

Page: 1 of 144

# **Hearing Aid Compatibility (HAC) TEST REPORT**

# <For RF-Emission Measurement>

Applicant Name	Razer Inc.
Address of Applicant	201 3rd Street, Suite 900, San Francisco, CA 94103, USA
EUT Name	Smart Phone
Brand Name	RAZER
Marketing Name	RAZER PHONE
Model No.	RZ35-0215
FCC ID	RWO-RZ350215
Date of receive	Aug. 28, 2017
Date of Test(s)	Sep. 15, 2017~ Sep. 29, 2017
Date of Issue	Oct. 27, 2017

Standards:

### ANSI C63.19-2011

FCC RULE PART(S): 47 CFR PART 20.19(B)

HAC CATEGORY: M4 (M Category)

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

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

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

Signed on behalf of SGS	
Sr. Engineer	Supervisor
Matt Kuo Matt Kuo	John Yeh
Date: Oct. 27, 2017	Date: Oct. 27, 2017

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 2 of 144

# **Revision History**

Report Number	Revision	Issue Date	
E5/2017/10025	Rev.00	Initial creation of document	Oct. 05, 2017
E5/2017/10025	Rev.01	1 <sup>st</sup> modify comment	Oct. 27, 2017

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 3 of 144

### **Table of Contents**

1. Introduction	4
2. Testing Laboratory	5
3. Details of Applicant	5
4. Description of EUT	6
5. Air Interfaces and Bands	10
6. Test Environment	11
7. Description of test system	12
8. Test Procedure	15
9. System Verification	17
10. Modulation Interference Factor	18
11. Measured conducted output power	20
12. Justification of held to ear modes tested	74
13. ANSI C63.19-2011 performance and categories	76
14. Instruments List	77
15. Summary of Results	79
16. Measurement Data	80
17. System Verification	108
18. DAE & Probe Calibration Certificate	114
19. Uncertainty Budget	129
20. System Validation from Original Equipment Supplier	130

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 4 of 144

### 1. Introduction

The purpose of the Hearing Aid Compatibility is to enable measurements of the near electric fields generated by wireless communication devices in the region controlled for use by a hearing aid in accordance with ANSI-C63.19-2011

The purpose of this standard is to establish categories for hearing aids and for WD (wireless communications devices) that can indicate to health care practitioners and hearing aid users which hearing aids are compatible with which WD, and to provide tests that can be used to assess the electromagnetic characteristics of hearing aids and WD and assign them to these categories. The various parameters required, in order to demonstrate compatibility and accessibility are measured. The design of the standard is such that when a hearing aid and WD achieve one of the categories specified, as measured by the methodology of this standard, the indicated performance is realized.

In order to provide for the usability of a hearing aid with a WD, several factors must be coordinated:

a) Radio frequency (RF) measurements of the near-field electric fields emitted by a WD to categorize these emissions for correlation with the RF immunity of a hearing aid.

Hence, the following are measurements made for the WD: RF E-Field emissions

The measurement plane is parallel to, and 1.5cm in front of, the reference plane.

Applications for certification of equipment operation under part 20, that a manufacturer is seeking to certify as hearing aid compatible, as set forth in §20.19 of that part, shall include a statement indication compliance with the test requirements of §20.19 and indicating the appropriate U-rating for the equipment. The manufacturer of the equipment shall be responsible for maintaining the test results.

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 5 of 144

# 2. Testing Laboratory

Company Name	SGS Taiwan Ltd. Electronics & Communication Laboratory
Company address	No.2, Keji 1st Rd., Guishan Township, Taoyuan County 333,
	Taiwan (R.O.C.)
Telephone	+886-2-2299-3279
Fax	+886-2-2298-0488
Website	http://www.tw.sgs.com/

# 3. Details of Applicant

Applicant Name	Razer Inc.
Applicant Address	201 3rd Street, Suite 900, San Francisco, CA 94103, USA

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 6 of 144

# 4. Description of EUT

EUT Name	Smart Phone				
Marketing Name	RAZER PHONE				
Brand Name	RAZER				
Model No.	RZ35-0215				
FCC ID	RWO-RZ350215				
Mode of Operation					
	⊠Bluetooth ⊠WLAN802.11 a/b/ç GSM	g/n/ac(20M/40M/80M)			
Duty Cycle	(DTM multi class B)	1/8.3			
	GPRS (support multi class 12 max)	1/2 (1Dn4UP) 1/2.76 (1Dn3UP) 1/4.1 (1Dn2UP) 1/8.3 (1Dn1UP)			
	EDGE (support multi class 12 max)	1/2 (1Dn4UP) 1/2.76 (1Dn3UP) 1/4.1 (1Dn2UP) 1/8.3 (1Dn1UP)			
	LTE FDD	1			
	LTE TDD	0.633			
	WCDMA	1			
	WLAN802.11a/b/g/n(20M/40M)/ ac(20M/40M/80M)	1			
	Bluetooth	1			
	GSM850	824 – 849			
TX Frequency Range	GSM1900	1850 — 1910			
(MHz)	WCDMA Band II	1850 — 1910			
	WCDMA Band IV	1710 — 1755			

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 7 of 144

	WCDMA Band V	824	_	849
	LTE FDD Band 2	1850	_	1910
	LTE FDD Band 4	1710	_	1755
	LTE FDD Band 5	824	_	849
	LTE FDD Band 7	2500	_	2570
	LTE FDD Band 12	699	_	716
	LTE FDD Band 17	704	_	716
	LTE FDD Band 25	1850	_	1915
	LTE FDD Band 26	814	_	849
	LTE FDD Band 30	2305	_	2315
	LTE TDD Band 38	2570		2620
TX Frequency Range	LTE TDD Band 41	2496	_	2690
	LTE FDD Band 66	1710	_	1780
(MHz)	WLAN802.11 b/g/n(20M)	2412	_	2462
	WLAN802.11 n(40M)	2422	_	2462
	WLAN802.11 a/n(20M)/ac(20M) 5.2G	5180	_	5240
	WLAN802.11 n(40M)/ac(40M) 5.2G	5190	_	5230
	WLAN802.11 ac(80M) 5.2G	5210		
	WLAN802.11 a/n(20M)/ac(20M) 5.3G	5260	_	5320
	WLAN802.11 n(40M)/ac(40M) 5.3G	5270	_	5310
	WLAN802.11 ac(80M) 5.3G	5290		
	WLAN802.11 a/n/ac(20M) 5.6G	5500	_	5720
	WLAN802.11 n/ac(40M) 5.6G	5510	_	5710
	WLAN802.11 ac(80M) 5.6G	5530	_	5690
	WLAN802.11 a/n(20M)/ac(20M) 5.8G	5745	_	5825

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 8 of 144

	WLAN802.11 n(40M)/ac(40M) 5.8G	5710	_	5795
TX Frequency Range (MHz)	WLAN802.11 ac(80M) 5.8G	5775		
	Bluetooth	2402	_	2480
	GSM850	128	_	251
	GSM1900	512	_	810
	WCDMA Band II	9262	_	9538
	WCDMA Band IV	1312	_	1513
	WCDMA Band V	4132	_	4233
	LTE FDD Band 2	18607	_	19193
	LTE FDD Band 4	19957	_	20393
	LTE FDD Band 5	20407	_	20643
Channel Number (ARFCN)	LTE FDD Band 7	20775	_	21425
	LTE FDD Band 12	23017	_	23173
	LTE FDD Band 17	23755	_	23825
	LTE FDD Band 25	26047	_	26683
	LTE FDD Band 26	26697	_	27033
	LTE FDD Band 30	27685	_	27735
	LTE TDD Band 38	37775	_	38225
	LTE TDD Band 41	39675	_	41565
	LTE FDD Band 66	131979	_	132665
	WLAN802.11 b/g/n(20M)	1	_	13
	WLAN802.11 n(40M)	3	_	11
	WLAN802.11 a/n(20M)/ac(20M) 5.2G	36	_	48
	WLAN802.11 n(40M)/ac(40M) 5.2G	38	_	46
	WLAN802.11 ac(80M) 5.2G	42		
	WLAN802.11 a/n(20M)/ac(20M) 5.3G	52	_	64

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 9 of 144

	WLAN802.11 n(40M)/ac(40M) 5.3G	54	_	62
	WLAN802.11 ac(80M) 5.3G	58		
	WLAN802.11 a/n/ac(20M) 5.6G	100	_	144
	WLAN802.11 n/ac(40M) 5.6G	102	_	142
(ARFCN)	WLAN802.11 ac(80M) 5.6G	106	_	138
	WLAN802.11 a/n(20M)/ac(20M) 5.8G	149	_	165
	WLAN802.11 n(40M)/ac(40M) 5.8G	142	_	159
	WLAN802.11 ac(80M) 5.8G	155		
	Bluetooth	0	_	78

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

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

SGS Taiwan Ltd.



Page: 10 of 144

# 5. Air Interfaces and Bands

Г				ı																																					
A'n latarfa	Band	Туре	C63.19 tested		Type	Simultaneous	Voice Over Digital	Power																																	
Air- Interface	(MHZ)	Transport			C63.19 tested		C63.19 tested				Transmitter	Transport OTT	Reduction																												
		-			but not tested	capability																																			
GSM	850	VO	Yes	Ye	es, WiFi or Bluetooth	No	No																																		
00.01	1900	, 0	163		o, viii i oi Bidotootii	No	No																																		
	II					No	No																																		
WCDMA	IV	VO	Yes (Note 1.)	Υe	s, WiFi or Bluetooth	No	No																																		
	V					No	No																																		
	2					Yes	No																																		
	4					Yes	No																																		
	5		Yes (Note 1.)			Yes	No																																		
	7				Yes	No																																			
LTE FDD	12			)		Yes	No																																		
	17	VD		y re	Yes, WiFi or Bluetooth	Yes	No																																		
	25																												1	1						1				Yes	No
	26					Yes	No																																		
	30					Yes	No																																		
	66					Yes	No																																		
1.TE TDD	38	\	V		- WE - Di - t- di	Yes	No																																		
LTE TDD	41	VD	Yes	Ye	es, WiFi or Bluetooth	Yes	No																																		
WiFi	2450	DT	No	Yes, WWAN or BT		Yes	No																																		
WiFi	5000	DT	No	No Yes, WWAN or BT		Yes	No																																		
Bluetooth	2450	DT	No	Yes, WWAN or WiFi		No	No																																		
VO= CMRS Voice Service				Note																																					
DT= Digital Transport					1.It applies the low power exemption based on																																				
VD=CMRS IP Voice Service and Digital Transport					ANSI C63.19-2011																																				

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

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



Page: 11 of 144

### 6. Test Environment

Ambient Temperature	21.7° C
Relative Humidity	<80 %

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 12 of 144

### 7. Description of test system

7.1 Measurement system Diagram for SPEAG Robotic

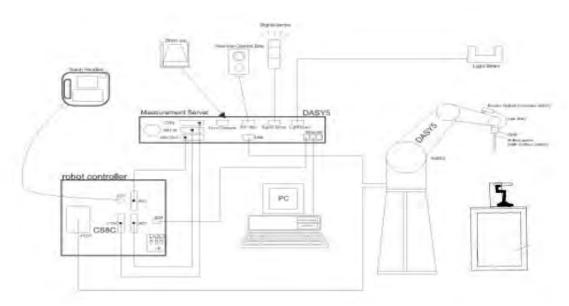


Fig.1 The SPEAG Robotic Diagram

The DASY5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
- E Field probe.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.

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

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

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

www.tw.sas.com



Page: 13 of 144

- A computer operating Windows 7.
- DASY5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The Test Arch phantom.
- The device holder for handheld mobile phones.
- Validation dipole kits allowing to validate the proper functioning of the system.

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

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

SGS Taiwan Ltd.

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

www.tw.sas.com



Page: 14 of 144

### 7.2 E Field Probe

Construction	One dipole parallel, two dipoles normal to probe axis Built-in shielding against static charges PEEK enclosure material	
Calibration	In air from 100 MHz to 3.0 GHz (absolute accuracy ±6.0%, k=2)	
Frequency	(extended to 20 MHz for MRI), Linearity: ± 0.2 dB (100 MHz to 3 GHz)	ER3DV6 E-Field Probe
Directivity	± 0.2 dB in air (rotation around prob ± 0.4 dB in air (rotation normal to pr	e axis)
Dynamic Range	2 V/m to > 1000 V/m; Linearity: ± 0.	2 dB
Dimensions	Tip diameter: 8 mm Distance from probe tip to dipole ce	nters: 2.5 mm

#### 7.3 Test Arch

Description	Enables easy and well defined	
	positioning of the phone and	
	validation dipoles as well as simple	
	teaching of the robot.	
Dimensions	length: 370 mm	
	width: 370 mm	
	height: 370 mm	Test Arch

#### 7.4 Phone Holder

Description	Supports accurate and reliable positioning of any phone Effect on near field <+/- 0.5 dB	
	meal field <+/- 0.5 dB	
		Phone Holder

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 15 of 144

### 8. Test Procedure

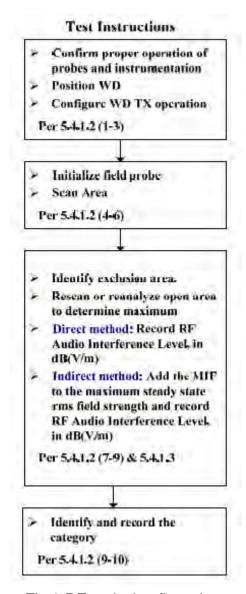


Fig.2 RF emission flow chart

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.

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

www.tw.sas.com



Page: 16 of 144

The following illustrate a typical RF emissions test scan over a wireless communications device (Indirect method):

- 1. Proper operation of the field probe, probe measurement system, other instrumentation, and the positioning system was confirmed.
- 2. WD is positioned in its intended test position, acoustic output point of the device perpendicular to the field probe.
- The WD operation for maximum rated RF output power was configured and confirmed with the base station simulator, at the test channel and other normal operating parameters as intended for the test. The battery was ensured to be fully charged before each test.
- 4. The center sub-grid was centered over the center of the acoustic output (also audio band magnetic output, if applicable). The WD audio output was positioned tangent (as physically possible) to the measurement plane.
- 5. A surface calibration was performed before each setup change to ensure repeatable spacing and proper maintenance of the measurement plane using the HAC Phantom.
- 6. The measurement system measured the field strength at the reference location.
- 7. Measurements at 5mm increments in the 5 x 5 cm region were performed and recorded. A 360° rotation about the azimuth axis at the maximum interpolated position was measured. For the worst-case condition, the peak reading from this rotation was used in re-evaluating the HAC category.
- 8. The system performed a drift evaluation by measuring the field at the reference location.

#### Note.

Per KDB 285076 D01 v04r01 2.d) 1), handsets that that have the ability to support concurrent connections using simultaneous transmissions shall be independently tested for each air interface/band given in ANSI C63.19-2011. At the present time ANSI C63.19 does not provide simultaneous transmission test procedures.

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

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

t (886-2) 2299-3279 f (886-2) 2298-0488 www.tw.sgs.com



Page: 17 of 144

# 9. System Verification

A dipole antenna meeting the requirements given in ANSI C63.19-2011 was placed in the position normally occupied by the WD.

The length of the dipole was scanned by E-field probes and the maximum values for each were recorded.

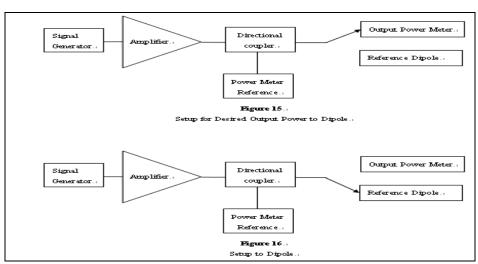


Fig.3 System verification

#### For E-Field Scan

Mode	Frequency (MHz)	Input Power(dBm)	E-Field 1 (V/m)	E-Field 2(V/m)	Target Value(V/m)	Deviation	Measured Date
CW	835	20	110.5	108.9	108.7	0.92%	Sep.15, 2017
CW	1880	20	91.43	89.94	91	0.35%	Sep.15, 2017
CW	2600	20	87.86	82.14	83.3	2.04%	Sep.29, 2017

Note:

For E-Field, the deviation is [(E-Field 1 + E-Field 2) / 2 – Target value] / Target value x 100%

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

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



Page: 18 of 144

### 10. Modulation Interference Factor

For any specific fixed and repeatable modulated signal, a modulation interference factor (MIF, expressed in dB) may be developed that relates its interference potential to its steady-state rms signal level or average power level. This factor is a function only of the audio-frequency amplitude modulation characteristics of the signal and is the same for field-strength and conducted power measurements. It is important to emphasize that the MIF is valid only for a specific repeatable audio-frequency amplitude modulation characteristic. Any change in modulation characteristic requires determination and application of a new MIF

The MIF may be determined using a radiated RF field or a conducted RF signal,

b) Using RF illumination or conducted coupling, apply the specific modulated signal

question to the measurement system at a level within its confirmed operating dynamic range.

- Measure the steady-state rms level at the output of the fast probe or sensor.
- d) Measure the steady-state average level at the weighting output.
- e) Without changing the square-law detector or weighting system, and using RF illumination or conducted coupling, substitute for the specific modulated signal a 1 kHz, 80% amplitude modulated carrier at the same frequency and adjust its strength until the level at the weighting output equals the step d) measurement.
- f) Without changing the carrier level from step e), remove the 1 kHz modulation and again

measure the steady-state rms level indicated at the output of the fast probe or sensor.

g) The MIF for the specific modulation characteristic is provided by the ratio of the step f)

measurement to the step c) measurement, expressed in dB ( $20 \times \log(\text{step f})$ )/step c)).

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

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

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

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

SGS Taiwan Ltd.



Page: 19 of 144

Based on the KDB285076 D01, the handset can also use the MIF values predetermined by the test equipment manufacturer, and the following table lists the MIF values evaluated by DASY manufacturer (SPEAG), and the test result will be calculated with the MIF parameter automatically.

SPEAG UID	UID version	Communication system	MIF(dB)
10021	DAC (8.1.2017)	GSM-FDD (TDMA, GMSK)	3.63
10011	CAB (8.1.2017)	UMTS-FDD (WCDMA)	-27.23
10170	CAD (8.1.2017)	LTE-FDD (SC-FDMA,1RB, 20MHz,16-QAM)	-9.76
10176	CAE (8.1.2017)	LTE-FDD (SC-FDMA,1RB, 10MHz,16-QAM)	-9.76
10178	CAE (8.1.2017)	LTE-FDD (SC-FDMA,1RB, 5MHz,16-QAM)	-9.76
10182	CAD (8.1.2017)	LTE-FDD (SC-FDMA,1RB, 15MHz,16-QAM)	-9.76
10185	CAD (8.1.2017)	LTE-FDD (SC-FDMA,1RB, 3MHz,16-QAM)	-9.76
10188	CAE (8.1.2017)	LTE-FDD (SC-FDMA,1RB, 1.4MHz,16-QAM)	-9.76
10173	CAD(8.1.2017)	LTE-TDD (SC-FDMA,1RB, 20MHz,16-QAM)	-1.44
10226	CAD(8.1.2017)	LTE-TDD (SC-FDMA,1RB, 1.4MHz,16-QAM)	-1.44
10229	CAD(8.1.2017)	LTE-TDD (SC-FDMA,1RB, 3MHz,16-QAM)	-1.44
10232	CAD(8.1.2017)	LTE-TDD (SC-FDMA,1RB, 5MHz,16-QAM)	-1.44
10235	CAD(8.1.2017)	LTE-TDD (SC-FDMA,1RB, 10MHz,16-QAM)	-1.44
10238	CAD(8.1.2017)	LTE-TDD (SC-FDMA,1RB, 15MHz,16-QAM)	-1.44

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 20 of 144

# 11. Measured conducted output power

Band	Channel	Average power(dBm)
	128	32.75
GSM 850 (GMSK)	190	32.75
(Gillert)	251	32.78
0011.1000	512	30.07
GSM 1900 (GMSK)	661	30.04
(Giller t)	810	29.98
	9262	24.45
WCDMA Band II	9400	24.43
	9538	24.45
	1312	24.1
WCDMA Band IV	1412	24.28
	1513	24.29
	4132	23.81
WCDMA Band V	4183	23.82
	4133	23.93

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 21 of 144

### LTE FDD Band 2 - conducted power table:

				FDD E	Band 2			
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1860	18700	22.96	23	0
			0	1880	18900	22.89	23	0
				1900	19100	22.99	23	0
		4 00	50	1860	18700	22.74	23	0
		1 RB	50	1880 1900	18900 19100	22.82 22.86	23 23	0
				1860	18700	22.94	23	0
			99	1880	18900	22.88	23	0
				1900	19100	22.91	23	0
				1860	18700	21.80	22	0-1
	QPSK		0	1880	18900	21.87	22	0-1
				1900	19100	21.98	22	0-1
		50 DD	٥٢	1860	18700	21.89	22	0-1
		50 RB	25	1880	18900	21.83 21.99	22 22	0-1 0-1
				1900 1860	19100 18700	21.88	22	0-1
			50	1880	18900	21.76	22	0-1
				1900	19100	21.96	22	0-1
			!	1860	18700	21.84	22	0-1
		10	0RB	1880	18900	21.85	22	0-1
				1900	19100	21.92	22	0-1
				1860	18700	21.98	22	0-1
			0	1880	18900	21.90	22	0-1
				1900	19100	21.93	22	0-1
		4.55	50	1860	18700	21.86	22	0-1
		1 RB	50	1880	18900	21.92	22	0-1
				1900	19100	21.93	22	0-1
			99	1860 1880	18700 18900	21.92 21.93	22 22	0-1 0-1
			33	1900	19100	21.97	22	0-1
		5-QAM 50 RB		1860	18700	20.79	21	0-2
20	16-QAM		0	1880	18900	20.86	21	0-2
				1900	19100	20.92	21	0-2
				1860	18700	20.86	21	0-2
			25	1880	18900	20.90	21	0-2
				1900	19100	20.97	21	0-2
				1860	18700	20.83	21	0-2
			50	1880	18900	20.74	21	0-2
				1900	19100	20.99	21	0-2
		10	0RB	1860 1880	18700 18900	20.78 20.90	21 21	0-2 0-2
		"	UND	1900	19100	20.94	21	0-2
				1860	18700	21.93	22	0-2
			0	1880	18900	21.98	22	0-1
				1900	19100	21.90	22	0-1
				1860	18700	21.84	22	0-1
		1 RB	50	1880	18900	21.82	22	0-1
				1900	19100	21.91	22	0-1
			00	1860	18700	21.97	22	0-1
			99	1880	18900	21.92	22	0-1
		-		1900 1860	19100 18700	21.93 20.92	22 21	0-1 0-2
	64-QAM		0	1880	18900	20.92	21	0-2
	J. 30 (1V)			1900	19100	20.86	21	0-2
				1860	18700	20.97	21	0-2
		50 RB	25	1880	18900	20.86	21	0-2
				1900	19100	20.90	21	0-2
				1860	18700	20.99	21	0-2
			50	1880	18900	20.83	21	0-2
				1900	19100	20.74	21	0-2
			ODD	1860	18700	20.94	21	0-2
		l 10	0RB	1880	18900	20.78	21	0-2
	ı	<u> </u>		1900	19100	20.90	21	0-2

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 22 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1857.5	18675	22.71	23	0
			0	1880	18900	22.92	23	0
				1902.5	19125	22.79	23	0
				1857.5	18675	22.53	23	0
		1 RB	36	1880	18900	22.75	23	0
				1902.5	19125	22.88	23	0
				1857.5	18675	22.66	23	0
			74	1880	18900	22.79	23	0
				1902.5	19125	22.97	23	0
				1857.5	18675	21.73	22	0-1
	QPSK		0	1880	18900	21.92	22	0-1
				1902.5	19125	21.94	22	0-1
				1857.5	18675	21.69	22	0-1
		36 RB	18	1880	18900	21.87	22	0-1
				1902.5	19125	22.00	22	0-1
			27	1857.5	18675	21.73	22	0-1
			37	1880	18900	21.78	22	0-1
				1902.5	19125	21.95	22	0-1
			·DD	1857.5	18675	21.66	22	0-1
		75RB		1880	18900	21.88	22	0-1
				1902.5	19125	21.91	22	0-1
			0	1857.5	18675	21.91	22	0-1
			0	1880	18900	21.94	22	0-1
				1902.5 1857.5	19125	21.98	22	0-1
		1 RB	36		18675	21.97	22	0-1
		IKD	36	1880	18900 19125	21.95	22 22	0-1 0-1
				1902.5 1857.5	18675	21.83 21.91	22	0-1
			74	1880	18900	21.92	22	0-1
			74	1902.5	19125	22.00	22	0-1
				1857.5	18675	20.69	21	0-2
15	16-QAM	G-QAM 36 RB	0	1880	18900	20.86	21	0-2
				1902.5	19125	20.99	21	0-2
			36 RB 18	1857.5	18675	20.79	21	0-2
				1880	18900	20.78	21	0-2
				1902.5	19125	21.00	21	0-2
				1857.5	18675	20.66	21	0-2
			37	1880	18900	20.83	21	0-2
				1902.5	19125	20.90	21	0-2
				1857.5	18675	20.60	21	0-2
		75	RB	1880	18900	20.84	21	0-2
				1902.5	19125	20.69	21	0-2
				1857.5	18675	21.98	22	0-1
			0	1880	18900	21.91	22	0-1
				1902.5	19125	21.94	22	0-1
		4.55	00	1857.5	18675	21.83	22	0-1
		1 RB	36	1880	18900	21.97	22	0-1
				1902.5	19125	21.95	22	0-1
			7.4	1857.5	18675	21.94	22	0-1
			74	1880	18900	21.90	22	0-1
				1902.5	19125	21.92	22	0-1
	64 0 4 4		0	1857.5	18675	20.99	21	0-2
	64-QAM		0	1880	18900	20.69	21	0-2
				1902.5	19125	20.86	21	0-2
		36 RB	18	1857.5	18675	20.74	21	0-2
		30 KD	10	1880	18900 19125	20.78	21 21	0-2 0-2
				1902.5		20.82		
			37	1857.5 1880	18675 18900	20.90 20.83	21 21	0-2 0-2
			51	1902.5	19125	20.66	21	0-2
				1857.5	18675	20.69	21	0-2
		7.5	SRB	1880	18900	20.60	21	0-2
	7							

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

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

prosecuted to the fullest extent of the law. SGS Taiwan Ltd.



Page: 23 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1855	18650	22.69	23	0
			0	1880	18900	22.92	23	0
				1905	19150	22.89	23	0
				1855	18650	22.62	23	0
		1 RB	25	1880	18900	22.74	23	0
				1905	19150	22.81	23	0
				1855	18650	22.92	23	0
			49	1880	18900	22.92	23	0
				1905	19150	22.84	23	0
	0.001		_	1855	18650	21.63	22	0-1
	QPSK		0	1880	18900	21.79	22	0-1
				1905	19150	21.92	22	0-1
		05.00	40	1855	18650	21.61	22	0-1
		25 RB	12	1880	18900	21.77	22	0-1
				1905	19150	21.90	22	0-1
			25	1855	18650	21.58	22	0-1
			25	1880	18900	21.74	22	0-1
				1905	19150	21.84	22	0-1
			NDD.	1855	18650	21.59	22	0-1
		50RB		1880	18900	21.79	22	0-1
				1905	19150	21.88 21.98	22 22	0-1 0-1
			0	1855	18650			0-1
			U	1880 1905	18900 19150	21.98 21.94	22 22	0-1
				1855	18650	21.61	22	0-1
		1 RB	25	1880	18900	21.84	22	0-1
		TIND	25	1905	19150	21.91	22	0-1
				1855	18650	21.79	22	0-1
			49	1880	18900	21.80	22	0-1
			43	1905	19150	21.97	22	0-1
				1855	18650	20.65	21	0-1
10	16-OAM	6-QAM	0	1880	18900	20.96	21	0-2
10	10 07 1111			1905	19150	20.92	21	0-2
				1855	18650	20.67	21	0-2
			12 25	1880	18900	20.82	21	0-2
				1905	19150	20.98	21	0-2
				1855	18650	20.58	21	0-2
				1880	18900	20.69	21	0-2
				1905	19150	20.82	21	0-2
				1855	18650	20.56	21	0-2
		50	)RB	1880	18900	20.71	21	0-2
				1905	19150	20.92	21	0-2
				1855	18650	21.91	22	0-1
			0	1880	18900	21.88	22	0-1
				1905	19150	21.91	22	0-1
				1855	18650	21.60	22	0-1
		1 RB	25	1880	18900	21.82	22	0-1
				1905	19150	21.88	22	0-1
				1855	18650	21.77	22	0-1
			49	1880	18900	21.77	22	0-1
				1905	19150	21.96	22	0-1
				1855	18650	20.63	21	0-2
	64-QAM		0	1880	18900	20.93	21	0-2
				1905	19150	20.90	21	0-2
				1855	18650	20.64	21	0-2
		25 RB	12	1880	18900	20.81	21	0-2
				1905	19150	20.96	21	0-2
			0.5	1855	18650	20.55	21	0-2
			25	1880	18900	20.67	21	0-2
				1905	19150	20.79	21	0-2
			NDD.	1855	18650	20.55	21	0-2
		50	)RB	1880	18900	20.69	21	0-2
				1905	19150	20.89	21	0-2

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 24 of 144

				Frequency		Conducted	Target Power +	MPR Allowed
BW(MHz)	Modulation	RB Size	RB Offset	(MHz)	Channel	power (dBm)	Max. Tolerance (dBm)	per 3GPP(dB)
				1852.5	18625	22.59	23	0
			0	1880	18900	22.73	23	0
				1907.5	19175	22.83	23	0
		4 DD	40	1852.5	18625	22.58	23	0
		1 RB	12	1880	18900	22.61	23	0
				1907.5	19175	22.89	23	0
			24	1852.5	18625	22.61	23	0
			24	1880 1907.5	18900 19175	22.72 22.86	23 23	0
							22	
	QPSK		0	1852.5 1880	18625 18900	21.61 21.82	22	0-1 0-1
	QI SIX		U	1907.5	19175	21.87	22	0-1
				1852.5	18625	21.59	22	0-1
		12 RB	6	1880	18900	21.78	22	0-1
		12110	Ŭ	1907.5	19175	21.87	22	0-1
				1852.5	18625	21.62	22	0-1
			13	1880	18900	21.73	22	0-1
			10	1907.5	19175	21.86	22	0-1
				1852.5	18625	21.67	22	0-1
		25	SRB	1880	18900	21.74	22	0-1
				1907.5	19175	21.82	22	0-1
				1852.5	18625	21.97	22	0-1
			0	1880	18900	21.89	22	0-1
				1907.5	19175	21.93	22	0-1
				1852.5	18625	21.61	22	0-1
		1 RB	12	1880	18900	21.90	22	0-1
				1907.5	19175	21.97	22	0-1
				1852.5	18625	21.92	22	0-1
			24	1880	18900	21.95	22	0-1
				1907.5	19175	21.91	22	0-1
			0	1852.5	18625	20.69	21	0-2
5	16-QAM			1880	18900	20.80	21	0-2
				1907.5	19175	20.89	21	0-2
				1852.5	18625	20.74	21	0-2
		12 RB	6	1880	18900	20.80	21	0-2
				1907.5	19175	20.99	21	0-2
				1852.5	18625	20.54	21	0-2
			13	1880	18900	20.77	21	0-2
				1907.5	19175	20.95	21	0-2
			-DD	1852.5	18625	20.61	21	0-2
		25	SRB	1880	18900	20.76	21	0-2
		ļ		1907.5	19175	20.95	21	0-2
			^	1852.5	18625	21.94	22	0-1
			0	1880	18900	21.87	22	0-1
				1907.5 1852.5	19175	21.90	22	0-1
		1 RB	12		18625	21.60	22	0-1
		IKB	12	1880	18900	21.88	22	0-1
				1907.5	19175	21.94	22	0-1
			24	1852.5	18625	21.90	22	0-1
			24	1880	18900	21.92	22 22	0-1 0-1
		<b>—</b>		1907.5 1852.5	19175 18625	21.90 20.67	21	0-1
	64-QAM		0	1880	18900	20.67	21	0-2
	UT QAIVI		J	1907.5	19175	20.77	21	0-2
				1852.5	18625	20.87	21	0-2
		12 RB	6	1880	18900	20.71	21	0-2
		'2'\'	,	1907.5	19175	20.79	21	0-2
		I		1852.5	18625	20.51	21	0-2
			13	1880	18900	20.75	21	0-2
				1907.5	19175	20.92	21	0-2
				1852.5	18625	20.60	21	0-2
		25	SRB	1880	18900	20.74	21	0-2
		l		1907.5	19175	20.92	21	0-2

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

t (886-2) 2299-3279

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 25 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1851.5	18615	22.54	23	0
			0	1880	18900	22.69	23	0
				1908.5	19185	22.75	23	0
				1851.5	18615	22.65	23	0
		1 RB	7	1880	18900	22.79	23	0
				1908.5	19185	22.79	23	0
				1851.5	18615	22.55	23	0
			14	1880	18900	22.65	23	0
				1908.5	19185	22.76	23	0
				1851.5	18615	21.57	22	0-1
	QPSK		0	1880	18900	21.68	22	0-1
				1908.5	19185	21.83	22	0-1
				1851.5	18615	21.53	22	0-1
		8 RB	4	1880	18900	21.67	22	0-1
				1908.5	19185	21.82	22	0-1
				1851.5	18615	21.46	22	0-1
			7	1880	18900	21.73	22	0-1
				1908.5	19185	21.79	22	0-1
				1851.5	18615	21.50	22	0-1
		15RB		1880	18900	21.76	22	0-1
				1908.5	19185	21.69	22	0-1
				1851.5	18615	21.70	22	0-1
			0	1880	18900	21.82	22	0-1
				1908.5	19185	21.96	22	0-1
				1851.5	18615	21.46	22	0-1
		1 RB	7	1880	18900	21.97	22	0-1
				1908.5	19185	21.95	22	0-1
				1851.5	18615	21.98	22	0-1
			14	1880	18900	21.99	22	0-1
				1908.5	19185	21.97	22	0-1
		8 RB	0	1851.5	18615	20.57	21	0-2
3	16-QAM			1880	18900	20.66	21	0-2
				1908.5	19185	20.96	21	0-2
			4	1851.5	18615	20.67	21	0-2
				1880	18900	20.81	21	0-2
				1908.5	19185	20.84	21	0-2
				1851.5	18615	20.55	21	0-2
			7	1880	18900	20.78	21	0-2
				1908.5	19185	20.77	21	0-2
				1851.5	18615	20.62	21	0-2
		15	5RB	1880	18900	20.62	21	0-2
				1908.5	19185	20.84	21	0-2
				1851.5	18615	21.67	22	0-1
			0	1880	18900	21.80	22	0-1
				1908.5	19185	21.93	22	0-1
				1851.5	18615	21.45	22	0-1
		1 RB	7	1880	18900	21.95	22	0-1
				1908.5	19185	21.92	22	0-1
				1851.5	18615	21.96	22	0-1
			14	1880	18900	21.96	22	0-1
				1908.5	19185	21.96	22	0-1
			_	1851.5	18615	20.55	21	0-2
	64-QAM		0	1880	18900	20.63	21	0-2
			ļ	1908.5	19185	20.94	21	0-2
			l .	1851.5	18615	20.64	21	0-2
		8 RB	4	1880	18900	20.80	21	0-2
		Ī		1908.5	19185	20.82	21	0-2
			_	1851.5	18615	20.52	21	0-2
			7	1880	18900	20.76	21	0-2
			]	1908.5	19185	20.74	21	0-2
			-00	1851.5	18615	20.61	21	0-2
		15	5RB	1880	18900	20.60	21	0-2
				1908.5	19185	20.81	21	0-2

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

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

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

SGS Taiwan Ltd.



