

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

_		
٦	Г	
,	Г	

Applicant:	FUJITSU CONNECTED TECHNOLOGIES Ltd. Chuorinkan 7-10-1 Yamato, Kanagawa 242-0007, Japan
Product Name:	Smart Phone
Brand Name:	FUJITSU
Model No.:	F-42A
Model Difference:	N/A
Report Number:	ER/2020/40010
FCC ID	2AQYEFMP178
FCC Rule Part:	2 , 22H & 24E & 27 C
Issue Date:	May 8th, 2020
Date of Test:	Mar. 31st, 2020 ~ May 4th, 2020
Date of EUT Received:	Mar. 31st, 2020
We have by contify that	

We hereby certify that:

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

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

Approved By:

CHUN; CHIZEH, CHIEN

Chun Chieh Chen / Supervisor



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

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are related to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488

```
www.sas.com.tw
```

Member of SGS Group



Revision History					
Report Number Revision Description Issue Date Remark					
ER/2020/40010	Rev.00	Original.	May 8th, 2020	Revised By: Yuri Tsai	

Note:

1. Disclaimer

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

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

f (886-2) 2298-0488

www.sgs.com.tw

Contents

1	GENERAL PRODUCT INFORMATION	
2	SYSTEM TEST CONFIGURATION	
3	SUMMARY OF TEST RESULTS	11
4	DESCRIPTION OF TEST MODES	
5	MEASUREMENT UNCERTAINTY	
6	MAXMUM OUTPUT POWER	15
7	OCCUPIED BANDWIDTH MEASUREMENT	
8	OUT OF BAND EMISSION AT ANTENNA TERMINALS	50
9	FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT	
10	FREQUENCY STABILITY MEASUREMENT	118
11	PEAK TO AVERAGE RATIO	123

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



GENERAL PRODUCT INFORMATION 1

1.1 **Product Description**

General:

Product Name:	Smart Ph	one
Brand Name:	FUJITSU	
Model No.:	F-42A	
Model Difference:	N/A	
Hardware Version:	V1.2.0	
Software Version:	V00R016	Ve
	3.8Vdc fro	om Rechargeable Li-ion Battery
Power Supply:	Model No.:CA54310-0075 Battery: Supplier: FUJITSU CONNECTED TECHNOLOGIES LIM- ITED	
IMEI:	35534511	10005329

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



Operation Frequency Range 1.2

Operating Frequency (MHz)				
GSM/GPRS/EDGE 850	824.2	-	848.8	
GSM/GPRS/EDGE 1900	1850.2	-	1909.8	
WCDMA / HSPA+ Band V 826.4 - 846.6				

LTE Band	BW (MHz)	Operation Frequency (MHz)		
	1.4	824.7	-	848.3
5	3	825.5	-	847.5
5	5	826.5	-	846.5
	10	829.0	-	844.0
	1.4	699.7	-	715.3
10	3	700.5	-	714.5
12	5	701.5	-	713.5
	10	704.0	-	711.0
17	5	706.5	-	713.5
17	10	709.0	-	711.0

1.3 **Antenna Designation**

Vendor	Туре	Antenna Part No.	Modulation	Frequency (MHz)	Peak Antenna Gain (dBi)					
			GSM / GPRS850	842.2 ~ 848.8	-3.2					
	λ/4 Monopole Antenna		GSM / GPRS1900	1850.2 ~ 1909.8	-1.2					
N/A		•	N/A	WCDMA Band V	826.4 ~ 846.6	-2.9				
			Antenna	Antenna	Antenna	Antenna	Antenna	Antenna		LTE Band 5
			LTE Band 12	699 ~ 716	-10.3					
			LTE Band 17	704 ~ 716	-10.3					

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

t (886-2) 2299-3279 台灣檢驗科技股份有限公司

f (886-2) 2298-0488

www.sgs.com.tw



Type of Emission & Max ERP/EIRP Power Measurement Result: 1.4

	ERP / EIR	P (dBm)	W	99%	Type of Emission
GPRS 850	29.31	ERP	0.853	0.2467	246KGXW
GPRS 1900	28.36	EIRP	0.685	0.2485	248KGXW
	ERP / EIR	P (dBm)	W	99%	Type of Emission
WCDMA Band V	20.70	ERP	0.117	4.1217	4M12F9W
HSDPA Band V	19.72	ERP	0.094	4.1146	4M11F9W
HSUPA Band V	19.82	ERP	0.096	4.1129	4M11F9W

LTE Band	BW	Modulation	ERP / E (dBn		(W)	Type of Emission
5	1.4	QPSK	18.14	ERP	0.065	1M10G7D
5	1.4	16QAM	17.19	ERP	0.052	1M10D7W
5	3	QPSK	18.01	ERP	0.063	2M70G7D
5	5	16QAM	16.94	ERP	0.049	2M70D7W
5	5	QPSK	17.94	ERP	0.062	4M50G7D
5	5	16QAM	17.04	ERP	0.051	4M50D7W
5	10	QPSK	17.95	ERP	0.062	8M99G7D
5	10	16QAM	17.09 ERP		0.051	8M96D7W
			ERP / EIRP			
LTE	RW/	Modulation	ERP / E	EIRP	(\\\)	Type of
LTE Band	BW	Modulation	ERP / E (dBn		(W)	Type of Emission
Band		Modulation QPSK			(W) 0.012	51
	BW 1.4		(dBn	n)		Emission
Band 12	1.4	QPSK	(dBn) 10.96	n) ERP	0.012	Emission 1M11G7D
Band		QPSK 16QAM	(dBn 10.96 10.06	n) ERP ERP	0.012 0.010	Emission 1M11G7D 1M11D7W
Band 12 12	1.4 3	QPSK 16QAM QPSK	(dBn 10.96 10.06 10.80	n) ERP ERP ERP	0.012 0.010 0.012	Emission 1M11G7D 1M11D7W 2M70G7D
Band 12	1.4	QPSK 16QAM QPSK 16QAM	(dBn 10.96 10.06 10.80 10.02	n) ERP ERP ERP ERP	0.012 0.010 0.012 0.010	Emission 1M11G7D 1M11D7W 2M70G7D 2M70D7W
Band 12 12	1.4 3	QPSK 16QAM QPSK 16QAM QPSK	(dBn 10.96 10.06 10.80 10.02 10.66	n) ERP ERP ERP ERP ERP	0.012 0.010 0.012 0.010 0.012	Emission 1M11G7D 1M11D7W 2M70G7D 2M70D7W 4M50G7D

LTE	DW	Modulation	ERP / E	IRP	(),()	Type of
Band	BW	wouldtion	(dBn	า)	(W)	Emission
17	5	QPSK	10.40	ERP	0.011	4M50G7D
17	/ 5	16QAM	9.50	ERP	0.009	4M50D7W
17	10	QPSK	10.77	ERP	0.012	8M96G7D
17	10	16QAM	9.81	ERP	0.010	8M93D7W

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

f (886-2) 2298-0488



Test Methodology of Applied Standards 1.5

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

ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System v03r01

KDB941225 D01 SAR test for 3G devices v03r01 (SAR Measurement Procedures for 3G Devices, WCDMA / HSPA) was used for EUT and Base station setting.

KDB412172 D01 Determining ERP and EIRP v01r01

TS 151 010-1 is used to set, and measure the output power.

Test Facility 1.6

SGS Taiwan Ltd. Electronics & Communication Laboratory (TAF code 0513) No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803

FCC Designation number: TW0001

1.7 **Special Accessories**

No special accessories were used during testing.

1.8 **Equipment Modifications**

There was no modifications incorporated into the EUT.

1.9 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m*9m*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

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

Weifs另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

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

2.2 EUT Exercise

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

2.3 Test Procedure

Conducted Measurement at Antenna Port 2.3.1

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

2.3.2 Radiated Emissions (ERP/EIRP)

The EUT is placed on a turn table, for emission measurements below 1 GHz is 0.8 m above ground plane, for emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 8 and 13.

2.4 **Measurement Results Explanation Example**

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level. Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor. Following shows an offset computation in physical test

	RF cable loss (dB)	Attenuation factor(dB)	offset(dB)
Low Band (Below 1GHz)	3.9	10	13.9
High Band (Above 1 GHz)	3.9	10	13.9

f (886-2) 2298-0488

www.sas.com.tw

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

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are relative to so days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Final Amplifier Voltage and Current Information: 2.5

Test Mode	DC voltage (V)	DC current (mA)
GSM 850		184
GSM 1900		237
WCDMA V	20	233
LTE Band 5	3.8	211
LTE Band 12		255
LTE Band 17		211

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



Configuration of Tested System 2.6

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

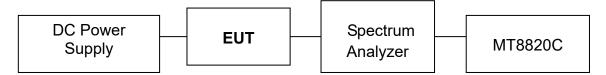


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)

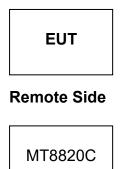


Table 2-1 Equipment Used in

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1	Radio Communication Analyer	Anritsu	MT8820C	6200995019	shielded	Un-shielded
2	Radio Communication Analyer	Anritsu	MT8815B	6200711454	shielded	Un-shielded
3	DC Power Supply	Agilent	E3640A	MY40000811	N/A	N/A

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recommended to the full of the low. prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司



SUMMARY OF TEST RESULTS 3

FCC Rules	Description Of Test	Result
§2.1046(a)	RF Power Output	Compliant
§22.913(a)(5) §24.232(c) §27.50(c)(10)	ERP/ EIRP measurement	Compliant
§2.1049(h)	99% & 26dB Occuupied Bandwidth	Compliant
§2.1051 §22.917(a)(b) §24.238(a) §27.53(g)	Out of Band Emissions at Antenna Terminals and Band Edge / Emission mask re- quirements	Compliant
§2.1053 §2.1057(a)(1) §22.917(a) §24.238(a) §27.53(g)	Field Strength of Spurious Radiation	Compliant
§24.232(d) §27.50(B)	Peak to Average Ratio	Compliant
§2.1055(1) §22.355 §24.235 §27.54	Frequency Stability	Compliant

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



DESCRIPTION OF TEST MODES

4.1 The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X(E1)Y(E2)Z(H) axis and antenna ports. The worst case was found as listed below. Following channel(s) was (were) selected for the final test as listed below:

BAND	H PLAN
GSM/GPRS 850	V
GSM/GPRS 1900	V
WCDMA/HSPA Band V	V
LTE Band 5	V
LTE Band 12	V
LTE Band 17	V

4.2 **Measurement Configuration**

Test Items	GSM	Test Channel			
rest items	Bands	L	М	Н	
ERP	850	V	V	V	
EIRP	1900	V	V	V	
FREQUENCY STABILITY	850	-	V	-	
FREQUENCE STABILITE	1900	-	V	-	
OCCUPIED BANDWIDTH	850	V	V	V	
OCCOPIED BANDWIDTT	1900	V	V	V	
PEAK TO AVERAGE RATIO	850	V	V	V	
FEAR TO AVERAGE RATIO	1900	V	V	V	
BAND FDGF	850	V	-	V	
DANDEDGE	1900	V	-	V	
CONDCUDETED EMISSION	850	V	V	V	
CONDCODETED EMISSION	1900	V	V	V	
RADIATED EMISSION	850	V	V	V	
RADIATED EMISSION	1900	V	V	V	

Test Items	WCDMA / HSPA	Test Channel			
restitents	Bands	L	М	Н	
ERP	Band V	V	V	V	
FREQUENCY STABILITY	Band V	-	V	-	
OCCUPIED BANDWIDTH	Band V	V	V	V	
PEAK TO AVERAGE RATIO	Band V	V	V	V	
BAND EDGE	Band V	V	1	V	
CONDCUDETED EMISSION	Band V	V	V	٧	
RADIATED EMISSION	Band V	V	V	V	

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

t (886-2) 2299-3279

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

f (886-2) 2298-0488

Unless otherwise stated the results shown in this test report report for the form of the state report report in the test report report report report in the test report repo prosecuted to the fullest extent of the law.



Test Items	Band	Tes	t Char	nnel		Ba	andwic	lth (M⊦	łz)		Modulation			RB #		
restitems	Dallu	L	М	Н	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	
	5	v	v	v	v	v	v	v	-	-	v	v	v	v	v	
Max. Output Power	12	v	v	v	v	v	v	v	-	-	v	v	v	v	v	
TOWER	17	v	v	v	-	-	v	v	-	-	v	v	v	v	v	
_	5	-	v	-			v		-	-	v	-	-	-	v	
Freqency Stability	12	-	v	-			v		-	-	v	-	-	-	v	
Stability	17	-	v	-	-	-	v		-	-	v	-	-	-	v	
Test Items	Band	Tes	t Char	nnel		Ba	andwic	lth (M⊦	łz)		Modu	lation		RB #		
	Danu	L	М	Н	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	
26dB and	5	٧	٧	V	V	V	V	V	-	-	V	V	-	-	V	
99 %	12	٧	٧	٧	٧	٧	v	V	•	•	V	V	-	-	V	
Bandwidth	17	V	٧	V	-	-	v	V	-	-	V	V	-	-	V	
Peak-to-Av	5	٧	٧	V	V	V	V	V	-	-		V	-	-	V	
erage Ratio	12	٧	٧	٧	V	٧	v	V	•	•		V	-	-	V	
erage Ratio	17	v	v	v	-	-	v	v	-	-		v	-	-	V	
Test Items	Band	Tes	t Char	nnel	Bandwidth (MHz)					Modulation R		RB #	≀B #			
Test items	Dallu	L	М	Н	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	
	5	V	-	V	v	V	v	v	-	-	v	-	v	v	V	
Band Edge	12	٧	-	V	V	V	V	V	-	-	V	-	V	V	V	
	17	V	-	V	-	-	V	V	-	-	V	-	V	V	v	
Conducted	5	٧	٧	V	V	V	v	V	•	•	V	-	V	-	-	
Emission	12	٧	٧	V	V	٧	v	V	-	•	V	-	v	-	-	
EIIIISSIUII	17	V	٧	V	-	-	v	v	-	-	v	-	v	-	-	
Test Items	Band	Tes	t Char	nnel		Ba	andwic	lth (MH	łz)		Modu	lation		RB #		
Test items	Dallu	L	М	Н	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	
Radiated	5	V	V	V			V		-	-	V		V			
Emission	12	V	V	V			v		-	-	V		V			
LIIIISSIUII	17	V	٧	v	-	-	v		-	-	v		V			

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



MEASUREMENT UNCERTAINTY 5

Test Items	Uncertainty
RF Power Output	+/- 1.10 dB
ERP/ EIRP measurement	Vertical Polarization = +/- 4.74dB Horizontal Polarization =+/- 4.62dB
99% Occupied Bandwidth	+/- 5.19 Hz
Out of Band Emissions at Antenna Terminals and Band Edge	+/- 0.70 dB
Peak to Average Ratio	+/- 0.70 dB
Frequency Stability vs. Temperature	+/- 5.19 Hz
Frequency Stability vs. Voltage	+/- 5.19 Hz
Temperature	+/- 0.65 °C
Humidity	+/- 4.6 %
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%

Radiated Spurious Emission:

	9kHz – 30MHz: +/- 2.87 dB				
	30MHz - 180MHz: +/- 3.37dB				
Measurement uncertainty (Polarization : Vertical)	180MHz -417MHz: +/- 3.19dB				
(i cialization : vortiour)	0.417GHz-1GHz: +/- 3.19dB				
	1GHz - 18GHz: +/- 4.04dB				
	18GHz - 40GHz: +/- 4.04dB				

-	9kHz – 30MHz: +/- 2.87 dB				
	30MHz - 167MHz: +/- 4.22dB				
Measurement uncertainty (Polarization : Horizontal)	167MHz -500MHz: +/- 3.44dB				
(Polanzalion - Honzonia)	0.5GHz-1GHz: +/- 3.39dB				
	1GHz - 18GHz: +/- 4.08dB				
	18GHz - 40GHz: +/- 4.08dB				

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

t (886-2) 2299-3279

```
www.sgs.com.tw
```

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



MAXMUM OUTPUT POWER 6

6.1 **Standard Applicable**

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

6.1.1 **ERP/EIRP LIMIT**

According to FCC §2.1046

FCC 22.913(a)

(5) mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

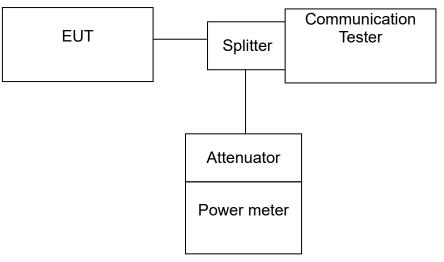
FCC 24.232(c)

(b) Mobile and portable stations are limited to 2W EIRP.

FCC 27.50(c)

(10) Portable stations (hand-held devices) are limited to 3 watts ERP.

6.2 **Test Set-up**



Note: Measurement setup for testing on Antenna connector

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are relative to so days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488

www.sas.com.tw

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



6.3 **Output Power Measurement Applicable Guideance**

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. TS 151 010-1 is reference to conduct the test measurement of output power.

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

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

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

According to KDB 412172 D01 Power Approach,

 $EIRP = P_{\tau}+G_{\tau}-L_{c}$

ERP= EIRP-2.15,

Where:

ERP or EIRP	 effective radiated power or equivalent isotropically radiated power (expressed in the same units as PT, typically dBW, dBm, or power spectral density (PSD)2), relative to either a dipole antenna (ERP) or an isotropic antenna (EIRP);
Ρτ	= transmitter output power, expressed in dBW, dBm, or PSD;
Gτ Lc	 gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP); signal attenuation in the connecting cable between the transmitter and antenna, in dB.

