

Page: 1 of 319

SAR TEST REPORT

The following samples were submitted and identified on behalf of the client as:

Equipment Under Test Mobile Phone

Brand Name Sony

Type No. PM-0852-BV

Company Name Sony Mobile Communications AB

Company Address Nya Vattentornet 22188 Lund/SWEDEN

Standards IEEE /ANSI C95.1, C95.3, IEEE 1528, KDB447498D01v05r02,

KDB248227D01v01r02,KDB941225D01v03,

KDB941225D05v02r03,KDB941225D06v02,KDB865664D01v

01r03, KDB865664D02v01r01, KDB648474D04v01r02.

FCC ID PY7-PM0852

Date of Receipt Nov. 11, 2014

Date of Test(s) Nov. 16, 2014 ~ Dec. 01, 2014

Date of Issue Jan. 19, 2015

In the configuration tested, the EUT complied with the standards specified above.

Remarks:

This report details the results of the testing carried out on three samples, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan Electronic & Communication Laboratory or testing done by SGS Taiwan Electronic & Communication Laboratory in connection with distribution or use of the product described in this report must be approved by SGS Taiwan Electronic & Communication Laboratory in writing.

Signed on behalf of SGS				
Sr. Engineer	Supervisor			
Kevin Li	Ricky Huang			
Date: Jan. 19, 2015	Date: Jan. 19, 2015			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format document at www.sgs.com/terms_and_conditions for Electronic Pocuments at www.sgs.com/terms_and_conditions.htm and, for electronic format document by Attention in draws to the limitation of limitation of limitation and invitable income defined.

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 2 of 319

Version

Report Number	Revision	Description	Issue Date
E5/2014/B0017	00	Initial Version	Jan. 08, 2015
E5/2014/B0017	01	1 st modification	Jan. 16, 2015
E5/2014/B0017	02	2 nd modification	Jan. 19, 2015

This test report contains a reference to the previous version test report that it replaces.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be

f (886-2) 2298-0488

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 3 of 319

Contents

1. General Information	4
1.1 Testing Laboratory	4
1.2 Details of Applicant	4
1.3 Description of EUT	5
1.4 Test Environment	52
1.5 Operation Description	52
1.6 Positioning Procedure	57
1.7 Evaluation Procedures	58
1.8 Probe Calibration Procedures	60
1.9 The SAR Measurement System	63
1.10 System Components	65
1.11 SAR System Verification	67
1.12 Tissue Simulant Fluid for the Frequency Band	69
1.13 Test Standards and Limits	74
2. Summary of Results	76
3. Simultaneous Transmission Analysis	97
4. Instruments List	118
5. Measurements	120
6. System Verification	166
7. DAE & Probe Calibration Certificate	193
8. Uncertainty Budget	255
9. Phantom Description	256
10. System Validation from Original Equipment Supplier	257

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 4 of 319

1. General Information

1.1 Testing Laboratory

SGS Taiwan Ltd. Electronics & Communication Laboratory			
No.134, Wu Kung F	Road, New Taipei Industrial Park		
Wuku District, New	Wuku District, New Taipei City, Taiwan		
Tel	+886-2-2299-3279		
+886-2-2298-0488			
Internet	http://www.tw.sgs.com/		

1.2 Details of Applicant

Company Name	Sony Mobile Communications AB
Company Address	Nya Vattentornet 22188 Lund/SWEDEN

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 5 of 319

1.3 Description of EUT

escription of EU i					
EUT Name	Mobile Phone				
Brand Name	Sony	Sony			
Type No.	PM-0852-BV				
HW Version	A				
SW Version	25.0.A.0.33				
	2G/3G: ZH8005X8BA				
Serial No.	LTE: ZH8005X8BJ				
	WLAN: ZH8005X1CM				
	2G/3G: 004402453551875				
IMEI Code	LTE: 004402453551685				
	WLAN: 004402453551651				
FCC ID	PY7-PM0852				
Mode of	\square GSM \square GPRS \square EDGE	—			
Operation	HSUPA HSPA+ LTE I				
	WLAN802.11 a/b/g/n (20M/40M)	⊠Bluetooth			
	GSM	1/8.3			
	GPRS	1/2 (1Dn4UP)			
	(support multi class 12 max)	1/2.76 (1Dn3UP) 1/4.1 (1Dn2UP)			
	(Support muiti class 12 max)	1/8.3 (1Dn1UP)			
		1/2 (1Dn4UP)			
	EDGE	1/2.76 (1Dn3UP)			
Duty Cycle	(support multi class 12 max)	1/4.1 (1Dn2UP)			
	(1/8.3 (1Dn1UP)			
	WCDMA	1			
	LTE	1			
	WLAN 802.11 a/b/g/n(20M/40M)	1			
	Bluetooth 1				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 6 of 319

	GSM850	824.2		848.8
	GSM1900	1850.2		1909.8
	WCDMA Band II	1852.4	_	1907.6
	WCDMA Band IV	1712.4	_	1752.6
	WCDMA Band V	826.4		846.6
	LTE FDD Band II	1850		1910
	LTE FDD Band IV	1710	_	1755
	LTE FDD Band V	824	_	849
	LTE FDD Band VII	2500		2570
	LTE FDD Band XII	699		716
TX Frequency	LTE FDD Band XIII	777		787
Range	LTE FDD Band XVII	704	_	716
(MHz)	WLAN 802.11 b/g/n(20M)	2412	_	2462
	WLAN 802.11 n(40M)	2422		2452
	WLAN802.11 a/n(20M) 5.2G	5180		5240
	WLAN802.11 a/n(20M) 5.3G	5260	_	5320
	WLAN802.11 a/n(20M) 5.5G	5500		5700
	WLAN802.11 a/n(20M) 5.8G	5745		5825
	WLAN802.11 n(40M) 5.2G	5190	_	5230
	WLAN802.11 n(40M) 5.3G	5270		5310
	WLAN802.11 n(40M) 5.5G	5510		5670
	WLAN802.11 n(40M) 5.8G	5755		5795
	Bluetooth	2402		2480

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 7 of 319

GSM850	128		251
GSM1900	512		810
WCDMA Band II	9262		9538
WCDMA Band IV	1312	_	1513
WCDMA Band V	4132		4233
LTE FDD Band II	18607	_	19193
LTE FDD Band IV	19957	_	20393
LTE FDD Band V	20407		20643
LTE FDD Band VII	20775		21425
LTE FDD Band XII	23007	_	23173
LTE FDD Band XIII	23205		23255
LTE FDD Band XVII	23755	_	23825
WLAN 802.11 b/g/n(20M)	1	_	11
WLAN 802.11 n(40M)	3	_	9
WLAN802.11 a/n(20M) 5.2G	36	_	48
WLAN802.11 a/n(20M) 5.3G	52		64
WLAN802.11 a/n(20M)5.6G	100	_	140
WLAN802.11 a/n(20M)5.8G	149	_	165
WLAN802.11 n(40M) 5.2G	38		46
WLAN802.11 n(40M) 5.3G	54	_	62
WLAN802.11 n(40M) 5.6G	102		134
WLAN802.11 n(40M) 5.8G	151		159
Bluetooth	0		78
	GSM1900 WCDMA Band II WCDMA Band IV WCDMA Band V LTE FDD Band II LTE FDD Band IV LTE FDD Band VII LTE FDD Band XII LTE FDD Band XIII LTE FDD Band XIII LTE FDD Band XVII WLAN 802.11 b/g/n(20M) WLAN 802.11 n(40M) WLAN 802.11 a/n(20M) 5.2G WLAN802.11 a/n(20M) 5.3G WLAN802.11 a/n(20M)5.8G WLAN802.11 n(40M) 5.2G WLAN802.11 n(40M) 5.3G WLAN802.11 n(40M) 5.3G WLAN802.11 n(40M) 5.3G WLAN802.11 n(40M) 5.3G WLAN802.11 n(40M) 5.6G WLAN802.11 n(40M) 5.6G	GSM1900 512 WCDMA Band II 9262 WCDMA Band IV 1312 WCDMA Band V 4132 LTE FDD Band II 18607 LTE FDD Band IV 19957 LTE FDD Band VII 20407 LTE FDD Band XII 23007 LTE FDD Band XIII 23205 LTE FDD Band XVII 23755 WLAN 802.11 b/g/n(20M) 1 WLAN 802.11 n(40M) 3 WLAN802.11 a/n(20M) 5.2G 36 WLAN802.11 a/n(20M) 5.3G 52 WLAN802.11 a/n(20M) 5.8G 149 WLAN802.11 n(40M) 5.3G 54 WLAN802.11 n(40M) 5.6G 102 WLAN802.11 n(40M) 5.8G 151	GSM1900 512 — WCDMA Band II 9262 — WCDMA Band IV 1312 — WCDMA Band V 4132 — LTE FDD Band II 18607 — LTE FDD Band IV 19957 — LTE FDD Band V 20407 — LTE FDD Band VII 20775 — LTE FDD Band XII 23007 — LTE FDD Band XIII 23205 — LTE FDD Band XVII 23755 — WLAN 802.11 b/g/n(20M) 1 — WLAN 802.11 a/n(20M) 5.2G 36 — WLAN802.11 a/n(20M) 5.3G 52 — WLAN802.11 a/n(20M) 5.3G 52 — WLAN802.11 a/n(20M) 5.3G 100 — WLAN802.11 a/n(20M) 5.3G 149 — WLAN802.11 n(40M) 5.3G 38 — WLAN802.11 n(40M) 5.3G 54 — WLAN802.11 n(40M) 5.3G 102 — WLAN802.11 n(40M) 5.8G 102 —

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 8 of 319

	Max. SAR (1 g) (Unit: W/Kg)				
Mode	Band	Measured	Reported	Position / Channel	
	GSM 850	0.602	0.66		
	GSM 1900	0.194	0.213	☐Left ☐Right ☐Cheek ☐Tilt 810 Channel	
	WCDMA Band II	0.352	0.36	☐Left ☐Right ☐Cheek ☐Tilt <u>9538</u> Channel	
	WCDMA Band IV	0.43	0.437	☐Left ☐Right ☐Cheek ☐Tilt ☐1412 Channel	
	WCDMA Band V	0.552	0.605		
Head	LTE FDD Band II	0.453	0.469	<pre></pre>	
	LTE FDD Band IV	0.615	0.616	<pre></pre>	
	LTE FDD Band V	0.581	0.597		
	LTE FDD Band VII	0.183	0.189	☐Left ☐Right ☐Cheek ☐Tilt ☐ Channel ☐	
	LTE FDD Band XII	0.042	0.048		
	LTE FDD Band XIII	0.274	0.288	<pre></pre>	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 9 of 319

Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Measured	Reported	Position / Channel	
	LTE FDD Band XVII	0.038	0.041	☐Left ☐Right☐Cheek ☐Tilt23790 Channel	
	WLAN802.11 b	0.587	0.612	☐Left ☐Right ☐Cheek ☐Tilt ☐Channel	
	WLAN802.11a 5.2G	0.249	0.25	☐Left ☐Right ☐Cheek ☐Tilt <u>36</u> Channel	
Head	WLAN802.11a 5.3G	0.218	0.219	☐Left ☐Right ☐Cheek ☐Tilt <u>64</u> Channel	
	WLAN802.11a 5.6G	0.48	0.482	☐Left ☐Right ☐Cheek ☐Tilt ☐ 132 Channel	
	WLAN802.11a 5.8G	0.493	0.512	□Left ⊠Right □Cheek □Tilt □161 Channel	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

t (886-2) 2299-3279

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 10 of 319

Max. SAR (1 g) (Unit: W/Kg)						
Mode	Band	Measured	Reported	Position / Channel		
	GSM 850	0.399	0.418	Front Back 251 Channel		
	GSM 1900	0.314	0.369	Front ⊠Back 512 Channel		
	WCDMA Band II	0.563	0.576	☑Front ☐Back <u>9538</u> Channel		
	WCDMA Band IV	0.59	0.6			
	WCDMA Band V	0.429	0.47	☐Front ☐Back 4233 Channel		
	LTE FDD Band II	0.743	0.769	☐Front ☐Back 19100 Channel		
	LTE FDD Band IV	0.679	0.681	☐Front ☐Back 20050 Channel		
Body worn	LTE FDD Band V	0.506	0.521	☐Front ☐Back 20600 Channel		
(speech mode)	LTE FDD Band VII	0.559	0.563	☐Front ☐Back 21350 Channel		
	LTE FDD Band XII	0.073	0.083	☐Front ☐Back 23090 Channel		
	LTE FDD Band XIII	0.442	0.464	☐Front ☐Back 23230 Channel		
	LTE FDD Band XVII	0.059	0.065	☐Front ☐Back 23780 Channel		
	WLAN802.11a 5.2G	0.341	0.342	☐Front ☐Back 36 Channel		
	WLAN802.11a 5.3G	0.319	0.32	☐Front ☐Back 64 Channel		
	WLAN802.11a 5.6G	0.382	0.384	☐Front ☐Back 132 Channel		
	WLAN802.11a 5.8G	0.298	0.311	☐Front ☐Back 165 Channel		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 11 of 319

Max. SAR (1 g) (Unit: W/Kg)					
Mode	Band	Measured	Reported	Position / Channel	
	GPRS 850 (1Dn1UP)	0.702	0.77	☐Front ☐Back☐Bottom☐Right☐Left☐190_Channel	
	GPRS 1900 (1Dn1UP)	0.662	0.726	☐Front ☐Back ☐Bottom ☐Right ☐Left810Channel	
	WCDMA Band II	1.34	1.371	☐Front ☐Back ☐Bottom ☐Right ☐Left 9538 Channel	
Hotspot	WCDMA Band IV	1.35	1.397	☐Front ☐Back ☐Bottom ☐Right ☐LeftChannel	
mode	WCDMA Band V	0.925	1.014	-repeat with worse case Front Back Bottom Right Left 4233 Channel	
	LTE FDD Band II	1.33	1.432	☐Front ☐Back ☐Bottom ☐Right ☐Left	
	LTE FDD Band IV	1.08	1.212	☐Front ☐Back ☐Bottom ☐Right ☐Left	
	LTE FDD Band V	0.832	0.863	☐Front ☐Back☐Bottom☐Right☐Left 20450_Channel	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 12 of 319

	Max. SAR	(1 g) (Uni	t: W/Kg)	
Mode	Band	Measured	Reported	Position / Channel
Hotspot mode	LTE FDD Band VII	1.13	1.138	☐Front ☐Back ☐Bottom ☐Right ☐Left21350 _Channel
	LTE FDD Band XII	0.111	0.127	☐Front ☐Back ☐Bottom ☐Right ☐Left
	LTE FDD Band XIII	0.594	0.623	☐Front ☐Back ☐Bottom ☐Right ☐Left
	LTE FDD Band XVII	0.084	0.092	☐Front ☐Back ☐Bottom ☐Right ☐Left
	WLAN802.11b	0.638	0.665	☐Front ☐Back ☐Bottom ☐Right ☐Left11Channel

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

t (886-2) 2299-3279

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 13 of 319

#. Conducted power table:

GSM/GPRS/EDGE conducted power table:

EUT mode	Frequency	011	~	Burst average power	Source-based time average power			
	(MHz)	СН	Power + Max. Tolerance (dBm)	Avg.(dBm)	Avg.(dBm)			
GSM 850	824.2	128	33.5	33.00	23.97			
(GMSK)	836.6	190	33.5	33.10	24.07			
(GIVISK)	848.8	251	33.5	33.30	24.27			
	The div	ision f	actor compared to	the number of TX time slot				
	Divisio	n facto	or	1 TX time slot				
	טואוט	iii iacto	וע	-9.03				

			Burst avera	age power					
	ted Avg. Powe olerance (dBr		33.5	30.5	28.5	27.5			
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP			
EUT mode	Frequency CH		Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)			
GPRS 850	824.2	128	33.00	29.50	27.70	26.50			
(GMSK)	836.6	190	33.10	29.50	27.70	26.60			
(GIVISK)	848.8	251	33.30	29.50	27.70	26.90			
		S	ource-based tim	urce-based time average power					
GPRS 850	824.2	128	23.97	23.48	23.44	23.49			
(GMSK)	836.6	190	24.07	23.48	23.44	23.59			
(GIVISK)	848.8	251	24.27	23.48	23.44	23.89			
	The div	ision fa	actor compared	to the number of	of TX time slot				
Div	ision factor		1 TX time slot -9.03	1 TX time slot 2 TX time slot -9.03 -6.02		4 TX time slot -3.01			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 14 of 319

			Burst avera	age power					
	ted Avg. Power		28	25.5	25	25			
			1Dn1UP	1Dn2UP	1Dn4UP				
EUT mode	Frequency (MHz)	СН	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)			
EDGE 850	824.2	128	27.70	25.00	24.90	24.70			
(MCS 5)	836.6	190	27.60	25.00	24.90	24.70			
(IVICS 5)	848.8	251	27.80	25.00	25.00	24.90			
		S	ource-based tim	urce-based time average power					
EDGE 850	824.2	128	18.67	18.98	20.64	21.69			
	836.6	190	18.57	18.98	20.64	21.69			
(MCS 5)	848.8	251	18.77	18.98	20.74	21.89			
	The div	ision fa		to the number o					
Div	ision factor	•	1 TX time slot	2 TX time slot	2 TX time slot 3 TX time slot				
	rision ractor		-9.03	-6.02	-4.26	-3.01			

			Burst ave	rage power					
	Max. Rated Avg. Power + Max. Tolerance (dBm)			30.5	28.5	27.5			
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP			
EUT mode	Frequency CH (MHz)		Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)			
EDGE 850	824.2	128	33.00	29.50	27.70	26.50			
(MCS 4)	836.6	190	33.10	29.50	27.70	26.60			
(10103 4)	848.8	251	33.20	29.50	27.70	26.80			
			Source-based tir	urce-based time average power					
EDGE 850	824.2	128	23.97	23.48	23.44	23.49			
(MCS 4)	836.6	190	24.07	23.48	23.44	23.59			
(10103 4)	848.8	251	24.17	23.48	23.44	23.79			
	The di	vision 1	factor compared	to the number	of TX time slot				
Divi	sion factor		1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot			
DIVI	SIOIT TACTO		-9.03	-6.02	-4.26	-3.01			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 15 of 319

			Burst avera	age power						
	ted Avg. Powe olerance (dBr		28	25.5	25	25				
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP				
EUT mode	Frequency CH (MHz)		Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)				
EDCE OFO	824.2	128	27.70	25.00	24.90	24.70				
EDGE 850 (MCS 9)	836.6	190	27.60	25.00	24.90	24.70				
(10103 9)	848.8	251	27.70	25.00	25.00	24.90				
		S	ource-based tim	urce-based time average power						
EDGE 850	824.2	128	18.67	18.98	20.64	21.69				
(MCS 9)	836.6	190	18.57	18.98	20.64	21.69				
(10103 9)	848.8	251	18.67	18.98	20.74	21.89				
	The div	ision fa	actor compared	to the number of	of TX time slot					
Div	ision factor		1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot				
DIV	יוטוטוז זמננטו		-9.03	-6.02	-4.26	-3.01				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 16 of 319

EUT mode	Frequency	CII	Max. Rated Avg. Power + Max.	Burst average power	Source-based time average power		
EUT Mode	(MHz)	СН	Tolerance (dBm)	Avg.(dBm)	Avg.(dBm)		
GSM 1900	1850.2	512	30.5	29.80	20.77		
(GMSK)	1880	661	30.5	29.90	20.87		
(GIVISK)	1909.8	810	30.5	30.10	21.07		
	The div	ision fa	ctor compared to	the number of TX time	e slot		
	Division	factor		1 TX time slot			
	DIVISIO	Tactor		-9.	03		

			Burst avera	age power						
	ted Avg. Powe olerance (dBr		30.5	27	25	24.5				
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP				
EUT mode	Frequency CH		Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)				
GPRS	1850.2	512	29.80	26.50	24.70	23.70				
1900	1880 661		29.90	26.50 24.70		23.80				
(GMSK)	1909.8	810	30.10	26.50	24.70	24.00				
		S	ource-based tim	urce-based time average power						
GPRS	1850.2	512	20.77	20.48	20.44	20.69				
1900	1880	661	20.87	20.48	20.44	20.79				
(GMSK)	1909.8	810	21.07	20.48	20.44	20.99				
	The div	ision fa	actor compared	to the number of	of TX time slot					
Div	ision factor		1 TX time slot -9.03	2 TX time slot -6.02	3 TX time slot -4.26	4 TX time slot -3.01				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 17 of 319

			Burst avera	age power						
	ted Avg. Powe olerance (dBm		27.5 24.5 23.5		22.5					
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP				
EUT mode	Frequency (MHz)	СН	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)				
EDGE	1850.2	512	27.10	24.20	23.20	22.10				
1900	1880	661	26.80	24.00	22.90	21.90				
(MCS 5)	1909.8	810	27.00	24.20	23.10	22.10				
		Ç	Source-based tim	ource-based time average power						
EDGE	1850.2	512	18.07	18.18	18.94	19.09				
1900	1880	661	17.77	17.98	18.64	18.89				
(MCS 5)	1909.8	810	17.97	18.18	18.84	19.09				
	The d	ivision 1	factor compared	to the number of	TX time slot					
Div	vision factor	·	1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot				
	VISIOII IACIOI		-9.03	-6.02	-4.26	-3.01				

			Burst aver	age power		
	ed Avg. Powe olerance (dBr		30.5	27	25	24.5
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP
EUT mode	Frequency CH		Avg. (dBm)	Avg. (dBm)	Avg. (dBm)	Avg. (dBm)
EDGE	1850.2	512	29.80	26.50	24.70	23.70
1900	1880 661		29.90	26.50	24.70	23.80
(MCS 4)	1909.8	810	30.00	26.50	24.70	23.90
		S	ource-based tim	ne average powe	er	
EDGE	1850.2	512	20.77	20.48	20.44	20.69
1900	1880	661	20.87	20.48	20.44	20.79
(MCS 4)	1909.8	810	20.97	20.48	20.44	20.89
	The div	ision fa	actor compared	to the number of	of TX time slot	
Div	vision factor	•	1 TX time slot	2 TX time slot	3 TX time slot	4 TX time slot
Div	ision ractor		-9.03	-6.02	-4.26	-3.01

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 18 of 319

			D 1						
			Burst avera	age power					
	ted Avg. Powe olerance (dBm		27.5 24.5 23.5		22.5				
			1Dn1UP	1Dn2UP	1Dn3UP	1Dn4UP			
EUT mode	Frequency	СН	Avg.	Avg.	Avg.	Avg.			
EUT Mode	(MHz)	СП	(dBm)	(dBm)	(dBm)	(dBm)			
EDGE	1850.2	512	27.10	24.20	23.20	22.10			
1900	1880	661	26.80	24.00	22.90	21.90			
(MCS 9)	1909.8	810	27.00	24.20	23.10	22.10			
			ource-based time average power						
EDGE	1850.2	512	18.07	18.18	18.94	19.09			
1900	1880	661	17.77	17.98	18.64	18.89			
(MCS 9)	1909.8	810	17.97	18.18	18.84	19.09			
	The d	ivision f	factor compared	to the number of	TX time slot				
Div	vision factor		1 TX time slot	1 TX time slot 2 TX time slot 3		4 TX time slot			
Div	VISIOII IACIOI		-9.03	-6.02	-4.26	-3.01			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 19 of 319

WCDMA Band II / Band IV / Band V - HSDPA / HSUPA conducted power table:

									obini, modini demandica potron table.								
Rate Avg	Max. Rated Avg.	Rel99	HSDPA mode AV(dBm)				HSUPA mode AV(dBm)				HSPA+ mode AV(dBm)						
Band	СН	Power + Max. Tolerance (dBm)	AV (dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5
WCDMA	9262	24.5	24.25	23.27	23.13	22.79	22.86	24.17	22.22	23.13	22.35	23.22	24.18	22.16	23.15	22.27	23.98
Band II	9400	24.5	24.17	23.21	23.03	22.76	22.77	24.15	22.22	23.07	22.27	23.15	24.14	22.18	23.13	22.22	23.99
Banu n	9538	24.5	24.40	23.39	23.25	22.86	22.98	24.34	22.38	23.32	22.42	23.38	24.35	22.34	23.36	22.38	24.21
WCDMA	1312	24.5	24.40	23.35	23.28	22.87	22.94	24.32	22.37	23.18	22.5	23.23	24.22	22.27	23.18	22.4	23.13
Band IV	1412	24.5	24.43	23.34	23.29	22.89	22.9	24.41	22.48	23.33	22.53	23.36	24.30	22.38	23.23	22.43	23.26
Dallu IV	1513	24.5	24.35	23.24	23.20	22.71	22.83	24.29	22.33	23.27	22.37	23.30	24.19	22.23	23.17	22.27	23.20
WCDMA	4132	24.5	24.37	23.31	23.30	22.85	22.9	24.33	22.39	23.27	22.44	23.27	24.34	22.37	23.32	22.40	24.15
Band V	4183	24.5	24.27	23.21	23.16	22.73	22.77	24.20	22.28	23.16	22.34	23.21	24.19	22.21	23.19	22.27	23.96
Dariu V	4233	24.5	24.10	22.99	23.10	22.5	22.56	24.02	22.06	23	22.14	23.01	24.01	21.98	23.00	22.04	23.83

HSDPA

SUB-TEST	eta_{c}	$eta_{\sf d}$	β _d (SF)	β_{c}/β_{d}	β _{HS} (Note1, Note 2)	CM (dB) <i>(Note 3)</i>	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15	15/15	64	12/15	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

HSUPA

113017													
SUB-TEST	eta_{c}	$eta_{ t d}$	β _d (SF)	β_c/β_d	β _{HS} (Note1)	eta_{ec}	β _{ed} (Note 5) (Note 6)	β _{ed} (SF)	β _{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β _{ed} 1: 47/15 β _{ed} 2: 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	15/15	64	15/15	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 20 of 319

LTE FDD Band II/ Band IV/ Band V/ Band VII/ Band XII/ Band XIII/ Band XVII nower table.

power	tabic.		-	DD Band 2)			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
			0	1860 1880	18700 18900	24.03 24.06	24.5 24.5	0
				1900	19100	24.14	24.5	0
				1860	18700	24.07	24.5	0
		1 RB	50	1880	18900	24.09	24.5	0
				1900	19100	24.21	24.5	0
				1860	18700	24.08	24.5	0
			99	1880	18900	24.18	24.5	0
				1900	19100	24.35	24.5	0
				1860	18700	23.10	24	0-1
	QPSK		0	1880	18900	23.16	24	0-1
				1900	19100	23.25	24	0-1
				1860	18700	23.11	24	0-1
		50 RB	25	1880	18900	23.15	24	0-1
				1900	19100	23.35	24	0-1
				1860	18700	23.15	24	0-1
			50	1880	18900	23.21	24	0-1
				1900	19100	23.46	24	0-1
			ı	1860	18700	23.14	24	0-1
		100	ORB	1880	18900	23.16	24	0-1
		TOOKS		1900	19100	23.36	24	0-1
20				1860	18700	23.50	24	0-1
			0	1880	18900	23.18	24	0-1
				1900	19100	23.46	24	0-1
				1860	18700	23.23	24	0-1
		1 RB	50	1880	18900	23.41	24	0-1
				1900	19100	23.24	24	0-1
				1860	18700	23.21	24	0-1
			99	1880	18900	23.16	24	0-1
				1900	19100	23.35	24	0-1
				1860	18700	22.15	23	0-2
	16-QAM		0	1880	18900	22.18	23	0-2
				1900	19100	22.25	23	0-2
				1860	18700	22.16	23	0-2
		50 RB	25	1880	18900	22.24	23	0-2
				1900	19100	22.37	23	0-2
				1860	18700	22.21	23	0-2
			50	1880	18900	22.21	23	0-2
				1900	19100	22.41	23	0-2
			•	1860	18700	22.17	23	0-2
		100	ORB	1880	18900	22.15	23	0-2
		TOOKS		1900	19100	22.35	23	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 21 of 319

			F	FDD Band 2	2			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1857.5	18675	24.05	24.5	0
			0	1880	18900	24.05	24.5	0
				1902.5	19125	24.20	24.5	0
				1857.5	18675	24.05	24.5	0
		1 RB	36	1880	18900	24.11	24.5	0
				1902.5	19125	24.30	24.5	0
				1857.5	18675	24.05	24.5	0
			74	1880	18900	24.19	24.5	0
				1902.5	19125	24.29	24.5	0
				1857.5	18675	23.15	24	0-1
	QPSK		0	1880	18900	23.14	24	0-1
				1902.5	19125	23.28	24	0-1
				1857.5	18675	23.13	24	0-1
		36 RB	18	1880	18900	23.13	24	0-1
				1902.5	19125	23.38	24	0-1
				1857.5	18675	23.13	24	0-1
			37	1880	18900	23.20	24	0-1
				1902.5	19125	23.46	24	0-1
				1857.5	18675	23.16	24	0-1
		75RB		1880	18900	23.13	24	0-1
15				1902.5	19125	23.34	24	0-1
				1857.5	18675	23.31	24	0-1
			0	1880	18900	23.35	24	0-1
				1902.5	19125	23.33	24	0-1
		1 DD	27	1857.5	18675	23.30	24	0-1
		1 RB	36	1880	18900	23.48	24	0-1
				1902.5	19125	23.50	24	0-1
			74	1857.5	18675	23.35	24	0-1
			74	1880 1902.5	18900	23.30	24 24	0-1 0-1
					19125	23.56 22.20		-
	16 OAM		0	1857.5	18675		23	0-2
	16-QAM		0	1880	18900	22.19	23	0-2
				1902.5 1857.5	19125 18675	22.37 22.18	23 23	0-2 0-2
		36 RB	18	1880	18900	22.18	23	0-2
		30 KD	10	1902.5	19125	22.43	23	0-2
				1902.5	18675	22.43	23	0-2
			37	1880	18900	22.23	23	0-2
			3,	1902.5	19125	22.23	23	0-2
				1902.5	18675	22.46	23	0-2
		75	RB	1880	18900	22.20	23	0-2
		/3		1902.5	19125	22.40	23	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 22 of 319

	FDD Band 2											
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
				1855	18650	24.12	24.5	0				
			0	1880	18900	24.03	24.5	0				
				1905	19150	24.15	24.5	0				
				1855	18650	24.12	24.5	0				
		1 RB	25	1880	18900	24.07	24.5	0				
				1905	19150	24.22	24.5	0				
				1855	18650	24.05	24.5	0				
			49	1880	18900	24.12	24.5	0				
			1905	19150	24.34	24.5	0					
				1855	18650	23.12	24	0-1				
	QPSK		0	1880	18900	23.14	24	0-1				
				1905	19150	23.31	24	0-1				
				1855	18650	23.09	24	0-1				
		25 RB	12	1880	18900	23.09	24	0-1				
				1905	19150	23.34	24	0-1				
				1855	18650	23.11	24	0-1				
			25	1880	18900	23.12	24	0-1				
				1905	19150	23.34	24	0-1				
				1855	18650	23.15	24	0-1				
		50RB		1880	18900	23.16	24	0-1				
10				1905	19150	23.33	24	0-1				
10				1855	18650	23.01	24	0-1				
			0	1880	18900	23.00	24	0-1				
				1905	19150	23.14	24	0-1				
				1855	18650	22.98	24	0-1				
		1 RB	25	1880	18900	23.01	24	0-1				
				1905	19150	23.22	24	0-1				
				1855	18650	23.01	24	0-1				
			49	1880	18900	23.04	24	0-1				
				1905	19150	23.08	24	0-1				
	44 0444			1855	18650	22.19	23	0-2				
	16-QAM		0	1880	18900	22.13	23	0-2				
				1905	19150	22.37	23	0-2				
		0F DD	10	1855	18650	22.14	23	0-2				
		25 RB	12	1880	18900	22.15	23	0-2				
				1905	19150	22.39	23	0-2				
			25	1855	18650	22.18	23	0-2				
			25	1880	18900	22.17	23	0-2				
				1905	19150	22.38	23	0-2				
			DD	1855	18650	22.19	23	0-2				
		50	RB	1880	18900	22.19	23	0-2				
				1905	19150	22.43	23	0-2				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 23 of 319

	FDD Band 2											
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
				1852.5	18625	23.99	24.5	0				
			0	1880	18900	24.05	24.5	0				
				1907.5	19175	24.13	24.5	0				
				1852.5	18625	23.99	24.5	0				
		1 RB	12	1880	18900	24.13	24.5	0				
				1907.5	19175	24.27	24.5	0				
				1852.5	18625	23.96	24.5	0				
			24	1880	18900	24.00	24.5	0				
	ļ			1907.5	19175	24.27	24.5	0				
				1852.5	18625	23.14	24	0-1				
	QPSK		0	1880	18900	23.12	24	0-1				
				1907.5	19175	23.32	24	0-1				
				1852.5	18625	23.10	24	0-1				
		12 RB	6	1880	18900	23.12	24	0-1				
				1907.5	19175	23.32	24	0-1				
				1852.5	18625	23.12	24	0-1				
			13	1880	18900	23.14	24	0-1				
				1907.5	19175	23.30	24	0-1				
				1852.5	18625	23.13	24	0-1				
		25RB		1880	18900	23.09	24	0-1				
5				1907.5	19175	23.35	24	0-1				
			_	1852.5	18625	23.48	24	0-1				
			0	1880	18900	23.28	24	0-1				
				1907.5	19175	23.68	24	0-1				
		4.00	40	1852.5	18625	23.45	24	0-1				
		1 RB	12	1880	18900	23.61	24	0-1				
				1907.5	19175	23.49	24	0-1				
			24	1852.5	18625	23.25	24	0-1				
			24	1880	18900	23.34	24	0-1				
	ŀ			1907.5	19175	23.50	24	0-1				
	16-QAM		0	1852.5	18625	22.18	23	0-2				
	TO-QAIVI		U	1880	18900	22.21	23	0-2				
				1907.5 1852.5	19175 18625	22.36 22.22	23 23	0-2 0-2				
		12 RB	6	1880	18900	22.22	23	0-2				
		IZ ND	U	1907.5	19175	22.12	23	0-2				
				1907.5	18625	22.35	23	0-2				
			13	1880	18900	22.11	23	0-2				
			13	1907.5	19175	22.10	23	0-2				
				1907.5	18625	22.27	23	0-2				
		25	RB	1880	18900	22.10	23	0-2				
		25		1907.5	19175	22.35	23	0-2				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 24 of 319

	FDD Band 2											
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
				1851.5	18615	24.01	24.5	0				
			0	1880	18900	23.99	24.5	0				
				1908.5	19185	24.22	24.5	0				
				1851.5	18615	24.05	24.5	0				
		1 RB	7	1880	18900	24.11	24.5	0				
				1908.5	19185	24.25	24.5	0				
				1851.5	18615	24.02	24.5	0				
			14	1880	18900	24.05	24.5	0				
				1908.5	19185	24.18	24.5	0				
				1851.5	18615	23.07	24	0-1				
	QPSK		0	1880	18900	23.09	24	0-1				
				1908.5	19185	23.32	24	0-1				
				1851.5	18615	23.05	24	0-1				
		8 RB	4	1880	18900	23.10	24	0-1				
				1908.5	19185	23.34	24	0-1				
				1851.5	18615	23.04	24	0-1				
			7	1880	18900	23.14	24	0-1				
				1908.5	19185	23.31	24	0-1				
				1851.5	18615	23.03	24	0-1				
		15	RB	1880	18900	23.15	24	0-1				
3				1908.5	19185	23.35	24	0-1				
				1851.5	18615	23.46	24	0-1				
			0	1880	18900	23.11	24	0-1				
				1908.5	19185	23.61	24	0-1				
		4.00	_	1851.5	18615	23.36	24	0-1				
		1 RB	7	1880	18900	23.48	24	0-1				
				1908.5	19185	23.39	24	0-1				
			1.4	1851.5	18615	23.29	24	0-1				
			14	1880	18900	23.37	24	0-1				
				1908.5	19185	23.42	24	0-1				
	16-QAM		0	1851.5 1880	18615 18900	22.16 22.21	23 23	0-2 0-2				
	10-QAIVI						23	0-2				
				1908.5 1851.5	19185 18615	22.40 22.13	23	0-2				
		8 RB	4	1880	18900	22.13	23	0-2				
		UND	"	1908.5	19185	22.25	23	0-2				
				1851.5	18615	22.39	23	0-2				
			7	1880	18900	22.17	23	0-2				
			'	1908.5	19185	22.22	23	0-2				
			l	1851.5	18615	22.36	23	0-2				
		15	RB	1880	18900	22.01	23	0-2				
				1908.5	19185	22.39	23	0-2				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 25 of 319

	FDD Band 2											
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
				1850.7	18607	23.97	24.5	0				
			0	1880	18900	23.94	24.5	0				
				1909.3	19193	24.23	24.5	0				
				1850.7	18607	24.05	24.5	0				
		1 RB	2	1880	18900	24.10	24.5	0				
				1909.3	19193	24.25	24.5	0				
				1850.7	18607	23.94	24.5	0				
			5	1880	18900	23.96	24.5	0				
				1909.3	19193	24.19	24.5	0				
				1850.7	18607	23.11	24	0-1				
	QPSK		0	1880	18900	23.12	24	0-1				
				1909.3	19193	23.31	24	0-1				
				1850.7	18607	23.05	24	0-1				
		3 RB	2	1880	18900	23.05	24	0-1				
				1909.3	19193	23.28	24	0-1				
				1850.7	18607	23.12	24	0-1				
			3	1880	18900	23.12	24	0-1				
				1909.3	19193	23.31	24	0-1				
				1850.7	18607	23.10	24	0-1				
		6RB		1880	18900	23.16	24	0-1				
1.4				1909.3	19193	23.27	24	0-1				
1				1850.7	18607	23.00	24	0-1				
			0	1880	18900	23.03	24	0-1				
				1909.3	19193	23.22	24	0-1				
				1850.7	18607	23.11	24	0-1				
		1 RB	2	1880	18900	23.27	24	0-1				
				1909.3	19193	23.53	24	0-1				
				1850.7	18607	23.04	24	0-1				
			5	1880	18900	23.02	24	0-1				
				1909.3	19193	23.13	24	0-1				
				1850.7	18607	22.05	23	0-2				
	16-QAM		0	1880	18900	22.14	23	0-2				
				1909.3	19193	22.23	23	0-2				
				1850.7	18607	22.09	23	0-2				
		3 RB	2	1880	18900	22.15	23	0-2				
				1909.3	19193	22.20	23	0-2				
				1850.7	18607	22.04	23	0-2				
			3	1880	18900	22.17	23	0-2				
				1909.3	19193	22.16	23	0-2				
				1850.7	18607	22.13	23	0-2				
		6	₹B	1880	18900	22.28	23	0-2				
		6RB		1909.3	19193	22.47	23	0-2				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 26 of 319

			F	DD Band 4	4			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1720	20050	24.49	24.5	0
			0	1732.5	20175	24.47	24.5	0
				1745	20300	24.48	24.5	0
				1720	20050	24.36	24.5	0
		1 RB	50	1732.5	20175	24.43	24.5	0
				1745	20300	24.37	24.5	0
				1720	20050	24.35	24.5	0
			99	1732.5	20175	24.46	24.5	0
				1745	20300	24.29	24.5	0
				1720	20050	23.65	24	0-1
	QPSK		0	1732.5	20175	23.53	24	0-1
				1745	20300	23.55	24	0-1
				1720	20050	23.59	24	0-1
		50 RB	25	1732.5	20175	23.54	24	0-1
				1745	20300	23.48	24	0-1
				1720	20050	23.56	24	0-1
			50	1732.5	20175	23.50	24	0-1
				1745	20300	23.48	24	0-1
				1720	20050	23.58	24	0-1
		100	ORB	1732.5	20175	23.51	24	0-1
20			1	1745	20300	23.50	24	0-1
				1720	20050	23.82	24	0-1
			0	1732.5	20175	23.96	24	0-1
				1745	20300	23.38	24	0-1
		4.00	50	1720	20050	23.76	24	0-1
		1 RB	50	1732.5	20175	23.56	24	0-1
				1745	20300	23.60	24	0-1
			00	1720	20050	23.85	24	0-1
			99	1732.5	20175	23.59	24	0-1
				1745	20300	23.64	24	0-1
	14 0 4 14			1720	20050	22.68	23	0-2
	16-QAM		0	1732.5	20175	22.57	23	0-2
				1745	20300	22.63	23	0-2
		50 RB	25	1720	20050	22.53	23	0-2
		SU KD	20	1732.5 1745	20175 20300	22.57 22.41	23	0-2
				1745	20300	22.41	23 23	0-2 0-2
			50	1720	20050	22.30	23	
] 30	1732.5	20175	22.48	23	0-2 0-2
			<u> </u>	1745	20300	22.48	23	0-2
		100	ORB	1732.5	20030	22.48	23	0-2
		100	סוגט	1732.5	20175	22.40	23	0-2
				1745	20300	22.37	۷3	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 27 of 319

	FDD Band 4											
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
				1717.5	20025	24.47	24.5	0				
			0	1732.5	20175	24.38	24.5	0				
				1747.5	20325	24.46	24.5	0				
				1717.5	20025	24.41	24.5	0				
		1 RB	36	1732.5	20175	24.39	24.5	0				
				1747.5	20325	24.39	24.5	0				
				1717.5	20025	24.37	24.5	0				
			74	1732.5	20175	24.41	24.5	0				
				1747.5	20325	24.30	24.5	0				
				1717.5	20025	23.56	24	0-1				
	QPSK		0	1732.5	20175	23.52	24	0-1				
				1747.5	20325	23.49	24	0-1				
				1717.5	20025	23.47	24	0-1				
		36 RB	18	1732.5	20175	23.49	24	0-1				
				1747.5	20325	23.46	24	0-1				
				1717.5	20025	23.45	24	0-1				
			37	1732.5	20175	23.50	24	0-1				
				1747.5	20325	23.44	24	0-1				
				1717.5	20025	23.49	24	0-1				
		75RB		1732.5	20175	23.46	24	0-1				
15				1747.5	20325	23.38	24	0-1				
15				1717.5	20025	23.70	24	0-1				
			0	1732.5	20175	23.72	24	0-1				
				1747.5	20325	23.82	24	0-1				
				1717.5	20025	23.70	24	0-1				
		1 RB	36	1732.5	20175	23.76	24	0-1				
				1747.5	20325	23.69	24	0-1				
				1717.5	20025	23.67	24	0-1				
			74	1732.5	20175	23.82	24	0-1				
				1747.5	20325	23.80	24	0-1				
				1717.5	20025	22.56	23	0-2				
	16-QAM		0	1732.5	20175	22.51	23	0-2				
				1747.5	20325	22.53	23	0-2				
				1717.5	20025	22.50	23	0-2				
		36 RB	18	1732.5	20175	22.53	23	0-2				
				1747.5	20325	22.45	23	0-2				
				1717.5	20025	22.50	23	0-2				
			37	1732.5	20175	22.52	23	0-2				
				1747.5	20325	22.46	23	0-2				
				1717.5	20025	22.49	23	0-2				
		75	RB	1732.5	20175	22.50	23	0-2				
				1747.5	20325	22.44	23	0-2				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 28 of 319

	FDD Band 4											
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
				1715	20000	24.41	24.5	0				
			0	1732.5	20175	24.36	24.5	0				
				1750	20350	24.39	24.5	0				
				1715	20000	24.36	24.5	0				
		1 RB	25	1732.5	20175	24.32	24.5	0				
				1750	20350	24.36	24.5	0				
				1715	20000	24.27	24.5	0				
			49	1732.5	20175	24.37	24.5	0				
				1750	20350	24.29	24.5	0				
				1715	20000	23.53	24	0-1				
	QPSK		0	1732.5	20175	23.46	24	0-1				
				1750	20350	23.36	24	0-1				
				1715	20000	23.53	24	0-1				
		25 RB	12	1732.5	20175	23.41	24	0-1				
				1750	20350	23.37	24	0-1				
				1715	20000	23.48	24	0-1				
			25	1732.5	20175	23.42	24	0-1				
				1750	20350	23.35	24	0-1				
			_	1715	20000	23.54	24	0-1				
		50RB		1732.5	20175	23.48	24	0-1				
10				1750	20350	23.39	24	0-1				
10				1715	20000	23.90	24	0-1				
			0	1732.5	20175	23.84	24	0-1				
				1750	20350	23.46	24	0-1				
				1715	20000	23.80	24	0-1				
		1 RB	25	1732.5	20175	23.68	24	0-1				
				1750	20350	23.69	24	0-1				
				1715	20000	23.71	24	0-1				
			49	1732.5	20175	23.73	24	0-1				
				1750	20350	23.71	24	0-1				
				1715	20000	22.56	23	0-2				
	16-QAM		0	1732.5	20175	22.51	23	0-2				
				1750	20350	22.46	23	0-2				
				1715	20000	22.50	23	0-2				
		25 RB	12	1732.5	20175	22.44	23	0-2				
				1750	20350	22.43	23	0-2				
				1715	20000	22.46	23	0-2				
			25	1732.5	20175	22.48	23	0-2				
				1750	20350	22.37	23	0-2				
				1715	20000	22.48	23	0-2				
		50	RB	1732.5	20175	22.54	23	0-2				
		50RB		1750	20350	22.46	23	0-2				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 29 of 319

	FDD Band 4												
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)					
				1712.5	19975	24.28	24.5	0					
			0	1732.5	20175	24.41	24.5	0					
				1752.5	20375	24.40	24.5	0					
				1712.5	19975	24.29	24.5	0					
		1 RB	12	1732.5	20175	24.26	24.5	0					
				1752.5	20375	24.39	24.5	0					
				1712.5	19975	24.20	24.5	0					
			24	1732.5	20175	24.20	24.5	0					
				1752.5	20375	24.28	24.5	0					
				1712.5	19975	23.49	24	0-1					
	QPSK		0	1732.5	20175	23.45	24	0-1					
				1752.5	20375	23.43	24	0-1					
				1712.5	19975	23.48	24	0-1					
		12 RB	6	1732.5	20175	23.45	24	0-1					
				1752.5	20375	23.38	24	0-1					
				1712.5	19975	23.46	24	0-1					
			13	1732.5	20175	23.43	24	0-1					
				1752.5	20375	23.36	24	0-1					
				1712.5	19975	23.46	24	0-1					
		25	RB	1732.5	20175	23.41	24	0-1					
5				1752.5	20375	23.36	24	0-1					
J				1712.5	19975	23.64	24	0-1					
			0	1732.5	20175	23.68	24	0-1					
				1752.5	20375	23.70	24	0-1					
				1712.5	19975	23.57	24	0-1					
		1 RB	12	1732.5	20175	23.57	24	0-1					
				1752.5	20375	23.71	24	0-1					
				1712.5	19975	23.51	24	0-1					
			24	1732.5	20175	23.67	24	0-1					
				1752.5	20375	23.56	24	0-1					
				1712.5	19975	22.47	23	0-2					
	16-QAM		0	1732.5	20175	22.44	23	0-2					
				1752.5	20375	22.42	23	0-2					
		40		1712.5	19975	22.42	23	0-2					
		12 RB	6	1732.5	20175	22.40	23	0-2					
				1752.5	20375	22.40	23	0-2					
				1712.5	19975	22.44	23	0-2					
			13	1732.5	20175	22.42	23	0-2					
				1752.5	20375	22.37	23	0-2					
			DD	1712.5	19975	22.45	23	0-2					
	25F	KB	1732.5	20175	22.43	23	0-2						
	231		1752.5	20375	22.32	23	0-2						

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 30 of 319

	FDD Band 4										
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)			
				1711.5	19965	24.34	24.5	0			
			0	1732.5	20175	24.28	24.5	0			
				1753.5	20385	24.34	24.5	0			
				1711.5	19965	24.35	24.5	0			
		1 RB	7	1732.5	20175	24.31	24.5	0			
				1753.5	20385	24.33	24.5	0			
				1711.5	19965	24.29	24.5	0			
			14	1732.5	20175	24.25	24.5	0			
				1753.5	20385	24.25	24.5	0			
				1711.5	19965	23.48	24	0-1			
	QPSK		0	1732.5	20175	23.42	24	0-1			
				1753.5	20385	23.37	24	0-1			
		8 RB	4	1711.5	19965	23.45	24	0-1			
				1732.5	20175	23.41	24	0-1			
				1753.5	20385	23.34	24	0-1			
			7	1711.5	19965	23.44	24	0-1			
				1732.5	20175	23.45	24	0-1			
				1753.5	20385	23.35	24	0-1			
		15RB		1711.5	19965	23.45	24	0-1			
				1732.5	20175	23.50	24	0-1			
3				1753.5	20385	23.30	24	0-1			
J		0 1 RB 7	1711.5	19965	23.82	24	0-1				
			1732.5	20175	23.79	24	0-1				
				1753.5	20385	23.38	24	0-1			
			7	1711.5	19965	23.84	24	0-1			
				1732.5	20175	23.78	24	0-1			
				1753.5	20385	23.40	24	0-1			
				1711.5	19965	23.77	24	0-1			
			14	1732.5	20175	23.17	24	0-1			
				1753.5	20385	23.29	24	0-1			
			_	1711.5	19965	22.54	23	0-2			
	16-QAM		0	1732.5	20175	22.58	23	0-2			
				1753.5	20385	22.52	23	0-2			
		0.55		1711.5	19965	22.61	23	0-2			
		8 RB	4	1732.5	20175	22.59	23	0-2			
				1753.5	20385	22.51	23	0-2			
			_	1711.5	19965	22.60	23	0-2			
			7	1732.5	20175	22.56	23	0-2			
				1753.5	20385	22.49	23	0-2			
		1-	DD	1711.5	19965	22.49	23	0-2			
		15	RB	1732.5	20175	22.53	23	0-2			
				1753.5	20385	22.47	23	0-2			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 31 of 319

	FDD Band 4										
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)			
				1710.7	19957	24.29	24.5	0			
			0	1732.5	20175	24.27	24.5	0			
				1754.3	20393	24.31	24.5	0			
				1710.7	19957	24.34	24.5	0			
		1 RB	2	1732.5	20175	24.34	24.5	0			
				1754.3	20393	24.35	24.5	0			
				1710.7	19957	24.30	24.5	0			
			5	1732.5	20175	24.26	24.5	0			
				1754.3	20393	24.32	24.5	0			
				1710.7	19957	23.39	24	0-1			
	QPSK		0	1732.5	20175	23.40	24	0-1			
		3 RB		1754.3	20393	23.38	24	0-1			
			2	1710.7	19957	23.38	24	0-1			
				1732.5	20175	23.32	24	0-1			
				1754.3	20393	23.31	24	0-1			
			3	1710.7	19957	23.38	24	0-1			
				1732.5	20175	23.39	24	0-1			
				1754.3	20393	23.34	24	0-1			
		6RB		1710.7	19957	23.37	24	0-1			
				1732.5	20175	23.36	24	0-1			
1.4				1754.3	20393	23.36	24	0-1			
		1 RB 2	1710.7	19957	23.58	24	0-1				
			0	1732.5	20175	23.45	24	0-1			
				1754.3	20393	23.49	24	0-1			
			2	1710.7	19957	23.58	24	0-1			
				1732.5	20175	23.51	24	0-1			
				1754.3	20393	23.52	24	0-1			
				1710.7	19957	23.51	24	0-1			
			5	1732.5	20175	23.46	24	0-1			
				1754.3	20393	23.45	24	0-1			
	1/ 0454			1710.7	19957	22.43	23	0-2			
	16-QAM		0	1732.5	20175	22.38	23	0-2			
				1754.3	20393	22.34	23	0-2			
		0.00	_	1710.7	19957	22.41	23	0-2			
		3 RB	2	1732.5	20175	22.39	23	0-2			
				1754.3	20393	22.29	23	0-2			
			2	1710.7	19957	22.42	23	0-2			
			3	1732.5	20175	22.39	23	0-2			
				1754.3	20393	22.27	23	0-2			
		/ .	מכ	1710.7	19957	22.48	23	0-2			
		61	RB	1732.5	20175	22.43	23	0-2			
				1754.3	20393	22.47	23	0-2			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 32 of 319

			F	FDD Band 5	5			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				829	20450	24.34	24.5	0
			0	836.5	20525	24.24	24.5	0
				844	20600	24.32	24.5	0
				829	20450	24.23	24.5	0
		1 RB	25	836.5	20525	24.33	24.5	0
				844	20600	24.37	24.5	0
				829	20450	24.24	24.5	0
			49	836.5	20525	24.38	24.5	0
				844	20600	24.18	24.5	0
				829	20450	23.32	24	0-1
	QPSK		0	836.5	20525	23.33	24	0-1
		25 RB		844	20600	23.34	24	0-1
			12	829	20450	23.35	24	0-1
				836.5	20525	23.37	24	0-1
				844	20600	23.34	24	0-1
			25	829	20450	23.36	24	0-1
				836.5	20525	23.35	24	0-1
				844	20600	23.38	24	0-1
		50RB		829	20450	23.37	24	0-1
				836.5	20525	23.40	24	0-1
10				844	20600	23.35	24	0-1
		0 1 RB 25	829	20450	23.41	24	0-1	
			0	836.5	20525	23.82	24	0-1
				844	20600	23.64	24	0-1
			25	829	20450	23.53	24	0-1
				836.5	20525	23.49	24	0-1
				844	20600	23.99	24	0-1
			49	829	20450	23.48	24	0-1
			49	836.5	20525	23.68	24	0-1
	-			844	20600	23.83	24	0-1
	16 0 11		0	829 924 F	20450	22.31	23	0-2
	16-QAM		U	836.5	20525	22.40	23	0-2
				844	20600	22.39	23	0-2
		25 RB	12	829 836.5	20450 20525	22.32	23 23	0-2 0-2
		ZO KD	12	830.5	20600	22.47 22.35	23	0-2
				829	20450	22.35	23	0-2
			25	836.5	20525	22.48	23	0-2
			20	844	20600	22.46	23	0-2
	}			829	20450	22.43	23	0-2
1		50	RB	836.5	20525	22.46	23	0-2
		30		844	20600	22.37	23	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 33 of 319

			F	DD Band 5	5			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				826.5	20425	24.32	24.5	0
			0	836.5	20525	24.16	24.5	0
				846.5	20625	24.24	24.5	0
				826.5	20425	24.27	24.5	0
		1 RB	12	836.5	20525	24.26	24.5	0
				846.5	20625	24.18	24.5	0
				826.5	20425	24.17	24.5	0
			24	836.5	20525	24.20	24.5	0
				846.5	20625	24.17	24.5	0
			_	826.5	20425	23.37	24	0-1
	QPSK		0	836.5	20525	23.34	24	0-1
				846.5	20625	23.40	24	0-1
		12 RB	6	826.5	20425	23.38	24	0-1
				836.5	20525	23.36	24	0-1
				846.5	20625	23.37	24	0-1
			13	826.5	20425	23.35	24	0-1
				836.5	20525	23.37	24	0-1
				846.5	20625	23.38	24	0-1
		25RB		826.5	20425	23.32	24	0-1
				836.5	20525	23.30	24	0-1
5			I	846.5	20625	23.35	24	0-1
			0	826.5	20425	23.53	24	0-1
		1 RB 12	U	836.5	20525	23.43	24	0-1
				846.5	20625	23.87	24	0-1
			12	826.5	20425	23.51	24	0-1
				836.5 846.5	20525 20625	23.50 23.78	24 24	0-1 0-1
			24	826.5	20025	23.76	24	0-1
				836.5	20525	23.44	24	0-1
			2.7	846.5	20625	23.70	24	0-1
				826.5	20425	22.42	23	0-1
	16-QAM		0	836.5	20525	22.42	23	0-2
	10 2/11/1		Ŭ	846.5	20625	22.49	23	0-2
				826.5	20425	22.37	23	0-2
		12 RB	6	836.5	20525	22.38	23	0-2
				846.5	20625	22.47	23	0-2
				826.5	20425	22.47	23	0-2
			13	836.5	20525	22.47	23	0-2
				846.5	20625	22.46	23	0-2
			<u> </u>	826.5	20425	22.35	23	0-2
		25RB		836.5	20525	22.34	23	0-2
				846.5	20625	22.37	23	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 34 of 319