Page: 26 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
							(dBm)	
				1850.7	18607	22.70	23	0
			0	1880	18900	22.76	23	0
				1909.3	19193	22.93	23	0
		1 RB	2	1850.7	18607	22.78	23	0
		IKB	2	1880 1909.3	18900 19193	22.87 22.88	23 23	0
				1850.7	18607	22.77	23	0
			5	1880	18900	22.76	23	0
				1909.3	19193	22.82	23	0
				1850.7	18607	22.80	23	0
	QPSK		0	1880	18900	22.90	23	0
				1909.3	19193	22.94	23	0
			2	1850.7	18607	22.86	23	0
		3 RB		1880	18900	22.84	23	0
				1909.3	19193	22.95	23	0
			_	1850.7	18607	22.73	23	0
			3	1880	18900	22.76	23	0
				1909.3	19193	22.91	23 22	0 0-1
		6RB		1850.7 1880	18607 18900	21.78 21.77	22	0-1
			IND	1909.3	19193	21.88	22	0-1
				1850.7	18607	21.93	22	0-1
			0	1880	18900	21.91	22	0-1
				1909.3	19193	21.98	22	0-1
				1850.7	18607	21.99	22	0-1
		1 RB	2	1880	18900	21.90	22	0-1
				1909.3	19193	21.95	22	0-1
				1850.7	18607	21.85	22	0-1
			5	1880	18900	21.75	22	0-1
				1909.3	19193	21.94	22	0-1
			•	1850.7	18607	21.82	22	0-1
1.4	16-QAM		0	1880	18900	21.76	22	0-1
				1909.3	19193	21.94	22	0-1
		2.00		1850.7	18607	21.83	22	0-1
		3 RB	2	1880 1909.3	18900 19193	21.76 21.97	22 22	0-1 0-1
			3	1850.7	18607	21.83	22	0-1
				1880	18900	21.92	22	0-1
				1909.3	19193	21.79	22	0-1
				1850.7	18607	20.70	21	0-2
		6	RB	1880	18900	20.73	21	0-2
				1909.3	19193	20.87	21	0-2
				1850.7	18607	21.90	22	0-1
			0	1880	18900	21.89	22	0-1
				1909.3	19193	21.95	22	0-1
		4 00	_	1850.7	18607	21.98	22	0-1
		1 RB	2	1880	18900	21.88	22	0-1
				1909.3	19193	21.92	22	0-1
			5	1850.7	18607	21.83	22	0-1
			,	1880 1909.3	18900 19193	21.72 21.93	22 22	0-1 0-1
				1850.7	18607	21.80	22	0-1
	64-QAM		0	1880	18900	21.73	22	0-1
			] -	1909.3	19193	21.92	22	0-1
				1850.7	18607	21.80	22	0-1
		3 RB	2	1880	18900	21.75	22	0-1
				1909.3	19193	21.95	22	0-1
				1850.7	18607	21.80	22	0-1
			3	1880	18900	21.90	22	0-1
				1909.3	19193	21.76	22	0-1
		_	DD	1850.7	18607	20.69	21	0-2
		6	RB	1880	18900	20.71	21	0-2
		]		1909.3	19193	20.84	21	0-2

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

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

SGS Taiwan Ltd.



Page: 27 of 144

### LTE FDD Band 4 - conducted power table:

				FDD Ba	ınd 4			
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Power + Max. Tolerance	MPR Allowed
				1720	20050	23.35	24	0
			0	1732.5	20175	23.53	24	0
				1745	20300	23.55	24	0
		1 RB	50	1720	20050	23.02	24	0
		TRB	50	1732.5 1745	20175 20300	23.35 23.37	24 24	0
				1745	20050	23.21	24	0
			99	1732.5	20175	23.29	24	0
				1745	20300	23.44	24	0
				1720	20050	22.34	23	0-1
	QPSK		0	1732.5	20175	22.49	23	0-1
				1745	20300	22.59	23	0-1
				1720	20050	22.23	23	0-1
		50 RB	25	1732.5	20175	22.38	23	0-1
				1745	20300	22.52	23	0-1
			50	1720	20050	22.27	23	0-1
			50	1732.5	20175	22.39	23	0-1
			ļ	1745 1720	20300 20050	22.49	23	0-1 0-1
		10	0RB	1732.5	20175	22.23 22.34	23	0-1
		10	OND	1732.3	20300	22.49	23	0-1
				1720	20050	22.59	23	0-1
			0	1732.5	20175	22.52	23	0-1
				1745	20300	22.58	23	0-1
				1720	20050	22.35	23	0-1
		1 RB	50	1732.5	20175	22.43	23	0-1
				1745	20300	22.49	23	0-1
				1720	20050	22.75	23	0-1
			99	1732.5	20175	22.70	23	0-1
		-		1745	20300	22.81	23	0-1
20	16-QAM		0	1720	20050	21.39	22	0-2
20	16-QAIVI		0	1732.5 1745	20175 20300	21.50 21.64	22 22	0-2 0-2
			25	1743	20050	21.04	22	0-2
		50 RB		1732.5	20175	21.42	22	0-2
		00.12		1745	20300	21.59	22	0-2
			50	1720	20050	21.21	22	0-2
				1732.5	20175	21.42	22	0-2
				1745	20300	21.48	22	0-2
		•		1720	20050	21.17	22	0-2
		100RB		1732.5	20175	21.35	22	0-2
				1745	20300	21.48	22	0-2
				1720	20050	22.56	23	0-1
			0	1732.5	20175	22.50	23	0-1
				1745	20300	22.55	23	0-1
		1 RB	50	1720 1732.5	20050 20175	22.34 22.41	23	0-1 0-1
		IND	30	1732.5	20300	22.41	23	0-1
				1743	20050	22.73	23	0-1
			99	1732.5	20175	22.67	23	0-1
				1745	20300	22.80	23	0-1
				1720	20050	21.37	22	0-2
	64-QAM		0	1732.5	20175	21.47	22	0-2
				1745	20300	21.62	22	0-2
				1720	20050	21.22	22	0-2
		50 RB	25	1732.5	20175	21.41	22	0-2
				1745	20300	21.57	22	0-2
				1720	20050	21.18	22	0-2
			50	1732.5	20175	21.40	22	0-2
		-		1745	20300	21.45	22	0-2
		10	0RB	1720 1732.5	20050 20175	21.16 21.33	22 22	0-2 0-2
		. 10	J. 12	1732.0	20110	۷1.33	~~	U-Z

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

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

SGS Taiwan Ltd.



Page: 28 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed
				1717.5	20025	23.30	24	0
			0	1732.5	20175	23.47	24	0
				1747.5	20325	23.50	24	0
				1717.5	20025	23.17	24	0
		1 RB	36	1732.5	20175	23.21	24	0
				1747.5	20325	23.37	24	0
				1717.5	20025	23.18	24	0
			74	1732.5	20175	23.34	24	0
				1747.5	20325	23.38	24	0
				1717.5	20025	22.26	23	0-1
	QPSK		0	1732.5	20175	22.40	23	0-1
				1747.5	20325	22.55	23	0-1
				1717.5	20025	22.26	23	0-1
		36 RB	18	1732.5	20175	22.30	23	0-1
				1747.5	20325	22.43	23	0-1
				1717.5	20025	22.28	23	0-1
			37	1732.5	20175	22.31	23	0-1
				1747.5	20325	22.54	23	0-1
				1717.5	20025	22.20	23	0-1
		7!	5RB	1732.5	20175	22.37	23	0-1
		l '`		1732.5	20325	22.45	23	0-1
				1747.5	20025	22.54	23	0-1
			0	1717.5	20025	22.54	23	0-1
			0					
		1 RB		1747.5	20325	22.80	23	0-1
			00	1717.5	20025	22.13	23	0-1
		1 KB	36	1732.5	20175	22.72	23	0-1
				1747.5	20325	22.47	23	0-1
				1717.5	20025	22.44	23	0-1
			74	1732.5	20175	22.73	23	0-1
				1747.5	20325	22.74	23	0-1
				1717.5	20025	21.24	22	0-2
15	16-QAM		0	1732.5	20175	21.41	22	0-2
				1747.5	20325	21.54	22	0-2
				1717.5	20025	21.27	22	0-2
		36 RB	18	1732.5	20175	21.35	22	0-2
				1747.5	20325	21.43	22	0-2
			37	1717.5	20025	21.28	22	0-2
				1732.5	20175	21.31	22	0-2
				1747.5	20325	21.49	22	0-2
				1717.5	20025	21.23	22	0-2
		75RB		1732.5	20175	21.37	22	0-2
		73110		1747.5	20325	21.46	22	0-2
			l	1747.5	22.51	22.54	23	0-2
			0	1717.5	22.58	22.60	23	0-1
				1732.5	22.77	22.80	23	0-1
				1747.5			23	0-1
		1 RB	36		22.12 22.7	22.13 22.72	23	
		IVP	30	1732.5				0-1
				1747.5	22.44	22.47	23	0-1
			7.4	1717.5	22.42	22.44	23	0-1
			74	1732.5	22.7	22.73	23	0-1
				1747.5	22.73	22.74	23	0-1
				1717.5	21.22	21.24	22	0-2
	64-QAM		0	1732.5	21.38	21.41	22	0-2
				1747.5	21.52	21.54	22	0-2
				1717.5	21.24	21.27	22	0-2
		36 RB	18	1732.5	21.34	21.35	22	0-2
				1747.5	21.41	21.43	22	0-2
				1717.5	21.25	21.28	22	0-2
			37	1732.5	21.29	21.31	22	0-2
				1747.5	21.46	21.49	22	0-2
				1717.5	21.22	21.23	22	0-2
		7!	5RB	1732.5	21.35	21.37	22	0-2

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

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

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

SGS Taiwan Ltd.



Page: 29 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
				1715	20000	23.30	24	0
			0	1732.5	20175	23.34	24	0
				1750	20350	23.44	24	0
				1715	20000	23.29	24	0
		1 RB	25	1732.5	20175	23.30	24	0
				1750	20350	23.41	24	0
			40	1715	20000	23.20	24	0
			49	1732.5	20175	23.22	24	0
				1750	20350	23.49	24	0
	QPSK		0	1715 1732.5	20000	22.18	23	0-1
	QPSK		0	1732.5	20175 20350	22.33 22.50	23 23	0-1 0-1
				1715	20000	22.50	23	0-1
		25 RB	12	1732.5		22.24	23	0-1
		23 KB	12	1752.5	20175 20350	22.53	23	0-1
				1715	20000	22.22	23	0-1
			25	1732.5	20175	22.27	23	0-1
			23	1752.5	20350	22.53	23	0-1
				1715	20000	22.20	23	0-1
		50RB		1732.5	20175	22.34	23	0-1
		"		1750	20350	22.50	23	0-1
				1715	20000	22.60	23	0-1
			0	1732.5	20175	22.37	23	0-1
			"	1750	20350	22.96	23	0-1
				1715	20000	22.19	23	0-1
		1 RB	25	1732.5	20175	22.47	23	0-1
				1750	20350	22.79	23	0-1
				1715	20000	22.22	23	0-1
			49	1732.5	20175	22.37	23	0-1
				1750	20350	22.61	23	0-1
				1715	20000	21.27	22	0-2
10	16-QAM		0	1732.5	20175	21.25	22	0-2
				1750	20350	21.42	22	0-2
				1715	20000	21.25	22	0-2
		25 RB	12	1732.5	20175	21.35	22	0-2
				1750	20350	21.57	22	0-2
			25	1715	20000	21.13	22	0-2
				1732.5	20175	21.29	22	0-2
				1750	20350	21.52	22	0-2
				1715	20000	21.24	22	0-2
		50RB		1732.5	20175	21.32	22	0-2
				1750	20350	21.52	22	0-2
				1715	20000	22.57	23	0-1
			0	1732.5	20175	22.35	23	0-1
				1750	20350	22.93	23	0-1
		l		1715	20000	22.18	23	0-1
		1 RB	25	1732.5	20175	22.45	23	0-1
				1750	20350	22.76	23	0-1
			4-	1715	20000	22.20	23	0-1
			49	1732.5	20175	22.34	23	0-1
				1750	20350	22.60	23	0-1
	04.044			1715	20000	21.25	22	0-2
	64-QAM		0	1732.5	20175	21.22	22	0-2
				1750	20350	21.40	22	0-2
		05.00	40	1715	20000	21.22	22	0-2
		25 RB	12	1732.5	20175	21.34	22	0-2
				1750	20350	21.55	22	0-2
			25	1715	20000	21.10	22	0-2
			25	1732.5	20175	21.27	22	0-2
		<b>—</b>	l	1750	20350	21.49	22	0-2
			nDD	1715	20000	21.23	22	0-2
		] 50	)RB	1732.5	20175	21.30	22	0-2
				1750	20350	21.49	22	0-2

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

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

SGS Taiwan Ltd.



Page: 30 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
				1712.5	19975	23.18	24	0
			0	1732.5	20175	23.29	24	0
				1752.5	20375	23.43	24	0
				1712.5	19975	23.17	24	0
		1 RB	12	1732.5	20175	23.34	24	0
				1752.5	20375	23.31	24	0
			24	1712.5	19975	23.13	24	0
			24	1732.5	20175	23.21	24 24	0
				1752.5 1712.5	20375 19975	23.54 22.11	23	0-1
	QPSK		0	1712.5	20175	22.31	23	0-1
	QI SIX			1752.5	20375	22.44	23	0-1
				1712.5	19975	22.21	23	0-1
		12 RB	6	1732.5	20175	22.34	23	0-1
		12110		1752.5	20375	22.53	23	0-1
				1712.5	19975	22.14	23	0-1
			13	1732.5	20175	22.27	23	0-1
				1752.5	20375	22.47	23	0-1
			<u> </u>	1712.5	19975	22.17	23	0-1
		25	RB	1732.5	20175	22.23	23	0-1
		]		1752.5	20375	22.51	23	0-1
				1712.5	19975	22.32	23	0-1
			0	1732.5	20175	22.90	23	0-1
			"	1752.5	20375	22.55	23	0-1
				1712.5	19975	22.30	23	0-1
		1 RB	12	1732.5	20175	22.75	23	0-1
				1752.5	20375	22.88	23	0-1
				1712.5	19975	22.10	23	0-1
			24	1732.5	20175	22.50	23	0-1
				1752.5	20375	22.64	23	0-1
				1712.5	19975	21.26	22	0-2
5	16-QAM		0	1732.5	20175	21.43	22	0-2
				1752.5	20375	21.43	22	0-2
				1712.5	19975	21.27	22	0-2
		12 RB	6	1732.5	20175	21.32	22	0-2
				1752.5	20375	21.53	22	0-2
			13	1712.5	19975	21.22	22	0-2
				1732.5	20175	21.16	22	0-2
				1752.5	20375	21.40	22	0-2
		2500		1712.5	19975	21.18	22	0-2
		25RB		1732.5	20175	21.34	22	0-2
			1	1752.5	20375	21.50	22	0-2
			0	1712.5 1732.5	19975 20175	22.29 22.88	23 23	0-1 0-1
			0	1752.5	20175	22.52	23	0-1
				1732.5	19975	22.29	23	0-1
		1 RB	12	1732.5	20175	22.73	23	0-1
		1 1/0	14	1752.5	20175	22.73	23	0-1
				1732.5	19975	22.08	23	0-1
			24	1732.5	20175	22.47	23	0-1
				1752.5	20375	22.63	23	0-1
				1712.5	19975	21.24	22	0-2
	64-QAM		0	1732.5	20175	21.40	22	0-2
			]	1752.5	20375	21.41	22	0-2
				1712.5	19975	21.24	22	0-2
		12 RB	6	1732.5	20175	21.31	22	0-2
				1752.5	20375	21.51	22	0-2
				1712.5	19975	21.19	22	0-2
			13	1732.5	20175	21.14	22	0-2
		1		1752.5	20375	21.37	22	0-2
				1712.5	19975	21.17	22	0-2
		25	SRB		19975 20175	21.17 21.32	22 22	0-2 0-2

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

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

SGS Taiwan Ltd.



Page: 31 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Power + Max. Tolerance	MPR Allowed
				1711.5	19965	23.16	24	0
			0	1732.5	20175	23.26	24	0
				1753.5	20385	23.32	24	0
				1711.5	19965	23.26	24	0
		1 RB	7	1732.5	20175	23.34	24	0
				1753.5	20385	23.41	24	0
				1711.5	19965	23.19	24	0
			14	1732.5	20175	23.19	24	0
				1753.5	20385	23.29	24	0
			_	1711.5	19965	22.19	23	0-1
	QPSK		0	1732.5	20175	22.33	23	0-1
				1753.5	20385	22.44	23	0-1
				1711.5	19965	22.20	23	0-1
		8 RB	4	1732.5	20175	22.25	23	0-1
				1753.5	20385	22.45	23	0-1
				1711.5	19965	22.15	23	0-1
			7	1732.5	20175	22.25	23	0-1
			l	1753.5	20385	22.42	23	0-1
		15RB		1711.5	19965	22.16	23	0-1
		18	NUD	1732.5	20175	22.26	23	0-1
			1	1753.5 1711.5	20385	22.42	23	0-1
			_	1711.5	19965	22.65	23	0-1
			0		20175	22.42 22.44	23	0-1
				1753.5 1711.5	20385 19965		23	0-1 0-1
		1 RB	7			22.52	23 23	0-1
		IKD	,	1732.5 1753.5	20175 20385	22.58 22.99	23	0-1
					19965		23	0-1
			14	1711.5 1732.5		22.58 22.66	23	0-1
			14		20175	22.66	23	0-1
				1753.5 1711.5	20385 19965	22.00	22	0-1
3	16-QAM		0	1711.5	20175	21.39	22	0-2
3	10 9/11/1		ľ	1752.5	20385	21.51	22	0-2
				1711.5	19965	21.21	22	0-2
		8 RB	4	1732.5	20175	21.35	22	0-2
		OND		1753.5	20385	21.46	22	0-2
			7	1711.5	19965	21.15	22	0-2
				1732.5	20175	21.15	22	0-2
				1753.5	20385	21.52	22	0-2
		l l		1711.5	19965	21.19	22	0-2
		15RB		1732.5	20175	21.45	22	0-2
		1010		1753.5	20385	21.38	22	0-2
				1711.5	19965	22.62	23	0-1
			0	1732.5	20175	22.40	23	0-1
				1753.5	20385	22.41	23	0-1
				1711.5	19965	22.51	23	0-1
		1 RB	7	1732.5	20175	22.56	23	0-1
				1753.5	20385	22.96	23	0-1
				1711.5	19965	22.56	23	0-1
			14	1732.5	20175	22.63	23	0-1
		<u> </u>	<u> </u>	1753.5	20385	22.65	23	0-1
				1711.5	19965	21.29	22	0-2
	16-QAM		0	1732.5	20175	21.36	22	0-2
				1753.5	20385	21.49	22	0-2
				1711.5	19965	21.18	22	0-2
		8 RB	4	1732.5	20175	21.34	22	0-2
				1753.5	20385	21.44	22	0-2
				1711.5	19965	21.12	22	0-2
			7	1732.5	20175	21.13	22	0-2
				1753.5	20385	21.49	22	0-2
				1711.5	19965	21.18	22	0-2
		15	5RB	1732.5	20175	21.43	22	0-2
				1753.5	20385	21.35	22	0-2

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

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

SGS Taiwan Ltd.



Page: 32 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Power + Max. Tolerance	MPR Allowed
				1710.7	19957	23.11	(dBm) 24	0
			0	1732.5	20175	23.22	24	0
				1754.3	20393	23.33	24	0
				1710.7	19957	23.10	24	0
		1 RB	2	1732.5	20175	23.28	24	0
				1754.3	20393	23.35	24	0
				1710.7	19957	23.07	24	0
			5	1732.5	20175	23.22	24	0
				1754.3	20393	23.29	24	0
				1710.7	19957	23.15	24	0
	QPSK		0	1732.5	20175	23.20	24	0
				1754.3	20393	23.34	24	0
				1710.7	19957	23.12	24	0
		3 RB	2	1732.5	20175	23.22	24	0
				1754.3	20393	23.41	24	0
				1710.7	19957	23.13	24	0
			3	1732.5	20175	23.18	24	0
				1754.3	20393	23.38	24	0
		_		1710.7	19957	22.06	23	0-1
		6	RB	1732.5	20175	22.24	23	0-1
			1	1754.3	20393	22.38	23	0-1
				1710.7	19957	21.97	23	0-1
			0	1732.5	20175	22.64	23	0-1
				1754.3	20393	22.59	23	0-1
		4 DD		1710.7	19957	22.63	23	0-1
		1 RB	2	1732.5	20175	22.48	23	0-1
				1754.3	20393	22.88	23	0-1
			_	1710.7	19957	22.31	23	0-1
			5	1732.5	20175	22.34	23	0-1
		-		1754.3	20393	22.31	23	0-1
4.4	16-QAM			1710.7	19957	22.17	23	0-1
1.4	16-QAIVI		0	1732.5	20175	22.19	23	0-1
				1754.3	20393	22.46	23 23	0-1
		3 RB	2	1710.7 1732.5	19957	22.24	23	0-1 0-1
		JIND	_	1754.3	20175 20393	22.28 22.37	23	0-1
			3	1710.7	19957	22.06	23	0-1
				1732.5	20175	22.27	23	0-1
				1754.3	20393	22.51	23	0-1
				1710.7	19957	21.15	22	0-2
		6RB		1732.5	20175	21.23	22	0-2
		OIVD		1754.3	20393	21.61	22	0-2
				1710.7	19957	21.94	23	0-1
			0	1732.5	20175	22.62	23	0-1
				1754.3	20393	22.56	23	0-1
				1710.7	19957	22.62	23	0-1
		1 RB	2	1732.5	20175	22.46	23	0-1
				1754.3	20393	22.85	23	0-1
				1710.7	19957	22.29	23	0-1
			5	1732.5	20175	22.31	23	0-1
				1754.3	20393	22.30	23	0-1
				1710.7	19957	22.15	23	0-1
	64-QAM		0	1732.5	20175	22.16	23	0-1
				1754.3	20393	22.44	23	0-1
				1710.7	19957	22.21	23	0-1
		3 RB	2	1732.5	20175	22.27	23	0-1
				1754.3	20393	22.35	23	0-1
				1710.7	19957	22.03	23	0-1
			3	1732.5	20175	22.25	23	0-1
				1754.3	20393	22.48	23	0-1
				1710.7	19957	21.14	22	0-2
		6	RB	1732.5	20175	21.21	22	0-2

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

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

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 33 of 144

### LTE FDD Band 5 - conducted power table:

				FDD	Band 5			
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				829	20450	22.48	23	0
			0	836.5	20525	22.58	23	0
				844	20600	22.99	23	0
				829	20450	22.59	23	0
		1 RB	25	836.5	20525	22.65	23	0
				844 829	20600 20450	22.96 22.76	23 23	0
			49	836.5	20525	22.69	23	0
				844	20600	22.86	23	0
				829	20450	21.65	22	0-1
	QPSK		0	836.5	20525	21.74	22	0-1
				844	20600	21.86	22	0-1
		25 DD	10	829	20450	21.67	22	0-1
		25 RB	12	836.5 844	20525 20600	21.75 21.93	22 22	0-1 0-1
				829	20450	21.69	22	0-1
			25	836.5	20525	21.72	22	0-1
				844	20600	21.77	22	0-1
				829	20450	21.59	22	0-1
		50	)RB	836.5	20525	21.68	22	0-1
				844	20600	21.87	22	0-1
			0	829	20450	21.80	22	0-1
				836.5 844	20525 20600	21.85 21.92	22 22	0-1 0-1
				829	20450	21.53	22	0-1
		1 RB	25	836.5	20525	21.92	22	0-1
				844	20600	21.91	22	0-1
				829	20450	21.58	22	0-1
			49	836.5	20525	21.98	22	0-1
				844	20600	21.96	22	0-1
10	16-QAM		0	829	20450	20.67	21	0-2
10	16-QAIVI	-NVI	U	836.5 844	20525 20600	20.72 20.83	21 21	0-2 0-2
				829	20450	20.65	21	0-2
		25 RB	12	836.5	20525	20.65	21	0-2
				844	20600	20.94	21	0-2
				829	20450	20.65	21	0-2
			25	836.5	20525	20.73	21	0-2
			L	844	20600	20.91	21	0-2
		50		829 836.5	20450 20525	20.63 20.75	21 21	0-2 0-2
		] 30	0RB	844	20600	20.75	21	0-2
				829	20450	21.76	22	0-1
			0	836.5	20525	21.84	22	0-1
				844	20600	21.90	22	0-1
			-	829	20450	21.49	22	0-1
		1 RB	25	836.5	20525	21.88	22	0-1
				844	20600	21.87	22	0-1
			49	829 836.5	20450 20525	21.57 21.96	22 22	0-1 0-1
			-,0	844	20600	21.92	22	0-1
				829	20450	20.63	21	0-2
64-C	64-QAM		0	836.5	20525	20.68	21	0-2
				844	20600	20.82	21	0-2
		05.55	4.5	829	20450	20.63	21	0-2
		25 RB	12	836.5	20525	20.61	21	0-2
				844	20600	20.90	21	0-2
			25	829 836.5	20450 20525	20.61 20.72	21 21	0-2 0-2
				844	20600	20.89	21	0-2
			•	829	20450	20.59	21	0-2
		50	0RB	836.5	20525	20.71	21	0-2
	l	]		844	20600	20.95	21	0-2

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

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

SGS Taiwan Ltd.



Page: 34 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				826.5	20425	22.54	23	0
			0	836.5	20525	22.73	23	0
				846.5	20625	22.78	23	0
				826.5	20425	22.58	23	0
		1 RB	12	836.5	20525	22.62	23	0
				846.5	20625	22.90	23	0
				826.5	20425	22.60	23	0
			24	836.5	20525	22.88	23	0
				846.5	20625	22.73	23	0
				826.5	20425	21.51	22	0-1
	QPSK		0	836.5	20525	21.71	22	0-1
				846.5	20625	21.91	22	0-1
				826.5	20425	21.70	22	0-1
		12 RB	6	836.5	20525	21.65	22	0-1
				846.5	20625	21.90	22	0-1
				826.5	20425	21.63	22	0-1
			13	836.5	20525	21.75	22	0-1
			846.5	20625	21.90	22	0-1	
		•	826.5	20425	21.66	22	0-1	
		25RB		836.5	20525	21.70	22	0-1
	]`		846.5	20625	21.91	22	0-1	
		l	826.5	20425	21.49	22	0-1	
		0	836.5	20525	21.91	22	0-1	
		1 RB	ľ	846.5	20625	21.94	22	0-1
				826.5	20425	21.97	22	0-1
			12	836.5	20525	21.93	22	0-1
				846.5	20625	21.99	22	0-1
				826.5	20425	21.52	22	0-1
			24	836.5	20525	21.93	22	0-1
				846.5	20625	21.73	22	0-1
				826.5	20425	20.59	21	0-2
5	16-QAM		0	836.5	20525	20.75	21	0-2
ŭ			Ĭ	846.5	20625	20.98	21	0-2
				826.5	20425	20.65	21	0-2
		12 RB	6	836.5	20525	20.72	21	0-2
				846.5	20625	20.93	21	0-2
				826.5	20425	20.67	21	0-2
			13	836.5	20525	20.87	21	0-2
			13	846.5	20625	20.89	21	0-2
			l		20425	20.75	21	0-2
		2!	5RB	826.5 836.5	20525	20.65	21	0-2
		_``	ZOND		20625	20.95	21	0-2
			1	846.5 826.5	20425	21.45	22	0-1
		1	0	836.5	20525	21.90	22	0-1
			l	846.5	20625	21.92	22	0-1
		1	<del>                                     </del>	826.5	20025	21.93	22	0-1
		1 RB	12	836.5	20525	21.93	22	0-1
		1 110	'-	846.5	20625	21.95	22	0-1
			<b></b>	826.5	20025	21.51	22	0-1
			24	836.5	20425	21.91	22	0-1
		1	-	846.5	20625	21.69	22	0-1
		<b>-</b>	1				21	
	64-OAM		0	826.5 836.5	20425 20525	20.55 20.71	21	0-2 0-2
64-QAM	U4-QAIVI			846.5	20625	20.71	21	0-2
		1	<b> </b>			20.63		
		12 PR	6	826.5	20425		21	0-2
		12 RB	6	836.5	20525	20.68	21	0-2
		12110			20625	20.89	21	0-2
		12113		846.5		30 c3	24	0.0
		12 KB	42	826.5	20425	20.63	21	0-2
		12 113	13	826.5 836.5	20425 20525	20.86	21	0-2
		1210	13	826.5 836.5 846.5	20425 20525 20625	20.86 20.87	21 21	0-2 0-2
			13 5RB	826.5 836.5	20425 20525	20.86	21	0-2

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 35 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				825.5	20415	22.51	23	0
			0	836.5	20525	22.59	23	0
				847.5	20635	22.86	23	0
				825.5	20415	22.62	23	0
		1 RB	7	836.5	20525	22.72	23	0
				847.5	20635	22.94	23	0
				825.5	20415	22.63	23	0
			14	836.5	20525	22.83	23	0
				847.5	20635	22.72	23	0
				825.5	20415	21.53	22	0-1
	QPSK		0	836.5	20525	21.74	22	0-1
				847.5	20635	21.95	22	0-1
				825.5	20415	21.60	22	0-1
		8 RB	4	836.5	20525	21.65	22	0-1
				847.5	20635	21.91	22	0-1
				825.5	20415	21.61	22	0-1
			7	836.5	20525	21.84	22	0-1
			847.5	20635	21.92	22	0-1	
			825.5	20415	21.57	22	0-1	
		15RB		836.5	20525	21.71	22	0-1
		'`		847.5	20635	21.84	22	0-1
			825.5	20035	21.69	22	0-1	
			0	836.5	20525	21.09	22	0-1
		U				22		
			847.5	20635	21.96		0-1	
		4 00	7	825.5	20415	21.73	22	0-1
		1 RB	7	836.5	20525	21.96	22	0-1
				847.5	20635	21.95	22	0-1
				825.5	20415	21.90	22	0-1
			14	836.5	20525	21.96	22	0-1
				847.5	20635	21.98	22	0-1
				825.5	20415	20.66	21	0-2
3	16-QAM		0	836.5	20525	20.83	21	0-2
				847.5	20635	20.91	21	0-2
				825.5	20415	20.57	21	0-2
		8 RB	4	836.5	20525	20.71	21	0-2
				847.5	20635	20.91	21	0-2
				825.5	20415	20.69	21	0-2
			7	836.5	20525	20.78	21	0-2
				847.5	20635	20.98	21	0-2
				825.5	20415	20.64	21	0-2
		15	RB	836.5	20525	20.77	21	0-2
				847.5	20635	20.87	21	0-2
				825.5	20415	21.65	22	0-1
			0	836.5	20525	21.96	22	0-1
				847.5	20635	21.94	22	0-1
				825.5	20415	21.69	22	0-1
		1 RB	7	836.5	20525	21.92	22	0-1
				847.5	20635	21.91	22	0-1
				825.5	20415	21.89	22	0-1
			14	836.5	20525	21.94	22	0-1
				847.5	20635	21.94	22	0-1
				825.5	20415	20.62	21	0-2
64-OAM	64-QAM		0	836.5	20525	20.79	21	0-2
	O I SANIVI			847.5	20635	20.90	21	0-2
				825.5	20635	20.55	21	0-2
		8 RB	4					
		0 40	4	836.5	20525	20.67	21	0-2
				847.5	20635	20.87	21	0-2
			-	825.5	20415	20.65	21	0-2
			7	836.5	20525	20.77	21	0-2
				847.5	20635	20.96	21	0-2
				825.5	20415	20.60	21	0-2
		15	RB	836.5	20525	20.73	21	0-2
				847.5	20635	20.83	21	0-2

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

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

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

SGS Taiwan Ltd.



