FCC RF Test Report

APPLICANT	: SHADOWTRACK TECHNOLOGIES, INC.
EQUIPMENT	: GPS Watch
BRAND NAME	: Compass XR
MODEL NAME	: XR-22
FCC ID	: 2ARH7-COMPASS-XR-22
STANDARD	: 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(F), 27(N)
CLASSIFICATION	: PCS Licensed Transmitter worn on body(PCT)
TEST DATE(S)	: Mar. 21, 2022 ~ Mar. 22, 2022

We, Sporton International Inc. (ShenZhen), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

This product installed a RF module (Brand Name: Fibocom, Model Name: NL668-AM-00, FCC ID: ZMONL668AM00) during the test, only Conducted Power, ERP/EIRP and RSE test items are tested in this report, all the other test results are leveraged from module RF report.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (ShenZhen), the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)
1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG221520B	Rev. 01	Initial issue of report	Apr. 11, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§22.913(a)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 17) (Band 71)	ERP < 3 Watt		-
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2Watt		-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	EIRP < 1Watt		-
-	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	1
-	§2.1049	Occupied Bandwidth	-	Report Only	1
-	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2)(4) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 66) (Band 71)	< 43+10log10(P[Watts])	PASS	1
-	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 66) (Band 71)	< 43+10log10(P[Watts])	PASS	1
-	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	1
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 25) (Band 26) (Band 66) (Band 71)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 20.59 dB at 1559.500 MHz

Remark 1:
All test results were leveraged from module RF report which can refer to Report No. FG091101B & FG8O1914B.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

SHADOWTRACK TECHNOLOGIES, INC.

One Lakeway, 3900 North Causeway Boulevard, Suite 1200, Metairie, LA 72000, United States

1.2 Manufacturer

SHADOWTRACK TECHNOLOGIES, INC.

One Lakeway, 3900 North Causeway Boulevard, Suite 1200, Metairie, LA 72000, United States

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	GPS Watch
Brand Name	Compass XR
Model Name	XR-22
FCC ID	2ARH7-COMPASS-XR-22
IMEI	Conducted: N/A Radiation: 868862040710117
HW Version	S10_V9.6.2
SW Version	4GYL
EUT Stage	Production Unit

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2 : 1850 MHz ~ 1910 MHz LTE Band 4 : 1710 MHz ~ 1755 MHz LTE Band 5 : 824 MHz ~ 849 MHz LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 17 : 704 MHz ~ 716 MHz LTE Band 66 : 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz
Rx Frequency	LTE Band 2 : 1930 MHz ~ 1990 MHz LTE Band 4 : 2110 MHz ~ 2155 MHz LTE Band 5 : 869 MHz ~ 894 MHz LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 17 : 734 MHz ~ 746 MHz LTE Band 66 : 2110 MHz~ 2180 MHz LTE Band 71: 617 MHz ~ 652 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 12 : 1.4MHz / 3MHz / 5MHz / 10MHz

	LTE Band 13 : 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 71 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.25 dBm LTE Band 4 : 22.90 dBm LTE Band 5 : 21.00 dBm LTE Band 12 : 21.39 dBm LTE Band 13 : 20.81 dBm LTE Band 17 : 21.39 dBm LTE Band 66 : 21.58 dBm LTE Band 71 : 21.24 dBm
Antenna Gain	LTE Band 2 : -1.2 dBi LTE Band 4 : -1.1 dBi LTE Band 5 : -2.5 dBi LTE Band 12 : -2.8 dBi LTE Band 13 : -3.0 dBi LTE Band 17 : -3.0 dBi LTE Band 66 : -1.1 dBi LTE Band 71 : -3.4 dBi
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP

LTE Band 2		QPSK		16QAM	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
1.4	1850.7 ~ 1909.3	0.1167	-	0.0966	-
3	1851.5 ~ 1908.5	0.1109	-	0.0918	-
5	1852.5 ~ 1907.5	0.1107	-	0.0849	-
10	1855.0 ~ 1905.0	0.1175	-	0.0940	-
15	1857.5 ~ 1902.5	0.1186	-	0.0923	-
20	1860.0 ~ 1900.0	0.1274	-	0.0982	-

LTE Band 4		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1710.7 ~ 1754.3	0.1371	-	0.1054	-
3	1711.5 ~ 1753.5	0.1306	-	0.1069	-
5	1712.5 ~ 1752.5	0.1300	-	0.1067	-
10	1715.0 ~ 1750.0	0.1297	-	0.1069	-
15	1717.5 ~ 1747.5	0.1306	-	0.1079	-
20	1720.0 ~ 1745.0	0.1514	-	0.1194	-
LTE Band 5		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
1.4	824.7 ~ 848.3	0.0431	-	0.0394	-
3	825.5 ~ 847.5	0.0414	-	0.0296	-
5	826.5 ~ 846.5	0.0419	-	0.0300	-
10	829.0 ~ 844.0	0.0432	-	0.0361	-
LTE Band 12		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
1.4	699.7 ~ 715.3	0.0428	-	0.0316	-
3	700.5 ~ 714.5	0.0424	-	0.0313	-
5	701.5 ~ 713.5	0.0421	-	0.0313	-
10	704.0 ~ 711.0	0.0441	-	0.0348	-
LTE Band 13		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	779.5 ~ 784.5	0.0366	-	0.0266	-
10	782.0	0.0368	-	0.0256	-
LTE Band 17		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	706.5 ~ 713.5	0.0421	-	0.0313	-
10	709.0 ~ 711.0	0.0441	-	0.0348	-

LTE Band 66		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1710.7 ~ 1779.3	0.1099	-	0.0875	-
3	1711.5 ~ 1778.5	0.1102	-	0.0824	-
5	1712.5 ~ 1777.5	0.1099	-	0.0804	-
10	1715.0 ~ 1775.0	0.1094	-	0.0839	-
15	1717.5 ~ 1772.5	0.1096	-	0.0843	-
20	1720.0 ~ 1770.0	0.1117	-	0.0966	-
LTE Band 71		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.0356	-	0.0301	-
10	668.0 ~ 693.0	0.0362	-	0.0301	-
15	670.5 ~ 690.5	0.0365	-	0.0296	-
20	673.0 ~ 688.0	0.0371	-	0.0297	-

1.7 Testing Location

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-SZ	AUDIX	E3	6.2009-8-24

1.9 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(L), 27(H), 27(F), 27(N)
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- 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, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

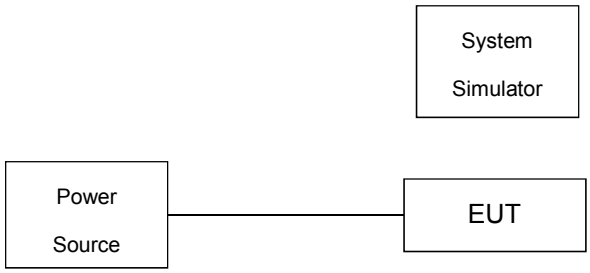
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

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
	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
	12	v	v	v	v	-	-	v	v	-	v	v	v	v	v	v
	13	-	-	v	v	-	-	v	v	-	v	v	v	v	v	v
	17	-	-	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
	71	-	-	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
	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
	12	v	v	v	v	-	-	v	v	-	v			v	v	v
	13	-	-	v	v	-	-	v	v	-	v			v	v	v
	66	v	v	v	v	v	v	v	v	-	v			v	v	v
	71	-	-	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
	13	Worst Case												v	v	v
	66	Worst Case												v	v	v
	71	Worst Case												v	v	v
Note	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 spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.															

	4. LTE Band 12 overlaps the entire frequency range of LTE Band 17. Therefore, the test results provided in this report covers Band 12 as well as Band 17.

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

For detail, please refer to test mode configuration and setup photographs for each test item.

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

2.4 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 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 13 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5

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

LTE Band 71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	133222	133322	133372
	Frequency	673.0	680.5	688.0
15	Channel	133197	133297	133397
	Frequency	670.5	680.5	690.5
10	Channel	133172	133272	133422
	Frequency	668.0	678.0	693.0
5	Channel	133147	133247	133447
	Frequency	665.5	675.5	695.5

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

3.3 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, Band 13 and Band 17 and Band 71.

