

SAR TEST REPORT

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

Product Name	ARGON MINI
Marketing Name	XT390
Brand Name	Motorola
Model No.	3343
Company Name	Motorola Mobility Inc.
Company Address	9 F., No.9, Songgao Rd., Taipei 110, Taiwan, R.O.C.
Standards	OET 65 supplement C, IEEE /ANSI C95.1 , C95.3, IEEE 1528
FCC ID	IHDT56NN1
Date of Receipt	Feb. 17, 2012
Date of Test(s)	Feb. 28 ~ Mar1, 2012
Date of Issue	Mar. 28, 2012

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

Remarks:

This report details the results of the testing carried out on one sample, 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 for on the behalf of SGS

Engineer



Chris Tsung

Date Mar. 28, 2012

Supervisor



Kelly Tsai

Date Mar. 28, 2012

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Version

Report Number	Revision	Date	Memo
EN/2012/20014	00	2012/03/06	Initial creation of test report.
EN/2012/20014	01	2012/03/20	1 st modification
EN/2012/20014	02	2012/03/28	2 nd modification

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Contents

1. General Information	4
1.1 Testing Laboratory	4
1.2 Details of Applicant.....	4
1.3 Description of EUT	4
1.4 Test Environment.....	8
1.5 Operation description	9
1.6 Positioning Procedure.....	12
1.7 EVALUATION PROCEDURES	13
1.8 The SAR Measurement System.....	14
1.9 System Components.....	17
1.10 SAR System Verification.....	19
1.11 Tissue Simulant Fluid for the Frequency Band.....	20
1.12 Test Standards and Limits	22
2. Summary of Results	25
3. Instruments List	31
4. Measurements5. System Verification	32
5. System Verification.....	99
6. DAE & Probe Calibration certificate	99
7. Uncertainty Budget.....	117
8. Phantom description.....	118
9. System Validation from Original equipment supplier	119

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

1. General Information

1.1 Testing Laboratory

SGS Taiwan Ltd. Electronics & Communication Laboratory	
134, Wu Kung Road, Wuku industrial zone	
Taipei county, Taiwan, R.O.C.	
Telephone	+886-2-2299-3279
Fax	+886-2-2298-0488
Internet	http://www.tw.sgs.com/
Testing Location	1F, No.8, Alley 15, Lane 120, Sec .1, NeiHu Road NeiHu District Taipei City 114, Taiwan

1.2 Details of Applicant

Company Name	Motorola Mobility Inc.
Company Address	9 F., No.9, Songgao Rd., Taipei 110, Taiwan, R.O.C.
Contact Person	Charlene Tsai
TEL	+886-2-8726-2815
Fax	+886-2-8788-3008

1.3 Description of EUT

Product Name	ARGON MINI		
Marketing Name	XT390		
Brand Name	Motorola		
Model No.	3343		
IMEI Code	359498040034012		
FCC ID	IHDT56NN1		
Mode of Operation	☒ GSM ☒ GPRS ☒ WCDMA ☒ HSDPA ☒ HSUPA ☒ WLAN802.11 b/g/n(☒ 20M) band		
Definition	Production unit		
Duty Cycle	GSM	1/8.3	
	GPRS	1/4.1	
	WCDMA	1	
	WLAN 802.11 b/g/n(20M)	1	
TX Frequency	GSM850	824.2	848.8

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Range (MHz)	GSM1900		1850.2	—	1909.8
	WCDMA Band V		826.4	—	846.6
	WLAN 802.11 b/g/n 20M		2412	—	2462
Channel Number (ARFCN)	GSM850		128	—	251
	GSM1900		512	—	810
	WCDMA Band V		4132	—	4233
	WLAN 802.11 b/g/ n(20M)		1	—	11
Max. SAR Measured(1 g) (Unit: mW/g)	Head	GSM850	0.992	☐ Left ☒ Right ☒ Cheek ☐ Tilt <u>251</u> Channel -with Memory card	
		GSM1900	0.321	☐ Left ☒ Right ☒ Cheek ☐ Tilt <u>661</u> Channel	
		WCDMA Band V	0.858	☐ Left ☒ Right ☒ Cheek ☐ Tilt <u>4233</u> Channel	
		WLAN802.11 b	0.387	☐ Left ☒ Right ☒ Cheek ☐ Tilt <u>11</u> Channel	
	Hotspot	GSM850	1.09	☒ Front ☐ Back ☐ Bottom ☐ Right ☐ Left <u>128</u> Channel	
		GSM1900	0.850	☐ Front ☒ Back ☐ Bottom ☐ Right ☐ Left <u>810</u> Channel	
		WCDMA Band V	0.729	☒ Front ☐ Back ☐ Bottom ☐ Right ☐ Left <u>4132</u> Channel	
		WLAN802.11 b	0.094	☐ Front ☒ Back ☐ Top ☐ Right ☐ Left <u>11</u> Channel -With Memory card	

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

台灣檢驗科技股份有限公司

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

#. GSM/GPRS conducted power table:

EUT mode	Frequency (MHz)	CH	Burst average power		Source-based time average power	
			Peak(dBm)	Avg.(dBm)	Peak(dBm)	Avg.(dBm)
GSM 850	824.2	128	32.90	32.80	23.87	23.77
	836.6	190	32.80	32.70	23.77	23.67
	848.8	251	32.80	32.70	23.77	23.67
The division factor compared to the number of TX time slot						
Division factor			1 TX time slot			
			-9.03			

Burst average power						
EUT mode	Frequency (MHz)	CH	1Dn1UP		1Dn2UP	
			Peak (dBm)	Avg. (dBm)	Peak (dBm)	Avg. (dBm)
GPRS 850	824.2	128	33.00	32.80	32.50	32.30
	836.6	190	32.80	32.70	32.10	32.00
	848.8	251	32.70	32.70	32.10	32.00
Source-based time average power						
GPRS 850	824.2	128	23.97	23.77	26.48	26.28
	836.6	190	23.77	23.67	26.08	25.98
	848.8	251	23.67	23.67	26.08	25.98
The division factor compared to the number of TX time slot						
Division factor			1 TX time slot		2 TX time slot	
			-9.03		-6.02	

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

EUT mode	Frequency (MHz)	CH	Burst average power		Source-based time average power	
			Peak(dBm)	Avg.(dBm)	Peak(dBm)	Avg.(dBm)
GSM 1900	1850.2	512	30.20	30.00	21.17	20.97
	1880	661	30.30	30.20	21.27	21.17
	1909.8	810	30.20	30.10	21.17	21.07
The division factor compared to the number of TX time slot						
Division factor			1 TX time slot			
			-9.03			

Burst average power						
			1Dn1UP		1Dn2UP	
EUT mode	Frequency (MHz)	CH	Peak (dBm)	Avg. (dBm)	Peak (dBm)	Avg. (dBm)
GPRS 1900	1850.2	512	30.10	30.00	29.30	29.10
	1880	661	30.30	30.10	29.50	29.40
	1909.8	810	30.20	30.00	29.40	29.30
Source-based time average power						
GPRS 1900	1850.2	512	21.07	20.97	23.28	23.08
	1880	661	21.27	21.07	23.48	23.38
	1909.8	810	21.17	20.97	23.38	23.28
The division factor compared to the number of TX time slot						
Division factor			1 TX time slot		2 TX time slot	
			-9.03		-6.02	

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

#. WCDMA Band V HSDPA/HSUPA conducted power table:

		Rel99	HSDPA				HSUPA				
		Rel99	1	2	3	4	1	2	3	4	5
WCDMA Band V	4132	23.35	23.14	23.28	22.68	22.73	23.31	21.37	22.35	21.42	23.17
	4183	23.37	23.23	23.26	22.75	22.79	23.30	21.38	22.36	21.44	23.13
	4233	23.27	23.39	23.14	22.90	22.96	23.19	21.23	22.27	21.31	23.08

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

		Peak power	Average power
WLAN 802.11 b	2412	19.73	17.22
	2437	20.00	17.36
	2462	19.89	17.59
WLAN 802.11 g	2412	16.95	13.62
	2437	17.12	13.64
	2462	17.01	13.45
WLAN 802.11 n(20M)	2412	14.94	11.58
	2437	15.67	12.14
	2462	15.45	12.60

#. Bluetooth conducted power table:

Channel	Peak Power	
	BDR	EDR
2402	6.19	5.70
2441	6.15	5.71
2480	6.61	5.95

1.4 Test Environment

Ambient Temperature : 22±2° C

Tissue Simulating Liquid: 22±2° C

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

1.5 Operation description

General:

1. The EUT is controlled by using a Radio Communication Tester (Agilent 8960), and the communication between the EUT and the tester is established by air link.
2. 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 DASY5 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 LET/LEC/RET/REC conditions.
5. Testing body-worn SAR by separating **10mm**.

#. The SAR testing for portable devices with wireless router capability is referred as test guidance of **KDB 941225 D06** (SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities).

#. The following procedures are applicable when the overall device length and width are $\geq 9 \text{ cm} \times 5 \text{ cm}$ 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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. /

t (886-2) 2299-3939

f (886-2) 2299-9489

台北縣五股工業區五工路136之1號

www.sgs.com.tw

Test configurations:

- (1) Front side
- (2) Back side
- (3) Top side.(WWAN antenna to edge distance >25mm_No SAR)
- (4) Bottom side. (WLAN antenna to edge distance >25mm_No SAR)
- (5) Right side.
- (6) Left side.

SAR evaluation considerations for handsets with multiple transmitters:

6. When the maximum transmitter and antenna output power are $\leq 60/f(\text{GHz})$ (mW)
SAR evaluation is typically not required for FCC or TCB approval
(BT power= 6.61dBm)
7. According to **KDB248227**-SAR is not required for 802.11 g/HT20 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11b channels.
8. Using **KDB941225 D01** to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
9. For Head, The highest 1-g SAR for WLAN is 0.387 W/kg and the highest 1-g SAR for WWAN is 0.992W/kg. The sum of 1-g for simultaneous transmitting WLAN and WWAN antenna pair is $0.387+0.992 = 1.379$ W/kg.
10. For Body, The highest 1-g SAR for WLAN is 0.094 W/kg and the highest 1-g SAR for WWAN is 1.09W/kg. The sum of 1-g for simultaneous transmitting WLAN and WWAN antenna pair is $0.094+1.09 = 1.184$ W/kg.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. /

t (886-2) 2299-3939

f (886-2) 2299-9489

台北縣五股工業區五工路136之1號

www.sgs.com.tw

11. Both Head & Body, **which lower than the limit 1.6W/kg**. According to **KDB648474/KDB447498** Simultaneous SAR evaluation is not required.

Additional configuration(Head):

12. For highest SAR configuration in this band repeated with external Memory card inside.

Additional configuration(Body):

13. For highest SAR configuration in this band repeated with external Memory card inside.
14. For highest SAR configuration in this band repeated with Headset.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

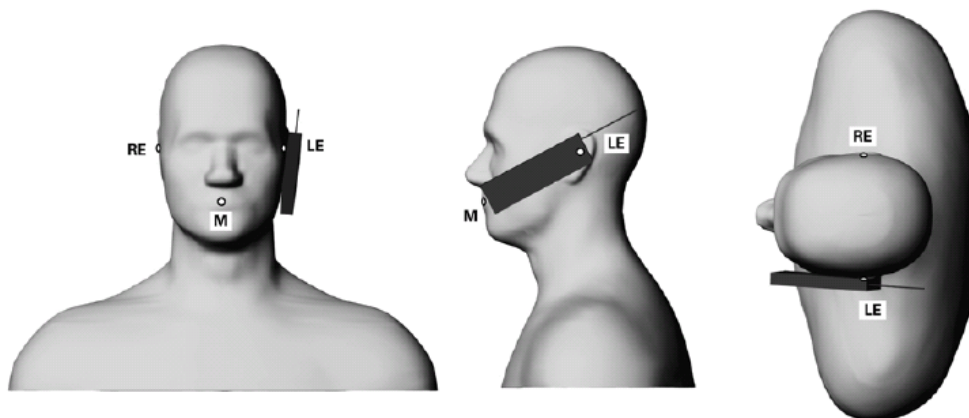
No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

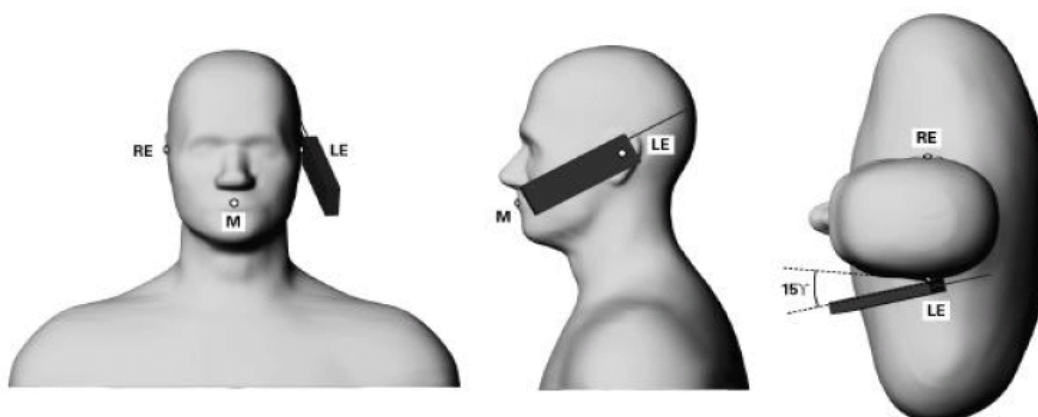
f (886-2) 2299-9489

www.sgs.com.tw

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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

台灣檢驗科技股份有限公司

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

is based on splines in two or three dimensions. The procedure can find the maximum for 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 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.

1.8 The SAR Measurement System

A photograph 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). A Model EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation $SAR = \sigma (|E_i|^2) / \rho$ where σ and ρ are the conductivity and mass density of the tissue-simulant.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. /

t (886-2) 2299-3939

f (886-2) 2299-9489

台北縣五股工業區五工路136之1號

www.sgs.com.tw

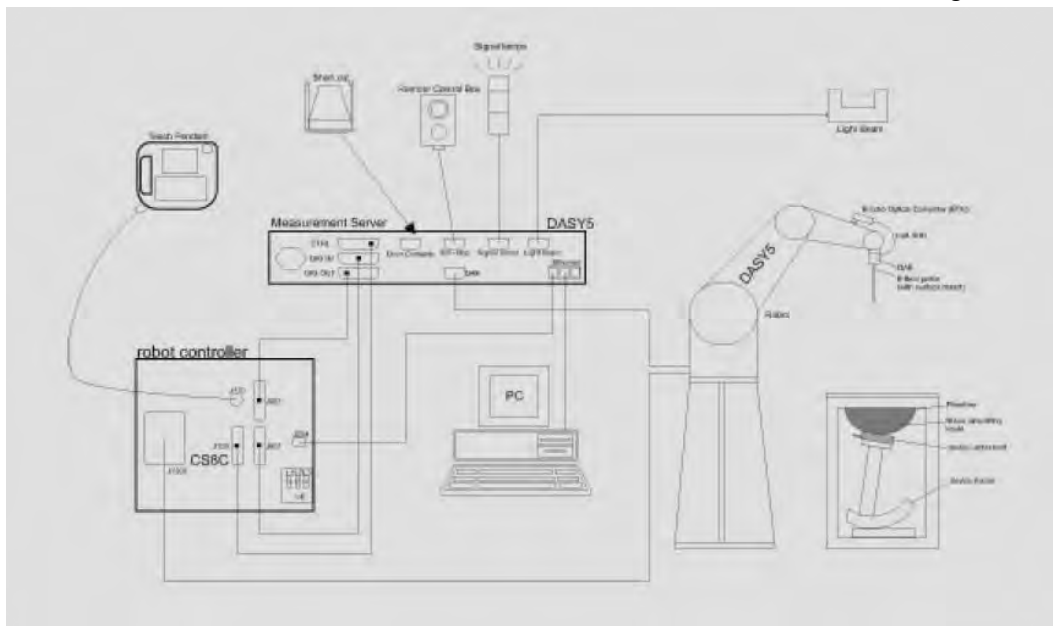


Fig.a The block diagram of SAR system

The DASY5 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.
- A 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.
- 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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 2000 or Windows XP.
- DASY5 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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

1.9 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)	 EX3DV4 E-Field Probe
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL835/1900/2450MHz Additional CF for other liquids and frequencies upon request	
Frequency	10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 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%.	

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SAM PHANTOM V4.0C

Construction:	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-200X, CENELEC 50361 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: 251 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
--------------	--	--

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

1.10 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 $\pm 5\%$ from the target SAR values.

These tests were done at 835/1900/2450 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 in the range 22.1°C , the relative humidity was in the range 62% and the liquid depth above the ear reference points was above 15 cm 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.

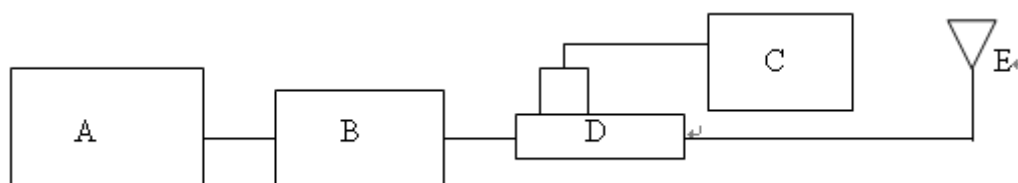


Fig.b The block diagram of system verification

- A. Agilent Model N5181A Signal Generator
- B. Mini circuits Model ZHL-42 Amplifier
- C. Agilent Model U2001B Power Sensor
- D. Agilent Model 778D/772D Dual directional coupling
- E. Reference dipole antenna



Photograph of the dipole Antenna

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、篡改皆屬非法，違犯者將會被依法追訴。

Validation Kit	S/N	Frequency (MHz)		Target SAR (1g) (Pin=250mW) (mW/g)	Measured SAR (1g)(mW/g)	Measured Date
D835V2	4d063	835	Head	2.31	2.38	Feb. 28, 2012
			Body	2.43	2.44	Feb. 28, 2012
D1900V2	5d027	1900	Head	10.1	9.6	Feb. 29, 2012
			Body	9.93	9.45	Feb. 29, 2012
D2450V2	727	2450	Head	13.7	13.8	Mar. 1, 2012
			Body	12.7	12.7	Mar. 1, 2012

Table 1. System validation (follow manufacture target value)

1.11 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the HP Model 85070D Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with HP E5071C Network Analyzer (30 KHz-6000MHz).

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 15cm±5mm during all tests. (Appendix Fig .2)

Frequency (MHz)	Tissue type	Dielectric Parameters		Recommended Limits	Measured	Measurement date
835	Head	ρ	Verification	38.38-42.42	41.066	Feb. 28, 2012
		σ (S/m)		0.84-0.92	0.898	
		Simulated Tissue Temp.(°C)		20-24	21.7	
	Body	ρ	Verification	51.21-56.60	52.57	Feb. 28, 2012
		σ (S/m)		0.95-1.05	1.012	
		Simulated Tissue Temp.(°C)		20-24	21.7	

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Frequency (MHz)	Tissue type	Dielectric Parameters		Recommended Limits	Measured	Measurement date
1900	Head	ρ	Verification	37.05-40.95	38.156	Feb. 29, 2012
		σ (S/m)		1.34-1.48	1.402	
		Simulated Tissue Temp.(°C)		20-24	21. 7	
	Body	ρ	Verification	48.55-53.66	51.695	Feb. 29, 2012
		σ (S/m)		1.44-1.60	1.516	
		Simulated Tissue Temp.(°C)		20-24	21.7	
2450	Head	ρ	Verification	36.67-40.53	37.668	Mar. 1, 2012
		σ (S/m)		1.65-1.82	1.809	
		Simulated Tissue Temp.(°C)		20-24	21.7	
	Body	ρ	Verification	48.07-53.13	49.529	Mar. 1, 2012
		σ (S/m)		1.81-2.01	1.881	
		Simulated Tissue Temp.(°C)		20-24	21.7	

Table 2. Dielectric Parameters of Tissue Simulant Fluid

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

The composition of the brain tissue simulating liquid:

Frequency (MHz)	Mode	Ingredient						Total amount
		DGMBE	Water	Salt	Preventol D-7	Cellulose	Sugar	
850	Head	—	532.63	18.29	2.40	3.20	765.49	1.0L(Kg)
	Body	—	633.91	11.76	1.20	—	602.12	1.0L(Kg)
1900	Head	445.08	554.12	0.80	—	—	—	1.0L(Kg)
	Body	300.03	697.94	2.03	—	—	—	1.0L(Kg)
2450	Head	450.00	550.00	—	—	—	—	1.0L(Kg)
	Body	313.65	686.35	—	—	—	—	1.0L(Kg)

Table 3. Recipes for tissue simulating liquid (Unit: g)

1.12 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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

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 an 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.