Page: 36 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed
				824.7	20407	22.42	23	0
			0	836.5	20525	22.61	23	0
				848.3	20643	22.80	23	0
		1 RB		824.7	20407	22.49	23	0
			2	836.5	20525	22.63	23	0
			_	848.3	20643	22.80	23	0
				824.7	20407	22.49	23	0
			5	836.5	20525	22.68	23	0
			Ü	848.3	20643	22.70	23	0
				824.7	20407	22.51	23	0
	QPSK		0	836.5	20525	22.63	23	0
	Qi Oit		U	848.3	20643	22.75	23	0
				824.7	20407	22.52	23	0
		3 RB	2				23	0
		3 110	2	836.5	20525	22.65 22.87	23	0
				848.3	20643			
			2	824.7	20407	22.51	23	0
			3	836.5	20525	22.64	23	0
				848.3	20643	22.80	23	0
		_ ا	DD.	824.7	20407	21.41	22	0-1
		l 6	RB	836.5	20525	21.65	22	0-1
				848.3	20643	21.77	22	0-1
			_	824.7	20407	21.51	22	0-1
			0	836.5	20525	21.54	22	0-1
				848.3	20643	21.96	22	0-1
				824.7	20407	21.45	22	0-1
		1 RB	2	836.5	20525	21.94	22	0-1
				848.3	20643	21.96	22	0-1
				824.7	20407	21.45	22	0-1
			5	836.5	20525	21.84	22	0-1
				848.3	20643	21.97	22	0-1
				824.7	20407	21.50	22	0-1
1.4	16-QAM		0	836.5	20525	21.71	22	0-1
				848.3	20643	21.82	22	0-1
				824.7	20407	21.62	22	0-1
		3 RB	2	836.5	20525	21.64	22	0-1
				848.3	20643	21.91	22	0-1
				824.7	20407	21.53	22	0-1
			3	836.5	20525	21.69	22	0-1
			Ŭ	848.3	20643	21.81	22	0-1
				824.7	20407	20.51	21	0-2
		6		836.5	20525	20.64	21	0-2
		_		848.3	20643	20.91	21	0-2
				824.7	20407	21.47	22	0-2
			0	836.5	20525	21.53	22	0-1
				848.3	20643	21.94	22	0-1
				824.7	2043	21.41	22	0-1
		1 RB	2		20525		22	0-1
		IVP		836.5		21.90		
				848.3	20643	21.92	22	0-1
			_	824.7	20407	21.44	22	0-1
			5	836.5	20525	21.82	22	0-1
				848.3	20643	21.93	22	0-1
	04.0444		_	824.7	20407	21.46	22	0-1
64-Q <i>F</i>	64-QAM		0	836.5	20525	21.67	22	0-1
				848.3	20643	21.81	22	0-1
			_	824.7	20407	21.60	22	0-1
		3 RB	2	836.5	20525	21.60	22	0-1
				848.3	20643	21.87	22	0-1
				824.7	20407	21.49	22	0-1
			3	836.5	20525	21.68	22	0-1
		<u> </u>		848.3	20643	21.79	22	0-1
				824.7	20407	20.47	21	0-2
		66	DD	836.5	20525	20.60	21	0-2
			RB	636.5	20020	20.00	21	0 2

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

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

SGS Taiwan Ltd.



Page: 37 of 144

# LTE FDD Band 7 - conducted power table:

				FDD	Band 7			
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				2510	20850	22.87	23.5	0
			0	2535	21100	22.96	23.5	0
				2560	21350	22.88	23.5	0
				2510	20850	22.69	23.5	0
		1 RB	50	2535	21100	22.76	23.5	0
				2560	21350	22.61	23.5	0
			99	2510	20850	22.95	23.5	
			99	2535 2560	21100 21350	22.89 22.54	23.5 23.5	
				2510	20850	21.25	22.5	
	QPSK		0	2535	21100	21.46	22.5	
	Qi Oit		ľ	2560	21350	21.23	22.5	
				2510	20850	21.42	22.5	
		50 RB	25	2535	21100	21.47	22.5	0-1
				2560	21350	21.20	22.5	0-1
				2510	20850	21.43	22.5	0-1
			50	2535	21100	21.44	22.5	0-1
				2560	21350	21.05	22.5	0-1
				2510	20850	21.40	22.5	0-1
		10	0RB	2535	21100	21.41	22.5	
				2560	21350	21.14	22.5	
				2510	20850	21.59	22.5	
			0	2535	21100	21.75	22.5	
				2560	21350	21.51	22.5	
		4 DD	50	2510	20850	21.56	22.5	
		1 RB	50	2535	21100	21.28	22.5	
				2560 2510	21350 20850	21.08 21.98	22.5 22.5	
			99	2535	21100	21.35	22.5	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1
			33	2560	21350	21.57	22.5	
				2510	20850	20.83	21.5	
20	16-QAM		0	2535	21100	20.99	21.5	0 0 0 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-
				2560	21350	20.77	21.5	
				2510	20850	20.96	21.5	
		50 RB	0 RB 25	2535	21100	20.91	21.5	0-2
				2560	21350	20.75	21.5	0-2
				2510	20850	20.90	21.5	0-2
			50	2535	21100	20.98	21.5	0-2
				2560	21350	20.72	21.5	0 0 0 1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1
				2510	20850	20.96	21.5	
		10	0RB					0 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-
			1					
			0					
			<b> </b>					
		1 RB	50					
		1,170	30					
			99					
				2560	21350	21.52	22.5	
			Ì	2510	20850	20.77	21.5	
	16-QAM		0	2535	21100	20.97	21.5	
				2560	21350	20.75	21.5	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1
				2510	20850	20.94	21.5	0-2
		50 RB	25	2535	21100	20.87	21.5	
				2560	21350	20.71	21.5	
				2510	2535         21100         20.94         21.5         0-2           2560         21350         20.73         21.5         0-2           2510         20850         21.55         22.5         0-1           2535         21100         21.74         22.5         0-1           2560         21350         21.49         22.5         0-1           2510         20850         21.52         22.5         0-1           2535         21100         21.24         22.5         0-1           2560         21350         21.04         22.5         0-1           2510         20850         21.97         22.5         0-1           2535         21100         21.33         22.5         0-1           2535         21100         21.33         22.5         0-1           2550         21350         21.52         22.5         0-1           2510         20850         20.77         21.5         0-2           2535         21100         20.97         21.5         0-2           2535         21100         20.97         21.5         0-2           2535         21100         20.97         21.5<			
			50					
			]	2560	21350	20.70	21.5	
		100RB	2510	20850	20.92	21.5		
		l 10	UKB	2535	21100	20.90	21.5	
				2560	21350	20.69	21.5	0-2

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

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

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



Page: 38 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				2507.5	20825	22.82	23.5	0		
			0	2535	21100	22.83	23.5	0		
				2562.5	21375	22.73	23.5	0		
				2507.5	20825	22.85	23.5	0		
		1 RB	36	2535	21100	22.80	23.5	0		
				2562.5	21375	22.61	23.5	0		
				2507.5	20825	22.91	23.5	0		
			74	2535	21100	22.86		0		
				2562.5	21375	22.57	23.5	0		
				2507.5	20825	21.85	22.5	0-1		
	QPSK		0	2535	21100	21.97	22.5	0-1		
				2562.5	21375	21.73	22.5	0-1		
				2507.5						
		36 RB	18	2535						
				2562.5						
				2507.5		21100         22.83         23.5           21375         22.73         23.5           20825         22.85         23.5           21107         22.80         23.5           21108         22.81         23.5           20825         22.91         23.5           21000         22.86         23.5           21375         22.57         22.5           221375         22.5         22.5           221375         21.73         22.5           221375         21.73         22.5           221375         21.99         22.5           221375         21.94         22.5           221376         21.94         22.5           221375         21.94         22.5           221375         21.92         22.5           221375         21.88         22.5           221375         21.88         22.5           221375         21.69         22.5           221375         21.53         22.5           221375         21.49         22.5           221375         21.49         22.5           221375         21.53         22.5           221375 </td				
			37	2535	21100					
			٥.	2562.5						
				2507.5						
		/3	71.0							
				2562.5 2507.5						
			0							
			U	2535						
				2562.5						
		4.00	00	2507.5						
		1 RB	36	2535						
				2562.5						
				2507.5						
			74	2535						
				2562.5						
				2507.5						
15	16-QAM		0	2535				0 0 0 0 0 0 0 0 0 0 0		
				2562.5		20.79	21.5	0-2		
				2507.5	20825	20.95	21.5	0-2		
		36 RB	18	2535	21100	20.92	21.5	0-2		
				2562.5	21375	20.67		0-2		
				2507.5	20825	20.95	21.5	0-2		
			37	2535	21100	20.94	21.5	0-2		
				2562.5	21375	20.71	21.5	0-2		
				2507.5	20825	20.97	21.5	0-2		
		75	SRB	2535	21100	21.00	21.5	0-2		
				2562.5	21375		21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0- 21.5 0-			
				2507.5	20825					
			0	2535	21100					
				2562.5	7.5         20825         21.63         22.5           1.5         21100         21.92         22.5           2.5         21375         21.53         22.5           7.5         20825         21.49         22.5           7.5         20825         21.49         22.5           2.5         21375         21.40         22.5           2.5         21375         21.40         22.5           2.5         21375         21.44         22.5           2.5         21375         21.44         22.5           2.5         21375         21.46         22.5           2.5         21375         21.46         22.5           2.5         21375         21.5         21.5           2.5         21375         20.87         21.5           2.5         21375         20.79         21.5           2.5         21375         20.79         21.5           2.5         21375         20.79         21.5           2.5         21375         20.67         21.5           2.5         21375         20.71         21.5           2.5         21375         20.71         21.5					
				2507.5						
		1 RB	36	2535						
			-	2562.5						
				2507.5						
			74	2535						
				2562.5						
				2507.5						
	64-QAM		0	2535						
	O I SEMINI		,	2562.5	21375	20.77	21.5			
				2502.5	20825	20.77	21.5			
		36 RB	18							
		30 KD	10	2535	21100	20.88	21.5			
				2562.5	21375	20.63	21.5			
			0.7	2507.5	20825	20.91	21.5			
			37	2535	21100	20.93	21.5			
				2562.5	21375	20.69	21.5			
			-00	2507.5	20825	20.93	21.5			
		75R	75RB	2535	21100	20.96	21.5	0-2		
		731	/5KB	2562.5	21375	20.71	21.5			

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

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

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 39 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)				
				2505	20800	22.57	23.5	0				
			0	2535	21100	22.60	23.5	0				
				2565	21400	22.49	23.5	0				
				2505	20800	22.54	23.5	0				
		1 RB	25	2535	21100	22.86	23.5	0				
				2565	21400	22.36						
				2505	20800	22.65						
			49	2535	21100	22.57		0				
				2565	21400	22.37		0				
				2505	20800	21.56						
	QPSK		0	2535	21100	21.64						
				2565	21400	21.37						
				2505	20800	21.62						
		25 RB	12	2535	21100	21.72						
		2011		2565	21400	21.37						
				2505	20800	21.61						
			25		21100	21.66						
				2535								
			L	2565	21400	21.41						
		F.	)RB	2505	20800	21.59						
		50	מאנ	2535	21100	21.67						
			1	2565	21400	21.38						
			_	2505	20800	21.91						
			0	2535	21100	21.96						
				2565	21400	21.60		0-1				
				2505	20800	21.43	22.5	0-1				
		1 RB	25	2535	21100	21.83	22.5	0-1				
				2565	21400	21.53	22.5	0-1				
				2505	20800	21.65	22.5	0-1				
			49	2535	21100	21.50	22.5	0-1				
				2565	21400	21.23						
				2505	20800	20.57						
10	16-QAM		0	2535	21100	20.64						
			ľ	2565	21400	20.38						
				2505	20800	20.70						
		25 RB	12	2535	21100	20.66						
		23 ND	12									
				2565	21400	20.38						
			25	2505	20800	20.65		0 0 0 0 0 0 0 0 0 0 0 0-1 0-1 0-1 0-1 0-				
			25	2535	21100	20.59						
				2565	21400	20.42		23.5         0           23.5         0           23.5         0           23.5         0           23.5         0           22.5         0-1				
			NDD.	2505	20800	20.63						
		50	)RB	2535	21100	20.58						
				2565	21400	20.40						
				2505	20800	21.87						
			0	2535	21100	21.95	23.5         0           23.5         0           23.5         0           22.5         0-1					
				2565	21400	21.58						
				2505	20800	21.39	22.5	0-1				
		1 RB	25	2535	21100	21.79	22.5	0-1				
				2565	21400	21.49	22.5	0-1				
				2505	20800	21.64						
			49	2535	21100	21.48						
			1	2565	21400	21.18						
				2505	20800	20.51						
	64-QAM		0	2535	21100	20.62						
	J. 30, 1111		l	2565	21400	20.36						
			<b>-</b>	2505	20800	20.68						
		25 PR	12									
		25 RB	'-	2535	21100 21400	20.62						
				2565		20.34						
		2	0.5	2505	20800	20.61						
			25	2535	21100	20.58						
				2565	21400	20.40						
				2505	20800	20.59						
		50	)RB	2535	21100	20.54	21.5					
		501		2565	21400	20.36	21.5	0-2				

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

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

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

SGS Taiwan Ltd.



Page: 40 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allower				
				2502.5	20775	22.71	23.5	0				
			0	2535	21100	22.68		0				
				2567.5	21425							
				2502.5	20775							
		1 RB	12	2535	21100							
				2567.5	21425							
				2502.5	20775							
			24	2535	21100							
			24	2567.5	21425							
	QPSK		0	2502.5	20775							
	QPSK		0	2535	21100							
				2567.5	21425							
			_	2502.5	20775							
		12 RB	6	2535	21100			0-1				
				2567.5	21425	21.57	22.5	0-1				
				2502.5	20775	21.74	22.5	0-1				
		1	13	2535	21100	21.85	22.5	0-1				
		1		2567.5	21425	21.56	22.5	0-1				
				2502.5	20775	200         22.68         23.5           25         22.60         23.5           25         22.79         23.5           25         22.75         23.5           25         22.38         23.5           25         22.32         23.5           20         22.82         23.5           25         22.53         23.5           25         22.53         22.5           20         21.93         22.5         0           25         21.78         22.5         0           25         21.78         22.5         0           25         21.78         22.5         0           20         21.94         22.5         0           20         21.94         22.5         0           20         21.85         22.5         0           20         21.85         22.5         0           20         21.85         22.5         0           20         21.87         22.5         0           25         21.78         22.5         0           20         21.82         22.5         0           20         21.83		0-1				
		25	SRB	2535	21100							
				2567.5	21425							
				2502.5	20775							
			0									
			U	2535	21100							
				2567.5	21425							
		4.55	40	2502.5	20775							
		1 RB	12	2535	21100							
				2567.5	21425		22.5	0-1				
				2502.5	20775	21.57	22.5	0-1				
			24	2535	21100	21.60	22.5	0-1				
				2567.5	21425	21.37	22.5	0-1				
				2502.5	20775	20.86	21.5	0-2				
5	16-QAM		0	2535				0-2				
				2567.5								
								2502.5				0 0 0 0 0 0 0 0 0 0 0-1 0-1 0-1 0-1 0-1
		12 RB	6	2535								
		12110	Ŭ	2567.5								
				2502.5								
			13									
			13	2535								
				2567.5								
			-00	2502.5								
		25	RB	2535								
				2567.5								
		]		2502.5	20775	21.83	22.5	0-1				
		1	0	2535	21100	21.62	22.5	0-1				
				2567.5	5         20775         20.86         21.5           21100         20.91         21.5           5         21425         20.53         21.5           5         20775         20.75         21.5           5         21100         20.84         21.5           5         21425         20.60         21.5           5         20775         20.79         21.5           6         20775         20.91         21.5           5         21425         20.53         21.5           5         20775         20.76         21.5           5         20775         20.76         21.5           5         21425         20.60         21.5           5         21425         20.60         21.5           5         21425         20.60         21.5           5         20775         21.83         22.5           21100         21.62         22.5           21100         21.62         22.5           5         21425         21.33         22.5           5         20775         21.80         22.5	0-1						
		1		2502.5				0-1				
		1 RB	12	2535		20775         21.57         22.5           21100         21.60         22.5           21425         21.37         22.5           20775         20.86         21.5           21100         20.91         21.5           21425         20.53         21.5           20775         20.75         21.5           21100         20.84         21.5           21425         20.60         21.5           20775         20.79         21.5           21100         20.91         21.5           21100         20.91         21.5           20775         20.76         21.5           21425         20.60         21.5           21425         20.60         21.5           21425         20.60         21.5           20775         21.83         22.5           21100         21.62         22.5           21425         21.33         22.5           21100         21.88         22.5           21100         21.88         22.5           21100         21.88         22.5           21100         21.56         22.5           2175						
		1		2567.5								
		1		2502.5								
		1	24	2535								
				2567.5	21425							
		<b></b>										
	64-QAM	1	0	2502.5	20775							
	04-QAIVI	1	0	2535	21100							
				2567.5	21425							
				2502.5	20775	20.73	21.5					
		12 RB	6	2535	21100	20.80	21.5					
		1		2567.5	21425	20.56	21.5	0-2				
		1		2502.5	20775	20.75	21.5	0-2				
		1	13	2535	21100	20.90	21.5	0-2				
		1		2567.5	21425	20.51	21.5					
			1	2502.5	20775	20.72	21.5					
		2!	SRB	2535	21100	20.87	21.5					
		2	25RB	_555	_ : : : : :	20.01	- 1.0					

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

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

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

SGS Taiwan Ltd.



Page: 41 of 144

## LTE FDD Band 12 - conducted power table:

				FDD	Band 12				
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
				704	23060	22.55	23	0	
			0	707.5	23095	22.65	23	0	
				711	23130	22.98	23	0	
				704	23060	22.91	23	0	
		1 RB	25	707.5	23095	22.85	23	0	
				711	23130	22.76	23	0	
				704	23060	22.93	23	0	
			49	707.5	23095	22.84	23	0	
				711	23130	22.95	23	0	
	00014			704	23060	21.83	22	0-1	
	QPSK		0	707.5	23095	21.74	22	0-1	
				711	23130	21.79	22	0-1	
		05 DD	40	704	23060	21.88	22		
		25 RB	12	707.5	23095	21.92	22		
				711	23130	21.87	22		
			25	704	23060	21.82	22		
			25	707.5	23095	21.85	22		
		<b>-</b>		711	23130	21.86	22		
			NDD.	704	23060	21.84	22		
		50	)RB	707.5	23095	21.81	22		
			1	711	23130	21.77	22		
			0	704	23060	21.99	22		
			0	707.5	23095	21.83	22		
				711	23130	21.93	22		
		4 DD	25	704	23060	21.99	22		
		1 RB	25	707.5	23095	21.98	22		
				711	23130	21.70	22		
			40	704	23060	21.90	22		
			49	707.5	23095	21.87	22		
				711	23130	21.91	22		
10	16-QAM		0	704	23060	20.71 20.75	21		
10	10-QAIVI		U	707.5 711	23095		21		
				711	23130 23060	20.84	21 21	0-2 0-2 0-2 0-2	
		25 RB	12	707.5	23095	20.78 20.90	21		
		23110	12	707.5	23130	20.90	21		
				704	23060	20.82	21		
			25	707.5	23095	20.90	21	0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2	
			23	711	23130	20.89	21	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
				704	23060	20.89	21		
		50	)RB	704	23095	20.80	21		
			,,,,,	707.5	23130	20.78	21		
	<b></b>			711	23060	21.95	22		
			0	707.5	23095	21.81	22		
			J	707.5	23130	21.89	22		
				711	23060	21.95	22		
		1 RB	25	707.5	23095	21.94	22		
		1 1/10	20	707.5	23130	21.66	22		
				704	23060	21.87	22		
			49	707.5	23095	21.83	22		
				711	23130	21.86	22		
				704	23060	20.65	21		
	64-QAM		0	707.5	23095	20.73	21		
				711	23130	20.82	21		
				704	23060	20.76	21		
		25 RB	12	707.5	23095	20.86	21		
		25 RB 12	-	711	23130	20.83	21		
				704	23060	20.78	21	0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2	
			25	707.5	23095	20.89	21		
				711	23130	20.87	21		
				704	23060	20.76	21		
		50RB	707.5	23095	20.93	21			
		ı	-	711	23130	20.74	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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 42 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				701.5	23035	22.69	23	0
			0	707.5	23095	22.74	23	0
				713.5	23155	22.69	23	0
				701.5	23035	22.69	23	0
		1 RB	12	707.5	23095	22.84	23	0
				713.5	23155	22.76	23	0
				701.5	23035	22.71	23	0
			24	707.5	23095	22.79	23	0
				713.5	23155	22.88	23	0
				701.5	23035	21.64	22	0-1
	QPSK		0	707.5	23095	21.72	22	0-1
				713.5	23155	21.85	22	0-1
				701.5	23035	21.76	22	0-1
		12 RB	6	707.5	23095	21.86	22	0-1
				713.5	23155	21.87	22	0-1
				701.5	23035	21.80	22	0-1
			13	707.5	23095	21.77	22	0-1
				713.5	23155 21.84 22	0-1		
				701.5	23035	21.74	22	0-1
		2!	5RB	707.5	23095	21.83	22	0-1
				713.5	23155	21.87	22	0-1
				701.5	23035	21.78	22	0-1
			0	707.5	23095	21.87	22	0-1
				713.5	23155	21.75	22	0-1
				701.5	23035	21.85	22	0-1
		1 RB	12	707.5	23095	21.93	22	0-1
				713.5	23155	21.95	22	0-1
				701.5	23035	21.98	22	0-1
			24	707.5	23095	21.93	22	0-1
			'	713.5	23155	22.00	22	0-1
				713.5	23035	20.70	21	0-2
5	16-QAM		0	707.5	23095	20.77	21	0-2
Ü	10 00 1111			713.5	23155	20.94	21	0-2
				701.5	23035	20.84	21	0-2
		12 RB	6	707.5	23095	20.90	21	0-2
		12 110	0	713.5	23155	20.86	21	0-2
				701.5	23035	20.77	21	0-2
			13	707.5	23095	20.84	21	0-2
			13	713.5	23155	20.87	21	0-2
				701.5	23035	20.73	21	0-2
		21	5RB	707.5	23095	20.73	21	0-2
			JIND .				21	
			l	713.5 701.5	23155 23035	20.88 21.74	22	0-2 0-1
			0	701.5		21.74	22	0-1
			U		23095		22	
				713.5	23155	21.71		0-1
		1 RB	12	701.5	23035	21.81	22	0-1
		I KD	12	707.5	23095	21.89	22	0-1
				713.5	23155	21.91	22	0-1
			24	701.5	23035	21.95	22	0-1
			24	707.5	23095	21.89	22	0-1
		<b></b>		713.5	23155	21.95	22	0-1
	64 6 4 4		_	701.5	23035	20.64	21	0-2
	64-QAM		0	707.5	23095	20.75	21	0-2
				713.5	23155	20.92	21	0-2
		40.55		701.5	23035	20.82	21	0-2
		12 RB	6	707.5	23095	20.86	21	0-2
				713.5	23155	20.82	21	0-2
				701.5	23035	20.73	21	0-2
			13	707.5	23095	20.83	21	0-2
				713.5	23155	20.85	21	0-2
				701.5	23035	20.69	21	0-2
	2		5RB	707.5	23095	20.87	21	0-2
				713.5	23155	20.84	21	0-2

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

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

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

SGS Taiwan Ltd.



Page: 43 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
				700.5	23025	22.49	23	0	
			0	707.5	23095	22.68	23	0	
				714.5	23165	22.77	23	0	
				700.5	23025	22.66	23	0	
		1 RB	7	707.5	23095				
				714.5	23165				
			4.4	700.5	23025				
			14	707.5	23095				
				714.5	23165				
	QPSK		0	700.5 707.5	23025 23095				
	QFSK		U	707.5	23165				
				714.5	23025				
		8 RB	4	707.5	23095				
		OILD	7	714.5	23165				
				700.5	23025				
			7	707.5	23095	Conducted power (dBm)			
			,	714.5	23165				
				700.5	23025			0-1	
		15	SRB	707.5	23095			wer + Max. ance (dBm)         mirk Allowed per 3GPP(dB)           23         0           23         0           23         0           23         0           23         0           23         0           23         0           23         0           23         0           23         0           23         0           22         0-1<	
		``		714.5	23165				
				700.5	23025				
			0	707.5	23095				
				714.5	23165		22		
				700.5	23025	21.91	22	0-1	
		1 RB	7	707.5	23095	21.82	22	0-1	
				714.5	23165		22	0-1	
				700.5	23025	21.83	22	0-1	
			14	707.5	23095	21.98	22	0-1	
				714.5	23165	21.90	22	0-1	
				700.5	23025	20.62	21	0-2	
3	16-QAM		0	707.5	23095	20.85	21	0-2	
				714.5	23165	20.78	21	0-2	
				700.5	23025			0-2	
		8 RB	4	707.5	23095				
				714.5	23165				
			_	700.5	23025			0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
			7	707.5	23095				
				714.5	23165				
		4,	:DD	700.5	23025				
		15	SRB	707.5	23095				
				714.5	23165 23025				
			0	700.5 707.5					
			U	707.5	23095 23165				
				714.5	23025				
		1 RB	7	700.5	23025				
			,	714.5	23165				
				700.5	23025				
			14	707.5	23095			Ů.	
				714.5	23165				
				700.5	23025				
	64-QAM		0	707.5	23095				
				714.5	23165				
				700.5	23025				
		8 RB	4	707.5	23095				
				714.5	23165				
				700.5	23025	20.77		0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
			7	707.5	23095	20.69	21	0-2	
				714.5	23165	20.83	21	0-2	
				700.5	23025	20.57	21	0-2	
		15	RB	707.5	23095	20.78			
		1310		714.5	23165	20.71	21	0-2	

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 44 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				699.7	23017	22.60	Tolerance (dBm) per 3GPP(	0
			0	707.5	23095	22.68	23	0
				715.3	23173		23	0
				699.7	23017	22.66	23	0
		1 RB	2	707.5			23	0
				715.3				0
				699.7			23	0
			5	707.5			23	0
				715.3		22.67	23	0
				699.7				
	QPSK		0	707.5				0
				715.3				0
				699.7				
		3 RB	2	707.5				
		0.12	_	715.3				
				699.7	Channel power (dBm)         Conducted power (dBm)         Power + Max. Tolerance (dBm)         Nier A per 3G           23017         22.60         23         23           23173         22.66         23         23           23095         22.66         23         23           23097         22.66         23         23           23017         22.67         23         23           23017         22.57         23         23           23017         22.65         23         23           23017         22.65         23         23           23017         22.65         23         23           23017         22.65         23         23           23017         22.66         23         23           23017         22.66         23         23           23017         22.66         23         23           23017         22.66         23         23           23017         22.64         23         23           23017         22.64         23         23           23017         22.64         23         23           23173         21.78         22			
			3	707.5				
				715.3				
			l	699.7				
		6	RB					
		ь	ΝĎ	707.5				
				715.3			22.86         23         0           22.82         23         0           22.57         23         0           22.77         23         0           22.67         23         0           22.65         23         0           22.81         23         0           22.82         23         0           22.84         23         0           22.84         23         0           22.82         23         0           22.84         23         0           22.82         23         0           22.84         23         0           22.82         23         0           22.84         23         0           22.82         23         0           22.84         23         0           22.84         23         0           22.82         23         0           22.82         23         0           22.82         23         0           21.78         22         0-1           21.79         22         0-1           21.87         22         0-1	
			_	699.7				
			0	707.5				
				715.3				
				699.7				
		1 RB	2	707.5				
				715.3				
				699.7	23017		22	0-1
			5	707.5	23095	21.92	22	0-1
				715.3	23173	21.95	22	0-1
				699.7	23017	21.64	22	0-1
1.4	16-QAM		0	707.5	23095	21.84	22	0-1
				715.3	23173	21.79	22	0-1
				699.7	23017	21.66	22	0-1
		3 RB	2	707.5	23095	21.87	22	0-1
				715.3	23173	21.87	22	0-1
				699.7	23017	21.52	22	0-1
			3	707.5	23095	21.81	22	0-1
				715.3			22	
				699.7				
		6	RB	707.5				
				715.3				
				699.7				
			0	707.5				
			]	715.3				
				699.7				
		1 RB	2	707.5				
				715.3				
				699.7				
			5					
			ا ا	707.5				
				715.3				
	64 0 4 4		_	699.7				
	64-QAM		0	707.5				
				715.3				0-1
		0.55	_	699.7				0-1
		3 RB	2	707.5				0-1
				715.3				0-1
				699.7	23017	21.48	22	0-1
			3	707.5	23095	21.80	22	0-1
				715.3	23173	21.57	22	0-1
				699.7	23017	20.62	21	0-2
					00005	20.00	04	0.0
		6R	RB	707.5	23095	20.80	21	0-2

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

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

SGS Taiwan Ltd.

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

prosecuted to the fullest extent of the law.