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

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 testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

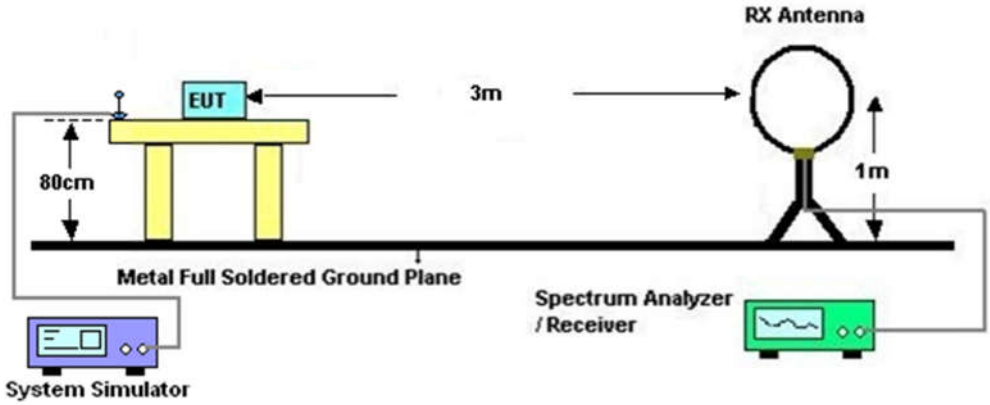
4 Radiated Test Items

4.1 Measuring Instruments

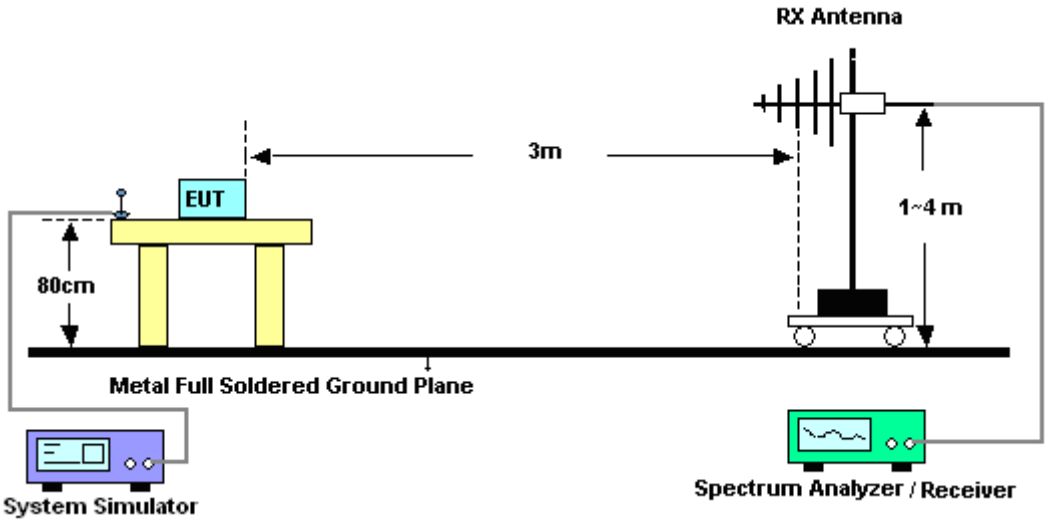
See list of measuring instruments of this test report.

4.2 Test Setup

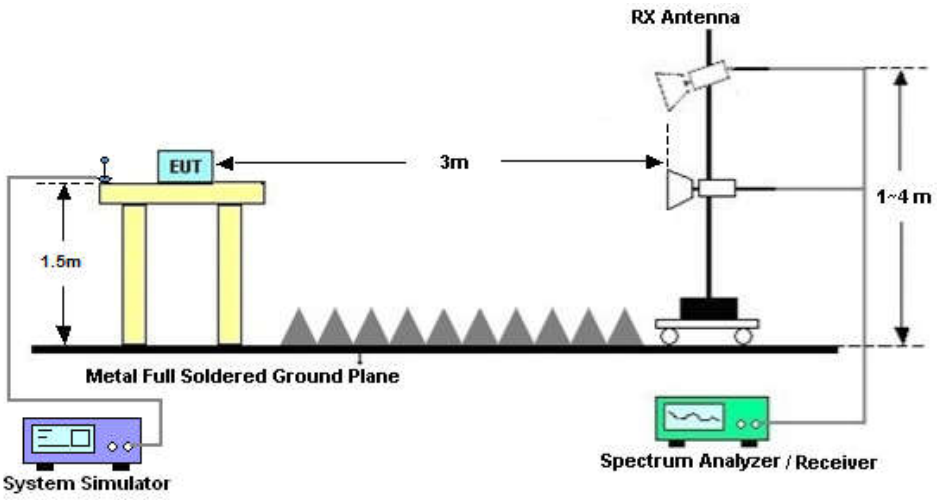
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

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 C63.26. 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

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
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 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 08, 2021	Mar. 22, 2022	Apr. 07, 2022	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2021	Mar. 22, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 20, 2021	Mar. 21, 2022	Jul. 19, 2022	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2021	Mar. 21, 2022	Jun. 21, 2022	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Oct. 22, 2021	Mar. 21, 2022	Oct. 21, 2022	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Jul. 15, 2021	Mar. 21, 2022	Jul. 14, 2022	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 25, 2021	Mar. 21, 2022	Jul. 24, 2022	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 22, 2021	Mar. 21, 2022	Oct. 21, 2022	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 22, 2021	Mar. 21, 2022	Oct. 21, 2022	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 20, 2021	Mar. 21, 2022	Jul. 19, 2022	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY53270156	500MHz~26.5GHz	Oct. 22, 2021	Mar. 21, 2022	Oct. 21, 2022	Radiation (03CH04-SZ)
AC Power Source	Chroma	61601	N/A	N/A	NCR	Mar. 21, 2022	NCR	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Mar. 21, 2022	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Mar. 21, 2022	NCR	Radiation (03CH04-SZ)

NCR: No Calibration Required.

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.8dB**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.1dB**

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.9dB**

Appendix A. Test Results of Conducted Test

Test Engineer :	Sam	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power(Average power)

LTE Band 2:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	21.97	21.55	21.66
20	QPSK	1	49	22.25	21.77	21.75
20	QPSK	1	99	21.39	21.37	21.32
20	QPSK	50	0	21.11	20.88	20.75
20	QPSK	50	24	20.92	20.78	20.72
20	QPSK	50	50	20.83	20.68	20.37
20	QPSK	100	0	20.95	20.70	20.64
20	16QAM	1	0	20.91	20.77	20.66
20	16QAM	1	49	20.91	21.12	20.72
20	16QAM	1	99	20.51	20.45	20.41
20	16QAM	50	0	20.06	19.76	19.94
20	16QAM	50	24	19.88	19.86	19.89
20	16QAM	50	50	19.87	19.86	19.56
20	16QAM	100	0	19.82	19.88	19.71
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	21.80	21.51	21.30
15	QPSK	1	37	21.94	21.77	21.43
15	QPSK	1	74	21.57	21.32	21.10
15	QPSK	36	0	20.86	20.57	20.46
15	QPSK	36	20	20.81	20.57	20.46
15	QPSK	36	39	20.63	20.47	20.20
15	QPSK	75	0	20.67	20.63	20.33
15	16QAM	1	0	20.75	20.79	20.39
15	16QAM	1	37	20.79	20.85	20.35
15	16QAM	1	74	20.42	20.79	20.10
15	16QAM	36	0	19.81	19.65	19.55
15	16QAM	36	20	19.69	19.71	19.47
15	16QAM	36	39	19.71	19.62	19.25
15	16QAM	75	0	19.76	19.54	19.36
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	21.69	21.36	21.28
10	QPSK	1	25	21.90	21.53	21.20
10	QPSK	1	49	21.58	21.15	21.06