- (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)

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

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.
2. 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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

台灣檢驗科技股份有限公司

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

2. Summary of Results

GSM 850 MHz

Band	Mode	EUT Position	Test Configuration	Averaged SAR over 1g / 10g (W/kg)			SAR Limit 1g (W/kg)
				CH 128	CH 190	CH 251	
				824.20 MHz	836.60 MHz	848.80 MHz	
GSM850	GSM	Right	Cheek	0.807 (1g) / 0.509 (10g)	0.843 (1g) / 0.541 (10g)	0.942 (1g) / 0.617 (10g)	1.6
			-with Memory card	—	—	0.992 (1g) / 0.655 (10g)	1.6
			Tilt	—	0.168 (1g) / 0.114 (10g)	—	1.6
		Left	Cheek	—	0.703 (1g) / 0.456 (10g)	—	1.6
			Tilt	—	0.162 (1g) / 0.111 (10g)	—	1.6
	GPRS	Hotspot	Front	1.09 (1g) / 0.704 (10g)	0.976 (1g) / 0.648 (10g)	0.998 (1g) / 0.686 (10g)	1.6
			-with Memory card	1.03 (1g) / 0.689 (10g)	—	—	1.6
			-with Bluetooth	0.971 (1g) / 0.645 (10g)	—	—	1.6
			-with Headset	0.897 (1g) / 0.586 (10g)	—	—	1.6
			Back	1.07 (1g) / 0.693 (10g)	0.927 (1g) / 0.598 (10g)	0.938 (1g) / 0.610 (10g)	1.6
			Bottom	—	0.143 (1g) / 0.082 (10g)	—	1.6
			Right	—	0.361 (1g) / 0.232 (10g)	—	1.6
			Left	—	0.293 (1g) /	—	1.6

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Band	Mode	EUT Position	Test Configuration	Averaged SAR over 1g / 10g (W/kg)			SAR Limit 1g (W/kg)
				CH 128	CH 190	CH 251	
				824.20 MHz	836.60 MHz	848.80 MHz	
					0.193 (10g)		

- # According to section 6.3.1 and 6.3.1.2 of KDB941225 D03 to exclude SAR test requirements for EDGE modes due to the source-based time-averaged output power (page 7's conducted power table) for edge mode is lower than that in the GPRS mode.
- # According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

PCS 1900 MHz

Band	Mode	EUT Position	Test Configuration	Averaged SAR over 1g / 10g (W/kg)			SAR Limit 1g (W/kg)
				CH 512	CH 661	CH 810	
				1850.20 MHz	1800.00 MHz	1909.80 MHz	
PCS 1900	GSM	Right	Cheek	0.275 (1g) / 0.171 (10g)	0.321 (1g) / 0.198 (10g)	0.294 (1g) / 0.179 (10g)	1.6
			Tilt	—	0.083 (1g) / 0.049 (10g)	—	1.6
		Left	Cheek	—	0.284 (1g) / 0.168 (10g)	—	1.6
			Tilt	—	0.097 (1g) / 0.060 (10g)	—	1.6
	GPRS	Hotspot	Front	—	0.594 (1g) / 0.358 (10g)	—	1.6
			Back	0.705 (1g) / 0.405 (10g)	0.788 (1g) / 0.462 (10g)	0.850 (1g) / 0.514 (10g)	1.6
			Bottom	—	0.624 (1g) / 0.346 (10g)	—	1.6
			Right	—	0.087 (1g) / 0.051 (10g)	—	1.6
			Left	—	0.196 (1g) / 0.111 (10g)	—	1.6

- # Using KDB941225 D03 and KDB941225 D04 to exclude SAR test requirements for EDGE modes due to the source-based time-averaged output power for edge mode is lower than that in the GPRS mode.
- # According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、篡改皆屬非法，違犯者將會被依法追訴。

WCDMA Band V

Band	Mode	EUT Position	Test Configuration	Averaged SAR over 1g/10g (W/kg)			SAR Limit 1g (W/kg)
				CH 4132	CH 4183	CH 4233	
				826.40 MHz	836.60 MHz	846.60 MHz	
WCDMA Band V	R99	Right	Cheek	0.800 (1g) / 0.513 (10g)	0.833 (1g) / 0.540 (10g)	0.858 (1g) / 0.56 (10g)	1.6
			Tilt	—	0.200 (1g) / 0.139 (10g)	—	1.6
		Left	Cheek	—	0.657 (1g) / 0.436 (10g)	—	1.6
			Tilt	—	0.165 (1g) / 0.116 (10g)	—	1.6
	Hotspot		Front	0.729 (1g) / 0.479 (10g)	0.676 (1g) / 0.456 (10g)	0.682 (1g) / 0.465 (10g)	1.6
			Back	—	0.587 (1g) / 0.383 (10g)	—	1.6
			Bottom	—	0.095 (1g) / 0.054 (10g)	—	1.6
			Right	—	0.221 (1g) / 0.143 (10g)	—	1.6
			Left	—	0.171 (1g) / 0.111 (10g)	—	1.6

- # Using KDB941225 D01 to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
- # According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

WLAN802.11 b

Band	EUT Position	Test Configuration	Averaged SAR over 1g/10g (W/kg)			SAR Limit 1g (W/kg)
			CH 1	CH 6	CH 11	
			2412 MHz	2437 MHz	2462 MHz	
WLAN 802.11 b	Right	Cheek	0.223 (1g) / 0.099 (10g)	0.204 (1g) / 0.103 (10g)	0.387 (1g) / 0.169 (10g)	1.6
		- With Memory card	—	—	0.326 (1g) / 0.143 (10g)	1.6
		- With Bluetooth	—	—	0.376 (1g) / 0.165 (10g)	1.6
		Tilt	—	0.146 (1g) / 0.068 (10g)	—	1.6
	Left	Cheek	—	0.120 (1g) / 0.065 (10g)	—	1.6
		Tilt	—	0.118 (1g) / 0.056 (10g)	—	1.6
	Hotspot	Front	—	0.069 (1g) / 0.038 (10g)	—	1.6
		Back	0.080 (1g) / 0.044 (10g)	0.072 (1g) / 0.040 (10g)	0.082 (1g) / 0.047 (10g)	1.6
		- With Memory card	—	—	0.094 (1g) / 0.049 (10g)	1.6
		- With Bluetooth	—	—	0.091 (1g) / 0.048 (10g)	1.6
		- With Headset	—	—	0.083 (1g) / 0.043 (10g)	1.6
		Top	—	0.043 (1g) / 0.022 (10g)	—	1.6
		Bottom	—	—	—	1.6
		Right	—	0.015 (1g) /	—	1.6

0.00725

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Band	EUT Position	Test Configuration	Averaged SAR over 1g/10g (W/kg)			SAR Limit 1g (W/kg)
			CH 1	CH 6	CH 11	
			2412 MHz	2437 MHz	2462 MHz	
				(10g)		
		Left	—	0.040 (1g)/ 0.020 (10g)	—	1.6

- # Using KDB248227-SAR is not required for 802.11 g/HT20 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11b channels.
- # According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

3. Instruments List

Device	Manufacturer	Type	Serial number	Date of last calibration	Date of last calibration
Dosimetric E-Field Probe	Schmid & Partner Engineering AG	EX3DV4	3801	Jul.11.2011	Jul.10.2012
835/1900/2450 MHz System Validation Dipole	Schmid & Partner Engineering AG	D835V2	4d063	May.25.2011	May.24.2012
		D1900V2	5d027	Apr.19.2011	Apr.18.2012
		D2450V2	727	Apr.19.2011	Apr.18.2012
Data acquisition Electronics	Schmid & Partner Engineering AG	DAE4	856	May.18.2011	May.17.2012
Software	Schmid & Partner Engineering AG	DASY 5 V52.6	N/A	Calibration not required	Calibration not required
Phantom	Schmid & Partner Engineering AG	SAM	N/A	Calibration not required	Calibration not required
Network Analyzer	HP	E5071C	MY46108212	Mar.21.2011	Mar.20.2012
Dielectric Probe Kit	HP	85070D	US01440168	Calibration not required	Calibration not required
Dual-directional coupler	Agilent	772D	MY46151242	Jul.07.2011	Jul.06.2012
		778D	MY48220468	May.29.2011	May.28.2012
RF Signal Generator	Agilent	N5181A	MY50141235	Jan.06.2012	Jan.05.2013
USB Power Sensor(Meter)	Agilent	U2001B	MY48100169	Apr.30.2011	Apr.29.2011
Radio Communication Test	Agilent	E5515C	GB44051912	Jun.27.2010	Jun.26.2012

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

4. Measurements

Date: 2/28/2012

RE Cheek_CH128

Communication System: Generic GSM; Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.888$ mho/m; $\epsilon_r = 41.206$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 13.713 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) /Cube 0:

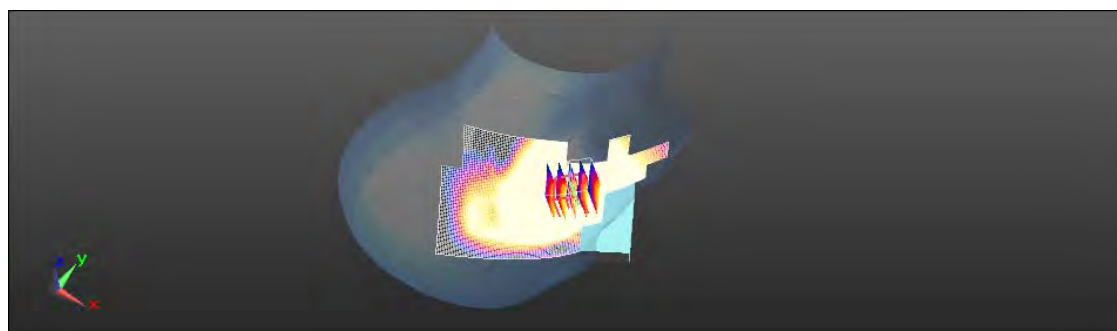
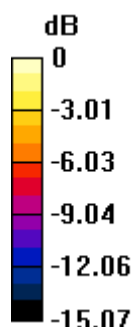
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 7.918 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.1010

SAR(1 g) = 0.807 mW/g; SAR(10 g) = 0.509 mW/g

Maximum value of SAR (measured) = 0.939 mW/g



0 dB = 0.940mW/g m = -0.54 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

RE Cheek_CH190

Communication System: Generic GSM; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASYS2, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 12.900 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

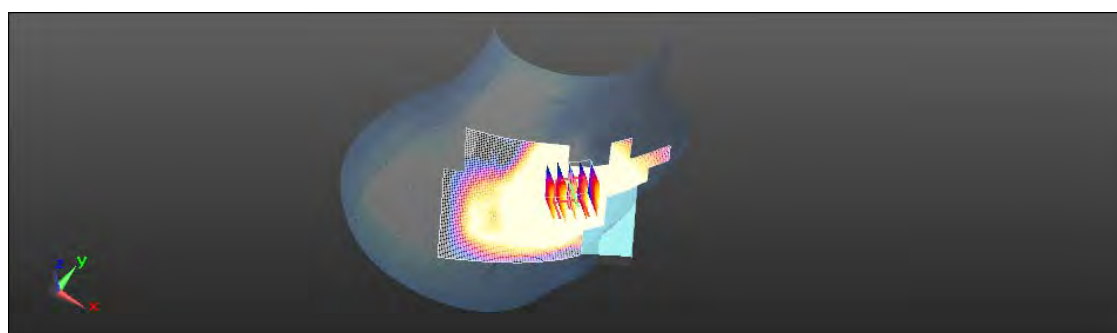
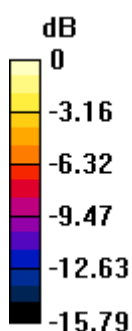
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.805 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.1400

SAR(1 g) = 0.843 mW/g; SAR(10 g) = 0.541 mW/g

Maximum value of SAR (measured) = 0.970 mW/g



0 dB = 0.970mW/g m = -0.26 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

RE Cheek_CH251

Communication System: Generic GSM; Frequency: 848.6 MHz

Medium parameters used: $f = 849$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 40.901$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 12.595 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

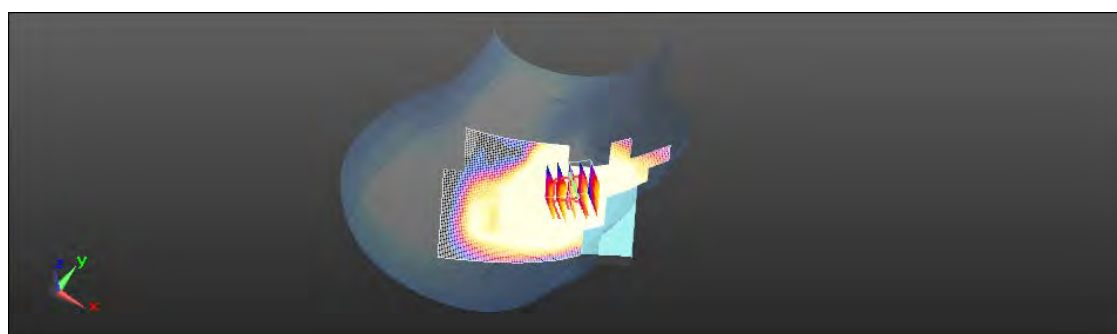
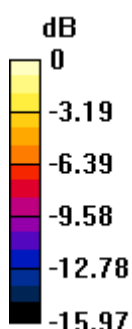
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 7.970 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.2610

SAR(1 g) = 0.942 mW/g; SAR(10 g) = 0.617 mW/g

Maximum value of SAR (measured) = 1.074 mW/g



0 dB = 1.070mW/g m = 0.59 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

RE Cheek_CH251_repeated with external Memory card inside

Communication System: Generic GSM; Frequency: 848.6 MHz

Medium parameters used: $f = 849$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 40.901$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 15.079 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

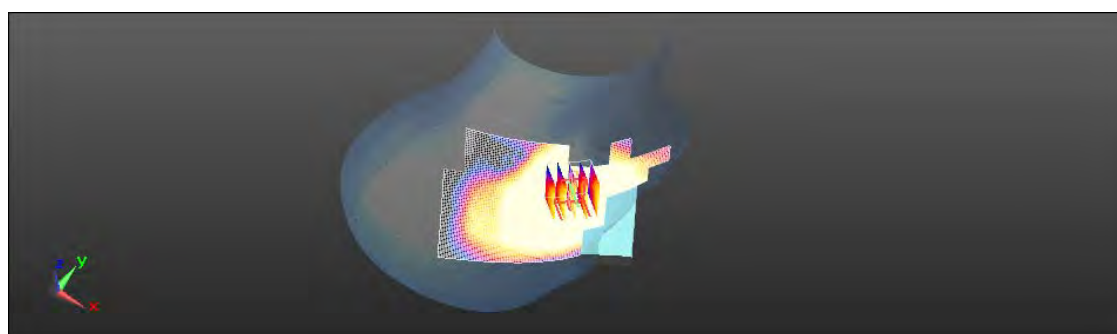
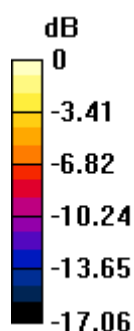
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 6.414 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.3630

SAR(1 g) = 0.992 mW/g; SAR(10 g) = 0.655 mW/g

Maximum value of SAR (measured) = 1.126 mW/g



0 dB = 1.130mW/g m = 1.06 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw



This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

RE Tilt_CH190

Communication System: Generic GSM; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Tilt/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 2.337 mW/g m

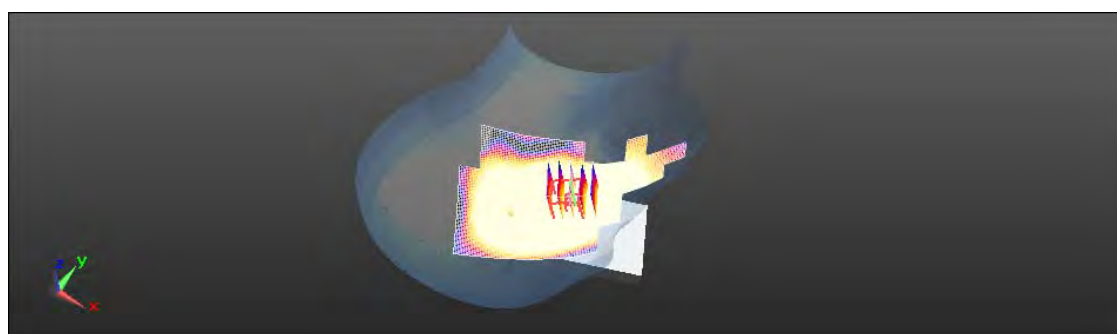
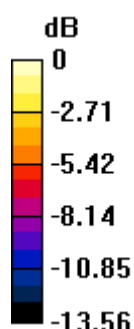
Configuration/RE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.510 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.2310

SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.114 mW/g

Maximum value of SAR (measured) = 0.203 mW/g



0 dB = 0.200mW/g m = -13.98 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

LE Cheek_CH190

Communication System: Generic GSM; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 11.777 mW/g m

Configuration/LE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

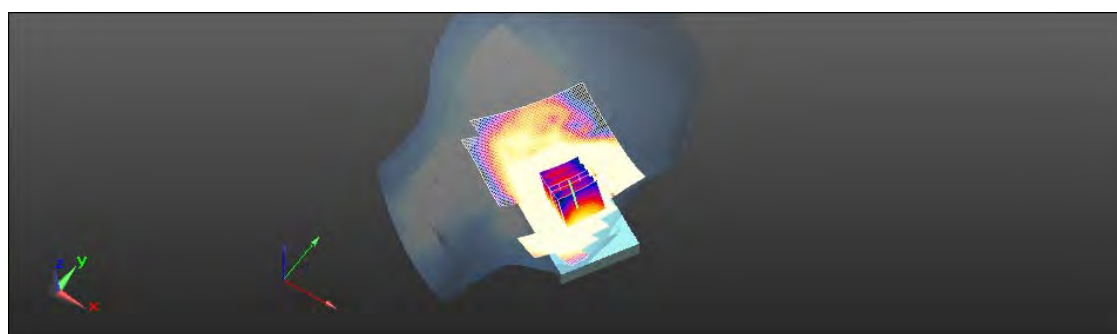
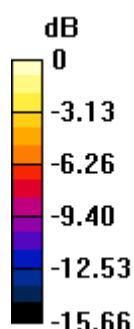
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 8.216 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.9420

SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.456 mW/g

Maximum value of SAR (measured) = 0.815 mW/g



0 dB = 0.820mW/g m = -1.72 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

LE Tilt_CH190

Communication System: Generic GSM; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Tilt/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 2.041 mW/g m

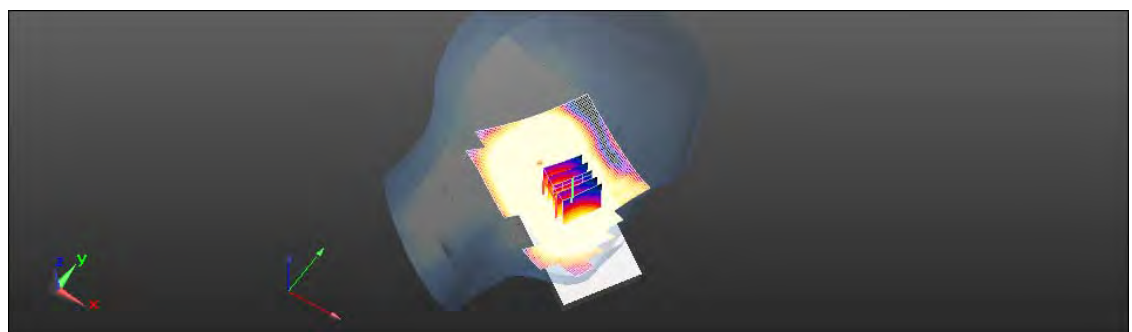
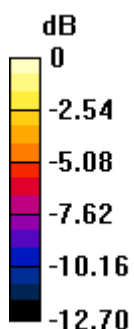
Configuration/LE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.538 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.2180

SAR(1 g) = 0.162 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.188 mW/g



0 dB = 0.190mW/g m = -14.42 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Front side_CH128

Communication System: GPRS(Class 10); Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 1.001$ mho/m; $\epsilon_r = 52.675$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 15.029 mW/g m

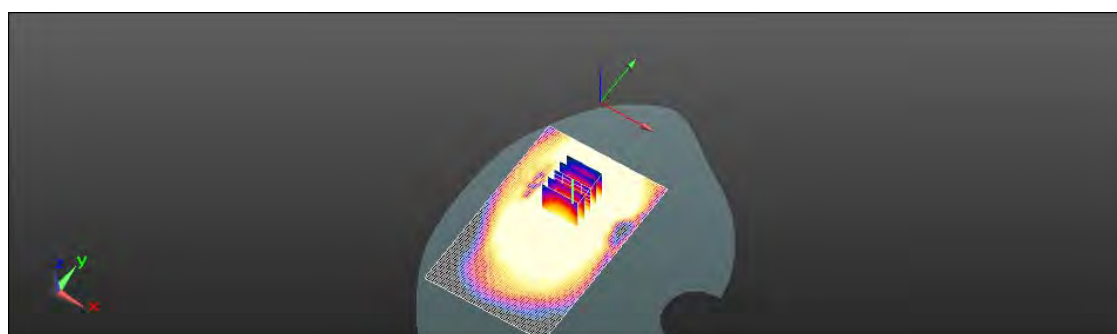
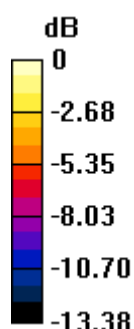
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.626 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.5980