			F	DD Band 5	5			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				825.5	20415	24.06	24.5	0
			0	836.5	20525	24.04	24.5	0
				847.5	20635	24.25	24.5	0
				825.5	20415	24.05	24.5	0
		1 RB	7	836.5	20525	24.10	24.5	0
				847.5	20635	24.31	24.5	0
				825.5	20415	24.07	24.5	0
			14	836.5	20525	24.05	24.5	0
				847.5	20635	24.26	24.5	0
				825.5	20415	23.26	24	0-1
	QPSK		0	836.5	20525	23.28	24	0-1
				847.5	20635	23.38	24	0-1
		8 RB	4	825.5	20415	23.27	24	0-1
				836.5	20525	23.26	24	0-1
				847.5	20635	23.36	24	0-1
			7	825.5	20415	23.30	24	0-1
				836.5	20525	23.31	24	0-1
				847.5	20635	23.38	24	0-1
		15RB		825.5	20415	23.36	24	0-1
				836.5	20525	23.25	24	0-1
3				847.5	20635	23.30	24	0-1
		1 RB 7	825.5	20415	23.51	24	0-1	
			0	836.5	20525	23.56	24	0-1
				847.5	20635	23.65	24	0-1
			7	825.5	20415	23.52	24	0-1
				836.5	20525	23.65	24	0-1
				847.5	20635	23.69	24	0-1
			1.4	825.5	20415	23.49	24	0-1
			14	836.5	20525	23.57	24	0-1
				847.5	20635	23.57	24	0-1
	16 0 11 11		0	825.5	20415	22.28	23	0-2
	16-QAM		0	836.5	20525	22.40	23	0-2
				847.5	20635	22.47	23	0-2
		8 RB	4	825.5	20415	22.36	23	0-2
		OKD	4	836.5	20525	22.39	23	0-2
				847.5	20635	22.47	23	0-2
			7	825.5 836.5	20415	22.36	23	0-2 0-2
			7	847.5	20525	22.45 22.49	23	0-2
					20635 20415	22.49	23 23	0-2
		15	RB	825.5 836.5	20525	22.38	23	0-2
		13	עאו				23	0-2
		<u> </u>		847.5	20635	22.30	23	U-Z

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 35 of 319

	FDD Band 5										
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)			
				824.7	20407	24.19	24.5	0			
			0	836.5	20525	24.14	24.5	0			
				848.3	20643	24.19	24.5	0			
				824.7	20407	24.25	24.5	0			
		1 RB	2	836.5	20525	24.29	24.5	0			
				848.3	20643	24.33	24.5	0			
				824.7	20407	24.15	24.5	0			
			5	836.5	20525	24.16	24.5	0			
				848.3	20643	24.20	24.5	0			
				824.7	20407	23.28	24	0-1			
	QPSK		0	836.5	20525	23.26	24	0-1			
				848.3	20643	23.29	24	0-1			
				824.7	20407	23.25	24	0-1			
		3 RB	2	836.5	20525	23.17	24	0-1			
				848.3	20643	23.27	24	0-1			
			3	824.7	20407	23.25	24	0-1			
				836.5	20525	23.20	24	0-1			
				848.3	20643	23.28	24	0-1			
		6RB		824.7	20407	23.28	24	0-1			
				836.5	20525	23.24	24	0-1			
1.4				848.3	20643	23.29	24	0-1			
1.4		1 RB	0	824.7	20407	23.50	24	0-1			
				836.5	20525	23.38	24	0-1			
				848.3	20643	23.42	24	0-1			
			2	824.7	20407	23.48	24	0-1			
				836.5	20525	23.49	24	0-1			
				848.3	20643	23.59	24	0-1			
				824.7	20407	23.39	24	0-1			
			5	836.5	20525	23.43	24	0-1			
				848.3	20643	23.48	24	0-1			
				824.7	20407	22.34	23	0-2			
	16-QAM		0	836.5	20525	22.33	23	0-2			
				848.3	20643	22.38	23	0-2			
				824.7	20407	22.33	23	0-2			
		3 RB	2	836.5	20525	22.32	23	0-2			
				848.3	20643	22.33	23	0-2			
				824.7	20407	22.30	23	0-2			
			3	836.5	20525	22.32	23	0-2			
				848.3	20643	22.37	23	0-2			
				824.7	20407	22.33	23	0-2			
		61	RB	836.5	20525	22.39	23	0-2			
				848.3	20643	22.42	23	0-2			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 36 of 319

FDD Band 7									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
				2510	20850	22.02	22.3	0	
			0	2535	21100	22.08	22.3	0	
				2560	21350	22.17	22.3	0	
				2510	20850	21.92	22.3	0	
		1 RB	50	2535	21100	21.98	22.3	0	
				2560	21350	22.14	22.3	0	
				2510	20850	22.17	22.3	0	
			99	2535	21100	22.24	22.3	0	
				2560	21350	22.27	22.3	0	
				2510	20850	21.00	22	0-1	
	QPSK		0	2535	21100	21.06	22	0-1	
				2560	21350	21.22	22	0-1	
		50 RB	25	2510	20850	21.04	22	0-1	
				2535	21100	21.08	22	0-1	
				2560	21350	21.20	22	0-1	
			50	2510	20850	21.11	22	0-1	
				2535	21100	21.22	22	0-1	
				2560	21350	21.34	22	0-1	
		100RB		2510	20850	21.04	22	0-1	
				2535	21100	21.18	22	0-1	
20				2560	21350	21.29	22	0-1	
		1 RB 50		2510	20850	21.03	22	0-1	
			2535	21100	21.48	22	0-1		
				2560	21350	21.30	22	0-1	
			50	2510	20850	21.25	22	0-1	
				2535	21100	21.59	22	0-1	
				2560	21350	21.03	22	0-1	
				2510	20850	21.29	22	0-1	
			99	2535	21100	21.73	22	0-1	
				2560	21350	21.48	22	0-1	
	4/ 044			2510	20850	20.04	21	0-2	
	16-QAM		0	2535	21100	20.04	21	0-2	
				2560	21350	20.14	21	0-2	
		E0.55	0.5	2510	20850	20.03	21	0-2	
		50 RB	25	2535	21100	20.11	21	0-2	
				2560	21350	20.16	21	0-2	
			F0	2510	20850	20.10	21	0-2	
			50	2535	21100	20.26	21	0-2	
				2560	21350	20.21	21	0-2	
			NDD.	2510	20850	20.00	21	0-2	
		100	ORB	2535	21100	20.13	21	0-2	
				2560	21350	20.15	21	0-2	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 37 of 319

				DD Band	7					
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				2507.5	20825	22.01	22.3	0		
			0	2535	21100	22.08	22.3	0		
				2562.5	21375	22.15	22.3	0		
				2507.5	20825	22.09	22.3	0		
		1 RB	36	2535	21100	22.13	22.3	0		
				2562.5	21375	22.22	22.3	0		
				2507.5	20825	22.13	22.3	0		
			74	2535	21100	22.26	22.3	0		
				2562.5	21375	22.27	Power + Max. Tolerance (dBm) 3GP 3GP	0		
				2507.5	20825	21.06		0-1		
	QPSK		0	2535	21100	21.19		0-1		
				2562.5	21375	21.31		0-1		
				2507.5	20825	21.08		0-1		
		36 RB	18	2535	21100	21.21		0-1		
				2562.5	21375	21.30		0-1		
				2507.5	20825	21.19		0-1		
			37	2535						
				2562.5						
				2507.5						
		75	RB	2535				3GPP(dB) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
15				2562.5						
				2507.5						
			0	2535	21375 21.37 22 20825 21.14 22 21100 21.21 22 21375 21.35 22 20825 21.57 22 21100 21.04 22 21375 21.07 22					
				2562.5				1		
		4.00		2507.5						
		1 RB	36	2535	21100	21.35		_		
				2562.5	21375	21.13	Bm) Tolerance (dBm) 3GPF (dBm) .001 22.3 0 .08 22.3 0 .15 22.3 0 .09 22.3 0 .13 22.3 0 .13 22.3 0 .13 22.3 0 .26 22.3 0 .27 22.3 0 .06 22 0 .19 22 0 .31 22 0 .30 22 0 .30 22 0 .37 22 0 .37 22 0 .37 22 0 .35 22 0 .57 22 0 .62 22 0 .35 22 0 .62 22 0 .35 22 0 .62 22 0 .35 <td></td>			
			7.4	2507.5	20825	21.29				
			74	2535	21100	21.22				
				2562.5	21375	21.41				
	14 000		0	2507.5	20825	20.10				
	16-QAM		U	2535	21100	20.14				
				2562.5	21375	20.20				
		24 DD	10	2507.5	20825	20.11				
		36 RB	18	2535	21100	20.19				
				2562.5	21375	20.25				
			37	2507.5	20825	20.15				
			31	2535	21100 21375	20.27 20.29		0-2		
				2562.5 2507.5	20825			0-2		
		75	RB	2507.5	21100	20.03		0-2		
		/3	טאו	2562.5	21375	20.14		0-2		
				2002.0	21373	20.24	Z I	U-Z		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 38 of 319

			F	DD Band	7			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				2505	20800	22.10	22.3	0
			0	2535	21100	22.10	22.3	0
				2565	21400	22.23	22.3	0
				2505	20800	22.08	22.3	Power + MPR Allowed per 3GPP(dB) 22.3 0 22.3 0 22.3 0 22.3 0
		1 RB	25	2535	21100	22.14	22.3	0
				2565	21400	22.21	Power + Max. Tolerance (dBm)	0
				2505	20800	22.11		0
			49	2535	21100	22.20	22.3	0
				2565 2 2505 2 2535 2 2565 2 2505 2 2535 2	21400	22.24	22.3	0
					20800	21.16		0-1
	QPSK		0	2535	21100	21.19		0-1
					21400	21.32	22	0-1
					20800	21.16	22	0-1
		25 RB	12		21100	21.21	d Power + Max. Tolerance (dBm) MPR Allowed per 3GPP(dB) 22.3 0 22.1 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1	
				2565	21400	21.34		
				2505	20800	21.12		2.3 0 2.3 0 2.3 0 2.3 0 2.3 0 2.3 0 2.3 0 2.3 0 2.3 0 2.3 0 2.2 0-1
			25	2535	21100	21.25		
				2565	21400	21.36		0-1
				2505	20800	21.14		0-1
		50	RB	2535	21100	21.25		
10				2565				
			· · · · · · · · · · · · · · · · · · ·					
			0	2535				
				2565				
				2505		21400 21.39 20800 21.16 21100 21.28 21400 21.35 20800 21.21		
		1 RB	25	2535				1
				2565		21.37		
				2505		21.14		_
			49	2535	305 20800 21.1 335 21100 21.2 365 21400 21.3 305 20800 21.1 335 21100 21.2 365 20800 21.2 355 21400 21.3 355 21100 21.3 365 21400 21.3 305 20800 21.1 335 21100 21.4 335 21100 21.4 365 21400 21.4 305 20800 20.0 305 20800 20.0			
				2565				
	1/ 0454			2505		20.09		
	16-QAM		0	2535		20.09		
				2565	21400	20.16		
		2E DD	10	2505	20800	20.13		
		25 RB	12	2535	21100	20.12		
				2565	21400	20.22		
			25	2505	20800	20.04		
			Z5	2535	21100	20.14		
				2565 2505	21400	20.25		
		EO	IDΩ	2505	20800	20.11		
		50	25 50RB	2535	21100	20.17		
				2565	21400	20.29	Z I	U-Z

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 39 of 319

			7							
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				2502.5	20775	22.06	22.3	0		
			0	2535	21100	22.21	22.3	0		
				2567.5	21425	22.33	22.3	0		
				2502.5	20775	22.20	22.3	0		
		1 RB	12	2535	21100	22.27	d Power + MPR Allowed per 3GPP(dB) 22.3 0 22.3 0 22.3 0			
				2567.5	21425	22.20				
				2502.5	20775	22.05	22.3	0		
			24	2535	21100	22.21	22.3	0		
				2567.5	21425	22.30	22.3	0		
				2502.5	20775	21.20	22	0-1		
	QPSK		0	2535	21100	21.25	22	0-1		
				2567.5	21425	21.36	22	0-1		
				2502.5	20775	21.20	22	0-1		
		12 RB	6	2535	21100	22.20 22.3 0 22.27 22.3 0 22.20 22.3 0 22.05 22.3 0 22.21 22.3 0 22.30 22.3 0 21.20 22 0 21.25 22 0 21.36 22 0 21.20 22 0 21.38 22 0 21.38 22 0 21.35 22 0 21.35 22 0 21.35 22 0 21.33 22 0 21.33 22 0 21.71 22 0 21.71 22 0 21.71 22 0 21.72 22 0 21.79 22 0	0-1			
				2567.5	21425	21.38	22	0-1		
				2502.5	20775	21.16	22	22.3 0 22.3 0 22.3 0 22.3 0 22.3 0 22.3 0 22.3 0 22.3 0 22.3 0 22 0-1 22 <		
			13	2535	21100	21.22	22			
				2567.5	21425	21.35	22	0-1		
				2502.5	20775	21.15	22	0-1		
		25	RB	2535	21100		22	0 0 0 0 0 0 0 0 0 0 0-1 0-1 0-1 0-1 0-1		
5				2567.5	21425	21.33	22	0-1		
J				2502.5	20775		22	0-1		
			0	2535	21100			0-1		
				2567.5	21425			+		
				2502.5	20775			0-1		
		1 RB	12	2535	21100					
				2567.5	21425		22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 22 0-1 21 0-2	1		
				2502.5	20775	21.63		1		
			24	2535	21100	21.74				
				2567.5	21425	21.77		1		
			_	2502.5	20775	20.17				
	16-QAM		0	2535	21100	20.21				
				2567.5	21425	20.27				
		40 ==		2502.5	20775	20.15				
		12 RB	6	2535	21100	20.23				
				2567.5	21425	20.29				
			40	2502.5	20775	20.16				
			13	2535	21100	20.21				
				2567.5	21425	20.31				
		= =	D.D.	2502.5	20775	20.17		1		
		25	RB	2535	21100	20.22		1		
				2567.5	21425	20.32	21	0-2		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 40 of 319

			F	DD Band 1	2			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				703	23050	24.36	24.5	0
			0	707	23090			0
				711	23130	24.31	24.5	0
				703	23050	24.43	24.5	Aver + dax. MPR Allowed per 3GPP(dB) 4.5 0 24 0-1 24 0-1 24 0-1 24 0-1
		1 RB	25	707	23090	24.48	24.5	0
				711	23130	24.33	24.5	0
				703	23050	(dBm) Tolerance (dBm) 3GPP(dBm) 24.36 24.5 0 24.39 24.5 0 24.31 24.5 0 24.43 24.5 0 24.48 24.5 0 24.48 24.5 0 24.49 24.5 0 24.41 24.5 0 24.42 24.5 0 24.43 24.5 0 24.44 24.5 0 23.38 24 0-1 23.38 24 0-1 23.44 24 0-1 23.48 24 0-1 23.48 24 0-1 23.48 24 0-1 23.48 24 0-1 23.49 24 0-1 23.49 24 0-1 23.49 24 0-1 23.47 24 0-1 23.99 24 0-1 23.64	0	
			49	707	23090	24.44	24.5	0
				711	23130	24.23	24.5	0
				703	23050	23.38	24	0-1
	QPSK		0	707	23090	23.51	24	0-1
				711	23130	23.44	24	0-1
				703	23050	23.41	24	0-1
		25 RB	12	707	23090	3090 24.44 24.5 3130 24.23 24.5 3050 23.38 24 3090 23.51 24 3130 23.44 24 3050 23.41 24 3090 23.48 24 3130 23.43 24 3050 23.49 24 3090 23.48 24 3130 23.55 24 3050 23.34 24 3090 23.42 24 3130 23.42 24 3130 23.47 24 3050 23.97 24	0-1	
				711	23130	23.43	24	Ower + Max. MPR Allowed per 3GPP(dB) dBm) 3GPP(dB) 24.5 0 24.0 0 24.0 0 24.0 </td
				703	23050	23.49	24	0-1
			25	707	23090	23.48	24	0 0 0 0 0 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-
				711	23130	23.55	24	0-1
			•	703	23050	23.34	24	0-1
		50	RB	707	23090	23.42	24	0-1
10				711	23130	23.47	24	0-1
10				703	23050	23.97	24	0-1
			0	707	23090	23.99	24	0-1
				711	23130	23.64	24	0-1
				703	23050	24.91	Power + Max. Tolerance (dBm) 24.5 0 24.5 24.5 0 24.5	0-1
		1 RB	25	707	23090	23.97 24 23.99 24 23.64 24 24.91 24 23.76 24	24	0-1
				711	23130	23.68	24	0-1
				703	23050	23.94	24	0-1
			49	707	23090	23.68	24	0-1
				711	23130	23.56	24	0-1
				703	23050	22.49	23	0-2
	16-QAM		0	707	23090	22.63	23	0-2
				711	23130	22.57	23	0-2
				703	23050	22.48	23	0-2
		25 RB	12	707	23090	22.64	23	0-2
				711	23130	22.59	23	0-2
				703	23050	22.53	23	0-2
			25	707	23090	22.64	23	0-2
				711	23130	22.57	23	0-2
			·	703	23050	22.50	23	0-2
		50	RB	707	23090	22.59	23	0-2
				711	23130	22.57	23	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 41 of 319

FDD Band 12										
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				700.5	23025	24.27	24.5	0		
			0	707	23090	24.32	24.5	0		
				713.5	23155	24.24	24.5	0		
				700.5	23025	24.36	24.5	0		
		1 RB	12	707	23090	24.41	24.5	0		
				713.5	23155	24.30	24.5	0		
				700.5	23025	Conducted power (dBm) 3025	0			
			24	707	23090	24.37	24.5	0		
				713.5	23155	24.13	36 24.5 0 31 24.5 0 30 24.5 0 32 24.5 0 37 24.5 0 33 24.5 0 39 24 0-1 43 24 0-1 43 24 0-1 44 24 0-1 45 24 0-1 46 24 0-1 47 24 0-1 48 24 0-1 49 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1 40 24 0-1	0		
				700.5	23025	23.39	24	0-1		
	QPSK		0	707	23090	23.47	24	0-1		
		12 RB		713.5	23155	23.43	24	0-1		
				700.5	23025	23.39	24	0-1		
		12 RB	6	707	23090	23.48	24	0-1		
				713.5	23155		Power + Max. Tolerance (dBm) 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.6 24.5 24.6 24.6 24.7			
				700.5	23025		24	0-1		
			13	707	23090		24	0-1		
				713.5	23155		24	0-1		
				700.5	23025		24	0-1		
		25	RB	707	23090			0 0 0 0 0 0 0 0 0-1 0-1 0-1 0-1 0-1 0-1		
5				713.5	23155		24	0-1		
			700.5 23025 2 0 707 23090 2							
								 		
				713.5	23155			i		
				700.5	23025					
		1 RB	12	707	23090					
				713.5	23155			 		
				700.5	23025			ł		
			24	707	23090					
				713.5	23155					
	4/ 044			700.5	23025					
	16-QAM		0	707	23090					
				713.5	23155					
		10.00	,	700.5	23025					
		12 RB	6	707	23090	1				
				713.5	23155					
			10	700.5				1		
			13	707	23090	22.54				
				713.5	23155	22.47				
		25	DD	700.5	23025	22.40	23	0-2		
		25	RB	707	23090	22.49	23	0-2		
				713.5	23155	22.47	23	0-2		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 42 of 319

			F	DD Band 1	2			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				699.5	23015	24.17	24.5	0
			0	707	23090	24.30	24.5	0
				714.5	23165	24.26	24.5	0
				699.5	23015	24.20	24.5	0
		1 RB	7	707	23090	24.36	24.5	0
				714.5	23165	24.33	24.5	0
				699.5	23015	24.30	24.5	0
			14	707		24.30	24.5	0
				714.5	23165	24.21	24.5 0 24 0-1 24 0-1 24 0-1 24 0-1 24 0-1	0
				699.5	23015	23.40	24	0-1
	QPSK		0	707	23090	23.45	24	0-1
				714.5	23165	23.41	24	0-1
				699.5	23015	23.38	24	0-1
		8 RB	4	707	23090	23.44	24	0-1
				714.5	23165	23.38	24	Power + Max. MPR Allowed per 3GPP(dB) Tolerance (dBm) 3GPP(dB) 24.5 0 24.0 0
				699.5	23015	23.36	24	
			7	707	23090	23.45	24	0-1
				714.5	23165	23.40	24	0-1
				699.5	23015	23.36	24	0-1
		15	RB	707	23090	23.39	24	0-1
3				714.5	23165	23.42	24	0-1
3				699.5	23015	23.57	24	0-1
			0	707	23090	23.38	24	0-1
				714.5	23165	23.38	24	0-1
				699.5	23015	23.65	8 24 0 4 24 0 8 24 0 6 24 0 5 24 0 6 24 0 9 24 0 2 24 0 8 24 0 8 24 0 6 24 0 6 24 0 6 24 0 9 24 0 2 24 0 2 24 0 6 24 0 6 24 0 6 24 0 6 24 0 6 24 0 6 24 0 6 24 0	0-1
		1 RB	7	707	23090	23.86	24	0-1
				714.5	23165	23.44		0-1
				699.5	23015	23.49		0-1
			14	707	23090	23.52		0-1
				714.5	23165	23.36	24	0-1
				699.5	23015	22.35	23	0-2
	16-QAM		0	707	23090	22.55		0-2
				714.5	23165	22.45		
				699.5	23015	22.44		0-2
		8 RB	4	707	23090	22.57		0-2
				714.5	23165	22.57		
				699.5	23015	22.57		
			7	707	23090	22.63		
				714.5	23165	22.45		
				699.5	23015	22.39	23	0-2
		15	RB	707	23090	22.37	23	0-2
				714.5	23165	22.38	23	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 43 of 319

FDD Band 12										
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				698.7	23007	24.13	24.5	0		
			0	707	23090	24.28	24.5	0		
				715.3	23173	24.24	24.5	0		
				698.7	23007	24.12	24.5	MPR Allowed per 3GPP(dB) 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 0 5 0 0 0 5 0		
		1 RB	2	707	23090	24.31	24.5	0		
				715.3	23173	24.35	24.5	Wer + Max. MPR Allowed per 3GPP(dB) Bm) 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 4.5 0 24 0-1 24 0-1		
				698.7	23007	namel Conducted power (dBm) Power Tolerance (dBm) MPR Allowed per 3GPP(dB) 3007 24.13 24.5 0 3090 24.28 24.5 0 3173 24.24 24.5 0 3007 24.12 24.5 0 3090 24.31 24.5 0 3090 24.31 24.5 0 3007 24.29 24.5 0 3090 24.21 24.5 0 3090 24.21 24.5 0 3090 24.21 24.5 0 3090 24.21 24.5 0 3090 23.341 24 0-1 3090 23.38 24 0-1 3090 23.41 24 0-1 3090 23.41 24 0-1 3173 23.41 24 0-1 3090 23.44 24 0-1 3173 23.44 24 0-1				
			5	707	23090	24.21	24.5	0		
				715.3	23173	173 24.18 24.5 007 23.41 24 090 23.38 24 173 23.37 24 007 23.37 24 090 23.41 24	0			
				698.7	23007					
	QPSK	3 RB	0	707	23090			0-1		
				715.3	23173			0-1		
				698.7	23007			0-1		
		3 RB	2	707	23090			wer + lax. MPR Allowed per 3GPP(dB) erance Bm) 3GPP(dB) 4.5 0 24 0-1		
				715.3	23173		Power + Max. Tolerance (dBm) MPR Allowed per 3GPP(dB) 24.5 0			
				698.7	23007			24 0-1 24 0-1		
			3	707	23090	23.44	24			
				715.3	23173	23.44	24	0-1		
				698.7	23007	23.31	24	.5 0 .5 0 .5 0 .5 0 .5 0 .5 0 .5 0 .5 0 .5 0 .5 0 .6 0 .7 0 .8 0 .9		
		61	RB	707	23090	23.36	24	0-1		
1.4				715.3	23173	23.36	24	0-1		
1.4				698.7	23007	23.51	24	0-1		
			0	707	23090	23.31	24	0-1		
				715.3	23173		24	0-1		
				698.7	23007	23.68	Ower dBm) Max. Tolerance (dBm) 14.13 24.5 14.28 24.5 14.24 24.5 14.31 24.5 14.32 24.5 14.33 24.5 14.29 24.5 14.21 24.5 14.22 24.5 14.33 24 13.37 24 13.37 24 13.39 24 13.41 24 13.31 24 13.33 24 13.31 24 13.36 24 13.31 24 13.31 24 13.51 24 13.51 24 13.51 24 13.57 24 13.57 24 13.57 24 13.57 24 13.51 24 13.57 24 13.51 24 13.57 24 <td< td=""><td>0-1</td></td<>	0-1		
		1 RB	2	707	23090			0-1		
				715.3	23173					
				698.7	23007					
			5	707	23090					
				715.3	23173					
				698.7	23007					
	16-QAM		0	707	23090					
				715.3	23173			per 3GPP(dB) 0 0 0 0 0 0 0 0 0 0 0 0 0 0-1 0-1 0-1		
				698.7	23007					
		3 RB	2	707	23090					
				715.3	23173					
				698.7	23007					
			3	707	23090					
				715.3	23173					
				698.7	23007					
		61	RB	707	23090					
				715.3	23173	22.41	23	0-2		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 44 of 319

	FDD Band 13									
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
			0	782	23230	24.31	24.5	0		
		1 RB	25	782	23230	24.44	24.5	0		
			49	782	23230	24.29	24.5	0		
	QPSK		0	782	23230	23.41	24	0-1		
		25 RB	12	782	23230	23.43	24	0-1		
			25	782	23230	23.39	24.5 0 24.5 0 24.5 0 24 0-1 24 0-1 24 0-1 24 0-1 24 0-1 24 0-1 24 0-1			
10		50	RB	782	23230	23.48	24	0-1		
10			0	782	23230	23.94	24	0-1		
		1 RB	25	782	23230	23.89	24	0-1		
			49	782	23230	23.88	24	0-1		
	16-QAM		0	782	23230	22.46	23	0-2		
		25 RB	12	782	23230	22.49	23	0-2		
			25	782	23230	22.48	23	0-2		
		50	RB	782	23230	22.54	23	0-2		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 45 of 319

BW(Mhz) Modulation RB Size RB Offset Frequency (MHz) Channel (dBm) Power (dBm) Tolerance (dBm) Toleran				F	DD Band 1	3			
OPSK OPSK 1 RB 12 0 782 784.5 23255 24.30 24.5 0 784.5 23255 24.31 24.5 0 788.2 23230 24.26 24.5 0 788.2 23230 24.26 24.5 0 788.5 23255 24.29 24.5 0 788.2 23230 24.20 24.5 0 788.2 23230 24.20 24.5 0 788.5 23255 24.18 24.5 0 788.5 23255 24.18 24.5 0 788.5 23255 24.18 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 23.49 24 0-1 788.5 23255 23.49 24 0-1 788.5 23255 23.46 24 0-1 789.5 23205 23.47 24 0-1 789.5 23205 23.47 24 0-1 789.5 23205 23.44 24 0-1 789.5 23205 23.44 24 0-1 789.5 23205 23.44 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.59 24 0-1 789.5 23205 23.59 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.61 24 0-1 789.5 23205 23.	BW(Mhz)	Modulation	RB Size	RB Offset		Channel	power	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
OPSK OPSK 1 RB 12 0 782 784.5 23255 24.30 24.5 0 784.5 23255 24.31 24.5 0 788.2 23230 24.26 24.5 0 788.2 23230 24.26 24.5 0 788.5 23255 24.29 24.5 0 788.2 23230 24.20 24.5 0 788.2 23230 24.20 24.5 0 788.5 23255 24.18 24.5 0 788.5 23255 24.18 24.5 0 788.5 23255 24.18 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 24.15 24.5 0 788.5 23255 23.49 24 0-1 788.5 23255 23.49 24 0-1 788.5 23255 23.46 24 0-1 789.5 23205 23.47 24 0-1 789.5 23205 23.47 24 0-1 789.5 23205 23.44 24 0-1 789.5 23205 23.44 24 0-1 789.5 23205 23.44 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.59 24 0-1 789.5 23205 23.59 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.61 24 0-1 789.5 23205 23.					779.5	23205	24.28	24.5	0
PARE 12 PRE 12 P				0	782	23230	24.30	24.5	0
1 RB					784.5	23255	24.30	24.5	0
APPLIED TO SET IN THE PROPERTY OF THE PROPERTY					779.5	23205	24.31	cted Power + Max. Tolerance (dBm) MPR Allowe per 3GPP(dB) 8 24.5 0 0 24.5 0 0 24.5 0 1 24.5 0 6 24.5 0 9 24.5 0 8 24.5 0 9 24.5 0 9 24 0-1 5 24.5 0 9 24 0-1 6 24 0-1 6 24 0-1 6 24 0-1 6 24 0-1 7 24 0-1 8 24 0-1 9 24 0-1 24 0-1 0-1 24 0-1 0-1 24 0-1 0-1 3 24 0-1 4 24 0-1 7 24 0-1 9	0
APSK OPSK			1 RB	12	782	23230	24.26	24.5	0
OPSK OPSK 12 RB 12 RB 14 RB 15 RB 14 RB 15 RB 15 RB 16 RB 17 RB 18 RB 18 RB 18 RB 10 RB 11 RB 11 RB 12 RB 13 RB 14 RB 15 RB 15 RB 15 RB 16 RB 16 RB 17 RB 18 RB 18 RB 10 RB 11 RB 12 RB 13 RB 14 RB 15 RB 16 RB 16 RB 17 RB 18 RB 18 RB 19 RB 10 RB 10 RB 10 RB 10 RB 10 RB 11 RB 12 RB 13 RB 14 RB 15 RB 16 RB 16 RB 17 RB 18 RB 18 RB 19 RB 10 RB 10 RB 10 RB 10 RB 10 RB 10 RB 11 RB 12 RB 13 RB 14 RB 15 RB 16 RB 16 RB 17 RB 17 RB 18 RB 18 RB 19 RB 10 R					784.5	23255	24.29	24.5	0
OPSK					779.5	23205	24.18	24.5	0
PARE A PA				24	782	23230	24.20	24.5	0
OPSK					784.5	23255	24.15	24.5	0
12 RB 12 RB 6 784.5 23255 23.46 24 0-1					779.5	23205	23.49	24	0-1
12 RB 6 779.5 782 23205 23.47 24 0-1 784.5 23255 23.48 24 0-1 779.5 23205 23.44 24 0-1 779.5 23205 23.44 24 0-1 779.5 23205 23.44 24 0-1 784.5 23255 23.48 24 0-1 784.5 23255 23.42 24 0-1 784.5 23255 23.45 24 0-1 784.5 23205 23.45 24 0-1 784.5 23205 23.45 24 0-1 784.5 23205 23.40 24 0-1 784.5 23205 23.40 24 0-1 784.5 23255 23.43 24 0-1 784.5 23205 23.57 24 0-1 784.5 23205 23.60 24 0-1 784.5 23255 23.61 24 0-1 784.5 23205 22.54 23 0-2 784.5 23205 22.54 23 0-2 784.5 23205 22.54 23 0-2 784.5 23205 22.54 23 0-2 784.5 23205 22.54 23 0-2		QPSK	12 RB	0	782	23230	23.45	24	0-1
12 RB 6 782 23230 23.44 24 0-1 784.5 23255 23.48 24 0-1 779.5 23205 23.44 24 0-1 789.5 23205 23.44 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.45 24 0-1 789.5 23205 23.43 24 0-1 789.5 23205 23.59 24 0-1 789.5 23205 23.63 24 0-1 789.5 23205 23.60 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2					784.5	23255	23.46	24	0-1
THE PROOF OF THE P					779.5	23205	23.47	24	0-1
18			12 RB	6	782	23205 23.47 24 23230 23.44 24 23255 23.48 24 23205 23.44 24 23230 23.45 24 23255 23.42 24	0-1		
13					784.5	23255	23.48	24	0-1
16-QAM TRB TR					779.5	23205	23.44	24.5 0 24.5 0 24.5 0 24.5 0 24.5 0 24.5 0 24.5 0 24.5 0 24 0-1 24 <	0-1
16-QAM 25RB 779.5 23205 23.45 24 0-1 784.5 23255 23.43 24 0-1 784.5 23255 23.43 24 0-1 789.5 23205 23.42 24 0-1 789.5 23205 23.43 24 0-1 789.5 23205 23.43 24 0-1 789.5 23205 23.59 24 0-1 789.5 23205 23.63 24 0-1 789.5 23205 23.63 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.60 24 0-1 789.5 23205 23.61 24 0-1 24 0-1 24 0-1 789.5 23205 23.61 24 0-1 24 0-1 24 0-1 24 0-1 789.5 23205 23.61 24 0-1 24 0-1 24 0-1 24 0-1 789.5 23205 23.61 24 0-1				13	782	23230	23.45		0-1
1 RB 12					784.5	23255	23.42	24	0-1
5 784.5 23255 23.43 24 0-1 779.5 23205 23.59 24 0-1 782 23230 23.57 24 0-1 784.5 23255 23.63 24 0-1 784.5 23205 23.60 24 0-1 782 23230 23.54 24 0-1 784.5 23255 23.61 24 0-1 784.5 23255 23.61 24 0-1 779.5 23205 23.47 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 782 23205 22.56 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 784.5 23205 22.54 23 0-2 784.5 23205 22.54 23 0-2 7					779.5	23205	23.45	24	0-1
1 RB 12 782 23205 23.59 24 0-1 1 RB 12 782 23205 23.60 24 0-1 779.5 23205 23.63 24 0-1 779.5 23205 23.60 24 0-1 779.5 23205 23.60 24 0-1 779.5 23205 23.60 24 0-1 784.5 23255 23.61 24 0-1 784.5 23255 23.61 24 0-1 779.5 23205 23.47 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 779.5 23205 22.54 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2	-		25	RB	782	23230	23.42	24	0-1
1 RB 12 782 23230 23.57 24 0-1 784.5 23255 23.63 24 0-1 779.5 23205 23.60 24 0-1 784.5 23255 23.60 24 0-1 784.5 23255 23.61 24 0-1 784.5 23255 23.61 24 0-1 785 23205 23.47 24 0-1 786.5 23255 23.51 24 0-1 786.5 23255 23.51 24 0-1 787.5 23205 23.51 24 0-1 788.5 23255 23.51 24 0-1 788.5 23255 23.51 24 0-1 788.5 23255 23.51 24 0-1 788.5 23255 22.56 23 0-2 788.5 23205 22.54 23 0-2 788.5 23255 22.43 23 0-2 788.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2	5				784.5	23255	23.43	24	0-1
1 RB 12 784.5 23255 23.63 24 0-1 779.5 23205 23.60 24 0-1 782 23230 23.54 24 0-1 784.5 23255 23.61 24 0-1 784.5 23255 23.61 24 0-1 789.5 23205 23.47 24 0-1 789.5 23205 23.47 24 0-1 789.5 23205 23.51 24 0-1 789.5 23205 23.51 24 0-1 789.5 23205 22.56 23 0-2 789.5 23205 22.56 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2				779.5 23205 23.59	24	0-1			
1 RB 12 779.5 23205 23.60 24 0-1 782 23230 23.54 24 0-1 784.5 23255 23.61 24 0-1 779.5 23205 23.47 24 0-1 782 23230 23.59 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 784.5 23255 23.51 24 0-1 782 23230 22.56 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2				0	782	23230	23.57	24	0-1
1 RB 12 782 23230 23.54 24 0-1 784.5 23255 23.61 24 0-1 779.5 23205 23.47 24 0-1 782 23230 23.59 24 0-1 784.5 23255 23.51 24 0-1 779.5 23205 23.51 24 0-1 782 23230 22.56 23 0-2 782 23230 22.54 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2					784.5	23255	23.63	24	0-1
16-QAM 124 784.5 23255 23.61 24 0-1 779.5 23205 23.47 24 0-1 782 23230 23.59 24 0-1 784.5 23255 23.51 24 0-1 779.5 23205 22.56 23 0-2 784.5 23255 22.54 23 0-2 784.5 23255 22.54 23 0-2 779.5 23205 22.54 23 0-2 784.5 782 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2					779.5	23205	23.60	24	0-1
16-QAM 24 779.5 23205 23.47 24 0-1 782 23230 23.59 24 0-1 784.5 23255 23.51 24 0-1 779.5 23205 22.56 23 0-2 782 23230 22.54 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2			1 RB	12	782	23230	23.54	24	0-1
16-QAM 24 782 23230 23.59 24 0-1 784.5 23255 23.51 24 0-1 779.5 23205 22.56 23 0-2 784.5 23230 22.54 23 0-2 784.5 23255 22.43 23 0-2 779.5 23205 22.54 23 0-2 784.5 23205 22.54 23 0-2 789.5 23205 22.54 23 0-2 789.5 780.					784.5	23255	23.61	24	0-1
16-QAM 0 784.5 23255 23.51 24 0-1 779.5 23205 22.56 23 0-2 782 23230 22.54 23 0-2 784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 779.5 23205 22.54 23 0-2 789.5 789.5 23205 22.54 23 0-2 789.5 789.5 23205 22.54 23 0-2					779.5	23205	23.47	24	0-1
16-QAM 0 779.5 23205 22.56 23 0-2 782 23230 22.54 23 0-2 784.5 23255 22.43 23 0-2 779.5 23205 22.54 23 0-2 779.5 23205 22.54 23 0-2 782 23230 22.52 23 0-2				24	782	23230	23.59	24	0-1
0 782 23230 22.54 23 0-2 784.5 23255 22.43 23 0-2 779.5 23205 22.54 23 0-2 12 RB 6 782 23230 22.52 23 0-2					784.5	23255	23.51	Tolerance (dBm) 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.6 24.6 24.6 24.7 25.7 26.7 27.7 2	0-1
784.5 23255 22.43 23 0-2 784.5 23255 22.43 23 0-2 779.5 23205 22.54 23 0-2 12 RB 6 782 23230 22.52 23 0-2		16-QAM			779.5	23205	22.56	23	0-2
12 RB 6 779.5 23205 22.54 23 0-2 782 23230 22.52 23 0-2				0					
12 RB 6 782 23230 22.52 23 0-2									
0 702 23230 22.32 23 0-2			12 RB	6					
.51.0 20200 22.11 20 02									
13 <u>782 23230 22.43 23 0-2</u>				13		23230		23	0-2
			25	DR					
			23	טא					

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 46 of 319

			F	DD Band 1	7			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				709	23780	24.43	24.5	0
			0	710	23790	24.33	24.5	0
				711	23800	24.42	ducted ower bower (dBm) Power (dBm) MPR Allowed per (dBm) 4.43 24.5 0 4.433 24.5 0 4.442 24.5 0 4.440 24.5 0 4.441 24.5 0 4.442 24.5 0 4.444 24.5 0 4.449 24.5 0 4.46 24.5 0 4.46 24.5 0 4.46 24.5 0 3.57 24 0-1 3.54 24 0-1 3.55 24 0-1 3.56 24 0-1 3.57 24 0-1 3.59 24 0-1 3.59 24 0-1 3.61 24 0-1 3.62 24 0-1 3.61 24 0-1 3.62 24 0-1 3.82 0-1 0-1 3	
				709	23780	24.44		
		1 RB	25	710	23790	24.40		
				711	23800	24.44		0
				709	23780 24.43 24.5 0 23790 24.33 24.5 0 23800 24.42 24.5 0 23780 24.44 24.5 0 23790 24.40 24.5 0 23800 24.44 24.5 0 23780 24.49 24.5 0 23790 24.46 24.5 0 23780 23.57 24 0-1 23790 23.54 24 0-1 23790 23.54 24 0-1 23780 23.55 24 0-1 23780 23.56 24 0-1 23790 23.56 24 0-1 23780 23.61 24 0-1 23780 23.56 24 0-1 23790 23.56 24 0-1 23790 23.64 24 0-1 23780 23.61 24 0-1 23780 <td>0</td>	0		
			49	710	23790	24.46	24.5	0
				711	23800	24.46	24.5	0
				709	23780	23.57		0-1
	QPSK		0	710	23790	23.54		0-1
				711				0-1
				709	23780			0-1
		25 RB	12	710			Aucted ower Bm) Aux. Tolerance (dBm) Aux.	
				711		23.57		Power + Max. MPR Allowed per 3GPP(dB) Tolerance (dBm) 0 24.5 0 2
				709	23780	23.61		
			25	710	23790	23.59	24	
				711	23800	23.56	24	0-1
				709	23780	23.61		0-1
		50	RB	710				
10			•	711				
								
			0	710				+
				711				
				709		(dBm) 80 24.43 24.5 0 90 24.33 24.5 0 80 24.42 24.5 0 80 24.44 24.5 0 90 24.40 24.5 0 80 24.49 24.5 0 90 24.46 24.5 0 90 24.46 24.5 0 90 24.46 24.5 0 90 24.46 24.5 0 90 23.57 24 0 90 23.54 24 0 90 23.55 24 0 90 23.56 24 0 90 23.56 24 0 90 23.57 24 0 80 23.61 24 0 90 23.59 24 0 90 23.56 24 0 80 23.82 <td< td=""><td></td></td<>		
		1 RB	25	710				
				711				
				709				
			49	710	(dBm) 23780 24.43 24.5 23790 24.33 24.5 23800 24.42 24.5 23780 24.44 24.5 23790 24.40 24.5 23800 24.44 24.5 23780 24.49 24.5 23790 24.46 24.5 23780 23.57 24 23790 23.54 24 23790 23.54 24 23790 23.56 24 23790 23.56 24 23790 23.56 24 23790 23.56 24 23790 23.56 24 23790 23.56 24 23780 23.61 24 23790 23.56 24 23780 23.61 24 23790 23.64 24 23790 23.64 24 23790 23.77 24 23800			
				711				
	1/ 0454			709				
	16-QAM		0	710				
				711				
		0F DD	10	709				
		25 RB	12	710				
				711				
			25	709				
			25	710				
				711				
			DD	709				
		50	RB	710				
				711	23800	22.53	23	0-2

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 47 of 319

			F	DD Band 1	7			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				706.5	23755	24.47	24.5	0
			0	710	23790	24.33	24.5	0
				713.5	23825	24.43	24.5	0
				706.5	23755	24.43	24.5	0
		1 RB	12	710	23790	24.39	24.5	0
				713.5	23825	24.43	24.5	0
				706.5	23755	24.40	24.5	0
			24	710	23790	24.46	24.5	0
				713.5	23825	24.38	24.5	0
				706.5	23755	23.52	24	0-1
	QPSK		0	710	23790	23.49	24	0-1
				713.5	23825	23.52	24	0-1
				706.5	23755	23.52		0-1
		12 RB	6	710	23790	23.50		Mer + MPR Allowed per 3GPP(dB) 24.5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				713.5	23825	23.51		
				706.5	23755	23.56		
			13	710	23790	23.49		
				713.5	23825	23.52		1
				706.5	23755	23.51		
		25	RB	710	23790	23.52		
5			1	713.5	23825	23.44		
				706.5	23755	23.82		
			0	710	23790	23.95		
				713.5	23825	23.94		
		1 RB	12	706.5	23755	23.93		
		IKD	12	710 713.5	23790 23825	23.97 23.97		
				713.5	23755	23.97		
			24	700.5	23790	23.98		
			24	713.5	23825	23.57		
				706.5	23755	22.53		
	16-QAM		0	710	23790	22.54		
	10 (2) (1)		Ŭ	713.5	23825	22.57		
				715.5	23755	22.52		
		12 RB	6	710	23790	22.54		
				713.5	23825	22.56		
				706.5	23755	22.54		
			13	710	23790	22.58		
				713.5	23825	22.57		
				706.5	23755	22.44		
		25	RB	710	23790	22.48		
				713.5	23825	22.44		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 48 of 319

WLAN802.11 a/b/g/n (20M/40M) conducted power table:

		<u></u>				
	802.11b	Max. Rated Avg.		Average Power	Output (dBm)	
СН	Frequency	Power + Max.		Data Rat	e (Mbps)	
СП	(MHz)	Tolerance (dBm)	1	2	5.5	11
1	2412	16.00	15.86	15.79	15.65	15.54
6	2437	16.00	15.92	15.87	15.75	15.68
11	2462	16.00	15.82	15.71	15.63	15.51

	802.11g	Max. Rated Avg.		Average Power Output(dBm)									
СН	Frequency	Power + Max.		Data Rate (Mbps)									
	(MHz)	(MHz) Tolerance (dBm)	6	9	12	18	24	36	48	54			
1	2412	15.00	14.99	14.85	14.76	14.66	14.52	14.41	14.35	14.22			
6	2437	15.00	14.75	14.62	14.54	14.41	14.34	14.21	14.12	14.08			
11	2462	15.00	14.67	14.51	14.42	14.38	14.31	14.22	14.15	14.03			

802.11n (20M)		Max. Rated Avg.	Average Power Output(dBm)								
CLI	Frequency	Power + Max.		Data Rate (Mbps)							
СН	(MHz)	Tolerance (dBm)	6.5	13	19.5	26	39	52	58.5	65	
1	2412	11.50	11.48	11.31	11.20	11.05	10.95	10.81	10.72	10.67	
6	2437	11.50	11.49	11.38	11.18	11.02	10.91	10.75	10.64	10.51	
11	2462	11.50	11.46	11.36	11.21	11.15	11.08	10.91	10.82	10.74	

802	2.11n (40M)	Max. Rated Avg.		Average Power Output(dBm)								
СН	Frequency	Power + Max.		Data Rate (Mbps)								
СП	(MHz)	Tolerance (dBm)	13.5	27	40.5	54	81	108	121.5	135		
3	2422	11.50	11.49	11.33	11.21	11.15	11.04	10.94	10.82	10.73		
6	2437	11.50	11.22	11.18	11.13	11.02	10.94	10.82	10.73	10.61		
9	2452	11.50	11.48	11.32	11.17	11.09	10.92	10.75	10.70	10.62		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 49 of 319

802.11a		Man Datad								
		Max. Rated			Aver	age Po	wer (d	Bm)		
5.26/5.3	3G/5.6G/5.8G	Avg. Power +					/2.41			
СН	Frequency	Max. Tolerance				ita Rate	<u> </u>	<u> </u>	Т	
	(MHz)	(dBm)	6	9	12	18	24	36	48	54
36	5180	14.00	13.99	13.82	13.69	13.52	13.44	13.31	13.25	13.17
40	5200	14.00	13.98	13.83	13.62	13.54	13.41	13.34	13.26	13.14
44	5220	14.00	13.74	13.61	13.52	13.41	13.34	13.22	13.14	13.05
48	5240	14.00	13.73	13.66	13.58	13.42	13.38	13.25	13.19	13.02
52	5260	14.00	13.84	13.78	13.70	13.62	13.54	13.28	13.17	13.01
56	5280	14.00	13.88	13.65	13.54	13.48	13.34	13.27	13.18	13.08
60	5300	14.00	13.96	13.91	13.82	13.64	13.55	13.45	13.34	13.22
64	5320	14.00	13.99	13.85	13.66	13.52	13.48	13.34	13.27	13.15
100	5500	14.00	13.78	13.62	13.52	13.47	13.32	13.24	13.17	13.08
104	5520	14.00	13.86	13.71	13.62	13.51	13.44	13.32	13.28	13.18
108	5540	14.00	13.89	13.75	13.64	13.57	13.42	13.34	13.27	13.21
112	5560	14.00	13.87	13.75	13.67	13.52	13.47	13.41	13.34	13.22
116	5580	14.00	13.80	13.72	13.62	13.54	13.42	13.34	13.21	13.05
132	5660	14.00	13.98	13.84	13.74	13.61	13.54	13.42	13.32	13.24
136	5680	14.00	13.63	13.52	13.42	13.31	13.28	13.14	13.10	13.02
140	5700	14.00	13.57	13.44	13.37	13.25	13.17	13.15	13.08	13.01
149	5745	14.00	13.70	13.62	13.51	13.41	13.32	13.22	13.13	13.08
153	5765	14.00	13.87	13.81	13.72	13.61	13.52	13.41	13.32	13.24
157	5785	14.00	13.74	13.62	13.51	13.40	13.32	13.24	13.17	13.02
161	5805	14.00	13.84	13.71	13.60	13.52	13.43	13.34	13.21	13.12
165	5825	14.00	13.81	13.72	13.68	13.59	13.48	13.38	13.25	13.14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 50 of 319

	11n(20M)	Max. Rated			Aver	age Po	wer (d	Bm)		
5.2G/5.3	3G/5.6G/5.8G	Avg. Power +								
СН	Frequency	Max. Tolerance	Data Rate (Mbps)							
CIT	(MHz)	(dBm)	6.5	13	19.5	26	39	52	58.5	65
36	5180	13.00	12.69	12.52	12.44	12.34	12.27	12.18	12.12	12.05
40	5200	13.00	12.74	12.64	12.52	12.47	12.34	12.27	12.18	12.13
44	5220	13.00	12.77	12.68	12.58	12.41	12.37	12.21	12.18	12.14
48	5240	13.00	12.78	12.70	12.62	12.52	12.41	12.34	12.24	12.08
52	5260	13.00	12.83	12.75	12.65	12.51	12.44	12.32	12.28	12.19
56	5280	13.00	12.95	12.79	12.64	12.58	12.41	12.34	12.24	12.17
60	5300	13.00	12.96	12.85	12.71	12.62	12.58	12.49	12.41	12.35
64	5320	13.00	12.99	12.92	12.84	12.71	12.62	12.48	12.32	12.27
100	5500	13.00	12.73	12.61	12.52	12.42	12.33	12.24	12.12	12.08
104	5520	13.00	12.74	12.62	12.51	12.45	12.38	12.28	12.17	12.07
108	5540	13.00	12.80	12.75	12.62	12.51	12.43	12.37	12.28	12.08
112	5560	13.00	12.92	12.82	12.74	12.62	12.54	12.42	12.34	12.27
116	5580	13.00	12.51	12.43	12.37	12.24	12.17	12.15	12.08	12.03
132	5660	13.00	12.97	12.79	12.65	12.54	12.42	12.35	12.10	12.01
136	5680	13.00	12.91	12.82	12.73	12.57	12.49	12.32	12.27	12.05
140	5700	13.00	12.96	12.90	12.75	12.68	12.60	12.51	12.38	12.21
149	5745	13.00	12.77	12.63	12.51	12.44	12.32	12.28	12.19	12.05
153	5765	13.00	12.83	12.75	12.62	12.52	12.41	12.32	12.24	12.18
157	5785	13.00	12.77	12.64	12.51	12.42	12.37	12.31	12.24	12.05
161	5805	13.00	12.64	12.61	12.52	12.42	12.38	12.18	12.12	12.03
165	5825	13.00	12.71	12.62	12.54	12.48	12.34	12.27	12.15	12.07

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 51 of 319

802.11n(40M) 5.2G/5.3G/5.6G/5.8G		Max. Rated	Average Power (dBm)								
5.26/5.3	36/5.66/5.86	Avg. Power +									
СН	Frequency	Max. Tolerance	Data Rate (Mbps)								
СП	(MHz)	(dBm)	13.5	27	40.5	54	81	108	121.5	135	
38	5190	10.50	10.28	10.21	10.16	10.09	10.01	9.93	9.81	9.75	
46	5230	12.00	11.98	11.92	11.87	11.71	11.69	11.55	11.42	11.32	
54	5270	12.00	11.97	11.91	11.82	11.73	11.65	11.52	11.44	11.31	
62	5310	11.50	11.45	11.31	11.25	11.18	11.12	11.06	10.98	10.91	
102	5510	11.50	11.35	11.25	11.19	11.11	11.04	10.97	10.84	10.72	
110	5550	12.00	11.86	11.74	11.65	11.54	11.48	11.32	11.26	11.14	
134	5670	12.00	11.98	11.95	11.84	11.74	11.69	11.63	11.52	11.44	
151	5755	12.00	11.76	11.68	11.54	11.44	11.35	11.21	11.15	11.04	
159	5795	12.00	11.84	11.75	11.66	11.59	11.47	11.32	11.25	11.14	

Bluetooth conducted power table:

	-						
Frequency	Peak (dBm)						
(MHz)	BDR	4DPSK	8DPSK				
2402	3.50	3.13	3.24				
2441	5.38	4.74	4.80				
2480	4.42	3.80	3.90				

Frequency	Avg. (dBm)			
(MHz)	BT4.0			
2402	-6			
2442	-3.86			
2480	-5.21			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 52 of 319

1.4 Test Environment

Ambient Temperature: 22±2° C Tissue Simulating Liquid: 22±2° C

1.5 Operation Description

General:

- 1. The EUT is controlled by using a Radio Communication Tester (R&S CMU200 and Antrisu MT8820C), and the communication between the EUT and the tester is established by air link.
- Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.
- 3. During the SAR testing, the DASY 5 system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing.
- 4. Testing head SAR at lowest, middle and highest channel for all bands with Left Tilt /Left Cheek/Right Tilt/Right Cheek conditions.
- 5. Testing body-worn SAR by separating the EUT and the phantom **15mm** distance when performing GSM850/1900, WCDMA Band II/IV/V, LTE Band 2/4/5/7/12/13/17 and WLAN 5G. (Both front side & back side)
- 6. Testing hotspot mode SAR by separating the EUT and the phantom **10mm** distance.
 - #. The SAR testing for portable devices with wireless router capability is referred as test guidance of KDB 941225D06v02 (SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities).
 - #. The following procedures are applicable when the overall device length and width are ≥9 cm x 5 cm respectively. A test separation of 10 mm is required. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25 mm from that surface or edge, for the data modes, wireless technologies and frequency bands supporting hotspot mode.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 53 of 319

For WLAN 2.4G (15mm separation): the testing device support mobile hotspot function, the separation distance is 10mm (No need to perform body-worn SAR testing due to the hotspot mode (10mm separation distance) is more conservative than body-worn mode (15mm separation distance).

Test configurations:

- (1) Front side
- (2) Back side
- (3) Top side. (WWAN antenna to edge distance > 25mm_ No SAR measurement is necessary for this configuration)
- (4) Bottom side. (WLAN antenna to edge distance >25mm_ No SAR measurement is necessary for this configuration)
- (5) Right side. (WLAN antenna to edge distance >25mm_ No SAR measurement is necessary for this configuration)
- (6) Left side.
- 7. According to KDB447498D01v05r02 The 1-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances≤ 50 mm are determined by: [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] $\cdot [\sqrt{f(GHz)}] \le 3.0$ for 1-g SAR, SAR evaluation is not required. (Max power of Bluetooth = 5.38 dBm)

When SAR evaluation is not required to be measured, per FCC KDB447498D01v05r02, the following equation must be used to estimate the 1g SAR for simultaneous transmission assessment involving that transmitter.

Estimated SAR = $[\sqrt{f(GHz)/7.5}] \cdot [(max. power of channel, mW)/(min. test separation)]$ distance, mm)]

Estimated 10g SAR = $[\sqrt{f(GHz)/18.75}] \cdot [(max. power of channel, mW)/(min. test)]$ separation distance, mm)]

Mode	Frequency (MHz)	Maximum Power (dBm)	Separation Distance (Body) (mm)	Estimated SAR 1g (Body) (W/kg)	
Bluetooth	2441	5.38	15	0.048	
Bluetooth	2441	5.38	10	0.072	

8. The SAR measurement for EDGE mode is not required since the source-based time-averaged power for EDGE mode is lower than that for GPRS mode.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 54 of 319

- 9. The SAR measurement is not required for HSPA since its maximum output power is less than ¼ dB higher than RMC without HSPA.
- 10. The SAR measurement is not required for HSPA+ since its maximum output power is less than ¼ dB higher than RMC without HSPA+.
- 11. LTE modes test according to KDB 941225D05v02r03.
 - a. Per Section 5.2.1, the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation.
 - Using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
 - When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.
 - When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.
 - b. Per Section 5.2.2, the largest channel bandwidth and measure SAR for QPSK with 50% RB allocation
 - The procedures required for 1 RB allocation in 5.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.
 - c. Per Section 5.2.3, the largest channel bandwidth and measure SAR for QPSK with 100% RB allocation
 - For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are \leq 0.8 W/kg.
 - Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - d. Per Section 5.2.4, Higher order modulations
 - For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 5.2.1, 5.2.2 and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 55 of 319

identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > 1/2 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

- e. Per Section 5.3, other channel bandwidth standalone SAR test requirements
 - For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 5.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > 1/2 dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.
 - The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth.
- 12. The SAR measurement is not required for 802.11g/n since its maximum output power is less than 1/4 dB higher than 802.11b.
- 13. The SAR measurement is not required for 802.11n since its maximum output power is less than 1/4 dB higher than 802.11a.
- 14. The highest body SAR configuration is repeated with a headset attached.
- 15. According to KDB447498D01v05r02, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is ≤ 0.8 W/kg, when the transmission band is \leq 100 MHz.
- 16. According to KDB447498D01v05r02, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is \leq 0.6 W/kg, when the transmission band is between 100 MHz and 200MHz.
- 17. According to KDB447498 D01v05r02, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is \leq 0.4 W/kg, when the transmission band is \geq 200MHz.
- 18. According to KDB865664D01v01r03, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is ≥ 0.8 W/kg, repeated that measurement once. Perform a second repeated measurement only if

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 56 of 319

the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit)

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

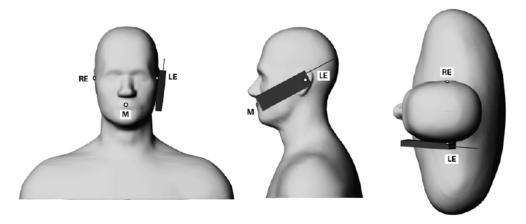
f (886-2) 2298-0488

SGS Taiwan Ltd.

