

SUPPLEMENTAL "UP LINK CARRIER AGGREGATION" TEST REPORT

CLASS II PC REPORT

Applicant: OF
Acer Incorporated
8F,88, Sec. 1, Hsin Tai Wu Rd. Hsichih, Taipei Hsien Taiwan

Product Name: 7c Modular Platform

Brand Name: acer

Model No.: QSIP7180

Model Difference: N/A

Report Number: ER/2020/C0100

FCC ID HLZQSIP7180

FCC Rule Part: 2, 22H & 24E & 27C

Issue Date: February 9, 2021

Date of Test: December 16, 2020 - February 2, 2021

Date of EUT Received: December 16, 2020

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.26-2015 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

The test results of this partial report relate only to the tested sample identified in this report.

Approved By:
Blue Yang / Asst. Manager

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

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

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

Revision History

Report Number	Revision	Description	Issue Date	Remark
ER/2020/C0100	Rev.00	Original.	February 9, 2021	Revised By: Elle Chang

Note:

1、Disclaimer

Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

Contents

1	GENERAL PRODUCT INFORMATION.....	4
2	SYSTEM TEST CONFIGURATION	7
3	SUMMARY OF TEST RESULTS.....	9
4	DESCRIPTION OF TEST MODES	10
5	MEASUREMENT UNCERTAINTY	12
6	MAXIMUM OUTPUT POWER.....	13
7	FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT	16

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

1 GENERAL PRODUCT INFORMATION

1.1 Product Description

General:

Product Name:	Notebook Computer
Brand Name:	<i>acer</i>
Model No. of Host:	N20Q8
Model Difference:	N/A
Hardware Version:	N/A
Software Version:	N/A
Model No. of WWAN/BT/WLAN Module:	QSIP7180
Class II Permissive change:	7c Modular Platform INSTALLED IN Notebook Computer
Power Supply:	11.25Vdc from Rechargeable Li-ion Battery or 5 / 9 / 12 / 15 / 20 Vdc from AC/DC Adapter

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

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

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

1.2 Operation Frequency Range

LTE Band	BW (MHz)	Operation Frequency (MHz)	
7	5	2502.5	- 2567.5
	10	2505.0	- 2565.0
	15	2507.5	- 2562.5
	20	2510.0	- 2560.0
38	5	2572.5	- 2617.5
	10	2575.0	- 2615.0
	15	2577.5	- 2612.5
	20	2580.0	- 2610.0
41	5	2498.5	- 2687.5
	10	2501.0	- 2685.0
	15	2503.5	- 2682.5
	20	2506.0	- 2680.0

1.3 Antenna Designation

Operating Frequency (MHz)		Antenna Type	Main Peak Gain (dBi)	Aux Peak Gain (dBi)
LTE-Band 7	2502.5 ~ 2567.5	PIFA	-2.97	-5.22
LTE-Band 38	2572.5 ~ 2617.5		-3.04	-4.74
LTE-Band 41	2498.5 ~ 2687.5		-2.97	-4.50

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

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

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

1.4 Test Methodology of Applied Standards

FCC 47 CFR Part 2, 22H, 24E, 27C.

ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System v03r01

1.5 Test Facility

SGS Taiwan Ltd. Central RF Lab (TAF code 3702)

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803

FCC Designation number: TW0027

1.6 Special Accessories

No special accessories were used during testing.

1.7 Equipment Modifications

There was no modifications incorporated into the EUT.

1.8 Radiated Emission Test Sites for Measurements from 9 kHz to 30 MHz

Radiated emission below 30MHz is measured in a 9m*9m*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

2 SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT (Transmitter) was operated in the continuous transmission mode employed with the simulator of the Base Station that fixates at test default channels to fix the Tx frequency which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Measurement at Antenna Port

The EUT is placed on a table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

2.3.2 Radiated Emissions (ERP/EIRP)

The EUT is placed on a turn table, for emission measurements below 1 GHz is 0.8 m above ground plane, for emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel-Conducted)

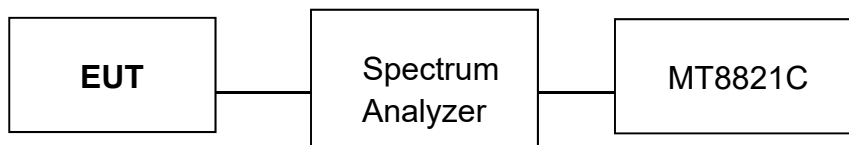


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)

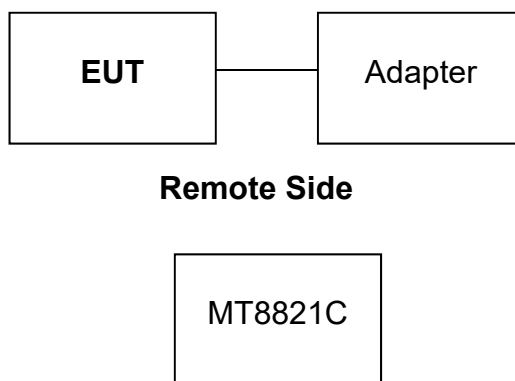


Table 2-1 Equipment Used in

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Radio Communication Analyzer	Anritsu	MT8821C	6262044670	shielded	Un-shielded

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

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

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

3 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a)	RF Power Output	Compliant
§22.913(a)(5) §24.232(c) §27.50(c)(10) §27.50(h)(2) §27.50(d)(4)	ERP/ EIRP measurement	Compliant
§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(m)(4)	Field Strength of Spurious Radiation	Compliant

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

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

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

4 DESCRIPTION OF TEST MODES

4.1 The Worst-Case Test Modes and Details

This device is Notebook Computer that supports with carrier aggregation (two carrier) uplink. Intra-Band contiguous specification as below:

E-UTRA Intra-Band CA configuration / Bandwidth combination set				
E-UTRA CA configuration	Component carriers in order of increasing carrier frequency		Maximum aggregated bandwidth [MHz]	Bandwidth combination set
	Channel bandwidth for carrier [MHz]	Channel bandwidth for carrier [MHz]		
CA_7C	15	15	40	0
	20	20		
	10	20		
	15	15,20	40	1
	20	10,15,20		
	15	10,15		
	20	15,20	40	2
CA_38C	5,10,15,20	20		
	20	5,10,15		
CA_41C	10	20	40	0
	15	15,20		
	20	10,15,20		
	5,10	20	40	1
	15	15,20		
	20	5,10,15,20		
	10	15,20	40	2
	15	10,15,20		
	20	10,15,20		
	10	20	40	3
	20	20		

Intra-Band Test Mode	Band	Description
2	7C	CA_PCC Ant0 Band 7_SCC Ant 0 Band 7
3	38C	CA_PCC Ant0 Band 38_SCC Ant 0 Band 38
4	41C	CA_PCC Ant0 Band 41_SCC Ant 0 Band 41

4.2 The Worst-Case Test Modes and Details

- Pre-Scan has been conducted to determine the worst-case mode from all possible positions of X(E1)Y(E2)Z(H) and NB axis for radiated emission. The worst case was found as NB plane as in normal use position.

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

4.2.1 Intra-Band

For uplink Intra-Band CA, evaluation has been done for contiguous and non-contiguous channel and bandwidth, configurations that generates highest output power in standalone transmission have been selected for the final test.

E-UTRA Band	Test Channel	Channel Band-width (MHz)	Modulation	Resource Block Allocation	
				RBs allocated	RB Start
7C	Mid	15+15	QPSK	Full	
38C	Mid	20+20	QPSK	Full	
41C	Mid	5+20	QPSK	Full	

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
RF Power Output	+/- 1 dB
ERP/ EIRP measurement	Vertical Polarization = +/- 3dB Horizontal Polarization = +/- 3dB
Temperature	+/- 0.4 °C
Humidity	+/- 3.5 %
DC / AC Power Source	DC= +/- 1%, AC= +/- 1%

Radiated Spurious Emission Measurement Uncertainty			
Polarization: Vertical	+/-	2.64 dB	9kHz~30MHz: +/- 2.3dB
	+/-	4.93 dB	30MHz - 1000MHz: +/- 3.37dB
	+/-	4.81 dB	1GHz - 18GHz: +/- 4.04dB
	+/-	4.52 dB	18GHz - 40GHz: +/- 4.04dB
Polarization: Horizontal	+/-	2.64 dB	9kHz~30MHz: +/- 2.3dB
	+/-	4.45 dB	30MHz - 1000MHz: +/- 4.22dB
	+/-	4.81 dB	1GHz - 18GHz: +/- 4.08dB
	+/-	4.52 dB	18GHz - 40GHz: +/- 4.08dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

6 MAXIMUM OUTPUT POWER

6.1 Standard Applicable

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals.

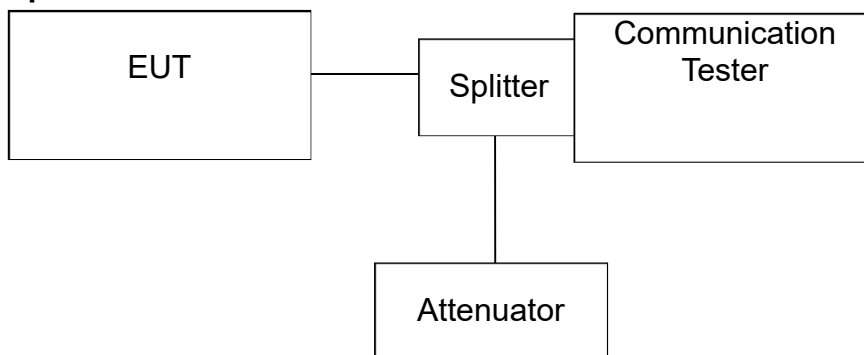
6.1.1 ERP/EIRP LIMIT

According to FCC §2.1046

FCC 27, 50(h)

(2) Mobile and other user stations transmitting in the BRS and EBS bands are limited to 2 W EIRP.

6.2 Test Set-up



Note: Measurement setup for testing on Antenna connector

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

6.3 Output Power Measurement Applicable Guidance

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading.

The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, (WCDMA/HSPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing, and KDB 971168 D01 Power Meas License Digital System as the supplemental test methodology to adjust the proper setting obtaining the measurement results.

All LTE bands conducted average power is obtained from the simulator telecommunication test set.