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.704 mW/g

Maximum value of SAR (measured) = 1.307 mW/g



0 dB = 1.310mW/g m = 2.35 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

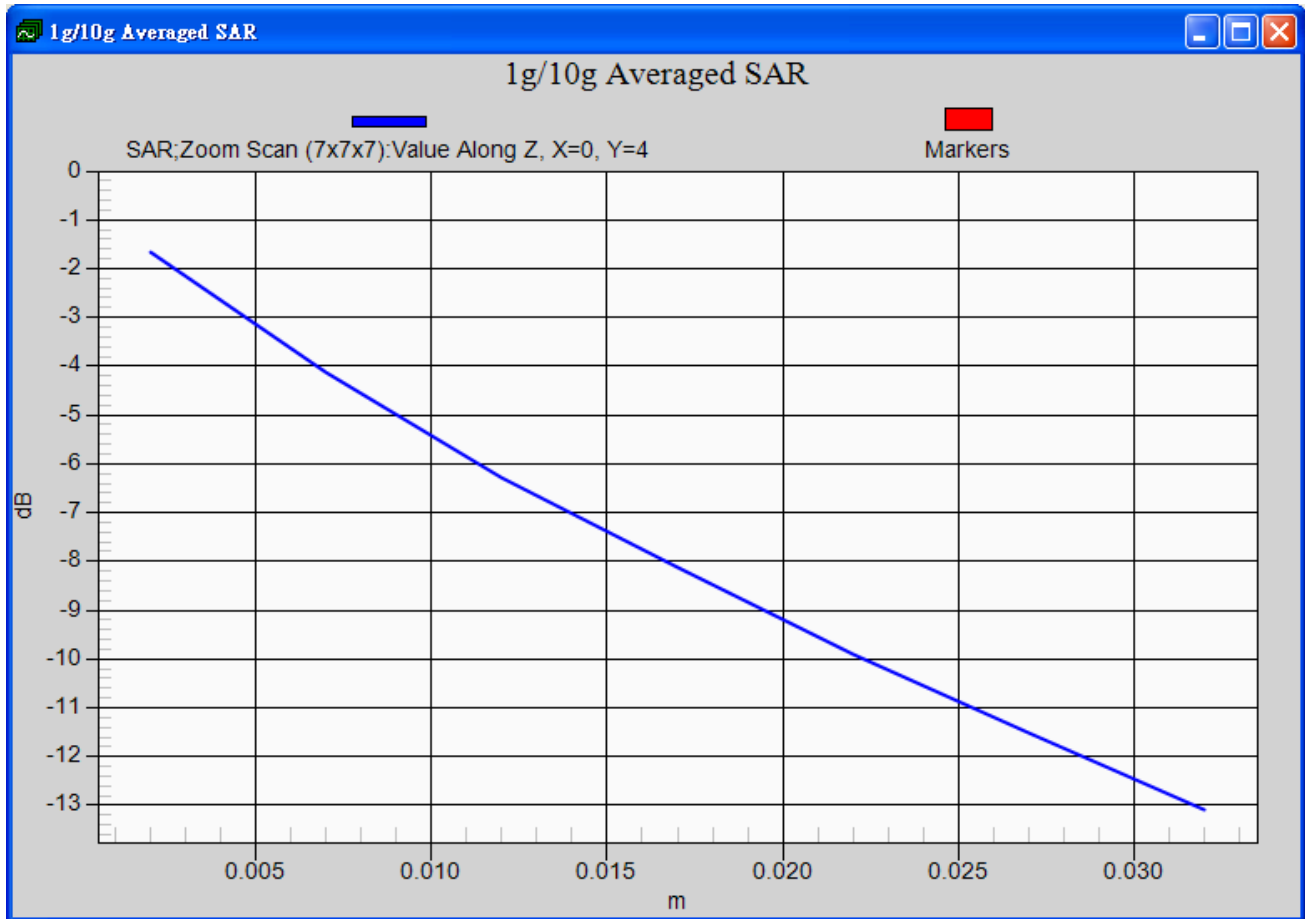
台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw



This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

Hotspot_Front side_CH190

Communication System: GPRS(Class 10); Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 13.303 mW/g m

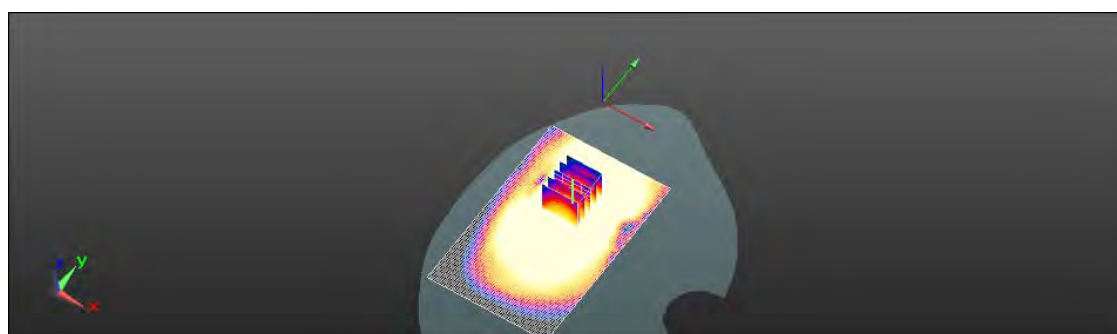
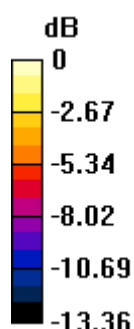
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.371 V/m; Power Drift = -0.00029 dB

Peak SAR (extrapolated) = 1.3590

SAR(1 g) = 0.976 mW/g; SAR(10 g) = 0.648 mW/g

Maximum value of SAR (measured) = 1.148 mW/g



0 dB = 1.150mW/g m = 1.21 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Front side_CH251

Communication System: GPRS(Class 10); Frequency: 848.8 MHz

Medium parameters used: $f = 849$ MHz; $\sigma = 1.027$ mho/m; $\epsilon_r = 52.431$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 13.109 mW/g m

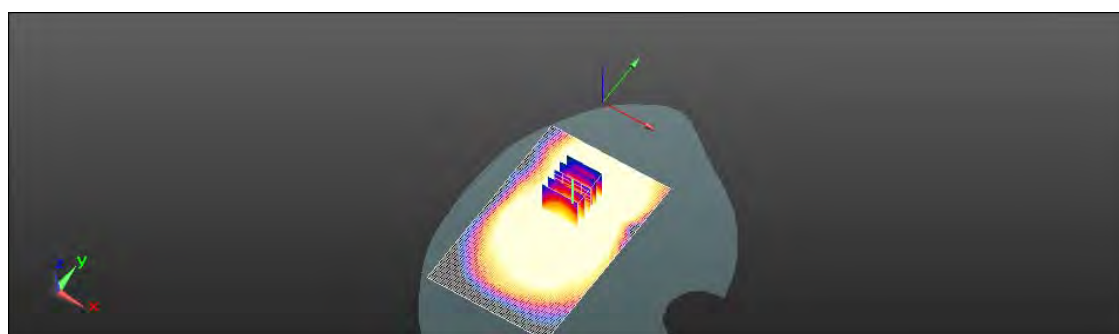
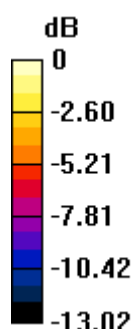
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.400 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.3360

SAR(1 g) = 0.998 mW/g; SAR(10 g) = 0.680 mW/g

Maximum value of SAR (measured) = 1.168 mW/g



0 dB = 1.170mW/g m = 1.36 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Front side_CH128_repeated with external Memory card inside

Communication System: GPRS(Class 10); Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 1.001$ mho/m; $\epsilon_r = 52.675$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 14.431 mW/g m

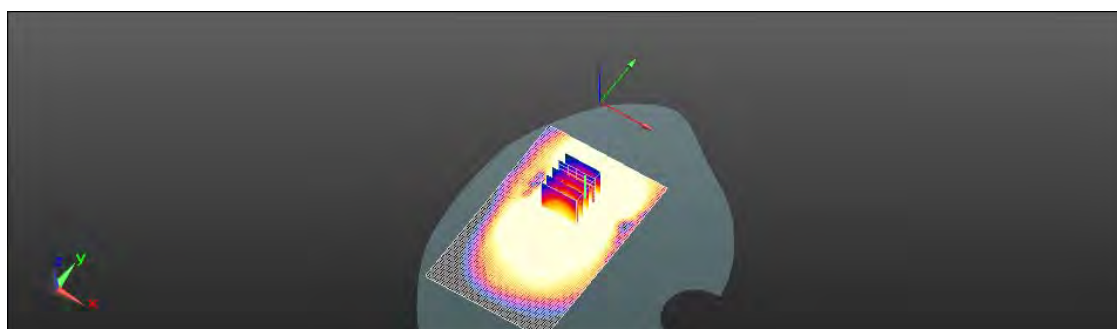
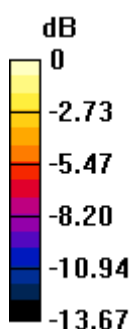
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.178 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.4370

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.689 mW/g

Maximum value of SAR (measured) = 1.214 mW/g



0 dB = 1.210mW/g m = 1.66 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Front side_CH128_repeated with Bluetooth active

Communication System: GPRS(Class 10); Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 1.001$ mho/m; $\epsilon_r = 52.675$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 13.222 mW/g m

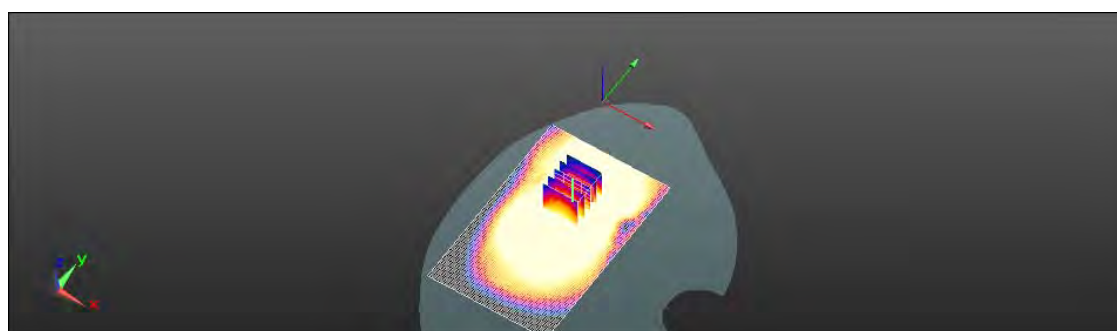
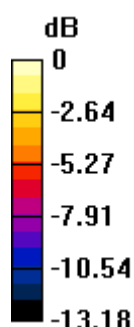
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.376 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.3440

SAR(1 g) = 0.971 mW/g; SAR(10 g) = 0.645 mW/g

Maximum value of SAR (measured) = 1.155 mW/g



0 dB = 1.150mW/g m = 1.21 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Front side_CH128_repeated with headset

Communication System: GPRS(Class 10); Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 1.001$ mho/m; $\epsilon_r = 52.675$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 12.597 mW/g m

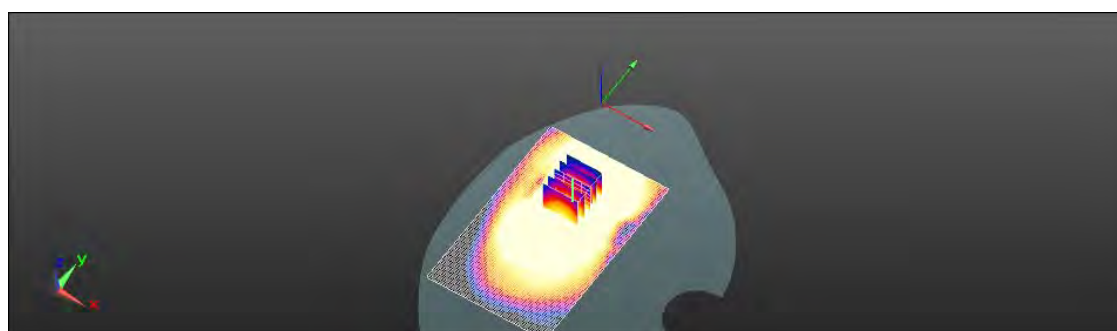
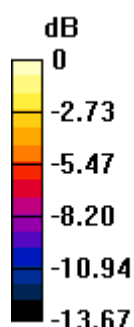
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.294 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.2770

SAR(1 g) = 0.897 mW/g; SAR(10 g) = 0.586 mW/g

Maximum value of SAR (measured) = 1.075 mW/g



0 dB = 1.080mW/g m = 0.67 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Back side_CH128

Communication System: GPRS(Class 10); Frequency: 824.2 MHz

Medium parameters used: $f = 824.2$ MHz; $\sigma = 1.001$ mho/m; $\epsilon_r = 52.675$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 11.370 mW/g m

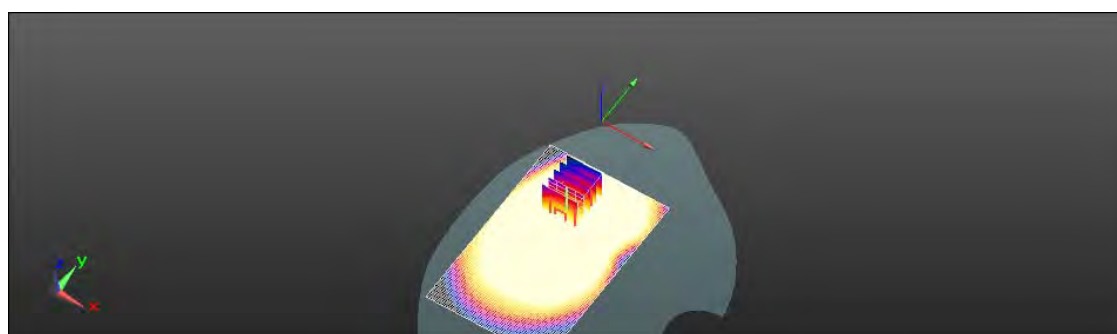
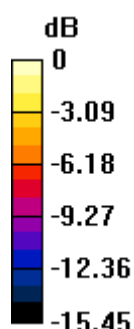
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.005 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.5900

SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.693 mW/g

Maximum value of SAR (measured) = 1.328 mW/g



0 dB = 1.330mW/g m = 2.48 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、篡改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Back side_CH190

Communication System: GPRS(Class 10); Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 9.787 mW/g m

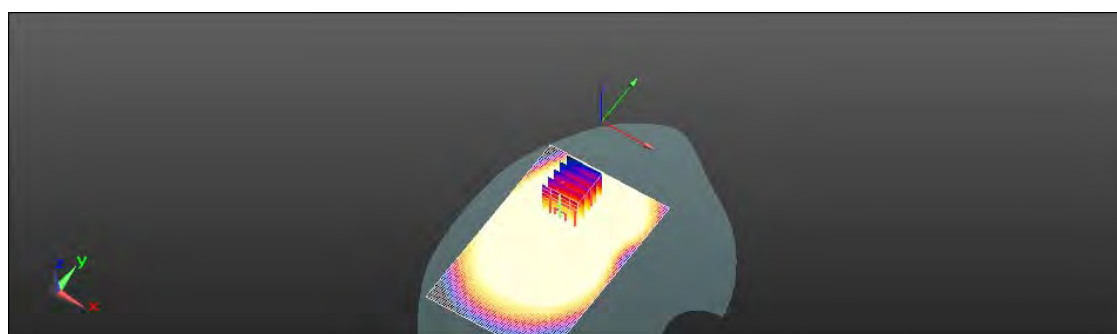
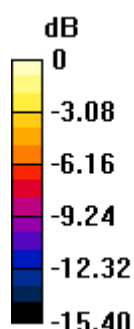
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.908 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.3550

SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.598 mW/g

Maximum value of SAR (measured) = 1.152 mW/g



0 dB = 1.150mW/g m = 1.21 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Back side_CH251

Communication System: GPRS(Class 10); Frequency: 848.8 MHz

Medium parameters used: $f = 849$ MHz; $\sigma = 1.027$ mho/m; $\epsilon_r = 52.431$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 9.517 mW/g m

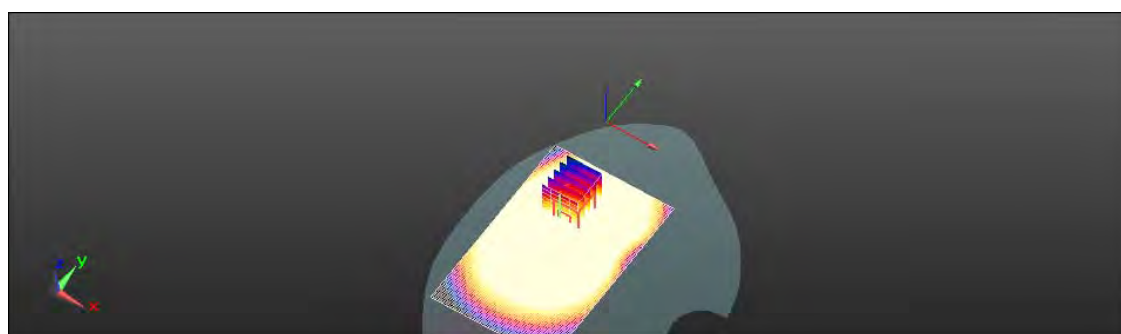
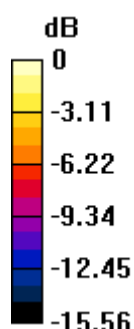
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.571 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.3620

SAR(1 g) = 0.938 mW/g; SAR(10 g) = 0.610 mW/g

Maximum value of SAR (measured) = 1.150 mW/g



0 dB = 1.150mW/g m = 1.21 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

Hotspot_Bottom side_CH190

Communication System: GPRS(Class 10); Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 1.535 mW/g m

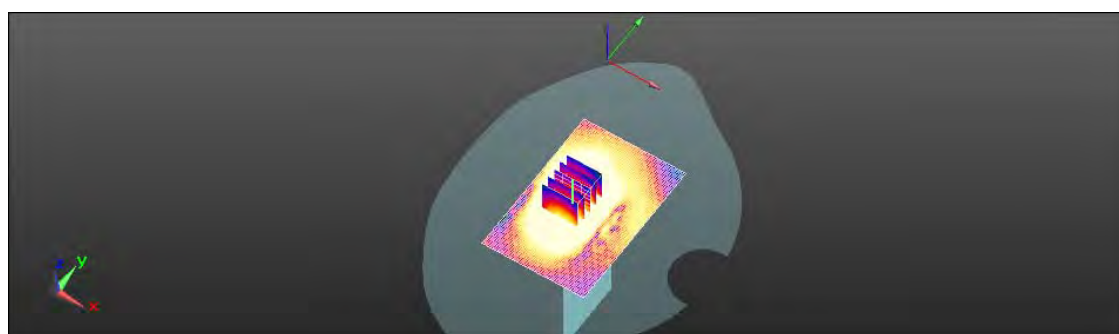
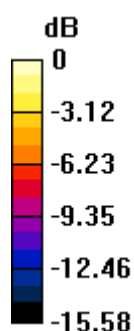
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.071 V/m; Power Drift = 0.0035 dB

Peak SAR (extrapolated) = 0.2390

SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.082 mW/g

Maximum value of SAR (measured) = 0.188 mW/g



0 dB = 0.190mW/g m = -14.42 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

Hotspot_Right side_CH190

Communication System: GPRS(Class 10); Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 5.840 mW/g m

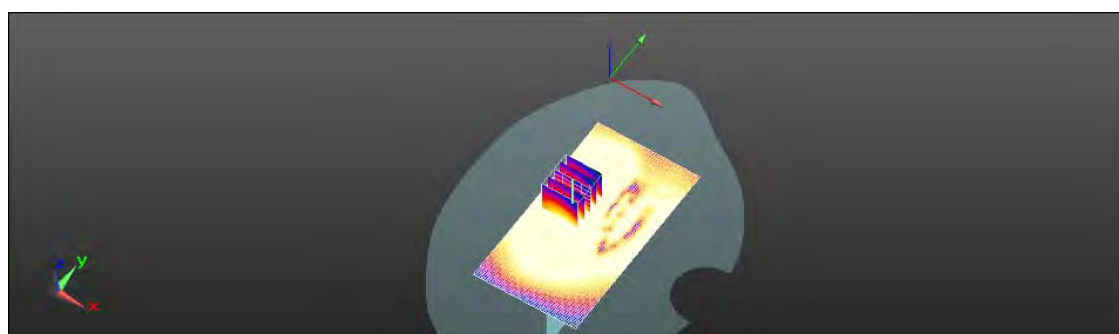
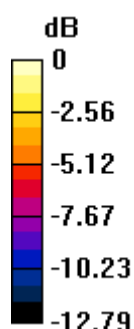
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.637 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.5570

SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.232 mW/g

Maximum value of SAR (measured) = 0.450 mW/g



0 dB = 0.450mW/g m = -6.94 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

Hotspot_Left side_CH190

Communication System: GPRS(Class 10); Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 2.677 mW/g m

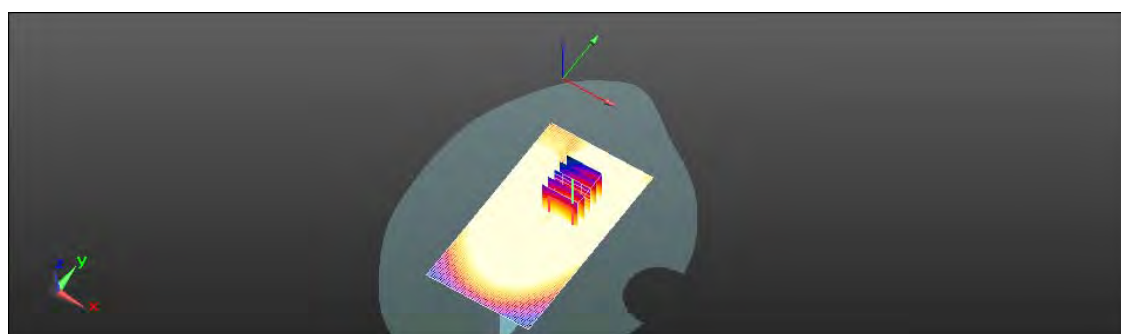
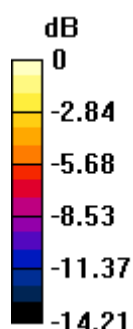
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.532 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.4430

