



FCC RADIO TEST REPORT

FCC ID : QYLEM7565E
Equipment : WWAN module
Brand Name : Getac
Model Name : EM7565
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 Jun. 15, 2021 and testing was started from Jul. 13, 2021 and completed on Jul. 22, 2021. 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 partial 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 333, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FG710507-21B	01	Initial issue of report	Jul. 27, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§22.913 (a)(5)	Effective Radiated Power (Band 5) (Band 26)	Pass	
	§27.50 (b)(10) §27.50 (c)(10)	Effective Radiated Power (Band 12) (Band 13)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 7) (Band 41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)		
-	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	-	See Note
-	§2.1049	Occupied Bandwidth	-	See Note
-	§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 26) (Band 66)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (Band 7) (Band 41)		
-	§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 26) (Band 66)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (Band 7) (Band 41)		
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	-	See Note



Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
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 26) (Band 66)	Pass	Under limit 6.11 dB at 12803.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (Band 7) (Band 41)		

Note: The module (Model: EM7565) makes no difference after verifying output power, this report reuses test data from the module report.

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: Yun Huang

Report Producer: Vivian Hsu

1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA/LTE

Product Specification subjective to this standard	
Antenna Type	WWAN: <Main> : PIFA Antenna <Aux.> : PIFA Antenna
Antenna Gain	<Main> : LTE Band 2 : 1.92 dBi LTE Band 4 : 1.25 dBi LTE Band 5 : 0.17 dBi LTE Band 7 : -0.7 dBi LTE Band 12 : -0.28 dBi LTE Band 13 : 0.08 dBi LTE Band 26 : 0.17 dBi LTE Band 41 : -0.7 dBi LTE Band 66 : 1.69 dBi <Aux.> : LTE Band 2 : 1.33 dBi LTE Band 4 : -0.13 dBi LTE Band 5 : -3.14 dBi LTE Band 7 : 1.68 dBi LTE Band 12 : 1.79 dBi LTE Band 13 : -0.37 dBi LTE Band 26 : -3.14 dBi LTE Band 41 : 1.68 dBi LTE Band 66 : 0.33 dBi

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

The product was installed into Tablet (Brand Name: Getac, Model Name: EX80) during test.

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 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH03-HY
Test Engineer	George Chen
Temperature	23.3~24.8℃
Relative Humidity	52~66%

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH15-HY (TAF Code: 3786)
Test Engineer	Leo Li, Mancy Chou and Bigshow Wang
Temperature	22.5~24.5℃
Relative Humidity	45~55%
Remark	The Radiated Spurious Emissions test item subcontracted to Sporton International Inc. Wensan Laboratory.

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

FCC Designation No.: TW1190 and TW3786



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

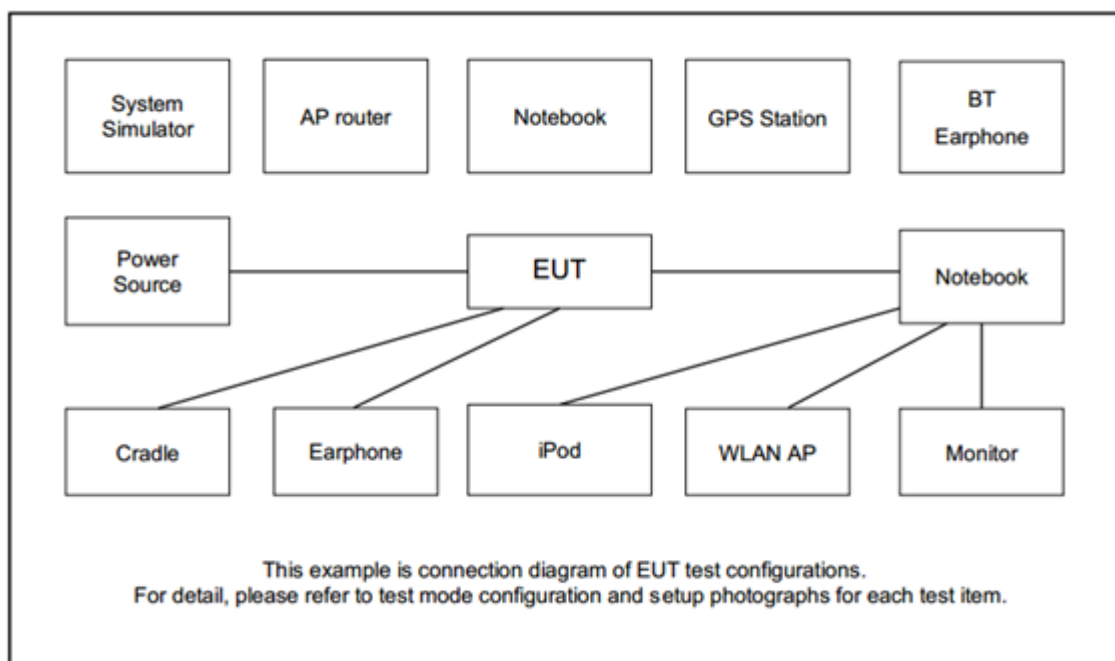
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

The measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find Y Plane with Cradle for LTE Band 7, 12, 13, 26, 66; Z Plane for LTE Band 2 as worst plane.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	13	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v
	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
E.R.P / E.I.R.P	2	v	v	v	v	v	v	v	v	v	Max. Power					
	4	v	v	v	v	v	v	v	v	v						
	5	v	v	v	v	-	-	v	v	v						
	7	-	-	v	v	v	v	v	v	v						
	12	v	v	v	v	-	-	v	v	v						
	13	-	-	v	v	-	-	v	v	v						
	26	v	v	v	v	v	-	v	v	v						
	41	-	-	v	v	v	v	v	v	v						
	66	v	v	v	v	v	v	v	v	v						

