



RADIO TESTREPORT

Report No:STS1906274W12

Issued for

FX Technology Limited

38a High Street, Northwood, Middlesex, United Kingdom,
HA6 1BN

Product Name:	Smartphone
Brand Name:	Fxtec
Model Name:	QX1000
Series Model:	N/A
FCC ID:	2AUCLQX1000
Test Standard:	47 CFR Part 2,24(E), 27

Any reproduction of this document must be done in full. No single part of this document may be reproduced without permission from STS, All Test Data Presented in this report is only applicable to presented Test sample.



**TEST RESULT CERTIFICATION**

Applicant's Name.....: FX Technology Limited
Address.....: 38a High Street, Northwood, Middlesex, United Kingdom, HA6 1BN
Manufacture's Name: UWIN INNOVATION (HONGKONG) LIMITED
Address.....: 1 Queen's Road Central, Hong Kong

Product description

Product Name: Smartphone
Brand Name: Fxtec
Model Name.....: QX1000
SeriesModel: N/A
Test Standards.....: 47 CFR Part 2,24(E), 27
Test Procedure: KDB 971168 D01 v03r01, ANSI C63.26 2015

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of STS, this document may be altered or revised by STS, personal only, and shall be noted in the revision of the document.

Date of Test.....:
Date (s) of performance of tests : 04 June 2019 ~ 21 Aug. 2019
Date of Issue: 22 Aug. 2019
Test Result: Pass

Testing Engineer :

(ChrisChen)

Technical Manager :

(Sunday Hu)

Authorized Signatory :

(Vita Li)





Table of Contents	Page
1. TEST FACTORY & MEASUREMENT UNCERTAINTY	5
2. GENERAL INFORMATION	6
3. CONDUCTED OUTPUT POWER	16
4. PEAK-TO-AVERAGE RATIO	33
5. RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER	36
6. OCCUPIED BANDWIDTH	54
7. CONDUCTED BAND EDGE	57
8. CONDUCTED SPURIOUS EMISSION	59
9. RADIATED SPURIOUS EMISSION	60
10. FREQUENCY STABILITY	93
APPENDIX-PHOTOS OF TEST SETUP	100



Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	22 Aug. 2019	STS1906274W12	ALL	Initial Issue





1. TEST FACTORY & MEASUREMENT UNCERTAINTY

1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.71\text{dB}$
2	Unwanted Emissions, conducted	$\pm 0.63\text{dB}$
3	All emissions, radiated 30-200MHz	$\pm 3.43\text{dB}$
4	All emissions, radiated 200MHz-1GHz	$\pm 3.57\text{dB}$
5	All emissions, radiated $>1\text{G}$	$\pm 4.13\text{dB}$
6	Conducted Emission (9KHz-150KHz)	$\pm 3.18\text{dB}$
7	Conducted Emission (150KHz-30MHz)	$\pm 2.70\text{dB}$



2. GENERAL INFORMATION

2.1 TECHNICAL SPECIFICATIONS AND REGULATIONS

2.1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

ProductName:	Smartphone
Trade Name	Fxtec
Model Name	QX1000
Series Model	N/A
Model Difference	N/A
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2 ☒ LTE FDD Band 4 ☒ LTE FDD Band 5 ☒ LTE FDD Band 7: ☒ LTE FDD Band 12 ☒ LTE FDD Band 13: ☒ LTE FDD Band 17 ☒ LTETDD Band 41:
SIM CARD:	SIM 1 and SIM 2 is a chipset unit and tested as single chipset,SIM 1 is used to tested
Antenna:	PIFA
Antenna gain:	LTE Band 2: 0dBiLTE Band 4: 0dBi LTE Band 5: 0dBiLTE Band 7: 0dBi LTE Band 12: 0dBiLTE Band 13: 0dBi LTE Band 17: 0dBiLTE Band 21: 0dBi
Battery parameter:	Rated Voltage: 3.85v Charge Limit: 4.4v Capacity: 3150mAh
Adapter:	Input:AC100-240V 50/60Hz 0.7A Output:5.0V/3A 9.0V/2.0A 12V/1.5A
Extreme Vol. Limits:	DC 3.6V to DC 4.4V (Nominal DC 3.85V)
Extreme Temp. Tolerance:	-30℃ to +50℃
Hardware version number:	T5_MB_P2
Software version number:	QX1000_EEA_20190829102646



2.1.2 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Product Specification Subjective To This Standard	
Tx Frequency	LTE Band 2:1850~1910MHz LTE Band 4:1710~1755MHz LTE Band 5:824-849MHz LTE Band 7:2500~2570MHz LTE Band 12:699-716MHz LTE Band 13:777-787MHz LTE Band 17:704-716MHz LTE Band 41:2496-2690MHz
Rx Frequency	LTE Band 2:1930~1990MHz LTE Band 4:2110-2155MHz LTE Band 5:869-894MHz LTE Band 7:2620-2690MHz LTE Band 12:729-746MHz LTE Band 13:746-76MHz LTE Band 17:734-746MHz LTE Band 41:2496-2690MHz
Bandwidth	LTE Band 2: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5: 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7: 5MHz / 10MHz / 15MHz / 20MHz LTE Band 12: 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13: 5MHz / 10MHz LTE Band 17: 5MHz / 10MHz LTE Band 41: 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power Limit	LTE Band 2: 22.06dBm LTE Band 4: 22.48dBm LTE Band 5: 21.70 dBm LTE Band 7: 21.70dBm LTE Band 12: 21.94dBm LTE Band 13: 21.06 dBm LTE Band 17: 21.90dBm LTE Band 41: 22.47dBm
Type of Modulation	QPSK / 16QAM



2.1.3 EMISSION DESIGNATOR

LTE Band 2	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M25G7D	1M24W7D
3	2M94G7D	2M94W7D
5	4M97G7D	4M99W7D
10	9M71G7D	9M63W7D
15	14M7G7D	14M7W7D
20	19M6G7D	19M4W7D
LTE Band 4	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M25G7D	1M24W7D
3	2M94G7D	2M95W7D
5	4M99G7D	5M01W7D
10	9M69G7D	9M64W7D
15	14M8G7D	14M7W7D
20	19M6G7D	19M4W7D
LTE Band 5	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M24G7D	1M24W7D
3	2M94G7D	2M96W7D
5	5M02G7D	4M96W7D
10	9M64G7D	9M61W7D
LTE Band 7	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
5	4M98W7D	4M98W7D
10	9M72G7D	9M65W7D
15	14M7G7D	14M7W7D
20	19M5G7D	19M6W7D
LTE Band 12	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M24G7D	1M25W7D
3	2M94G7D	2M96W7D
5	4M99G7D	4M99W7D
10	9M77G7D	9M70W7D
LTE Band 13	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
5	4M98G7D	5M01W7D
10	9M71G7D	9M59W7D
LTE Band 17	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
5	4M98G7D	4M99W7D
10	9M75G7D	9M70W7D
LTE Band 41	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
5	5M10G7D	5M10W7D
10	9M73G7D	9M61W7D
15	14M7G7D	14M8W7D
20	19M3G7D	19M2W7D



2.1.4 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items listed below are performed according to KDB 971168D01 v03r01 and ANSI C63.262015 Power Meas. License Digital Systems with maximum output power. Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Remark:

1. The mark 'v' means that this configuration is chosen for testing
2. The mark '-' means that this bandwidth is not supported.
3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated

ITEMS	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v			v	v	v	v	v	v	v	v
	7			v	v	v	v	v	v	v	v	v	v	v	v
	12	v	v	v	v			v	v	v	v	v	v	v	v
	13			v	v			v	v	v	v	v		v	
	17			v	v			v	v	v	v	v	v	v	v
	25	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	26	v	v	v	v	v		v	v	v	v	v	v	v	v
	41			v	v	v	v	v	v	v	v	v	v	v	v
Peak&Avera Ratio	2						v	v	v	v		v	v	v	v
	4						v	v	v	v		v	v	v	v
	5				v			v	v	v		v	v	v	v
	7						v	v	v	v		v	v	v	v
	12				v			v	v	v		v	v	v	v
	13				v			v	v	v		v		v	
	17				v			v	v	v		v	v	v	v
	25						v	v	v	v		v	v	v	v
	26					v		v	v	v		v	v	v	v
	41						v	v	v	v		v	v	v	v
26dB&99% Bandwidth	2	v	v	v	v	v	v	v	v			v	v	v	v
	4	v	v	v	v	v	v	v	v			v	v	v	v
	5	v	v	v	v			v	v			v	v	v	v
	7			v	v	v	v	v	v			v	v	v	v
	12	v	v	v	v			v	v			v	v	v	v
	13			v	v			v	v			v		v	
	17			v	v			v	v			v	v	v	v
	25	v	v	v	v	v	v	v	v			v	v	v	v
	26	v	v	v	v	v		v	v			v	v	v	v
	41			v	v	v	v	v	v			v	v	v	v



Conducted Band Edge	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v			v	v	v		v	v	v	v
	7			v	v	v	v	v	v	v		v	v	v	v
	12	v	v	v	v			v	v	v		v	v	v	v
	13			v	v			v	v	v		v		v	
	17			v	v			v	v	v		v	v	v	v
	25	v	v	v	v	v	v	v	v	v		v	v	v	v
	26	v	v	v	v	v		v	v	v		v	v	v	v
	41			v	v	v	v	v	v	v		v	v	v	v
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v			v	v	v			v	v	v
	7			v	v	v	v	v	v	v			v	v	v
	12	v	v	v	v			v	v	v			v	v	v
	13			v	v			v	v	v				v	
	17			v	v			v	v	v			v	v	v
	25	v	v	v	v	v	v	v	v	v			v	v	v
	26	v	v	v	v	v		v	v	v			v	v	v
	41			v	v	v	v	v	v	v			v	v	v
Frequency Stability	2				v			v					v		v
	4				v			v					v		v
	5				v			v					v		v
	7				v			v					v		v
	12				v			v					v		v
	13				v			v					v		v
	17				v			v					v		v
	25				v			v					v		v
	26				v			v					v		v
	41				v			v					v		v
E.R.P.& E.I.R.P.	2	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v			v	v	v			v	v	v
	7			v	v	v	v	v	v	v			v	v	v
	12	v	v	v	v			v	v	v			v	v	v
	13			v	v			v	v	v				v	
	17			v	v			v	v	v			v	v	v
	25	v	v	v	v	v	v	v	v	v			v	v	v
	26	v	v	v	v	v		v	v	v			v	v	v
	41			v	v	v	v	v	v	v			v	v	v



Radiated Spurious Emission	2	v	v	v	v	v	v	v		v			v	v	v
	4	v	v	v	v	v	v	v		v			v	v	v
	5	v	v	v	v			v		v			v	v	v
	7			v	v	v	v	v		v			v	v	v
	12	v	v	v	v			v		v			v	v	v
	13			v	v			v		v				v	
	17			v	v			v		v			v	v	v
	25	v	v	v	v	v	v	v		v			v	v	v
	26	v	v	v	v	v		v		v			v	v	v
	41			v	v	v	v	v		v			v	v	v





2.1.5 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for filing to comply with the 47 CFR Part 2,24(E), 27

2.1.6 SPECIAL ACCESSORIES

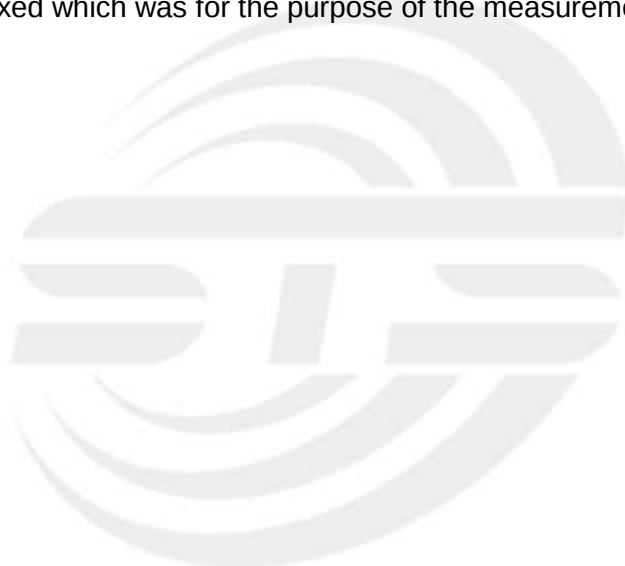
The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with eut intended for fcc grant together.

2.1.7 EUT CONFIGURATION

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

2.1.8 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.





2.1.9 CONFIGURATION OF EUT SYSTEM

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

E-1
EUT

Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	Serial No.	Note
N/A	N/A	N/A	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.1.10 MEASUREMENT INSTRUMENTS

The radiated emission testing was performed according to the procedures of ANSI C63.262015and FCC CFR 47 rules of 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057.

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2018.10.13	2019.10.12
Signal Analyzer	Agilent	N9020A	MY51110105	2019.03.02	2020.03.01
Wireless Communications Test Set	R&S	CMW 500	133884	2019.03.02	2020.03.01
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.1
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2018.10.19	2021.10.18
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2021.03.10
Pre-Amplifier(0.1M-3GHz)	EM	EM330	060665	2018.10.13	2019.10.12
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2018.10.13	2019.10.12
turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2018.10.11	2019.10.10
Test SW	BULUN	BL410-E/18.905			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Universal Radio communication tester	R&S	CMU200	11764	2018.10.13	2019.10.12
Wireless Communications Test Set	R&S	CMW 500	133884	2019.03.02	2020.03.01
Signal Analyzer	Agilent	N9020A	MY49100060	2018.10.13	2019.10.12
Temperature & Humidity	HH660	Mieo	N/A	2018.10.11	2019.10.10
Test SW	FARAD	LZ-RF /LzRf-3A3			



2.1.11 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 attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF Cable Loss + Attenuator Factor.





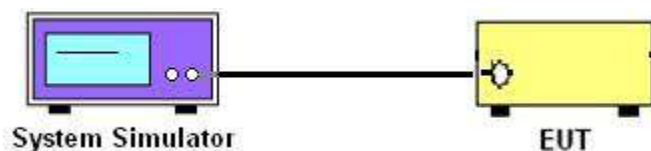
3. CONDUCTED OUTPUT POWER

3.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

3.1.1 MEASUREMENT METHOD

A system simulator was used to establish communication with the eut. Its parameters were set to force the eut transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported. Configuration follows KDB 971168 D01 v03r01.

3.1.2 TEST SETUP



3.1.3 TEST PROCEDURES

1. The transmitter output port was connected to system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest/middle/highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



3.1.4 TEST RESULTS

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	21.77	21.87	21.8
1.4	1	2		21.54	21.64	21.51
1.4	1	5		21.34	21.42	21.25
1.4	3	0		21.13	21.14	21.01
1.4	3	1		20.89	20.92	20.76
1.4	3	2		20.65	20.65	20.5
1.4	6	0		20.36	20.44	20.27
1.4	1	0	16-QAM	21.55	21.61	21.54
1.4	1	2		21.34	21.41	21.33
1.4	1	5		21.12	21.19	21.06
1.4	3	0		20.84	20.92	20.84
1.4	3	1		20.64	20.71	20.54
1.4	3	2		20.38	20.5	20.32
1.4	6	0		20.11	20.22	20.1
3	1	0	QPSK	21.77	21.67	21.76
3	1	7		21.52	21.38	21.53
3	1	14		21.24	21.08	21.27
3	8	0		21.02	20.87	21.05
3	8	4		20.78	20.65	20.78
3	8	7		20.54	20.43	20.51
3	15	0		20.34	20.21	20.25
3	1	0	16-QAM	21.57	21.38	21.47
3	1	7		21.3	21.18	21.21
3	1	14		21.08	20.95	20.98
3	8	0		20.79	20.73	20.7
3	8	4		20.55	20.5	20.42
3	8	7		20.32	20.26	20.17
3	15	0		20.04	20.06	19.93



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.53	21.5	21.32
5	1	12		21.26	21.26	21.04
5	1	24		20.97	21.05	20.76
5	12	0		20.7	20.84	20.48
5	12	6		20.44	20.62	20.27
5	12	11		20.2	20.33	20.06
5	25	0		19.93	20.06	19.83
5	1	0	16-QAM	21.31	21.26	21.08
5	1	12		21.11	21.05	20.8
5	1	24		20.88	20.81	20.57
5	12	0		20.6	20.59	20.36
5	12	6		20.34	20.31	20.09
5	12	11		20.11	20.06	19.81
5	25	0		19.84	19.78	19.59
10	1	0	QPSK	21.4	21.34	21.23
10	1	24		21.1	21.08	20.97
10	1	49		20.81	20.78	20.74
10	25	0		20.54	20.57	20.45
10	25	12		20.24	20.31	20.18
10	25	24		19.98	20.04	19.93
10	50	0		19.76	19.84	19.67
10	1	0	16-QAM	21.18	21.11	20.95
10	1	24		20.95	20.82	20.73
10	1	49		20.69	20.53	20.46
10	25	0		20.42	20.28	20.17
10	25	12		20.18	20	19.97
10	25	24		19.91	19.71	19.77
10	50	0		19.64	19.47	19.48



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	21.14	20.96	21.2
15	1	37		20.94	20.68	20.93
15	1	74		20.64	20.45	20.72
15	36	0		20.4	20.24	20.48
15	36	18		20.19	19.98	20.27
15	36	39		19.95	19.77	19.99
15	75	0		19.74	19.47	19.73
15	1	0	16-QAM	20.84	20.72	21
15	1	38		20.57	20.52	20.76
15	1	75		20.33	20.28	20.52
15	36	0		20.06	20	20.26
15	36	18		19.82	19.74	20.01
15	36	39		19.61	19.44	19.77
15	75	0		19.37	19.23	19.5
20	1	0	QPSK	21.93	21.96	22.06
20	1	49		21.71	21.72	21.86
20	1	99		21.43	21.43	21.6
20	50	0		21.16	21.16	21.33
20	50	24		20.89	20.9	21.03
20	50	49		20.61	20.68	20.73
20	100	0		20.36	20.46	20.52
20	1	0	16-QAM	21.7	21.72	21.81
20	1	49		21.49	21.47	21.61
20	1	99		21.2	21.17	21.36
20	50	0		20.94	20.94	21.1
20	50	24		20.7	20.71	20.85
20	50	49		20.44	20.45	20.62
20	100	0		20.19	20.17	20.41



