



FCC RF Test Report

APPLICANT : MOTOROLA MOBILITY LLC
EQUIPMENT : MOBILE CELLULAR PHONE
BRAND NAME : MOTOROLA
MODEL NAME : XT1929-6
FCC ID : IHDT56XE4
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

This is a variant report. The product was received on Jan. 18, 2018 and completely tested on Mar. 07, 2018. We, SPORTON INTERNATIONAL Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and the testing has shown the tested sample to be in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



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APPENDIX B. TEST RESULTS OF ERP/EIRP AND RADIATED TEST



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG811821-05B	Rev. 01	Initial issue of report	Mar. 12, 2018



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt		
	§27.50(b)(10)	Effective Radiated Power (Band 12) (Band 17)	ERP < 3 Watt		
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2)(Band 7)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	EIRP < 1Watt		
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	Not required	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	Not required	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2)(4) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 17) (Band 66)	< 43+10log10(P[Watts])	Not required	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17) (Band 66)	< 43+10log10(P[Watts])	Not required	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7)	< 55+10log ₁₀ (P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		



Report Section	FCC Rule	Description	Limit	Result	Remark
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(f) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17) (Band 66)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	Under limit 6.73 dB at 12840.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$		
Note: Not required means after assessing, test items are not necessary to carry out.					



1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT1929-6
FCC ID	IHDT56XE4
Sample 1	EUT with Dual SIM
Sample 2	EUT with Single SIM
IMEI Code	Conducted : IMEI 1: 354102090009370 IMEI 2: 354102090009388
	Radiation : IMEI 1: 354102090013794 IMEI 2: 354102090013802
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/GNSS/NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	DVT2
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. This is a variant report. Except Radiation Spurious Emission for LTE Band 2 and Band 5, Conducted Output Power, Equivalent Isotropic Radiated Power, Effective Radiated Power, Radiated Spurious Emission, FG811821-05B report reuses conducted test data for LTE Band 2 and Band 5 from the FG811821-02B report and FG811821-05B report reuses test data from the FG811821B report.



Accessory List	
AC Adapter 1	Brand Name : Motorola
	Model Name : SC-22 SPN5970A
	Manufacturer : Salom
AC Adapter 2	Brand Name : Motorola
	Model Name : SC-22 SPN5993A
	Manufacturer : Chenyang
AC Adapter 3	Brand Name : Motorola
	Model Name : SC-23 SPN5971A
	Manufacturer : Salom
AC Adapter 4	Brand Name : Motorola
	Model Name : SC-23 SPN5989A
	Manufacturer : Chenyang
AC Adapter 5	Brand Name : Motorola
	Model Name : SC-27 SPN5975A
	Manufacturer : Salom
AC Adapter 6	Brand Name : Motorola
	Model Name : SC-27 SPN5992A
	Manufacturer : Chenyang
Battery	Brand Name : Motorola
	Model Name : JS40
	Manufacturer : SUNWODA
C2Audio Cable 1	Brand Name : Motorola
	Model Name : SC18C27844
	Manufacturer : Luxshare
C2Audio Cable 2	Brand Name : Motorola
	Model Name : SC18C27845
	Manufacturer : Cabletech
USB Cable 1	Brand Name : Cabletech
	Model Name : SKN6473A
USB Cable 2	Brand Name : FOXLINK
	Model Name : SKN6473A 17195-C 0403532
USB Cable 3	Brand Name : SAIBAO
	Model Name : SKN6473A 17214-C 1127044
USB Cable 4	Brand Name : Luxshare
	Model Name : SKN6473A 17227-C 1126538



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz
Rx Frequency	LTE Band 2: 1930.7 MHz ~ 1989.3 MHz LTE Band 4: 2110.7 MHz ~ 2154.3 MHz LTE Band 5: 869.7 MHz ~ 893.3 MHz LTE Band 7: 2622.5 MHz ~ 2687.5 MHz LTE Band 12: 729.7 MHz ~ 745.3 MHz LTE Band 17: 736.5 MHz ~ 743.5 MHz LTE Band 66: 2110.7 MHz ~ 2199.3 MHz
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 17: 5MHz / 10MHz LTE Band 66: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2: 22.94 dBm LTE Band 4: 22.59 dBm LTE Band 5: 22.38 dBm LTE Band 7: 22.30 dBm LTE Band 12: 22.37 dBm LTE Band 17: 22.33 dBm LTE Band 66: 22.71 dBm
Antenna Type	Fixed Internal Antenna
Antenna Gain	<Main Antenna> LTE Band 2: -2.1 dBi LTE Band 4: -2.0 dBi LTE Band 5: -5.6 dBi LTE Band 7: 0.3 dBi LTE Band 12: -6.0 dBi LTE Band 17: -5.6 dBi LTE Band 66: -2.0 dBi <Aux. Antenna> LTE Band 7: -4.7 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.



1.6 Emission Designator

<For Main Antenna>

LTE Band 2		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	-	-	0.1119	-	-	0.0951	-	-	0.0743
3	1851.5 ~ 1908.5	-	-	0.1122	-	-	0.0955	-	-	0.0745
5	1852.5 ~ 1907.5	-	-	0.1135	-	-	0.0966	-	-	0.0762
10	1855.0 ~ 1905.0	-	-	0.1205	-	-	0.1021	-	-	0.0794
15	1857.5 ~ 1902.5	-	-	0.1167	-	-	0.0993	-	-	0.0782
20	1860.0 ~ 1900.0	-	-	0.1213	-	-	0.1045	-	-	0.0813
LTE Band 4		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	-	-	0.1096	-	-	0.0923	-	-	0.0726
3	1711.5 ~ 1753.5	-	-	0.1099	-	-	0.0927	-	-	0.0726
5	1712.5 ~ 1752.5	-	-	0.1119	-	-	0.0946	-	-	0.0740
10	1715.0 ~ 1750.0	-	-	0.1125	-	-	0.0964	-	-	0.0752
15	1717.5 ~ 1747.5	-	-	0.1146	-	-	0.0977	-	-	0.0764
20	1720.0 ~ 1745.0	-	-	0.1146	-	-	0.0986	-	-	0.0762
LTE Band 5		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	824.7 ~ 848.3	-	-	0.0288	-	-	0.0248	-	-	0.0193
3	825.5 ~ 847.5	-	-	0.0289	-	-	0.0248	-	-	0.0194
5	826.5 ~ 846.5	-	-	0.0290	-	-	0.0250	-	-	0.0195
10	829.0 ~ 844.0	-	-	0.0290	-	-	0.0250	-	-	0.0195
LTE Band 7		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	-	-	0.1816	-	-	0.1560	-	-	0.1211
10	2505.0 ~ 2565.0	-	-	0.1799	-	-	0.1560	-	-	0.1205
15	2507.5 ~ 2562.5	-	-	0.1816	-	-	0.1563	-	-	0.1208
20	2510.0 ~ 2560.0	-	-	0.1820	-	-	0.1552	-	-	0.1213



LTE Band 12		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	699.7 ~ 715.3	-	-	0.0261	-	-	0.0223	-	-	0.0175
3	700.5 ~ 714.5	-	-	0.0260	-	-	0.0224	-	-	0.0174
5	701.5 ~ 713.5	-	-	0.0264	-	-	0.0226	-	-	0.0177
10	704.0 ~ 711.0	-	-	0.0264	-	-	0.0226	-	-	0.0176
LTE Band 17		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	706.5 ~ 713.5	-	-	0.0287	-	-	0.0247	-	-	0.0192
10	709.0 ~ 711.0	-	-	0.0286	-	-	0.0247	-	-	0.0192
LTE Band 66		QPSK			16QAM			64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1779.3	-	-	0.1127	-	-	0.0953	-	-	0.0745
3	1711.5 ~ 1778.5	-	-	0.1127	-	-	0.0955	-	-	0.0748
5	1712.5 ~ 1777.5	-	-	0.1143	-	-	0.0966	-	-	0.0760
10	1715.0 ~ 1775.0	-	-	0.1156	-	-	0.0984	-	-	0.0769
15	1717.5 ~ 1772.5	-	-	0.1175	-	-	0.1005	-	-	0.0780
20	1720.0 ~ 1770.0	-	-	0.1178	-	-	0.1009	-	-	0.0782

<For Aux. Antenna>

LTE Band 7		QPSK	16QAM	64QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	0.0574	0.0493	0.0383
10	2505.0 ~ 2565.0	0.0569	0.0493	0.0381
15	2507.5 ~ 2562.5	0.0574	0.0494	0.0382
20	2510.0 ~ 2560.0	0.0575	0.0491	0.0384



1.7 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH03HY

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	03CH13-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 24(E), 27
- ♦ ANSI / TIA-603-E
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

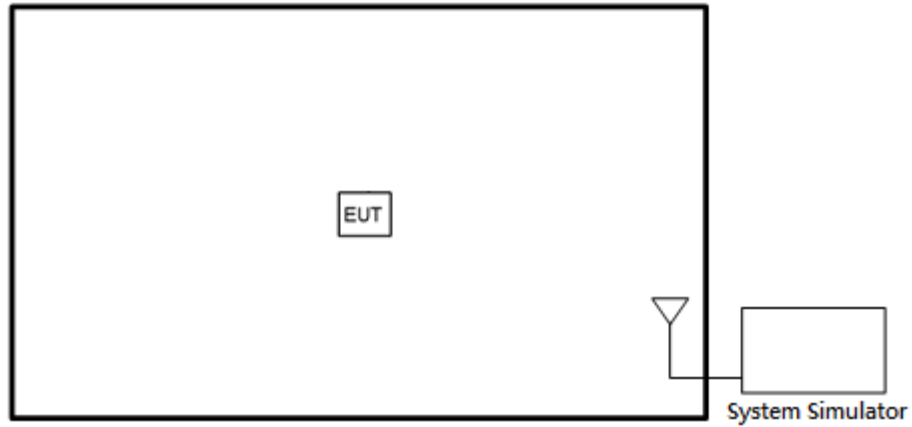
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

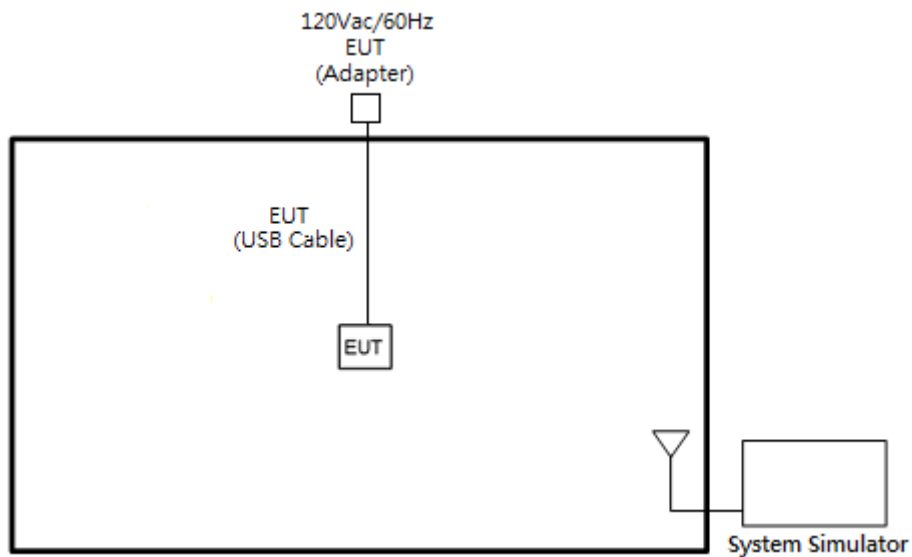
Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
E.R.P / E.I.R.P	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
	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
	12	v	v	v	v	-	-	v	v	v	v	v		v	v	v
	17	-	-	v	v	-	-	v	v	v	v			v	v	v
	66	v	v	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	Worst Case											v	v	v	
	4	Worst Case											v	v	v	
	5	Worst Case											v	v	v	
	7	Worst Case											v	v	v	
	12	Worst Case											v	v	v	
	17	Worst Case											v	v	v	
	66	Worst Case											v	v	v	
Note	<ol style="list-style-type: none"> The mark "v " means that this configuration is chosen for testing The mark "- " means that this bandwidth is not supported. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. All the radiated test cases were performance with Adapter 1, USB Cable 1, and Sample 1. 															