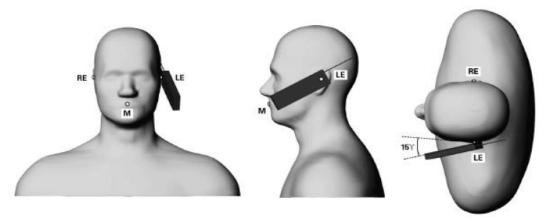


Page: 57 of 319

1.6 Positioning Procedure



Phone position 1, "cheek" or "touch" position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning.



Phone position 2, "tilted position." The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning.

Cheek/Touch Position:

The handset was brought toward the mouth of the head phantom by pivoting against the ear reference point until any point of the mouthpiece or keypad touched the phantom.

Ear/Tilt Position:

With the phone aligned in the Cheek/Touch position, the handset was tilted away from the mouth with respect to the test device reference point by 15 degrees.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 58 of 319

1.7 Evaluation Procedures

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- 1. The extraction of the measured data (grid and values) from the Zoom Scan.
- 2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters).
- 3. The generation of a high-resolution mesh within the measured volume.
- 4. The interpolation of all measured values from the measurement grid to the high-resolution grid.
- 5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface.
- 6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within -2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 59 of 319

most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans.

The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm contains about 30g of tissue. The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is the moved around until the highest averaged SAR is found.

If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 60 of 319

1.8 Probe Calibration Procedures

For the calibration of E-field probes in lossy liquids, an electric field with an accurately known field strength must be produced within the measured liquid. For standardization purposes it would be desirable if all measurements which are necessary to assess the correct field strength would be traceable to standardized measurement procedures. In the following two different calibration techniques are summarized:

1.8.1 Transfer Calibration with Temperature Probes

In lossy liquids the specific absorption rate (SAR) is related both to the electric field (E) and the temperature gradient $(\delta T / \delta t)$ in the liquid.

$$SAR = \frac{\sigma}{\rho} |E|^2 = c \frac{\delta T}{\delta t}$$

Whereby σ is the conductivity, ρ the density and c the heat capacity of the liquid.

Hence, the electric field in lossy liquid can be measured indirectly by measuring the temperature gradient in the liquid. Non-disturbing temperature probes (optical probes or thermistor probes with resistive lines) with high spatial resolution (<1-2 mm) and fast reaction time (<1 s) are available and can be easily calibrated with high precision [1]. The setup and the exciting source have no influence on the calibration; only the relative positioning uncertainties of the standard temperature probe and the E-field probe to be calibrated must be considered. However, several problems limit the available accuracy of probe calibrations with temperature probes:

 The temperature gradient is not directly measurable but must be evaluated from temperature measurements at different time steps. Special precaution is necessary to avoid measurement errors caused by temperature gradients due to energy equalizing effects or convection currents in the liquid. Such effects cannot be completely avoided, as the measured field itself destroys the thermal equilibrium in the liquid. With a careful setup these errors can be kept small.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd. t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 61 of 319

• The measured volume around the temperature probe is not well defined. It is difficult to calculate the energy transfer from a surrounding gradient temperature field into the probe. These effects must be considered, since temperature probes are calibrated in liquid with homogeneous temperatures. There is no traceable standard for temperature rise measurements.

- The calibration depends on the assessment of the specific density, the heat capacity and the conductivity of the medium. While the specific density and heat capacity can be measured accurately with standardized procedures ($\sim 2\%$ for c; much better for ρ), there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed $\pm 5\%$.
- Temperature rise measurements are not very sensitive and therefore are often performed at a higher power level than the E-field measurements. The nonlinearities in the system (e.g., power measurements, different components, etc.) must be considered.

Considering these problems, the possible accuracy of the calibration of E-field probes with temperature gradient measurements in a carefully designed setup is about $\pm 10\%$ (RSS) [2]. Recently, a setup which is a combination of the waveguide techniques and the thermal measurements was presented in [3]. The estimated uncertainty of the setup is $\pm 5\%$ (RSS) when the same liquid is used for the calibration and for actual measurements and $\pm 7-9\%$ (RSS) when not, which is in good agreement with the estimates given in [2].

1.8.2 Calibration with Analytical Fields

In this method a technical setup is used in which the field can be calculated analytically from measurements of other physical magnitudes (e.g., input power). This corresponds to the standard field method for probe calibration in air; however, there is no standard defined for fields in lossy liquids.

When using calculated fields in lossy liquids for probe calibration, several points must be considered in the assessment of the uncertainty:

• The setup must enable accurate determination of the incident power.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

www.tw.sas.com



Page: 62 of 319

- The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.
- Due to the small wavelength in liquids with high permittivity, even small setups might be above the resonant cutoff frequencies. The field distribution in the setup must be carefully checked for conformity with the theoretical field distribution.

References

- [1] N. Kuster, Q. Balzano, and J.C. Lin, Eds., *Mobile Communications Safety*, Chapman & Hall, London, 1997.
- [2] K. Meier, M. Burkhardt, T. Schmid, and N. Kuster, \Broadband calibration of E-field probes in lossy media", IEEE Transactions on Microwave Theory and Techniques, vol. 44, no. 10, pp. 1954{1962, Oct. 1996.
- [3] K. Jokela, P. Hyysalo, and L. Puranen, \Calibration of specific absorption rate (SAR) probes in waveguide at 900 MHz", IEEE Transactions on Instrumentation and Measurements, vol. 47, no. 2, pp. 432{438, Apr. 1998.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

www.tw.sas.com



Page: 63 of 319

1.9 The SAR Measurement System

A block diagram of the SAR measurement system is given in Fig. a. This SAR measurement system uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). Model EX3DV4 field probes are used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ ($|Ei|^2$)/ ρ where σ and ρ are the conductivity and mass density of the tissue-simulant.

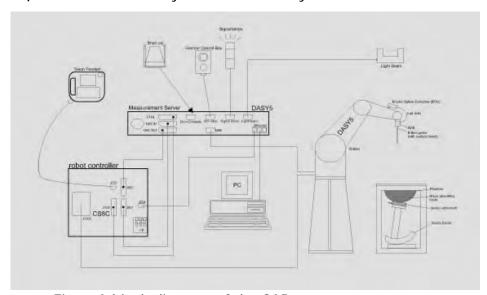


Fig. a A block diagram of the SAR measurement system

The DASY 5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- Data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 www.tw.sas.com



Page: 64 of 319

- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 7
- DASY 5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing to validate the proper functioning of the system.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 65 of 319

1.10 System Components

EX3DV4 E-Field Probe

Construction	Symmetrical design with triangular core Built-in						
	shielding against static charges PEEK enclosure						
	material (resistant to organic solvents, e.g.,						
	DGBE)						
Calibration	Basic Broad Band Calibration in air						
	Conversion Factors (CF) for HSL 750/835/1750						
	/1900/2450/2600/5200/5300/5600/5800 MHz						
	Additional CF for other liquids and frequencies						
	upon request						
Frequency	10 MHz to > 6 GHz, Linearity: ± 0.6 dB						
Directivity	± 0.3 dB in HSL (rotation around probe axis)						
	± 0.5 dB in tissue material (rotation normal to probe axis)						
Dynamic	$10 \mu W/g \text{ to } > 100 \text{ mW/g}$						
Range	Linearity: ± 0.2 dB (noise: typically < 1 μW/g)						
Dimensions	Tip diameter: 2.5 mm						
Application	High precision dosimetric measurements in any exposure scenario (e.g.,						
	very strong gradient fields). Only probe which enables compliance testing						
	for frequencies up to 6 GHz with precision of better 30%.						

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 66 of 319

SAM PHANTOM V4.0C

Construction: The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-200X and IEC 62209. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.

Shell Thickness: 2 ± 0.2 mm

Filling Volume: Approx. 25 liters

Dimensions: Height: 210 mm;

> Length: 1000 mm; Width: 500 mm



DEVICE HOLDER

Construction	In combination with the Twin SAM Phantom
	V4.0/V4.0C or Twin SAM, the Mounting
	Device (made from POM) enables the rotation
	of the mounted transmitter in spherical
	coordinates, whereby the rotation point is the
	ear opening. The devices can be easily and
	accurately positioned according to IEC, IEEE,
	CENELEC, FCC or other specifications. The
	device holder can be locked at different
	phantom locations (left head, right head, flat
	phantom).



Device Holder

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 67 of 319

1.11 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% (according to KDB865664 D01) from the target SAR values.

These tests were done at 750/835/1750/1900/2450/2600/5200/5300/5600/5800 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1. During the tests, the ambient temperature of the laboratory was 21.7°C, the relative humidity was 62% and the liquid depth above the ear reference points was above 15 cm $(\leq 3G)$ or 10 cm (>3G) in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

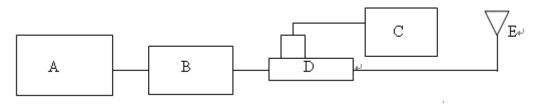
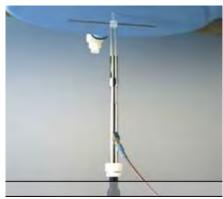


Fig. b The block diagram of system verification

- A. Signal Generator
- B. Amplifier
- C. Power Sensor
- D. Dual Directional Coupling
- E. Reference Dipole Antenna



Photograph of the Dipole Antenna

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 68 of 319

Validation Kit	S/N	Frequency (MHz)		Target SAR (1g) (Pin=250mW)	Measured SAR (1g)(mW/g)	Deviation (%)	Measured Date
			Head	2.11	2.13	-0.95%	Nov. 21, 2014
D750V2	1015	750	Body	2.24	2.28	-1.79%	Nov. 28, 2014
			Бойу	2.24	2.27	-1.34%	Nov. 29, 2014
			Head	2.38	2.39	-0.42%	Nov. 16, 2014
D835V2	4d063	835	Heau	2.38	2.51	-5.46%	Nov. 26, 2014
D033V2	40003	033	Body	2.41	2.46	-2.07%	Nov. 16, 2014
			Войу	2.41	2.47	-2.49%	Nov. 27, 2014
			Head	9.26	9.34	-0.86%	Nov. 17, 2014
D1750V2	1000	1750	пеаи	9.26	8.98	3.02%	Nov. 22, 2014
D1730V2	1006	1008 1750	Pody	9.44	9.38	0.64%	Nov. 17, 2014
			Body	9.44	9.48	-0.42%	Nov. 23, 2014
			Head	9.71	9.78	-0.72%	Nov. 18, 2014
D1900V2	5d027	5d027 1900		9.71	9.68	0.31%	Nov. 24, 2014
D1900V2			Body	9.87	9.94	-0.71%	Nov. 18, 2014
			Войу	9.87	10.2	-3.34%	Nov. 25, 2014
D2450V2	727	2450	Head	13.1	13.4	-2.29%	Nov. 23, 2014
D2430V2	121	2450	Body	12.8	13.1	-2.34%	1100. 23, 2014
D2600V2	1005	2600	Head	14.7	14.9	-1.36%	Nov. 30, 2014
D2000V2	1005	2000	Body	14.3	14.4	-0.70%	Dec. 01, 2014
		5200	Head	8.02	8.37	-4.36%	Nov. 17, 2014
		3200	Body	7.69	7.59	1.30%	Nov. 19, 2014
		5300	Head	8.45	8.32	1.54%	Nov. 18, 2014
D5GHzV2	1104	3300	Body	7.84	7.83	0.13%	Nov. 19, 2014
	1104	5600	Head	8.31	8.74	-5.17%	Nov. 17, 2014
		3600	Body	8.21	8.4	-2.31%	Nov. 19, 2014
		5800	Head	7.95	8.11	-2.01%	Nov. 18, 2014
			Body	7.73	7.72	0.13%	Nov. 19, 2014

Table 1. System validation (follow manufacture target value)

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 69 of 319

1.12 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the Agilent Model 85070E Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjuncation with Network Analyzer.

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The depth of the tissue simulant in the flat section of the phantom was at least 15 cm (≤3G) or 10 cm (>3G) during all tests. (Appendix Fig. 2)

Tissue Type	Measured Frequency (MHz)	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, Er	Measured Conductivity, σ (S/m)	% dev ɛr	% dev σ	Measurement Date
	703	42.186	0.890	43.087	0.86	-2.14%	3.34%	
	707	42.165	0.890	43.029	0.865	-2.05%	2.81%	
	709	42.155	0.890	43.012	0.867	-2.03%	2.58%	
Head	710	42.149	0.890	42.999	0.867	-2.02%	2.58%	Nov.21, 2014
	711	42.144	0.890	42.988	0.868	-2.00%	2.47%	
	750	41.942	0.893	42.233	0.902	-0.69%	-1.01%	
	782	41.775	0.896	41.921	0.929	-0.35%	-3.70%	
	703	55.714	0.960	54.772	0.924	1.69%	3.72%	
	707	55.699	0.960	54.731	0.927	1.74%	3.44%	Nov.28, 2014
	711	55.683	0.960	54.711	0.931	1.75%	3.02%	
	750	55.531	0.963	54.319	0.972	2.18%	-0.93%	
Body	782	55.406	0.966	53.993	1.004	2.55%	-3.95%	
	709	55.691	0.960	54.704	0.932	1.77%	2.92%	
	710	55.687	0.960	54.695	0.933	1.78%	2.81%	Nov.29, 2014
	711	55.683	0.960	54.687	0.934	1.79%	2.71%	
	750	55.531	0.963	54.296	0.976	2.22%	-1.35%	
	824.2	41.556	0.899	41.299	0.872	0.62%	3.02%	Nov.16, 2014
Head	826.4	41.545	0.899	41.273	0.874	0.65%	2.78%	
	835	41.500	0.900	41.166	0.883	0.80%	1.89%	
	836.6	41.500	0.902	41.14	0.885	0.87%	1.88%	
	846.6	41.500	0.912	41.012	0.894	1.18%	1.97%	
	848.8	41.500	0.915	40.986	0.896	1.24%	2.08%	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279

www.tw.sas.com



Page: 70 of 319

Tissue Type	Measured Frequency (MHz)	Target Dielectric Constant, Er	Target Conductivity, σ (S/m)	Measured Dielectric Constant, Er	Measured Conductivity, σ (S/m)	% dev £r	% dev σ	Measurement Date
Body	824.2	55.242	0.969	52.976	1.001	4.10%	-3.29%	
	826.4	55.234	0.969	52.958	1.003	4.12%	-3.51%	
	835	55.2	0.97	52.886	1.013	4.19%	-4.43%	Nov.16, 2014
Бойу	836.6	55.195	0.972	52.87	1.015	4.21%	-4.42%	
	846.6	55.164	0.984	52.785	1.025	4.31%	-4.17%	
	848.8	55.158	0.987	52.766	1.027	4.34%	-4.05%	
	829	41.531	0.9	41.237	0.891	0.71%	1.00%	
Head	835	41.500	0.9	41.143	0.897	0.86%	0.33%	Nov.26, 2014
пеаи	836.5	41.500	0.902	41.125	0.898	0.90%	0.44%	1000.20, 2014
	844	41.500	0.91	41.006	0.906	1.19%	0.44%	
	829	55.223	0.97	53.413	0.965	3.28%	0.52%	Nov.27, 2014
Pody	835	55.2	0.97	53.304	0.969	3.43%	0.10%	
Body	836.5	55.195	0.972	53.278	0.97	3.47%	0.21%	
	844	55.172	0.981	53.195	0.977	3.58%	0.41%	
	1712.4	40.138	1.349	39.584	1.343	1.38%	0.44%	Nov. 17, 2014
Head	1732.4	40.107	1.361	39.598	1.364	1.27%	-0.22%	
пеаи	1750	40.079	1.371	39.564	1.377	1.28%	-0.44%	
	1752.6	40.075	1.373	39.547	1.379	1.32%	-0.44%	
	1712.4	53.531	1.465	54.496	1.43	-1.80%	2.39%	
Body	1732.4	53.478	1.477	54.47	1.444	-1.85%	2.23%	
Бойу	1750	53.432	1.488	54.404	1.457	-1.82%	2.08%	
	1752.6	53.425	1.49	54.388	1.459	-1.80%	2.08%	
	1720	40.126	1.354	40.675	1.362	-1.37%	-0.59%	Nov. 22, 2014
Head	1732.5	40.107	1.361	40.628	1.379	-1.30%	-1.32%	
	1745	40.187	1.368	40.605	1.386	-1.04%	-1.32%	
	1750	40.079	1.371	40.597	1.391	-1.29%	-1.46%	
Body	1720	53.511	1.469	53.954	1.442	-0.83%	1.84%	Nov. 23, 2014
	1732.5	53.478	1.477	53.838	1.451	-0.67%	1.76%	
	1745	53.445	1.485	53.779	1.464	-0.62%	1.41%	
	1750	53.432	1.488	53.752	1.471	-0.60%	1.14%	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 71 of 319

Tissue Type	Measured Frequency (MHz)	Target Dielectric Constant, Er	Target Conductivity, σ (S/m)	Measured Dielectric Constant, Er	Measured Conductivity, σ (S/m)	% dev ɛr	% dev σ	Measurement Date
	1850.2	40.000	1.400	39.531	1.331	1.17%	4.93%	
	1852.4	40.000	1.400	39.522	1.332	1.20%	4.86%	
Head	1880	40.000	1.400	39.435	1.361	1.41%	2.79%	
пеаи	1900	40.000	1.400	39.35	1.38	1.63%	1.43%	
	1907.6	40.000	1.400	39.314	1.388	1.72%	0.86%	
	1909.8	40.000	1.400	39.304	1.389	1.74%	0.79%	Nov. 10, 2014
	1850.2	53.300	1.520	52.205	1.445	2.05%	4.93%	Nov. 18, 2014
	1852.4	53.300	1.520	52.194	1.446	2.08%	4.87%	
Dody	1880	53.300	1.520	52.026	1.467	2.39%	3.49%	
Body	1900	53.300	1.520	51.93	1.491	2.57%	1.91%	
	1907.6	53.300	1.520	51.911	1.502	2.61%	1.18%	
	1909.8	53.300	1.520	51.909	1.504	2.61%	1.05%	
	1860	40.000	1.400	41.136	1.374	-2.84%	1.86%	Nov. 24, 2014
Head	1880	40.000	1.400	41.123	1.383	-2.81%	1.21%	
	1900	40.000	1.400	41.116	1.42	-2.79%	-1.43%	
	1860	53.300	1.520	51.904	1.499	2.62%	1.38%	Nov. 25, 2014
Body	1880	53.300	1.520	51.855	1.52	2.71%	0.00%	
	1900	53.300	1.520	51.826	1.542	2.77%	-1.45%	
	2412	39.268	1.766	39.3	1.779	-0.08%	-0.74%	Nov. 23, 2014
Head	2437	39.223	1.788	39.231	1.808	-0.02%	-1.12%	
пеаи	2450	39.200	1.800	39.185	1.823	0.04%	-1.28%	
	2462	39.185	1.813	39.117	1.836	0.17%	-1.27%	
	2412	52.751	1.914	50.237	1.992	4.77%	-4.08%	
Б	2437	52.717	1.938	50.142	2.027	4.88%	-4.59%	
Body	2450	52.700	1.950	50.104	2.045	4.93%	-4.87%	
	2462	52.685	1.967	50.06	2.063	4.98%	-4.88%	
	2510	39.124	1.865	38.986	1.879	0.35%	-0.75%	Nov. 30, 2014
Head	2535	39.092	1.893	39.916	1.908	-2.11%	-0.79%	
	2560	39.060	1.920	38.831	1.928	0.59%	-0.42%	
	2600	39.009	1.964	38.778	1.972	0.59%	-0.41%	
	2510	52.624	2.035	51.72	2.021	1.72%	0.69%	
	2535	52.592	2.071	51.673	2.055	1.75%	0.77%	†
Body	2560	52.560	2.106	51.581	2.093	1.86%	0.62%	Dec. 01, 2014
	2600	52.509	2.163	51.492	2.138	1.94%	1.16%	†

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 72 of 319

Tissue Type	Measured Frequency (MHz)	Target Dielectric Constant, Er	Target Conductivity, σ (S/m)	Measured Dielectric Constant, Er	Measured Conductivity, σ (S/m)	% dev ɛr	% dev σ	Measurement Date
	5180	36.009	4.635	36.126	4.589	-0.33%	0.98%	Nov. 17, 2014
	5200	35.986	4.655	36.074	4.618	-0.25%	0.79%	
	5220	35.963	4.676	36.058	4.652	-0.26%	0.50%	
	5540	35.597	5.004	35.288	5.017	0.87%	-0.27%	
	5560	35.574	5.024	35.255	5.037	0.90%	-0.26%	
	5600	35.529	5.065	35.142	5.081	1.09%	-0.32%	
Head	5660	35.460	5.127	35.031	5.153	1.21%	-0.52%	
Head	5280	35.894	4.737	35.889	4.705	0.01%	0.68%	
	5300	35.871	4.758	35.828	4.731	0.12%	0.56%	
	5320	35.849	4.778	35.798	4.767	0.14%	0.23%	Nov. 18, 2014
	5765	35.340	5.234	34.758	5.276	1.65%	-0.80%	
	5800	35.300	5.270	34.701	5.315	1.70%	-0.85%	
	5805	35.294	5.275	34.677	5.321	1.75%	-0.87%	
	5825	35.271	5.296	34.595	5.342	1.92%	-0.88%	
	5180	49.041	5.276	48.660	5.393	0.78%	-2.22%	Nov. 19, 2014
	5200	49.014	5.299	48.601	5.407	0.84%	-2.03%	
	5220	48.987	5.323	48.468	5.430	1.06%	-2.02%	
	5280	48.906	5.393	48.364	5.556	1.11%	-3.03%	
	5300	48.879	5.416	48.323	5.571	1.14%	-2.86%	
	5320	48.851	5.439	48.196	5.590	1.34%	-2.77%	
Pody	5540	48.553	5.696	47.536	5.945	2.09%	-4.36%	
Body	5560	48.526	5.720	47.462	6.002	2.19%	-4.94%	
	5600	48.471	5.766	47.501	6.041	2.00%	-4.76%	
	5660	48.390	5.837	47.180	6.058	2.50%	-3.80%	
	5765	48.248	5.959	46.908	6.161	2.78%	-3.39%	
	5800	48.200	6.000	46.941	6.200	2.61%	-3.33%	
	5805	48.193	6.006	46.936	6.213	2.61%	-3.45%	
	5825	48.166	6.029	46.889	6.263	2.65%	-3.88%	

Table 2. Dielectric Parameters of Tissue Simulant Fluid

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

www.tw.sgs.com



Page: 73 of 319

The composition of the brain tissue simulating liquid:

The compos	ILIOIT OI		issuc siriic	nating nqt	iiu.			
Fraguenav				Ingre	edient			Total
Frequency (MHz)	Mode	DGMBE	Water	Salt	Preventol D-7	Cellulose	Sugar	Total amount
750	Head		532.98 g	18.3 g	2.4 g	3.2 g	766 g	1.3L(Kg)
750	Body	_	631.68 g	11.72 g	1.2 g		600 g	1.0L(Kg)
050	Head	_	532.98 g	18.3 g	2.4 g	3.2 g	766 g	1.3L(Kg)
850	Body	_	631.68 g	11.72 g	1.2 g		600 g	1.0L(Kg)
1750	Head	444.52 g	552.42 g	3.06 g				1.0L(Kg)
1750	Body	300.67 g	716.56 g	4.0 g	_		_	1.0L(Kg)
1000	Head	444.52 g	552.42 g	3.06 g				1.0L(Kg)
1900	Body	300.67 g	716.56 g	4.0 g	_	_	_	1.0L(Kg)
2450	Head	550ml	450ml		_		_	1.0L(Kg)
2450	Body	301.7ml	698.3ml	_	_	_	_	1.0L(Kg)
2400	Head	550ml	450ml	_	_			1.0L(Kg)
2600	Body	301.7ml	698.3ml		_		_	1.0L(Kg)

Simulating Liquids for 5 GHz, Manufactured by SPEAG:

Ingredients	Water	Esters, Emulsifiers, Inhibitors	Sodium and Salt
(% by weight)	60-80	20-40	0-1.5

Table 3. Recipes for tissue simulating liquid

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 74 of 319

1.13 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017.

These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter.

Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

(1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over a 10 grams of tissue (defined as a tissue volume in the shape of a cube).

Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 75 of 319

(2) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube).

Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube).

General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure.

Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section. (Table .6)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 m W/g	8.00 m W/g
Spatial Average SAR (Whole Body)	0.08 m W/g	0.40 m W/g
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 m W/g	20.00 m W/g

Table 4. RF exposure limits

Notes:

- 1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
- Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

SGS Taiwan Ltd. t (886-2) 2299-3279 f (886-2) 2298-0488 www.tw.sas.com



Page: 76 of 319

2. Summary of Results

GSM 850 MHz

Mode	Position	Distanc e (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Scaling	Averaged 1 (W/ Measured	g kg)	Plot page
	Re Cheek	-	251	848.8	33.50	33.30	4.71%	0.511	0.535	-
	Re Tilt	-	251	848.8	33.50	33.30	4.71%	0.298	0.312	-
GSM850	Le Cheek	-	128	824.2	33.50	33.00	12.20%	0.515	0.578	-
(GMSK) (Head)	Le Cheek	-	190	836.6	33.50	33.10	9.65%	0.602	0.660	120
(1.544)	Le Cheek	-	251	848.8	33.50	33.30	4.71%	0.600	0.628	-
	Le Tilt	-	251	848.8	33.50	33.30	4.71%	0.317	0.332	-
GSM850	Front side	15	251	848.8	33.50	33.30	4.71%	0.254	0.266	-
(GMSK)	Back side	15	128	824.2	33.50	33.00	12.20%	0.295	0.331	-
(Speech	Back side	15	190	836.6	33.50	33.10	9.65%	0.353	0.387	-
mode)	Back side	15	251	848.8	33.50	33.30	4.71%	0.399	0.418	121
	Front side	10	251	848.8	33.50	33.30	4.71%	0.532	0.557	-
	Back side	10	128	824.2	33.50	33.00	12.20%	0.653	0.733	-
GPRS850	Back side	10	190	836.6	33.50	33.10	9.65%	0.702	0.770	122
(GMSK)	Back side	10	251	848.8	33.50	33.30	4.71%	0.701	0.734	-
(Hotspot)	Bottom side	10	251	848.8	33.50	33.30	4.71%	0.255	0.267	-
	Right side	10	251	848.8	33.50	33.30	4.71%	0.336	0.352	-
	Left side	10	251	848.8	33.50	33.30	4.71%	0.627	0.657	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 77 of 319

GSM 1900 MHz

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance	Measured Avg. Power (dBm)	Scaling	1	SAR over g /kg) Reported	Plot page
	Re Cheek	-	512	1850.2	30.50	29.80	17.49%	0.148	0.174	-
	Re Cheek	-	661	1880	30.50	29.90	14.82%	0.171	0.196	-
GSM1900	Re Cheek	-	810	1909.8	30.50	30.10	9.65%	0.194	0.213	123
(GMSK) (Head)	Re Tilt	-	810	1909.8	30.50	30.10	9.65%	0.052	0.057	-
(ricua)	Le Cheek	-	810	1909.8	30.50	30.10	9.65%	0.176	0.193	-
	Le Tilt	-	810	1909.8	30.50	30.10	9.65%	0.054	0.059	-
GSM1900	Front side	15	810	1909.8	30.50	30.10	9.65%	0.287	0.315	-
(GMSK)	Back side	15	512	1850.2	30.50	29.80	17.49%	0.314	0.369	-
(Speech	Back side	15	661	1880	30.50	29.90	14.82%	0.318	0.365	-
mode)	Back side	15	810	1909.8	30.50	30.10	9.65%	0.326	0.357	124
	Front side	10	810	1909.8	30.50	30.10	9.65%	0.466	0.511	-
	Back side	10	810	1909.8	30.50	30.10	9.65%	0.548	0.601	-
GPR S1 900	Bottom side	10	512	1850.2	30.50	29.80	17.49%	0.538	0.632	-
(GMSK)	Bottom side	10	661	1880	30.50	29.90	14.82%	0.562	0.645	-
(Hotspot)	Bottom side	10	810	1909.8	30.50	30.10	9.65%	0.662	0.726	125
	Right side	10	810	1909.8	30.50	30.10	9.65%	0.120	0.132	-
	Left side	10	810	1909.8	30.50	30.10	9.65%	0.094	0.103	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 78 of 319

WCDMA Band II

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	•	Plot page
R99 (Head) Body-worn (speech mode)		(11111)		(IVII IZ)	Tolerance (dBm)	(dBm)		Measured	Reported	page
	RE Cheek	-	9262	1852.4	24.5	24.25	5.93%	0.308	0.326	-
	RE Cheek	-	9400	1880	24.5	24.17	7.89%	0.33	0.356	-
R99	RE Cheek	-	9538	1907.6	24.5	24.40	2.33%	0.352	0.360	126
(Head)	RE Tilt	-	9538	1907.6	24.5	24.40	2.33%	0.099	0.101	-
	LE Cheek	-	9538	1907.6	24.5	24.40	2.33%	0.338	0.346	-
	LE Tilt	-	9538	1907.6	24.5	24.40	2.33%	0.1	0.102	-
	Front side	15	9262	1852.4	24.5	24.25	5.93%	0.485	0.514	-
,	Front side	15	9400	1880	24.5	24.17	7.89%	0.505	0.545	-
, ,	Front side	15	9538	1907.6	24.5	24.40	2.33%	0.563	0.576	127
modoj	Back side	15	9538	1907.6	24.5	24.40	2.33%	0.484	0.495	-
	Front side	10	9262	1852.4	24.5	24.25	5.93%	0.768	0.814	-
	Front side	10	9400	1880	24.5	24.17	7.89%	0.796	0.859	-
	Front side	10	9538	1907.6	24.5	24.40	2.33%	0.838	0.858	-
	Back side	10	9262	1852.4	24.5	24.25	5.93%	0.993	1.052	-
	Back side	10	9400	1880	24.5	24.17	7.89%	1.12	1.208	-
Hotspot	Back side	10	9538	1907.6	24.5	24.40	2.33%	1.25	1.279	-
πυιδρυι	Bottom side	10	9262	1852.4	24.5	24.25	5.93%	1.05	1.112	-
	Bottom side	10	9400	1880	24.5	24.17	7.89%	1.05	1.133	-
	Bottom side	10	9538	1907.6	24.5	24.40	2.33%	1.34	1.371	128
	Bottom side*	10	9538	1907.6	24.5	24.40	2.33%	1.28	1.310	-
	Right side	10	9538	1907.6	24.5	24.40	2.33%	0.235	0.240	-
	Left side	10	9538	1907.6	24.5	24.40	2.33%	0.184	0.188	-

^{* -} repeated at the highest SAR measurement according to the KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 79 of 319

WCDMA Band IV

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g /kg)	Plot
R99 (Head) Body-worn (speech mode) Hotspot		(111111)		(IVII IZ)	Tolerance (dBm)	(dBm)		Measured	Reported	page
	RE Cheek	-	1312	1712.4	24.5	24.40	2.33%	0.4	0.409	-
	RE Cheek	-	1412	1732.4	24.5	24.43	1.62%	0.43	0.437	129
R99	RE Cheek	-	1513	1752.6	24.5	24.35	3.51%	0.39	0.404	-
(Head)	RE Tilt	-	1412	1732.4	24.5	24.43	1.62%	0.163	0.166	-
	LE Cheek	-	1412	1732.4	24.5	24.43	1.62%	0.387	0.393	-
	LE Tilt	-	1412	1732.4	24.5	24.43	1.62%	0.118	0.120	-
	Front side	15	1312	1712.4	24.5	24.40	2.33%	0.58	0.594	-
Body-worn	Front side	15	1412	1732.4	24.5	24.43	1.62%	0.59	0.600	130
(speech mode)	Front side	15	1513	1752.6	24.5	24.35	3.51%	0.575	0.595	-
	Back side	15	1412	1732.4	24.5	24.43	1.62%	0.561	0.570	-
	Front side	10	1312	1712.4	24.5	24.40	2.33%	0.985	1.008	-
	Front side	10	1412	1732.4	24.5	24.43	1.62%	1.01	1.026	-
	Front side	10	1513	1752.6	24.5	24.35	3.51%	0.969	1.003	-
	Back side	10	1312	1712.4	24.5	24.40	2.33%	1.19	1.218	-
	Back side	10	1412	1732.4	24.5	24.43	1.62%	1.07	1.087	-
Hotspot	Back side	10	1513	1752.6	24.5	24.35	3.51%	1.33	1.377	-
потѕрот	Back side*	10	1513	1752.6	24.5	24.35	3.51%	1.35	1.397	131
	Bottom side	10	1312	1712.4	24.5	24.40	2.33%	0.98	1.003	-
	Bottom side	10	1412	1732.4	24.5	24.43	1.62%	1.1	1.118	-
	Bottom side	10	1513	1752.6	24.5	24.35	3.51%	1.18	1.221	-
	Right side	10	1412	1732.4	24.5	24.43	1.62%	0.246	0.250	-
	Left side	10	1412	1732.4	24.5	24.43	1.62%	0.214	0.217	-

^{* -} repeated at the highest SAR measurement according to the KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 80 of 319

WCDMA Band V

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	Averaged S (W/	AR over 1g 'kg)	Plot page
		(11111)		(1411 12)	Tolerance (dBm)	(dBm)		Measured	Reported	page
	RE Cheek	-	4132	826.4	24.5	24.37	3.04%	0.427	0.440	-
	RE Tilt	-	4132	826.4	24.5	24.37	3.04%	0.244	0.251	-
R99	LE Cheek	-	4132	826.4	24.5	24.37	3.04%	0.491	0.506	-
(Head)	LE Cheek	-	4183	836.6	24.5	24.27	5.44%	0.523	0.551	-
	LE Cheek	-	4233	846.6	24.5	24.10	9.65%	0.552	0.605	132
	LE Tilt	-	4132	826.4	24.5	24.37	3.04%	0.256	0.264	-
	Front side	15	4132	826.4	24.5	24.37	3.04%	0.271	0.279	-
Body-worn	Back side	15	4132	826.4	24.5	24.37	3.04%	0.298	0.307	-
(speech mode)	Back side	15	4183	836.6	24.5	24.27	5.44%	0.311	0.328	-
	Back side	15	4233	846.6	24.5	24.10	9.65%	0.429	0.470	133
	Front side	10	4132	826.4	24.5	24.37	3.04%	0.662	0.682	-
	Back side	10	4132	826.4	24.5	24.37	3.04%	0.964	0.993	134
	Back side*	10	4132	826.4	24.5	24.37	3.04%	0.959	0.988	-
Hotopot	Back side	10	4183	836.6	24.5	24.27	5.44%	0.919	0.969	-
Hotspot	Back side	10	4233	846.6	24.5	24.10	9.65%	0.925	1.014	-
	Bottom side	10	4132	826.4	24.5	24.37	3.04%	0.17	0.175	-
	Right side	10	4132	826.4	24.5	24.37	3.04%	0.446	0.460	-
	Left side	10	4132	826.4	24.5	24.37	3.04%	0.616	0.635	-

^{* -} repeated at the highest SAR measurement according to the KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 81 of 319

LTE FDD Band II

	D Du.	<u> </u>													
									Max. Rated	Measured		Averaged 1g (V	SAR over V/kg)		
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page	
					RE Cheek	-	19100	1900	24.5	24.35	3.51%	0.351	0.363	-	
					RE Tilt	-	19100	1900	24.5	24.35	3.51%	0.158	0.164	-	
			1 RB	99	LE Cheek	-	18700	1860	24.5	24.08	10.15%	0.328	0.361	-	
			I KD	99	LE Cheek	-	18900	1880	24.5	24.18	7.65%	0.374	0.403	-	
				LE Cheek	-	19100	1900	24.5	24.35	3.51%	0.453	0.469	135		
				LE Tilt	-	19100	1900	24.5	24.35	3.51%	0.15	0.155	-		
LTE Band 2	LTE Band 2	MHz QPSK		50	RE Cheek	-	19100	1900	24	23.46	13.24%	0.284	0.322	-	
(Head)	ZUIVITZ		EO DD		RE Tilt	-	19100	1900	24	23.46	13.24%	0.131	0.148	-	
			501	50 RB	50	LE Cheek	-	19100	1900	24	23.46	13.24%	0.327	0.370	-
					LE Tilt	-	19100	1900	24	23.46	13.24%	0.121	0.137	-	
					RE Cheek	-	19100	1900	24	23.36	15.88%	0.271	0.314	-	
			100) RB	RE Tilt	-	19100	1900	24	23.36	15.88%	0.128	0.148	-	
			100	/ KD	LE Cheek	-	19100	1900	24	23.36	15.88%	0.342	0.396	-	
					LE Tilt	-	19100	1900	24	23.36	15.88%	0.113	0.131	-	
					Front side	15mm	19100	1900	24.5	24.35	3.51%	0.476	0.493	-	
			1 RB	99	Back side	15mm	18700	1860	24.5	24.08	10.15%	0.638	0.703	-	
LTC Dand 1			TIND	77	Back side	15mm	18900	1880	24.5	24.18	7.65%	0.659	0.709	-	
LTE Band 2 (Body-	20MHz	QPSK			Back side	15mm	19100	1900	24.5	24.35	3.51%	0.743	0.769	136	
Worn)	ZOIVII IZ	QI SIX	50 RB	50	Front side	15mm	19100	1900	24	23.46	13.24%	0.386	0.437	-	
110,			30 KB	30	Back side	15mm	19100	1900	24	23.46	13.24%	0.583	0.660	-	
			100) RB	Front side	15mm	19100	1900	24	23.36	15.88%	0.375	0.435	-	
			100	י ועט	Back side	15mm	19100	1900	24	23.36	15.88%	0.567	0.657	-	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 82 of 319

									Max. Rated	Measured		Averaged 1g (V	SAR over V/kg)		
Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dRm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page	
					Front side	10mm	18700	1860	24.5	24.08	10.15%	0.769	0.847	-	
					Front side	10mm	18900	1880	24.5	24.18	7.65%	0.821	0.884	-	
					Front side	10mm	19100	1900	24.5	24.35	3.51%	0.899	0.931	-	
					Back side	10mm	18700	1860	24.5	24.08	10.15%	1.18	1.300	-	
					Back side	10mm	18900	1880	24.5	24.18	7.65%	1.33	1.432	-	
					Back side	10mm	19100	1900	24.5	24.35	3.51%	1.32	1.366	-	
			1 DD	00	Bottom side	10mm	18700	1860	24.5	24.08	10.15%	1.13	1.245	-	
			1 RB	99	Bottom side	10mm	18900	1880	24.5	24.18	7.65%	1.21	1.303	-	
				Bottom side	10mm	19100	1900	24.5	24.35	3.51%	1.34	1.387	137		
				Bottom side*	10mm	19100	1900	24.5	24.35	3.51%	1.25	1.294	-		
				Bottom side- with headset	10mm	19100	1900	24.5	24.35	3.51%	1.29	1.335	-		
					Right side	10mm	19100	1900	24.5	24.35	3.51%	0.213	0.220	-	
					Left side	10mm	19100	1900	24.5	24.35	3.51%	0.227	0.235	-	
					Front side	10mm	18700	1860	24	23.15	21.62%	0.616	0.749	-	
						Front side	10mm	18900	1880	24	23.21	19.95%	0.661	0.793	-
					Front side	10mm	19100	1900	24	23.46	13.24%	0.744	0.843	-	
LTE Band 2	20MHz	QPSK			Back side	10mm	18700	1860	24	23.15	21.62%	0.965	1.174	-	
(Hotspot)	ZUIVITZ	UPSK			Back side	10mm	18900	1880	24	23.21	19.95%	1.03	1.235	-	
			50 RB 50	50 RB 50	50	Back side	10mm	19100	1900	24	23.46	13.24%	1.09	1.234	-
					Bottom side	10mm	18700	1860	24	23.15	21.62%	0.929	1.130	-	
					Bottom side	10mm	18900	1880	24	23.21	19.95%	0.989	1.186	-	
					Bottom side	10mm	19100	1900	24	23.46	13.24%	1.09	1.234	-	
					Right side	10mm	19100	1900	24	23.46	13.24%	0.171	0.194	-	
					Left side	10mm	19100	1900	24	23.46	13.24%	0.182	0.206	-	
					Front side	10mm	18700	1860	24	23.14	21.90%	0.614	0.748	-	
					Front side	10mm	18900	1880	24	23.16	21.34%	0.649	0.787	-	
					Front side	10mm	19100	1900	24	23.36	15.88%	0.72	0.834	-	
					Back side	10mm	18700	1860	24	23.14	21.90%	0.958	1.168	-	
				Back side	10mm	18900	1880	24	23.16	21.34%	1.01	1.226	-		
		100	RB	Back side	10mm	19100	1900	24	23.36	15.88%	1.07	1.240	-		
					Bottom side	10mm	18700	1860	24	23.14	21.90%	0.932	1.136	-	
					Bottom side	10mm	18900	1880	24	23.16	21.34%	0.972	1.179	-	
					Bottom side	10mm	19100	1900	24	23.36	15.88%	1.06	1.228	-	
					Right side	10mm	19100	1900	24	23.36	15.88%	0.172	0.199	-	
					Left side	10mm	19100	1900	24	23.36	15.88%	0.181	0.210	-	

^{* -} repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 83 of 319

LTE FDD Band IV

									Max. Rated	Measured			SAR over V/kg)		
Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page	
					RE Cheek	-	20050	1720	24.5	24.49	0.23%	0.451	0.452	-	
					RE Tilt	-	20050	1720	24.5	24.49	0.23%	0.182	0.182	-	
			1 RB	0	LE Cheek	-	20050	1720	24.5	24.49	0.23%	0.615	0.616	138	
			IKD	U	LE Cheek	-	20175	1732.5	24.5	24.47	0.69%	0.571	0.575	-	
					LE Cheek	-	20300	1745	24.5	24.48	0.46%	0.536	0.538	-	
				LE Tilt	-	20050	1720	24.5	24.49	0.23%	0.15	0.150	-		
LTE Band 4	LTE Band 4 20MHz	QPSK			RE Cheek	-	20050	1720	24	23.65	8.39%	0.373	0.404	-	
(Head)	ZUIVITZ		50 RB	EO DD	0	RE Tilt	-	20050	1720	24	23.65	8.39%	0.15	0.163	-
				30 KB	0	LE Cheek	-	20050	1720	24	23.65	8.39%	0.492	0.533	-
					LE Tilt	-	20050	1720	24	23.65	8.39%	0.122	0.132	-	
					RE Cheek	-	20050	1720	24	23.58	10.15%	0.366	0.403	-	
			100	DD	RE Tilt	-	20050	1720	24	23.58	10.15%	0.149	0.164	-	
			100	KD	LE Cheek	-	20050	1720	24	23.58	10.15%	0.49	0.540	-	
					LE Tilt	-	20050	1720	24	23.58	10.15%	0.123	0.135	-	
					Front side	15mm	20050	1720	24.5	24.49	0.23%	0.617	0.618	-	
			1 RB	0	Back side	15mm	20050	1720	24.5	24.49	0.23%	0.679	0.681	139	
LTC Dond 4			I KD	U	Back side	15mm	20175	1732.5	24.5	24.47	0.69%	0.654	0.659	-	
	LTE Band 4 (Body- 20MHz Worn)	QPSK			Back side	15mm	20300	1745	24.5	24.48	0.46%	0.585	0.588	-	
		Ursk	50 DP	0	Front side	15mm	20050	1720	24	23.65	8.39%	0.506	0.548	-	
vvoiii)			50 RB	U	Back side	15mm	20050	1720	24	23.65	8.39%	0.543	0.589	-	
		-	100	PR	Front side	15mm	20050	1720	24	23.58	10.15%	0.497	0.547	-	
			100	י ועט	Back side	15mm	20050	1720	24	23.58	10.15%	0.528	0.582	-	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 84 of 319

									Max. Rated	Measured		Averaged 1g (V	SAR over V/kg)	
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dRm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
					Front side	10mm	20050	1720	24.5	24.49	0.23%	1.08	1.082	-
					Front side	10mm	20175	1732.5	24.5	24.47	0.69%	1.14	1.148	-
					Front side	10mm	20300	1745	24.5	24.48	0.46%	0.957	0.961	
					Back side	10mm	20050	1720	24.5	24.49	0.23%	1.14	1.143	-
					Back side	10mm	20175	1732.5	24.5	24.47	0.69%	1.18	1.188	-
			1 RB	0	Back side	10mm	20300	1745	24.5	24.48	0.46%	1.07	1.075	
			IKD	U	Bottom side	10mm	20050	1720	24.5	24.49	0.23%	1.11	1.113	-
				Bottom side	10mm	20175	1732.5	24.5	24.47	0.69%	1.2	1.208	140	
				Bottom side	10mm	20300	1745	24.5	24.48	0.46%	1.03	1.035	-	
				Bottom side*	10mm	20175	1732.5	24.5	24.47	0.69%	1.13	1.138	-	
				Right side	10mm	20050	1720	24.5	24.49	0.23%	0.392	0.393	-	
				0.23%	0.278	0.279	-							
					Front side	10mm	20050	1720	24	23.65	8.39%	0.887	0.961	-
					Front side	10mm	20300	1745	24	23.55	10.92%	0.914	1.014	-
					Back side	10mm	20050	1720	24	23.65	8.39%	0.934	1.012	-
				0	Back side		10.92%	0.913	1.013	-				
LTE Band 4	20MHz	OPSK		U	Bottom side	10mm	20050	1720	24	23.65	8.39%	0.908	0.984	-
(Hotspot)	ZUIVII IZ	QF3K	50 RB		Bottom side	10mm	20300	1745	24	23.55	10.92%	0.964	1.069	-
					Right side	10mm	20050	1720	24	23.65	8.39%	0.326	0.353	-
					Left side	10mm	20050	1720	24	23.65	8.39%	0.218	0.236	-
					Front side	10mm	20175	1732.5	24	23.54	11.17%	0.759	0.844	-
				25	Back side	10mm	20175	1732.5	24	23.54	11.17%	0.81	0.901	-
					Bottom side	10mm	20175	1732.5	24	23.54	11.17%	0.976	1.085	-
					Front side	10mm	20050	1720	24	23.58	10.15%	0.874	0.963	-
					Front side	10mm	20175	1732.5	24	23.51	11.94%	0.734	0.822	-
					Front side	10mm	20300	1745	24	23.5	12.20%	0.797	0.894	-
					Back side	10mm	20050	1720	24	23.58	10.15%	0.932	1.027	-
					Back side	10mm	20175	1732.5	24	23.51	11.94%	0.935	1.047	-
	10	100) RB	Back side	10mm	20300	1745	24	23.5	12.20%	1.08	1.212	-	
				Bottom side	10mm	20050	1720	24	23.58	10.15%	0.905	0.997		
					Bottom side	10mm	20175	1732.5	24	23.51	11.94%	0.937	1.049	-
					Bottom side	10mm	20300	1745	24	23.5	12.20%	0.982	1.102	-
					Right side	10mm	20050	1720	24	23.58	10.15%	0.348	0.383	-
					Left side	10mm	20050	1720	24	23.58	10.15%	0.204	0.225	-

^{* -} repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

t (886-2) 2299-3279



Page: 85 of 319

LTE FDD Band V

									Max. Rated	Measured			SAR over V/kg)	
Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
				49	RE Cheek	-	20525	836.5	24.5	24.38	2.80%	0.479	0.492	-
				49	RE Tilt	-	20525	836.5	24.5	24.38	2.80%	0.307	0.316	-
			1 RB	0	LE Cheek	-	20450	829	24.5	24.34	3.75%	0.501	0.520	-
			I KD	25	LE Cheek	-	20600	844	24.5	24.37	3.04%	0.549	0.566	-
				49	LE Cheek	-	20525	836.5	24.5	24.38	2.80%	0.581	0.597	141
				49	LE Tilt	-	20525	836.5	24.5	24.38	2.80%	0.31	0.319	-
LTE Band 5	10MHz	OPSK			RE Cheek	-	20600	844	24	23.38	15.35%	0.396	0.457	-
(Head)	TOWITIZ	QF3K	25 RB	25	RE Tilt	-	20600	844	24	23.38	15.35%	0.255	0.294	-
			23 KD	25	LE Cheek	-	20600	844	24	23.38	15.35%	0.484	0.558	-
					LE Tilt	-	20600	844	24	23.38	15.35%	0.257	0.296	-
					RE Cheek	-	20525	836.5	24	23.4	14.82%	0.38	0.436	-
			50	RB	RE Tilt	-	20525	836.5	24	23.4	14.82%	0.275	0.316	-
			30	ΝD	LE Cheek	-	20525	836.5	24	23.4	14.82%	0.459	0.527	-
					LE Tilt	-	20525	836.5	24	23.4	14.82%	0.283	0.325	-
				49	Front side	15mm	20525	836.5	24.5	24.38	2.80%	0.496	0.510	-
			1 RB	0	Back side	15mm	20450	829	24.5	24.34	3.75%	0.502	0.521	-
LTE Band 5			I ND	25	Back side	15mm	20600	844	24.5	24.37	3.04%	0.506	0.521	142
(Body-	10MHz	QPSK		49	Back side	15mm	20525	836.5	24.5	24.38	2.80%	0.504	0.518	-
Worn)	TOWNIZ	QI JK	25 RB	25	Front side	15mm	20600	844	24	23.38	15.35%	0.407	0.469	-
1.5111)			23 ND	20	Back side	15mm	20600	844	24	23.38	15.35%	0.41	0.473	-
			50	RB	Front side	15mm	20525	836.5	24	23.4	14.82%	0.401	0.460	-
			50	טאו	Back side	15mm	20525	836.5	24	23.4	14.82%	0.407	0.467	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 86 of 319

									Max. Rated	Measured			SAR over V/kg)	
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dRm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
				49	Front side	10mm	20525	836.5	24.5	24.38	2.80%	0.58	0.596	-
				0	Back side	10mm	20450	829	24.5	24.34	3.75%	0.832	0.863	-
				25	Back side	10mm	20600	844	24.5	24.37	3.04%	0.834	0.859	-
			1 RB	49	Back side	10mm	20525	836.5	24.5	24.38	2.80%	0.838	0.861	143
			IND	49	Back side*	10mm	20525	836.5	24.5	24.38	2.80%	0.836	0.859	-
				49	Bottom side	10mm	20525	836.5	24.5	24.38	2.80%	0.238	0.245	-
				49	Right side	10mm	20525	836.5	24.5	24.38	2.80%	0.591	0.608	-
				49	Left side	10mm	20525	836.5	24.5	24.38	2.80%	0.739	0.760	-
LTE Band 5	10MHz	QPSK			Front side	10mm	20600	844	24	23.38	15.35%	0.474	0.547	-
(Hotspot)	TOWNIZ	QI JIX			Back side	10mm	20600	844	24	23.38	15.35%	0.672	0.775	-
			25 RB	25	Bottom side	10mm	20600	844	24	23.38	15.35%	0.199	0.230	-
					Right side	10mm	20600	844	24	23.38	15.35%	0.487	0.562	-
					Left side	10mm	20600	844	24	23.38	15.35%	0.602	0.694	-
					Front side	10mm	20525	836.5	24	23.4	14.82%	0.472	0.542	-
					Back side	10mm	20525	836.5	24	23.4	14.82%	0.68	0.781	1
			50	RB	Bottom side	10mm	20525	836.5	24	23.4	14.82%	0.187	0.215	-
					Right side	10mm	20525	836.5	24	23.4	14.82%	0.473	0.543	-
					Left side	10mm	20525	836.5	24	23.4	14.82%	0.605	0.695	-

^{* -} repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 87 of 319

LTE FDD Band VII

									Max. Rated	Measured		Averaged SA (W/I		
Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
					RE Cheek	-	20850	2510	22.3	22.17	3.04%	0.183	0.189	-
					RE Cheek	-	21100	2535	22.3	22.24	1.39%	0.185	0.188	144
			1 RB	99	RE Cheek	-	21350	2560	22.3	22.27	0.69%	0.152	0.153	-
			ו ועט	77	RE Tilt	-	21350	2560	22.3	22.27	0.69%	0.046	0.046	-
					LE Cheek	-	21350	2560	22.3	22.27	0.69%	0.081	0.082	-
					LE Tilt	-	21350	2560	22.3	22.27	0.69%	0.045	0.045	-
LTE Band 7	20M⊔7	OPSK			RE Cheek	-	21350	2560	22	21.34	16.41%	0.122	0.142	-
(Head)	I ////H7	QF3K	50 RB	50	RE Tilt	-	21350	2560	22	21.34	16.41%	0.037	0.043	-
			30 KD	50	LE Cheek	-	21350	2560	22	21.34	16.41%	0.064	0.075	-
					LE Tilt	-	21350	2560	22	21.34	16.41%	0.036	0.042	-
					RE Cheek	-	21350	2560	22	21.29	17.76%	0.126	0.148	-
			100	DR	RE Tilt	-	21350	2560	22	21.29	17.76%	0.037	0.044	-
			100	, KD	LE Cheek	-	21350	2560	22	21.29	17.76%	0.063	0.074	-
					LE Tilt	-	21350	2560	22	21.29	17.76%	0.038	0.045	-
					Front side	15mm	21350	2560	22.3	22.27	0.69%	0.231	0.233	-
			1 RB	99	Back side	15mm	20850	2510	22.3	22.17	3.04%	0.462	0.476	-
LTE Band 7			ו ועט	//	Back side	15mm	21100	2535	22.3	22.24	1.39%	0.509	0.516	-
(Body-	20MHz	QPSK			Back side	15mm	21350	2560	22.3	22.27	0.69%	0.559	0.563	145
Worn)	ZUIVII IZ	QI JIX	50 RB	50	Front side	15mm	21350	2560	22	21.34	16.41%	0.189	0.220	-
""			טט ועט	30	Back side	15mm	21350	2560	22	21.34	16.41%	0.449	0.523	-
			100	RB	Front side	15mm	21350	2560	22	21.29	17.76%	0.185	0.218	-
			100	יועט	Back side	15mm	21350	2560	22	21.29	17.76%	0.443	0.522	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 88 of 319