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	21.86	22.3	21.98
1.4	1	2		21.61	22.01	21.7
1.4	1	5		21.4	21.75	21.47
1.4	3	0		21.11	21.49	21.23
1.4	3	1		20.87	21.2	20.94
1.4	3	2		20.65	20.96	20.66
1.4	6	0		20.43	20.7	20.41
1.4	1	0	16-QAM	21.64	22.01	21.71
1.4	1	2		21.42	21.77	21.48
1.4	1	5		21.13	21.48	21.27
1.4	3	0		20.89	21.28	21.01
1.4	3	1		20.59	21.04	20.72
1.4	3	2		20.34	20.8	20.44
1.4	6	0		20.12	20.56	20.22
3	1	0	QPSK	21.85	22.06	21.83
3	1	7		21.56	21.79	21.55
3	1	14		21.32	21.51	21.25
3	8	0		21.1	21.28	20.98
3	8	4		20.88	21	20.69
3	8	7		20.59	20.72	20.49
3	15	0		20.32	20.43	20.25
3	1	0	16-QAM	21.61	21.77	21.59
3	1	7		21.41	21.5	21.33
3	1	14		21.2	21.27	21.08
3	8	0		21	21	20.86
3	8	4		20.76	20.75	20.66
3	8	7		20.52	20.55	20.46
3	15	0		20.3	20.26	20.19



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.58	21.6	21.32
5	1	12		21.37	21.4	21.09
5	1	24		21.1	21.11	20.82
5	12	0		20.88	20.83	20.57
5	12	6		20.58	20.59	20.3
5	12	11		20.37	20.38	20.01
5	25	0		20.17	20.12	19.73
5	1	0	16-QAM	21.31	21.33	21.03
5	1	12		21.04	21.07	20.78
5	1	24		20.75	20.77	20.57
5	12	0		20.47	20.54	20.32
5	12	6		20.26	20.27	20.06
5	12	11		20.01	20.05	19.83
5	25	0		19.81	19.82	19.6
10	1	0	QPSK	20.9	21.68	21.42
10	1	24		20.66	21.42	21.16
10	1	49		20.43	21.15	20.9
10	25	0		20.22	20.86	20.69
10	25	12		20.01	20.62	20.43
10	25	24		19.72	20.37	20.21
10	50	0		19.51	20.13	19.98
10	1	0	16-QAM	20.68	21.39	21.16
10	1	24		20.48	21.16	20.95
10	1	49		20.23	20.87	20.74
10	25	0		19.95	20.64	20.45
10	25	12		19.73	20.39	20.2
10	25	24		19.48	20.15	19.91
10	50	0		19.25	19.85	19.65



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	21.25	21.23	21.04
15	1	37		20.98	21.02	20.78
15	1	74		20.75	20.82	20.52
15	36	0		20.49	20.6	20.26
15	36	18		20.25	20.3	19.96
15	36	39		19.95	20.01	19.75
15	75	0		19.68	19.73	19.54
15	1	0	16-QAM	20.98	20.94	20.77
15	1	38		20.77	20.68	20.52
15	1	75		20.5	20.45	20.25
15	36	0		20.22	20.24	20.02
15	36	18		19.94	19.98	19.79
15	36	39		19.72	19.77	19.55
15	75	0		19.43	19.55	19.34
20	1	0	QPSK	22.44	22.31	22.48
20	1	49		22.22	22.04	22.26
20	1	99		21.98	21.77	21.97
20	50	0		21.68	21.51	21.76
20	50	24		21.41	21.26	21.53
20	50	49		21.19	21.05	21.26
20	100	0		20.9	20.79	20.99
20	1	0	16-QAM	22.15	22.03	22.24
20	1	49		21.94	21.73	22.04
20	1	99		21.72	21.44	21.74
20	50	0		21.52	21.16	21.46
20	50	24		21.26	20.92	21.24
20	50	49		20.97	20.63	20.97
20	100	0		20.75	20.38	20.69



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	20.79	21	21.38
1.4	1	2		20.58	20.73	21.12
1.4	1	5		20.32	20.48	20.85
1.4	3	0		20.05	20.26	20.64
1.4	3	1		19.76	19.98	20.35
1.4	3	2		19.54	19.71	20.09
1.4	6	0		19.29	19.44	19.79
1.4	1	0	16-QAM	20.5	20.72	21.11
1.4	1	2		20.24	20.49	20.83
1.4	1	5		20	20.22	20.54
1.4	3	0		19.76	19.98	20.3
1.4	3	1		19.55	19.68	20.05
1.4	3	2		19.27	19.38	19.8
1.4	6	0		19.06	19.15	19.52
3	1	0	QPSK	20.65	20.84	21.17
3	1	7		20.43	20.61	20.92
3	1	14		20.22	20.39	20.64
3	8	0		19.97	20.18	20.4
3	8	4		19.72	19.94	20.15
3	8	7		19.49	19.72	19.9
3	15	0		19.2	19.5	19.64
3	1	0	16-QAM	20.44	20.63	20.93
3	1	7		20.17	20.42	20.64
3	1	14		19.93	20.18	20.34
3	8	0		19.72	19.91	20.09
3	8	4		19.46	19.63	19.84
3	8	7		19.24	19.36	19.59
3	15	0		18.98	19.07	19.3



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.07	21.33	21.65
5	1	12		20.84	21.04	21.36
5	1	24		20.6	20.76	21.07
5	12	0		20.37	20.48	20.85
5	12	6		20.13	20.26	20.56
5	12	11		19.92	20.02	20.3
5	25	0		19.66	19.8	20.1
5	1	0	16-QAM	20.86	21.09	21.42
5	1	12		20.57	20.8	21.22
5	1	24		20.27	20.52	20.98
5	12	0		19.98	20.28	20.7
5	12	6		19.75	19.99	20.4
5	12	11		19.52	19.79	20.1
5	25	0		19.23	19.55	19.85
10	1	0	QPSK	21.27	21.56	21.7
10	1	24		21.02	21.31	21.47
10	1	49		20.76	21.01	21.19
10	25	0		20.56	20.78	20.92
10	25	12		20.3	20.52	20.7
10	25	24		20.01	20.25	20.44
10	50	0		19.78	19.96	20.18
10	1	0	16-QAM	21.02	21.35	21.42
10	1	24		20.75	21.09	21.21
10	1	49		20.52	20.82	20.98
10	25	0		20.29	20.62	20.69
10	25	12		20.05	20.33	20.41
10	25	24		19.84	20.04	20.15
10	50	0		19.57	19.76	19.91



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.38	21.43	21.25
5	1	12		21.16	21.19	20.97
5	1	24		20.96	20.93	20.76
5	12	0		20.72	20.7	20.55
5	12	6		20.51	20.45	20.33
5	12	11		20.24	20.21	20.1
5	25	0		19.94	19.98	19.8
5	1	0	16-QAM	21.14	21.18	20.95
5	1	12		20.9	20.95	20.68
5	1	24		20.67	20.69	20.46
5	12	0		20.41	20.44	20.24
5	12	6		20.14	20.21	20.04
5	12	11		19.9	19.99	19.8
5	25	0		19.68	19.76	19.53
10	1	0	QPSK	21.62	21.4	21.58
10	1	24		21.34	21.14	21.29
10	1	49		21.14	20.85	21
10	25	0		20.93	20.57	20.72
10	25	12		20.69	20.35	20.42
10	25	24		20.4	20.11	20.13
10	50	0		20.18	19.89	19.88
10	1	0	16-QAM	21.37	21.16	21.31
10	1	24		21.07	20.88	21.07
10	1	49		20.79	20.67	20.84
10	25	0		20.53	20.38	20.64
10	25	12		20.3	20.17	20.39
10	25	24		20.05	19.93	20.13
10	50	0		19.8	19.69	19.86



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	20.68	20.85	20.73
15	1	37		20.4	20.57	20.52
15	1	74		20.18	20.33	20.26
15	36	0		19.94	20.11	19.98
15	36	18		19.7	19.86	19.76
15	36	39		19.45	19.65	19.49
15	75	0		19.19	19.41	19.25
15	1	0	16-QAM	20.42	20.61	20.48
15	1	38		20.21	20.37	20.27
15	1	75		19.96	20.13	19.98
15	36	0		19.73	19.87	19.76
15	36	18		19.53	19.62	19.55
15	36	39		19.31	19.37	19.27
15	75	0		19.09	19.17	19.02
20	1	0	QPSK	21.58	21.7	21.63
20	1	49		21.36	21.46	21.39
20	1	99		21.06	21.17	21.13
20	50	0		20.78	20.96	20.92
20	50	24		20.52	20.74	20.68
20	50	49		20.32	20.48	20.39
20	100	0		20.06	20.27	20.14
20	1	0	16-QAM	21.37	21.44	21.42
20	1	49		21.09	21.17	21.18
20	1	99		20.85	20.89	20.9
20	50	0		20.61	20.62	20.69
20	50	24		20.38	20.42	20.42
20	50	49		20.16	20.2	20.22
20	100	0		19.91	19.99	19.93



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	21.5	20.97	21.24
1.4	1	2		21.29	20.71	20.95
1.4	1	5		21.07	20.43	20.66
1.4	3	0		20.85	20.19	20.42
1.4	3	1		20.57	19.96	20.15
1.4	3	2		20.32	19.71	19.86
1.4	6	0		20.04	19.44	19.59
1.4	1	0	16-QAM	21.26	20.69	20.94
1.4	1	2		21.03	20.48	20.67
1.4	1	5		20.73	20.26	20.37
1.4	3	0		20.51	19.97	20.14
1.4	3	1		20.28	19.69	19.93
1.4	3	2		20.04	19.44	19.69
1.4	6	0		19.81	19.21	19.4
3	1	0	QPSK	21.26	20.88	21.24
3	1	7		21.06	20.66	20.97
3	1	14		20.82	20.44	20.74
3	8	0		20.52	20.21	20.47
3	8	4		20.31	19.92	20.26
3	8	7		20.1	19.64	20.05
3	15	0		19.89	19.35	19.82
3	1	0	16-QAM	21.06	20.65	21
3	1	7		20.86	20.42	20.74
3	1	14		20.61	20.14	20.5
3	8	0		20.36	19.89	20.24
3	8	4		20.16	19.59	19.97
3	8	7		19.95	19.31	19.74
3	15	0		19.74	19.04	19.47



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.57	21.64	21.58
5	1	12		21.32	21.37	21.36
5	1	24		21.07	21.12	21.1
5	12	0		20.83	20.89	20.83
5	12	6		20.61	20.67	20.57
5	12	11		20.32	20.43	20.3
5	25	0		20.11	20.19	20.06
5	1	0	16-QAM	21.29	21.43	21.29
5	1	12		21.05	21.2	21.07
5	1	24		20.79	20.91	20.77
5	12	0		20.56	20.7	20.52
5	12	6		20.31	20.49	20.28
5	12	11		20.04	20.27	19.99
5	25	0		19.75	20	19.74
10	1	0	QPSK	21.93	21.94	21.71
10	1	24		21.64	21.7	21.49
10	1	49		21.43	21.49	21.22
10	25	0		21.2	21.26	20.98
10	25	12		20.9	20.96	20.77
10	25	24		20.69	20.67	20.55
10	50	0		20.4	20.42	20.31
10	1	0	16-QAM	21.71	21.7	21.45
10	1	24		21.43	21.47	21.19
10	1	49		21.17	21.18	20.94
10	25	0		20.96	20.92	20.73
10	25	12		20.72	20.63	20.52
10	25	24		20.52	20.35	20.26
10	50	0		20.22	20.08	19.97



LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	20.66	20.6	21.01
5	1	12		20.43	20.36	20.73
5	1	24		20.22	20.12	20.52
5	12	0		20.01	19.83	20.26
5	12	6		19.78	19.62	20.02
5	12	11		19.55	19.33	19.74
5	25	0		19.3	19.08	19.53
5	1	0	16-QAM	20.41	20.33	20.79
5	1	12		20.17	20.11	20.53
5	1	24		19.95	19.88	20.32
5	12	0		19.69	19.66	20.09
5	12	6		19.46	19.42	19.85
5	12	11		19.23	19.19	19.57
5	25	0		18.97	18.89	19.27
10	1	0	QPSK	--	21.06	--
10	1	24		--	20.81	--
10	1	49		--	20.54	--
10	25	0		--	20.25	--
10	25	12		--	20.04	--
10	25	24		--	19.76	--
10	50	0		--	19.47	--
10	1	0	16-QAM	--	20.77	--
10	1	24		--	20.51	--
10	1	49		--	20.27	--
10	25	0		--	20.01	--
10	25	12		--	19.77	--
10	25	24		--	19.49	--
10	50	0		--	19.2	--



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.67	21.77	21.4
5	1	12		21.37	21.53	21.17
5	1	24		21.08	21.29	20.96
5	12	0		20.85	21.01	20.68
5	12	6		20.61	20.78	20.39
5	12	11		20.37	20.55	20.09
5	25	0		20.1	20.35	19.86
5	1	0	16-QAM	21.39	21.53	21.16
5	1	12		21.14	21.25	20.95
5	1	24		20.87	21.01	20.67
5	12	0		20.66	20.77	20.38
5	12	6		20.46	20.47	20.14
5	12	11		20.25	20.2	19.85
5	25	0		20	19.92	19.59
10	1	0	QPSK	21.83	21.79	21.9
10	1	24		21.58	21.58	21.61
10	1	49		21.33	21.33	21.37
10	25	0		21.09	21.08	21.15
10	25	12		20.79	20.8	20.91
10	25	24		20.52	20.56	20.69
10	50	0		20.3	20.3	20.45
10	1	0	16-QAM	21.56	21.57	21.7
10	1	24		21.34	21.35	21.49
10	1	49		21.08	21.11	21.26
10	25	0		20.81	20.87	20.99
10	25	12		20.57	20.64	20.73
10	25	24		20.27	20.39	20.44
10	50	0		19.98	20.19	20.2



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.15	22	21.63
5	1	12		21.92	21.71	21.4
5	1	24		21.7	21.45	21.11
5	12	0		21.49	21.24	20.9
5	12	6		21.28	21.03	20.67
5	12	11		21.06	20.77	20.45
5	25	0		20.77	20.53	20.18
5	1	0	16-QAM	21.88	21.77	21.34
5	1	12		21.68	21.52	21.06
5	1	24		21.44	21.26	20.76
5	12	0		21.23	21.04	20.47
5	12	6		21.01	20.75	20.2
5	12	11		20.81	20.53	19.99
5	25	0		20.55	20.28	19.78
10	1	0	QPSK	21.09	21.1	20.68
10	1	24		20.87	20.82	20.4
10	1	49		20.58	20.59	20.14
10	25	0		20.3	20.3	19.84
10	25	12		20.08	20.1	19.63
10	25	24		19.81	19.83	19.35
10	50	0		19.58	19.54	19.07
10	1	0	16-QAM	20.8	20.82	20.44
10	1	24		20.58	20.61	20.18
10	1	49		20.28	20.38	19.96
10	25	0		20.05	20.15	19.67
10	25	12		19.8	19.86	19.42
10	25	24		19.51	19.58	19.16
10	50	0		19.21	19.37	18.87



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	20.13	20.39	20.28
15	1	37		19.89	20.11	20.08
15	1	74		19.68	19.85	19.78
15	36	0		19.4	19.55	19.53
15	36	18		19.14	19.33	19.28
15	36	39		18.87	19.1	19.04
15	75	0		18.57	18.87	18.8
15	1	0	16-QAM	19.87	20.13	19.98
15	1	38		19.66	19.89	19.75
15	1	75		19.39	19.66	19.47
15	36	0		19.13	19.37	19.25
15	36	18		18.89	19.15	19.01
15	36	39		18.64	18.85	18.79
15	75	0		18.35	18.56	18.52
20	1	0	QPSK	22.47	22.45	22.11
20	1	49		22.2	22.19	21.9
20	1	99		21.91	21.93	21.64
20	50	0		21.69	21.66	21.42
20	50	24		21.39	21.37	21.15
20	50	49		21.13	21.12	20.87
20	100	0		20.92	20.91	20.57
20	1	0	16-QAM	22.18	22.22	21.91
20	1	49		21.98	22.01	21.61
20	1	99		21.77	21.76	21.36
20	50	0		21.53	21.52	21.06
20	50	24		21.27	21.29	20.78
20	50	49		21.01	21.05	20.55
20	100	0		20.72	20.81	20.25

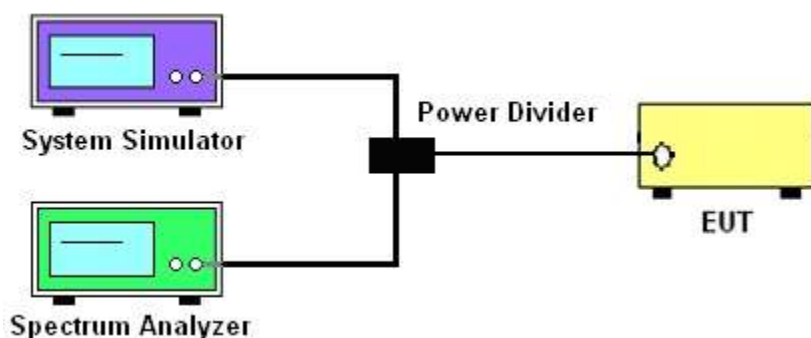
4. PEAK-TO-AVERAGE RATIO

4.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

4.1.1 MEASUREMENT METHOD

Use one of the procedures presented in 4.1 to measure the total peak power and record as P_{Pk}. Use one of the applicable procedures presented 4.2 to measure the total average power and record as P_{Avg}. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:
 $PAPR (dB) = P_{Pk} (dBm) - P_{Avg} (dBm)$.

4.1.2 TEST SETUP



4.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.7.2 and ANSI C63.262015Section 5.2.3.4
2. The EUT was connected to spectrum and system simulator via a power divider
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Set the test probe and measure the peak and average power of the spectrum analyzer
5. Record the deviation as Peak to Average Ratio.