10	QPSK	25	0	20.70	20.61	20.34
10	QPSK	25	12	20.76	20.51	20.39
10	QPSK	25	25	20.78	20.43	20.22
10	QPSK	50	0	20.72	20.44	20.22
10	16QAM	1	0	20.69	20.76	20.26
10	16QAM	1	25	20.58	20.70	20.26
10	16QAM	1	49	20.93	20.34	20.03
10	16QAM	25	0	19.91	19.62	19.52
10	16QAM	25	12	19.82	19.62	19.57
10	16QAM	25	25	19.92	19.66	19.35
10	16QAM	50	0	19.78	19.46	19.42
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	21.54	21.42	21.36
5	QPSK	1	12	21.64	21.60	21.43
5	QPSK	1	24	21.46	21.36	21.01
5	QPSK	12	0	20.73	20.54	20.30
5	QPSK	12	7	20.82	20.53	20.22
5	QPSK	12	13	20.83	20.52	20.19
5	QPSK	25	0	20.79	20.52	20.25
5	16QAM	1	0	20.46	20.37	20.06
5	16QAM	1	12	20.49	20.44	20.15
5	16QAM	1	24	20.36	20.25	20.01
5	16QAM	12	0	19.66	19.67	19.27
5	16QAM	12	7	19.60	19.66	19.30
5	16QAM	12	13	19.71	19.58	19.30
5	16QAM	25	0	19.69	19.68	19.33
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	21.61	21.39	21.23
3	QPSK	1	8	21.56	21.50	21.29
3	QPSK	1	14	21.65	21.56	21.03
3	QPSK	8	0	20.66	20.49	20.31
3	QPSK	8	4	20.81	20.57	20.29
3	QPSK	8	7	20.67	20.54	20.26
3	QPSK	15	0	20.70	20.43	20.27
3	16QAM	1	0	20.54	20.43	20.04
3	16QAM	1	8	20.39	20.83	20.05
3	16QAM	1	14	20.56	20.33	20.02
3	16QAM	8	0	19.72	19.62	19.30
3	16QAM	8	4	19.70	19.66	19.28
3	16QAM	8	7	19.80	19.67	19.16
3	16QAM	15	0	19.52	19.43	19.03
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	21.55	21.45	21.45
1.4	QPSK	1	3	21.81	21.55	21.35
1.4	QPSK	1	5	21.53	21.51	21.63
1.4	QPSK	3	0	21.82	21.66	21.63
1.4	QPSK	3	1	21.87	21.75	21.57

1.4	QPSK	3	3	21.74	21.47	21.04
1.4	QPSK	6	0	20.77	20.54	20.25
1.4	16QAM	1	0	20.76	20.61	20.24
1.4	16QAM	1	3	20.50	21.05	20.19
1.4	16QAM	1	5	20.57	20.75	20.57
1.4	16QAM	3	0	20.92	20.68	20.62
1.4	16QAM	3	1	20.83	20.64	20.62
1.4	16QAM	3	3	20.84	20.59	20.46
1.4	16QAM	6	0	19.59	19.53	19.48

LTE Band 4:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	21.96	21.55	21.10
20	QPSK	1	49	22.07	21.92	22.90
20	QPSK	1	99	21.01	21.27	22.88
20	QPSK	50	0	21.00	20.94	21.90
20	QPSK	50	24	20.83	20.75	21.48
20	QPSK	50	50	20.70	20.76	21.40
20	QPSK	100	0	20.96	20.87	21.65
20	16QAM	1	0	21.04	20.56	20.13
20	16QAM	1	49	20.70	20.60	21.73
20	16QAM	1	99	20.02	20.58	21.87
20	16QAM	50	0	19.97	19.74	20.48
20	16QAM	50	24	19.70	19.81	20.51
20	16QAM	50	50	19.68	19.69	20.97
20	16QAM	100	0	19.92	19.84	20.50
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	21.91	21.21	21.06
15	QPSK	1	37	22.10	21.84	22.26
15	QPSK	1	74	21.26	21.48	21.91
15	QPSK	36	0	21.09	20.86	21.08
15	QPSK	36	20	20.80	20.63	21.22
15	QPSK	36	39	20.56	20.62	21.68
15	QPSK	75	0	20.76	20.64	21.43
15	16QAM	1	0	21.09	20.45	21.11
15	16QAM	1	37	20.68	20.45	21.43
15	16QAM	1	74	20.53	20.50	21.30
15	16QAM	36	0	19.78	19.53	19.92
15	16QAM	36	20	19.69	19.65	20.21
15	16QAM	36	39	19.57	19.61	20.57
15	16QAM	75	0	19.66	19.66	20.27
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	21.94	21.27	21.08
10	QPSK	1	25	22.02	21.74	22.23
10	QPSK	1	49	21.38	21.54	21.90
10	QPSK	25	0	20.90	21.44	21.08
10	QPSK	25	12	20.78	20.50	21.23
10	QPSK	25	25	20.66	20.59	21.69
10	QPSK	50	0	20.84	20.58	21.44
10	16QAM	1	0	21.00	20.46	21.12
10	16QAM	1	25	20.62	20.46	21.39
10	16QAM	1	49	20.54	20.41	21.32
10	16QAM	25	0	19.98	19.52	19.92
10	16QAM	25	12	19.68	19.52	20.21
10	16QAM	25	25	19.60	19.50	20.57
10	16QAM	50	0	19.83	19.52	20.25

Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	22.10	21.47	21.05
5	QPSK	1	12	21.96	21.76	22.24
5	QPSK	1	24	21.60	21.74	21.90
5	QPSK	12	0	21.03	20.61	21.06
5	QPSK	12	7	21.06	20.51	21.23
5	QPSK	12	13	20.99	20.47	21.67
5	QPSK	25	0	20.92	20.58	21.43
5	16QAM	1	0	20.98	20.30	21.16
5	16QAM	1	12	20.85	20.26	21.38
5	16QAM	1	24	20.45	20.41	21.30
5	16QAM	12	0	19.97	19.44	19.93
5	16QAM	12	7	19.89	19.32	20.21
5	16QAM	12	13	20.04	19.30	20.56
5	16QAM	25	0	19.97	19.41	20.22
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	22.02	21.41	21.09
3	QPSK	1	8	22.13	21.64	22.26
3	QPSK	1	14	21.91	21.64	21.90
3	QPSK	8	0	21.08	20.71	21.06
3	QPSK	8	4	21.00	20.61	21.27
3	QPSK	8	7	20.97	20.67	21.69
3	QPSK	15	0	21.05	20.58	21.40
3	16QAM	1	0	21.04	20.21	21.16
3	16QAM	1	8	21.04	20.25	21.39
3	16QAM	1	14	20.79	20.36	21.33
3	16QAM	8	0	20.09	19.56	19.92
3	16QAM	8	4	20.11	19.70	20.17
3	16QAM	8	7	20.09	19.53	20.58
3	16QAM	15	0	19.95	19.55	20.23
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	21.96	21.39	21.04
1.4	QPSK	1	3	22.11	21.58	22.21
1.4	QPSK	1	5	21.87	21.57	21.88
1.4	QPSK	3	0	21.84	21.49	21.83
1.4	QPSK	3	1	21.76	21.37	22.00
1.4	QPSK	3	3	21.70	21.45	22.47
1.4	QPSK	6	0	21.03	20.52	21.34
1.4	16QAM	1	0	20.98	20.18	21.11
1.4	16QAM	1	3	20.98	20.18	21.33
1.4	16QAM	1	5	20.75	20.30	21.29
1.4	16QAM	3	0	20.54	20.00	20.35
1.4	16QAM	3	1	20.54	20.16	20.63
1.4	16QAM	3	3	20.56	20.10	21.04
1.4	16QAM	6	0	19.92	19.51	20.17

LTE Band 5:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	20.84	20.70	20.57
10	QPSK	1	25	20.69	20.93	20.60
10	QPSK	1	49	20.85	21.00	20.67
10	QPSK	25	0	19.72	19.86	20.04
10	QPSK	25	12	19.82	19.95	19.83
10	QPSK	25	25	20.90	20.96	20.20
10	QPSK	50	0	19.74	19.94	19.80
10	16QAM	1	0	19.75	20.22	20.00
10	16QAM	1	25	19.40	19.94	19.79
10	16QAM	1	49	19.05	19.99	19.64
10	16QAM	25	0	18.80	18.95	19.13
10	16QAM	25	12	18.99	19.02	19.12
10	16QAM	25	25	18.82	18.98	18.86
10	16QAM	50	0	18.77	18.94	18.98
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	20.48	20.57	20.55
5	QPSK	1	12	20.60	20.87	20.85
5	QPSK	1	24	20.23	20.76	20.47
5	QPSK	12	0	19.53	19.65	19.74
5	QPSK	12	7	19.65	19.85	19.68
5	QPSK	12	13	19.02	19.77	19.74
5	QPSK	25	0	19.49	19.79	19.59
5	16QAM	1	0	19.14	19.13	19.35
5	16QAM	1	12	19.21	19.42	19.12
5	16QAM	1	24	19.20	19.29	19.42
5	16QAM	12	0	18.45	18.49	18.64
5	16QAM	12	7	18.47	18.51	18.53
5	16QAM	12	13	18.38	18.68	18.55
5	16QAM	25	0	18.53	18.80	18.71
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	20.43	20.52	20.50
3	QPSK	1	8	20.55	20.82	20.80
3	QPSK	1	14	20.18	20.71	20.42
3	QPSK	8	0	19.48	19.60	19.69
3	QPSK	8	4	19.60	19.80	19.63
3	QPSK	8	7	19.66	19.72	19.69
3	QPSK	15	0	19.44	19.74	19.54
3	16QAM	1	0	19.09	19.08	19.30
3	16QAM	1	8	19.16	19.37	19.07
3	16QAM	1	14	19.15	19.24	19.37
3	16QAM	8	0	18.40	18.44	18.59
3	16QAM	8	4	18.42	18.46	18.48