Page: 45 of 144

# LTE FDD Band 17 - conducted power table:

		1		FDD	Band 17				
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed	
				709	23780	22.74	23	0	
			0	710	23790	22.89	23	0	
				711	23800	22.98	23		
				709	23780	22.80	23		
		1 RB	25	710	23790	22.65	23	0	
				711	23800	22.91	23		
				709	23780	22.97	23		
			49	710	23790	22.90	23		
				711	23800	22.78	23		
				709	23780	21.85	22		
	QPSK		0	710	23790	21.77	22		
				711	23800	21.81	22		
		05.00	40	709	23780	21.82	22		
		25 RB	12	710	23790	21.93	22		
				711	23800	21.78	22		
			0.5	709	23780	21.88	22		
			25	710	23790	21.92	22		
				711	23800	21.96	22		
			NDD.	709	23780	21.86	22		
		50	)RB	710	23790	21.80	22		
			1	711	23800	21.75	22		
				709	23780	21.76	22		
			0	710	23790	21.89	22		
				711	23800	21.76	22		
		1 RB	25	709	23780	21.75	22 22		
		IKD	25	710	23790	21.94 21.78	22		
				711	23800				
			49	709 710	23780 23790	21.95	22 22		
			49	710	23800	21.92 21.93	22		
				711	23780	20.77	21		
10	16-QAM		0	710	23790	20.85	21		
10	TO QAIVI			710	23800	20.81	21	0	
				709	23780	20.83	21		
		25 RB	12	710	23790	20.91	21		
		2011	12	711	23800	20.86	21		
				709	23780	20.86	21		
			25	710	23790	20.99	21	0 0 0 0 1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-	
				711	23800	20.76	21		
				709	23780	20.83	21	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
		50	)RB	710	23790	20.99	21		
		``	-	711	23800	20.84	21		
				709	23780	21.72	22		
			0	710	23790	21.87	22		
				711	23800	21.72	22		
				709	23780	21.71	22		
		1 RB	25	710	23790	21.90	22		
				711	23800	21.74	22		
				709	23780	21.92	22		
			49	710	23790	21.88	22		
				711	23800	21.88	22		
				709	23780	20.71	21		
	64-QAM		0	710	23790	20.83	21	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
				711	23800	20.79	21		
				709	23780	20.81	21		
		25 RB	12	710	23790	20.87	21		
				711	23800	20.82	21		
				709	23780	20.82	21		
			25	710	23790	20.98	21		
				711	23800	20.74	21		
				709	23780	20.79	21		
		50RB	710	23790	20.95	21			
				711	23800	20.80	21	0-2	

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

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

t (886-2) 2299-3279

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



Page: 46 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
				706.5	23755	22.50	23	0	
			0	710	23790	22.63	23	0	
				713.5	23825	22.52	23	0	
				706.5	23755	22.64	23	0	
		1 RB	12	710	23790		23		
				713.5	23825				
				706.5	23755				
			24	710	23790				
				713.5	23825				
	QPSK		0	706.5	23755				
	QPSK		0	710 713.5	23790				
				713.5	23825 23755				
		12 RB	6	706.5	23790				
		12 110	١	713.5	23825				
				713.5	23755				
			13	710	23790				
			10	713.5	23825				
		<b>-</b>	I	713.5	23755				
		25	RB	710					
		2	,,,,,	713.5					
			I	706.5					
			0	710					
			Ĭ	713.5	23825				
				706.5	23755				
		1 RB	12	710	23790				
				713.5					
				706.5					
			24	710					
				713.5					
				706.5					
5	16-QAM		0	710					
				713.5				0-2	
				706.5	23755		21	0-2	
		12 RB	6	710	23790	20.69	21	0-2	
				713.5	23825	20.75	21	0-2	
				706.5	23755	20.57	21	0-2	
			13	710	23790	20.64	21	0-2	
				713.5	23825	20.76	21	0-2	
				706.5	23755	20.62	21	0-2	
		25	RB	710	23790			0-2	
				713.5	23825			0-2	
				706.5	23755			0-1	
			0	710	23790			0-1	
				713.5	06.5         23755         21.91         22           110         23790         21.95         22           13.5         23825         21.77         22           06.5         23755         20.71         21           10         23790         20.75         21           13.5         23825         20.78         21           16.5         23755         20.60         21           10         23790         20.69         21           10.5         23825         20.75         21           10.5         23755         20.57         21           10         23790         20.64         21           3.5         23825         20.76         21           10         23790         20.64         21           3.5         23825         20.76         21           10         23790         20.68         21           3.5         23825         20.75         21           10         23790         20.68         21           3.5         23825         20.75         21           10         23790         21.88         22           10	0-1			
				706.5		3790         21.62         22           3825         21.76         22           3755         21.92         22           3790         21.76         22           3790         21.76         22           3755         21.74         22           3790         21.95         22           3825         21.98         22           3755         21.91         22           3790         21.95         22           3790         21.95         22           3755         21.91         22           3790         21.95         22           3755         21.91         22           3790         20.75         21           3825         20.71         21           3790         20.75         21           3825         20.78         21           3790         20.69         21           3790         20.69         21           3755         20.57         21           3790         20.64         21           3755         20.62         21           3790         20.68         21           3755 <td>0-1</td>	0-1		
		1 RB	12	710					
				713.5				0-1	
				706.5	23755			0-1	
			24	710	23790				
				713.5	23825				
	04 6			706.5	23755			0-2	
	64-QAM		0	710	23790				
				713.5	23825				
		40.55	_	706.5	23755				
		12 RB	6	710	23790				
				713.5	23825			0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
			40	706.5	23755				
			13	710	23790				
		<u> </u>		713.5	23825				
			·DD	706.5	23755	20.58	21		
	2		SRB	710	23790	20.64	21		
				713.5	23825	20.71	21	0-2	

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

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

SGS Taiwan Ltd.



Page: 47 of 144

# LTE FDD Band 25 - conducted power table:

				FDD	Band 25				
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
				1860	26140	22.78	23	0	
			0	1882.5	26365	22.64	23	0	
				1905	26590	22.99	23		
				1860	26140	22.37	23		
		1 RB	50	1882.5	26365	22.35	23		
				1905	26590	22.55	23		
				1860	26140	22.52	23		
			99	1882.5	26365	22.51	23		
				1905	26590	22.75	23		
				1860	26140	21.46	22		
	QPSK		0	1882.5	26365	21.56	22		
				1905	26590	21.85	22		
				1860	26140	21.48	22		
		50 RB	25	1882.5	26365	21.47	22		
				1905	26590	21.83	22		
				1860	26140	21.51	22		
			50	1882.5	26365	21.38	22		
				1905	26590	21.75	22		
				1860	26140	21.53	22	0-1	
		l 10	0RB	1882.5	26365	21.49	22		
				1905	26590	21.90	22		
				1860	26140	21.92	22	0-1	
			0	1882.5	26365	21.62	22	0-1	
				1905	26590	21.92	22	0-1	
				1860	26140	21.89	22	0-1	
		1 RB	50	1882.5	26365	21.45	22	0-1	
				1905	26590	21.90	22	0-1	
				1860	26140	21.79	22	0-1	
			99	1882.5	26365	22.00	22	0-1	
				1905	26590	21.98	22	0-1	
				1860	26140	20.41	21	0-2	
20	16-QAM		0	1882.5	26365	20.48	21		
				1905	26590	20.88	21	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
				1860	26140	20.55	21		
		50 RB	25	1882.5	26365	20.47	21		
				1905	26590	20.79	21		
				1860	26140	20.44	21		
			50	1882.5	26365	20.45	21	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
				1905	26590	20.88	21		
				1860	26140	20.56	21		
		10	0RB	1882.5	26365	20.50	21		
		l ''	J. (D	1905	26590	20.92	21		
				1860	26140	21.88	22		
		1	0	1882.5	26365	21.60	22		
				1905	26590	21.89	22		
		1		1860	26140	21.85	22		
		1 RB	50			21.85	22		
		I LVB	30	1882.5 1905	26365 26590	21.41	22		
		1							
			00	1860	26140	21.78	22		
		1	99	1882.5	26365	21.99	22		
		<u> </u>		1905	26590	21.93	22		
	64 6 6 4 4	1	l ,	1860	26140	20.35	21		
	64-QAM	1	0	1882.5	26365	20.46	21	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
		1		1905	26590	20.84	21		
				1860	26140	20.52	21		
		50 RB	25	1882.5	26365	20.46	21		
				1905	26590	20.75	21		
		1		1860	26140	20.40	21	0-2	
		1	50	1882.5	26365	20.44	21	0-2	
				1905	26590	20.86	21	0-2	
				1860	26140	20.52	21	0-2	
		10	0RB	1882.5	26365	20.46	21	0-2	
	1	l		1905	26590	20.88	21	0-2	

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

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

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



Page: 48 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				1857.5	26115	22.58		0		
			0	1882.5	26365					
				1907.5	26615					
				1857.5	26115			0		
		1 RB	36	1882.5	26365					
				1907.5	26615			_		
				1857.5	26115					
			74	1882.5	26365					
				1907.5	26615					
				1857.5	26115					
	QPSK		0	1882.5	26365					
	α. σ. τ			1907.5	26615			-		
				1857.5	26115			_		
		36 RB	18	1882.5	26365					
		30 KB	10	1907.5	26615					
				1857.5	26115					
			37			Conducted power (dBm)         Power + Max. Tolerance (dBm)         IMPR AIR per 3GPF           22.58         23         0           22.50         23         0           22.86         23         0           22.44         23         0           22.47         23         0           22.47         23         0           22.47         23         0           22.47         23         0           22.47         23         0           22.43         23         0           22.47         23         0           21.55         22         0-1           21.55         22         0-1           21.52         22         0-1           21.56         22         0-1           21.76         22         0-1           21.78         22         0-1           21.78         22         0-1           21.78         22         0-1           21.78         22         0-1           21.79         22         0-1           21.86         22         0-1           21.91         22         0-1           <				
			J	1882.5 1907.5	26365 26615		Tolerance (dBm)			
				1857.5	26115			_		
		7.	:DD							
		'5	SRB	1882.5	26365					
				1907.5	26615					
			0	1857.5	26115			_		
			0	1882.5	26365					
			1907.5	26615						
				1857.5	26115			_		
		1 RB	36	1882.5	26365					
				1907.5	26615	21.88	22	0-1		
				1857.5	26115			0-1		
			74	1882.5	26365	21.94	22	0-1		
				1907.5	26615	21.87		0-1		
				1857.5	26115	20.51	21	0-2		
15	16-QAM		0	1882.5	26365	20.56	21	0-2		
				1907.5	26615	20.91	21	0-2		
				1857.5	26115	20.60	21	0-2		
		36 RB	18	1882.5	26365	20.54	21	0-2		
				1907.5	26615	20.85	21	0-2		
				1857.5	26115	20.57	21	0-2		
			37	1882.5	26365	20.42	21	22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           22         0-1           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           21         0-2           22         0-1           22         0-1           22         0-1		
				1907.5	26615	20.83	21	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
				1857.5	26115	20.68	21	0-2		
		75	SRB	1882.5	26365	20.49	21	0-2		
				1907.5	26615	20.80	21	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1		
				1857.5	26115					
			0	1882.5	26365		22	0-1		
				1907.5	26615					
				1857.5	26115			_		
		1 RB	36	1882.5	26365					
				1907.5	26615	24.24				
				1857.5	26115					
			74	1882.5	26365					
			1	1907.5	26615					
				1857.5	26115					
	64-QAM		0	1882.5	26365					
	5 . G, (IVI		Ĭ	1907.5	26615					
				1857.5	26115					
		36 RB	18	1882.5	26365					
		0010	10	1907.5	26615					
			37	1857.5	26115			0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1		
			31	1882.5	26365					
				1907.5	26615	20.81	21	0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2		
		75RB	-DD	1857.5	26115	20.64	21			
			75RB	1882.5	26365	20.45	21			
				1907.5	26615	20.76	21	0-2		

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

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

SGS Taiwan Ltd.



Page: 49 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)			
				1855	26090	22.78		0			
			0	1882.5	26365		23	0			
				1910	26640			0			
				1855				0			
		1 RB	25	1882.5				0			
				1910							
				1855							
			49	1882.5	26365		23	0			
				1910							
				1855							
	QPSK		0	1882.5							
				1910							
				1855							
		25 RB	12	1882.5							
		20.12		1910							
				1855		Channel Power (Bm)         Conducted power (Bm) power (dBm)         Power + Max. Tolerance (dBm) per 3GPP( decays)           26080         22.78         23         0           26365         22.69         23         0           26090         22.36         23         0           26090         22.36         23         0           26090         22.62         23         0           26090         22.62         23         0           26365         22.59         23         0           26365         22.59         23         0           26365         22.59         23         0           26365         22.59         23         0           26365         22.143         22         0-1           26366         21.43         22         0-1           26365         21.43         22         0-1           26365         21.44         22         0-1           26365         21.46         22         0-1           26365         21.39         22         0-1           26365         21.39         22         0-1           26365         21.47         22         0-1 </td					
			25	1882.5							
			20	1910			Power + Max.   Tolerance (dBm)   Power + Max.   Tolerance (dBm)   Power 3GPP(dBm)   Power 3GPP(dBm)				
				1855							
		E(	)RB	1882.5							
		30	,,,D								
				1910							
			0								
			U								
		4.55					22 0-1				
		1 RB	25					per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
					26640			0-1			
				1855	26090	21.97	22	0-1 0-1 0-1 0-1			
			49	1882.5	26365	21.76		0-1			
				1910	26640	21.97	22	0-1			
				1855	26090	20.53	21	0-2			
10	16-QAM		0	1882.5	26365	20.49	21	0-2			
				1910	26640	20.82	21	0-2			
				1855	26090	20.54	21	0-2			
		25 RB	12	1882.5	26365	20.53	21	0-2			
				1910	26640	20.87	21	0-2			
				1855	26090	20.46	21	0-2			
			25	1882.5	26365	20.36	21	0-2			
				1910	26640	20.81	21	0-2			
				1855	26090	20.47	21	0-2			
		50	)RB	1882.5	26365	20.47	21	0 0 0 0 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1			
				1910			21	0-2			
				1855							
			0								
								per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
		1 RB	RB 25								
			20								
			12 25 0RB 0								
			49								
			,5								
	64-QAM		0								
	U4-QAIVI		J								
		05.00	40								
		25 RB	12								
				1910							
				1855							
			25	1882.5							
				1910							
				1855	26090	20.43	21	0-2			
		50	0RB	1882.5	26365	20.43	21	0-2			
		508	סטוס				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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 50 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	
				1852.5	26065	22.47		0
			0	1882.5	26365		23	0
				1912.5				0
				1852.5				
		1 RB	12	1882.5				
				1912.5				
				1852.5				
			24	1882.5				
				1912.5				
				1852.5				
	QPSK		0	1882.5				
				1912.5				
				1852.5				_
		12 RB	6	1882.5				
		.25	Ü	1912.5	Channel         Conducted power (dBm) power (dBm)         Power + Max. Tolerance (dBm)         Por 3G           26065         22.47         23         4           26365         22.29         23         4           26665         22.37         23         4           26365         22.38         23         6           26365         22.35         23         6           26665         22.65         23         6           26365         22.35         23         6           26665         22.60         23         6           26065         21.50         22         0           26065         21.50         22         0           26065         21.50         22         0           26065         21.80         22         0           26065         21.44         22         0           26065         21.44         22         0           26065         21.44         22         0           26065         21.44         22         0           26065         21.46         22         0           26065         21.48         22         0 <tr< td=""><td></td></tr<>			
			13	1882.5				
				1912.5				
		26	SRB					
		25	טאע	1882.5				
				1912.5				
			0	1852.5				
			0	1882.5				
				1912.5				
				1852.5			Power + Max. Tolerance (dBm)         Impre dispers dis	
		1 RB	12	1882.5				Sm) per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				1912.5	26665		22	
				1852.5	26065	21.50	22	0-1
			24	1882.5	26365	21.25	22	0-1
				1912.5	26665	21.94	22	0-1
				1852.5	26065	20.55	21	0-2
5	16-QAM		0	1882.5	26365	20.49	21	0-2
				1912.5	26665	20.71	21	0-2
				1852.5	26065	20.46	21	0-2
		12 RB	6	1882.5	26365	20.46	21	0-2
				1912.5	26665	20.75	21	0-2
							21	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1
			13					0-2
			_					
		25	SRB					
			,					
			n					
			J					
								0 0 0 0 1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-
		1 PP	12					
		IKD	12				20.46     21     0-2       20.75     21     0-2       20.43     21     0-2       20.44     21     0-2       20.74     21     0-2       20.50     21     0-2       20.38     21     0-2       20.79     21     0-2       21.65     22     0-1       21.84     22     0-1       21.60     22     0-1       21.27     22     0-1       21.65     22     0-1	
			0.4					
			∠4					
	04.6***		_					
	64-QAM		0					
				1912.5				
			RB 6 1882.5 26365 20.46 21  1912.5 26665 20.75 21  1882.5 26065 20.43 21  1882.5 26365 20.44 21  1912.5 26665 20.74 21  25RB 1882.5 26365 20.38 21  1912.5 26665 20.38 21  1912.5 26665 20.79 21  1882.5 26365 21.65 22  1882.5 26365 21.65 22  1882.5 26365 21.84 22  1912.5 26665 21.60 22  1852.5 26065 21.65 22  1852.5 26665 21.84 22  1912.5 26665 21.84 22  1912.5 26665 21.84 22  1912.5 26665 21.84 22  1912.5 26665 21.89 22  1852.5 26365 21.89 22  1852.5 26365 21.89 22  1852.5 26365 21.89 22  1852.5 26365 21.89 22  1852.5 26365 20.49 21  1882.5 26365 20.47 21  1912.5 26665 20.47 21  1912.5 26665 20.43 21  1882.5 26365 20.47 21  1882.5 26365 20.43 21  1882.5 26365 20.45 21  1882.5 26365 20.45 21					
		12 RB	6	1882.5	26365	20.45	21	0-2
				1912.5	26665	20.71	21	0-2
						20.39	21	0-2
			13	1882.5	26365	20.43	21	0-2
				1912.5				
				1852.5	26065	20.46		-
	Ι Γ	OFDI	25RB					
		25	SRB	1882.5	26365	20.34	21	0-2

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

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

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 51 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1851.5	26055	22.47	23	0
			0	1882.5	26365	22.45	23	0
				1913.5	26675	22.75	23	0
				1851.5	26055	22.47	23	0
		1 RB	7	1882.5	26365	22.38	23	0
				1913.5	26675	22.63	23	0
				1851.5	26055	22.41	23	0
			14	1882.5	26365	22.32	23	0
				1913.5	26675	Power (GBm)   To	23	0
				1851.5	26055	21.49	22	0-1
	QPSK		0	1882.5	26365	21.32	22	0-1
				1913.5	26675	21.70	22	0-1
				1851.5		21.43	22	0-1
		8 RB	4	1882.5		21.36	22	0-1
				1913.5		21.75	22	0-1
				1851.5		66055         22.41         23           6365         22.32         23           6675         22.65         23           66055         21.49         22           6365         21.32         22           66675         21.70         22           6665         21.36         22           6665         21.36         22           66675         21.75         22           66655         21.38         22           66655         21.37         22           6675         21.77         22           66055         21.36         22           66055         21.33         22           6665         21.39         22           6665         21.33         22           6675         21.68         22           6675         21.46         22           6675         21.95         22           6675         21.95         22           6675         21.95         22           6675         21.95         22           6675         21.95         22           6675         21.85         22 <td< td=""><td>22</td><td>0-1</td></td<>	22	0-1
			7	1882.5	26365			0-1
								0-1
		15	RB	1882.5				
		'`	_	1913.5				
				1851.5				
			0	1882.5				
				1913.5				
		1 RB	7	1851.5				
		I KD	<b>'</b>	1882.5				
				1913.5				
				1851.5				
			14	1882.5				
				1913.5				
	40.044			1851.5				
3	16-QAM		0	1882.5				
		8 RB	4					
					26675	20.77		0-2
								0 0 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1
			7	1882.5	26365	20.42		
				1913.5	26675	20.77	21	0-2
				1851.5	26055	20.46		0-2
		15	RB	1882.5	26365		21	0-2
				1913.5	26675	20.54	21	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				1851.5	26055	21.35	22	0-1
			0	1882.5	26365	21.44	22	0-1
				1913.5	26675	21.92	22	0-1
				1851.5	26055		22	0-1
		1 RB	7	1882.5	26055         22.47         23         0           26365         22.45         23         0           26675         22.75         23         0           26055         22.47         23         0           26365         22.38         23         0           26675         22.63         23         0           26675         22.63         23         0           26365         22.32         23         0           26675         22.65         23         0           26675         22.65         23         0           26675         22.65         23         0           26675         22.65         23         0           26675         21.49         22         0-1           26365         21.32         22         0-1           26055         21.43         22         0-1           26055         21.43         22         0-1           26055         21.33         22         0-1           26055         21.38         22         0-1           26055         21.38         22         0-1           26365         21.37			
			1913.5 26675 20.82 21  1851.5 26055 20.58 21  1882.5 26365 20.50 21  1913.5 26675 20.77 21  1851.5 26055 20.58 21  7 1882.5 26365 20.42 21  1913.5 26675 20.77 21  1851.5 26675 20.77 21  1851.5 26675 20.42 21  1913.5 26675 20.42 21  1913.5 26675 20.46 21  1882.5 26365 20.40 21  1913.5 26675 20.54 21  1913.5 26675 20.54 21  0 1851.5 26055 21.35 22  1882.5 26365 21.44 22  1913.5 26675 21.92 22  1851.5 26055 21.59 22  1882.5 26365 21.39 22  1913.5 26675 21.91 22  1851.5 26055 21.84 22					
			14	1882.5				
				1913.5				
				1851.5				
	64-QAM		0	1882.5				
				1913.5				
				1851.5				
		8 RB	4	1882.5				
		0 100	-					
				1913.5				
			7	1851.5				
			7	1882.5				
				1913.5				
			- D.D.	1851.5				
		15	SRB	1882.5				
				1913.5	26675	20.50	21	I 0-2

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

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

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

SGS Taiwan Ltd.



Page: 52 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1850.7	26047	22.69	23	0
			0	1882.5	26365	22.80	23	0
				1914.3	26683	22.81	23	0
				1850.7	26047	22.69	23	0
		1 RB	2	1882.5	26365	22.91	23	0
				1914.3	26683	22.87	23	0
				1850.7	26047	22.62	23	0
			5	1882.5	26365	22.75	23	per 3GPP(dB)  0  0  0  0  0  0  0  0  0  0
				1914.3	26683	22.76	23	0
				1850.7	26047	21.70	22	0-1
	QPSK		0	1882.5	26365	21.83	22	0-1
				1914.3	26683	21.85	22	0-1
				1850.7	26047	21.73	22	0-1
		3 RB	2	1882.5	26365	21.86	22	0-1
				1914.3	26683	21.92	22	0-1
				1850.7	26047	21.72	22	MPK Allowed   per 3GPP(dB)   23
			3 1882.5 26365 21.85				22	0-1
				1914.3	26683	21.84	22	0-1
				1850.7	26047	20.59		
		6	RB	1882.5	26365	20.82		0-1
				1914.3	26683	20.97		
				1850.7	26047	20.91	Power + Max. Tolerance (dBm)  23	
			0	1882.5	26365	20.71		_
				1914.3	26683	21.17		0-1
				1850.7	26047	20.63	22	0-1
		1 RB	2	1882.5	26365	21.01		
				1914.3	26683	20.92		per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				1850.7	26047	20.69		
			5	1882.5	26365	20.94		
				1914.3	26683	21.30		per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				1850.7	26047	20.74		
1.4	16-QAM		0	1882.5	26365	20.93		
				1914.3	26683	20.89		
				1850.7	26047	20.86		
		3 RB	2	1882.5	26365	20.95		
				1914.3	26683	20.91		
				1850.7	26047	20.68		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			3	1882.5	26365	20.91		
				1914.3	26683	20.96		
				1850.7	26047	20.82		
		6	RB	1882.5	26365	20.93		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				1914.3	26683	20.94		0 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-
				1850.7	26047	20.87		
			0	1882.5	26365	20.69		
			]	1914.3	26683	21.14		
				1850.7	26047	20.59	22	
		1 RB	2	1882.5	26365	20.97		
			_	1914.3	26683	20.88		
				1850.7	26047	20.68		
			5	1882.5	26365	20.93		
				1914.3	26683	21.25		
				1850.7	26047	20.68		
	64-QAM		n	1882.5	26365	20.91		
	. 3, 111		6RB  0 2 5 0 2 3 6RB  0 2 5 0 2 5 0 0 0	1914.3	26683	20.85		
				1850.7	26047	20.83		
		3 RB	2	1882.5	26365	20.94		
		2 1/10		1914.3	26683	20.94		
			-	1850.7				
			2		26047	20.64		
			ا ا	1882.5	26365	20.90		
			l	1914.3	26683	20.94	21	
	]	۱ .		1850.7	26047	20.78 20.89	21 21	
	6F		DD	1882.5	26365			

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

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

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

SGS Taiwan Ltd.



Page: 53 of 144

## LTE FDD Band 26 - conducted power table:

				FDD	Band 26															
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)													
				822.5	26825	22.63	23	0												
			0	831.5	26865	22.57	23													
				841.5	26965	22.98	23													
		1 RB		822.5	26825	22.80	23													
		1 RB	36	831.5	26865	22.69	23													
				841.5	26965	22.88	23													
				822.5	26825	22.84	23													
			74	831.5	26865	22.73	23													
				841.5	26965	22.77	23													
	ODCK			822.5	26825	21.70	22													
	QPSK		0	831.5	26865	21.69	22													
				841.5	26965	21.80	22													
		26 DD	18	822.5	26825	21.88	22													
		30 KD	10	831.5	26865	21.83	22	(m) per 3GPP(dB)												
				841.5 822.5	26965	21.96	22 22													
			37		26825	21.89														
			31	831.5 841.5	26865	21.76	22 22	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0												
				822.5	26965	21.91	22													
		70	SRB		26825	21.81 21.77	22													
		"	JI/D	831.5 841.5	26865 26965	21.77	22													
			1	822.5	26825	21.99	22	-												
			0				22													
			U	831.5 841.5	26865 26965	21.78 21.92	22													
				822.5	26825	21.91	22	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0												
		1 DR	36	831.5	26865	21.92	22													
		TIND	30	841.5	26965	21.99	22	per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0												
				822.5	26825	21.95	22													
			74	831.5	26865	21.94	22													
			, ,	841.5	26965	21.98	22													
				822.5	26825	20.82	21													
15	16-QAM		0	831.5	26865	20.71	21													
		36 RB		ľ	841.5	26965	20.79	21												
																822.5	26825	20.86	21	
			5 RB 18	831.5	26865	20.77	21													
				841.5	26965	20.94	21													
				822.5	26825	20.86	21													
			37	831.5	26865	20.77	21													
				841.5	26965	20.98	21													
				822.5	26825	20.79	21													
		75	SRB	831.5	26865	20.76	21													
				841.5	26965	20.90	21													
				822.5	26825	21.95	22													
			0	831.5	26865	21.76	22													
				841.5	26965	21.89	22													
		1		822.5	26825	21.87	22	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0												
		1 RB	36	831.5	26865	21.88	22													
				841.5	26965	21.95	22													
				822.5	26825	21.94	22													
		1	74	831.5	26865	21.93	22													
				841.5	26965	21.93	22	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1												
				822.5	26825	20.76	21													
	64-QAM		0	831.5	26865	20.69	21													
				841.5	26965	20.75	21													
				822.5	26825	20.83	21													
		36 RB	18	831.5	26865	20.76	21													
		1		841.5	26965	20.90	21													
				822.5	26825	20.82	21													
		1	37	831.5	26865	20.76	21													
				841.5	26965	20.96	21													
				822.5	26825	20.75	21													
		75	5RB	831.5	26865	20.72	21													
		75R		841.5	26965	20.86	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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 54 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)	
				820	26750	22.67	23	0	
			0	831.5	26865	22.67	23	0	
				844	26990	22.88	23	0	
				820	26750	22.79	23	0	
		1 RB	25	831.5	26865	22.63	23	0	
				844	26990	22.89	23	0	
				820	26750	22.75	23	0	
			49	831.5	26865	22.67	23	0	
				844	26990	22.82	23	Max. (dBm)	
				820	26750	21.78	22	0-1	
	QPSK		0	831.5	26865	21.62	22	0-1	
				844	26990	21.99	22	0-1	
				820	26750	21.74	22	0-1	
		25 RB	12	831.5	26865	21.69	22	0-1	
				844	26990		22	0-1	
				820	26750	65         22.67         23           90         22.88         23           60         22.79         23           65         22.63         23           60         22.75         23           65         22.67         23           60         22.82         23           60         22.82         23           60         21.78         22         0           65         21.62         22         0           60         21.99         22         0           60         21.99         22         0           60         21.98         22         0           60         21.76         22         0           60         21.76         22         0           60         21.76         22         0           60         21.70         22         0           60         21.71         22         0           60         21.71         22         0           60         21.41         22         0           60         21.38         22         0           60         21.47         22		0-1	
			25	831.5	26865				
				844	26990				
				820	26750				
		50	ORB	831.5	26865				
		l ~		844	26990				
				820	26750				
			0	831.5	26865				
				844	26990				
		1 RB	25	820 831.5	26750 26865			per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
		IND	25						
				844	26990				
			40	820	26750				
			49	831.5	26865			0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1	
				844	26990				
			_	820	26750				
10	16-QAM		0	831.5	26865				
				844	26990				
				820	26750				
		25 RB	12						
			25		844         26990         20.93         21           820         26750         20.67         21				
				844	26990	20.91	21	0-2	
		I		820	26750			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
		50	)RB	831.5	26865	20.67	21	0-2	
				844	26990	20.99	21	0-2	
				820	26750	21.34	22	0-1	
			0	831.5	26865	21.55	22	0-1	
				844	26990	21.64	22	0-1	
				820	26750				
		1 RB	25	831.5	26865				
				844	26990	21.95	22	0-1	
				820	26750				
			49	831.5	26865				
				844	26990				
				820	26750				
	64-QAM		0	831.5	26865				
				844	26990				
				820	26750	20.57	21		
		25 RB	25 RB 12	831.5	26865	20.64	21	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
		2010	14	844		20.89	21		
					26990				
			25	820	26750	20.63	21		
			25	831.5	26865	20.71	21		
				844	26990	20.89	21		
			NDD	820	26750	20.63	21		
		J 50	)RB	831.5	26865	20.63	21		
				844	26990	20.95	21	I 0-2	

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

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

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

SGS Taiwan Ltd.



Page: 55 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)		
				816.5	26715	22 51		0	
			0	831.5	26865				
				846.5	27015	22.92	23	0	
				816.5	26715	22.45	23	0	
		1 RB	12	831.5	26865	22.69	Power (dBm)	0	
				846.5	27015	22.71	23	0	
				816.5	26715	22.52			
			24	831.5	26865				
				846.5	27015				
	ODOK			816.5	26715				
	QPSK		0	831.5	26865			-	
				846.5	27015				
		12 RB	6	816.5 831.5	26715 26865				
		12 110	0	846.5	27015				
				816.5	26715			_	
			13	831.5	26865				
				846.5					
				816.5	27015 26715			0-1	
		25	5RB	831.5	26865	21.66	22	0-1	
				846.5	27015	21.88	22	0-1	
				816.5	26715	22.78         23           21.53         22           21.67         22           21.95         22           21.49         22           21.81         22           21.85         22           21.61         22           21.73         22           21.82         22           21.59         22           21.66         22           21.88         22           21.39         22           21.37         22           21.37         22           21.37         22           21.77         22           21.42         22           21.74         22           21.47         22           21.47         22           21.47         22           21.47         22           20.69         21           20.99         21           20.57         21           20.58         21           20.58         21           20.58         21           20.56         21           20.56         21           20.56         21 <td>0-1</td>	0-1		
			0	831.5	26865	21.39	22	0-1	
				846.5	27015			0-1	
				816.5	26715			_	
		1 RB	12	831.5	26865				
				846.5	27015			_	
			0.4	816.5	26715			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
			24	831.5	26865				
				846.5 816.5	27015 26715			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
5	16-QAM		0	831.5	26865				
0	10 00/11/1		0	846.5	27015				
				816.5	26715				
		12 RB	6	831.5	26865				
		12 110	12 110		846.5	27015			
				816.5	26715				
			13	831.5	26865	20.80	21	0-2	
				846.5	27015	20.85	21	0-2	
				816.5	26715	20.56	21	0-2	
		25	SRB	831.5	26865	20.75	21	0-2	
				846.5	27015			0-2	
				816.5	26715				
			0	831.5	26865				
				846.5	27015			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
		1 00	10	816.5	26715				
		1 RB	12	831.5	26865 27015			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
				846.5 816.5					
			24	831.5	26715 26865				
				846.5	27015				
				816.5	26715				
	64-QAM		0	831.5	26865				
				846.5	27015				
				816.5	26715				
		12 RB	6	831.5	26865				
				846.5	27015				
				816.5	26715				
			13	831.5	26865	20.79		0-2	
				846.5	27015	20.83			
				816.5	26715	20.52	21		
		25	SRB	831.5	26865	20.71	21		
		I		846.5	27015	20.84	21	0-2	

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

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

SGS Taiwan Ltd.