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	PK/AVG	PK/AVG	PK/AVG	PK/AVG	PK/AVG	PK/AVG
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto



4.1.4 TEST RESULTS

LTE Band 2 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
N/A	N/A	N/A	P-A	P-A	P-A
20	1	QPSK	3.56	3.6	3.98
20	100	N/A	4.98	4.99	5.24
20	1	16-QAM	4.37	4.43	5.04
20	100	N/A	5.85	5.96	5.69
Limit			≤13dBm		

LTE Band 4 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
N/A	N/A	N/A	P-A	P-A	P-A
20	1	QPSK	4.37	4.28	3.79
20	100	N/A	5.02	5.17	5.14
20	1	16-QAM	5.02	5.3	4.56
20	100	N/A	5.93	5.96	5.92
Limit			≤13dBm		

LTE Band 5 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
N/A	N/A	N/A	P-A	P-A	P-A
10	1	QPSK	3.99	3.53	3.58
10	50	N/A	4.87	4.9	4.52
10	1	16-QAM	4.81	4.41	4.48
10	50	N/A	5.68	5.81	5.98
Limit			≤13dBm		

LTE Band 7 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
N/A	N/A	N/A	P-A	P-A	P-A
20	1	QPSK	3.26	4.37	4.26
20	100	N/A	4.79	5.03	5.31
20	1	16-QAM	3.92	5.17	5.33
20	100	N/A	5.71	5.84	5.99
Limit			≤13dBm		

LTE Band 12 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
N/A	N/A	N/A	P-A	P-A	P-A
10	1	QPSK	3.22	4.2	3.27
10	50	N/A	4.75	4.61	4.76
10	1	16-QAM	4.13	5.2	3.92
10	50	N/A	5.77	5.5	5.68
Limit			≤13dBm		



LTE Band 13 PAR [dBm]			
BW [MHz]	RB Size	Modulation	N/A
N/A	N/A	N/A	P-A
10	1	QPSK	4.21
10	50	N/A	4.78
10	1	16-QAM	5
10	50	N/A	5.62
Limit			≤13dBm

LTE Band 17 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
N/A	N/A	N/A	P-A	P-A	P-A
10	1	QPSK	3.95	3.21	3.19
10	50	N/A	4.69	4.81	4.71
10	1	16-QAM	4.71	4.49	4.08
10	50	N/A	5.66	5.61	5.646
Limit			≤13dBm		

LTE Band 41 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
N/A	N/A	N/A	P-A	P-A	P-A
20	1	QPSK	5.66	4.37	4.61
20	100	N/A	5.1	5.3	5.52
20	1	16-QAM	5.24	4.37	5.69
20	100	N/A	5.95	5.91	6.02
Limit			≤13dBm		

Note: Test chart See Appendix D

5. RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER

5.1 DESCRIPTION OF THE ERP/EIRP MEASUREMENT

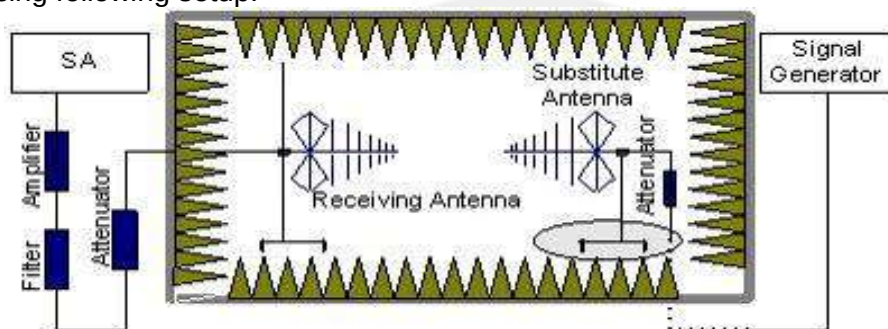
5.1.1 MEASUREMENT METHOD

Effective radiated power output measurements by substitution method according to ANSI C63.262015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems. Mobile and portable (hand-held) stations operating are limited to average ERP, Equivalent isotropic radiated power output measurements by substitution method according to ANSI C63.262015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas, Mobile and portable (hand-held) stations operating are limited to average EIRP.

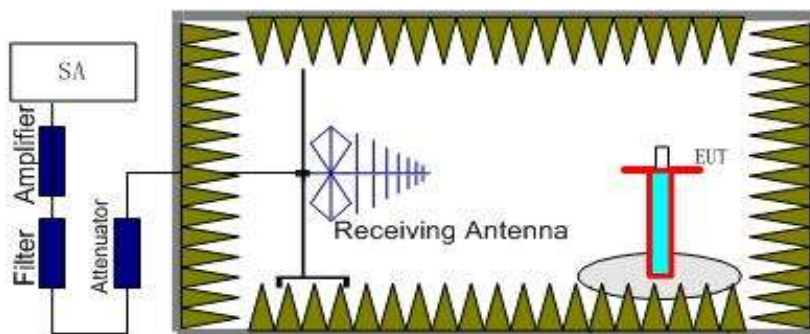
5.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions (RSE) is calculated as, $RSE = R_x (\text{dBuV}) + CL (\text{dB}) + SA (\text{dB}) + \text{Gain} (\text{dBi}) - 107 (\text{dBuV to dBm})$ The SA is calibrated using following setup.



b) EUT was placed on a 1.5m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.



Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

$\text{Power} = \text{PMea} + \text{ARpl}$



5.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01v03r01 Section 5.6 and ANSI C63.262015 Section 5.2.
2. The EUT was placed on a non-conductive rotating platform 1.5 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with Peak detector.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 m in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to ANSI C63.262015. The EUT was replaced by dipole antenna (substitution antenna) at same location and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, $EIRP/ERP = LVL + \text{Correction factor}$
5. RB Set greater than bandwidth, VB Set spectrum analyzer Maximum support.





5.1.4 TEST RESULTS

Note: Test is divided into three directions, X/Y/Z. X pattern for the worst.

Radiated Power (EIRP) for LTE Band 2 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G. Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.19	2.37	10.40	19.22	Horizontal	Pass
	1	0	Middle	11.12	2.39	10.42	19.15	Horizontal	Pass
	1	0	Highest	10.99	2.40	10.44	19.03	Horizontal	Pass
	1	0	Lowest	12.53	2.37	10.40	20.56	Vertical	Pass
	1	0	Middle	12.49	2.39	10.42	20.52	Vertical	Pass
	1	0	Highest	12.42	2.40	10.44	20.46	Vertical	Pass
16QAM	1	0	Lowest	10.78	2.37	10.40	18.81	Horizontal	Pass
	1	0	Middle	10.79	2.39	10.42	18.82	Horizontal	Pass
	1	0	Highest	10.88	2.40	10.44	18.92	Horizontal	Pass
	1	0	Lowest	12.16	2.37	10.40	20.19	Vertical	Pass
	1	0	Middle	12.26	2.39	10.42	20.29	Vertical	Pass
	1	0	Highest	12.25	2.40	10.44	20.29	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 2 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G. Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.14	2.37	10.40	19.17	Horizontal	Pass
	1	0	Middle	10.94	2.39	10.42	18.97	Horizontal	Pass
	1	0	Highest	11.17	2.40	10.44	19.21	Horizontal	Pass
	1	0	Lowest	12.44	2.37	10.40	20.47	Vertical	Pass
	1	0	Middle	12.25	2.39	10.42	20.28	Vertical	Pass
	1	0	Highest	12.49	2.40	10.44	20.53	Vertical	Pass
16QAM	1	0	Lowest	10.86	2.37	10.40	18.89	Horizontal	Pass
	1	0	Middle	10.59	2.39	10.42	18.62	Horizontal	Pass
	1	0	Highest	10.87	2.40	10.44	18.91	Horizontal	Pass
	1	0	Lowest	12.17	2.37	10.40	20.20	Vertical	Pass
	1	0	Middle	11.96	2.39	10.42	19.99	Vertical	Pass
	1	0	Highest	12.19	2.40	10.44	20.23	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 2 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.81	2.37	10.40	18.84	Horizontal	Pass
	1	0	Middle	10.78	2.39	10.42	18.81	Horizontal	Pass
	1	0	Highest	10.56	2.40	10.44	18.60	Horizontal	Pass
	1	0	Lowest	12.12	2.37	10.40	20.15	Vertical	Pass
	1	0	Middle	12.23	2.39	10.42	20.26	Vertical	Pass
	1	0	Highest	11.92	2.40	10.44	19.96	Vertical	Pass
16QAM	1	0	Lowest	10.52	2.37	10.40	18.55	Horizontal	Pass
	1	0	Middle	10.44	2.39	10.42	18.47	Horizontal	Pass
	1	0	Highest	10.33	2.40	10.44	18.37	Horizontal	Pass
	1	0	Lowest	11.88	2.37	10.40	19.91	Vertical	Pass
	1	0	Middle	11.88	2.39	10.42	19.91	Vertical	Pass
	1	0	Highest	11.67	2.40	10.44	19.71	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 2 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.66	2.37	10.40	18.69	Horizontal	Pass
	1	0	Middle	10.6	2.39	10.42	18.63	Horizontal	Pass
	1	0	Highest	10.54	2.40	10.44	18.58	Horizontal	Pass
	1	0	Lowest	12.12	2.37	10.40	20.15	Vertical	Pass
	1	0	Middle	12.02	2.39	10.42	20.05	Vertical	Pass
	1	0	Highest	11.97	2.40	10.44	20.01	Vertical	Pass
16QAM	1	0	Lowest	10.54	2.37	10.40	18.57	Horizontal	Pass
	1	0	Middle	10.44	2.39	10.42	18.47	Horizontal	Pass
	1	0	Highest	10.21	2.40	10.44	18.25	Horizontal	Pass
	1	0	Lowest	11.86	2.37	10.40	19.89	Vertical	Pass
	1	0	Middle	11.77	2.39	10.42	19.80	Vertical	Pass
	1	0	Highest	11.68	2.40	10.44	19.72	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 2 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.42	2.37	10.40	18.45	Horizontal	Pass
	1	0	Middle	10.36	2.39	10.42	18.39	Horizontal	Pass
	1	0	Highest	10.47	2.40	10.44	18.51	Horizontal	Pass
	1	0	Lowest	11.73	2.37	10.40	19.76	Vertical	Pass
	1	0	Middle	11.66	2.39	10.42	19.69	Vertical	Pass
	1	0	Highest	11.82	2.40	10.44	19.86	Vertical	Pass
16QAM	1	0	Lowest	10.13	2.37	10.40	18.16	Horizontal	Pass
	1	0	Middle	10.02	2.39	10.42	18.05	Horizontal	Pass
	1	0	Highest	10.18	2.40	10.44	18.22	Horizontal	Pass
	1	0	Lowest	11.48	2.37	10.40	19.51	Vertical	Pass
	1	0	Middle	11.45	2.39	10.42	19.48	Vertical	Pass
	1	0	Highest	11.57	2.40	10.44	19.61	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 2 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.33	2.37	10.40	19.36	Horizontal	Pass
	1	0	Middle	11.34	2.39	10.42	19.37	Horizontal	Pass
	1	0	Highest	11.31	2.40	10.44	19.35	Horizontal	Pass
	1	0	Lowest	12.7	2.37	10.40	20.73	Vertical	Pass
	1	0	Middle	12.66	2.39	10.42	20.69	Vertical	Pass
	1	0	Highest	12.69	2.40	10.44	20.73	Vertical	Pass
16QAM	1	0	Lowest	10.86	2.37	10.40	18.89	Horizontal	Pass
	1	0	Middle	10.98	2.39	10.42	19.01	Horizontal	Pass
	1	0	Highest	11.08	2.40	10.44	19.12	Horizontal	Pass
	1	0	Lowest	12.35	2.37	10.40	20.38	Vertical	Pass
	1	0	Middle	12.44	2.39	10.42	20.47	Vertical	Pass
	1	0	Highest	12.56	2.40	10.44	20.60	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 4 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.4	2.35	10.13	19.18	Horizontal	Pass
	1	0	Middle	11.8	2.36	10.16	19.60	Horizontal	Pass
	1	0	Highest	11.37	2.37	10.22	19.22	Horizontal	Pass
	1	0	Lowest	12.79	2.35	10.13	20.57	Vertical	Pass
	1	0	Middle	13.17	2.36	10.16	20.97	Vertical	Pass
	1	0	Highest	12.76	2.37	10.22	20.61	Vertical	Pass
16QAM	1	0	Lowest	11.14	2.35	10.13	18.92	Horizontal	Pass
	1	0	Middle	11.48	2.36	10.16	19.28	Horizontal	Pass
	1	0	Highest	11.04	2.37	10.22	18.89	Horizontal	Pass
	1	0	Lowest	12.62	2.35	10.13	20.40	Vertical	Pass
	1	0	Middle	12.94	2.36	10.16	20.74	Vertical	Pass
	1	0	Highest	12.53	2.37	10.22	20.38	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.36	2.35	10.13	19.14	Horizontal	Pass
	1	0	Middle	11.65	2.36	10.16	19.45	Horizontal	Pass
	1	0	Highest	11.34	2.37	10.22	19.19	Horizontal	Pass
	1	0	Lowest	12.78	2.35	10.13	20.56	Vertical	Pass
	1	0	Middle	12.97	2.36	10.16	20.77	Vertical	Pass
	1	0	Highest	12.78	2.37	10.22	20.63	Vertical	Pass
16QAM	1	0	Lowest	11.13	2.35	10.13	18.91	Horizontal	Pass
	1	0	Middle	11.34	2.36	10.16	19.14	Horizontal	Pass
	1	0	Highest	10.87	2.37	10.22	18.72	Horizontal	Pass
	1	0	Lowest	12.59	2.35	10.13	20.37	Vertical	Pass
	1	0	Middle	12.66	2.36	10.16	20.46	Vertical	Pass
	1	0	Highest	12.36	2.37	10.22	20.21	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for LTE Band 4 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.01	2.35	10.13	18.79	Horizontal	Pass
	1	0	Middle	11.14	2.36	10.16	18.94	Horizontal	Pass
	1	0	Highest	10.71	2.37	10.22	18.56	Horizontal	Pass
	1	0	Lowest	12.42	2.35	10.13	20.20	Vertical	Pass
	1	0	Middle	12.59	2.36	10.16	20.39	Vertical	Pass
	1	0	Highest	12.08	2.37	10.22	19.93	Vertical	Pass
16QAM	1	0	Lowest	10.87	2.35	10.13	18.65	Horizontal	Pass
	1	0	Middle	10.88	2.36	10.16	18.68	Horizontal	Pass
	1	0	Highest	10.39	2.37	10.22	18.24	Horizontal	Pass
	1	0	Lowest	12.17	2.35	10.13	19.95	Vertical	Pass
	1	0	Middle	12.18	2.36	10.16	19.98	Vertical	Pass
	1	0	Highest	11.83	2.37	10.22	19.68	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.53	2.35	10.13	18.31	Horizontal	Pass
	1	0	Middle	11.1	2.36	10.16	18.90	Horizontal	Pass
	1	0	Highest	10.86	2.37	10.22	18.71	Horizontal	Pass
	1	0	Lowest	11.89	2.35	10.13	19.67	Vertical	Pass
	1	0	Middle	12.59	2.36	10.16	20.39	Vertical	Pass
	1	0	Highest	12.28	2.37	10.22	20.13	Vertical	Pass
16QAM	1	0	Lowest	10.13	2.35	10.13	17.91	Horizontal	Pass
	1	0	Middle	10.82	2.36	10.16	18.62	Horizontal	Pass
	1	0	Highest	10.47	2.37	10.22	18.32	Horizontal	Pass
	1	0	Lowest	11.59	2.35	10.13	19.37	Vertical	Pass
	1	0	Middle	12.3	2.36	10.16	20.10	Vertical	Pass
	1	0	Highest	11.95	2.37	10.22	19.80	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for LTE Band 4 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.88	2.35	10.13	18.66	Horizontal	Pass
	1	0	Middle	10.69	2.36	10.16	18.49	Horizontal	Pass
	1	0	Highest	10.55	2.37	10.22	18.40	Horizontal	Pass
	1	0	Lowest	12.21	2.35	10.13	19.99	Vertical	Pass
	1	0	Middle	12.17	2.36	10.16	19.97	Vertical	Pass
	1	0	Highest	11.99	2.37	10.22	19.84	Vertical	Pass
16QAM	1	0	Lowest	10.46	2.35	10.13	18.24	Horizontal	Pass
	1	0	Middle	10.36	2.36	10.16	18.16	Horizontal	Pass
	1	0	Highest	10.28	2.37	10.22	18.13	Horizontal	Pass
	1	0	Lowest	11.86	2.35	10.13	19.64	Vertical	Pass
	1	0	Middle	11.79	2.36	10.16	19.59	Vertical	Pass
	1	0	Highest	11.58	2.37	10.22	19.43	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.92	2.35	10.13	19.70	Horizontal	Pass
	1	0	Middle	11.86	2.36	10.16	19.66	Horizontal	Pass
	1	0	Highest	11.92	2.37	10.22	19.77	Horizontal	Pass
	1	0	Lowest	13.27	2.35	10.13	21.05	Vertical	Pass
	1	0	Middle	13.21	2.36	10.16	21.01	Vertical	Pass
	1	0	Highest	13.3	2.37	10.22	21.15	Vertical	Pass
16QAM	1	0	Lowest	11.64	2.35	10.13	19.42	Horizontal	Pass
	1	0	Middle	11.55	2.36	10.16	19.35	Horizontal	Pass
	1	0	Highest	11.78	2.37	10.22	19.63	Horizontal	Pass
	1	0	Lowest	13.08	2.35	10.13	20.86	Vertical	Pass
	1	0	Middle	12.89	2.36	10.16	20.69	Vertical	Pass
	1	0	Highest	13.14	2.37	10.22	20.99	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for LTE Band 5 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.81	1.27	6.70	18.24	Horizontal	Pass
	1	0	Middle	12.92	1.28	6.70	18.34	Horizontal	Pass
	1	0	Highest	13.24	1.29	6.70	18.65	Horizontal	Pass
	1	0	Lowest	14.15	1.27	6.70	19.58	Vertical	Pass
	1	0	Middle	14.27	1.28	6.70	19.69	Vertical	Pass
	1	0	Highest	14.66	1.29	6.70	20.07	Vertical	Pass
16QAM	1	0	Lowest	12.35	1.27	6.70	17.78	Horizontal	Pass
	1	0	Middle	12.72	1.28	6.70	18.14	Horizontal	Pass
	1	0	Highest	13.01	1.29	6.70	18.42	Horizontal	Pass
	1	0	Lowest	13.77	1.27	6.70	19.20	Vertical	Pass
	1	0	Middle	14.07	1.28	6.70	19.49	Vertical	Pass
	1	0	Highest	14.35	1.29	6.70	19.76	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 5 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.39	1.27	6.70	17.82	Horizontal	Pass
	1	0	Middle	12.76	1.28	6.70	18.18	Horizontal	Pass
	1	0	Highest	13.07	1.29	6.70	18.48	Horizontal	Pass
	1	0	Lowest	13.85	1.27	6.70	19.28	Vertical	Pass
	1	0	Middle	14.2	1.28	6.70	19.62	Vertical	Pass
	1	0	Highest	14.51	1.29	6.70	19.92	Vertical	Pass
16QAM	1	0	Lowest	12.32	1.27	6.70	17.75	Horizontal	Pass
	1	0	Middle	12.47	1.28	6.70	17.89	Horizontal	Pass
	1	0	Highest	12.71	1.29	6.70	18.12	Horizontal	Pass
	1	0	Lowest	13.73	1.27	6.70	19.16	Vertical	Pass
	1	0	Middle	13.83	1.28	6.70	19.25	Vertical	Pass
	1	0	Highest	14.13	1.29	6.70	19.54	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 5 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.93	1.27	6.70	18.36	Horizontal	Pass
	1	0	Middle	13.29	1.28	6.70	18.71	Horizontal	Pass
	1	0	Highest	13.51	1.29	6.70	18.92	Horizontal	Pass
	1	0	Lowest	14.37	1.27	6.70	19.80	Vertical	Pass
	1	0	Middle	14.68	1.28	6.70	20.10	Vertical	Pass
	1	0	Highest	14.89	1.29	6.70	20.30	Vertical	Pass
16QAM	1	0	Lowest	12.6	1.27	6.70	18.03	Horizontal	Pass
	1	0	Middle	12.92	1.28	6.70	18.34	Horizontal	Pass
	1	0	Highest	13.21	1.29	6.70	18.62	Horizontal	Pass
	1	0	Lowest	14.04	1.27	6.70	19.47	Vertical	Pass
	1	0	Middle	14.34	1.28	6.70	19.76	Vertical	Pass
	1	0	Highest	14.66	1.29	6.70	20.07	Vertical	Pass
Limit	ERP<3W=34.77dBm								