2.2 Connection Diagram of Test System

<EUT with Standalone>



<EUT with Adapter>





2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and 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.

$$\text{Offset} = \text{RF cable loss} + \text{attenuator factor}.$$

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3



LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

LTE Band 12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3



LTE Band 17 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23780	23790	23800
	Frequency	709	710	711
5	Channel	23755	23790	23825
	Frequency	706.5	710	713.5

LTE Band 66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	132072	132322	132572
	Frequency	1720	1745	1770
15	Channel	132047	132322	132597
	Frequency	1717.5	1745	1772.5
10	Channel	132022	132322	132622
	Frequency	1715	1745	1775
5	Channel	131997	132322	132647
	Frequency	1712.5	1745	1777.5
3	Channel	131987	132322	132657
	Frequency	1711.5	1745	1778.5
1.4	Channel	131979	132322	132665
	Frequency	1710.7	1745	1779.3

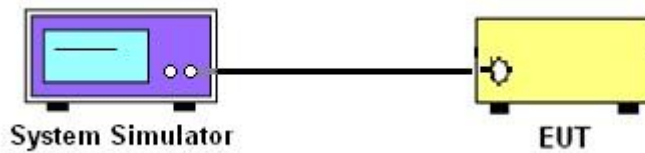
3 Conducted Test Items

3.1 Measuring Instruments

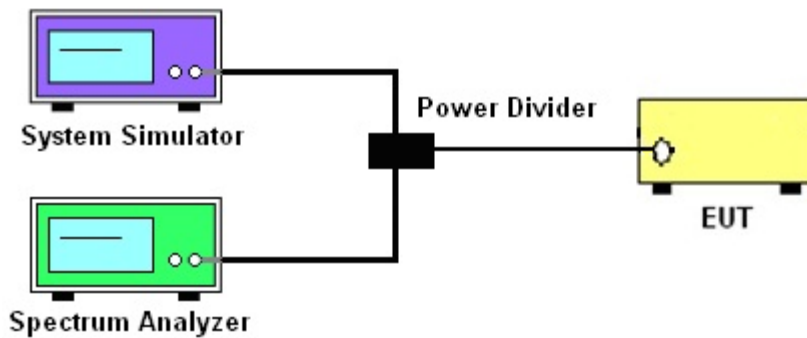
See list of measuring instruments of this test report.

3.2 Test Setup

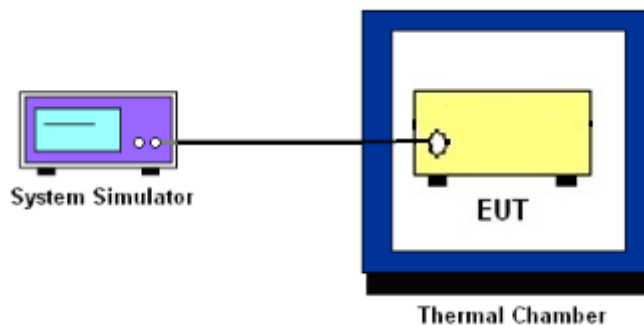
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

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.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12 and Band 17.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 7.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4 and Band 66.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 Test Procedures

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



3.5 Frequency Stability

3.5.1 Description of Frequency Stability Measurement

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.

3.5.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 v03 Section 9.0.

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.

3.5.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 v03 Section 9.0.

1. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

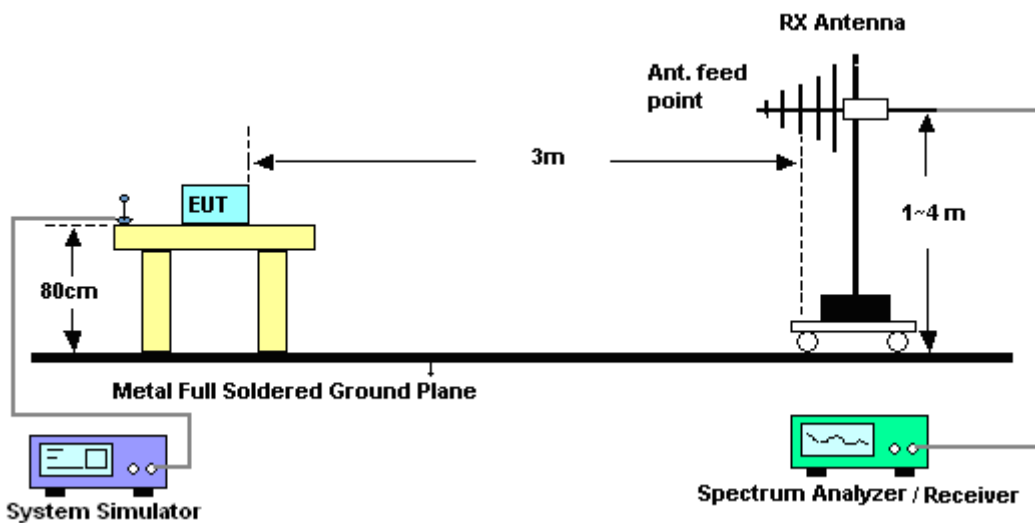
4 Radiated Test Items

4.1 Measuring Instruments

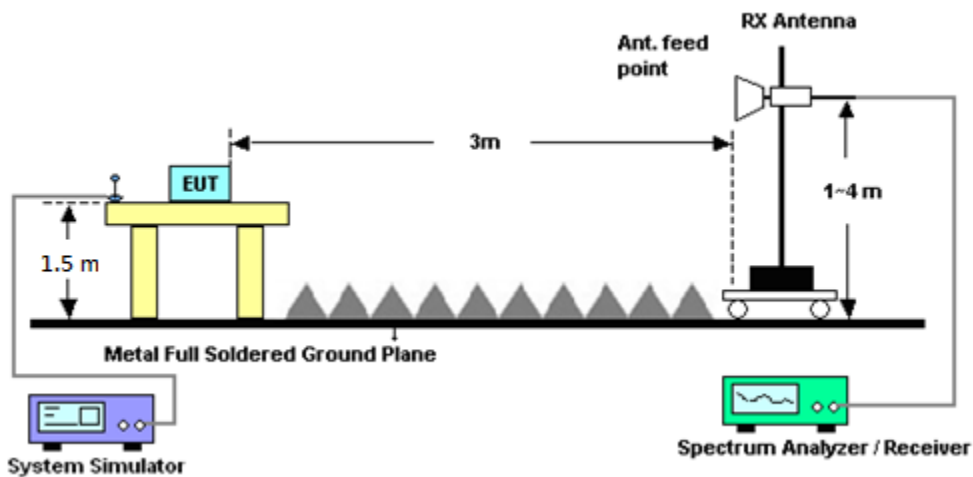
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.



4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. 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 LTE Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

The testing follows FCC KDB 971168 v03 Section 5.8 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. 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.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. 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)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LTE Base Station	Anritsu	MT8820C	620143282 1	GSM/GPRS /WCDMA/LTE	Oct. 13, 2017	Mar. 07, 2018	Oct. 12, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 09, 2017	Mar. 07, 2018	Nov. 08, 2018	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-30°C~70°C	Aug. 28, 2017	Mar. 07, 2018	Aug. 27, 2018	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890001	1V~20V 0.5A~5A	Oct. 06, 2017	Mar. 07, 2018	Oct. 05, 2018	Conducted (TH05-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	Jul. 17, 2018	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 21, 2016	Mar. 02, 2018 ~ Mar. 06, 2018	Dec. 20, 2018	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	40103&07	30MHz to 1GHz	Jan. 10, 2018	Mar. 02, 2018 ~ Mar. 06, 2018	Jan. 09, 2019	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-124 1	1GHz ~ 18GHz	Jun. 15, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	Jun. 14, 2018	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	May 22, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	May 21, 2018	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY532701 47	1GHz~26.5GHz	Feb. 02, 2018	Mar. 02, 2018 ~ Mar. 06, 2018	Feb. 01, 2019	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY553705 26	10Hz~44GHz	Mar. 15, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	Mar. 14, 2018	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Mar. 02, 2018 ~ Mar. 06, 2018	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Mar. 02, 2018 ~ Mar. 06, 2018	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Mar. 02, 2018 ~ Mar. 06, 2018	N/A	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 251	18GHz- 40GHz	Nov. 10, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	Nov. 09, 2018	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 584	18GHz- 40GHz	Nov. 27, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	Nov. 26, 2018	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-152 2	1G~18GHz	Mar. 17, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	Mar. 16, 2018	Radiation (03CH13-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May 22, 2017	Mar. 02, 2018 ~ Mar. 06, 2018	May 21, 2018	Radiation (03CH13-HY)