									Max. Rated	Measured		Averaged S/	U	
Mode	Bandwidth (MHz)	Modulation	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
					Front side	10mm	21350	2560	22.3	22.27	0.69%	0.407	0.410	-
					Back side	10mm	20850	2510	22.3	22.17	3.04%	0.954	0.983	-
					Back side	10mm	21100	2535	22.3	22.24	1.39%	1.02	1.034	-
					Back side	10mm	21350	2560	22.3	22.27	0.69%	1.13	1.138	146
			1 RB	99	Back side*	10mm	21350	2560	22.3	22.27	0.69%	1.13	1.138	-
			ו אט	77	Bottom side	10mm	20850	2510	22.3	22.17	3.04%	0.8	0.824	-
					Bottom side	10mm	21100	2535	22.3	22.24	1.39%	0.883	0.895	-
					Bottom side	10mm	21350	2560	22.3	22.27	0.69%	0.974	0.981	-
					Right side	10mm	21350	2560	22.3	22.27	0.69%	0.057	0.057	-
					Left side	10mm	21350	2560	22.3	22.27	0.69%	0.057	0.057	-
					Front side	10mm	21350	2560	22	21.34	16.41%	0.332	0.386	-
					Back side	10mm	20850	2510	22	21.11	22.74%	0.751	0.922	-
					Back side	10mm	21100	2535	22	21.22	19.67%	0.841	1.006	-
LTE Band 7	20MHz	QPSK			Back side	10mm	21350	2560	22	21.34	16.41%	0.915	1.065	-
(Hotspot)	ZUIVITZ	UPSK	50 RB	50	Bottom side	10mm	20850	2510	22	21.11	22.74%	0.631	0.775	-
					Bottom side	10mm	21100	2535	22	21.22	19.67%	0.707	0.846	-
					Bottom side	10mm	21350	2560	22	21.34	16.41%	0.783	0.912	-
					Right side	10mm	21350	2560	22	21.34	16.41%	0.054	0.063	-
					Left side	10mm	21350	2560	22	21.34	16.41%	0.041	0.048	-
					Front side	10mm	21350	2560	22	21.29	17.76%	0.327	0.385	-
					Back side	10mm	20850	2510	22	21.04	24.74%	0.728	0.908	-
					Back side	10mm	21100	2535	22	21.18	20.78%	0.828	1.000	-
					Back side	10mm	21350	2560	22	21.29	17.76%	0.905	1.066	-
			100) RB	Bottom side	10mm	20850	2510	22	21.04	24.74%	0.614	0.766	-
					Bottom side	10mm	21100	2535	22	21.18	20.78%	0.701	0.847	-
					Bottom side	10mm	21350	2560	22	21.29	17.76%	0.771	0.908	-
					Right side	10mm	21350	2560	22	21.29	17.76%	0.053	0.062	-
					Left side	10mm	21350	2560	22	21.29	17.76%	0.052	0.061	-

^{* -} repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 89 of 319

LTE FDD Band XII

	D Bai								Max. Rated	Measured		Averaged 1g (V	SAR over	
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured		Plot page
					RE Cheek	-	23090	707	24.5	24.48	0.46%	0.029	0.029	-
			1 RB	25	RE Tilt	-	23090	707	24.5	24.48	0.46%	0.019	0.019	-
			TIND	25	LE Cheek	-	23090	707	24.5	24.48	0.46%	0.043	0.043	147
					LE Tilt	-	23090	707	24.5	24.48	0.46%	0.024	0.024	-
					RE Cheek	-	23090	707	24	23.51	11.94%	0.021	0.024	-
LTE Band			25 RB	0	RE Tilt	-	23090	707	24	23.51	11.94%	0.013	0.015	-
12	10MHz	QPSK	20 ND		LE Cheek	-	23090	707	24	23.51	11.94%	0.032	0.036	-
(Head)	TOWNIE	QI SIX			LE Tilt	-	23090	707	24	23.51	11.94%	0.018	0.020	-
(******)					RE Cheek	-	23130	711	24	23.47	12.98%	0.027	0.031	-
					RE Tilt	-	23130	711	24	23.47	12.98%	0.019	0.021	-
			50	DB.	LE Cheek	-	23050	703	24	23.34	16.41%	0.026	0.030	-
			30	ND .	LE Cheek	-	23090	707	24	23.42	14.29%	0.042	0.048	-
					LE Cheek	-	23130	711	24	23.47	12.98%	0.042	0.047	-
					LE Tilt	-	23130	711	24	23.47	12.98%	0.021	0.024	-
			1 RB	25	Front side	15mm	23090	707	24.5	24.48	0.46%	0.037	0.037	-
			1 110	20	Back side	15mm	23090	707	24.5	24.48	0.46%	0.055	0.055	-
LTE Band			25 RB	0	Front side	15mm	23090	707	24	23.51	11.94%	0.03	0.034	-
12	10MHz	QPSK	20 ND	Ů	Back side	15mm	23090	707	24	23.51	11.94%	0.046	0.051	-
(Body-	10111112	QI OIL		ļ	Front side	15mm	23130	711	24	23.47	12.98%	0.026	0.029	-
Worn)			50	RR	Back side	15mm	23050	703	24	23.34	16.41%	0.044	0.051	-
			30	ND .	Back side	15mm	23090	707	24	23.42	14.29%	0.073	0.083	148
					Back side	15mm	23130	711	24	23.47	12.98%	0.059	0.067	-
					Front side	10mm	23090	707	24.5	24.48	0.46%	0.04	0.040	-
					Back side	10mm	23090	707	24.5	24.48	0.46%	0.095	0.095	-
			1 RB	25	Bottom side	10mm	23090	707	24.5	24.48	0.46%	0.018	0.018	-
					Right side	10mm	23090	707	24.5	24.48	0.46%	0.024	0.024	-
					Left side	10mm	23090	707	24.5	24.48	0.46%	0.038	0.038	-
					Front side	10mm	23090	707	24	23.51	11.94%	0.03	0.034	-
					Back side	10mm	23090	707	24	23.51	11.94%	0.076	0.085	-
LTE Band			25 RB	0	Bottom side	10mm	23090	707	24	23.51	11.94%	0.014	0.016	-
12	10MHz	QPSK			Right side	10mm	23090	707	24	23.51	11.94%	0.018	0.020	-
(Hotspot)					Left side	10mm	23090	707	24	23.51	11.94%	0.02	0.022	-
1				ļ	Front side	10mm	23130	711	24	23.47	12.98%	0.035	0.040	-
1				ļ	Back side	10mm	23050	703	24	23.34	16.41%	0.069	0.080	-
					Back side	10mm	23090	707	24	23.42	14.29%	0.111	0.127	149
			50	RB	Back side	10mm	23130	711	24	23.47	12.98%	0.086	0.097	-
				ļ	Bottom side	10mm	23130	711	24	23.47	12.98%	0.016	0.018	-
				ļ	Right side	10mm	23130	711	24	23.47	12.98%	0.022	0.025	-
				Left side	10mm	23130	711	24	23.47	12.98%	0.034	0.038	-	

^{* -} repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 90 of 319

LTE FDD Band XIII

									Max. Rated	Measured			SAR over V/kg)	
Mode	Bandwidth (MHz)	Modulatior	RB Size	RB start	Position	Distance (mm)	СН	Freq. (MHz)	Avg. Power + Max. Tolerance (dBm)	Avg. Power (dBm)	Scaling	Measured	Reported	Plot page
				25	RE Cheek	-	23230	782	24.5	24.44	1.39%	0.2	0.203	-
				25	RE Tilt	-	23230	782	24.5	24.44	1.39%	0.122	0.124	-
			1 RB	0	LE Cheek	-	23230	782	24.5	24.31	4.47%	0.262	0.274	-
				25	LE Cheek	-	23230	782	24.5	24.44	1.39%	0.243	0.246	-
				49	LE Cheek	-	23230	782	24.5	24.29	4.95%	0.274	0.288	150
LTE Band				25	LE Tilt	-	23230	782	24.5	24.44	1.39%	0.156	0.158	-
13	10MHz	QPSK			RE Cheek	-	23230	782	24	23.43	14.02%	0.176	0.201	-
(Head)			25 RB	12	RE Tilt	-	23230	782	24	23.43	14.02%	0.113	0.129	-
					LE Cheek	-	23230	782	24	23.43	14.02%	0.203	0.231	-
					LE Tilt	-	23230	782	24	23.43	14.02%	0.135	0.154	-
					RE Cheek	-	23230	782	24	23.48	12.72%	0.186	0.210	-
			50	RB	RE Tilt	-	23230	782	24	23.48	12.72%	0.119	0.134	-
					LE Cheek	-	23230	782	24	23.48	12.72%	0.212	0.239	-
					LE Tilt	-	23230	782	24	23.48	12.72%	0.14	0.158	-
				25	Front side	15mm	23230	782	24.5	24.44	1.39%	0.27	0.274	-
			1 RB	0	Back side	15mm	23230	782	24.5	24.31	4.47%	0.383	0.400	-
LTE Band				25	Back side	15mm	23230	782	24.5	24.44	1.39%	0.422	0.428	-
13 (Dady)	10MHz	QPSK		49	Back side	15mm	23230	782	24.5	24.29	4.95%	0.442	0.464	151
(Body- Worn)			25 RB	12	Front side	15mm	23230	782	24	23.43	14.02%	0.224	0.255	-
vvoi ii)				ļ	Back side	15mm	23230	782	24	23.43	14.02%	0.354	0.404	-
			50	RB	Front side	15mm	23230	782	24	23.48	12.72%	0.238	0.268	-
				0.5	Back side	15mm	23230	782	24	23.48	12.72%	0.353	0.398	-
				25	Front side	10mm	23230	782	24.5	24.44	1.39%	0.321	0.325	-
				0	Back side	10mm	23230	782	24.5	24.31	4.47%	0.529	0.553	-
			1 DD	25	Back side	10mm	23230	782	24.5	24.44	1.39%	0.573	0.581	150
			1 RB	49 25	Back side Bottom side	10mm	23230	782 782	24.5	24.29	4.95%	0.594	0.623 0.088	152
				25	Right side	10mm 10mm	23230 23230	782	24.5 24.5	24.44	1.39% 1.39%	0.087	0.000	-
				25	Left side	10mm	23230	782	24.5	24.44	1.39%	0.21	0.402	-
LTC Dand				20	Front side	10mm	23230	782	24.3	23.43	14.02%	0.390	0.402	-
LTE Band 13	10MHz	QPSK			Back side	10mm	23230	782	24	23.43	14.02%	0.234	0.243	_
	TOWNTZ	QI JK	25 RB	12	Bottom side	10mm	23230	782	24	23.43	14.02%	0.474	0.088	
(Hotspot)			20 110	'-	Right side	10mm	23230	782	24	23.43	14.02%	0.077	0.000	
					Left side	10mm	23230	782	24	23.43	14.02%	0.133	0.177	
				1	Front side	10mm	23230	782	24	23.48	12.72%	0.357	0.304	_
					Back side	10mm	23230	782	24	23.48	12.72%	0.455	0.513	
			50	RR	Bottom side	10mm	23230	782	24	23.48	12.72%	0.433	0.090	
			30		Right side	10mm	23230	782	24	23.48	12.72%	0.163	0.184	-
					Left side	10mm	23230	782	24	23.48	12.72%	0.335	0.378	_

^{* -} repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 91 of 319

LTE FDD Band XVII

<u> </u>	JD Bai	IU AV	<u> </u>											
	Bandwidth					Distance		Freq.	Max. Rated Avg.	Measured Avg.		Averaged 1g (V	SAR over V/kg)	Plot
Mode	(MHz)	Modulatior	RB Size	RB start	Position	(mm)	СН	(MHz)	Power + Max. Tolerance (dBm)	Power (dBm)	Scaling	Measured	Reported	page
					RE Cheek	-	23780	709	24.5	24.49	0.23%	0.022	0.022	-
			1 RB	49	RE Tilt	-	23780	709	24.5	24.49	0.23%	0.019	0.019	-
			I KD	49	LE Cheek	-	23780	709	24.5	24.49	0.23%	0.03	0.030	-
					LE Tilt	-	23780	709	24.5	24.49	0.23%	0.02	0.020	-
					RE Cheek	-	23780	709	24	23.61	9.40%	0.025	0.027	-
LTE Band			25 RB	25	RE Tilt	-	23780	709	24	23.61	9.40%	0.023	0.025	-
17	10MHz	QPSK	23 KD	23	LE Cheek	-	23780	709	24	23.61	9.40%	0.035	0.038	-
(Head)	TOWNIZ	QI SIX			LE Tilt	-	23780	709	24	23.61	9.40%	0.02	0.022	-
(11044)					RE Cheek	-	23790	710	24	23.64	8.64%	0.028	0.030	-
					RE Tilt	-	23790	710	24	23.64	8.64%	0.017	0.018	-
			50	RB	LE Cheek	-	23780	709	24	23.61	9.40%	0.034	0.037	-
			30	KD	LE Cheek	-	23790	710	24	23.64	8.64%	0.038	0.041	153
					LE Cheek	-	23800	711	24	23.56	10.66%	0.034	0.038	-
					LE Tilt	-	23790	710	24	23.64	8.64%	0.02	0.022	-
			1 RB	49	Front side	15mm	23780	709	24.5	24.49	0.23%	0.027	0.027	-
			TILD	17	Back side	15mm	23780	709	24.5	24.49	0.23%	0.056	0.056	-
LTE Band			25 RB	25	Front side	15mm	23780	709	24	23.61	9.40%	0.03	0.033	-
17	10MHz	QPSK	20 KB	20	Back side	15mm	23780	709	24	23.61	9.40%	0.059	0.065	154
(Body-	TOWNIZ	QI SIX			Front side	15mm	23790	710	24	23.64	8.64%	0.029	0.032	-
Worn)			50	RB	Back side	15mm	23780	709	24	23.61	9.40%	0.05	0.055	-
			30	KD	Back side	15mm	23790	710	24	23.64	8.64%	0.057	0.062	-
					Back side	15mm	23800	711	24	23.56	10.66%	0.055	0.061	-
					Front side	10mm	23780	709	24.5	24.49	0.23%	0.036	0.036	-
					Back side	10mm	23780	709	24.5	24.49	0.23%	0.089	0.089	155
					Back side	10mm	23790	710	24.5	24.46	0.93%	0.08	0.081	-
			1 RB	49	Back side	10mm	23800	711	24.5	24.46	0.93%	0.087	0.088	-
					Bottom side	10mm	23780	709	24.5	24.49	0.23%	0.01	0.010	-
					Right side	10mm	23780	709	24.5	24.49	0.23%	0.017	0.017	-
					Left side	10mm	23780	709	24.5	24.49	0.23%	0.024	0.024	-
LTE Band					Front side	10mm	23780	709	24	23.61	9.40%	0.04	0.044	-
17	10MHz	QPSK			Back side	10mm	23780	709	24	23.61	9.40%	0.084	0.092	-
(Hotspot)			25 RB	25	Bottom side	10mm	23780	709	24	23.61	9.40%	0.016	0.018	-
					Right side	10mm	23780	709	24	23.61	9.40%	0.024	0.026	-
					Left side	10mm	23780	709	24	23.61	9.40%	0.024	0.026	-
					Front side	10mm	23790	710	24	23.64	8.64%	0.03	0.033	-
					Back side	10mm	23790	710	24	23.64	8.64%	0.074	0.080	-
			50	RB	Bottom side	10mm	23790	710	24	23.64	8.64%	0.016	0.017	-
					Right side	10mm	23790	710	24	23.64	8.64%	0.024	0.026	-
					Left side	10mm	23790	710	24	23.64	8.64%	0.034	0.037	-

^{* -} repeated at the highest SAR measurement according to the FCC KDB865664D01v01r03

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 92 of 319

WLAN802.11 b

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg.	Measured Avg.	Scaling	Averaged S (W/		Plot
		(111111)		(IVITZ)	Power + Max.	Power		Measured	Reported	page
	RE Cheek	-	1	2412	16.00	15.86	3.28%	0.391	0.404	-
	RE Cheek	-	6	2437	16.00	15.92	1.86%	0.375	0.382	-
Head	RE Cheek	-	11	2462	16.00	15.82	4.23%	0.587	0.612	156
пеац	RE Tilt	-	6	2437	16.00	15.92	1.86%	0.239	0.243	-
	LE Cheek	-	6	2437	16.00	15.92	1.86%	0.161	0.164	-
	LE Tilt	-	6	2437	16.00	15.92	1.86%	0.126	0.128	-
	Front side	10	6	2437	16.00	15.92	1.86%	0.116	0.118	-
	Back side	10	1	2412	16.00	15.86	3.28%	0.392	0.405	-
Hotspot	Back side	10	6	2437	16.00	15.92	1.86%	0.333	0.339	-
Πυιδρυι	Back side	10	11	2462	16.00	15.82	4.23%	0.638	0.665	157
	Top side	10	6	2437	16.00	15.92	1.86%	0.062	0.063	-
	Left side	10	6	2437	16.00	15.92	1.86%	0.177	0.180	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 93 of 319

WLAN802.11 a 5.2G

Mode	Position	Distance	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling		SAR over 1g /kg)	Plot
		(mm)		(IVITZ)	Tolerance (dBm)	(dBm)		Measured	Reported	page
	RE Cheek	-	36	5180	14.00	13.99	0.23%	0.235	0.236	-
	RE Tilt	-	36	5180	14.00	13.99	0.23%	0.249	0.250	158
Head	RE Tilt	-	44	5220	14.00	13.74	6.17%	0.199	0.211	-
	LE Cheek	-	36	5180	14.00	13.99	0.23%	0.201	0.201	-
	LE Tilt	-	36	5180	14.00	13.99	0.23%	0.209	0.209	-
	Front side	15	36	5180	14.00	13.99	0.23%	0.040	0.040	-
Body- worn	Back side	15	36	5180	14.00	13.99	0.23%	0.341	0.342	159
Wolli	Back side	15	44	5220	14.00	13.74	6.17%	0.300	0.319	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The

therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 94 of 319

WLAN802.11 a 5.3G

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling	_	AR over 1g 'kg)	Plot
		(111111)		(IVITZ)	Tolerance (dBm)	(dBm)		Measured	Reported	page
	RE Cheek	-	64	5320	14.00	13.99	0.23%	0.206	0.206	-
	RE Tilt	-	56	5280	14.00	13.88	2.80%	0.207	0.213	-
Head	RE Tilt	-	64	5320	14.00	13.99	0.23%	0.218	0.219	160
	LE Cheek	-	64	5320	14.00	13.99	0.23%	0.168	0.168	-
	LE Tilt	-	64	5320	14.00	13.99	0.23%	0.174	0.174	-
Dody	Front side	15	64	5320	14.00	13.99	0.23%	0.040	0.040	-
Body- worn	Back side	15	56	5280	14.00	13.88	2.80%	0.307	0.316	-
VVOITI	Back side	15	64	5320	14.00	13.99	0.23%	0.319	0.320	161

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 t (886-2) 2299-3279



Page: 95 of 319

WLAN802.11 a 5.6G

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling		SAR over 1g /kg)	Plot
		(111111)		(IVII IZ)	Tolerance (dBm)	(dBm)		Measured	Reported	page
	RE Cheek	-	108	5540	14.00	13.89	2.57%	0.369	0.378	-
	RE Cheek	-	112	5560	14.00	13.87	3.04%	0.359	0.370	-
Head	RE Cheek	-	132	5660	14.00	13.98	0.46%	0.480	0.482	162
пеаи	RE Tilt	-	132	5660	14.00	13.98	0.46%	0.448	0.450	-
	LE Cheek	-	132	5660	14.00	13.98	0.46%	0.313	0.314	-
	LE Tilt	-	132	5660	14.00	13.98	0.46%	0.361	0.363	-
	Front side	15	132	5660	14.00	13.98	0.46%	0.080	0.080	-
Body-	Back side	15	108	5540	14.00	13.89	2.57%	0.360	0.369	-
worn	Back side	15	112	5560	14.00	13.87	3.04%	0.371	0.382	-
	Back side	15	132	5660	14.00	13.98	0.46%	0.382	0.384	163

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 96 of 319

WLAN802.11 a 5.8G

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling		AR over 1g 'kg)	Plot
		(111111)		(IVII IZ)	Tolerance (dBm)	(dBm)		Measured	Reported	page
	RE Cheek	-	153	5765	14.00	13.87	3.04%	0.414	0.427	-
	RE Cheek	-	161	5805	14.00	13.84	3.75%	0.493	0.512	164
Head	RE Cheek	-	165	5825	14.00	13.81	4.47%	0.464	0.485	-
пеаи	RE Tilt	-	153	5765	14.00	13.87	3.04%	0.353	0.364	-
	LE Cheek	-	153	5765	14.00	13.87	3.04%	0.288	0.297	-
	LE Tilt	-	153	5765	14.00	13.87	3.04%	0.284	0.293	-
	Front side	15	153	5765	14.00	13.87	3.04%	0.059	0.061	-
Body-	Back side	15	153	5765	14.00	13.87	3.04%	0.298	0.307	-
worn	Back side	15	161	5805	14.00	13.84	3.75%	0.287	0.298	-
	Back side	15	165	5825	14.00	13.81	4.47%	0.298	0.311	165

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 97 of 319

3. Simultaneous Transmission Analysis

Simultaneous Transmission Scenarios:

Simultaneous Transmit Configurations	Head	Body-Worn	Hotspot
GSM850/1900 + 2.4GHz Wi-Fi	Yes	No	No
GPRS850/1900 + 2.4GHz Wi-Fi	No	No	Yes
UMTS B2/4/5 + 2.4GHz Wi-Fi	Yes	No	Yes
LTE FDD B2/4/5/7/12/13/17 + 2.4GHz Wi-Fi	Yes	No	Yes
GSM850/1900 + 5GHz Wi-Fi	Yes	Yes	No
GPRS850/1900 + 5GHz Wi-Fi	No	No	No
UMTS B2/4/5 + 5GHz Wi-Fi	Yes	Yes	No
LTE FDD B2/4/5/7/12/13/17 + 5GHz Wi-Fi	Yes	Yes	No
GSM850/1900 + Bluetooth	No	Yes	No
GPRS850/1900 + Bluetooth	No	No	Yes
UMTS B2/4/5 + Bluetooth	No	Yes	Yes
LTE FDD B2/4/5/7/12/13/17 + Bluetooth	No	Yes	Yes

Notes:

- 1. GSM & WCDMA & LTE share the same antenna path and cannot transmit simultaneously
- 2. Bluetooth, 5GHz WiFi, and 2.4GHz WiFi share the same antenna path and cannot transmit simultaneously.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 98 of 319

3.1 Estimated SAR calculation

According to KDB447498 D01v05 – When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

Estimated SAR =
$$\frac{\text{Max.tune up power(mW)}}{\text{Min.test separation distance(mm)}} \times \frac{\sqrt{f(GHz)}}{7.5}$$

If the minimum test separation distance is < 5mm, a distance of 5mm is used for estimated SAR calculation. When the test separation distance is >50mm, the 0.4W/kg is used for SAR-1g.

3.2 SPLSR evaluation and analysis

Per KDB447498D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR sum to peak location separation ratio(SPLSR).

The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion.

The ratio is determined by (SAR1 + SAR2)^1.5/Ri, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

SAR1 and SAR2 are the highest reported or estimated SAR for each antenna in the pair, and Ri is the separation distance between the peak SAR locations for the antenna pair in mm.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd. t (886-2) 2299-3279 f (886-2) 2298-0488

www.tw.sas.com



Page: 99 of 319

Simultaneous Transmission Combination

	repo	rted SAR WW	AN and WLA	N DTS 2.4GI	-lz, ΣSAR eva	aluation	
Frequency	Do	osition	reported S	AR / W/kg	ΣSAR	Calculated	SPLSR
band	PC	JSILIUII	WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.535	0.612	1.147	-	-
GSM 850	Head	RE tilt	0.312	0.243	0.555	-	=
G3IVI 636	Heau	LE cheek	0.66	0.164	0.824	-	-
		LE tilt	0.332	0.128	0.460	-	-
		Front	0.557	0.118	0.675	-	-
		Back	0.77	0.665	1.435	-	-
GPRS 850	Hotspot	Тор	-	0.063	-	-	-
(1Dn1UP)	Hotspot	Bottom	0.267	-	-	-	-
		Right	0.352	-	-	-	-
		Left	0.657	0.180	0.837	-	-
		RE cheek	0.213	0.612	0.825	-	-
GSM 1900	Head	RE tilt	0.057	0.243	0.300	-	-
G3W 1700	ricau	LE cheek	0.193	0.164	0.357	-	-
		LE tilt	0.059	0.128	0.187	-	-
		Front	0.511	0.118	0.629	-	-
		Back	0.601	0.665	1.266	-	-
GPRS 1900	Hotspot	Тор	-	0.063	-	-	-
(1Dn1UP)	Tiotspot	Bottom	0.726	-	-	-	-
		Right	0.132	-	-	-	-
		Left	0.103	0.180	0.283	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 100 of 319

	repo	rted SAR WW	AN and WLA	N DTS 2.4GI	Hz, ΣSAR ev	aluation	
Frequency	D.	- 141	reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR
band	PC	osition	WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.36	0.612	0.972	-	-
	Head	RE tilt	0.101	0.243	0.344	-	-
	Head	LE cheek	0.346	0.164	0.510	-	-
		LE tilt	0.102	0.128	0.230	-	-
WCDMA		Front	0.859	0.118	0.977	-	-
Band II		Back	1.279	0.665	1.944	116	0.023
	Hotspot	Тор	-	0.063	-	-	1
	потѕрот	Bottom	1.371	-	-	-	1
		Right	0.24	-	-	-	-
		Left	0.188	0.180	0.368	-	-
		RE cheek	0.437	0.612	1.049	-	-
	Head	RE tilt	0.166	0.243	0.409	-	-
	rieau	LE cheek	0.393	0.164	0.557	-	-
		LE tilt	0.12	0.128	0.248	-	-
WCDMA		Front	1.026	0.118	1.144	-	-
Band IV		Back	1.397	0.665	2.062	115.6	0.026
	Hotspot	Тор	-	0.063	-	-	-
	Ποτοροτ	Bottom	1.221	-	-	-	-
		Right	0.25	-	-	-	-
		Left	0.217	0.180	0.397	-	-
		RE cheek	0.44	0.612	1.052	-	-
	Hood	RE tilt	0.251	0.243	0.494	-	-
	Head	LE cheek	0.605	0.164	0.769	-	-
		LE tilt	0.264	0.128	0.392	-	-
WCDMA		Front	0.682	0.118	0.800	-	-
Band V		Back	1.014	0.665	1.679	108.9	0.020
		Тор	-	0.063	-	-	-
	Hotspot	Bottom	0.175	-	-	-	-
		Right	0.46	-	-	_	-
		Left	0.635	0.180	0.815	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

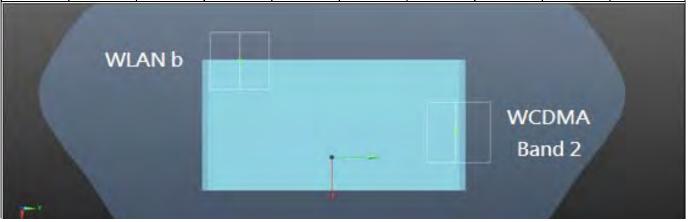
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 101 of 319

			Co	oordinates (cr	n)		Peak		
Conditions	Position	SAR Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
WCDMA B2 CH 9538	Back side	1.279	0.4	6.29	-0.06	1.944	116	0.023	SPLSR<0.04,
802.11b CH 11	Dack Side	0.665	-3.38	-4.68	-0.09	1.744	110	0.023	Not required



			Co	oordinates (cr	n)		Peak		
Conditions	Position	SAR Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
WCDMA B4 CH 1513	Back side	1.397	0.7	6.14	-0.06	2.062	115.6	0.026	SPLSR<0.04,
802.11b CH 11	back side	0.665	-3.38	-4.68	-0.09	2.002	115.0	0.020	Not required
	W	ALN b					WCD Ban		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

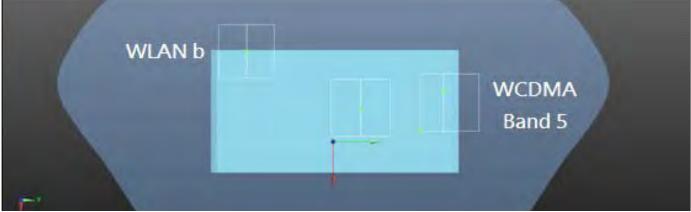
SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 f (886-2) 2298-0488



Page: 102 of 319

			Co	oordinates (cr	n)		Peak		
Conditions	Position	SAR Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
WCDMA B5 CH 4233	Back side	1.014	-1.14	5.98	-0.12	1.679	108.9	0.020	SPLSR<0.04,
802.11b CH 11	Dack side	0.665	-3.38	-4.68	-0.09	1.079	100.9	0.020	Not required
								1	



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 103 of 319

	repo	orted SAR WW	'AN and WLA	N DTS 2.4GI	Hz, ΣSAR ev	aluation	
Frequency	D	osition	reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR
band	PO	DSILION	WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.363	0.612	0.975	-	-
	Llood	RE tilt	0.164	0.243	0.407	-	-
	Head	LE cheek	0.469	0.164	0.633	-	-
		LE tilt	0.155	0.128	0.283	-	-
LTE FDD		Front	0.931	0.118	1.049	-	-
Band 2		Back	1.432	0.665	2.097	121.6	0.025
	Hotspot	Тор	-	0.063	-	-	-
	потѕрот	Bottom	1.387	1	1	1	1
		Right	0.220	-	1	1	-
		Left	0.235	0.180	0.415	1	-
		RE cheek	0.452	0.612	1.064	-	-
	Head	RE tilt	0.182	0.243	0.425	-	-
	Head	LE cheek	0.616	0.164	0.780	-	-
		LE tilt	0.15	0.128	0.278	1	-
LTE FDD		Front	1.148	0.118	1.266	-	-
Band 4		Back	1.212	0.665	1.877	111.8	0.023
	Hotspot	Тор	-	0.063	1	1	-
	потѕрот	Bottom	1.208	-	1	1	1
		Right	0.393	-	1	1	-
		Left	0.279	0.180	0.459	1	-
		RE cheek	0.492	0.612	1.104	1	-
	Head	RE tilt	0.316	0.243	0.559	-	-
	пеаи	LE cheek	0.597	0.164	0.761	ı	-
		LE tilt	0.325	0.128	0.453	-	-
LTE FDD		Front	0.596	0.118	0.714	-	-
Band 5		Back	0.863	0.665	1.528	-	-
	Hotspot	Тор	-	0.063	-	-	-
	Πυιδρυί	Bottom	0.245	-	-	-	-
		Right	0.608	-	-	-	-
		Left	0.76	0.180	0.940	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 104 of 319

			Co	oordinates (cr	n)		Peak		
Conditions	Position	SAR Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
LTE Band 2 CH 18900	Back side	1.432	0.35	6.89	-0.06	2.097	121.6	0.025	SPLSR<0.04,
802.11b CH 11	Dack side	0.665	-3.38	-4.68	-0.09	2.071	121.0	0.023	Not required
				TE nd 2		WLAN	b		

			Co	oordinates (cr	n)		Peak		
Conditions	Position	SAR Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
LTE Band 4 CH 20300	Back side	1.212	2.03	5.1	-0.03	1.877	111.8	0.023	SPLSR<0.04,
802.11b CH 11	Dack side	0.665	-3.38	-4.68	-0.09	1.077	111.0	0.023	Not required
7				LTE , Band 4		WLAI	N b		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_and/conditions for Electronic Documents at www.sgs.com/terms_and/conditions for Electronic Documents at www.sgs.com/terms_and/conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined.

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 105 of 319

	repo	orted SAR WW	'AN and WLA	N DTS 2.4GI	Hz, ΣSAR ev	aluation	
Frequency		141	reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR
band	PO	osition	WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.189	0.612	0.801	-	-
	Hood	RE tilt	0.046	0.243	0.289	-	-
	Head	LE cheek	0.082	0.164	0.246	-	-
		LE tilt	0.045	0.128	0.173	-	-
LTE FDD		Front	0.41	0.118	0.528	-	-
Band 7		Back	1.138	0.665	1.803	113.8	0.021
	Hotspot	Тор	-	0.063	-	-	-
	потѕрот	Bottom	0.981	1	1	1	-
		Right	0.063	-	-	1	-
		Left	0.061	0.180	0.241	1	-
		RE cheek	0.031	0.612	0.643	-	-
	Head	RE tilt	0.021	0.243	0.264	1	-
		LE cheek	0.048	0.164	0.212	-	-
		LE tilt	0.024	0.128	0.152	1	-
LTE FDD		Front	0.04	0.118	0.158	1	-
Band 12		Back	0.127	0.665	0.792	-	-
	Hotspot	Тор	-	0.063	1	1	-
	Ποιδροί	Bottom	0.018	-	-	-	-
		Right	0.025	-	-	-	-
		Left	0.038	0.180	0.218	1	-
		RE cheek	0.197	0.612	0.809	-	-
	Head	RE tilt	0.12	0.243	0.363	-	-
	Heau	LE cheek	0.261	0.164	0.425	-	-
		LE tilt	0.154	0.128	0.282	-	-
LTE FDD		Front	0.317	0.118	0.435	-	-
Band 13		Back	0.566	0.665	1.231	-	-
	Hotspot	Тор	-	0.063	-	-	-
	Hotspot	Bottom	0.086	-	-	-	-
		Right	0.207	-	-	-	-
		Left	0.391	0.180	0.571	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 106 of 319

			Co	oordinates (cr	n)		Peak		
Conditions	Position	SAR Value (W/kg)	х	у	Z	ΣSAR (W/kg)	Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
LTE Band 7 CH 21350	Back side	1.138	-0.4	6.3	-0.07	1.803	113.8	0.021	SPLSR<0.04,
802.11b CH 11	Dack Slue	0.665	-3.38	-4.68	-0.09	1.003	113.0	0.021	Not required



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 f (886-2) 2298-0488



Page: 107 of 319

reported SAR WWAN and WLAN DTS 2.4GHz, ΣSAR evaluation											
	repo	orted SAR WW	AN and WLA	N DTS 2.4GI	Hz, ΣSAR ev	aluation					
Frequency	D _r	osition	reported S	AR / W/kg	ΣSAR	Calculated	SPLSR				
band	F	JSILIOII	WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)				
	Head	RE cheek	0.03	0.612	0.642	1	-				
		RE tilt	0.025	0.243	0.268	-	-				
пеаи	Heau	LE cheek	0.041	0.164	0.205	ı	-				
		LE tilt	0.022	0.128	0.150	1	-				
LTE FDD		Front	0.044	0.118	0.162	1	-				
Band 17		Back	0.092	0.665	0.757	1	-				
	Hotspot	Тор	1	0.063	-	ı	-				
	потѕрот	Bottom	0.018	ı	-	-	-				
		Right	0.026	-	-	-	-				
		Left	0.037	0.180	0.217	-	-				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 108 of 319

reported SAR WWAN and WLAN DTS 5.8 GHz, ΣSAR evaluation							
Frequency	Position		reported SAR / W/kg		ΣSAR	Calculated	SPLSR
band			WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
GSM 850	Head	RE cheek	0.535	0.512	1.047	-	-
		RE tilt	0.312	0.364	0.676	1	-
		LE cheek	0.66	0.297	0.957	1	-
		LE tilt	0.332	0.293	0.625	-	-
	Body- Worn	Front	0.266	0.061	0.327	1	-
		Back	0.418	0.311	0.729	1	-
GSM 1900	Head	RE cheek	0.213	0.512	0.725	1	-
		RE tilt	0.057	0.364	0.421	1	-
		LE cheek	0.193	0.297	0.49	-	-
		LE tilt	0.059	0.293	0.352	1	-
	Body-	Front	0.315	0.061	0.376	1	-
	Worn	Back	0.369	0.311	0.68	1	-
WCDMA Band II	Head	RE cheek	0.36	0.512	0.872	1	-
		RE tilt	0.101	0.364	0.465	1	-
		LE cheek	0.346	0.297	0.643	1	-
		LE tilt	0.102	0.293	0.395	1	-
	Body- Worn	Front	0.576	0.061	0.637	1	-
		Back	0.495	0.311	0.806	1	-
WCDMA Band IV	Head	RE cheek	0.437	0.512	0.949	-	-
		RE tilt	0.166	0.364	0.53	-	-
		LE cheek	0.393	0.297	0.69	-	-
		LE tilt	0.12	0.293	0.413	-	-
	Body- Worn	Front	0.6	0.061	0.661	-	-
		Back	0.57	0.311	0.881	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 109 of 319

	reported	SAR WWAI	N and WLAN	N DTS 5.8 G	Hz, ΣSAR e	valuation	
Frequency	5	.,.	reported SAR / W/kg		ΣSAR	Calculated	SPLSR
band	Pos	ition	WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.44	0.512	0.952	-	-
	Head	RE tilt	0.251	0.364	0.615	-	-
WCDMA	Heau	LE cheek	0.605	0.297	0.902	-	-
Band V		LE tilt	0.264	0.293	0.557	-	-
	Body-	Front	0.279	0.061	0.34	-	-
	Worn	Back	0.47	0.311	0.781	-	-
		RE cheek	0.363	0.512	0.875	-	-
	Head	RE tilt	0.164	0.364	0.528	-	-
LTE FDD		LE cheek	0.469	0.297	0.766	-	-
Band 2		LE tilt	0.155	0.293	0.448	-	-
	Body-	Front	0.493	0.061	0.554	-	-
	Worn	Back	0.769	0.311	1.08	-	-
	Head	RE cheek	0.452	0.512	0.964	-	-
		RE tilt	0.182	0.364	0.546	-	-
LTE FDD		LE cheek	0.616	0.297	0.913	-	-
Band 4		LE tilt	0.15	0.293	0.443	-	-
	Body-	Front	0.618	0.061	0.679	-	-
	Worn	Back	0.681	0.311	0.992	-	-
		RE cheek	0.492	0.512	1.004	-	-
	Hood	RE tilt	0.316	0.364	0.68	-	-
LTE FDD	Head	LE cheek	0.597	0.297	0.894	-	-
Band 5		LE tilt	0.325	0.293	0.618	-	-
	Body-	Front	0.51	0.061	0.571		
	Worn	Back	0.521	0.311	0.832	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 110 of 319

	reported	SAR WWAI	N and WLAN	N DTS 5.8 G	Hz, ΣSAR e	valuation	
Frequency	D	111	reported SAR / W/kg		ΣSAR	Calculated	SPLSR
band	l . J Pus		WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.189	0.512	0.701	-	-
	Head	RE tilt	0.046	0.364	0.41	-	-
LTE FDD	Heau	LE cheek	0.082	0.297	0.379	-	-
Band 7		LE tilt	0.045	0.293	0.338	-	-
	Body-	Front	0.233	0.061	0.294	-	-
	Worn	Back	0.563	0.311	0.874	-	-
		RE cheek	0.031	0.512	0.543	-	-
	Head	RE tilt	0.021	0.364	0.385	-	-
LTE FDD		LE cheek	0.048	0.297	0.345	-	-
Band 12		LE tilt	0.024	0.293	0.317	-	-
	Body-	Front	0.037	0.061	0.098	-	-
	Worn	Back	0.083	0.311	0.394	-	-
	Head	RE cheek	0.197	0.512	0.709	-	-
		RE tilt	0.12	0.364	0.484	-	-
LTE FDD		LE cheek	0.261	0.297	0.558	-	-
Band 13		LE tilt	0.154	0.293	0.447	-	-
	Body-	Front	0.266	0.061	0.327	-	-
	Worn	Back	0.421	0.311	0.732	-	-
		RE cheek	0.03	0.512	0.542	-	-
	Head	RE tilt	0.025	0.364	0.389	-	-
LTE FDD	пеаи	LE cheek	0.041	0.297	0.338	-	
Band 17		LE tilt	0.022	0.293	0.315	-	-
	Body-	Front	0.033	0.061	0.094		
	Worn	Back	0.065	0.311	0.376	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 111 of 319

	reported SAR WWAN and WLAN DTS 5 GHz, ΣSAR evaluation								
Frequency			reported S	AR / W/kg	ΣSAR	Calculated	SPLSR		
band	I , , I hud		WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)		
		RE cheek	0.535	0.482	1.017	-	-		
	Head	RE tilt	0.312	0.45	0.762	-	-		
GSM 850	Heau	LE cheek	0.66	0.314	0.974	-	-		
G3W 630		LE tilt	0.332	0.363	0.695	-	-		
	Body-	Front	0.266	0.08	0.346	-	-		
	Worn	Back	0.418	0.384	0.802	-	-		
		RE cheek	0.213	0.482	0.695	-	-		
GSM 1900	Head	RE tilt	0.057	0.45	0.507	-	-		
		LE cheek	0.193	0.314	0.507	-	-		
		LE tilt	0.059	0.363	0.422	-	-		
	Body-	Front	0.315	0.08	0.395	-	-		
	Worn	Back	0.369	0.384	0.753	-	-		
	Head	RE cheek	0.36	0.482	0.842	-	-		
		RE tilt	0.101	0.45	0.551	-	-		
WCDMA		LE cheek	0.346	0.314	0.66	-	-		
Band II		LE tilt	0.102	0.363	0.465	-	-		
	Body-	Front	0.576	0.08	0.656	-	-		
	Worn	Back	0.495	0.384	0.879	-	-		
		RE cheek	0.437	0.482	0.919	-	-		
	Hand	RE tilt	0.166	0.45	0.616	-	-		
WCDMA	Head	LE cheek	0.393	0.314	0.707	-	-		
Band IV		LE tilt	0.12	0.363	0.483	-	-		
	Body-	Front	0.6	0.08	0.68	-	-		
	Worn	Back	0.57	0.384	0.954	-	-		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 112 of 319

	reporte	ed SAR WWA	N and WLA	N DTS 5 GH	łz, ΣSAR ev	aluation	
Frequency			reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR
band	. , l hUd		WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.44	0.482	0.922	-	ı
	Head	RE tilt	0.251	0.45	0.701	-	ı
WCDMA	Heau	LE cheek	0.605	0.314	0.919	-	-
Band V		LE tilt	0.264	0.363	0.627	-	-
	Body-	Front	0.279	0.08	0.359	-	-
	Worn	Back	0.47	0.384	0.854	-	-
		RE cheek	0.363	0.482	0.845	-	ı
	Head	RE tilt	0.164	0.45	0.614	-	-
LTE FDD		LE cheek	0.469	0.314	0.783	-	-
Band 2		LE tilt	0.155	0.363	0.518	-	-
	Body-	Front	0.493	0.08	0.573	-	-
	Worn	Back	0.769	0.384	1.153	-	-
	Head	RE cheek	0.452	0.482	0.934	-	-
		RE tilt	0.182	0.45	0.632	-	-
LTE FDD		LE cheek	0.616	0.314	0.93	-	-
Band 4		LE tilt	0.15	0.363	0.513	-	-
	Body-	Front	0.618	0.08	0.698	-	-
	Worn	Back	0.681	0.384	1.065	-	ı
		RE cheek	0.492	0.482	0.974	-	-
	Hood	RE tilt	0.316	0.45	0.766	-	-
LTE FDD	Head	LE cheek	0.597	0.314	0.911	-	-
Band 5		LE tilt	0.325	0.363	0.688	-	-
	Body-	Front	0.51	0.08	0.59	-	-
	Worn	Back	0.521	0.384	0.905	=	=

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this online unlawful and offenders may be

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 113 of 319

	reporte	ed SAR WWA	AN and WLA	N DTS 5 GH	lz, ΣSAR ev	aluation	
Frequency	D	111	reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR
band	band		WWAN	WLAN	<1.6W/kg	distance (mm)	(≦0.04)
		RE cheek	0.189	0.482	0.671	-	-
	Head	RE tilt	0.046	0.45	0.496	-	i
LTE FDD	Heau	LE cheek	0.082	0.314	0.396	-	-
Band 7		LE tilt	0.045	0.363	0.408	-	1
	Body-	Front	0.233	0.08	0.313	-	-
	Worn	Back	0.563	0.384	0.947	-	-
		RE cheek	0.031	0.482	0.513	-	-
LTE FDD Band 12	Head	RE tilt	0.021	0.45	0.471	-	-
		LE cheek	0.048	0.314	0.362	=	ı
		LE tilt	0.024	0.363	0.387	-	-
	Body-	Front	0.037	0.08	0.117	-	-
	Worn	Back	0.083	0.384	0.467	-	ı
		RE cheek	0.197	0.482	0.679	-	-
	Head	RE tilt	0.12	0.45	0.57	-	-
LTE FDD	пеац	LE cheek	0.261	0.314	0.575	-	-
Band 13		LE tilt	0.154	0.363	0.517	-	-
	Body-	Front	0.266	0.08	0.346	-	ı
	Worn	Back	0.421	0.384	0.805	-	-
		RE cheek	0.03	0.482	0.512	-	ı
	Head	RE tilt	0.025	0.45	0.475	-	-
LTE FDD	неаа	LE cheek	0.041	0.314	0.355	-	-
Band 17		LE tilt	0.022	0.363	0.385	-	-
	Body-	Front	0.033	0.08	0.113	=	=
	Worn	Back	0.065	0.384	0.449	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 114 of 319

	reported SAR WWAN and Bluetooth, ΣSAR evaluation									
Frequency			reported S	reported SAR / W/kg		Calculated	SPLSR			
band	Posi	Position		Bluetooth	<1.6W/kg	distance (mm)	(≦0.04)			
GSM 850	Body-	Front	0.266	0.048	0.314	-	-			
G3W 630	Worn	Back	0.418	0.048	0.466	-	-			
		Front	0.557	0.072	0.629	-	-			
		Back	0.77	0.072	0.842	-	-			
GPRS 850	Hotspot	Top	-	0.072	-	-	-			
(1Dn1UP)	πυιδρυι	Bottom	0.267	0.072	0.339	-	-			
		Right	0.352	0.072	0.424	-	-			
		Left	0.657	0.072	0.729	-	-			
GSM 1900	Body-	Front	0.315	0.048	0.363	-	-			
G3W 1900	Worn	Back	0.369	0.048	0.417	-	-			
		Front	0.511	0.072	0.583	-	-			
CDDC		Back	0.601	0.072	0.673	-	-			
GPRS 1900	Hotspot	Тор	-	0.072	-	-	-			
(1Dn1UP)		Bottom	0.726	0.072	0.798	-	-			
		Right	0.132	0.072	0.204	-	-			
		Left	0.103	0.072	0.175	-	-			
	Body-	Front	0.576	0.048	0.624	-	-			
	Worn	Back	0.495	0.048	0.543	-	-			
		Front	0.859	0.072	0.931	-	-			
WCDMA		Back	1.279	0.072	1.351	-	-			
Band II	Hotspot	Тор	-	0.072	-	-	-			
		Bottom	1.371	0.072	1.443	-	-			
		Right	0.24	0.072	0.312	-	-			
		Left	0.188	0.072	0.26	-	-			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 115 of 319

	reported SAR WWAN and Bluetooth, ΣSAR evaluation									
Frequency			reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR			
band	Pos	ition	WWAN	Bluetooth	<1.6W/kg	distance (mm)	(≦0.04)			
	Body-	Front	0.6	0.048	0.648	-	-			
	Worn	Back	0.57	0.048	0.618	-	-			
		Front	1.026	0.072	1.098	-	-			
WCDMA		Back	1.397	0.072	1.469	-	-			
Band IV	Hotspot	Тор	-	0.072	-	-	-			
	ποιδροι	Bottom	1.221	0.072	1.293	-	-			
		Right	0.25	0.072	0.322	-	-			
		Left	0.217	0.072	0.289	-	-			
	Body-	Front	0.279	0.048	0.327	-	-			
	Worn	Back	0.47	0.048	0.518	-	-			
		Front	0.682	0.072	0.754	-	-			
WCDMA	Hotspot	Back	1.014	0.072	1.086	-	-			
Band V		Top	-	0.072	-	-	-			
		Bottom	0.175	0.072	0.247	-	-			
		Right	0.46	0.072	0.532	-	-			
		Left	0.635	0.072	0.707	-	-			
	Body-	Front	0.493	0.048	0.541	-	-			
	Worn	Back	0.769	0.048	0.817	-	-			
		Front	0.931	0.072	1.003	-	-			
LTE FDD		Back	1.432	0.072	1.504	-	-			
Band 2	Hotspot	Тор	-	0.072	_	-	-			
		Bottom	1.387	0.072	1.459	-	-			
		Right	0.220	0.072	0.292	-	-			
		Left	0.235	0.072	0.307	-	-			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 116 of 319

	reported SAR WWAN and Bluetooth, ΣSAR evaluation									
Frequency	_		reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR			
band	Pos	ition	WWAN	Bluetooth	<1.6W/kg	distance (mm)	(≦0.04)			
	Body-	Front	0.618	0.048	0.666	-	-			
	Worn	Back	0.681	0.048	0.729	-	-			
		Front	1.148	0.072	1.22	-	-			
LTE FDD		Back	1.212	0.072	1.284	-	-			
Band 4	Hotopot	Тор	-	0.072	-	-	-			
	Hotspot	Bottom	1.208	0.072	1.28	-	-			
		Right	0.393	0.072	0.465	-	-			
		Left	0.279	0.072	0.351	-	-			
	Body-	Front	0.51	0.048	0.558	-	-			
	Worn	Back	0.521	0.048	0.569	-	-			
		Front	0.596	0.072	0.668	-	-			
LTE FDD	Hotspot	Back	0.863	0.072	0.935	-	-			
Band 5		Тор	-	0.072	-	-	-			
		Bottom	0.245	0.072	0.317	-	-			
		Right	0.608	0.072	0.68	-	-			
		Left	0.76	0.072	0.832	-	-			
	Body-	Front	0.233	0.048	0.281	-	-			
	Worn	Back	0.563	0.048	0.611	-	-			
		Front	0.41	0.072	0.482	-	-			
LTE FDD		Back	1.138	0.072	1.21	-	-			
Band 7	Hatanat	Тор		0.072	-	-				
	Hotspot	Bottom	0.981	0.072	1.053	-	-			
		Right	0.063	0.072	0.135	-	-			
		Left	0.061	0.072	0.133	-	-			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The

Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 117 of 319

	rep	orted SAR \	WWAN and	Bluetooth, Σ	SAR evalua	tion	
Frequency			reported S	SAR / W/kg	ΣSAR	Calculated	SPLSR
band	Pos	ition	WWAN	Bluetooth	<1.6W/kg	distance (mm)	(≦0.04)
	Body-	Front	0.037	0.048	0.085	-	-
	Worn	Back	0.083	0.048	0.131	-	-
		Front	0.04	0.072	0.112	-	-
LTE FDD		Back	0.127	0.072	0.199	-	-
Band 12	Hotspot	Тор	-	0.072	-	-	-
	Посорос	Bottom	0.018	0.072	0.09	-	-
		Right	0.025	0.072	0.097	-	-
		Left	0.038	0.072	0.11	-	-
	Body-	Front	0.266	0.048	0.314	-	-
	Worn	Back	0.421	0.048	0.469	-	-
		Front	0.317	0.072	0.389	-	-
LTE FDD		Back	0.566	0.072	0.638	-	-
Band 13	Hotspot	Тор	-	0.072	-	-	-
		Bottom	0.086	0.072	0.158	-	-
		Right	0.207	0.072	0.279	-	-
		Left	0.391	0.072	0.463	-	-
	Body-	Front	0.033	0.048	0.081	-	-
	Worn	Back	0.065	0.048	0.113	-	-
		Front	0.044	0.072	0.116	-	-
LTE FDD		Back	0.092	0.072	0.164	-	-
Band 17	Hotenot	Тор	-	0.072	-	-	-
	Hotspot	Bottom	0.018	0.072	0.09	-	-
		Right	0.026	0.072	0.098	-	-
		Left	0.037	0.072	0.109	-	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 118 of 319

4. Instruments List

LIST				
Manufacturar	Tuno	Serial	Date of last	Date of next
Manufacturei	туре	number	calibration	calibration
		3923	Aug.28,2014	Aug.27,2015
Schmid & Partner	EASUM	3831	Jan.31,2014	Jan.30,2015
Engineering AG	EV3DA4	3938	Jul.25,2014	Jul.24,2015
		3770	Apr.24,2014	Apr.23,2015
	D750V2	1015	Aug.28,2014	Aug.27,2015
	D835V2	4d063	Aug.28,2014	Aug.27,2015
Calamaid O Damboan	D1750V2	1008	Aug.28,2014	Aug.27,2015
	D1900V2	5d027	Apr.23,2014	Apr.22,2015
Erigineering Ae	D2450V2	727	Apr.23,2014	Apr.22,2015
	D2600V2	1005	Jan.28,2014	Jan.27,2015
	D5GHzV2	1104	Apr.16,2014	Apr.15,2015
Schmid & Partner Engineering AG		1260	Aug.26,2014	Aug.25,2015
	DAE4	915	Jun.18,2014	Jun.17,2015
		856	Aug.27,2014	Aug.26,2015
	DAE3	360	Feb.17,2014	Feb.16,2015
Schmid & Partner	DASY 52	NI/A	Calibration	Calibration
Engineering AG	V52.8.8	IN/A	not required	not required
Schmid & Partner	SAM	Ν/Δ	Calibration	Calibration
Engineering AG	JAIVI	IN/ /A	not required	not required
Agilent	E5071C	MY46107530	Feb.14,2014	Feb.13,2015
Aailent	85070F	MV44300677	Calibration	Calibration
Agilont	03070L	101144300077	not required	not required
Agilent	772D	MY46151242	Jul.14,2014	Jul.13,2015
Agnone	778D	MY48220468	Apr.01,2014	Mar.31,2015
Agilent	N5181A	MY50141235	Dec.14,2013	Dec.13,2016
Power Meter	E4417A	MY52240003	Apr.30,2014	Apr.29,2015
	Schmid & Partner Engineering AG Agilent Agilent Agilent Agilent	ManufacturerTypeSchmid & Partner Engineering AGEX3DV4Schmid & Partner Engineering AGD750V2 D835V2 D1750V2 D1900V2 	Manufacturer Type Serial number number 3923 Schmid & Partner Engineering AG EX3DV4 3831 Schmid & Partner Engineering AG D750V2 1015 D835V2 4d063 D1750V2 1008 D1900V2 5d027 D2450V2 727 D2600V2 1005 D5GHzV2 1104 Schmid & Partner Engineering AG DAE4 915 856 DAE3 360 N/A S66 Schmid & Partner Engineering AG SAM N/A N/A Schmid & Partner Engineering AG SAM N/A N/A Agilent E5071C MY46107530 MY44300677 Agilent 772D MY46151242 778D MY48220468 Agilent N5181A MY50141235 MY50141235	Manufacturer Type Serial number calibration Date of last calibration Schmid & Partner Engineering AG EX3DV4 3923 Aug.28,2014 Schmid & Partner Engineering AG D750V2 1015 Aug.28,2014 D750V2 1015 Aug.28,2014 D835V2 4d063 Aug.28,2014 D1750V2 1008 Aug.28,2014 D1900V2 5d027 Apr.23,2014 D2450V2 727 Apr.23,2014 D2450V2 727 Apr.23,2014 D2600V2 1005 Jan.28,2014 D5GHzV2 1104 Apr.16,2014 Schmid & Partner Engineering AG DAE4 915 Jun.18,2014 856 Aug.27,2014 856 Aug.27,2014 Schmid & Partner Engineering AG DASY 52 N/A Calibration not required Schmid & Partner Engineering AG SAM N/A Calibration not required Agilent 85070E MY46107530 Feb.14,2014 Agilent 772D MY46151242 Jul.14,2014 778D

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 119 of 319

Device	Manufacturer	Туре	Serial number	Date of last calibration	Date of next calibration
Agilent	Power Sensor	E9301H	MY52200004	Apr.30,2014	Apr.29,2015
Radio Communication Test	R&S	CMU200	122498	Aug.14,2014	Aug.13,2015
Radio Communication Test	Anritsu	MT8820C	6201061014	Aug.06,2014	Aug.05,2015
TECPEL	Digital thermometer	DTM-303A	TP130074	Mar.20,2014	Mar.19,2015

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 120 of 319

5. Measurements

Date: 2014/11/16

GSM 850_Head_Le Cheek_CH 190

Communication System: GSM; Frequency: 836.6 MHz, Duty factor: 1:8.3

Medium parameters used: f = 837 MHz; $\sigma = 0.885 \text{ S/m}$; $\epsilon_r = 41.14$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(9.14, 9.14, 9.14); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.693 W/kg

Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

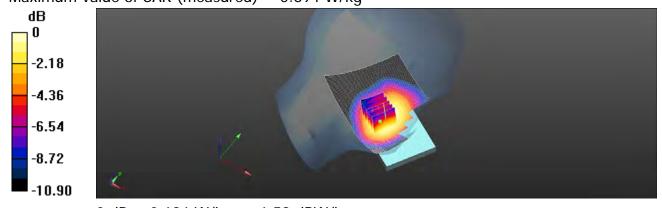
dy=8mm, dz=5mm

Reference Value = 6.239 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.768 W/kg

SAR(1 g) = 0.602 W/kg; SAR(10 g) = 0.440 W/kg

Maximum value of SAR (measured) = 0.694 W/kg



0 dB = 0.694 W/kq = -1.59 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 121 of 319

Date: 2014/11/16

GSM 850_Speech mode_Back side_CH 251_15mm

Communication System: GSM; Frequency: 848.8 MHz, Duty factor: 1:8.3

Medium parameters used: f = 849 MHz; $\sigma = 1.027$ S/m; $\varepsilon_r = 52.766$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3831; ConvF(9.03, 9.03, 9.03); Calibrated: 2014/1/31;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2014/6/18
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.467 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