Radiated Power (EIRP) for LTE Band 5 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	13.16	1.27	6.70	18.59	Horizontal	Pass
	1	0	Middle	13.4	1.28	6.70	18.82	Horizontal	Pass
	1	0	Highest	13.7	1.29	6.70	19.11	Horizontal	Pass
	1	0	Lowest	14.58	1.27	6.70	20.01	Vertical	Pass
	1	0	Middle	14.89	1.28	6.70	20.31	Vertical	Pass
	1	0	Highest	15.08	1.29	6.70	20.49	Vertical	Pass
16QAM	1	0	Lowest	12.9	1.27	6.70	18.33	Horizontal	Pass
	1	0	Middle	13.22	1.28	6.70	18.64	Horizontal	Pass
	1	0	Highest	13.4	1.29	6.70	18.81	Horizontal	Pass
	1	0	Lowest	14.28	1.27	6.70	19.71	Vertical	Pass
	1	0	Middle	14.62	1.28	6.70	20.04	Vertical	Pass
	1	0	Highest	14.8	1.29	6.70	20.21	Vertical	Pass
Limit	ERP<3W=34.77dBm								



Radiated Power (EIRP) for LTE Band 7 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.6	2.56	10.60	18.64	Horizontal	Pass
	1	0	Middle	10.77	2.67	10.65	18.75	Horizontal	Pass
	1	0	Highest	10.61	2.72	10.70	18.59	Horizontal	Pass
	1	0	Lowest	11.96	2.56	10.60	20.00	Vertical	Pass
	1	0	Middle	12.24	2.67	10.65	20.22	Vertical	Pass
	1	0	Highest	12.05	2.72	10.70	20.03	Vertical	Pass
16QAM	1	0	Lowest	10.31	2.56	10.60	18.35	Horizontal	Pass
	1	0	Middle	10.44	2.67	10.65	18.42	Horizontal	Pass
	1	0	Highest	10.26	2.72	10.70	18.24	Horizontal	Pass
	1	0	Lowest	11.75	2.56	10.60	19.79	Vertical	Pass
	1	0	Middle	11.82	2.67	10.65	19.80	Vertical	Pass
	1	0	Highest	11.68	2.72	10.70	19.66	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 7 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.76	2.56	10.60	18.80	Horizontal	Pass
	1	0	Middle	10.61	2.67	10.65	18.59	Horizontal	Pass
	1	0	Highest	10.86	2.72	10.70	18.84	Horizontal	Pass
	1	0	Lowest	12.24	2.56	10.60	20.28	Vertical	Pass
	1	0	Middle	12.04	2.67	10.65	20.02	Vertical	Pass
	1	0	Highest	12.23	2.72	10.70	20.21	Vertical	Pass
16QAM	1	0	Lowest	10.57	2.56	10.60	18.61	Horizontal	Pass
	1	0	Middle	10.53	2.67	10.65	18.51	Horizontal	Pass
	1	0	Highest	10.66	2.72	10.70	18.64	Horizontal	Pass
	1	0	Lowest	12.01	2.56	10.60	20.05	Vertical	Pass
	1	0	Middle	11.92	2.67	10.65	19.90	Vertical	Pass
	1	0	Highest	12	2.72	10.70	19.98	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 7 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	9.87	2.56	10.60	17.91	Horizontal	Pass
	1	0	Middle	10.25	2.67	10.65	18.23	Horizontal	Pass
	1	0	Highest	9.89	2.72	10.70	17.87	Horizontal	Pass
	1	0	Lowest	11.33	2.56	10.60	19.37	Vertical	Pass
	1	0	Middle	11.56	2.67	10.65	19.54	Vertical	Pass
	1	0	Highest	11.38	2.72	10.70	19.36	Vertical	Pass
16QAM	1	0	Lowest	9.58	2.56	10.60	17.62	Horizontal	Pass
	1	0	Middle	9.98	2.67	10.65	17.96	Horizontal	Pass
	1	0	Highest	9.76	2.72	10.70	17.74	Horizontal	Pass
	1	0	Lowest	11.01	2.56	10.60	19.05	Vertical	Pass
	1	0	Middle	11.28	2.67	10.65	19.26	Vertical	Pass
	1	0	Highest	11.17	2.72	10.70	19.15	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 7 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.68	2.56	10.60	18.72	Horizontal	Pass
	1	0	Middle	11.2	2.67	10.65	19.18	Horizontal	Pass
	1	0	Highest	10.95	2.72	10.70	18.93	Horizontal	Pass
	1	0	Lowest	12.14	2.56	10.60	20.18	Vertical	Pass
	1	0	Middle	12.51	2.67	10.65	20.49	Vertical	Pass
	1	0	Highest	12.29	2.72	10.70	20.27	Vertical	Pass
16QAM	1	0	Lowest	10.6	2.56	10.60	18.64	Horizontal	Pass
	1	0	Middle	10.66	2.67	10.65	18.64	Horizontal	Pass
	1	0	Highest	10.63	2.72	10.70	18.61	Horizontal	Pass
	1	0	Lowest	12.08	2.56	10.60	20.12	Vertical	Pass
	1	0	Middle	12.09	2.67	10.65	20.07	Vertical	Pass
	1	0	Highest	12.13	2.72	10.70	20.11	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 12 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	13.55	1.21	6.40	18.74	Horizontal	Pass
	1	0	Middle	13.12	1.22	6.40	18.30	Horizontal	Pass
	1	0	Highest	13.35	1.23	6.40	18.52	Horizontal	Pass
	1	0	Lowest	15.03	1.21	6.40	20.22	Vertical	Pass
	1	0	Middle	14.54	1.22	6.40	19.72	Vertical	Pass
	1	0	Highest	14.74	1.23	6.40	19.91	Vertical	Pass
16QAM	1	0	Lowest	13.27	1.21	6.40	18.46	Horizontal	Pass
	1	0	Middle	12.67	1.22	6.40	17.85	Horizontal	Pass
	1	0	Highest	13.22	1.23	6.40	18.39	Horizontal	Pass
	1	0	Lowest	14.72	1.21	6.40	19.91	Vertical	Pass
	1	0	Middle	14.11	1.22	6.40	19.29	Vertical	Pass
	1	0	Highest	14.55	1.23	6.40	19.72	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 12 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	13.4	1.21	6.40	18.59	Horizontal	Pass
	1	0	Middle	13.08	1.22	6.40	18.26	Horizontal	Pass
	1	0	Highest	13.38	1.23	6.40	18.55	Horizontal	Pass
	1	0	Lowest	14.79	1.21	6.40	19.98	Vertical	Pass
	1	0	Middle	14.42	1.22	6.40	19.60	Vertical	Pass
	1	0	Highest	14.7	1.23	6.40	19.87	Vertical	Pass
16QAM	1	0	Lowest	13.11	1.21	6.40	18.30	Horizontal	Pass
	1	0	Middle	12.64	1.22	6.40	17.82	Horizontal	Pass
	1	0	Highest	13.05	1.23	6.40	18.22	Horizontal	Pass
	1	0	Lowest	14.58	1.21	6.40	19.77	Vertical	Pass
	1	0	Middle	14.1	1.22	6.40	19.28	Vertical	Pass
	1	0	Highest	14.5	1.23	6.40	19.67	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 12 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	13.54	1.21	6.40	18.73	Horizontal	Pass
	1	0	Middle	13.8	1.22	6.40	18.98	Horizontal	Pass
	1	0	Highest	13.61	1.23	6.40	18.78	Horizontal	Pass
	1	0	Lowest	15	1.21	6.40	20.19	Vertical	Pass
	1	0	Middle	15.23	1.22	6.40	20.41	Vertical	Pass
	1	0	Highest	15.06	1.23	6.40	20.23	Vertical	Pass
16QAM	1	0	Lowest	13.45	1.21	6.40	18.64	Horizontal	Pass
	1	0	Middle	13.62	1.22	6.40	18.80	Horizontal	Pass
	1	0	Highest	13.41	1.23	6.40	18.58	Horizontal	Pass
	1	0	Lowest	14.81	1.21	6.40	20.00	Vertical	Pass
	1	0	Middle	14.94	1.22	6.40	20.12	Vertical	Pass
	1	0	Highest	14.73	1.23	6.40	19.90	Vertical	Pass
Limit	ERP<3W=34.77dBm								

Radiated Power (EIRP) for LTE Band 12 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	13.98	1.21	6.40	19.17	Horizontal	Pass
	1	0	Middle	14.23	1.22	6.40	19.41	Horizontal	Pass
	1	0	Highest	13.84	1.23	6.40	19.01	Horizontal	Pass
	1	0	Lowest	15.45	1.21	6.40	20.64	Vertical	Pass
	1	0	Middle	15.56	1.22	6.40	20.74	Vertical	Pass
	1	0	Highest	15.22	1.23	6.40	20.39	Vertical	Pass
16QAM	1	0	Lowest	13.73	1.21	6.40	18.92	Horizontal	Pass
	1	0	Middle	13.77	1.22	6.40	18.95	Horizontal	Pass
	1	0	Highest	13.61	1.23	6.40	18.78	Horizontal	Pass
	1	0	Lowest	15.15	1.21	6.40	20.34	Vertical	Pass
	1	0	Middle	15.19	1.22	6.40	20.37	Vertical	Pass
	1	0	Highest	15.05	1.23	6.40	20.22	Vertical	Pass
Limit	ERP<3W=34.77dBm								



Radiated Power (EIRP) for LTE Band 13 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.73	1.21	6.40	17.92	Horizontal	Pass
	1	0	Middle	12.68	1.22	6.40	17.86	Horizontal	Pass
	1	0	Highest	12.99	1.23	6.40	18.16	Horizontal	Pass
	1	0	Lowest	14.22	1.21	6.40	19.41	Vertical	Pass
	1	0	Middle	14.14	1.22	6.40	19.32	Vertical	Pass
	1	0	Highest	14.48	1.23	6.40	19.65	Vertical	Pass
16QAM	1	0	Lowest	12.52	1.21	6.40	17.71	Horizontal	Pass
	1	0	Middle	12.34	1.22	6.40	17.52	Horizontal	Pass
	1	0	Highest	12.88	1.23	6.40	18.05	Horizontal	Pass
	1	0	Lowest	14.01	1.21	6.40	19.20	Vertical	Pass
	1	0	Middle	13.82	1.22	6.40	19.00	Vertical	Pass
	1	0	Highest	14.27	1.23	6.40	19.44	Vertical	Pass
Limit	ERP<3W=34.77dBm								

Radiated Power (EIRP) for LTE Band 13 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Middle	13.18	1.22	6.40	18.36	Horizontal	Pass
	1	0	Middle	14.61	1.22	6.40	19.79	Vertical	Pass
16QAM	1	0	Middle	13.34	1.22	6.40	18.52	Horizontal	Pass
	1	0	Middle	14.65	1.22	6.40	19.83	Vertical	Pass
Limit	ERP<3W=34.77dBm								



Radiated Power (EIRP) for LTE Band 17 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	13.72	1.21	6.40	18.91	Horizontal	Pass
	1	0	Middle	13.78	1.22	6.40	18.96	Horizontal	Pass
	1	0	Highest	13.58	1.23	6.40	18.75	Horizontal	Pass
	1	0	Lowest	15.18	1.21	6.40	20.37	Vertical	Pass
	1	0	Middle	15.27	1.22	6.40	20.45	Vertical	Pass
	1	0	Highest	14.9	1.23	6.40	20.07	Vertical	Pass
16QAM	1	0	Lowest	13.48	1.21	6.40	18.67	Horizontal	Pass
	1	0	Middle	13.68	1.22	6.40	18.86	Horizontal	Pass
	1	0	Highest	13.36	1.23	6.40	18.53	Horizontal	Pass
	1	0	Lowest	14.87	1.21	6.40	20.06	Vertical	Pass
	1	0	Middle	15.01	1.22	6.40	20.19	Vertical	Pass
	1	0	Highest	14.75	1.23	6.40	19.92	Vertical	Pass
Limit	ERP<3W=34.77dBm								

Radiated Power (EIRP) for LTE Band 17 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P.(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	13.94	1.21	6.40	19.13	Horizontal	Pass
	1	0	Middle	14.04	1.22	6.40	19.22	Horizontal	Pass
	1	0	Highest	13.93	1.23	6.40	19.10	Horizontal	Pass
	1	0	Lowest	15.26	1.21	6.40	20.45	Vertical	Pass
	1	0	Middle	15.4	1.22	6.40	20.58	Vertical	Pass
	1	0	Highest	15.36	1.23	6.40	20.53	Vertical	Pass
16QAM	1	0	Lowest	13.57	1.21	6.40	18.76	Horizontal	Pass
	1	0	Middle	13.66	1.22	6.40	18.84	Horizontal	Pass
	1	0	Highest	13.86	1.23	6.40	19.03	Horizontal	Pass
	1	0	Lowest	15.06	1.21	6.40	20.25	Vertical	Pass
	1	0	Middle	15.08	1.22	6.40	20.26	Vertical	Pass
	1	0	Highest	15.31	1.23	6.40	20.48	Vertical	Pass
Limit	ERP<3W=34.77dBm								



Radiated Power (EIRP) for LTE Band41 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.42	2.56	10.60	19.46	Horizontal	Pass
	1	0	Middle	11.28	2.67	10.65	19.26	Horizontal	Pass
	1	0	Highest	10.99	2.72	10.70	18.97	Horizontal	Pass
	1	0	Lowest	12.9	2.56	10.60	20.94	Vertical	Pass
	1	0	Middle	12.73	2.67	10.65	20.71	Vertical	Pass
	1	0	Highest	12.38	2.72	10.70	20.36	Vertical	Pass
16QAM	1	0	Lowest	11.08	2.56	10.60	19.12	Horizontal	Pass
	1	0	Middle	11.07	2.67	10.65	19.05	Horizontal	Pass
	1	0	Highest	10.59	2.72	10.70	18.57	Horizontal	Pass
	1	0	Lowest	12.48	2.56	10.60	20.52	Vertical	Pass
	1	0	Middle	12.39	2.67	10.65	20.37	Vertical	Pass
	1	0	Highest	12.02	2.72	10.70	20.00	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 41 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	10.38	2.56	10.60	18.42	Horizontal	Pass
	1	0	Middle	10.45	2.67	10.65	18.43	Horizontal	Pass
	1	0	Highest	9.9	2.72	10.70	17.88	Horizontal	Pass
	1	0	Lowest	11.8	2.56	10.60	19.84	Vertical	Pass
	1	0	Middle	11.87	2.67	10.65	19.85	Vertical	Pass
	1	0	Highest	11.38	2.72	10.70	19.36	Vertical	Pass
16QAM	1	0	Lowest	10.09	2.56	10.60	18.13	Horizontal	Pass
	1	0	Middle	10.08	2.67	10.65	18.06	Horizontal	Pass
	1	0	Highest	9.71	2.72	10.70	17.69	Horizontal	Pass
	1	0	Lowest	11.41	2.56	10.60	19.45	Vertical	Pass
	1	0	Middle	11.46	2.67	10.65	19.44	Vertical	Pass
	1	0	Highest	11.18	2.72	10.70	19.16	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 41 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	9.41	2.56	10.60	17.45	Horizontal	Pass
	1	0	Middle	9.85	2.67	10.65	17.83	Horizontal	Pass
	1	0	Highest	9.58	2.72	10.70	17.56	Horizontal	Pass
	1	0	Lowest	10.81	2.56	10.60	18.85	Vertical	Pass
	1	0	Middle	11.16	2.67	10.65	19.14	Vertical	Pass
	1	0	Highest	10.99	2.72	10.70	18.97	Vertical	Pass
16QAM	1	0	Lowest	9.08	2.56	10.60	17.12	Horizontal	Pass
	1	0	Middle	9.3	2.67	10.65	17.28	Horizontal	Pass
	1	0	Highest	9.2	2.72	10.70	17.18	Horizontal	Pass
	1	0	Lowest	10.44	2.56	10.60	18.48	Vertical	Pass
	1	0	Middle	10.77	2.67	10.65	18.75	Vertical	Pass
	1	0	Highest	10.68	2.72	10.70	18.66	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 41 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	11.72	2.56	10.60	19.76	Horizontal	Pass
	1	0	Middle	11.68	2.67	10.65	19.66	Horizontal	Pass
	1	0	Highest	11.6	2.72	10.70	19.58	Horizontal	Pass
	1	0	Lowest	13.05	2.56	10.60	21.09	Vertical	Pass
	1	0	Middle	13.08	2.67	10.65	21.06	Vertical	Pass
	1	0	Highest	12.92	2.72	10.70	20.90	Vertical	Pass
16QAM	1	0	Lowest	11.6	2.56	10.60	19.64	Horizontal	Pass
	1	0	Middle	11.53	2.67	10.65	19.51	Horizontal	Pass
	1	0	Highest	11.32	2.72	10.70	19.30	Horizontal	Pass
	1	0	Lowest	12.94	2.56	10.60	20.98	Vertical	Pass
	1	0	Middle	12.91	2.67	10.65	20.89	Vertical	Pass
	1	0	Highest	12.65	2.72	10.70	20.63	Vertical	Pass
Limit	EIRP<2W=33dBm								



6. OCCUPIED BANDWIDTH

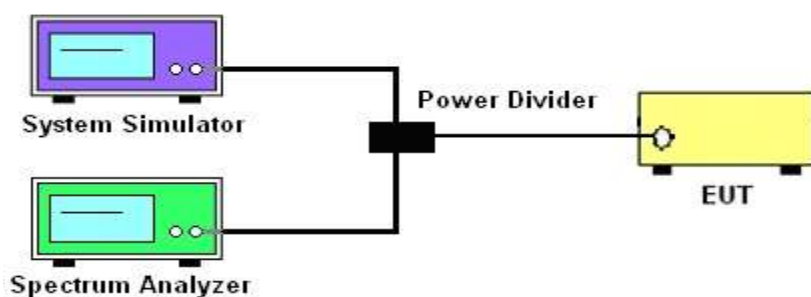
6.1 DESCRIPTION OF OCCUPIED BANDWIDTH MEASUREMENT

6.1.1 MEASUREMENT METHOD

1.The occupied bandwidth is the width of a frequency band such that, below the lower and above theupper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% ofthe total mean transmitted power.