3	16QAM	8	7	18.33	18.63	18.50
3	16QAM	15	0	18.48	18.75	18.66
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	20.40	20.49	20.47
1.4	QPSK	1	3	20.52	20.79	20.77
1.4	QPSK	1	5	20.15	20.68	20.39
1.4	QPSK	3	0	20.95	20.98	20.97
1.4	QPSK	3	1	20.99	20.94	20.95
1.4	QPSK	3	3	20.91	20.91	20.90
1.4	QPSK	6	0	19.41	19.71	19.51
1.4	16QAM	1	0	19.06	19.05	19.27
1.4	16QAM	1	3	19.13	19.34	19.04
1.4	16QAM	1	5	19.12	19.21	19.34
1.4	16QAM	3	0	20.37	20.41	20.56
1.4	16QAM	3	1	20.39	20.43	20.45
1.4	16QAM	3	3	20.30	20.60	20.47
1.4	16QAM	6	0	18.45	18.72	18.63

LTE Band 12:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	21.18	21.25	20.88
10	QPSK	1	25	21.17	21.25	21.30
10	QPSK	1	49	21.20	21.39	21.31
10	QPSK	25	0	20.24	20.53	20.50
10	QPSK	25	12	20.11	20.37	20.36
10	QPSK	25	25	20.19	20.27	20.26
10	QPSK	50	0	20.07	20.42	20.41
10	16QAM	1	0	20.11	19.82	19.75
10	16QAM	1	25	20.33	20.06	19.84
10	16QAM	1	49	20.14	20.36	19.84
10	16QAM	25	0	19.11	19.29	19.48
10	16QAM	25	12	19.19	19.33	19.64
10	16QAM	25	25	19.36	19.47	19.35
10	16QAM	50	0	19.13	19.42	19.53
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	21.19	21.00	21.07
5	QPSK	1	12	21.12	21.12	21.05
5	QPSK	1	24	20.89	21.03	20.43
5	QPSK	12	0	20.03	19.86	20.13
5	QPSK	12	7	20.01	20.06	20.05
5	QPSK	12	13	20.09	20.13	19.96
5	QPSK	25	0	20.00	19.90	19.84
5	16QAM	1	0	19.88	19.67	19.91
5	16QAM	1	12	19.65	19.69	19.78
5	16QAM	1	24	19.53	19.76	19.56
5	16QAM	12	0	19.15	19.06	19.05
5	16QAM	12	7	19.03	19.12	19.01
5	16QAM	12	13	19.19	19.09	18.86
5	16QAM	25	0	19.24	19.03	19.08
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	21.22	20.97	21.02
3	QPSK	1	8	21.15	21.09	21.00
3	QPSK	1	14	20.92	21.00	20.38
3	QPSK	8	0	20.06	19.83	20.08
3	QPSK	8	4	20.04	20.03	20.00
3	QPSK	8	7	20.12	20.10	19.91
3	QPSK	15	0	20.03	19.87	19.79
3	16QAM	1	0	19.91	19.64	19.86
3	16QAM	1	8	19.68	19.66	19.73
3	16QAM	1	14	19.56	19.73	19.51
3	16QAM	8	0	19.18	19.03	19.00
3	16QAM	8	4	19.06	19.09	18.96

3	16QAM	8	7	19.22	19.06	18.81
3	16QAM	15	0	19.27	19.00	19.03
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	21.26	20.99	21.08
1.4	QPSK	1	3	21.19	21.11	21.06
1.4	QPSK	1	5	20.96	21.02	20.44
1.4	QPSK	3	0	20.10	20.13	20.14
1.4	QPSK	3	1	20.08	20.05	20.06
1.4	QPSK	3	3	20.16	20.12	20.10
1.4	QPSK	6	0	20.07	19.89	19.85
1.4	16QAM	1	0	19.95	19.66	19.92
1.4	16QAM	1	3	19.72	19.68	19.79
1.4	16QAM	1	5	19.60	19.75	19.57
1.4	16QAM	3	0	19.22	19.05	19.06
1.4	16QAM	3	1	19.10	19.11	19.02
1.4	16QAM	3	3	19.26	19.08	19.13
1.4	16QAM	6	0	19.31	19.02	19.09

LTE Band 13:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel					23230	
Frequency (MHz)					782	
10	QPSK	1	0		20.58	
10	QPSK	1	25		20.58	
10	QPSK	1	49		20.81	
10	QPSK	25	0		19.83	
10	QPSK	25	12		19.61	
10	QPSK	25	25		19.63	
10	QPSK	50	0		19.53	
10	16QAM	1	0		19.23	
10	16QAM	1	25		19.09	
10	16QAM	1	49		19.11	
10	16QAM	25	0		18.64	
10	16QAM	25	12		18.73	
10	16QAM	25	25		18.69	
10	16QAM	50	0		18.67	
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5
5	QPSK	1	0	20.39	20.56	20.58
5	QPSK	1	12	20.75	20.67	20.78
5	QPSK	1	24	20.37	20.25	20.62
5	QPSK	12	0	19.58	19.35	19.42
5	QPSK	12	7	19.54	19.38	19.68
5	QPSK	12	13	19.46	19.38	19.73
5	QPSK	25	0	19.52	19.39	19.55
5	16QAM	1	0	19.03	19.37	19.39
5	16QAM	1	12	19.31	19.19	19.32
5	16QAM	1	24	19.15	19.02	19.40
5	16QAM	12	0	18.27	18.53	18.33
5	16QAM	12	7	18.43	18.46	18.80
5	16QAM	12	13	18.27	18.31	18.88
5	16QAM	25	0	18.38	18.56	18.67

LTE Band 17:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	21.30	20.97	20.91
10	QPSK	1	25	21.37	21.27	21.30
10	QPSK	1	49	21.39	21.35	21.31
10	QPSK	25	0	20.45	20.41	20.33
10	QPSK	25	12	20.35	20.39	20.31
10	QPSK	25	25	20.44	20.35	20.29
10	QPSK	50	0	20.45	20.44	20.22
10	16QAM	1	0	20.43	19.89	19.48
10	16QAM	1	25	20.53	20.41	19.93
10	16QAM	1	49	20.21	20.15	19.83
10	16QAM	25	0	19.43	19.23	19.49
10	16QAM	25	12	19.55	19.36	19.34
10	16QAM	25	25	19.45	19.55	19.36
10	16QAM	50	0	19.40	19.39	19.39
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	20.79	20.60	20.67
5	QPSK	1	12	21.12	21.12	21.05
5	QPSK	1	24	20.89	21.03	20.43
5	QPSK	12	0	20.03	19.86	20.13
5	QPSK	12	7	20.01	20.06	20.05
5	QPSK	12	13	20.09	20.13	19.96
5	QPSK	25	0	20.00	19.90	19.84
5	16QAM	1	0	19.88	19.67	19.91
5	16QAM	1	12	19.65	19.69	19.78
5	16QAM	1	24	19.53	19.76	19.56
5	16QAM	12	0	19.15	19.06	19.05
5	16QAM	12	7	19.03	19.12	19.01
5	16QAM	12	13	19.19	19.09	18.86
5	16QAM	25	0	19.24	19.03	19.08