6.5 **Measurement Equipment Used**

Conducted Emission (measured at antenna port) Test Site									
EQUIPMENT MFR MODEL SERIAL LAST CAL DUE									
TYPE		NUMBER	NUMBER	CAL.					
Radio Communication Analyer	Anritsu	MT8820C	6200995019	Apr. 1st, 2020	Mar. 31st, 2021				
Radio Communication Analyer	Anritsu	MT8815B	6200711454	Apr. 1st, 2020	Mar. 31st, 2021				

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

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are relative to so days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488

www.sas.com.tw



6.6 **GSM Measurement Results**

GSM/GPRS/EDGE (GMSK; 8-PSK) Result:

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
0.014	824.2	128	32.51	-3.20	27.16	29.31	38.50	-9.19
GSM 850	836.6	190	32.45	-3.20	27.10	29.25	38.50	-9.25
030	848.8	251	32.17	-3.20	26.82	28.97	38.50	-9.53
0000	824.2	128	32.51	-3.20	27.16	29.31	38.50	-9.19
GPRS 850	836.6	190	32.45	-3.20	27.10	29.25	38.50	-9.25
0.00	848.8	251	32.17	-3.20	26.82	28.97	38.50	-9.53
GSM/GPR	s/edge (GMS	K; 8-PS	iK) Result:					
EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
0.014	1850.2	512	29.46	-1.20	26.11	28.26	33.00	-4.74
GSM 1900	1880.0	661	29.56	-1.20	26.21	28.36	33.00	-4.64
1900	1909.8	810	29.23	-1.20	25.88	28.03	33.00	-4.97
0000	1850.2	512	29.46	-1.20	26.11	28.26	33.00	-4.74
GPRS 1900	1880.0	661	29.56	-1.20	26.21	28.36	33.00	-4.64
1700	1909.8	810	29.23	-1.20	25.88	28.03	33.00	-4.97

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

```
www.sgs.com.tw
```



EUT Mode	Frequency (MHz)	СН	Average Burst Power (1DN 1UP) Class 8 (dBm)	Average Burst Power (1DN 2UP) Class 10 (dBm)	Average Burst Power (1DN 3UP) Class 12 (dBm)	Average Burst Power (1DN 4UP) Class 12 (dBm)
CDDC	824.2	128	32.51	30.87	29.13	27.83
GPRS 850	836.6	190	32.45	30.89	29.21	27.89
000	848.8	251	32.17	30.86	29.28	28.07

EUT Mode	Frequency (MHz)	СН	Average Burst Power (1DN 1UP) Class 8 (dBm)	Average Burst Power (1DN 2UP) Class 10 (dBm)	Average Burst Power (1DN 3UP) Class 12 (dBm)	Average Burst Power (1DN 4UP) Class 12 (dBm)
	1850.2	512	29.46	27.03	25.26	23.88
GPRS 1900	1880.0	661	29.56	27.08	25.28	23.99
1700	1909.8	810	29.23	27.07	25.20	23.97

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

www.sgs.com.tw



6.7 WCDMA & HSPA Measurement Results:

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
	826.4	4132	23.60	-2.90	18.55	20.70	38.50	-17.80
WCDMA	836.6	4183	23.50	-2.90	18.45	20.60	38.50	-17.90
	846.6	4233	23.56	-2.90	18.51	20.66	38.50	-17.84
	826.4	4132	22.46	-2.90	17.41	19.56	38.50	-18.94
HSDPA	836.6	4183	22.50	-2.90	17.45	19.60	38.50	-18.90
	846.6	4233	22.62	-2.90	17.57	19.72	38.50	-18.78
	826.4	4132	22.53	-2.90	17.48	19.63	38.50	-18.87
HSUPA	836.6	4183	22.56	-2.90	17.51	19.66	38.50	-18.84
	846.6	4233	22.72	-2.90	17.67	19.82	38.50	-18.68

WCDMA/HSUPA/HSDPA Band V Result:

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recommended to the full of the low. prosecuted to the fullest extent of the law.

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



6.7.1 HSPA (HSDPA & HSUPA) Release 6:

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1. RMC 12.2kps is used for this testing.

6.7.2 HSDPA SUB-TEST Setting

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

Sub-test	βc	βd	β₀ (SF)	β _c /β _d	βнs (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)	RMC (Kbps)
1	2/15	15/15	64	2/15	4/15	0.0	0.0	12.2
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0	12.2
3	15/15	8/15	64	15/8	30/15	1.5	0.5	12.2
4	15/15	4/15	64	15/4	30/15	1.5	0.5	12.2

Note: The recommended HSDPA MPRs are implemented as per following sub-tests.

	Sub	Avg. Power (dBm)							
Mode	test		Channel						
		4132.00	4183.00	4233.00					
	1	22.46	22.50	22.62					
HSDPA V	2	22.07	21.99	22.15					
	3	21.99	22.00	22.17					
	4	21.97	21.99	22.17					

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recommended to the full of the low. prosecuted to the fullest extent of the law.

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

f (886-2) 2298-0488



6.7.3 HSPA SUB-TEST Setting

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

Sub-			βa			βec	β _{ed}	βed	β_{ed}	СМ	MPR	AG		RMC
test	βc	βa	(SF)	βс∕βа	βнs	pee	Pou	(SF)	(Code s)	(dB)	(dB)	Index	E-TFCI	(Kbps)
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/22 5	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	β _{ed} 1: 47/15 β _{ed} 2: 47/15	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

Note: The recommended HSUPA MPRs are implemented as per following sub-tests.

Mode	Sub test	Avg. Power (dBm) Channel						
	1051	4132.00	4183.00	4233.00				
	1	22.53	22.56	22.72				
	2	20.43	20.45	20.69				
HSUPA V	3	21.45	21.46	21.62				
	4	20.54	20.56	20.69				
	5	22.53	22.52	22.68				

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司

f (886-2) 2298-0488



Minimum Communications Power Measurement PCS 1900 band

PCL	0	1	2	3	4	5	6	7	8
Output power (dBm)	29.33	28.16	26.02	23.88	21.89	19.94	17.79	15.68	13.74
								_	
PCL	9	10	11	12	13	14	15		
Output power (dBm)	11.66	10.21	8.07	6.16	4.1	2.13	0.63		

Note: The EUT output power was controlled by simulator. Set Communication Tester MT8820C PCL as above, and get the mobile phone output power reading.

6.7.4 WCDMA/HSDPA/HSUPA band V

The EUT output power was controlled by simulator and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm then record the read. The min. power was measures by a function key "minimum power" then record the read. It is -52.3dBm. The power variation can be 0.1dB step by setting.

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

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report report for the form of the state report report in the test report report report report in the test report repo prosecuted to the fullest extent of the law.

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



6.8 LTE Measurement Results:

Antenna gain (dBi) -2.9

			LTE Ba	and 5_l	Uplink f	requency band	: 824 to 849 MH	z		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.08	18.03	20.18	38.45	-18.27
	20407	824.7	QPSK	1	5	23.19	18.14	20.29	38.45	-18.16
	20407	024.7	QF 3K	3	2	22.63	17.58	19.73	38.45	-18.72
	20525 836.5			6	0	22.09	17.04	19.19	38.45	-19.26
				1	0	23.19	18.14	20.29	38.45	-18.16
		836 F	QPSK	1	5	23.07	18.02	20.17	38.45	-18.28
		UPSK	3	2	22.77	17.72	19.87	38.45	-18.58	
				6	0	22.20	17.15	19.30	38.45	-19.15
		848.3	3 QPSK	1	0	23.04	17.99	20.14	38.45	-18.31
	20643			1	5	23.11	18.06	20.21	38.45	-18.24
	20043			3	2	22.70	17.65	19.80	38.45	-18.65
1.4				6	0	22.09	17.04	19.19	38.45	-19.26
1.4				1	0	21.86	16.81	18.96	38.45	-19.49
	20407	824.7	16QAM	1	5	21.76	16.71	18.86	38.45	-19.59
	20407	024.7	TOQAIN	3	2	21.69	16.64	18.79	38.45	-19.66
				6	0	20.93	15.88	18.03	38.45	-20.42
				1	0	22.24	17.19	19.34	38.45	-19.11
	20525	836.5	16QAM	1	5	21.54	16.49	18.64	38.45	-19.81
	20323	030.5	TOQAIN	3	2	21.64	16.59	18.74	38.45	-19.71
				6	0	21.10	16.05	18.20	38.45	-20.25
	20643			1	0	21.62	16.57	18.72	38.45	-19.73
		848 3	16OAM	1	5	21.92	16.87	19.02	38.45	-19.43
		848.3	16QAM	3	2	21.77	16.72	18.87	38.45	-19.58
				6	0	20.93	15.88	18.03	38.45	-20.42

t (886-2) 2299-3279

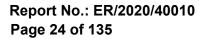
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司

f (886-2) 2298-0488

www.sgs.com.tw





-2.9 Antenna gain (dBi)

			LTE Ba	and 5_	Uplink f	requency band	: 824 to 849 MH	Z		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.06	18.01	20.16	38.45	-18.29
	20415	825.5	QPSK	1	14	22.98	17.93	20.08	38.45	-18.37
	20413	023.3	UPSK	8	4	22.14	17.09	19.24	38.45	-19.21
				15	0	22.14	17.09	19.24	38.45	-19.21
				1	0	22.98	17.93	20.08	38.45	-18.37
	20525 836.5	836 5	QPSK	1	14	23.04	17.99	20.14	38.45	-18.31
		030.0	QF3K	8	4	22.21	17.16	19.31	38.45	-19.14
				15	0	22.15	17.10	19.25	38.45	-19.2
		635 847.5	47.5 QPSK	1	0	22.90	17.85	20.00	38.45	-18.45
	20635			1	14	22.79	17.74	19.89	38.45	-18.56
	20033			8	4	22.18	17.13	19.28	38.45	-19.17
3				15	0	22.15	17.10	19.25	38.45	-19.2
5				1	0	21.68	16.63	18.78	38.45	-19.67
	20415	825.5	16QAM	1	14	21.62	16.57	18.72	38.45	-19.73
	20413	023.3		8	4	21.04	15.99	18.14	38.45	-20.31
				15	0	20.73	15.68	17.83	38.45	-20.62
				1	0	21.72	16.67	18.82	38.45	-19.63
	20525	836.5	16QAM	1	14	21.68	16.63	18.78	38.45	-19.67
	20525	030.3		8	4	21.15	16.10	18.25	38.45	-20.2
				15	0	20.94	15.89	18.04	38.45	-20.41
	20635			1	0	21.90	16.85	19.00	38.45	-19.45
		847.5	1600.00	1	14	21.99	16.94	19.09	38.45	-19.36
			16QAM	8	4	21.33	16.28	18.43	38.45	-20.02
				15	0	21.17	16.12	18.27	38.45	-20.18

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司



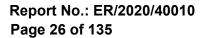
-2.9

Antenna gain (dBi)

			LTE Ba	and 5_l	Uplink f	requency band	: 824 to 849 MH	Z		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.62	17.57	19.72	38.45	-18.73
	20425	826.5	QPSK	1	24	22.66	17.61	19.76	38.45	-18.69
	20423	020.5		12	6	22.21	17.16	19.31	38.45	-19.14
				25	0	22.13	17.08	19.23	38.45	-19.22
				1	0	22.79	17.74	19.89	38.45	-18.56
	20525	836.5	QPSK	1	24	22.99	17.94	20.09	38.45	-18.36
	20525	030.3	QUSIC	12	6	22.19	17.14	19.29	38.45	-19.16
				25	0	22.16	17.11	19.26	38.45	-19.19
			.6.5 QPSK	1	0	22.75	17.70	19.85	38.45	-18.6
	20625	846.5		1	24	22.87	17.82	19.97	38.45	-18.48
	20025	040.5		12	6	22.14	17.09	19.24	38.45	-19.21
5				25	0	22.05	17.00	19.15	38.45	-19.3
J				1	0	21.60	16.55	18.70	38.45	-19.75
	20425	826.5	16QAM	1	24	21.76	16.71	18.86	38.45	-19.59
	20423	020.5	TOQAIN	12	6	21.12	16.07	18.22	38.45	-20.23
				25	0	21.29	16.24	18.39	38.45	-20.06
				1	0	21.50	16.45	18.60	38.45	-19.85
	20525	836.5	16QAM	1	24	22.09	17.04	19.19	38.45	-19.26
	20323	030.5	TOQAIN	12	6	21.00	15.95	18.10	38.45	-20.35
				25	0	21.09	16.04	18.19	38.45	-20.26
				1	0	22.02	16.97	19.12	38.45	-19.33
	20625	0625 846.5	16QAM	1	24	21.67	16.62	18.77	38.45	-19.68
	20023			12	6	21.07	16.02	18.17	38.45	-20.28
				25	0	21.08	16.03	18.18	38.45	-20.27

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.





-2.9

Antenna gain (dBi)

			LTE Ba	nd 5_	Uplink f	requency band	: 824 to 849 MH	z		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.88	17.83	19.98	38.45	-18.47
	20450	829	QPSK	1	49	22.90	17.85	20.00	38.45	-18.45
	20430	027	UF SK	25	12	22.10	17.05	19.20	38.45	-19.25
			50	0	22.11	17.06	19.21	38.45	-19.24	
			1	0	22.87	17.82	19.97	38.45	-18.48	
	20525	836.5		1	49	22.86	17.81	19.96	38.45	-18.49
	20323	030.5		25	12	22.17	17.12	19.27	38.45	-19.18
			50	0	22.12	17.07	19.22	38.45	-19.23	
				1	0	22.97	17.92	20.07	38.45	-18.38
	20600	844	QPSK	1	49	23.00	17.95	20.10	38.45	-18.35
	20000	044	UF SK	25	12	22.24	17.19	19.34	38.45	-19.11
10				50	0	22.17	17.12	19.27	38.45	Limit (dBm)Margin (dB)38.45-18.4738.45-18.4538.45-19.2538.45-19.2438.45-18.4838.45-18.4938.45-19.1838.45-19.2338.45-18.3838.45-18.3838.45-18.3538.45-19.23
10				1	0	22.14	17.09	19.24	38.45	-19.21
	20450	829	16QAM	1	49	21.90	16.85	19.00	38.45	-19.45
	20430	027		25	12	21.30	16.25	18.40	38.45	-20.05
				50	0	21.09	16.04	18.19	38.45	-20.26
				1	0	22.12	17.07	19.22	38.45	-19.23
	20525	836.5	16QAM	1	49	21.85	16.80	18.95	38.45	-19.5
	20525	030.5		25	12	21.23	16.18	18.33	38.45	-20.12
				50	0	20.98	15.93	18.08	38.45	-20.37
				1	0	21.90	16.85	19.00	38.45	-19.45
	20600	844	16QAM	1	49	21.62	16.57	18.72	38.45	-19.73
	20000	044		25	12	21.46	16.41	18.56	38.45	-19.89
				50	0	21.09	16.04	18.19	38.45	-20.26

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



			LTE Ba	nd 12_	Uplink	frequency band	: 699 to 716 Mł	Ηz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.41	10.96	13.11	34.77	-21.66
	23017	699.7	QPSK	1	5	23.41	10.96	13.11	34.77	-21.66
	23017	077.7	UF SK	3	2	22.80	10.35	12.50	34.77	-22.27
				6	0	22.37	9.92	12.07	34.77	-22.7
				1	0	23.33	10.88	13.03	34.77	-21.74
	23095	707.5	QPSK	1	5	23.36	10.91	13.06	34.77	-21.71
	23073	101.5	QUSIC	3	2	23.00	10.55	12.70	34.77	-22.07
				6	0	22.37	9.92	12.07	34.77	-22.7
				1	0	23.27	10.82	12.97	34.77	-21.8
	23173	715.5	QPSK	1	5	23.35	10.90	13.05	34.77	-21.72
	23173	715.5	QUSIC	3	2	22.71	10.26	12.41	34.77	-22.36
1.4				6	0	22.31	9.86	12.01	34.77 -22.0 34.77 -22.0 34.77 -21.0 34.77 -21.0 34.77 -21.0 34.77 -22.0 34.77 -22.0 34.77 -22.0 34.77 -22.0 34.77 -22.0 34.77 -22.0 34.77 -22.0 34.77 -22.0 34.77 -22.0 34.77 -22.0	-22.76
1.7				1	0	22.51	10.06	12.21	34.77	-22.56
	23017	699.7	16QAM	1	5	22.17	9.72	11.87	34.77	-22.9
	23017	077.7		3	2	21.94	9.49	11.64	34.77	-23.13
				6	0	21.27	8.82	10.97	34.77	-23.8
				1	0	22.06	9.61	11.76	34.77	-23.01
	23095	707.5	16QAM	1	5	21.85	9.40	11.55	34.77	-23.22
	23073	101.5	TOCAM	3	2	21.93	9.48	11.63	34.77	-23.14
			6	0	21.19	8.74	10.89	34.77	-23.88	
			<u> </u>	1	0	22.40	9.95	12.10	34.77	-22.67
	23173	715.5	16QAM	1	5	22.10	9.65	11.80	34.77	-22.97
	23173	/10.0		3	2	21.99	9.54	11.69	34.77	-23.08
				6	0	21.26	8.81	10.96	34.77	-23.81

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



			LTE Ba	nd 12_	Uplink	frequency band	: 699 to 716 Mł	Ηz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.11	10.66	12.81	34.77	-21.96
	23025	700.5	QPSK	1	14	23.13	10.68	12.83	34.77	-21.94
	23023	700.5	QUSIC	8	4	22.42	9.97	12.12	34.77	-22.65
				15	0	22.40	9.95	12.10	34.77	-22.67
				1	0	23.10	10.65	12.80	34.77	-21.97
	23095	707.5	QPSK	1	14	23.25	10.80	12.95	34.77	-21.82
	23075	707.5		8	4	22.42	9.97	12.12	34.77	-22.65
			15	0	22.37	9.92	12.07	34.77	-22.7	
				1	0	23.03	10.58	12.73	34.77	-22.04
	23165	714.5	QPSK	1	14	23.16	10.71	12.86	34.77	-21.91
	23103	714.5	QUSIC	8	4	22.41	9.96	12.11	34.77	-22.66
3				15	0	22.29	9.84	11.99	34.77	-22.78
5				1	0	22.45	10.00	12.15	34.77	-22.62
	23025	700.5	16QAM	1	14	22.11	9.66	11.81	34.77	-22.96
	23023	700.5		8	4	21.51	9.06	11.21	34.77	-23.56
				15	0	21.33	8.88	11.03	34.77	-23.74
				1	0	22.47	10.02	12.17	34.77	-22.6
	23095	707.5	16QAM	1	14	21.95	9.50	11.65	34.77	-23.12
	23075	101.5		8	4	21.47	9.02	11.17	34.77	-23.6
				15	0	21.39	8.94	11.09	34.77	-23.68
		23165 714.5 16QAM		1	0	22.14	9.69	11.84	34.77	-22.93
	23165		16QAM	1	14	22.45	10.00	12.15	34.77	-22.62
	23103	717.5		8	4	21.37	8.92	11.07	34.77	-23.7
				15	0	21.30	8.85	11.00	34.77	-23.77

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



			LTE Ba	nd 12_	Uplink	frequency band	: 699 to 716 Mł	Ηz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.95	10.50	12.65	34.77	-22.12
	23035	701.5	QPSK	1	24	22.99	10.54	12.69	34.77	-22.08
	23033	701.5	UF SK	12	6	22.39	9.94	12.09	34.77	-22.68
				25	0	22.22	9.77	11.92	34.77	-22.85
			– – – –	1	0	22.83	10.38	12.53	34.77	-22.24
	23095	707.5	QPSK	1	24	23.11	10.66	12.81	34.77	-21.96
	23073	101.5	QUSIC	12	6	22.42	9.97	12.12	34.77	-22.65
				25	0	22.34	9.89	12.04	34.77	-22.73
				1	0	22.77	10.32	12.47	34.77	-22.3
	23155	713.5	QPSK	1	24	22.83	10.38	12.53	34.77	-22.24
	23133	715.5	QUSIC	12	6	22.33	9.88	12.03	34.77	-22.74
5				25	0	22.24	9.79	11.94	34.77	-22.83
5				1	0	21.80	9.35	11.50	34.77	-23.27
	23035	701.5	16QAM	1	24	22.33	9.88	12.03	34.77	-22.74
	23033	701.5	TOCAM	12	6	21.42	8.97	11.12	34.77	-23.65
				25	0	21.27	8.82	10.97	34.77	-23.8
				1	0	21.88	9.43	11.58	34.77	-23.19
	23095	707.5	16QAM	1	24	21.87	9.42	11.57	34.77	-23.2
	23073	101.5	TOCAM	12	6	21.54	9.09	11.24	34.77	-23.53
			25	0	21.30	8.85	11.00	34.77	-23.77	
				1	0	21.88	9.43	11.58	34.77	-23.19
	23155	713.5 16QAM	1	24	22.28	9.83	11.98	34.77	-22.79	
	23133	/10.0		12	6	21.33	8.88	11.03	34.77	-23.74
				25	0	21.34	8.89	11.04	34.77	-23.73

t (886-2) 2299-3279

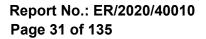
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.