2.The 26 db emission bandwidth is defined as the frequency range between two points, one above andone below the carrier frequency, at which the spectral density of the emission is attenuated 26 dbbelow the maximum in-band spectral density of the modulated signal. spectral density (power per unitbandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% ofthe emission bandwidth.

6.1.2 TEST SETUP



6.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 4.1.and 4.2
2. The EUT was connected to spectrum and system simulator via a power divider
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Set the test probe and measure the Occupied Bandwidth of the spectrum analyzer
5. Measure and record the Occupied Bandwidth from the Spectrum Analyzer.

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	PK	PK	PK	PK	PK	PK
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto



6.1.4 MEASUREMENT RESULT

LTE Band 2 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.1004	1.231	1.092	1.234	1.0931	1.245
1.4	16-QAM	1.0871	1.23	1.094	1.241	1.0947	1.244
3	QPSK	2.688	2.937	2.683	2.933	2.683	2.931
3	16-QAM	2.68	2.934	2.681	2.932	2.6797	2.938
5	QPSK	4.505	4.967	4.4977	4.974	4.522	4.976
5	16-QAM	4.496	4.963	4.524	4.994	4.5145	4.98
10	QPSK	8.927	9.667	8.943	9.665	8.946	9.71
10	16-QAM	8.935	9.578	8.933	9.631	8.936	9.607
15	QPSK	13.435	14.59	13.469	14.67	13.485	14.63
15	16-QAM	13.469	14.6	13.467	14.65	13.481	14.68
20	QPSK	17.864	19.3	17.916	19.55	17.887	19.22
20	16-QAM	17.91	19.32	17.906	19.35	17.879	19.27

LTE Band 4 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.092	1.248	1.101	1.233	1.0924	1.239
1.4	16-QAM	1.094	1.24	1.088	1.227	1.094	1.244
3	QPSK	2.6871	2.932	2.684	2.936	2.6839	2.93
3	16-QAM	2.6797	2.951	2.682	2.925	2.681	2.937
5	QPSK	4.501	4.99	4.495	4.959	4.519	4.973
5	16-QAM	4.5	4.979	4.52	4.978	4.522	5.008
10	QPSK	8.923	9.635	8.939	9.689	8.948	9.693
10	16-QAM	8.94	9.557	8.939	9.635	8.942	9.606
15	QPSK	13.431	14.72	13.466	14.72	13.496	14.78
15	16-QAM	13.46	14.64	13.475	14.66	13.476	14.66
20	QPSK	17.847	19.17	17.91	19.58	17.925	19.38
20	16-QAM	17.905	19.37	17.902	19.39	17.91	19.36

LTE Band 5 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.0927	1.242	1.102	1.233	1.091	1.237
1.4	16-QAM	1.0929	1.239	1.088	1.226	1.095	1.244
3	QPSK	2.682	2.934	2.688	2.926	2.682	2.936
3	16-QAM	2.6795	2.932	2.68	2.958	2.68	2.926
5	QPSK	4.507	5.002	4.493	4.942	4.513	4.964
5	16-QAM	4.504	4.983	4.518	4.985	4.514	4.969
10	QPSK	8.934	9.638	8.923	9.621	8.946	9.636
10	16-QAM	8.947	9.577	8.92	9.604	8.935	9.612



LTE Band 7 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.5	4.955	4.516	4.987	4.504	4.969
5	16-QAM	4.526	4.971	4.521	4.98	4.498	4.968
10	QPSK	8.93	9.625	8.941	9.698	8.946	9.722
10	16-QAM	8.935	9.629	8.943	9.645	8.94	9.622
15	QPSK	13.441	14.73	13.472	14.72	13.492	14.72
15	16-QAM	13.47	14.67	13.484	14.71	13.492	14.64
20	QPSK	17.875	19.35	17.933	19.54	17.882	19.18
20	16-QAM	17.92	19.34	17.934	19.6	17.889	19.29
LTE Band 12 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.0948	1.249	1.1004	1.232	1.093	1.245
1.4	16-QAM	1.087	1.23	1.0923	1.249	1.0951	1.248
3	QPSK	2.684	2.93	2.689	2.93	2.685	2.943
3	16-QAM	2.681	2.93	2.681	2.96	2.683	2.949
5	QPSK	4.506	4.987	4.494	4.953	4.5324	4.976
5	16-QAM	4.507	4.959	4.52	4.986	4.526	4.99
10	QPSK	8.92	9.641	8.923	9.602	8.964	9.774
10	16-QAM	8.921	9.59	8.917	9.543	8.954	9.704
LTE Band 13 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.491	4.948	4.503	4.961	4.522	4.975
5	16-QAM	4.4897	4.958	4.529	4.98	4.533	5.013
10	QPSK			8.949	9.705		
10	16-QAM			8.936	9.589		
LTE Band 17 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.502	4.972	4.497	4.966	4.528	4.981
5	16-QAM	4.5141	4.987	4.527	4.988	4.505	4.98
10	QPSK	8.925	9.595	8.948	9.642	8.963	9.753
10	16-QAM	8.933	9.587	8.945	9.629	8.951	9.7
LTE Band 41 Bandwidth [MHz]							
BW [MHz]	Mod	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.507	5.011	4.4916	4.918	4.5023	5.104
5	16-QAM	4.494	4.984	4.513	4.995	4.506	5.098
10	QPSK	8.928	9.723	8.934	9.57	8.935	9.727
10	16-QAM	8.921	9.527	8.924	9.584	8.946	9.606
15	QPSK	13.422	14.67	13.421	14.59	13.456	14.58
15	16-QAM	13.511	14.76	13.489	14.66	13.468	14.61
20	QPSK	17.883	19.21	17.881	19.26	17.871	19.04
20	16-QAM	17.894	19.18	17.863	19.22	17.842	19.22

Note: Test chart See Appendix A



7. CONDUCTED BAND EDGE

7.1 DESCRIPTION OF CONDUCTED BAND EDGE MEASUREMENT

7.1.1 MEASUREMENT METHOD

1. §22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

2. §24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3. §27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

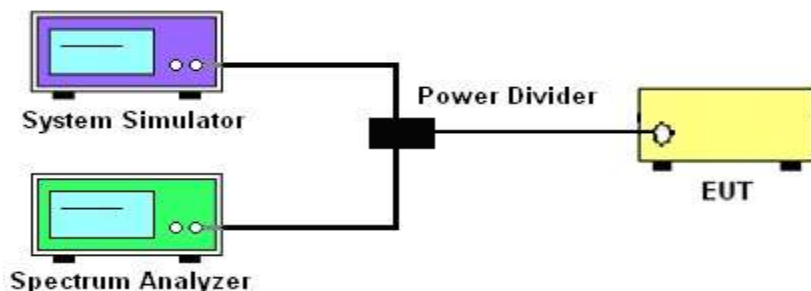
4. §27.53(m)(4)

For operations in the 2500 MHz ~ 2570 MHz band this section, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

5. §27.53 (g)

For operations in the 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. 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.

7.1.2 TEST SETUP



7.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0. and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS/AVG detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.

Band 7:
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm.

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	12MHz	13MHz	15MHz	20MHz	25MHz	30MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	RMS	RMS	RMS	RMS	RMS	RMS
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto

7.1.4 MEASUREMENT RESULT

Note: Test chart See Appendix B



8. CONDUCTED SPURIOUS EMISSION

8.1 DESCRIPTION OF CONDUCTED SPURIOUS EMISSION MEASUREMENT

8.1.1 MEASUREMENT METHOD

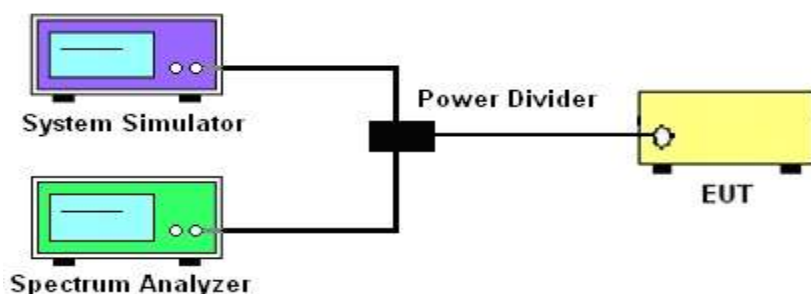
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log(P)$ dB.

For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log(P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

8.1.2 TEST SETUP



8.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0. and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement
4. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)} = [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}$.
 For Band 7: $P(W) - [43 + 10\log(P)] \text{ (dB)} = -25\text{dBm}$

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	Auto	Auto	Auto	Auto	Auto	Auto
RBW	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz
VBW	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz
Detector	PK	PK	PK	PK	PK	PK
Trace	Max	Max	Max	Max	Max	Max

8.1.4 TEST RESULTS

Note: Test chart See Appendix C

9. RADIATED SPURIOUS EMISSION

9.1 DESCRIPTION OF RADIATED SPURIOUS EMISSION

9.1.1 MEASUREMENT METHOD

The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB. For Band 7 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

9.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions (RSE) is calculated as, $RSE = R_x (\text{dBuV}) + CL (\text{dB}) + SA (\text{dB}) + \text{Gain} (\text{dBi}) - 107 (\text{dBuV to dBm})$ The SA is calibrated using following setup.

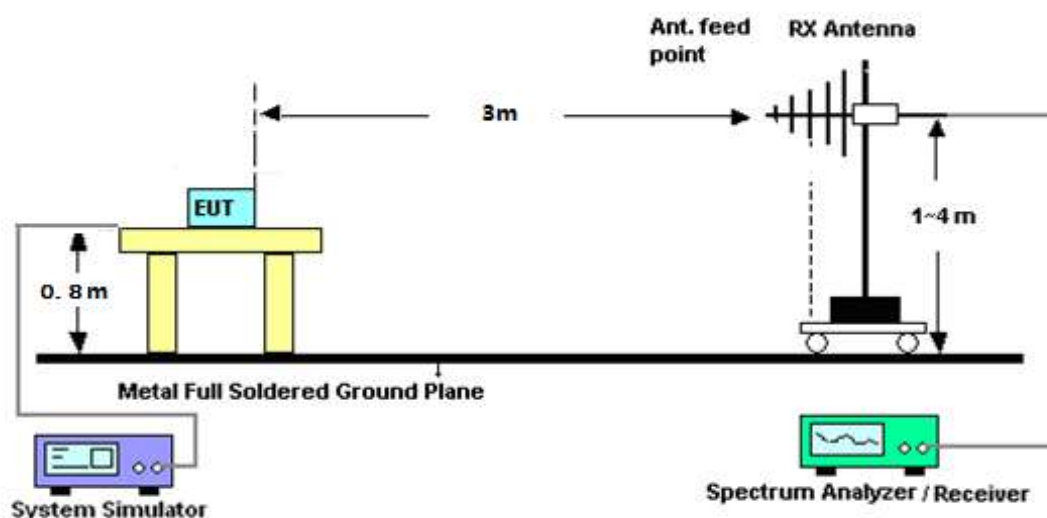
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8 m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1 MHz bandwidth.

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

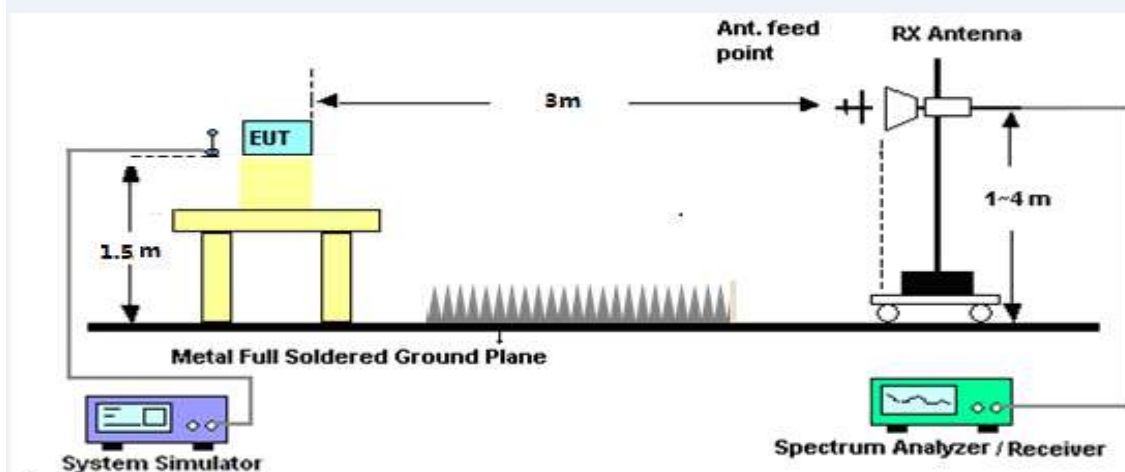
The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

Power = $P_{\text{Mea}} + \text{ARpl}$

For radiated test from 30 MHz to 1 GHz



For radiated test from above 1GHz



9.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 Section 5.8 and ANSI C63.26 2015 Section 5.5.
2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenntower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm

For Band 7:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm

EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

ERP (dBm) = EIRP - 2.15



9.1.4 TEST RESULTS

LTE Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3701.22	-34.59	12.60	12.93	-34.92	-13.00	-21.92	H
5551.93	-34.46	13.10	17.11	-38.47	-13.00	-25.47	H
7402.95	-32.88	11.50	22.20	-43.58	-13.00	-30.58	H
3701.22	-35.30	12.60	12.93	-35.63	-13.00	-22.63	V
5551.93	-34.25	13.10	17.11	-38.26	-13.00	-25.26	V
7402.95	-32.35	11.50	22.20	-43.05	-13.00	-30.05	V
LTE Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3760.17	-33.86	12.60	12.93	-34.19	-13.00	-21.19	H
5639.97	-35.42	13.10	17.11	-39.43	-13.00	-26.43	H
7519.90	-33.33	11.50	22.20	-44.03	-13.00	-31.03	H
3760.17	-35.80	12.60	12.93	-36.13	-13.00	-23.13	V
5639.97	-34.10	13.10	17.11	-38.11	-13.00	-25.11	V
7519.90	-33.15	11.50	22.20	-43.85	-13.00	-30.85	V
LTE Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3818.26	-34.16	12.60	12.93	-34.49	-13.00	-21.49	H
5727.47	-34.73	13.10	17.11	-38.74	-13.00	-25.74	H
7636.87	-32.94	11.50	22.20	-43.64	-13.00	-30.64	H
3818.26	-34.91	12.60	12.93	-35.24	-13.00	-22.24	V
5727.47	-33.86	13.10	17.11	-37.87	-13.00	-24.87	V
7636.87	-31.81	11.50	22.20	-42.51	-13.00	-29.51	V



LTE Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3703.13	-34.57	12.60	12.93	-34.90	-13.00	-21.90	H
5554.53	-35.23	13.10	17.11	-39.24	-13.00	-26.24	H
7406.56	-32.29	11.50	22.20	-42.99	-13.00	-29.99	H
3703.13	-34.55	12.60	12.93	-34.88	-13.00	-21.88	V
5554.53	-34.30	13.10	17.11	-38.31	-13.00	-25.31	V
7406.56	-33.00	11.50	22.20	-43.70	-13.00	-30.70	V
LTE Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3759.88	-34.74	12.60	12.93	-35.07	-13.00	-22.07	H
5639.84	-34.98	13.10	17.11	-38.99	-13.00	-25.99	H
7520.14	-33.35	11.50	22.20	-44.05	-13.00	-31.05	H
3759.88	-35.76	12.60	12.93	-36.09	-13.00	-23.09	V
5639.84	-34.78	13.10	17.11	-38.79	-13.00	-25.79	V
7520.14	-32.72	11.50	22.20	-43.42	-13.00	-30.42	V
LTE Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3816.34	-33.46	12.60	12.93	-33.79	-13.00	-20.79	H
5724.83	-34.12	13.10	17.11	-38.13	-13.00	-25.13	H
7633.39	-33.61	11.50	22.20	-44.31	-13.00	-31.31	H
3816.34	-35.55	12.60	12.93	-35.88	-13.00	-22.88	V
5724.83	-35.03	13.10	17.11	-39.04	-13.00	-26.04	V
7633.39	-32.37	11.50	22.20	-43.07	-13.00	-30.07	V



