



FCC RADIO TEST REPORT

FCC ID : QYLWP7610BC03
Equipment : WWAN Module
Brand Name : Getac
Model Name : WP7610
Applicant : Getac Technology Corporation.
5F., Building A, No. 209, Sec.1, Nangang
Rd., Nangang Dist., Taipei City 11568,
Taiwan, R.O.C.
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27

The product was received on May 29, 2020 and testing was started from Jul. 03, 2020 and completed on Jul. 17, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FG9D1046-01B	01	Initial issue of report	Jul. 30, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)
3.2	§2.1046	Conducted Output Power	Reporting only
	§22.913 (a)(2)	Effective Radiated Power (Band 5)	Pass
	§27.50 (b)(10) §27.50 (c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 17)	
	§24.232 (c)	Equivalent Isotropic Radiated Power (Band 2)	
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	
-	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	Not Required
-	§2.1049	Occupied Bandwidth	Not Required
-	§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)	Not Required
-	§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)	Not Required
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Not Required



Report Clause	Ref Std. Clause	Test Items	Result
4.2	\$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 66)	Pass

Note:

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a variant report by changing eSIM to nano-SIM for host. All the test cases were performed on original report which can be referred to Sporton Report Number FG9D1046B. Based on the original report, the test cases were verified.

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.

Reviewed by: Wii Chang

Report Producer: Lucy Wu



1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA and LTE.

Product Specification subjective to this standard	
Integrated into Host	Equipment Name: Body Worn Camera Brand Name: Getac Model Name: BC-03
Antenna Type	PIFA Antenna

1.2 Modification of EUT

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

1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH05-HY
Test Engineer	Bryant Liu
Temperature	23~25℃
Relative Humidity	51~54%

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

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
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. 03CH15-HY
Test Engineer	Leo Lee, Mancy Chou and Bigshow Wang
Temperature	21.3~23.4℃
Relative Humidity	55~61%

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

FCC Designation No.: TW1190 and TW0007



1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site 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.
3. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

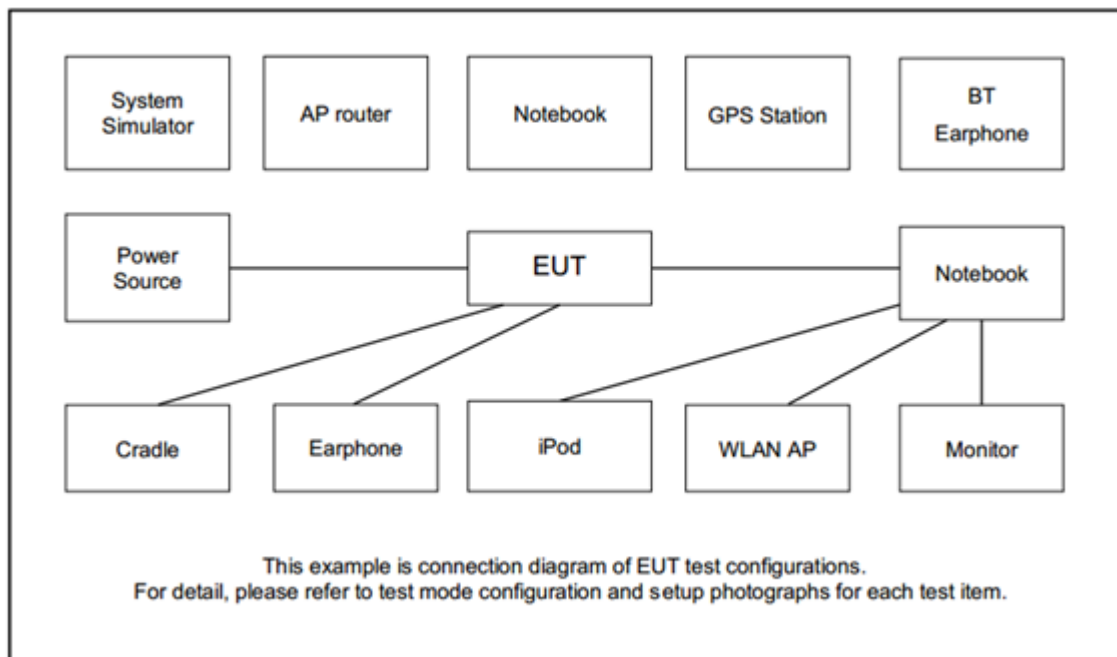
2.1 Test Mode

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.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X Plane for LTE Band 17 ; Y Plane for LTE Band 2, 4, 5, 12, 13, 66) were recorded in this report.

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
E.R.P / E.I.R.P	2	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
	12	v	v	v	v	-	-	v	v		v	v		v	v	v
	13	-	-	v	v	-	-	v	v		v			v	v	v
	17	-	-	v	v	-	-	v	v		v			v	v	v
	66	v	v	v	v	v	v	v	v		v	v		v	v	v
Radiated Spurious Emission	2	Worst Case												v		
	4	Worst Case													v	
	5	Worst Case													v	
	12	Worst Case													v	
	13	Worst Case													v	
	17	Worst Case													v	
	66	Worst Case													v	
Remark	1. The mark "v " means that this configuration is chosen for testing 2. The mark "- " means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	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

3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power and ERP/EIRP

3.2.1 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 13 and Band 17

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

3.2.2 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.