6.4 Determining ERP and/or EIRP from conducted RF output power measurements

According to KDB 412172 D01 Power Approach,

$$EIRP = P_T + G_T - L_C,$$

$$ERP = EIRP - 2.15,$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power (expressed in the same units as P_T , typically dBW, dBm, or power spectral density (PSD)²), relative to either a dipole antenna (ERP) or an isotropic antenna (EIRP);

P_T = transmitter output power, expressed in dBW, dBm, or PSD;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

6.5 Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Radio Communication Analyzer	Anritsu	MT8821C	6262044670	08/06/2020	08/05/2021

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

6.6 LTE Measurement Results:

6.6.1 Intra-Band

Antenna gain (dBi)							-2.97																				
First Band							Second Band							Power(dBm)							EIRP		Margin				
Band	Range	Modulation	Band width	Channel	Frequency	RB	Band	Range	Modulation	Band width	Channel	Frequency	RB	PCC	SCC	Total	EIRP	EIRP Limit	Margin (dBm)								
CA_7C	Low	QPSK	10	20805	2505.5	Full	+	Low	QPSK	20	20949	2519.9	Full	20.90	13.73	21.54	18.57	33	-14.43								
		QPSK	20	20850	2510	Full			QPSK	10	20994	2524.4	Full	20.98	13.51	21.40	18.43	33	-14.57								
		QPSK	15	20825	2507.5	Full			QPSK	10	20945	2519.5	Full	21.13	13.94	22.02	19.05	33	-13.95								
		QPSK	15	20825	2507.5	Full			QPSK	15	20975	2522.5	Full	21.03	13.93	21.47	18.50	33	-14.50								
		QPSK	15	20828	2507.8	Full			QPSK	20	20999	2524.9	Full	20.93	14.26	21.81	18.84	33	-14.16								
		QPSK	20	20850	2510	Full			QPSK	15	21021	2527.1	Full	21.47	13.94	22.00	19.03	33	-13.97								
	Mid	QPSK	20	20850	2510	Full		Mid	QPSK	20	21048	2529.8	Full	20.98	13.75	21.82	18.85	33	-14.15								
		QPSK	10	21006	2525.6	Full			QPSK	20	21150	2540	Full	20.64	14.25	21.67	18.70	33	-14.30								
		QPSK	20	21051	2530.1	Full			QPSK	10	21195	2544.5	Full	21.25	13.52	22.26	19.29	33	-13.71								
		QPSK	15	21051	2530.1	Full			QPSK	10	21171	2542.1	Full	20.60	13.70	21.39	18.42	33	-14.58								
		QPSK	15	21025	2527.5	Full			QPSK	15	21175	2542.5	Full	21.44	14.18	22.36	19.39	33	-13.61								
		QPSK	15	21003	2525.3	Full			QPSK	20	21174	2542.4	Full	21.16	13.95	21.51	18.54	33	-14.46								
	High	QPSK	20	21026	2527.6	Full		High	QPSK	15	21197	2544.7	Full	20.85	14.18	21.63	18.66	33	-14.34								
		QPSK	20	21001	2525.1	Full			QPSK	20	21199	2544.9	Full	21.46	13.62	21.62	18.65	33	-14.35								
		QPSK	10	21206	2545.6	Full			QPSK	20	21350	2560	Full	21.11	14.49	21.18	18.21	33	-14.79								
		QPSK	20	21251	2550.1	Full			QPSK	10	21395	2564.5	Full	21.37	14.14	21.65	18.68	33	-14.32								
		QPSK	15	21277	2552.7	Full			QPSK	10	21397	2564.7	Full	21.31	13.91	21.42	18.45	33	-14.55								
		QPSK	15	21225	2547.5	Full			QPSK	15	21375	2562.5	Full	20.78	13.71	21.64	18.67	33	-14.33								
		QPSK	20	21179	2542.9	Full			QPSK	20	21350	2560	Full	20.92	14.08	22.18	19.21	33	-13.79								
		QPSK	20	21201	2545.1	Full			QPSK	15	21372	2562.2	Full	20.80	13.44	21.48	18.51	33	-14.49								
		QPSK	20	21152	2540.2	Full			QPSK	20	21350	2560	Full	20.95	14.31	21.80	18.83	33	-14.17								

Antenna gain (dBi)			-3.13																				
First Band							Second Band							Power(dBm)				EIRP Limit	Margin (dBm)				
Band	Range	Modulation	Band width	Channel	Frequency	RB	Band	Range	Modulation	Band width	Channel	Frequency	RB	PCC	SCC	Total	EIRP	EIRP Limit	Margin (dBm)				
CA_38C	Low	QPSK	15	37825	2577.5	Full	+	Low	QPSK	15	37975	2592.5	Full	21.53	13.88	22.20	19.07	33	-13.93				
		QPSK	20	37850	2580	Full			QPSK	20	38048	2599.8	Full	21.44	13.91	21.69	18.56	33	-14.44				
	Mid	QPSK	15	37925	2587.5	Full		Mid	QPSK	15	38075	2602.5	Full	21.15	14.42	21.64	18.51	33	-14.49				
		QPSK	20	37901	2585.1	Full			QPSK	20	38099	2604.9	Full	20.99	14.58	22.42	19.29	33	-13.71				
	High	QPSK	15	38025	2597.5	Full		High	QPSK	15	38175	2612.5	Full	21.66	14.15	22.29	19.16	33	-13.84				
		QPSK	20	37952	2590.2	Full			QPSK	20	38150	2610	Full	21.20	14.40	22.34	19.21	33	-13.79				

	Antenna gain (dBi)		-2.97																					
First Band							Second Band							Power(dBm)							EIRP Limit		Margin (dBm)	
Band	Range	Modulation	Band width	Channel	Frequency	RB	Band	Range	Modulation	Band width	Channel	Frequency	RB	PCC	SCC	Total	EIRP	EIRP Limit	Margin (dBm)					
CA_41C	Low	QPSK	5	39683	2499.3	Full	Low		QPSK	20	39800	2511	Full	20.98	14.27	21.81	18.84	33	-14.16					
		QPSK	20	39750	2506	Full			QPSK	5	39867	2517.7	Full	20.65	13.94	22.12	19.15	33	-13.85					
		QPSK	10	39703	2501.3	Full			QPSK	15	39823	2513.3	Full	21.17	14.03	21.80	18.83	33	-14.17					
		QPSK	15	39725	2503.5	Full			QPSK	10	39845	2515.5	Full	21.31	13.79	21.80	18.83	33	-14.17					
		QPSK	10	39705	2501.5	Full			QPSK	20	39849	2515.9	Full	21.40	14.20	21.99	19.02	33	-13.98					
		QPSK	20	39750	2506	Full			QPSK	10	39894	2520.4	Full	21.37	14.83	21.79	18.82	33	-14.18					
		QPSK	15	39725	2503.5	Full			QPSK	15	39875	2518.5	Full	21.66	14.29	21.74	18.77	33	-14.23					
		QPSK	15	39728	2503.8	Full			QPSK	20	39899	2520.9	Full	21.64	14.26	21.61	18.64	33	-14.36					
		QPSK	20	39750	2506	Full			QPSK	15	39921	2523.1	Full	21.57	14.23	21.48	18.51	33	-14.49					
		QPSK	20	39750	2506	Full			QPSK	20	39948	2525.8	Full	21.35	13.98	22.26	19.29	33	-13.71					
	Mid	QPSK	5	40528	2583.8	Full	Mid		QPSK	20	40645	2595.5	Full	21.34	13.83	22.45	19.48	33	-13.52					
		QPSK	20	40595	2590.5	Full			QPSK	5	40712	2602.2	Full	20.57	14.48	21.67	21.67	33	-11.33					
		QPSK	10	40549	2585.9	Full			QPSK	15	40669	2597.9	Full	21.02	13.90	21.68	18.71	33	-14.29					
		QPSK	15	40571	2588.1	Full			QPSK	10	40691	2600.1	Full	20.95	14.46	21.47	18.50	33	-14.5					
		QPSK	10	40526	2583.6	Full			QPSK	20	40670	2598	Full	21.21	13.96	22.15	19.18	33	-13.82					
		QPSK	20	40571	2588.1	Full			QPSK	10	40715	2602.5	Full	21.45	14.07	22.12	19.15	33	-13.85					
		QPSK	15	40545	2585.5	Full			QPSK	15	40695	2600.5	Full	21.64	13.90	21.86	18.89	33	-14.11					
		QPSK	15	40523	2583.3	Full			QPSK	20	40694	2600.4	Full	20.79	14.04	22.19	19.22	33	-13.78					
		QPSK	20	40546	2585.6	Full			QPSK	15	40717	2602.7	Full	21.64	14.05	22.17	19.20	33	-13.8					
		QPSK	20	40521	2583.1	Full			QPSK	20	40719	2602.9	Full	21.51	14.43	21.74	18.77	33	-14.23					
	High	QPSK	20	40529	2583.9	Full	High		QPSK	20	40712	2602.2	Full	20.81	14.64	22.03	19.06	33	-13.94					
		QPSK	5	41373	2668.3	Full			QPSK	20	41490	2680	Full	20.91	14.66	21.48	18.51	33	-14.49					
		QPSK	20	41440	2675	Full			QPSK	5	41557	2686.7	Full	20.74	14.53	22.29	19.32	33	-13.68					
		QPSK	10	41395	2670.5	Full			QPSK	15	41515	2682.5	Full	21.52	14.11	22.38	19.41	33	-13.59					
		QPSK	15	41417	2672.7	Full			QPSK	10	41537	2684.7	Full	21.18	14.12	21.76	18.79	33	-14.21					
		QPSK	10	41346	2665.6	Full			QPSK	20	41490	2680	Full	20.77	13.94	22.32	19.35	33	-13.65					
		QPSK	20	41391	2670.1	Full			QPSK	10	41535	2684.5	Full	20.67	14.46	21.75	18.78	33	-14.22					
		QPSK	15	41365	2667.5	Full			QPSK	15	41515	2682.5	Full	21.14	14.01	21.98	19.01	33	-13.99					
		QPSK	15	41319	2662.9	Full			QPSK	20	41490	2680	Full	20.90	14.57	21.57	18.60	33	-14.4					
		QPSK	20	41341	2665.1	Full			QPSK	15	41512	2682.2	Full	21.19	13.80	21.52	18.55	33	-14.45					
		QPSK	20	41292	2660.2	Full		QPSK	20	41490	2680	Full	21.46	14.45	21.68	18.71	33	-14.29						