SAR(1 g) = 0.293 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.373 mW/g



0 dB = 0.370mW/g m = -8.64 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/29/2012

RE Cheek_CH512

Communication System: Generic GSM; Frequency: 1850.2 MHz

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.349$ mho/m; $\epsilon_r = 38.268$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.6, 7.6, 7.6); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 3.686 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

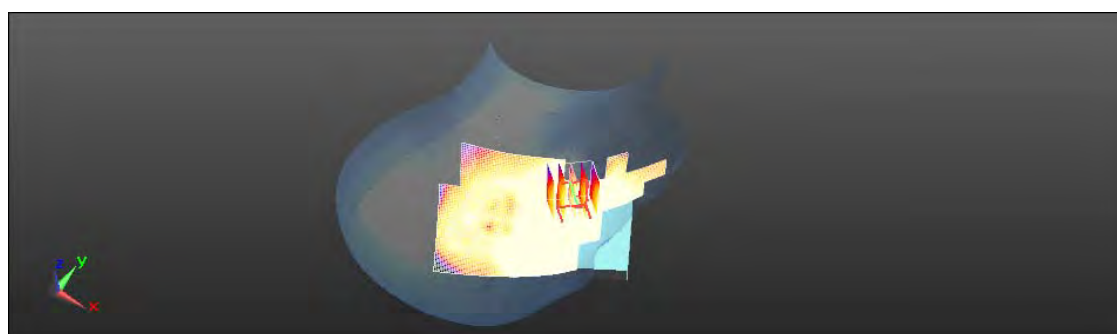
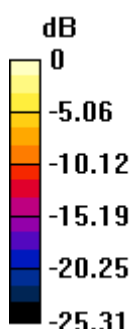
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 4.651 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.4060

SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.327 mW/g



0 dB = 0.330mW/g m = -9.63 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

RE Cheek_CH661

Communication System: Generic GSM; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 38.188$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.6, 7.6, 7.6); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 4.872 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

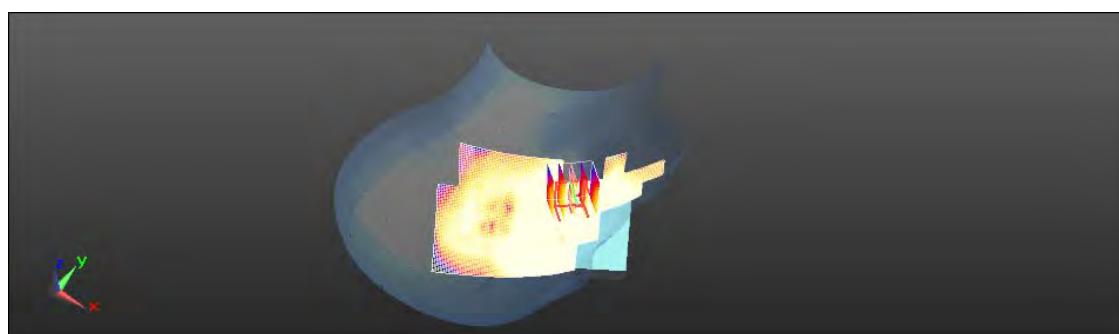
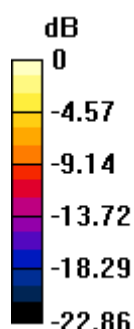
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 5.308 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.4720

SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.198 mW/g

Maximum value of SAR (measured) = 0.388 mW/g



0 dB = 0.390mW/g m = -8.18 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

RE Cheek_CH810

Communication System: Generic GSM; Frequency: 1909.8 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.413$ mho/m; $\epsilon_r = 38.128$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.6, 7.6, 7.6); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (61x111x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 4.046 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

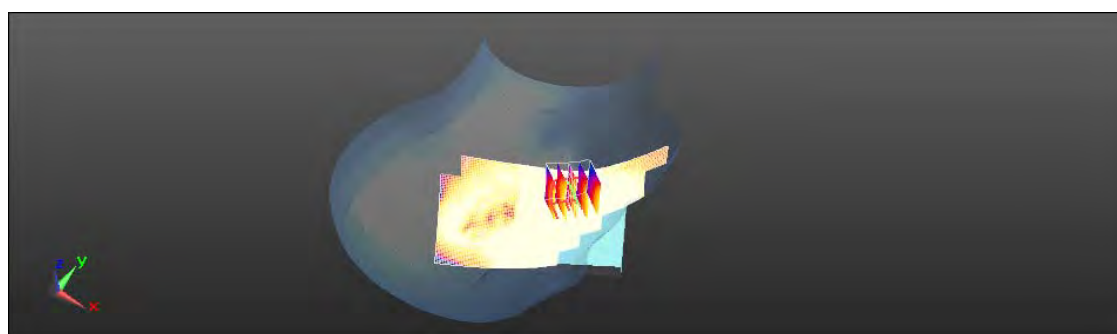
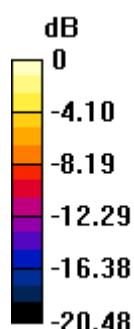
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.445 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.4360

SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.179 mW/g

Maximum value of SAR (measured) = 0.366 mW/g



0 dB = 0.370mW/g m = -8.64 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

RE Tilt_CH661

Communication System: Generic GSM; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 38.188$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.6, 7.6, 7.6); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Tilt/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 1.331 mW/g m

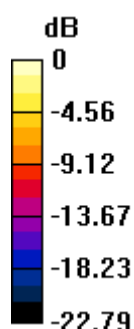
Configuration/RE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.144 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.1390

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.049 mW/g

Maximum value of SAR (measured) = 0.110 mW/g



0 dB = 0.110mW/g m = -19.17 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、篡改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

LE Cheek_CH661

Communication System: Generic GSM; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 38.188$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.6, 7.6, 7.6); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 2.960 mW/g m

Configuration/LE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

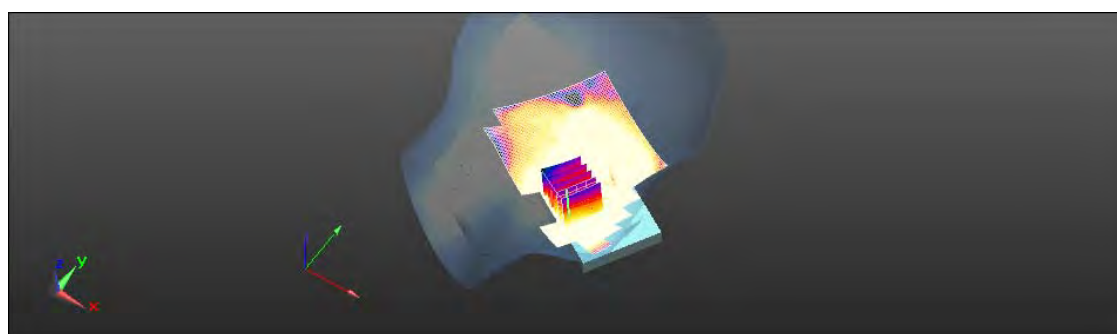
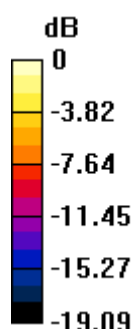
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 4.581 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.4750

SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.168 mW/g

Maximum value of SAR (measured) = 0.384 mW/g



0 dB = 0.380mW/g m = -8.40 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

LE Tilt_CH661

Communication System: Generic GSM; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 38.188$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.6, 7.6, 7.6); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Tilt/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 1.848 mW/g m

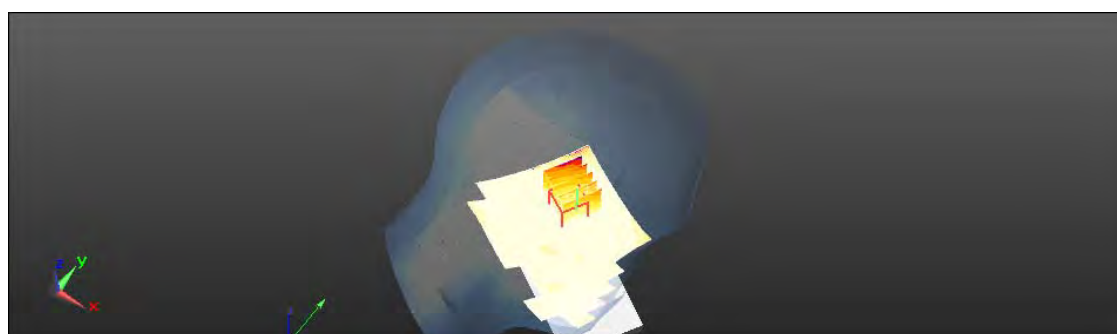
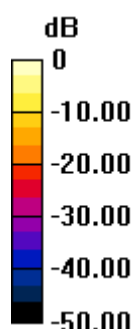
Configuration/LE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.480 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.1510

SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.060 mW/g

Maximum value of SAR (measured) = 0.123 mW/g



0 dB = 0.120mW/g m = -18.42 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Hotspot_Front side_CH661

Communication System: GPRS(Class 10); Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.499$ mho/m; $\epsilon_r = 52.052$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 8.305 mW/g m

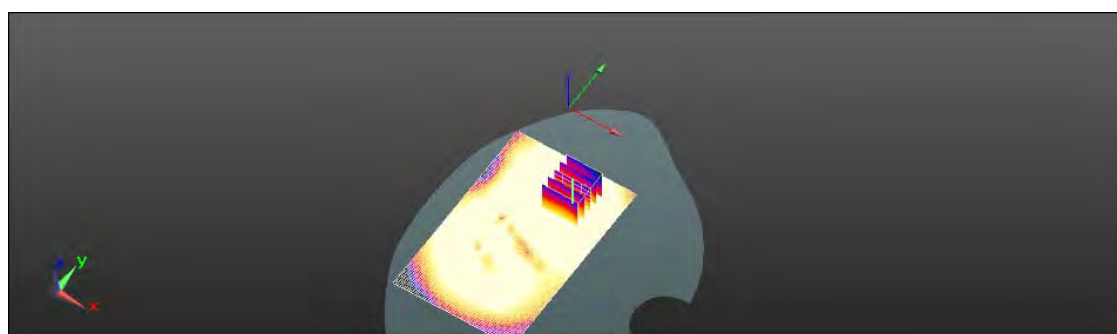
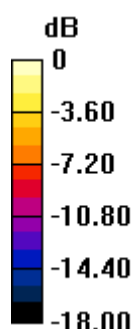
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.217 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.9740

SAR(1 g) = 0.594 mW/g; SAR(10 g) = 0.358 mW/g

Maximum value of SAR (measured) = 0.795 mW/g



0 dB = 0.800mW/g m = -1.94 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Hotspot_Back side_CH512

Communication System: GPRS(Class 10); Frequency: 1850.2 MHz

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.492$ mho/m; $\epsilon_r = 52.349$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 10.332 mW/g m

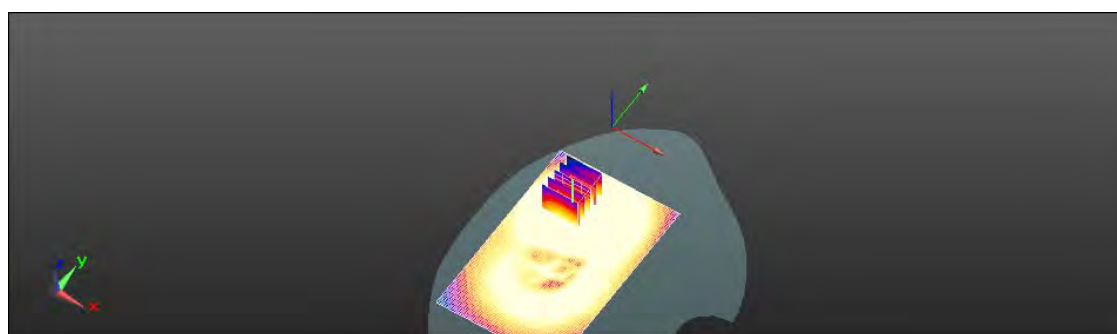
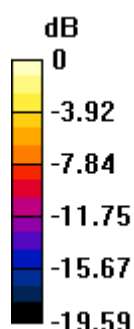
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.534 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.2240

SAR(1 g) = 0.705 mW/g; SAR(10 g) = 0.405 mW/g

Maximum value of SAR (measured) = 0.975 mW/g



0 dB = 0.980mW/g m = -0.18 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Hotspot_Back side_CH661

Communication System: GPRS(Class 10); Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.499$ mho/m; $\epsilon_r = 52.052$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 11.237 mW/g m

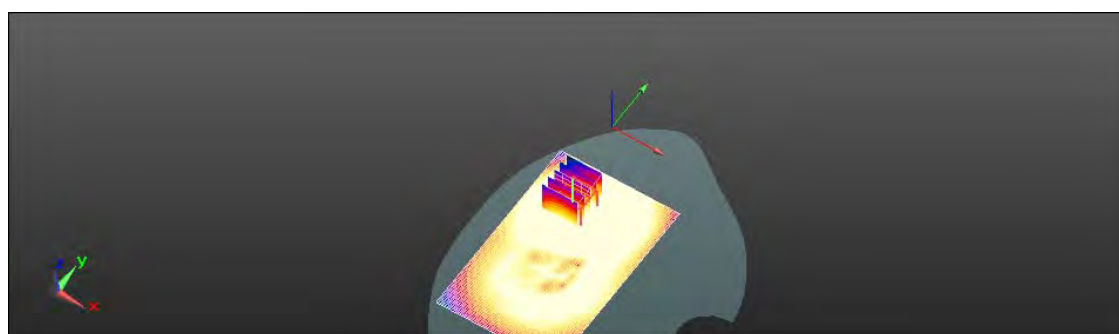
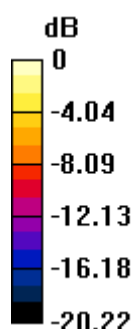
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.328 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.3750

SAR(1 g) = 0.788 mW/g; SAR(10 g) = 0.462 mW/g

Maximum value of SAR (measured) = 1.080 mW/g



0 dB = 1.080mW/g m = 0.67 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Hotspot_Back side_CH810

Communication System: GPRS(Class 10); Frequency: 1909.8 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.532$ mho/m; $\epsilon_r = 51.58$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 11.805 mW/g m

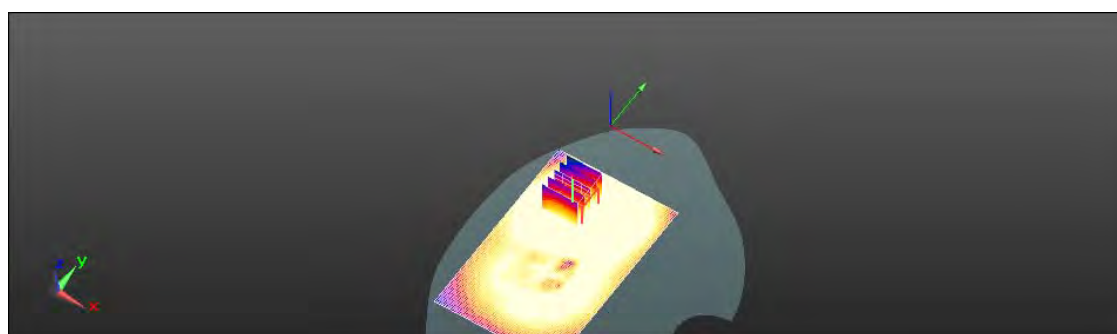
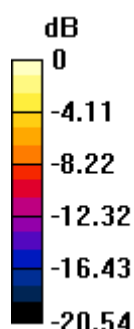
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.886 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.4650

SAR(1 g) = 0.850 mW/g; SAR(10 g) = 0.514 mW/g

Maximum value of SAR (measured) = 1.156 mW/g



0 dB = 1.160mW/g m = 1.29 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Hotspot_Bottom side_CH661

Communication System: GPRS(Class 10); Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.499$ mho/m; $\epsilon_r = 52.052$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 7.654 mW/g m

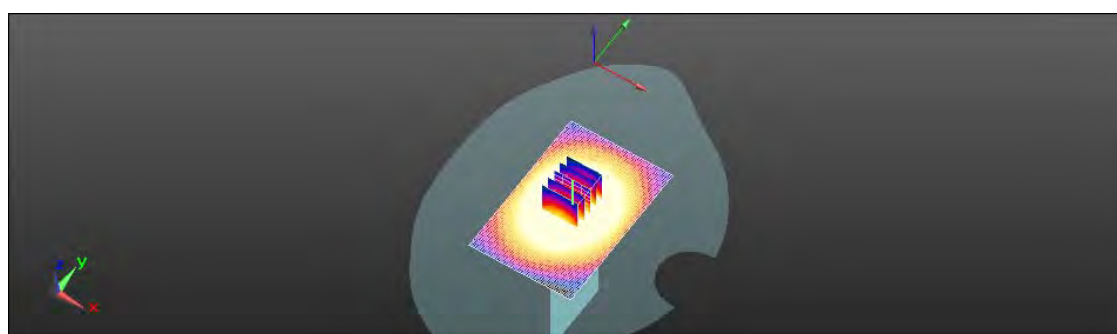
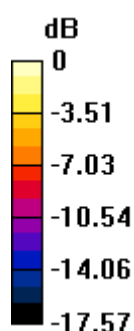
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.369 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.0460

SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.346 mW/g

Maximum value of SAR (measured) = 0.847 mW/g



0 dB = 0.850mW/g m = -1.41 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Hotspot_Right side_CH661

Communication System: GPRS(Class 10); Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.499$ mho/m; $\epsilon_r = 52.052$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 0.968 mW/g m

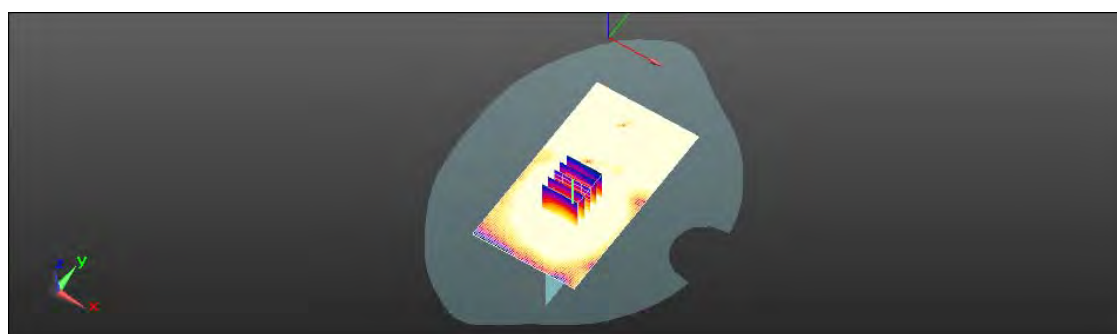
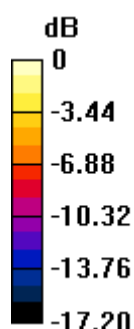
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.681 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.1410

SAR(1 g) = 0.087 mW/g; SAR(10 g) = 0.051 mW/g

Maximum value of SAR (measured) = 0.114 mW/g



0 dB = 0.110mW/g m = -19.17 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Hotspot_Left side_CH661

Communication System: GPRS(Class 10); Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.499$ mho/m; $\epsilon_r = 52.052$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 2.628 mW/g m

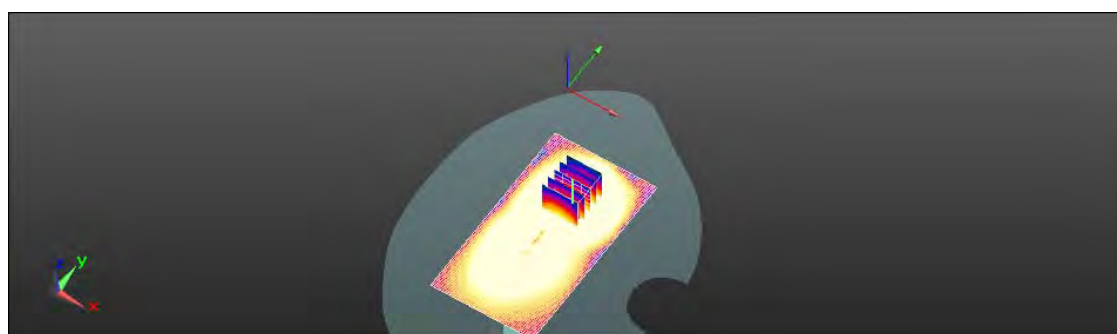
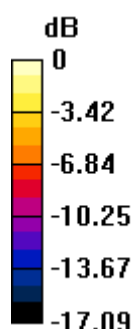
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.278 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.3260

SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.263 mW/g



0 dB = 0.260mW/g m = -11.70 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

RE Cheek_CH4132

Communication System: WCDMA; Frequency: 826.4 MHz

Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 41.177$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 13.274 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