6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.07
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.48
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.92
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.94	22.83	22.66
20	1	49		22.61	22.54	22.46
20	1	99		22.72	22.66	22.42
20	50	0		21.77	21.67	21.64
20	50	24		21.71	21.66	21.58
20	50	50		21.64	21.61	21.51
20	100	0		21.72	21.64	21.59
20	1	0	16-QAM	22.29	22.16	21.99
20	1	49		21.93	21.84	21.83
20	1	99		22.02	21.99	21.71
20	50	0		20.87	20.77	20.71
20	50	24		20.82	20.73	20.67
20	50	50		20.74	20.67	20.60
20	100	0		20.80	20.75	20.66
20	1	0	64-QAM	21.20	21.08	20.90
20	1	49		20.86	20.82	20.76
20	1	99		20.96	20.92	20.68
20	50	0		19.88	19.81	19.76
20	50	24		19.80	19.74	19.69
20	50	50		19.74	19.71	19.60
20	100	0		19.79	19.76	19.67
15	1	0	QPSK	22.77	22.67	22.65
15	1	37		22.60	22.54	22.45
15	1	74		22.58	22.52	22.46
15	36	0		21.74	21.69	21.61
15	36	20		21.74	21.65	21.56
15	36	39		21.67	21.62	21.49
15	75	0		21.71	21.61	21.56
15	1	0	16-QAM	22.07	22.01	21.94
15	1	37		21.94	21.87	21.82
15	1	74		21.91	21.83	21.74
15	36	0		20.87	20.78	20.68
15	36	20		20.79	20.75	20.65
15	36	39		20.78	20.67	20.58
15	75	0		20.76	20.74	20.63
15	1	0	64-QAM	21.03	20.92	20.89
15	1	37		20.86	20.80	20.74
15	1	74		20.84	20.80	20.71
15	36	0		19.90	19.79	19.74
15	36	20		19.85	19.77	19.68
15	36	39		19.78	19.69	19.63
15	75	0		19.80	19.71	19.65



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.91	22.82	22.53
10	1	25		22.61	22.54	22.45
10	1	49		22.76	22.73	22.44
10	25	0		21.71	21.65	21.52
10	25	12		21.69	21.64	21.55
10	25	25		21.65	21.59	21.49
10	50	0		21.70	21.63	21.53
10	1	0	16-QAM	22.19	22.12	21.88
10	1	25		21.93	21.90	21.82
10	1	49		22.07	22.02	21.70
10	25	0		20.81	20.75	20.65
10	25	12		20.80	20.74	20.60
10	25	25		20.74	20.70	20.58
10	50	0		20.77	20.74	20.60
10	1	0	64-QAM	21.10	21.09	20.79
10	1	25		20.86	20.82	20.71
10	1	49		21.03	20.97	20.65
10	25	0		19.82	19.75	19.65
10	25	12		19.79	19.74	19.63
10	25	25		19.75	19.69	19.57
10	50	0		19.77	19.73	19.64
5	1	0	QPSK	22.65	22.58	22.48
5	1	12		22.60	22.54	22.43
5	1	24		22.62	22.58	22.42
5	12	0		21.66	21.61	21.51
5	12	7		21.67	21.61	21.50
5	12	13		21.65	21.56	21.47
5	25	0		21.64	21.58	21.48
5	1	0	16-QAM	21.94	21.91	21.83
5	1	12		21.92	21.86	21.78
5	1	24		21.95	21.85	21.68
5	12	0		20.80	20.71	20.60
5	12	7		20.76	20.70	20.61
5	12	13		20.76	20.68	20.54
5	25	0		20.74	20.68	20.58
5	1	0	64-QAM	20.92	20.83	20.77
5	1	12		20.85	20.78	20.71
5	1	24		20.88	20.80	20.66
5	12	0		19.81	19.75	19.63
5	12	7		19.82	19.75	19.65
5	12	13		19.80	19.71	19.62
5	25	0		19.76	19.70	19.61



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.60	22.54	22.43
3	1	8		22.55	22.52	22.41
3	1	14		22.54	22.51	22.41
3	8	0		21.63	21.55	21.44
3	8	4		21.64	21.60	21.49
3	8	7		21.60	21.55	21.47
3	15	0		21.60	21.55	21.47
3	1	0	16-QAM	21.90	21.85	21.75
3	1	8		21.88	21.84	21.73
3	1	14		21.85	21.82	21.68
3	8	0		20.75	20.69	20.61
3	8	4		20.77	20.74	20.60
3	8	7		20.74	20.68	20.58
3	15	0		20.71	20.64	20.54
3	1	0	64-QAM	20.82	20.78	20.70
3	1	8		20.81	20.77	20.66
3	1	14		20.81	20.75	20.62
3	8	0		19.77	19.71	19.61
3	8	4		19.78	19.73	19.62
3	8	7		19.76	19.69	19.59
3	15	0		19.73	19.65	19.58
1.4	1	0	QPSK	22.51	22.48	22.34
1.4	1	3		22.58	22.51	22.42
1.4	1	5		22.51	22.42	22.33
1.4	3	0		22.56	22.50	22.35
1.4	3	1		22.59	22.53	22.39
1.4	3	3		22.55	22.49	22.36
1.4	6	0		21.56	21.49	21.38
1.4	1	0	16-QAM	21.81	21.77	21.61
1.4	1	3		21.88	21.84	21.68
1.4	1	5		21.80	21.77	21.59
1.4	3	0		21.61	21.57	21.45
1.4	3	1		21.67	21.64	21.46
1.4	3	3		21.59	21.56	21.42
1.4	6	0		20.71	20.64	20.52
1.4	1	0	64-QAM	20.78	20.70	20.59
1.4	1	3		20.81	20.76	20.61
1.4	1	5		20.75	20.70	20.54
1.4	3	0		20.77	20.70	20.60
1.4	3	1		20.80	20.76	20.62
1.4	3	3		20.76	20.71	20.57
1.4	6	0		19.64	19.60	19.49



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.59	22.59	22.54
20	1	49		22.40	22.35	22.43
20	1	99		22.32	22.27	22.33
20	50	0		21.57	21.52	21.47
20	50	24		21.47	21.46	21.42
20	50	50		21.41	21.35	21.42
20	100	0		21.49	21.46	21.41
20	1	0	16-QAM	21.94	21.92	21.86
20	1	49		21.74	21.71	21.77
20	1	99		21.65	21.61	21.62
20	50	0		20.68	20.63	20.59
20	50	24		20.60	20.55	20.51
20	50	50		20.54	20.48	20.52
20	100	0		20.58	20.55	20.50
20	1	0	64-QAM	20.82	20.82	20.81
20	1	49		20.67	20.67	20.72
20	1	99		20.59	20.56	20.59
20	50	0		19.67	19.66	19.60
20	50	24		19.60	19.59	19.52
20	50	50		19.54	19.50	19.54
20	100	0		19.60	19.58	19.52
15	1	0	QPSK	22.59	22.55	22.51
15	1	37		22.40	22.36	22.41
15	1	74		22.39	22.34	22.39
15	36	0		21.53	21.48	21.46
15	36	20		21.51	21.45	21.53
15	36	39		21.43	21.38	21.43
15	75	0		21.48	21.44	21.38
15	1	0	16-QAM	21.90	21.90	21.84
15	1	37		21.73	21.70	21.74
15	1	74		21.75	21.67	21.65
15	36	0		20.64	20.60	20.56
15	36	20		20.58	20.55	20.59
15	36	39		20.54	20.47	20.50
15	75	0		20.59	20.54	20.48
15	1	0	64-QAM	20.81	20.83	20.77
15	1	37		20.67	20.66	20.70
15	1	74		20.65	20.57	20.60
15	36	0		19.68	19.65	19.58
15	36	20		19.63	19.59	19.63
15	36	39		19.57	19.51	19.54
15	75	0		19.59	19.57	19.50



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.51	22.47	22.50
10	1	25		22.43	22.37	22.39
10	1	49		22.39	22.33	22.32
10	25	0		21.51	21.43	21.51
10	25	12		21.49	21.40	21.46
10	25	25		21.46	21.35	21.39
10	50	0		21.51	21.45	21.44
10	1	0	16-QAM	21.80	21.79	21.84
10	1	25		21.73	21.70	21.64
10	1	49		21.72	21.66	21.59
10	25	0		20.61	20.53	20.57
10	25	12		20.58	20.55	20.57
10	25	25		20.54	20.49	20.46
10	50	0		20.58	20.51	20.57
10	1	0	64-QAM	20.73	20.73	20.76
10	1	25		20.65	20.63	20.62
10	1	49		20.64	20.58	20.57
10	25	0		19.61	19.59	19.59
10	25	12		19.58	19.56	19.55
10	25	25		19.59	19.52	19.49
10	50	0		19.57	19.55	19.56
5	1	0	QPSK	22.49	22.43	22.45
5	1	12		22.42	22.37	22.39
5	1	24		22.42	22.35	22.37
5	12	0		21.51	21.41	21.44
5	12	7		21.50	21.45	21.41
5	12	13		21.46	21.36	21.39
5	25	0		21.47	21.39	21.43
5	1	0	16-QAM	21.73	21.74	21.70
5	1	12		21.67	21.72	21.65
5	1	24		21.76	21.64	21.66
5	12	0		20.54	20.53	20.55
5	12	7		20.58	20.52	20.52
5	12	13		20.52	20.50	20.49
5	25	0		20.52	20.50	20.52
5	1	0	64-QAM	20.69	20.68	20.65
5	1	12		20.62	20.62	20.60
5	1	24		20.60	20.60	20.59
5	12	0		19.64	19.58	19.60
5	12	7		19.60	19.59	19.58
5	12	13		19.56	19.55	19.55
5	25	0		19.58	19.50	19.53



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.41	22.35	22.40
3	1	8		22.40	22.32	22.36
3	1	14		22.35	22.31	22.34
3	8	0		21.43	21.40	21.41
3	8	4		21.46	21.42	21.40
3	8	7		21.42	21.37	21.39
3	15	0		21.44	21.36	21.38
3	1	0	16-QAM	21.66	21.67	21.65
3	1	8		21.66	21.66	21.65
3	1	14		21.63	21.63	21.58
3	8	0		20.55	20.53	20.51
3	8	4		20.56	20.55	20.52
3	8	7		20.54	20.49	20.52
3	15	0		20.52	20.46	20.49
3	1	0	64-QAM	20.61	20.61	20.59
3	1	8		20.61	20.58	20.59
3	1	14		20.59	20.59	20.56
3	8	0		19.56	19.53	19.53
3	8	4		19.59	19.55	19.53
3	8	7		19.54	19.51	19.51
3	15	0		19.55	19.50	19.48
1.4	1	0	QPSK	22.32	22.28	22.28
1.4	1	3		22.40	22.34	22.35
1.4	1	5		22.32	22.24	22.27
1.4	3	0		22.36	22.31	22.33
1.4	3	1		22.40	22.33	22.35
1.4	3	3		22.37	22.28	22.31
1.4	6	0		21.37	21.33	21.32
1.4	1	0	16-QAM	21.58	21.58	21.56
1.4	1	3		21.65	21.64	21.62
1.4	1	5		21.59	21.55	21.57
1.4	3	0		21.40	21.38	21.39
1.4	3	1		21.44	21.43	21.40
1.4	3	3		21.38	21.37	21.36
1.4	6	0		20.52	20.48	20.47
1.4	1	0	64-QAM	20.54	20.52	20.52
1.4	1	3		20.61	20.58	20.58
1.4	1	5		20.53	20.49	20.50
1.4	3	0		20.57	20.54	20.51
1.4	3	1		20.60	20.55	20.55
1.4	3	3		20.54	20.52	20.50
1.4	6	0		19.46	19.41	19.43