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
Radiated Spurious Emission	2						v	v			v			v	v	v
	7	-	-		v			v			v			v	v	v
	12				v	-	-	v			v			v	v	v
	13	-	-	v		-	-	v			v			v	v	v
	26	v					-	v			v			v	v	v
	66						v	v			v			v	v	v
Remark	- The mark "v" means that this configuration is chosen for testing - The mark "-" means that this bandwidth is not supported. - The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. - All the radiated test cases were performed with Battery 2.															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8821C	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 7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

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



LTE Band 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 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829.0	836.5	844.0
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3

LTE Band 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	39750	40620	41490
	Frequency	2506.0	2593.0	2680.0
15	Channel	39725	40620	41515
	Frequency	2503.5	2593.0	2682.5
10	Channel	39700	40620	41540
	Frequency	2501.0	2593.0	2685.0
5	Channel	39675	40620	41565
	Frequency	2498.5	2593.0	2687.5



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

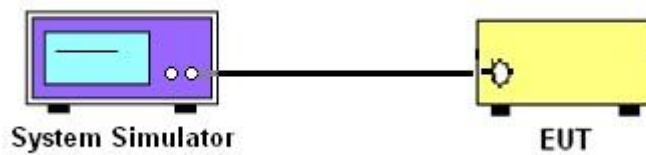
3 Conducted Test Items

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 and Band 26

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12 and Band 13

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 7 and Band 41

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.

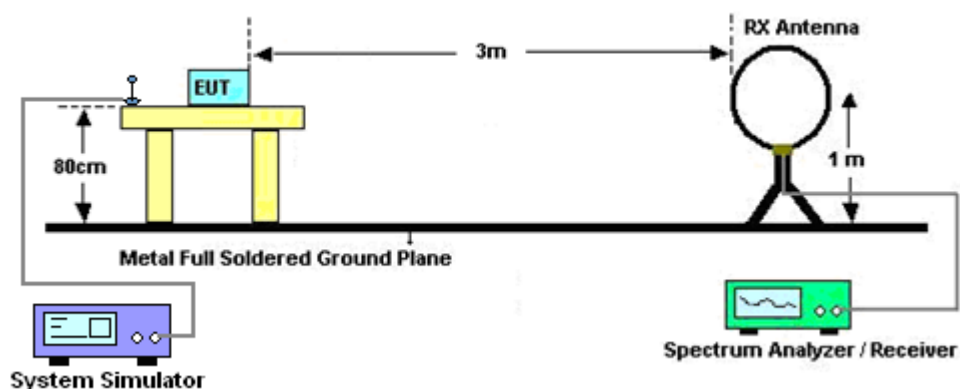
4 Radiated Test Items

4.1 Measuring Instruments

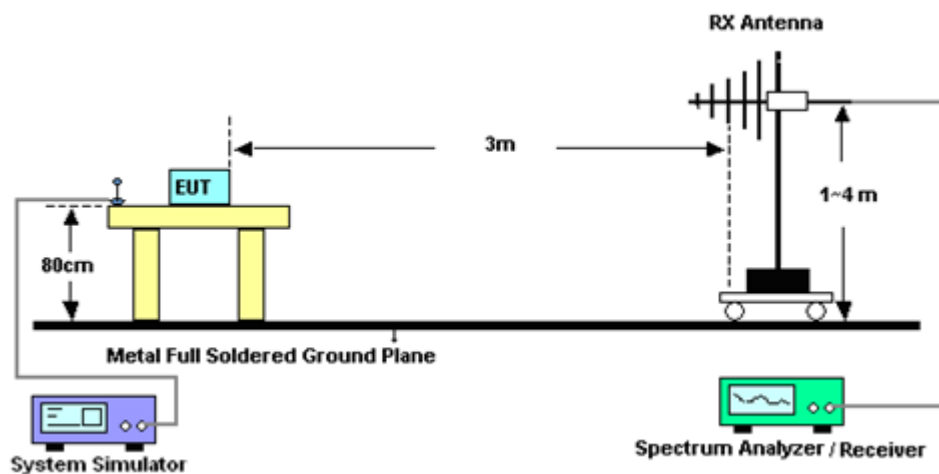
See list of measuring instruments of this test report.