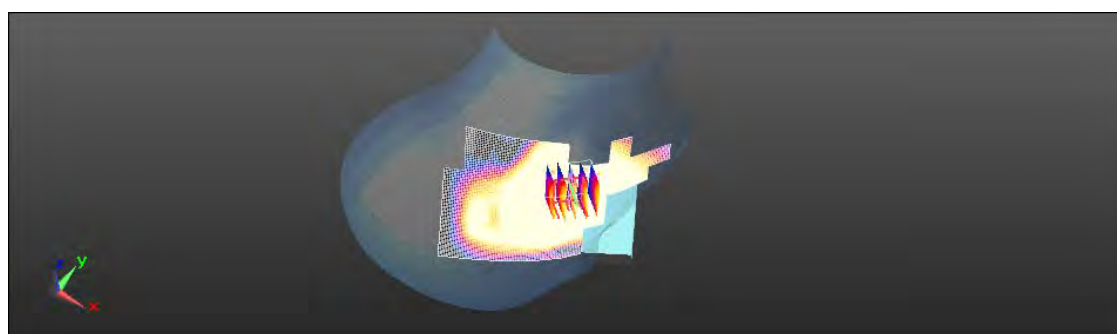
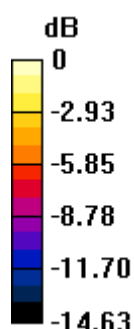
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 8.597 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.0840

SAR(1 g) = 0.800 mW/g; SAR(10 g) = 0.513 mW/g

Maximum value of SAR (measured) = 0.931 mW/g



0 dB = 0.930mW/g m = -0.63 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

RE Cheek_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 13.237 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

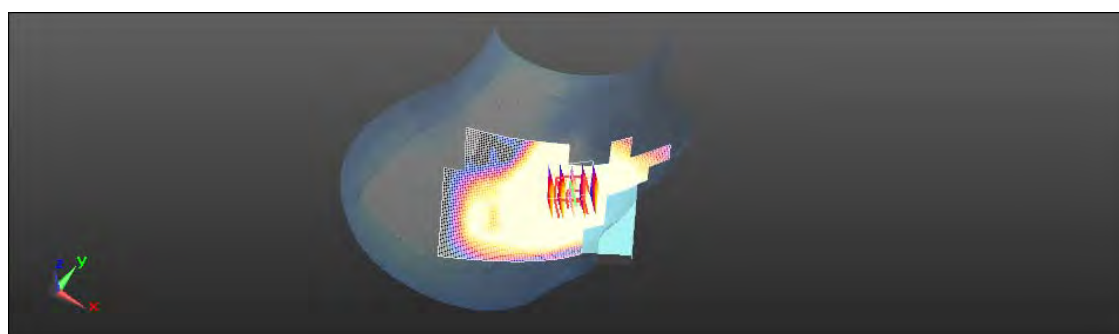
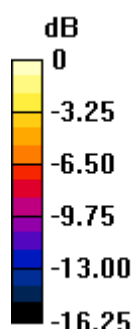
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 7.442 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.1180

SAR(1 g) = 0.833 mW/g; SAR(10 g) = 0.540 mW/g

Maximum value of SAR (measured) = 0.953 mW/g



0 dB = 0.950mW/g m = -0.45 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

RE Cheek_CH4233

Communication System: WCDMA; Frequency: 846.6 MHz

Medium parameters used: $f = 847$ MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 40.921$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 12.941 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

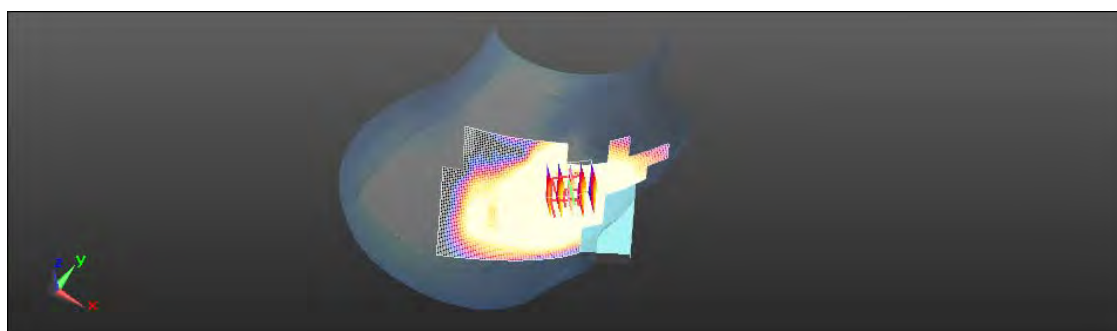
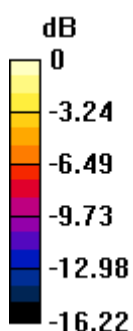
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 8.635 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.1490

SAR(1 g) = 0.858 mW/g; SAR(10 g) = 0.565 mW/g

Maximum value of SAR (measured) = 0.974 mW/g



0 dB = 0.970mW/g m = -0.26 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

RE Tilt_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Tilt/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 2.534 mW/g m

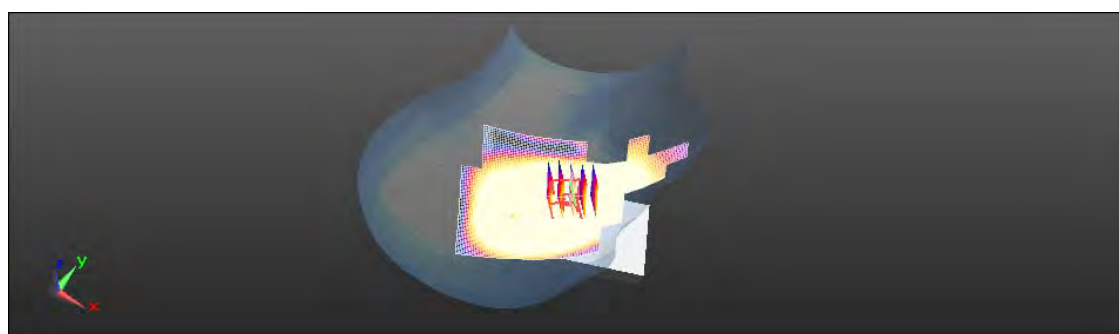
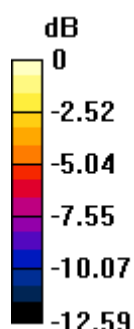
Configuration/RE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.666 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.2680

SAR(1 g) = 0.200 mW/g; SAR(10 g) = 0.139 mW/g

Maximum value of SAR (measured) = 0.238 mW/g



0 dB = 0.240mW/g m = -12.40 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

LE Cheek_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Cheek/Area Scan (71x111x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 10.114 mW/g m

Configuration/LE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

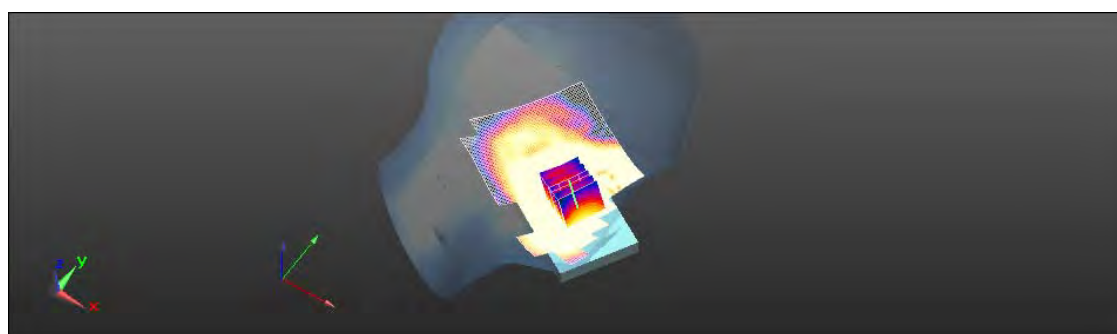
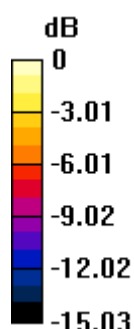
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.927 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.8450

SAR(1 g) = 0.657 mW/g; SAR(10 g) = 0.436 mW/g

Maximum value of SAR (measured) = 0.762 mW/g



0 dB = 0.760mW/g m = -2.38 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

LE Tilt_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 41.044$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Tilt/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 1.863 mW/g m

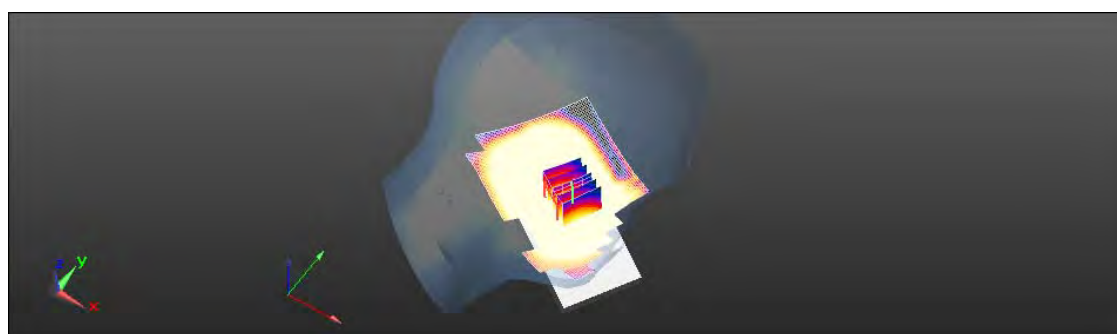
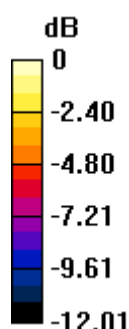
Configuration/LE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.486 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.2190

SAR(1 g) = 0.165 mW/g; SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.191 mW/g



0 dB = 0.190mW/g m = -14.42 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Front side_CH4132

Communication System: WCDMA; Frequency: 826.4 MHz

Medium parameters used: $f = 826.4$ MHz; $\sigma = 1.003$ mho/m; $\epsilon_r = 52.652$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 9.753 mW/g m

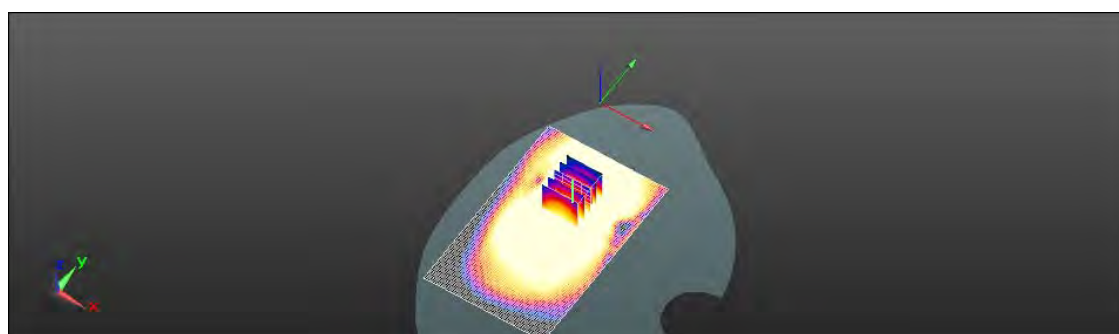
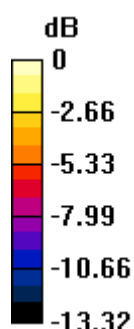
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.383 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.0460

SAR(1 g) = 0.729 mW/g; SAR(10 g) = 0.479 mW/g

Maximum value of SAR (measured) = 0.874 mW/g



0 dB = 0.870mW/g m = -1.21 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Front side_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 8.524 mW/g m

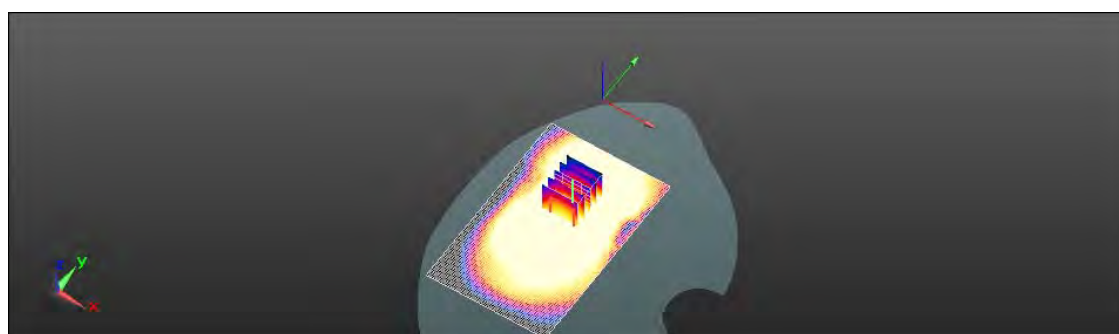
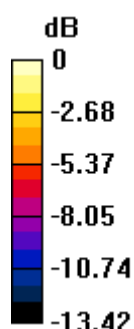
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.619 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.9350

SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.456 mW/g

Maximum value of SAR (measured) = 0.800 mW/g



0 dB = 0.800mW/g m = -1.94 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

Hotspot_Front side_CH4233

Communication System: WCDMA; Frequency: 846.6 MHz

Medium parameters used: $f = 847$ MHz; $\sigma = 1.025$ mho/m; $\epsilon_r = 52.449$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 8.667 mW/g m

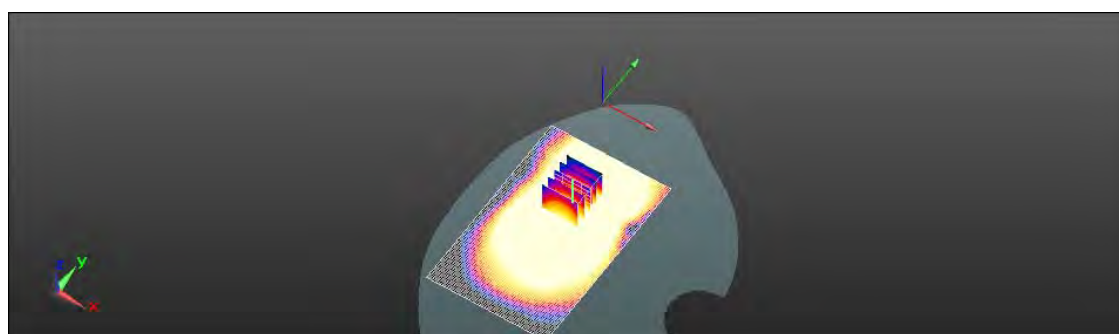
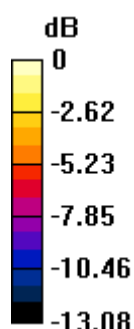
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.891 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.9120

SAR(1 g) = 0.682 mW/g; SAR(10 g) = 0.465 mW/g

Maximum value of SAR (measured) = 0.802 mW/g



0 dB = 0.800mW/g m = -1.94 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Back side_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 5.856 mW/g m

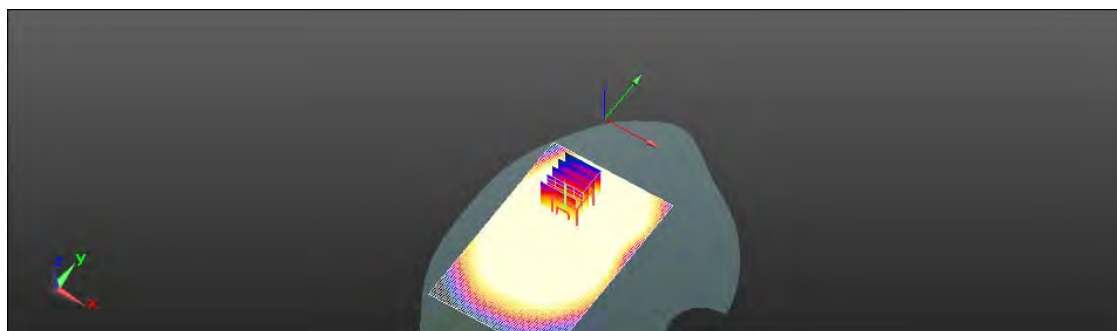
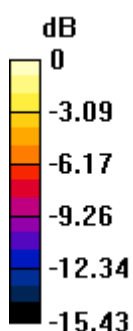
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.244 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.8500

SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.383 mW/g

Maximum value of SAR (measured) = 0.717 mW/g



0 dB = 0.720mW/g m = -2.85 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Bottom side_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 1.014 mW/g m

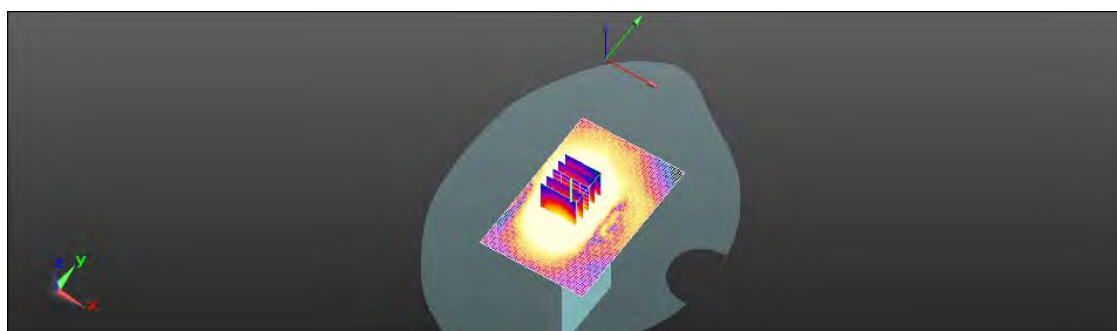
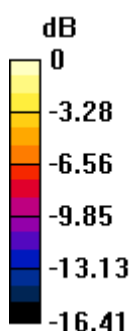
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.628 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.1610

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.054 mW/g

Maximum value of SAR (measured) = 0.127 mW/g



0 dB = 0.130mW/g m = -17.72 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Hotspot_Right side_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 3.105 mW/g m

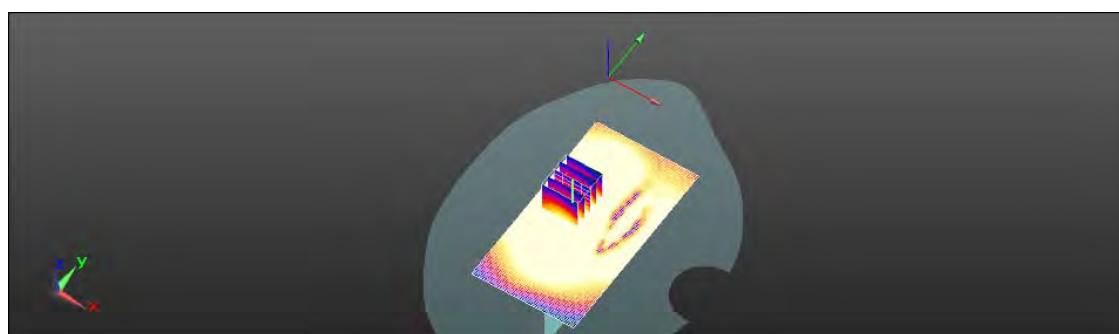
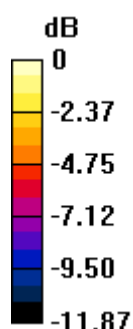
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.426 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.3420

SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.271 mW/g



0 dB = 0.270mW/g m = -11.37 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 2/28/2012

Hotspot_Left side_CH4183

Communication System: WCDMA; Frequency: 836.6 MHz

Medium parameters used: $f = 837$ MHz; $\sigma = 1.014$ mho/m; $\epsilon_r = 52.551$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 2.380 mW/g m

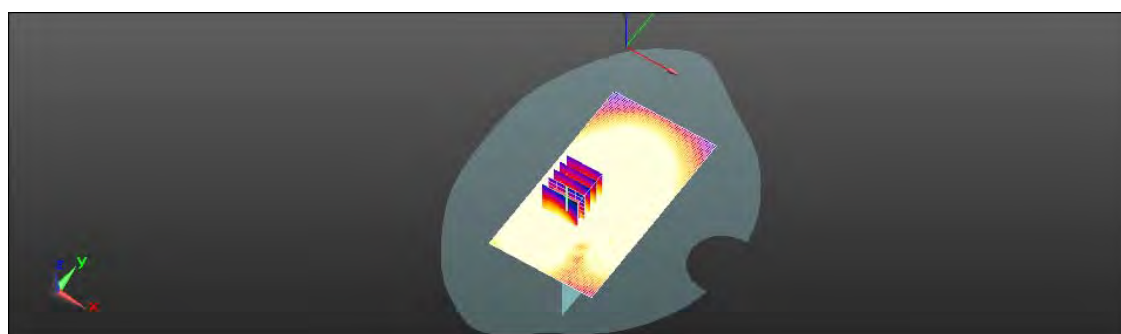
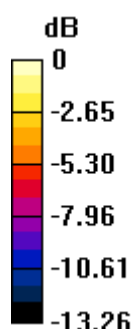
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.161 V/m; Power Drift = -0.11dB

Peak SAR (extrapolated) = 0.2670

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.218 mW/g



0 dB = 0.220mW/g m = -13.15 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 3/1/2012

RE Cheek_WLAN802.11b_CH1

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2412 MHz

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.767$ mho/m; $\epsilon_r = 37.68$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of Total (interpolated) = 3.420 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

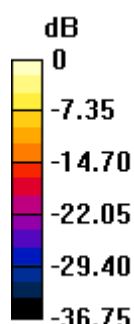
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 8.216 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.5770

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.385 mW/g



0 dB = 0.390mW/g m = -8.18 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

RE Cheek_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.797 \text{ mho/m}$; $\epsilon_r = 37.68$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 3.463 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

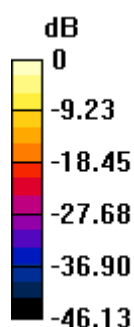
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.190 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.5600

SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.103 mW/g

Maximum value of SAR (measured) = 0.390 mW/g



0 dB = 0.390mW/g m = -8.18 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

RE Cheek_WLAN802.11b_CH11

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.82 \text{ mho/m}$; $\epsilon_r = 37.632$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 5.684 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