LTE Band 66:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	21.09	21.25	21.34
20	QPSK	1	49	21.57	21.50	21.58
20	QPSK	1	99	21.08	21.27	21.09
20	QPSK	50	0	20.70	20.55	20.72
20	QPSK	50	24	20.30	20.50	20.67
20	QPSK	50	50	20.16	20.45	20.60
20	QPSK	100	0	20.27	20.62	20.69
20	16QAM	1	0	20.03	20.31	20.43
20	16QAM	1	49	20.14	20.25	20.95
20	16QAM	1	99	20.06	20.33	20.28
20	16QAM	50	0	19.18	19.73	19.69
20	16QAM	50	24	19.33	19.49	19.73
20	16QAM	50	50	19.18	19.56	19.63
20	16QAM	100	0	19.29	19.53	19.73
Channel				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	21.13	21.50	21.35
15	QPSK	1	37	21.16	21.49	21.50
15	QPSK	1	74	21.06	21.22	21.19
15	QPSK	36	0	20.13	20.54	20.58
15	QPSK	36	20	20.18	20.29	20.58
15	QPSK	36	39	20.11	20.29	20.64
15	QPSK	75	0	20.11	20.45	20.62
15	16QAM	1	0	20.13	20.36	20.26
15	16QAM	1	37	20.09	20.18	20.23
15	16QAM	1	74	20.02	20.19	20.08
15	16QAM	36	0	19.16	19.53	19.61
15	16QAM	36	20	19.11	19.39	19.60
15	16QAM	36	39	19.13	19.29	19.58
15	16QAM	75	0	19.23	19.45	19.66
Channel				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	21.05	21.26	21.35
10	QPSK	1	25	21.03	21.49	21.45
10	QPSK	1	49	21.03	21.06	21.17
10	QPSK	25	0	20.08	20.26	20.41
10	QPSK	25	12	20.04	20.23	20.57
10	QPSK	25	25	20.10	20.20	20.59
10	QPSK	50	0	20.09	20.41	20.64
10	16QAM	1	0	20.06	20.34	20.15
10	16QAM	1	25	20.02	20.05	20.29
10	16QAM	1	49	20.01	20.02	20.16
10	16QAM	25	0	19.06	19.30	19.56
10	16QAM	25	12	19.11	19.61	19.52
10	16QAM	25	25	19.16	19.56	19.50
10	16QAM	50	0	19.17	19.45	19.58

Channel				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	21.02	21.21	21.35
5	QPSK	1	12	21.22	21.28	21.43
5	QPSK	1	24	21.10	21.32	21.51
5	QPSK	12	0	20.04	20.19	20.41
5	QPSK	12	7	20.14	20.22	20.53
5	QPSK	12	13	20.15	20.22	20.60
5	QPSK	25	0	20.03	20.26	20.51
5	16QAM	1	0	20.10	20.00	20.15
5	16QAM	1	12	20.01	20.09	20.11
5	16QAM	1	24	20.00	20.05	20.03
5	16QAM	12	0	19.07	19.24	19.43
5	16QAM	12	7	19.04	19.42	19.56
5	16QAM	12	13	19.14	19.32	19.60
5	16QAM	25	0	19.20	19.33	19.63
Channel				131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5
3	QPSK	1	0	21.09	21.21	21.52
3	QPSK	1	8	21.24	21.47	21.51
3	QPSK	1	14	21.05	21.27	21.41
3	QPSK	8	0	20.16	20.29	20.58
3	QPSK	8	4	20.28	20.26	20.55
3	QPSK	8	7	20.17	20.22	20.60
3	QPSK	15	0	20.18	20.22	20.64
3	16QAM	1	0	20.06	20.05	20.17
3	16QAM	1	8	20.12	20.05	20.26
3	16QAM	1	14	20.10	20.00	20.07
3	16QAM	8	0	19.23	19.41	19.70
3	16QAM	8	4	19.26	19.36	19.70
3	16QAM	8	7	19.06	19.40	19.60
3	16QAM	15	0	19.01	19.45	19.64
Channel				131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3
1.4	QPSK	1	0	21.05	21.17	21.48
1.4	QPSK	1	3	21.20	21.43	21.47
1.4	QPSK	1	5	21.01	21.23	21.37
1.4	QPSK	3	0	21.12	21.25	21.18
1.4	QPSK	3	1	21.24	21.22	21.51
1.4	QPSK	3	3	21.13	21.18	21.23
1.4	QPSK	6	0	20.16	20.20	20.62
1.4	16QAM	1	0	20.04	20.03	20.15
1.4	16QAM	1	3	20.10	20.03	20.24
1.4	16QAM	1	5	20.08	20.15	20.05
1.4	16QAM	3	0	20.52	20.43	20.32
1.4	16QAM	3	1	20.09	20.22	20.28
1.4	16QAM	3	3	20.14	20.11	20.31
1.4	16QAM	6	0	19.42	19.43	19.62

LTE Band 71:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				133222	133297	133372
Frequency (MHz)				673	680.5	688
20	QPSK	1	0	20.99	20.97	20.92
20	QPSK	1	49	21.23	21.24	21.17
20	QPSK	1	99	21.15	21.18	21.11
20	QPSK	50	0	20.29	20.22	20.15
20	QPSK	50	24	20.33	20.35	20.25
20	QPSK	50	50	20.28	20.17	20.13
20	QPSK	100	0	20.30	20.31	20.19
20	16QAM	1	0	20.27	20.19	20.20
20	16QAM	1	49	20.28	20.22	20.17
20	16QAM	1	99	20.26	20.23	20.21
20	16QAM	50	0	19.49	19.44	19.40
20	16QAM	50	24	19.56	19.50	19.52
20	16QAM	50	50	19.53	19.48	19.45
20	16QAM	100	0	19.45	19.39	19.40
Channel				133197	133297	133397
Frequency (MHz)				670.5	680.5	690.5
15	QPSK	1	0	20.93	20.90	20.78
15	QPSK	1	37	21.17	21.16	21.03
15	QPSK	1	74	21.09	20.04	21.00
15	QPSK	36	0	20.23	20.17	20.02
15	QPSK	36	20	20.27	20.14	20.14
15	QPSK	36	39	20.22	20.13	20.01
15	QPSK	75	0	20.24	20.21	20.10
15	16QAM	1	0	20.25	20.15	20.11
15	16QAM	1	37	20.26	20.18	20.08
15	16QAM	1	74	20.21	20.19	20.12
15	16QAM	36	0	19.44	19.40	19.31
15	16QAM	36	20	19.53	19.43	19.43
15	16QAM	36	39	19.50	19.47	19.36
15	16QAM	75	0	19.44	19.34	19.31
Channel				133172	133297	133422
Frequency (MHz)				668	680.5	693
10	QPSK	1	0	20.91	20.97	20.77
10	QPSK	1	25	21.08	21.14	20.17
10	QPSK	1	49	21.01	20.03	21.09
10	QPSK	25	0	20.22	20.17	20.19
10	QPSK	25	12	20.24	20.13	20.17
10	QPSK	25	25	20.21	20.11	20.11
10	QPSK	50	0	20.23	20.14	20.13
10	16QAM	1	0	20.34	20.17	20.14
10	16QAM	1	25	20.31	20.17	20.07
10	16QAM	1	49	20.18	20.23	20.17
10	16QAM	25	0	19.41	19.47	19.45
10	16QAM	25	12	19.55	19.44	19.44

10	16QAM	25	25	19.46	19.45	19.33
10	16QAM	50	0	19.41	19.36	19.24
Channel				133147	133297	133447
Frequency (MHz)				665.5	680.5	695.5
5	QPSK	1	0	20.77	20.78	20.81
5	QPSK	1	12	21.07	21.01	20.99
5	QPSK	1	24	21.03	20.97	21.07
5	QPSK	12	0	20.22	20.21	20.34
5	QPSK	12	7	20.17	20.17	20.18
5	QPSK	12	13	20.24	20.23	20.14
5	QPSK	25	0	20.23	20.17	20.16
5	16QAM	1	0	20.34	20.17	20.14
5	16QAM	1	12	20.29	20.28	20.21
5	16QAM	1	24	20.17	20.34	20.19
5	16QAM	12	0	19.43	19.51	19.47
5	16QAM	12	7	19.34	19.43	19.41
5	16QAM	12	13	19.44	19.46	19.31
5	16QAM	25	0	19.41	19.38	19.27