7 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

7.1 Standard Applicable

According to FCC §2.1053,

FCC§27.53(h)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

FCC §27.53(m) (4) (6) for LTE B7, 41

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

Table 2 — Unwanted Emissions for Mobile, Portable and Low-Power Fixed Subscriber Equipment

Frequency (MHz)	Attenuation (dB)
<2200	$43 + 10 \log_{10}(p)$
2200 - 2288	$70 + 10 \log_{10}(p)$
2288 - 2292	$67 + 10 \log_{10}(p)$
2292 - 2296	$61 + 10 \log_{10}(p)$
2296 - 2300	$55 + 10 \log_{10}(p)$
2300 - 2305	$43 + 10 \log_{10}(p)$
2305 - 2320	$43 + 10 \log_{10}(p)$ ^{Note}
2320 - 2324	$55 + 10 \log_{10}(p)$
2324 - 2328	$61 + 10 \log_{10}(p)$
2328 - 2337	$67 + 10 \log_{10}(p)$
2337 - 2341	$61 + 10 \log_{10}(p)$
2341 - 2345	$55 + 10 \log_{10}(p)$
2345 - 2360	$43 + 10 \log_{10}(p)$ ^{Note}
2360 - 2365	$43 + 10 \log_{10}(p)$
2365 - 2395	$70 + 10 \log_{10}(p)$
>2395	$43 + 10 \log_{10}(p)$

Note: Measured at the edges of the highest and lowest frequency range(s) in which the equipment is designed to operate. See Section 1.2 for the permitted frequency ranges for various equipment types.

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

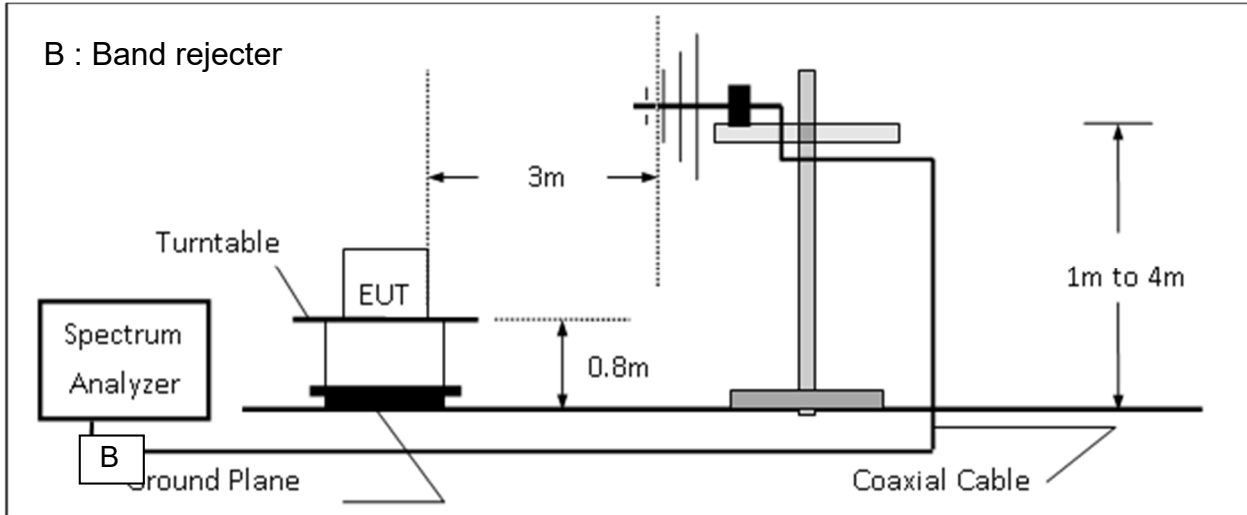
f (886-2) 2298-0488

www.sgs.com.tw

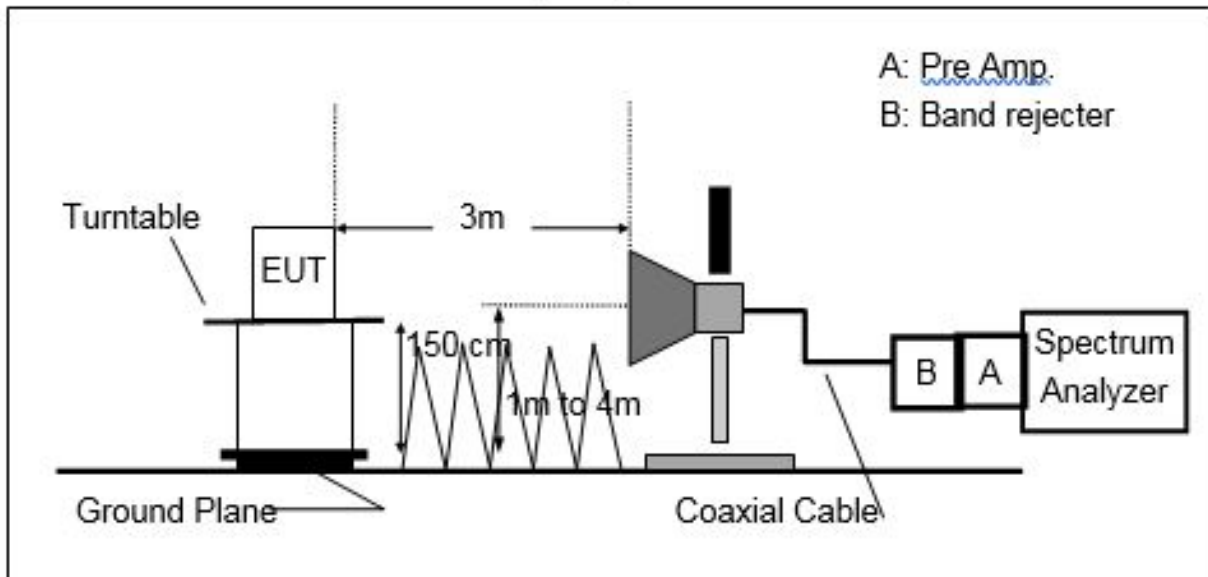
Member of SGS Group

7.2 EUT Setup

Radiated Emission Test Set-Up, Frequency Below 1000MHz



Radiated Emission Test Set-UP Frequency Over 1 GHz



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

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

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

SGS Taiwan Ltd.

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

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

7.3 Measurement Procedure:

The EUT was placed on a non-conductive; the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP (dBm) = SG Level(dBm) + Antenna Gain(dBd) + Cable Loss(dB)

EIRP (dBm) = SG Level(dBm) + Antenna Gain(dBi) + Cable Loss(dB)

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

7.4 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Bi-log Antenna	SCHWAZBECK	VULB9168	300	11/18/2020	11/17/2021
Horn Antenna	Schwarzbeck	BBHA9120D	603	04/29/2020	04/28/2021
Horn Antenna	Schwarzbeck	BBHA9170	184	12/11/2020	12/10/2021
Horn Antenna	Schwarzbeck	BBHA9170	185	07/30/2020	07/29/2021
Site Cal	SGS	SAC I chamber	N/A	01/01/2021	12/31/2021
Horn Antenna	Schwarzbeck	BBHA9120D	D803	12/17/2020	12/16/2021
Bi-log Antenna	TESEO	CBL 6112D	35242 & AT-N0555	01/13/2021	01/12/2022
Spectrum Analyzer	Agilent	E4446A	MY51100003	10/29/2020	10/28/2021
Radio Communication Analyzer	Anritsu	MT8821C	6262044670	08/06/2020	08/05/2021
Test Software	audix	e3	Ver. 6.11-20180413	01/01/2021	12/31/2021
Pre-Amplifier	EMC Instruments	EMC184045B	980135	12/16/2020	12/15/2021
Pre-Amplifier	HP	8449B	3008A01973	12/16/2020	12/15/2021
Pre-Amplifier	HP	8447D	2944A09469	12/16/2020	12/15/2021
Filter 2240-2700	Micro-Tronics	WI	2	12/16/2020	12/15/2021
High Pass Filter	WI	WHKX4.0/18G-10SS	WHKX4.0/18G-10SS	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	succoflex 102	MY2622/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	succoflex 104A	800086/4a	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	EMC 104-SM-SM-2000	160123	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104	160125	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 106	76096/6	12/16/2020	12/15/2021

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

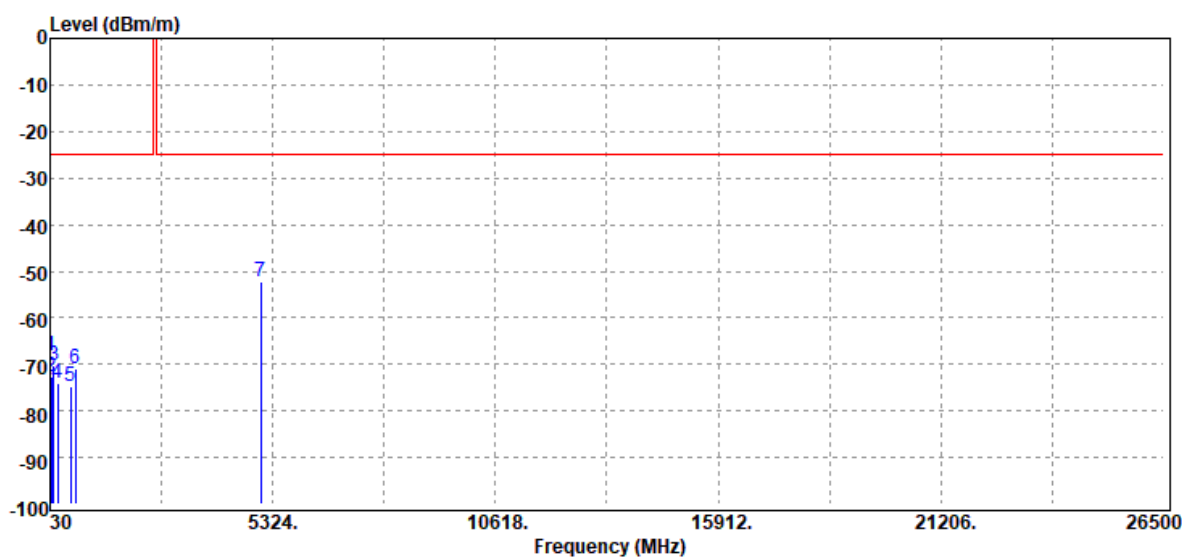
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