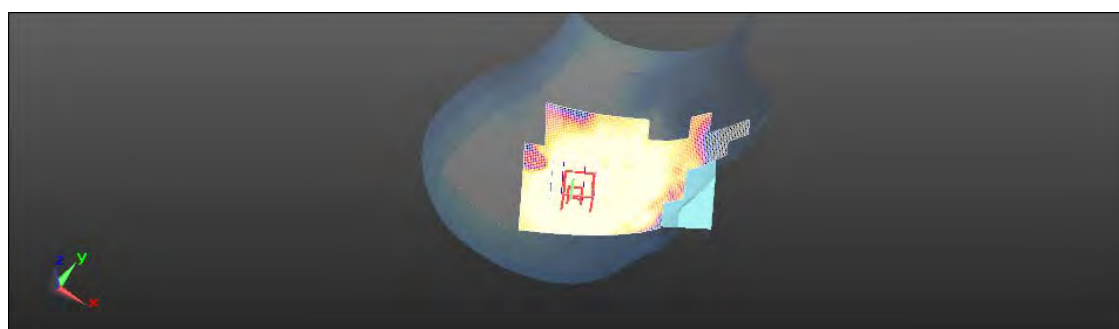
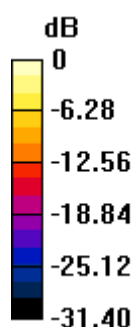
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.088 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.0420

SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.169 mW/g

Maximum value of SAR (measured) = 0.681 mW/g



0 dB = 0.680mW/g m = -3.35 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

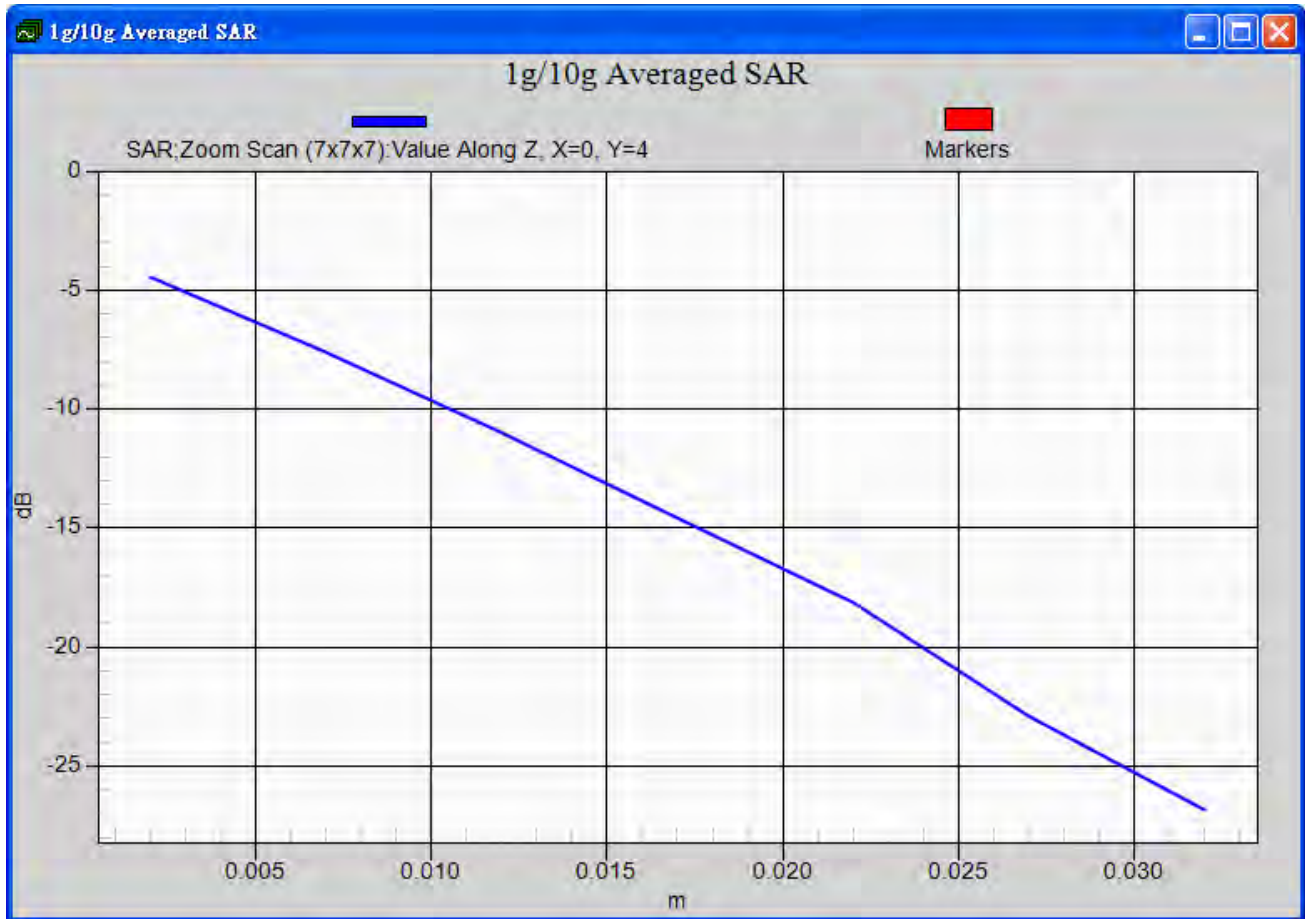
台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw



This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 3/1/2012

RE Cheek_WLAN802.11b_CH11_repeated with external Memory card inside

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.82 \text{ mho/m}$; $\epsilon_r = 37.632$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 4.076 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

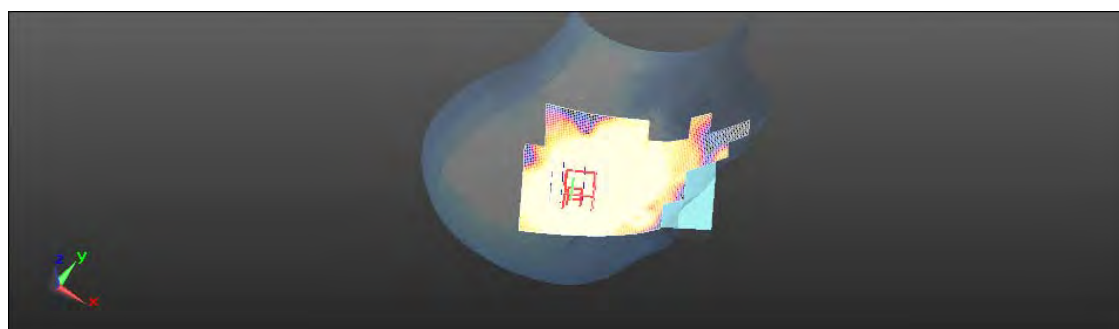
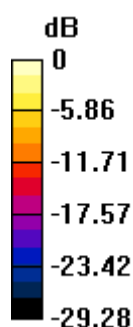
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.055 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.8720

SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.567 mW/g



0 dB = 0.570mW/g m = -4.88 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

RE Cheek_WLAN802.11b_CH11_repeated with Bluetooth active

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.82 \text{ mho/m}$; $\epsilon_r = 37.632$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 5.327 mW/g m

Configuration/RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

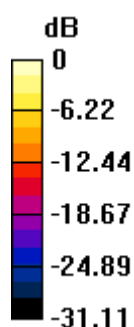
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.221 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.0180

SAR(1 g) = 0.376 mW/g; SAR(10 g) = 0.165 mW/g

Maximum value of SAR (measured) = 0.662 mW/g



0 dB = 0.660mW/g m = -3.61 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

RE Tilt_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.797 \text{ mho/m}$; $\epsilon_r = 37.68$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/RE Tilt/Area Scan (71x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 2.073 mW/g m

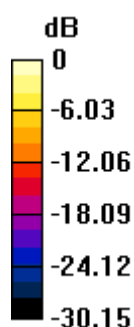
Configuration/RE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.583 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.3740

SAR(1 g) = 0.146 mW/g; SAR(10 g) = 0.068 mW/g

Maximum value of SAR (measured) = 0.225 mW/g



0 dB = 0.230mW/g m = -12.77 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

LE Cheek_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.797 \text{ mho/m}$; $\epsilon_r = 37.68$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Cheek/Area Scan (71x111x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 3.762 mW/g m

Configuration/LE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.479 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.2730

SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.065 mW/g

Maximum value of SAR (measured) = 0.177 mW/g



0 dB = 0.180mW/g m = -14.89 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

LE Tilt_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.797$ mho/m; $\epsilon_r = 37.68$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/LE Tilt/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 2.709 mW/g m

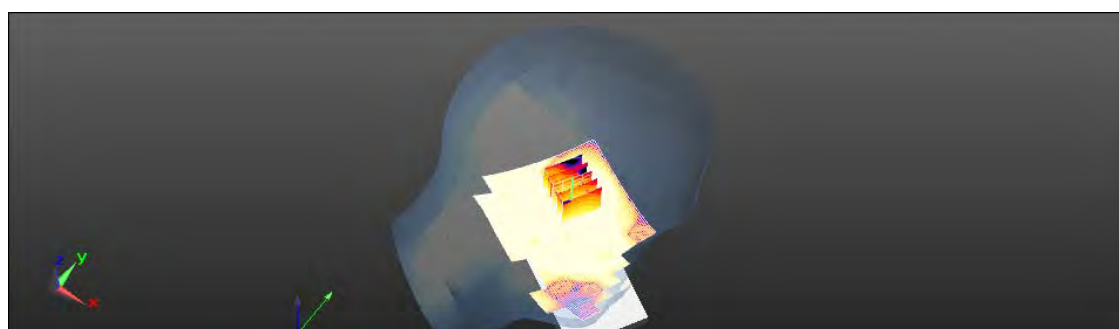
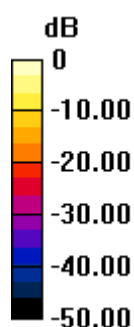
Configuration/LE Tilt/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.251 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.2320

SAR(1 g) = 0.118 mW/g; SAR(10 g) = 0.056 mW/g

Maximum value of SAR (measured) = 0.174 mW/g



0 dB = 0.170mW/g m = -15.39 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Front side_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz
Medium parameters used: $f = 2437$ MHz; $\sigma = 1.864$ mho/m; $\epsilon_r = 49.552$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 1.149 mW/g m

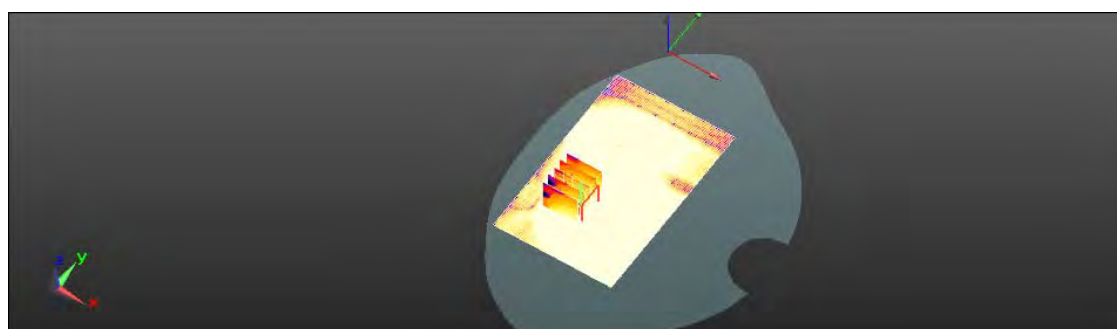
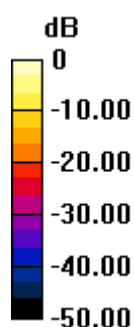
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.749 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.1240

SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.095 mW/g



0 dB = 0.090mW/g m = -20.92 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 3/1/2012

Hotspot_Back side_WLAN802.11b_CH1

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2412 MHz

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.828$ mho/m; $\epsilon_r = 49.582$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of Total (interpolated) = 1.052 mW/g m

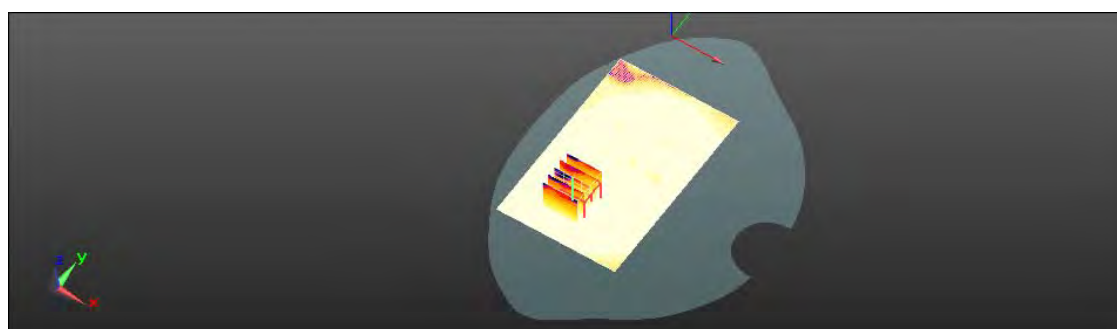
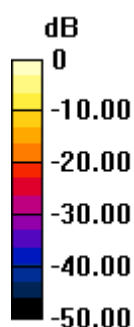
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.817 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.1660

SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.044 mW/g

Maximum value of SAR (measured) = 0.121 mW/g



0 dB = 0.120mW/g m = -18.42 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Back side_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.864 \text{ mho/m}$; $\epsilon_r = 49.552$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (71x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 0.922 mW/g m

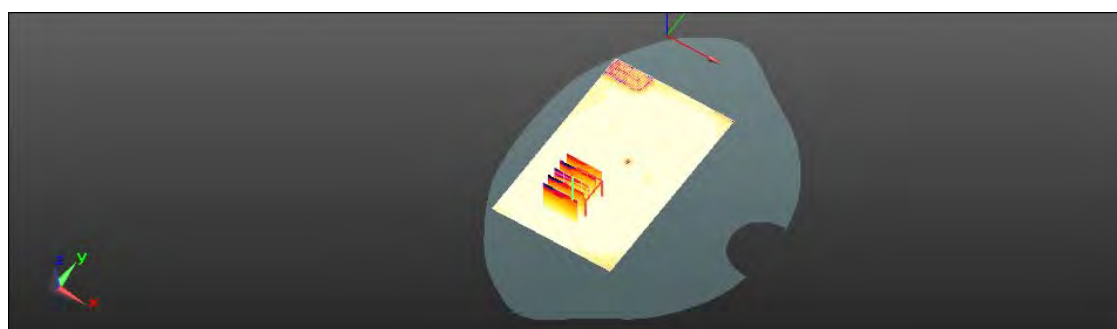
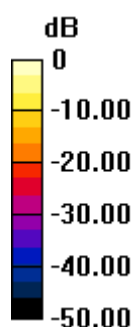
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.809 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.1440

SAR(1 g) = 0.072 mW/g ; SAR(10 g) = 0.040 mW/g

Maximum value of SAR (measured) = 0.105 mW/g



$0 \text{ dB} = 0.110 \text{ mW/g m} = -19.17 \text{ dB mW/g m}$

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Back side_WLAN802.11b_CH11

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.895 \text{ mho/m}$; $\epsilon_r = 49.502$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (71x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 0.994 mW/g m

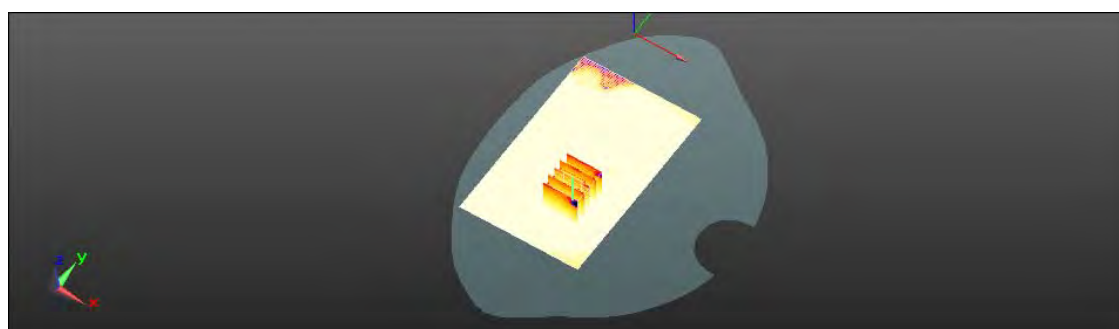
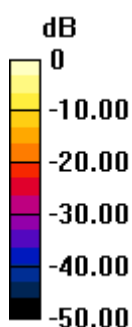
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.058 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.1480

SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.047 mW/g

Maximum value of SAR (measured) = 0.111 mW/g



0 dB = 0.110mW/g m = -19.17 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Back side_WLAN802.11b_CH11_repeated with external Memory card inside

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.895 \text{ mho/m}$; $\epsilon_r = 49.502$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (71x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 1.394 mW/g m

Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.159 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.1980

SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.049 mW/g

Maximum value of SAR (measured) = 0.143 mW/g



0 dB = 0.140mW/g m = -17.08 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

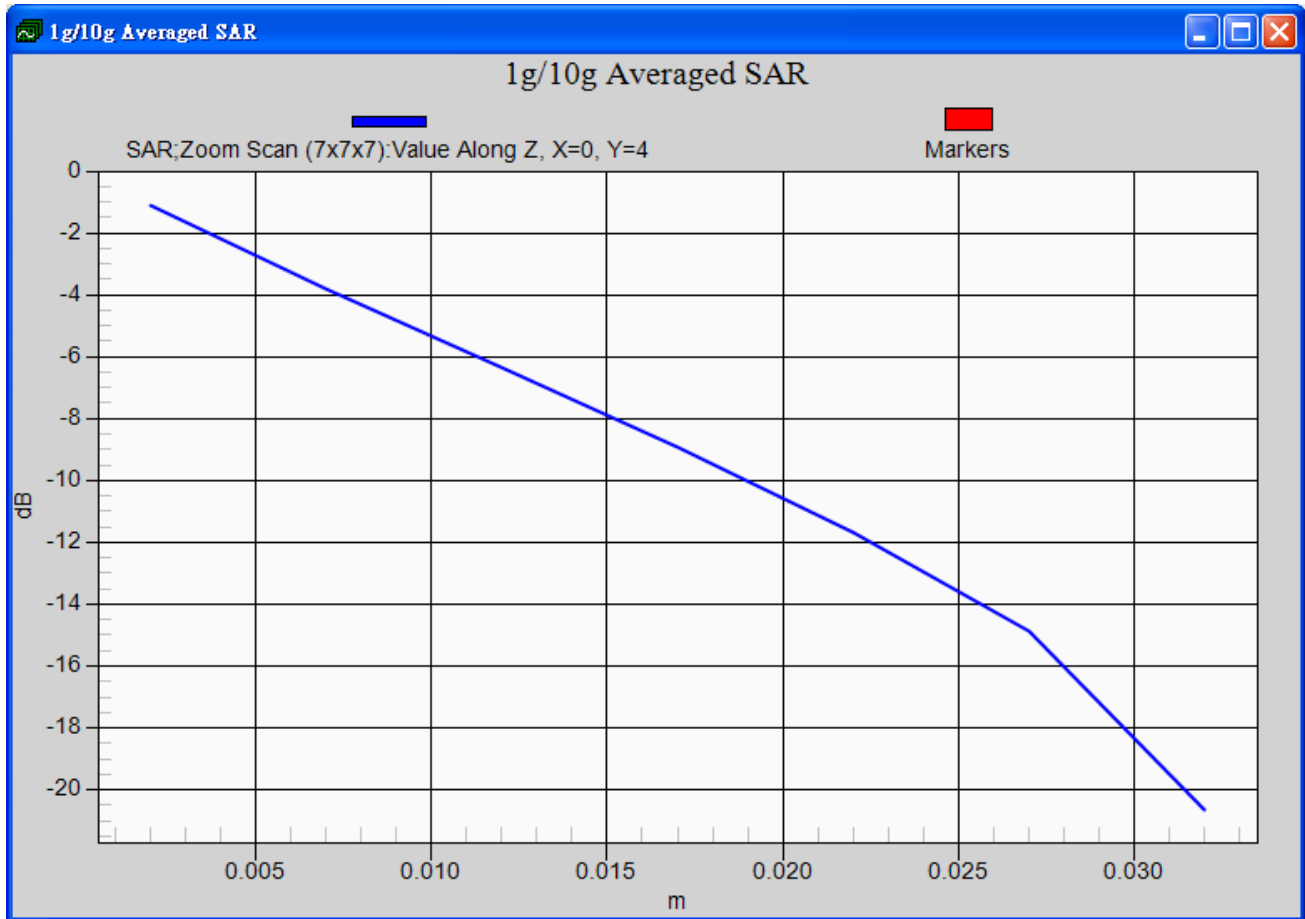
台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw



This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Date: 3/1/2012

Hotspot_Back side_WLAN802.11b_CH11_repeated with Bluetooth active

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.895 \text{ mho/m}$; $\epsilon_r = 49.502$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (71x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 1.182 mW/g m