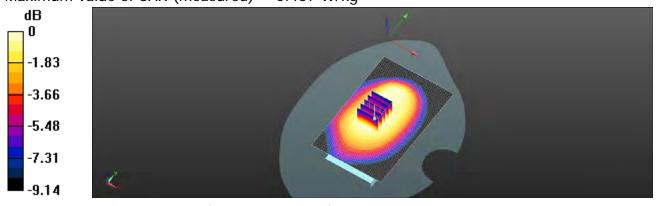
dy=8mm, dz=5mm

Reference Value = 20.95 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.517 W/kg

SAR(1 g) = 0.399 W/kg; SAR(10 g) = 0.295 W/kg

Maximum value of SAR (measured) = 0.467 W/kg



0 dB = 0.467 W/kq = -3.31 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 122 of 319

Date: 2014/11/16

GPRS 850_Hotspot_Back side_CH 190_10mm

Communication System: GPRS (1Dn1Up); Frequency: 836.6 MHz, Duty factor: 1:8.3 Medium parameters used: f = 837 MHz; $\sigma = 1.015$ S/m; $\epsilon_r = 52.87$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3831; ConvF(9.03, 9.03, 9.03); Calibrated: 2014/1/31;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2014/6/18
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.825 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 27.83 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.902 W/kg

SAR(1 g) = 0.702 W/kg; SAR(10 g) = 0.520 W/kg

Maximum value of SAR (measured) = 0.819 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 27.83 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.933 W/kg

SAR(1 g) = 0.588 W/kg; SAR(10 g) = 0.398 W/kg

Maximum value of SAR (measured) = 0.769 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 2: Measurement grid: dx=8mm,

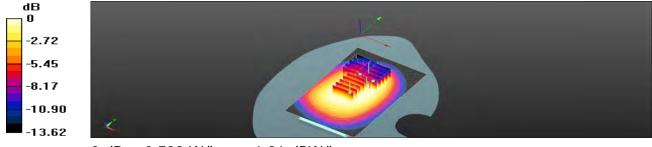
dy=8mm, dz=5mm

Reference Value = 27.83 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.875 W/kg

SAR(1 g) = 0.573 W/kg; SAR(10 g) = 0.393 W/kg

Maximum value of SAR (measured) = 0.739 W/kg



0 dB = 0.739 W/kq = -1.31 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 123 of 319

Date: 2014/11/18

GSM 1900_Head_Re Cheek_CH 810

Communication System: GSM; Frequency: 1909.8 MHz, Duty factor: 1:8.3

Medium parameters used: f = 1910 MHz; $\sigma = 1.389 \text{ S/m}$; $\epsilon_r = 39.304$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(7.79, 7.79, 7.79); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.254 W/kg

Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

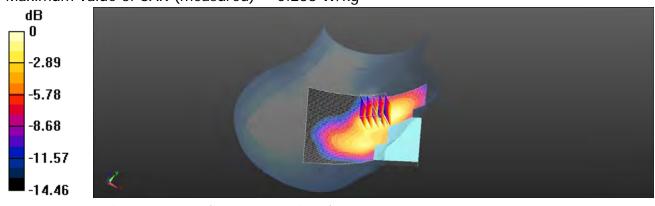
dy=8mm, dz=5mm

Reference Value = 3.897 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.298 W/kg

SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.123 W/kg

Maximum value of SAR (measured) = 0.238 W/kg



0 dB = 0.238 W/kq = -6.23 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 124 of 319

Date: 2014/11/18

GSM 1900_Speech mode_Back side_CH 810_15mm

Communication System: GSM; Frequency: 1909.8 MHz, Duty factor: 1:8.3

Medium parameters used: f = 1910 MHz; $\sigma = 1.504 \text{ S/m}$; $\epsilon_r = 51.909$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(7.19, 7.19, 7.19); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head:

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.420 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

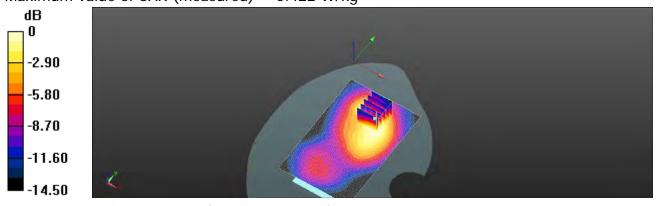
dv=8mm, dz=5mm

Reference Value = 7.268 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.511 W/kg

SAR(1 g) = 0.326 W/kg; SAR(10 g) = 0.199 W/kg

Maximum value of SAR (measured) = 0.422 W/kg



0 dB = 0.422 W/kg = -3.75 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 125 of 319

Date: 2014/11/18

GPRS 1900_Hotspot_Bottom side_CH 810_10mm

Communication System: GPRS (1Dn1Up); Frequency: 1909.8 MHz, Duty factor: 1:8.3 Medium parameters used: f = 1910 MHz; $\sigma = 1.504 \text{ S/m}$; $\epsilon_r = 51.909$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3831; ConvF(7.19, 7.19, 7.19); Calibrated: 2014/1/31;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2014/6/18
- Phantom: Head:
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (41x61x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.888 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

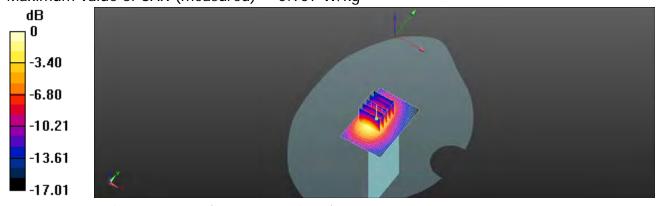
dv=8mm, dz=5mm

Reference Value = 15.70 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.662 W/kg; SAR(10 g) = 0.362 W/kg

Maximum value of SAR (measured) = 0.907 W/kg



0 dB = 0.907 W/kq = -0.42 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 f (886-2) 2298-0488



Page: 126 of 319

Date: 2014/11/18

WCDMA Band II_Head_Re Cheek_CH 9538

Communication System: WCDMA; Frequency: 1907.6 MHz, Duty factor: 1:1

Medium parameters used: f = 1908 MHz; $\sigma = 1.388$ S/m; $\epsilon_r = 39.314$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 SN3831; ConvF(7.79, 7.79, 7.79); Calibrated: 2014/1/31;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2014/6/18
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.460 W/kg

Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

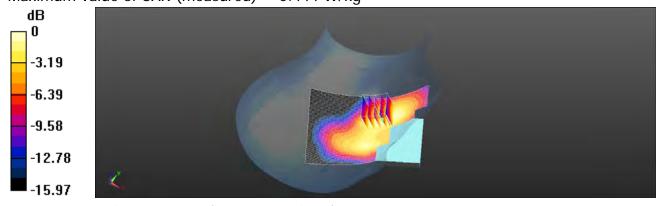
dy=8mm, dz=5mm

Reference Value = 5.758 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.544 W/kg

SAR(1 g) = 0.352 W/kg; SAR(10 g) = 0.220 W/kg

Maximum value of SAR (measured) = 0.444 W/kg



0 dB = 0.444 W/kq = -3.53 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 127 of 319

Date: 2014/11/18

WCDMA Band II_Speech mode_Front side_CH 9538_15mm

Communication System: WCDMA; Frequency: 1907.6 MHz, Duty factor: 1:1

Medium parameters used: f = 1908 MHz; $\sigma = 1.502$ S/m; $\epsilon_r = 51.911$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3831; ConvF(7.19, 7.19, 7.19); Calibrated: 2014/1/31;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2014/6/18
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.744 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

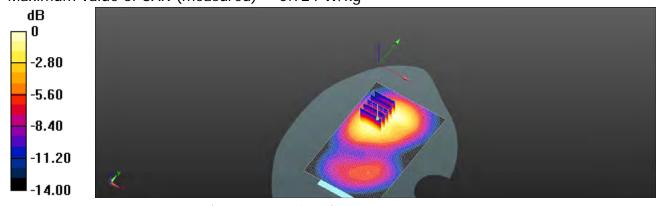
dy=8mm, dz=5mm

Reference Value = 7.439 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.874 W/kg

SAR(1 g) = 0.563 W/kg; SAR(10 g) = 0.353 W/kg

Maximum value of SAR (measured) = 0.724 W/kg



0 dB = 0.724 W/kq = -1.40 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 128 of 319

Date: 2014/11/18

WCDMA Band II_Hotspot_Bottom side_CH 9538_10mm

Communication System: WCDMA; Frequency: 1907.6 MHz, Duty factor: 1:1

Medium parameters used: f = 1908 MHz; $\sigma = 1.502$ S/m; $\epsilon_r = 51.911$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(7.19, 7.19, 7.19); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head:

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.86 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

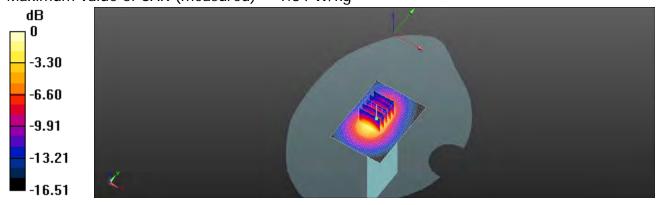
dv=8mm, dz=5mm

Reference Value = 25.63 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 1.34 W/kg; SAR(10 g) = 0.738 W/kg

Maximum value of SAR (measured) = 1.84 W/kg



0 dB = 1.84 W/kq = 2.65 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 129 of 319

Date: 2014/11/17

WCDMA Band IV Head Re Cheek CH 1412

Communication System: WCDMA; Frequency: 1732.4 MHz, Duty factor: 1:1

Medium parameters used: f = 1732.4 MHz; $\sigma = 1.364 \text{ S/m}$; $\epsilon_r = 39.598$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(8, 8, 8); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head:

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.542 W/kg

Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

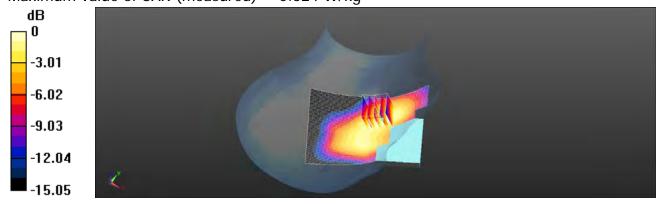
dv=8mm, dz=5mm

Reference Value = 4.484 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.625 W/kg

SAR(1 g) = 0.430 W/kg; SAR(10 g) = 0.283 W/kg

Maximum value of SAR (measured) = 0.524 W/kg



0 dB = 0.524 W/kq = -2.81 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 130 of 319

Date: 2014/11/17

WCDMA Band IV_Speech mode_Front side_CH 1412_15mm

Communication System: WCDMA; Frequency: 1732.4 MHz, Duty factor: 1:1

Medium parameters used: f = 1732.4 MHz; $\sigma = 1.444 \text{ S/m}$; $\varepsilon_r = 54.47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(7.63, 7.63, 7.63); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.753 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

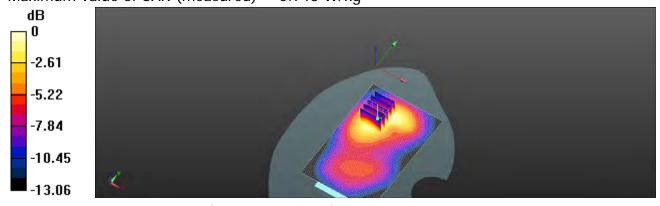
dy=8mm, dz=5mm

Reference Value = 10.95 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.876 W/kg

SAR(1 g) = 0.590 W/kg; SAR(10 g) = 0.376 W/kg

Maximum value of SAR (measured) = 0.748 W/kg



0 dB = 0.748 W/kq = -1.26 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 131 of 319

Date: 2014/11/17

WCDMA Band IV_Hotspot_Back side_CH 1513_10mm_repeat SAR test at the highest SAR measurement

Communication System: WCDMA; Frequency: 1752.6 MHz, Duty factor: 1:1

Medium parameters used: f = 1753 MHz; $\sigma = 1.459$ S/m; $\epsilon_r = 54.388$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(7.63, 7.63, 7.63); Calibrated: 2014/1/31;

• Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 1.56 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

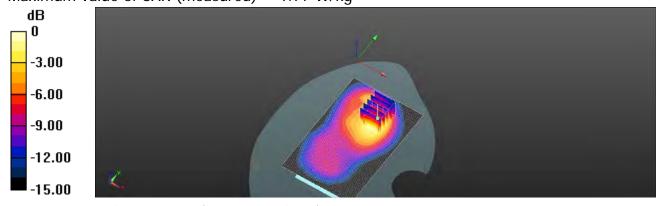
dy=8mm, dz=5mm

Reference Value = 12.47 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.818 W/kg

Maximum value of SAR (measured) = 1.77 W/kg



0 dB = 1.77 W/kq = 2.48 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 132 of 319

Date: 2014/11/16

WCDMA Band V_Head_Le Cheek_CH 4233

Communication System: WCDMA; Frequency: 846.6 MHz, Duty factor: 1:1

Medium parameters used: f = 847 MHz; $\sigma = 0.894$ S/m; $\varepsilon_r = 41.012$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 SN3831; ConvF(9.14, 9.14, 9.14); Calibrated: 2014/1/31;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2014/6/18
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Head/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.642 W/kg

Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

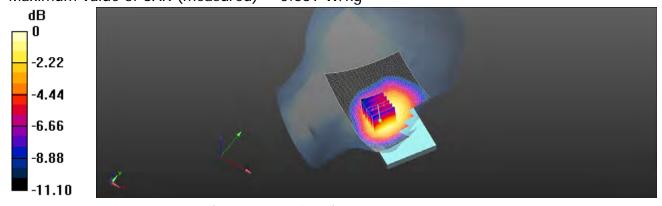
dy=8mm, dz=5mm

Reference Value = 5.542 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.721 W/kg

SAR(1 g) = 0.552 W/kg; SAR(10 g) = 0.399 W/kg

Maximum value of SAR (measured) = 0.639 W/kg



0 dB = 0.639 W/kq = -1.94 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 133 of 319

Date: 2014/11/16

WCDMA Band V_Speech mode_Back side_CH 4233_15mm

Communication System: WCDMA; Frequency: 846.6 MHz, Duty factor: 1:1

Medium parameters used: f = 847 MHz; $\sigma = 1.025$ S/m; $\varepsilon_r = 52.785$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(9.03, 9.03, 9.03); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.508 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 20.45 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.574 W/kg

SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.310 W/kg

Maximum value of SAR (measured) = 0.510 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm,

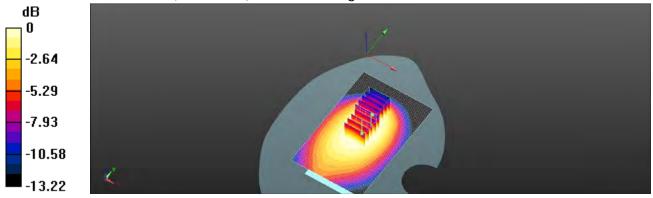
dy=8mm, dz=5mm

Reference Value = 20.45 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.552 W/kg

SAR(1 g) = 0.364 W/kg; SAR(10 g) = 0.253 W/kg

Maximum value of SAR (measured) = 0.469 W/kg



0 dB = 0.469 W/kq = -3.29 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 134 of 319

Date: 2014/11/16

WCDMA Band V_Hotspot_Back side_CH 4132_10mm

Communication System: WCDMA; Frequency: 826.4 MHz, Duty factor: 1:1

Medium parameters used: f = 826.4 MHz; $\sigma = 1.003 \text{ S/m}$; $\varepsilon_r = 52.958$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(9.03, 9.03, 9.03); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 1.13 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 32.26 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.964 W/kg; SAR(10 g) = 0.710 W/kg

Maximum value of SAR (measured) = 1.13 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm,

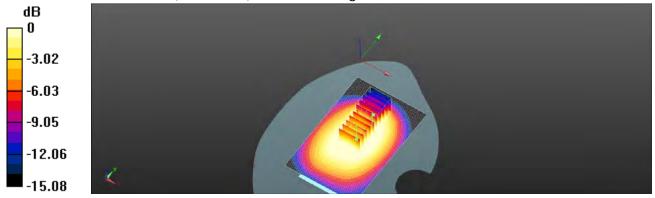
dy=8mm, dz=5mm

Reference Value = 32.26 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.997 W/kg

SAR(1 g) = 0.666 W/kg; SAR(10 g) = 0.434 W/kg

Maximum value of SAR (measured) = 0.829 W/kg



0 dB = 0.829 W/kq = -0.81 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 135 of 319

Date: 2014/11/24

LTE Band 2 (20MHz) Head Le Cheek CH 19100 QPSK 1-99

Communication System: LTE; Frequency: 1900 MHz, Duty factor: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.42 \text{ S/m}$; $\epsilon r = 41.116$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(7.65, 7.65, 7.65); Calibrated: 2014/7/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn360; Calibrated: 2014/2/17
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.573 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

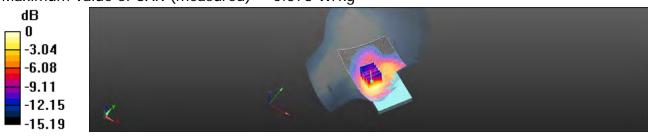
dx=8mm, dv=8mm, dz=5mm

Reference Value = 6.368 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.726 W/kg

SAR(1 g) = 0.453 W/kg; SAR(10 g) = 0.277 W/kg

Maximum value of SAR (measured) = 0.578 W/kg



0 dB = 0.578 W/kq = -2.38 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 136 of 319

Date: 2014/11/25

LTE Band 2 (20MHz)_Body-worn_Back side_CH 19100 QPSK 1-99 15mm

Communication System: LTE; Frequency: 1900 MHz, Duty factor: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.542 \text{ S/m}$; $\epsilon r = 51.826$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.03, 7.03, 7.03); Calibrated: 2014/7/25;

• Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn360; Calibrated: 2014/2/17

· Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.975 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

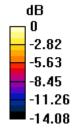
dx=8mm, dy=8mm, dz=5mm

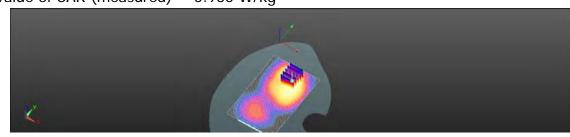
Reference Value = 11.17 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.743 W/kg; SAR(10 g) = 0.454 W/kg

Maximum value of SAR (measured) = 0.960 W/kg





0 dB = 0.960 W/kq = -0.18 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 137 of 319

Date: 2014/11/25

LTE Band 2 (20MHz)_Hotspot_Bottom side_CH 19100 QPSK 1-99 10mm

Communication System: LTE; Frequency: 1900 MHz, Duty factor: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.542 \text{ S/m}$; $\epsilon r = 51.826$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.03, 7.03, 7.03); Calibrated: 2014/7/25;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn360; Calibrated: 2014/2/17

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (41x71x1): Interpolated grid: dx=15 mm,

dv=15 mm

Maximum value of SAR (interpolated) = 1.87 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

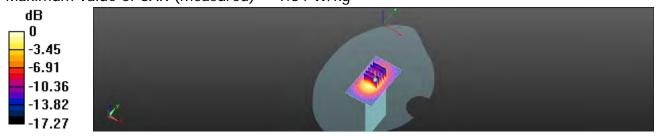
dx=8mm, dy=8mm, dz=5mm

Reference Value = 30.56 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 2.24 W/kg

SAR(1 g) = 1.34 W/kg; SAR(10 g) = 0.728 W/kg

Maximum value of SAR (measured) = 1.84 W/kg



0 dB = 1.84 W/kq = 2.65 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 138 of 319

Date: 2014/11/22

LTE Band 4 (20MHz)_Head_Le Cheek_CH 20050_QPSK_1-0

Communication System: LTE; Frequency: 1720 MHz, Duty factor: 1:1

Medium parameters used: f = 1720 MHz; $\sigma = 1.362 \text{ S/m}$; $\epsilon r = 40.675$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(7.91, 7.91, 7.91); Calibrated: 2014/7/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn360; Calibrated: 2014/2/17
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (61x111x1): Interpolated grid: Headdx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.809 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

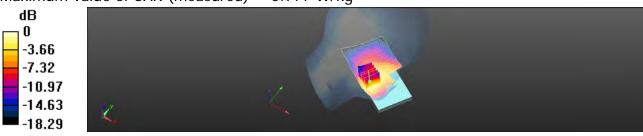
dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.896 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.924 W/kg

SAR(1 g) = 0.615 W/kg; SAR(10 g) = 0.383 W/kg

Maximum value of SAR (measured) = 0.777 W/kg



0 dB = 0.777 W/kq = -1.09 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 139 of 319

Date: 2014/11/23

LTE Band 4 (20MHz)_Body-worn_Back side_CH 20050 QPSK 1-0 15mm

Communication System: LTE; Frequency: 1720 MHz, Duty factor: 1:1

Medium parameters used: f = 1720 MHz; $\sigma = 1.442 \text{ S/m}$; $\epsilon r = 53.954$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/7/25;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn360; Calibrated: 2014/2/17

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: Headdx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 1.06 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

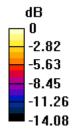
dx=8mm, dy=8mm, dz=5mm

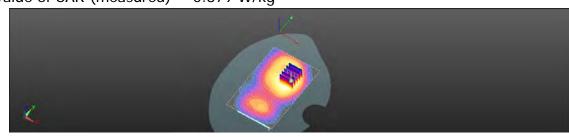
Reference Value = 11.78 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.679 W/kg; SAR(10 g) = 0.426 W/kg

Maximum value of SAR (measured) = 0.879 W/kg





0 dB = 0.879 W/kq = -0.56 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 140 of 319

Date: 2014/11/23

LTE Band 4 (20MHz)_Hotspot_Bottom side_CH 20175_QPSK_1-0_10mm

Communication System: LTE; Frequency: 1732.5 MHz, Duty factor: 1:1

Medium parameters used: f = 1732.5 MHz; $\sigma = 1.451 \text{ S/m}$; $\epsilon r = 53.838$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/7/25;

• Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn360; Calibrated: 2014/2/17

· Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (41x71x1): Interpolated grid: Headdx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 1.68 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

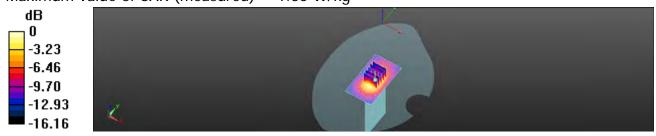
dx=8mm, dy=8mm, dz=5mm

Reference Value = 31.45 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.98 W/kg

SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.648 W/kg

Maximum value of SAR (measured) = 1.65 W/kg



0 dB = 1.65 W/kg = 2.17 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 141 of 319

Date: 2014/11/26

LTE Band 5 (10MHz)_Head_Le Cheek_CH 20525_QPSK_1-49

Communication System: LTE; Frequency: 836.5 MHz, Duty factor: 1:1

Medium parameters used: f = 836.5 MHz; $\sigma = 0.898 \text{ S/m}$; $\epsilon r = 41.125$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.48, 10.48, 10.48); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.668 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

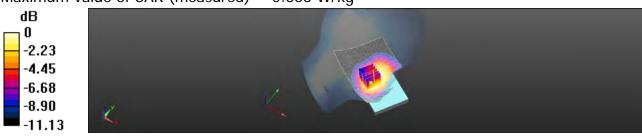
dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.520 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.750 W/kg

SAR(1 g) = 0.581 W/kg; SAR(10 g) = 0.425 W/kg

Maximum value of SAR (measured) = 0.663 W/kg



0 dB = 0.663 W/kq = -1.79 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 142 of 319

Date: 2014/11/27

LTE Band 5 (10MHz)_Body-worn_Back side_CH 20600 QPSK 1-25 15mm

Communication System: LTE; Frequency: 844 MHz, Duty factor: 1:1

Medium parameters used: f = 844 MHz; $\sigma = 0.977$ S/m; $\epsilon r = 53.195$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2014/7/25;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn360; Calibrated: 2014/2/17

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dv=15 mm

Maximum value of SAR (interpolated) = 0.596 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

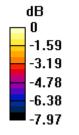
dx=8mm, dy=8mm, dz=5mm

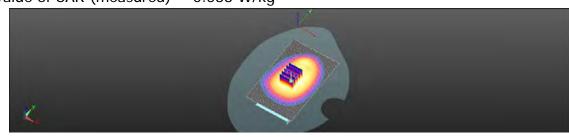
Reference Value = 23.98 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.658 W/kg

SAR(1 g) = 0.506 W/kg; SAR(10 g) = 0.383 W/kg

Maximum value of SAR (measured) = 0.588 W/kg





0 dB = 0.588 W/kq = -2.31 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 143 of 319

Date: 2014/11/27

LTE Band 5 (10MHz)_Hotspot_Back side_CH 20525_QPSK_1-49_10mm

Communication System: LTE; Frequency: 836.5 MHz, Duty factor: 1:1

Medium parameters used: f = 836.5 MHz; $\sigma = 0.97 \text{ S/m}$; $\epsilon r = 53.278$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2014/7/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn360; Calibrated: 2014/2/17
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.983 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dv=8mm, dz=5mm

Reference Value = 30.37 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.630 W/kg

Maximum value of SAR (measured) = 0.976 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 1: Measurement grid:

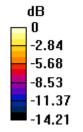
dx=8mm, dy=8mm, dz=5mm

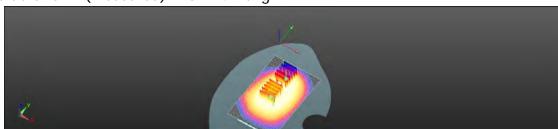
Reference Value = 30.37 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.893 W/kg

SAR(1 g) = 0.572 W/kg; SAR(10 g) = 0.392 W/kg

Maximum value of SAR (measured) = 0.724 W/kg





0 dB = 0.724 W/kq = -1.40 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 144 of 319

Date: 2014/11/30

LTE Band 7 (20MHz)_Head_Re Cheek_CH 21100_QPSK_1-99

Communication System: LTE; Frequency: 2535 MHz, Duty factor: 1:1

Medium parameters used: f = 2535 MHz; $\sigma = 1.908 \text{ S/m}$; $\epsilon r = 38.916$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(7.41, 7.41, 7.41); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (81x141x1): Interpolated grid: dx=12 mm,

dy=12 mm

Maximum value of SAR (interpolated) = 0.264 W/kg

Configuration/HEAD/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

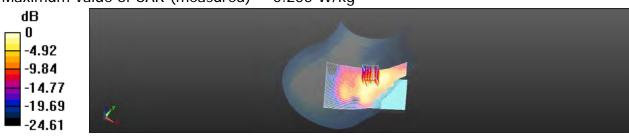
dx=5mm, dv=5mm, dz=5mm

Reference Value = 3.131 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.344 W/kg

SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.098 W/kg

Maximum value of SAR (measured) = 0.255 W/kg



0 dB = 0.255 W/kq = -5.94 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 145 of 319

Date: 2014/12/1

LTE Band 7 (20MHz)_Body-worn_Back side_CH 21350_QPSK_1-99_15mm

Communication System: LTE; Frequency: 2560 MHz, Duty factor: 1:1

Medium parameters used: f = 2560 MHz; $\sigma = 2.093 \text{ S/m}$; $\epsilon r = 51.581$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/8/28;

Sensor-Surface: 2mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (91x141x1): Interpolated grid: dx=12 mm,

dy=12 mm

Maximum value of SAR (interpolated) = 0.863 W/kg

Configuration/HEAD/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

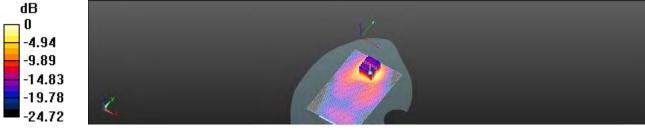
dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.160 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.559 W/kg; SAR(10 g) = 0.276 W/kg

Maximum value of SAR (measured) = 0.822 W/kg



0 dB = 0.822 W/kq = -0.85 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 146 of 319

Date: 2014/12/1

LTE Band 7 (20MHz)_Hotspot_Back side_CH 21350_QPSK_1-99_10mm

Communication System: LTE; Frequency: 2560 MHz, Duty factor: 1:1

Medium parameters used: f = 2560 MHz; $\sigma = 2.093 \text{ S/m}$; $\epsilon r = 51.581$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (91x141x1): Interpolated grid: dx=12 mm,

dy=12 mm

Maximum value of SAR (interpolated) = 1.78 W/kg

Configuration/HEAD/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

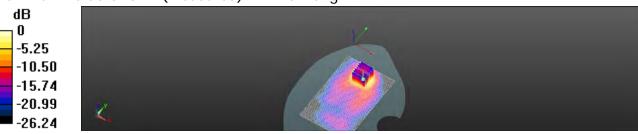
dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.065 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 2.29 W/kg

SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.528 W/kg

Maximum value of SAR (measured) = 1.70 W/kg



0 dB = 1.70 W/kq = 2.31 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 147 of 319

Date: 2014/11/21

LTE Band 12 (10MHz)_Head_Le Cheek_CH 23090_QPSK_1-25

Communication System: LTE; Frequency: 707 MHz, Duty factor: 1:1

Medium parameters used: f = 707 MHz; $\sigma = 0.865 \text{ S/m}$; $\epsilon r = 43.029$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.91, 10.91, 10.91); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.0494 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

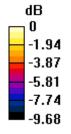
dx=8mm, dy=8mm, dz=5mm

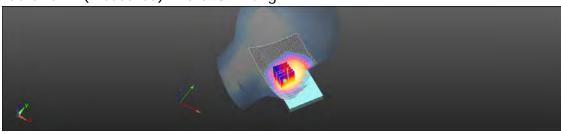
Reference Value = 1.915 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.0550 W/kg

SAR(1 g) = 0.043 W/kg; SAR(10 g) = 0.032 W/kg

Maximum value of SAR (measured) = 0.0481 W/kg





0 dB = 0.0481 W/kq = -13.18 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 148 of 319

Date: 2014/11/28

LTE Band 12 (10MHz)_Body-worn_Back side_CH 23090_QPSK_50-0_15mm

Communication System: LTE; Frequency: 707 MHz, Duty factor: 1:1

Medium parameters used: f = 707 MHz; $\sigma = 0.927$ S/m; $\epsilon r = 54.731$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;

• Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

· Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.0922 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

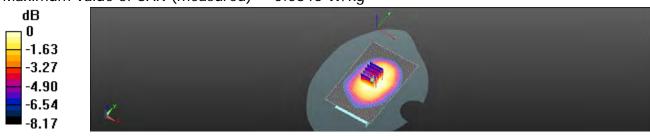
dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.835 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.0960 W/kg

SAR(1 g) = 0.073 W/kg; SAR(10 g) = 0.056 W/kg

Maximum value of SAR (measured) = 0.0846 W/kg



0 dB = 0.0846 W/kq = -10.72 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 149 of 319

Date: 2014/11/28

LTE Band 12 (10MHz)_Hotspot_Back side_CH 23090_QPSK_50-0_10mm

Communication System: LTE; Frequency: 707 MHz, Duty factor: 1:1

Medium parameters used: f = 707 MHz; $\sigma = 0.927$ S/m; $\epsilon r = 54.731$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;

• Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

· Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.127 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

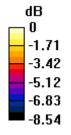
dx=8mm, dy=8mm, dz=5mm

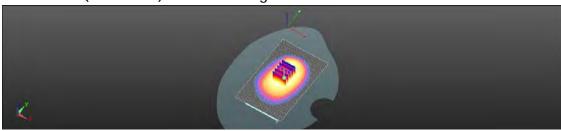
Reference Value = 11.64 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.140 W/kg

SAR(1 g) = 0.111 W/kg; SAR(10 g) = 0.085 W/kg

Maximum value of SAR (measured) = 0.128 W/kg





0 dB = 0.128 W/kq = -8.94 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 150 of 319

Date: 2014/11/21

LTE Band 13 (10MHz)_Head_Le Cheek_CH 23230_QPSK_1-49

Communication System: LTE; Frequency: 782 MHz, Duty factor: 1:1

Medium parameters used: f = 782 MHz; $\sigma = 0.929 \text{ S/m}$; $\epsilon r = 41.921$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.91, 10.91, 10.91); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.357 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

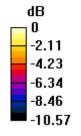
dx=8mm, dy=8mm, dz=5mm

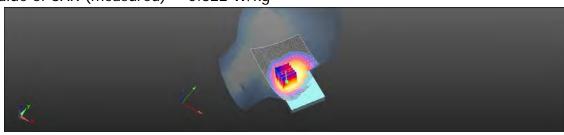
Reference Value = 3.956 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.378 W/kg

SAR(1 g) = 0.274 W/kg; SAR(10 g) = 0.203 W/kg

Maximum value of SAR (measured) = 0.322 W/kg





0 dB = 0.322 W/kq = -4.92 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents of the limitation of limitation of limitation of limitation of limitation of limitation and invisdiction issues defined.

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 151 of 319

Date: 2014/11/28

LTE Band 13 (10MHz)_Body-worn_Back side_CH 23230_QPSK_1-49

Communication System: LTE; Frequency: 782 MHz, Duty factor: 1:1

Medium parameters used: f = 782 MHz; $\sigma = 1.004 \text{ S/m}$; $\epsilon r = 53.993$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.509 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

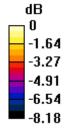
dx=8mm, dy=8mm, dz=5mm

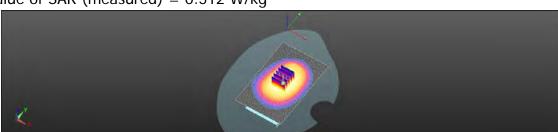
Reference Value = 22.95 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.565 W/kg

SAR(1 g) = 0.442 W/kg; SAR(10 g) = 0.334 W/kg

Maximum value of SAR (measured) = 0.512 W/kg





0 dB = 0.512 W/kq = -2.91 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 152 of 319

Date: 2014/11/28

LTE Band 13 (10MHz)_Hotspot_Back side_CH 23230_QPSK_1-49_10mm

Communication System: LTE; Frequency: 782 MHz, Duty factor: 1:1

Medium parameters used: f = 782 MHz; $\sigma = 1.004 \text{ S/m}$; $\epsilon r = 53.993$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;

• Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

· Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.681 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.20 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.751 W/kg

SAR(1 g) = 0.594 W/kg; SAR(10 g) = 0.451 W/kg

Maximum value of SAR (measured) = 0.683 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 1: Measurement grid:

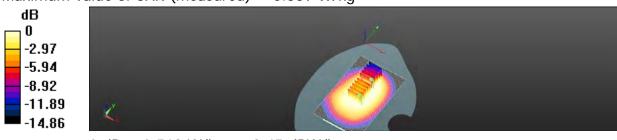
dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.20 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.681 W/kg

SAR(1 g) = 0.451 W/kg; SAR(10 g) = 0.312 W/kg

Maximum value of SAR (measured) = 0.569 W/kg



0 dB = 0.569 W/kg = -2.45 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 153 of 319

Date: 2014/11/21

LTE Band 17 (10MHz)_Head_Le Cheek_CH 23790_QPSK_50-0

Communication System: LTE; Frequency: 710 MHz, Duty factor: 1:1

Medium parameters used: f = 710 MHz; $\sigma = 0.867 \text{ S/m}$; $\epsilon r = 42.999$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.91, 10.91, 10.91); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.0429 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

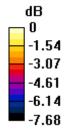
dx=8mm, dv=8mm, dz=5mm

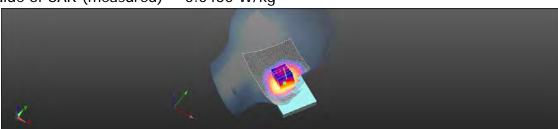
Reference Value = 1.658 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.0470 W/kg

SAR(1 g) = 0.038 W/kg; SAR(10 g) = 0.031 W/kg

Maximum value of SAR (measured) = 0.0430 W/kg





0 dB = 0.0430 W/kq = -13.66 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 154 of 319

Date: 2014/11/29

LTE Band 17 (10MHz)_Body-worn_Back side_CH 23780_QPSK_25-25_15mm

Communication System: LTE; Frequency: 709 MHz, Duty factor: 1:1

Medium parameters used: f = 709 MHz; $\sigma = 0.932$ S/m; $\epsilon r = 54.704$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;

• Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

· Phantom: Head

• DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dy=15 mm

Maximum value of SAR (interpolated) = 0.0666 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

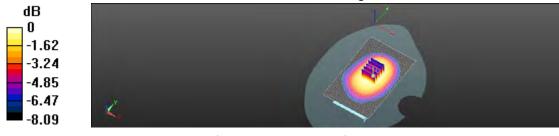
dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.482 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.0740 W/kg

SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.045 W/kg

Maximum value of SAR (measured) = 0.0676 W/kg



0 dB = 0.0676 W/kq = -11.70 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 155 of 319

Date: 2014/11/29

LTE Band 17 (10MHz)_Hotspot_Back side_CH 23780 QPSK 1-49 10mm

Communication System: LTE; Frequency: 709 MHz, Duty factor: 1:1

Medium parameters used: f = 709 MHz; $\sigma = 0.932$ S/m; $\epsilon r = 54.704$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/HEAD/Area Scan (71x111x1): Interpolated grid: dx=15 mm,

dv=15 mm

Maximum value of SAR (interpolated) = 0.104 W/kg

Configuration/HEAD/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

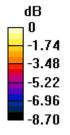
dx=8mm, dy=8mm, dz=5mm

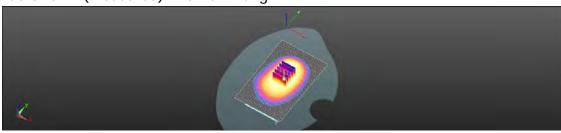
Reference Value = 10.72 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.113 W/kg

SAR(1 g) = 0.089 W/kg; SAR(10 g) = 0.069 W/kg

Maximum value of SAR (measured) = 0.102 W/kg





0 dB = 0.102 W/kq = -9.90 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 156 of 319

Date: 2014/11/23

WLAN802.11b Head RE Cheek CH 11

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz, Duty

factor: 1:1

Medium parameters used: f = 2462 MHz; $\sigma = 1.836 \text{ S/m}$; $\epsilon_r = 39.117$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3770; ConvF(6.97, 6.97, 6.97); Calibrated: 4/24/2014;

- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/RE Cheek/Area Scan (91x141x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.963 W/kg

Configuration/RE Cheek/Zoom Scan (7x7x7) / Cube 0: Measurement grid:

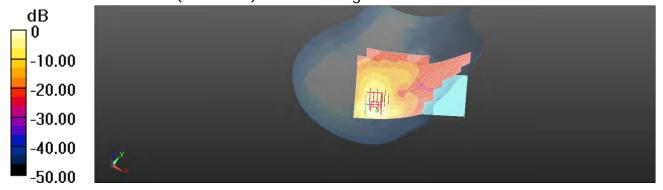
dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.12 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.587 W/kg; SAR(10 g) = 0.276 W/kg

Maximum value of SAR (measured) = 0.870 W/kg



0 dB = 0.963 W/kg = -0.16 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 157 of 319

Date: 2014/11/23

WLAN802.11b_Hotspot_Back side_CH 11_10mm

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz, Duty

factor: 1:1

Medium parameters used: f = 2462 MHz; $\sigma = 2.063 \text{ S/m}$; $\epsilon_r = 50.06$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(7.15, 7.15, 7.15); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Hotspot/Area Scan (91x151x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

Configuration/Hotspot/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

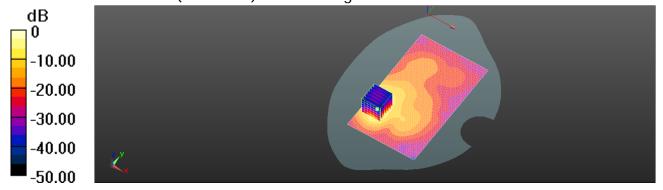
dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.334 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.638 W/kg; SAR(10 g) = 0.276 W/kg

Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.03 W/kg = 0.11 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 158 of 319

Date: 2014/11/17

WLAN802.11a5.2G_Head_RE Tilt_CH 36

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5180 MHz, Duty factor: 1:1 Medium parameters used: f = 5180 MHz; $\sigma = 4.589$ S/m; $\epsilon_r = 36.126$; $\rho = 1000$ kg/m³ Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(5.25, 5.25, 5.25); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/RE Tilt/Area Scan (111x181x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.425 W/kg

Configuration/RE Tilt/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

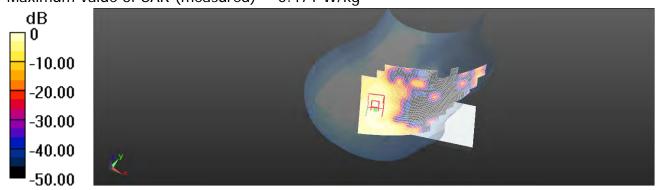
dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.951 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.913 W/kg

SAR(1 g) = 0.249 W/kg; SAR(10 g) = 0.087 W/kg

Maximum value of SAR (measured) = 0.471 W/kg



0 dB = 0.425 W/kq = -3.72 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 159 of 319

Date: 2014/11/19

WLAN802.11a5.2G_Body-worn_Back side_CH 36_15mm

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5180 MHz, Duty factor: 1:1 Medium parameters used: f = 5180 MHz; $\sigma = 5.393 \text{ S/m}$; $\varepsilon_r = 48.66$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.56, 4.56, 4.56); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head:
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (111x181x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.625 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

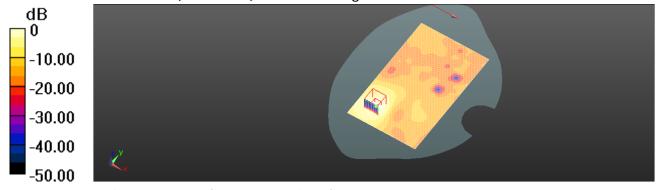
dx=4mm, dv=4mm, dz=2mm

Reference Value = 2.167 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.341 W/kg; SAR(10 g) = 0.144 W/kg

Maximum value of SAR (measured) = 0.609 W/kg



0 dB = 0.625 W/kq = -2.04 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 160 of 319

Date: 2014/11/18

WLAN802.11a5.3G_Head_RE Tilt_CH 64

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5320 MHz, Duty factor: 1:1 Medium parameters used: f = 5320 MHz; $\sigma = 4.767$ S/m; $\epsilon_r = 35.798$; $\rho = 1000$ kg/m³ Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(5.07, 5.07, 5.07); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/RE Tilt/Area Scan (111x181x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.389 W/kg

Configuration/RE Tilt/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

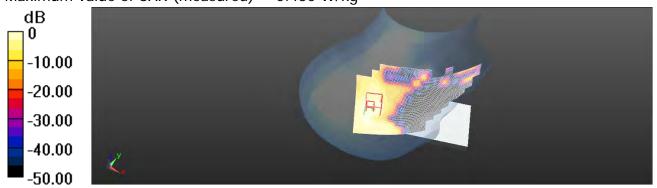
dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.042 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.901 W/kg

SAR(1 g) = 0.218 W/kg; SAR(10 g) = 0.070 W/kg

Maximum value of SAR (measured) = 0.430 W/kg



0 dB = 0.389 W/kq = -4.10 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 161 of 319

Date: 2014/11/19

WLAN802.11a5.3G_Body-worn_Back side_CH 64_15mm

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5320 MHz, Duty factor: 1:1 Medium parameters used: f = 5320 MHz; $\sigma = 5.59$ S/m; $\epsilon_r = 48.196$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (111x181x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.592 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

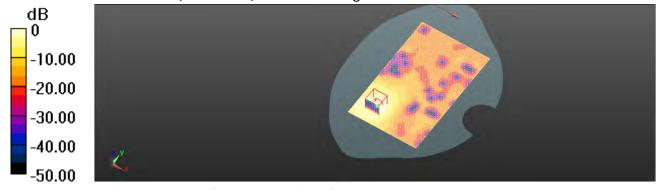
dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.909 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.319 W/kg; SAR(10 g) = 0.131 W/kg

Maximum value of SAR (measured) = 0.576 W/kg



0 dB = 0.592 W/kq = -2.27 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 162 of 319

Date: 2014/11/17

WLAN802.11a5.6G_Head_RE Cheek_CH 132

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5660 MHz, Duty factor: 1:1 Medium parameters used: f = 5660 MHz; $\sigma = 5.153$ S/m; $\epsilon_r = 35.031$; $\rho = 1000$ kg/m³ Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.48, 4.48, 4.48); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/RE Cheek/Area Scan (111x181x1): Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.833 W/kg

Configuration/RE Cheek/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.722 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 0.480 W/kg; SAR(10 g) = 0.155 W/kg

Maximum value of SAR (measured) = 0.974 W/kg

Configuration/RE Cheek/Zoom Scan (7x7x12)/Cube 1: Measurement grid:

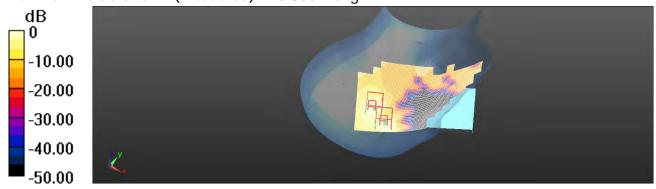
dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.722 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.88 W/kg

SAR(1 g) = 0.412 W/kg; SAR(10 g) = 0.131 W/kg

Maximum value of SAR (measured) = 0.835 W/kg



0 dB = 0.833 W/kg = -0.79 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 163 of 319

Date: 2014/11/19

WLAN802.11a5.6G_Body-worn_Back side_CH 132_15mm

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5660 MHz, Duty factor: 1:1 Medium parameters used: f = 5660 MHz; $\sigma = 6.058 \text{ S/m}$; $\varepsilon_r = 47.18$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(3.76, 3.76, 3.76); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head:
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (111x181x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.735 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

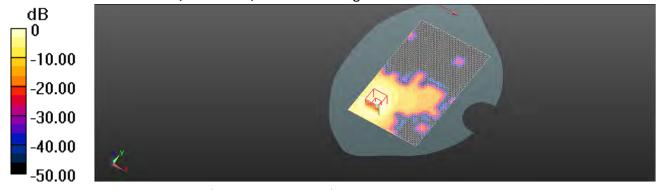
dx=4mm, dv=4mm, dz=2mm

Reference Value = 1.359 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.382 W/kg; SAR(10 g) = 0.139 W/kg

Maximum value of SAR (measured) = 0.736 W/kg



0 dB = 0.735 W/kq = -1.34 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 164 of 319

Date: 2014/11/18

WLAN802.11a5.8G_Head_RE Cheek_CH 161

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5805 MHz, Duty factor: 1:1 Medium parameters used : f = 5805 MHz; $\sigma = 5.321$ S/m; $\epsilon_r = 34.677$; $\rho = 1000$ kg/m³ Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/RE Cheek/Area Scan (111x181x1): Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.822 W/kg

Configuration/RE Cheek/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.226 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 2.28 W/kg

SAR(1 g) = 0.493 W/kg; SAR(10 g) = 0.152 W/kg

Maximum value of SAR (measured) = 0.995 W/kg

Configuration/RE Cheek/Zoom Scan (7x7x12)/Cube 1: Measurement grid:

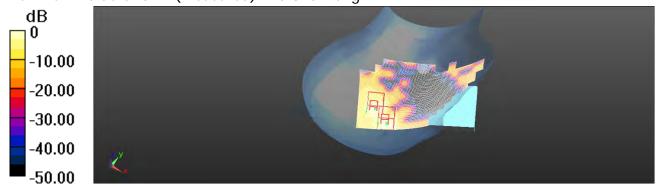
dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.226 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 2.03 W/kg

SAR(1 g) = 0.406 W/kg; SAR(10 g) = 0.126 W/kg

Maximum value of SAR (measured) = 0.825 W/kg



0 dB = 0.822 W/kg = -0.85 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 165 of 319

Date: 2014/11/19

WLAN802.11a5.8G_Body-worn_Back side_CH 165_15mm

Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5825 MHz, Duty factor: 1:1 Medium parameters used : f = 5825 MHz; $\sigma = 6.263$ S/m; $\epsilon_r = 46.889$; $\rho = 1000$ kg/m³ Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.13, 4.13, 4.13); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (111x181x1): Interpolated grid: dx=10 mm,

dy=10 mm

Maximum value of SAR (interpolated) = 0.534 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.357 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.110 W/kg

Maximum value of SAR (measured) = 0.543 W/kg

Configuration/Body/Zoom Scan (7x7x12)/Cube 1: Measurement grid:

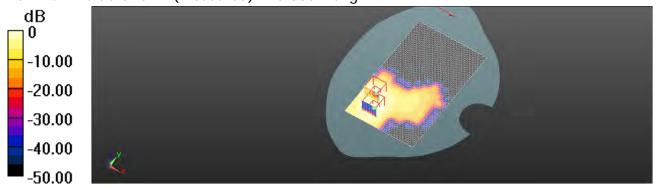
dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.357 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.298 W/kg; SAR(10 g) = 0.126 W/kg

Maximum value of SAR (measured) = 0.560 W/kg



0 dB = 0.534 W/kg = -2.72 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 166 of 319

6. System Verification

Date: 2014/11/21

Dipole 750 MHz_SN:1015_Head

Communication System: CW; Frequency: 750 MHz, Duty factor: 1:1

Medium parameters used: f = 750 MHz; $\sigma = 0.902 \text{ S/m}$; $\varepsilon_r = 42.233$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(10.91, 10.91, 10.91); Calibrated: 2014/8/28;

Sensor-Surface: 2mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.63 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

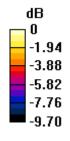
dx=5mm, dy=5mm, dz=5mm

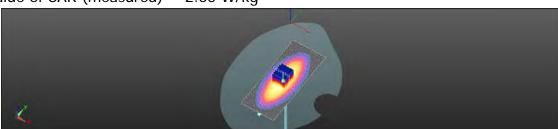
Reference Value = 56.79 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.09 W/kg

SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.43 W/kg

Maximum value of SAR (measured) = 2.65 W/kg





0 dB = 2.65 W/kq = 4.24 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 167 of 319

Date: 2014/11/28

Dipole 750 MHz_SN:1015_Body_1

Communication System: CW; Frequency: 750 MHz, Duty factor: 1:1

Medium parameters used: f = 750 MHz; $\sigma = 0.972 \text{ S/m}$; $\varepsilon_r = 54.319$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.96 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

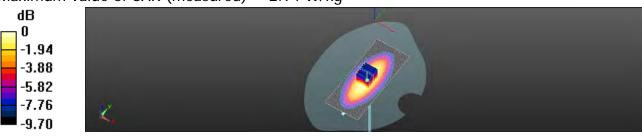
dx=5mm, dv=5mm, dz=5mm

Reference Value = 56.48 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.53 W/kg

SAR(1 g) = 2.28 W/kg; SAR(10 g) = 1.49 W/kg

Maximum value of SAR (measured) = 2.94 W/kg



0 dB = 2.94 W/kq = 4.68 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 168 of 319

Date: 2014/11/29

Dipole 750 MHz_SN:1015_Body_2

Communication System: CW; Frequency: 750 MHz, Duty factor: 1:1

Medium parameters used: f = 750 MHz; $\sigma = 0.976 \text{ S/m}$; $\varepsilon_r = 54.296$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.29, 10.29, 10.29); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.94 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

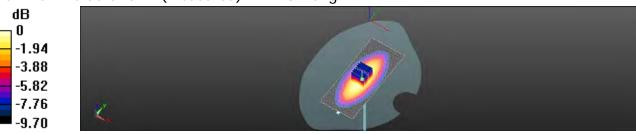
dx=5mm, dv=5mm, dz=5mm

Reference Value = 56.331 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.51 W/kg

SAR(1 g) = 2.27 W/kg; SAR(10 g) = 1.48 W/kg

Maximum value of SAR (measured) = 2.93 W/kg



0 dB = 2.93 W/kq = 4.67 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 169 of 319

Date: 2014/11/16

Dipole 835 MHz_SN:4d063_Head

Communication System: CW; Frequency: 835 MHz, Duty factor: 1:1

Medium parameters used: f = 835 MHz; $\sigma = 0.883$ S/m; $\varepsilon_r = 41.166$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(9.14, 9.14, 9.14); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head:

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x121x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 3.66 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

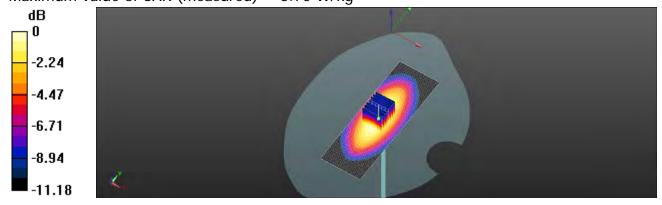
dx=5mm, dy=5mm, dz=5mm

Reference Value = 62.44 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 4.37 W/kg

SAR(1 q) = 2.39 W/kq; SAR(10 q) = 1.58 W/kq

Maximum value of SAR (measured) = 3.70 W/kg



0 dB = 3.70 W/kq = 5.68 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 170 of 319

Date: 2014/11/26

Dipole 835 MHz_SN:4d063_Head

Communication System: CW; Frequency: 835 MHz, Duty factor: 1:1

Medium parameters used: f = 835 MHz; $\sigma = 0.897 \text{ S/m}$; $\varepsilon_r = 41.143$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3923; ConvF(10.48, 10.48, 10.48); Calibrated: 2014/8/28;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1260; Calibrated: 2014/8/26
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 3.43 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

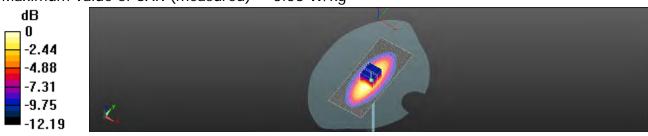
dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.55 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 4.48 W/kg

SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.63 W/kg

Maximum value of SAR (measured) = 3.58 W/kg



0 dB = 3.58 W/kq = 5.54 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 171 of 319

Date: 2014/11/16

Dipole 835 MHz_SN:4d063_Body

Communication System: CW; Frequency: 835 MHz, Duty factor: 1:1

Medium parameters used: f = 835 MHz; $\sigma = 1.013$ S/m; $\varepsilon_r = 52.886$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(9.03, 9.03, 9.03); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x131x1): Interpolated grid: dx=15 mm, dv=15 mm

mm, dy=15 mm

Maximum value of SAR (interpolated) = 3.39 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

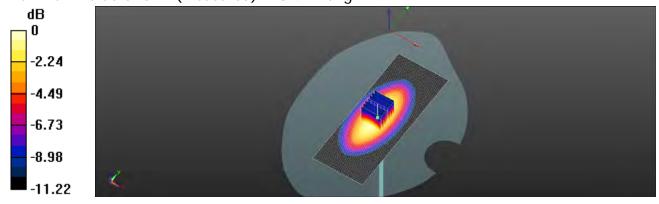
dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.93 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 4.05 W/kg

SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg

Maximum value of SAR (measured) = 3.42 W/kg



0 dB = 3.42 W/kq = 5.34 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 172 of 319

Date: 2014/11/27

Dipole 835 MHz_SN:4d063_Body

Communication System: CW; Frequency: 835 MHz, Duty factor: 1:1

Medium parameters used: f = 835 MHz; $\sigma = 0.969 \text{ S/m}$; $\varepsilon_r = 53.304$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(9.35, 9.35, 9.35); Calibrated: 2014/7/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn360; Calibrated: 2014/2/17
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x121x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 3.11 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

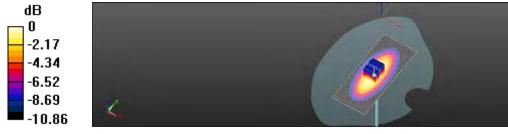
dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.177 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.71 W/kg

SAR(1 g) = 2.47 W/kg; SAR(10 g) = 1.62 W/kg

Maximum value of SAR (measured) = 3.16 W/kg



0 dB = 3.16 W/kq = 5.00 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 173 of 319

Date: 2014/11/17

Dipole 1750 MHz_SN:1008_Head

Communication System: CW; Frequency: 1750 MHz, Duty factor: 1:1

Medium parameters used: f = 1750 MHz; $\sigma = 1.377 \text{ S/m}$; $\epsilon_r = 39.564$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(8, 8, 8); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x61x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 12.6 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