4.1.1 Test Setup

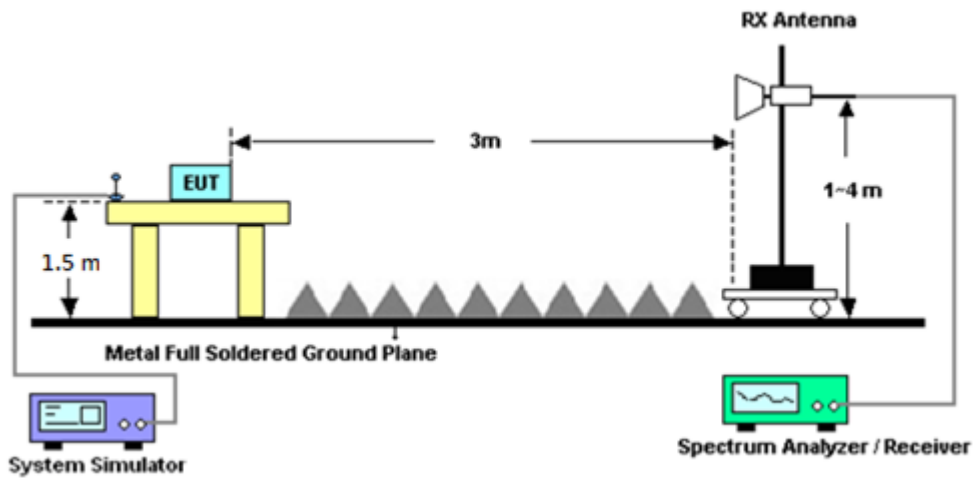
For radiated test below 30MHz



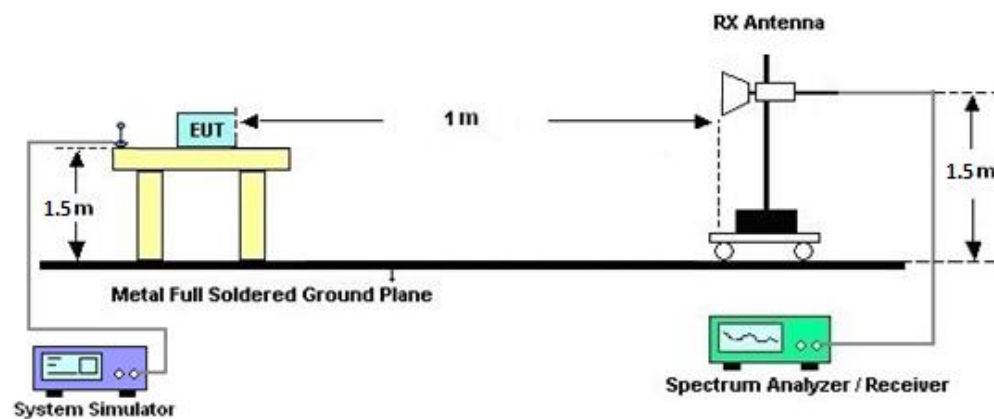
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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 adequate comparison measurement 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 7, 41

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

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)

For LTE Band 7, 41

The limit line is derived from $55 + 10\log(P)$ 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	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 04, 2021	Jul. 13, 2021~ Jul. 14, 2021	Jan. 03, 2022	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Oct. 11, 2020	Jul. 13, 2021~ Jul. 14, 2021	Oct. 10, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&00 800N1D01N-06	41912&05	30MHz to 1GHz	Feb. 08, 2021	Jul. 13, 2021~ Jul. 14, 2021	Feb. 07, 2022	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 28, 2020	Jul. 13, 2021~ Jul. 14, 2021	Dec. 27, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1-18GHz	Aug. 04, 2020	Jul. 13, 2021~ Jul. 14, 2021	Aug. 03, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz~18GHz	Nov. 03, 2020	Jul. 13, 2021~ Jul. 14, 2021	Nov. 02, 2021	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Dec. 02, 2020	Jul. 13, 2021~ Jul. 14, 2021	Dec. 01, 2021	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 21, 2021	Jul. 13, 2021~ Jul. 14, 2021	May 20, 2022	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055006	1GHz~18GHz	May 06, 2021	Jul. 13, 2021~ Jul. 14, 2021	May 05, 2022	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2020	Jul. 13, 2021~ Jul. 14, 2021	Aug. 20, 2021	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 11, 2020	Jul. 13, 2021~ Jul. 14, 2021	Dec. 10, 2021	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9038A	MY54130085	20MHz~8.4GHz	Nov. 02, 2020	Jul. 13, 2021~ Jul. 14, 2021	Nov. 01, 2021	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Mar. 05, 2021	Jul. 13, 2021~ Jul. 14, 2021	Mar. 04, 2022	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jul. 13, 2021~ Jul. 14, 2021	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jul. 13, 2021~ Jul. 14, 2021	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Jul. 13, 2021~ Jul. 14, 2021	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE, 508405/2E	30MHz~18G	Nov. 16, 2020	Jul. 13, 2021~ Jul. 14, 2021	Nov. 15, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 22, 2021	Jul. 13, 2021~ Jul. 14, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 22, 2021	Jul. 13, 2021~ Jul. 14, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Jul. 13, 2021~ Jul. 14, 2021	Mar. 10, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 15, 2020	Jul. 13, 2021~ Jul. 14, 2021	Sep. 14, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-935-1000-15000-40ST	SN1	1GHz High Pass Filter	Apr. 29, 2021	Jul. 13, 2021~ Jul. 14, 2021	Apr. 28, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN4	3GHz High Pass Filter	Sep. 16, 2020	Jul. 13, 2021~ Jul. 14, 2021	Sep. 15, 2021	Radiation (03CH15-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Jan. 31, 2021	Jul. 13, 2021~ Jul. 14, 2021	Jan. 30, 2022	Radiation (03CH15-HY)
Radio Communication Analyzer	Anritsu	MT8821C	62620025341	LTE FDD/TDD LTE-2CC ULCA/DLCA	Oct. 06, 2020	Jul. 22, 2021	Oct. 05, 2021	Conducted (TH03-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.98 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.31 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

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

Conducted Output Power (Average power & ERP/EIRP)

LTE Band 2 Maximum Average Power [dBm] (GT - LC = 1.92 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.38	22.50	22.45	24.42	0.2767
20	1	49		22.37	22.37	22.39		
20	1	99		22.18	22.26	22.22		
20	50	0		21.40	21.41	21.29		
20	50	24		21.35	21.37	21.18		
20	50	50		21.27	21.32	21.21		
20	100	0		21.30	21.40	21.28		
20	1	0	16-QAM	21.73	21.65	21.65	23.67	0.2328
20	1	49		21.75	21.71	21.54		
20	1	99		21.47	21.60	21.51		
20	50	0		20.51	20.36	20.31		
20	50	24		20.24	20.38	20.19		
20	50	50		20.07	20.28	20.12		
20	100	0		20.53	20.39	20.08		
20	1	0	64-QAM	20.84	20.55	20.38	22.76	0.1888
20	1	49		20.55	20.55	20.18		
20	1	99		20.38	20.45	20.22		
20	50	0		19.39	19.33	19.12		
20	50	24		19.31	19.38	19.16		
20	50	50		19.05	19.32	19.12		
20	100	0		19.33	19.22	19.19		
Limit	EIRP < 2W			Result			Pass	