ERP/EIRP

LTE Band 2 (GT - LC = -1.2 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
Conducted Power (dBm)	21.87	21.75	21.57	21.65	21.56	21.03	21.64	21.60	21.43
Conducted Power (Watts)	0.1538	0.1496	0.1435	0.1462	0.1432	0.1268	0.1459	0.1445	0.1390
EIRP(dBm)	20.67	20.55	20.37	20.45	20.36	19.83	20.44	20.40	20.23
EIRP(Watts)	0.1167	0.1135	0.1089	0.1109	0.1086	0.0962	0.1107	0.1096	0.1054

LTE Band 2 (GT - LC = -1.2 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
Conducted Power (dBm)	21.90	21.53	21.20	21.94	21.77	21.43	22.25	21.77	21.75
Conducted Power (Watts)	0.1549	0.1422	0.1318	0.1563	0.1503	0.1390	0.1679	0.1503	0.1496
EIRP(dBm)	20.70	20.33	20.00	20.74	20.57	20.23	21.05	20.57	20.55
EIRP(Watts)	0.1175	0.1079	0.1000	0.1186	0.1140	0.1054	0.1274	0.1140	0.1135

LTE Band 2 (GT - LC = -1.2 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
Conducted Power (dBm)	20.50	21.05	20.19	20.39	20.83	20.05	20.49	20.44	20.15
Conducted Power (Watts)	0.1122	0.1274	0.1045	0.1094	0.1211	0.1012	0.1119	0.1107	0.1035
EIRP(dBm)	19.30	19.85	18.99	19.19	19.63	18.85	19.29	19.24	18.95
EIRP(Watts)	0.0851	0.0966	0.0793	0.0830	0.0918	0.0767	0.0849	0.0839	0.0785

LTE Band 2 (GT - LC = -1.2 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
Conducted Power (dBm)	20.93	20.34	20.03	20.79	20.85	20.35	20.91	21.12	20.72
Conducted Power (Watts)	0.1239	0.1081	0.1007	0.1199	0.1216	0.1084	0.1233	0.1294	0.1180
EIRP(dBm)	19.73	19.14	18.83	19.59	19.65	19.15	19.71	19.92	19.52
EIRP(Watts)	0.0940	0.0820	0.0764	0.0910	0.0923	0.0822	0.0935	0.0982	0.0895

LTE Band 4 (GT - LC = -1.1 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	21.70	21.45	22.47	22.13	21.64	22.26	21.96	21.76	22.24
Conducted Power (Watts)	0.1479	0.1396	0.1766	0.1633	0.1459	0.1683	0.1570	0.1500	0.1675
EIRP(dBm)	20.60	20.35	21.37	21.03	20.54	21.16	20.86	20.66	21.14
EIRP(Watts)	0.1148	0.1084	0.1371	0.1268	0.1132	0.1306	0.1219	0.1164	0.1300

LTE Band 4 (GT - LC = -1.1 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	22.02	21.74	22.23	22.10	21.84	22.26	22.07	21.92	22.90
Conducted Power (Watts)	0.1592	0.1493	0.1671	0.1622	0.1528	0.1683	0.1611	0.1556	0.1950
EIRP(dBm)	20.92	20.64	21.13	21.00	20.74	21.16	20.97	20.82	21.80
EIRP(Watts)	0.1236	0.1159	0.1297	0.1259	0.1186	0.1306	0.1250	0.1208	0.1514

LTE Band 4 (GT - LC = -1.1 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	20.98	20.18	21.33	21.04	20.25	21.39	20.85	20.26	21.38
Conducted Power (Watts)	0.1253	0.1042	0.1358	0.1271	0.1059	0.1377	0.1216	0.1062	0.1374
EIRP(dBm)	19.88	19.08	20.23	19.94	19.15	20.29	19.75	19.16	20.28
EIRP(Watts)	0.0973	0.0809	0.1054	0.0986	0.0822	0.1069	0.0944	0.0824	0.1067

LTE Band 4 (GT - LC = -1.1 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	20.62	20.46	21.39	20.68	20.45	21.43	20.02	20.58	21.87
Conducted Power (Watts)	0.1153	0.1112	0.1377	0.1169	0.1109	0.1390	0.1005	0.1143	0.1538
EIRP(dBm)	19.52	19.36	20.29	19.58	19.35	20.33	18.92	19.48	20.77
EIRP(Watts)	0.0895	0.0863	0.1069	0.0908	0.0861	0.1079	0.0780	0.0887	0.1194

LTE Band 5 (GT - LC = -2.5 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
Conducted Power (dBm)	20.99	20.94	20.95	20.55	20.82	20.80	20.60	20.87	20.85
Conducted Power (Watts)	0.1256	0.1242	0.1245	0.1135	0.1208	0.1202	0.1148	0.1222	0.1216
ERP(dBm)	16.34	16.29	16.30	15.90	16.17	16.15	15.95	16.22	16.20
ERP(Watts)	0.0431	0.0426	0.0427	0.0389	0.0414	0.0412	0.0394	0.0419	0.0417

LTE Band 5 (GT - LC = -2.5 dB) QPSK			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	20.85	21.00	20.67
Conducted Power (Watts)	0.1216	0.1259	0.1167
ERP(dBm)	16.20	16.35	16.02
ERP(Watts)	0.0417	0.0432	0.0400

LTE Band 5 (GT - LC = -2.5 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
Conducted Power (dBm)	20.30	20.60	20.47	19.16	19.37	19.07	19.21	19.42	19.12
Conducted Power (Watts)	0.1072	0.1148	0.1114	0.0824	0.0865	0.0807	0.0834	0.0875	0.0817
ERP(dBm)	15.65	15.95	15.82	14.51	14.72	14.42	14.56	14.77	14.47
ERP(Watts)	0.0367	0.0394	0.0382	0.0282	0.0296	0.0277	0.0286	0.0300	0.0280

LTE Band 5 (GT - LC = -2.5 dB) 16QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	19.75	20.22	20.00
Conducted Power (Watts)	0.0944	0.1052	0.1000
ERP(dBm)	15.10	15.57	15.35
ERP(Watts)	0.0324	0.0361	0.0343

LTE Band 12 (GT - LC = -2.8 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	21.26	20.99	21.08	21.22	20.97	21.02	21.19	21.00	21.07
Conducted Power (Watts)	0.1337	0.1256	0.1282	0.1324	0.1250	0.1265	0.1315	0.1259	0.1279
ERP(dBm)	16.31	16.04	16.13	16.27	16.02	16.07	16.24	16.05	16.12
ERP(Watts)	0.0428	0.0402	0.0410	0.0424	0.0400	0.0405	0.0421	0.0403	0.0409

LTE Band 12 (GT - LC = -2.8 dB) QPSK			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	21.20	21.39	21.31
Conducted Power (Watts)	0.1318	0.1377	0.1352
ERP(dBm)	16.25	16.44	16.36
ERP(Watts)	0.0422	0.0441	0.0433

LTE Band 12 (GT - LC = -2.8 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	19.95	19.66	19.92	19.91	19.64	19.86	19.88	19.67	19.91
Conducted Power (Watts)	0.0989	0.0925	0.0982	0.0979	0.0920	0.0968	0.0973	0.0927	0.0979
ERP(dBm)	15.00	14.71	14.97	14.96	14.69	14.91	14.93	14.72	14.96
ERP(Watts)	0.0316	0.0296	0.0314	0.0313	0.0294	0.0310	0.0311	0.0296	0.0313

LTE Band 12 (GT - LC = -2.8 dB) 16QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	20.14	20.36	19.84
Conducted Power (Watts)	0.1033	0.1086	0.0964
ERP(dBm)	15.19	15.41	14.89
ERP(Watts)	0.0330	0.0348	0.0308

LTE Band 13 (GT - LC = -3.0 dB) QPSK						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	20.75	20.67	20.78		20.81	-
Conducted Power (Watts)	0.1189	0.1167	0.1197		0.1205	-
ERP(dBm)	15.60	15.52	15.63		15.66	-
ERP(Watts)	0.0363	0.0356	0.0366		0.0368	-

LTE Band 13 (GT - LC = -3.0 dB) 16QAM						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	19.15	19.02	19.40		19.23	-
Conducted Power (Watts)	0.0822	0.0798	0.0871		0.0838	-
ERP(dBm)	14.00	13.87	14.25		14.08	-
ERP(Watts)	0.0251	0.0244	0.0266		0.0256	-