LTE Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3705.15	-34.81	12.60	12.93	-35.14	-13.00	-22.14	H
5558.04	-35.08	13.10	17.11	-39.09	-13.00	-26.09	H
7410.44	-33.27	11.50	22.20	-43.97	-13.00	-30.97	H
3705.15	-34.83	12.60	12.93	-35.16	-13.00	-22.16	V
5558.04	-34.82	13.10	17.11	-38.83	-13.00	-25.83	V
7410.44	-31.79	11.50	22.20	-42.49	-13.00	-29.49	V
LTE Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3760.12	-34.59	12.60	12.93	-34.92	-13.00	-21.92	H
5640.23	-34.07	13.10	17.11	-38.08	-13.00	-25.08	H
7519.85	-33.49	11.50	22.20	-44.19	-13.00	-31.19	H
3760.12	-35.75	12.60	12.93	-36.08	-13.00	-23.08	V
5640.23	-33.90	13.10	17.11	-37.91	-13.00	-24.91	V
7519.85	-31.86	11.50	22.20	-42.56	-13.00	-29.56	V
LTE Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3813.98	-34.47	12.60	12.93	-34.80	-13.00	-21.80	H
5721.45	-34.22	13.10	17.11	-38.23	-13.00	-25.23	H
7628.69	-33.19	11.50	22.20	-43.89	-13.00	-30.89	H
3813.98	-35.83	12.60	12.93	-36.16	-13.00	-23.16	V
5721.45	-34.10	13.10	17.11	-38.11	-13.00	-25.11	V
7628.69	-32.38	11.50	22.20	-43.08	-13.00	-30.08	V



LTE Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3710.44	-34.89	12.60	12.93	-35.22	-13.00	-22.22	H
5565.74	-34.92	13.10	17.11	-38.93	-13.00	-25.93	H
7420.82	-32.80	11.50	22.20	-43.50	-13.00	-30.50	H
3710.44	-35.07	12.60	12.93	-35.40	-13.00	-22.40	V
5565.74	-34.51	13.10	17.11	-38.52	-13.00	-25.52	V
7420.82	-32.04	11.50	22.20	-42.74	-13.00	-29.74	V
LTE Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3760.03	-34.37	12.60	12.93	-34.70	-13.00	-21.70	H
5640.20	-35.43	13.10	17.11	-39.44	-13.00	-26.44	H
7520.23	-32.77	11.50	22.20	-43.47	-13.00	-30.47	H
3760.03	-35.33	12.60	12.93	-35.66	-13.00	-22.66	V
5640.20	-35.01	13.10	17.11	-39.02	-13.00	-26.02	V
7520.23	-32.59	11.50	22.20	-43.29	-13.00	-30.29	V
LTE Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3809.40	-33.83	12.60	12.93	-34.16	-13.00	-21.16	H
5714.05	-35.15	13.10	17.11	-39.16	-13.00	-26.16	H
7618.10	-32.25	11.50	22.20	-42.95	-13.00	-29.95	H
3809.40	-35.36	12.60	12.93	-35.69	-13.00	-22.69	V
5714.05	-34.67	13.10	17.11	-38.68	-13.00	-25.68	V
7618.10	-32.32	11.50	22.20	-43.02	-13.00	-30.02	V



LTE Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3716.04	-34.81	12.60	12.93	-35.14	-13.00	-22.14	H
5574.17	-35.33	13.10	17.11	-39.34	-13.00	-26.34	H
7618.71	-32.44	11.50	22.20	-43.14	-13.00	-30.14	H
3716.04	-35.08	12.60	12.93	-35.41	-13.00	-22.41	V
5574.17	-34.80	13.10	17.11	-38.81	-13.00	-25.81	V
7618.71	-32.42	11.50	22.20	-43.12	-13.00	-30.12	V
LTE Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3760.05	-34.25	12.60	12.93	-34.58	-13.00	-21.58	H
5640.00	-34.79	13.10	17.11	-38.80	-13.00	-25.80	H
7520.24	-32.89	11.50	22.20	-43.59	-13.00	-30.59	H
3760.05	-35.69	12.60	12.93	-36.02	-13.00	-23.02	V
5640.00	-34.41	13.10	17.11	-38.42	-13.00	-25.42	V
7520.24	-31.74	11.50	22.20	-42.44	-13.00	-29.44	V
LTE Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3803.64	-34.16	12.60	12.93	-34.49	-13.00	-21.49	H
5705.35	-34.50	13.10	17.11	-38.51	-13.00	-25.51	H
7607.18	-32.70	11.50	22.20	-43.40	-13.00	-30.40	H
3803.64	-34.93	12.60	12.93	-35.26	-13.00	-22.26	V
5705.35	-35.15	13.10	17.11	-39.16	-13.00	-26.16	V
7607.18	-32.83	11.50	22.20	-43.53	-13.00	-30.53	V



LTE Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3721.41	-34.90	12.60	12.93	-35.23	-13.00	-22.23	H
5581.22	-34.10	13.10	17.11	-38.11	-13.00	-25.11	H
7441.97	-32.99	11.50	22.20	-43.69	-13.00	-30.69	H
3721.41	-35.76	12.60	12.93	-36.09	-13.00	-23.09	V
5581.22	-33.94	13.10	17.11	-37.95	-13.00	-24.95	V
7441.97	-31.91	11.50	22.20	-42.61	-13.00	-29.61	V
LTE Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3760.14	-34.12	12.60	12.93	-34.45	-13.00	-21.45	H
5640.06	-34.66	13.10	17.11	-38.67	-13.00	-25.67	H
7519.94	-33.46	11.50	22.20	-44.16	-13.00	-31.16	H
3760.14	-35.94	12.60	12.93	-36.27	-13.00	-23.27	V
5640.06	-34.63	13.10	17.11	-38.64	-13.00	-25.64	V
7519.94	-32.73	11.50	22.20	-43.43	-13.00	-30.43	V
LTE Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3798.45	-33.53	12.60	12.93	-33.86	-13.00	-20.86	H
5697.22	-34.35	13.10	17.11	-38.36	-13.00	-25.36	H
7597.04	-32.42	11.50	22.20	-43.12	-13.00	-30.12	H
3798.45	-34.66	12.60	12.93	-34.99	-13.00	-21.99	V
5697.22	-34.15	13.10	17.11	-38.16	-13.00	-25.16	V
7597.04	-33.11	11.50	22.20	-43.81	-13.00	-30.81	V



LTE Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3421.25	-34.37	12.90	12.56	-34.03	-13.00	-21.03	H
5131.90	-34.62	13.10	12.46	-33.98	-13.00	-20.98	H
6842.64	-32.78	12.33	21.13	-41.58	-13.00	-28.58	H
3421.25	-34.67	12.90	12.76	-34.53	-13.00	-21.53	V
5131.90	-33.91	13.10	16.32	-37.13	-13.00	-24.13	V
6842.64	-33.18	12.33	21.13	-41.98	-13.00	-28.98	V
LTE Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3464.79	-34.62	12.80	12.56	-34.38	-13.00	-21.38	H
5196.94	-34.68	13.10	12.46	-34.04	-13.00	-21.04	H
6930.19	-33.00	12.33	21.13	-41.80	-13.00	-28.80	H
3464.79	-35.75	12.80	12.76	-35.71	-13.00	-22.71	V
5196.94	-35.15	13.10	16.32	-38.37	-13.00	-25.37	V
6930.19	-31.89	12.33	21.13	-40.69	-13.00	-27.69	V
LTE Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3508.58	-33.76	12.61	12.56	-33.71	-13.00	-20.71	H
5262.42	-34.31	13.12	12.46	-33.65	-13.00	-20.65	H
7015.85	-33.35	12.32	21.13	-42.16	-13.00	-29.16	H
3508.58	-35.60	12.61	12.76	-35.75	-13.00	-22.75	V
5262.42	-34.34	13.12	16.32	-37.54	-13.00	-24.54	V
7015.85	-32.97	12.32	21.13	-41.78	-13.00	-28.78	V



LTE Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3424.16	-34.66	12.90	12.56	-34.32	-13.00	-21.32	H
5136.25	-34.91	13.10	12.46	-34.27	-13.00	-21.27	H
6848.62	-32.69	12.33	21.13	-41.49	-13.00	-28.49	H
3424.16	-35.46	12.90	12.76	-35.32	-13.00	-22.32	V
5136.25	-34.49	13.10	16.32	-37.71	-13.00	-24.71	V
6848.62	-32.58	12.33	21.13	-41.38	-13.00	-28.38	V
LTE Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3465.22	-34.06	12.80	12.56	-33.82	-13.00	-20.82	H
5197.25	-35.08	13.10	12.46	-34.44	-13.00	-21.44	H
6930.05	-32.91	12.33	21.13	-41.71	-13.00	-28.71	H
3465.22	-35.51	12.80	12.76	-35.47	-13.00	-22.47	V
5197.25	-35.17	13.10	16.32	-38.39	-13.00	-25.39	V
6930.05	-32.15	12.33	21.13	-40.95	-13.00	-27.95	V
LTE Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3506.79	-34.40	12.61	12.56	-34.35	-13.00	-21.35	H
5262.33	-34.25	13.12	12.46	-33.59	-13.00	-20.59	H
7013.10	-33.44	12.32	21.13	-42.25	-13.00	-29.25	H
3506.79	-35.84	12.61	12.76	-35.99	-13.00	-22.99	V
5262.33	-34.66	13.12	16.32	-37.86	-13.00	-24.86	V
7013.10	-32.94	12.32	21.13	-41.75	-13.00	-28.75	V



LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3425.32	-34.28	12.90	12.56	-33.94	-13.00	-20.94	H
5137.44	-34.77	13.10	12.46	-34.13	-13.00	-21.13	H
6850.05	-33.03	12.33	21.13	-41.83	-13.00	-28.83	H
3425.32	-35.97	12.90	12.76	-35.83	-13.00	-22.83	V
5137.44	-34.96	13.10	16.32	-38.18	-13.00	-25.18	V
6850.05	-32.79	12.33	21.13	-41.59	-13.00	-28.59	V
LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3465.21	-34.75	12.80	12.56	-34.51	-13.00	-21.51	H
5196.88	-35.49	13.10	12.46	-34.85	-13.00	-21.85	H
6929.94	-32.67	12.33	21.13	-41.47	-13.00	-28.47	H
3465.21	-35.41	12.80	12.76	-35.37	-13.00	-22.37	V
5196.88	-35.22	13.10	16.32	-38.44	-13.00	-25.44	V
6929.94	-32.29	12.33	21.13	-41.09	-13.00	-28.09	V
LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3505.63	-34.81	12.61	12.56	-34.76	-13.00	-21.76	H
5257.45	-34.52	13.12	12.46	-33.86	-13.00	-20.86	H
7010.23	-32.97	12.32	21.13	-41.78	-13.00	-28.78	H
3505.63	-35.18	12.61	12.76	-35.33	-13.00	-22.33	V
5257.45	-35.17	13.12	16.32	-38.37	-13.00	-25.37	V
7010.23	-33.01	12.32	21.13	-41.82	-13.00	-28.82	V



LTE Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3430.32	-34.06	12.90	12.56	-33.72	-13.00	-20.72	H
5145.54	-34.76	13.10	12.46	-34.12	-13.00	-21.12	H
6860.92	-32.30	12.33	21.13	-41.10	-13.00	-28.10	H
3430.32	-35.12	12.90	12.76	-34.98	-13.00	-21.98	V
5145.54	-34.12	13.10	16.32	-37.34	-13.00	-24.34	V
6860.92	-32.23	12.33	21.13	-41.03	-13.00	-28.03	V
LTE Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3464.81	-33.66	12.80	12.56	-33.42	-13.00	-20.42	H
5196.91	-34.46	13.10	12.46	-33.82	-13.00	-20.82	H
6929.85	-32.52	12.33	21.13	-41.32	-13.00	-28.32	H
3464.81	-35.01	12.80	12.76	-34.97	-13.00	-21.97	V
5196.91	-34.94	13.10	16.32	-38.16	-13.00	-25.16	V
6929.85	-32.34	12.33	21.13	-41.14	-13.00	-28.14	V
LTE Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3500.57	-33.54	12.61	12.56	-33.49	-13.00	-20.49	H
5250.14	-34.23	13.12	12.46	-33.57	-13.00	-20.57	H
6999.88	-32.39	12.32	21.13	-41.20	-13.00	-28.20	H
3500.57	-34.70	12.61	12.76	-34.85	-13.00	-21.85	V
5250.14	-34.06	13.12	16.32	-37.26	-13.00	-24.26	V
6999.88	-31.84	12.32	21.13	-40.65	-13.00	-27.65	V



LTE Band 4 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3435.28	-34.64	12.90	12.56	-34.30	-13.00	-21.30	H
5152.36	-35.04	13.10	12.46	-34.40	-13.00	-21.40	H
6870.93	-33.07	12.33	21.13	-41.87	-13.00	-28.87	H
3435.28	-34.97	12.90	12.76	-34.83	-13.00	-21.83	V
5152.36	-34.05	13.10	16.32	-37.27	-13.00	-24.27	V
6870.93	-32.38	12.33	21.13	-41.18	-13.00	-28.18	V
LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3465.11	-34.73	12.80	12.56	-34.49	-13.00	-21.49	H
5196.83	-34.16	13.10	12.46	-33.52	-13.00	-20.52	H
6930.12	-32.92	12.33	21.13	-41.72	-13.00	-28.72	H
3465.11	-34.58	12.80	12.76	-34.54	-13.00	-21.54	V
5196.83	-34.95	13.10	16.32	-38.17	-13.00	-25.17	V
6930.12	-32.35	12.33	21.13	-41.15	-13.00	-28.15	V
LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3495.34	-33.98	12.61	12.56	-33.93	-13.00	-20.93	H
5242.27	-35.06	13.12	12.46	-34.40	-13.00	-21.40	H
6990.70	-32.21	12.32	21.13	-41.02	-13.00	-28.02	H
3495.34	-34.74	12.61	12.76	-34.89	-13.00	-21.89	V
5242.27	-35.22	13.12	16.32	-38.42	-13.00	-25.42	V
6990.70	-32.70	12.32	21.13	-41.51	-13.00	-28.51	V



LTE Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3440.49	-33.54	12.90	12.56	-33.20	-13.00	-20.20	H
5160.53	-34.81	13.10	12.46	-34.17	-13.00	-21.17	H
6880.72	-32.98	12.33	21.13	-41.78	-13.00	-28.78	H
3440.49	-35.37	12.90	12.76	-35.23	-13.00	-22.23	V
5160.53	-34.95	13.10	16.32	-38.17	-13.00	-25.17	V
6880.72	-33.17	12.33	21.13	-41.97	-13.00	-28.97	V
LTE Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3465.08	-34.69	12.80	12.56	-34.45	-13.00	-21.45	H
5196.81	-35.01	13.10	12.46	-34.37	-13.00	-21.37	H
6929.93	-32.24	12.33	21.13	-41.04	-13.00	-28.04	H
3465.08	-35.86	12.80	12.76	-35.82	-13.00	-22.82	V
5196.81	-34.50	13.10	16.32	-37.72	-13.00	-24.72	V
6929.93	-32.96	12.33	21.13	-41.76	-13.00	-28.76	V
LTE Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3490.59	-34.51	12.61	12.56	-34.46	-13.00	-21.46	H
5235.21	-34.16	13.12	12.46	-33.50	-13.00	-20.50	H
6980.20	-33.51	12.32	21.13	-42.32	-13.00	-29.32	H
3490.59	-35.43	12.61	12.76	-35.58	-13.00	-22.58	V
5235.21	-34.78	13.12	16.32	-37.98	-13.00	-24.98	V
6980.20	-32.30	12.32	21.13	-41.11	-13.00	-28.11	V



LTE Band 5 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1649.28	-34.68	9.56	9.72	-34.84	-13.00	-21.84	H
2473.79	-34.26	10.50	10.86	-34.62	-13.00	-21.62	H
3298.52	-32.63	12.78	11.57	-31.42	-13.00	-18.42	H
1649.28	-35.07	9.56	9.34	-34.85	-13.00	-21.85	V
2473.79	-34.91	10.50	10.42	-34.83	-13.00	-21.83	V
3298.52	-32.22	12.78	11.12	-30.56	-13.00	-17.56	V
LTE Band 5 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.96	-33.75	9.56	9.72	-33.91	-13.00	-20.91	H
2509.23	-34.48	10.50	10.86	-34.84	-13.00	-21.84	H
3345.93	-32.94	12.78	11.57	-31.73	-13.00	-18.73	H
1672.96	-34.92	9.56	9.34	-34.70	-13.00	-21.70	V
2509.23	-34.81	10.50	10.42	-34.73	-13.00	-21.73	V
3345.93	-32.89	12.78	11.12	-31.23	-13.00	-18.23	V
LTE Band 5 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1696.17	-34.81	9.56	9.72	-34.97	-13.00	-21.97	H
2544.44	-35.09	10.50	10.86	-35.45	-13.00	-22.45	H
3393.06	-32.33	12.78	11.57	-31.12	-13.00	-18.12	H
1696.17	-35.41	9.56	9.34	-35.19	-13.00	-22.19	V
2544.44	-34.59	10.50	10.42	-34.51	-13.00	-21.51	V
3393.06	-33.14	12.78	11.12	-31.48	-13.00	-18.48	V