Page: 56 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)			
				815.5	26705	22.27	23	0		
			0	831.5				0		
				847.5	27025	22.93	23	0		
				815.5	26705	22.41	23	0		
		1 RB	7	831.5	26865	22.64	23	0		
				847.5	27025	22.84	23	0		
				815.5	26705	22.40	23	0		
			14	831.5	26865	22.41	23	0		
				847.5	27025	22.62	23	0		
				815.5	26705	21.33	22	0-1		
	QPSK		0	831.5	26865	21.55	22	0-1		
				847.5	27025	21.73	22	0-1		
				815.5	26705	21.34	22	0-1		
		8 RB	4	831.5	26865	21.50	22	0-1		
				847.5	ency (z)         Channel (z)         Conducted power (dBm)         Power + Max. Tolerance (dBm)           .5         26705         22.27         23           .5         26865         22.33         23           .5         26865         22.93         23           .5         26865         22.41         23           .5         26865         22.41         23           .5         26865         22.40         23           .5         26865         22.41         23           .5         26865         22.41         23           .5         26865         22.41         23           .5         26865         22.41         23           .5         26865         21.33         22           .5         26865         21.55         22           .5         27025         21.28         22           .5         27025         21.34         22           .5         26865         21.50         22           .5         26865         21.50         22           .5         26705         21.28         22           .5         26865         21.77         22     <	22	0-1			
			815.5 26705	21.28	22	0-1				
			7	831.5	26865	21.46	22	0-1		
				847.5	27025	21.77	22	0-1		
				815.5	26705	21.29	22	0-1		
		15	5RB	831.5	26865	21.55	22	0-1		
				847.5	27025	21.71	22	0-1		
				815.5	26705	21.75	22	0-1		
			0	831.5	26865	21.88	22	0-1		
				847.5	27025	21.92	22	0-1		
				815.5	26705	21.48	22	0-1		
		1 RB	7	831.5	26865	21.88	22	Bm) per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
				847.5	27025	21.86	22			
				815.5	26705	21.82	22			
			14	831.5	26865	21.67	22			
				847.5	27025	21.87	22	0-1		
				815.5	26705	20.40	21	0-2		
3	16-QAM		0	831.5	26865	20.56	21	0-2		
				847.5	27025	20.91	21	0-2		
				815.5	26705	20.38	21	0-2		
		8 RB	4	831.5	26865	20.57	21	0-2		
				847.5	27025	20.87	21	Per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
				815.5	26705	20.19	21	0-2		
			7	831.5		20.48	21	0-2		
				847.5	27025	20.84	21	0-2		
				815.5	26705	20.33	21	0-2		
		15	SRB	831.5	26865	20.60	21	0 0 0 0 0 1 0-1 0-1 0-1 0-1 0-1 0-1 0-1		
				847.5	27025	20.65	21	0-2		
				815.5		21.71	22	0-1		
			0	831.5		21.86	22	0-1		
				847.5			22			
				815.5						
		1 RB	7	831.5						
				847.5						
				815.5						
			14	831.5						
				847.5						
				815.5						
	64-QAM		0	831.5						
				847.5						
				815.5						
		8 RB	7 14 0 4 7 15RB 0 7 14 0 4 7 15RB 0 7 14 0 7 15RB	831.5						
				847.5						
				815.5						
			7	831.5						
				847.5	27025	20.82	21			
				815.5	26705	20.29	21			
		1500								
		15	5RB	831.5	26865	20.56	21	()-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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 57 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	
				814.7	26697	22.41	23	0
			0	831.5	26865	22.60	23	0
				848.3	27033	22.77	23	0
				814.7	26697	22.47	23	0
		1 RB	2	831.5	26865	22.64	23	0
				848.3	27033	22.92	23	0
				814.7	26697	22.44		0
			5	831.5	26865	22.56		0
				848.3	27033	22.81	23	0
				814.7				0-1
	QPSK		0	831.5	26865	21.64		0-1
				848.3				
				814.7				
		3 RB	2	831.5				
				848.3	831.5         26865         22.60         23           848.3         27033         22.77         23           814.7         26697         22.47         23           331.5         26865         22.64         23           348.3         27033         22.92         23           348.3         27033         22.81         23           348.3         27033         22.81         23           348.3         27033         22.81         23           348.3         27033         22.81         23           348.3         27033         21.90         22           348.3         27033         21.90         22           348.3         27033         21.80         22           348.3         27033         21.84         22           348.3         27033         21.84         22           348.3         27033         21.84         22           348.3         27033         21.84         22           348.3         27033         21.84         22           348.3         27033         21.84         22           348.3         27033         21.84         22			
			3	831.5				
				848.3				
		_	DD					
		6	RB					
			1					
			0					0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		1 RB						
		4 00	0					
		TRB	2					0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			_					
			5					
1.4	16-QAM		0					
1.4	10-QAIVI		U					
		3 RB	5 0 2					
		3110	_					
			3					
		6	RB					
		Ĭ						
			0					
				814.7				per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		1 RB	2					
				814.7				-
			5	831.5				
				848.3				
				814.7	26697	20.48	21	
	64-QAM		0	831.5	26865	20.68	21	
				848.3	Channel   Conducted power (dBm)   Power (dBm)   Tolera	21		
			848.3 27033 20.85 22 814.7 26697 20.75 22 831.5 26865 21.18 22 848.3 27033 21.31 22 814.7 26697 20.44 22 848.3 27033 21.02 22 848.3 27033 21.02 22 848.3 27033 21.02 22 848.3 27033 21.02 22 848.3 27033 21.37 22 848.3 27033 21.37 22 848.3 27033 21.37 22 848.3 27033 20.54 21 848.3 27033 20.73 21 848.3 27033 20.73 21 848.3 27033 20.73 21 848.3 27033 20.73 21 848.3 27033 20.75 21 848.3 27033 20.99 21 848.3 27033 20.99 21 848.3 27033 20.99 21 848.3 27033 20.99 21 854.7 26697 20.50 21 868.8 31.5 26865 20.76 21 868.8 31.5 26865 20.76 21 870.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2					
		3 RB	2	831.5				
			3	831.5	26865	20.65	21	0-2
		<u></u>						
				814.7	26697	19.48	21	0-2
		6	RB	831.5	26865	19.65	21	0-2
		UK.	6KB		07000	10.00		

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

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

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 58 of 144

### LTE FDD Band 30 - conducted power table:

				FDD	Band 30					
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
			0	2310	27710	22.80	23	0		
		1 RB	25	2310	27710	22.71	23	0		
			49	2310	27710	22.98	23	0		
	QPSK		0	2310	27710	21.75	22	0-1		
		25 RB	12	2310	27710	21.88	22	0-1		
			25	2310	27710	21.84	22	0-1		
		50	ORB	2310	27710	21.80	22	0-1		
		1 RB	0	2310	27710	21.56	22	0-1		
			1 RB	1 RB	25	2310	27710	21.89	22	0-1
			49	2310	27710	21.98	22	0-1		
10	16-QAM		0	2310	27710	20.68	21	0-2		
		25 RB	12	2310	27710	20.86	21	0-2		
			25	2310	27710	20.79	21	0-2		
		50	ORB	2310	27710	20.78	21	0-2		
			0	2310	27710	21.50	22	0-1		
		1 RB	25	2310	27710	21.87	22	0-1		
			49	2310	27710	21.95	22	0-1		
	64-QAM		0	2310	27710	20.64	21	0-2		
		25 RB	12	2310	27710	20.82	21	0-2		
			25	2310	27710	20.75	21	0-2		
	50	ORB	2310	27710	20.77	21	0-2			

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

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 59 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed		
				2307.5	27685	22.88	23	0		
			0	2310	27710	22.72	23			
			ŭ	2312.5	27735	22.75	23	· -		
				2307.5	27685	22.68	23	0		
		1 RB	12	2310	27710	22.81	23	0		
				2312.5	27735	22.91	23	per 3GPP(dB)  0  0  0  0  0		
				2307.5	27685	22.89	23	0		
			24	2310	27710	22.92	23	0		
				2312.5	27735	22.88	23			
			_	2307.5	27685					
	QPSK		0	2310	27710					
				2312.5	27735					
		40.00		2307.5	27685					
		12 RB	6	2310	27710					
				2312.5	27735					
			13	2307.5 2310	27685 27710					
			13	2312.5	27735	-				
				2307.5	27685			1		
		2!	5RB	2310	27710					
			SILD	2312.5	27735					
				2307.5	27685					
			0	2310	27710					
			Ü	2312.5	27735					
				2307.5	27685			X. per 3GPP(dE m) per		
		1 RB	12	2310	27710					
				2312.5	27735					
				2307.5	27685		22			
			24	2310	27710		22			
				2312.5	27735	21.52	22	0-1		
				2307.5	27685	20.88	21	0-2		
5	16-QAM		0	2310	27710	20.90	21	per 3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
				2312.5	27735	20.76	21			
				2307.5	27685	20.92	21			
		12 RB	6	2310	27710	20.92	21	0-2		
				2312.5	27735	20.89	21	0-2		
				2307.5	27685	20.80				
			13	2310	27710			<del>-</del>		
				2312.5	27735					
			-00	2307.5	27685					
		2	ORB	2310	27710					
				2312.5	27735					
			0	2307.5	27685					
			U	2310 2312.5	27710 27735					
				2312.5	27685	22.81         23           22.91         23           22.89         23           22.92         23           22.88         23           21.87         22         0           21.92         22         0           21.80         22         0           21.89         22         0           21.98         22         0           21.91         22         0           21.93         22         0           21.94         22         0           21.95         22         0           21.92         22         0           21.92         22         0           21.86         22         0           21.79         22         0           21.81         22         0           21.83         22         0           21.79         22         0           21.86         22         0           21.77         22         0           21.77         22         0           21.77         22         0           21.77         22         0           21.52				
		1 RB	0 6 13 25RB 0 12 24	2310	27710					
			12	2312.5	27735			0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1		
				2307.5	27685					
			24	2310	27710					
				2312.5	27735					
				2307.5	27685					
	64-QAM		0	2310	27710			+		
				2312.5	27735			+		
				2307.5	27685			+		
		12 RB	6	2310	27710			<del>-</del>		
				2312.5	27735					
				2307.5	27685			+		
			13	2310	27710					
				2312.5	27735					
			2307.5	27685	20.81	21	0-2			
		2	5RB	2310	27710	20.83	21	0-2		
		201	25	25		2312.5	27735	20.92	21	0-2

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

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

SGS Taiwan Ltd.



Page: 60 of 144

## LTE TDD Band 38 - conducted power table:

				TC	DD Band 38			
BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				2580	37850	23.00	24	0
			0	2595	38000	23.13	24	0
				2610	38150	23.55	24	
		1 RB	50	2580	37850	22.90	24	
		IKD	50	2595 2610	38000 38150	23.00 23.11	24 24	
				2580	37850	22.90	24	
			99	2595	38000	23.34	24	
				2610	38150	23.25	24	0
				2580	37850	22.01	23	0-1
	QPSK		0	2595	38000	22.26	23	0-1
				2610	38150	22.34	23	0-1
				2580	37850	22.02	23	0-1
		50 RB	25	2595	38000	22.09	23	0-1
				2610	38150	22.36	23	3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			50	2580	37850	22.07	23	
			50	2595	38000	22.13	23	3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				2610	38150	22.24	23	
		10	0RB	2580 2595	37850 38000	22.06 22.17	23 23	
		10	UND	2610	38150	22.17	23	
			l			22.31	23	
			0 2580 37850 0 2595 38000 2610 38150 2580 37850		22.48	23		
			Ŭ			22.55	23	
						22.12	23	
		1 RB	50	2595	38000	22.31	23	
				2610	38150	22.33	23	
				2580	37850	22.12	23	
			99	2595	38000	22.41	23	0-1
				2610	38150	22.33	23	0-1
		QAM		2580	37850	21.14	22	0-2
20	16-QAM		0	2595	38000	21.28	22	0-2
				2610	38150	21.37	22	
				2580	37850	21.05	22	
		50 RB	25	2595	38000	21.23	22	
				2610	38150	21.38	22	
			50	2580	37850	21.09	22	
			50	2595	38000	21.16	22	
			L	2610 2580	38150 37850	21.27 21.14	22 22	
		10	0RB	2595	38000	21.14	22	
		10	OND	2610	38150	21.33	22	
				2580	37850	22.25	23	
			0	2595	38000	22.46	23	
				2610	38150	22.52	23	
				2580	37850	22.08	23	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		1 RB	50	2595	38000	22.27	23	
				2610	38150	22.29	23	0-1
				2580	37850	22.11	23	
			99	2595	38000	22.40	23	
				2610	38150	22.28	23	
				2580	37850	21.09	22	
	64-QAM		0	2595	38000	21.25	22	
				2610	38150	21.33	22	
		E0 DD	0.5	2580	37850	21.04	22	
		50 RB	25	2595	38000	21.22	22	
				2610	38150	21.34	22	
			50	2580	37850	21.05	22	
			50	2595	38000	21.15	22	
				2610	38150	21.25	22	
			10000	2500				
		10	0RB	2580 2595	37850 38000	21.12 21.12	22 22	

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

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

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

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

t (886-2) 2299-3279 f (886-2) 2298-0488 www.tw.sgs.com



Page: 61 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				2577.5	37825	23.03	24	0		
			0	2595	38000	23.19	24	0		
				2612.5	38175	23.22	24	0		
				2577.5	37825	23.02	24	0		
		1 RB	36	2595	38000	23.10	24	0		
				2612.5	38175		Tolerance (dBm)  24  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  0  24  1  23  0-1  24  25  26  27  29  29  29  29  29  29  20  20  20  20			
				2577.5	37825					
			74	2595	38000					
				2612.5	38175					
				2577.5	37825					
	QPSK		0	2595	38000					
				2612.5	38175					
				2577.5	37825					
		36 RB	18	2595	38000	225         23.02         24         0           200         23.10         24         0           75         23.27         24         0           205         22.99         24         0           200         23.15         24         0           200         23.15         24         0           200         23.16         24         0           225         21.97         23         0-1           200         22.24         23         0-1           75         22.26         23         0-1           265         22.09         23         0-1           200         22.18         23         0-1           200         22.18         23         0-1           200         22.18         23         0-1           200         22.29         23         0-1           200         22.22         23         0-1           200         22.22         23         0-1           200         22.22         23         0-1           200         22.07         23         0-1           200         22.07         23 <td< td=""><td>-</td></td<>		-		
				2612.5	38175					
				2577.5	37825					
			37	2595	38000					
			0.	2612.5	38175					
				2577.5	37825					
		79	5RB	2595	38000					
		· ` `		2612.5	38175					
				2577.5	37825		24         0           24         0           24         0           24         0           24         0           24         0           23         0-1			
			0	2595	38000					
			Ŭ	2612.5	38175					
				2577.5	37825					
		1 RB	36	2595	38000					
		110	30	2612.5	38175					
				2577.5	37825					
			74	2595	38000					
			74	2612.5	38175			-		
				2577.5	37825					
15	16-QAM		0	2595	38000					
10	10 0/11/1		Ů	2612.5	38175					
				2577.5	37825					
		36 RB	18	2595	38000					
		30 KB	10	2612.5	38175			0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2		
				2577.5	37825					
			37							
			31	2595 2612.5	38000					
			ļ		38175					
		70	5RB	2577.5	37825					
		/3	DKD	2595	38000					
			1	2612.5	38175 37825					
			0	2577.5						
			'	2595	38000					
				2612.5	38175					
		1 RB	26	2577.5	37825					
		IKB	36	2595	38000					
				2612.5	38175					
			7.4	2577.5	37825	22.23				
			74	2595	38000	22.28				
				2612.5	38175	22.34				
	64.644			2577.5	37825	20.95				
	64-QAM		0	2595	38000	21.19				
				2612.5	38175	21.18				
		00.55	40	2577.5	37825	21.10				
		36 RB	18	2595	38000	21.19				
				2612.5	38175	21.29				
				2577.5	37825	20.89	22	0-2		
			37	2595	38000	21.18	22	0-2		
				2612.5	38175	21.24	22	0-2		
				2577.5	37825	21.05	22	0-2		
		75	75RB	2595	38000	21.15	22	0-2		
						2612.5	38175	21.27	22	0-2

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

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

SGS Taiwan Ltd.



Page: 62 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max.	MPR Allowed per 3GPP(dB)				
				2575	37800	22.03		0				
			0	2595	38000							
			Ů	2615	38200							
				2575	37800							
		1 RB	25	2595	38000							
				2615	38200			wer + Max.				
				2575	37800			0				
			49	2595	38000	23.15						
				2615	38200	23.29	24	0				
				2575	37800	21.97	23	0-1				
	QPSK		0	2595	38000	22.12	23	0-1				
				2615	38200	22.36	23	0-1				
				2575	37800	Dower (dBm)   Tolerance (dBm)   3GPP		0-1				
		25 RB	12	2595	38000	22.16	23	0-1				
				2615	38200		0-1					
				2575	37800	21.94	23	0-1				
			25	2595	38000	22.18		0-1				
				2615	38200	22.36	23					
				2575	37800							
		50	ORB	2595	38000	22.09	23	0-1				
				2615	38200	22.30	23	0-1				
				2575	37800	22.16	23	0-1				
			0	2595	38000	22.43	23	0-1				
				2615	38200	22.58	23	0-1				
				2575	37800	22.25	23	0-1				
		1 RB	25	2595	38000	22.26	23	0-1				
				2615	38200	22.51	23	0-1				
				2575	37800	22.16	23	0-1				
			49	2595	38000	22.26	23	0-1				
				2615	38200	22.50	23	0-1				
				2575	37800	21.06	22	0-2				
10	16-QAM		0	2595	38000	21.21	22	0-2				
				2615	38200	21.40						
				2575	37800	21.06	22	0-2				
		25 RB	12	2595	38000							
				2615	38200							
				2575	37800			0-2				
			25	2595	38000							
				2615	38200							
				2575	37800							
		50	ORB	2595	38000							
				2615	38200							
				2575	37800							
			0	2595	38000							
				2615	38200							
				2575	37800							
		1 RB	25	2595	38000							
				2615	38200							
				2575	37800	220		<u> </u>				
			49	2595	38000							
				2615	38200							
				2575	37800							
	64-QAM		0	2595	38000							
				2615	38200							
				2575	37800	21.05						
		25 RB	12	2595	38000	21.18						
				2615	38200	21.30						
				2575	37800	20.94						
			25	2595	38000	21.25						
				2615	38200	21.37						
				2575	37800	21.03						
		50	ORB	2595	38000	21.06						
						I		2615	38200	21.25	22	0-2

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

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

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

SGS Taiwan Ltd.



Page: 63 of 144

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)		
				2572.5	37775	22.88	24	0		
			0	2595	38000	23.09	24	0		
				2617.5	38225	23.19	24	0		
				2572.5	37775	22.81	24	0		
		1 RB	12	2595	38000	22.98	24	0		
				2617.5	38225	23.25	24	Power + Max. Tolerance (dBm)  24  24  24  0  24  0  24  0  24  0  24  0  24  0  0		
				2572.5	37775	22.89	24			
			24	2595	38000	23.09	24			
				2617.5	38225	23.09	24	0		
				2572.5	37775		23			
	QPSK		0	2595	38000	22.13	23	0-1		
				2617.5	38225	22.32				
				2572.5	37775		23.09         24         0           23.09         24         0           21.89         23         0-1           22.13         23         0-1           22.32         23         0-1           22.15         23         0-1           22.40         23         0-1           21.88         23         0-1           22.36         23         0-1           22.99         23         0-1           22.99         23         0-1           22.99         23         0-1           22.99         23         0-1           22.99         23         0-1           22.99         23         0-1           22.99         23         0-1           22.99         23         0-1           22.99         23         0-1           22.33         0-1         0-1           22.39         0-1         0-1           22.43         0-1         0-1           22.43         0-1         0-1           22.44         23         0-1           22.51         23         0-1           22.51         23			
		12 RB	6	2595	38000					
				2617.5	38225					
				2572.5	37775					
			13	2595	38000					
			"	2617.5	38225					
				2572.5	37775					
		2!	5RB	2595	38000					
		[		2617.5	38225					
			l	2572.5	37775		22.09     23     0-1       22.33     23     0-1       22.12     23     0-1       22.27     23     0-1       22.43     23     0-1       22.08     23     0-1       22.24     23     0-1       22.51     23     0-1       22.11     23     0-1			
			0	2595	38000					
			O	2617.5	38225					
				2572.5	37775		24       0         24       0         24       0         24       0         24       0         24       0         23       0-1         22			
		4 DD	12							
		1 RB	12	2595	38000					
				2617.5	38225					
			0.4	2572.5	37775					
			24	2595	38000					
				2617.5	38225					
_				2572.5	37775					
5	16-QAM		0	2595	38000					
				2617.5	38225					
		40.00		2572.5	37775					
		12 RB	6	2595	38000					
				2617.5	38225					
				2572.5	37775					
			13	2595	38000					
				2617.5	38225					
				2572.5	37775					
		25	5RB	2595	38000	21.13				
			ı	2617.5	38225	21.44				
				2572.5	37775	22.06				
			0	2595	38000	22.25				
				2617.5	38225	22.40				
				2572.5	37775	22.04				
		1 RB	12	2595	38000	22.20				
				2617.5	38225	22.47	23	0-1		
				2572.5	37775	22.10		0-1		
			24	2595	38000	22.31	23	0-1		
				2617.5	38225	22.48	23	0-1		
				2572.5	37775	20.91	22	0-2		
	64-QAM		0	2595	38000	21.07	22	0-2		
				2617.5	38225	21.26	22	0-2		
				2572.5	37775	21.05	22	0-2		
		12 RB	6	2595	38000	21.21				
				2617.5	38225	21.38				
				2572.5	37775	20.91				
			13	2595	38000	21.10				
			"	2617.5	38225	21.29				
				2572.5	37775	20.98				
		2!	5RB	2595	38000	21.09				
		25F		2617.5	38225	21.40	22	0-2		
				1		2011.0	JUZZU	∠1.70	44	∪-∠

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

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

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 64 of 144

## LTE TDD Band 41 - conducted power table:

W(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB						
				2506 2549.5	39750 40185	23.97 23.99	24 24	0						
			0	2593	40620	23.85	24	0						
				2636.5 2680	41055 41490	23.86 23.28	24 24	0						
				2506	39750	23.78	24	0						
		4.00	=0	2549.5	40185 40620	23.62	24	0						
		1 RB	50	2593 2636.5	40620	23.61 23.57	24 24	0						
				2680	41490	23.38	24	0						
				2506 2549.5	39750 40185	23.67 23.49	24 24	0						
			99	2593	40620	23.60	24	0						
				2636.5 2680	41055 41490	23.58 22.39	24 24	0						
				2506	39750	22.92	23	0-1						
	QPSK		_	2549.5	40185	22.88	23	0-1						
	QPSK		0	2593 2636.5	40620 41055	22.68 22.74	23 23	0-1 0-1						
				2680	41490	22.45	23	0-1						
				2506 2549.5	39750 40185	22.90 22.74	23 23	0-1 0-1						
		50 RB	25	2593	40620	22.74	23	0-1						
				2636.5 2680	41055 41490	22.76 22.58	23 23	0-1 0-1						
				2506	39750	22.73	23	0-1						
				=0	2549.5	40185	22.64	23	0-1					
			50	2593 2636.5	40620 41055	22.58 22.63	23 23	0-1 0-1						
				2680	41490	22.60	23	0-1						
				2506 2549.5	39750 40185	22.88 22.74	23 23	0-1 0-1						
		10	0RB	2593	40620	22.68	23	0-1						
				2636.5	41055	22.75	23	0-1						
			1	2680 2506	41490 39750	22.68 22.97	23 23	0-1 0-1						
				2549.5	40185	22.99	23	0-1						
		1 RB	1 RB			0	2593 2636.5	40620 41055	22.85 22.85	23 23	0-1 0-1			
								2680	41490	22.28	23	0-1		
										2506	39750	22.78	23	0-1
				50	2549.5 2593	40185 40620	22.62 22.61	23 23	0-1 0-1					
				2636.5	41055	22.57	23	0-1						
				2680 2506	41490 39750	22.38 22.67	23 23	0-1 0-1						
				2549.5	40185	22.49	23	0-1						
			99	2593	40620	22.60	23	0-1						
				2636.5 2680	41055 41490	22.58 21.39	23 23	0-1 0-1						
				2506	39750	21.92	22	0-2						
20	16-QAM		0	2549.5 2593	40185 40620	21.88 21.68	22 22	0-2 0-2						
20	10-QAW		"	2636.5	41055	21.74	22	0-2						
		50 RB	50 RB	50 RB	50 RB					2680	41490	21.45 21.90	22	0-2
									2506 2549.5	39750 40185	21.74	22 22	0-2 0-2	
						25	2593	40620	21.74	22	0-2			
				2636.5 2680	41055 41490	21.76 21.58	22 22	0-2 0-2						
				2506	39750	21.73	22	0-2						
			50	2549.5 2593	40185 40620	21.64 21.58	22 22	0-2 0-2						
		1		2636.5	41055	21.63	22	0-2						
			l	2680	41490	21.60	22 22	0-2						
		1		2506 2549.5	39750 40185	21.88 21.74	22	0-2 0-2						
		10	0RB	2593	40620	21.68	22	0-2						
				2636.5 2680	41055 41490	21.75 21.68	22 22	0-2 0-2						
				2506	39750	22.91	23	0-1						
		1	0	2549.5	40185 40620	22.97	23	0-1						
		1	"	2593 2636.5	40620	22.82 22.81	23 23	0-1 0-1						
			<u> </u>	2680	41490	22.24	23	0-1						
			1	2506 2549.5	39750 40185	22.74 22.61	23 23	0-1 0-1						
		1 RB	50	2593	40620	22.60	23	0-1						
		1		2636.5 2680	41055 41490	22.52 22.33	23 23	0-1 0-1						
				2506	39750	22.64	23	0-1						
		1	00	2549.5 2593	40185 40620	22.45 22.59	23 23	0-1 0-1						
		1	99	2636.5	40620	22.57	23	0-1 0-1						
				2680	41490	21.35	23	0-1						
			1	2506 2549.5	39750 40185	21.88 21.87	22 22	0-2 0-2						
	64-QAM	1	0	2593	40620	21.66	22	0-2						
		1		2636.5 2680	41055 41490	21.72 21.41	22 22	0-2 0-2						
				2506	39750	21.86	22	0-2						
		50.00	0=	2549.5	40185	21.70	22	0-2						
		50 RB	25	2593 2636.5	40620 41055	21.70 21.75	22 22	0-2 0-2						
			ļ	2680	41490	21.56	22	0-2						
			l	2506 2549.5	39750	21.71 21.60	22 22	0-2						
		1	50	2593	40185 40620	21.54	22	0-2 0-2						
			1	2636.5	41055	21.59	22	0-2						
			·	2680 2506	41490 39750	21.56 21.87	22 22	0-2 0-2						
		1		2549.5	40185	21.72	22	0-2						
	l	100	0RB	2593 2636.5	40620 41055	21.66 21.71	22	0-2 0-2						
		,	100	100	100									

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

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

SGS Taiwan Ltd.



Page: 65 of 144

W(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(db		
				2503.5 2548.3	39725 40173	23.83 23.71	24 24	0		
			0	2593	40620	23.56	24	0		
				2637.8 2682.5	41068 41515	23.52 23.53	24 24	0		
				2503.5	39725	23.61	24	0		
		1 RB	36	2548.3 2593	40173 40620	23.44 23.41	24 24	0		
			00	2637.8	41068	23.41	24	0		
				2682.5 2503.5	41515 39725	23.32 23.54	24 24	0		
				2548.3	40173	23.41	24	0		
			74	2593 2637.8	40620 41068	23.38 23.41	24 24	0		
				2682.5	41515	23.41	24	0		
				2503.5 2548.3	39725	22.69	23	0-1		
	QPSK		0	2548.3	40173 40620	22.61 22.47	23 23	0-1 0-1		
				2637.8 2682.5	41068 41515	22.58	23	0-1		
				2503.5	39725	22.51 22.63	23 23	0-1 0-1		
		00.00	40	2548.3	40173	22.54	23	0-1		
		36 RB	18	2593 2637.8	40620 41068	22.45 22.47	23 23	0-1 0-1		
				2682.5	41515	22.41	23	0-1		
				2503.5 2548.3	39725 40173	22.61 22.42	23	0-1 0-1		
		l	37	2593	40620	22.44	23	0-1		
		l	l	2637.8 2682.5	41068 41515			0-1 0-1		
				2503.5	39725	22.70	23	0-1		
		71	SRB	2548.3 2593	40173 40620	22.52	23 23	0-1 0-1		
		l "		2637.8	41068	22.44	23	0-1		
			1	2682.5 2503.5	41515 39725	22.45	23	0-1		
	1	l		2548.3	40173	22.35	23	0-1		
		l	0	2593 2637.8	40620 41068	22.99	23	0-1		
				2682.5	41068					
		1 RB				2503.5	39725	22.36	23	0-1
			36	2548.3 2593	40173 40620					
				2637.8	41068	22.12	23	0-1		
				2682.5 2503.5	41515 39725					
				2548.3	40173	22.10	23	0-1		
			74	2593 2637.8	40620 41068					
				2682.5	41515	21.89	23	0-1		
				2503.5	39725	21.69	22	0-2		
15	16-QAM		0	2548.3 2593	40173 40620		22			
				2637.8	41068	21.56	2243         23         0-1           22.77         23         0-1           22.70         23         0-1           22.52         23         0-1           22.42         23         0-1           22.44         23         0-1           22.45         23         0-1           22.45         23         0-1           22.50         23         0-1           22.99         23         0-1           22.96         23         0-1           22.36         23         0-1           22.31         0-1         0-1           22.14         23         0-1           22.13         23         0-1           22.11         23         0-1           22.12         23         0-1           22.06         23         0-1           22.12         23         0-1           22.12         23         0-1           22.06         23         0-1           22.10         23         0-1           22.10         23         0-1           22.10         23         0-1           22.10         23	0-2		
				2682.5 2503.5	41515 39725					
		36 RB	18	2548.3	40173					
		30 KB	10	2593 2637.8	40620 41068					
				2682.5	41515	21.34				
				2503.5 2548.3	39725 40173					
			37	2593	40620	21.36				
				2637.8 2682.5	41068 41515					
				2503.5	39725	21.68	22	0-2		
	1	75	SRB	2548.3 2593	40173 40620					
		I "		2637.8	41068	21.52	22	0-2		
	<b> </b>	<del>                                     </del>	1	2682.5 2503.5	41515 39725					
		l		2548.3	40173	22.33	23	0-1		
	1	l	0	2593 2637.8	40620 41068					
		l		2682.5	41515	22.32	23	0-1		
		l		2503.5 2548.3	39725 40173	22.32 22.13	23 23	0-1 0-1		
		1 RB	36	2593	40620	22.12	23	0-1		
	1	l		2637.8 2682.5	41068 41515	22.07 22.01	23 23	0-1 0-1		
		l		2503.5	39725	22.30	23	0-1		
		l	74	2548.3 2593	40173 40620	22.06 22.09	23 23	0-1 0-1		
		l		2637.8	41068	22.00	23	0-1		
			<del>                                     </del>	2682.5 2503.5	41515 39725	21.85 21.65	23 22	0-1 0-2		
		l	Ī	2548.3	40173	21.53	22	0-2		
	64-QAM	l	0	2593 2637.8	40620 41068	21.50 21.54	22 22	0-2 0-2		
		l	<u> </u>	2682.5	41515	21.41	22	0-2		
		l		2503.5	39725 40173	21.58	22 22	0-2		
	1	36 RB	18	2548.3 2593	40620	21.55 21.47	22	0-2 0-2		
		l		2637.8	41068	21.49	22	0-2		
	1	l	<b>-</b>	2682.5 2503.5	41515 39725	21.32 21.53	22 22	0-2 0-2		
	1	l		2548.3	40173	21.46	22	0-2		
		l	37	2593 2637.8	40620 41068	21.32 21.33	22 22	0-2 0-2		
				2682.5	41515	21.27	22	0-2		
	1	l		2503.5 2548.3	39725 40173	21.67 21.59	22	0-2 0-2		
	1	75	SRB	2593	40620	21.50	22	0-2		
				2637.8	41068	21.48	22	0-2		

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

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

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

SGS Taiwan Ltd.