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.36	22.38	22.34
10	1	25		22.30	22.32	22.29
10	1	49		22.29	22.23	22.27
10	25	0		21.38	21.41	21.30
10	25	12		21.49	21.39	21.41
10	25	25		21.40	21.33	21.39
10	50	0		21.43	21.36	21.29
10	1	0	16-QAM	21.73	21.72	21.64
10	1	25		21.67	21.67	21.69
10	1	49		21.67	21.60	21.63
10	25	0		20.48	20.49	20.40
10	25	12		20.58	20.50	20.47
10	25	25		20.51	20.42	20.45
10	50	0		20.55	20.44	20.40
10	1	0	64-QAM	20.65	20.63	20.56
10	1	25		20.58	20.58	20.62
10	1	49		20.58	20.52	20.56
10	25	0		19.48	19.48	19.43
10	25	12		19.61	19.46	19.54
10	25	25		19.53	19.45	19.45
10	50	0		19.55	19.47	19.39
5	1	0	QPSK	22.38	22.36	22.35
5	1	12		22.34	22.31	22.31
5	1	24		22.30	22.29	22.27
5	12	0		21.43	21.39	21.38
5	12	7		21.42	21.38	21.38
5	12	13		21.36	21.35	21.34
5	25	0		21.38	21.34	21.36
5	1	0	16-QAM	21.73	21.70	21.68
5	1	12		21.70	21.68	21.66
5	1	24		21.66	21.65	21.63
5	12	0		20.50	20.45	20.48
5	12	7		20.50	20.49	20.47
5	12	13		20.46	20.42	20.47
5	25	0		20.47	20.44	20.43
5	1	0	64-QAM	20.66	20.63	20.61
5	1	12		20.60	20.61	20.59
5	1	24		20.56	20.53	20.56
5	12	0		19.55	19.54	19.49
5	12	7		19.54	19.54	19.51
5	12	13		19.48	19.48	19.48
5	25	0		19.50	19.47	19.45



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.36	22.33	22.32
3	1	8		22.32	22.30	22.31
3	1	14		22.32	22.26	22.30
3	8	0		21.38	21.35	21.33
3	8	4		21.39	21.36	21.39
3	8	7		21.37	21.34	21.33
3	15	0		21.38	21.35	21.34
3	1	0	16-QAM	21.70	21.66	21.68
3	1	8		21.69	21.65	21.66
3	1	14		21.67	21.63	21.61
3	8	0		20.52	20.44	20.47
3	8	4		20.54	20.49	20.51
3	8	7		20.48	20.46	20.47
3	15	0		20.48	20.45	20.43
3	1	0	64-QAM	20.62	20.59	20.59
3	1	8		20.62	20.56	20.57
3	1	14		20.59	20.54	20.55
3	8	0		19.52	19.47	19.47
3	8	4		19.53	19.51	19.51
3	8	7		19.49	19.46	19.46
3	15	0		19.46	19.43	19.46
1.4	1	0	QPSK	22.28	22.22	22.21
1.4	1	3		22.33	22.29	22.29
1.4	1	5		22.27	22.21	22.23
1.4	3	0		22.32	22.28	22.24
1.4	3	1		22.35	22.30	22.30
1.4	3	3		22.30	22.28	22.26
1.4	6	0		21.31	21.25	21.27
1.4	1	0	16-QAM	21.64	21.58	21.59
1.4	1	3		21.69	21.65	21.67
1.4	1	5		21.60	21.57	21.57
1.4	3	0		21.42	21.36	21.37
1.4	3	1		21.44	21.38	21.38
1.4	3	3		21.40	21.38	21.38
1.4	6	0		20.47	20.43	20.43
1.4	1	0	64-QAM	20.56	20.50	20.51
1.4	1	3		20.61	20.57	20.56
1.4	1	5		20.52	20.50	20.51
1.4	3	0		20.52	20.49	20.49
1.4	3	1		20.58	20.54	20.52
1.4	3	3		20.52	20.48	20.49
1.4	6	0		19.41	19.36	19.38



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.16	22.08	22.04
20	1	49		22.25	22.18	22.24
20	1	99		22.30	22.20	22.27
20	50	0		21.22	21.18	21.25
20	50	24		21.28	21.32	21.27
20	50	50		21.31	21.37	21.33
20	100	0		21.25	21.21	21.21
20	1	0	16-QAM	21.50	21.38	21.35
20	1	49		21.61	21.51	21.55
20	1	99		21.59	21.51	21.60
20	50	0		20.32	20.24	20.32
20	50	24		20.35	20.36	20.37
20	50	50		20.42	20.43	20.44
20	100	0		20.31	20.35	20.28
20	1	0	64-QAM	20.39	20.30	20.27
20	1	49		20.51	20.45	20.48
20	1	99		20.49	20.43	20.54
20	50	0		19.33	19.28	19.33
20	50	24		19.37	19.41	19.34
20	50	50		19.40	19.43	19.42
20	100	0		19.31	19.37	19.28
15	1	0	QPSK	22.21	22.15	22.06
15	1	37		22.26	22.20	22.19
15	1	74		22.24	22.18	22.29
15	36	0		21.24	21.20	21.19
15	36	20		21.34	21.30	21.31
15	36	39		21.31	21.34	21.25
15	75	0		21.33	21.29	21.25
15	1	0	16-QAM	21.57	21.49	21.40
15	1	37		21.58	21.52	21.49
15	1	74		21.55	21.51	21.64
15	36	0		20.35	20.29	20.22
15	36	20		20.42	20.40	20.40
15	36	39		20.34	20.40	20.35
15	75	0		20.40	20.31	20.33
15	1	0	64-QAM	20.48	20.38	20.29
15	1	37		20.52	20.45	20.41
15	1	74		20.48	20.38	20.51
15	36	0		19.34	19.28	19.25
15	36	20		19.46	19.43	19.41
15	36	39		19.41	19.41	19.37
15	75	0		19.36	19.35	19.33



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.24	22.17	22.15
10	1	25		22.25	22.19	22.21
10	1	49		22.24	22.12	22.24
10	25	0		21.24	21.24	21.24
10	25	12		21.31	21.29	21.26
10	25	25		21.30	21.31	21.25
10	50	0		21.30	21.23	21.30
10	1	0	16-QAM	21.53	21.50	21.48
10	1	25		21.58	21.53	21.52
10	1	49		21.63	21.45	21.60
10	25	0		20.34	20.29	20.32
10	25	12		20.40	20.39	20.34
10	25	25		20.39	20.36	20.32
10	50	0		20.35	20.36	20.36
10	1	0	64-QAM	20.49	20.41	20.37
10	1	25		20.51	20.42	20.44
10	1	49		20.49	20.37	20.51
10	25	0		19.31	19.32	19.33
10	25	12		19.42	19.36	19.33
10	25	25		19.43	19.37	19.34
10	50	0		19.39	19.33	19.39
5	1	0	QPSK	22.27	22.10	22.13
5	1	12		22.29	22.19	22.23
5	1	24		22.21	22.18	22.26
5	12	0		21.31	21.23	21.23
5	12	7		21.40	21.31	21.31
5	12	13		21.26	21.31	21.30
5	25	0		21.23	21.25	21.27
5	1	0	16-QAM	21.57	21.47	21.47
5	1	12		21.63	21.51	21.57
5	1	24		21.56	21.52	21.59
5	12	0		20.39	20.32	20.29
5	12	7		20.47	20.37	20.38
5	12	13		20.33	20.34	20.39
5	25	0		20.31	20.31	20.34
5	1	0	64-QAM	20.46	20.36	20.38
5	1	12		20.53	20.42	20.48
5	1	24		20.44	20.43	20.49
5	12	0		19.46	19.32	19.34
5	12	7		19.53	19.43	19.40
5	12	13		19.41	19.41	19.40
5	25	0		19.34	19.35	19.34



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.28	22.26	22.29
10	1	25		22.36	22.33	22.29
10	1	49		22.32	22.29	22.26
10	25	0		21.44	21.36	21.34
10	25	12		21.45	21.43	21.34
10	25	25		21.40	21.36	21.32
10	50	0		21.41	21.39	21.32
10	1	0	16-QAM	21.64	21.57	21.60
10	1	25		21.69	21.64	21.55
10	1	49		21.64	21.57	21.54
10	25	0		20.51	20.47	20.39
10	25	12		20.51	20.49	20.42
10	25	25		20.47	20.43	20.42
10	50	0		20.50	20.45	20.41
10	1	0	64-QAM	20.53	20.49	20.55
10	1	25		20.61	20.58	20.49
10	1	49		20.58	20.50	20.48
10	25	0		19.52	19.49	19.40
10	25	12		19.54	19.51	19.46
10	25	25		19.53	19.47	19.42
10	50	0		19.50	19.47	19.44
5	1	0	QPSK	22.30	22.31	22.24
5	1	12		22.30	22.29	22.26
5	1	24		22.37	22.31	22.23
5	12	0		21.32	21.35	21.29
5	12	7		21.33	21.37	21.30
5	12	13		21.42	21.35	21.30
5	25	0		21.43	21.36	21.30
5	1	0	16-QAM	21.64	21.64	21.51
5	1	12		21.58	21.61	21.54
5	1	24		21.70	21.59	21.55
5	12	0		20.39	20.45	20.38
5	12	7		20.42	20.43	20.39
5	12	13		20.50	20.40	20.36
5	25	0		20.49	20.39	20.38
5	1	0	64-QAM	20.56	20.58	20.50
5	1	12		20.53	20.52	20.50
5	1	24		20.63	20.49	20.49
5	12	0		19.45	19.48	19.40
5	12	7		19.47	19.49	19.44
5	12	13		19.53	19.48	19.42
5	25	0		19.50	19.42	19.39