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LTE Band 2 Maximum Average Power [dBm] (GT - LC = 1.92 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	22.25	22.30	22.39	24.31	0.2698
15	1	37		22.24	22.37	22.33		
15	1	74		22.09	22.09	22.11		
15	36	0		21.46	21.26	21.22		
15	36	20		21.21	21.29	21.14		
15	36	39		21.24	21.17	21.06		
15	75	0		21.15	21.33	21.24		
15	1	0	16-QAM	21.62	21.48	21.54	23.56	0.2270
15	1	37		21.64	21.62	21.47		
15	1	74		21.32	21.58	21.49		
15	36	0		20.43	20.22	20.25		
15	36	20		20.14	20.19	20.10		
15	36	39		20.03	20.17	20.04		
15	75	0		20.40	20.20	20.18		
15	1	0	64-QAM	20.71	20.55	20.26	22.63	0.1832
15	1	37		20.53	20.52	20.16		
15	1	74		20.33	20.36	20.02		
15	36	0		19.26	19.29	19.02		
15	36	20		19.14	19.34	19.14		
15	36	39		19.01	19.17	19.04		
15	75	0		19.28	19.07	19.07		
Limit	EIRP < 2W			Result			Pass	



LTE Band 2 Maximum Average Power [dBm] (GT - LC = 1.92 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.23	22.13	22.41	24.33	0.2710
10	1	25		22.37	22.26	22.38		
10	1	49		22.18	22.11	22.22		
10	25	0		21.30	21.29	21.18		
10	25	12		21.22	21.25	21.14		
10	25	25		21.24	21.31	21.17		
10	50	0		21.30	21.34	21.19		
10	1	0	16-QAM	21.60	21.56	21.61	23.54	0.2259
10	1	25		21.57	21.62	21.39		
10	1	49		21.28	21.45	21.33		
10	25	0		20.42	20.21	20.16		
10	25	12		20.17	20.35	20.08		
10	25	25		20.07	20.18	20.03		
10	50	0		20.40	20.36	20.06		
10	1	0	64-QAM	20.78	20.39	20.27	22.7	0.1862
10	1	25		20.47	20.49	20.03		
10	1	49		20.33	20.40	20.14		
10	25	0		19.19	19.33	19.11		
10	25	12		19.18	19.30	19.16		
10	25	25		19.19	19.32	19.10		
10	50	0		19.21	19.13	19.15		
Limit	EIRP < 2W			Result			Pass	



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LTE Band 2 Maximum Average Power [dBm] (GT - LC = 1.92 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.13	22.31	22.49	24.41	0.2761
5	1	12		22.25	22.28	22.30		
5	1	24		22.10	22.19	22.17		
5	12	0		21.39	21.28	21.18		
5	12	7		21.33	21.25	21.26		
5	12	13		21.25	21.21	21.18		
5	25	0		21.19	21.34	21.26		
5	1	0	16-QAM	21.73	21.62	21.64	23.65	0.2317
5	1	12		21.56	21.55	21.45		
5	1	24		21.32	21.43	21.43		
5	12	0		20.34	20.16	20.29		
5	12	7		20.08	20.38	20.02		
5	12	13		20.09	20.13	20.03		
5	25	0		20.43	20.36	20.14		
5	1	0	64-QAM	20.71	20.54	20.28	22.63	0.1832
5	1	12		20.52	20.39	20.02		
5	1	24		20.19	20.40	20.21		
5	12	0		19.32	19.22	19.08		
5	12	7		19.25	19.20	19.00		
5	12	13		19.20	19.21	19.15		
5	25	0		19.18	19.14	19.20		
Limit	EIRP < 2W			Result			Pass	



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LTE Band 2 Maximum Average Power [dBm] (GT - LC = 1.92 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	22.15	22.20	22.43	24.35	0.2723
3	1	8		22.29	22.37	22.34		
3	1	14		22.18	22.22	22.17		
3	8	0		21.36	21.26	21.20		
3	8	4		21.31	21.19	21.03		
3	8	7		21.07	21.20	21.07		
3	15	0		21.27	21.24	21.17		
3	1	0	16-QAM	21.53	21.50	21.61	23.58	0.2280
3	1	8		21.57	21.66	21.37		
3	1	14		21.27	21.59	21.44		
3	8	0		20.44	20.17	20.22		
3	8	4		20.17	20.33	20.13		
3	8	7		20.07	20.17	20.02		
3	15	0		20.38	20.38	20.03		
3	1	0	64-QAM	20.78	20.52	20.20	22.70	0.1862
3	1	8		20.55	20.54	20.07		
3	1	14		20.28	20.38	20.14		
3	8	0		19.23	19.26	19.00		
3	8	4		19.24	19.37	19.14		
3	8	7		19.11	19.21	19.05		
3	15	0		19.25	19.19	19.03		
Limit	EIRP < 2W			Result			Pass	



LTE Band 2 Maximum Average Power [dBm] (GT - LC = 1.92 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	22.28	22.30	22.23	24.35	0.2723
1.4	1	3		22.14	22.21	22.16		
1.4	1	5		22.23	22.11	22.10		
1.4	3	0		22.24	22.25	22.43		
1.4	3	1		22.23	22.24	22.39		
1.4	3	3		22.18	22.25	22.08		
1.4	6	0		21.42	21.12	21.28		
1.4	1	0	16-QAM	21.29	21.34	21.08	23.55	0.2265
1.4	1	3		21.10	21.28	21.06		
1.4	1	5		21.22	21.27	21.20		
1.4	3	0		21.61	21.60	21.45		
1.4	3	1		21.58	21.63	21.41		
1.4	3	3		21.40	21.53	21.50		
1.4	6	0		20.42	20.31	20.23		
1.4	1	0	64-QAM	20.18	20.24	20.03	22.65	0.1841
1.4	1	3		20.04	20.22	20.07		
1.4	1	5		20.73	20.49	20.22		
1.4	3	0		20.50	20.42	20.17		
1.4	3	1		20.32	20.33	20.03		
1.4	3	3		20.16	20.30	20.15		
1.4	6	0		19.12	19.32	19.09		
Limit	EIRP < 2W			Result			Pass	