LTE Band 5 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1650.92	-33.51	9.56	9.72	-33.67	-13.00	-20.67	H
2476.00	-34.81	10.50	10.86	-35.17	-13.00	-22.17	H
3301.67	-33.20	12.78	11.57	-31.99	-13.00	-18.99	H
1650.92	-34.57	9.56	9.34	-34.35	-13.00	-21.35	V
2476.00	-34.63	10.50	10.42	-34.55	-13.00	-21.55	V
3301.67	-32.96	12.78	11.12	-31.30	-13.00	-18.30	V
LTE Band 5 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.94	-34.07	9.56	9.72	-34.23	-13.00	-21.23	H
2509.05	-34.81	10.50	10.86	-35.17	-13.00	-22.17	H
3345.92	-33.27	12.78	11.57	-32.06	-13.00	-19.06	H
1672.94	-35.29	9.56	9.34	-35.07	-13.00	-22.07	V
2509.05	-34.10	10.50	10.42	-34.02	-13.00	-21.02	V
3345.92	-32.44	12.78	11.12	-30.78	-13.00	-17.78	V
LTE Band 5 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1694.76	-34.40	9.56	9.72	-34.56	-13.00	-21.56	H
2542.02	-34.63	10.50	10.86	-34.99	-13.00	-21.99	H
3389.58	-32.49	12.78	11.57	-31.28	-13.00	-18.28	H
1694.76	-35.53	9.56	9.34	-35.31	-13.00	-22.31	V
2542.02	-35.19	10.50	10.42	-35.11	-13.00	-22.11	V
3389.58	-32.23	12.78	11.12	-30.57	-13.00	-17.57	V



LTE Band 5 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1652.94	-33.66	9.56	9.72	-33.82	-13.00	-20.82	H
2479.03	-34.02	10.50	10.86	-34.38	-13.00	-21.38	H
3305.66	-33.62	12.78	11.57	-32.41	-13.00	-19.41	H
1652.94	-35.25	9.56	9.34	-35.03	-13.00	-22.03	V
2479.03	-33.86	10.50	10.42	-33.78	-13.00	-20.78	V
3305.66	-32.58	12.78	11.12	-30.92	-13.00	-17.92	V
LTE Band 5 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.92	-34.07	9.56	9.72	-34.23	-13.00	-21.23	H
2509.45	-34.70	10.50	10.86	-35.06	-13.00	-22.06	H
3345.63	-32.87	12.78	11.57	-31.66	-13.00	-18.66	H
1672.92	-34.66	9.56	9.34	-34.44	-13.00	-21.44	V
2509.45	-34.11	10.50	10.42	-34.03	-13.00	-21.03	V
3345.63	-32.03	12.78	11.12	-30.37	-13.00	-17.37	V
LTE Band 17 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1692.61	-33.70	9.56	9.72	-33.86	-13.00	-20.86	H
2539.01	-34.02	10.50	10.86	-34.38	-13.00	-21.38	H
3385.99	-33.15	12.78	11.57	-31.94	-13.00	-18.94	H
1692.61	-35.06	9.56	9.34	-34.84	-13.00	-21.84	V
2539.01	-34.47	10.50	10.42	-34.39	-13.00	-21.39	V
3385.99	-32.76	12.78	11.12	-31.10	-13.00	-18.10	V



LTE Band 5 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1657.86	-33.82	9.56	9.72	-33.98	-13.00	-20.98	H
2486.69	-34.73	10.50	10.86	-35.09	-13.00	-22.09	H
3315.72	-32.46	12.78	11.57	-31.25	-13.00	-18.25	H
1657.86	-35.93	9.56	9.34	-35.71	-13.00	-22.71	V
2486.69	-34.59	10.50	10.42	-34.51	-13.00	-21.51	V
3315.72	-32.30	12.78	11.12	-30.64	-13.00	-17.64	V
LTE Band 5 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.89	-34.81	9.56	9.72	-34.97	-13.00	-21.97	H
2509.04	-34.61	10.50	10.86	-34.97	-13.00	-21.97	H
3345.66	-32.29	12.78	11.57	-31.08	-13.00	-18.08	H
1672.89	-35.37	9.56	9.34	-35.15	-13.00	-22.15	V
2509.04	-34.92	10.50	10.42	-34.84	-13.00	-21.84	V
3345.66	-33.05	12.78	11.12	-31.39	-13.00	-18.39	V
LTE Band 5 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1687.81	-34.49	9.56	9.72	-34.65	-13.00	-21.65	H
2531.53	-34.49	10.50	10.86	-34.85	-13.00	-21.85	H
3375.65	-32.56	12.78	11.57	-31.35	-13.00	-18.35	H
1687.81	-34.63	9.56	9.34	-34.41	-13.00	-21.41	V
2531.53	-34.61	10.50	10.42	-34.53	-13.00	-21.53	V
3375.65	-32.87	12.78	11.12	-31.21	-13.00	-18.21	V



LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5005.23	-34.04	12.66	12.54	-33.92	-25.00	-8.92	H
7508.08	-35.38	11.46	12.57	-36.49	-25.00	-11.49	H
10010.56	-33.24	12.79	21.23	-41.68	-25.00	-16.68	H
5005.23	-34.57	12.66	12.54	-34.45	-25.00	-9.45	V
7508.08	-34.63	11.46	12.57	-35.74	-25.00	-10.74	V
10010.56	-32.52	12.79	21.23	-40.96	-25.00	-15.96	V
LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5070.15	-34.90	12.72	12.55	-34.73	-25.00	-9.73	H
7605.23	-34.28	11.46	12.57	-35.39	-25.00	-10.39	H
10140.17	-33.24	12.09	21.25	-42.40	-25.00	-17.40	H
5070.15	-35.41	12.80	12.55	-35.16	-25.00	-10.16	V
7605.23	-34.02	13.10	12.57	-33.49	-25.00	-8.49	V
10140.17	-32.54	12.33	21.25	-41.46	-25.00	-16.46	V
LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5134.16	-33.79	12.76	12.57	-33.60	-25.00	-8.60	H
7701.45	-35.12	11.45	12.58	-36.25	-25.00	-11.25	H
10268.71	-33.50	12.28	21.27	-42.49	-25.00	-17.49	H
5134.16	-35.90	12.76	12.57	-35.71	-25.00	-10.71	V
7701.45	-33.95	11.45	12.58	-35.08	-25.00	-10.08	V
10268.71	-33.09	12.28	21.27	-42.08	-25.00	-17.08	V



LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5010.35	-34.12	12.66	12.54	-34.00	-25.00	-9.00	H
7515.56	-34.47	11.46	12.57	-35.58	-25.00	-10.58	H
10020.88	-32.60	12.79	21.23	-41.04	-25.00	-16.04	H
5010.35	-35.55	12.66	12.54	-35.43	-25.00	-10.43	V
7515.56	-35.13	11.46	12.57	-36.24	-25.00	-11.24	V
10020.88	-32.57	12.79	21.23	-41.01	-25.00	-16.01	V
LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5070.20	-34.42	12.72	12.55	-34.25	-25.00	-9.25	H
7604.83	-35.22	11.46	12.57	-36.33	-25.00	-11.33	H
10140.05	-33.22	12.09	21.25	-42.38	-25.00	-17.38	H
5070.20	-34.58	12.80	12.55	-34.33	-25.00	-9.33	V
7604.83	-34.39	13.10	12.57	-33.86	-25.00	-8.86	V
10140.05	-31.80	12.33	21.25	-40.72	-25.00	-15.72	V
LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5129.34	-34.09	12.76	12.57	-33.90	-25.00	-8.90	H
7694.14	-34.00	11.45	12.58	-35.13	-25.00	-10.13	H
10258.93	-32.25	12.28	21.27	-41.24	-25.00	-16.24	H
5129.34	-35.97	12.76	12.57	-35.78	-25.00	-10.78	V
7694.14	-34.28	11.45	12.58	-35.41	-25.00	-10.41	V
10258.93	-32.72	12.28	21.27	-41.71	-25.00	-16.71	V



LTE Band 7 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5015.88	-34.10	12.66	12.54	-33.98	-25.00	-8.98	H
7524.37	-34.30	11.46	12.57	-35.41	-25.00	-10.41	H
10031.97	-33.17	12.79	21.23	-41.61	-25.00	-16.61	H
5015.88	-35.19	12.66	12.54	-35.07	-25.00	-10.07	V
7524.37	-34.30	11.46	12.57	-35.41	-25.00	-10.41	V
10031.97	-32.16	12.79	21.23	-40.60	-25.00	-15.60	V
LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5069.91	-34.41	12.72	12.55	-34.24	-25.00	-9.24	H
7605.02	-34.61	11.46	12.57	-35.72	-25.00	-10.72	H
10140.10	-33.19	12.09	21.25	-42.35	-25.00	-17.35	H
5069.91	-35.89	12.80	12.55	-35.64	-25.00	-10.64	V
7605.02	-33.84	13.10	12.57	-33.31	-25.00	-8.31	V
10140.10	-31.75	12.33	21.25	-40.67	-25.00	-15.67	V
LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5123.78	-34.03	12.76	12.57	-33.84	-25.00	-8.84	H
7524.22	-34.92	11.45	12.58	-36.05	-25.00	-11.05	H
10032.41	-32.70	12.28	21.27	-41.69	-25.00	-16.69	H
5123.78	-34.94	12.76	12.57	-34.75	-25.00	-9.75	V
7524.22	-33.90	11.45	12.58	-35.03	-25.00	-10.03	V
10032.41	-32.02	12.28	21.27	-41.01	-25.00	-16.01	V



LTE Band 7 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5021.08	-34.56	12.66	12.54	-34.44	-25.00	-9.44	H
7531.37	-35.42	11.46	12.57	-36.53	-25.00	-11.53	H
7523.91	-32.23	12.79	21.23	-40.67	-25.00	-15.67	H
5021.08	-35.08	12.66	12.54	-34.96	-25.00	-9.96	V
7531.37	-34.80	11.46	12.57	-35.91	-25.00	-10.91	V
7523.91	-32.50	12.79	21.23	-40.94	-25.00	-15.94	V
LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5069.78	-33.69	12.72	12.55	-33.52	-25.00	-8.52	H
7604.96	-34.78	11.46	12.57	-35.89	-25.00	-10.89	H
10139.84	-32.85	12.09	21.25	-42.01	-25.00	-17.01	H
5069.78	-34.58	12.80	12.55	-34.33	-25.00	-9.33	V
7604.96	-34.79	13.10	12.57	-34.26	-25.00	-9.26	V
10139.84	-31.81	12.33	21.25	-40.73	-25.00	-15.73	V
LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5118.91	-34.48	12.76	12.57	-34.29	-25.00	-9.29	H
7678.03	-35.26	11.45	12.58	-36.39	-25.00	-11.39	H
10238.24	-32.49	12.28	21.27	-41.48	-25.00	-16.48	H
5118.91	-34.98	12.76	12.57	-34.79	-25.00	-9.79	V
7678.03	-34.95	11.45	12.58	-36.08	-25.00	-11.08	V
10238.24	-32.42	12.28	21.27	-41.41	-25.00	-16.41	V



LTE Band 12 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1399.06	-33.57	8.17	9.34	-34.74	-13.00	-21.74	H
2098.61	-35.37	9.53	10.42	-36.26	-13.00	-23.26	H
2798.32	-32.47	11.27	11.12	-32.32	-13.00	-19.32	H
1399.06	-34.82	8.17	9.34	-35.99	-13.00	-22.99	V
2098.61	-34.43	9.53	10.42	-35.32	-13.00	-22.32	V
2798.32	-33.11	11.27	11.12	-32.96	-13.00	-19.96	V
LTE Band 12 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.89	-34.61	8.17	9.34	-35.78	-13.00	-22.78	H
2122.12	-34.94	9.53	10.42	-35.83	-13.00	-22.83	H
2829.51	-32.55	11.27	11.12	-32.40	-13.00	-19.40	H
1414.89	-34.96	8.17	9.34	-36.13	-13.00	-23.13	V
2122.12	-35.19	9.53	10.42	-36.08	-13.00	-23.08	V
2829.51	-32.58	11.27	11.12	-32.43	-13.00	-19.43	V
LTE Band 12 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1430.28	-33.71	8.17	9.34	-34.88	-13.00	-21.88	H
2145.76	-34.05	9.53	10.42	-34.94	-13.00	-21.94	H
2860.96	-32.94	11.27	11.12	-32.79	-13.00	-19.79	H
1430.28	-35.54	8.17	9.34	-36.71	-13.00	-23.71	V
2145.76	-35.03	9.53	10.42	-35.92	-13.00	-22.92	V
2860.96	-32.19	11.27	11.12	-32.04	-13.00	-19.04	V



LTE Band 12 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1400.56	-33.49	8.17	9.34	-34.66	-13.00	-21.66	H
2101.14	-35.03	9.53	10.42	-35.92	-13.00	-22.92	H
2801.80	-33.31	11.27	11.12	-33.16	-13.00	-20.16	H
1400.56	-35.42	8.17	9.34	-36.59	-13.00	-23.59	V
2101.14	-34.66	9.53	10.42	-35.55	-13.00	-22.55	V
2801.80	-31.85	11.27	11.12	-31.70	-13.00	-18.70	V
LTE Band 12 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.52	-33.75	8.17	9.34	-34.92	-13.00	-21.92	H
2122.04	-34.74	9.53	10.42	-35.63	-13.00	-22.63	H
2829.93	-33.24	11.27	11.12	-33.09	-13.00	-20.09	H
1414.52	-35.43	8.17	9.34	-36.60	-13.00	-23.60	V
2122.04	-34.48	9.53	10.42	-35.37	-13.00	-22.37	V
2829.93	-32.19	11.27	11.12	-32.04	-13.00	-19.04	V
LTE Band 12 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1428.64	-33.47	8.17	9.34	-34.64	-13.00	-21.64	H
2143.39	-34.72	9.53	10.42	-35.61	-13.00	-22.61	H
2857.92	-33.47	11.27	11.12	-33.32	-13.00	-20.32	H
1428.64	-34.74	8.17	9.34	-35.91	-13.00	-22.91	V
2143.39	-34.88	9.53	10.42	-35.77	-13.00	-22.77	V
2857.92	-33.10	11.27	11.12	-32.95	-13.00	-19.95	V



LTE Band 12 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1402.53	-34.28	8.17	9.34	-35.45	-13.00	-22.45	H
2104.50	-35.18	9.53	10.42	-36.07	-13.00	-23.07	H
2805.63	-33.28	11.27	11.12	-33.13	-13.00	-20.13	H
1402.53	-35.64	8.17	9.34	-36.81	-13.00	-23.81	V
2104.50	-34.65	9.53	10.42	-35.54	-13.00	-22.54	V
2805.63	-32.29	11.27	11.12	-32.14	-13.00	-19.14	V
LTE Band 12 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.82	-34.63	8.17	9.34	-35.80	-13.00	-22.80	H
2122.17	-34.26	9.53	10.42	-35.15	-13.00	-22.15	H
2829.96	-32.40	11.27	11.12	-32.25	-13.00	-19.25	H
1414.82	-34.80	8.17	9.34	-35.97	-13.00	-22.97	V
2122.17	-33.80	9.53	10.42	-34.69	-13.00	-21.69	V
2829.96	-33.11	11.27	11.12	-32.96	-13.00	-19.96	V
LTE Band 12 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1426.83	-34.42	8.17	9.34	-35.59	-13.00	-22.59	H
2140.41	-35.09	9.53	10.42	-35.98	-13.00	-22.98	H
2853.56	-32.43	11.27	11.12	-32.28	-13.00	-19.28	H
1426.83	-35.63	8.17	9.34	-36.80	-13.00	-23.80	V
2140.41	-33.83	9.53	10.42	-34.72	-13.00	-21.72	V
2853.56	-32.51	11.27	11.12	-32.36	-13.00	-19.36	V



LTE Band 12 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1407.78	-34.68	8.17	9.34	-35.85	-13.00	-22.85	H
2111.97	-35.10	9.53	10.42	-35.99	-13.00	-22.99	H
2815.97	-33.52	11.27	11.12	-33.37	-13.00	-20.37	H
1407.78	-35.57	8.17	9.34	-36.74	-13.00	-23.74	V
2111.97	-34.05	9.53	10.42	-34.94	-13.00	-21.94	V
2815.97	-33.04	11.27	11.12	-32.89	-13.00	-19.89	V
LTE Band 12 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.69	-34.68	8.17	9.34	-35.85	-13.00	-22.85	H
2122.21	-34.42	9.53	10.42	-35.31	-13.00	-22.31	H
2829.91	-33.44	11.27	11.12	-33.29	-13.00	-20.29	H
1414.69	-34.56	8.17	9.34	-35.73	-13.00	-22.73	V
2122.21	-33.99	9.53	10.42	-34.88	-13.00	-21.88	V
2829.91	-33.00	11.27	11.12	-32.85	-13.00	-19.85	V
LTE Band 12 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1421.57	-33.88	8.17	9.34	-35.05	-13.00	-22.05	H
2132.69	-34.95	9.53	10.42	-35.84	-13.00	-22.84	H
2843.50	-32.77	11.27	11.12	-32.62	-13.00	-19.62	H
1421.57	-35.61	8.17	9.34	-36.78	-13.00	-23.78	V
2132.69	-34.30	9.53	10.42	-35.19	-13.00	-22.19	V
2843.50	-32.36	11.27	11.12	-32.21	-13.00	-19.21	V



LTE Band 13 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1559.21	-34.85	8.17	9.34	-36.02	-13.00	-23.02	H
2338.04	-35.20	9.53	10.42	-36.09	-13.00	-23.09	H
3118.30	-33.27	11.27	11.12	-33.12	-13.00	-20.12	H
1559.21	-34.82	8.17	9.34	-35.99	-13.00	-22.99	V
2338.04	-33.91	9.53	10.42	-34.80	-13.00	-21.80	V
3118.30	-32.21	11.27	11.12	-32.06	-13.00	-19.06	V
LTE Band 13 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1564.16	-34.30	8.17	9.34	-35.47	-13.00	-22.47	H
2345.92	-34.38	9.53	10.42	-35.27	-13.00	-22.27	H
3128.13	-33.24	11.27	11.12	-33.09	-13.00	-20.09	H
1564.16	-34.76	8.17	9.34	-35.93	-13.00	-22.93	V
2345.92	-34.93	9.53	10.42	-35.82	-13.00	-22.82	V
3128.13	-32.59	11.27	11.12	-32.44	-13.00	-19.44	V
LTE Band 13 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1568.67	-34.22	8.17	9.34	-35.39	-13.00	-22.39	H
2353.28	-34.78	9.53	10.42	-35.67	-13.00	-22.67	H
3138.13	-32.33	11.27	11.12	-32.18	-13.00	-19.18	H
1568.67	-34.85	8.17	9.34	-36.02	-13.00	-23.02	V
2353.28	-35.05	9.53	10.42	-35.94	-13.00	-22.94	V
3138.13	-32.67	11.27	11.12	-32.52	-13.00	-19.52	V