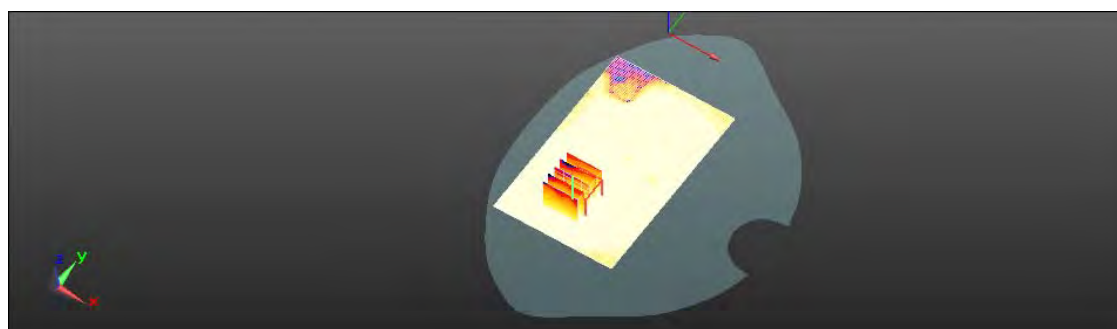
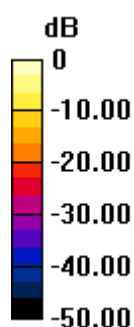
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.412 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.1900

SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.048 mW/g

Maximum value of SAR (measured) = 0.138 mW/g



0 dB = 0.140mW/g m = -17.08 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Back side_WLAN802.11b_CH11_repeated with headset

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.895 \text{ mho/m}$; $\epsilon_r = 49.502$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (71x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 1.277 mW/g m

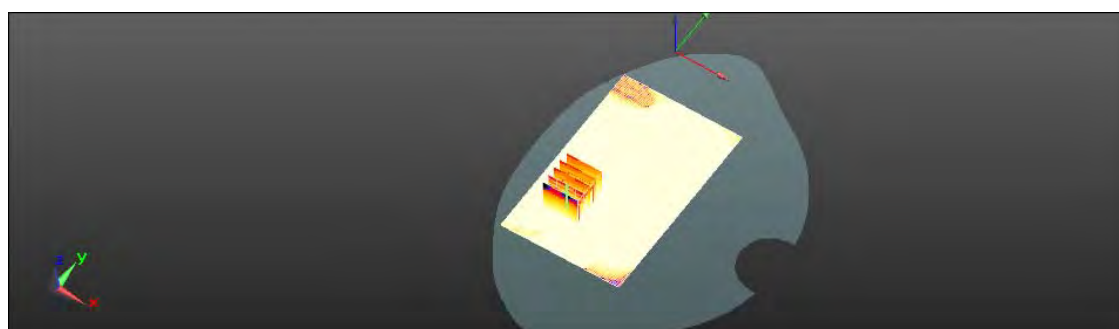
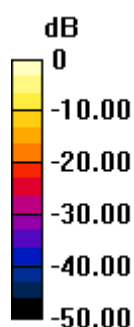
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.731 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.1770

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.124 mW/g



0 dB = 0.120mW/g m = -18.42 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Top side_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.864 \text{ mho/m}$; $\epsilon_r = 49.552$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x91x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 0.438 mW/g m

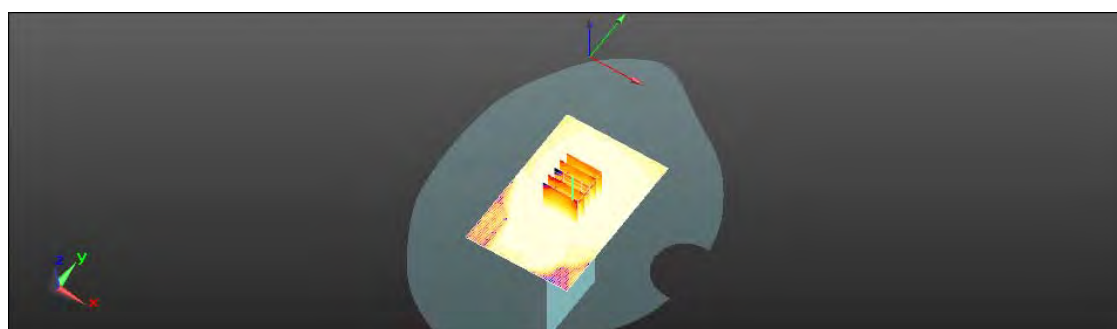
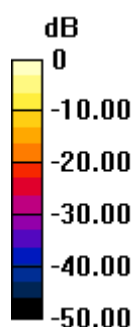
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.766 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.0850

SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.063 mW/g



0 dB = 0.060mW/g m = -24.44 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Right side_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.864$ mho/m; $\epsilon_r = 49.552$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 0.179 mW/g m

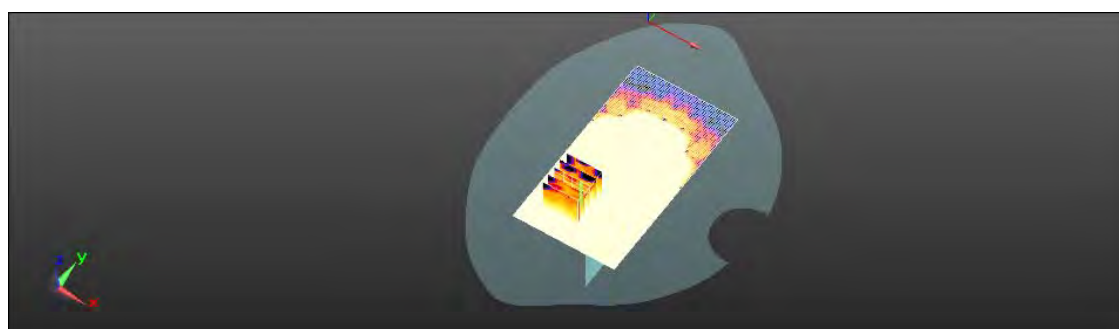
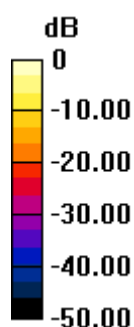
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.989 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.0300

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00725 mW/g

Maximum value of SAR (measured) = 0.022 mW/g



0 dB = 0.020mW/g m = -33.98 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Hotspot_Left side_WLAN802.11b_CH6

Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.864 \text{ mho/m}$; $\epsilon_r = 49.552$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/Body/Area Scan (61x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 0.582 mW/g m

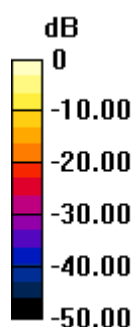
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.294 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.0850

SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.063 mW/g



0 dB = 0.060mW/g m = -24.44 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

5. System Verification

Date: 2/28/2012

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.898 \text{ mho/m}$; $\epsilon_r = 41.066$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration / d=15mm, Pin=250mW, dist=2mm: Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 22.792 mW/g m

Configuration / d=15mm, Pin=250mW, dist=2mm: Measurement grid:

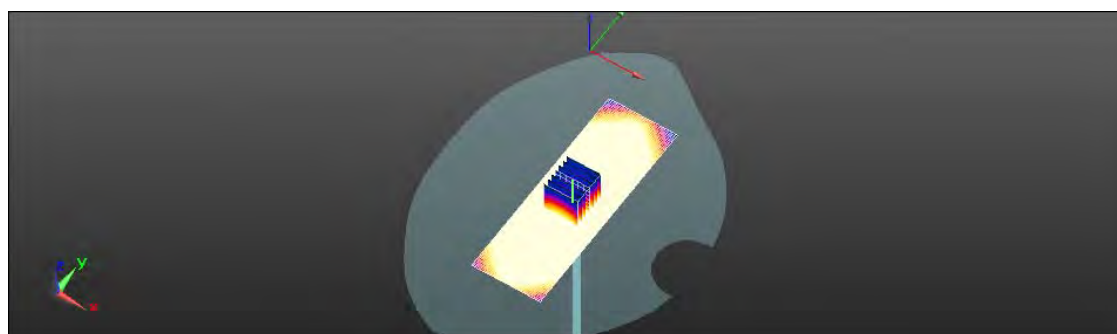
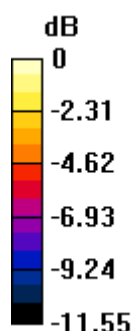
dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.851 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 3.7410

SAR(1 g) = 2.38 mW/g; SAR(10 g) = 1.51 mW/g

Maximum value of SAR (measured) = 3.087 mW/g



0 dB = 3.090mW/g m = 9.80 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/28/2012

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 1.012 \text{ mho/m}$; $\epsilon_r = 52.57$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(9.21, 9.21, 9.21); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASYS2, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration / d=15mm, Pin=250mW, dist=2mm: Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 23.627 mW/g m

Configuration / d=15mm, Pin=250mW, dist=2mm: Measurement grid:

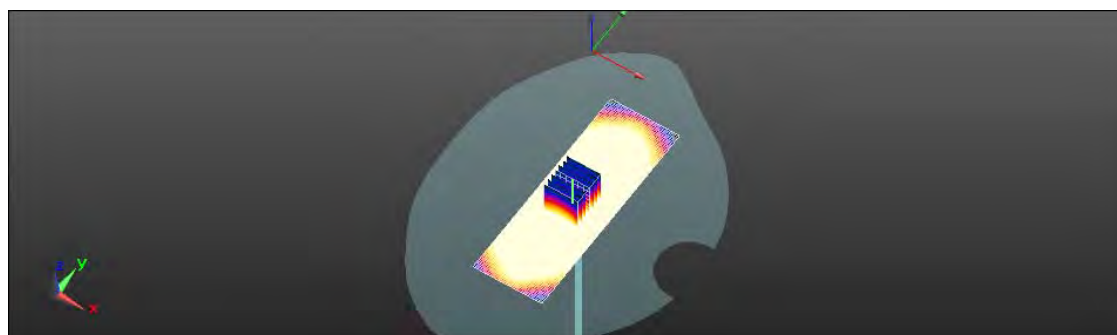
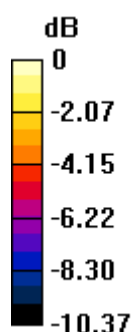
dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.550 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 3.6380

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 3.087 mW/g



0 dB = 3.090mW/g m = 9.80 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.402$ mho/m; $\epsilon_r = 38.156$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.6, 7.6, 7.6); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASYS2, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/d=10mm, Pin=250mW, dist=2mm: Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 69.427 mW/g m

Configuration/d=10mm, Pin=250mW, dist=2mm: Measurement grid:

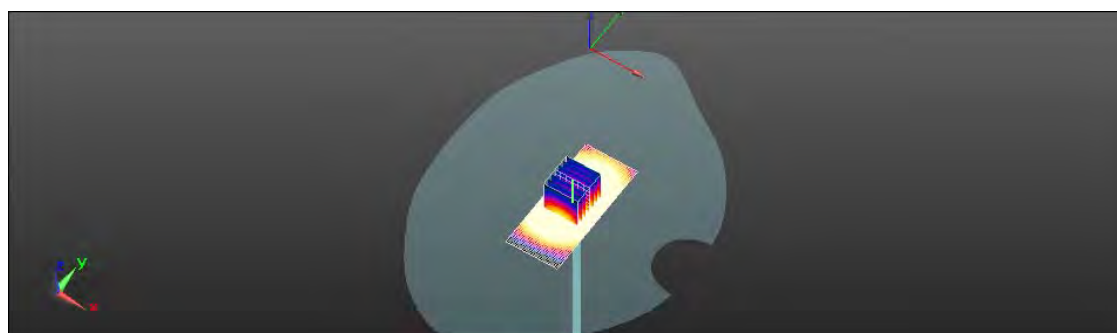
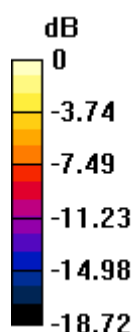
dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.3 V/m; Power Drift = -0.0028 dB

Peak SAR (extrapolated) = 18.4270

SAR(1 g) = 9.6 mW/g; SAR(10 g) = 4.9 mW/g

Maximum value of SAR (measured) = 14.061 mW/g



0 dB = 14.060mW/g m = 22.96 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 2/29/2012

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.516 \text{ mho/m}$; $\epsilon_r = 51.695$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.14, 7.14, 7.14); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASYS2, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration / d=10mm, Pin=250mW, dist=2mm: Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 89.546 mW/g m

Configuration / d=10mm, Pin=250mW, dist=2mm: Measurement grid:

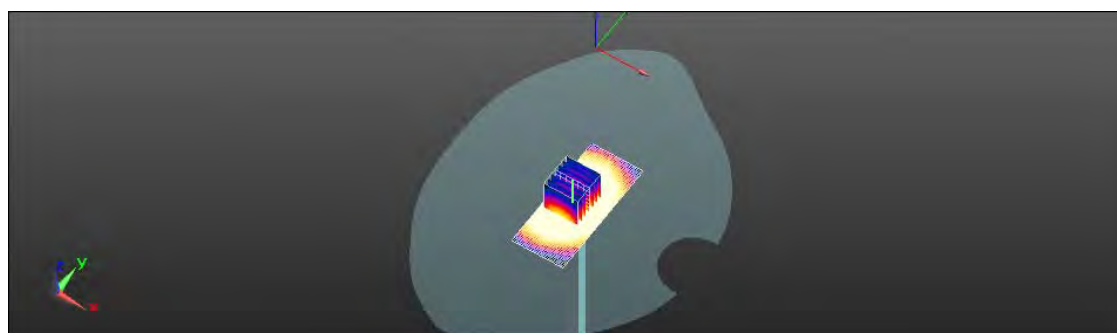
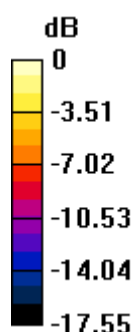
dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.822 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 18.9120

SAR(1 g) = 9.45 mW/g; SAR(10 g) = 4.94 mW/g

Maximum value of SAR (measured) = 15.161 mW/g



0 dB = 15.160mW/g m = 23.39 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.809 \text{ mho/m}$; $\epsilon_r = 37.668$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.81, 6.81, 6.81); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASYS2, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/d=10mm, Pin=250mW, dist=2mm: Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of Total (interpolated) = 82.153 mW/g m

Configuration/d=10mm, Pin=250mW, dist=2mm: Measurement grid:

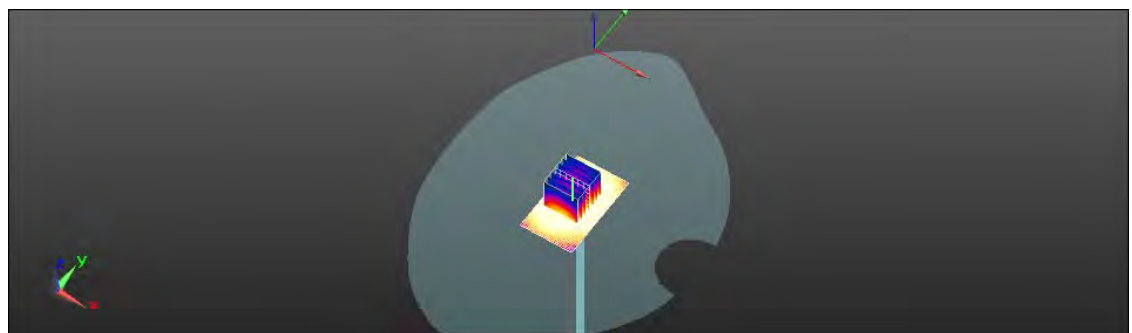
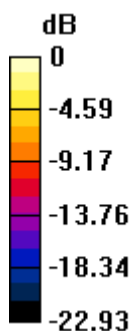
$dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 107.1 V/m ; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 29.6620

SAR(1 g) = 13.8 mW/g ; SAR(10 g) = 6.22 mW/g

Maximum value of SAR (measured) = 21.148 mW/g



0 dB = $21.150\text{mW/g m} = 26.51 \text{ dB mW/g m}$

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

Date: 3/1/2012

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.881$ mho/m; $\epsilon_r = 49.529$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.79, 6.79, 6.79); Calibrated: 7/11/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/18/2011
- Phantom: SAM2; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Configuration/d=10mm, Pin=250mW, dist=2mm: Measurement grid:

dx=15mm, dy=15mm

Maximum value of Total (interpolated) = 85.888 mW/g m

Configuration/d=10mm, Pin=250mW, dist=2mm: Measurement grid:

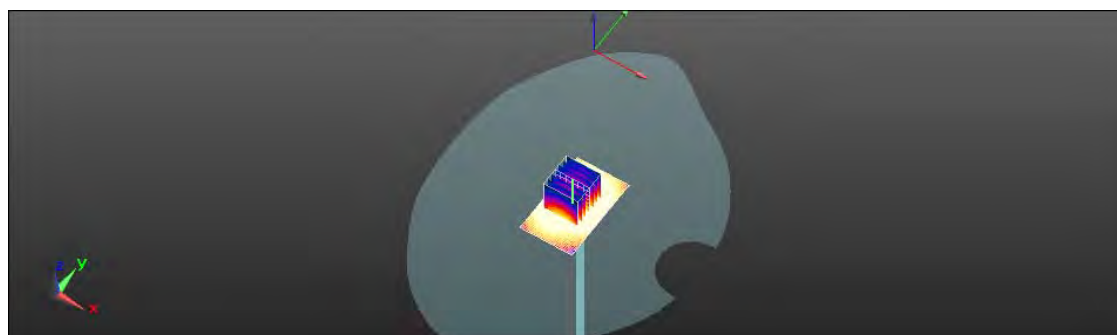
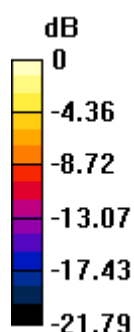
dx=5mm, dy=5mm, dz=5mm

Reference Value = 103.4 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 26.5100

SAR(1 g) = 12.7 mW/g; SAR(10 g) = 5.88 mW/g

Maximum value of SAR (measured) = 19.212 mW/g



0 dB = 19.210mW/g m = 25.67 dB mW/g m

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

6. DAE & Probe Calibration certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
S Service suisse d'étalonnage
S Servizio svizzero di taratura
S 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

Accreditation No.: SCS 108

Client **SGS-TW (Auden)**

Certificate No: DAE4-856_May11

CALIBRATION CERTIFICATE

Object **DAE4 - SD 000 D04 BJ - SN: 856**

Calibration procedure(s) **QA CAL-06.v23
Calibration procedure for the data acquisition electronics (DAE)**

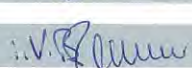
Calibration date: **May 18, 2011**

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)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	28-Sep-10 (No:10376)	Sep-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Calibrator Box V1.1	SE UMS 006 AB 1004	07-Jun-10 (in house check)	In house check: Jun-11

Calibrated by:	Name Dominique Steffen	Function Technician	Signature 
Approved by:	Fin Bornholt	R&D Director	

Issued: May 18, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: DAE4-856_May11

Page 1 of 5

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S 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

Accreditation No.: SCS 108

Client

ALBA

Certificate No: EX3-3801_Jul11

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:3801

Calibration procedure(s) QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4
Calibration procedure for dosimetric E-field probes

Calibration date: July 11, 2011

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)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41498087	31-Mar-11 (No. 217-01372)	Apr-12
Reference 3 dB Attenuator	SN: S5054 (3c)	29-Mar-11 (No. 217-01369)	Apr-12
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	3-May-11 (No. DAE4-654_May11)	May-12
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: Jelen Kastrati Laboratory Technician
Approved by: Kaja Pokovic Technical Manager
Issued: July 21, 2011
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: EX3-3801_Jul11

Page 1 of 11

Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S 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
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- 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:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,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 characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; VR_{x,y,z}**: A, B, C 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 $f \leq 800$ 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 NORM_{x,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 (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.

EX3DV4 – SN:3801

July 11, 2011

Probe EX3DV4

SN:3801

Manufactured: April 5, 2011

Calibrated: July 11, 2011

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

EX3DV4- SN:3801

July 11, 2011

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3801

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.57	0.59	0.52	$\pm 10.1 \%$
DCP (mV) ^B	99.7	97.1	99.1	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc ^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	127.3	$\pm 3.0 \%$
			Y	0.00	0.00	1.00	124.0	
			Z	0.00	0.00	1.00	121.2	

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%.