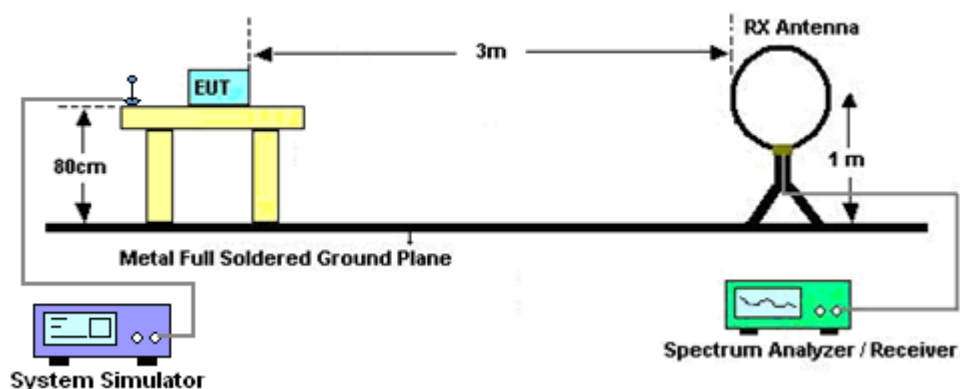
4 Radiated Test Items

4.1 Measuring Instruments

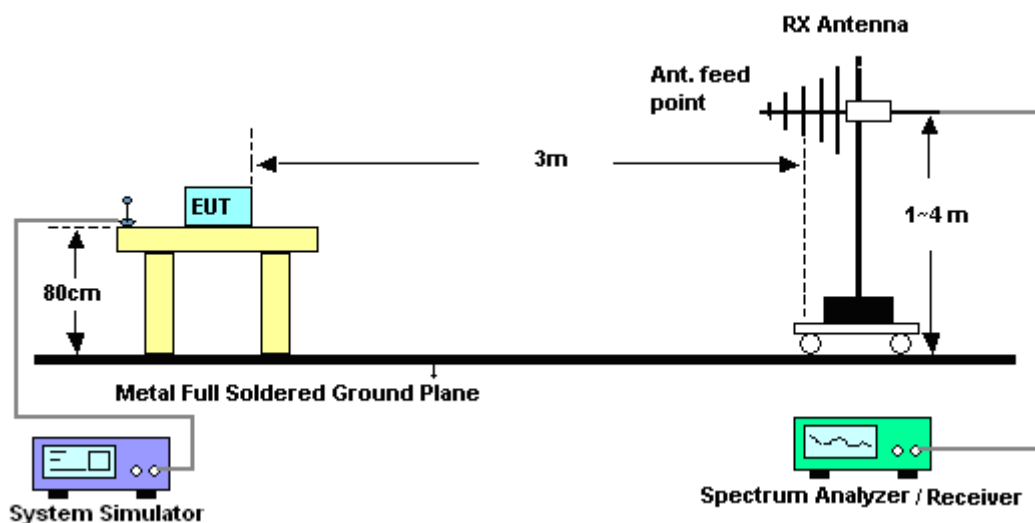
See list of measuring instruments of this test report.

4.1.1 Test Setup

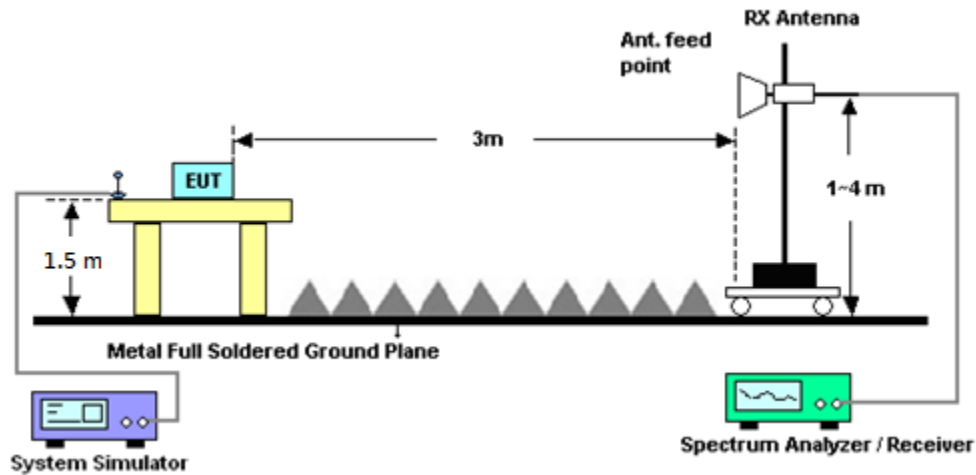
For radiated emissions below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

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.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

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.

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 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)

$EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$

$ERP \text{ (dBm)} = EIRP - 2.15$



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Base Station (Measure)	Anritsu	MT8821C	62620025341	N/A	Oct. 24, 2019	Jul. 17, 2020	Oct. 23, 2020	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 09, 2020	Jul. 03, 2020~Jul. 12, 2020	Jan. 08, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&00800N1D01N-06	41912&05	30MHz to 1GHz	Feb. 09, 2020	Jul. 03, 2020~Jul. 12, 2020	Feb. 08, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-2114	1-18GHz	Jul. 31, 2019	Jul. 03, 2020~Jul. 12, 2020	Jul. 30, 2020	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Dec. 10, 2019	Jul. 03, 2020~Jul. 12, 2020	Dec. 09, 2020	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2019	Jul. 03, 2020~Jul. 12, 2020	Dec. 26, 2020	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055007	1GHz~18GHz	Mar. 31, 2020	Jul. 03, 2020~Jul. 12, 2020	Mar. 30, 2021	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 23, 2019	Jul. 03, 2020~Jul. 12, 2020	Aug. 22, 2020	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 13, 2019	Jul. 03, 2020~Jul. 12, 2020	Dec. 12, 2020	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Nov. 01, 2019	Jul. 03, 2020~Jul. 12, 2020	Oct. 31, 2020	Radiation (03CH15-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Feb. 25, 2020	Jul. 03, 2020~Jul. 12, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jul. 03, 2020~Jul. 12, 2020	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jul. 03, 2020~Jul. 12, 2020	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Jul. 03, 2020~Jul. 12, 2020	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY36980/4	30M-18G	Apr. 14, 2020	Jul. 03, 2020~Jul. 12, 2020	Apr. 13, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9838/4PE	30M-18G	Apr. 14, 2020	Jul. 03, 2020~Jul. 12, 2020	Apr. 13, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY802430/4	30M~18GHz	Apr. 14, 2020	Jul. 03, 2020~Jul. 12, 2020	Apr. 13, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 25, 2020	Jul. 03, 2020~Jul. 12, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 25, 2020	Jul. 03, 2020~Jul. 12, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN4	1.53G Low Pass	Jul. 03, 2020	Jul. 03, 2020~Jul. 12, 2020	Jul. 02, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN4	3GHz High Pass Filter	Sep. 17, 2019	Jul. 03, 2020~Jul. 12, 2020	Sep. 16, 2020	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60ST	SN5	1.2GHz High Pass Filter	Jul. 01, 2020	Jul. 03, 2020~Jul. 12, 2020	Jun. 30, 2021	Radiation (03CH15-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.06
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.63
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.16
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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	22.03	22.14	22.04
20	1	49		22.30	22.37	22.24
20	1	99		21.79	21.69	22.10
20	50	0		20.48	20.66	20.74
20	50	24		20.40	20.63	20.63
20	50	50		20.39	20.48	20.55
20	100	0		20.36	20.53	20.50
20	1	0	16-QAM	20.20	20.47	20.55
20	1	49		20.27	20.42	20.64
20	1	99		20.14	20.21	20.18
20	50	0		19.48	19.65	19.87
20	50	24		19.40	19.76	19.74
20	50	50		19.34	19.63	19.56
20	100	0		19.35	19.55	19.62
15	1	0	QPSK	21.99	21.84	21.94
15	1	37		22.34	21.91	22.33
15	1	74		21.77	21.46	21.72
15	36	0		20.82	20.99	21.14
15	36	20		20.94	21.03	21.20
15	36	39		20.80	20.81	21.09
15	75	0		20.86	20.96	21.07
15	1	0	16-QAM	20.68	20.89	20.74
15	1	37		20.80	20.81	20.85
15	1	74		20.62	20.52	20.82
15	36	0		19.85	20.03	20.02
15	36	20		20.03	20.01	20.10
15	36	39		19.91	19.73	19.98
15	75	0		19.96	19.94	20.14