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LTE Band 4 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.31	22.46	22.33	23.71	0.2350
20	1	49		22.11	22.14	22.08		
20	1	99		22.10	22.09	22.13		
20	50	0		21.20	21.24	21.18		
20	50	24		21.18	21.14	21.08		
20	50	50		21.09	21.20	21.13		
20	100	0		21.14	21.40	21.23		
20	1	0	16-QAM	21.60	21.54	22.18	23.43	0.2203
20	1	49		21.37	21.31	21.96		
20	1	99		21.26	21.28	21.95		
20	50	0		20.08	20.16	20.83		
20	50	24		20.08	20.03	20.75		
20	50	50		20.00	20.02	20.69		
20	100	0		20.05	20.05	20.70		
20	1	0	64-QAM	20.33	20.35	21.10	22.35	0.1718
20	1	49		20.15	20.13	20.70		
20	1	99		20.18	20.07	20.56		
20	50	0		19.09	19.13	19.90		
20	50	24		19.11	19.30	19.80		
20	50	50		19.09	19.24	19.76		
20	100	0		19.02	19.01	19.77		
Limit	EIRP < 1W			Result			Pass	



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LTE Band 4 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	22.26	22.43	22.28	23.68	0.2333
15	1	37		22.16	22.05	22.15		
15	1	74		22.07	22.08	22.20		
15	36	0		21.13	21.24	21.18		
15	36	20		21.17	21.22	21.00		
15	36	39		21.07	21.29	21.08		
15	75	0		21.11	21.44	21.23		
15	1	0	16-QAM	21.50	21.47	22.25	23.50	0.2239
15	1	37		21.36	21.24	21.95		
15	1	74		21.35	21.31	21.85		
15	36	0		20.10	20.23	20.88		
15	36	20		20.04	20.30	20.69		
15	36	39		20.07	20.04	20.59		
15	75	0		20.06	20.02	20.77		
15	1	0	64-QAM	20.38	20.36	21.15	22.40	0.1738
15	1	37		20.10	20.16	20.76		
15	1	74		20.12	20.05	20.48		
15	36	0		19.09	19.12	19.94		
15	36	20		19.12	19.34	19.83		
15	36	39		19.01	19.24	19.84		
15	75	0		19.20	19.30	19.71		
Limit	EIRP < 1W			Result			Pass	



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LTE Band 4 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.24	22.33	22.13	23.58	0.2280
10	1	25		22.10	22.17	22.08		
10	1	49		22.05	22.07	22.13		
10	25	0		21.23	21.22	21.25		
10	25	12		21.27	21.06	21.10		
10	25	25		21.19	21.17	21.15		
10	50	0		21.04	21.19	21.71		
10	1	0	16-QAM	21.54	21.55	22.25	23.50	0.2239
10	1	25		21.39	21.22	21.97		
10	1	49		21.21	21.27	21.97		
10	25	0		20.18	20.20	20.89		
10	25	12		20.05	20.10	20.65		
10	25	25		20.03	20.11	20.71		
10	50	0		20.00	20.08	20.72		
10	1	0	64-QAM	20.32	20.30	21.20	22.45	0.1758
10	1	25		20.08	20.20	20.67		
10	1	49		20.08	20.01	20.56		
10	25	0		19.14	19.09	19.99		
10	25	12		19.03	19.35	19.89		
10	25	25		19.19	19.26	19.73		
10	50	0		19.03	19.09	19.70		
Limit	EIRP < 1W			Result			Pass	