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.30	22.30	22.24
3	1	8		22.28	22.29	22.24
3	1	14		22.28	22.30	22.22
3	8	0		21.32	21.32	21.26
3	8	4		21.32	21.35	21.30
3	8	7		21.29	21.31	21.27
3	15	0		21.31	21.33	21.26
3	1	0	16-QAM	21.66	21.60	21.49
3	1	8		21.63	21.60	21.54
3	1	14		21.54	21.56	21.48
3	8	0		20.46	20.44	20.37
3	8	4		20.45	20.46	20.42
3	8	7		20.41	20.44	20.41
3	15	0		20.41	20.43	20.36
3	1	0	64-QAM	20.53	20.56	20.47
3	1	8		20.55	20.52	20.47
3	1	14		20.52	20.51	20.46
3	8	0		19.45	19.47	19.37
3	8	4		19.48	19.48	19.43
3	8	7		19.44	19.45	19.39
3	15	0		19.41	19.44	19.38
1.4	1	0	QPSK	22.23	22.22	22.15
1.4	1	3		22.29	22.29	22.23
1.4	1	5		22.20	22.20	22.14
1.4	3	0		22.27	22.26	22.18
1.4	3	1		22.31	22.29	22.21
1.4	3	3		22.26	22.26	22.18
1.4	6	0		21.25	21.27	21.19
1.4	1	0	16-QAM	21.56	21.51	21.46
1.4	1	3		21.64	21.59	21.50
1.4	1	5		21.54	21.51	21.42
1.4	3	0		21.38	21.34	21.27
1.4	3	1		21.40	21.37	21.29
1.4	3	3		21.35	21.32	21.24
1.4	6	0		20.40	20.40	20.34
1.4	1	0	64-QAM	20.49	20.46	20.39
1.4	1	3		20.57	20.53	20.43
1.4	1	5		20.48	20.46	20.37
1.4	3	0		20.49	20.48	20.39
1.4	3	1		20.53	20.50	20.44
1.4	3	3		20.48	20.46	20.39
1.4	6	0		19.36	19.35	19.28



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.32	22.32	22.29
10	1	25		22.31	22.30	22.29
10	1	49		22.29	22.27	22.28
10	25	0		21.36	21.40	21.33
10	25	12		21.38	21.38	21.36
10	25	25		21.37	21.34	21.32
10	50	0		21.38	21.35	21.33
10	1	0	16-QAM	21.67	21.67	21.62
10	1	25		21.63	21.60	21.59
10	1	49		21.63	21.63	21.61
10	25	0		20.48	20.44	20.43
10	25	12		20.46	20.47	20.46
10	25	25		20.45	20.44	20.43
10	50	0		20.47	20.46	20.44
10	1	0	64-QAM	20.59	20.57	20.56
10	1	25		20.55	20.51	20.51
10	1	49		20.55	20.54	20.52
10	25	0		19.48	19.49	19.46
10	25	12		19.48	19.50	19.46
10	25	25		19.46	19.46	19.42
10	50	0		19.46	19.48	19.46
5	1	0	QPSK	22.33	22.30	22.26
5	1	12		22.30	22.28	22.27
5	1	24		22.33	22.29	22.27
5	12	0		21.41	21.34	21.30
5	12	7		21.42	21.36	21.33
5	12	13		21.38	21.35	21.31
5	25	0		21.40	21.33	21.31
5	1	0	16-QAM	21.67	21.64	21.57
5	1	12		21.63	21.59	21.60
5	1	24		21.64	21.59	21.58
5	12	0		20.48	20.44	20.39
5	12	7		20.48	20.44	20.40
5	12	13		20.49	20.44	20.40
5	25	0		20.46	20.42	20.39
5	1	0	64-QAM	20.57	20.53	20.52
5	1	12		20.55	20.52	20.52
5	1	24		20.58	20.53	20.49
5	12	0		19.51	19.49	19.44
5	12	7		19.54	19.50	19.49
5	12	13		19.53	19.45	19.47
5	25	0		19.46	19.41	19.42



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.71	22.65	22.48
20	1	49		22.50	22.42	22.27
20	1	99		22.42	22.31	22.19
20	50	0		21.63	21.55	21.41
20	50	24		21.57	21.47	21.33
20	50	50		21.50	21.39	21.29
20	100	0		21.58	21.50	21.31
20	1	0	16-QAM	22.04	22.00	21.81
20	1	49		21.80	21.81	21.62
20	1	99		21.81	21.65	21.58
20	50	0		20.77	20.67	20.50
20	50	24		20.68	20.58	20.41
20	50	50		20.61	20.49	20.34
20	100	0		20.67	20.60	20.42
20	1	0	64-QAM	20.93	20.90	20.75
20	1	49		20.72	20.72	20.51
20	1	99		20.72	20.58	20.51
20	50	0		19.75	19.68	19.52
20	50	24		19.70	19.63	19.46
20	50	50		19.62	19.51	19.37
20	100	0		19.69	19.60	19.46
15	1	0	QPSK	22.70	22.63	22.45
15	1	37		22.51	22.42	22.27
15	1	74		22.49	22.40	22.25
15	36	0		21.61	21.57	21.37
15	36	20		21.57	21.47	21.36
15	36	39		21.49	21.45	21.29
15	75	0		21.57	21.49	21.29
15	1	0	16-QAM	22.02	21.99	21.81
15	1	37		21.77	21.79	21.60
15	1	74		21.85	21.71	21.62
15	36	0		20.69	20.66	20.48
15	36	20		20.66	20.59	20.41
15	36	39		20.59	20.51	20.38
15	75	0		20.68	20.58	20.39
15	1	0	64-QAM	20.92	20.92	20.76
15	1	37		20.74	20.73	20.52
15	1	74		20.75	20.63	20.56
15	36	0		19.77	19.69	19.52
15	36	20		19.70	19.63	19.47
15	36	39		19.66	19.55	19.38
15	75	0		19.69	19.60	19.43



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.63	22.53	22.36
10	1	25		22.52	22.40	22.25
10	1	49		22.48	22.36	22.21
10	25	0		21.58	21.49	21.34
10	25	12		21.57	21.44	21.31
10	25	25		21.55	21.42	21.22
10	50	0		21.55	21.43	21.27
10	1	0	16-QAM	21.93	21.87	21.73
10	1	25		21.81	21.77	21.60
10	1	49		21.72	21.65	21.59
10	25	0		20.68	20.59	20.39
10	25	12		20.68	20.55	20.39
10	25	25		20.61	20.50	20.34
10	50	0		20.65	20.56	20.41
10	1	0	64-QAM	20.86	20.80	20.62
10	1	25		20.75	20.70	20.55
10	1	49		20.70	20.58	20.48
10	25	0		19.67	19.61	19.45
10	25	12		19.69	19.54	19.41
10	25	25		19.62	19.53	19.38
10	50	0		19.68	19.56	19.38
5	1	0	QPSK	22.58	22.48	22.31
5	1	12		22.51	22.40	22.23
5	1	24		22.53	22.38	22.27
5	12	0		21.56	21.43	21.27
5	12	7		21.58	21.46	21.30
5	12	13		21.51	21.41	21.27
5	25	0		21.53	21.40	21.26
5	1	0	16-QAM	21.85	21.82	21.65
5	1	12		21.81	21.75	21.61
5	1	24		21.80	21.67	21.62
5	12	0		20.66	20.53	20.40
5	12	7		20.63	20.55	20.39
5	12	13		20.59	20.48	20.37
5	25	0		20.63	20.53	20.33
5	1	0	64-QAM	20.81	20.75	20.61
5	1	12		20.72	20.67	20.54
5	1	24		20.72	20.60	20.51
5	12	0		19.71	19.59	19.41
5	12	7		19.71	19.60	19.43
5	12	13		19.66	19.53	19.38
5	25	0		19.63	19.51	19.38



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.52	22.40	22.26
3	1	8		22.50	22.37	22.24
3	1	14		22.47	22.33	22.21
3	8	0		21.53	21.39	21.26
3	8	4		21.55	21.44	21.27
3	8	7		21.50	21.40	21.22
3	15	0		21.51	21.39	21.24
3	1	0	16-QAM	21.79	21.75	21.60
3	1	8		21.80	21.74	21.60
3	1	14		21.72	21.71	21.57
3	8	0		20.63	20.54	20.40
3	8	4		20.67	20.56	20.43
3	8	7		20.61	20.54	20.36
3	15	0		20.61	20.50	20.36
3	1	0	64-QAM	20.72	20.67	20.53
3	1	8		20.74	20.66	20.53
3	1	14		20.71	20.60	20.49
3	8	0		19.65	19.55	19.40
3	8	4		19.66	19.58	19.41
3	8	7		19.63	19.53	19.38
3	15	0		19.62	19.50	19.34
1.4	1	0	QPSK	22.44	22.32	22.18
1.4	1	3		22.52	22.38	22.24
1.4	1	5		22.43	22.30	22.17
1.4	3	0		22.49	22.38	22.21
1.4	3	1		22.52	22.39	22.25
1.4	3	3		22.47	22.35	22.22
1.4	6	0		21.47	21.34	21.18
1.4	1	0	16-QAM	21.74	21.70	21.56
1.4	1	3		21.79	21.74	21.61
1.4	1	5		21.71	21.68	21.52
1.4	3	0		21.54	21.47	21.33
1.4	3	1		21.57	21.51	21.37
1.4	3	3		21.53	21.44	21.33
1.4	6	0		20.61	20.50	20.36
1.4	1	0	64-QAM	20.65	20.61	20.45
1.4	1	3		20.72	20.66	20.51
1.4	1	5		20.65	20.58	20.46
1.4	3	0		20.68	20.59	20.48
1.4	3	1		20.70	20.65	20.50
1.4	3	3		20.66	20.58	20.45
1.4	6	0		19.55	19.45	19.29



Appendix B. Test Results of ERP/EIRP and Radiated Test

ERP/EIRP

<For Main Antenna>

LTE Band 2 / 1.4MHz (Average) (GT - LC = -2.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	3	1	22.59	0.1816	20.49	0.1119
Middle		3	1	22.53	0.1791	20.43	0.1104
Highest		3	1	22.39	0.1734	20.29	0.1069
Lowest	16QAM	1	3	21.88	0.1542	19.78	0.0951
Middle		1	3	21.84	0.1528	19.74	0.0942
Highest		1	3	21.68	0.1472	19.58	0.0908
Lowest	64QAM	1	3	20.81	0.1205	18.71	0.0743
Middle		1	3	20.76	0.1191	18.66	0.0735
Highest		1	3	20.61	0.1151	18.51	0.0710
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 3MHz (Average) (GT - LC = -2.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.60	0.1820	20.50	0.1122
Middle		1	0	22.54	0.1795	20.44	0.1107
Highest		1	0	22.43	0.1750	20.33	0.1079
Lowest	16QAM	1	0	21.90	0.1549	19.80	0.0955
Middle		1	0	21.85	0.1531	19.75	0.0944
Highest		1	0	21.75	0.1496	19.65	0.0923
Lowest	64QAM	1	0	20.82	0.1208	18.72	0.0745
Middle		1	0	20.78	0.1197	18.68	0.0738
Highest		1	0	20.70	0.1175	18.60	0.0724
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 5MHz (Average) (GT - LC = -2.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.65	0.1841	20.55	0.1135
Middle		1	0	22.58	0.1811	20.48	0.1117
Highest		1	0	22.48	0.1770	20.38	0.1091
Lowest	16QAM	1	24	21.95	0.1567	19.85	0.0966
Middle		1	24	21.85	0.1531	19.75	0.0944
Highest		1	24	21.68	0.1472	19.58	0.0908
Lowest	64QAM	1	0	20.92	0.1236	18.82	0.0762
Middle		1	0	20.83	0.1211	18.73	0.0746
Highest		1	0	20.77	0.1194	18.67	0.0736
Limit	EIRP < 2W			Result		PASS	