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	21.37	21.73	21.88
10	1	25		21.87	22.37	22.11
10	1	49		21.48	21.37	21.56
10	25	0		20.75	20.93	21.11
10	25	12		20.69	20.90	21.06
10	25	25		20.77	20.85	21.01
10	50	0		20.79	20.95	21.02
10	1	0	16-QAM	20.58	20.83	20.79
10	1	25		20.68	20.80	20.94
10	1	49		20.68	20.64	20.68
10	25	0		19.78	19.92	20.17
10	25	12		19.78	19.94	20.15
10	25	25		19.95	19.88	19.80
10	50	0		19.70	19.95	19.91
5	1	0	QPSK	21.49	21.72	21.47
5	1	12		21.47	21.61	21.46
5	1	24		21.58	21.38	21.79
5	12	0		20.58	20.87	20.96
5	12	7		20.64	20.86	20.98
5	12	13		20.57	20.69	20.91
5	25	0		20.64	20.78	20.83
5	1	0	16-QAM	20.29	20.63	20.70
5	1	12		20.41	20.58	20.65
5	1	24		20.46	20.46	20.54
5	12	0		19.61	19.85	19.71
5	12	7		19.59	19.57	19.69
5	12	13		19.62	19.53	19.95
5	25	0		19.49	19.72	19.83



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	21.33	21.64	21.61
3	1	8		21.16	21.66	21.57
3	1	14		21.20	21.55	21.54
3	8	0		20.37	20.57	20.73
3	8	4		20.33	20.57	20.58
3	8	7		20.30	20.59	20.65
3	15	0		20.39	20.68	20.65
3	1	0	16-QAM	20.16	20.41	20.33
3	1	8		20.12	20.33	20.40
3	1	14		20.18	20.48	20.49
3	8	0		19.40	19.40	19.71
3	8	4		19.37	19.62	19.55
3	8	7		19.23	19.67	19.63
3	15	0		19.06	19.74	19.58
1.4	1	0	QPSK	21.51	21.61	21.70
1.4	1	3		21.61	21.67	21.87
1.4	1	5		21.54	21.52	21.77
1.4	3	0		21.70	21.66	21.88
1.4	3	1		21.66	21.90	21.97
1.4	3	3		21.58	21.81	21.81
1.4	6	0		20.49	20.79	20.91
1.4	1	0	16-QAM	20.39	20.75	20.74
1.4	1	3		20.67	20.79	20.82
1.4	1	5		20.30	20.51	20.55
1.4	3	0		20.69	20.70	20.52
1.4	3	1		20.52	20.69	20.94
1.4	3	3		20.72	20.44	20.92
1.4	6	0		19.61	19.62	19.88



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	21.94	21.98	21.88
20	1	49		22.36	22.44	22.40
20	1	99		21.89	21.81	22.15
20	50	0		21.23	21.31	21.26
20	50	24		21.13	21.16	21.26
20	50	50		21.17	21.10	21.20
20	100	0		21.20	21.33	21.31
20	1	0	16-QAM	20.75	20.89	20.94
20	1	49		20.91	20.94	20.96
20	1	99		20.66	20.85	20.99
20	50	0		20.24	20.17	20.32
20	50	24		20.06	20.02	20.29
20	50	50		20.19	20.15	20.16
20	100	0		20.21	20.03	20.18
15	1	0	QPSK	21.87	21.95	22.24
15	1	37		22.39	22.21	22.41
15	1	74		21.97	21.64	21.98
15	36	0		21.21	21.07	21.22
15	36	20		21.10	21.12	21.17
15	36	39		21.13	21.05	21.15
15	75	0		21.11	21.07	21.09
15	1	0	16-QAM	20.89	20.84	21.17
15	1	37		21.00	20.98	20.90
15	1	74		20.81	20.73	21.00
15	36	0		20.15	20.06	20.15
15	36	20		20.06	20.04	20.08
15	36	39		20.11	20.04	20.08
15	75	0		20.16	20.16	20.20



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	21.73	21.69	21.79
10	1	25		22.22	22.19	22.24
10	1	49		21.90	21.55	22.19
10	25	0		21.20	21.11	21.17
10	25	12		21.25	21.11	21.14
10	25	25		21.15	21.07	21.10
10	50	0		21.22	21.14	21.16
10	1	0	16-QAM	20.74	20.68	20.80
10	1	25		21.15	21.04	20.88
10	1	49		20.70	20.62	20.88
10	25	0		20.16	20.03	20.12
10	25	12		20.29	20.13	20.17
10	25	25		19.92	19.86	20.20
10	50	0		20.28	20.15	20.18
5	1	0	QPSK	21.92	22.00	22.00
5	1	12		21.92	21.98	22.11
5	1	24		22.29	22.13	22.11
5	12	0		21.19	21.23	21.28
5	12	7		21.12	21.16	21.24
5	12	13		21.27	21.22	21.17
5	25	0		21.11	21.19	21.15
5	1	0	16-QAM	20.85	20.85	21.05
5	1	12		20.83	20.92	20.96
5	1	24		21.00	20.98	20.88
5	12	0		20.22	20.21	19.97
5	12	7		20.32	20.19	20.22
5	12	13		20.30	19.84	20.24
5	25	0		20.16	20.16	20.18