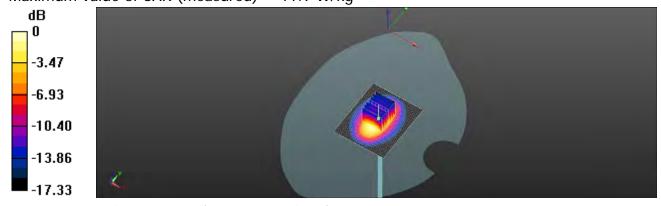
dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.47 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 15.3 W/kg

SAR(1 g) = 9.34 W/kg; SAR(10 g) = 4.91 W/kg

Maximum value of SAR (measured) = 11.9 W/kg



0 dB = 11.9 W/kq = 10.76 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 174 of 319

Date: 2014/11/22

Dipole 1750 MHz_SN:1008_Head

Communication System: CW; Frequency: 1750 MHz, Duty factor: 1:1

Medium parameters used: f = 1750 MHz; $\sigma = 1.391 \text{ S/m}$; $\epsilon_r = 40.597$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.91, 7.91, 7.91); Calibrated: 2014/7/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn360; Calibrated: 2014/2/17

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 13.0 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

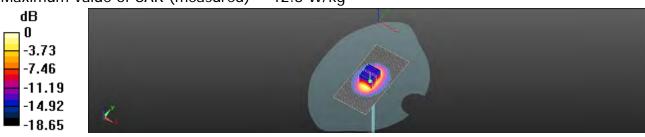
dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.91 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 8.98 W/kg; SAR(10 g) = 4.83 W/kg

Maximum value of SAR (measured) = 12.8 W/kg



0 dB = 12.8 W/kq = 11.07 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 175 of 319

Date: 2014/11/17

Dipole 1750 MHz_SN:1008_Body

Communication System: CW; Frequency: 1750 MHz, Duty factor: 1:1

Medium parameters used: f = 1750 MHz; $\sigma = 1.457 \text{ S/m}$; $\varepsilon_r = 54.404$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(7.63, 7.63, 7.63); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x61x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 11.7 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

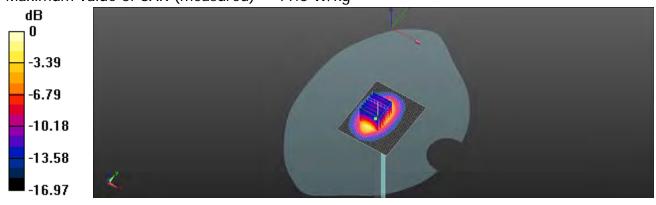
dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.34 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 14.4 W/kg

SAR(1 g) = 9.38 W/kg; SAR(10 g) = 5.06 W/kg

Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kq = 10.64 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 176 of 319

Date: 2014/11/23

Dipole 1750 MHz_SN:1008_Body

Communication System: CW; Frequency: 1750 MHz, Duty factor: 1:1

Medium parameters used: f = 1750 MHz; $\sigma = 1.471 \text{ S/m}$; $\varepsilon_r = 53.752$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/7/25;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn360; Calibrated: 2014/2/17

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x101x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.1 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

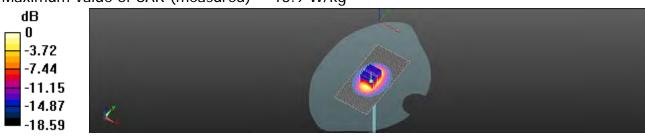
dx=5mm, dv=5mm, dz=5mm

Reference Value = 95.59 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 18.0 W/kg

SAR(1 g) = 9.48 W/kg; SAR(10 g) = 5.02 W/kg

Maximum value of SAR (measured) = 13.9 W/kg



0 dB = 13.9 W/kq = 11.43 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 177 of 319

Date: 2014/11/18

Dipole 1900 MHz_SN:5d027_Head

Communication System: CW; Frequency: 1900 MHz, Duty factor: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.38 \text{ S/m}$; $\epsilon_r = 39.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3831; ConvF(7.79, 7.79, 7.79); Calibrated: 2014/1/31;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn915; Calibrated: 2014/6/18

Phantom: Head;

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x61x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 12.4 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

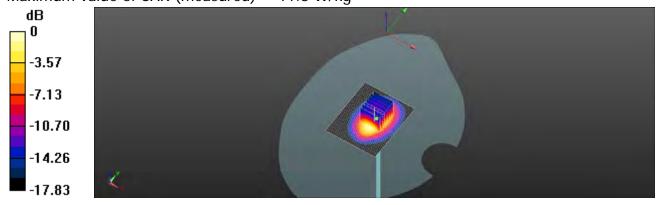
dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.56 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 15.4 W/kg

SAR(1 g) = 9.78 W/kg; SAR(10 g) = 5.13 W/kg

Maximum value of SAR (measured) = 11.8 W/kg



0 dB = 11.8 W/kq = 10.72 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 178 of 319

Date: 2014/11/24

Dipole 1900 MHz_SN:5d027_Head

Communication System: CW; Frequency: 1900 MHz, Duty factor: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.42 \text{ S/m}$; $\varepsilon_r = 41.116$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(7.65, 7.65, 7.65); Calibrated: 2014/7/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn360; Calibrated: 2014/2/17
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.2 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

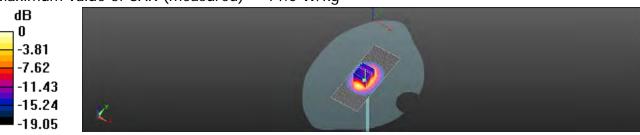
dx=5mm, dv=5mm, dz=5mm

Reference Value = 98.781 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.68 W/kg; SAR(10 g) = 5.04 W/kg

Maximum value of SAR (measured) = 14.0 W/kg



0 dB = 14.0 W/kq = 11.45 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 179 of 319

Date: 2014/11/18

Dipole 1900 MHz_SN:5d027_Body

Communication System: CW; Frequency: 1900 MHz, Duty factor: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.491 \text{ S/m}$; $\varepsilon_r = 51.93$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3831; ConvF(7.19, 7.19, 7.19); Calibrated: 2014/1/31;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2014/6/18
- Phantom: Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x61x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.6 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

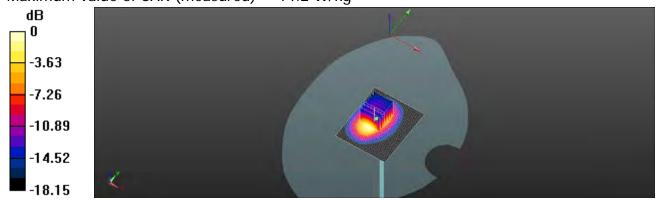
dx=5mm, dy=5mm, dz=5mm

Reference Value = 82.49 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 9.94 W/kg; SAR(10 g) = 5.14 W/kg

Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kq = 11.52 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 180 of 319

Date: 2014/11/25

Dipole 1900 MHz_SN:5d027_Body

Communication System: CW; Frequency: 1900 MHz, Duty factor: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.542 \text{ S/m}$; $\epsilon_r = 51.826$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(7.03, 7.03, 7.03); Calibrated: 2014/7/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn360; Calibrated: 2014/2/17
- Phantom: Head
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (41x101x1): Interpolated grid: dx=15

mm, dy=15 mm

Maximum value of SAR (interpolated) = 14.6 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

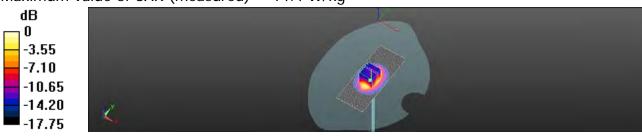
dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.672 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 18.3 W/kg

SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.3 W/kg

Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kq = 11.58 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 181 of 319

Date: 2014/11/23

Dipole 2450 MHz_SN:727_Head

Communication System: CW; Frequency: 2450 MHz, Duty factor: 1:1

Medium parameters used: f = 2450 MHz; $\sigma = 1.823 \text{ S/m}$; $\epsilon_r = 39.185$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(6.97, 6.97, 6.97); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=250mW, dist=2mm: Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 22.3 W/kg

Configuration/d=10mm, Pin=250mW, dist=2mm /Cube 0: Measurement

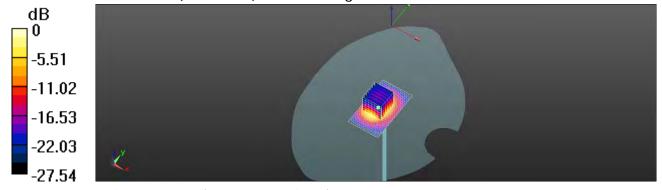
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.77 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 29.0 W/kg

SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.02 W/kg

Maximum value of SAR (measured) = 20.9 W/kg



0 dB = 22.3 W/kq = 13.47 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 182 of 319

Date: 2014/11/23

Dipole 2450 MHz_SN:727_Body

Communication System: CW; Frequency: 2450 MHz, Duty factor: 1:1

Medium parameters used: f = 2450 MHz; $\sigma = 2.045 \text{ S/m}$; $\epsilon_r = 50.104$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(7.15, 7.15, 7.15); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=250mW, dist=2mm: Interpolated grid: dx=12

mm, dy=12 mm

Maximum value of SAR (interpolated) = 23.8 W/kg

Configuration/d=10mm, Pin=250mW, dist=2mm /Cube 0: Measurement

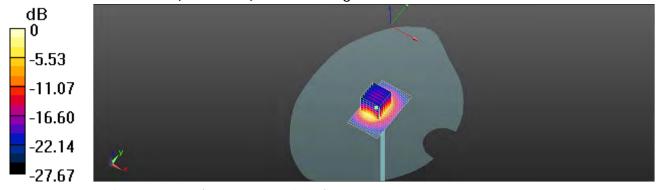
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.07 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 30.7 W/kg

SAR(1 g) = 13.1 W/kg; SAR(10 g) = 5.85 W/kg

Maximum value of SAR (measured) = 22.3 W/kg



0 dB = 23.8 W/kq = 13.76 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 183 of 319

Date: 2014/11/30

Dipole 2600 MHz_SN:1005_Head

Communication System: CW; Frequency: 2600 MHz, Duty factor: 1:1

Medium parameters used: f = 2600 MHz; $\sigma = 1.972 \text{ S/m}$; $\epsilon_r = 38.778$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(7.41, 7.41, 7.41); Calibrated: 2014/8/28;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (61x121x1): Interpolated grid: dx=12

mm, dy=12 mm

Maximum value of SAR (interpolated) = 24.0 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

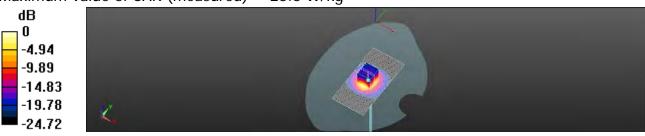
dx=5mm, dv=5mm, dz=5mm

Reference Value = 101.3 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 33.3 W/kg

SAR(1 q) = 14.9 W/kq; SAR(10 q) = 6.48 W/kq

Maximum value of SAR (measured) = 23.6 W/kg



0 dB = 23.6 W/kq = 13.72 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 184 of 319

Date: 2014/12/1

Dipole 2600 MHz_SN:1005_Body

Communication System: CW; Frequency: 2600 MHz, Duty factor: 1:1

Medium parameters used: f = 2600 MHz; $\sigma = 2.138 \text{ S/m}$; $\epsilon_r = 51.492$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3923; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/8/28;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1260; Calibrated: 2014/8/26

Phantom: Head

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Pin=250mW/Area Scan (51x91x1): Interpolated grid: dx=12

mm, dy=12 mm

Maximum value of SAR (interpolated) = 25.2 W/kg

Configuration/Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

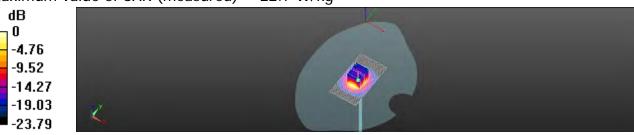
dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.663 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 31.4 W/kg

SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.34 W/kg

Maximum value of SAR (measured) = 22.7 W/kg



0 dB = 22.7 W/kq = 13.56 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 185 of 319

Date: 2014/11/17

Dipole 5200 MHz_SN:1104_Head

Communication System: CW; Frequency: 5200 MHz, Duty factor: 1:1

Medium parameters used: f = 5200 MHz; $\sigma = 4.618 \text{ S/m}$; $\epsilon_r = 36.074$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(5.25, 5.25, 5.25); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=100mW, dist=2mm: Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 18.4 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm /Cube 0: Measurement

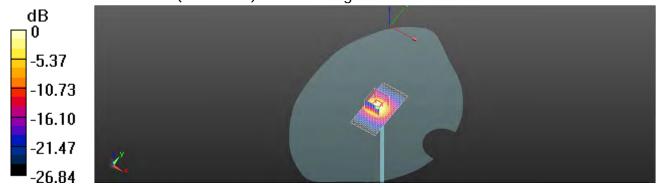
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 59.62 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 36.6 W/kg

SAR(1 g) = 8.37 W/kg; SAR(10 g) = 2.43 W/kg

Maximum value of SAR (measured) = 18.4 W/kg



0 dB = 18.4 W/kg = 12.66 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 186 of 319

Date: 2014/11/19

Dipole 5200 MHz_SN:1104_Body

Communication System: CW; Frequency: 5200 MHz, Duty factor: 1:1

Medium parameters used: f = 5200 MHz; $\sigma = 5.407 \text{ S/m}$; $\epsilon_r = 48.601$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.56, 4.56, 4.56); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head:
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=100mW, dist=2mm: Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 19.2 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm /Cube 0: Measurement

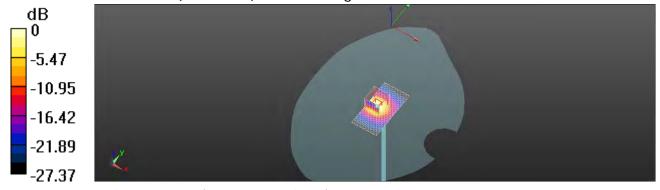
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 48.19 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 29.8 W/kg

SAR(1 q) = 7.59 W/kq; SAR(10 q) = 2.06 W/kq

Maximum value of SAR (measured) = 15.3 W/kg



0 dB = 19.2 W/kq = 12.82 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 f (886-2) 2298-0488



Page: 187 of 319

Date: 2014/11/18

Dipole 5300 MHz_SN:1104_Head

Communication System: CW; Frequency: 5300 MHz, Duty factor: 1:1

Medium parameters used: f = 5300 MHz; $\sigma = 4.731 \text{ S/m}$; $\varepsilon_r = 35.828$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3770; ConvF(5.07, 5.07, 5.07); Calibrated: 4/24/2014;

- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=100mW, dist=2mm: Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 17.4 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm /Cube 0: Measurement

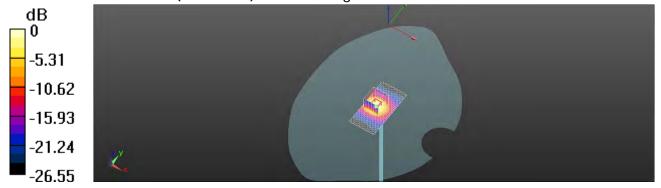
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 57.38 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 34.8 W/kg

SAR(1 g) = 8.32 W/kg; SAR(10 g) = 2.32 W/kg

Maximum value of SAR (measured) = 17.1 W/kg



0 dB = 17.4 W/kg = 12.40 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 188 of 319

Date: 2014/11/19

Dipole 5300 MHz_SN:1104_Body

Communication System: CW; Frequency: 5300 MHz, Duty factor: 1:1

Medium parameters used: f = 5300 MHz; $\sigma = 5.571 \text{ S/m}$; $\epsilon_r = 48.323$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.38, 4.38, 4.38); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=100mW, dist=2mm: Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 16.5 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm/Cube 0: Measurement

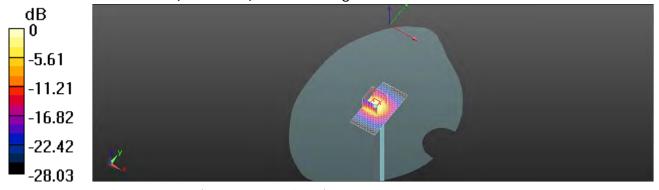
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 44.03 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 32.5 W/kg

SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.24 W/kg

Maximum value of SAR (measured) = 16.9 W/kg



0 dB = 16.5 W/kq = 12.17 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 189 of 319

Date: 2014/11/17

Dipole 5600 MHz_SN:1104_Head

Communication System: CW; Frequency: 5600 MHz, Duty factor: 1:1

Medium parameters used: f = 5600 MHz; $\sigma = 5.081 \text{ S/m}$; $\epsilon_r = 35.142$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.48, 4.48, 4.48); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=100mW, dist=2mm: Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 19.7 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm /Cube 0: Measurement

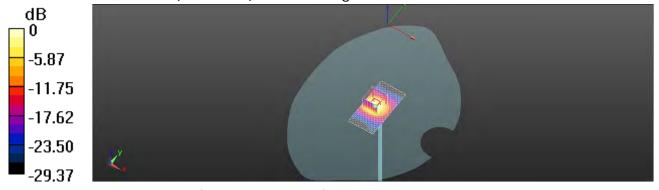
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.23 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 39.8 W/kg

SAR(1 g) = 8.74 W/kg; SAR(10 g) = 2.58 W/kg

Maximum value of SAR (measured) = 19.1 W/kg



0 dB = 19.7 W/kq = 12.93 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 190 of 319

Date: 2014/11/19

Dipole 5600 MHz_SN:1104_Body

Communication System: CW; Frequency: 5600 MHz, Duty factor: 1:1

Medium parameters used: f = 5600 MHz; $\sigma = 6.041 \text{ S/m}$; $\epsilon_r = 47.501$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(3.76, 3.76, 3.76); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=100mW, dist=2mm: Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 18.2 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm/Cube 0: Measurement

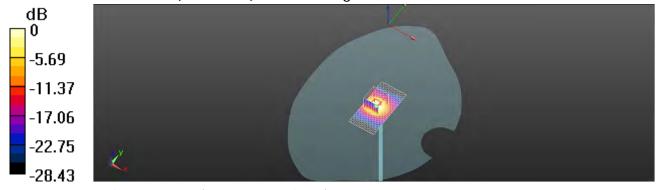
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 54.52 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 37.3 W/kg

SAR(1 g) = 8.4 W/kg; SAR(10 g) = 2.35 W/kg

Maximum value of SAR (measured) = 18.2 W/kg



0 dB = 18.2 W/kq = 12.59 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 191 of 319

Date: 2014/11/18

Dipole 5800 MHz_SN:1104_Head

Communication System: CW; Frequency: 5800 MHz, Duty factor: 1:1

Medium parameters used: f = 5800 MHz; $\sigma = 5.315 \text{ S/m}$; $\epsilon_r = 34.701$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.65, 4.65, 4.65); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom: Head:
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/d=10mm, Pin=100mW, dist=2mm: Interpolated grid: dx=10

mm, dy=10 mm

Maximum value of SAR (interpolated) = 17.8 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm /Cube 0: Measurement

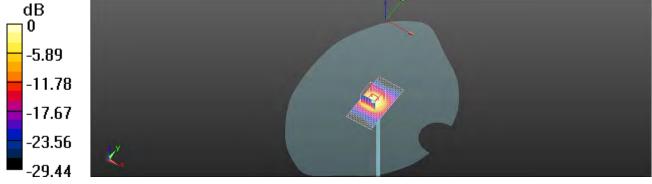
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.30 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 38.6 W/kg

SAR(1 g) = 8.11 W/kg; SAR(10 g) = 2.33 W/kg

Maximum value of SAR (measured) = 17.7 W/kg



0 dB = 17.8 W/kg = 12.50 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 192 of 319

Date: 2014/11/19

Dipole 5800 MHz_SN:1104_Body

Communication System: CW; Frequency: 5800 MHz, Duty factor: 1:1

Medium parameters used: f = 5800 MHz; $\sigma = 6.2 \text{ S/m}$; $\varepsilon_r = 46.941$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 SN3770; ConvF(4.13, 4.13, 4.13); Calibrated: 4/24/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 8/27/2014
- Phantom:Head;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

$\label{lem:configuration} \textbf{Configuration/d=10mm, Pin=100mW, dist=2mm:} \ \, \textbf{Interpolated grid: dx=10}$

mm, dy=10 mm

Maximum value of SAR (interpolated) = 16.9 W/kg

Configuration/d=10mm, Pin=100mW, dist=2mm/Cube 0: Measurement

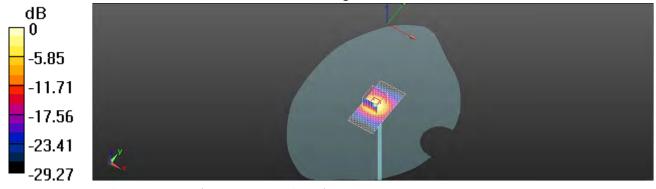
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 51.84 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 36.2 W/kg

SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.16 W/kg

Maximum value of SAR (measured) = 16.9 W/kg



0 dB = 16.9 W/kq = 12.28 dBW/kq

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 193 of 319

7. DAE & Probe Calibration Certificate

Calibration Laboratory of CHISS Schweizerischer Kalibriardienst S Schmid & Partner Sarvice suisse d'étalonnage C C TORATO Engineering AG sughausstrasse 43, 8004 Zurich, Switzerland Servizio svizzero di terature Swiss Calibration Service Accredited by the Swiss Accreditation Service (SAS) Accreditation No.: SCS 108 The Swiss Accreditation Service is one of the signatories to the EA Multillateral Agreement for the recognition of calibration certificates Certificate No: DAE4-1260_Aug14 SGS-TW (Auden) CALIBRATION CERTIFICATE DAE4 - SD 000 D04 BM - SN: 1260 QA CAL-06.v26 Calibration procedure for the data acquisition electronics (DAE) Dathration date: August 26, 2014 This calibration conflictor occurrents the paceptality to redone standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory tacility, environment temperature (22 ± 3)°C and humidity < 70%. Calibration Equipment used (M&TE princil for calibration) Primary Standards ID P Cas Date (Certificate No.) Scheduled Calibration 01-De-13 (No:13976) Doi:14 SN 0810278 Kathley Multimater Type 2001 Dheck Date (in house) Scheduled Check SE UWS 053 AA 1001 U7-Jan-14 (in figure check) Auto DAE Californion Unit in house check JanvitS SE LINES 000 AA 1002 07-Jan-14 (in house check) In bouse check: Jan-15 Calibrator Box V2.1 Function Calibrated by: Domnique Statten Deputy Fectifical Misnager Approved by: Fin Edmhob Issued: August 26, 2014 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

Certificate No: DAE4-1260, Aug 14

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Page 9 at 5

SGS Taiwan Ltd.



Page: 194 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeeghausstrasse 43, 8004 Zurich, Switzerland





S Schweigerscher Kultionerdiens C Service autsoch étalennage Servizio avizzero di taratura S Swess Calibration Service

Accreditation No.: SCS 108

According by the Swiss Accordination Service (SAS)
The Swiss Accordination Service is one of the signal ories to the EA
Multishood Agreement for the recognition of calibration certification

Glossary

DAE

data acquisition electronics

Connector angle

information used in DASY system to align probe sensor X to the robot

coordinate system.

Methods Applied and Interpretation of Parameters

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- Connector angle. The angle of the connector is assessed measuring the angle mechanically by a fool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage, Influence of offset voltage is included in this measurement.
 - Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
 - Channel separation: Influence of a voltage on the neighbor channels not subject to an input voltage.
 - AD Converter Values with inputs shorted: Values on the internal AD converter corresponding to zero input voltage
 - Input Offset Measurement: Output voltage and statistical results over a large number of zero voltage measurements.
 - Input Offset Current: Typical value for information, Maximum channel input offset current, not considering the input resistance.
 - Input resistance: Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - Low Battery Alarm Vollage: Typical value for information. Below this voltage, a battery alarm signal is generated.
 - Power consumption: Typical value for information. Supply currents in various operating modes.

Dortdinate No: DAE4-1250, Aug 14

Page 2 el 6

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 195 of 319

DC Voltage Measurement

A/D Convener Resolution nominal

High Rerige ILSB = 6.1 µV, full range = -100, +600 mV Low Range: ILSB = 61 nV, full range = -1,.....+2 mV DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec.

Calibration Factors	X	Υ	- 2
High Range	406.033 ± 0.02% (k=2)	405.001 ± 0.02% (k=2)	405 579 ± 0.02% (k-2)
Low Range	3.95663 ± 1.50% (k=2)	4.01886 ± 1.50% (k=2)	4.00468 ± 1.50% (k=2)

Connector Angle

١	Connector Angle to be used in DASY system	B4.0 * ± 1 "

Certificate No. DAE4-1260_Aug14

Page 3 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 196 of 319

Appendix (Additional assessments outside the scope of SCS108)

High Range	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	190997,43	-0.04	-0.00
Channel X + Input	20003.49	2.49	0.01
Channel X - Input	-19998.62	2,32	-0.01
Channel Y + Input	199988.97	1.33	0,00
Channel Y - Input	20001.53	0.51	0.00
Channel Y - Input	-20000.52	0.34	-0.00
Channel Z + Input	199996,52	1.01	0.00
Channel Z + Input	19999.80	-1/21	-0.01
Channel Z - Input	-20001.65	-0.71	0.00

Low Range	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	2005,98	0.17	0.01
Channel X + Input	201.72	0.49	0,24
Channel K - Input	-198.19	0:50	-0.25
Channel Y + Input	1999.92	-1.02	0.05
Channel Y + input	201,16	-0.25	0.12
Channel V - Input	-198.53	0.05	-0.03
Channel Z + Input	2001.06	0.10	0.01
Channel Z + Input	200.04	-1.27	-0,63
Channel Z - Input	-200.02	-1,46	0.74

2. Common mode sensitivity

	Common mode Input Voltage (mV)	High Range Average Reading (µV)	Low Range Average Reading (µV)
Channel X	200	1.17	-0,56
	- 200	1.57	-0.48
Channel Y	200	12.66	12,37
	200	13.46	-12.07
Channel Z	200	-0.46	-0.74
	- 200	-1.73	-1.63

3. Channel separation

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (µV)
Channel X	200		5,89	A2.24
Channel Y	200	9,64	-	7.42
Channel Z	200	9,68	7.16	

Certificate No. DAE4-1260_Aug14

Page 4 of 6.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 197 of 319

AD-Converter Values with inputs shorted

s: Auto Zero Time: 3 sec. Messuring firm: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	15914	14950
Channel Y	15817	16075
Channel Z	16045	16582

5. Input Offset Measurement

DASY measurement parameters: Autó Zéro Time: 3 suo; Measuring fimo; 3 sec.

	Average (μV)	min. Offset (uV)	max. Offset (μV)	Std. Deviation (µV)
Channel X	0.26	-0.78	1,42	0.43
Channel Y	-0.44	-1,36	0.61	0.43
Channel Z	-1,66	2.60	-0.69	0.44

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	500

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)	
Supply (+ Vec)	17.9	
Supply (+ Vcc)	:7.6	

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (* Vcc)	+0,01	+6	+14
Supply (- Vco)	-0.01	-8	-8

Certificate No. DAE4-1260 - Aug 14

Page 5 cd 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 198 of 319

Calibration Laboratory of Schmid & Partner Engineering AG ugaausstrasse 43, 8004 Zurich, Switzerland





S Service suisse d'étalonnage C Servizio svizzero di taratura Swiss Calibration Service

Accreption by the Switz Approduction Service (SAS).

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Auden

Accreditation No.: SCS 108

Certificate No: DAE4-915_Jun14

CALIBRATION CERTIFICATE DAE4 - SD 000 D04 BK - SN 915 Calibration procedure(e) QA CAL-06.v26 Calibration procedure for the data acquisition electronics (DAE) Calibration date: June 18, 2014 This calibration conflicute documents the Inspecially to national standards, which residue the physical units of messagements (Si). The measurements and the uncertainties with confidence procedulty are given on the blowing pages and are part of the centresion Micalibrations have been conducted in the closed laboratory facility: enuronment compensions (22 ± 31 C and humiday < 70%). Callimiture Equipmen used (M&TE critical for calbration) Primary Standards Car Date (Certificate No.) Scredued Calibration Keithley Multimoter Type 2001 SN: 0810278 01-Out-13 (Nu:13076) Qt+14 Check Date (in house) Schooland Check Auto DAE Galbration Line SE UWS 050 AA 1001 07-Jan-14 lin house check in house chuck: Jury 15 Calibrator Box V2.1 SE UMS 006 AA 1000 - 07-Jan-14 IIII ris-ue atueki hi house check: Jen-15 Hame Function Calbrated by: Dominique Staffer Technician Approved by Debuty Technical Manager Issued June 18, 2014 This calibration conflicate shall not be reproduced except to full without written applicable the laboratory

Certificate No: DAE4-915_Jun14

Page 1 8 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 199 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Service suisse d'étalonnage C Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary

data acquisition electronics

Connector angle information used in DASY system to align probe sensor X to the robot

coordinate system.

Methods Applied and Interpretation of Parameters

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
 - Channel separation: Influence of a voltage on the neighbor channels not subject to an input voltage.
 - AD Converter Values with inputs shorted: Values on the internal AD converter corresponding to zero input voltage
 - Input Offset Measurement: Output voltage and statistical results over a large number of zero voltage measurements.
 - Input Offset Current: Typical value for information; Maximum channel input offset current, not considering the input resistance.
 - Input resistance: Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - Low Battery Alarm Voltage: Typical value for information. Below this voltage, a battery alarm signal is generated.
 - Power consumption: Typical value for information. Supply currents in various operating modes.

Certificate No: DAE4-915 Jun14 Page 2 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 200 of 319

DC Voltage Measurement

A/D - Converter Resolution nominal High Range: 1LSB = full range = -100...+300 mV full range = -1......+3mV Low Range: 1LSB = 61nV. DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	z
High Range	404.307 ± 0.02% (k=2)	404.432 ± 0.02% (k=2)	404.778 ± 0.02% (k=2)
Low Range	3.97786 ± 1.50% (k=2)	4.00889 ± 1.50% (k=2)	3.98763 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	115.0 ° ± 1 °

Certificate No: DAE4-915_Jun14 Page 3 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 201 of 319

Appendix (Additional assessments outside the scope of SCS108)

1. DC Voltage Linearity

High Range	Reading (µV)	Difference (μV)	Error (%)
Channel X + Input	199998.08	1.14	0.00
Channel X + Input	20000.26	-0.79	-0.00
Channel X - Input	-19999.34	1.47	-0.01
Channel Y + Input	200000.17	3.04	0.00
Channel Y + Input	19999.35	-1.60	-0.01
Channel Y - Input	-20000.40	0.40	-0.00
Channel Z + Input	199996.89	-0.05	-0.00
Channel Z + Input	19999.67	-1.07	-0.01
Channel Z - Input	-20001.83	-0.82	0.00

Low Range	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	2000.78	-0.15	-0.01
Channel X + Input	201.37	-0.01	-0.00
Channel X - Input	-198.71	-0.07	0.04
Channel Y + Input	2001.08	0.23	0.01
Channel Y + Input	201.11	-0.04	-0.02
Channel Y - Input	-198.95	-0.16	0.08
Channel Z + Input	2000.69	-0.17	-0.01
Channel Z + Input	200.66	-0.48	-0.24
Channel Z - Input	-200.04	-1.33	0.67

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	-15.73	-17.62
	- 200	17.95	16.40
Channel Y	200	-5.63	-5.61
	- 200	4.75	4.70
Channel Z	200	-0.98	-1.03
	- 200	-0.88	-0.86

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (μV)
Channel X	200	- "	4.09	-3.56
Channel Y	200	7.89	-	5.02
Channel Z	200	8.61	6.69	

Certificate No: DAE4-915_Jun14

Page 4 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 202 of 319

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16112	13093
Channel Y	15985	14777
Channel Z	1588:1	15729

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec Input $10M\Omega$

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (µV)
Channel X	0.08	-1.17	1.32	0.43
Channel Y	-0.58	-1.57	0.70	0.47
Channel Z	-0.51	-1.47	1.80	0.44

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values Alarm Level (VDC)		
Supply (+ Vcc)	+7.9	
Supply (- Vcc)	-7.6	

9. Power Consumption /Tuning Lucture for infer

	(Typical values for information)		
Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-B	-9

Certificate No: DAE4-915_Jun14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 203 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schwaizerischer Kalibrierdinest Service suisse d'étalonnage Servizio svizzere di terature Swiss Calibration Service

According by the Swiss Accordington Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multiloteral Agreement for the recognition of calibration certificates

Client SGS - TW (Auden)

Accorditation No.: SCS 108

Certificate No. DAE4-856_Aug14

CALIBRATION CERTIFICATE

DAE4 - SD 000 D04 BM - SN; 856

Calibration procedure(s) QA CAL-06,v26

Calibration procedure for the data acquisition electronics (DAE)

Dantenios date. August 27, 2014

This probable conflicts a occurrents the missibility to retrive is students, which reside the physical units of measurements (3). The measurements and the increasingles with conflictnose probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (PZ ± 3) % and humidity = 70%.

Calification Equipment used (M&TE critical for calibration)

Primary Standards	ID-0	Car Date (Certificate No.)	Scheduled Carbration
Keithley Musimeler Type 2001	5N 0810278	(71-Oci-13 (Ne. 13975)	Oct-14
Secondary Standards	10.4	Check Date (in Indust)	Scheduled Check
Auto DAE Calibration Unit.	SE UWS 053 AA 1001	07-Jan-14 (in house check)	III Focase chiscii, dani 15
Calibrator Box V2.1	SE LAMS 006 AA 1002	07-Jan-14 (In house check)	In house chack: Jan-15

Calibrated by:

Approved by:

Vame Эмптицие бесел

Fin Bompoir

Function Technology

TV-HCSBH

Deputy Technical Mirreger

1 1 Burn

This selfuration certificate shall not be reproduced except in full without written approval of the laquisatory.

Certificate No: DAE=856, Aug 14

Page 1 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format document is issued by the Company subject to its General Conditions for Electronic Pocuments at your early and accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format document is a subject to Terms and Conditions for Electronic Pocuments at your early and accessible at www.sgs.com/terms_and_conditions.htm and document is a subject to Terms and Conditions for Electronic Pocuments at your early and accessible at www.sgs.com/terms_and_conditions.htm and document is a subject to Terms and Conditions for Electronic Pocuments at your early and accessible at www.sgs.com/terms_and_conditions.htm and with a subject to the limitation of limitation and invitation and accessible at www.sgs.com/terms_and_conditions.htm and with a subject to the limitation of limitation and accessible at www.sgs.com/terms_and_conditions.htm and with a subject to the limitation of limitation and with a subject to the limitation and with a subject to the limitation and with a subject to the limitation of limitation and with a subject to the limi

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 204 of 319

Calibration Laboratory of Schmid & Partner

Engineering AG





Service suisse d'étalormage C Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 108

According by the Seiss According Service (SAS)

The Swiss Accreditation Service is one of the algostories to the EA Mulmineral Agreement for the recognition of calibration pertitioates

Glossary

data acquisition electronics DAE

information used in DASY system to align probe sensor X to the robot Connector angle

coordinate system.

Methods Applied and Interpretation of Parameters

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range
- Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
 - Channel separation: influence of a voltage on the neighbor channels not subject to an input voltage.
 - AD Converter Values with inputs shorted: Values on the internal AD converter corresponding to zero input voltage
 - Input Offset Measurement. Output voltage and statistical results over a large number of zero voltage measurements.
 - Input Offset Current: Typical value for information; Maximum channel input offset current, not considering the input resistance.
 - Input resistance: Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - Low Battery Alarm Voltage: Typical value for information. Below this voltage, a battery alarm signal is generated.
 - Power consumption: Typical value for information. Supply currents in various operating modes.

Continent No: DAE4-666_Aug 14

Face 2 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 205 of 319

DC Voltage Measurement

A/D - Converter Resolution nominal

full range = -1.00,_+300 mV full range = -1. +3mV High Range: 1LSB = ETHY. Low Range: 1LSB = 61nV ; DASY measurement parameters: Auto Zern Time: 3 sec; Measuring Illmir: 3 sec

Calibration Factors	×	Ψ	2
High Range	400,468 ± 0.02% (k=2)	404.581 ± 0.02% (6+2)	403.903 ± 0.02% (k-2)
Low Range	3.97681 ± 1.50% (k-2)	3.97783 ± 1.50% (k=2)	3.97815 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	52.5 "±1"

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

Certificate No. DAE4-856_Aug14

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Page 5 of 6

SGS Taiwan Ltd.



Page: 206 of 319

Appendix (Additional assessments outside the scope of SCS108)

1. DC Voltage Linearity

High Range	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	#9999B33	0.84	0.00
Channel X + Input	19990.20	32.25	+0,01
Channel X - Input	20000.45	0.34	-0,00
Channel Y + Input	199999.95	0.96	0.00
Channel Y + Input	19997,51	-3.82	-0,02
Channal Y Input	-2000n 77	0.07	-0,00
Channel Z + Input	199997.26	0.19	-0,00
Channel Z + Input	19997.65	-3.57	-0.02
Channel Z - Input	-20002.47	1.55	0.01

Low Bange	Heading (µV)	Difference (µV)	Error (%)
Channel X + Input	2001.05	-0.09	-0,00
Channel X + Input	202,34	0.60	0.40
Channel X - Input	-198.91	0.26	-0.13
Channel Y + Input	2001.39	0,26	0.01
Channel Y + Input	201.08	-0,36	0.18
Channel Y - Input	-199,24	-0.78	0,39
Channel Z + Input	2000.92	-0.16	-0.01
Channel Z + Input	200,26	-1.22	-0.60
Channel Z - Input	-199,91	+1:47	0.74

2. Common mode sensitivity

	Input Voltage (mV)	High Range Average Reading (µV)	Low Range Average Reading (µV)
Channel X	200	-14,76	-16.42
	-200	17,19	15,88
Channel Y	500	-2.17	2.25
	+200	0.30	.0.01
Channel Z	200	10.27	10,05
	-300	-13.06	-13.03

3. Channel separation

DASY measurement parameters: Auto Zero Time; 3 sac; Measuring time: 5 sec

	Input Voltage (mV)	Channel X (µV)	Channel V (µV)	Channel Z (µV)
Channel X	200	- >1	2.81	-1.15
Channel Y	200	7.99		.3:07
Channel Z	200	8.55	5.24	-

Certificate No: DAE4-856_Aug14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 207 of 319

4. AD-Converter Values with Inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec;

	High Range (LSB)	Low Range (LSB)
Channel X	16226	18620
Channel Y	15942	16803
Channel 2	15875	16811

5. Input Offset Measurement

DASY measurement parameters. Auto Zero Time: 3 sec: Measuring time: 3 sec

local toMC

	Average (μV)	min. Offset (µV)	max. Offset (µV)	Std. Deviation (µV)
Channel X	0.72	+0.77	1.89	0.38
Channel Y	-0.24	-1.07	1,89	0,42
Channel Z	-0.98	-2.01	0.07	0.40

6. Input Offset Current

Nominal input circuity offset current on all channels «25tA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)	
Supply (+ Vcc)	+7.9	
Supply (- Vcc)	-7.0	

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0;01	-8	-9

Certificate No: DAE4-856_Aug14

Page 5 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 208 of 319



nbei Road, Haidian District, Beijing, 100191. China 33-2079 Fax: «86-10-62304633-2504 Tel: +86-10-62304633-2079 E-mail: Inforcemente.com Http://www.emcite.com

Auden

Certificate No: Z14-97006

Client : **CALIBRATION CERTIFICATE** Object DAE3 - SN: 360 Calibration Procedure(s) TMC-OS-E-01-198 Calibration Procedure for the Data Acquisition Electronics Calibration date: February 17, 2014 This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory facility; environment temperature(22±3) to and Calibration Equipment used (M&TE critical for calibration) Primary Standards ID# Cal Date(Calibrated by, Certificate No.) Scheduled Calibration Documenting Process Calibrator 753 1971018 01-July-13 (TMC, No:JW13-049) July-14 Name Function Calibrated by: SAR Test Engineer Zhao Jing. Reviewed by: Qi Dianyuan SAR Project Leader Approved by: Deputy Director of the laboratory Lu Bingsong Issued: February 18, 2014

Certificate No: Z14-97006

Page Lof 3

This calibration certificate shall not be reproduced except in full without written approval of the laboratory

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 209 of 319



bei Road, Haidian District, Beijing, 100191, China Tel: -86-10-62304633-2079 E-mail: Into geneite.com Fax: +86-10-62304633-2504 Http://www.emcite.com

Glossary:

DAE

data acquisition electronics

Connector angle

information used in DASY system to align probe sensor X

to the robot coordinate system.

Methods Applied and Interpretation of Parameters:

- DC Voltage Measurement. Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The report provide only calibration results for DAE, it does not contain other performance test results.

Certificate No: Z14-97007

Page 2 of 3

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The

Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 210 of 319



n Collaboration with

S D C A G

Add: No.52 Huayushbei Rood, Haidian District, Beijing, 100191, China. Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504 Fax: +86-10-62304633-2504 Fax: +86-10-62304633-2504

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1µV, full range = -100...+300 mV Low Range: 1LSB = 61nV, full range = -1......+3mV DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	x	Y	Z
High Range	404.198 ± 0.15% (k=2)	404.046 ± 0.15% (k=2)	404.074 ± 0.15% (k=2)
Low Range	3.93670 ± 0.7% (k=2)	3.93807 ± 0.7% (k=2)	3.97346 ± 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	223° ± 1 °	

Certificate No: Z14-97006

Page 3 of 3

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 211 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zoughausstrasse 43, 8004 Zurich, Switzelland





Schweizerischer Kallarierdienst Service suisse d'étalormage Servizio avizzero di taratura Swiss Calibration Service

Appreciation No.: SCS 108

Accepted by the swest Acceptation Service (BAE)
The Swiss Acceptation Service is one of the signaturies to the EA
Multilateral Agreement for the recognition of ambiration certification

cione 3

SGS-TW (Auden)

Certificate No: EX3-3923_Aug14

Calibration procedure(s) Calibration procedure for documentic E-field probes Calibration procedure for documentic E-field probes Calibration calls and the uncertainties with confidence procedure, which realed the physical unite of imposurements (S). The measurements and the uncertainties with confidence procedure for given on the following pages and are part of the cartificate. All carbrations have been conducted in the closed interestry facility, environment temperature (22 ± 3)*O and famility < 70%. Garbrations Equatorised used (M& 15 critical for calibration)

Primary Standards	.0	Cal Date (Certificate No.)	Scheduled Calibration
Power minter E44198	GB41293874	03-Apr-14 (No. 217-01811)	Apr-15
Power serior E4412A	MY41498087	03-Apr:14 (No. 217-01911)	April 5
Reference 3 dft Attenuator	BN: 85064 (3u)	03-Apr-14 (No. 217-01915)	Apr. 15
Reference 20 dB Attenuator	SN: 85277 (20x)	1/3-Apr-14 (No. 217-01919)	April 15
Reference 30 dB Attenuelor	SN 85129 (30b)	II3-Apr-14 (No. 217-01920)	April 15
Reference Probe E83DV2	SM: 3013	30-Dec-13 (No. ES3-3013, Dec13)	Dep-14
DAE4	SN, 660	13-Dec-13 (No. DAE4-660_Dec.13)	Dec.14
Secondary Standards	10	Check Divin (in noise)	Scheduled Chick
RF generator HP 8648C	LIS3642U01700	4-Aug-98 (in house check Acr-13)	in house check. Apr-16-
Network Abilityter HP 8753E	US37390585	18-Oct-01 (in house check Oct-13)	In house check: Oct-14

Certificate No: EX3-3923 Aug 14

Page 1 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 212 of 319

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughtenstraum 42, 800 (Zurlet, Switterland





S Schweizenscher Kalbelennerst
C Service suisse d'étaiceninge
Service sylizere di santon
Swiss Calibration Service

Acceptimise No.: SCS 108

Accredited by the Same Accreminate Service (SAS)

The Swian Accreditation Service is one of the signatories to the Elli Munitational Agmement for the recognition of calibration conflicts

Glossary:

TSL tissue simulating liquid
NORMX,y.z sensitivity in free space
ConvF sensitivity in TSL / NORMX,y.z
DCP diode compression point

CF crest factor (1/duty_cycle) of this RF signal A, B, C, D modulation dependent linearization parameters

Polarization in in rotation around probe axis

Polarization is a repeat around an axis that is in the plane normal tu probe axis (at measurement cambri),

i.e., ti = 0 is normal to proce axis

Connector Angle information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

 i) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Minecurement Techniques", June 2013.

Techniques", June 2013
b) IEC 62209-1, "Procedure to measure the Specific Atsorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)". Fabruary 2005

Methods Applied and Interpretation of Parameters:

- NORMx, y,z: Assessed for E-field polarization 8 = 6 (f = 100 MHz in TEM-call; f > 1800 MHz, R22 waveguide).
 NORMx, y,z are only intermediate values, i.e., the uncertainties of NORMx, y,z does not affect the E²-field uncertainty inside TSL (see below ConVF).
- NORM(f)x,y,z = NCRMx,y,z * frequency_response (see Frequency Response Charl). This linearization is implemented in DASY4 software varsions later than 4.2. The uncertainty of the frequency response ≼ included in the stated uncertainty of ConvF.
- DCPx.y.z: DCP are numerical linearization parameters assessed based on the data of power aweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- As, y.z. Bs, y.z. Cs, y.z. Ds, y.z. VRx, y.z. A. B. C. D an numerical invariantion parameters assessed based on the data of power sweet for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the tilode.
- ConvF and Boundary Effect Parameters. Assessed in flat phantom using E-field (or Temperature Transfer
 Standard for t = 900 MHz) and inside wayegude using analytical field distributions based on power
 measurements for t > 900 MHz. The same setups are used for assessment of the parameters applied for
 boundary companisation (alpha, depth) of which typical uncertainty values are given. These parameters are
 used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds
 to NORMit, y, z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent
 ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100
 MHz.
- Spherical isotropy (20 deviation from isotropy), it is field of low gradients resilized using a flat phantom exposed by a patch unternia.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No loterance required.
- Connector Angle: The angle is assessed using the Information gained by determining the NORMx (no. uncertainty required).

Perincan No. EX3-1925 Aug 14

Page Z of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 213 of 319

EX 10VA - SVLTVE

7800006-20 -501to

Probe EX3DV4

SN:3923

Manufactured; Calibrated: March 8, 2013 August 28, 2014

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system)

Contificate No: EX343923_Aug14

Page 2 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 214 of 319

EX3DV4-5N 3973

- Avignet set 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

Basic Calibration Parameters

	Sensor	Sensor Y	Sensor Z	Unc (k=2)	
Norm (µV/(V/m)*)*	0.58	0.48	0.47	±10,1%	
DCP (mV)"	99.2	102.2	103.3		

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dBõV	C	dB	WR mV	Unc (k=Z)
()	EW.	X	0.0	0.0	1.0	0.00	132.9	23.0 %
		Y	0.0	-0.0	1.0		134 B	_
		2	0.0	0.0	1.0		135 (0	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No. EX3-3923_August

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

The uncertainties of MormX,Y,Z do not wheat the E field undertainty make TEL (see Page 5 4nd 5) formers of mentination parameter uncertainty our required. Or entainty to community make the rest is not useful and useful undertainty to community and the rest of the rest of the second of the rest is not useful and the rest of the r



Page: 215 of 319

Avgust 20, 2014 EX30V4 SN:3923

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

Calibration Parameter Determined in Head Tissue Simulating Media

r (MHz) [©]	Relative Permittivity	Conductivity (Sim)	ConvF X	ConvF Y	ConvF Z	Alphé 9	Depth ^G (mm)	Unct. (k=2)
750	41,9	0:89	10.91	10.91	10.91	0.25	1.16	± 12.0 %
835	41.5	0.90	10.48	10.48	10.48	0.27	1.07	± 12.0 W
900	41.5	0.97	10.26	10.25	10.26	0.17	1.53	± 12-0.%
1750	40.1	1.37	8.72	B;72	8.72	0.75	0.57	± 12.0 %
1900	40.0	1.40	3.42	8.42	8.42	0.45	0.77	±12.09
2000	40.0	1.40	8.46	5.46	8.46	0,67	0.63	± 12.0 %
2300	39.5	1.67	B.02	5.02	B.02	0.35	0.85	±12.09
2450	39.2	1.80	7.66	7,66	7,66	0.33	0.87	112.03
2600	39.0	1.96	7.41	7.41	7.41	0.35	0.86	±12.05
5200	36.0	4.68	5.17	5.17	5.17	0.35	1.80	+13.13
5300	35.9	4.76	4.99	4.99	4.99	0.35	1,80	±13.19
5800	35.5	5.07	4.71	4.71	4.71	0.40	1.80	±13.19
5600	35.3	5.27	4.67	4.67	4.67	0.40	1.80	± 13.1 %

⁶ Frequency weldily above 300 MHz of a 100 MHz only applies to CASY 44 and higher (see Page 2), vice 4 is restricted to a 50 MHz. The uncertainty is the RSS of the Cornel uncertainty at celebration frequency and the uncertainty to the ordinated frequency welday better 500 MHz (a.1.0...25, 40, 50 and 70 MHz (b.). Some secondard to 200 MHz (b.). Above 5 GHz requency validity can be exceeded to 110 MHz.
*A frequencies better 3 CPS, the validity of feature currentless (c.) and be retained for 110 MHz.
*A frequencies better 3 CPS, the validity of feature currentless (c.) and be retained for 110 MHz.

Certocato No. EX3-3921, Aug 14

Page 5 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

An requestion comes a Care. We writely a few a Sight, be validly of tissue parameters (clarified in a fair control of the properties a few a appear or measured SAV values. At languages above a few a specific of the Confirmation of the control of the second of the seco



Page: 216 of 319

E330V4- SN:3022

August 28, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) E	Relative Permittivity	Conductivity (S/m)	ConvF X	ConvFY	ConvF 2	Alphu "	Depth to (mm)	Unct. (k=2)
750	55.5	0.96	10.29	10.29	10.29	0.30	1.04	± 12.0.%
635	55.2	0.97	10.32	10.32	10.32	0.55	0.78	± 12.0 %
900	55,0	1,05	10.04	10.04	10.04	0.44	0.88	± 12.0 %
1750	53.4	1.49	8.30	8.30	8,30	0.39	0.85	± 12.01
1900	53,8	1,52	8.03	B 03	8.03	0.30	0.95	± 12.09
2000	53,3	1.52	8.16	B.16	8.16	0.23	116	± 12.09
2300	62.9	1.01	7.76	7.76	7.76	0.44	0.77	± 12,0 9
2450	52.7	1.95	7.58	7.56	7.56	0.80	0.50	± 12.0 9
2600	52.5	216	7.36	7,36	7.36	0.80	0.50	± 12.0 9
5200	49.0	5,30	4.71	4.71	4.71	0.35	1.90	± 13.1 %
5300	48,9	5.42	4.58	4,58	4.58	0.35	1.90	213.13
5600	48.5	5.77	4.09	4.09	4:09	-0.4D	1.00	±13.19
5800	48.2	6.00	4.33	4,33	4:33	0.40	1.90	2 13.13

Finguously validity above 380 MHz of ± 107 MHz only applied for DAGY vid a and higher [see Page 2], should be asserted to ± 50 MHz. The uncertainty is the HSS of the Count uncertainty at contrastion begans and the uncertainty for the indicated frequency band. Finguestry saidity below 360 MHz or ± 10, 25, 40, 50 and 70 MHz by Count asserted at 30, 54, 128, 150 and 200 MHz or page of key. Above 5 GHz begans or yaidity can be exceeded to ± 110 MHz.

All frequences below 3 GHz, the validity of issue parameters (a amile) can be released to ± 10% 1 input compression formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of issue parameters. In and or its restricted to ± 5%. The uncertainty of the 150 of the Count and other parameters.

Applied out are delationated earger tissue parameters.

Applied out to the boundary effect offer outperforms below ± 2% for higher costs between 3-8 GHz at any delation larger than full this price to

Certificate No. EX3-3923_Aug 14

Page 6 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

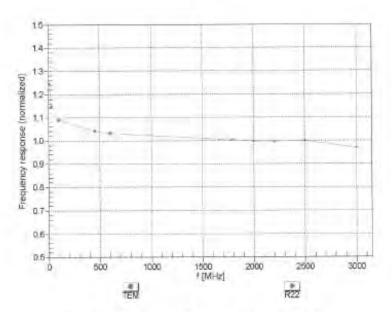


Page: 217 of 319

EX3DV4- SN:3923

August 28, 2014

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: EX3-3923_Aug/14

Page 7 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

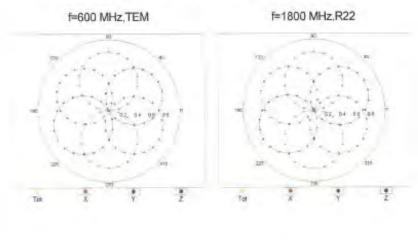
No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

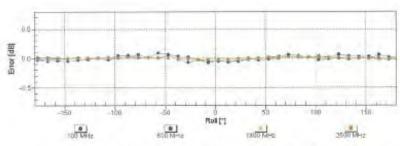


Page: 218 of 319

August 28, 2014 EX3DV4-SN:3923

Receiving Pattern (6), 9 = 0°





Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Gertificate No: EX3-3923_Aug14

Page 8 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

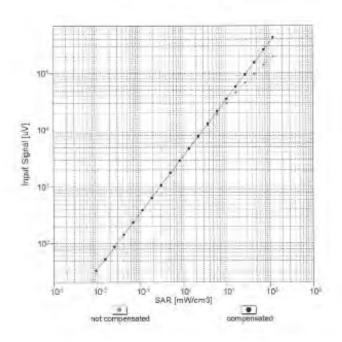
SGS Taiwan Ltd.

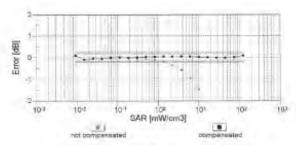


Page: 219 of 319

August 28, 2014 EX3DV4- SN:3923

Dynamic Range f(SAR_{head}) (TEM cell , feval= 1900 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Certificate No: EX3-3923_Aug14

Page 9 of 11

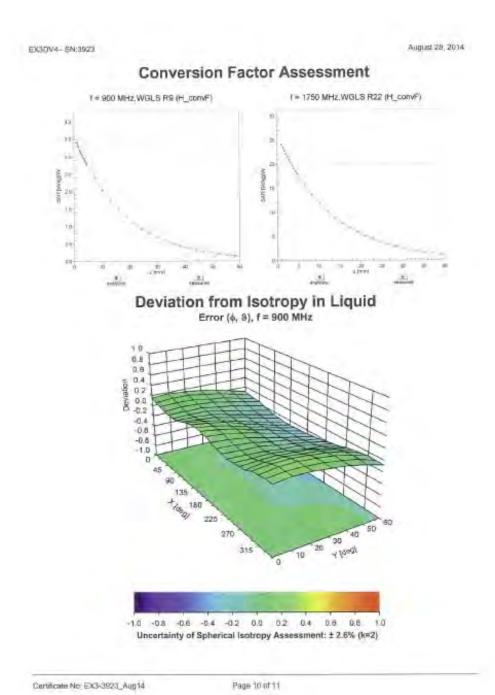
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The

Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 220 of 319



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 221 of 319

EXXXV4 SN:3323

August 28, 2016

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3923

Other Probe Parameters

Sensor Arrangament	Triangular
Connector Angle (*)	-57
Mechanical Surface Delection Mode	anabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 cmm
Tip Length	2 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	7 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Messurement Distance from Surface	1.4 wm

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 222 of 319

Calibration Laboratory of Schmid & Partner Engineering AG ougharastrasss 43,8004 Zonon. Switterland





Schweizerischer Kalibrierdienes Service suisse d'étalonnage Servizio evizzaro di torattica

Accrecised by the Swiss Accrecitation Service (SA6) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of chibration certificates

SGS-TW (Auden)

Acceptation No.: SCS 108

C

Certificate No. EX3-3831_Jan14 CALIBRATION CERTIFICATE EX3DV4 - SN:3831 Cateration procedured QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6 Calibration procedure for desimetric E-field probes Carrygion date: January 31, 2014 The callendar certificate documents the succeptility or national statistics, which replice the physical and of measurements (5) The measurements and the unconsenter with confidence outliability are given on the following pages and are part of the cardicale All calibrations have been conducted in the closed laboratory facility, environment temperature (22 ± 3)°C and hamiday = 10% Calibration Equipment used (MS/TE critical for calibration) Primary Standards Cal Date (Certificate No.) Scheduled Calibration Power meter E4410B C841200674 84-Apr-13 (No. 217-01733) April 14 Phwer sensor E4412A MY43498087 B4-Apr-13 (No. 217-01733) April4 Reference 3 dB Attenuator SN \$5054 (3c) D4-Acr-13 (No. 237-01237) Apr. 14 Reference 20 dB Attanuation SN: \$5277 (20x) 04-Apr-13 (No. 217-01735) Apr-14 Reference 30 dB Attenueror SN: \$5129 (30b) B4-Apr-13 (No. 217-01738) Apr-14 Reference Prese ES3DV2 SN: 3013 36-Dec-13 (No. ES3-3013 Dec/3) Day-10 DAE4 37. BOI 13-Dec-13 (No. DAEA (RID), Dec13) Dac-14 Secondary Standards ID. Check Dale (in house) Screduled Check RF generator HP 88490 US3642LIG1700 4-Aug-99 (In trause sheek Apr-13) In house check: Apr-16 Neiwork Analyzin HP 67535 1153724(0305 18-Oct-01 (in human streets Oct-13). In house check: Dig-14 Non Estable Laboratory Technician anoveres Kata Pakono Technical Manager Issued January 31, 2014 This collection certificate shall led be recordinate average in full without written approve in the laboratory.