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

7.5 Measurement Result:

Radiated Spurious Emission Measurement Result: LTE Band 7C Mode

Report Number	:ER/2020/C0100	Test Site	:SAC I Chamber
Operation Mode	:LTE 7C	Test Date	:2021-01-26
Test Mode	:Tx CH Low	Temp./Humi.	:23.6/63
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2507.5_2522.5 MHz	Engineer	:Neo Tsai



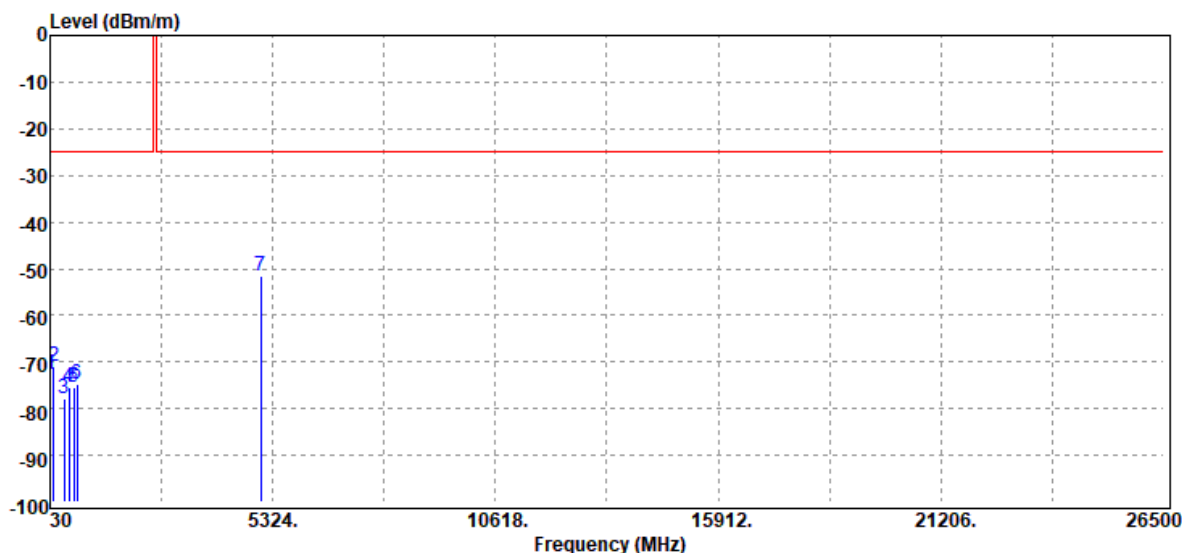
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
46.49	-68.11	-54.84	-12.57	-0.70	-25.00	-43.11
65.89	-72.78	-64.19	-7.79	-0.80	-25.00	-47.78
112.45	-70.17	-67.45	-1.65	-1.07	-25.00	-45.17
211.39	-74.22	-77.52	4.78	-1.48	-25.00	-49.22
517.91	-74.70	-76.64	4.11	-2.17	-25.00	-49.70
631.40	-71.06	-72.15	3.46	-2.37	-25.00	-46.06
5030.00	-52.10	-56.77	12.26	-7.59	-25.00	-27.10

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

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 7C
Test Mode :Tx CH Low
EUT Pol :NB Plane
Test Frequency :2507.5_2522.5 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
44.55	-72.55	-59.01	-12.85	-0.69	-25.00	-47.55
115.36	-70.94	-68.13	-1.71	-1.10	-25.00	-45.94
357.86	-77.80	-80.34	4.50	-1.96	-25.00	-52.80
476.20	-75.38	-77.22	4.21	-2.37	-25.00	-50.38
600.36	-75.29	-76.29	3.64	-2.64	-25.00	-50.29
677.96	-74.61	-75.54	3.84	-2.91	-25.00	-49.61
5030.00	-51.40	-56.07	12.26	-7.59	-25.00	-26.40

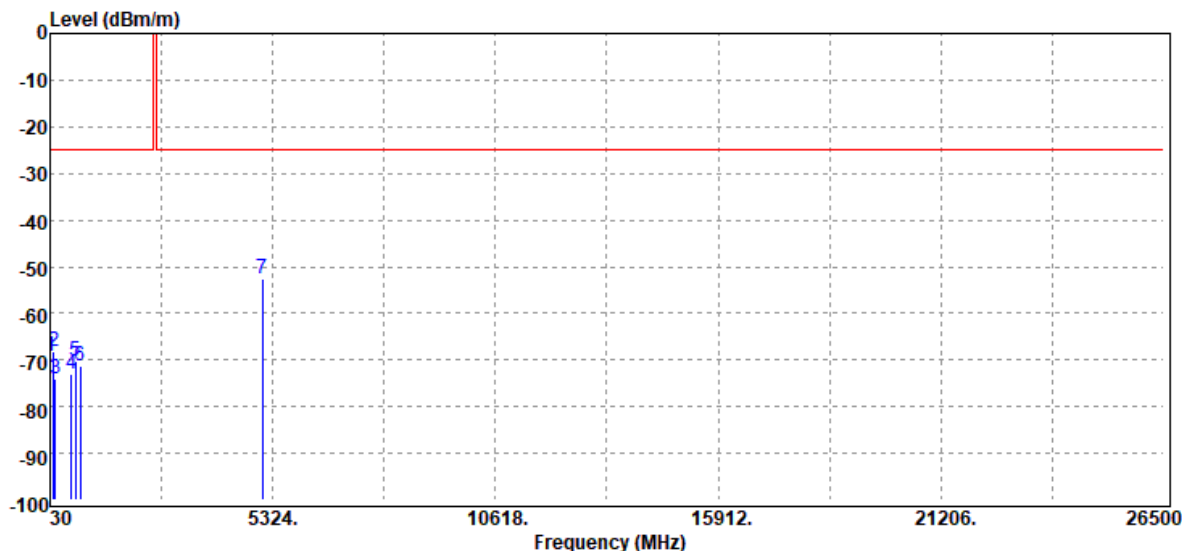
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 7C
Test Mode :Tx CH Mid
EUT Pol :NB Plane
Test Frequency :2527.5_2542.5 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :VERTICAL
Engineer :Neo Tsai



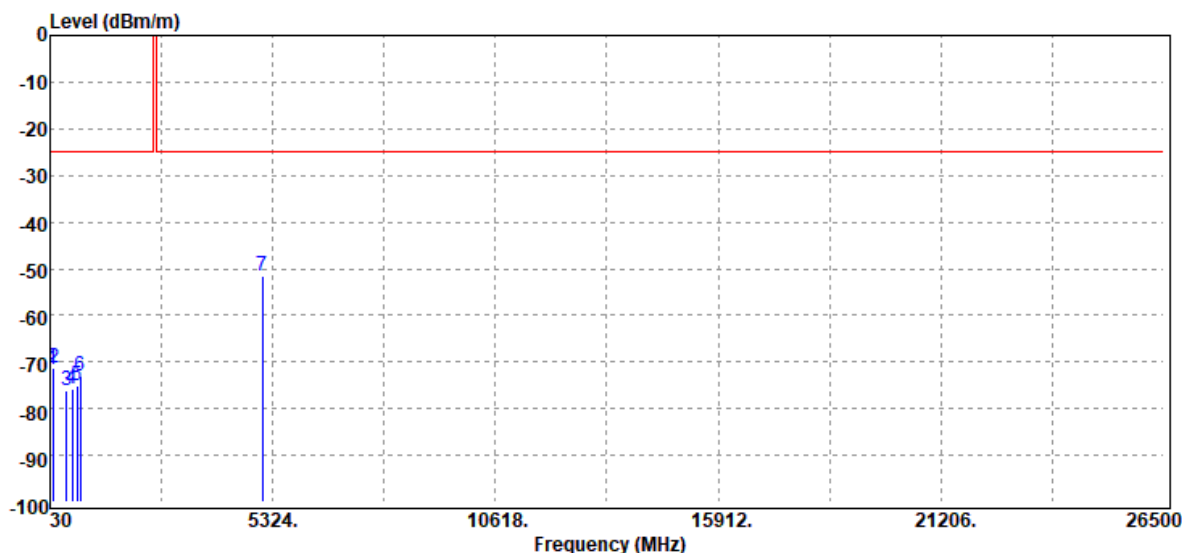
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
44.55	-69.17	-55.63	-12.85	-0.69	-25.00	-44.17
117.30	-68.30	-65.46	-1.73	-1.11	-25.00	-43.30
145.43	-74.01	-71.01	-1.78	-1.22	-25.00	-49.01
531.49	-73.08	-75.24	4.19	-2.03	-25.00	-48.08
631.40	-70.37	-71.46	3.46	-2.37	-25.00	-45.37
744.89	-71.21	-71.58	2.82	-2.45	-25.00	-46.21
5070.00	-52.58	-56.85	12.10	-7.83	-25.00	-27.58

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

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 7C
Test Mode :Tx CH Mid
EUT Pol :NB Plane
Test Frequency :2527.5_2542.5 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
105.66	-71.52	-69.14	-1.34	-1.04	-25.00	-46.52
113.42	-71.37	-68.62	-1.67	-1.08	-25.00	-46.37
425.76	-76.11	-78.18	4.03	-1.96	-25.00	-51.11
555.74	-75.94	-77.73	4.26	-2.47	-25.00	-50.94
677.96	-75.21	-76.14	3.84	-2.91	-25.00	-50.21
744.89	-72.89	-73.26	2.82	-2.45	-25.00	-47.89
5070.00	-51.39	-55.66	12.10	-7.83	-25.00	-26.39