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	21.43	21.32	21.20
3	1	8		21.44	21.36	21.57
3	1	14		21.63	21.36	21.64
3	8	0		20.56	20.63	20.62
3	8	4		20.66	20.69	20.69
3	8	7		20.59	20.66	20.62
3	15	0		20.59	20.67	20.66
3	1	0	16-QAM	20.31	20.34	20.27
3	1	8		20.21	20.36	20.55
3	1	14		20.49	20.33	20.51
3	8	0		19.64	19.70	19.66
3	8	4		19.59	19.47	19.55
3	8	7		19.76	19.58	19.77
3	15	0		19.61	19.70	19.51
1.4	1	0	QPSK	22.04	21.90	22.02
1.4	1	3		22.06	21.95	21.97
1.4	1	5		22.10	21.83	22.14
1.4	3	0		22.06	22.33	22.13
1.4	3	1		22.06	22.42	22.25
1.4	3	3		22.17	22.36	22.19
1.4	6	0		21.18	21.03	21.16
1.4	1	0	16-QAM	20.92	20.98	21.11
1.4	1	3		21.04	21.13	21.23
1.4	1	5		21.26	20.95	21.02
1.4	3	0		21.28	21.13	21.06
1.4	3	1		21.31	21.17	21.09
1.4	3	3		21.40	21.16	21.00
1.4	6	0		20.04	19.82	20.05



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	21.32	21.49	21.43
10	1	25		21.59	21.62	21.54
10	1	49		21.04	21.31	21.32
10	25	0		20.53	20.60	20.55
10	25	12		20.61	20.66	20.61
10	25	25		20.46	20.50	20.32
10	50	0		20.53	20.62	20.50
10	1	0	16-QAM	20.18	20.82	20.19
10	1	25		20.45	20.54	20.47
10	1	49		20.24	20.21	20.09
10	25	0		19.65	19.58	19.60
10	25	12		19.66	19.61	19.59
10	25	25		19.51	19.45	19.46
10	50	0		19.49	19.58	19.64
5	1	0	QPSK	21.35	21.38	21.32
5	1	12		21.09	21.21	21.25
5	1	24		21.20	21.22	21.24
5	12	0		20.39	20.44	20.44
5	12	7		20.48	20.43	20.33
5	12	13		20.41	20.35	20.32
5	25	0		20.37	20.41	20.30
5	1	0	16-QAM	20.23	20.23	20.06
5	1	12		20.05	20.16	20.13
5	1	24		20.16	20.13	20.20
5	12	0		19.51	19.10	19.60
5	12	7		19.51	19.63	19.59
5	12	13		19.59	19.55	19.48
5	25	0		19.53	19.58	19.41



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	21.25	21.24	21.31
3	1	8		21.01	21.19	21.15
3	1	14		21.10	21.14	21.16
3	8	0		20.30	20.38	20.42
3	8	4		20.41	20.39	20.26
3	8	7		20.36	20.27	20.28
3	15	0		20.31	20.40	20.28
3	1	0	16-QAM	20.21	20.17	20.07
3	1	8		20.06	20.07	20.04
3	1	14		20.13	20.11	20.14
3	8	0		19.42	19.05	19.56
3	8	4		19.46	19.57	19.57
3	8	7		19.49	19.49	19.41
3	15	0		19.43	19.51	19.34
1.4	1	0	QPSK	21.30	21.22	21.22
1.4	1	3		21.07	21.12	21.20
1.4	1	5		21.17	21.19	21.21
1.4	3	0		21.26	21.20	21.22
1.4	3	1		21.04	21.10	21.23
1.4	3	3		21.13	21.18	21.20
1.4	6	0		20.09	20.12	20.12
1.4	1	0	16-QAM	20.16	20.10	20.00
1.4	1	3		20.02	20.06	20.02
1.4	1	5		20.12	20.10	20.09
1.4	3	0		20.44	20.10	20.10
1.4	3	1		20.32	20.11	20.25
1.4	3	3		20.37	20.04	20.16
1.4	6	0		19.20	19.01	19.12



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.06	22.26	21.99
10	1	25		22.56	22.57	22.46
10	1	49		22.19	21.98	22.06
10	25	0		21.41	21.22	21.13
10	25	12		21.33	21.17	21.35
10	25	25		21.31	21.25	21.36
10	50	0		21.43	21.17	21.39
10	1	0	16-QAM	20.43	21.18	20.98
10	1	25		21.48	20.73	21.30
10	1	49		20.49	21.04	21.06
10	25	0		20.58	20.35	20.58
10	25	12		20.69	20.24	20.60
10	25	25		20.27	20.24	20.34
10	50	0		20.51	20.31	20.32
5	1	0	QPSK	22.35	22.27	22.42
5	1	12		22.49	22.10	22.19
5	1	24		22.31	22.26	22.05
5	12	0		21.32	21.19	21.39
5	12	7		21.34	21.26	21.31
5	12	13		21.47	21.16	21.28
5	25	0		21.37	21.12	21.39
5	1	0	16-QAM	20.91	20.92	21.20
5	1	12		21.07	21.05	21.12
5	1	24		21.01	20.98	20.60
5	12	0		19.96	20.23	20.37
5	12	7		20.48	20.28	20.56
5	12	13		20.58	20.16	20.37
5	25	0		20.35	20.19	20.44



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.42	22.28	22.40
3	1	8		21.98	22.14	22.30
3	1	14		22.52	22.26	22.03
3	8	0		21.53	21.26	21.41
3	8	4		21.36	21.18	21.31
3	8	7		21.29	21.15	21.30
3	15	0		21.38	21.23	21.32
3	1	0	16-QAM	21.02	21.33	21.06
3	1	8		21.16	21.40	21.11
3	1	14		21.24	21.27	21.20
3	8	0		20.06	20.34	20.47
3	8	4		20.49	20.29	20.58
3	8	7		20.42	20.26	20.23
3	15	0		20.49	20.22	20.45
1.4	1	0	QPSK	22.37	22.20	22.25
1.4	1	3		22.22	22.15	22.21
1.4	1	5		22.34	22.34	22.06
1.4	3	0		22.46	22.20	22.31
1.4	3	1		22.41	22.35	22.20
1.4	3	3		22.38	22.28	22.23
1.4	6	0		21.37	20.98	21.17
1.4	1	0	16-QAM	20.82	21.26	21.11
1.4	1	3		21.25	21.27	21.24
1.4	1	5		21.06	21.04	21.15
1.4	3	0		20.81	21.24	21.50
1.4	3	1		21.36	21.27	21.31
1.4	3	3		21.29	21.15	21.16
1.4	6	0		19.84	20.11	20.22



LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK		22.49	
10	1	25			22.65	
10	1	49			22.43	
10	25	0			21.34	
10	25	12			21.38	
10	25	25			21.39	
10	50	0			21.46	
10	1	0	16-QAM		21.33	
10	1	25			21.39	
10	1	49			20.99	
10	25	0			20.42	
10	25	12			20.36	
10	25	25			20.37	
10	50	0			20.39	
5	1	0	QPSK	22.30	22.43	22.10
5	1	12		22.61	22.63	22.20
5	1	24		22.11	22.11	22.17
5	12	0		21.27	21.30	21.34
5	12	7		21.30	21.28	21.22
5	12	13		21.25	21.24	21.15
5	25	0		21.28	21.28	21.27
5	1	0	16-QAM	21.22	21.03	20.93
5	1	12		21.11	21.44	20.76
5	1	24		20.91	21.03	20.94
5	12	0		20.32	20.23	20.28
5	12	7		20.45	20.52	19.99
5	12	13		20.31	20.32	20.22
5	25	0		20.32	20.38	20.13



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.32	22.48	22.22
10	1	25		22.48	22.56	22.43
10	1	49		22.35	22.46	22.37
10	25	0		21.26	21.28	21.23
10	25	12		21.30	21.23	21.21
10	25	25		21.34	21.34	21.32
10	50	0		21.27	21.29	21.14
10	1	0	16-QAM	21.18	21.10	21.09
10	1	25		21.22	21.22	21.34
10	1	49		21.26	21.22	21.15
10	25	0		20.39	20.36	20.53
10	25	12		20.23	20.35	20.52
10	25	25		20.52	20.47	20.38
10	50	0		20.44	20.37	20.39
5	1	0	QPSK	22.34	21.97	21.85
5	1	12		22.20	22.54	22.48
5	1	24		21.95	22.07	22.32
5	12	0		21.25	21.17	21.36
5	12	7		21.15	21.28	21.40
5	12	13		21.17	21.33	21.32
5	25	0		21.24	21.17	21.21
5	1	0	16-QAM	21.09	20.88	21.01
5	1	12		20.83	21.05	21.13
5	1	24		20.83	21.09	21.02
5	12	0		20.29	20.19	20.53
5	12	7		20.11	20.49	20.56
5	12	13		20.12	20.37	20.49
5	25	0		20.25	20.28	20.39



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	21.93	22.01	21.83
20	1	49		22.16	22.40	22.01
20	1	99		21.86	21.88	21.65
20	50	0		20.95	21.22	21.05
20	50	24		20.86	20.97	20.92
20	50	50		20.92	20.95	20.86
20	100	0		20.93	21.09	21.02
20	1	0	16-QAM	20.67	20.83	20.82
20	1	49		20.89	20.97	20.78
20	1	99		20.71	20.75	20.53
20	50	0		19.97	20.22	20.02
20	50	24		19.71	20.04	19.96
20	50	50		19.94	19.96	19.84
20	100	0		20.03	20.06	19.89
15	1	0	QPSK	22.08	22.14	21.90
15	1	37		22.28	22.34	22.30
15	1	74		22.05	21.97	21.74
15	36	0		21.09	21.26	21.11
15	36	20		21.07	21.14	21.13
15	36	39		21.00	21.10	21.02
15	75	0		21.08	21.24	21.06
15	1	0	16-QAM	21.02	21.05	20.88
15	1	37		20.94	20.91	21.05
15	1	74		20.88	20.89	20.70
15	36	0		20.04	20.28	20.10
15	36	20		19.94	20.07	20.04
15	36	39		19.98	20.05	19.98
15	75	0		20.04	20.14	20.07



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	21.90	22.21	21.72
10	1	25		22.01	22.00	22.15
10	1	49		21.82	22.06	21.43
10	25	0		21.02	21.24	21.10
10	25	12		21.05	21.13	20.98
10	25	25		20.97	21.12	20.94
10	50	0		20.95	21.15	20.86
10	1	0	16-QAM	20.81	20.90	20.85
10	1	25		20.96	20.86	21.09
10	1	49		20.69	20.81	20.61
10	25	0		19.97	20.19	20.00
10	25	12		20.14	20.08	19.79
10	25	25		20.02	20.18	19.82
10	50	0		20.00	20.09	19.90
5	1	0	QPSK	21.31	21.54	21.42
5	1	12		21.88	21.55	21.53
5	1	24		21.23	21.47	21.21
5	12	0		20.62	20.61	20.64
5	12	7		20.67	20.74	20.51
5	12	13		20.49	20.69	20.52
5	25	0		20.51	20.68	20.56
5	1	0	16-QAM	20.23	20.33	20.46
5	1	12		20.19	20.08	20.25
5	1	24		20.28	20.28	20.21
5	12	0		19.44	19.71	19.45
5	12	7		19.50	19.72	19.71
5	12	13		19.46	19.70	19.47
5	25	0		19.47	19.73	19.52



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	21.94	22.05	21.90
3	1	8		21.96	21.96	21.78
3	1	14		21.91	21.97	21.50
3	8	0		21.06	21.15	21.09
3	8	4		21.04	21.08	20.98
3	8	7		20.98	21.10	20.88
3	15	0		21.11	21.04	20.97
3	1	0	16-QAM	20.83	20.84	20.84
3	1	8		20.80	20.77	20.72
3	1	14		20.82	20.72	20.35
3	8	0		20.13	20.15	20.23
3	8	4		20.03	20.09	19.95
3	8	7		20.05	20.19	19.98
3	15	0		20.07	20.08	19.80
1.4	1	0	QPSK	21.93	22.03	21.86
1.4	1	3		22.02	22.14	21.74
1.4	1	5		21.87	22.11	21.77
1.4	3	0		22.21	22.08	22.02
1.4	3	1		22.31	22.23	21.95
1.4	3	3		22.33	22.22	21.89
1.4	6	0		21.08	21.20	21.01
1.4	1	0	16-QAM	20.89	20.95	20.99
1.4	1	3		20.96	21.07	20.98
1.4	1	5		20.82	20.86	20.81
1.4	3	0		20.97	21.00	21.05
1.4	3	1		21.04	21.11	20.94
1.4	3	3		21.05	21.08	20.81
1.4	6	0		19.59	20.07	20.04