LTE Band 2 / 10MHz (Average) (GT - LC = -2.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.91	0.1954	20.81	0.1205
Middle		1	0	22.82	0.1914	20.72	0.1180
Highest		1	0	22.53	0.1791	20.43	0.1104
Lowest	16QAM	1	0	22.19	0.1656	20.09	0.1021
Middle		1	0	22.12	0.1629	20.02	0.1005
Highest		1	0	21.88	0.1542	19.78	0.0951
Lowest	64QAM	1	0	21.10	0.1288	19.00	0.0794
Middle		1	0	21.09	0.1285	18.99	0.0793
Highest		1	0	20.79	0.1199	18.69	0.0740
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 15MHz (Average) (GT - LC = -2.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.77	0.1892	20.67	0.1167
Middle		1	0	22.67	0.1849	20.57	0.1140
Highest		1	0	22.65	0.1841	20.55	0.1135
Lowest	16QAM	1	0	22.07	0.1611	19.97	0.0993
Middle		1	0	22.01	0.1589	19.91	0.0979
Highest		1	0	21.94	0.1563	19.84	0.0964
Lowest	64QAM	1	0	21.03	0.1268	18.93	0.0782
Middle		1	0	20.92	0.1236	18.82	0.0762
Highest		1	0	20.89	0.1227	18.79	0.0757
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 20MHz (Average) (GT - LC = -2.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.94	0.1968	20.84	0.1213
Middle		1	0	22.83	0.1919	20.73	0.1183
Highest		1	0	22.66	0.1845	20.56	0.1138
Lowest	16QAM	1	0	22.29	0.1694	20.19	0.1045
Middle		1	0	22.16	0.1644	20.06	0.1014
Highest		1	0	21.99	0.1581	19.89	0.0975
Lowest	64QAM	1	0	21.20	0.1318	19.10	0.0813
Middle		1	0	21.08	0.1282	18.98	0.0791
Highest		1	0	20.90	0.1230	18.80	0.0759
Limit	EIRP < 2W			Result		PASS	



LTE Band 4 / 1.4MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	3	22.40	0.1738	20.40	0.1096
Middle		1	3	22.34	0.1714	20.34	0.1081
Highest		1	3	22.35	0.1718	20.35	0.1084
Lowest	16QAM	1	3	21.65	0.1462	19.65	0.0923
Middle		1	3	21.64	0.1459	19.64	0.0920
Highest		1	3	21.62	0.1452	19.62	0.0916
Lowest	64QAM	1	3	20.61	0.1151	18.61	0.0726
Middle		1	3	20.58	0.1143	18.58	0.0721
Highest		1	3	20.58	0.1143	18.58	0.0721
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 3MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.41	0.1742	20.41	0.1099
Middle		1	0	22.35	0.1718	20.35	0.1084
Highest		1	0	22.40	0.1738	20.40	0.1096
Lowest	16QAM	1	0	21.66	0.1466	19.66	0.0925
Middle		1	0	21.67	0.1469	19.67	0.0927
Highest		1	0	21.65	0.1462	19.65	0.0923
Lowest	64QAM	1	0	20.61	0.1151	18.61	0.0726
Middle		1	0	20.61	0.1151	18.61	0.0726
Highest		1	0	20.59	0.1146	18.59	0.0723
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 5MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.49	0.1774	20.49	0.1119
Middle		1	0	22.43	0.1750	20.43	0.1104
Highest		1	0	22.45	0.1758	20.45	0.1109
Lowest	16QAM	1	24	21.76	0.1500	19.76	0.0946
Middle		1	24	21.64	0.1459	19.64	0.0920
Highest		1	24	21.66	0.1466	19.66	0.0925
Lowest	64QAM	1	0	20.69	0.1172	18.69	0.0740
Middle		1	0	20.68	0.1169	18.68	0.0738
Highest		1	0	20.65	0.1161	18.65	0.0733
Limit	EIRP < 1W			Result		PASS	



LTE Band 4 / 10MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.51	0.1782	20.51	0.1125
Middle		1	0	22.47	0.1766	20.47	0.1114
Highest		1	0	22.50	0.1778	20.50	0.1122
Lowest	16QAM	1	0	21.80	0.1514	19.80	0.0955
Middle		1	0	21.79	0.1510	19.79	0.0953
Highest		1	0	21.84	0.1528	19.84	0.0964
Lowest	64QAM	1	0	20.73	0.1183	18.73	0.0746
Middle		1	0	20.73	0.1183	18.73	0.0746
Highest		1	0	20.76	0.1191	18.76	0.0752
Limit	EIRP < 1W		Result		PASS		

LTE Band 4 / 15MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.59	0.1816	20.59	0.1146
Middle		1	0	22.55	0.1799	20.55	0.1135
Highest		1	0	22.51	0.1782	20.51	0.1125
Lowest	16QAM	1	0	21.90	0.1549	19.90	0.0977
Middle		1	0	21.90	0.1549	19.90	0.0977
Highest		1	0	21.84	0.1528	19.84	0.0964
Lowest	64QAM	1	0	20.81	0.1205	18.81	0.0760
Middle		1	0	20.83	0.1211	18.83	0.0764
Highest		1	0	20.77	0.1194	18.77	0.0753
Limit	EIRP < 1W		Result		PASS		

LTE Band 4 / 20MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.59	0.1816	20.59	0.1146
Middle		1	0	22.59	0.1816	20.59	0.1146
Highest		1	0	22.54	0.1795	20.54	0.1132
Lowest	16QAM	1	0	21.94	0.1563	19.94	0.0986
Middle		1	0	21.92	0.1556	19.92	0.0982
Highest		1	0	21.86	0.1535	19.86	0.0968
Lowest	64QAM	1	0	20.82	0.1208	18.82	0.0762
Middle		1	0	20.82	0.1208	18.82	0.0762
Highest		1	0	20.81	0.1205	18.81	0.0760
Limit	EIRP < 1W		Result		PASS		



LTE Band 5 / 1.4MHz (Average) (GT - LC = -5.6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	1	22.35	0.1718	14.60	0.0288
Middle		3	1	22.30	0.1698	14.55	0.0285
Highest		3	1	22.30	0.1698	14.55	0.0285
Lowest	16QAM	1	3	21.69	0.1476	13.94	0.0248
Middle		1	3	21.65	0.1462	13.90	0.0245
Highest		1	3	21.67	0.1469	13.92	0.0247
Lowest	64QAM	1	3	20.61	0.1151	12.86	0.0193
Middle		1	3	20.57	0.1140	12.82	0.0191
Highest		1	3	20.56	0.1138	12.81	0.0191
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz (Average) (GT - LC = -5.6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	22.36	0.1722	14.61	0.0289
Middle		1	0	22.33	0.1710	14.58	0.0287
Highest		1	0	22.32	0.1706	14.57	0.0286
Lowest	16QAM	1	0	21.70	0.1479	13.95	0.0248
Middle		1	0	21.66	0.1466	13.91	0.0246
Highest		1	0	21.68	0.1472	13.93	0.0247
Lowest	64QAM	1	0	20.62	0.1153	12.87	0.0194
Middle		1	0	20.59	0.1146	12.84	0.0192
Highest		1	0	20.59	0.1146	12.84	0.0192
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 5MHz (Average) (GT - LC = -5.6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	22.38	0.1730	14.63	0.0290
Middle		1	0	22.36	0.1722	14.61	0.0289
Highest		1	0	22.35	0.1718	14.60	0.0288
Lowest	16QAM	1	0	21.73	0.1489	13.98	0.0250
Middle		1	0	21.70	0.1479	13.95	0.0248
Highest		1	0	21.68	0.1472	13.93	0.0247
Lowest	64QAM	1	0	20.66	0.1164	12.91	0.0195
Middle		1	0	20.63	0.1156	12.88	0.0194
Highest		1	0	20.61	0.1151	12.86	0.0193
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 10MHz (Average) (GT - LC = -5.6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	22.36	0.1722	14.61	0.0289
Middle		1	0	22.38	0.1730	14.63	0.0290
Highest		1	0	22.34	0.1714	14.59	0.0288
Lowest	16QAM	1	0	21.73	0.1489	13.98	0.0250
Middle		1	0	21.72	0.1486	13.97	0.0249
Highest		1	0	21.64	0.1459	13.89	0.0245
Lowest	64QAM	1	0	20.65	0.1161	12.90	0.0195
Middle		1	0	20.63	0.1156	12.88	0.0194
Highest		1	0	20.56	0.1138	12.81	0.0191
Limit	ERP < 7W			Result		PASS	



LTE Band 7 / 5MHz (Average) (GT - LC = 0.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	22.29	0.1694	22.59	0.1816
Middle		1	12	22.19	0.1656	22.49	0.1774
Highest		1	12	22.23	0.1671	22.53	0.1791
Lowest	16QAM	1	12	21.63	0.1455	21.93	0.1560
Middle		1	12	21.51	0.1416	21.81	0.1517
Highest		1	12	21.57	0.1435	21.87	0.1538
Lowest	64QAM	1	12	20.53	0.1130	20.83	0.1211
Middle		1	12	20.42	0.1102	20.72	0.1180
Highest		1	12	20.48	0.1117	20.78	0.1197
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 10MHz (Average) (GT - LC = 0.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	22.25	0.1679	22.55	0.1799
Middle		1	25	22.19	0.1656	22.49	0.1774
Highest		1	25	22.21	0.1663	22.51	0.1782
Lowest	16QAM	1	49	21.63	0.1455	21.93	0.1560
Middle		1	49	21.45	0.1396	21.75	0.1496
Highest		1	49	21.60	0.1445	21.90	0.1549
Lowest	64QAM	1	25	20.51	0.1125	20.81	0.1205
Middle		1	25	20.42	0.1102	20.72	0.1180
Highest		1	25	20.44	0.1107	20.74	0.1186
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 15MHz (Average) (GT - LC = 0.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	74	22.24	0.1675	22.54	0.1795
Middle		1	74	22.18	0.1652	22.48	0.1770
Highest		1	74	22.29	0.1694	22.59	0.1816
Lowest	16QAM	1	74	21.55	0.1429	21.85	0.1531
Middle		1	74	21.51	0.1416	21.81	0.1517
Highest		1	74	21.64	0.1459	21.94	0.1563
Lowest	64QAM	1	37	20.52	0.1127	20.82	0.1208
Middle		1	37	20.45	0.1109	20.75	0.1189
Highest		1	37	20.41	0.1099	20.71	0.1178
Limit	EIRP < 2W			Result		PASS	