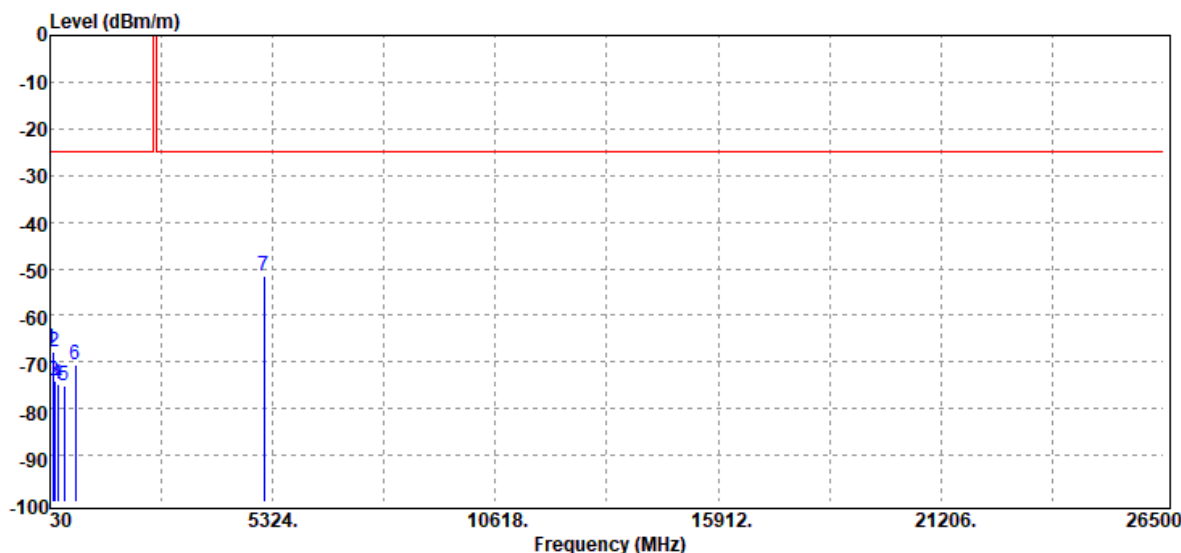
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 7C
Test Mode :Tx CH High
EUT Pol :NB Plane
Test Frequency :2547.5_2562.5 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :VERTICAL
Engineer :Neo Tsai



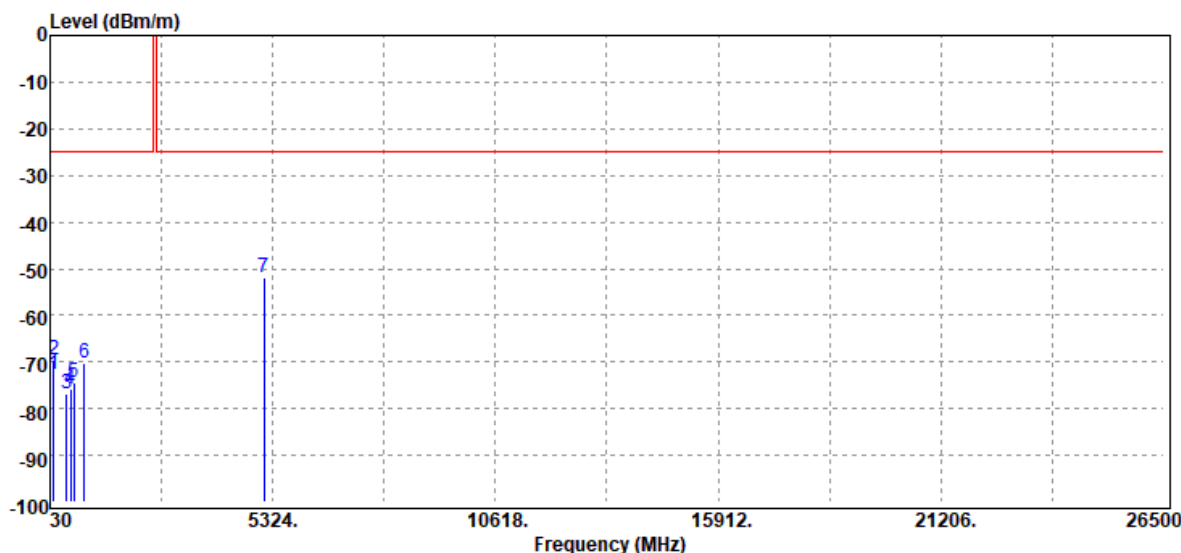
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
44.55	-67.24	-53.70	-12.85	-0.69	-25.00	-42.24
115.36	-67.97	-65.16	-1.71	-1.10	-25.00	-42.97
144.46	-74.18	-71.01	-1.93	-1.24	-25.00	-49.18
211.39	-74.90	-78.20	4.78	-1.48	-25.00	-49.90
361.74	-75.07	-77.60	4.48	-1.95	-25.00	-50.07
631.40	-70.54	-71.63	3.46	-2.37	-25.00	-45.54
5110.00	-51.71	-55.82	12.10	-7.99	-25.00	-26.71

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

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 7C
Test Mode :Tx CH High
EUT Pol :NB Plane
Test Frequency :2547.5_2562.5 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
109.54	-72.79	-70.20	-1.54	-1.05	-25.00	-47.79
117.30	-69.62	-66.78	-1.73	-1.11	-25.00	-44.62
420.91	-76.79	-79.10	4.21	-1.90	-25.00	-51.79
526.64	-75.78	-77.91	4.18	-2.05	-25.00	-50.78
604.24	-74.43	-75.47	3.62	-2.58	-25.00	-49.43
841.89	-70.26	-71.98	4.69	-2.97	-25.00	-45.26
5110.00	-52.03	-56.14	12.10	-7.99	-25.00	-27.03

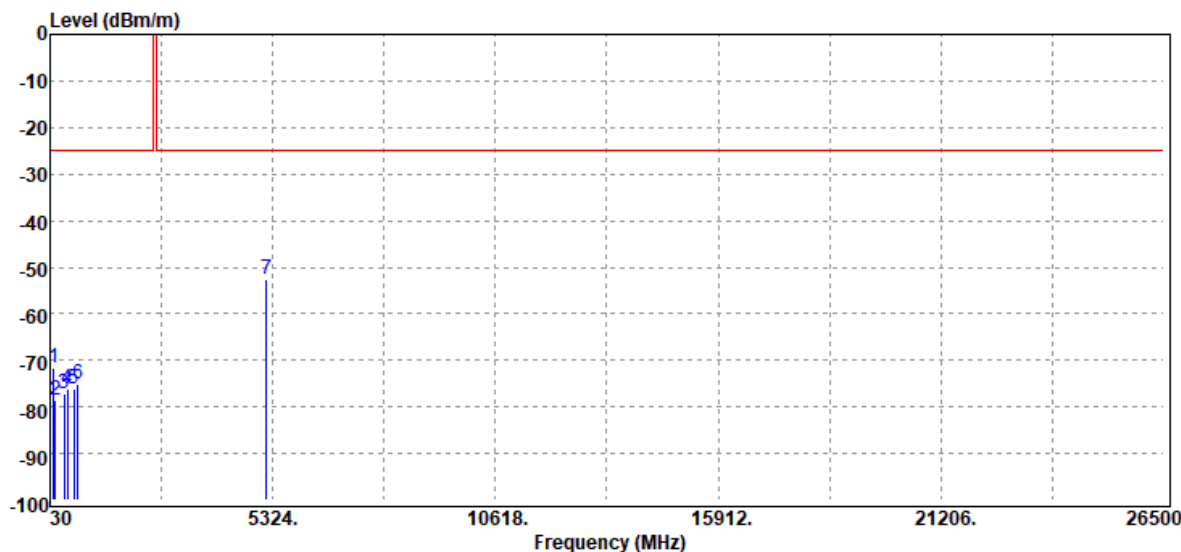
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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

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

Radiated Spurious Emission Measurement Result: LTE Band 38C Mode

Report Number	:ER/2020/C0100	Test Site	:SAC I Chamber
Operation Mode	:LTE 38C	Test Date	:2021-01-26
Test Mode	:Tx CH Low	Temp./Humi.	:23.6/63
EUT Pol	:NB Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2580_2599.8 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG	Antenna	Cable	Limit	Margin
MHz	dBm	Output Level dBm	Gain dBi/dBd	Loss dB	dBm	dB
117.30	-71.75	-68.91	-1.73	-1.11	-25.00	-46.75
149.31	-78.62	-75.83	-1.64	-1.15	-25.00	-53.62
357.86	-77.16	-79.70	4.50	-1.96	-25.00	-52.16
445.16	-76.10	-78.05	4.15	-2.20	-25.00	-51.10
589.69	-75.97	-77.12	3.80	-2.65	-25.00	-50.97
681.84	-75.18	-76.12	3.82	-2.88	-25.00	-50.18
5179.80	-52.75	-57.13	12.28	-7.90	-25.00	-27.75

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

t (886-2) 2299-3279

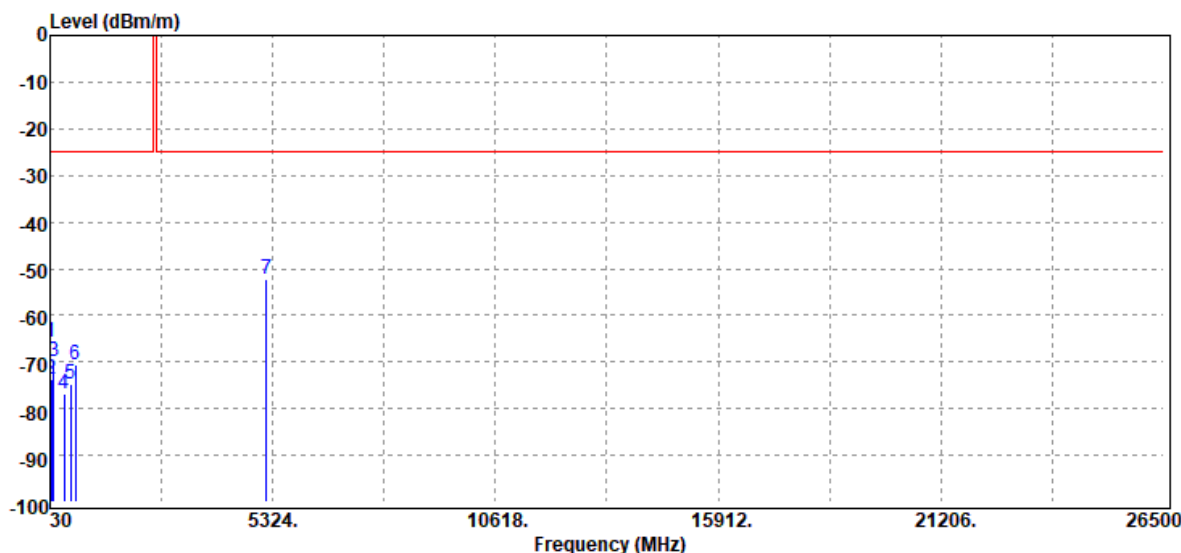
f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