			LTE Ba	nd 12_	Uplink	frequency band	: 699 to 716 MI	Ηz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.87	10.42	12.57	34.77	-22.2
	23060	704	QPSK	1	49	23.38	10.93	13.08	34.77	-21.69
	23000	704	QUSIC	25	12	22.34	9.89	12.04	34.77	-22.73
				50	0	22.35	9.90	12.05	34.77	-22.72
				1	0	22.80	10.35	12.50	34.77	-22.27
	23095	707.5	QPSK	1	49	23.28	10.83	12.98	34.77	-21.79
	23073	101.5		25	12	22.41	9.96	12.11	34.77	-22.66
				50	0	22.43	9.98	12.13	34.77	-22.64
				1	0	23.12	10.67	12.82	34.77	-21.95
	23130	711	QPSK	1	49	22.94	10.49	12.64	34.77	-22.13
	23130	711	QUSIC	25	12	22.40	9.95	12.10	34.77	-22.67
10				50	0	22.23	9.78	11.93	34.77	-22.84
10				1	0	21.70	9.25	11.40	34.77	-23.37
	23060	704	16QAM	1	49	22.39	9.94	12.09	34.77	-22.68
	23000	704	TOCAM	25	12	21.17	8.72	10.87	34.77	-23.9
				50	0	21.38	8.93	11.08	34.77	-23.69
				1	0	21.83	9.38	11.53	34.77	-23.24
	23095	707.5	16QAM	1	49	22.38	9.93	12.08	34.77	-22.69
	23073	101.5	TOCAM	25	12	21.42	8.97	11.12	34.77	-23.65
			50	0	21.43	8.98	11.13	34.77	-23.64	
			1	0	22.01	9.56	11.71	34.77	-23.06	
	23130	711	16QAM	1	49	21.73	9.28	11.43	34.77	-23.34
	23130	/ 1 1		25	12	21.52	9.07	11.22	34.77	-23.55
				50	0	21.28	8.83	10.98	34.77	-23.79

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.





-10.3 Antenna gain (dBi)

			LTE Ba	nd 17_	Uplink	frequency band	: 704 to 716 Mł	Ηz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.72	10.27	12.42	34.77	-22.35
	23755	706.5	QPSK	1	24	22.70	10.25	12.40	34.77	-22.37
	23755	700.5	UFSK	12	6	22.29	9.84	11.99	34.77	-22.78
				25	0	22.27	9.82	11.97	34.77	-22.8
				1	0	22.75	10.30	12.45	34.77	-22.32
	23790	710	QPSK	1	24	22.85	10.40	12.55	34.77	-22.22
	23770	710	UP SIX	12	6	22.05	9.60	11.75	34.77	-23.02
				25	0	22.15	9.70	11.85	34.77	-22.92
				1	0	22.68	10.23	12.38	34.77	-22.39
	23825	713.5	QPSK	1	24	22.83	10.38	12.53	34.77	-22.24
	23023	713.3	UP SK	12	6	22.14	9.69	11.84	34.77	-22.93
5				25	0	22.07	9.62	11.77	34.77	-23
5				1	0	21.87	9.42	11.57	34.77	-23.2
	23755	706.5	16QAM	1	24	21.67	9.22	11.37	34.77	-23.4
	23733	700.5		12	6	21.10	8.65	10.80	34.77	-23.97
				25	0	21.23	8.78	10.93	34.77	-23.84
				1	0	21.95	9.50	11.65	34.77	-23.12
	23790	710	16QAM	1	24	21.89	9.44	11.59	34.77	-23.18
	23770	710	TOQAM	12	6	21.04	8.59	10.74	34.77	-24.03
				25	0	21.29	8.84	10.99	34.77	-23.78
				1	0	21.66	9.21	11.36	34.77	-23.41
	23825	713.5	16QAM	1	24	21.71	9.26	11.41	34.77	-23.36
	23023	/10.0		12	6	21.03	8.58	10.73	34.77	-24.04
				25	0	21.37	8.92	11.07	34.77	-23.7

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司

```
www.sgs.com.tw
```



			LTE Ba	nd 17_	Uplink	frequency band	: 704 to 716 MI	Ηz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.92	10.47	12.62	34.77	-22.15
	23780	709	QPSK	1	49	22.91	10.46	12.61	34.77	-22.16
	23700	109	UFJK	25	12	22.15	9.70	11.85	34.77	-22.92
				50	0	22.34	9.89	12.04	34.77	-22.73
				1	0	22.75	10.30	12.45	34.77	-22.32
	23790	710	QPSK	1	49	22.81	10.36	12.51	34.77	-22.26
	23770	710	UFJK	25	12	22.20	9.75	11.90	34.77	-22.87
				50	0	22.19	9.74	11.89	34.77	-22.88
				1	0	22.71	10.26	12.41	34.77	-22.36
	23800	711	QPSK	1	49	23.22	10.77	12.92	34.77	-21.85
	23000	711	QLOK	25	12	22.27	9.82	11.97	34.77	-22.8
10				50	0	22.17	9.72	11.87	34.77	-22.9
10				1	0	21.82	9.37	11.52	34.77	-23.25
	23780	709	16QAM	1	49	22.26	9.81	11.96	34.77	-22.81
	23700	107		25	12	21.19	8.74	10.89	34.77	-23.88
				50	0	21.34	8.89	11.04	34.77	-23.73
				1	0	21.76	9.31	11.46	34.77	-23.31
	23790	710	16QAM	1	49	21.71	9.26	11.41	34.77	-23.36
	23770	710		25	12	21.32	8.87	11.02	34.77	-23.75
) 711 16QAM	50	0	21.35	8.90	11.05	34.77	-23.72	
			1	0	22.16	9.71	11.86	34.77	-22.91	
	23800		16QAM	1	49	22.13	9.68	11.83	34.77	-22.94
	20000	/ 1 1		25	12	21.25	8.80	10.95	34.77	-23.82
				50	0	21.17	8.72	10.87	34.77	-23.9

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

Report No.: ER/2020/40010 Page 33 of 135

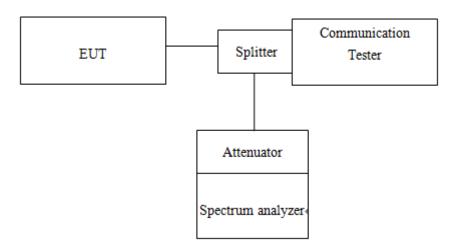


OCCUPIED BANDWIDTH MEASUREMENT 7

7.1 **Standard Applicable**

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power.

7.2 **Test Set-up**



7.3 **Measurement Procedure**

99% &26dB Bandwidth with detector peak

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW= 3 times RBW, -26dBc display line was placed on the screen (or 26dB bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace. Then set RBW to 99% bandwidth, RBW= 1%, VBW= 3 RBW, with span > 2 * Signal BW, set % Power = 99%.

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

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are related to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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



Measurement Equipment Used 7.4

Condu	icted Emission (n	neasured at	antenna po	ort) Test Site	
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY54200716	Apr. 1st, 2020	Mar. 31st, 2021
Radio Communication Analyer	Anritsu	MT8820C	6200995019	Apr. 1st, 2020	Mar. 31st, 2021
DC Power Supply	Agilent	E3640A	MY40000811	Dec. 23th, 2019	Dec. 22nd, 2020
Radio Communication Analyer	Anritsu	MT8815B	6200711454	Apr. 1st, 2020	Mar. 31st, 2021
Attenuator	Mini-Circuit	BW-S10W2+	2	Jan. 2nd, 2020	Jan. 1st, 2021
Splitter	RF-LAMBAD	RFLT2W1G1 8G	11-JSPF412- 018	Jan. 2nd, 2020	Jan. 1st, 2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102EPA	MY2616/2	Jan. 2nd, 2020	Jan. 1st, 2021

7.5 **Measurement Result**

Erog		99% BV	V (MHz)	26 dB B	W (MHz)
Freq. (MHz)	СН	GSM	GPRS	GPRS	GPRS
(11112)		850	850	850	850
824.2	128	0.24593	0.24112	0.315	0.314
836.6	190	0.24378	0.24672	0.315	0.319
848.8	251	0.24426	0.24270	0.319	0.314
Erog		99% BV	V (MHz)	26 dB B	W (MHz)
Freq.	СН	99% BV GSM	V (MHz) GPRS	26 dB B GSM	W (MHz) GPRS
Freq. (MHz)	СН		、 /		、 <i>/</i>
-	CH 512	GSM	GPRS	GSM	GPRS
(MHz)		GSM 1900	GPRS 1900	GSM 1900	GPRS 1900

Freq.		99	9% BW (MF	lz)	26	Hz)	
(MHz)	СН	WCDMA	HSDPA	HSUPA	WCDMA	HSDPA	HSUPA
		V	V	V	V	V	V
826.40	4132	4.10360	4.09760	4.10870	4.684	4.666	4.656
836.60	4183	4.12170	4.11410	4.11290	4.699	4.684	4.672
846.60	4233	4.11880	4.11460	4.10530	4.681	4.675	4.656

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

Report No.: ER/2020/40010 Page 35 of 135



	LTE BAND 5 Channel bandwidth: 1.4MHz									
ſ	Freq.	СН	99% B\	N (MHz)	26 dB BW (MHz)					
	(MHz)	СП	QPSK	16QAM	QPSK	16QAM				
I	824.7	20407	1.0976	1.1007	1.290	1.299				
	836.5	20525	1.0970	1.1012	1.281	1.292				
	848.3	20643	1.0976	1.1004	1.285	1.304				

LTE BAND 5 Channel bandwidth: 3MHz								
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)				
(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
825.5	20415	2.6957	2.7001	2.993	3.001			
836.5	20525	2.6991	2.7027	2.989	2.992			
847.5	20635	2.6994	2.7031	2.982	2.993			

LTE BAND 5 Channel bandwidth: 5MHz								
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)				
(MHz)		QPSK	16QAM	QPSK	16QAM			
826.5	20425	4.4818	4.4938	4.985	5.015			
836.5	20525	4.4984	4.5042	5.026	5.044			
846.5	20625	4.4980	4.4988	5.026	5.017			
Ľ	LTE BAND 12 Channel bandwidth: 1.4MHz							
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
699.7	23017	1.1108	1.1114	1.280	1.267			
707.5	23095	1.0969	1.0946	1.264	1.262			
715.3	23173	1.0979	1.1017	1.291	1.298			

Freq.	СН	99% BW (MHz)		26 dB BW (MHz)		
(MHz)		QPSK	16QAM	QPSK	16QAM	
825.5	20415	2.6957	2.7001	2.993	3.001	
836.5	20525	2.6991	2.7027	2.989	2.992	
847.5	20635	2.6994	2.7031	2.982	2.993	
LTE BAND 5 Channel bandwidth: 10MHz						

Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)		QPSK	16QAM	QPSK	16QAM		
829.0	20450	8.9807	8.9380	9.827	9.859		
836.5	20525	8.9930	8.9559	9.922	9.789		
844.0	20600	8.9632	8.9237	9.861	9.829		
LTE BAND 12 Channel bandwidth: 3MHz							
Freq.	СН	99% BW (MHz)		26 dB B	W (MHz)		
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
700.5	23025	2.6649	2.6987	2.880	2.996		
707.5	23095	2.6674	2.7004	2.899	2.997		
714.5	23165	2.7035	2.7014	2.997	2.994		

LTE BAND 12 Channel bandwidth: 5MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)		QPSK	16QAM	QPSK	16QAM		
701.5	23035	4.4968	4.4929	4.998	4.972		
707.5	23095	4.4873	4.4954	4.869	5.019		
713.5	23155	4.5025	4.5013	5.003	5.007		

Freq.	СН	eq. CH 99% BW (MHz)		26 dB BW (MHz)		
(MHz)		QPSK	16QAM	QPSK	16QAM	
704.0	23060	9.0000	8.9626	9.919	9.853	
707.5	23095	9.0084	8.9510	9.874	9.769	
711.0	23130	8.9778	8.8929	9.829	9.548	
LTE DAND 17 Channel handwidth, 10MUz						

LTE BAND 12 Channel bandwidth: 10MHz

LTE BAND 17 Channel bandwidth: 5MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)		QPSK	16QAM	QPSK	16QAM		
706.5	23755	4.4973	4.4781	5.017	4.820		
710.0	23790	4.4713	4.4749	4.786	4.859		
713.5	23825	4.4985	4.5011	5.061	5.014		

LTE BAND 17 Channel bandwidth: 10MHz							
Freq.	СН	req. 99% BW (MHz)		26 dB BW (MHz)			
(MHz)		QPSK	16QAM	QPSK	16QAM		
709.0	23780	8.9467	8.9305	9.387	9.786		
710.0	23790	8.9282	8.8995	9.546	10.515		
711.0	23800	8.9600	8.8948	9.636	9.403		

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the initis of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be recompted to the full the fully. prosecuted to the fullest extent of the law.

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

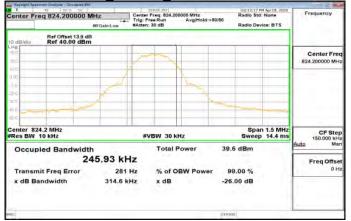
台灣檢驗科技股份有限公司

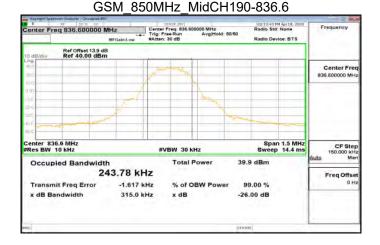
f (886-2) 2298-0488

www.sgs.com.tw



GSM 850MHz LowCH128-824.2

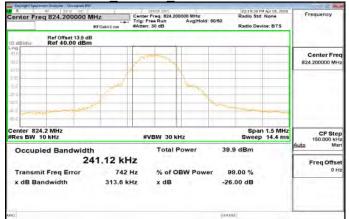




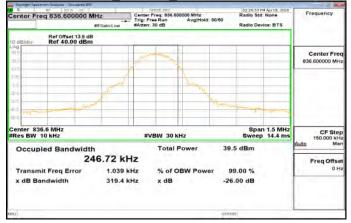
GSM_850MHz_HighCH251-848.8



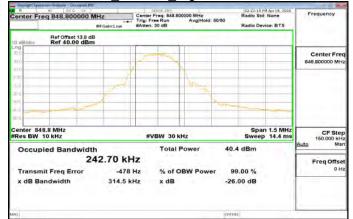
GPRS 850MHz LowCH128-824.2



GPRS 850MHz MidCH190-836.6



GPRS_850MHz_HighCH251-848.8



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

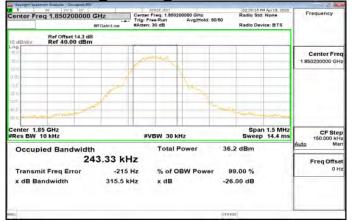
```
f (886-2) 2298-0488
```

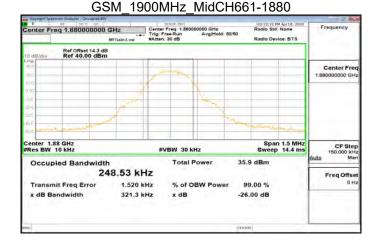
Member of SGS Group

www.sqs.com.tw

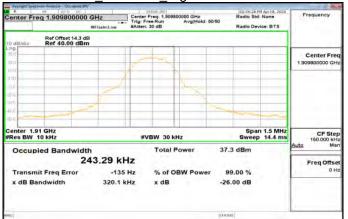


GSM 1900MHz LowCH512-1850.2





GSM 1900MHz HighCH810-1909.8



GPRS 1900MHz LowCH512-1850.2



GPRS 1900MHz MidCH661-1880



GPRS_1900MHz_HighCH810-1909.8



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

www.sqs.com.tw

Member of SGS Group



WCDMA B5 LowCH4132-826.4

Center Fre	eq 826.400000 M	MHZ MFGain:Low	Center Freq: 826.400000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency
10 dB/div	Ref Offset 13.9 dE Ref 30.00 dBm							
				-				Center Freq 826.400000 MHz
	1						1-s-	
40.0 30.0								
enter 82 Res BW			#VBW 15	0 kHz			oan 6 MHz ep 2.6 ms	CF Step 600.000 kH
Occup	Occupied Bandwidth 4,1036 MHz			Total Power 33			100	Auto Man
	Transmit Freq Error -4.399 ki x dB Bandwidth 4.684 Mi		Hz % of OBW Power			9.00 % 5.00 dB		0 H
0					ITAN	05		-

12:45:14 PM Apr 10 Radio Std: None nter Freq 836,600000 MHz Frec Center Freq 00 MHz Ref Offset 13.9 dB Ref 30.00 dBm Center Fre 836.600000 BW 47 kHz Span 6 MH veep 2.6 m CF Ste #VBW 150 kHz Sweep Total Power 33.4 dBm Occupied Bandwidth 4.1217 MHz Freq Offs Transmit Freq Error 11 438 kHz % of OBW Powe 99 00 % 0 F x dB Bandwidth 4.699 MHz x dB -26.00 dB

WCDMA B5 MidCH4183-836.6

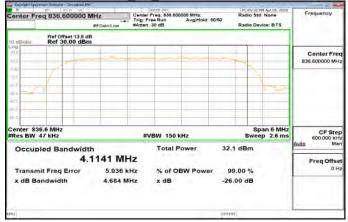
WCDMA B5 HighCH4233-846.6



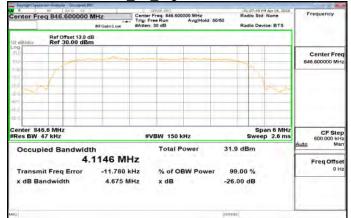
HSDPA B5 LowCH4132-826.4

Supergitt.Spect	traint Analyzer - Occupies BW				
Center Fre	eq 826.400000 M	Trig:	r Freq: 826.400000 MHz Free Run AvgiHold: (n: 30 dB	50/50 Radio Std: None Radio Device: BT	Frequency
10 dBidiy	Ref Offset 13.9 dE Ref 30.00 dBm				
310 100					Center Free 826.400000 MH
19.082 14.0.0 -20.0	T				
-10 0. -10 1	~				24
-60 C					
Center 82 #Res BW			VBW 150 kHz	Span 6 1 Sweep 2.6	ms 600.000 kH
Occup	led Bandwidt	h 0976 MHz	Total Power	32.1 dBm	Auto Mar
Transmit Freq Error -4.135		-4.135 kHz	% of OBW Power		Freq Offse
x dB Ba	andwidth	4.666 MHz	x dB	-26.00 dB	
VENC)				EDEATE	