Page: 66 of 144

W(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB		
				2501	39700	23.63	24	0		
			0	2547	40160 40620	23.84	24	0		
			0	2593 2639	41080	23.71 23.66	24 24	0		
				2685	41540	23.82	24	0		
				2501 2547	39700 40160	23.47 23.33	24 24	0		
		1 RB	25	2593	40620	23.28	24	0		
				2639	41080	23.54	24 24	0		
				2685 2501	41540 39700	23.15 23.40	24	0		
				2547	40160	23.31	24	0		
			49	2593 2639	40620 41080	23.19 23.47	24 24	0		
				2685	41540	23.54	24	0		
				2501	39700	22.67	23	0-1		
	QPSK		0	2547 2593	40160 40620	22.42 22.39	23 23	0-1 0-1		
				2639	41080	22.42	23	0-1		
				2685 2501	41540 39700	22.50 22.57	23 23	0-1 0-1		
				2547	40160	22.43	23	0-1		
		25 RB	12	2593	40620	22.42	23	0-1		
				2639 2685	41080 41540	22.40 22.28	23 23	0-1 0-1		
				2501	39700	22.46	23	0-1		
			25	2547 2593	40160 40620	22.38 22.27	23 23	0-1 0-1		
			23	2639	41080	22.31	23	0-1		
				2685	41540	22.41	23	0-1		
				2501 2547	39700 40160	22.62 22.47	23 23	0-1 0-1		
		50	RB	2593	40160 40620	22.36	23	0-1 0-1		
				2639	41080	22.40	23	0-1		
				2685 2501	41540 39700	22.39 22.87	23 23	0-1 0-1		
				2547	40160	22.71	23	0-1		
			0	2593 2639	40620 41080	22.72 22.70	23 23	0-1 0-1		
			L	2685	41080	22.70	23	0-1		
				2501	39700	22.79	23	0-1		
		1 RB	1 RB	25	2547 2593	40160 40620	22.67 22.57	23 23	0-1 0-1	
			20	2639	41080	22.53	23	0-1		
				2685	41540	22.42	23	0-1		
				2501 2547	39700 40160	22.65 22.99	23 23	0-1 0-1		
			49	2593	40620	22.54	23	0-1		
				2639	41080	22.51 22.79	23 23	0-1 0-1		
				2685 2501	41540 39700	21.61	23	0-1		
			_	2547	40160	21.49	22	0-2		
10	16-QAM		0	2593 2639	40620 41080	21.45 21.41	22 22	0-2 0-2		
					2685	41540	21.54	22	0-2	
				•	2501	39700	21.68	22	0-2	
		25 RB	RB 12	2547 2593	40160 40620	21.42 21.38	22 22	0-2 0-2		
				2639	41080	21.46	22	0-2		
				2685 2501	41540 39700	21.33 21.61	22 22	0-2 0-2		
				2547	40160	21.37	22	0-2		
			25	2593	40620	21.28	22	0-2		
				2639 2685	41080 41540	21.31 21.36	22 22	0-2 0-2		
				2501	39700	21.54	22	0-2		
		E	RB	2547 2593	40160 40620	21.42 21.36	22 22	0-2 0-2		
		50		2593 2639	40620 41080	21.36 21.48	22 22	0-2 0-2		
			1	2685	41540	21.43	22	0-2		
				2501 2547	39700 40160	22.81 22.69	23 23	0-1 0-1		
			0	2593	40620	22.69	23	0-1		
				2639	41080 41540	22.66 22.94	23 23	0-1 0-1		
				2685 2501	39700	22.94 22.75	23 23	0-1 0-1		
		4.55	0.5	2547	40160	22.66	23	0-1		
		1 RB	25	2593 2639	40620 41080	22.56 22.48	23 23	0-1 0-1		
				2685	41540	22.37	23	0-1		
				2501	39700	22.62	23	0-1		
			49	2547 2593	40160 40620	22.95 22.53	23 23	0-1 0-1		
				2639	41080	22.50	23	0-1		
				2685 2501	41540 39700	22.75 21.57	23 22	0-1 0-2		
				2501	40160	21.48	22	0-2 0-2		
	64-QAM		0	2593	40620	21.43	22	0-2		
				2639 2685	41080 41540	21.39 21.50	22 22	0-2 0-2		
				2501	39700	21.64	22	0-2		
		SE DD	10	2547	40160	21.38	22	0-2		
		25 RB	12	2593 2639	40620 41080	21.34 21.45	22 22	0-2 0-2		
				2685	41540	21.31	22	0-2		
				2501	39700	21.59	22	0-2		
			25	2547 2593	40160 40620	21.33 21.24	22 22	0-2 0-2		
			_	2639	41080	21.27	22	0-2		
				2685	41540	21.32	22	0-2		
				2501 2547	39700 40160	21.53 21.40	22 22	0-2 0-2		
		50	RB	2593	40620	21.34	22	0-2		
		50RB	50F	50		2639	41080	21.44	22	0-2

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

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

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 67 of 144

W(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB			
				2498.5	39675	23.84	24	0			
			0	2547.8 2593	40148 40620	23.66 23.61	24 24	0			
			0	2640.3	41093	23.58	24	0			
				2687.5	41565	23.72	24	0			
				2498.5 2547.8	39675 40148	23.80 23.60	24 24	0			
		1 RB	12	2593	40620	23.58	24	0			
				2640.3 2687.5	41093 41565	23.63 23.42	24 24	0			
				2498.5	39675	23.76	24	0			
			0.4	2547.8	40148	23.62	24	0			
			24	2593 2640.3	40620 41093	23.48 23.45	24 24	0			
				2687.5	41565	23.48	24	0			
				2498.5 2547.8	39675 40148	22.89 22.71	23 23	0-1 0-1			
	QPSK		0	2593	40620	22.70	23	0-1			
				2640.3	41093	22.69	23	0-1			
				2687.5 2498.5	41565 39675	22.62 22.82	23 23	0-1 0-1			
				2547.8	40148	22.70	23	0-1			
		12 RB	6	2593 2640.3	40620 41093	22.62 22.58	23 23	0-1 0-1			
				2687.5	41565	22.43	23	0-1			
				2498.5	39675	22.92	23	0-1			
			13	2547.8 2593	40148 40620	22.67 22.72	23 23	0-1 0-1			
			1	2640.3	41093	22.69	23	0-1			
			l	2687.5	41565	22.62	23	0-1 0-1			
				2498.5 2547.8	39675 40148	22.82 22.72	23 23	0-1 0-1			
		25	5RB	2593	40620	22.67	23	0-1			
				2640.3 2687.5	41093 41565	22.64 22.46	23	0-1 0-1			
				2498.5	39675	22.91	23	0-1			
			0	2547.8	40148	22.90	23	0-1			
			J "	2593 2640.3	40620 41093	22.95 22.78	23 23	0-1 0-1			
		1 RB	1 RB		2687.5	41565	22.74	23	0-1		
							2498.5 2547.8	39675 40148			0-1 0-1
				12	2593	40620			0-1		
				2640.3	41093	22.82	23	0-1			
				2687.5 2498.5	41565 39675			0-1 0-1			
			2547.8	40148	22.88	23	0-1				
			24	2593	40620	22.73	23	0-1			
				2640.3 2687.5	41093 41565			0-1 0-1			
				2498.5	39675	21.97	22	0-2			
-	46 0414		0	2547.8	40148	21.78	22	0-2			
5	16-QAW		0	2593 2640.3	40620 41093		2291         23           22.94         23           22.82         23           22.88         23           22.99         23           22.93         23           22.93         23           22.73         23           22.79         23           22.65         23           21.97         22           21.70         22           21.70         22           21.69         22           21.94         22           21.97         22           21.69         22           21.94         22           21.95         22           21.96         22           21.97         22           21.50         22           21.69         22           21.69         22           21.69         22           21.62         22           21.84         22	0-2 0-2			
	16-QAM				2687.5	41565	21.52		0-2		
				2498.5 2547.8	39675 40148			0-2 0-2			
		12 RB	12 RB	6	2593	40620	21.69		0-2		
				2640.3	41093			0-2			
				2687.5 2498.5	41565 39675			0-2 0-2			
				2547.8	40148	21.72	22	0-2			
			13	2593 2640.3	40620 41093	21.73 21.67	22 22	0-2 0-2			
				2687.5	41565	21.53	22	0-2			
				2498.5	39675	21.86	22	0-2			
		25	5RB	2547.8 2593	40148 40620	21.78 21.75	22 22	0-2 0-2			
				2640.3	41093	21.76	22	0-2			
				2687.5 2498.5	41565 39675	21.58 22.85	22 23	0-2 0-1			
			1	2547.8	40148	22.88	23	0-1 0-1			
			0	2593	40620	22.92	23	0-1			
				2640.3 2687.5	41093 41565	22.74 22.70	23 23	0-1 0-1			
				2498.5	39675	22.87	23	0-1			
		1 00	12	2547.8 2593	40148 40620	22.93 22.81	23 23	0-1 0-1			
		1 RB	12	2640.3	40620	22.81	23	0-1 0-1			
				2687.5	41565	22.93	23	0-1			
				2498.5 2547.8	39675 40148	22.90 22.84	23 23	0-1 0-1			
			24	2593	40620	22.72	23	0-1			
				2640.3	41093	22.78	23	0-1			
			-	2687.5 2498.5	41565 39675	22.61 21.93	23 22	0-1 0-2			
				2547.8	40148	21.77	22	0-2			
	64-QAM		0	2593 2640.3	40620 41093	21.68 21.67	22 22	0-2			
				2687.5	41093	21.48	22	0-2 0-2			
				2498.5	39675	21.90	22	0-2			
		12 RB	6	2547.8 2593	40148	21.73 21.65	22	0-2 0-2			
		12 110	"	2640.3	40620 41093	21.67	22	0-2			
				2687.5	41565	21.60	22	0-2			
			1	2498.5 2547.8	39675 40148	21.82 21.68	22 22	0-2 0-2			
			13	2547.8	40148	21.69	22	0-2 0-2			
				2640.3	41093	21.63	22	0-2			
			L	2687.5 2498.5	41565 39675	21.49 21.85	22 22	0-2 0-2			
				2547.8	40148	21.76	22	0-2			
		25	5RB	2593	40620	21.73	22	0-2			
		~~		2640.3	41093	21.72	22	0-2			

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

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 68 of 144

### LTE FDD Band 66 - conducted power table:

					D Band 66	er table:		
BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
			0	1720 1745	132072 132322	24.13 24.06	24.5 24.5	0
				1770 1720	132572 132072	24.14 23.85	24.5 24.5	0
		1 RB	50	1745	132322	23.80	24.5	0
				1770 1720	132572 132072	23.90 23.77	24.5	0
			99	1745 1770	132322 132572	23.84 23.79	24.5 24.5	0
	QPSK		0	1720 1745	132072	22.96 22.99	23.5	24.5         0           24.5         0           24.5         0           24.5         0           24.5         0           23.5         0-1           23.5         0-2           22.5         0-2
	QFSK		0	1770	132322 132572	22.97	23.5	0-1
		50 RB	25	1720 1745	132072 132322	22.97 22.93	23.5 23.5	
				1770 1720	132572 132072	22.87 22.92	23.5	3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			50	1745	132322	22.85	23.5	0-1
				1770 1720	132572 132072	22.82 23.01	23.5 23.5	
		10	0RB	1745 1770	132322 132572	22.97 22.87	23.5	
		_	1720	132072	23.13	23.5	0-1	
			0	1745 1770	132322 132572	23.19 23.22	23.5 23.5	
		1 RB	50	1720 1745	132072 132322	22.73 23.34	23.5	
		TIND	30	1770	132572	22.81	23.5	0-1
			99	1720 1745	132072 132322	23.14 23.26	23.5 23.5	
				1770 1720	132572 132072	23.20 21.95	23.5	
20	16-QAM		0	1745	132322	22.11	22.5	0-2
				1770 1720	132572 132072	22.05 21.92	22.5 22.5	
		50 RB	25	1745 1770	132322 132572	21.92 21.85	22.5	3GPP(dB)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				1720	132072	21.95	22.5	0-2
			50	1745 1770	132322 132572	21.89 21.88	22.5 22.5	
		10	0RB	1720 1745	132072 132322	21.90 21.93	22.5	
		10		1770	132572	21.96	22.5	0-2
			0	1720 1745	132072 132322	23.07 23.17	23.5 23.5	
				1770 1720	132572 132072	23.19 22.69	23.5 23.5	
		1 RB	50	1745	132322	23.30	23.5	0-1
				1770 1720	132572 132072	22.77 23.13	23.5 23.5	
			99	1745	132322	23.25	23.5	0.4
			_	1770	132572	23.15	23.5	0-2
	64-QAM		0	1745 1770	132322 132572	22.08 22.01	22.5 22.5	
		50 RB	25	1720 1745	132072 132322	21.91 21.91	22.5 22.5	0-2
		30 10	25	1770	132572	21.81	22.5	0-2
			50	1720 1745	132072 132322	21.91 21.88	22.5 22.5	
			-	1770	132572	21.86	22.5	0-2
		10	0RB	1720 1745	132072 132322	21.88 21.89	22.5 22.5	0-2
	'			1770	132572	21.92	22.5	0-2

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

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

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

SGS Taiwan Ltd.



Page: 69 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)					
				1717.5	132047	23.96	24.5	0					
			0	1745	132322	24.06	24.5	0					
				1772.5	132597	24.13	24.5	0					
				1717.5	132047	23.77	24.5	0					
		1 RB	36	1745	132322	23.89	24.5	0					
				1772.5	132597	23.82	24.5	0					
				1717.5	132047	23.83	24.5	0					
			74	1745	132322	23.89	24.5	0					
				1772.5	132597	23.79	24.5	0					
				1717.5	132047	22.88	23.5	0-1					
	QPSK		0	1745	132322	23.00	23.5	0-1					
				1772.5	132597	22.90	23.5						
				1717.5	132047	22.81	23.5						
		36 RB	18	1745	132322	22.89	23.5						
		00112		1772.5	132597	22.85	23.5						
				1717.5	132047	22.86	23.5						
			37	1745	132322	22.84	23.5						
			37	1772.5	132527	22.79	23.5	• .					
		<b>-</b>	L	1717.5		22.79	23.5						
		71	5RB	1717.5	132047								
		/:	OKD		132322	22.88	23.5						
		1		1772.5	132597	22.87	23.5						
			0	1717.5	132047	23.45	23.5						
			0	1745	132322	23.49	23.5						
				1772.5	132597	23.42	23.5						
				1717.5	132047	23.27	23.5						
		1 RB	36	1745	132322	23.05	23.5						
				1772.5	132597	23.27	23.5						
				1717.5	132047	23.40	23.5	• •					
			74	1745	132322	23.14	23.5	0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1					
				1772.5	132597	23.26	23.5	0-1					
				1717.5	132047	21.87	22.5	0-2					
15	16-QAM		0	1745	132322	21.96	22.5	0-2					
				1772.5	132597	21.96	22.5	0-2					
				1717.5	132047	21.97	22.5	0-2					
		36 RB	18	1745	132322	21.90	22.5	0-2					
				1772.5	132597	21.86	22.5	0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2					
				1717.5	132047	21.88	22.5	0-2					
			37	1745	132322	21.85	22.5	0-2					
				1772.5	132597	21.76	22.5	0-2					
			•	1717.5	132047	21.78	22.5	0-2					
		75	5RB	1745	132322	21.99	22.5						
				1772.5	132597	21.85	22.5						
				1717.5	132047	23.45	23.5						
			0	1745	132322	23.49	23.5						
			-	1772.5	132597	23.42	23.5						
				1717.5	132047	23.27	23.5						
		1 RB	36	1745	132322	23.05	23.5	0-1					
			55	1772.5	132527	23.27	23.5	0-1					
				1717.5	132047	23.40	23.5	0-1					
			74	1717.5	132322	23.40	23.5	0-1					
			'4					0-1					
		<del></del>	-	1772.5	132597	23.26	23.5						
	64-QAM		0	1717.5	132047	21.87	22.5	0-2					
	04-QAIVI		l <sup>U</sup>	1745	132322	21.96	22.5	0-2					
			-	1772.5	132597	21.96	22.5	0-2					
		00.55	4.0	1717.5	132047	21.97	22.5	0-2					
		36 RB	18	1745	132322	21.90	22.5	0-2					
				1772.5	132597	21.86	22.5	0-2					
				1717.5	132047	21.88	22.5	0-2					
			37	1745	132322	21.85	22.5	0-2					
				1772.5	132597	21.76	22.5	0-2					
				1717.5	132047	21.78	22.5	0-2					
		75	5RB	1745	132322	21.99	22.5	0-2					
		/5	751	75	731	731	731	0,10	1772.5	132597	21.85	22.5	0-2

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

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

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 70 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1715	132022	23.86	Power + Max. Tolerance (dBm)   Tolerance (dBm)   3GPP(dB)	
			0	1745	132322	23.99		
				1775	132622	23.83		
				1715	132022	23.76		
		1 RB	25	1745	132322			
				1775	132622			
			40	1715	132022			
			49	1745 1775	132322			
					132622			
	QPSK		0	1715 1745	132322			
	Qi Oit			1775	132622			
				1715	132022			
		25 RB	12	1745	132322	022         23.86         24.5         0           322         23.71         24.5         0           622         23.74         24.5         0           022         22.89         23.5         0-1           322         22.97         23.5         0-1           322         22.87         23.5         0-1           322         22.84         23.5         0-1           322         22.94         23.5         0-1           622         22.85         23.5         0-1           622         22.85         23.5         0-1           622         22.82         23.5         0-1           622         22.82         23.5         0-1           622         22.82         23.5         0-1           622         22.82         23.5         0-1           622         22.84         23.5         0-1           622         22.89         23.5         0-1           622         22.89         23.5         0-1           622         23.15         23.5         0-1           622         23.41         23.5         0-1           622		
		20.12		1775	132622			Ů.
				1715				
		25 1745 132322 22.82						
				1775	132622			
				1715	132022			_
		50	RB	1745	132322			
				1775	132622			0-1
				1715	132022			0-1
			0	1745	132322	23.41	23.5	0-1
				1775	132622	23.44		0-1
				1715	132022	23.29	23.5	0-1
		1 RB	25	1745	132322	23.16		0-1
				1775	132622	23.10	23.5	0-1
				1715	132022	23.02	23.5	0-1
			49	1745	132322	22.82	23.5	0-1
				1775	132622	22.99	23.5	
				1715	132022	21.86	22.5	0-2
10	16-QAM		0	1745	132322	21.98	22.5	0-2
				1775	132622			
				1715	132022			
		25 RB	12	1745	132322			
				1775	132622			
				1715	132022			_
			25	1745	132322			
				1775	132622			
			)RB	1715	132022			
		50	JI/D	1745	132322			
			1	1775 1715	132622 132022			
			0	1715	132322			
				1775	132622			
			<b>-</b>	1715	132022			
		1 RB	25	1745	132322			
			-	1775	132622	23.23		
				1715	132022			
			49	1745	132322			
			]	1775	132622	23.21		
				1715	132022	21.82		
	64-QAM		0	1745	132322	21.93		
				1775	132622	21.92		
				1715	132022	21.96		
		25 RB	12	1745	132322	21.89		
				1775	132622	21.82	22.5	0-2
				1715	132022	21.84		
			25	1745	132322	21.84	22.5	0-2
				1775	132622	21.74	22.5	0-2
		<del>                                     </del>	1715	132022	21.76	22.5	0-2	
		50	)RB	1745	132322	21.95	22.5	0-2
	ı			1775	132622	21.81	22.5	0-2

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

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

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

SGS Taiwan Ltd.



Page: 71 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)						
				1712.5	131997	23.83	Note of Column   Power + Max. Tolerance (dBm)   3GPP(dB)     23.83							
			0	1745	132322									
				1777.5	132647									
				1712.5	131997									
		1 RB	12	1745	132322									
				1777.5	132647									
			0.4	1712.5	131997									
			24	1745 1777.5	132322									
					132647									
	QPSK		0	1712.5 1745	131997 132322									
	Qi Oit			1777.5	132647									
				1717.5	131997									
		12 RB	6	1712.5	132322									
			ľ	1777.5	132647									
				1712.5										
		13 1745 132322 22.83												
				1777.5	132647									
				1712.5	131997									
		25	5RB	1745	132322									
				1777.5	132647			0-1						
				1712.5	131997			0-1						
			0	1745	132322	23.42	23.5	0-1						
				1777.5	132647	23.32	23.5	0-1						
				1712.5	131997	23.14	23.5	0-1						
		1 RB	12	1745	132322	23.08	23.5	0-1						
				1777.5	132647	22.66	23.5	0-1						
				1712.5	131997	22.98	23.5	0-1						
			24	1745	132322	22.98	23.5	0-1						
				1777.5	132647									
				1712.5	131997									
5	16-QAM		0	1745	132322			-						
				1777.5	132647									
				1712.5	131997									
		12 RB	6	1745	132322									
				1777.5	132647									
			40	1712.5	131997									
			13	1745	132322									
				1777.5	132647									
		21	SRB	1712.5 1745	131997 132322									
			JIND .											
		<b>-</b>		1777.5 1712.5	132647 131997									
			0	1712.5	132322									
				1777.5	132647									
				1717.5	131997									
		1 RB	12	1745	132322									
				1777.5	132647									
				1712.5	131997									
			24	1745	132322									
				1777.5	132647									
				1712.5	131997			0-2						
	16-QAM		0	1745	132322									
			<u> </u>	1777.5	132647			0-2						
				1712.5	131997			0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1 0-1						
		12 RB	6	1745	132322	21.90		0-2						
				1777.5	132647	21.76	22.5	0-2						
				1712.5	131997	21.73	22.5	0-2						
			13	1745	132322	21.88	22.5	0-2						
				1777.5	132647	21.83	22.5	_						
			1712.5	131997	21.84	22.5								
		25	5RB	1745	132322	21.84	22.5							
			∠51	25			23	25		1777.5	132647	21.74	22.5	0-2

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

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

SGS Taiwan Ltd.



Page: 72 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
	Modulation   RB Size   RB Offset   Frequency   Channel   Channel   Down (dBm)   Tolerance (dBm)   Modulation   RB Size   RB Offset   Frequency   1711.5   131987   23.90   24.5   0.0	0						
			0	1745	132322	23.87	24.5	0
				1778.5	132657	24.03	24.5	0
				1711.5	131987	23.97		0
		1 RB	7	1745	132322	23.86	24.5	0
				1778.5	132657	23.75	24.5	0
						23.85	24.5	
			14	1745	132322	23.76	24.5	0
				1778.5	132657	23.74	24.5	0
				1711.5	131987	22.85	23.5	0-1
	QPSK		0	1745	132322	22.80	23.5	0-1
				1778.5	132657	22.78	23.5	0-1
				1711.5	131987	22.86	23.5	0-1
		8 RB	4	1745	132322	2322         22.82         23.5         0-1           2657         22.72         23.5         0-1           1987         22.81         23.5         0-1           2322         22.80         23.5         0-1           2657         22.74         23.5         0-1           2881         23.5         0-1           2832         22.79         23.5         0-1           22657         22.79         23.5         0-1           2987         23.5         0-1           2987         23.5         0-1           2322         23.04         23.5         0-1           2987         23.5         0-1           2987         23.5         0-1           2987         23.5         0-1           2987         23.5         0-1           2987         23.5         0-1           2322         23.33         23.5         0-1           2322         23.33         23.5         0-1           2322         23.99         23.5         0-1           2987         23.5         0-1           2987         23.5         0-1           2987<	0-1	
				1778.5	132657	22.72	23.5	0-1
							23.5	0-1
			7	1745	132322	22.80	23.5	0-1
				1778.5	132657	22.74	23.5	0-1
				1711.5	131987	22.81	23.5	0-1
		15	5RB	1745	132322	22.79	23.5	0-1
				1778.5	132657	22.79	23.5	0-1
				1711.5	131987	23.04	23.5	0-1
			0	1745	132322	23.04	23.5	0-1
				1778.5	132657	22.87	23.5	0-1
				1711.5	131987	23.02	23.5	0-1
		1 RB	7	1745	132322	23.33	23.5	0-1
				1778.5	132657	22.99	23.5	0-1
				1711.5	131987	23.01	23.5	0-1
			14		132322	22.86	23.5	0-1
				1778.5	132657	23.02	23.5	0-1
				1711.5	131987	21.87	22.5	0-2
3	16-QAM		0	1745	132322	21.95	22.5	
				1778.5	132657	21.84	22.5	0-2
				1711.5		21.93	22.5	0-2
		8 RB	4	1745	132322	22.07	22.5	0-2
				1778.5	132657	21.67	22.5	0-2
				1711.5	131987	21.82	22.5	0-2
			7					0-2
				1778.5		21.90	22.5	0-2
							22.5	0-2
	1	15	5RB					
	1	1						
	1		0					
	1							
	1							
	1	1 RB	7					
	l		1					
		1778.5 132657 22.95						
			1/11.5	131987				
			14					
			14	1745	132322	22.85	23.5	0-1
			14	1745 1778.5	132322 132657	22.85 22.97	23.5 23.5	0-1 0-1
	64-QAM		14	1745 1778.5 1711.5	132322 132657 131987	22.85 22.97 21.82	23.5 23.5 22.5	0-1 0-1 0-2
	64-QAM			1745 1778.5 1711.5 1745	132322 132657 131987 132322	22.85 22.97 21.82 21.92	23.5 23.5 22.5 22.5	0-1 0-1 0-2 0-2
	64-QAM			1745 1778.5 1711.5 1745 1778.5	132322 132657 131987 132322 132657	22.85 22.97 21.82 21.92 21.80	23.5 23.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2
	64-QAM	8 RR	0	1745 1778.5 1711.5 1745 1778.5 1711.5	132322 132657 131987 132322 132657 131987	22.85 22.97 21.82 21.92 21.80 21.92	23.5 23.5 22.5 22.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2 0-2 0-2
	64-QAM	8 RB		1745 1778.5 1711.5 1745 1778.5 1711.5 1745	132322 132657 131987 132322 132657 131987 132322	22.85 22.97 21.82 21.92 21.80 21.92 22.06	23.5 23.5 22.5 22.5 22.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2
	64-QAM	8 RB	0	1745 1778.5 1711.5 1745 1778.5 1711.5 1745 1778.5	132322 132657 131987 132322 132657 131987 132322 132657	22.85 22.97 21.82 21.92 21.80 21.92 22.06 21.63	23.5 23.5 22.5 22.5 22.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2
	64-QAM	8 RB	0 4	1745 1778.5 1711.5 1745 1778.5 1711.5 1745 1778.5 1771.5	132322 132657 131987 132322 132657 131987 132322 132657 131987	22.85 22.97 21.82 21.92 21.80 21.92 22.06 21.63 21.78	23.5 23.5 22.5 22.5 22.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2
	64-QAM	8 RB	0	1745 1778.5 1711.5 1745 1778.5 1711.5 1745 1778.5 1711.5 1745	132322 132657 131987 132322 132657 131987 132322 132657 131987 132322	22.85 22.97 21.82 21.92 21.80 21.92 22.06 21.63 21.78 21.95	23.5 23.5 22.5 22.5 22.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2
	64-QAM	8 RB	0 4	1745 1778.5 1711.5 1745 1778.5 1711.5 1745 1778.5 1711.5 1745 1778.5 1745	132322 132657 131987 132322 132657 131987 132322 132657 131987 132322 132657	22.85 22.97 21.82 21.92 21.80 21.92 22.06 21.63 21.78 21.95 21.88	23.5 23.5 22.5 22.5 22.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2
	64-QAM		0 4	1745 1778.5 1711.5 1745 1778.5 1711.5 1745 1778.5 1711.5 1745	132322 132657 131987 132322 132657 131987 132322 132657 131987 132322	22.85 22.97 21.82 21.92 21.80 21.92 22.06 21.63 21.78 21.95	23.5 23.5 22.5 22.5 22.5 22.5 22.5 22.5	0-1 0-1 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2 0-2

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

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

SGS Taiwan Ltd.



Page: 73 of 144

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	Target Power + Max. Tolerance (dBm)	MPR Allowed per 3GPP(dB)
				1710.7	131979	23.65	24.5	0
			0	1745	132322	23.75	24.5	0
				1779.3	132665	23.60	24.5	0
				1710.7	131979	23.81	24.5	0
		1 RB	2	1745	132322	23.83	24.5	0
				1779.3	132665	23.68	24.5	0
				1710.7	131979	23.66	24.5	0
			5	1745	132322	23.67	24.5	0
				1779.3	132665	23.65	24.5	0
				1710.7	131979	23.80	24.5	0
	QPSK		0	1745	132322	23.75	24.5	0
				1779.3	132665	23.71	24.5	0
				1710.7	131979	23.81	24.5	0
		3 RB	2	1745	132322	23.91	24.5	0
				1779.3	132665	23.84	24.5	0
				1710.7	131979	23.70	24.5	0
			3	1745	132322	23.79	24.5	0
				1779.3	132665	23.70	24.5	0
				1710.7	131979	22.79	23.5	0-1
		6	RB	1745	132322	22.74	23.5	0-1
		_		1779.3	132665	22.67	23.5	0-1
				1710.7	131979	22.80	23.5	0-1
			0	1745	132322	22.66	23.5	0-1
			0	1779.3	132665	22.61	23.5	0-1
		1 RB		1710.7	131979	23.15	23.5	0-1
			2	1745	132322	23.21	23.5	0-1
			_	1779.3	132665	22.93	23.5	0-1
			5	1710.7	131979	22.71	23.5	0-1
				1745	132322	22.91	23.5	0-1
				1779.3		22.78	23.5	0-1
				1710.7	132665		23.5	0-1
1.4	16-QAM		0	1710.7	131979 132322	22.83	23.5	0-1
1.4	10-QAIVI			1779.3		22.85		0-1
					132665	22.77 22.91	23.5	
		3 RB	2	1710.7 1745	131979		23.5	0-1
		3 10		1779.3	132322	22.84 22.73	23.5 23.5	0-1
					132665			0-1
			_	1710.7	131979	22.66	23.5	0-1
			3	1745	132322	22.80	23.5	0-1
				1779.3	132665	22.77	23.5	0-1
			RB	1710.7	131979	21.73	22.5	0-2
		0	KD	1745	132322	21.90	22.5	0-2
				1779.3	132665	21.84	22.5	0-2
				1710.7	131979	22.74	23.5	0-1
			0	1745	132322	22.64	23.5	0-1
			<b></b>	1779.3	132665	22.58	23.5	0-1
		4.00		1710.7	131979	23.11	23.5	0-1
		1 RB	2	1745	132322	23.17	23.5	0-1
				1779.3	132665	22.89	23.5	0-1
			۱ ۔	1710.7	131979	22.70	23.5	0-1
			5	1745	132322	22.90	23.5	0-1
			ļ	1779.3	132665	22.73	23.5	0-1
			l .	1710.7	131979	22.78	23.5	0-1
64-QAM	64-QAM		0	1745	132322	22.82	23.5	0-1
				1779.3	132665	22.73	23.5	0-1
			l	1710.7	131979	22.90	23.5	0-1
		3 RB	2	1745	132322	22.83	23.5	0-1
				1779.3	132665	22.69	23.5	0-1
				1710.7	131979	22.62	23.5	0-1
			3	1745	132322	22.79	23.5	0-1
				1779.3	132665	22.75	23.5	0-1
				1710.7	131979	21.71	22.5	0-2
		6RB		1745	132322	21.86	22.5	0-2
		I		1779.3	132665	21.80	22.5	0-2

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

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

SGS Taiwan Ltd.



Page: 74 of 144

# 12. Justification of held to ear modes tested

# I. Analysis of RF air interface technologies

- a. OTT data services are outside the current definition of a managed CMRS service and are currently not required to be evaluated.
- b. Based on ANSI. C63.19-2011. An RF air interface technology of a device is exempt from testing when its average antenna input power plus its MIF is ≤17 dBm for any of its operating modes. If a device supports multiple RF air interfaces, each RF air interface shall be evaluated individually.

The MIF plus the worst case average power for all modes are investigated below to determine the testing requirements for this device.

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.

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



Page: 75 of 144

# II. Low power exemption

Air interference	Maximum power(dB)	MIF(dB)	Power + MIF (dB)	ANSI C63.19 2011 test required
GSM850	32.78	3.63	36.41	Yes
GSM1900	30.07	3.63	33.7	Yes
WCDMA B2	24.45	-27.23	-2.78	No
WCDMA B4	23.49	-27.23	-2.94	No
WCDMA B5	23.93	-27.23	-3.3	No
LTE FDD	24.5	-9.76	14.74	No
LTE TDD	24	-1.44	22.56	Yes

- # We used the predetermined MIF to evaluate the low power exemption.
- # Based on ANSI. C63.19 2011, RF emission testing for WCDMA /LTE FDD is exempted.
- # Based on ANSI. C63.19 2011, WCDMA / LTE FDD that is exempted from testing shall be rated as M4.

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

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

SGS Taiwan Ltd.