Report Number :ER/2020/C0100
Operation Mode :LTE 38C
Test Mode :Tx CH Low
EUT Pol :NB Plane
Test Frequency :2580_2599.8 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :VERTICAL
Engineer :Neo Tsai



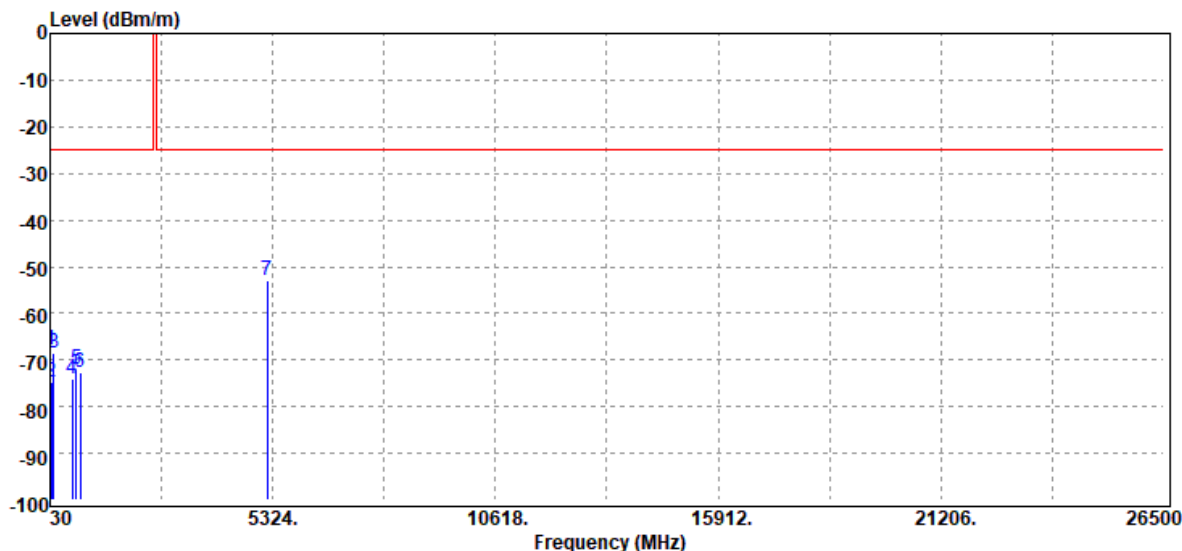
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
44.55	-65.80	-52.26	-12.85	-0.69	-25.00	-40.80
63.95	-73.75	-64.37	-8.60	-0.78	-25.00	-48.75
117.30	-69.82	-66.98	-1.73	-1.11	-25.00	-44.82
357.86	-76.95	-79.49	4.50	-1.96	-25.00	-51.95
526.64	-74.59	-76.72	4.18	-2.05	-25.00	-49.59
631.40	-70.55	-71.64	3.46	-2.37	-25.00	-45.55
5179.80	-52.37	-56.75	12.28	-7.90	-25.00	-27.37

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

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 38C
Test Mode :Tx CH Mid
EUT Pol :NB Plane
Test Frequency :2585.1_2604.9 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :VERTICAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
46.49	-67.90	-54.63	-12.57	-0.70	-25.00	-42.90
63.95	-74.67	-65.29	-8.60	-0.78	-25.00	-49.67
117.30	-68.59	-65.75	-1.73	-1.11	-25.00	-43.59
556.71	-74.20	-75.95	4.26	-2.51	-25.00	-49.20
660.50	-71.81	-73.08	3.68	-2.41	-25.00	-46.81
744.89	-72.78	-73.15	2.82	-2.45	-25.00	-47.78
5190.00	-52.92	-57.37	12.34	-7.89	-25.00	-27.92

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

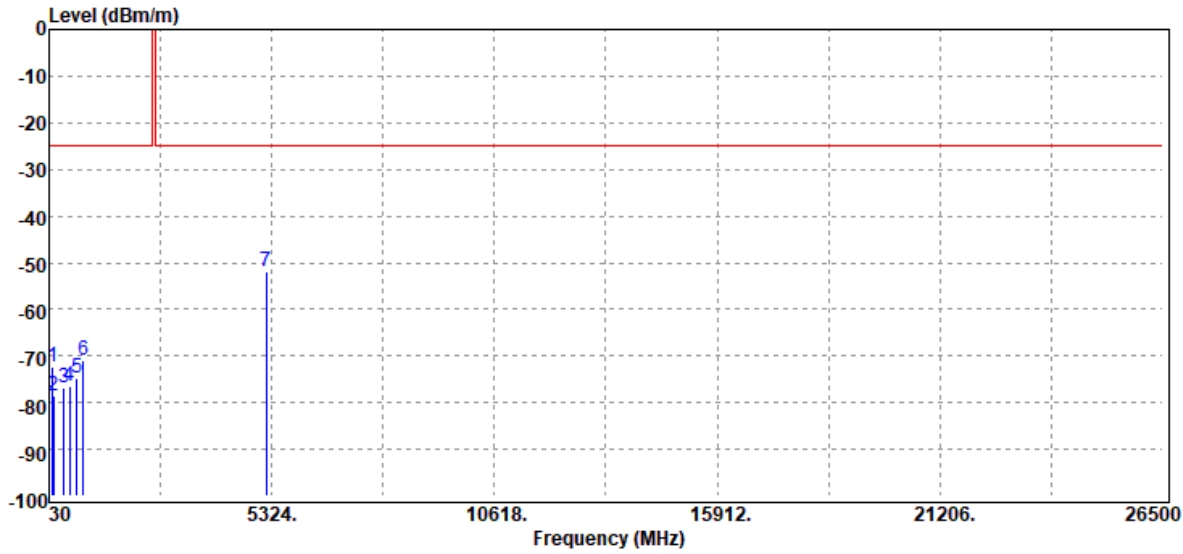
t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

Report Number :ER/2020/C0100
Operation Mode :LTE 38C
Test Mode :Tx CH Mid
EUT Pol :NB Plane
Test Frequency :2585.1_2604.9 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
114.39	-72.29	-69.47	-1.73	-1.09	-25.00	-47.29
143.49	-78.41	-75.22	-1.93	-1.26	-25.00	-53.41
381.14	-76.68	-79.04	4.38	-2.02	-25.00	-51.68
515.00	-76.52	-78.52	4.12	-2.12	-25.00	-51.52
692.51	-74.65	-75.43	3.74	-2.96	-25.00	-49.65
838.01	-71.00	-72.59	4.64	-3.05	-25.00	-46.00
5190.00	-52.07	-56.52	12.34	-7.89	-25.00	-27.07

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

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

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

SGS Taiwan Ltd.

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

台灣檢驗科技股份有限公司

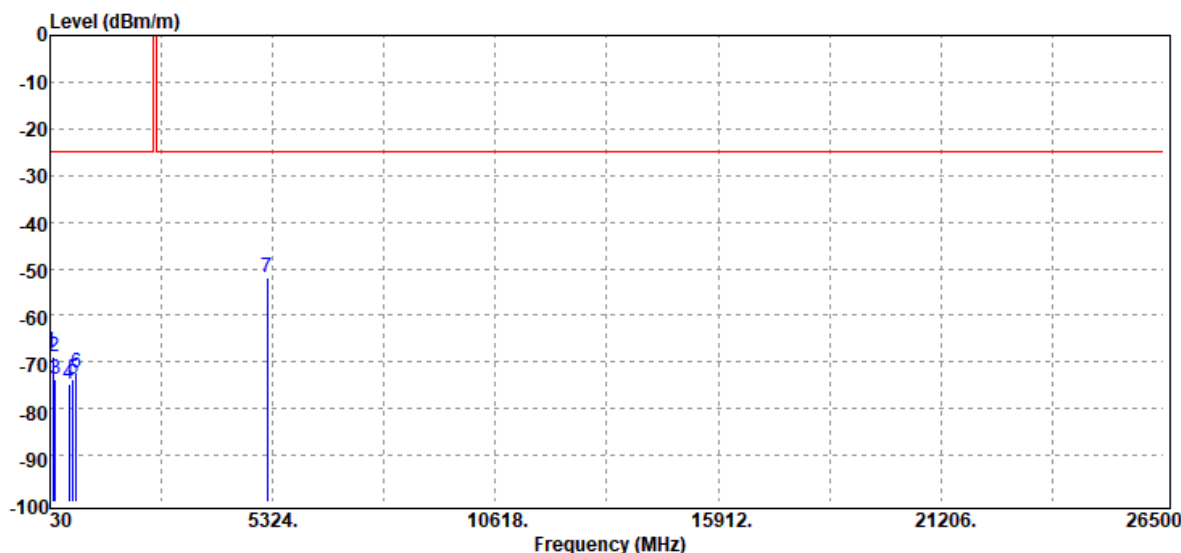
t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

Report Number :ER/2020/C0100
Operation Mode :LTE 38C
Test Mode :Tx CH High
EUT Pol :NB Plane
Test Frequency :2590.2_2610 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :VERTICAL
Engineer :Neo Tsai