HSDPA B5 MidCH4183-836.6



HSDPA_B5_HighCH4233-846.6



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

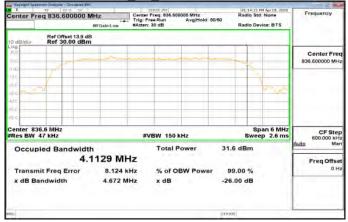
```
f (886-2) 2298-0488
```

www.sgs.com.tw Member of SGS Group



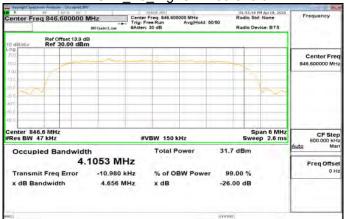
HSUPA B5 LowCH4132-826.4

P Center Fre	NF Sing bc			Center Free, 826.400000 MHz Frig: Free Run AvgiHold: 50/50 Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency		
10 dB/div	Ref Offset 13 Ref 30.00	Ref Offset 13.9 dB Ref 30.00 dBm									
00 70 100			-				-		Center Free 826 400000 MH		
	1							1 mar			
60 60 80 80											
enter 82 Res BW				VBW 150	kHz			pan 6 MHz ep 2.6 ms	CF Ste 600.000 ki		
Occup	eccupied Bandwidth 4,1087 MH						.3 dBm		Auto Mar Freg Offse		
	lit Freq Erro Indwidth	r -1.577 4.656		% of O x dB	BW Powe		9.00 % 5.00 dB		0 H		
						(III) AT	05	-			



HSUPA B5 MidCH4183-836.6

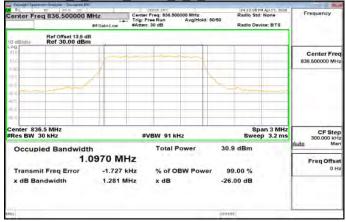
HSUPA_B5_HighCH4233-846.6



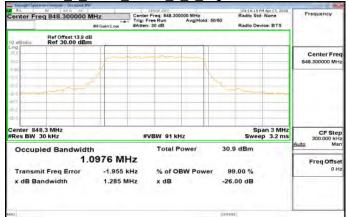
Band5_1_4MHz_QPSK_6_0_LowCH20407-824.7

	ream Arsan/zer - Occupted BW						
Center Fre	ag 824,700000 N	Tri	g: Free Run tten: 30 dB	AvgiHold: 50/5	Radio Std		Frequency
10 dBrdiv	Ref Offset 13.9 dB Ref 30.00 dBm						
10,0 10,0 0 000				-			Center Fred 824.700000 MHz
20.0	-	1	_	1	-		-
-10 0. -4010							
Center 824	4 7 MHz					an 3 MHz	
#Res BW		-	#VBW 91 k	Hz		p 3.2 ms	CF Ste 300.000 kH
Occup	led Bandwidt	1	Total	Power		Auto Man	
	1.0	976 MHz					Freq Offset
Transm	Transmit Freq Error -2.313 kl		% of C	BW Power	99.00 %		0 Hz
x dB Ba	ndwidth	1.290 MHz	x dB		-26.00 dB		
Artika					STATUS		

Band5 1 4MHz QPSK 6 0 MidCH20525-836.5



Band5_1_4MHz_QPSK_6_0_HighCH20643-848.3



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

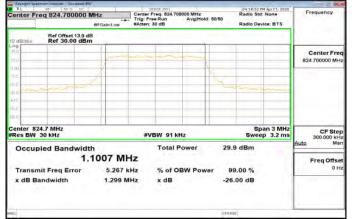
t (886-2) 2299-3279

f (886-2) 2298-0488

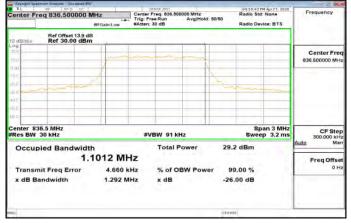
Member of SGS Group



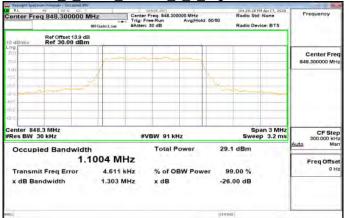
Band5 1 4MHz 16QAM 6 0 LowCH20407-824.7



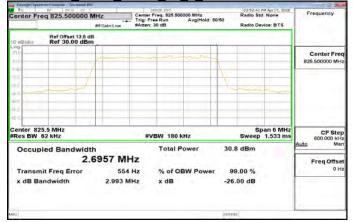
Band5 1 4MHz 16QAM 6 0 MidCH20525-836.5



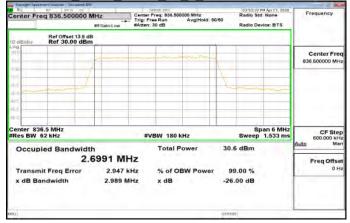
Band5_1_4MHz_16QAM_6_0_HighCH20643-848.3



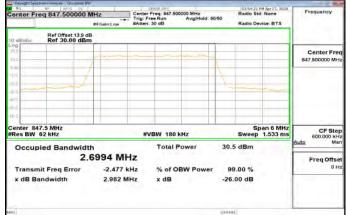
Band5 3MHz QPSK 15 0 LowCH20415-825.5



Band5 3MHz QPSK 15 0 MidCH20525-836.5



Band5_3MHz_QPSK_15_0_HighCH20635-847.5



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

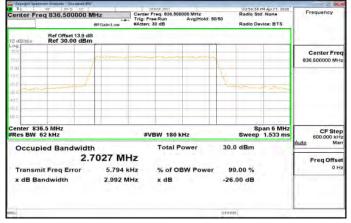
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



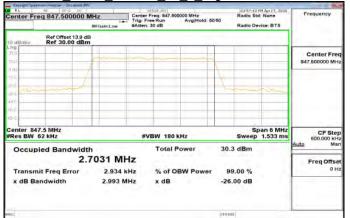
Band5_3MHz_16QAM_15_0_LowCH20415-825.5

Averght Seat	Selen Anunyser - Occupe			SINGLAW?				PM Apr 17, 2020	
	eq 825,50000		Trig: I	Center Freq: 825.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency
o dB/div	Ref Offset 13 Ref 30.00 c								
10.0		10							Center Fred 825 500000 MHz
9.00 (0.0 (9.0)		1				1			_
0 0 0 0									
center 82	5.5 MHz							pan 6 MHz	
Res BW			#	#VBW 180 kHz			Sweep	1.533 ms	CF Step 600.000 kHz Auto Mar
Occupied Bandwidth 2.7001 MHz							1 dBm	1.1.1	Auto Man Freg Offset
			.520 kHz .001 MHz	% of O x dB	BW Power	r 99.00 % -26.00 dB			0 H2
ia)						(III)	05	-	

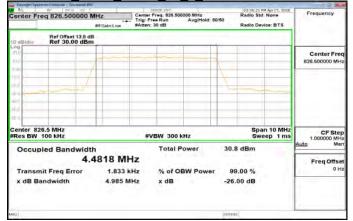
Band5 3MHz 16QAM 15 0 MidCH20525-836.5



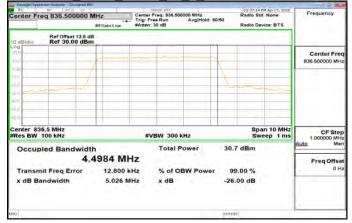
Band5_3MHz_16QAM_15_0_HighCH20635-847.5



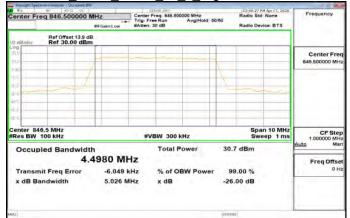
Band5 5MHz QPSK 25 0 LowCH20425-826.5



Band5 5MHz QPSK 25 0 MidCH20525-836.5



Band5_5MHz_QPSK_25_0_HighCH20625-846.5



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

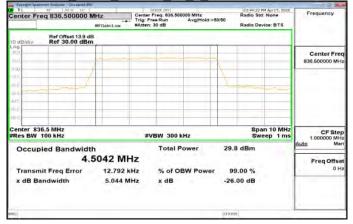
f (886-2) 2298-0488



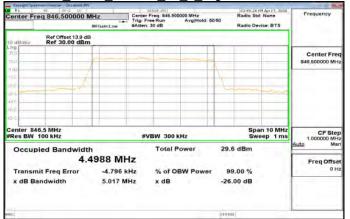
Band5_5MHz_16QAM_25_0_LowCH20425-826.5

Sweet: Seet	Bram Anunyaer - Occup	eed BWY		siner and				PM Apr 17, 2020	
	eq 826,5000	00 MHz	Trig	Center Freq: 826.500000 MHz Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency
10 dB/div	Ref Offset 13 Ref 30.00								
100 100 000									Center Free 826 500000 MH
20.0		1				X			
40.0 40.0									
Center 82	6.5 MU2						- Co	an 10 MHz	
Res BW								eep 1 ms	CF Step 1.000000 MH
Occupied Bandwidth 4.4938 MHz							9 dBm		Freq Offset
		3.695 kHz 5.015 MHz				9.00 % 5.00 dB	ł j	0 H3	
NO I						(ITA)	05	-	

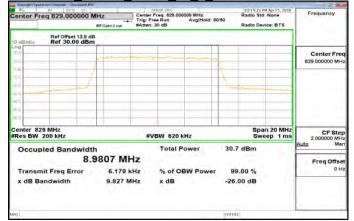
Band5 5MHz 16QAM 25 0 MidCH20525-836.5



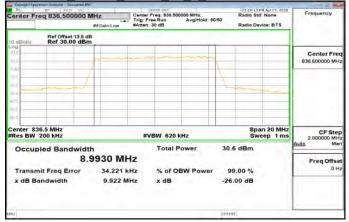
Band5_5MHz_16QAM_25_0_HighCH20625-846.5



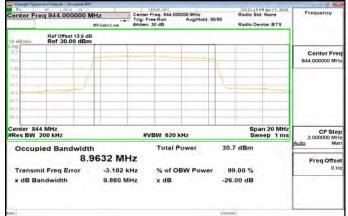
Band5 10MHz QPSK 50 0 LowCH20450-829



Band5 10MHz QPSK 50 0 MidCH20525-836.5



Band5_10MHz_QPSK_50_0_HighCH20600-844



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

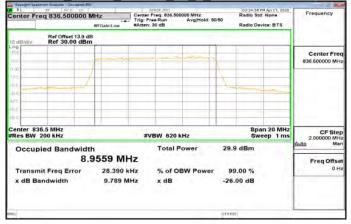
f (886-2) 2298-0488



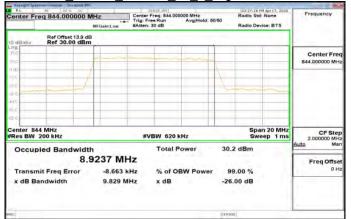
Band5_10MHz_16QAM_50_0_LowCH20450-829

Center Fr	eq 829.000000	MFGain:Low	Trig: I	Center Freq: 829.000000 MHz Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency
10 dBrdiv	Ref Offset 13.9 Ref 30.00 dE								
30,0 30,0 10,0 10,0		-			m		-		Center Fred 829.000000 MHz
20.0		4				1			
00 00 00									
enter 82	9 MHz						Sn	an 20 MHz	
Res BW			#	#VBW 620 kHz				eep 1 ms	CF Ster 2.000000 MH
Occupied Bandwidth 8.9380 MHz			Hz	1,011111 01100			.0 dBm		FreqOffset
		4.849 9.859		% of OBW Power x dB		99.00 % -26.00 dB			0 H
6						inter	05		

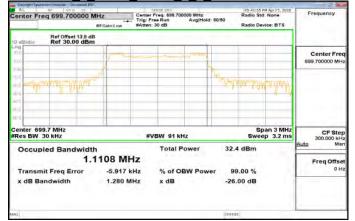
Band5 10MHz 16QAM 50 0 MidCH20525-836.5



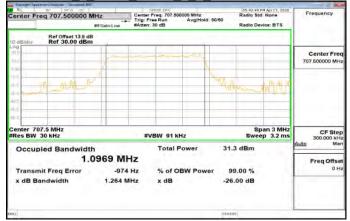
Band5 10MHz 16QAM 50 0 HighCH20600-844



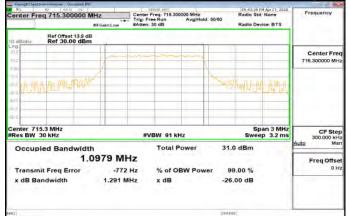
Band12_1_4MHz_QPSK_6_0_LowCH23017-699.7



Band12 1 4MHz QPSK 6 0 MidCH23095-707.5



Band12_1_4MHz_QPSK_6_0_HighCH23173-715.3



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

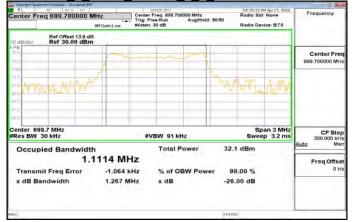
台灣檢驗科技股份有限公司

t (886-2) 2299-3279

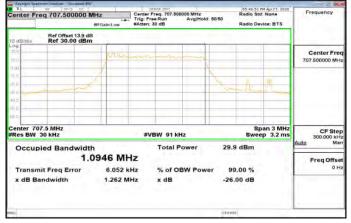
```
f (886-2) 2298-0488
```



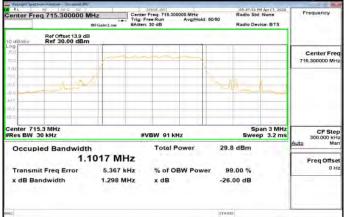
Band12 1 4MHz 16QAM 6 0 LowCH23017-699.7



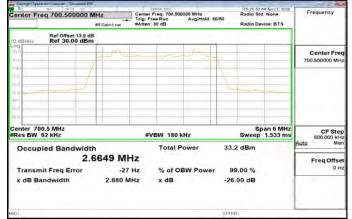
Band12 1 4MHz 16QAM 6 0 MidCH23095-707.5



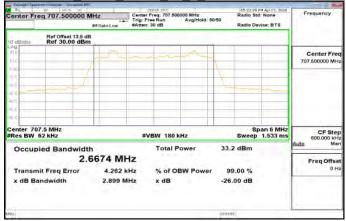
Band12_1_4MHz_16QAM_6_0_HighCH23173-715.3



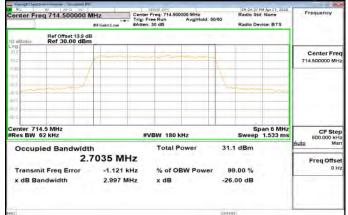
Band12 3MHz QPSK 15 0 LowCH23025-700.5



Band12 3MHz QPSK 15 0 MidCH23095-707.5



Band12_3MHz_QPSK_15_0_HighCH23165-714.5



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

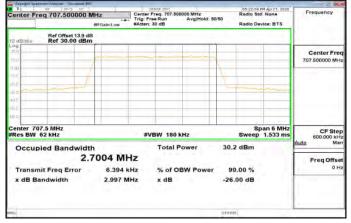
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



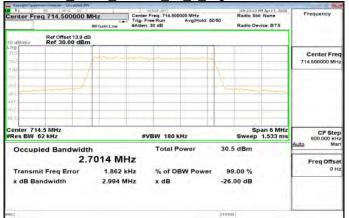
Band12_3MHz_16QAM_15_0_LowCH23025-700.5

Average Spect	International Concurrence BW		SINGLAWI			PM Apr 17, 2020	2 2 2
	eq 700.500000 M	Trig:	Center Freq: 700.500000 MHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB			d: None vice: BTS	Frequency
10 dBrdiv	Ref Offset 13.9 dE Ref 30.00 dBm	1					
310 10.0		/		-			Center Fred 700.500000 MHz
9.00 1011 2010							
40.0							
Center 70	0. F. 1411-					oan 6 MHz	
Res BW		*	#VBW 180 kHz			1.533 ms	CF Step 600.000 kHz
Occup	led Bandwidt	6987 MHz	Total Power 30.2			1 1 1	Auto Man
Transmit Freq Error 2.677 kH		2.677 kHz 2.996 MHz	% of OBW Powe x dB		99.00 % 5.00 dB	- 8	Freq Offset 0 Hi
363				TAT	05		

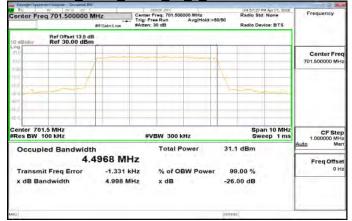
Band12 3MHz 16QAM 15 0 MidCH23095-707.5



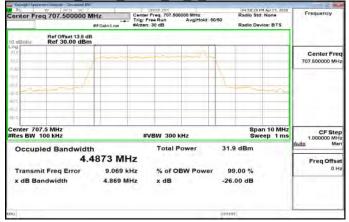
Band12_3MHz_16QAM_15_0_HighCH23165-714.5



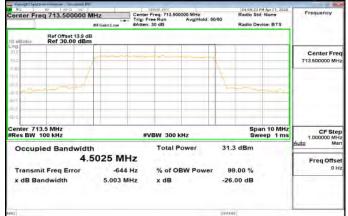
Band12 5MHz QPSK 25 0 LowCH23035-701.5



Band12 5MHz QPSK 25 0 MidCH23095-707.5



Band12_5MHz_QPSK_25_0_HighCH23155-713.5



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

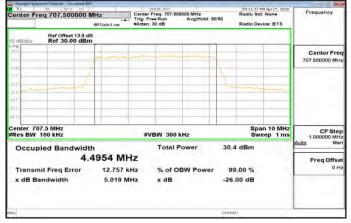
f (886-2) 2298-0488



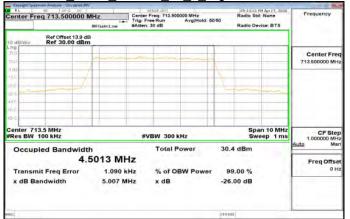
Band12_5MHz_16QAM_25_0_LowCH23035-701.5

Keyeght Spatt	Instant Answer - Occupied BW				05:10:20 PM Ac				
	eq 701,500000 M	Trig:	r Freq: 701.500000 MHz Free Run AvgiHold: n: 30 dB	Radio Std: None Radio Device: BTS		Frequency			
10 dBrdiv									
31,0 10,0 10,0							Center Free 701 500000 MHz		
20.0	- 1			X					
470 10.0									
Center 70			VBW 300 kHz		Span 1 Sweep		CF Step		
Occup	led Bandwidth		Total Power 30.1 dBr			Au	to Mar		
	4.4929 MH Transmit Freq Error -1.446 kl x dB Bandwidth 4.972 Mi		% of OBW Powe x dB		99.00 % -26.00 dB		Freq Offsel 0 Hz		
NO O				ITA 16	1	-			