Certificate No. EX3-3831_Jan14

Page 1 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 223 of 319

Calibration Laboratory of

Schmid & Partner Engineering AG oughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonn С Servizio svizzero di taratura

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signaturies to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

tissue simulating liquid NORMx,y,z sensitivity in free space sensitivity in TSL / NORMx,y,z ConvF DCP diode compression point

crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters A, B, C, D

Polarization @ o rotation around probe axis

Polarization 9 a rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

Connector Angle information used in DASY system to align probe sensor X to the robot coordinate system

- Calibration is Performed According to the Following Standards:

 a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement
 - Techniques", June 2013
 IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization $\theta = 0$ (f ≤ 900 MHz in TEM-cell; f ≥ 1800 MHz: R22 wavegu NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- $NORM(f)x,y,z = NORMx,y,z * frequency_response$ (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor medi
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z; A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f < 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters applied for used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from \pm 50 MHz to \pm 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Certificate No: EX3-3831_Jan14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 224 of 319

EX3DV4 -- SN:3831

January 31, 2014

Probe EX3DV4

SN:3831

Manufactured: Calibrated:

September 6, 2011 January 31, 2014

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system!)

Certificate No: EX3-3831_Jan14

Page 3 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 225 of 319

EX3DV4-- SN:3831

January 31, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3831

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (µV/(V/m) ²) ^A	0.45	0.42	0.43	± 10.1 %
DCP (mV) ^B	102.4	100.1	97.7	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	С	D dB	VR mV	Unc ^t (k=2)
0	CW	X	0.0	0.0	1.0	0.00	153.1	±3.0 %
		_ Y	0.0	0.0	1.0		146.3	
		Z	0.0	0.0	1.0		154.8	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: EX3-3831_Jan14

Page 4 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

^A The uncertainfies of NormX,Y,Z do not affect the E⁴-field uncertainty inside TSL (see Pages 5 and 6).

**Numerical Incarization parameter: uncertainty not required.

**Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the equare of the field value.



Page: 226 of 319

EX3DV4-SN:3831

January 31, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3831

Calibration Parameter Determined in Head Tissue Simulating Media

Janioration	raiameter D	etermined m	nead IIs	sue Sim	ulating me	edia		
f (MHz) c	Relative Permittivity ^F	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ⁶	Depth ^G (mm)	Unct. (k=2)
750	41.9	0.89	9.59	9.59	9.59	0.74	0.84	± 12.0 %
835	41.5	0.90	9.14	9.14	9.14	0.22	1.36	± 12.0 %
900	41.5	0.97	9.17	9.17	9.17	0.28	0.96	± 12.0 %
1750	40.1	1.37	8.00	8.00	8.00	0.26	0.99	± 12.0 %
1900	40.0	1.40	7.79	7.79	7.79	0.60	0.65	± 12.0 %
2000	40.0	1,40	7.71	7.71	7.71	0.39	0.79	± 12.0 %
2300	39.5	1.67_	7.35	7.35	7.35	0.43	0.76	± 12.0 %
2450	39.2	1.80	6.99	6.99	6.99	0.37	0.85	± 12.0 %
2600	39.0	1.96	6.62	6.62	6.62	0.38	0.87	± 12.0 %
5200	36.0	4.66	4.67	4.67	4.67	0.35	1.80	± 13.1 %
5300	35.9	4.76	4.41	4.41	4.41	0.40	1.80	± 13.1 %
5600	35.5	5.07	3.99	3.99	3.99	0.50	1.80	± 13.1 %
5800	35.3	5.27	4.12	4.12	4.12	0.45	1.80	± 13.1 %

Certificate No: EX3-3831_Jan14

Page 5 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

⁶ Frequency validity of ± 100 MHz cirtly applies for DASY v4.4 and higher (see Page 2), also it is restricted to ± 50 MHz. The uncertainty is the RSS of the Corner uncertainty at cellbration frequency and the uncertainty for the indicated frequency band.

*At frequencies below 3 GHz, the validity of tissue parameters (a and a) can be released to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of issue parameters (a and a) is restricted to ± 5%. The uncertainty is the RSS of the Corner uncertainty for indicated target issue parameters.

*AphatDepth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz at any distance larger than half the probe tip dismeter from the boundary.



Page: 227 of 319

EX3DV4-- SN:3831

January 31, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3831

Calibration Parameter Determined in Body Tissue Simulating Media

and addit Parameter Determined in Body Tissue Simulating Media										
f (MHz) ^c	Relative Permittivity	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ⁵	Depth ^c (mm)	Unct. (k=2)		
750	55.5	0.96	9.10	9.10	9.10	0.50	0.80	± 12.0 %		
835	55.2	0.97_	9.03	9.03	9.03	0.28	1.15	± 12.0 %		
900	55.0	1.05	8.84	8.84	8.84	0.29	1.08	± 12.0 %		
1750	53.4	1.49	7.63	7.63	7.63	0.26	1.16	± 12.0 %		
1900	53.3	1.52	7.19	7.19	7.19	0.32	1.01	± 12.0 %		
2000	53.3	1.52	7.17	7.17	7.17	0.44	0.83	± 12.0 %		
2300	52,9	1.81	6.90	6.90	6.90	0.52	0.76	± 12.0 %		
2450	52.7	1.95	6.68	6.68	6.68	0.80	0.56	± 12.0 %		
2600	52.5	2.16	6.50	6.50	6.50	0.80	0.50	± 12.0 %		
5200	49.0	5.30	4.08	4.08	4.08	0.50	1.90	± 13.1 %		
5300	48.9	5.42	3.87	3.87	3.87	0.50	1.90	± 13.1 %		
5600	48.5	5.77	3.36	3.36	3.36	0.60	1.90	± 13.1 %		
5800	48.2	6.00	3.78	3.78	3.78	0.55	1.90	± 13.1 %		

Certificate No: EX3-3831_Jan14

Page 6 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

⁰ Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), clase it is asstricted to ± 50 MHz. The uncertainty is the RS3 of the Cornel' uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

*At frequencies below 3 GHz, the validity of tissue parameters (a and e) can be released to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (a and e) is restricted to ± 6%. The uncertainty is the RSS of the ConvF uncertainty for indicated target issue parameters.

*Application and the determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.



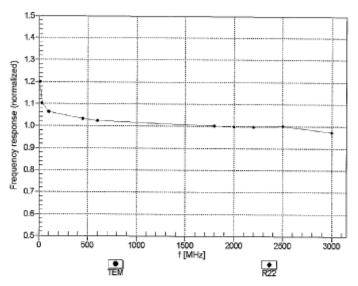
January 31, 2014

Page: 228 of 319

EX3DV4- SN:3831

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: EX3-3831_Jan14 Page 7 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留⁹⁰天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

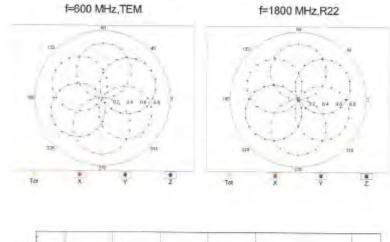


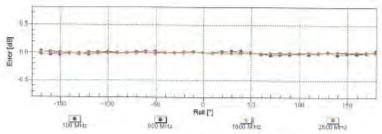
Page: 229 of 319

EX3DV4- SN:3831

January 31, 2014

Receiving Pattern (6), 9 = 0°





Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Certificate No: EX3-3831_Jan14

Page 8 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

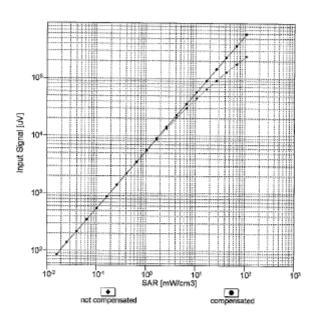


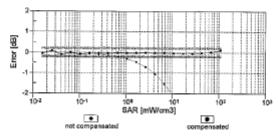
Page: 230 of 319

EX3DV4- SN:3831

January 31, 2014

Dynamic Range f(SAR_{head}) (TEM cell , f = 900 MHz)





Uncertainty of Linearity Assessment: 2 0.6% (k=2)

Certificate No: EX3-3831_Jan14

Page 9 of 11

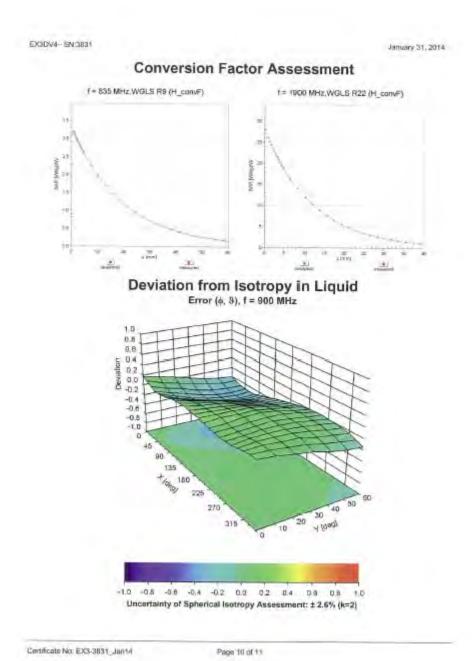
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 231 of 319



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 232 of 319

EX3DV4-- \$N:3831

January 31, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3831

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (*)	-20.6
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm

Certificate No: EX3-3531_Jan14

Page 11 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 233 of 319

Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweiberscher Kalipnerdienst
C Service susse d'abiomage
Servicio avizzaro di tarature
Swiss Calibration Service

Accreditation No.: SCS 108
The Swiss Accreditation Service is now of the signstonies to the EA
Multillateral Agreement for the recognition of calibration cartificates

Client SGS-TW (Auden)

Certificate (4) EX3-3938_Jul14

CALIBRATION CERTIFICATE

Disjust: EX3DV4 + SN:3936

GelEvation procedures: QA CAL-01.V9, QA CAL-14.V4, QA CAL-25.V5, QA CAL-25.V6

Calibration procedure for dostmetric E-field probes

Calibration date: July 25, 2014

This calibration cartificate documents the troopability on national standards, which relates the physical units of measurements (81). The measurements and the functionists with confidence probability are given on the following pages and are part of the cartification. At calibrations have been conducted in the classed information for calibration.

Primary Standards	(0)	Cal Cote (Certificate Mo.)	Scheduled Calibration
Power maler E4415E	GB41293874	03-Apr-14 (No. 217-01911)	April .
Power sensor E4412A	MY41498887	03-Apr-14 (No. 217-01911)	Apr-15
Reference 3 dB Attenuator	SN: 55094 (3c)	03-Apr-14 (No. 217-01915)	Apx+10:
Reference 20 dB Attenuator	SNI 56277 (20x)	03-Apr-14 (No. 217-01919)	Apr 15
Flatimarica 30 dB Abstruator	SN 55179 (Mb)	03-Apr-14 (No. 217-01920)	Apr-13
Reference Prope E330V2	SN 3013	33-Dec-13 (No. ES3-3013_Dec13)	Dec-14
DAE4	BN: 660	13-Dec-13 (No. DAE4-860_Dec13)	Dec-14
Secondary Standards	(0	Check Dain (in house)	Scheduled Check
RF generator HF 86480	US3642U01700	#-Aug-99 (in house check Apr-13)	In house check: Apr-16
Network Analyzer Hir B/50E	US3/399580	15-Oct-01 (in house check Gizt-13)	in house check. Dicy 14

	Marie	Finction	Signme
Carbreled by	unite El-Neous	Lamoratory Trich was	Micen Eleveny
Approved by	Help Powyc	Technical Minager	SIM
			Issued July 26, 2014

Certificate Nor EX3-3938_46114

Page 1 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 234 of 319

Calibration Laboratory of

Schmid & Partner Engineering AG





Service suisse d'étalonnage C Servizio svizzero di taratura

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signal Multilateral Agreement for the recognition of calibration certificates

Glossary:

tissue simulating liquid NORMx,y,z sensitivity in free spa sensitivity in TSL / NORMx,y,z DCP

diode compression point crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters A, B, C, D

Polarization φ φ rotation around probe axis

Polarization 9 9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., θ = 0 is normal to probe axis information used in DASY system to align probe sensor X to the robot coordinate system Connector Angle

Calibration is Performed According to the Following Standards:

IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement

Techniquee*, June 2013
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization 9 = 0 (f < 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe securacy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * CanvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Certificate No: EX3-3938_Jul14

Page 2 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 235 of 319

July 25, 2014 EX3DV4 -- SN:3938

Probe EX3DV4

SN:3938

Manufactured: Calibrated:

May 2, 2013 July 25, 2014

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

Certificate No: EX3-3938 Jul 14 Page 3 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 236 of 319

EX3DV4-- SN:3938

July 25, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

Basic Calibration Parameters

Dusic Cambration i arameters										
	Sensor X	Sensor Y	Sensor Z	Unc (k=2)						
Norm (µV/(V/m) ²) ^A	0.52	0.59	0.34	± 10.1 %						
DCP (mV) ⁶	98.3	99.4	104.7							

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	С	D dB	VR mV	Unc ^t (k=2)
0	CW	Х	0.0	0.0	1.0	0.00	166.6	±3.0 %
		Y	0.0	0.0	1.0		157.7	
		Z	0.0	0.0	1.0		153.7	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: EX3-3938_Jul14

Page 4 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

The uncertainties of NormX,Y,Z do not affect the IE²-field uncertainty inside TSL (see Pages 5 and 6).

Numerical linearization parameter: uncertainty not required.

Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the square of the



Page: 237 of 319

EX3DV4-SN:3938

July 25, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ⁰	Relative Permittivity ^F	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ⁶	Depth ^G (mm)	Unct. (k=2)
835	41.5	0.90	9.41	9.41	9.41	0.80	0.50	± 12.0 %
900	41.5	0.97	9.26	9.26	9.26	0.61	0.68	± 12.0 %
1750	40.1	1.37	7.91	7.91	7.91	0.59	0.66	± 12.0 %
1900	40.0	1.40	7.65	7.65	7.65	0.54	0.72	± 12.0 %
2000	40.0	1.40	7.66	7.66	7.66	0.80	0.59	± 12.0 %
2450	39.2	1.80	6.97	6.97	6.97	0.41	0.78	± 12.0 %
2600	39.0	1.96	6.83	6.83	6.83	0.38	0.86	± 12.0 %
5200	36.0	4.66	4.95	4.95	4.95	0.40	1.80	± 13.1 %
5300	35.9	4.76	4.74	4.74	4.74	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.47	4.47	4.47	0.40	1.80	± 13.1 %
5800	35.3	5.27	4.49	4.49	4.49	0.40	1.80	± 13.1 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at estituation frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 10 MHz.

^f At frequencies below 3 GHz, the validity of tissue parameters (s and o) can be released to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (s and o) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target Issue parameters.

^g Apha/Depth are determined during cationation. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always lass than ± 1% for frequencies below 3 GHz and balow ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip clameter from the boundary.

Certificate No: EX3-3938_Jul14

Page 5 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 238 of 319

EX3DV4-SN:3938

July 25, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

Calibration Parameter Determined in Body Tissue Simulating Media

alibration	alibration Parameter Determined in Body Tissue Simulating Media										
f (MHz) ^a	Relative Permittivity ^F	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ⁶	Depth ^G (mm)	Unot. (k=2)			
835	55.2	0.97	9.35	9.35	9.35	0.80	0.60	± 12.0 %			
900	55.0	1.05	9.24	9.24	9.24	0.80	0.50	± 12.0 %			
1750	53.4	1.49	7.36	7.36	7.36	0.80	0.62	±12.0 %			
1900	53.3	1.52	7.03	7.03	7.03	0.44	0.83	± 12.0 %			
2000	53.3	1.52	7.21	7.21	7.21	0.30	0.97	± 12.0 %			
2450	52.7	1.95	6.69	6.69	6.69	0.75	0.57	± 12.0 %			
2600	52.5	2.16	6.57	6.57	6.57	0.80	0.50	± 12.0 %			
5200	49.0	5.30	4.27	4.27	4.27	0.45	1.90_	± 13.1 %			
5300	48.9	5.42	4.11	4.11	4.11	0.45	1.90	± 13.1 %			
5600	48.5	5.77	3.70	3.70	3.70	0.50	1.90	± 13.1 %			
5800	48.2	6.00	3.92	3.92	3.92	0.50	1.90	± 13.1 %			

Grequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity before 300 MHz is ± 10, 25, 46, 30 and 70 MHz for ConvF assessments at 30, 84, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

F At frequencies below 3 GHz, the validity of tissue parameters (a and a) can be released to ± 10% if fixed compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (a and a) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

AphatOepth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-8 GHz at any distance larger than half the probe tip disances from the boundary.

Certificate No: EX3-3938_Jul14

Page 6 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



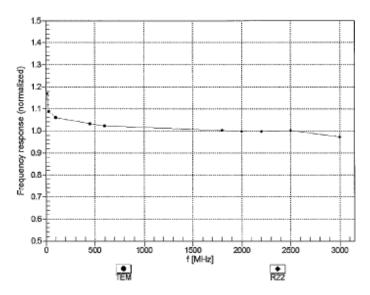
Page: 239 of 319

EX3DV4-- SN:3938

July 25, 2014

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: EX3-3938_Jul14

Page 7 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

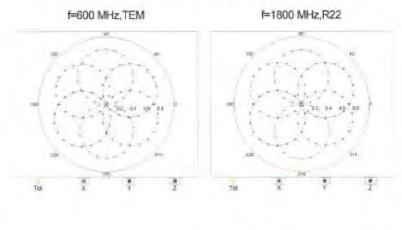
No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

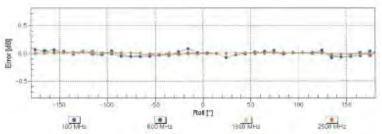


Page: 240 of 319

EX30V4- SN:3938 July 25, 2014

Receiving Pattern (6), 9 = 0°





Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Certificate No. EX3-3938 Jul 14

Page 8 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

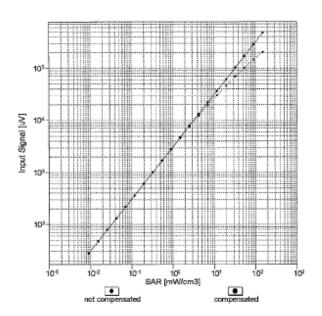
SGS Taiwan Ltd.

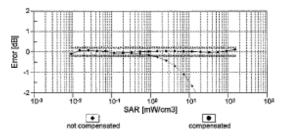


Page: 241 of 319

July 25, 2014 EX3DV4-- SN:3938

Dynamic Range f(SAR_{head}) (TEM cell , feval = 1900 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Certificate No: EX3-3938_Jul14 Page 9 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

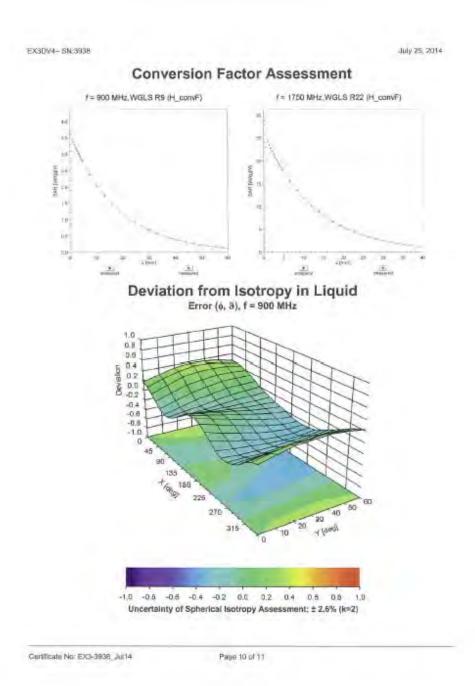
除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 242 of 319



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 243 of 319

EX30V4- SN:3938 July 25, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-25.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Certificate No: EX3-3938_Jul14 Page 11 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

SGS Taiwan Ltd. No.134,Wu Kung Road, New Taipei Ind 皮股份有限公司 t (886-2) 2299-3279

98-0488 www.tw.sgs.com



Page: 244 of 319

Calibration Laboratory of

Schmid & Partner Engineering AG aghausstrates 43, 1004 Zurich, Switzerund





Schweizerischer Kallbrierdin Service suisse d'étalunnage Servizio evizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the algeatonics to the EA Multifateral Agreement for the recognition of calibration certificates

SGS-TW (Auden)

Cereficate No: EX3-3770 April

CALIBRATION CERTIFICATE EX3DV4 - SN:3770 Object QA CAL 01.V9, QA CAL-14.V4: QA CAL-23.V5, QA CAL-25.V6 Calibration procedurated Calibration procedure for cosmetric E-field probes April 24, 2014 Calibration date This paids also perfileate documents the tracestrify to national standards, which reutize the physical units of meass The recognitionals and the uncertainties with confidence probability will given on the following pages and are part of the perfican All calibrations have been constituted in the closed substatory facility environment temperature (22 ± 3)/13 and numetry = 70%. Calibration Equipment used IMATE critical for calibration)

Printing Standards	iti	Gall Date (Certificate No.)	Scheduled Califration
Power meter E4419B	GB41293874	E3-Apr-14 (No. 217-01911)	Apr-15
Fower sensor E4412A	MY41498087	03-Apr-14 (No. 217-01911)	Apr-15
Reference 3 dB Attenuation	SN: 36054 (3c)	03-Apr-14 (No. 217-01915)	Apr-15
Reference 20 dB Atlenuator	SN: 36277 (204)	03-Apr-14 (No. 217-01619)	Apr-15
Falterence 30 cB Abenuator	SN: S5129 (30b)	(CS-Apri-14 (No. 217-01920)	April 15
Reterence Probe E330V2	EN: 3013	30-Den-13 (No. ES3-3013_Dec13)	Dec.14
DAEA	5N 680	13 Dec-13 (No. DIAE4 660, Dec13)	Dec-14
Secondary Standards	(1)	Check Date (in house)	Scheduled Check
RF generator HP 8848C	US3642U01700	4-Aug-99 (in house check Apr-13).	try frogser check: Apr-15
Network Analyzes HP 8753E	US37990560	18-Oct-01 (in house check Col-13)	in house check. Oct-14

Norme	Function	Stamillare _
Jeich Kastrali	Laborary Technologic	FILE
Katja Polimic	Technical Manager	JOE 14
		Issued, April 24, 2014
	Jenon Kastrali	Jeton Kastrati Jaba seary Technogau

Certificate No: EX3-37/70_Apr14

Page 1.0f 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 245 of 319

Calibration Laboratory of

Schmid & Partner Engineering AG cughausstrasse 43, 8904 Zurich, Switzerland





Schweizerischer Kalibrierdie Service suisse d'étalor С Servizio svizzero di taratura viss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signat Multilateral Agreement for the recognition of calibration certificates

Glossary:

tissue simulating liquid NORMx,y,z sensitivity in free space sensitivity in TSL / NORMx,y,z DCP diode compression point

crest factor (1/duty_cycle) of the RF signal A, B, C, D modulation dependent linearization parameters

Polarization φ o rotation around probe axis

9 rotation around an axis that is in the plane normal to probe axis (at measurement center), Polarization 9

i.e., 9 = 0 is normal to probe axis information used in DASY system to align probe sensor X to the robot coordinate system Connector Angle

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement
- Techniques", June 2013
 IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- WORMx,y,z: Assessed for E-field polarization 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f s 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Certificate No: EX3-3770_Apr14

Page 2 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 246 of 319

EX3DV4 - SN:3770

April 24, 2014

Probe EX3DV4

SN:3770

Manufactured: Calibrated: July 6, 2010 April 24, 2014

Calibrated for DASY/EASY Systems (Note: non-competible with DASY2 system!)

Certificate No: EX3-3770_Apr14

Page 3 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



April 24, 2014

Page: 247 of 319

EX3DV4-SN:3770

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

Basic Calibration Parameters

Daoic Calibration Fara	metera			
	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (µV/(V/m) ²) ^A	0.31	0.61	0.40	± 10.1 %
DCP (mV) th	104.0	96.9	102.5	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	С	D dB	VR mV	Unc ^{ll} (k=2)
0	CW	×	0.0	0.0	1.0	0.00	141.8	±3.5 %
		Y	0.0	0.0	1.0		132.9	
		Z	0.0	0.0	1.0		135.7	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: EX3-3770_Apr14

Page 4 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

Numerical linearization parameter: uncertainty not required.

*Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the square of the



Page: 248 of 319

EX3DV4-SN:3770

April 24, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ⁶	Depth ⁶ (mm)	Unct. (k=2)
750	41.9	0.89	9.70	9.70	9.70	0.27	1.09	± 12.0 %
835	41.5	0.90	9.32	9.32	9.32	0.52	0.77	± 12.0 %
900	41.5	0.97	9.16	9.16	9.16	0.14	1.68	± 12.0 %
1750	40.1	1.37	8.08	8.08	8.08	0.28	0.92	± 12.0 %
1900	40.0	1.40	7.79	7.79	7.79	0.36	0.81	± 12.0 %
2000	40.0	1.40	7.75	7.75	7.75	0.40	0.78	± 12.0 %
2300	39.5	1.67	7.35	7.35	7.35	0.26	0.95	± 12.0 %
2450	39.2	1.80	6.97	6.97	6.97	0.35	0.82	± 12.0 %
2600	39.0	1.96	6.73	6.73	6.73	0.45	0.73	± 12.0 %
5200	36.0	4.66	5.25	5.25	5.25	0.35	1.80	± 13.1 %
5300	35.9	4.76	5.07	5.07	5.07	0.35	1.80	± 13.1 %
5600	35.5	5.07	4.48	4.48	4.48	0.45	1.80	± 13.1 %
5800	35.3	5,27	4.65	4.65	4.65	0.45	1.80	± 13.1 %

Certificate No: EX3-3770_Apr14

Page 5 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

Frequency validity of a 100 MHz only applies for DASY w.A. and higher (see Page 2), also it is restricted to ± 60 MHz. The uncertainty is the RSS of the ConvE uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

At frequencies below 3 GHz, the validity of lissue parameters (a and o) can be relaxed to ± 10% if liquid compensation formats is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (a and o) is restricted to ± 5%. The uncertainty is the RSS of the ConvE uncertainty for indicated trappt fissue parameters.

AphatDepth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.



Page: 249 of 319

EX3DV4- SN:3770

April 24, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

Calibration Parameter Determined in Body Tissue Simulating Media

alibration Parameter Determined in Body Tissue Simulating Media								
f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ⁰	Depth ⁶ (mm)	Unct. (k=2)
750	55,5	0.96	9.54	9.54	9.54	0.53	0.79	± 12.0 %
835	55.2	0.97	9.40	9.40	9.40	0.19	1.60	± 12.0 %
900	55.0	1.05	9.23	9.23	9.23	0.27	1.20	± 12.0 %
1750	53.4	1.49	7.79	7.79	7.79	0.37	0.87	± 12.0 %
1900	53.3	1.52	7.51	7.51	7.51	0.47	0.78	± 12.0 %
2000	53.3	1.52	7.59	7.59	7.59	0.61	0.69	± 12.0 %
2300	52.9	1.81	7.27	7.27	7.27	0.60	0.69	± 12.0 %
2450	52.7	1.95	7.15	7.15	7.15	0.52	0.72	± 12.0 %
2600	52.5	2.16	6.90	6.90	6.90	0.80	0.50	±12.0 %
5200	49.0	5.30	4.56	4.56	4.56	0.50	1.90	± 13.1 %
5300	48.9	5.42	4.38	4.38	4.38	0.50_	1.90	± 13.1 %
5800	48.5	5.77	3.76	3.76	3.76	0.55	1.90	± 13.1 %
5800	48.2	6.00	4.13	4.13	4.13	0.55	1.90	± 13.1 %

Certificate No: EX3-3770_Apr14

Page 6 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

⁶ Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), also it is restricted to ± 60 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

*At frequencies below 3 GHz, the validity of tissue parameters (c and e) can be reliaved to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (c and e) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target issue parameters.

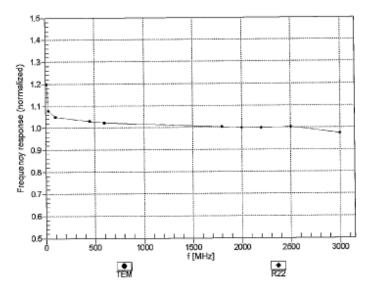
ApharDepth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-8 GHz at any distance larger than half the probe tip diameter from the boundary.



Page: 250 of 319

EX3DV4- SN:3770 April 24, 2014

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: EX3-3770_Apr14

Page 7 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

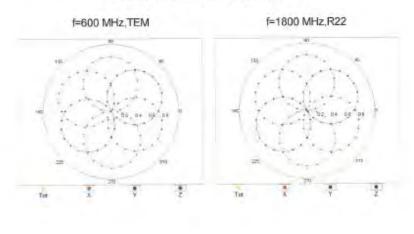
SGS Taiwan Ltd.

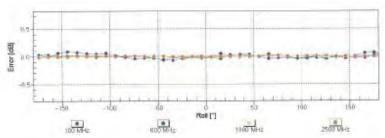


Page: 251 of 319

April 24, 2014 EX3DV4- SN:3770

Receiving Pattern (\$\phi\$), 9 = 0°





Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Certificate No: EX3-3770_Apr14

Page 8 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

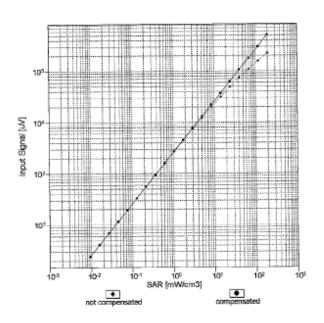


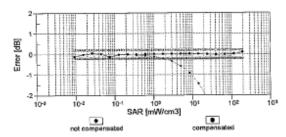
Page: 252 of 319

EX3DV4-SN:3770

April 24, 2014

Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Certificate No: EX3-3770_Apr14

Page 9 of 11

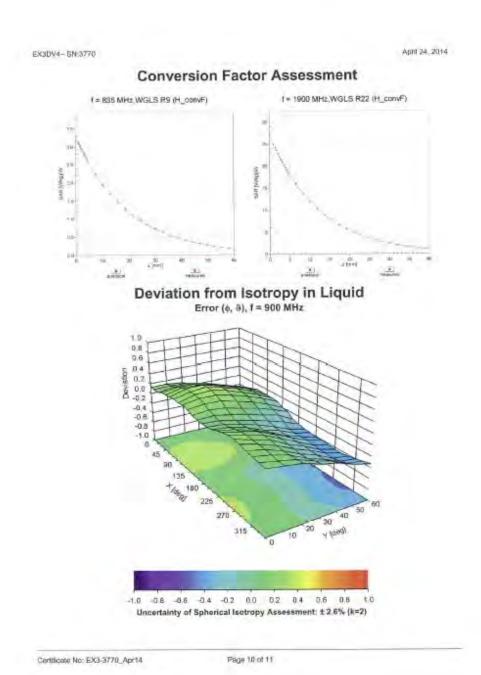
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 253 of 319



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 254 of 319

EX3DV4-- SN:3770

April 24, 2014

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3770

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (*)	-34.3
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm

Certificate No: EX3-3770_Apr14

Page 11 of 11

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 255 of 319

8. Uncertainty Budget

Measurement Uncertainty evaluation template for DUT SAR test

IEEE 1528	1	-		I a	1	I,		l	I.
A	C	D	е	f	g	h=c * f	/ e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty %	Probability Distributioin	Div	ci (1g)	ci (10g)	Standar uncerta		Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration(under 6Ghz)	6.55%	N	1		1	1 6	5.55%	6.55%	8
Isotropy , Axial	3.50%	R	$\sqrt{3}$		1	1 2	2.02%	2.02%	8
Isotropy, Hemispherical	9.60%	R	$\sqrt{3}$		1	1 5	5.54%	5.54%	∞
Boundary Effect	1.00%	R	$\sqrt{3}$		1	1 0).58%	0.58%	∞
Linearity	4.70%	R	$\sqrt{3}$		1	1 2	2.71%	2.71%	∞
Detection Limits	1.00%	R	$\sqrt{3}$		1	1 0).58%		
Readout Electronics	0.30%	N	1		1	1 0	0.30%		
Response time	0.80%	R	$\sqrt{3}$		1	1 0).46%	0.46%	∞
Integration Time	2.60%	R	$\sqrt{3}$		1	1 1	.50%	1.50%	∞
Measurement drift (class A evaluation)	1.75%	R	√3		1	1 1	.01%	1.01%	∞
RF ambient condition - noise	3.00%	R	√3		1	1 1	.73%	1.73%	∞
RF ambient conditions -reflections	3.00%	R	√3		1	1 1	.73%	1.73%	∞
Probe positioner Mechanical restrictions	0.40%	R	√3		1	1 0).23%	0.23%	∞
Probe Positioning with respect to phantom	2.90%	R	√3		1	1 1	.67%	1.67%	∞
Post-processing	1.00%	R	√3		1	1 0).58%	0.58%	∞
Max SAR Eval	1.00%	R	$\sqrt{3}$		1	1 0).58%	0.58%	∞
Test Sample related									
Test sample	2.90%	N	1		1	1 2	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1		1		3.60%		
Drift of output power	5.00%	R	√3		1	1 2	2.89%	2.89%	∞
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3		1	1 2	2.31%	2.31%	∞
Liquid conductivity(meas.)	4.94%	N	1	0.6	1		3.16%		
Liquid permitivity(meas.)	4.98%	N	1	0.	6 0.	49 2	2.99%	2.44%	M
Combined standard uncertainty		RSS				12	2.36%	12.01%	
Expant uncertainty (95% confidence interval), K=2						24	1.72%	24.03%	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

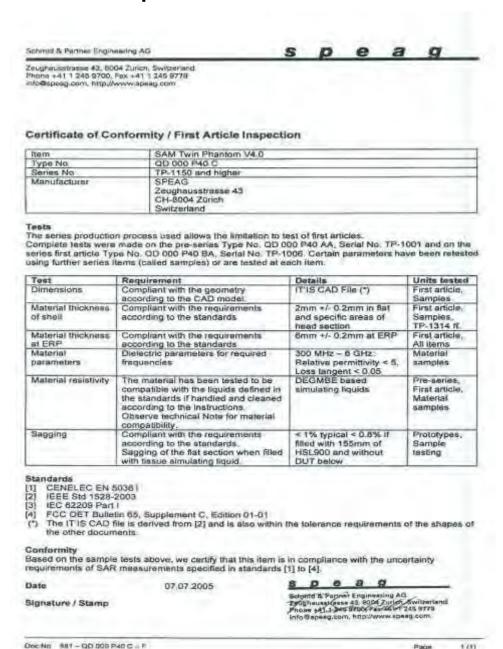
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 256 of 319

9. Phantom Description



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be

prosecuted to the fullest extent of the law.



Page: 257 of 319

10. System Validation from Original Equipment Supplier



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 258 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstriase 43, 8004 Zurich, Switzerland





S Schwerencher Kalibnierdiener Service suisse d'étainnage C Servizie svizzere di matters

S Syring Calibration Service

Accorditation No.: SCS 108

Ascendiad by the Swas Accendibation Service (SAS)

The Swiss According to Service in one of the agreement to the EA Musilateral Agreement for the recognition of calibration certificates

Glossary:

TSL

N/A

tissue simulating liquid

sensitivity in TSL / NORM x,y,z not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", Exhaust 2005.
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end
 of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed
 point exactly below the center marking of the flat phantom section, with the arms oriented
 parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole
 positioned under the liquid filled phantom. The impedance stated is transformed from the
 measurement at the SMA connector to the feed point. The Return Loss ensures low
 reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point.
 No uncertainty required.
- · SAR measured: SAR measured at the stated antenna input power
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificase New 0750V3-1015 Aug 14

Fage 8 of 5

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 259 of 319

Measurement Conditions

DASY Version	DASY5	V52.8.5
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx dy, dz = 5 mm	
Frequency	750 MHz = 1 MHz	

Head TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41,9	0.89 mhp/m
Measured Head TSL parameters	(22.0 ± 0.2) VO	#2.2 ± 6 %	0,91 mho/m ± 6 %
Head TSL temperature change during test.	< 0.5 °C		-

SAR result with Head TSL

SAR averaged over 1 cm ² (1 g) of Head TSL	Condition	
SAR measured	250 mW Input power	2.11 W/kg
SAR for pominal Head TSL parameters	normalized to 1W	8.31 W/kg ± 17.0 % (km2)

5AR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input prover	1.38 W/kg
SAR for numinal Head TSL parameters	normalized to 1W	5.45 W/kg ± 16.5 % (k=2)

Body TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22,0 °C	55,5	0,96 mho/m
Measured Body TSL parameters	(22.0±0.2) °C	55,4±8 %	0.99 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	1,660	The state of

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAFI medisured	950 mW input power	2,24 WAG
SAR for nominal Body TSL parameters	normalized to 1W	8.75 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm2 (10 g) of Body TSL	condition	
SAR measured	250 mW Input power	1.49 W/kg
SARI for nominal Body TSL gammeters	nolmaized to 1W	5.85 W/kg ± 16.5 % (k=2)

Centicate No: 0750V3-1015_Aug14

Page 9 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 260 of 319

Appendix (Additional assessments outside the scope of SCS108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.1 Ω - 0.4 jΩ
Return Loss	- 30.4 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.3 Ω - 2.9 jΩ	
Return Loss	- 29.5 dB	

General Antenna Parameters and Design

Electrical Delay (one direction) 1.037 ns	
---	--

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional FUT Data

Manufactured by	SPEAG	
Manufactured on	March 22, 2010	

Certificate No: D750V3-1015_Aug14

Page 4 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 261 of 319

DASY5 Validation Report for Head TSL

Date: 28.08.2014

Test Laboratory; SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1015

Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.91 \text{ S/m}$; $\varepsilon_r = 42.2$; $\rho = 1000 \text{ kg/m}^3$ Phanton section: Flat Section

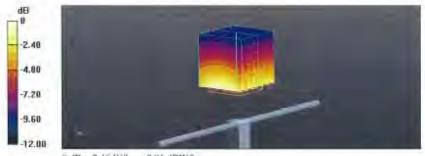
Measurement Standard; DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.37, 6.37, 6.37); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid; dx=5mm, dy=5mm, dz=5mm Reference Value = 53.68 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 3.13 W/kg SAR(1 g) = 2.11 W/kg; SAR(10 g) = 1.38 W/kgMaximum value of SAR (measured) = 2.46 W/kg



0 dB = 2.46 W/kg = 3.91 dBW/kg

Cartificate No: D750V3-1015_Aug14

Page 5 of B

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The

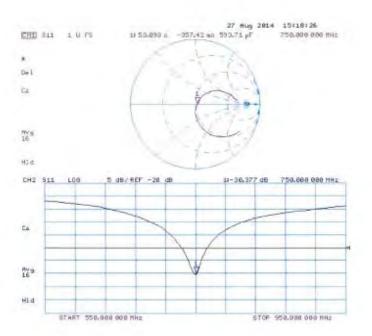
Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 262 of 319

Impedance Measurement Plot for Head TSL



Certificate No: D750V3-1015_Aug14

Page 6 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 263 of 319

DASY5 Validation Report for Body TSL

Date: 27.08.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1015

Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.99$ S/m; $\varepsilon_c = 55.4$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63,19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.13, 6.13, 6.13); Calibrated: 30.12.2013;
- Sensor-Surface; 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52,8,8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 53.06 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3,26 W/kg SAR(1 g) = 2.24 W/kg; SAR(10 g) = 1.49 W/kg Maximum value of SAR (measured) = 2.60 W/kg



0 dB = 2.60 W/kg = 4.15 dBW/kg

Certificate No D750V3-1015_Aug14

Page 7 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

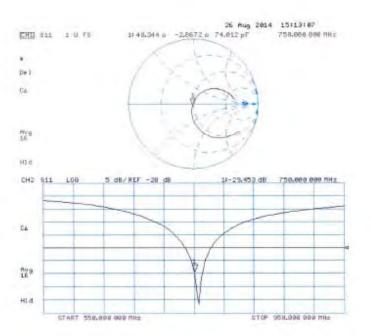
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 264 of 319

Impedance Measurement Plot for Body TSL



Certificate No: D750V3-1015_Aug14

Page 8 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 265 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerlscher Kelibrierdienst Service suisse d'étalonnage C Servizio svizzoro di taratura S Swiss Calibration Service

Accredited by the Swas Accreditation Service (SAS)

The Swins Accreditation Service is one of the aignotories to the EA Multilateral Agreement for the recognition of calibration certificates

Client SGS-TW (Auden)

Accorditation No.: SCS 108

Certificate No. D835V2-4d063 Aug 14

Object	D835V2 - SN. 46063		
Claimsdon procedura(s)	DA CAL-05.v9 Calibration proce	dure for dipole validation kits abo	ove 700 MHz
Onttrution date:	August 28, 2014		
		ional standards, which realize the physical un robublity are given on the following pages ar	
All calibrations have been borous	sted in the placed lappropri	ry lacity, environment immortalule (22 ± 3)*	C and numbbly a 70%.
Calbration Equipment used (M&	E critical for calibration)		
Calbration Equipment used (M&) Primary Standards	E critical for calibration)	Cal Date (Certificate No.)	Scheduled Calibration
Primary Standards Power maller EPM-442A	ID # GB37480704	09-Oct-13 (No. 217-01627)	Gra-1#
Plimary Standards Power maler EPM-442A Power sensor HP 9461A	ID # IB37480704 US37292783	09-Gc+13 (No. 217-01627) 09-Gc+13 (No. 217-01627)	Oct-14 Oct-14
Primary Standards Power maler EPM-442A Power season HP 9461A Power season HP 8481A	ID # GB37480704 US37282783 MY41092317	09-Oc+13 (No. 217-01627) 09-Oc+13 (No. 217-01627) 09-Oc+13 (No. 217-01628)	Oct-14 Oct-14 Oct-14
Primary Standards Gower meller EPM-442A Tower sensor HP 8461A Tower sensor HP 8481A Reference 20 dtl Afrenuator	ID # GB37480704 US37292783 MY41092317 SN: 5058 (20K)	09-Oci-13 (No. 217-01627) 09-Oci-13 (No. 217-01627) 09-Oci-13 (No. 217-01628) 03-Apr-14 (No. 217-01618)	Oct-14 Oct-14 Oct-14 Apr-15
Primary Standards Power maller EPM-442A Power season HP 9461A Power season HP 9461A Reference 20 df Americalor Type-N mismatch combination	ID # GB37480704 US37292783 MY41092317 SN: 5008 (20K) SN: 5047.2 / 06327	0#-Oc=13 (No. 217-01827) 0#-Oc=13 (No. 217-01827) 0#-Oc=13 (No. 217-01828) 08-Apr-14 (No. 217-01918) 08-Apr-14 (No. 217-01921)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15
Primary Standards Power maler EPM-442A rower seeson HP 8461A Power seeson HP 8461A Reference 20 dD Anerosalor rype-N mismatch combination Reference Proce ES3OVI	ID # GB37480704 US37292783 MY41092317 SN: 5058 (20K)	09-Oci-13 (No. 217-01627) 09-Oci-13 (No. 217-01627) 09-Oci-13 (No. 217-01628) 03-Apr-14 (No. 217-01618)	Oct-14 Oct-14 Oct-14 Apr-15
Primary Standards Fower meller EPM-442A Fower sensor HP 946TA Power sensor HP 946TA Reference 20 d0 Afterwalor Type-N mismatch combination Reference Proce ES30VI DAE4	JD # GB37480704 US37292788 MY41092317 SN: 0008 (20K) SN: 5047.2 / 06327 SN: 3206 SN: 601	0#-Oc+13 (No. 217-01827) 0#-Oc+13 (No. 217-01827) 0#-Oc+13 (No. 217-01828) 03-Apr-14 (No. 217-01816) 03-Apr-14 (No. 217-01921) 30-Oc+13 (No. ES3-3206_Dec13) 18-Aug-14 (No. DAE4-601_Aug14)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15
Primary Standards Power meller EPM-442A Power sensor HP 9461A Power sensor HP 9481A Reference 20 d0 Americator Type-N mismatch combination Reference Proce ES90Vi DAE4 Secondary Standards	ID # IB37480704 US37292783 MY41993317 SN: 5068 (20K) SN: 5047.27 (26327 SN: 509- SN: 601	0#-Oc=13 (No. 217-01627) 0#-Oc=13 (No. 217-01827) 0#-Oc=13 (No. 217-01828) 03-Apr-14 (No. 217-01916) 03-Apr-14 (No. 217-01921) 30-Oc=13 (No. ES3-3206, Dec13) 18-Aug-14 (No. DAE4-601, Aug14) Creck Date (in house)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Schatteled Chack
Primary Standards Ower seesor HP 8461A Tower seesor HP 8461A Tower seesor HP 8481A Telefrence 20 d0 Anerosator Type-N mismatch combination Telefrence Proce ES300VI DAE4 Secondary Standards Figererator R&S SMT-C6	JD # GB37480704 US37292788 MY41092317 SN: 0008 (20K) SN: 5047.2 / 06327 SN: 3206 SN: 601	0#-Oc+13 (No. 217-01827) 0#-Oc+13 (No. 217-01827) 0#-Oc+13 (No. 217-01828) 03-Apr-14 (No. 217-01816) 03-Apr-14 (No. 217-01921) 30-Oc+13 (No. ES3-3206_Dec13) 18-Aug-14 (No. DAE4-601_Aug14)	Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Schotuled Chack In Pousa check: Oct-16
Primary Standards	JD # GB37480704 US37292783 MY41092317 SN: 5008 (20K) SN: 5047.27 (06327 SN: 3206 SN: 601 ID 8 100005 US37389685 S4206	0#-Oci-13 (No. 217-01827) 0#-Oci-13 (No. 217-01827) 0#-Oci-13 (No. 217-01828) 03-Apr-14 (No. 217-01918) 03-Apr-14 (No. 217-01918) 03-Oci-13 (No. ESS-2205, Dec13) 18-Aug-14 (No. DAE4-601, Aug14) Oreck Date (in house) 04-Aug-89 (in house check Oci-13) 18-Oci-11 (in house check Oci-13)	Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Scheduled Chack In nouse chack, Oct-14 Ill nouse chack, Oct-14
Primary Standards Cover male: EPM-442A Yower sensor HP 8481A Telemence 20 dtl Americator ype-N internation combination retirence Proce ESCOVI MAE4 Secondary Standards © generator R&S SMT-06 withwork Analyzer (42-8753)	ID # IB37480704 US37292783 MY41092317 SN: 5006 (Z0K) SN: 5047.2 / 08327 SN: 3206 SN: 601 ID # 100006	04-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01828) 03-Apr-14 (No. 217-01918) 03-Apr-14 (No. 217-01921) 30-Occ-13 (No. ES3-2206, Dec13) 18-Aug-14 (No. DAE4-601, Aug-14) Creck Date (in house) 04-Aug-86 (in house) Cct-13) 18-Oct-01 (in house) Cct-13)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15
Primary Standards Fower treller EPM-442A Power sensor HP 8461A Power sensor HP 8461A Reference 20 d0 Afternator (ype-N mismatch combination reference Proce ESSOV) DAE4 Secondary Standards RE generator R&S SMT-06 vetwork Analyzer HP 8753E	ID # IB37480704 US37292783 MY41092317 SN: 5008 (20K) SN: 5047.27 0B327 SN: 5001 ID # IB37390685 S4208 Name	0#-Oci-13 (No. 217-01827) 0#-Oci-13 (No. 217-01827) 0#-Oci-13 (No. 217-01828) 03-Apr-14 (No. 217-01918) 03-Apr-14 (No. 217-01918) 03-Oci-13 (No. ESS-2205, Dec13) 18-Aug-14 (No. DAE4-601, Aug14) Oreck Date (in house) 04-Aug-89 (in house check Oci-13) 18-Oci-11 (in house check Oci-13)	Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Scheduled Chack In rouse chack, Oct-14 Ill rouse chack, Oct-14
Primary Standards Power malier EPM-442A Power sensor HP 8461A Power sensor HP 8481A Reference 20 d0 Americator Type-N mismatch combination Guidanneps Proce ES30VI DAE4 Secondary Standards PF generator R&S SMT-06	ID # IB37480704 US37292783 MY41092317 SN: 5008 (20K) SN: 5047.27 0B327 SN: 5001 ID # IB37390685 S4208 Name	04-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01828) 03-Apr-14 (No. 217-01918) 03-Apr-14 (No. 217-01921) 30-Occ-13 (No. ES3-2206, Dec13) 18-Aug-14 (No. DAE4-601, Aug-14) Creck Date (in house) 04-Aug-86 (in house) Cct-13) 18-Oct-01 (in house) Cct-13)	Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Scheduled Chack In nouse chack, Oct-14 Ill nouse chack, Oct-14

Certificate No: D835V2-4d063_Aug14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 266 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeuchaustrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalliniertillenst
C Service aufsse dietalonnage
Service aufzere di beratine
S Swine Calibration Service

romtion No.: SCS 108

Accrecited by the Swins Appreciation Service (BAS)

The Swiss Accreditation Service is one of the signaturies to the EA Multilate of Agreement for the recognition of calibration cartificates

Glossary:

TSL tissue simulating liquid

ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- i) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices; Measurement Techniques", June 2013
- EC 62209-1. "Procedure to measure the Specific Absorption Rate (SAR) for hand held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)".
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL. The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole
 positioned under the liquid filled phantom. The impedance stated is transformed from the
 measurement at the SMA connector to the feed point. The Return Loss ensures low
 reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point.
 No uncertainty required.
- . SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: D835V2-4df6:L Augili

Page 2 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 267 of 319

Measurement Conditions

ASY system configuration, as far as not	given on page 1.	
DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

he following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.0 ± 6 %	0.94 mha/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ² (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.38 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.24 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.05 W/kg ± 16.5 % (k=2)

Body TSL parameters

and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.2 ± 6 %	1.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.41 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.35 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.59 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.21 W/kg ± 16.5 % (k=2)

Certificate No: D835V2-4d063_Aug14

Page 3 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 268 of 319

Appendix (Additional assessments outside the scope of SCS108)

Antenna Parameters with Head TSL

Impedance: transformed to fried point	51.7 \Omega - 3.6 \Omega	
Return Loss.	-28,2 dB	

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.1 LL - 5.8 j.)
Raturn Loss	-29.7 dB

General Antenna Parameters and Design

William Control	to before
Electrical Delay (one direction)	T-091-05

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard samingin coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-diculted for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standars.

No excessive large must be applied to the dipole arms, because they might bend on the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 27, 2006

Certificate No: D835V2-4:063 Aug 14

Face 4 of B

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 269 of 319

DASY5 Validation Report for Head TSL

Date: 28.08.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

Communication System: UID 0 - CW; Frequency: 835 MHz.

Medium parameters used: f = 835 MHz; $\sigma = 0.94$ S/m; $\varepsilon_r = 42$; $\rho = 1000$ kg/m³

Phantom section; Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63,19-2011)

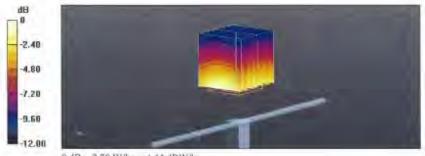
DASY52 Configuration:

- Probe: ES3DV3 SN3205: ConvF(6.22, 6.22, 6.22); Calibrated: 30.12,2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial; 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.23 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.53 W/kg

SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.55 W/kgMaximum value of SAR (measured) = 2.78 W/kg



0 dB = 2.78 W/kg = 4.44 dBW/kg

Certificate No: D835V2-4c083_Aug14

Page 5 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

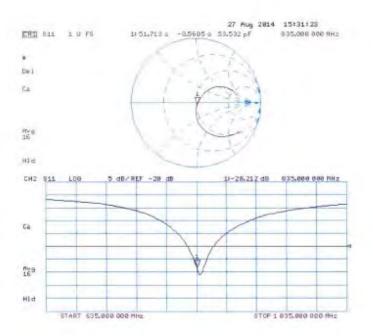
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 270 of 319

Impedance Measurement Plot for Head TSL



Certificate No: D835V2-4d063_Aug14

Page 6 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and www.s

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 271 of 319

DASY5 Validation Report for Body TSL

Date: 27.08.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

Communication System: UID 0 - CW; Frequency: 835 MHz

Medium parameters used: f = 835 MHz; $\sigma = 1.01 \text{ S/m}$; $\varepsilon_c = 55.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.09, 6.09, 6.09); Calibrated: 30.12.2013;
- Sensor-Surface; 3mm (Mechanical Surface Detection)
- Efectronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8,8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0;

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 54.65 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 3,53 W/kg

SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.59 W/kg Maximum value of SAR (measured) = 2.80 W/kg



0 dB = 2.80 W/kg = 4,47 dHW/kg

Certificate No: D835V2-4d063 Aug 14

Page 7 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

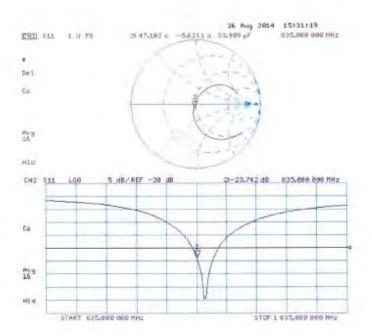
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 272 of 319

Impedance Measurement Plot for Body TSL



Certificate No: D835V2-4d063_Aug14

Page 8 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 273 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerlscher KalbrertSingt Service et isse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accrecited by the Swes Accrecitation Service (SAS).