LTE Band 7 / 20MHz (Average) (GT - LC = 0.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	99	22.30	0.1698	22.60	0.1820
Middle		1	99	22.20	0.1660	22.50	0.1778
Highest		1	99	22.27	0.1687	22.57	0.1807
Lowest	16QAM	1	49	21.61	0.1449	21.91	0.1552
Middle		1	49	21.51	0.1416	21.81	0.1517
Highest		1	49	21.55	0.1429	21.85	0.1531
Lowest	64QAM	1	99	20.49	0.1119	20.79	0.1199
Middle		1	99	20.43	0.1104	20.73	0.1183
Highest		1	99	20.54	0.1132	20.84	0.1213
Limit	EIRP < 2W			Result		PASS	



LTE Band 12 / 1.4MHz (Average) (GT - LC = -6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	1	22.31	0.1702	14.16	0.0261
Middle		3	1	22.29	0.1694	14.14	0.0259
Highest		3	1	22.21	0.1663	14.06	0.0255
Lowest	16QAM	1	3	21.64	0.1459	13.49	0.0223
Middle		1	3	21.59	0.1442	13.44	0.0221
Highest		1	3	21.50	0.1413	13.35	0.0216
Lowest	64QAM	1	3	20.57	0.1140	12.42	0.0175
Middle		1	3	20.53	0.1130	12.38	0.0173
Highest		1	3	20.43	0.1104	12.28	0.0169
Limit	ERP < 3W		Result		PASS		

LTE Band 12 / 3MHz (Average) (GT - LC = -6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	22.30	0.1698	14.15	0.0260
Middle		1	0	22.30	0.1698	14.15	0.0260
Highest		1	0	22.24	0.1675	14.09	0.0256
Lowest	16QAM	1	0	21.66	0.1466	13.51	0.0224
Middle		1	0	21.60	0.1445	13.45	0.0221
Highest		1	0	21.49	0.1409	13.34	0.0216
Lowest	64QAM	1	0	20.53	0.1130	12.38	0.0173
Middle		1	0	20.56	0.1138	12.41	0.0174
Highest		1	0	20.47	0.1114	12.32	0.0171
Limit	ERP < 3W		Result		PASS		

LTE Band 12 / 5MHz (Average) (GT - LC = -6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	22.37	0.1726	14.22	0.0264
Middle		1	24	22.31	0.1702	14.16	0.0261
Highest		1	24	22.23	0.1671	14.08	0.0256
Lowest	16QAM	1	24	21.70	0.1479	13.55	0.0226
Middle		1	24	21.59	0.1442	13.44	0.0221
Highest		1	24	21.55	0.1429	13.40	0.0219
Lowest	64QAM	1	24	20.63	0.1156	12.48	0.0177
Middle		1	24	20.49	0.1119	12.34	0.0171
Highest		1	24	20.49	0.1119	12.34	0.0171
Limit	ERP < 3W		Result		PASS		



LTE Band 12 / 10MHz (Average) (GT - LC = -6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	22.36	0.1722	14.21	0.0264
Middle		1	25	22.33	0.1710	14.18	0.0262
Highest		1	25	22.29	0.1694	14.14	0.0259
Lowest	16QAM	1	25	21.69	0.1476	13.54	0.0226
Middle		1	25	21.64	0.1459	13.49	0.0223
Highest		1	25	21.55	0.1429	13.40	0.0219
Lowest	64QAM	1	25	20.61	0.1151	12.46	0.0176
Middle		1	25	20.58	0.1143	12.43	0.0175
Highest		1	25	20.49	0.1119	12.34	0.0171
Limit	ERP < 3W			Result		PASS	



LTE Band 17 / 5MHz (Average) (GT - LC = -5.6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	22.33	0.1710	14.58	0.0287
Middle		1	0	22.30	0.1698	14.55	0.0285
Highest		1	0	22.26	0.1683	14.51	0.0282
Lowest	16QAM	1	0	21.67	0.1469	13.92	0.0247
Middle		1	0	21.64	0.1459	13.89	0.0245
Highest		1	0	21.57	0.1435	13.82	0.0241
Lowest	64QAM	1	24	20.58	0.1143	12.83	0.0192
Middle		1	24	20.53	0.1130	12.78	0.0190
Highest		1	24	20.49	0.1119	12.74	0.0188
Limit	ERP < 3W			Result		PASS	

LTE Band 17 / 10MHz (Average) (GT - LC = -5.6 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	22.32	0.1706	14.57	0.0286
Middle		1	0	22.32	0.1706	14.57	0.0286
Highest		1	0	22.29	0.1694	14.54	0.0284
Lowest	16QAM	1	0	21.67	0.1469	13.92	0.0247
Middle		1	0	21.67	0.1469	13.92	0.0247
Highest		1	0	21.62	0.1452	13.87	0.0244
Lowest	64QAM	1	0	20.59	0.1146	12.84	0.0192
Middle		1	0	20.57	0.1140	12.82	0.0191
Highest		1	0	20.56	0.1138	12.81	0.0191
Limit	ERP < 3W			Result		PASS	



LTE Band 66 / 1.4MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	3	22.52	0.1786	20.52	0.1127
Middle		1	3	22.38	0.1730	20.38	0.1091
Highest		1	3	22.24	0.1675	20.24	0.1057
Lowest	16QAM	1	3	21.79	0.1510	19.79	0.0953
Middle		1	3	21.74	0.1493	19.74	0.0942
Highest		1	3	21.61	0.1449	19.61	0.0914
Lowest	64QAM	1	3	20.72	0.1180	18.72	0.0745
Middle		1	3	20.66	0.1164	18.66	0.0735
Highest		1	3	20.51	0.1125	18.51	0.0710
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 3MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.52	0.1786	20.52	0.1127
Middle		1	0	22.40	0.1738	20.40	0.1096
Highest		1	0	22.26	0.1683	20.26	0.1062
Lowest	16QAM	1	8	21.80	0.1514	19.80	0.0955
Middle		1	8	21.74	0.1493	19.74	0.0942
Highest		1	8	21.60	0.1445	19.60	0.0912
Lowest	64QAM	1	8	20.74	0.1186	18.74	0.0748
Middle		1	8	20.66	0.1164	18.66	0.0735
Highest		1	8	20.53	0.1130	18.53	0.0713
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 5MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.58	0.1811	20.58	0.1143
Middle		1	0	22.48	0.1770	20.48	0.1117
Highest		1	0	22.31	0.1702	20.31	0.1074
Lowest	16QAM	1	0	21.85	0.1531	19.85	0.0966
Middle		1	0	21.82	0.1521	19.82	0.0959
Highest		1	0	21.65	0.1462	19.65	0.0923
Lowest	64QAM	1	0	20.81	0.1205	18.81	0.0760
Middle		1	0	20.75	0.1189	18.75	0.0750
Highest		1	0	20.61	0.1151	18.61	0.0726
Limit	EIRP < 1W			Result		PASS	



LTE Band 66 / 10MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.63	0.1832	20.63	0.1156
Middle		1	0	22.53	0.1791	20.53	0.1130
Highest		1	0	22.36	0.1722	20.36	0.1086
Lowest	16QAM	1	0	21.93	0.1560	19.93	0.0984
Middle		1	0	21.87	0.1538	19.87	0.0971
Highest		1	0	21.73	0.1489	19.73	0.0940
Lowest	64QAM	1	0	20.86	0.1219	18.86	0.0769
Middle		1	0	20.80	0.1202	18.80	0.0759
Highest		1	0	20.62	0.1153	18.62	0.0728
Limit	EIRP < 1W		Result		PASS		

LTE Band 66 / 15MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.70	0.1862	20.70	0.1175
Middle		1	0	22.63	0.1832	20.63	0.1156
Highest		1	0	22.45	0.1758	20.45	0.1109
Lowest	16QAM	1	0	22.02	0.1592	20.02	0.1005
Middle		1	0	21.99	0.1581	19.99	0.0998
Highest		1	0	21.81	0.1517	19.81	0.0957
Lowest	64QAM	1	0	20.92	0.1236	18.92	0.0780
Middle		1	0	20.92	0.1236	18.92	0.0780
Highest		1	0	20.76	0.1191	18.76	0.0752
Limit	EIRP < 1W		Result		PASS		

LTE Band 66 / 20MHz (Average) (GT - LC = -2 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.71	0.1866	20.71	0.1178
Middle		1	0	22.65	0.1841	20.65	0.1161
Highest		1	0	22.48	0.1770	20.48	0.1117
Lowest	16QAM	1	0	22.04	0.1600	20.04	0.1009
Middle		1	0	22.00	0.1585	20.00	0.1000
Highest		1	0	21.81	0.1517	19.81	0.0957
Lowest	64QAM	1	0	20.93	0.1239	18.93	0.0782
Middle		1	0	20.90	0.1230	18.90	0.0776
Highest		1	0	20.75	0.1189	18.75	0.0750
Limit	EIRP < 1W		Result		PASS		



<For Aux. Antenna>

LTE Band 7 / 5MHz (Average) (GT - LC = -4.7 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	22.29	0.1694	17.59	0.0574
Middle		1	12	22.19	0.1656	17.49	0.0561
Highest		1	12	22.23	0.1671	17.53	0.0566
Lowest	16QAM	1	12	21.63	0.1455	16.93	0.0493
Middle		1	12	21.51	0.1416	16.81	0.0480
Highest		1	12	21.57	0.1435	16.87	0.0486
Lowest	64QAM	1	12	20.53	0.1130	15.83	0.0383
Middle		1	12	20.42	0.1102	15.72	0.0373
Highest		1	12	20.48	0.1117	15.78	0.0378
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 10MHz (Average) (GT - LC = -4.7 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	22.25	0.1679	17.55	0.0569
Middle		1	25	22.19	0.1656	17.49	0.0561
Highest		1	25	22.21	0.1663	17.51	0.0564
Lowest	16QAM	1	49	21.63	0.1455	16.93	0.0493
Middle		1	49	21.45	0.1396	16.75	0.0473
Highest		1	49	21.60	0.1445	16.90	0.0490
Lowest	64QAM	1	25	20.51	0.1125	15.81	0.0381
Middle		1	25	20.42	0.1102	15.72	0.0373
Highest		1	25	20.44	0.1107	15.74	0.0375
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 15MHz (Average) (GT - LC = -4.7 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	74	22.24	0.1675	17.54	0.0568
Middle		1	74	22.18	0.1652	17.48	0.0560
Highest		1	74	22.29	0.1694	17.59	0.0574
Lowest	16QAM	1	74	21.55	0.1429	16.85	0.0484
Middle		1	74	21.51	0.1416	16.81	0.0480
Highest		1	74	21.64	0.1459	16.94	0.0494
Lowest	64QAM	1	37	20.52	0.1127	15.82	0.0382
Middle		1	37	20.45	0.1109	15.75	0.0376
Highest		1	37	20.41	0.1099	15.71	0.0372
Limit	EIRP < 2W			Result		PASS	