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LTE Band 4 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.26	22.45	22.33	23.70	0.2344
5	1	12		22.05	22.17	22.00		
5	1	24		22.10	22.06	22.10		
5	12	0		21.21	21.20	21.15		
5	12	7		21.09	21.06	21.02		
5	12	13		21.11	21.15	21.10		
5	25	0		21.05	21.05	21.63		
5	1	0	16-QAM	21.68	21.44	22.13	23.38	0.2178
5	1	12		21.28	21.31	21.95		
5	1	24		21.34	21.35	21.85		
5	12	0		20.10	20.19	20.82		
5	12	7		20.28	20.24	20.82		
5	12	13		20.23	20.20	20.65		
5	25	0		20.03	20.12	20.70		
5	1	0	64-QAM	20.25	20.42	21.19	22.44	0.1754
5	1	12		20.25	20.18	20.68		
5	1	24		20.19	20.16	20.58		
5	12	0		19.11	19.21	19.87		
5	12	7		19.18	19.22	19.90		
5	12	13		19.11	19.22	19.71		
5	25	0		19.08	19.02	19.74		
Limit	EIRP < 1W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	22.22	22.44	22.19	23.69	0.2339
3	1	8		22.04	22.23	22.01		
3	1	14		22.20	22.19	22.18		
3	8	0		21.13	21.20	21.18		
3	8	4		21.08	21.05	21.07		
3	8	7		21.05	21.10	21.18		
3	15	0		21.23	21.07	21.68		
3	1	0	16-QAM	21.52	21.62	22.14	23.39	0.2183
3	1	8		21.46	21.35	21.91		
3	1	14		21.18	21.32	22.00		
3	8	0		20.06	20.21	20.80		
3	8	4		20.06	20.03	20.80		
3	8	7		20.01	20.08	20.68		
3	15	0		20.12	20.20	20.71		
3	1	0	64-QAM	20.26	20.34	21.17	22.42	0.1746
3	1	8		20.18	20.11	20.60		
3	1	14		20.13	20.17	20.48		
3	8	0		19.15	19.23	19.87		
3	8	4		19.02	19.30	19.71		
3	8	7		19.02	19.17	19.76		
3	15	0		19.10	19.02	19.83		
Limit	EIRP < 1W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 1.25 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	22.30	22.38	22.30	23.63	0.2307
1.4	1	3		22.14	22.18	22.07		
1.4	1	5		22.08	22.18	22.21		
1.4	3	0		22.30	22.36	22.27		
1.4	3	1		22.05	22.05	22.13		
1.4	3	3		22.18	22.16	22.21		
1.4	6	0		21.22	21.28	21.23		
1.4	1	0	16-QAM	21.21	21.22	21.17	23.47	0.2223
1.4	1	3		21.18	21.10	21.11		
1.4	1	5		21.12	21.08	21.76		
1.4	3	0		21.50	21.46	22.22		
1.4	3	1		21.27	21.25	21.95		
1.4	3	3		21.34	21.23	22.02		
1.4	6	0		20.05	20.25	20.77		
1.4	1	0	64-QAM	20.01	20.13	20.72	22.37	0.1726
1.4	1	3		20.01	20.11	20.77		
1.4	1	5		20.06	20.05	20.72		
1.4	3	0		20.34	20.42	21.12		
1.4	3	1		20.12	20.11	20.71		
1.4	3	3		20.09	20.10	20.56		
1.4	6	0		19.14	19.32	19.82		
Limit	EIRP < 1W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	23.22	23.40	23.15	21.42	0.1387
10	1	25		23.15	23.23	23.09		
10	1	49		23.09	23.08	23.08		
10	25	0		22.22	22.32	22.23		
10	25	12		22.21	22.30	22.11		
10	25	25		22.18	22.14	22.16		
10	50	0		22.19	22.28	22.08		
10	1	0	16-QAM	22.48	22.52	22.44	20.56	0.1138
10	1	25		22.46	22.54	22.33		
10	1	49		22.38	22.41	22.39		
10	25	0		21.24	21.31	21.12		
10	25	12		21.21	21.32	21.13		
10	25	25		21.15	21.16	21.16		
10	50	0		21.21	21.29	21.11		
10	1	0	64-QAM	21.45	21.38	21.38	19.47	0.0885
10	1	25		21.40	21.39	21.25		
10	1	49		21.29	21.27	21.33		
10	25	0		20.24	20.32	20.13		
10	25	12		20.24	20.31	20.14		
10	25	25		20.17	20.18	20.18		
10	50	0		20.22	20.33	20.14		
Limit	ERP < 7W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	23.31	23.34	23.24	21.36	0.1368
5	1	12		23.18	23.17	23.10		
5	1	24		23.04	23.17	23.02		
5	12	0		22.14	22.35	22.29		
5	12	7		22.26	22.25	22.02		
5	12	13		22.19	22.17	22.19		
5	25	0		22.24	22.31	22.13		
5	1	0	16-QAM	22.41	22.53	22.49	20.55	0.1135
5	1	12		22.49	22.45	22.42		
5	1	24		22.35	22.32	22.32		
5	12	0		21.19	21.21	21.21		
5	12	7		21.23	21.37	21.07		
5	12	13		21.09	21.25	21.19		
5	25	0		21.17	21.26	21.12		
5	1	0	64-QAM	21.38	21.38	21.40	19.48	0.0887
5	1	12		21.46	21.43	21.27		
5	1	24		21.25	21.37	21.36		
5	12	0		20.32	20.28	20.05		
5	12	7		20.27	20.23	20.13		
5	12	13		20.14	20.27	20.18		
5	25	0		20.24	20.42	20.14		
Limit	ERP < 7W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	23.29	23.34	23.09	21.36	0.1368
3	1	8		23.17	23.29	23.09		
3	1	14		23.05	23.18	23.15		
3	8	0		22.20	22.33	22.21		
3	8	4		22.19	22.40	22.14		
3	8	7		22.25	22.24	22.21		
3	15	0		22.21	22.23	22.07		
3	1	0	16-QAM	22.46	22.60	22.34	20.62	0.1153
3	1	8		22.40	22.57	22.25		
3	1	14		22.29	22.38	22.32		
3	8	0		21.16	21.25	21.09		
3	8	4		21.22	21.22	21.16		
3	8	7		21.14	21.21	21.18		
3	15	0		21.24	21.23	21.10		
3	1	0	64-QAM	21.45	21.35	21.29	19.47	0.0885
3	1	8		21.44	21.45	21.34		
3	1	14		21.30	21.29	21.35		
3	8	0		20.27	20.37	20.09		
3	8	4		20.24	20.35	20.24		
3	8	7		20.10	20.08	20.09		
3	15	0		20.23	20.35	20.11		
Limit	ERP < 7W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	23.31	23.39	23.22	21.41	0.1384
1.4	1	3		23.06	23.16	23.18		
1.4	1	5		23.13	23.13	23.03		
1.4	3	0		23.15	23.30	23.18		
1.4	3	1		23.25	23.27	23.12		
1.4	3	3		22.99	23.04	23.14		
1.4	6	0		22.21	22.38	22.09		
1.4	1	0	16-QAM	22.20	22.30	22.04	20.59	0.1146
1.4	1	3		22.25	22.05	22.09		
1.4	1	5		22.25	22.32	22.03		
1.4	3	0		22.52	22.43	22.35		
1.4	3	1		22.38	22.57	22.30		
1.4	3	3		22.44	22.37	22.29		
1.4	6	0		21.32	21.23	21.22		
1.4	1	0	64-QAM	21.21	21.37	21.21	19.48	0.0887
1.4	1	3		21.09	21.16	21.15		
1.4	1	5		21.30	21.33	21.11		
1.4	3	0		21.40	21.45	21.46		
1.4	3	1		21.44	21.31	21.33		
1.4	3	3		21.37	21.30	21.39		
1.4	6	0		20.19	20.38	20.19		
Limit	ERP < 7W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	21.64	21.50	21.99	21.29	0.1346
20	1	49		21.49	21.32	21.80		
20	1	99		21.51	21.35	21.79		
20	50	0		20.55	20.46	20.76		
20	50	24		20.49	20.32	20.74		
20	50	50		20.52	20.29	20.63		
20	100	0		20.46	20.29	20.57		
20	1	0	16-QAM	20.89	20.75	21.08	20.38	0.1091
20	1	49		20.77	20.56	20.81		
20	1	99		20.85	20.62	21.02		
20	50	0		19.56	19.41	19.69		
20	50	24		19.52	19.30	19.62		
20	50	50		19.51	19.25	19.45		
20	100	0		19.48	19.19	19.53		
20	1	0	64-QAM	19.81	19.48	19.81	19.11	0.0815
20	1	49		19.64	19.37	19.48		
20	1	99		19.72	19.17	19.50		
20	50	0		18.43	18.30	18.21		
20	50	24		18.46	18.10	18.17		
20	50	50		18.44	18.60	18.05		
20	100	0		18.43	18.58	18.10		
Limit	EIRP < 2W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	21.54	21.56	21.83	21.13	0.1297
15	1	37		21.59	21.32	21.78		
15	1	74		21.41	21.33	21.77		
15	36	0		20.46	20.55	20.73		
15	36	20		20.48	20.32	20.74		
15	36	39		20.58	20.29	20.59		
15	75	0		20.42	20.37	20.67		
15	1	0	16-QAM	20.96	20.76	21.16	20.46	0.1112
15	1	37		20.74	20.61	20.89		
15	1	74		20.84	20.67	21.00		
15	36	0		19.53	19.33	19.74		
15	36	20		19.59	19.32	19.53		
15	36	39		19.48	19.26	19.47		
15	75	0		19.55	19.13	19.52		
15	1	0	64-QAM	19.91	19.38	19.73	19.21	0.0834
15	1	37		19.64	19.38	19.53		
15	1	74		19.78	19.12	19.57		
15	36	0		18.46	18.37	18.19		
15	36	20		18.55	18.04	18.24		
15	36	39		18.51	18.70	18.01		
15	75	0		18.46	18.50	18.06		
Limit	EIRP < 2W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	21.63	21.55	21.78	21.09	0.1285
10	1	25		21.49	21.35	21.72		
10	1	49		21.45	21.45	21.79		
10	25	0		20.42	20.50	20.82		
10	25	12		20.45	20.39	20.68		
10	25	25		20.46	20.31	20.67		
10	50	0		20.40	20.29	20.53		
10	1	0	16-QAM	20.96	20.73	20.98	20.41	0.1099
10	1	25		20.70	20.56	20.86		
10	1	49		20.83	20.59	21.11		
10	25	0		19.55	19.49	19.62		
10	25	12		19.62	19.26	19.58		
10	25	25		19.41	19.28	19.50		
10	50	0		19.51	19.21	19.45		
10	1	0	64-QAM	19.88	19.44	19.76	19.18	0.0828
10	1	25		19.60	19.31	19.54		
10	1	49		19.74	19.24	19.48		
10	25	0		18.47	18.22	18.21		
10	25	12		18.51	18.11	18.20		
10	25	25		18.49	18.62	18.06		
10	50	0		18.52	18.67	18.08		
Limit	EIRP < 2W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	21.67	21.44	21.73	21.04	0.1271
5	1	12		21.55	21.38	21.74		
5	1	24		21.56	21.27	21.72		
5	12	0		20.55	20.38	20.75		
5	12	7		20.54	20.26	20.78		
5	12	13		20.49	20.23	20.67		
5	25	0		20.52	20.31	20.49		
5	1	0	16-QAM	20.82	20.76	21.04	20.42	0.1102
5	1	12		20.79	20.55	20.86		
5	1	24		20.90	20.57	21.12		
5	12	0		19.65	19.46	19.70		
5	12	7		19.50	19.36	19.59		
5	12	13		19.51	19.27	19.47		
5	25	0		19.48	19.22	19.53		
5	1	0	64-QAM	19.82	19.41	19.90	19.20	0.0832
5	1	12		19.71	19.30	19.48		
5	1	24		19.73	19.22	19.41		
5	12	0		18.48	18.22	18.25		
5	12	7		18.37	18.08	18.21		
5	12	13		18.48	18.59	18.90		
5	25	0		18.36	18.58	18.01		
Limit	EIRP < 2W			Result			Pass	