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



Page: 76 of 144

# 13. ANSI C63.19-2011 performance and categories

The measurements were performed to ensure compliance to the ANSI C63.19-2011 standard,

Category	E-Field Emissions dB(V/m) < 960MHz
M1	50-55
M2	45-50
M3	40-45
M4	<40

Category	E-Field Emissions dB(V/m) > 960MHz
M1	40-45
M2	35-40
M3	30-35
M4	<30

WD RF audio interference level categories in logarithmic units

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 77 of 144

# 14. Instruments List

Manufacturer	Device	Туре	Serial number	Date of last calibration	Date of next calibration
Schmid & Partner Engineering AG	E-Field Probe	ER3DV6	2306	Mar.20,2017	Mar.19,2018
		CD835V3	1052	Mar.20,2017	Mar.19,2018
Schmid & Partner Engineering AG	System Validation Dipole	CD1880V3	1044	Mar.20,2017	Mar.19,2018
		CD2600V3	1010	Nov,17,2016	Nov,16,2017
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	547	Mar.22,2017	Mar.21,2018
Schmid & Partner	Software	DASY52	N/A	Calibration	Calibration
Engineering AG	Software	52.8.8	IN/A	not required	not required
Agilent	Dielectric Probe Kit	85070D	US01440168	Calibration	Calibration
Agiletit	Dielectric Frode Kit	03070D	0301440100	not required	not required
Agilent	Dual-directional coupler	778D	MY52180302	Apr.13,2017	Apr.12,2018
Agilent	RF Signal Generator	N5181A	MY50144143	Mar.01,2017	Feb.28,2018
Schmid & Partner Engineering AG	Test Arch SD HAC	P01	1047	Calibration not required	Calibration not required
Agilent	Power Meter	E4417A	MY52240003	Jan.20,2017	Jan.19,2018
Agilent	Power Sensor		MY52200003	Oct.17,2016	Oct.16,2017
Agiletit	FUWEI SEIISUI	E9301H	MY52200004	Oct.17,2016	Oct.16,2017

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

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery 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.134,1

 台灣檢驗科技股份有限公司
 t (886-2)



Page: 78 of 144

Manufacturer	Device	Туре	Serial number	Date of last calibration	Date of next calibration
Anritsu	Radio Communication	MT8820C	6201061049	Apr.08.2017	Apr.07.2018
	Test			r , -	, , , , ,

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 79 of 144

# 15. Summary of Results

### E-Field

L-I ICIU							
E-Field Emission	Channel	Modulation Interference Factor	Conducted Power (dBm)	Power Drift(dB)	Audio Interference Level dB(V/m)	RESULT	Excl Blocks per 4.3.1.2.2
	128	3.63	32.75	0.07	39.41	M4	689
GSM 850	190	3.63	32.75	-0.04	35.97	M4	689
	251	3.63	32.78	0.07	35.54	M4	689
E-Field Emission	Channel	Modulation Interference Factor	Conducted Power (dBm)	Power Drift(dB)	Audio Interference Level dB(V/m)	RESULT	Excl Blocks per 4.3.1.2.2
	512	3.63	30.07	-0.16	26.95	M4	123
GSM 1900	661	3.63	30.04	-0.08	25.38	M4	123
	810	3.63	29.98	-0.13	22.93	M4	123
E-Field Emission	Channel	Modulation Interference Factor	Conducted Power (dBm)	Power Drift(dB)	Audio Interference Level dB(V/m)	RESULT	Excl Blocks per 4.3.1.2.2
	37850	-1.44	22.31	-0.19	17.33	M4	123
LTE B38	38000	-1.44	22.48	0.12	17.01	M4	123
	38150	-1.44	22.55	-0.10	17.15	M4	123
E-Field Emission	Channel	Modulation Interference Factor	Conducted Power (dBm)	Power Drift(dB)	Audio Interference Level dB(V/m)	RESULT	Excl Blocks per 4.3.1.2.2
	39750	-1.44	22.97	0.11	18.45	M4	123
	40185	-1.44	22.99	-0.17	18.48	M4	123
LTE B41	40620	-1.44	22.85	-0.13	17.88	M4	123
	41055	-1.44	22.85	0.15	17.62	M4	123
	41490	-1.44	22.28	0.07	17.43	M4	123

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

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

f (886-2) 2298-0488

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 80 of 144

# 16. Measurement Data

Date: 2017/9/15

### HAC RF-EMISSION\_GSM 850\_CH 128

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 824.2

MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

#### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

 $\mathsf{mm}$ 

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 40.04 V/m; Power Drift = 0.07 dB

Applied MIF = 3.63 dB

RF audio interference level = 34.91 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 <b>M4</b>	Grid 3 <b>M4</b>
32.51 dBV/m	34.69 dBV/m	34.7 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
32.69 dBV/m	34.91 dBV/m	34.94 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
32.97 dBV/m	35.11 dBV/m	35.13 dBV/m

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

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

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

SGS Taiwan Ltd.

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



Page: 81 of 144

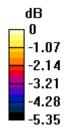
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 35.13 dBV/m

E Category: M4

Location: -9.5, 25, 8.7 mm





0 dB = 57.07 V/m = 35.13 dBV/m

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

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

SGS Taiwan Ltd.



Page: 82 of 144

Date: 2017/9/15

## HAC RF-EMISSION\_GSM 850\_CH 190

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 836.6

MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### DASY5 Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Device E-Field measurement /E Scan: Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 45.48 V/m; Power Drift = -0.04 dB

Applied MIF = 3.63 dB

RF audio interference level = 35.97 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 <b>M4</b>	Grid 3 <b>M4</b>
33.38 dBV/m	35.81 dBV/m	35.83 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
33.52 dBV/m	35.97 dBV/m	36.02 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
33.84 dBV/m	36.16 dBV/m	36.19 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 83 of 144

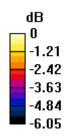
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

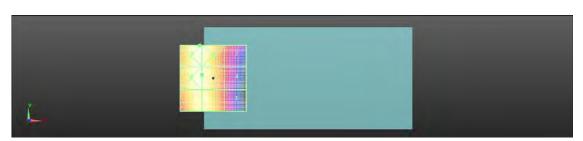
#### **Cursor:**

Total = 36.19 dBV/m

E Category: M4

Location: -10, 25, 8.7 mm





0 dB = 64.52 V/m = 36.19 dBV/m

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

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

SGS Taiwan Ltd.



Page: 84 of 144

Date: 2017/9/15

## HAC RF-EMISSION\_GSM 850\_CH 251

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 848.6

MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 41.82 V/m; Power Drift = 0.07 dB

Applied MIF = 3.63 dB

RF audio interference level = 35.54 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 <b>M4</b>	Grid 3 <b>M4</b>
32.57 dBV/m	35.34 dBV/m	35.4 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
32.75 dBV/m	35.54 dBV/m	35.65 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
33.11 dBV/m	35.76 dBV/m	35.82 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.

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



Page: 85 of 144

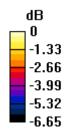
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 35.82 dBV/m

E Category: M4

Location: -10.5, 25, 8.7 mm





0 dB = 61.82 V/m = 35.82 dBV/m

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

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

SGS Taiwan Ltd.



Page: 86 of 144

Date: 2017/9/15

## HAC RF-EMISSION GSM 1900 CH 512

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1850.2

MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.293 V/m; Power Drift = -0.16 dB

Applied MIF = 3.63 dB

RF audio interference level = 26.95 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 M4	Grid 3 M4
26.91 dBV/m	28.3 dBV/m	27.98 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
22.51 dBV/m	21.85 dBV/m	22.95 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
22.77 dBV/m	26.81 dBV/m	26.95 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

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

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



Page: 87 of 144

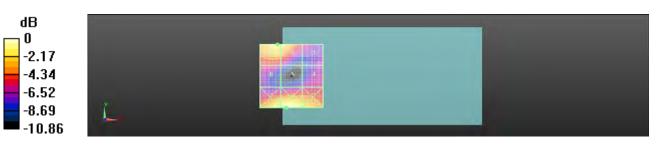
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 28.30 dBV/m

E Category: M4

Location: -4, -25, 8.7 mm



0 dB = 26.00 V/m = 28.30 dBV/m

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

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

SGS Taiwan Ltd.



Page: 88 of 144

Date: 2017/9/15

## HAC RF-EMISSION\_GSM 1900\_CH 661

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880

MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### DASY5 Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 4.564 V/m; Power Drift = -0.08 dB

Applied MIF = 3.63 dB

RF audio interference level = 25.38 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 M4	Grid 2 M4	Grid 3 M4
24.88 dBV/m	26.64 dBV/m	26.5 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
22.1 dBV/m	21.36 dBV/m	21.01 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
21.72 dBV/m	25.17 dBV/m	25.38 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.

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



Page: 89 of 144

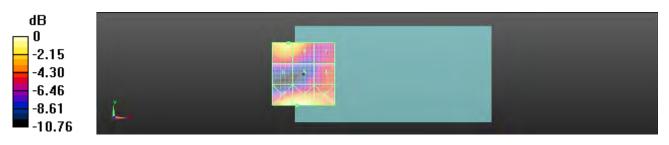
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 26.64 dBV/m

E Category: M4

Location: -5, -25, 8.7 mm



0 dB = 21.48 V/m = 26.64 dBV/m

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

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

SGS Taiwan Ltd.



Page: 90 of 144

Date: 2017/9/15

## HAC RF-EMISSION GSM 1900 CH 810

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1909.8

MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 4.963 V/m; Power Drift = -0.13 dB

Applied MIF = 3.63 dB

RF audio interference level = 22.93 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 M4	Grid 3 M4
22.72 dBV/m	24.47 dBV/m	24.34 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
21.94 dBV/m	20.28 dBV/m	18.32 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
21.12 dBV/m	22.67 dBV/m	22.93 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 91 of 144

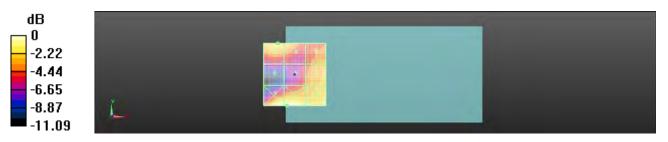
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 24.47 dBV/m

E Category: M4

Location: -6, -25, 8.7 mm



0 dB = 16.73 V/m = 24.47 dBV/m

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

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

SGS Taiwan Ltd.



Page: 92 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 38 (20M)\_CH 37850\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2580 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### DASY5 Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Device E-Field measurement /E Scan: Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.668 V/m; Power Drift = -0.19 dB

Applied MIF = -1.44 dB

RF audio interference level = 17.33 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 M4	Grid 3 M4
20.52 dBV/m	20.43 dBV/m	20.77 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
17.33 dBV/m	16.87 dBV/m	17.12 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
15.77 dBV/m	16.02 dBV/m	16.69 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 93 of 144

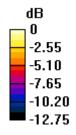
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 20.77 dBV/m

E Category: M4

Location: -12, -25, 8.7 mm





0 dB = 10.92 V/m = 20.77 dBV/m

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

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

SGS Taiwan Ltd.



Page: 94 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 38 (20M)\_CH 38000\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2595 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.143 V/m; Power Drift = 0.12 dB

Applied MIF = -1.44 dB

RF audio interference level = 17.01 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 M4	Grid 3 M4
20.36 dBV/m	19.91 dBV/m	20.25 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
17.01 dBV/m	16.27 dBV/m	16.6 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
15.67 dBV/m	15.58 dBV/m	16.05 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

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

SGS Taiwan Ltd.



Page: 95 of 144

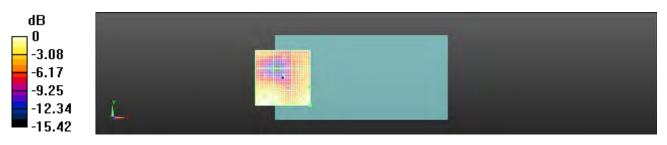
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 20.36 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



0 dB = 10.42 V/m = 20.36 dBV/m

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

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

SGS Taiwan Ltd.



Page: 96 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 38 (20M)\_CH 38150\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2610 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.756 V/m; Power Drift = -0.10 dB

Applied MIF = -1.44 dB

RF audio interference level = 17.15 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 M4	Grid 2 M4	Grid 3 M4
20.03 dBV/m	19.32 dBV/m	19.72 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
16.67 dBV/m	16.56 dBV/m	17.15 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
15.01 dBV/m	14.51 dBV/m	15.38 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

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



Page: 97 of 144

Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 20.03 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



0 dB = 10.03 V/m = 20.03 dBV/m

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

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

SGS Taiwan Ltd.



Page: 98 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 41 (20M)\_CH 39750\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2506 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 6.017 V/m; Power Drift = 0.11 dB

Applied MIF = -1.44 dB

RF audio interference level = 18.45 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 M4	Grid 2 <b>M4</b>	Grid 3 M4
21.16 dBV/m	21.22 dBV/m	21.55 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
17.65 dBV/m	17.8 dBV/m	18.45 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
16.01 dBV/m	16.42 dBV/m	17.16 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

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

SGS Taiwan Ltd.

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



Page: 99 of 144

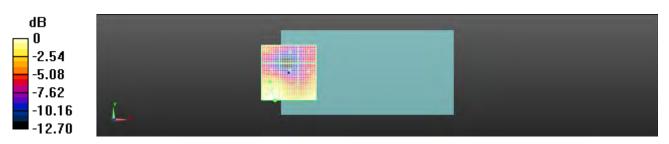
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 21.55 dBV/m

E Category: M4

Location: -12.5, -25, 8.7 mm



0 dB = 11.96 V/m = 21.55 dBV/m

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

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

SGS Taiwan Ltd.



Page: 100 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 41 (20M)\_CH 40185\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2549.5 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.396 V/m; Power Drift = -0.17 dB

Applied MIF = -1.44 dB

RF audio interference level = 18.48 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 M4	Grid 3 M4
21.39 dBV/m	21.9 dBV/m	22.1 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
18.48 dBV/m	17.25 dBV/m	17.68 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
17.31 dBV/m	17.33 dBV/m	17.79 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

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

SGS Taiwan Ltd.

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



Page: 101 of 144

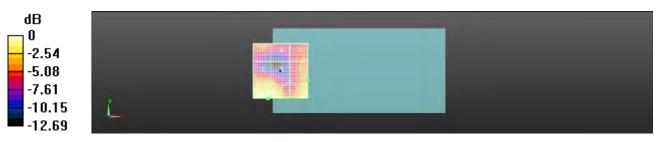
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 22.10 dBV/m

E Category: M4

Location: -11.5, -25, 8.7 mm



0 dB = 12.73 V/m = 22.10 dBV/m

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

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

SGS Taiwan Ltd.



Page: 102 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 41 (20M)\_CH 40620\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2593 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 6.312 V/m; Power Drift = -0.13 dB

Applied MIF = -1.44 dB

RF audio interference level = 17.88 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 M4	Grid 2 M4	Grid 3 M4
21.29 dBV/m	20.92 dBV/m	21.32 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
17.85 dBV/m	17.51 dBV/m	17.88 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
16.31 dBV/m	16.24 dBV/m	16.97 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 103 of 144

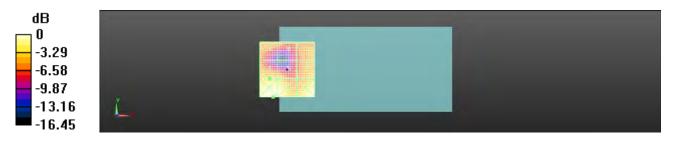
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 21.32 dBV/m

E Category: M4

Location: -13, -25, 8.7 mm



0 dB = 11.64 V/m = 21.32 dBV/m

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

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

SGS Taiwan Ltd.



Page: 104 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 41 (20M)\_CH 41055\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2636.5 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Device E-Field measurement /E Scan:** Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.160 V/m; Power Drift = 0.15 dB

Applied MIF = -1.44 dB

RF audio interference level = 17.62 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 M4	Grid 3 M4
20.09 dBV/m	20.12 dBV/m	20.59 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
16.55 dBV/m	17.01 dBV/m	17.62 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
15.45 dBV/m	15.87 dBV/m	16.13 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

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

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



Page: 105 of 144

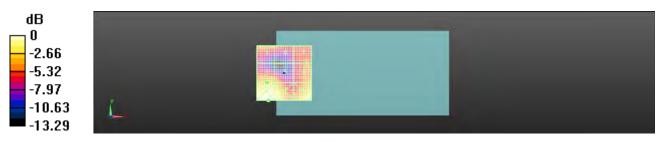
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 20.59 dBV/m

E Category: M4

Location: -14.5, -25, 8.7 mm



0 dB = 10.71 V/m = 20.59 dBV/m

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

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

SGS Taiwan Ltd.



Page: 106 of 144

Date: 2017/9/29

# HAC-RF-Emission\_LTE Band 41 (20M)\_CH 41490\_16QAM\_1-0

Communication System: UID 10173 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM);

Frequency: 2680 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

### **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Device E-Field measurement /E Scan: Interpolated grid: dx=0.5000 mm, dy=0.5000

mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 4.436 V/m; Power Drift = 0.07 dB

Applied MIF = -1.44 dB

RF audio interference level = 17.43 dBV/m

**Emission category: M4** 

MIF scaled E-field

Grid 1 <b>M4</b>	Grid 2 M4	Grid 3 M4
19.58 dBV/m	19.93 dBV/m	20.42 dBV/m
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>
16.23 dBV/m	16.8 dBV/m	17.43 dBV/m
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
14.92 dBV/m	14.37 dBV/m	14.71 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.



Page: 107 of 144

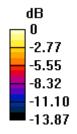
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

#### **Cursor:**

Total = 20.42 dBV/m

E Category: M4

Location: -14.5, -25, 8.7 mm





0 dB = 10.49 V/m = 20.42 dBV/m

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

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

SGS Taiwan Ltd.



Page: 108 of 144

# 17. System Verification

Date: 2017/9/15

**Dipole CD835 SN:1052** 

Communication System: CW; Frequency: 835 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

**DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Dipole E-Field measurement:** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 107.4 V/m; Power Drift = 0.00 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 108.9 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 <b>M4</b>	Grid 2 <b>M4</b>	Grid 3 <b>M4</b>
103.7 V/m	108.9 V/m	102.2 V/m
Grid 4 <b>M4</b>	Grid 5 M4	Grid 6 <b>M4</b>
62.44 V/m	62.63 V/m	60.59 V/m
Grid 7 <b>M4</b>	Grid 8 M4	Grid 9 <b>M4</b>
110.4 V/m	110.5 V/m	110.0 V/m

#### **Cursor:**

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

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

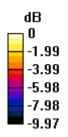
SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

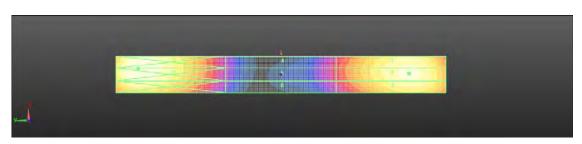


Report No.: E5/2017/80025 Page: 109 of 144

Total = 110.5 V/m E Category: M4

Location: 3, 78, 9.7 mm





0 dB = 110.5 V/m = 40.86 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms\_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined

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

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



Page: 110 of 144

Date: 2017/9/15

# Dipole CD1880\_SN:1044

Communication System: CW; Frequency: 1880 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

# **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

• Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Dipole E-Field measurement:** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 159.3 V/m; Power Drift = -0.02 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 89.94 V/m

Near-field category: M3 (AWF 0 dB)

PMF scaled E-field

Grid 1 M3	Grid 2 M3	Grid 3 M3
90.06 V/m	91.43 V/m	90.04 V/m
Grid 4 <b>M3</b>	Grid 5 M3	Grid 6 M3
69.98 V/m	70.52 V/m	69.25 V/m
Grid 7 <b>M3</b>	Grid 8 <b>M3</b>	Grid 9 <b>M3</b>
88.80 V/m	89.94 V/m	88.25 V/m

### **Cursor:**

Total = 91.43 V/m E Category: M3

Location: 0, -32.5, 9.7 mm

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

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

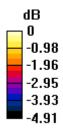
prosecuted to the fullest extent of the law.

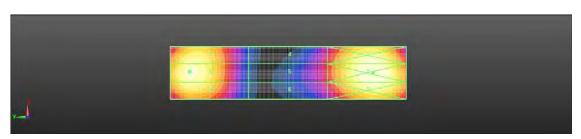
SGS Taiwan Ltd.

台灣檢驗科技股份有限公司



Page: 111 of 144





0 dB = 91.43 V/m = 39.22 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 112 of 144

Date: 2017/9/29

# **Dipole CD2600\_SN:1010**

Communication System: CW; Frequency: 2600 MHz

Medium parameters used:  $\sigma = 0$  S/m,  $\varepsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

# **DASY5** Configuration:

Probe: ER3DV6 - SN2306; ConvF(1, 1, 1); Calibrated: 2017/3/20;

Sensor-Surface: (Fix Surface)

• Electronics: DAE4 Sn547; Calibrated: 2017/3/22

Phantom: HAC Test Arch; ;

DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Dipole E-Field measurement:** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 73.29 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 82.14 V/m

Near-field category: M3 (AWF 0 dB)

PMF scaled E-field

Grid 1 M3	Grid 2 M3	Grid 3 M3
81.69 V/m	87.83 V/m	87.86 V/m
Grid 4 M3	Grid 5 M3	Grid 6 M3
77.98 V/m	82.14 V/m	82.14 V/m
Grid 7 <b>M3</b>	Grid 8 <b>M3</b>	Grid 9 <b>M3</b>
75.99 V/m	80.22 V/m	80.30 V/m

### **Cursor:**

Total = 87.86 V/m E Category: M3

Location: -4, -23, 9.7 mm

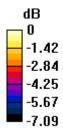
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

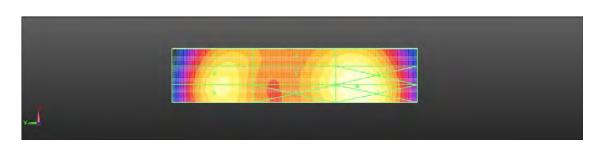
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 113 of 144





0 dB = 87.86 V/m = 38.88 dBV/m

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.

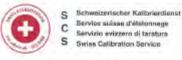


Page: 114 of 144

# 18. DAE & Probe Calibration Certificate

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Accreditation No.: SCS 0108

According by the Swise Accordination Service (SAS).

The Swise Accordination Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates.

CALIBRATION	CERTIFICATE		
Object	DAE4 - SD 000 D04 BM - SN: 547		
Calibration procedure(s)	QA CAL-06.v29 Calibration proced	lure for the data acquisition electron	onics (DAE)
Calibration date	March 22, 2017		
The incesurements and the unco	ortainties with confidence pro	nol standards, which realize the physical units shability are given on the following pages and a facility, environment temperature (22 ± 3°C a	are part of the conflicate.
	10.4	Cal Date (Certificate No.)	Scheduled Calibration
Primary Standards	1D # SN: 0810278	Cal Date (Certificate No.) 09-Sep-16 (No:19065)	Scheduled Calibration Sep-17
Primary Standards Keithley Multimeter Type 2001	SN: 0810278	09-Sep-16 (No:19065)	Sep-17
Primary Standards	SN: 0810278 JD 4 SE UWS 053 AA 1001		
Primary Standards Keithley Multimeter Type 2001 Secondary Standards Auto DAE Calibration Unit	SN: 0810278  JD 4  SE UWS 053 AA 1001 SE UMS 096 AA 1002  Name	09-Sep-16 (Na:19065) Check Date (in house) 05-Jan-17 (in house check) 95-Jan-17 (in house check)	Sep-17 Scheduled Check In house check: Jan-18
Primary Standards Keithley Multimeter Type 2001 Secondary Standards Auto DAE Calibration Unit	SN: 0810278  JD A  SE UWS 053 AA 1001  SE UMS 006 AA 1002	09-Sep-16 (No:19065) Check Date (in house) 05-Jan-17 (in house check) 05-Jan-17 (in house check)	Sep-17 Scheduled Check In house check: Jan-18 In house check: Jan-18
Primary Standards Keithley Multimeter Type 2001 Secondary Standards Auto DAE Calibration Unit Calibrator Box V2 I	SN: 0810278  JD 4  SE UWS 053 AA 1001 SE UMS 096 AA 1002  Name	09-Sep-16 (Na:19065) Check Date (in house) 05-Jan-17 (in house check) 95-Jan-17 (in house check)	Sep-17 Scheduled Check In house check: Jan-18 In house check: Jan-18

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

Page 1 of 5

SGS Taiwan Ltd.

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

Certificate No: DAE4-547 Mar17



Page: 115 of 144

Calibration Laboratory of Schmid & Partner Engineering AG





S Service suices d'éstionnage C Servizio svizzeno di terasme **Buiss Calibration Service** 

According by the Swiss According to Service (SAS) The Swiss Accorditation Service is one of the signaturies to the EA Mullitateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

#### Glossary

DAF

data acquisition electronics

information used in DASY system to align probe sensor X to the robot

coordinate system.

#### Methods Applied and Interpretation of Parameters

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- · Connector angle: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
  - DC Voltage Measurement Linearity: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
  - Common mode sensitivity: Influence of a positive or negative common mode voltage on the differential measurement.
  - Channel separation: Influence of a voltage on the neighbor channels not subject to an
  - AD Converter Values with inputs shorted. Values on the internal AD converter corresponding to zero input voltage
  - Input Offset Measurement, Output voltage and statistical results over a large number of zero voltage measurements.
  - Input Offset Current: Typical value for information; Maximum channel input offset current, not considering the input resistance.
  - Input resistance: Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
  - Low Battery Alarm Voltage: Typical value for information, Below this voltage, a battery alarm signal is generated.
  - Power consumption: Typical value for information. Supply currents in various operating modes.

Certificate No: DAE4-547\_Mar 17

Page 2 of E

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

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

SGS Taiwan Ltd.



Page: 116 of 144

#### DC Voltage Measurement

A/D - Converter Resolution nominal High Range: 1LSB = 6.1µV. full range = -100...+300 mV Low Range: ILSB = BinV. full range = -1......+3mV DASY measurement parameters. Auto Zero Time: 3 sec. Measuring time: 3 sec.

Calibration Factors	X	Α.	Z
High Range	403.189 / 0.02% (k=2)	403.093 ± 0.02% (k=2)	402.739 ± 0.02% (k=2)
Low Range	3.95348 ± 1.50% (k=2)	3,90456 ± 1,50% (K=2)	3.96243 ± 1.50% (k=2)

#### Connector Angle

Connector Angle to be used in DASY system	91.0 °± 1 "

Circlificate No: DAE4-647, Mar17

Page 3 of 5

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

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

SGS Taiwan Ltd.



Page: 117 of 144

## Appendix (Additional assessments outside the scope of SCS0108)

## 1. DC Voltage Linearity

High Range	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	200031.23	0,59	0.00
Channel X + Input	20005,44	2.04	0.01
Channel X - Input	-20000.97	4,91	-0.02
Channel Y + Input	200029.80	-1,03	-0.00
Channel Y + Input	20000.30	-3.03	-0.02
Channel Y - Input	-20007,73	-1.72	0.01
Channel Z + Input	200030,21	-0.96	-0.00
Channel Z 4 Input	20003.13	-0.21	-0.00
Channel Z - Input	-20005.14	0.81	-0.00

Low Range	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	2000.02	-0.08	-0.00
Channel X + Input	200 18	0.36	0.18
Channel X - Input	-200.†B	0.00	-0.00
Channel Y + Input	2000,10	0.06	0.00
Channel Y + Input	199.43	-0.40	-0.20
Channel Y - Input	-200.77	-0.70	0.35
Channel Z + Input	2000,19	0.28	0.01
Channel Z + Input	198.82	-1,00	-0.50
Channel Z - Input	-201,46	-1,37	0.68

#### 2. Common mode sensitivity

ASY measurement parameters. Auto Zero Time: 3 aec; Measuring time: 3 aec

	Common mode Input Voltage (mV)	High Range Average Reading (µV)	Low Range Average Reading (µV)
Channel X	200	-2.09	-5.00
	-200	6.80	4,50
Channel V	200	-0.67	4.21
	-200	0,37	-0.41
Channel Z	200	5.07	4.93
	- 200	-7,67	-8.12

#### 3. Channel separation

DASY measurement parameters: Auto Zero Time, 3 sec. Measuring time; 3 sec.

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (µV)
Channel X	.200	-	2.65	-2.08
Channel Y	200	10,56	-	3.60
Channel Z	200	4.55	7.85	100

Certificate No: DAE4-547\_Mor17

Page 4 of S

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

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

SGS Taiwan Ltd.



Page: 118 of 144

### 4. AD-Converter Values with inputs shorted

	High Range (LSB)	Low Range (LSB)
Channel X	16364	15364
Channel Y	16476	16801
Channel Z	16077	16468

#### 5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 soc; Measuring time: 3 sec

	Average (µV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (µV)
Channel X	-0.53	-1.14	0.26	0.31
Channel Y	-1.03	-2.43	-0.21	0.32
Channel Z	-1.56	-2.31	-0.62	0,35

#### 6. Input Offset Current

Nominal Input circuitry offset current on all channels: <251A

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	\$00	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7,6

9. Power Consumption (Typical values for inform

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	914
Supply (- Voc)	-0.01	-B	-9

Certificate No: DAE4-547\_Mar1

Page 5 of 5

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

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

SGS Taiwan Ltd.



Page: 119 of 144

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

SGS-TW (Auden)

Certificate No: ER3-2306\_Nov16

### CALIBRATION CERTIFICATE

ER3DV6 - SN:2306 Object

QA CAL-02.v8, QA CAL-25.v6 Calibration procedure(s)

Calibration procedure for E-field probes optimized for close near field

evaluations in air

Calibration date: November 23, 2016

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (St). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the confidence

All calibrations have been conducted in the closed laboratory facility, environment temperature (22 ± 3)°C and humidity < 70%,

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	(D)	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	06-Apr-16 (No. 217-02288/02289)	Apr-17
Power sensor NRP-Z91	SN: 103244	06-Apr-16 (No. 217-02288)	Apr-17
Power sensor NRP-Z91	SN. 103245	06-Apr-16 (No. 217-02289)	Apr-17
Reference 20 dB Altenuator	SN: 55277 (20x)	05-Apr-16 (No. 217-02293)	Apr-17
Reference Probe ER3DV6	SN: 2328	14-Oct-16 (No. ER3-2328_Oct16)	Oct-17
DAE4	SN: 789	11-Nov-15 (No. DAE4-789_Nov16)	Nov-17
Secondary Standards	ID.	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41283874	05-Apr-16 (in house check Jun-16)	In house check; Jun-18
Power sensor E4412A	SN MY41498087	06-Apr-16 (in house check Jun-16)	In house check: Jun 18
Power sensor E4412A	SN: 000110210	05-Apr-16 (in house check Jun-16)	In house check: Jun-18
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-15)	In house check: Jun-18
Notwerk Analyzer HP 8753E	SN: US37300686	18 Oct 01 (in house check Oxt-16)	In house check: Oct-17

Michael Weber Laboratory Technician Calibrated by: Approved by Kalja Pokovic Ceshnical Manage Issued: November 25, 2016 This calibration certificate shall not be reproduced except in full without written approval of the laboratory

Certificate No: ER3-2306\_Nov16

Page 1 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.

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

www.tw.sas.com



Page: 120 of 144

#### Calibration Laboratory of

Schmid & Partner Engineering AG Zaughausstrasse 43, 8004 Zunch, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage C Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossarv:

NORMx,y,z sensitivity in free space DCP diode compression point

CF crest factor (1/duty\_cycle) of the RF signal A. B. C. D modulation dependent linearization parameters

Polarization w φ rotation around probe axis

Polarization 9 B rotation around an axis that is in the plane normal to probe axis (at measurement center)

i.e., & = 0 is normal to probe axis

Connector Angle Information used in DASY system to align probe sensor X to the robot coordinate system

#### Calibration is Performed According to the Following Standards:

iEEE Std 1309-2005. "IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", December 2005

b) CTIA Test Plan for Hearing Aid Compatibility, Rev 3.0, November 2013

#### Methods Applied and Interpretation of Parameters:

- NORMX, y, z. Assessed for E-field polarization  $\theta = 0$  for XY sensors and  $\theta = 90$  for Z sensor (f s 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide).
- NORM(I)x,y,z = NORMx,y,z \* Irequency\_response (see Frequency Response Chart).
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z; A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode
- Spherical isotropy (3D deviation from isotropy): in a locally homogeneous field realized using an open wavequide setup.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tin (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Certificate No ER3-2306\_Nov16

Page 2 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms\_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.



Page: 121 of 144

ER3DV6 - SN:2306

November 23, 2016

# Probe ER3DV6

SN:2306

Manufactured: Calibrated:

December 17, 2002 November 23, 2016

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system!)

Certificate No: ER3-2306\_Nov16

Page 3 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms\_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 122 of 144

FR3DV0 - SN:2306

November 23, 2016

# DASY/EASY - Parameters of Probe: ER3DV6 - SN:2306

#### **Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (µV/(V/m) <sup>2</sup> )	1.05	1.08	1.19	± 10.1 %
DCP (mV) <sup>8</sup>	102.1	101.9	104.6	

UID	Communication System Name		A dB	B dB√μV	C	D dB	WR mV	Unc* (k=2)
0	CW	X	0.0	0.0	1.0	0.00	153.2	±3.3 %
		Y	0.0	0.0	5.0		166.4	11-7
		Z	0.0	0.0	1:0	1	156.4	100
10010- CAA	SAR Validation (Square, 100ms, 10ms)	×	0.33	.50,6	4.6	10.00	36.4	±2.7 %
		Y	0.34	49.4	4.6		37.9	
	La Plance	2	0.42	50.7	4.4	1000	36.9	100 V
10021- DAC	GSM-FDD (TDMA, GMSK)	×	2.39	69.1	15.0	9.39	131.5	±2.5 %
		Y	3.18	76.0	19.5		139.0	1.
		2	2.56	68.9	15.1	-	130.6	4.0
10295- AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	5.49	70.5	26.8	12.49	80.8	#1.4%
		Y	5.73	72.3	28.6		87.7	
-		Z	6.01	72.1	27.0		84.7	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No. ER3-2306 Nov16

Page 4 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms\_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery 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.

<sup>\*</sup> Numerical linearization parameter; uncertainty not required.

\*\*Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the equate of the field value.

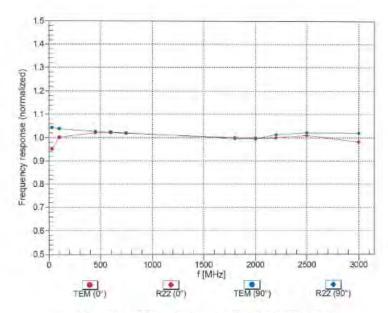


Page: 123 of 144

ER3DV6 - SN:2306

November 23, 2016.

# Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: ER3-2306\_Nov16

Page 5 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms\_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

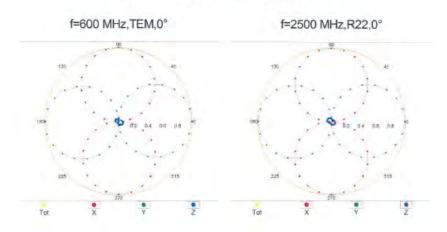
SGS Taiwan Ltd.



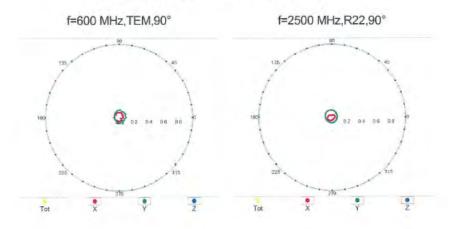
Page: 124 of 144

ER3DV6 - SN:2306 November 23, 2016

# Receiving Pattern ( $\phi$ ), $9 = 0^{\circ}$



# Receiving Pattern (\$\phi\$), \$\text{9} = 90°



Certificate No: ER3-2306\_Nov16

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

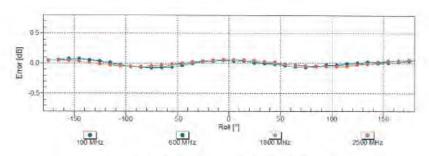


Page: 125 of 144

ER3DV6 - SN:2306

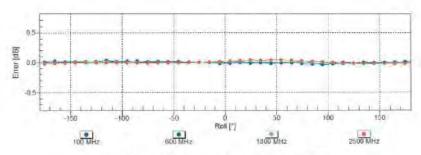
November 23, 2016

# Receiving Pattern (6), 9 = 0°



Uncertainty of Axial Isotropy Assessment: ± 0,5% (k=2)

# Receiving Pattern (\$\phi\$), \$\theta = 90°



Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Certificate No: ER3-2306\_Nov16

Page 7 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_end\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

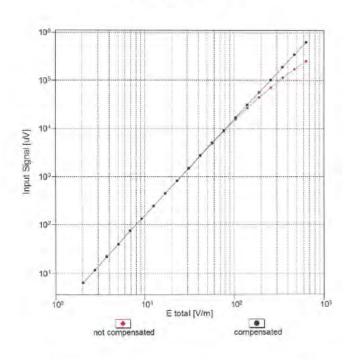


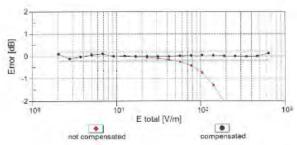
Page: 126 of 144

ER3DV6 - SN:2306

November 23, 2016

# Dynamic Range f(E-field) (TEM cell , f = 900 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Certificate No: ER3-2306\_Nov16

Page 8 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be

f (886-2) 2298-0488

prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

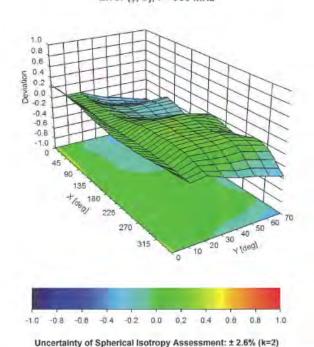


Page: 127 of 144

ER3DV6 - SN:2306

November 23, 2016

### Deviation from Isotropy in Air Error (ø, ð), f = 900 MHz



Certificate No: ER3-2306\_Nov16

Page 9 of 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 <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 128 of 144

ER3DV6 - SN.2306

November 23, 2016

## DASY/EASY - Parameters of Probe: ER3DV6 - SN:2306

#### Other Probe Parameters

Sensor Arrangement	Rectangular
Connector Angle (")	134,7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Trp Length	10 mm
Tip Diameter	8 mm
Probe Tip to Sensor X Calibration Point	2.5 mm
Probe Tip to Sensor Y Calibration Point	2.5 mm
Probe Tip to Sensor Z Calibration Point	2.5 mm

Certificate No. ER3-2306\_Nov16

Page 10 of 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 <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 129 of 144

# 19. Uncertainty Budget

Error Description	Uncert.	Prob. Dist.	Div.	(c <sub>i</sub> ) E	$\begin{pmatrix} c_i \end{pmatrix}$	Std. Unc. E	Std. Unc
Measurement System							
Probe Calibration	±5,1%	N	1	1	1	±5.1%	±5.1 %
Axial Isotropy	$\pm 4.7\%$	R	$\sqrt{3}$	1	1	±2.7%	$\pm 2.7\%$
Sensor Displacement	±16.5 %	R	$\sqrt{3}$	1	0.145	±9.5 %	±1.4%
Boundary Effects	±2.4%	R	√3	1 -	1	±1.4%	±1.4%
Phantom Boundary Effect	±7.2%	R	$\sqrt{3}$	1	0	±4.1 %	±0.0%
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%
Scaling with PMR calibration	±10.0%	R	$\sqrt{3}$	1	1	±5.8%	±5.8%
System Detection Limit	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6 %
Readout Electronics	±0.3%	N	1	1.	1	±0.3%	±0.3 %
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5 %
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%
RF Ambient Conditions	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%
RF Reflections	±12.0%	R	$\sqrt{3}$	1	1	±6.9%	±6.9 %
Probe Positioner	±1.2%	R	$\sqrt{3}$	1	0.67	±0.7%	±0.5 %
Probe Positioning	±4.7%	R	√3	1	0.67	±2.7%	±1.8%
Extrap. and Interpolation	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%
Test Sample Related							
Device Positioning Vertical	±4.7%	R	$\sqrt{3}$	1	0.67	±2.7%	±1.8%
Device Positioning Lateral	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%
Device Holder and Phantom	±2.4%	R	$\sqrt{3}$	1	1	±1.4%	±1.4%
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9 %
Phantom and Setup Related			155				
Phantom Thickness	±2.4%	R	$\sqrt{3}$	1	0.67	±1.4%	$\pm 0.9 \%$
Combined Std. Uncertainty				14.5		±16,3 %	±12.3 %
Expanded Std. Uncertainty o	n Power		1	1111		±32.6 %	±24.6 %

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

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



Page: 130 of 144

# 20. System Validation from Original Equipment Supplier



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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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



Page: 131 of 144

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasso 43, 8004 Zurich, Switzerland





Schweizenscher Kalibierdiener Service suisse d'étalonnage Servizio svizzeno di taratusa Swiss Calibration Service

Accreditation No.: SCS 0108

Accreditus by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA.
Muritational Agreement for the reoperation of calibration pertificates

#### References

H ANSI-063.19-2011

American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

#### Mathods Applied and Interpretation of Peremeters:

- Coordinate System: y-axis is in the direction of the dipole arms: z-axis is from the basis of the america
  (mounted on the table) fowards its feed point between the two dipole arms: x-axis is normal to the other axes.
   In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a distance of 15 mm above the top metal edge of the dipole arms.
- Measurement Conditions: Further details are available from the hardcopies at the end of the certificate. All
  figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connected
  is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a
  directional couplar. While the dipole under test is connected, the forward power is adjusted to the same level.
- Aritema Positioning: The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded norm with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move electrically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is vertiled. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (upper by the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- Feed Point Impedance and Return Lose: These parameters are measured using a HP 8753E Vector Network
  Analyzer. The impedance is appoilted at the SMA conhector of the dipole. The influence of reflections was
  eliminating by applying the averaging function white moving the dipole in the air, at least 70cm away from any
  obsticeter.
- E-fleta distribution: E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the amenia feed point. In accordance with (1), the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 6) is determined to compensation for any tion-paralletity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: CD835V3-1052\_Mar17

Page 2 of 5

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 132 of 144

#### Measurement Conditions

DASY system configuration, as far as not given on page 1

DASY Version	DASY5	V52.8.8
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, dy = 5 mm	
Frequency	835 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

#### Maximum Field values at 835 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	109.4 V/m = 40.78 dBV/m
Maximum measured above low end	100 mW input power	107.9 V/m = 40.68 dBV/m
Averaged maximum above arm	100 mW input power	108.7 V/m ± 12.8 % (k=2)

#### Appendix (Additional assessments outside the scope of SCS 0108)

#### Antenna Parameters

Frequency	Return Loss	Impedance
800 MHz	15.6 dB	41.2 Ω - 12.5 jΩ
835 MHz	28.6 dB	51.0 Ω + 3.6 jΩ
900 MHz	17.1 dB	52.8 Ω - 14.3 jΩ
950 MHz	20.3 dB	49.8 Ω + 9.7 jΩ
960 MHz	15.0 dB	60.8 Ω + 16.8 jΩ

### 3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

Certificate No: CD835V3-1052 Mar17

Page 3 of 5

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

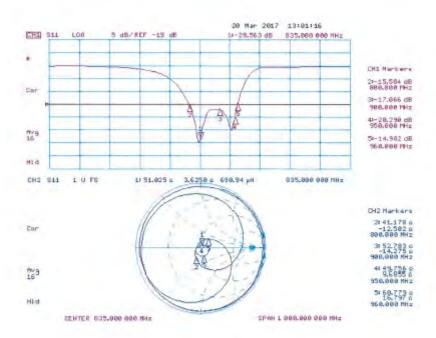
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions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

SGS Taiwan Ltd.



Page: 133 of 144

#### Impedance Measurement Plot



Certificate No: CD835V3-1052\_Mar17

Page 4 of 5

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 134 of 144

Date: 17.03.2017

#### **DASY5 E-field Result**

Test Laboratory; SPEAG Lab2

DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: CD835V3 - SN: 1052

Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used:  $\sigma = 0.5/m$ ,  $\epsilon_r = 1$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63:19-2011)

#### DASY52 Configuration:

- Probe: ER3DV6 SN2336; ConvF(1, 1, 1); Calibrated: 30.12.2016;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 02.09.2016
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

#### Dipole E-Field measurement @ 835MHz/E-Scan - 835MHz d=15mm/Hearing Aid Compatibility Test (41x361x1):

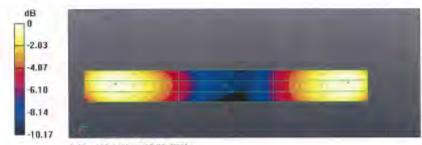
Interpolated grid: dx=0.5000 mm, dy=0.5000 mm Device Reference Point: 0, 0, -6.3 mm Reference Value = 108.8 V/m; Power Drift = -0.01 dB

Applied MIF = 0.00 dB RF audio interference level = 40.78 dBV/m

Emission category: M3

#### MIF scaled E-field

Grid 1 M3	Grid 2 M3	Grid 3 M3
40,35 dBV/m	40.66 dBV/m	40.6 dBV/m
	Grid 5 M4 35.98 dBV/m	Grid 6 M4 35.9 dBV/m
Grid 7 M3 40.46 dBV/m	Grid 8 M3 40.78 dBV/m	Grid 9 M3 40.74 dBV/m



0 dB = 109.4 V/m = 40.78 dBV/m

Certificate No: CD835V3-1052\_Mar17

Page 5 of 5

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

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

SGS Taiwan Ltd.

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

www.tw.sas.com



Page: 135 of 144

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kallbrierdienst Service suisse d'étalonnage Servicio svizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multiliateral Agreement for the recognition of calibration certificates

Climi SGS-TW (Auden)

Accreditation No.: SCS 0108

Certificate No: CD1880V3-1044\_Mar17

CALIBRATION C	ERTIFICATE		
Object.	CD1880V3 - SN:	1044	
Carbiedon procedure(e)	QA CAL-20,v6 Callbration proce	dure for dipoles in air	
Calibration date:	March 20, 2017		
This calibration cartificate document	ents the tradeability to nati	onal standards, which realize the physical unit	s of measulements (5I).
	Prince and a second section of	obability are given on the following pages and	a to the second second second
All calibrations have been conduc	ped in the closed laborator	y lacility: environment temperature (22 $\pm$ 3)°C	and humidity = 70%
National designation of the	T consequences		
Salibration Equipment used [M&]	E critical for calibration)		
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power mater NRP	SN: 104778	05-Apr-16 (No. 217-02288/02289)	Apr-17
ower sensor NRP-Z91	SN: 103244	06-Apr-16 (No. 217-02288)	Apr-17
Power sensor NRP-Z91	SN: 183245	05-Apr-16 (No. 217-02289)	Apr-17
leference 20 dB Attenuator	SNI 5058 (20k)	05-Apr-18 (No. 217-02282)	Apr-17
ype-N mismatch combination	SN: 5047.2 / 06327	05-Apr-16 (No. 217-02285)	Apr-17
Probe ERSDV6	SN: 2336	30-Dec-16 (No. ER3-2336_Dec16)	Dec-17
Probe H3DV6	SN: 6065	30-Dec-16 (No. H3-6065, Dec16)	Dec-17
DAE4	SN: 781	02-Sep-16 (No. DAE4-781_Sep16)	Sep-17.
	ID #	Check Date (in house)	Saneduled Check
Secondary Standards			
Secondary Standards Power meter Adlent 44198	SN: GB42420191	89-Oct-89 (in house check Sep-14)	In house check: Oct-17
Secondary Standards Power meter Agilent 44198 Power sensor HP E4412A	SN: GB42420191 SN: US38485102	09-Oct-09 (in house check Sep-14) 05-Jan-10 (in house check Sep-14)	
Power meter Agrient 44199 Power sensor HP E4412A	GILL AND COMPANY	05-Jan-10 (in house check Sep-14)	In house check; Oct-17
Power meter Agrient 44198 Power sensor HP E4412A Power sensor HP 8482A	SN: US38485102 SN: US37295597	05-Jan-10 (in house check Sep-14) 09-Oct-09 (in house check Sep-14)	In house check; Oct-17 In house check: Oct-17
Power meter Agrient 44198 Power sensor HP E4412A Power sensor HP 8482A RF generator R&S SMT-06	SN: US38485102	05-Jan-10 (in house check Sep-14)	In house check; Oct-17 In house check; Oct-17 In house check; Oct-17
Power meter Agrient 44199 Power sensor HP E4412A	SN: US38485102 SN: US37295897 SN: 832283/011	05-Jan-10 (in house check: Sep-14) 09-Oct-08 (in house check: Sep-14) 27-Aug-12 (in house check: Oct-15)	In house check; Oct-17 In house check; Oct-17 In house check; Oct-17 In house check; Oct-17
Power meter Agilent 44198 Power sensor HP E4412A Power sensor HP 6482A RF genessen RAS SMT-06 Network Analyzer HP 6753E	SN: US30485102 SN: US37296597 SN: B32283/011 SN: US37390685 Name	05-Jan-10 (in house check Sep-14) 09-Oct-98 (in house check Sep-14) 27-Aug-12 (in house check Oct-15) 18-Oct-01 (in house check Oct-16) Function	In floure check; Oct-17 In house check; Oct-17 In house check; Oct-17 In house check; Oct-17 In house check; Oct-17 Signature
Power moter Agrient 44198 Power sensor HP E4412A Power sensor HP 8482A RF genesator RAS SMT-06 Network Analyzer HP 8753E	SN: US38485102 SN: US3729597 SN: B32283/011 SN: US37390685	05-Jan-10 (in house check: Sep-14) 09-Oct-09 (in house check: Sep-14) 27-Aug-12 (in house check Oct-15) 18-Oct-01 (in house check Oct-16)	In house check; Oct-17 In house check; Oct-17 In house check; Oct-17 In house check; Oct-17
Power meter Agrient 44198 Power sensor HP E4412A Power sensor HP 8482A Power sensor R&S SMT-06 Network Analyzer HP 6753E Calibrated by	SN: US38485102 SN: US37296897 SN: B32283/011 SN: US3730685 Name Jonannes Kurikka	05-Jan-10 (in house check Sep-14) 09-Oct-09 (in house check Sep-14) 27-Aug-12 (in house check Oct-15) 18-Oct-01 (in house check Oct-16) Fanction Laboratory Technician	In house check; Oct-17 In house check; Oct-17 In house check; Oct-17 In house check; Oct-17
Power meter Agilent 44198 Power sensor HP E4412A Power sensor HP 6482A RF genessen RAS SMT-06 Network Analyzer HP 6753E	SN: US30485102 SN: US37296597 SN: B32283/011 SN: US37390685 Name	05-Jan-10 (in house check Sep-14) 09-Oct-98 (in house check Sep-14) 27-Aug-12 (in house check Oct-15) 18-Oct-01 (in house check Oct-16) Function	In house check; Oct-17 In house check; Oct-17 In house check; Oct-17 In house check; Oct-17
Power meter Agrient 44198 Power sensor HP E4412A Power sensor HP 8482A Power sensor R&S SMT-06 Network Analyzer HP 6753E Calibrated by	SN: US38485102 SN: US37296897 SN: B32283/011 SN: US3730685 Name Jonannes Kurikka	05-Jan-10 (in house check Sep-14) 09-Oct-09 (in house check Sep-14) 27-Aug-12 (in house check Oct-15) 18-Oct-01 (in house check Oct-16) Fanction Laboratory Technician	In house check; Oct-17 In house check; Oct-17 In house check; Oct-17 In house check; Oct-17

Page 1 of 5

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

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

Certificate No: CD1880V3-1044\_Mar17

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Page: 136 of 144

Calibration Laboratory of Schmid & Partner Engineering AG enghausstrasse 43, 8004 Zurich, Switzenand





sterischer Kalibrierdienst S Service suitae d'étalennage C Servizio svizzero di teretura Swiss Calibration Service

Accreditation No.: SCS 0108

Accremited by the Swee Accremitation Service (SAS). The Swiss Accreditation Service is one of the signatories to the BA Multilateral Agreement for the recognition of calibration certificates

#### References

ANSI-C63.19-2011 American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids

#### Methods Applied and Interpretation of Parameters:

- Coordinate System; y-axis is in the direction of the dipole arms, z-axis is from the basis of the antenna. (mounted on the table) lowards its feed point between the two dipole arms, x-axes is normal to the other axes. In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a distance of 15 mm above the top metal edge of the dipole arms.
- Measurement Conditions: Further details are available from the hardcopies at the end of the certificate. All figures stated in the cartificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power mater connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level
- Aritarina Positioning: The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipols under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move clastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASYS Surface. Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching gnd reference point (Irp. of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the **BECUFFICY**
- Feed Point Impedance and Return Loss: These parameters are measured using a HP 8753E Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminating by applying the averaging function while moving the dipole in the air, at least 70cm away from any
- E-field distribution: E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the anterina leed point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are particularly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D E-flaid, in the plane above the dipole surface.

The important uncertainty of measurement is stated as the standard uncertainty of measurement	nent multiplied by the
coverage factor k=2, which for a normal distribution corresponds to a coverage probability of	approximately 95%.

Dertweate No. CD1860V3-1044\_Mart7

Page 2 of 5

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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



Page: 137 of 144

#### Measurement Conditions

AST system configuration, as far as not given	on page 1.	
DASY Version	DASY5	V52.8.8
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, dy = 5 mm	
Frequency	1880 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

#### Maximum Field values at 1880 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	92.0 V/m = 39.28 dBV/m
Maximum measured above low end	100 mW input power	89.9 V/m = 39.08 dBV/m
Averaged maximum above arm	100 mW input power	91.0 V/m ± 12.8 % (k=2)

#### Appendix (Additional assessments outside the scope of SCS 0108)

#### Antenna Parameters

Frequency	Return Loss	Impedance
1730 MHz	23.5 dB	54.7 Ω + 5.2 jΩ
1880 MHz	20.0 dB	58.9 Ω + 6.3 jΩ
1900 MHz	20.3 dB	60.3 Ω + 2.6 jΩ
1950 MHz	26.7 dB	53.2 Ω - 3.5 jΩ
2000 MHz	21.7 dB	46.1 Ω + 6.9 jΩ

#### 3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

Certificate No: CD1880V3-1044\_Mar17

Page 3 of 5

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

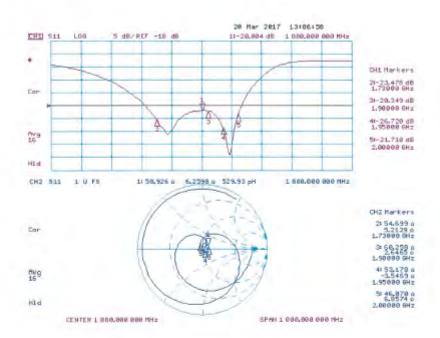
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions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

SGS Taiwan Ltd.



Page: 138 of 144

#### Impedance Measurement Plot



Certificate No: CD1880V3-1044 Mar17

Page 4 of 5

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

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 139 of 144

Date: 17.03.2017

#### **DASY5 E-field Result**

Test Laboratory: SPEAG Lab2

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: CD1880V3 - SN: 1044

Communication System: UID 0 - CW; Frequency: 1880 MHz Medium parameters used:  $\sigma$  = 0 S/m,  $\varepsilon_r$  = 1;  $\rho$  = 1000 kg/m<sup>2</sup>

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

#### DASY52 Configuration

- Probe: ER3DV6 SN2336; ConvF(1, 1, 1); Calibrated: 30.12.2016;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 5n781; Calibrated: 02.09.2016
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

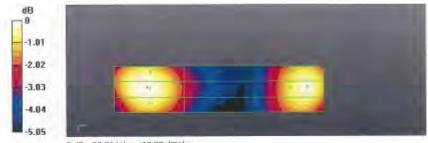
#### Dipole E-Field measurement @ 1880MHz/E-Scan - 1880MHz d=15mm/Hearing Aid Compatibility Test (41x181x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm Device Reference Point: 0, 0, -6.3 mm Reference Value = 162.5 V/m; Power Drift = -0.03 dB Applied MIF = 0.00 dB RF audio interference level = 39.28 dBV/m

Emission category: MZ

#### MIF scaled E-field

0.00	Grid 2 M2 39,28 dBV/m	Grid 3 M2 39.21 dBV/m
	Grid 5 M2 37.07 dBV/m	Grid 5 M2 36.98 dBV/m
Grid 7 M2 38.8 dBV/m	Grid 8 M2 39.08 dBV/m	Grid 9 M2 39.01 dBV/m



0 dB = 92.01 V/m = 39.28 dBV/m

Certificate No: CD1980V3-1044\_Mar/17

Page 5 of 5

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

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

SGS Taiwan Ltd.



Page: 140 of 144

Calibration Laboratory of Schmid & Partner Engineering AG Zeoghavastrasse 43, 8004 Zenon, Switzenferd





Accredited by the Same Accreditation Service (SAS)

The Selec Accreditation Service is one of the argustonics to the EA
Multisteral Agreement for the recognition of calibration card learns

Assertablished No. SCS 0108

Cont Sporton-TW (Auden)

Cesticate No. CD2600V3-1010 Nov16

Object	CD2600V3 SN	1010	
Calentian propinsion(II)	QA CAL-20 v6 Calibration proce	dure for dipoles in air	
Chicomon male,	November 17, 20	016	
The maleurements and the union	ristories with contribution p	cost standards, which replace the physical and retabling are grean on the following pages as: ry laudity attenuament transpendure (25 ± 1)/17	Land part of the continuate
Calification Equipment used (M&)	450	Francisco de la Constitución de	Control was
Primary Standards	(D)	Ca/ District (Centificate No.)	Scheduled Californian
Foxer tracer NEF	SN: 104778	56-Apr-16 (No. 217-02286)02288)	Ap+IT
Power sentor (8011-201	SN: 103244	06-Api-18 (No. 217-02283)	ADI-17 ADI-17
Power sensor NRP-291	3N 703945	DG-App-16 (No. 217-02281)	April 1
Reference 20 dB Attenuator	SNL 5856 (20a)	05-Apr-16 (No. 217-02249)	601-17
Type N mematch continution Prose EFSOVS	SN 5047 2 (06327 SN 4013	05-Apr 16 (No. 217-92291) 21-Jun-16 (No. EFS-4013_Jun11)	AuntT
DAE4	SN 4013	DE Sec-16 (No. DAE4-781 SAD16)	Sap-17
	0.	Check base (in frame)	Scheduled Chica
Secondary Standards	SN GB42420191	(8-Out-09 (in house oftens Sep.14)	in house chick: Oct-17
	Ste Presentation	the state of the s	in nouse check Oct-17
Power Initial Agricus 44198	SN US18465102	CS-Jan 10 (in fraues check (Sep-14)	
Power Intel® Agricul 4419B Power Satisco HP EA412A	SN US18465102 SN US17206897	09-043-09 (In nouse thank Teep-M)	to house check: Oct-17
Power Instal Agricul 44198 Power Satisce HP EA412A Power Satisce HP 8462A RF generator HS 8467-06	SN 13518465100 SN 13517200807 SN 635283/011	CO-Chd-00 (In nouse chark Telp-M) C7-Aug-12 (in Nouse drivide Det-16)	In Yourse Street, Oct-17
Power tribler Agricul 44196 Power satisce HP EA412A Power satisce HP 8412A RF generator 1160 BMT-06	SN US18465102 SN US17206897	09-043-09 (In nouse thank Teep-M)	A STATE OF THE STA
Power tribler Agricul 44196 Power satisce HP EA412A Power satisce HP 8412A RF generator HSS BMT-On	SN US38469100 SN US3770607 SN 838283/011 SN US37940865	CO-Chd-00 (In nouse chark Telp-M) C7-Aug-12 (in Nouse drivide Det-16)	In Yourse Street, Oct-17
Secondary Standards Power Install Agrees 44196 Power enters the E4419A Power sensor the E4419A Power sensor the B482A RF germann 1945 SMT-On NH sensor Advance HP 8753E Calibratial On	SN 13518465100 SN 13517200807 SN 635283/011	06-Dis-09 (In niuse chark Tep-14) 07-Aug-12 (in house chark Det-16) 19-Det-01 (in house chark Dat-16)	in Found Misch, Oct-17 In Found check, Dot-17 September
Power triblet Agricul 44198 Power satisfier HP EA412A Power satisfier HP 8482A RF germany 1160 Staff On NHARON Account HP 8753E	SN US38468102 SN US3729467 SN US3836011 SN US3894065	CA-CH2-09 (In multiplicate Telp M) 27-Aug-12 (in house divide Oct-16) 19-Cet-01 (in house chool Oct-16) Fundah	in house check, Oct-17 In house check, Oct-17
Power Inteled Append 44198 Power service HP EA412A Power service HP 8482A RF generator 1160 Statt On NHHMOR Account HP 8753E	SN US38468102 SN US3729467 SN US3836011 SN US3894065	CA-CH2-09 (In multiplicate Telp M) 27-Aug-12 (in house divide Oct-16) 19-Cet-01 (in house chool Oct-16) Fundah	in house check, Oct-17 In house check, Oct-17 Signature

Page 1 Mid

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

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

Genificate No: CD260;7V3-1010\_Nov16

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

SGS Taiwan Ltd.



Page: 141 of 144

Celibration Laboratory of Schmid & Partner Engineering AG Zeogramiations 41, 8004 Zerich, Setbyland





S Schweidensuber Kalbriereinen
C Service aufse d'élatonnage
Service soltration de tareture
Swiss Caubration Bervice

Accomplisation No.: SCS 0108

According by the Smith According to Service (SAS).

The Swine Accordingtion Service is one of the elegationist to the EA Stuffments Agreement for the recognition of patentine certification.

#### References

ANS: C63.19-2011
 American National Standard: Mathods of Measurement of Compatibility between Winness Gommunications
 Delices and Hearing Alds.

#### Methods Applied and Interpretation of Parameters:

- Coordinate System years is in the direction of the cignite near a sais a from the basis of the antennal
  (minumed on the table) towards its feed point between the two dipole arms, x-exis is normal to the other axes
  in concidence with the standards [1], this measurement planes (pictic sensor center) are selected to be at a
  distance of 15 mm above the top metal edge of the cignite arms.
- Misscurement Commons: Further details are available from the hardsopies in the end of the conflicate. An
  figures stated in the perificate are valid at the frequency indicated. The forward power to the dipole connector
  is set with a calibrated power mater connected and monitored with an auxiliary power mater connected to a
  directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- Antenne Positioning: The dipole is mounted on a HAC. Test Arch phantom using the matching pipole positioner with the same honzontal and the testing cable coming from the Black. The measurements are performed in a shreided proon with absorbers around for satisp to necuce one reflections. It is writted before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a time. It is insighed on the HAC dipole positioner with its arms prefile below the diplocinic reference with induction in move elastically in writted direction without deninging its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASYS Surface Chack job Select the measurement. The distance between pluroum sufface and probe tip is verified. The proper measurement distance is selected by choosing the metalting accions of the IAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching and reference point (upper surface of the probe is assential for the accuracy).
- Feed Point impledance and Ainten Loss: These parameters are measured using a HP 6753E Vector Network.
   Analyzer: The impedance is specified at the SMA connector of the dipole. The influence of reflections was attached by applying the exercising function white moving the dipole in the air, at least 70cm away from any obstacles.
- E-Mod distriction: E-had is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW lorwed power to the amortra lead point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (n z) above the metal tip of the dipole arms. Two 3D maxima are available near the and of the tilipole arms. Assuming the dipole arms are perfectly in one tips the properties two measure in subgrid 2 and subgrid 6) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calabration value represents the majoraum of the immediated SD-E-field, in the plane above the displacement.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor 4-2, which for a normal distribution corresponds to a coverage probability of approximately 95°-

Contribute No. CD2900V3-1010\_Nov10

Page 2 of 5

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

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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 142 of 144

#### Measurement Conditions

DASY Version	DASY5	V52.0.8
Prinntum	HAC Test Arch	
Distance Dipole Top - Probe Center	, 15 mm	
Scan resolution	ds. dy = 5 mm	
Frequency	2600 MHz + 1 MHz	
Ingui power driff	≈ 0.05 dB	

#### Maximum Field values at 2500 MHz

E-field 15 mm above dipole surface	condition	interpolated maximum
Maximum measured above high and	100 mW input power	#5.6 V/m = 36.45 dBV/m
Maximum misasured above low end	100 MW Input power	82.9 V/m = 38,37 dBV/m
Averaged maximum above arm	100 mW input power	63.3 V/m ± 12.8 % (k=2)

#### Appendix (Additional assessments outside the scope of SCS 0108)

#### Antenna Parameters

Frequency	Return Louis	Impedance
2450 MHz	24.7 dB	45,437-31/0
2550 MHz	32,0 dB	51.811 + 1.8 (1)
9600 MHz	26.8 dB	54.7 (1 - 0.0 (1)
2650 MHz	26,5 dfl	53,3 (1 - 3 6 [1)
2750 MHz	16.6 (6)	45.9 (310.3-)(3

#### 3.2 Amenna Design and Handling

The calibration dipole hits a symmetric geometry with a little in two stub metrying network, which loads to the

emanded bendwidth.

The dipole is built of standard servigid coexial cable. The internal matching line is open ended. The addition is

therefore open for DC signals.

Do not apply force to district sites, as they are lable to bend. The scrooled connections near the testiport may be damaged. After excessive mechanical stress or everticating, check the impedance characteristics to ensure that the internal matching natwork is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the freedpoint can be measured.

Certificate No. CDC600VS-1010\_Nav16

Page 3 of 6

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

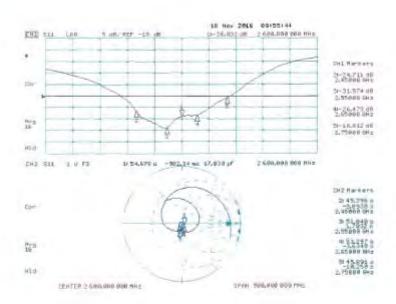
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions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

SGS Taiwan Ltd.



Page: 143 of 144

#### Impedance Measurement Plot



Certificate No: CD2600V3-1010\_Nov16

Dans del I

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

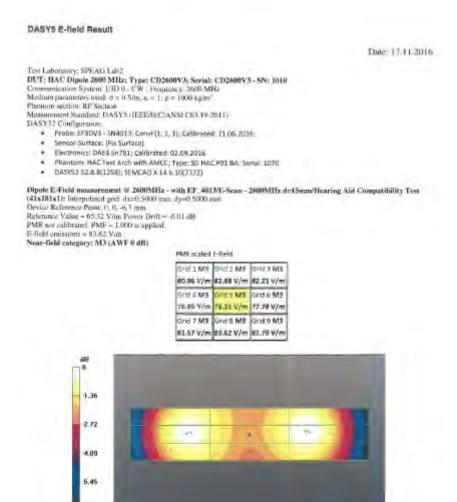
documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised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

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 144 of 144



# End of 1st part of report

Page 5 cl 5

0 d8 = 83.62 V/m = 38.45 dBV/m

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

Certificate No: CD2600V3-1010 Nov16

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format

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

SGS Taiwan Ltd.

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

www.tw.sas.com