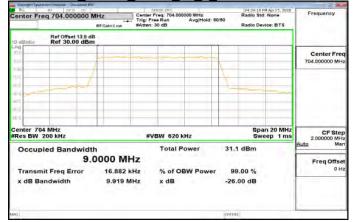
Band12 5MHz 16QAM 25 0 MidCH23095-707.5



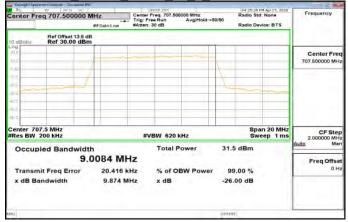
Band12_5MHz_16QAM_25_0_HighCH23155-713.5



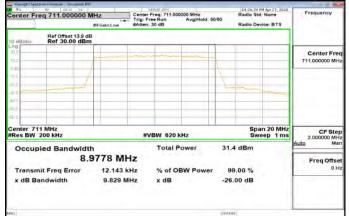
Band12 10MHz QPSK 50 0 LowCH23060-704



Band12 10MHz QPSK 50 0 MidCH23095-707.5



Band12_10MHz_QPSK_50_0_HighCH23130-711



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

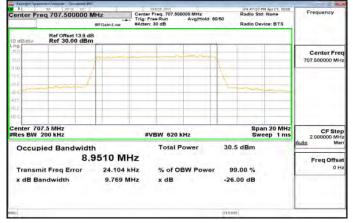
```
f (886-2) 2298-0488
```

Member of SGS Group

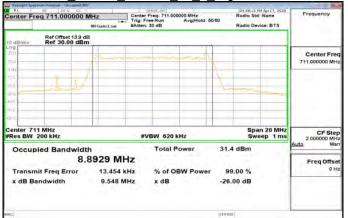
Band12_10MHz_16QAM_50_0_LowCH23060-704

RL i	- BF	1		INST STAT				M Apr 17, 2020	Frequency
Center Fre	eq 704.000000	MHZ			AvgiHold: 5	0/50	Radio Std Radio Dev		Frequency
10 dB/div	Ref Offset 13.9 d Ref 30.00 dBr								
39,0 10,0 10,0					m				Center Freq 704,000000 MHz
x0.0 20.0		-				1			
40 0 40 0									
Center 70	4 MU7						Ena	n 20 MHz	
Res BW			#V	#VBW 620 kHz				ep 1 ms	CF Step 2.000000 MHz
Occup	ied Bandwid	th		Total Power 30.3			.3 dBm		Auto Man
	8.	9626 MH	lz						Freq Offset
	Transmit Freq Error 12.551 k		Hz	% of OI	BW Power	9	9.00 %	. A	0 Ha
x dB Ba	andwidth	9.853 M	Hz	x dB		-26	5.00 dB		
80						TAT	05	-	

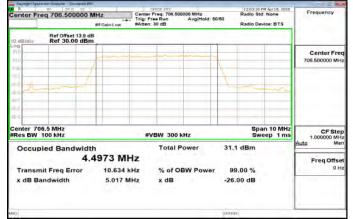
Band12 10MHz 16QAM 50 0 MidCH23095-707.5



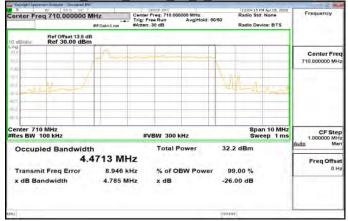
Band12_10MHz_16QAM_50_0_HighCH23130-711



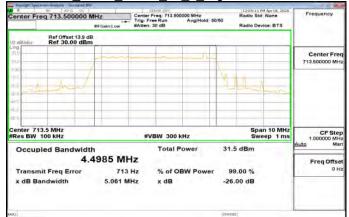
Band17 5MHz QPSK 25 0 LowCH23755-706.5



Band17 5MHz QPSK 25 0 MidCH23790-710



Band17_5MHz_QPSK_25_0_HighCH23825-713.5



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.

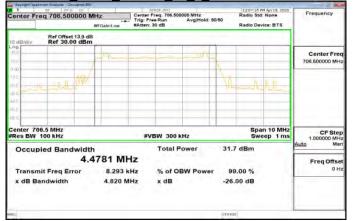
Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

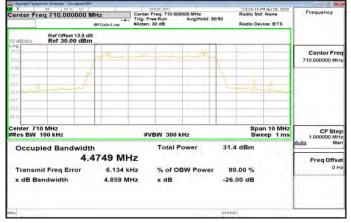
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



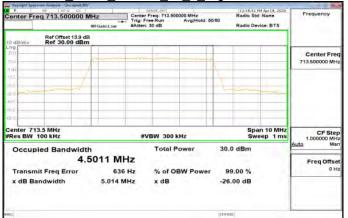
Band17 5MHz 16QAM 25 0 LowCH23755-706.5



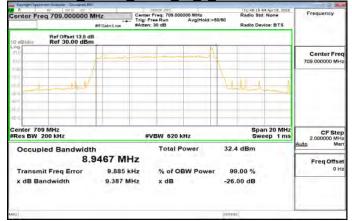
Band17 5MHz 16QAM 25 0 MidCH23790-710



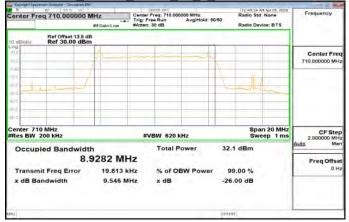
Band17_5MHz_16QAM_25_0_HighCH23825-713.5



Band17 10MHz QPSK 50 0 LowCH23780-709



Band17 10MHz QPSK 50 0 MidCH23790-710



Band17_10MHz_QPSK_50_0_HighCH23800-711



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

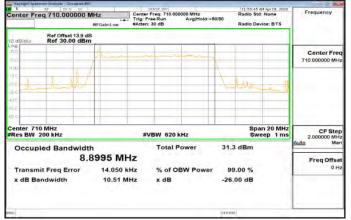
f (886-2) 2298-0488



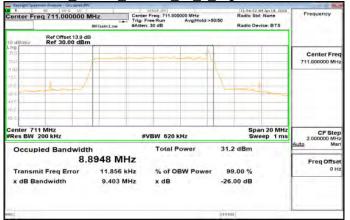
Band17_10MHz_16QAM_50_0_LowCH23780-709

Center Fr	eq 709.00000		Trig:	Center Freq: 709.000000 MHz Trig: Freq: Run Avg Hold: 50/50 #Atten: 30 dB				MA Apr 18, 2028 d: None vice: BTS	Frequency
10 dB/div	Ref Offset 13. Ref 30.00 d						_		
30,0 30,0 10,0 10,0		-					-		Center Freq 709.000000 MHz
0.0						1		-	
0 0 0 0				-					
6D G.									
Res BW				VBW 620	KHZ		Spa	eep 1 ms	CF Step 2.000000 MH
Occup	led Bandwi			Total Power 30.7 dE					Auto Man
8.9305 MH Transmit Freq Error 20.301 k x dB Bandwidth 9.786 M				Hz % of OBW Power			99.00 % -26.00 dB		Freq Offset 0 Hz
no.						ITAT	and l		

Band17 10MHz 16QAM 50 0 MidCH23790-710



Band17_10MHz_16QAM_50_0_HighCH23800-711



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com.tw/Terms-and-Conditions and for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com.tw/Terms-and-Conditions and for electronic issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to IS Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



8 **OUT OF BAND EMISSION AT ANTENNA TERMINALS**

8.1 **Standard Applicable**

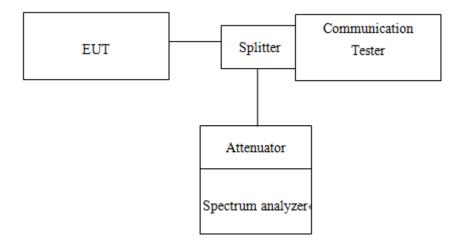
FCC §22.917(a), §24.238(a)

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

FCC §27.53(g)

Compliance for operations in the 600 MHz, 698-746 MHz, 746-758 MHz and the 776-788 MHz band with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

8.2 Test SET-UP



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

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are related to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488

www.sas.com.tw

Member of SGS Group



8.3 **Measurement Procedure**

8.3.1 **Conducted Emission**

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

- To connect Antenna Port of EUT to Spectrum. 1.
- 2. Set RBW = 1MHz & VBW = 1MHz on Spectrum.
- 3. Allow trace to fully stabilize
- 4. Repeat above procedures until all default test channel measured were complete.

8.3.2 **Band Edge**

- To connect Antenna Port of EUT to Spectrum. 1.
- 2. The band edge of low and high channels for the highest RF powers was measured. Setting RBW \geq 1% EBW.
- 3. Allow trace to fully stabilize
- 4. Repeat above procedures until all default test channel measured were complete.

8.4 **Measurement Equipment Used**

Condu	cted Emission (n	neasured a	it antenna p	ort) Test Site	
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY54200716	Apr. 1st, 2020	Mar. 31st, 2021
Radio Communication Analyer	Anritsu	MT8820C	6200995019	Apr. 1st, 2020	Mar. 31st, 2021
DC Power Supply	Agilent	E3640A	MY40000811	Dec. 23th, 2019	Dec. 22nd, 2020
Radio Communication Analyer	Anritsu	MT8815B	6200711454	Apr. 1st, 2020	Mar. 31st, 2021
Attenuator	Mini-Circuit	BW-S10W2 +	2	Jan. 2nd, 2020	Jan. 1st, 2021
Splitter	RF-LAMBAD	RFLT2W1G 18G	11-JSPF412- 018	Jan. 2nd, 2020	Jan. 1st, 2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102EPA	MY2616/2	Jan. 2nd, 2020	Jan. 1st, 2021

8.5 **Measurement Result:**

Refer to next pages.

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

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are relative to so days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



GSM_850MHz_LowCH128-824.2



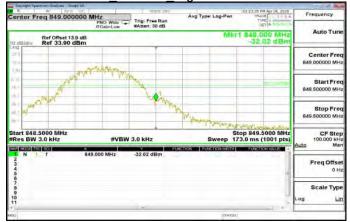




GPRS 850MHz LowCH128-824.2



GPRS_850MHz_HighCH251-848.8



GSM 1900MHz LowCH512-1850.2



GSM_1900MHz_HighCH810-1909.8



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488



GPRS 1900MHz LowCH512-1850.2



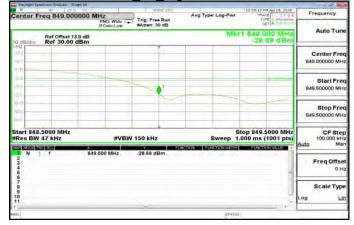
GPRS 1900MHz HighCH810-1909.8



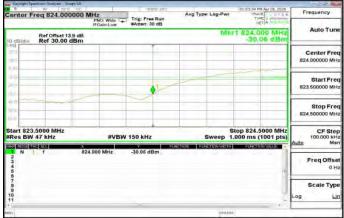
WCDMA B5 LowCH4132-826.4



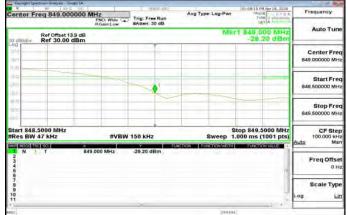
WCDMA_B5_HighCH4233-846.6



HSDPA_B5_LowCH4132-826.4



HSDPA_B5_HighCH4233-846.6



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

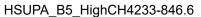
SGS Taiwan Ltd No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號

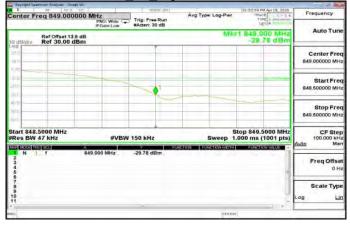
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



HSUPA B5 LowCH4132-826.4







Band5 1 4MHz QPSK 1 0 LowCH20407-824.7



Band5_1_4MHz_QPSK_1_5_HighCH20643-848.3



Band5 1 4MHz QPSK 6 0 LowCH20407-824.7



Band5_1_4MHz_QPSK_6_0_HighCH20643-848.3



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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



Band5_3MHz_QPSK_1_0_LowCH20415-825.5



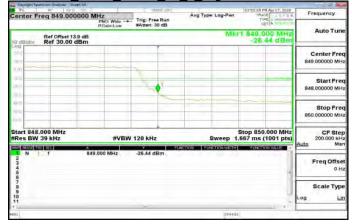
Band5 3MHz QPSK 1 14 HighCH20635-847.5



Band5 3MHz QPSK 15 0 LowCH20415-825.5



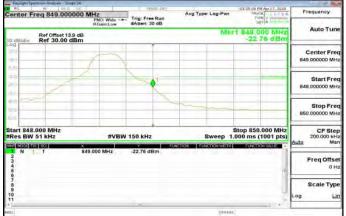
Band5_3MHz_QPSK_15_0_HighCH20635-847.5



Band5 5MHz QPSK 1 0 LowCH20425-826.5



Band5_5MHz_QPSK_1_24_HighCH20625-846.5



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.

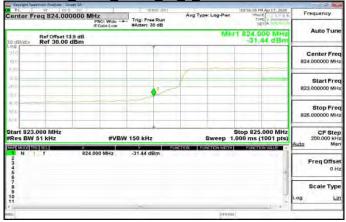
Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

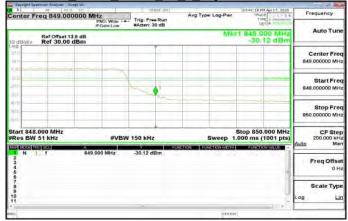
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



Band5_5MHz_QPSK_25_0_LowCH20425-826.5



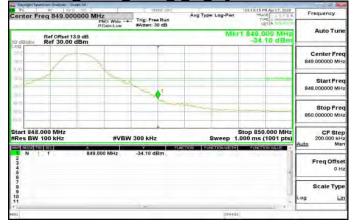
Band5 5MHz QPSK 25 0 HighCH20625-846.5



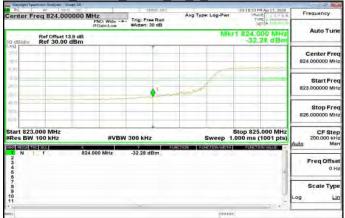
Band5 10MHz QPSK 1 0 LowCH20450-829



Band5_10MHz_QPSK_1_49_HighCH20600-844



Band5 10MHz QPSK 50 0 LowCH20450-829



Band5_10MHz_QPSK_50_0_HighCH20600-844



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

t (886-2) 2299-3279

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司

f (886-2) 2298-0488

Band12 1 4MHz QPSK 1 0 LowCH23017-699.7



Band12_1_4MHz_QPSK_1_5_HighCH23173-715.3



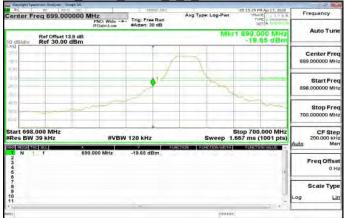
Band12 1 4MHz QPSK 6 0 LowCH23017-699.7



Band12_1_4MHz_QPSK_6_0_HighCH23173-715.3



Band12 3MHz QPSK 1 0 LowCH23025-700.5



Band12_3MHz_QPSK_1_14_HighCH23165-714.5



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

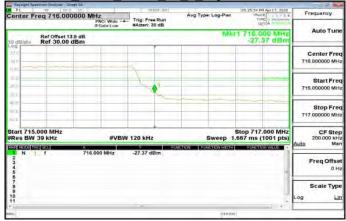
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



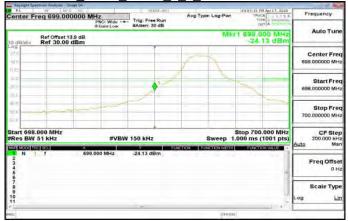
Band12_3MHz_QPSK_15_0_LowCH23025-700.5



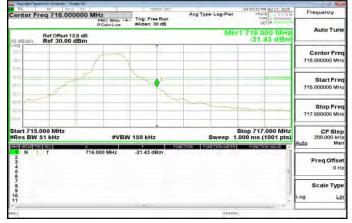
Band12 3MHz QPSK 15 0 HighCH23165-714.5



Band12 5MHz QPSK 1 0 LowCH23035-701.5



Band12_5MHz_QPSK_1_24_HighCH23155-713.5



Band12 5MHz QPSK 25 0 LowCH23035-701.5



Band12_5MHz_QPSK_25_0_HighCH23155-713.5



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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

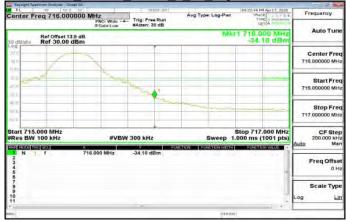
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



Band12_10MHz_QPSK_1_0_LowCH23060-704



Band12 10MHz QPSK 1 49 HighCH23130-711



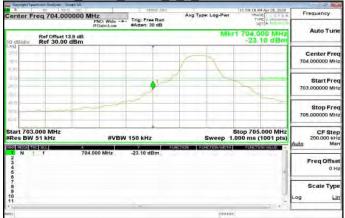
Band12 10MHz QPSK 50 0 LowCH23060-704



Band12_10MHz_QPSK_50_0_HighCH23130-711



Band17 5MHz QPSK 1 0 LowCH23755-706.5



Band17_5MHz_QPSK_1_24_HighCH23825-713.5



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.