LTE Band 66 (GT - LC = -1.1 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	21.24	21.22	21.51	21.09	21.21	21.52	21.10	21.32	21.51
Conducted Power (Watts)	0.1330	0.1324	0.1416	0.1285	0.1321	0.1419	0.1288	0.1355	0.1416
EIRP(dBm)	20.14	20.12	20.41	19.99	20.11	20.42	20.00	20.22	20.41
EIRP(Watts)	0.1033	0.1028	0.1099	0.0998	0.1026	0.1102	0.1000	0.1052	0.1099

LTE Band 66 (GT - LC = -1.1 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	21.03	21.49	21.45	21.13	21.50	21.35	21.57	21.50	21.58
Conducted Power (Watts)	0.1268	0.1409	0.1396	0.1297	0.1413	0.1365	0.1435	0.1413	0.1439
EIRP(dBm)	19.93	20.39	20.35	20.03	20.40	20.25	20.47	20.40	20.48
EIRP(Watts)	0.0984	0.1094	0.1084	0.1007	0.1096	0.1059	0.1114	0.1096	0.1117

LTE Band 66 (GT - LC = -1.1 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	20.52	20.43	20.32	20.12	20.05	20.26	20.10	20.00	20.15
Conducted Power (Watts)	0.1127	0.1104	0.1076	0.1028	0.1012	0.1062	0.1023	0.1000	0.1035
EIRP(dBm)	19.42	19.33	19.22	19.02	18.95	19.16	19.00	18.90	19.05
EIRP(Watts)	0.0875	0.0857	0.0836	0.0798	0.0785	0.0824	0.0794	0.0776	0.0804

LTE Band 66 (GT - LC = -1.1 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	20.06	20.34	20.15	20.13	20.36	20.26	20.14	20.25	20.95
Conducted Power (Watts)	0.1014	0.1081	0.1035	0.1030	0.1086	0.1062	0.1033	0.1059	0.1245
EIRP(dBm)	18.96	19.24	19.05	19.03	19.26	19.16	19.04	19.15	19.85
EIRP(Watts)	0.0787	0.0839	0.0804	0.0800	0.0843	0.0824	0.0802	0.0822	0.0966

LTE Band 71 (GT - LC = -3.4 dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
Conducted Power (dBm)	21.07	21.01	20.99	21.08	21.14	20.17	21.17	21.16	21.03
Conducted Power (Watts)	0.1279	0.1262	0.1256	0.1282	0.1300	0.1040	0.1309	0.1306	0.1268
ERP(dBm)	15.52	15.46	15.44	15.53	15.59	14.62	15.62	15.61	15.48
ERP(Watts)	0.0356	0.0352	0.0350	0.0357	0.0362	0.0290	0.0365	0.0364	0.0353

LTE Band 71 (GT - LC = -3.4 dB) QPSK			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency (MHz)	673	680.5	688
Conducted Power (dBm)	21.23	21.24	21.17
Conducted Power (Watts)	0.1327	0.1330	0.1309
ERP(dBm)	15.68	15.69	15.62
ERP(Watts)	0.0370	0.0371	0.0365

LTE Band 71 (GT - LC = -3.4 dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
Conducted Power (dBm)	20.34	20.17	20.14	20.34	20.17	20.14	20.26	20.18	20.08
Conducted Power (Watts)	0.1081	0.1040	0.1033	0.1081	0.1040	0.1033	0.1062	0.1042	0.1019
ERP(dBm)	14.79	14.62	14.59	14.79	14.62	14.59	14.71	14.63	14.53
ERP(Watts)	0.0301	0.0290	0.0288	0.0301	0.0290	0.0288	0.0296	0.0290	0.0284

LTE Band 71 (GT - LC = -3.4 dB) 16QAM			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency (MHz)	673	680.5	688
Conducted Power (dBm)	20.28	20.22	20.17
Conducted Power (Watts)	0.1067	0.1052	0.1040
ERP(dBm)	14.73	14.67	14.62
ERP(Watts)	0.0297	0.0293	0.0290

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Kuang Jia/ Wen Bo Xiao	Temperature :	22~25℃
		Relative Humidity :	48~52%

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	3702.18	-55.49	-13	-42.49	-72.02	-62.25	5.82	12.58	H
	5553.27	-48.56	-13	-35.56	-67.91	-54.28	7.28	13.00	H
	7404.36	-52.83	-13	-39.83	-76.74	-55.99	8.32	11.48	H
	3702.18	-59.69	-13	-46.69	-75.96	-66.45	5.82	12.58	V
	5553.27	-51.59	-13	-38.59	-70.79	-57.31	7.28	13.00	V
	7404.36	-52.22	-13	-39.22	-76.45	-55.38	8.32	11.48	V
Middle	3742.18	-56.38	-13	-43.38	-73.01	-63.13	5.85	12.60	H
	5613.27	-53.72	-13	-40.72	-73.24	-59.52	7.30	13.10	H
	7484.36	-55.05	-13	-42.05	-78.80	-58.20	8.35	11.50	H
	3742.18	-61.03	-13	-48.03	-77.28	-67.78	5.85	12.60	V
	5613.27	-52.16	-13	-39.16	-71.16	-57.96	7.30	13.10	V
	7484.36	-54.61	-13	-41.61	-78.75	-57.76	8.35	11.50	V
Highest	3782.18	-59.24	-13	-46.24	-76.00	-65.98	5.88	12.62	H
	5673.27	-45.81	-13	-32.81	-66.23	-51.62	7.32	13.13	H
	7564.36	-53.40	-13	-40.40	-77.01	-56.56	8.38	11.54	H
	3782.18	-60.24	-13	-47.24	-76.49	-66.98	5.88	12.62	V
	5673.27	-47.94	-13	-34.94	-67.29	-53.75	7.32	13.13	V
	7564.36	-52.22	-13	-39.22	-76.3	-55.38	8.38	11.54	V

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

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)
Lowest	3422.18	-57.61	-13	-44.61	-72.65	-64.49	5.60	12.48	H
	5133.27	-55.35	-13	-42.35	-75.01	-61.03	7.10	12.78	H
	6844.36	-58.30	-13	-45.30	-80.40	-61.69	8.38	11.77	H
	3422.18	-58.69	-13	-45.69	-73.74	-65.57	5.60	12.48	V
	5133.27	-57.17	-13	-44.17	-76.57	-62.85	7.10	12.78	V
	6844.36	-57.85	-13	-44.85	-80.37	-61.24	8.38	11.77	V
Middle	3447.18	-58.45	-13	-45.45	-73.61	-65.30	5.65	12.50	H
	5170.77	-54.48	-13	-41.48	-74.10	-60.15	7.13	12.80	H
	6894.36	-58.36	-13	-45.36	-80.47	-61.76	8.40	11.80	H
	3447.18	-59.01	-13	-46.01	-74.19	-65.86	5.65	12.50	V
	5170.77	-51.39	-13	-38.39	-70.69	-57.06	7.13	12.80	V
	6894.36	-57.83	-13	-44.83	-80.28	-61.23	8.40	11.80	V
Highest	3472.18	-57.04	-13	-44.04	-72.32	-63.88	5.68	12.52	H
	5208.27	-49.87	-13	-36.87	-69.40	-55.54	7.15	12.82	H
	6944.36	-58.02	-13	-45.02	-80.20	-61.45	8.42	11.85	H
	3472.18	-54.61	-13	-41.61	-69.92	-61.45	5.68	12.52	V
	5208.27	-50.12	-13	-37.12	-69.26	-55.79	7.15	12.82	V
	6944.36	-57.74	-13	-44.74	-80.19	-61.17	8.42	11.85	V

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

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	1649.18	-66.72	-13	-53.72	-74.01	-69.95	3.98	9.36	H
	2473.77	-63.75	-13	-50.75	-75.36	-67.30	4.85	10.55	H
	3298.36	-62.11	-13	-49.11	-76.99	-67.04	5.50	12.58	H
	1649.18	-49.55	-13	-36.55	-56.89	-52.78	3.98	9.36	V
	2473.77	-63.98	-13	-50.98	-75.63	-67.53	4.85	10.55	V
	3298.36	-62.35	-13	-49.35	-77.15	-67.28	5.50	12.58	V
Middle	1664.18	-64.16	-13	-51.16	-71.16	-67.41	4.00	9.40	H
	2496.27	-56.53	-13	-43.53	-68.21	-60.10	4.88	10.60	H
	3328.36	-61.82	-13	-48.82	-76.69	-66.75	5.52	12.60	H
	1664.18	-40.87	-13	-27.87	-48.01	-44.12	4.00	9.40	V
	2496.27	-55.20	-13	-42.20	-66.97	-58.77	4.88	10.60	V
	3328.36	-61.50	-13	-48.50	-76.35	-66.43	5.52	12.60	V
Highest	1679.18	-63.26	-13	-50.26	-70.19	-66.43	4.10	9.42	H
	2518.77	-55.00	-13	-42.00	-66.78	-58.58	4.90	10.63	H
	3358.36	-62.25	-13	-49.25	-77.11	-67.17	5.55	12.62	H
	1679.18	-66.88	-13	-53.88	-74.00	-70.05	4.10	9.42	V
	2518.77	-53.46	-13	-40.46	-65.33	-57.04	4.90	10.63	V
	3358.36	-62.34	-13	-49.34	-77.21	-67.26	5.55	12.62	V