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

ERP/EIRP

LTE Band 2 / 1.4MHz (Average) (GT - LC = 0.27 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	3	1	21.66	0.1466	21.93	0.1560
Middle		3	1	21.90	0.1549	22.17	0.1648
Highest		3	1	21.97	0.1574	22.24	0.1675
Lowest	16QAM	3	1	20.52	0.1127	20.79	0.1199
Middle		3	1	20.69	0.1172	20.96	0.1247
Highest		3	1	20.94	0.1242	21.21	0.1321
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 3MHz (Average) (GT - LC = 0.27 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	21.16	0.1306	21.43	0.1390
Middle		1	8	21.66	0.1466	21.93	0.1560
Highest		1	8	21.57	0.1435	21.84	0.1528
Lowest	16QAM	1	14	20.18	0.1042	20.45	0.1109
Middle		1	14	20.48	0.1117	20.75	0.1189
Highest		1	14	20.49	0.1119	20.76	0.1191
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 5MHz (Average) (GT - LC = 0.27 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	24	21.58	0.1439	21.85	0.1531
Middle		1	24	21.38	0.1374	21.65	0.1462
Highest		1	24	21.79	0.1510	22.06	0.1607
Lowest	16QAM	1	0	20.29	0.1069	20.56	0.1138
Middle		1	0	20.63	0.1156	20.90	0.1230
Highest		1	0	20.70	0.1175	20.97	0.1250
Limit	EIRP < 2W			Result		PASS	



LTE Band 2 / 10MHz (Average) (GT - LC = 0.27 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	21.87	0.1538	22.14	0.1637
Middle		1	25	22.37	0.1726	22.64	0.1837
Highest		1	25	22.11	0.1626	22.38	0.1730
Lowest	16QAM	1	25	20.68	0.1169	20.95	0.1245
Middle		1	25	20.80	0.1202	21.07	0.1279
Highest		1	25	20.94	0.1242	21.21	0.1321
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 15MHz (Average) (GT - LC = 0.27 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	37	22.34	0.1714	22.61	0.1824
Middle		1	37	21.91	0.1552	22.18	0.1652
Highest		1	37	22.33	0.1710	22.60	0.1820
Lowest	16QAM	1	0	20.68	0.1169	20.95	0.1245
Middle		1	0	20.89	0.1227	21.16	0.1306
Highest		1	0	20.74	0.1186	21.01	0.1262
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 20MHz (Average) (GT - LC = 0.27 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	22.30	0.1698	22.57	0.1807
Middle		1	49	22.37	0.1726	22.64	0.1837
Highest		1	49	22.24	0.1675	22.51	0.1782
Lowest	16QAM	1	49	20.27	0.1064	20.54	0.1132
Middle		1	49	20.42	0.1102	20.69	0.1172
Highest		1	49	20.64	0.1159	20.91	0.1233
Limit	EIRP < 2W			Result		PASS	



LTE Band 4 / 1.4MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	3	1	22.06	0.1607	24.28	0.2679
Middle		3	1	22.42	0.1746	24.64	0.2911
Highest		3	1	22.25	0.1679	24.47	0.2799
Lowest	16QAM	3	3	21.40	0.1380	23.62	0.2301
Middle		3	3	21.16	0.1306	23.38	0.2178
Highest		3	3	21.00	0.1259	23.22	0.2099
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 3MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	14	21.63	0.1455	23.85	0.2427
Middle		1	14	21.36	0.1368	23.58	0.2280
Highest		1	14	21.64	0.1459	23.86	0.2432
Lowest	16QAM	1	8	20.21	0.1050	22.43	0.1750
Middle		1	8	20.36	0.1086	22.58	0.1811
Highest		1	8	20.55	0.1135	22.77	0.1892
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 5MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	24	22.29	0.1694	24.51	0.2825
Middle		1	24	22.13	0.1633	24.35	0.2723
Highest		1	24	22.11	0.1626	24.33	0.2710
Lowest	16QAM	1	0	20.85	0.1216	23.07	0.2028
Middle		1	0	20.85	0.1216	23.07	0.2028
Highest		1	0	21.05	0.1274	23.27	0.2123
Limit	EIRP < 1W			Result		PASS	



LTE Band 4 / 10MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	22.22	0.1667	24.44	0.2780
Middle		1	25	22.19	0.1656	24.41	0.2761
Highest		1	25	22.24	0.1675	24.46	0.2793
Lowest	16QAM	1	25	21.15	0.1303	23.37	0.2173
Middle		1	25	21.04	0.1271	23.26	0.2118
Highest		1	25	20.88	0.1225	23.10	0.2042
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 15MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	37	22.39	0.1734	24.61	0.2891
Middle		1	37	22.21	0.1663	24.43	0.2773
Highest		1	37	22.41	0.1742	24.63	0.2904
Lowest	16QAM	1	0	20.89	0.1227	23.11	0.2046
Middle		1	0	20.84	0.1213	23.06	0.2023
Highest		1	0	21.17	0.1309	23.39	0.2183
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 20MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	22.36	0.1722	24.58	0.2871
Middle		1	49	22.44	0.1754	24.66	0.2924
Highest		1	49	22.40	0.1738	24.62	0.2897
Lowest	16QAM	1	99	20.66	0.1164	22.88	0.1941
Middle		1	99	20.85	0.1216	23.07	0.2028
Highest		1	99	20.99	0.1256	23.21	0.2094
Limit	EIRP < 1W			Result		PASS	