LTE Band 7 / 20MHz (Average) (GT - LC = -4.7 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	99	22.30	0.1698	17.60	0.0575
Middle		1	99	22.20	0.1660	17.50	0.0562
Highest		1	99	22.27	0.1687	17.57	0.0571
Lowest	16QAM	1	49	21.61	0.1449	16.91	0.0491
Middle		1	49	21.51	0.1416	16.81	0.0480
Highest		1	49	21.55	0.1429	16.85	0.0484
Lowest	64QAM	1	99	20.49	0.1119	15.79	0.0379
Middle		1	99	20.43	0.1104	15.73	0.0374
Highest		1	99	20.54	0.1132	15.84	0.0384
Limit	EIRP < 2W			Result		PASS	



Radiated Spurious Emission

Part24E LTE Band 2

<For Main Antenna>

LTE Band 2/ 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-53.65	-13	-40.65	-75.51	-63.96	1.97	12.28	H
	5555	-38.30	-13	-25.30	-66.28	-48.43	2.14	12.28	H
	7400	-41.11	-13	-28.11	-75.61	-49.11	2.18	10.18	H
									H
									H
									H
	3700	-41.74	-13	-28.74	-76.6	-52.05	1.97	12.28	V
	5555	-39.46	-13	-26.46	-67.44	-49.59	2.14	12.28	V
	7400	-40.97	-13	-27.97	-75.51	-48.97	2.18	10.18	V
									V
									V
									V
Middle	3742	-48.76	-13	-35.76	-70.67	-59.02	2.00	12.25	H
	5611	-40.45	-13	-27.45	-68.58	-50.68	2.13	12.36	H
	7484	-41.97	-13	-28.97	-76.65	-49.87	2.12	10.03	H
									H
									H
									H
	3742	-39.52	-13	-26.52	-61.43	-49.78	2.00	12.25	V
	5611	-40.32	-13	-27.32	-68.48	-50.55	2.13	12.36	V
	7484	-42.02	-13	-29.02	-76.7	-49.92	2.12	10.03	V
									V
									V
									V



Highest	3784	-54.29	-13	-41.29	-76.26	-64.50	2.02	12.23	H
	5674	-36.91	-13	-23.91	-65.26	-47.24	2.11	12.44	H
	7568	-41.33	-13	-28.33	-76.12	-49.46	2.11	10.24	H
									H
									H
									H
									H
	3784	-54.13	-13	-41.13	-76.1	-64.34	2.02	12.23	V
	5674	-38.55	-13	-25.55	-66.9	-48.88	2.11	12.44	V
	7568	-41.57	-13	-28.57	-76.36	-49.70	2.11	10.24	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Part27L LTE Band 4

LTE Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3448	-36.74	-13	-23.74	-58.17	-47.16	1.83	12.24	H
	5170	-42.47	-13	-29.47	-69.45	-52.31	2.29	12.13	H
	6899	-42.55	-13	-29.55	-76.01	-51.17	2.39	11.00	H
									H
									H
									H
									H
	3448	-35.06	-13	-22.06	-56.49	-45.48	1.83	12.24	V
	5170	-43.18	-13	-30.18	-70.16	-53.02	2.29	12.13	V
	6899	-43.40	-13	-30.40	-76.86	-52.02	2.39	11.00	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Part22H LTE Band 5

LTE Band 5 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-60.55	-13	-47.55	-75.16	-65.94	1.23	8.76	H
	2472	-58.20	-13	-45.20	-75.92	-65.09	1.44	10.48	H
	3296	-55.31	-13	-42.31	-76.34	-63.25	1.70	11.79	H
									H
									H
									H
									H
	1648	-60.51	-13	-47.51	-75.12	-65.90	1.23	8.76	V
	2472	-58.06	-13	-45.06	-785.78	-64.95	1.44	10.48	V
	3296	-55.60	-13	-42.60	-76.63	-63.54	1.70	11.79	V
									V
									V
									V
									V
Middle	1664	-60.51	-13	-47.51	-75.17	-65.95	1.23	8.82	H
	2496	-57.65	-13	-44.65	-75.46	-64.56	1.44	10.50	H
	3328	-55.21	-13	-42.21	-76.33	-63.22	1.73	11.88	H
									H
									H
									H
									H
	1664	-61.20	-13	-48.20	-75.86	-66.64	1.23	8.82	V
	2496	-57.87	-13	-44.87	-75.68	-64.78	1.44	10.50	V
	3328	-55.42	-13	-42.42	-76.54	-63.43	1.73	11.88	V
									V
									V
									V
									V



Highest	1680	-60.81	-13	-47.81	-75.52	-66.31	1.24	8.88	H
	2520	-57.76	-13	-44.76	-75.65	-64.69	1.44	10.52	H
	3360	-55.12	-13	-42.12	-76.33	-63.19	1.76	11.98	H
									H
									H
									H
									H
	1680	-60.79	-13	-47.79	-75.5	-66.29	1.24	8.88	V
	2520	-57.96	-13	-44.96	-75.85	-64.89	1.44	10.52	V
	3360	-54.92	-13	-41.92	-76.13	-62.99	1.76	11.98	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Part27M LTE Band 7

LTE Band 7 / 20MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5040	-49.76	-25	-24.76	-49.08	-59.52	2.34	12.11	H
	7560	-52.94	-25	-27.94	-61.05	-61.04	2.11	10.22	H
	12600	-47.41	-25	-22.41	-64.26	-58.05	2.54	13.18	H
									H
									H
									H
									H
	5040	-49.49	-25	-24.49	-48.81	-59.25	2.34	12.11	V
	7560	-53.07	-25	-28.07	-61.18	-61.17	2.11	10.22	V
	12600	-46.71	-25	-21.71	-63.56	-57.35	2.54	13.18	V
									V
									V
									V
									V
Middle	5088	-52.13	-25	-27.13	-51.61	-61.92	2.32	12.12	H
	7632	-52.28	-25	-27.28	-60.54	-60.64	2.11	10.48	H
	12720	-45.96	-25	-20.96	-63.54	-56.46	2.53	13.04	H
									H
									H
									H
									H
	5088	-50.81	-25	-25.81	-50.29	-60.60	2.32	12.12	V
	7632	-52.36	-25	-27.36	-60.62	-60.72	2.11	10.48	V
	12720	-45.84	-25	-20.84	-63.42	-56.34	2.53	13.04	V
									V
									V
									V
									V



Highest	5136	-42.34	-25	-17.34	-46.07	-52.16	2.30	12.13	H
	7704	-50.29	-25	-25.29	-58.7	-58.91	2.11	10.73	H
	10272	-48.06	-25	-23.06	-62.41	-57.74	2.23	11.91	H
									H
									H
									H
									H
	5136	-45.36	-25	-20.36	-45.09	-55.18	2.30	12.13	V
	7704	-49.08	-25	-24.08	-57.49	-57.70	2.11	10.73	V
	10272	-46.39	-25	-21.39	-61.74	-56.07	2.23	11.91	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Part27F LTE Band 12

LTE Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1424	-39.68	-13.00	-26.68	-53.28	-44.23	1.15	7.85	H
	2136	-59.95	-13.00	-46.95	-76.06	-66.63	1.38	10.21	H
	2848	-56.41	-13.00	-43.41	-75.93	-63.58	1.45	10.78	H
									H
									H
									H
									H
	1424	-36.52	-13.00	-23.52	-50.12	-41.07	1.15	7.85	V
	2136	-59.73	-13.00	-46.73	-75.84	-66.41	1.38	10.21	V
	2848	-56.75	-13.00	-43.75	-76.27	-63.92	1.45	10.78	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Part27H LTE Band 17

LTE Band 17 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1408	-56.52	-13	-43.52	69.92	-61.00	1.15	7.78	H
	2118	-59.98	-13	-46.98	-76.00	-66.65	1.38	10.19	H
	2824	-56.87	-13	-43.87	-76.23	-64.03	1.45	10.76	H
									H
									H
									H
									H
	1408	-53.02	-13	-40.02	-66.42	-57.50	1.15	7.78	V
	2118	-59.84	-13	-46.84	-75.86	-66.51	1.38	10.19	V
	2824	-56.61	-13	-43.61	-75.97	-63.77	1.45	10.76	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Part27L LTE Band 66

LTE Band 41 / 20MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	3525	-41.17	-13	-28.17	-62.78	-51.67	1.88	12.39	H
	5282	-45.06	-13	-32.06	-72.34	-54.97	2.24	12.16	H
	7046	-42.58	-13	-29.58	-76.45	-51.01	2.39	10.82	H
									H
									H
									H
									H
	3525	-38.59	-13	-25.59	-60.2	-49.09	1.88	12.39	V
	5282	-42.94	-13	-29.94	-70.22	-52.85	2.24	12.16	V
	7046	-42.66	-13	-29.66	-76.53	-51.09	2.39	10.82	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Part27M LTE Band 7

<For Aux. Antenna>

LTE Band 7 / 20MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5040	-56.64	-25	-31.64	-55.96	-66.40	2.34	12.11	H
	7560	-52.69	-25	-27.69	-60.8	-60.79	2.11	10.22	H
	12600	-46.87	-25	-21.87	-63.72	-57.51	2.54	13.18	H
									H
									H
									H
	5040	-48.31	-25	-23.31	-47.63	-58.07	2.34	12.11	V
	7560	-52.61	-25	-27.61	-60.72	-60.71	2.11	10.22	V
	12600	-47.23	-25	-22.23	-64.08	-57.87	2.54	13.18	V
									V
									V
									V
Middle	5088	-57.09	-25	-32.09	-56.57	-66.88	2.32	12.12	H
	7632	-52.38	-25	-27.38	-60.64	-60.74	2.11	10.48	H
	12720	-45.95	-25	-20.95	-63.53	-56.45	2.53	13.04	H
									H
									H
									H
	5088	-46.89	-25	-21.89	-46.37	-56.68	2.32	12.12	V
	7632	-51.31	-25	-26.31	-59.57	-59.67	2.11	10.48	V
	12720	-45.95	-25	-20.95	-63.53	-56.45	2.53	13.04	V
									V
									V
									V



Highest	5136	-49.52	-25	-24.52	-49.25	-59.34	2.30	12.13	H
	7704	-47.39	-25	-22.39	-55.8	-56.01	2.11	10.73	H
	10272	-35.33	-25	-10.33	-50.77	-45.01	2.23	11.91	H
	12840	-31.73	-25	-6.73	-50.05	-42.10	2.52	12.89	H
									H
									H
									H
	5136	-41.87	-25	-16.87	-41.6	-51.69	2.30	12.13	V
	7704	-48.17	-25	-23.17	-56.58	-56.79	2.11	10.73	V
	10272	-40.21	-25	-15.21	-55.56	-49.89	2.23	11.91	V
	12840	-33.57	-25	-8.57	-51.89	-43.94	2.52	12.89	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.