^A The uncertainties of NormX,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter; uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

EX3DV4- SN:3801

July 11, 2011

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3801

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	Depth (mm)	Unct. (k=2)
750	41.9	0.89	9.28	9.28	9.28	0.80	0.66	± 12.0 %
835	41.5	0.90	9.00	9.00	9.00	0.80	0.64	± 12.0 %
900	41.5	0.97	8.72	8.72	8.72	0.78	0.69	± 12.0 %
1750	40.1	1.37	7.92	7.92	7.92	0.80	0.62	± 12.0 %
1900	40.0	1.40	7.60	7.60	7.60	0.80	0.63	± 12.0 %
2000	40.0	1.40	7.55	7.55	7.55	0.80	0.50	± 12.0 %
2450	39.2	1.80	6.81	6.81	6.81	0.80	0.63	± 12.0 %

^C Frequency validity 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.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

EX3DV4- SN:3801

July 11, 2011

DASY/EASY - Parameters of Probe: EX3DV4- SN:3801

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	9.59	9.59	9.59	0.18	1.23	± 12.0 %
835	55.2	0.97	9.21	9.21	9.21	0.22	1.15	± 12.0 %
900	55.0	1.05	9.04	9.04	9.04	0.26	0.82	± 12.0 %
1750	53.4	1.49	7.63	7.63	7.63	0.80	0.70	± 12.0 %
1900	53.3	1.52	7.14	7.14	7.14	0.80	0.67	± 12.0 %
2000	53.3	1.52	7.28	7.28	7.28	0.80	0.66	± 12.0 %
2450	52.7	1.95	6.79	6.79	6.79	0.80	0.61	± 12.0 %

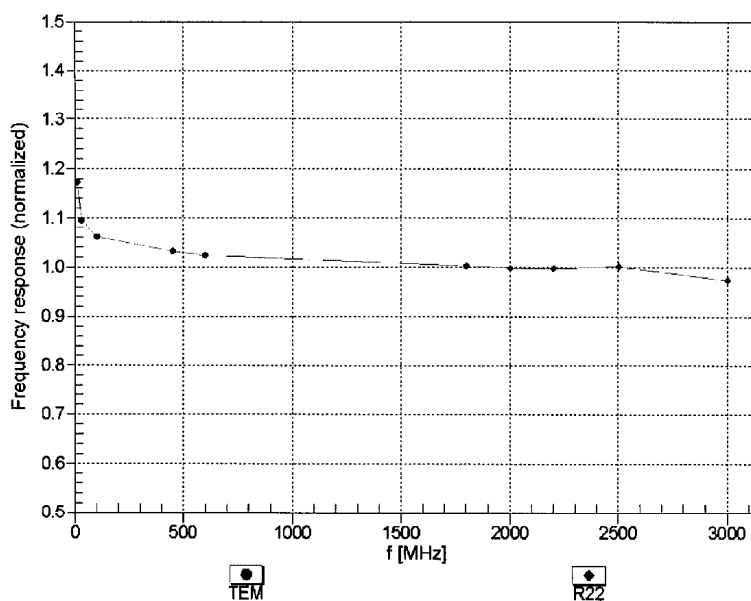
^c Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

EX3DV4-SN:3801

July 11, 2011

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

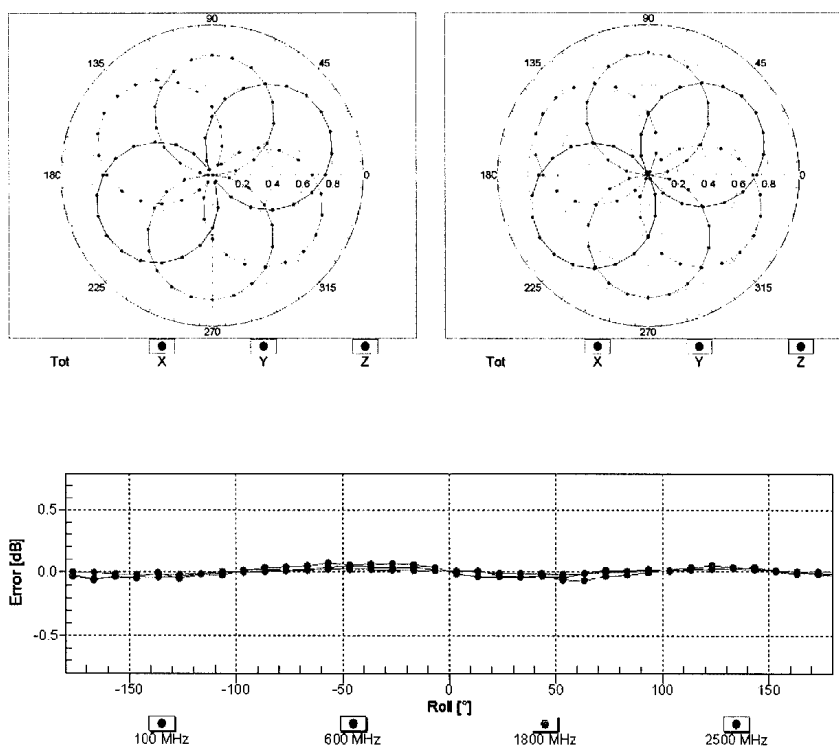
EX3DV4-SN:3801

July 11, 2011

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

f=1800 MHz,R22

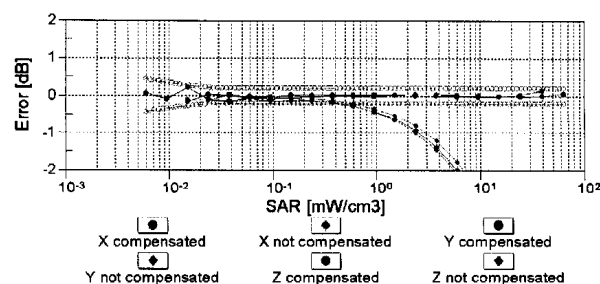
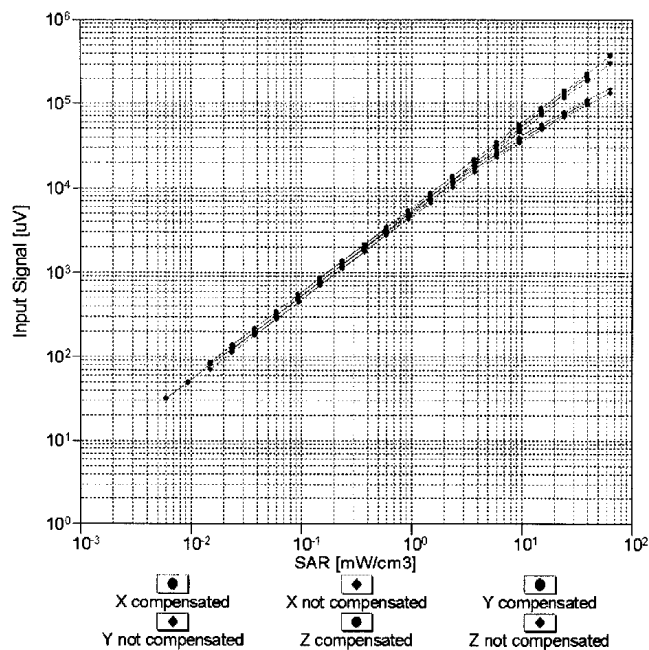


Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

EX3DV4- SN:3801

July 11, 2011

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f = 900 \text{ MHz}$)

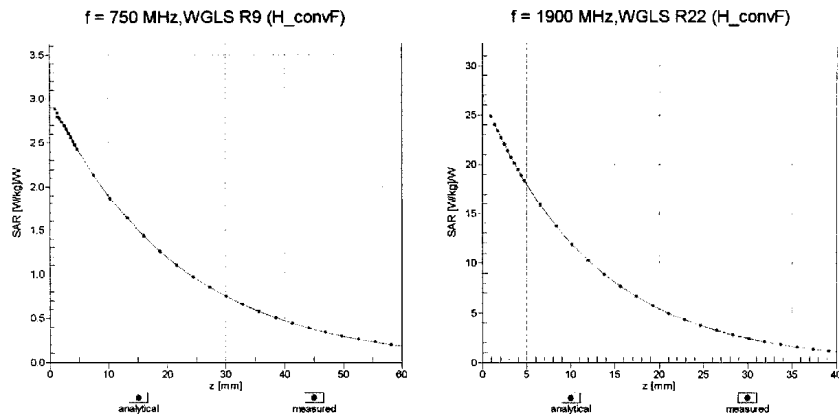


Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

EX3DV4-SN:3801

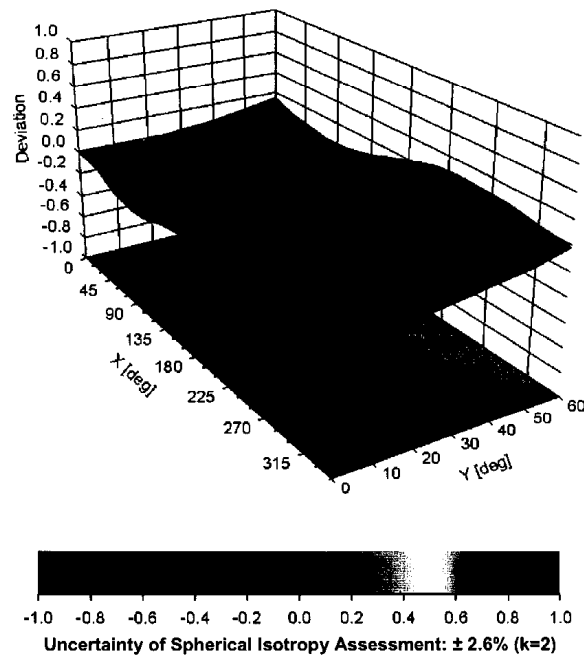
July 11, 2011

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ , θ), $f = 900 \text{ MHz}$



EX3DV4- SN:3801

July 11, 2011

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3801

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
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

7. Uncertainty Budget

Measurement Uncertainty evaluation template for DUT SAR test
IEEE 1528

A	c	D	e	f	g	$h=c * f / e$	$i=c * g / e$	k
Source of Uncertainty	Tolerance/ Uncertainty %	Probability Distribution	Div	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system								
Probe calibration (Frequency below 2GHz)	6.0%	N	1	1	1	6.0%	6.0%	∞
<i>Isotropy, Axial</i>	4.7%	R	$\sqrt{3}$	1	1	2.7%	2.7%	∞
<i>Isotropy, Hemispherical</i>	9.6%	R	$\sqrt{3}$	1	1	5.5%	5.5%	∞
Boundary Effect	1.0%	R	$\sqrt{3}$	1	1	0.6%	0.6%	∞
Linearity	4.7%	R	$\sqrt{3}$	1	1	2.7%	2.7%	∞
Detection Limits	1.0%	R	$\sqrt{3}$	1	1	0.6%	0.6%	∞
Readout Electronics	0.3%	N	1	1	1	0.3%	0.3%	∞
Response time	0.8%	R	$\sqrt{3}$	1	1	0.5%	0.5%	∞
Integration Time	2.6%	R	$\sqrt{3}$	1	1	1.5%	1.5%	∞
<i>Measurement drift (class A evaluation)</i>	1.8%	R	$\sqrt{3}$	1	1	1.0%	1.0%	∞
RF ambient condition - noise	3.0%	R	$\sqrt{3}$	1	1	1.7%	1.7%	∞
RF ambient conditions -reflections	3.0%	R	$\sqrt{3}$	1	1	1.7%	1.7%	∞
Probe positioner Mechanical restrictions	0.4%	R	$\sqrt{3}$	1	1	0.2%	0.2%	∞
Probe Positioning with respect to phantom	2.9%	R	$\sqrt{3}$	1	1	1.7%	1.7%	∞
Post-processing	1.0%	R	$\sqrt{3}$	1	1	0.6%	0.6%	∞
Max SAR Eval	1.0%	R	$\sqrt{3}$	1	1	0.6%	0.6%	∞
Test Sample related								
Test sample	2.9%	N	1	1	1	2.9%	2.9%	M-1
Device Holder Uncertainty	3.6%	N	1	1	1	3.6%	3.6%	M-1
Drift of output power	5.0%	R	$\sqrt{3}$	1	1	2.9%	2.9%	∞
Phantom and Setup								
Phantom Uncertainty	4.0%	R	$\sqrt{3}$	1	1	2.3%	2.3%	∞
Liquid conductivity(meas.) Max at 1900 band	4.6%	N	1	0.64	0.43	2.9%	2.0%	M
Liquid permittivity(meas.) Max at 835 band	2.2%	N	1	0.6	0.49	1.3%	1.1%	M
Combined standard uncertainty		RSS				11.9%	11.6%	
Expan uncertainty (95% confidence interval), K=2						23.7%	23.3%	

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

8. Phantom description

Schenck & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland Phone +41 1 245 9700, Fax +41 1 245 9779 info@speag.com, http://www.speag.com		s p e a g	
Certificate of Conformity / First Article Inspection			
Item	SAM Twin Phantom V4.0		
Type No.	QD 000 P40 C		
Series No.	TP-1150 and higher		
Manufacturer	SPEAG Zeughausstrasse 43 CH-8004 Zurich Switzerland		
Tests The series production process used allows the limitation to test of first articles. Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series items (called samples) or are tested at each item.			
Test	Requirement	Details	Units tested
Dimensions	Compliant with the geometry according to the CAD model.	IT/IS CAD File (*)	First article, Samples
Material thickness of shell	Compliant with the requirements according to the standards	2mm +/- 0.2mm in flat and specific areas of head section	First article, Samples, TP-1314 ff.
Material thickness at ERP	Compliant with the requirements according to the standards	6mm +/- 0.2mm at ERP	First article, All items
Material parameters	Dielectric parameters for required frequencies	300 MHz – 6 GHz: Relative permittivity < 5, Loss tangent < 0.05	Material samples
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards if handled and cleaned according to the instructions. Observe technical Note for material compatibility.	DEGMBE based simulating liquids	Pre-series, First article, Material samples
Sagging	Compliant with the requirements according to the standards. Sagging of the flat section when filled with tissue simulating liquid.	< 1% typical < 0.8% if filled with 156mm of HSL900 and without DUT below	Prototypes, Sample testing
Standards [1] CENELEC EN 50361 [2] IEEE Std 1528-2003 [3] IEC 62209 Part 1 [4] FCC OET Bulletin 65, Supplement C, Edition 01-01 (*) The IT/IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of the other documents.			
Conformity Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standards [1] to [4].			
Date	07.07.2005		
Signature / Stamp	s p e a g Schenck & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland Phone +41 1 245 9700, Fax +41 1 245 9779 info@speag.com, http://www.speag.com		
Doc No. 881 - QD 000 P40 C - F		Page 1 (1)	

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

9. System Validation from Original equipment supplier

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S 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

Accreditation No.: SCS 108

Client **SGS-TW (Auden)**

Certificate No: D835V2-4d063_May11

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 4d063**

Calibration procedure(s) **QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz**

Calibration date: **May 25, 2011**

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)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by:	Name Claudio Leubler	Function Laboratory Technician	Signature
Approved by:	Katja Pokovic	Technical Manager	

Issued: May 25, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D835V2-4d063_May11

Page 1 of 8

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw

DASY5 Validation Report for Head TSL

Date: 25.05.2011

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL900

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ mho/m}$; $\epsilon_r = 40.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.07, 6.07, 6.07); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Cube 0:

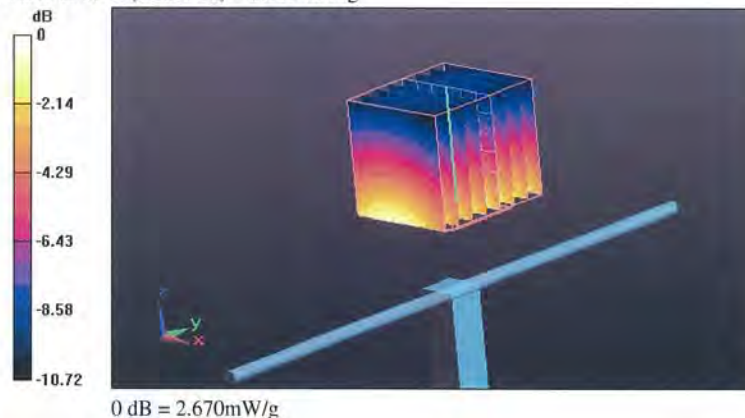
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.554 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.427 W/kg

SAR(1 g) = 2.31 mW/g; SAR(10 g) = 1.52 mW/g

Maximum value of SAR (measured) = 2.669 mW/g



DASY5 Validation Report for Body TSL

Date: 25.05.2011

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d063

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: MSL900

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 1 \text{ mho/m}$; $\epsilon_r = 53.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.02, 6.02, 6.02); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Cube 0:

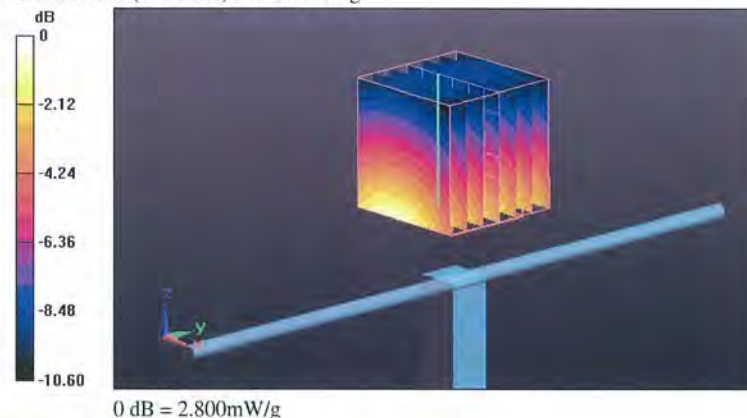
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.297 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 3.530 W/kg

SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 2.804 mW/g



Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S 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

Accreditation No.: SCS 108

Client **SGS TW (Auden)**

Certificate No: D1900V2-5d027_Apr11

CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 5d027**

Calibration procedure(s) **QA CAL-05.v8
Calibration procedure for dipole validation kits**

Calibration date: **April 19, 2011**

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)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: 5086 (20g)	29-Mar-11 (No. 217-01368)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: **Name** **Function** **Signature**
Claudio Leubler Laboratory Technician

Approved by: **Name** **Function**
Katja Pokovic Technical Manager

Issued: April 19, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D1900V2-5d027_Apr11

Page 1 of 9

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

DASY5 Validation Report for Head TSL

Date/Time: 18.04.2011 15:27:22

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL U12 BB

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 39$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.09, 5.09, 5.09); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.2 Build (2829)

Pin=250 mW, Cube 0:

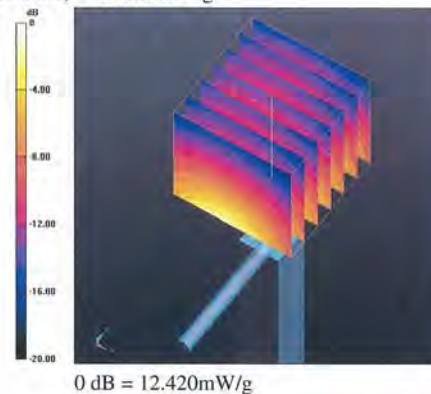
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 97.235 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 18.650 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.26 mW/g

Maximum value of SAR (measured) = 12.424 mW/g



DASY5 Validation Report for Body TSL

Date/Time: 19.04.2011 12:53:51

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: MSL U12 BB

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 51.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.59, 4.59, 4.59); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.2 Build (2829)

Pin=250 mW, Cube 0:

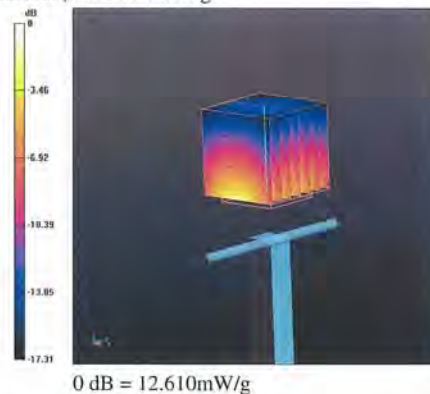
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 96.170 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.156 W/kg

SAR(1 g) = 9.93 mW/g; SAR(10 g) = 5.18 mW/g

Maximum value of SAR (measured) = 12.615 mW/g



Calibration Laboratory of
Schmid & Partner
Engineering AG
 Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
S Service suisse d'étalonnage
C Servizio svizzero di taratura
S 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

Accreditation No.: **SCS 108**

Client **SGS TW (Auden)**

Certificate No: **D2450V2- 727_Apr11**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 727**

Calibration procedure(s) **QA CAL-05.v8**
 Calibration procedure for dipole validation kits

Calibration date: **April 19, 2011**

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 $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: 5086 (20g)	29-Mar-11 (No. 217-01368)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: **Claudio Leubler** Laboratory Technician

Approved by: **Katja Pokovic** Technical Manager

Issued: April 19, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D2450V2-727_Apr11

Page 1 of 9

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

DASY5 Validation Report for Head TSL

Date/Time: 18.04.2011 16:55:19

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL U12 BB

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.74 \text{ mho/m}$; $\epsilon_r = 38.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.53, 4.53, 4.53); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.2 Build (2829)

Pin=250 mW, Cube 0:

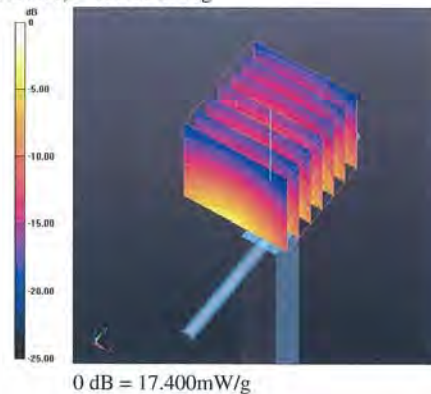
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 103.6 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 27.919 W/kg

SAR(1 g) = 13.7 mW/g; SAR(10 g) = 6.39 mW/g

Maximum value of SAR (measured) = 17.401 mW/g



DASY5 Validation Report for Body TSL

Date/Time: 19.04.2011 14:37:11

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: MSL U12 BB

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.91 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.31, 4.31, 4.31); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.2 Build (2829)

Pin=250 mW, Cube 0:

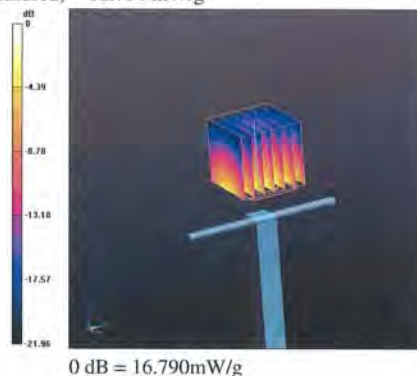
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 96.949 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 26.888 W/kg

SAR(1 g) = 12.7 mW/g; SAR(10 g) = 5.84 mW/g

Maximum value of SAR (measured) = 16.794 mW/g



End of 1st part of report

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at www.sgs.com. Attention is drawn to the limitations of liability, indemnification, and Jurisdictional issued defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，請注意此條款列印於背面，亦可在www.sgs.com中查閱。將本公司之義務，免責，管轄權皆明確規範之。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan. / 台北縣五股工業區五工路136之1號

t (886-2) 2299-3939

f (886-2) 2299-9489

www.sgs.com.tw