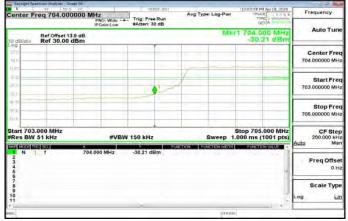
Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

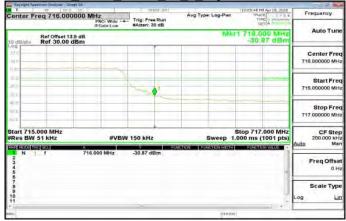
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



Band17_5MHz_QPSK_25_0_LowCH23755-706.5



Band17 5MHz QPSK 25 0 HighCH23825-713.5



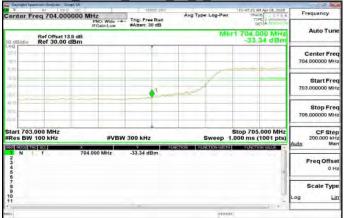
Band17 10MHz QPSK 1 0 LowCH23780-709



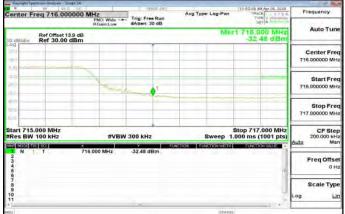
Band17_10MHz_QPSK_1_49_HighCH23800-711



Band17 10MHz QPSK 50 0 LowCH23780-709



Band17_10MHz_QPSK_50_0_HighCH23800-711



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

t (886-2) 2299-3279

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. and offenders may be prosecuted to the fullest extent of the law

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

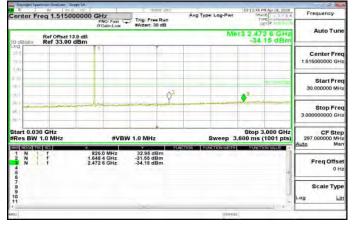
台灣檢驗科技股份有限公司

f (886-2) 2298-0488



Out of Band Emission

30MHz~3GHz_GSM_850MHz_LowCH128-824.2



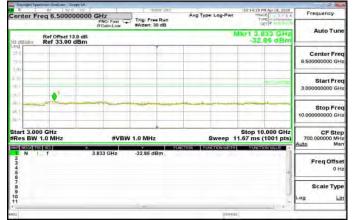
3GHz~10GHz_GSM_850MHz_LowCH128-824.2

									more Analyzer - S	Kay sight Spar
Frequency	PH Apr 18, 2028	TP	: Log-Pwr	Avg Tys	Free Run		Hz PNO: Fast	000000 G		Center Fr
Auto Tune	805 GHz	Ref Offset 13.9 dB Mkr1 3.805 GHz 9 dBidly Ref 33.90 dBm -32.66 dBm								
Center Free 6.500000000 GH										210
Start Fre 3.000000000 GH									A1	E ID IN I
Stop Fre 10.000000000 GH		-							-	
CF Ste 700.000000 MH Auto Ma	0.000 GHz (1001 pts)	1.67 ms	Sweep 1	201004	N.9.9	1.0 MH	#VBW		1.0 MHz	Start 3.00 Res BW
Freq Offse					6 dBm	-32.66	105 GHz	3.8	· 1	N 10345
Scale Typ	J									6 7 8 9 10
		15	TATUS							009

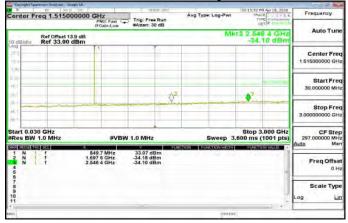
30MHz~3GHz_GSM_850MHz_MidCH190-836.6

Frequency	02-14(05 PH Apr 18, 2020) TRACE 7 8 4 8 TUPE 0ET P	vg Type: Log-Pwr	Trig: Free Run	DE	req 1.51500	B 1			
Auto Tuni	Ref Offset 13.9 dB Mir 2 2.509 8 GH								
Center Free 1.515000000 GH				1					
Start Free 30,000000 MH						4 (p) 6 (p) (n) 1			
Stop Free 3.000000000 GH			X	in the second					
CF Ste 297.000000 MH Auto Ma	Stop 3.000 GHz 00 ms (1001 pts)		1.0 MHz	#VBW	1.0 MHz	Start 0.03 Res BW			
Freq Offse 0 H	FUNCTION WILLTE	HERE DR WORK	32,96 dBm -32,11 dBm -33,75 dBm	837.8 MHz 1.673 2 GHz 2.509 8 GHz		1 N 2 N 3 N 4 5			
Scale Type	J					6 7 8 9 10			
		STATUS				80			

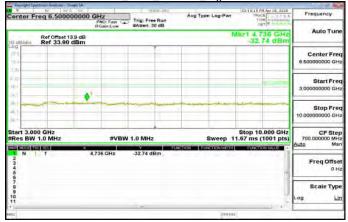
3GHz~10GHz_GSM_850MHz_MidCH190-836.6



30MHz~3GHz_GSM_850MHz_HighCH251-848.8



3GHz~10GHz_GSM_850MHz_HighCH251-848.8



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

t (886-2) 2299-3279

Unless otherwise stated the results structure results in the structure of the other with the structure of the state and structure of the structure of the state and structure of the structure of 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/新北市五股區新北產業園區五工路 134 號 Taiwan I to

台灣檢驗科技股份有限公司

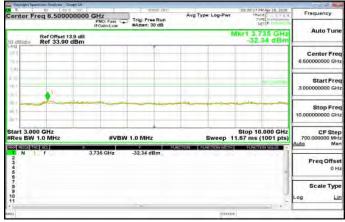
f (886-2) 2298-0488



30MHz~3GHz_GPRS_850MHz_LowCH128-824.2

Center Fre	q 1.51500	0000 GHz PNO: Fast G IFGain Low	Trig: Free Run	Avg Type: Log-Pwr	02:19:58 PM Apr 18, 2028 TRACE 1 X S S TUPE 11-000000 DET P	Frequency	
Ref Offset 13.9 dB. Mir 3 2.472 6 GHz 10 dBids Ref 33.90 dBm33.99 dBm							
200	_	71				Center Free 1.515000000 GH:	
1.41 E (0) M ()			A2		10 Turner	Start Free 30,000000 MH	
й I — — — — — — — — — — — — — — — — — —			in the second			Stop Free 3.000000000 GH	
tart 0.030 Res BW 1		#VB)	V 1.0 MHz	Sweep 3	Stop 3.000 GHz .600 ms (1001 pts)	CF Ste 297.000000 MH Auto Ma	
1 N 2 N 4 5	St. Extendes Extendes			FUNCTION WALLE	Freq Offse		
6 7 8 9 10					J	Scale Type	
				STATU		L	

3GHz~10GHz_GPRS_850MHz_LowCH128-824.2



30MHz~3GHz_GPRS_850MHz__MidCH190-836.6

Any night Spattioner Analyzer - Smatt SA					E_ E_ E
Center Freq 1.51500000	PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	THACE THE SE	Frequency
Ref Offset 13.9 dE	3		MB	13 2.509 8 GHz -33.12 dBm	Auto Tuni
90 214 114 141	11				Center Fre 1 515000000 GH
		A2			Start Fre 30,00000 MH
461 461		Y			Stop Fre 3 000000000 GH
start 0.030 GHz Res BW 1.0 MHz	#VBM	/ 1.0 MHz	Sweep 3	Stop 3.000 GHz 600 ms (1001 pts)	CF Ste 297.000000 Mi Auto Ma
	837.8 MHz 1.673 2 GHz 2.509 8 GHz	33.05 dBm -32.87 dBm -33.12 dBm			Freq Offs 0 F
6 7 8 9 10 11				J	Scale Typ
00			STATUS		

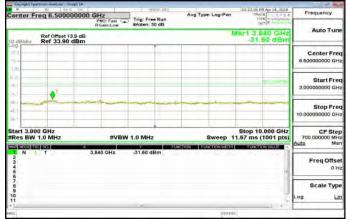
3GHz~10GHz_GPRS_850MHz__MidCH190-836.6

Keynight Spettrizer Analyzer - Singt SA			
Center Freq 6.50000000	PNO: East In Trig. Free Run	Avg Type: Log-Pwr TRUC	PLAT AND ADDRESS OF THE OWNER OF T
Ref Offset 13.9 dB	IFGain:Low #Atten: 30 dB	Mkrt 3.8	40 GHz Auto Tun
00 30 100			Center Fre 6.500000000 GH
			Start Fre 3.00000000 GH
35.1 46.1 /u.t			Stop Fre 10.000000000 GH
Start 3.000 GHz Res BW 1.0 MHz	#VBW 1.0 MHz	Sweep 11.67 ms (Auto Mr
2 3 4 5	3.840 GHz -32.72 dBm	MCTION FUNCTION WOTH FUNCTION	Freq Offs
6 7 8 9 10 11			Scale Typ
¥	-	TRUS	and the second s

30MHz~3GHz_GPRS_850MHz__HighCH251-848.8



3GHz~10GHz_GPRS_850MHz__HighCH251-848.8



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

Unless otherwise stated the results structure results in the structure of the other with the structure of the state and structure of the structure of the state and structure of the structure of 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/新北市五股區新北產業園區五工路 134 號 Taiwan I to

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

Report No.: ER/2020/40010 Page 63 of 135



30MHz~3GHz_GSM_1900MHz_LowCH512-1850.2

Frequency	02:31:16 PH Apr 18, 2020			100002-1011	1		- 10 - 20	B I		
requerey	THRE IN WAR	pe: Log-Pwr	-	rig: Free Run Atten: 30 dB	O Fast ()	p	eq 1.5150	Center Fr		
Auto Tur	1 1.850 6 GHz 29.08 dBm	Mar			ann Low	Ref Offset 14.3 dB Ref 34.30 dBm				
Center Fre 1 515000000 GH			1			ubm	Kei 34.30	24 3		
Start Fre 30.000000 Mi	-									
Stop Fre 3.000000000 GH	ure alle							6. 6.7		
CF Ste 297.000000 Mi Auto Mi	Stop 3.000 GHz 600 ms (1001 pts)	Sweep 3.	theory		#VBW	*	1.0 MHz	tart 0.03 Res BW		
Freq Offs 01				29.08 dBm	GHz	1.850	1	N 1 2 3 4 5		
Scale Typ	J							6 7 8 9 10		
1.5.2			_	-				G		

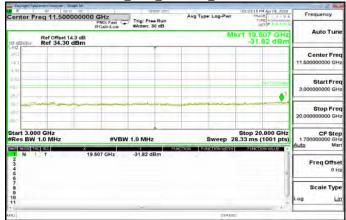
3GHz~10GHz_GSM_1900MHz_LowCH512-1850.2



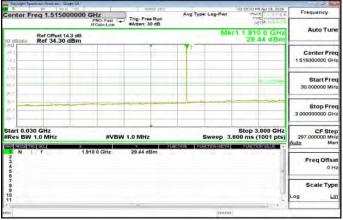
30MHz~3GHz_GSM_1900MHz_MidCH661-1880

enter Freq 1.51500000	PNO: Fast Co	Trig: Free Run	Avg Type: Log-Pwr	62:32:51 PH Apr 18, 2020 IRACE 1 2 3 5 TUPE 11, 2020	Frequency
Ref Offset 14.3 dB	IFGain:Low	#Atten: 30 dB	Ma		Auto Tune
20 24 1 24 1 24 3			1		Center Free 1.515000000 GH
					Start Free 30.000000 MH
					Stop Fre 3.000000000 GH
tart 0.030 GHz Res BW 1.0 MHz	#VBW	1.0 MHz	Sweep 3	Stop 3.000 GHz 600 ms (1001 pts)	CF Ste 297.000000 MH Auto Ma
	1,880 3 GHz	29.32 dBm			Freq Offse
6 7 8 9 10 11				Į	Scale Type
80			TAIL		

3GHz~10GHz_GSM_1900MHz_MidCH661-1880



30MHz~3GHz_GSM_1900MHz_HighCH810-1909.8



3GHz~10GHz_GSM_1900MHz_HighCH810-1909.8

	02:35(20 PM Apr 18, 2028		101, 1991		W Sea Do	R						
Frequency	TVPE P TA	Avg Type: Log-Pwr	g: Free Run tten: 30 dB	PMO: East (-)	11.500000000	center Fred						
Auto Tuni	1 19.575 GHz -31.65 dBm											
Center Free 11.500000000 GH						241 241 143 431						
Start Free 3.000000000 GH	at one					570 (57)						
Stop Fre 20.000000000 GH						187						
	Stop 20.000 GHz 33 ms (1001 pts)	Sweep 28	MHz	#VBW 1.		tart 3.000 G Res BW 1.0						
CF Ster 1.700000000 GH <u>Auto</u> Mar Freq Offse 0 H	.33 ms (1001 pts)	Sweep 28			Hz							
Scale Type	1					5 6 7 8 9 10						
		STATUS	-			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.

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488

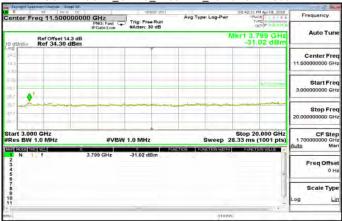
Report No.: ER/2020/40010 Page 64 of 135



30MHz~3GHz GPRS 1900MHz LowCH512-1850.2

Frequency	02-42:10 PH Aur 18, 2020			1 10 10 10 10 10 10 10 10 10 10 10 10 10		G DC P	thorn Analyser - S No. 1901	B. 1	
Frequency	TRACE T RES &	pe: Log-Pwr	Av	Trig: Free Run	Hz NO: Fast	000000 GI	eq 1.5150	enter Fr	
ALC: NO	DET P. I			#Atten: 30 dB	Gain:Low	JE			
Auto Tun	Ref Offset 14.3 dB Mill 1.850 6 GHz 2 dBldsv Ref 34.30 dBm 29.19 dBm								
Center Free			1	1				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1 515000000 GH								43	
								1	
Start Free		-			-		_	-	
30.000000 M		1			-	-	-	0	
		-					-	97	
Stop Free			-					1	
3.00000000 GH					1			8.2	
								-	
CF Step 297.000000 MH	Stop 3.000 GHz 600 ms (1001 pts)	Sweep 3.		1.0 MHz	#VBW			tart 0.03 Res BW	
Auto Ma	FUNCTION WALKE	COLUMN STREET	Solid Book			×	8150	OR MARCELER	
The second second				29.19 dBm	6 GHz	1.850	1	N 1	
Freq Offse	-							345	
Scale Type								6 7 8 9	
								0	
Log Li								1	

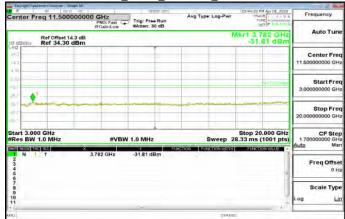
3GHz~10GHz_GPRS_1900MHz_LowCH512-1850.2



30MHz~3GHz_GPRS_1900MHz_MidCH661-1880

Frequency	02:43;33 PH Apr 18, 2028 TRACE TVPE 11, 2028	Type: Log-Pwr		Trig: Free F	Z KO: Fast	p	q 1.5150	enter Fre		
Auto Tune	Ref Offset 14.3 dB Mkr1 1.880 3 GHz 9 dBldtv Ref 34.30 dBm 23.25 dBm									
Center Free 1 515000000 GH						usm				
Start Free 30 000000 MH	5. 1. -									
Stop Free 3.000000000 GH										
CF Step 297.000000 MH Auto Ma	Stop 3.000 GHz 600 ms (1001 pts)	Sweep 3.	BUNG	.o MHz	#VBW		.0 MHz	tart 0.030 Res BW 1		
Freq Offse 0 H				29.25 dBr	3 GHz	1.880	T	N 1 2 3 4 5		
Scale Type								6 7 8 9		

3GHz~10GHz_GPRS_1900MHz_MidCH661-1880



30MHz~3GHz_GPRS_1900MHz_HighCH810-1909.8



3GHz~10GHz_GPRS_1900MHz_HighCH810-1909.8

Frequency	192-45 32 PM Apr 18, 2028 TRACE 1 3 5 5 TVPE PUNYMENT	Avg Type: Log-Pwr	Trig: Free Run	D GHZ	g 11.500000	nter Fr				
Auto Tun	PROTECT THE FRANCIAL Ref Offset 14.3 dB MARYL 30 dB - 31.95 dBm - 31.95 dBm									
Center Fre 11.500000000 GH					Ref 34.30 dBn	43				
Start Fre 3.000000000 GH	At				1					
Stop Fre 20.000000000 GH					-					
CF Ste 1.700000000 GH Auto Ma	Stop 20.000 GHz 33 ms (1001 pts)		.0 MHz	#VBW	.0 MHz	art 3.000 es BW 1				
Freq Offse 0 H			31.95 dBm	4.972 GHz	1	N 1				
Scale Typ	ļ									
		Status:								

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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/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 台灣檢驗科技股份有限公司

f (886-2) 2298-0488

Report No.: ER/2020/40010 Page 65 of 135



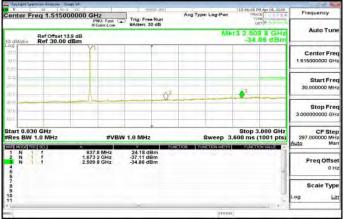
30MHz~3GHz WCDMA B5 LowCH4132-826.4

Center Freq 1.5150000	5 P	Trig: Free Run	Avg Type: Log-Pwr	112-42,18 PM Apr 18, 2010 TRACE 1 2 3 5 TIPE 11 100000 DET P 10000	Frequency
Ref Offset 13.9 c	iB m		Ma	13 2 479 2 GHz -35.02 dBm	
29 27 0 10 0 10 0	Vi				Center Free 1 515000000 GH
		12		1	Start Fre 30.000000 MH
	- Inna and -	a service and there			Stop Fre 3.000000000 GH
tart 0.030 GHz Res BW 1.0 MHz	#VBV	V 1.0 MHz		Stop 3.000 GHz 600 ms (1001 pts)	CF Ste 297.000000 MH Auto Ma
	826.0 MHz 1.652 8 GHz 2.479 2 GHz	23.81 dBm -36.76 dBm -35.02 dBm	ECHON FUNCTION WOTH	FUNCTION WILLIE	Freq Offse
6 7 8 9 10					Scale Typ

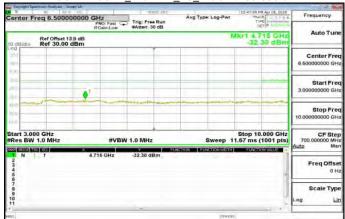




30MHz~3GHz WCDMA B5 MidCH4183-836.6



3GHz~10GHz_WCDMA_B5_MidCH4183-836.6



30MHz~3GHz_WCDMA_B5_HighCH4233-846.6



3GHz~10GHz WCDMA B5 HighCH4233-846.6

5.2	The second second				thioner Annihone - Simpt SA	Lay right Spar					
Frequency	12-49:29 PM Apr 18, 2028 THACE	Avg Type: Log-Pwr	Trig: Free Run	GHz PNO: Fest	eq 6.50000000 G	Center Fr					
Auto Tun	DET		#Atten: 30 dB	IFGain:Low							
	-32.13 dBm										
Center Fre				-		at i					
6,500000000 GH						0.0					
Start Fre				-		(D.D.					
3,000000000 GH					\$1.	10.0					
Stop Fre			and the second s			40.00					
10.00000000 GH						laŭ -					
CF Ste 700.000000 MH	Stop 10.000 GHz .67 ms (1001 pts)	Sweep 11	.0 MHz	#VBW		Start 3.00 #Res BW					
Auto Ma	FUNCTION WALVE	Electron and the second	-32.13 dBm	3.707 GHz		NOS MORE AR					
Freq Offse						2 3 4					
Scale Typ						5 6 7 8 9 10					
Log Li						10 11					
	- 1 m	STATUS				*					

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

Unless onerwise stated in escuts structure results structure to fur the feature only to the sample(s) tested and such sample(s) and retained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比樣品僅保留的公式。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preceduced in the full web of the low. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

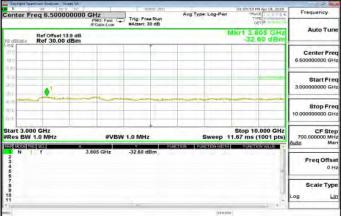
Report No.: ER/2020/40010 Page 66 of 135