LTE Band 5 / 1.4MHz (Average) (GT - LC = -1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	21.30	0.1349	17.42	0.0552
Middle		1	0	21.22	0.1324	17.34	0.0542
Highest		1	0	21.22	0.1324	17.34	0.0542
Lowest	16QAM	3	0	20.44	0.1107	16.56	0.0453
Middle		3	0	20.10	0.1023	16.22	0.0419
Highest		3	0	20.10	0.1023	16.22	0.0419
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz (Average) (GT - LC = -1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	21.25	0.1334	17.37	0.0546
Middle		1	0	21.24	0.1330	17.36	0.0545
Highest		1	0	21.31	0.1352	17.43	0.0553
Lowest	16QAM	1	0	20.21	0.1050	16.33	0.0430
Middle		1	0	20.17	0.1040	16.29	0.0426
Highest		1	0	20.07	0.1016	16.19	0.0416
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 5MHz (Average) (GT - LC = -1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	21.35	0.1365	17.47	0.0558
Middle		1	0	21.38	0.1374	17.50	0.0562
Highest		1	0	21.32	0.1355	17.44	0.0555
Lowest	16QAM	1	0	20.23	0.1054	16.35	0.0432
Middle		1	0	20.23	0.1054	16.35	0.0432
Highest		1	0	20.06	0.1014	16.18	0.0415
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 10MHz (Average) (GT - LC = -1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	21.59	0.1442	17.71	0.0590
Middle		1	25	21.62	0.1452	17.74	0.0594
Highest		1	25	21.54	0.1426	17.66	0.0583
Lowest	16QAM	1	0	20.18	0.1042	16.30	0.0427
Middle		1	0	20.82	0.1208	16.94	0.0494
Highest		1	0	20.19	0.1045	16.31	0.0428
Limit	ERP < 7W			Result		PASS	



LTE Band 12 / 1.4MHz (Average) (GT - LC = -5.38 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	0	22.46	0.1762	14.93	0.0311
Middle		3	0	22.20	0.1660	14.67	0.0293
Highest		3	0	22.31	0.1702	14.78	0.0301
Lowest	16QAM	3	0	20.81	0.1205	13.28	0.0213
Middle		3	0	21.24	0.1330	13.71	0.0235
Highest		3	0	21.50	0.1413	13.97	0.0249
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 3MHz (Average) (GT - LC = -5.38 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	14	22.52	0.1786	14.99	0.0316
Middle		1	14	22.26	0.1683	14.73	0.0297
Highest		1	14	22.03	0.1596	14.50	0.0282
Lowest	16QAM	1	8	21.16	0.1306	13.63	0.0231
Middle		1	8	21.40	0.1380	13.87	0.0244
Highest		1	8	21.11	0.1291	13.58	0.0228
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 5MHz (Average) (GT - LC = -5.38 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	12	22.49	0.1774	14.96	0.0313
Middle		1	12	22.10	0.1622	14.57	0.0286
Highest		1	12	22.19	0.1656	14.66	0.0292
Lowest	16QAM	1	0	20.91	0.1233	13.38	0.0218
Middle		1	0	20.92	0.1236	13.39	0.0218
Highest		1	0	21.20	0.1318	13.67	0.0233
Limit	ERP < 3W			Result		PASS	



LTE Band 12 / 10MHz (Average) (GT - LC = -5.38 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	22.56	0.1803	15.03	0.0318
Middle		1	25	22.57	0.1807	15.04	0.0319
Highest		1	25	22.46	0.1762	14.93	0.0311
Lowest	16QAM	1	25	21.48	0.1406	13.95	0.0248
Middle		1	25	20.73	0.1183	13.20	0.0209
Highest		1	25	21.30	0.1349	13.77	0.0238
Limit	ERP < 3W			Result		PASS	



LTE Band 13 / 5MHz (Average) (GT - LC = -2.33 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	12	22.61	0.1824	18.13	0.0650
Middle		1	12	22.63	0.1832	18.15	0.0653
Highest		1	12	22.20	0.1660	17.72	0.0592
Lowest	16QAM	1	12	21.11	0.1291	16.63	0.0460
Middle		1	12	21.44	0.1393	16.96	0.0497
Highest		1	12	20.76	0.1191	16.28	0.0425
Limit	ERP < 3W			Result		PASS	

LTE Band 13 / 10MHz (Average) (GT - LC = -2.33 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	-	-	-	-	-	-
Middle		1	25	22.65	0.1841	18.17	0.0656
Highest		-	-	-	-	-	-
Lowest	16QAM	-	-	-	-	-	-
Middle		1	25	21.39	0.1377	16.91	0.0491
Highest		-	-	-	-	-	-
Limit	ERP < 3W			Result		PASS	



LTE Band 17 / 5MHz (Average) (GT - LC = -5.38 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	12	22.20	0.1660	14.67	0.0293
Middle		1	12	22.54	0.1795	15.01	0.0317
Highest		1	12	22.48	0.1770	14.95	0.0313
Lowest	16QAM	1	12	20.83	0.1211	13.30	0.0214
Middle		1	12	21.05	0.1274	13.52	0.0225
Highest		1	12	21.13	0.1297	13.60	0.0229
Limit	ERP < 3W			Result		PASS	

LTE Band 17 / 10MHz (Average) (GT - LC = -5.38 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	22.48	0.1770	14.95	0.0313
Middle		1	25	22.56	0.1803	15.03	0.0318
Highest		1	25	22.43	0.1750	14.90	0.0309
Lowest	16QAM	1	25	21.22	0.1324	13.69	0.0234
Middle		1	25	21.22	0.1324	13.69	0.0234
Highest		1	25	21.34	0.1361	13.81	0.0240
Limit	ERP < 3W			Result		PASS	



LTE Band 66 / 1.4MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	3	3	22.33	0.1710	24.55	0.2851
Middle		3	3	22.22	0.1667	24.44	0.2780
Highest		3	3	21.89	0.1545	24.11	0.2576
Lowest	16QAM	3	1	21.04	0.1271	23.26	0.2118
Middle		3	1	21.11	0.1291	23.33	0.2153
Highest		3	1	20.94	0.1242	23.16	0.2070
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 3MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	21.94	0.1563	24.16	0.2606
Middle		1	0	22.05	0.1603	24.27	0.2673
Highest		1	0	21.90	0.1549	24.12	0.2582
Lowest	16QAM	1	0	20.83	0.1211	23.05	0.2018
Middle		1	0	20.84	0.1213	23.06	0.2023
Highest		1	0	20.84	0.1213	23.06	0.2023
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 5MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	21.88	0.1542	24.10	0.2570
Middle		1	12	21.55	0.1429	23.77	0.2382
Highest		1	12	21.53	0.1422	23.75	0.2371
Lowest	16QAM	1	0	20.23	0.1054	22.45	0.1758
Middle		1	0	20.33	0.1079	22.55	0.1799
Highest		1	0	20.46	0.1112	22.68	0.1854
Limit	EIRP < 1W			Result		PASS	