LTE Band 12 Maximum Average Power [dBm] (GT - LC = -0.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	23.19	23.25	23.10	20.82	0.1208
10	1	25		23.12	23.06	23.04		
10	1	49		23.18	23.15	23.07		
10	25	0		22.26	22.28	22.12		
10	25	12		22.24	22.17	22.11		
10	25	25		22.21	22.21	22.08		
10	50	0		22.22	22.23	22.11		
10	1	0	16-QAM	22.27	22.36	22.25	20.01	0.1002
10	1	25		22.40	22.33	22.30		
10	1	49		22.34	22.44	22.33		
10	25	0		21.13	21.17	20.99		
10	25	12		21.22	21.18	21.13		
10	25	25		21.21	21.22	21.11		
10	50	0		21.24	21.14	21.14		
10	1	0	64-QAM	21.28	21.33	21.16	18.94	0.0783
10	1	25		21.30	21.35	21.29		
10	1	49		21.32	21.37	21.23		
10	25	0		20.14	20.19	20.02		
10	25	12		20.26	20.18	20.16		
10	25	25		20.20	20.21	20.10		
10	50	0		20.25	20.16	20.11		
Limit	ERP < 3W			Result			Pass	



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LTE Band 12 Maximum Average Power [dBm] (GT - LC = -0.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	23.10	23.19	23.09	20.81	0.1205
5	1	12		23.04	23.16	22.99		
5	1	24		23.24	23.05	23.02		
5	12	0		22.22	22.29	22.09		
5	12	7		22.20	22.13	22.09		
5	12	13		22.16	22.14	21.99		
5	25	0		22.15	22.17	22.14		
5	1	0	16-QAM	22.26	22.44	22.21	20.08	0.1019
5	1	12		22.35	22.36	22.34		
5	1	24		22.44	22.51	22.43		
5	12	0		21.12	21.26	21.00		
5	12	7		21.30	21.11	21.04		
5	12	13		21.14	21.16	21.14		
5	25	0		21.17	21.12	21.14		
5	1	0	64-QAM	21.32	21.41	21.20	18.98	0.0791
5	1	12		21.26	21.29	21.29		
5	1	24		21.40	21.29	21.24		
5	12	0		20.12	20.17	20.00		
5	12	7		20.18	20.19	20.19		
5	12	13		20.20	20.31	20.07		
5	25	0		20.19	20.23	20.18		
Limit	ERP < 3W			Result			Pass	