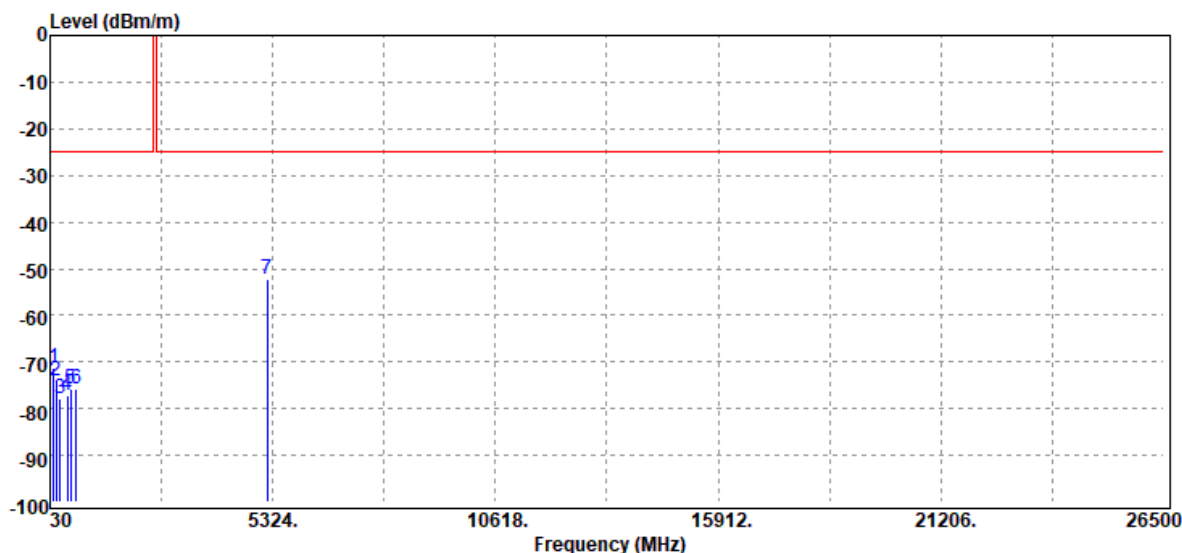
Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
46.49	-67.73	-54.46	-12.57	-0.70	-25.00	-42.73
114.39	-68.84	-66.02	-1.73	-1.09	-25.00	-43.84
146.40	-73.88	-70.94	-1.73	-1.21	-25.00	-48.88
473.29	-74.64	-76.50	4.18	-2.32	-25.00	-49.64
579.99	-73.84	-75.08	3.95	-2.71	-25.00	-48.84
650.80	-72.26	-73.45	3.63	-2.44	-25.00	-47.26
5200.20	-52.07	-56.59	12.40	-7.88	-25.00	-27.07

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

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 38C
Test Mode :Tx CH High
EUT Pol :NB Plane
Test Frequency :2590.2_2610 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
112.45	-71.27	-68.55	-1.65	-1.07	-25.00	-46.27
167.74	-74.06	-72.25	-0.55	-1.26	-25.00	-49.06
269.59	-77.88	-80.37	4.13	-1.64	-25.00	-52.88
447.10	-77.07	-79.03	4.15	-2.19	-25.00	-52.07
524.70	-75.80	-77.88	4.18	-2.10	-25.00	-50.80
657.59	-75.67	-76.92	3.64	-2.39	-25.00	-50.67
5200.20	-52.33	-56.85	12.40	-7.88	-25.00	-27.33

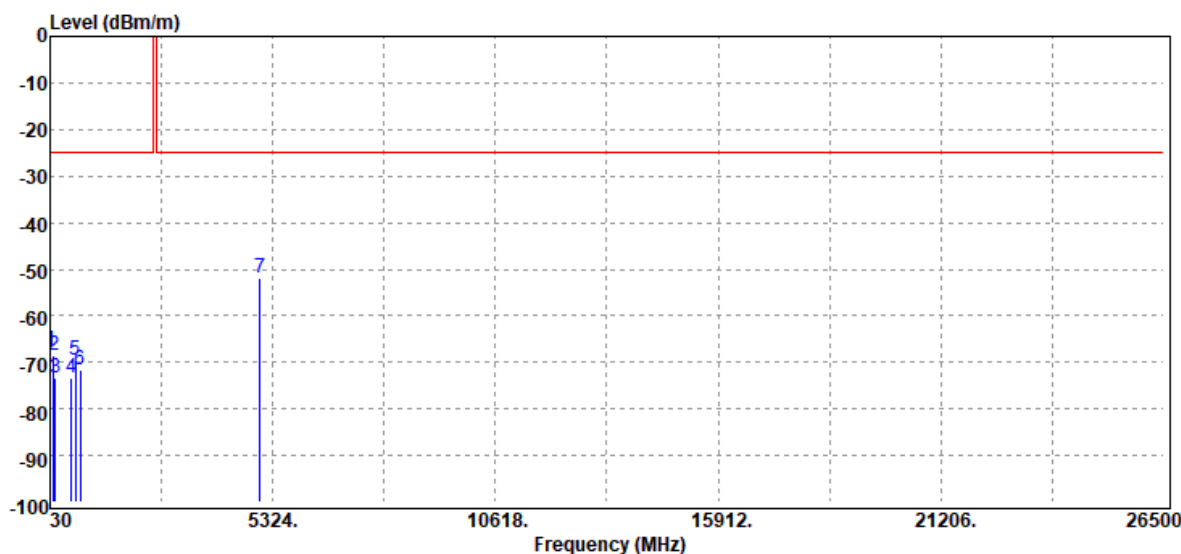
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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

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

Radiated Spurious Emission Measurement Result: LTE Band 41C Mode

Report Number	:ER/2020/C0100	Test Site	:SAC I Chamber
Operation Mode	:LTE 41C	Test Date	:2021-01-26
Test Mode	:Tx CH Low	Temp./Humi.	:23.6/63
EUT Pol	:NB Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2499.3_2511 MHz	Engineer	:Neo Tsai



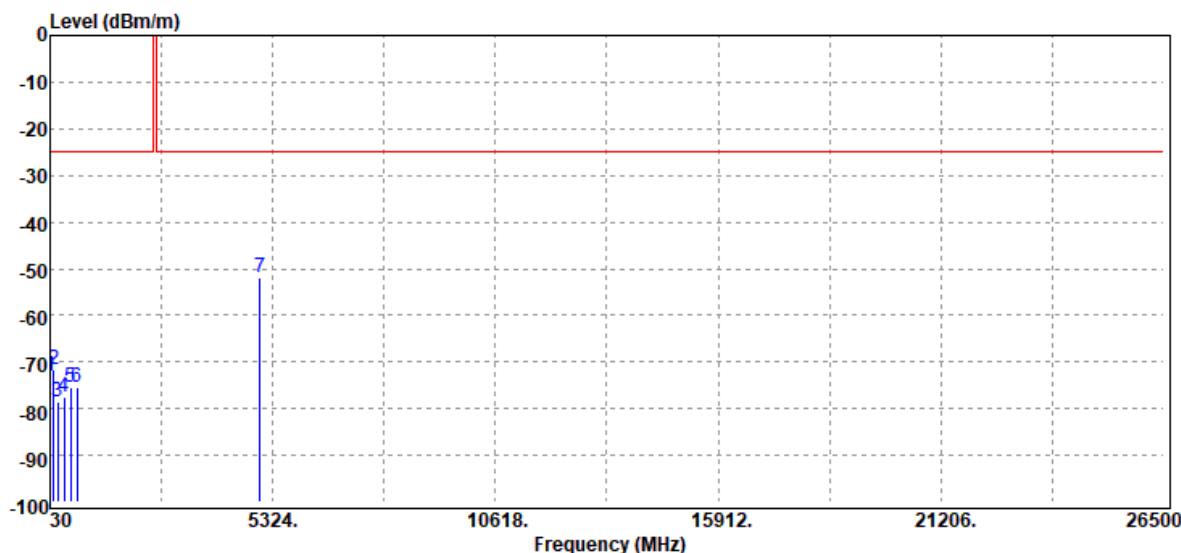
Freq.	EIRP/ERP	SG	Antenna	Cable	Limit	Margin
MHz	dBm	Output Level dBm	Gain dBi/dBd	Loss dB	dBm	dB
46.49	-67.40	-54.13	-12.57	-0.70	-25.00	-42.40
112.45	-68.53	-65.81	-1.65	-1.07	-25.00	-43.53
146.40	-73.21	-70.27	-1.73	-1.21	-25.00	-48.21
534.40	-73.36	-75.45	4.24	-2.15	-25.00	-48.36
631.40	-69.71	-70.80	3.46	-2.37	-25.00	-44.71
749.74	-71.56	-71.96	2.88	-2.48	-25.00	-46.56
5010.30	-52.07	-57.02	12.42	-7.47	-25.00	-27.07

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

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 41C
Test Mode :Tx CH Low
EUT Pol :NB Plane
Test Frequency :2499.3_2511 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
44.55	-72.92	-59.38	-12.85	-0.69	-25.00	-47.92
114.39	-71.64	-68.82	-1.73	-1.09	-25.00	-46.64
211.39	-78.63	-81.93	4.78	-1.48	-25.00	-53.63
359.80	-77.46	-80.03	4.51	-1.94	-25.00	-52.46
524.70	-75.40	-77.48	4.18	-2.10	-25.00	-50.40
675.05	-75.52	-76.38	3.87	-3.01	-25.00	-50.52
5010.30	-51.85	-56.80	12.42	-7.47	-25.00	-26.85

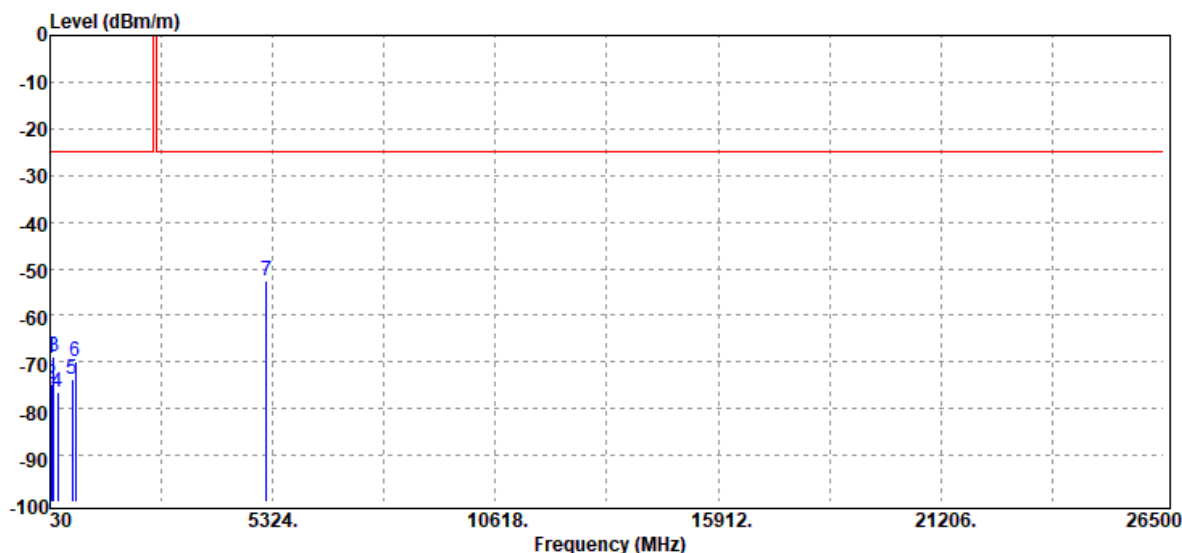
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 41C
Test Mode :Tx CH Mid
EUT Pol :NB Plane
Test Frequency :2583.8_2595.5 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :VERTICAL
Engineer :Neo Tsai



Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
44.55	-69.27	-55.73	-12.85	-0.69	-25.00	-44.27
63.95	-74.78	-65.40	-8.60	-0.78	-25.00	-49.78
117.30	-68.94	-66.10	-1.73	-1.11	-25.00	-43.94
211.39	-76.56	-79.86	4.78	-1.48	-25.00	-51.56
548.95	-73.55	-75.46	4.19	-2.28	-25.00	-48.55
631.40	-69.80	-70.89	3.46	-2.37	-25.00	-44.80
5179.30	-52.75	-57.13	12.28	-7.90	-25.00	-27.75

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

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

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

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

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

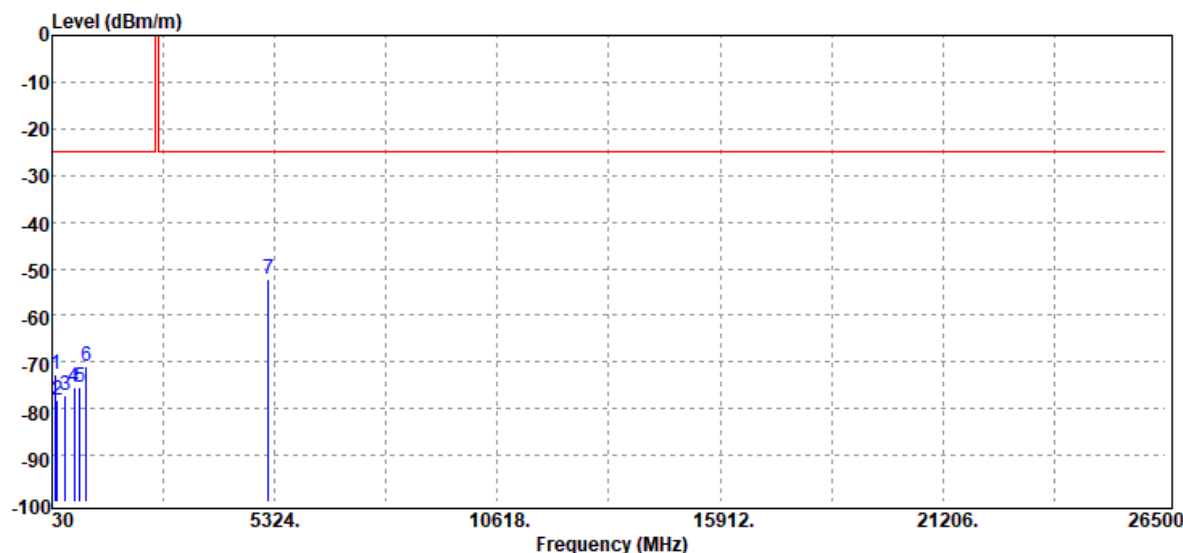
t (886-2) 2299-3279

f (886-2) 2298-0488

www.sgs.com.tw

Member of SGS Group

Report Number :ER/2020/C0100
Operation Mode :LTE 41C
Test Mode :Tx CH Mid
EUT Pol :NB Plane
Test Frequency :2583.8_2595.5 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai


Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
116.33	-72.75	-70.04	-1.61	-1.10	-25.00	-47.75
146.40	-78.31	-75.37	-1.73	-1.21	-25.00	-53.31
353.01	-77.14	-79.65	4.52	-2.01	-25.00	-52.14
551.86	-75.44	-77.32	4.22	-2.34	-25.00	-50.44
694.45	-75.46	-76.28	3.72	-2.90	-25.00	-50.46
841.89	-71.07	-72.79	4.69	-2.97	-25.00	-46.07
5179.30	-52.15	-56.53	12.28	-7.90	-25.00	-27.15

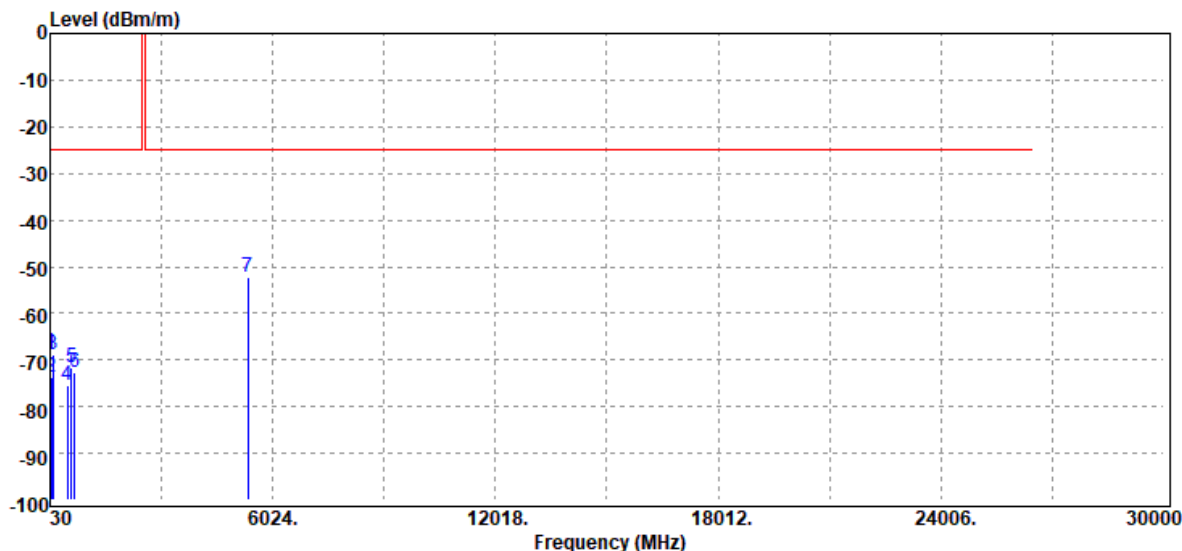
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 41C
Test Mode :Tx CH High
EUT Pol :NB Plane
Test Frequency :2668.3_2680 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :VERTICAL
Engineer :Neo Tsai



Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
44.55	-68.48	-54.94	-12.85	-0.69	-25.00	-43.48
63.95	-73.59	-64.21	-8.60	-0.78	-25.00	-48.59
114.39	-68.86	-66.04	-1.73	-1.09	-25.00	-43.86
495.60	-75.55	-77.38	4.18	-2.35	-25.00	-50.55
599.39	-71.46	-72.48	3.66	-2.64	-25.00	-46.46
686.69	-72.70	-73.51	3.78	-2.97	-25.00	-47.70
5348.30	-52.21	-56.49	13.00	-8.72	-25.00	-27.21

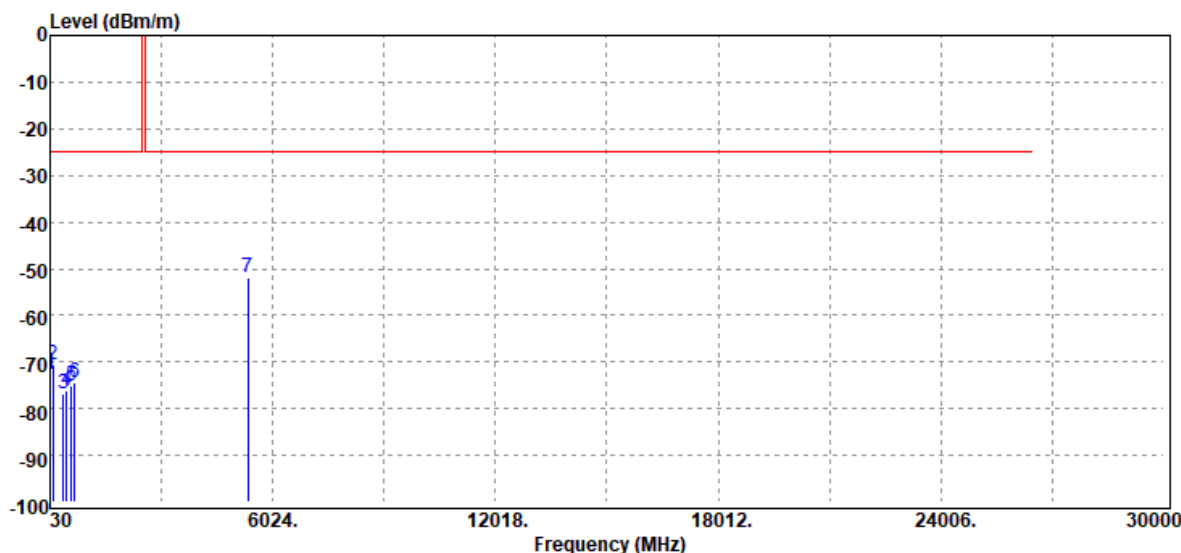
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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

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

Report Number :ER/2020/C0100
Operation Mode :LTE 41C
Test Mode :Tx CH High
EUT Pol :NB Plane
Test Frequency :2668.3_2680 MHz

Test Site :SAC I Chamber
Test Date :2021-01-26
Temp./Humi. :23.6/63
Antenna Pol. :HORIZONTAL
Engineer :Neo Tsai



Freq. MHz	EIRP/ERP dBm	SG Output Level dBm	Antenna Gain dBi/dBd	Cable Loss dB	Limit dBm	Margin dB
46.49	-72.58	-59.31	-12.57	-0.70	-25.00	-47.58
114.39	-70.53	-67.71	-1.73	-1.09	-25.00	-45.53
393.75	-76.69	-78.94	4.33	-2.08	-25.00	-51.69
483.96	-76.23	-78.15	4.28	-2.36	-25.00	-51.23
600.36	-75.13	-76.13	3.64	-2.64	-25.00	-50.13
682.81	-74.42	-75.33	3.81	-2.90	-25.00	-49.42
5348.30	-51.82	-56.10	13.00	-8.72	-25.00	-26.82

~ End of Report ~

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

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

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