LTE Band 66 / 10MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	21.90	0.1549	24.12	0.2582
Middle		1	0	22.21	0.1663	24.43	0.2773
Highest		1	0	21.72	0.1486	23.94	0.2477
Lowest	16QAM	1	25	20.96	0.1247	23.18	0.2080
Middle		1	25	20.86	0.1219	23.08	0.2032
Highest		1	25	21.09	0.1285	23.31	0.2143
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 15MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	37	22.28	0.1690	24.50	0.2818
Middle		1	37	22.34	0.1714	24.56	0.2858
Highest		1	37	22.30	0.1698	24.52	0.2831
Lowest	16QAM	1	0	21.02	0.1265	23.24	0.2109
Middle		1	0	21.05	0.1274	23.27	0.2123
Highest		1	0	20.88	0.1225	23.10	0.2042
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 20MHz (Average) (GT - LC = 2.22 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	22.16	0.1644	24.38	0.2742
Middle		1	49	22.40	0.1738	24.62	0.2897
Highest		1	49	22.01	0.1589	24.23	0.2649
Lowest	16QAM	1	49	20.89	0.1227	23.11	0.2046
Middle		1	49	20.97	0.1250	23.19	0.2084
Highest		1	49	20.78	0.1197	23.00	0.1995
Limit	EIRP < 1W			Result		PASS	

**Radiated Spurious Emission****LTE Band 2**

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	3760	-45.49	-13	-32.49	-65.77	-56.52	1.48	12.51	H
	5640	-40.21	-13	-27.21	-63.88	-51.48	2.00	13.27	H
	7520	-39.44	-13	-26.44	-67.1	-48.55	2.18	11.30	H
									H
									H
									H
									H
	3760	-46.10	-13	-33.10	-66.08	-57.13	1.48	12.51	V
	5640	-37.55	-13	-24.55	-61.44	-48.82	2.00	13.27	V
	7520	-39.40	-13	-26.40	-66.7	-48.51	2.18	11.30	V
									V
									V
									V
									V

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

**LTE Band 66**

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)
Middle	3489	-47.48	-13	-34.48	-66.88	-58.51	1.25	12.28	H
	5234	-41.33	-13	-28.33	-65.15	-52.33	1.98	12.98	H
	6979	-39.95	-13	-26.95	-66.11	-49.32	2.37	11.73	H
									H
									H
									H
									H
	3490	-47.84	-13	-34.84	-67.07	-58.87	1.25	12.28	V
	5234	-43.45	-13	-30.45	-66.91	-54.45	1.98	12.98	V
	6979	-39.42	-13	-26.42	-65.84	-48.79	2.37	11.73	V
									V
									V
									V
									V

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



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	3462	-47.58	-13	-34.58	-66.69	-58.56	1.24	12.22	H
	5197	-44.02	-13	-31.02	-67.86	-54.98	1.97	12.94	H
	6929	-39.95	-13	-26.95	-65.66	-49.17	2.36	11.57	H
									H
									H
									H
									H
	3462	-47.17	-13	-34.17	-66.01	-58.15	1.24	12.22	V
	5197	-44.05	-13	-31.05	-67.45	-55.01	1.97	12.94	V
	6929	-39.28	-13	-26.28	-65.11	-48.50	2.36	11.57	V
									V
									V
									V
									V

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



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)
Middle	1673	-53.22	-13	-40.22	-64.16	-59.16	0.71	8.79	H
	2496	-42.33	-13	-29.33	-58.01	-50.02	0.95	10.79	H
	3344	-47.04	-13	-34.04	-64.82	-55.63	1.21	11.96	H
									H
									H
									H
									H
	1673	-52.79	-13	-39.79	-63.64	-58.73	0.71	8.79	V
	2504	-48.17	-13	-35.17	-63.83	-55.87	0.95	10.80	V
	3344	-48.22	-13	-35.22	-65.7	-56.81	1.21	11.96	V
									V
									V
									V
									V

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



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	1416	-51.38	-13.00	-38.38	-63.22	-56.39	0.59	7.75	H
	2120	-48.30	-13.00	-35.30	-63.76	-55.51	0.90	10.27	H
	2830	-48.20	-13.00	-35.20	-65.02	-56.05	1.07	11.06	H
									H
									H
									H
									H
	1408	-48.32	-13.00	-35.32	-60.23	-53.30	0.58	7.71	V
	2120	-46.62	-13.00	-33.62	-62.06	-53.83	0.90	10.27	V
	2832	-47.88	-13.00	-34.88	-65.13	-55.73	1.07	11.07	V
									V
									V
									V
									V

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



LTE Band 13

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	1564	-54.15	-42.15	-12.00	-64.98	-59.71	0.65	8.36	H
	2344	-48.80	-13	-35.80	-64.82	-56.30	0.93	10.58	H
	3128	-48.34	-13	-35.34	-66.31	-56.51	1.16	11.48	H
									H
									H
									H
									H
	1564	-52.97	-42.15	-10.82	-63.53	-58.53	0.65	8.36	V
	2346	-49.60	-13	-36.60	-65.72	-57.10	0.93	10.58	V
	3128	-48.17	-13	-35.17	-49.17	-56.34	1.16	11.48	V
									V
									V
									V
									V

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



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	1416	-49.17	-13	-36.17	-61.01	-54.18	0.59	7.75	H
	2120	-45.37	-13	-32.37	-60.83	-52.58	0.90	10.27	H
	2832	-45.84	-13	-32.84	-62.67	-53.69	1.07	11.07	H
									H
									H
									H
									H
	1416	-50.90	-13	-37.90	-62.72	-55.91	0.59	7.75	V
	2128	-47.63	-13	-34.63	-63.22	-54.85	0.91	10.28	V
	2840	-48.72	-13	-35.72	-65.97	-56.57	1.07	11.07	V
									V
									V
									V
									V

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