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

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)
Lowest	1399	-53.58	-13	-40.58	-61.88	-56.81	3.98	9.36	H
	2098.5	-63.14	-13	-50.14	-73.53	-66.69	4.85	10.55	H
	2798	-62.50	-13	-49.50	-76.07	-67.43	5.50	12.58	H
	1399	-57.10	-13	-44.10	-65.30	-60.33	3.98	9.36	V
	2098.5	-61.01	-13	-48.01	-71.63	-64.56	4.85	10.55	V
	2798	-62.51	-13	-49.51	-76.01	-67.44	5.50	12.58	V
Middle	1406	-53.96	-13	-40.96	-62.26	-57.21	4.00	9.40	H
	2109	-64.83	-13	-51.83	-75.34	-68.40	4.88	10.60	H
	2812	-61.98	-13	-48.98	-75.58	-66.91	5.52	12.60	H
	1406	-56.12	-13	-43.12	-64.31	-59.37	4.00	9.40	V
	2109	-63.66	-13	-50.66	-74.40	-67.23	4.88	10.60	V
	2812	-62.29	-13	-49.29	-75.82	-67.22	5.52	12.60	V
Highest	1413	-53.44	-13	-40.44	-61.73	-56.61	4.10	9.42	H
	2119.5	-64.58	-13	-51.58	-75.22	-68.16	4.90	10.63	H
	2826	-62.35	-13	-49.35	-76.00	-67.27	5.55	12.62	H
	1413	-53.62	-13	-40.62	-61.79	-56.79	4.10	9.42	V
	2119.5	-64.39	-13	-51.39	-75.28	-67.97	4.90	10.63	V
	2826	-62.42	-13	-49.42	-76.00	-67.34	5.55	12.62	V

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

LTE Band 13 / 5MHz / 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	1554.5	-64.92	-13	-51.92	-73.32	-68.15	3.98	9.36	H
	2331.75	-64.07	-13	-51.07	-75.54	-67.62	4.85	10.55	H
	3109	-61.49	-13	-48.49	-76.23	-66.42	5.50	12.58	H
	1554.5	-65.29	-13	-52.29	-73.46	-68.52	3.98	9.36	V
	2331.75	-64.05	-13	-51.05	-75.55	-67.60	4.85	10.55	V
	3109	-61.69	-13	-48.69	-76.25	-66.62	5.50	12.58	V
Middle	1559.5	-65.26	-42.15	-23.11	-73.65	-68.51	4.00	9.40	H
	2339.25	-64.33	-13	-51.33	-75.81	-67.90	4.88	10.60	H
	3119	-61.87	-13	-48.87	-76.65	-66.80	5.52	12.60	H
	1559.5	-65.41	-42.15	-23.26	-73.57	-68.66	4.00	9.40	V
	2339.25	-64.58	-13	-51.58	-76.07	-68.15	4.88	10.60	V
	3119	-62.12	-13	-49.12	-76.71	-67.05	5.52	12.60	V
Highest	1564.5	-65.03	-42.15	-22.88	-73.41	-68.20	4.10	9.42	H
	2346.75	-63.75	-13	-50.75	-75.22	-67.33	4.90	10.63	H
	3129	-61.46	-13	-48.46	-76.29	-66.38	5.55	12.62	H
	1564.5	-64.96	-42.15	-22.81	-73.11	-68.13	4.10	9.42	V
	2346.75	-63.16	-13	-50.16	-74.62	-66.74	4.90	10.63	V
	3129	-61.59	-13	-48.59	-76.21	-66.51	5.55	12.62	V

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

LTE Band 13 / 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	1559.5	-62.74	-42.15	-20.59	-71.13	-65.99	4.00	9.40	H
	2339.25	-64.19	-13	-51.19	-75.67	-67.76	4.88	10.60	H
	3119	-61.68	-13	-48.68	-76.46	-66.61	5.52	12.60	H
	1559.5	-65.61	-42.15	-23.46	-73.77	-68.86	4.00	9.40	V
	2339.25	-63.56	-13	-50.56	-75.05	-67.13	4.88	10.60	V
	3119	-62.09	-13	-49.09	-76.68	-67.02	5.52	12.60	V

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

LTE Band 66 / 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	3422	-55.00	-13	-42.00	-70.04	-61.88	5.60	12.48	H
	5133	-55.40	-13	-42.40	-75.06	-61.08	7.10	12.78	H
	6844	-57.52	-13	-44.52	-79.62	-60.91	8.38	11.77	H
	3422	-60.25	-13	-47.25	-75.3	-67.13	5.60	12.48	V
	5133	-55.86	-13	-42.86	-75.26	-61.54	7.10	12.78	V
	6844	-57.32	-13	-44.32	-79.84	-60.71	8.38	11.77	V
Middle	3492	-47.63	-13	-34.63	-63.00	-54.48	5.65	12.50	H
	5238	-48.83	-13	-35.83	-68.09	-54.50	7.13	12.80	H
	6984	-56.47	-13	-43.47	-78.72	-59.87	8.40	11.80	H
	3492	-52.19	-13	-39.19	-67.6	-59.04	5.65	12.50	V
	5238	-49.21	-13	-36.21	-68.04	-54.88	7.13	12.80	V
	6984	-55.89	-13	-42.89	-78.34	-59.29	8.40	11.80	V
Highest	3522	-56.38	-13	-43.38	-71.94	-63.22	5.68	12.52	H
	5283	-56.78	-13	-43.78	-76.14	-62.45	7.15	12.82	H
	7044	-56.68	-13	-43.68	-79.18	-60.11	8.42	11.85	H
	3522	-60.30	-13	-47.30	-75.9	-67.14	5.68	12.52	V
	5283	-56.28	-13	-43.28	-75.28	-61.95	7.15	12.82	V
	7044	-56.44	-13	-43.44	-79.27	-59.87	8.42	11.85	V

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

LTE Band 71 / 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	1328	-58.96	-13	-45.96	-66.41	-62.19	3.98	9.36	H
	1992	-64.74	-13	-51.74	-73.85	-68.29	4.85	10.55	H
	2656	-63.24	-13	-50.24	-76.00	-68.17	5.50	12.58	H
	1328	-58.23	-13	-45.23	-65.62	-61.46	3.98	9.36	V
	1992	-60.85	-13	-47.85	-70.06	-64.40	4.85	10.55	V
	2656	-63.26	-13	-50.26	-75.89	-68.19	5.50	12.58	V
Middle	1348	-37.91	-13	-24.91	-45.60	-41.16	4.00	9.40	H
	2022	-65.23	-13	-52.23	-74.67	-68.80	4.88	10.60	H
	2696	-62.65	-13	-49.65	-75.63	-67.58	5.52	12.60	H
	1348	-57.52	-13	-44.52	-65.14	-60.77	4.00	9.40	V
	2022	-62.27	-13	-49.27	-71.83	-65.84	4.88	10.60	V
	2696	-62.87	-13	-49.87	-75.74	-67.80	5.52	12.60	V
Highest	1358	-61.85	-13	-48.85	-69.64	-65.02	4.10	9.42	H
	2037	-64.46	-13	-51.46	-74.11	-68.04	4.90	10.63	H
	2716	-62.90	-13	-49.90	-75.97	-67.82	5.55	12.62	H
	1358	-60.73	-13	-47.73	-68.44	-63.90	4.10	9.42	V
	2037	-64.90	-13	-51.90	-74.69	-68.48	4.90	10.63	V
	2716	-62.92	-13	-49.92	-75.89	-67.84	5.55	12.62	V

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