The Swiss Accorditation Service is one of the signatures to the EA Multitatural Agreement for the recognition of calibration partificates

client SGS-TW (Auden)

Accreditation No.: SCS 108

Certificate No: D1750V2-1008_Aug14

	ERTIFICATE		
Object	D1750V2 - SN: 1	800	
Сайочник ргосновин(в)	DA CAL-05.v9 Calibration proces	dure for dipole validation kits abo	we 700 MHz
Galbration date	August 26, 2014		
		onal scandards, which resides the physical un rebublity are given on the folkwing pages an	
All calibrations have been conduc	ded in the dicead laborator	y acety: endromieric arripentora (62 ± 3)*(and inumetre = 70%
Calorision Equipment used (M&	E critical for calibration)		
Manager Property	(D.4	Cal Date (Certificate No.)	Scheduled Calibration
Printiary Startdards	169.75	California (Continuate 140.7	Screenist cardiates
	GB07486704	IN-Oct-13 (No. 217-01827)	Oct-14
Fower meter EPM-442A Power sensor HP 8481A	GB37480704 US37282763	88-Oct-13 (No. 217-01827) 08-Oct-13 (No. 217-01827)	Oct-14 Cict-14
Fower meter EPM-442A Power sensor HP 6481A Power sensor HP 6481A	GB37486704 US37292783 MY41092317	NI-Oct-13 (No. 217-01827) D9-Oct-13 (No. 217-01827) D9-Oct-13 (No. 217-01828)	Oct-14 Oct-18 Oct-14
Fower meter EPM-442A Power sensor HF 8481A Power sensor HP 8481A Reference 20 dB Attenuator	GB37486704 US37292783 MY41092317 SN: 5058 (204)	RH-Oct-13 (No. 217-01827) D9-Oct-13 (No. 217-01827) D9-Oct-13 (No. 217-01828) D3-Apr-14 (No. 217-01918)	Oct-14 Oct-14 Oct 14 Apr-15
Fower meter EPM-462A Power sansor HF 6481A Power sensor HP 6481A Reference 20 dB Attenuator Type-N manualch combination	GB37460704 US37282783 MY41092317 SN: 5058 (20x) SN: 5047 2 / 06327	RH-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01828) D3-Apr-14 (No. 217-01918) D3-Apr-14 (No. 217-01921)	Oct-14 Ces-1a Oct-14 Apr-15 Apr-15
Fower meter EPM-442A Power sensor HF 8481A Power sensor HF 9481A Reference 20 dB Attenuator Type-N manualch combination Reference Probe ESSOV3	GB07460704 US37292783 MY41092317 SN: 5058 (20x) SN: 5058 (20x) SN: 5047 2 / 06327 SN: 3205	Ri-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01828) DB-Apr-14 (No. 217-01918) DB-Apr-14 (No. 217-01921) DB-Occ-13 (No. ES3-3266_Dec13)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Oct-14
Fower meter EPM-442A Power sensor HF 8481A Power sensor HF 9481A Relevence 20 dB Attenuator Type-N manufact combination Reference Probe ESSOV3	GB37460704 US37282783 MY41092317 SN: 5058 (20x) SN: 5047 2 / 06327	RH-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01828) D3-Apr-14 (No. 217-01918) D3-Apr-14 (No. 217-01921)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15
Primary Standards Flower meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Reference 20 dtb Attenuator Type-N mamatch contrination Reference Probe ESSOV3 DAE4 Securitary Standards	GB07460704 US37292783 MY41092317 SN: 5058 (20x) SN: 5058 (20x) SN: 5047 2 / 06327 SN: 3205	Ri-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01828) DB-Apr-14 (No. 217-01918) DB-Apr-14 (No. 217-01921) DB-Occ-13 (No. ES3-3266_Dec13)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Oct-14
Fower meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Relesence 20 dB Attenuator Type-N mammatch combination Reference Probe ESSOV3 DAE4 Secundary Standards	GE07460704 US37292783 MY41092317 SN: 5059 (20%) SN: 5047 2/ 06327 SN: 3205 SN: 601	IBi-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01828) DB-Apr-14 (No. 217-01818) DB-Apr-14 (No. 217-01921) 30-Oce-13 (No. ES3-3206 DHc13) 18-Aug-14 (No. DAE4-63) _Aug14)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Disc-14 Aug-15
Fower meter EPM-442A Power sensor HF 8481A Power sensor HP 8481A Releance 20 dB Attenuato Type N manualch combination Reference Probe ESSOV3 DAE4	GB07460704 Us37292783 MY41092317 SN: D009 (200) SN: E047 2/ (06327 SN: 3205 SN: E01	Ri-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01828) D3-Apr-14 (No. 217-01918) D3-Apr-14 (No. 217-01921) 30-Occ-13 (No. ESS-3206, Dec13) 18-Aug-14 (No. DAE4-601_Aug14) Chace Date (In house)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dect-14 Aug-15 Schedyljed Check
Power meter EPM-042A Power sensor HF 8481A Type-N manusich combination Reference Probe ESSOV3 DAE4 Secundary Standards RF generator RAS SMT-06	GB07480704 Usarzsz783 MY41092317 SN: 0058 (20X) SN: 5047 2 / 06327 SN: 3205 SN: 601	Ri-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DG-Oct-13 (No. 217-01827) DG-Oct-13 (No. 217-01938) DG-Apr-14 (No. 217-01931) SG-Occ-13 (No. ES3-3266, Dec13) 18-Aug-14 (No. DAE4-631_Aug14) Check Eate (In house) D4-Aug-98 (in house check Oct-13)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Scheduled Check in heuse crieck: Oct-18
Power meter EPM-042A Power sensor HF 8481A Type-N manusich combination Reference Probe ESSOV3 DAE4 Secundary Standards RF generator RAS SMT-06	GB07460704 Us37292783 MY41092317 SN: D059 (200) SN: E047 2/ / 06327 SN: 3205 SN: E01	Ri-Oct-13 (No. 217-01827) D9-Oct-13 (No. 217-01827) D9-Oct-13 (No. 217-01827) D9-Oct-13 (No. 217-01928) D3-Apr-14 (No. 217-01918) D3-Apr-14 (No. 217-01921) 39-Occ-13 (No. ESS-S206, Dec13) 18-Aug-14 (No. DAE4-63) Aug-14 Check Date (In house) D4-Aug-99 (in house check Oct-13) 18-Oct-01 (in house check Oct-13)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Scheckled Check in house check: Oct-16 in house check: Oct-16
Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Releistance 20 dB Alternation Type-N manualch combination Reference Probe ESSOV3 DAE4 Secundary Standards RF generator RAS SMT-96 Melwork Analyzes HP 8753E	GB07460704 Usa7292783 MY41092317 SN: D059 (20x) SN: 5047-2/ (06327 SN: 3205 SN: 501 10.4 190605 US37390585 S4205 Name	Rii-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01827) DB-Oct-13 (No. 217-01918) DB-Apri-14 (No. 217-01918) DB-Apri-14 (No. 217-01918) DB-Apri-14 (No. 217-01921) SB-Oct-13 (No. E553-506, Dect 3) BB-Aug-14 (No. DAE4-601_Aug-14) Check Date (In house) D4-Aug-98 (in house check Oct-13) 18-Oct-01 (in house check Oct-13)	Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dec-14 Aug-15 Scheckled Check in house check: Oct-16 in house check: Oct-16

Certificase No: D1750V2-1008_Aug14

Page 1 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sgs.com



Page: 274 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zaugharautrase 43, 8004 Zurich, Bwitzerland





Schweizerischer Kalibrierdienut S Service suitare d'étalonnage C Security systems of faculture Swiss Calibration Service

Accreditation No.: SCS 108

Accordance by the Swins Accordination Steven (SAS)

The Sweet Accreditation Service is one of the signalistics to the EA. Multilateral Acreement to the recognition of calibration certificates

Glossary:

TSL

tissue simulating liquid

ConvF N/A

sensitivity in TSL / NORM x.y.z. not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)",
- KDB 865864, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook.

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end. of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized; SAR as measured, normalized to an input power of I W at the entenna
- SAR for nominal TSL parameters. The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Combosts No: 01750V2-1008_Aug14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 275 of 319

Measurement Conditions

DASY system configuration, as lar as not given on page 1.

DASY5	V52.6.8
Advanced Extrapolation	
Modular Flat Phantom	
10 mm	with Space
dx. dy, dz ~ 5 mm	
1750 MHz ± 1 MHz	
	Advanced Extrepolation Modular Plat Phantism 10 mm dx. dy, dz = 5 mm

Head TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	55.0 °C	40.1	1.37 mmp/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	392=5%	1.37 mho/m = 6.%
Head TSL temperature change during test	< 0.5 °C		-

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.26 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.9 W/kg = 17.0 % (k=2)

SAR averaged over 10 cm² (10 g) of Head TSL	nomonon	
SAR measured	250 mW input power	4,91 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.6 W/kg ± 16.5 % (k=2)

Body TSL parameters

	Tamperature	Permittivity	Conductivity
Nomical Body TSL parameters	22,0 °C	53,A	1.49 mhalm
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.0±8%	1.49 mbo/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ² (1 g) of Body TSL	Condition	
SAR measured	250 mW Input power	9.44 W/kg
SAR for nominal Body TSL parameters	nomelized to 1W	37.5 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ² (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.07 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.2 W/kg ± 16.5 % (k=2)

Certificate No: D1750V2-1068_Aug1/I

Page 3 of B

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 276 of 319

Appendix (Additional assessments outside the scope of SCS108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	$50.4 \Omega + 0.3 j\Omega$	
Return Loss	- 48.4 dB	

Antenna Parameters with Body TSL

Impedance, transformed to feed point	$46.4 \Omega + 0.3 j\Omega$	
Return Loss	- 28.5 dB	

General Antenna Parameters and Design

	100000000
Electrical Delay (one direction)	1.222 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	February 11, 2009

Certificate No: D1750V2-1008_Aug14 Page 4 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 277 of 319

DASY5 Validation Report for Head TSL

Date: 28.08.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1008

Communication System: UID 0 - CW; Frequency: 1750 MHz

Medium parameters used: f = 1750 MHz; $\sigma = 1.37 \text{ S/m}$; $\varepsilon_r = 39.2$; $p = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConyF(5.23, 5.23, 5.23); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 95.53 V/m; Power Drift = -0.01 dB-Peak SAR (extrapolated) = 16.7 W/kg

SAR(1 g) = 9.26 W/kg; SAR(10 g) = 4.91 W/kgMaximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg = 10.64 dBW/kg

Certificate No: D1750V2-1008_Aug14

Page 5 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

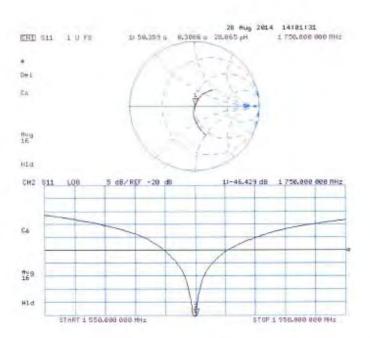
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 278 of 319

Impedance Measurement Plot for Head TSL



Certificate No: D1750V2-1008 Aug14 Page 6 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 279 of 319

DASY5 Validation Report for Body TSL

Date: 28.08.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1008

Communication System: UID 0 - CW; Frequency: 1750 MHz

Medium parameters used: f = 1750 MHz; $\sigma = 1.49 \text{ S/m}$; $\epsilon_r = 52$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

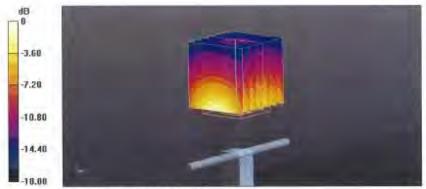
DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.89, 4.89, 4.89); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18:08:2014
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 93,44 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 16.3 W/kg

SAR(1 g) = 9,44 W/kg; SAR(10 g) = 5.07 W/kg Maximum value of SAR (measured) = 11.9 W/kg



0 dB = 11.9 W/kg = 10.76 dBW/kg

Certificate No: D1750V2-1008, Aug14

Page 7 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

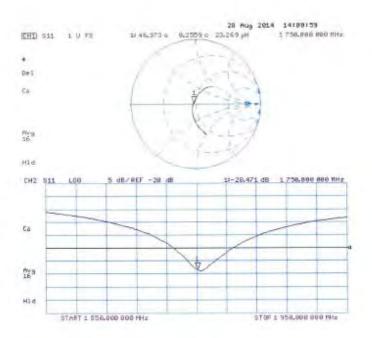
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 280 of 319

Impedance Measurement Plot for Body TSL



Certificate No: D1750V2-1008 Aug14

Page 8 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 281 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura S Swiss Calibration Service

Accredited by the Swas Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatures to the EA Multitateral Agreement for the recognition of calibration certificates

Client SGS-TW (Auden)

Accreditation No.: SCS 108

C

Certificate No. D1900V2-5d027 Apr14

Object	D1900V2 - SN: 5d027		
Carbyatter procedure(s)	QA CAL-05,v9 Calibration procedure for dipole validation kits above 700 MHz		
Cartrellor dale	April 23, 2014		
		or at standards, which realize the physical un robability are given on the following pages on	
All calibrations have been concur	ged in the closed facorator	ry facety: environment temperature (65° ± 3)/1	C and formally < 70%
		ry facility: environment temperature $05' \pm 10'$	and formally < 70%
arbitation Equipment used dAS			
arbrision Equipment used dAS rimary Standards	TE critical for calibration)	cy facety: environment temperature (05° a (§*) Gal Date (Certificate No.) O9-Cich 13 No. 217-01827)	Schedund Celoratori Oct-14
artimich Equipment usos dAS nmary Standards ower meter EPM-442A	FE ciffical for calibration)	Car Date (Certificate No.)	Scheduled Caloration
artimich Equipment usos dAS nmary Standards ower meter EPM-442A ower sensor HF 84B1A	FE critical for calibration) E3 4 GB37480704	Gar Date (Cermicate No.) 09-Cro13/No. 2(7-01527)	Scheduled Catorebon Oct-14
cartention Equipment used dAS remary Standards Power meter EPM-442A Power sensor HP 8481A Ower sensor HP 8481A Nover sensor HP 8481A Nover sensor HP 8481A Nover sensor HP 8481A	E ameau for calibration) ED 4 GB37480704 US37292783 WY41982317 SN. 5058 (20k)	Car Date (Cermicale No.) 09-Ctr.13 (No. 217-01827) 09-Ctr.13 (No. 217-01828) 03-Apr.14 (No. 217-01918)	Scheduled Celoration Oct-14 Oct-14 Oct-14 A0-15
Cardination Equipment used dNS Primary Standards Power meter EPM-442A Power sensor HF 8481 A Power sensor HF 8461 A Power sensor HF 8461 A Reference 20 dB Attenuation Type-N instructor combination	E emical for calibration) E0 4 GB37480704 US37292783 WY41092317 SN: 5066 (20k) SN: 5047,2 J 06327	Gir Date (Cermicate No.) 09-Cro.13 (No. 217-01827) 09-Cro.13 (No. 217-01827) 09-Cro.13 (No. 217-01828) 03-Apr.14 (No. 217-01918) 03-Apr.14 (No. 217-01921)	Scheduled Cetorelion Oct-14 Oct-14 Oct-14 Aor-15 Apr-15
Cardenson Equipment used dMS Primary Standards Power meter EPM-442A Power sensor HF 8481A Power sensor HF 8461A Power sensor HF 8461A Power can the sensor HF 8461A Power sensor HF 8461A Adversor 20 dB Attenuate Type-N mismatch combination Adversor Probe ESSOV3	E citical for calibration) (B37480704 US37292788 WY41092317 SN: 5058 (20N) SN: 5047.2 / 06327 SN: 3809	Cal Date (Certificate No.) 09-Crs-13 (No. 217-01827) 09-Crs-13 (No. 217-01827) 09-Crs-13 (No. 217-01828) 03-Apr-14 (No. 217-01828) 03-Apr-14 (No. 217-01821) 30-Crs-13 (No. E83-9209_Dec13)	Scheduled Catoristion Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Date-14
Carbration Equipment used dMS Primary Standards Power meter EPM-442A Power sensor HF 8481A Power sensor HF 8461A Power sensor HF 8461A Power can all the sensor HF 8461A Power sensor HF 8461A Power resemble to combination Type-N mismatch combination Powerence Probe ESSOV3	E emical for calibration) E0 4 GB37480704 US37292783 WY41092317 SN: 5066 (20k) SN: 5047,2 J 06327	Gir Date (Cermicate No.) 09-Cro.13 (No. 217-01827) 09-Cro.13 (No. 217-01827) 09-Cro.13 (No. 217-01828) 03-Apr.14 (No. 217-01918) 03-Apr.14 (No. 217-01921)	Scheduled Celoretroni Oct-14 Oct-14 Oct-14 Apr-15 Apr-15
Cardination Equipment used dNS Primary Standards Power meter EPIM-442A Power sensor HF 8481A Power sensor HF 8461A Power sensor HF 8461A Power sensor HF 8461A Power Sensor HF 8461A DAE4 Sacandary Standards	E emical for calibration) ID 4 GB37480704 US37292788 WY41932317 SN: 5066 (28N) SN: 5047.2 J 00327 SN: 3801	Osc Date (Certificate No.) OS-Cis-13/No. 2(7-01827) OS-Cis-13 (No. 217-01827) OS-Cis-13 (No. 217-01828) OS-Apr-14 (No. 217-01828) OS-Apr-14 (No. 217-01821) OS-Cis-13 (No. 217-01821) OS-Cis-13 (No. ES3-0205, Dec13) 25-Apr-13 (No. DAE4-601_Apr15) Crisck Date (in frouse)	Scheduled Cetorelion Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dis-14 Apr-14 Scheduled Check-
Cardination Equipment used dAS Primary Standards Power meter EPM-442A Power sensor HF 8481A DAE4 Secondary Standards HF generator HAS SMT-08	E critical for calibration) ED 4 GB37480704 US37292783 UY41092317 SN: 5068 (204) SN: 5047.2 / 00327 SN: 3208 SN: 801	Cal Date (Certificate No.) 09-Cos-13 (No. 217-01827) 09-Cos-13 (No. 217-01828) 03-Apr-14 (No. 217-01921) 30-Dac-13 (No. EB3-9205_Dac13) 25-Apr-13 (No. DAE4-001_Apr13)	Schedung Celoretron Oct-14 Oct-14 Oct-14 Oct-14 A0-15 Apr-15 Dec-14 Ao-14 Scheduled Check In house check: Oct-16
All calibrations have been conclusion. Cardention Equipment used dAS Frimary Standards. Flower meter EPM-442A. Power sensor HP 8481A. Power sensor HP 8481A. Reference 20 dD Attenuator Type-8 internets combination. Anderence Probe ESSOVA. DAE4. Sacondary Standards. HP generator HAS SMT-08. Natiwork Analyzer HP 8753E.	E emical for calibration) E e GB37480704 US37292783 WY41932317 SN: 5066 (20N) SN: 5047.2 J 00327 SN: 200 EN: 801 ED V 100006 US37390685 54208	Cist Date (Certificate No.) 09-Cist 13/No. 217-01827) 09-Cist 13/No. 217-01827) 09-Cist 13/No. 217-01827) 09-Cist 13/No. 217-01828) 03-April 4 (No. 217-01928) 03-April 4 (No. 217-01921) 30-Cist 13/No. DAE-1-001_April 3/No. DAE-1-001_Ap	Scheduled Cetorelion Oct-14 Oct-14 Oct-14 Aor-15 Aor-15 Dar-14 Aor-14 Scheduled Check In house check Oct-14 In house check Oct-14
Cardination Equipment used dNS Primary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A Power sensor HP 8481A Power can all the sensor HP 8481A Power sensor HP 8481A Power Probe ESSOVA DAE4 Secondary Standards HP generator HSS SMT-08 Nationals Analyzer HP 8753E	E citical for calibration) ID 4 GB37480704 US37292788 WY41992317 SN: 5068 (20N) SN: 5047.2 J 00327 SN: 3298 SN: 601 ID 9 100006 US37390585 54208	Cal Date (Certificate No.) OS-Cis-13 (No. 217-01827) OS-Cis-13 (No. 217-01827) OS-Cis-13 (No. 217-01828) OS-Apr-14 (No. 217-01918) OS-Apr-14 (No. 217-01918) OS-Apr-13 (No. E83-9205, Dec13) 25-Apr-13 (No. DAE4-001_Apr13) Check Date (in house) O4-Aug-39 (in house check Oct-13) 18-Cis-11 (in house check Oct-13)	Schedung Celoration Oct-14 Oct-14 Oct-14 Oct-14 A0-15 Apr-15 Disc-14 Ao-14 Scheduled Check In house check Oct-16
Cardination Equipment used dAS Primary Standards Power meter EPM-442A Power sensor HP 8481 A Type-N mismitch combination Type-N mismitch combination Addressed Probe ESSOV3 DAE4 Secondary Standards HP generator H&S SMT-08	E emical for calibration) E e GB37480704 US37292783 WY41932317 SN: 5066 (20N) SN: 5047.2 J 00327 SN: 200 EN: 801 ED V 100006 US37390685 54208	Cist Date (Certificate No.) 09-Cist 13/No. 217-01827) 09-Cist 13/No. 217-01827) 09-Cist 13/No. 217-01827) 09-Cist 13/No. 217-01828) 03-April 4 (No. 217-01928) 03-April 4 (No. 217-01921) 30-Cist 13/No. DAE-1-001_April 3/No. DAE-1-001_Ap	Scheduled Celoration Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Dat-14 Apr-14 Scheduled Check In house check Oct-14 In house check Oct-14

Certificate No: D1900V2-5d027_Apr14

Page 1 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 282 of 319

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizie suizzero di taratura

S Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- EC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end
 of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed
 point exactly below the center marking of the flat phantom section, with the arms oriented
 parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole
 positioned under the liquid filled phantom. The impedance stated is transformed from the
 measurement at the SMA connector to the feed point. The Return Loss ensures low
 reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point.
 No uncertainty required.
- · SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: D1900V2-5d027_Apr14

Page 2 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 283 of 319

Measurement Conditions

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.1 ± 6 %	1.36 mha/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	****	

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.71 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	39.3 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.10 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	20.6 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.4 ± 6 %	1.52 mha/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.87 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	39.3 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.22 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.8 W/kg ± 16.5 % (k=2)

Certificate No: D1900V2-5d027 Apr14

Page 3 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 284 of 319

Appendix

Antenna Parameters with Head TSL

Impedance, transformed	to feed point	52.5 Ω + 6.8 jΩ
Return Loss		- 23.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.3 Ω + 2.8 jΩ
Return Loss	- 26.4 dB

General Antenna Parameters and Design

Electrical	Delay (one direction)	1.199 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-dirouted for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 17, 2002

Certificate No: D1900V2-5d027_Apr14

Page 4 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 285 of 319

DASY5 Validation Report for Head TSL

Date: 23.04.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d027

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.36 \text{ S/m}$; $\epsilon_r = 39.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(5.06, 5.06, 5.06); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 25,04,2013
- Phantom: Flat Phantom 5.0 (front); Type; QD000P50AA; Serial: 1001
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 97.825 V/m; Power Drift = 0.06 dB Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.71 W/kg; SAR(10 g) = 5.1 W/kgMaximum value of SAR (measured) = 12.3 W/kg



0 dB = 12.3 W/kg = 10.90 dBW/kg

Certificate No. D1900V2-5d027_Apr14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

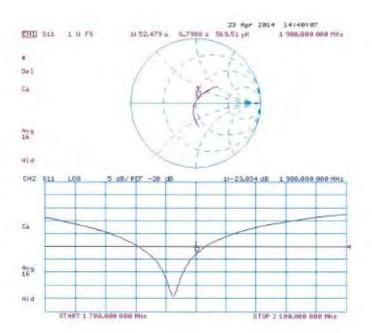
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 286 of 319

Impedance Measurement Plot for Head TSL



Certificate No: D1900V2-5d027_Apr14

Page 6 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 287 of 319

DASY5 Validation Report for Body TSL

Date: 22.04.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT; Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d027

Communication System: LIID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.52$ S/m; $\epsilon_c = 52.4$; $\rho = 1000$ kg/m²

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

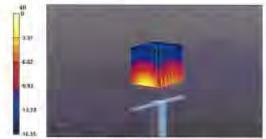
DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.76, 4.76, 4.76); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 25,04,2013
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm 2/Zoom Scan (7x7x7)/Cube 0;

Measurement grid; dx=5mm, dy=5mm, dz=5mm Reference Value = 94.526 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.87 W/kg; SAR(10 g) = 5.22 W/kg. Maximum value of SAR (measured) = 12.5 W/kg



0 dB = 12.5 W/kg = 10.97 dBW/kg.

Certificate No: D1900V2-5d027_Apr14

Page 7 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

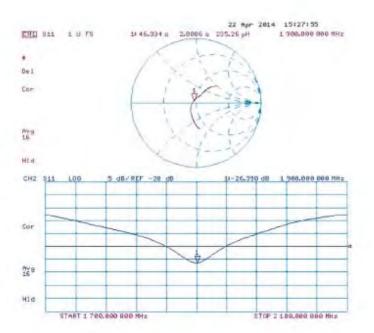
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 288 of 319

Impedance Measurement Plot for Body TSL



Certificate No: D1900V2-5d027_Apr14

Page 8 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 289 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kallbrierdienst Service suisse d'étalonnage Servizio avizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accorditation Sarvice (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client SGS-TW (Auden)

Accreditation No.: SCS 108

Continue No. D2450V2-727 Apr.14

Dijerd	D2450V2 - SN: 7	27	
Calibration procedurals)	QA CAL-05.v9 Calibration proce	dure for dipole validation kits abo	ove 700 MHz
Calexanon date:	April 23, 2014		
		onal sundents, which realize the chyescal un robability are given on the following pages an	
All calibrations have been condu	oted in the closed laborator	y facility coversement temperature (32 ± 3)*(C and rumidity < 70%
		ry fundity coversament temperature (22 ± 3)*0	C and runniday < 70%
Calibration Equipment used (MS	TE critical for dalibrations		
Tambiation Equipment used (MS)	TE chical for castralions	Cel Dale (Centricate No.)	Scheduled Cashration
Calibration Equipment used 645 Primary Standards Power marks EPM-442A	FE chical for calibration) IO 4 GB37480704	Cel Date (Centilicate No.). 09-0e-13 (No. 217-21627)	Scheduled Cashration
Calibration Equipment used (MA formary Standards Cower Tracer EPM-442A Swer sensor HP 6481A	ID 4 UB37490704 US37292783	Cel Date (Centilicate No.) 09-0c-13 (No. 217-01827) 09-0c-13 (No. 217-01827)	Scheduled Cashration Dot-14 Dot-14
Calibration Equipment used 6/45 formary Standards formar maner EPM-442A formar sensor HP 8/481A formar sensor HP 8/481A	TE chics/ for calibration ID 4 IBS7490704 USS7292783 MV41082317	Cal Date (Certificate No.) 09-0c-13 (No. 217-01827) 09-0c-13 (No. 217-01827) 09-0c-13 (No. 217-01828)	Scheduled Cashration Oct-14 Oct-14 Oct-14
Calibration Equipment used 6/45 Comary Standards Cowar mater EPM-442A Cowar sensor HP 6/481A Cowar sensor HP 6/481A televence 20 dB Attenuator	TE chies/for calibration) #0 # GB37480704 US37292783 MY41093517 SPC 8068 (20k)	Cal Date (Certificate No.). 09-0c-13 (No. 217-21827) 09-0c-13 (No. 217-01827) 09-0c-13 (No. 217-01828) 03-Apr 14 (No. 217-01818)	Scheduled Cashettion Onl-14 Oct-14 Opt-14 Aps-15
Calibration Equipment used 0/MS Primary Standards Power renew EPM-442A Power sensor HP 6481A Helsence 20 dB Attenuator ypa-N mannach comzination	TE chics/ for calibration ID 4 IBS7490704 USS7292783 MV41082317	Cel Date (Centilicate No.) 09-0x-13 (No. 217-01827) 09-0x-13 (No. 217-01827) 09-0x-13 (No. 217-01826) 03-0x-14 (No. 217-01918) 03-0x-14 (No. 217-01921)	Scheduled Contration Oct-14 Oct-14 Oct-14 Ap-15 Ap-15
Calibration Equipment used 6/45 Commany Standards	TE chical for calibration) 80 4 61837490704 US37292783 MYA1092317 SRL 506E (20k) SRL 5047.2 / 08327	Cal Date (Certificate No.). 09-0c-13 (No. 217-21827) 09-0c-13 (No. 217-01827) 09-0c-13 (No. 217-01828) 03-Apr 14 (No. 217-01818)	Scheduled Cashettion Onl-14 Dot-14 Dot-14 Aps-15
Calibration Equipment used 6MS Permary Standards Power meser EPM-442A Power sensor HP 8481A Power sensor HP 8481A reference 20 dB Attenuator type-N mismach combination Twierence Probe ESSEV3 JAE4	TE chics/for casumitors 10 4 0837490704 0837292783 MV41093317 SPC 5068 (20k) SPC 5047 2 / 06327 SPC 3206	Cal Date (Centilicate No.) 09-Oc-13 (No. 217-01827) 09-Oc-13 (No. 217-01827) 09-Oc-13 (No. 217-01827) 09-Oc-13 (No. 217-01828) 03-Apr-14 (No. 217-01921) 30-Doc-13 (No. ES3-3203_Doc-13)	Scheideld Costration Oct-14 Oct-14 Oct-14 Apr-15 Apr-15 Doc-14
Pamary Standards Pomary Standards Power sensor HP 6481A Power sensor HP 8481A Helsence 20 dB Attenuator typo-N mismach comzination Tellounce Probe ESSEV3 JAE4. Secondary Standards	TE chical for calumnors 10 4 GR37490704 US37292783 MY41090317 SN: 5068 (204) SN: 5047.2 / 08327 SN: 3205 SR: 671	Cal Date (Centicate No.) 09-0c-13 (No. 217-01827) 09-0c-13 (No. 217-01827) 09-0c-13 (No. 217-01828) 03-Apr.14 (No. 217-01921) 30-Dec-13 (No. ES3-3205, Dec13) 25-Apr.15 (No. DAE4-861, Apr.13)	Scheduled Costration Dot-14 Dot-14 Dot-14 Ap-15 Ap-15 Doc-14 Ap-14 Scheduled Check
Partition Equipment used 646 Permary Standards Power Inser EPM-442A Power sensor HP 6481A Power HP 6481A Pow	FE chical for calibration) #0 4 GB37490704 US37292783 MY41082317 SN: 5061 (20k) SN: 5047 2 / 08387 SN: 5205 ER: 691	Cel Date (Centificate No.) 09-Dic-13 (No. 217-01827) 09-Dic-13 (No. 217-01827) 09-Dic-13 (No. 217-01826) 03-Apr-14 (No. 217-01918) 03-Apr-14 (No. 217-01921) 30-Dic-13 (No. ES3-3205, Die-13) 25-Apr-13 (No. DAE4-95)	Scheduled Costration Oct-14 Oct-14 Oct-14 Apr-15 Dec-14 Apr-15 Dec-14 Apr-14
	TE chical for calibrations 10 4 GB37490704 US37292783 MY41092317 SN: 506E (20K) SN: 5047.2 / 08327 SN: 3205 ER: 691 10 V 100405 US37390585 \$4206	Cel Date (Centificate No.) 09-Dis-13 (No. 217-01827) 09-Dis-13 (No. 217-01827) 09-Ois-13 (No. 217-01827) 09-Ois-13 (No. 217-01826) 03-Apr-14 (No. 217-01921) 30-Dis-13 (No. ES3-3205, Dise13) 25-Apr-13 (No. ES3-3205, Dise13) Check Date (in flouse) DI-Aug-#6 (in flouse) DI-Aug-#6 (in house check Dis-13) 18-Ois-01 (in house check Dis-13)	Scheduled Contration Oct-14 DCt-14 Ap-15 Ap-15 Dec-14 Ap-14 Scheduled Check In house check Oct-14
Calibration Equipment used 6MS Permary Standards Cowar meter EPM-442A Yower sensor HP 8481 A televence 20 db Attenuator type-N mismach comzination televence Probe ESSEV3 3AE4. Secondary Standards IF generator P&S SMT-06 latwork Analyzer HP 8753E	FE chies/for casomilion) 80 4 6837490704 0837292783 MY41092317 SN: 5068 (20k) SN: 5047 2 / 08327 SN: 3205 ER: 671 10 V 100005 US37390585 54206 Name-	Cel Date (Centilicate No.) 09-Oc-13 (No. 217-01827) 09-Oc-13 (No. 217-01827) 09-Oc-13 (No. 217-01828) 03-Apr 14 (No. 217-01928) 03-Apr 14 (No. 217-01921) 30-Dec-13 (No. ES3-3205, Dec13) 25-Apr 15 (No. DAE4-801, Apr 13) Check Date (in flouse) D4-Aug-25 (in house check Oct-13) 18-Oct-01 (in house check Oct-13)	Scheduled Costration Oct-14 Oct-14 Oct-14 Apr-15 Dec-14 Apr-15 Dec-14 Apr-14
Partition Equipment used 646 Permary Standards Power Inser EPM-442A Power sensor HP 6481A Power HP 6481A Pow	TE chical for calibrations 10 4 GB37490704 US37292783 MY41092317 SN: 506E (20K) SN: 5047.2 / 08327 SN: 3205 ER: 691 10 V 100405 US37390585 \$4206	Cel Date (Centificate No.) 09-Dis-13 (No. 217-01827) 09-Dis-13 (No. 217-01827) 09-Ois-13 (No. 217-01827) 09-Ois-13 (No. 217-01826) 03-Apr-14 (No. 217-01921) 30-Dis-13 (No. ES3-3205, Dise13) 25-Apr-13 (No. ES3-3205, Dise13) Check Date (in flouse) DI-Aug-#6 (in flouse) DI-Aug-#6 (in house check Dis-13) 18-Ois-01 (in house check Dis-13)	Scheduled Contration Oct-14 DCt-14 Ap-15 Ap-15 Dec-14 Ap-14 Scheduled Check In house check Oct-14

Certificate No: D2450V2-727_Apr14

Page 1 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 290 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage

С Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL ConvE N/A

tissue simulating liquid sensitivity in TSL / NORM x,y,z

not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)*, February 2005
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: D2450V2-727_Apr14

Page 2 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 291 of 319

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.2 ± 6 %	1.81 mho/m ±6%
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.1 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.0 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ² (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.09 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.2 W/kg ± 16.5 % (k=2)

Body TSL parameters

ing parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.6 ± 6 %	2.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.8 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.0 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.90 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.3 W/kg ± 16.5 % (k=2)

Certificate No: D2450V2-727_Apr14

Page 3 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 292 of 319

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.6 Ω + 1.9 jΩ
Return Loss	- 26.5 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	51.1 Ω + 3.5 <u>j</u> Ω
Fleturn Loss	- 28.7 dB

General Antenna Parameters and Design

1	Electrical Delay (one direction)	1.148 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	January 09, 2003

Certificate No: D2450V2-727_Apr14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Page 4 of 8

SGS Taiwan Ltd.



Page: 293 of 319

DASY5 Validation Report for Head TSL

Date: 23.04.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 727

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 1.81$ S/m; $\varepsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

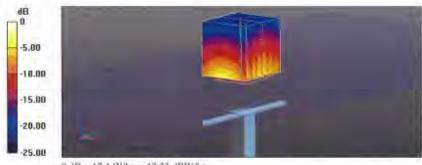
- Probe: ES3DV3 SN3205; ConvF(4.53, 4.53, 4.53); Calibrated: 30.12.2013;
- · Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 25.04,2013
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.7(1137); SEMCAD X 14,6.10(7164)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid; dx=5mm, dy=5mm, dz=5mm Reference Value = 100.01 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 27.0 W/kg

SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.09 W/kgMaximum value of SAR (measured) = 17.1 W/kg



0 dB = 17.1 W/kg = 12.33 dBW/kg

Certificate No: D2450V2-727_Apr14

Page 5 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

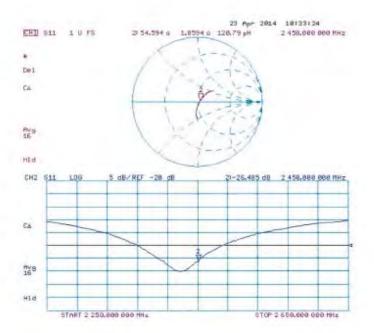
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 294 of 319

Impedance Measurement Plot for Head TSL



Certificate No: D2450V2-727_Apr14 Page 6 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 295 of 319

DASY5 Validation Report for Body TSL

Date: 23.04,2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 727

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 2.01 \text{ S/m}$; $\varepsilon_c = 50.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section; Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

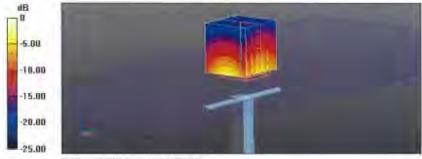
DASY52 Configuration:

- Probe: ES3DV3 SN3205: ConvF(4.35, 4.35, 4.35); Calibrated: 30.12,2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 25.04.2013
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 94.356 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 26.9 W/kg

SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.9 W/kgMaximum value of SAR (measured) = 16.7 W/kg



0 dB = 16.7 W/kg = 12.23 dBW/kg

Centicaté No: D2450V2-727_Apr14

Page 7 d B

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

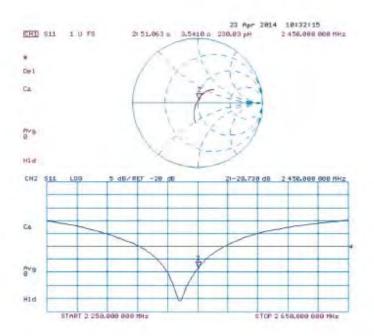
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 296 of 319

Impedance Measurement Plot for Body TSL



Certificate No: D2450V2-727_Apr14

Page 8 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 297 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zirrich, Switzerland





S Sonweizerlacher Kalihrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

SGS-TW (Auden)

Accreditation No.: SCS 108

C

Certificate No: D2600V2-1005_Jan14

Depot	D2600V2 - SN: 10	005	
Calibration procedure(s)	QA CAL-05.v9 Calibration proces	dure for dipole validation kits abo	ive 700 MHz
Calibration dine:	January 26, 2014		
he measurements and the unce	artainties with confidence pr	robability are given on the following pages an	d are part of the conflication
		y faculty: finalionement temperature (22 a 3)/1	C and humidity + 70%
alinsion Equipment used (MA	TE ontical for palibration)		
All calibrations have been condu- Calibration Equipment used (MA Primary (Senderds Primary alon EPM-442A Primary sensor (PP A401A Primary sensor (PP A401A Peterence 20 off Apenian Type-N instructor contribution Reference Pribe ESSEV3 DAE-4		y facility: Illinoronnium l'imperature (22 a 3)/1 Gai Daile (CertBoata No.) BS-Oct-13 (No. 217-01627) BS-Oct-13 (No. 217-01627) BS-Oct-13 (No. 217-01628) 64-Apr-13 (No. 217-01736) 64-Apr-13 (No. 217-01736) 30-Dec-13 (No. 217-01730) 30-Dec-13 (No. 217-01730) 30-Dec-13 (No. DAC4-001_Apr13)	Scheduled Calibration Oct-14 Oct-14 Oct-14 Apr-14 Apr-14 Apr-14 Apr-14
Interestion Equipment used (Mill Primary Southerts Primary Southerts Primary Southerts Primary Southert Primary Primary Southerts Primary	TE critical for patibilition) (D.# (B837480794 US37292783 MY41002517 SN: 5058 (20s) SN: 5047.3 / 06327 SN: 7878	Cai Daie (CertBoata No.) DB-Cct-13 (No. 217-01827) DB-Cct-13 (No. 217-01827) DB-Cct-13 (No. 217-01828) C4-Apr-13 (No. 217-01736) O4-Apr-13 (No. 217-01739) 30-Dec-13 (No. 217-01739)	Scheduer Calbration Oct-14 Oct-14 Oct-14 Apr-14 Apr-14 Doc-14
Cultivation Equipment used (MA Primary Sandards Power wine EPM-442A Power sensor IVP 8481A Power sensor IVP 8481A Power sensor IVP 8481A Power Sensor IVP 8481A Type-N prismatch contribution Reference 20 off Apenuation Type-N prismatch contribution Reference Probe ESSCV3	TE critical for patibilition) ID # GB07480704 US37292783 MY41082517 BN 5068 (20n) SN 5047.37(0602) SN 3250 SN 8011	Cai Daie (Ceribcata No.) 09-Oct-13 (No. 217-01827) 09-Oct-13 (No. 217-01828) 04-Apr-13 (No. 217-01828) 04-Apr-13 (No. 217-01736) 04-Dec-13 (No. 177-01739) 00-Dec-13 (No. FS3-3205, Daic13) 25-Apr-13 (No. DAE4-601, Apr13)	Scheduled Calibration Clef-14 Clef-14 Oct-14 Apr-14 Apr-14 Doc-14 Apr-14
Cultivation Equipment used (MA Primary Standards Primary solid EPM-442A Primary solid PA 4451A Primary solid promisers Type-N instructor contribution Peterence 20 del Apenuary Type-N instructor contribution Peterence Prima ESSEV3 CAE4	TE critical for patibilition) (D.# GB07480704 US37292783 MY41062517 SN: 5069 (20%) SN: 5047.37 (96027) SN: 7875 SN: 801	Cai Date (CertBoata No.) DB-Cct-13 (No. 217-01627) DB-Cct-13 (No. 217-01627) DB-Cct-13 (No. 217-01628) C4-Apr-13 (No. 217-01628) C4-Apr-13 (No. 217-01736) DA-Dec-13 (No. 217-01730) DB-Cct-13 (No. 217-01730) DB-Cct-13 (No. DAE4-601 Apr-13) Check Date on house) O4-Aug-99 (In house obsol Oct-13)	Scheduler Calibration Oct-14 Oct-14 Oct-14 Apr-14 Apr-14 Dec-14 Apr-14 Scheduler Check In nouse check: Oct-16

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 www.tw.sgs.com

Certificate No: D2600V2-1005_Jan14



Page: 298 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage С Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL ConvF

N/A

tissue simulating liquid

sensitivity in TSL / NORM x,y,z not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)",
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%

Certificate No: D2600V2-1005 Jan14

Page 2 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 299 of 319

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V62.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2600 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

The following parameters and calculations were appropriate	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.0	1.96 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.2 ± 6 %	2.02 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	14.7 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	57.7 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.57 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	26.0 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.5	2.16 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.9 ± 6 %	2.21 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	14.3 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	56.2 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.33 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	25.1 W/kg ± 16.5 % (k=2)

Certificate No: D2600V2-1005_Jan14

Page 3 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sgs.com



Page: 300 of 319

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.1 Ω - 3.2 jΩ
Return Loss	- 30.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.5 Ω - 2.6 jΩ
Return Loss	- 26.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.155 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 23, 2006

Certificate No: D2600V2-1005_Jan14

Page 4 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 301 of 319

DASY5 Validation Report for Head TSL

Date: 28.01,2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN: 1005

Communication System; UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; $\sigma = 2.02 \text{ S/m}$; $\epsilon_c = 38.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

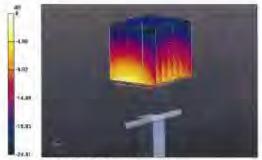
Measurement Standard; DASY5 (IEEE/IEC/ANSI C63:19-2007)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.46, 4.46, 4.46); Calibrated: 30.12.2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 25.04.2013
- Phantom: Flat Phantom 5,0 (front); Type: QD000P50AA; Serial: [00]
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 98.590 V/m; Power Drift = 0.08 dE Peak SAR (extrapolated) = 31.3 W/kg. SAR(1 g) = 14.7 W/kg; SAR(10 g) = 6.57 W/kg Maximum value of SAR (measured) = 19.3 W/kg



0 0B = 19,3 W/kg = 12,86 dBW/kg

Centicate No: D2600V2-1005_lan14

Page 5 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

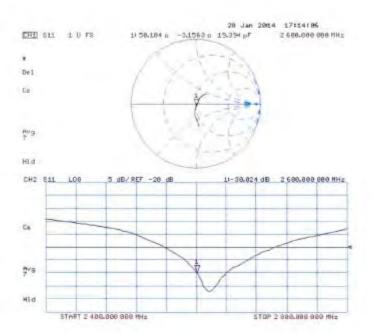
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 302 of 319

Impedance Measurement Plot for Head TSL



Certificate No: D2600V2-1005_Jan14

Page 6 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 303 of 319

DASY5 Validation Report for Body TSL

Date: 28.01.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN: 1005

Communication System: UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; $\alpha = 2.21 \text{ S/m}$; $\epsilon_r = 50.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

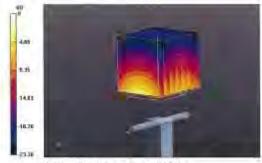
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.24, 4.24, 4.24); Calibrated: 30.12.2013
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Su601; Calibrated: 25.04.2013
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 96,624 V/m; Power Drift = -0.00 dB Peak SAR (extrapolated) = 30.8 W/kg SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.33 W/kgMaximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg = 12.86 dBW/kg

Certificate No: D2600V2-1085_Jan1ii

Page 7 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

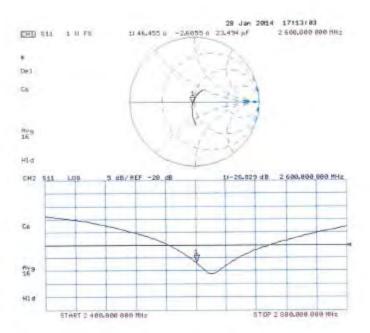
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 304 of 319

Impedance Measurement Plot for Body TSL



Certificate No: D2600V2-1005 Jan14

Page 8 of 8

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 305 of 319

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienat Service suisse d'étalonnage Servizio svizzero di taratura S Swiss Calibration Service

Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of salibration certificates

Client SGS-TW (Auden)

Accreditation No.: SCS 108

Confilence No: D5GHzV2-1104 Apr14

Opera	D5GHzV2 - SN:	1104	
Calibration processure(s)	OA CAL-22.v2 Calibration proce	dure for dipole validation kits be	tween 3-8 GHz
Caltration date:	April 16, 2014		
		ional standants, which resize the physics or robability are given on the following pages a	
All calibrations have been cond	uped in the plotted laborator	ry tability environment temperature (22 ± 3)*	G and namency < 70%
Castrolion Equipment used (M	ATE artical for canonings)		
Primary Shortants	104	Cali Date (Certificate No.)	Scheduled Calibration
Power malar EPM-442A	GB37486704	09-Ocs-13 (No. 217-01827)	Oct-14
POWER BEISON HIF 8481A	US37292783	09-Oct-13 (No. 217-01627)	Cici-14
Prover sensor HP 8481A	MY41092317	09-Odi-13 (No. 217-01828)	Ox1-14
Reference 20 dB Attenuaror	SN 5050 (20k)	03-Apr-14 (No. 217-01918)	Apr-11
Type-N mismatch combination	SN 5047.2 / 06327	03-Apr-14 (No. 217-01921)	Apr.15
Raterance Probe EX3DV4 DAE4	5N: 3503 SN: 601	30-Dec-13 (No. EX3-3500, Dec13) 25-Apr-13 (No. DAE4-601_Apr13)	Dec-14 April 4
Committee Official	- Control		0.00
Securitary Stantanta His generator HISS SM I I DB	100005	Check Data (in hopse) 04-Aug-39 (in frozie check Od-13)	Scheduled Check
Network Ansayzer HP 0753E	US37390585 S4205	18-Qci-01 (in house check Oct-13)	In house check: Oct-16 In house check: Oct-14
	None	Function	Signature
Dalibrated by	Jeinn Kastmi)	Laboratory Technician	+15
Approved by:	Kalja Pokovic	Technical Menager	All My
			Issued: April 17, 2011

Certificate No: D5GHzV2-1104_Apr14

Page 1 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 306 of 319

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdiens
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Muttilateral Agreement for the recognition of calibration certificates

Glossary:

TSL tissue simulating liquid
ConvF sensitivity in TSL / NORM x,y,z
N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC 62209-2, "Evaluation of Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices in the Frequency Range of 30 MHz to 6 GHz: Human models, Instrumentation, and Procedures"; Part 2: "Procedure to determine the Specific Absorption Rate (SAR) for including accessories and multiple transmitters", March 2010
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"
- c) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end
 of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed
 point exactly below the center marking of the flat phantom section, with the arms oriented
 parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole
 positioned under the liquid filled phantom. The impedance stated is transformed from the
 measurement at the SMA connector to the feed point. The Return Loss ensures low
 reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point.
 No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: D5GHzV2-1104_Apr14

Page 2 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 307 of 319

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5200 MHz ± 1 MHz 5300 MHz ± 1 MHz 5600 MHz ± 1 MHz 5800 MHz ± 1 MHz	

Head TSL parameters at 5200 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	36.0	4.66 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.8 ± 6 %	4.43 mha/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5200 MHz

SAR averaged over 1 cm ² (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.0 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ² (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.29 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.8 W/kg ± 19.5 % (k=2)

Certificate No: D5GHzV2-1104_Apr14 Page 3 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 308 of 319

Head TSL parameters at 5300 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.76 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.7 ± 6 %	4.54 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5300 MHz

SAR averaged over 1 cm3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.45 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	84.3 W / kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.0 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) *C	35.3 ± 6 %	4.83 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.31 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	82.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm3 (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.5 W/kg ± 19.5 % (k=2)

Certificate No: D5GHzV2-1104_Apr14

Page 4 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_and/conditions for Electronic Documents at www.sgs.com/terms_and/conditions for Electronic Documents at www.sgs.com/terms_and/conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined.

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 309 of 319

Head TSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.3	5.27 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.0 ± 6 %	5.03 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5800 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.95 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.2 W/kg ± 19.9 % (k=2)

	SAR averaged over 10 cm3 (10 g) of Head TSL	condition	
į	SAR measured	100 mW input power	2.26 W/kg
į	SAR for nominal Head TSL parameters	normalized to 1W	22.5 W/kg ± 19.5 % (k=2)

Certificate No: D5GHzV2-1104_Apr14

Page 5 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 310 of 319

Body TSL parameters at 5200 MHz

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49.0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.0 ± 6 %	5.44 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5200 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.69 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	76.3 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.15 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.3 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5300 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.42 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.8 ± 6 %	5.57 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5300 MHz

SAR averaged over 1 cm3 (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.84 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	77.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.19 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.7 W/kg ± 19.5 % (k=2)

Certificate No: D5GHzV2-1104_Apr14

Page 6 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 311 of 319

Body TSL parameters at 5600 MHz

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.3 ± 6 %	5.96 mha/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	8.21 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	81.4 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.28 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.6 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5800 MHz

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6.00 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.0 ± 6 %	6.23 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5800 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.73 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	76.7 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm3 (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.13 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.1 W/kg ± 19.5 % (k=2)

Certificate No: D5GHzV2-1104_Apr14

Page 7 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 312 of 319

Appendix

Antenna Parameters with Head TSL at 5200 MHz

Impedance, transformed to feed point	48.2 Ω - 4.8 jΩ
Return Loss	- 25.6 dB

Antenna Parameters with Head TSL at 5300 MHz

Impedance, transformed to feed point	48.5 Ω - 7.6 jΩ
Return Loss	- 22.2 dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	53.9 Ω + 0.5 jΩ
Return Loss	- 28.5 dB

Antenna Parameters with Head TSL at 5800 MHz

Impedance, transformed to feed point	58.3 Ω - 4.4 Ω
Return Loss	- 21.2 dB

Antenna Parameters with Body TSL at 5200 MHz

Impedance, transformed to feed point	52.6 Ω - 9.2 μΩ
Return Loss	- 20.6 dB

Antenna Parameters with Body TSL at 5300 MHz

Impedance, transformed to feed point	53.3 Ω - 1.8 jΩ
Return Loss	- 28.7 dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	58.7 Ω - 5.2 jΩ
Return Loss	- 20.6 dB

Antenna Parameters with Body TSL at 5800 MHz

Impedance, transformed to feed point	57.0 Ω + 2.2 jΩ
Return Loss	- 23.3 dB

Certificate No: D5GHzV2-1104_Apr14

Page 8 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 313 of 319

General Antenna Parameters and Design

Electrical Delay (one direction)	1.207 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	September 24, 2010

Certificate No: D5GHzV2-1104_Apr14

Page 9 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format

documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 314 of 319

DASY5 Validation Report for Head TSL

Date: 16.04.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1104

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5600

MHz, Frequency: 5800 MHz

Medium parameters used: f = 5200 MHz; $\sigma = 4.43 \text{ S/m}$; $\epsilon_r = 35.8$; $\rho = 1000 \text{ kg/m}^3$, Medium parameters used: f = 5300 MHz; $\sigma = 4.54$ S/m; $\epsilon_r = 35.7$; $\rho = 1000$ kg/m 3 , Medium parameters used: f = 5600 MHz; $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 , Medium parameters used: $\sigma = 1000$ kg/m 3 kg/m 4.83 S/m; ϵ_r = 35.3; ρ = 1000 kg/m³, Medium parameters used: f = 5800 MHz; σ = 5.03 S/m; ϵ_r = 35; ρ = 1000 kg/m3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.52, 5.52, 5.52); Calibrated: 30.12.2013, ConvF(5.2, 5.2, 5.2); Calibrated: 30.12.2013, ConvF(4.86, 4.86, 4.86); Calibrated: 30.12.2013, ConvF(4.91, 4.91, 4.91); Calibrated: 30.12.2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 25.04.2013
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.950 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 29.4 W/kgSAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.29 W/kg

Maximum value of SAR (measured) = 18.2 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.460 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 32.1 W/kg

SAR(1 g) = 8.45 W/kg; SAR(10 g) = 2.41 W/kg

Maximum value of SAR (measured) = 19.4 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 64.602 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 33.3 W/kg

SAR(1 g) = 8.31 W/kg; SAR(10 g) = 2.36 W/kg

Maximum value of SAR (measured) = 19.7 W/kg

Page 10 of 15 Certificate No: D5GHzV2-1104, Apr14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sas.com



Page: 315 of 319

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 62.293 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 33.5 W/kg
SAR(1 g) = 7.95 W/kg; SAR(10 g) = 2.26 W/kg
Maximum value of SAR (measured) = 19.1 W/kg



Certificate No: D5GHzV2-1104_Apr14

Page 11 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

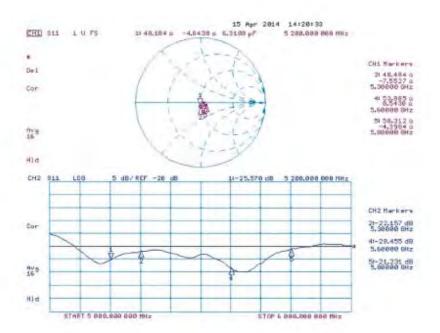
f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 316 of 319

Impedance Measurement Plot for Head TSL



Certificate No: D5GHzV2-1104_Apr14

Page 12 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 317 of 319

DASY5 Validation Report for Body TSL

Date: 15.04.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1104

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5600

MHz, Frequency: 5800 MHz

Medium parameters used: f = 5200 MHz; $\sigma = 5.44$ S/m; $\varepsilon_r = 47$; $\rho = 1000$ kg/m³, Medium parameters used: f= 5300 MHz; σ = 5.57 S/m; ϵ_r = 46.8; ρ = 1000 kg/m³, Medium parameters used: f = 5600 MHz; σ = 5.96 S/m; ϵ_r = 46.3; ρ = 1000 kg/m³, Medium parameters used: f = 5800 MHz; σ = 6.23 S/m; ϵ_r = 46; ρ = 1000 kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.01, 5.01, 5.01); Calibrated: 30.12.2013, ConvF(4.76, 4.76, 4.76); Calibrated: 30.12.2013, ConvF(4.3, 4.3, 4.3); Calibrated: 30.12.2013, ConvF(4.47, 4.47, 4.47); Calibrated: 30.12.2013:
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 25.04.2013
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 59.628 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 30.7 W/kg

SAR(1 g) = 7.69 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 18.2 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 59.482 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 32.5 W/kg

SAR(1 g) = 7.84 W/kg; SAR(10 g) = 2.19 W/kg

Maximum value of SAR (measured) = 18.7 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 58.886 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 36.9 W/kg

SAR(1 g) = 8.21 W/kg; SAR(10 g) = 2.28 W/kg

Maximum value of SAR (measured) = 20.1 W/kg

Certificate No: D5GHzV2-1104 Apr14

Page 13 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488

www.tw.sas.com



Page: 318 of 319

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan,

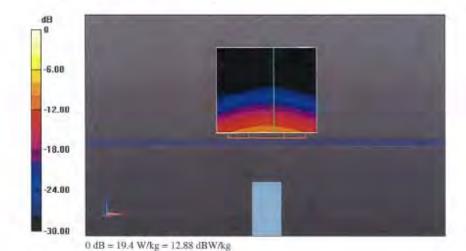
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 56.160 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 36.8 W/kg

SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.13 W/kg

Maximum value of SAR (measured) = 19.4 W/kg



Certificate No: D5GHzV2-1104_Apr14

Page 14 of 15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

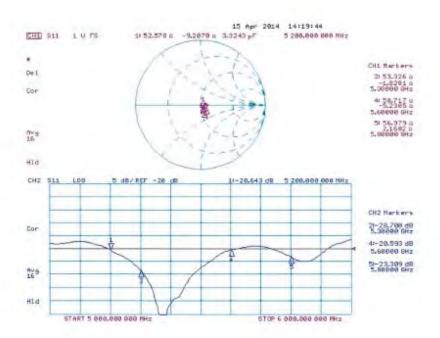
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 319 of 319

Impedance Measurement Plot for Body TSL



Certificate No: D5GHzV2-1104_Apr14

Page 15 of 15

End of 1st part of report

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.