LTE Band 13 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1563.80	-34.72	8.17	9.34	-35.89	-13.00	-22.89	H
2346.07	-34.82	9.53	10.42	-35.71	-13.00	-22.71	H
3128.15	-32.48	11.27	11.12	-32.33	-13.00	-19.33	H
1563.80	-35.78	8.17	9.34	-36.95	-13.00	-23.95	V
2346.07	-34.51	9.53	10.42	-35.40	-13.00	-22.40	V
3128.15	-32.42	11.27	11.12	-32.27	-13.00	-19.27	V



LTE Band 17 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1413.07	-34.11	8.17	9.34	-35.28	-13.00	-22.28	H
2120.39	-35.48	9.53	10.42	-36.37	-13.00	-23.37	H
2826.64	-32.70	11.27	11.12	-32.55	-13.00	-19.55	H
1413.07	-35.82	8.17	9.34	-36.99	-13.00	-23.99	V
2120.39	-34.98	9.53	10.42	-35.87	-13.00	-22.87	V
2826.64	-32.64	11.27	11.12	-32.49	-13.00	-19.49	V
LTE Band 17 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1420.00	-33.79	8.17	9.34	-34.96	-13.00	-21.96	H
2130.16	-34.81	9.53	10.42	-35.70	-13.00	-22.70	H
2840.05	-33.36	11.27	11.12	-33.21	-13.00	-20.21	H
1420.00	-35.55	8.17	9.34	-36.72	-13.00	-23.72	V
2130.16	-35.06	9.53	10.42	-35.95	-13.00	-22.95	V
2840.05	-33.06	11.27	11.12	-32.91	-13.00	-19.91	V
LTE Band 17 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1426.25	-33.95	8.17	9.34	-35.12	-13.00	-22.12	H
2139.53	-34.75	9.53	10.42	-35.64	-13.00	-22.64	H
2852.56	-32.61	11.27	11.12	-32.46	-13.00	-19.46	H
1426.25	-35.45	8.17	9.34	-36.62	-13.00	-23.62	V
2139.53	-34.82	9.53	10.42	-35.71	-13.00	-22.71	V
2852.56	-32.62	11.27	11.12	-32.47	-13.00	-19.47	V



LTE Band 17 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1418.17	-34.38	8.17	9.34	-35.55	-13.00	-22.55	H
2127.37	-34.84	9.53	10.42	-35.73	-13.00	-22.73	H
2836.58	-32.36	11.27	11.12	-32.21	-13.00	-19.21	H
1418.17	-35.64	8.17	9.34	-36.81	-13.00	-23.81	V
2127.37	-34.67	9.53	10.42	-35.56	-13.00	-22.56	V
2836.58	-32.96	11.27	11.12	-32.81	-13.00	-19.81	V
LTE Band 17 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1419.90	-34.88	8.17	9.34	-36.05	-13.00	-23.05	H
2130.00	-34.01	9.53	10.42	-34.90	-13.00	-21.90	H
2839.98	-33.59	11.27	11.12	-33.44	-13.00	-20.44	H
1419.90	-35.00	8.17	9.34	-36.17	-13.00	-23.17	V
2130.00	-33.82	9.53	10.42	-34.71	-13.00	-21.71	V
2839.98	-32.36	11.27	11.12	-32.21	-13.00	-19.21	V
LTE Band 17 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1421.15	-34.70	8.17	9.34	-35.87	-13.00	-22.87	H
2132.05	-34.60	9.53	10.42	-35.49	-13.00	-22.49	H
2842.81	-33.38	11.27	11.12	-33.23	-13.00	-20.23	H
1421.15	-34.96	8.17	9.34	-36.13	-13.00	-23.13	V
2132.05	-34.35	9.53	10.42	-35.24	-13.00	-22.24	V
2842.81	-32.75	11.27	11.12	-32.60	-13.00	-19.60	V



LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
4996.86	-34.40	12.66	12.54	-34.28	-25.00	-9.28	H
7495.81	-35.06	11.46	12.57	-36.17	-25.00	-11.17	H
9994.16	-33.38	12.79	21.23	-41.82	-25.00	-16.82	H
4996.93	-35.90	12.66	12.54	-35.78	-25.00	-10.78	V
7495.52	-34.47	11.46	12.57	-35.58	-25.00	-10.58	V
9994.31	-32.97	12.79	21.23	-41.41	-25.00	-16.41	V
LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5186.31	-34.21	12.72	12.55	-34.04	-25.00	-9.04	H
7779.37	-34.66	11.46	12.57	-35.77	-25.00	-10.77	H
10372.20	-32.36	12.09	21.25	-41.52	-25.00	-16.52	H
5186.31	-34.84	12.80	12.55	-34.59	-25.00	-9.59	V
7779.37	-34.98	13.10	12.57	-34.45	-25.00	-9.45	V
10372.20	-33.06	12.33	21.25	-41.98	-25.00	-16.98	V
LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5375.07	-34.92	12.76	12.57	-34.73	-25.00	-9.73	H
8062.13	-34.96	11.45	12.58	-36.09	-25.00	-11.09	H
10749.87	-33.03	12.28	21.27	-42.02	-25.00	-17.02	H
5375.07	-35.66	12.76	12.57	-35.47	-25.00	-10.47	V
8062.13	-34.94	11.45	12.58	-36.07	-25.00	-11.07	V
10749.87	-33.08	12.28	21.27	-42.07	-25.00	-17.07	V



LTE Band 41 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5002.22	-33.97	12.66	12.54	-33.85	-25.00	-8.85	H
7503.43	-35.38	11.46	12.57	-36.49	-25.00	-11.49	H
10004.39	-32.95	12.79	21.23	-41.39	-25.00	-16.39	H
5002.22	-35.66	12.66	12.54	-35.54	-25.00	-10.54	V
7503.43	-34.13	11.46	12.57	-35.24	-25.00	-10.24	V
10004.39	-31.97	12.79	21.23	-40.41	-25.00	-15.41	V
LTE Band 41 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5186.75	-33.66	12.72	12.55	-33.49	-25.00	-8.49	H
7779.52	-34.21	11.46	12.57	-35.32	-25.00	-10.32	H
10371.07	-32.83	12.09	21.25	-41.99	-25.00	-16.99	H
5186.75	-34.83	12.80	12.55	-34.58	-25.00	-9.58	V
7779.52	-35.06	13.10	12.57	-34.53	-25.00	-9.53	V
10371.07	-31.83	12.33	21.25	-40.75	-25.00	-15.75	V
LTE Band 41 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5370.37	-34.94	12.76	12.57	-34.75	-25.00	-9.75	H
8055.59	-35.37	11.45	12.58	-36.50	-25.00	-11.50	H
10739.93	-32.96	12.28	21.27	-41.95	-25.00	-16.95	H
5370.37	-35.89	12.76	12.57	-35.70	-25.00	-10.70	V
8055.59	-35.20	11.45	12.58	-36.33	-25.00	-11.33	V
10739.93	-31.95	12.28	21.27	-40.94	-25.00	-15.94	V



LTE Band 41 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5007.20	-34.74	12.66	12.54	-34.62	-25.00	-9.62	H
7510.34	-35.02	11.46	12.57	-36.13	-25.00	-11.13	H
10014.68	-32.51	12.79	21.23	-40.95	-25.00	-15.95	H
5007.20	-35.87	12.66	12.54	-35.75	-25.00	-10.75	V
7510.34	-34.31	11.46	12.57	-35.42	-25.00	-10.42	V
10014.68	-31.76	12.79	21.23	-40.20	-25.00	-15.20	V
LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5186.13	-34.65	12.72	12.55	-34.48	-25.00	-9.48	H
7779.01	-35.48	11.46	12.57	-36.59	-25.00	-11.59	H
10372.28	-32.19	12.09	21.25	-41.35	-25.00	-16.35	H
5186.13	-34.76	12.80	12.55	-34.51	-25.00	-9.51	V
7779.01	-35.20	13.10	12.57	-34.67	-25.00	-9.67	V
10372.28	-33.01	12.33	21.25	-41.93	-25.00	-16.93	V
LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5365.82	-34.07	12.76	12.57	-33.88	-25.00	-8.88	H
8046.86	-34.77	11.45	12.58	-35.90	-25.00	-10.90	H
10730.02	-32.60	12.28	21.27	-41.59	-25.00	-16.59	H
5365.82	-35.52	12.76	12.57	-35.33	-25.00	-10.33	V
8046.86	-34.70	11.45	12.58	-35.83	-25.00	-10.83	V
10730.02	-32.00	12.28	21.27	-40.99	-25.00	-15.99	V



LTE Band 41 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5012.24	-34.62	12.66	12.54	-34.50	-25.00	-9.50	H
7518.31	-34.45	11.46	12.57	-35.56	-25.00	-10.56	H
10023.99	-33.07	12.79	21.23	-41.51	-25.00	-16.51	H
5012.24	-34.55	12.66	12.54	-34.43	-25.00	-9.43	V
7518.31	-34.41	11.46	12.57	-35.52	-25.00	-10.52	V
10023.99	-32.52	12.79	21.23	-40.96	-25.00	-15.96	V
LTE Band 41 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5186.07	-34.46	12.72	12.55	-34.29	-25.00	-9.29	H
7778.92	-34.14	11.46	12.57	-35.25	-25.00	-10.25	H
10372.20	-32.25	12.09	21.25	-41.41	-25.00	-16.41	H
5186.07	-35.16	12.80	12.55	-34.91	-25.00	-9.91	V
7778.92	-34.58	13.10	12.57	-34.05	-25.00	-9.05	V
10372.20	-31.79	12.33	21.25	-40.71	-25.00	-15.71	V
LTE Band 41 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
5359.94	-33.88	12.76	12.57	-33.69	-25.00	-8.69	H
8040.21	-35.08	11.45	12.58	-36.21	-25.00	-11.21	H
10719.96	-32.89	12.28	21.27	-41.88	-25.00	-16.88	H
5359.94	-34.76	12.76	12.57	-34.57	-25.00	-9.57	V
8040.21	-35.03	11.45	12.58	-36.16	-25.00	-11.16	V
10719.96	-32.47	12.28	21.27	-41.46	-25.00	-16.46	V

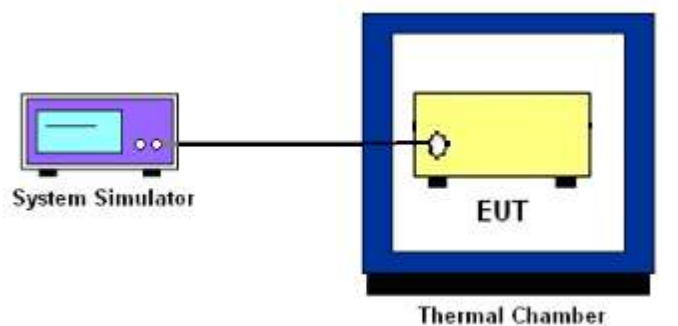
10. FREQUENCY STABILITY

10.1 DESCRIPTION OF FREQUENCY STABILITY MEASUREMENT

10.1.1 MEASUREMENT METHOD

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

10.1.2 TEST SETUP



10.1.3 TEST PROCEDURES FOR TEMPERATURE VARIATION

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

10.1.4 TEST PROCEDURES FOR VOLTAGE VARIATION

1. The testing follows FCC KDB 971168 D01v01r03 Section 9.0.
2. The EUT was placed in a temperature chamber at $25 \pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.



10.1.5 TEST RESULTS

LTE Band 2 (QPSK) / 1880MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	23.77	0.013		
40		12.61	0.007		
30		23.54	0.013		
20		14.30	0.008		
10		20.38	0.011		
0		32.08	0.017		
-10		12.87	0.007		
-20		21.38	0.011		
-30		12.27	0.007		
25	Maximum Voltage	25.35	0.013		
25	BEP	31.62	0.017		

LTE Band 2 (QPSK) / 1880MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	34.07	0.018		
40		36.47	0.019		
30		14.09	0.007		
20		22.97	0.012		
10		16.80	0.009		
0		22.78	0.012		
-10		18.20	0.010		
-20		25.80	0.014		
-30		34.68	0.018		
25	Maximum Voltage	22.55	0.012		
25	BEP	17.69	0.009		

LTE Band 4 (QPSK) / 1733MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	25.40	0.015		
40		30.33	0.018		
30		32.46	0.019		
20		21.04	0.012		
10		33.38	0.019		
0		33.86	0.020		
-10		16.63	0.010		
-20		13.05	0.008		
-30		12.24	0.007		
25	Maximum Voltage	20.75	0.012		
25	BEP	16.12	0.009		



LTE Band 4 (QPSK) / 1733MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	25.19	0.015		
40		34.34	0.020		
30		32.81	0.019		
20		35.05	0.020		
10		31.71	0.018		
0		22.99	0.013		
-10		18.16	0.010		
-20		22.54	0.013		
-30		17.66	0.010		
25	Maximum Voltage	28.79	0.017		
25	BEP	30.37	0.018		

LTE Band 5 (QPSK) / 836.5MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	16.94	0.024		
40		16.46	0.023		
30		18.02	0.025		
20		36.35	0.051		
10		14.98	0.021		
0		27.73	0.039		
-10		31.27	0.004		
-20		14.36	0.020		
-30		25.04	0.035		
25	Maximum Voltage	34.73	0.049		
25	BEP	22.36	0.031		

LTE Band 5 (QPSK) / 836.5MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	12.99	0.018		
40		16.64	0.023		
30		17.46	0.025		
20		29.52	0.042		
10		32.92	0.046		
0		12.38	0.017		
-10		24.42	0.003		
-20		26.75	0.038		
-30		21.51	0.030		
25	Maximum Voltage	18.18	0.026		
25	BEP	13.54	0.019		



LTE Band 7 (QPSK) / 2535MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	32.87	0.013		
40		35.10	0.014		
30		20.41	0.008		
20		20.16	0.008		
10		12.17	0.005		
0		14.25	0.006		
-10		33.85	0.013		
-20		17.25	0.007		
-30		25.51	0.010		
25	Maximum Voltage	21.51	0.008		
25	BEP	28.55	0.011		

LTE Band 7 (QPSK) / 2535MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	28.77	0.011		
40		24.55	0.010		
30		34.32	0.014		
20		21.49	0.008		
10		25.62	0.010		
0		13.18	0.005		
-10		33.39	0.013		
-20		20.30	0.008		
-30		27.92	0.011		
25	Maximum Voltage	21.86	0.009		
25	BEP	22.79	0.009		

LTE Band 12 (QPSK) / 707.5MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	33.80	0.048		
40		36.10	0.051		
30		21.47	0.030		
20		13.68	0.019		
10		25.85	0.036		
0		22.92	0.032		
-10		18.57	0.003		
-20		28.55	0.040		
-30		22.35	0.031		
25	Maximum Voltage	32.46	0.046		
25	BEP	25.66	0.036		



LTE Band 12 (QPSK) / 707.5MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	24.91	0.035		
40		14.52	0.020		
30		30.65	0.043		
20		22.52	0.032		
10		19.34	0.027		
0		20.04	0.028		
-10		13.63	0.002		
-20		19.55	0.028		
-30		24.51	0.035		
25	Maximum Voltage	12.81	0.018		
25	BEP	30.69	0.043		

LTE Band 13 (QPSK) / 782MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	31.41	0.044		
40		34.68	0.049		
30		24.51	0.035		
20		17.85	0.025		
10		14.33	0.020		
0		18.10	0.025		
-10		24.46	0.003		
-20		12.03	0.017		
-30		30.86	0.043		
25	Maximum Voltage	18.50	0.026		
25	BEP	30.29	0.043		

LTE Band 13 (QPSK) / 782MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	26.07	0.037		
40		12.40	0.017		
30		31.06	0.044		
20		21.69	0.031		
10		13.58	0.019		
0		28.78	0.041		
-10		33.69	0.005		
-20		24.40	0.034		
-30		11.82	0.017		
25	Maximum Voltage	19.15	0.027		
25	BEP	11.85	0.017		



LTE Band 17 (QPSK) / 710MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	16.66	0.023		
40		17.23	0.024		
30		24.92	0.035		
20		26.67	0.038		
10		33.01	0.046		
0		30.65	0.043		
-10		19.22	0.003		
-20		22.94	0.032		
-30		24.97	0.035		
25	Maximum Voltage	27.78	0.039		
25	BEP	18.60	0.026		

LTE Band 17 (QPSK) / 710MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	18.63	0.026		
40		17.68	0.025		
30		27.84	0.039		
20		26.85	0.038		
10		24.66	0.035		
0		30.53	0.043		
-10		33.64	0.005		
-20		13.93	0.020		
-30		15.55	0.022		
25	Maximum Voltage	14.67	0.021		
25	BEP	27.00	0.038		

LTE Band 41 (QPSK) / 2593MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	26.70	0.011		
40		32.99	0.013		
30		22.52	0.009		
20		20.66	0.008		
10		25.20	0.010		
0		16.01	0.006		
-10		13.43	0.005		
-20		22.39	0.009		
-30		32.69	0.013		
25	Maximum Voltage	21.80	0.009		
25	BEP	36.44	0.014		



LTE Band 41 (QPSK) / 2593MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
N/A	(Volt)	(Hz)	(ppm)	2.5ppm	PASS
50	Normal Voltage	34.51	0.014		
40		29.78	0.012		
30		22.90	0.009		
20		24.40	0.010		
10		18.91	0.007		
0		30.96	0.012		
-10		17.91	0.007		
-20		14.40	0.006		
-30		20.91	0.008		
25	Maximum Voltage	31.94	0.013		
25	BEP	12.26	0.005		





APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※END OF THE REPORT※※※※