30MHz~3GHz_HSDPA_B5_LowCH4132-826.4



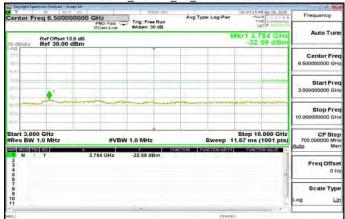




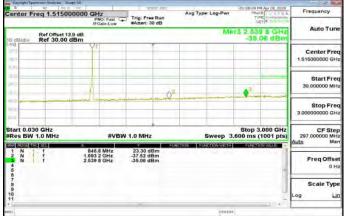
30MHz~3GHz HSDPA B5 MidCH4183-836.6

GHZ PNO Fast	1 1002 1011	Ava Type: Log-Pwr	01:00:51 PH Apr 18, 2020	Frequency				
IFGain Low	Trig: Free Run	KAR (The roll + a)	TUPE IN WINNING	rioquency				
Ref 0ffset 13.9 dB Alt 13.9 dB -35.46 dBm -35.46 dBm								
Y1	_			Center Fre 1 515000000 GH				
	0		1	Start Fre 30,00000 MH				
J. Langerson print	- 141 - 14 - V			Stop Fre 3 000000000 GH				
#VBW				CF Ste 297.000000 MH				
673 2 GHz	23.26 dBm -36.97 dBm -36.46 dBm	UNCTION FUNCTION WOTH	FUNCTION WILLIE	Freq Offse				
				Scale Typ				
	#VEW 8378 MH 609 5 GHz	#VBW 1.0 MHz #VBW 1.0 MHz 837.5 MHz 23.26 dBm 23.3 CHt 23.36 dBm	#VBW 1.0 MHz Sweep 3 #VBW 1.0 MHz Sweep 3 \$23.26 dtm \$73.2 GHz 35.87 dtm \$73.2 GHz 35.87 dtm	-35.46 dBm				

3GHz~10GHz_HSDPA_B5_MidCH4183-836.6



30MHz~3GHz_HSDPA_B5_HighCH4233-846.6



3GHz~10GHz HSDPA B5 HighCH4233-846.6

2.2	01:08:26 PM Apr 18, 2020				These Analyses - Sing	Any sight Spa				
Frequency	TRACE T T S & TIPE IN HUMAN	Avg Type: Log-Pwr	Trig: Free Run #Atten: 30 dB		eq 6.50000	Center Fi				
Auto Tun	Ref Offset 13.9 dB 10 dB/div Ref 30.00 dBm -32.41 dBm									
Center Fre 6.500000000 GH						atd mn				
Start Fre 3.000000000 GH						(DD) _(CD) _(CD)				
Stop Fre 10.000000000 GH	and a strength of the strength		and and a second distance of the second dista	the second	La della reasonatione	alico				
CF Ste 700.000000 MH Auto Ma	Stop 10.000 GHz 1.67 ms (1001 pts)		1.0 MHz	#VBW	1.0 MHz	Start 3.00 #Res BW				
Freq Offse			-32.41 dBm	3.798 GHz	T	T N I				
Scale Typ	1					2 3 4 5 6 7 8 9 10 11				
		TAUS				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.

Unless onerwise stated in escuts structure results structure to first tepor report refer only to the sample(s) result and studie(s) are refained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比准僅保留的文。本報告未經本公司書面許可,不可部的複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preserved to the full we obtain the limit. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

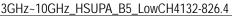
f (886-2) 2298-0488

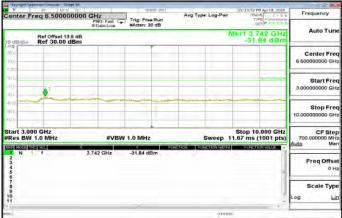
Report No.: ER/2020/40010 Page 67 of 135



30MHz~3GHz HSUPA B5 LowCH4132-826.4

Renter Freq 1.51500000	0 GHz PNO: Fast G	Trig: Free Run	Avg Type: Log-Pwr	OLITIZO PHI Aprild, 20 TRACE T TUPE HUMAN DET P	S & Frequency				
Ref Offset 139 dB Mit 3 2 479 2 GHz 0 dBldtv Ref 30.00 dBm -35.32 dBm									
20 210 000	Q1				Center Fre 1.515000000 GH				
000 000 000		132		3	Start Fre				
40 0 10 0 10 0		Calul	dune for been		Stop Fre 3.00000000 GH				
tart 0.030 GHz Res BW 1.0 MHz	#VBV	V 1.0 MHz	Sweep 3	Stop 3.000 Gi .600 ms (1001 pi	297.000000 MH				
	826.0 MHz 1.662 8 GHz 2.479 2 GHz	22.48 dBm -36.62 dBm -35.32 dBm			Freq Offse				
6 7 8 9 10					Scale Typ				

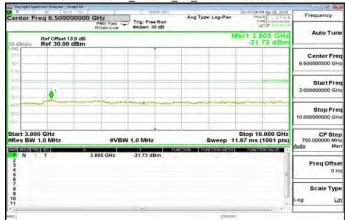




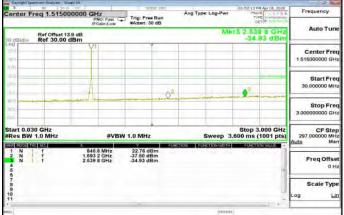
30MHz~3GHz HSUPA B5 MidCH4183-836.6

			_					nam Analyzer - Si	versite Spece	14
Frequency	TRACE T 2 5 6	Log-Pwr	Ave Type	e Run	Trig: Fre	Hz	00000 GH		ter Fre	Cen
Auto Tur	DET P. I			NO dB	#Atten: 3	Gain:Low	IFC	_	_	_
Auto Turk	Ref Offset 13.9 dB Mir 3 2.509 8 GHz div Ref 30.00 dBm -35.23 dBm									lū d
Center Free 1 51500000 GH							Vi			at a
Start Free	-				_					0.00
Stop Free	3			Q2			- Au		-	10.0
3 00000000 GH CF Stej 297 00000 MH	Stop 3.000 GHz 0 ms (1001 pts)	weep 3 f			1.0 MHz	#VBW			t 0.030 s BW 1	
Auto Ma	EUROPORT WILLIE	anawae		in the state	1		X		2003100	
Freq Offse				Bm	23.35 di -36.29 di -35.23 di	8 MHz 2 GHz 8 GHz	1.673	1	222	123456
Scale Typ	Į									078910 101
		STATUS			-					* (00)

3GHz~10GHz_HSUPA_B5_MidCH4183-836.6



30MHz~3GHz_HSUPA_B5_HighCH4233-846.6



3GHz~10GHz HSUPA B5 HighCH4233-846.6

Frequency	01:52:31 PH Apr 18, 2028			10052 JUL	-		107 101	B 1		
Frequency	THACE TO S &	pe: Log-Pwr	4	Trig: Free Run	ND: Fast	p	eq 6.5000	Center Fr		
Auto Tun	Ref Offset 13.9 dB Mkr1 3.763 GHz 10 dB/ds Ref 30.00 dBm -32.67 dBm									
Center Free 6.500000000 GH								23.0 00.0		
Start Free 3.000000000 GH							1	(D.D. 2010) 2010		
Stop Free 10.000000000 GH		aparts 2000		-an gene	un chine	4		4000		
CF Stej 700.000000 MH Auto Ma	Stop 10.000 GHz .67 ms (1001 pts)			I.0 MHz	#VBW		1.0 MHz	start 3.00 Res BW		
Freq Offse	FUNCTION VALUE	LANCE TROOM AND THE	FUNCTION	-32.87 dBm	i3 GHz	3,76	T	2015 020000 000 1 N 1 2 3 4 5		
Scale Type	Į							2 3 4 5 6 7 8 9 10 11		
		TAIUS						1		

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

Unless onerwise stated in escuts structure results structure to first tepor report refer only to the sample(s) result and studie(s) are refained to 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責、同時比准僅保留的文。本報告未經本公司書面許可,不可部的複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders more the preserved to the full we obtain the limit. 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/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

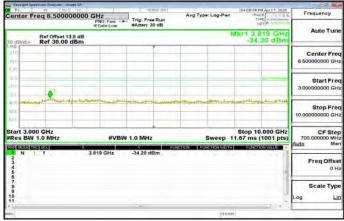
f (886-2) 2298-0488



30MHz~3GHz_Band5_1_4MHz_QPSK_1_0_LowCH20407-824.7

🖌 Kayaighi Spestican Analyzer - Simpt SA					- 2 E
Center Freq 1.51500000	PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	64 07 54 PH Apr 17, 2020 TRACE 1 4 5 6 TUPE HUMAN	Frequency
Ref Offset 13.9 dB	Auto Tune				
200 	*1				Center Free 1.515000000 GH:
000 200		N2		3	Start Free 30,000000 MH
ab m SCD ED L		and a second s	- Harrison Partition	an an an the game at a set	Stop Free 3.000000000 GH
Start 0.030 GHz #Res BW 1.0 MHz	#VBW	1.0 MHz	Sweep 3	Stop 3.000 GHz .600 ms (1001 pts)	CF Step 297.000000 MH Auto Mar
	826.0 MHz 1.649 4 GHz 2.474 1 GHz	27.14 dBm -38.88 dBm -36.59 dBm	ACTION POWLINA WOTH		Freq Offse 0 H
5 6 7 8 9 10				ļ	Scale Type
WEIG			STATUS		

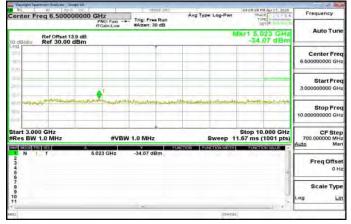
3GHz~10GHz Band5 1 4MHz QPSK 1 0 LowCH20407-824.7



30MHz~3GHz_Band5_1_4MHz_QPSK_1_0_MidCH20525-836.5



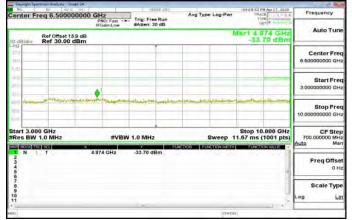
3GHz~10GHz_Band5_1_4MHz_QPSK_1_0_MidCH20525-836.5



30MHz~3GHz_Band5_1_4MHz_QPSK_1_0_HighCH20643-848.3



3GHz~10GHz_Band5_1_4MHz_QPSK_1_0_HighCH20643-848.3



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

t (886-2) 2299-3279

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司

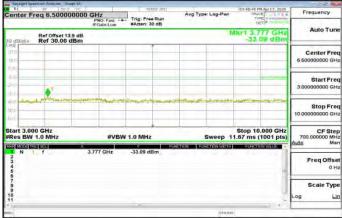
f (886-2) 2298-0488



30MHz~3GHz_Band5_3MHz_QPSK_1_0_LowCH20415-825.5

5.2		- Ten - served at							ticam Analyan - Sin	
Frequency	M Apr 17, 2020	TRA	e: Log-Pwr	Avg T			1z NO: Fast	00000 GH	rq 1.51500	Center Fr
Auto Tune	Ref Offset 13 g dB 10 dB/dy Ref 30.00 dBm -37,13 dBm									
Center Free 1 515000000 GH								×1		200
Start Free 30.000000 MH		.3			Δ^2					(p.p. 240)
Stop Free 3 00000000 GH	and the second second	the state of the s	if is housed	and in	-9-	a with the		le		40.0 60.0 60.0
CF Step 297.000000 MH Auto Mar		600 ms (Sweep 3.	terner 1		1.0 MHz	#VBW		.0 MHz	Start 0.03 #Res BW
Freq Offse 0 H	-4				Bm Bm	26.67 di -39.60 di -37.13 di	0 MHz 0 GHz 5 GHz	1.651	1	1 N 1 2 N 1 3 N 1 4 5
Scale Type	J									6 7 8 9 10
			TAIUS							OGN

3GHz~10GHz_Band5_3MHz_QPSK_1_0_LowCH20415-825.5



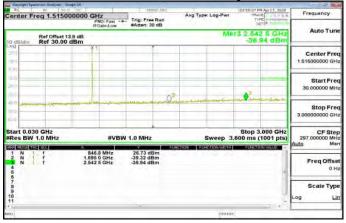
30MHz~3GHz_Band5_3MHz_QPSK_1_0_MidCH20525-836.5

								tticam Analyan - Sin		
Frequency	H Apr 17, 2020	TRAC	g Type: Log-Pwr		Trig: Free	O Fast -	0000 GH	eq 1.51500	enter Fi	
Auto Tuni	Ref Offset 13.9 dB Mirrs 2.509 5 GHz									
	or upm	-30.	-	-			iBm	Ref 30.00 (a dB/div	
Center Free 1 515000000 GH					_	-		-	10 0.	
Start Free					_				(85)	
30,000000 MH		A ²		02		-			0.05	
Stop Fre 3.00000000 GH				- and and	مست الكم	least manifest	and the design of the second		1000	
297.000000 MH	.000 GHz 1001 pts)		Sweep 3		1.0 MHz	#VBW			tart 0.03 Res BW	
Auto Ma	WWW.	EUNDER	HUNCHNAME	EUN	26.87 dE	MHz			RE LOOK IN	
Freq Offse				m	-36.34 dE	0 GHz	1.673 0 2.609 5	1	1 N N 1	
Scale Typ	- 1								789	
Log Li	-				-				10	
			STATUS						0	

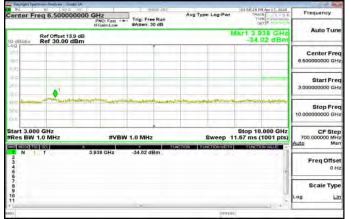
3GHz~10GHz_Band5_3MHz_QPSK_1_0_MidCH20525-836.5



30MHz~3GHz_Band5_3MHz_QPSK_1_0_HighCH20635-847.5



3GHz~10GHz_Band5_3MHz_QPSK_1_0_HighCH20635-847.5



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.

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

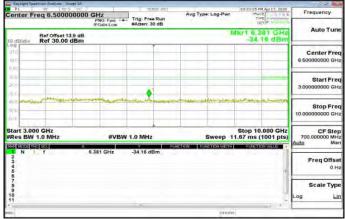
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



30MHz~3GHz_Band5_5MHz_QPSK_1_0_LowCH20425-826.5

	in the second second					ywight Spectrum Analys			
Frequency	03.32;45 PH Apr 17, 2020 TRACE TVPE 11-10-3-6 DFT P	Avg Type: Log-Pwr	rig: Free Run	PNO: Fast	15000000 GH	ter Freq 1.5			
Auto Tune	IFGainLow #Atten: 30 dB 0017 000000 Ref Offset 13.9 dB 05 05 Hz 10 dB/dw Ref 30.00 dBm 37.39 dBm 37.39 dBm								
Center Freq 1 515000000 GHz				1	×1				
Start Freq 30.000000 MHz			A2						
Stop Freq 3 00000000 GHz	and and a second second	the control and a start processing	and a star	Alle Ja - Jugeton		an a			
CF Step 297.000000 MHz Auto Man	Stop 3.000 GHz 600 ms (1001 pts)	Sweep 3.		#VBW	z	t 0.030 GHz s BW 1.0 MHz			
Freq Offset 0 Hz			26.14 dBm 38.98 dBm 37.39 dBm	6.0 MHz 3 0 GHz 9 5 GHz	1.663	N			
Scale Type	ļ								
		STATUS							

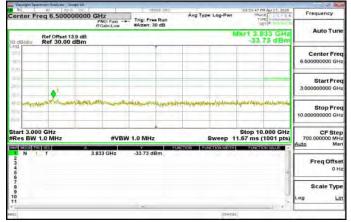
3GHz~10GHz_Band5_5MHz_QPSK_1_0_LowCH20425-826.5



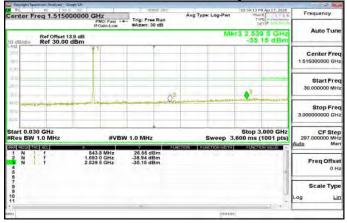
30MHz~3GHz_Band5_5MHz_QPSK_1_0_MidCH20525-836.5

Karywight Spectru	He Analyzer - Singe	154			03 23 29 PH Apr 17, 2020	
Center Free		PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	THACE THE PARTY, TOTAL	
	tef Offset 13.9	IFGain:Low	Auto Tur			
	tef 30.00 dl				-36.63 dBm	-
20.0		81				Center Fre 1 515000000 GH
(p.p. 					3	Start Fre 30.000000 MH
000 <u>(</u>) 900		and the second sec	- Contraction	and the second s		Stop Fre 3.000000000 GH
Start 0.030 (Res BW 1.)		#VBV	1.0 MHz	Sweep 3	Stop 3.000 GHz 600 ms (1001 pts)	297.000000 MH
NOT ALLOW MADE	20			No TON BEAMING THE	FUNCTION WILL/E	Auto Ma
1 N 1		834.9 MHz 1.673.0 GHz 2.509.5 GHz	26.86 dBm -39.94 dBm -36.63 dBm			Freq Offse
7 8 9 10 11						Scale Typ
*				STATU		

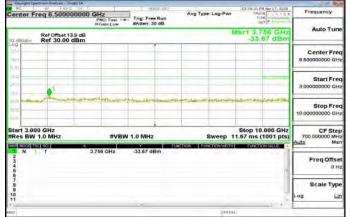
3GHz~10GHz_Band5_5MHz_QPSK_1_0_MidCH20525-836.5



30MHz~3GHz_Band5_5MHz_QPSK_1_0_HighCH20625-846.5



3GHz~10GHz_Band5_5MHz_QPSK_1_0_HighCH20625-846.5



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.

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



30MHz~3GHz_Band5_10MHz_QPSK_1_0_LowCH20450-829

E 2 2		1.15.1						thiom Analyzer - Se	Reputation Spect
Frequency	DET P	TH	vg Type: Log-Pwr			1z NO: Fast	p	eq 1.5150	
Auto Tune	Ref Offset 13.9 dB Mit 13 2 487 0 GHz g dBidsy Ref 30.00 dBm - 35.82 dBm								
Center Free 1 515000000 GH:							¥1	_	9g 30.0 100
Start Free 30,000000 MH		1		13					
Stop Free 3.000000000 GH	and the second		and the paper of the other	lo real la come de la c	10000-00		li-		
CF Step 297.000000 MH Auto Mar	3.000 GHz (1001 pts)	3,600 ms		1 200	1.0 MHz	#VBW		1.0 MHz	tart 0.030 Res BW 1
Freq Offset 0 Hz				3m 3m	26.21 d8 -38.38 d8 -35.82 d8	0 MHz 0 GHz 0 GHz	1.658	1	1 N 1 2 N 1 4 5
Scale Type	Į								6 7 8 9 0
		15	STATUS						0

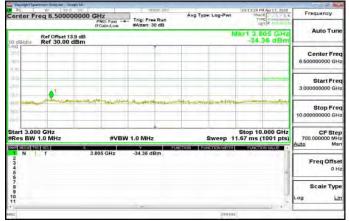
3GHz~10GHz_Band5_10MHz_QPSK_1_0_LowCH20450-829



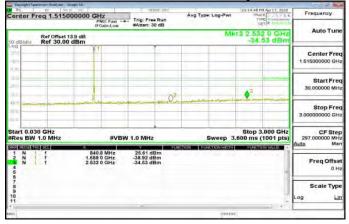
30MHz~3GHz_Band5_10MHz_QPSK_1_0_MidCH20525-836.5

E 2 2					ust and				AZ PRESC	n Ainaliyane -			141
Frequency	02-12(05 PH Apr 17, 2020 IRACE 1 5 5 5 TVPE HUMMAN		Avg Type: Log-Pwr		Trig: Free Run #Atten: 30 dB		PNO: Fast						
Auto Tun	8 5 GHz 12 dBm	13 2.50	Mil	-	0 dB	#Atten: 3	sin:Low			of Offset			
Center Free 1.515000000 GH	12 000	-30.			1			¥1	0 dBm	ef 30.0	R	3./dzv	atri atri
Start Fre 30.000000 MH	in monge												(0.0) (0.0) (0.0)
Stop Fre 3.00000000 GH	an and an	- Rome	- Farmahada	-	S	4		-					
CF Ste 297.000000 MH Auto Ma		600 ms (Sweep 3.	steps	-	1.0 MHz	#VBW			MHz	1.0	t 0.0 s BV	Re
Freq Offse					Bm	26.77 di -38.61 di -36.12 di	GHz	831.9 1.673 0 2.509 5			1	222	
Scale Typ	J												6 7 8 9 10
			TATUS										-

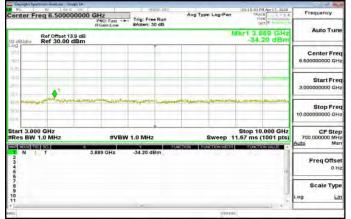
3GHz~10GHz_Band5_10MHz_QPSK_1_0_MidCH20525-836.5



30MHz~3GHz_Band5_10MHz_QPSK_1_0_HighCH20600-844



3GHz~10GHz_Band5_10MHz_QPSK_1_0_HighCH20600-844



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

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

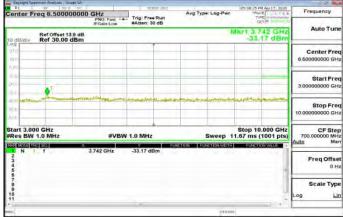
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



30MHz~3GHz_Band12_1_4MHz_QPSK_1_0_LowCH23017-699.7

							pastnom Analyzar	
Frequency	TRACE T S S	Avg Type: Log-Pwr		Trig Free	PNO: Fast +#	5000000	Freq 1.515	
Auto Tune	2.099 1 GHz -37.94 dBm	Mit	iQ dB	#Atten: 3	IFGain Low	et 13.9 dB 00 dBm	Ref Offset Ref 30.0	10 dB/drv
Center Free 1.515000000 GH:						*1		200 100
Start Free 30.000000 MH:		3		**				(0.0) 24(0) (0.1)
Stop Free 3.000000000 GH		the second se	وتوجعون	milt		an lettered	Charles and the second second	ahim area
CF Step 297.000000 MHz Auto Mar	Stop 3.000 GHz 10 ms (1001 pts)	Sweep 3.		V 1.0 MHz	#VBW		/ 1.0 MHz	Start 0.0 #Res BV
Freq Offset 0 Hz			8m 8m	26.73 da -40.48 da -37.94 da	598.3 MHz 599 4 GHz 599 1 GHz	1.3	11	1 2 N N N 4 5 6
Scale Type	ļ							5 7 8 9 10 11
-		STATUS						100

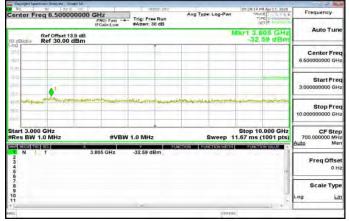
3GHz~10GHz_Band12_1_4MHz_QPSK_1_0_LowCH23017-699.7



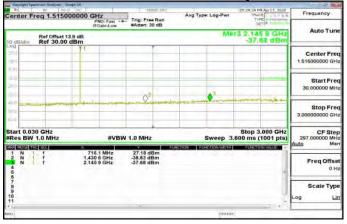
30MHz~3GHz_Band12_1_4MHz_QPSK_1_0_MidCH23095-707.5

5.2			_		_		ncen Analyzer - S	ight Spects	
Frequency	d5:38:55 PH Apr 17, 2020 WY 18408 1 5 5 TUPE 11		Avg Type	Trig: Free Run	PNO Fast -	000000 G		er Fre	Cent
Auto Tune	122 5 GHz 38.70 dBm	Mars	_	#Atten: 30 dB	IFGain:Low	13.9 dB	Ref Offset 1 Ref 30.00		in de
Center Fre 1.515000000 GH						*1			nm
Start Fre 30,000000 MH	See Transfer			12					(DD) (DD) (00)
Stop Fre 3 00000000 GH	and the second sec	and a start of the	a she can not	and the second second	and the main			- anti-arrest	inn sobo
CF Ste 297.000000 MH Auto Ma	p 3.000 GHz ns (1001 pts)	eep 3.6		I.O MHz	#VBW		.0 MHz	0.030 BW 1.	Res
Freq Offse				27.61 dBm -39.25 dBm -38.70 dBm	07.2 MHz 15 0 GHz 22 5 GHz	1,418	ţ	NNN	1 2
Scale Typ									6 7 8 9 10
		TRUE							10

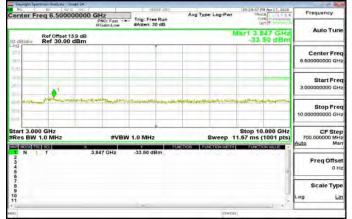
3GHz~10GHz_Band12_1_4MHz_QPSK_1_0_MidCH23095-707.5



30MHz~3GHz_Band12_1_4MHz_QPSK_1_0_HighCH23173-715.3



3GHz~10GHz_Band12_1_4MHz_QPSK_1_0_HighCH23173-715.3



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

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

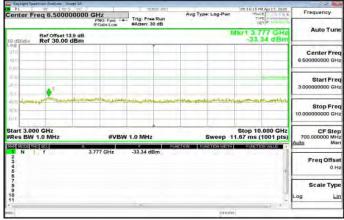
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



30MHz~3GHz_Band12_3MHz_QPSK_1_0_LowCH23025-700.5

e 2 🖬	and the second second second second				Analyzer - Simpt SA	
Frequency	19408 11 10 PH Apr 17, TOLD 19408 1 8 5 6 1920 11 10 10 10	Avg Type: Log-Pwr		PNO: Fast	1.515000000 G	Center Fre
Auto Tune	3 2.101 5 GHz -37.85 dBm	Mit	#Atten: 30 dB	-Gain:Low	of Offset 13.9 dB	O dB/dry
Center Fred 1 515000000 GHz					¥†	20.0
Start Free 30.000000 MHz	111 T	3	1			(D)D 24(0)
Stop Free 3.00000000 GH		and the second country			were and the second	ann planaith
CF Step 297.000000 MHz Auto Mar	Stop 3.000 GHz 00 ms (1001 pts)	Sweep 3.	I.0 MHz	#VBW	MHz	Start 0.030 Res BW 1
Freq Offset 0 Hz			27.06 dBm -40.52 dBm -37.86 dBm	3 MHz 0 GHz 5 GHz	698 1,401	1 N 1
Scale Type	ļ					6 7 8 9 10
		STATUS				00

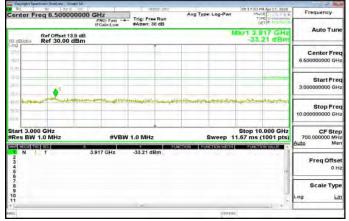
3GHz~10GHz_Band12_3MHz_QPSK_1_0_LowCH23025-700.5



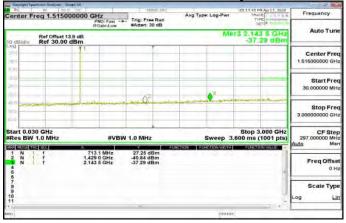
30MHz~3GHz_Band12_3MHz_QPSK_1_0_MidCH23095-707.5

					the Appenticiant Americane - 5	
Frequency	THACE THE SEA	Avg Type: Log-Pwr	Trig: Free Run	PNO Fast	r Freq 1.5150	Cente
Auto Tun	3 2.122 5 GHz -38.75 dBm	Mar	#Atten: 30 dB	IFGain:Low	Ref Offset 1	10 dB/
Center Fre 1 515000000 GH				*1		20.0
Start Fre 30 000000 MH	an to the second	3	12			(0.0) (0.0) (0.1)
Stop Fre 3.00000000 GH	a graan all man gebland water	the street war the	and the suma	in his make - ar		
CF Ste 297.000000 MH Auto Ma	Stop 3.000 GHz 500 ms (1001 pts)	Sweep 3.6	1.0 MHz	#VB1	0.030 GHz BW 1.0 MHz	
Freq Offse	FUNCTION MUDE	ICTION FUNCTION WOTH	27.60 dBm -39.30 dBm -38.75 dBm	707.2 MHz 1.415 0 GHz 2.122 5 GHz		1 N N N N N N N N N N N N N N N N N N N
Scale Typ	Į					6 7 8 9 10
		TAILS				00

3GHz~10GHz_Band12_3MHz_QPSK_1_0_MidCH23095-707.5



30MHz~3GHz_Band12_3MHz_QPSK_1_0_HighCH23165-714.5



3GHz~10GHz_Band12_3MHz_QPSK_1_0_HighCH23165-714.5



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.

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

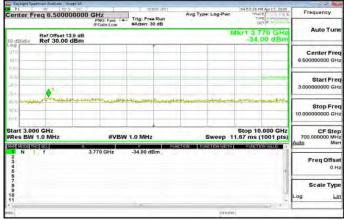
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



30MHz~3GHz_Band12_5MHz_QPSK_1_0_LowCH23035-701.5



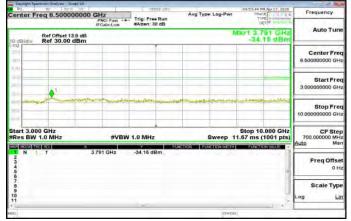
3GHz~10GHz_Band12_5MHz_QPSK_1_0_LowCH23035-701.5



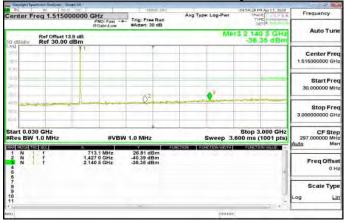
30MHz~3GHz_Band12_5MHz_QPSK_1_0_MidCH23095-707.5

				m'SA.	Spectrum Analyzer - Se	
Frequency	CH-53105 PH Apr 17, 2020 TRACE	Avg Type: Log-Pwr	Trig: Free Run	PNO: Fast ++	Freq 1.5150	Cente
Auto Tune	3 2 122 5 GHz -37.57 dBm	Mar	#Atten: 30 dB	IFGain:Low 9 dB Bm	Ref Offset 13 Ref 30.00	10 08/
Center Fre 1 515000000 GH				Ť		20.0
Start Fre 30,000000 MH	0r - r.	3	22			(DD) (0.0)
Stop Fre 3.00000000 GH	and the second	and the second	and Rold and		lone an argue and	ab co Sci Di Epi Di
CF Ste 297.000000 MH Auto Ma	Stop 3.000 GHz 500 ms (1001 pts)	Sweep 3.6	1.0 MHz	#VBV	030 GHz W 1.0 MHz	
Auto Ma Freq Offse 0 H	FUNCTION WOLDE	ICTION FUNCTION WRITE	27.08 dBm -38.50 dBm -37.57 dBm	704.2 MHz 1,415 0 GHz 2,122 5 GHz		1 2 N N N N N N N N N N N N N N N N N N
Scale Typ	ļ					6 7 8 9 10
		STATUS				ec.

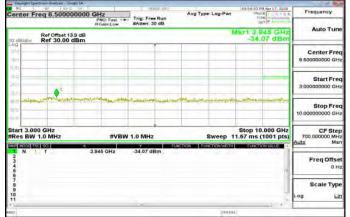
3GHz~10GHz_Band12_5MHz_QPSK_1_0_MidCH23095-707.5



30MHz~3GHz_Band12_5MHz_QPSK_1_0_HighCH23155-713.5



3GHz~10GHz_Band12_5MHz_QPSK_1_0_HighCH23155-713.5



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.

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



30MHz~3GHz_Band12_10MHz_QPSK_1_0_LowCH23060-704

5.2					Faryaight Spectrum Analyzer - Simpt
Frequency	Avg Type: Log-Pwr		Trig: Free Run	PNO: Fast	enter Freq 1.515000
Auto Tun		MB	#Atten: 30 dB		Ref Offset 13.9 Ref 30.00 dE
Center Fred 1 515000000 GH:				1	94 370 1910
Start Free 30,000000 MH	(3) et al and	3	-02		
Stop Free 3.000000000 GH	and the second s	and the second	- Lagrandaria		nn interior and
CF Step 297.000000 MH Auto Mar	Stop 3.000 GHz 500 ms (1001 pts)	Sweep 3.	1.0 MHz	#VBW	tart 0.030 GHz Res BW 1.0 MHz
Freq Offse 0 H		CTOP FOR IDAWAR	26.59 dBm -39.00 dBm -37.42 dBm	701.2 MHz 1.408 0 GHz 2.112 0 GHz	
Scale Type	1				4 5 6 7 8 9 0
		TAUS			0

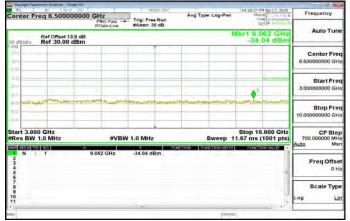
3GHz~10GHz_Band12_10MHz_QPSK_1_0_LowCH23060-704



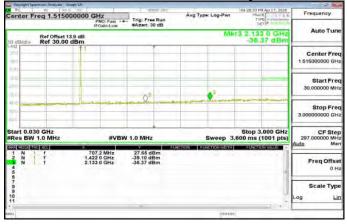
30MHz~3GHz_Band12_10MHz_QPSK_1_0_MidCH23095-707.5

Fayaight Spectrum Analyzer - Singe	154				E 2 1
Center Freq 1.515000	PNO: Fast -	Trig: Free Run	Avg Type: Log-Pwr		Frequency
	IFGain:Low	#Atten: 30 dB	Ma	DET P 100 M 100	Auto Tune
Ref Offset 13.9 Ref 30.00 de				-36.51 dBm	
2310	*1				Center Free 1.515000000 GH
n,m					Start Free
200		02	3		30,00000 MH
40.07		Angel Of a share been			Stop Fre 3.00000000 GH
Start 0.030 GHz #Res BW 1.0 MHz	#VBW	1.0 MHz	Sweep 3.	Stop 3.000 GHz 600 ms (1001 pts)	CF Ste 297.000000 MH
1206 (12010) (1201 (2001 (2001 (2001			BORDER BRANCH	EU/ArticeWalks	Auto Ma
1 N 1 f 2 N 1 f 4 6	704.2 MHz 1.415 0 GHz 2.122 5 GHz	27.00 dBm -39.30 dBm -36.51 dBm			Freq Offse 0 H
6 7 8 9 10 11				Į	Scale Type
1		-	TAIUS		

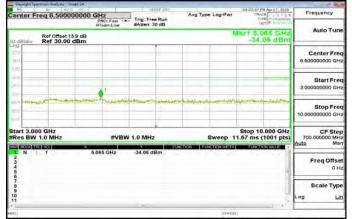
3GHz~10GHz_Band12_10MHz_QPSK_1_0_MidCH23095-707.5



30MHz~3GHz_Band12_10MHz_QPSK_1_0_HighCH23130-711



3GHz~10GHz_Band12_10MHz_QPSK_1_0_HighCH23130-711



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

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

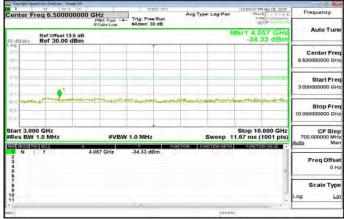
台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488



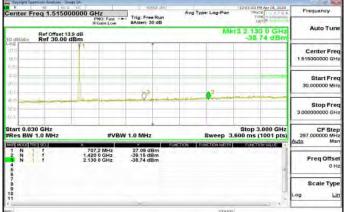
30MHz~3GHz_Band17_5MHz_QPSK_1_0_LowCH23755-706.5

e. 2 🖬	and the second second						ethione Analyzan - S	Any night Space
Frequency	Avg Type: Log-Pwr			Trig: Free	PNO: Fast	000000 G	reg 1.5150	Center Fr
Auto Tune	2.110 5 GHz -37.72 dBm	Mar	dB	#Atten: 30	FGain:Low	3.9 dB	Ref Offset 1 Ref 30.00	10 dB/dtv
Center Freq 1 515000000 GHz						¥1		210 000
Start Free 30.000000 MHz		3		1.2				(p.p. 200)
Stop Free 3.00000000 GH		and the second s	a de la composition de la comp	and the		on the second	harmour	100
CF Step 297.000000 MHz Auto Mar	Stop 3.000 GHz 00 ms (1001 pts)	Sweep 3.	PON	1.0 MHz	#VBW		1.0 MHz	Start 0.030 #Res BW
Freq Offset 0 Hz			m	27.38 dB -39.46 dB -37.72 dB	4.2 MHz 3.0 GHz 3.5 GHz	1.413	ţ	1 N 1 2 N 1 4 5
Scale Type	Į							6 7 8 9 10
		STATUS						100

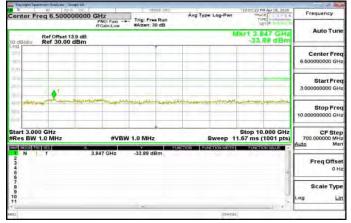
3GHz~10GHz_Band17_5MHz_QPSK_1_0_LowCH23755-706.5



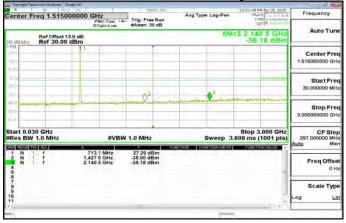
30MHz~3GHz_Band17_5MHz_QPSK_1_0_MidCH23790-710



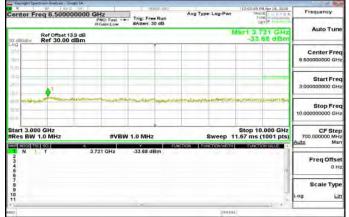
3GHz~10GHz_Band17_5MHz_QPSK_1_0_MidCH23790-710



30MHz~3GHz_Band17_5MHz_QPSK_1_0_HighCH23825-713.5



3GHz~10GHz_Band17_5MHz_QPSK_1_0_HighCH23825-713.5



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.

Unless otherwise stated the results structure results in the state report repo and offenders may be prosecuted to the fullest extent of the law

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

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488