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LTE Band 12 Maximum Average Power [dBm] (GT - LC = -0.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	23.22	23.24	23.10	20.81	0.1205
3	1	8		23.20	23.04	23.04		
3	1	14		23.10	23.16	23.06		
3	8	0		22.18	22.24	22.05		
3	8	4		22.26	22.15	22.04		
3	8	7		22.24	22.15	22.11		
3	15	0		22.17	22.18	22.03		
3	1	0	16-QAM	22.27	22.39	22.30	20.07	0.1016
3	1	8		22.50	22.26	22.38		
3	1	14		22.42	22.48	22.35		
3	8	0		21.12	21.15	21.08		
3	8	4		21.27	21.21	21.13		
3	8	7		21.28	21.13	21.01		
3	15	0		21.30	21.09	21.23		
3	1	0	64-QAM	21.34	21.34	21.14	18.98	0.0791
3	1	8		21.21	21.35	21.28		
3	1	14		21.38	21.41	21.13		
3	8	0		20.12	20.09	19.92		
3	8	4		20.32	20.12	20.10		
3	8	7		20.12	20.27	20.01		
3	15	0		20.29	20.13	20.19		
Limit	ERP < 3W			Result			Pass	



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LTE Band 12 Maximum Average Power [dBm] (GT - LC = -0.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	23.22	23.11	23.00	20.80	0.1202
1.4	1	3		23.19	23.00	23.02		
1.4	1	5		23.09	23.12	23.01		
1.4	3	0		23.22	23.19	23.02		
1.4	3	1		23.15	23.04	23.12		
1.4	3	3		23.23	23.19	23.11		
1.4	6	0		22.32	22.35	22.08		
1.4	1	0	16-QAM	22.32	22.20	22.12	20.02	0.1005
1.4	1	3		22.31	22.11	22.05		
1.4	1	5		22.20	22.18	22.05		
1.4	3	0		22.19	22.45	22.24		
1.4	3	1		22.33	22.40	22.36		
1.4	3	3		22.44	22.45	22.35		
1.4	6	0		21.23	21.21	21.07		
1.4	1	0	64-QAM	21.16	21.12	21.05	18.96	0.0787
1.4	1	3		21.18	21.26	21.03		
1.4	1	5		21.29	21.19	21.18		
1.4	3	0		21.33	21.27	21.22		
1.4	3	1		21.21	21.26	21.19		
1.4	3	3		21.39	21.37	21.26		
1.4	6	0		20.20	20.09	20.08		
Limit	ERP < 3W			Result			Pass	



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LTE Band 13 Maximum Average Power [dBm] (GT - LC = 0.08 dB)									
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)	
10	1	0	QPSK	-	23.19		21.12	0.1294	
10	1	25			23.12				
10	1	49			23.04				
10	25	0			22.28				
10	25	12			22.19				
10	25	25			22.15				
10	50	0			22.17				
10	1	0	16-QAM		22.32	-	20.34	0.1081	
10	1	25			22.41				
10	1	49			22.33				
10	25	0			21.10				
10	25	12			21.20				
10	25	25			21.15				
10	50	0			21.19				
10	1	0	64-QAM		21.25		19.24	0.0839	
10	1	25			21.31				
10	1	49			21.22				
10	25	0			20.12				
10	25	12			20.21				
10	25	25			20.17				
10	50	0			20.21				
Limit	ERP < 3W			Result			Pass		



LTE Band 13 Maximum Average Power [dBm] (GT - LC = 0.08 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	23.12	23.07	23.04	21.08	0.1282
5	1	12		23.14	23.15	23.04		
5	1	24		23.02	22.98	23.03		
5	12	0		22.17	22.15	22.02		
5	12	7		22.23	22.20	22.19		
5	12	13		22.20	22.21	22.25		
5	25	0		22.22	22.15	22.08		
5	1	0	16-QAM	22.38	22.29	22.42	20.35	0.1084
5	1	12		22.37	22.37	22.40		
5	1	24		22.24	22.33	22.35		
5	12	0		21.03	21.20	21.02		
5	12	7		21.20	21.18	21.20		
5	12	13		21.10	21.19	21.13		
5	25	0		21.18	21.10	21.14		
5	1	0	64-QAM	21.30	21.25	21.33	19.28	0.0847
5	1	12		21.34	21.29	21.35		
5	1	24		21.25	21.30	21.12		
5	12	0		20.19	20.20	20.05		
5	12	7		20.15	20.15	20.14		
5	12	13		20.12	20.17	20.25		
5	25	0		20.29	20.27	20.25		
Limit	ERP < 3W			Result			Pass	



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LTE Band 26 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0	QPSK	22.53	22.54	22.27	20.56	0.1138
15	1	37		22.51	22.31	22.06		
15	1	74		22.53	22.26	22.13		
15	36	0		21.25	21.30	21.21		
15	36	20		21.16	21.30	21.03		
15	36	39		21.23	21.26	21.09		
15	75	0		21.09	21.23	21.10		
15	1	0	16-QAM	21.34	21.58	21.50	19.63	0.0918
15	1	37		21.41	21.61	21.34		
15	1	74		21.40	21.56	21.20		
15	36	0		20.02	20.29	20.15		
15	36	20		20.09	20.25	20.20		
15	36	39		20.02	20.28	20.23		
15	75	0		20.15	20.21	20.18		
15	1	0	64-QAM	20.11	20.44	20.41	18.46	0.0701
15	1	37		20.12	20.43	20.22		
15	1	74		20.25	20.38	20.07		
15	36	0		19.19	19.26	19.23		
15	36	20		19.08	19.24	19.20		
15	36	39		19.10	19.25	19.22		
15	75	0		19.30	19.18	19.25		
Limit	ERP < 7W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	22.53	22.35	22.24	20.55	0.1135
10	1	25		22.49	22.11	22.06		
10	1	49		22.50	22.21	22.20		
10	25	0		21.24	21.11	21.11		
10	25	12		21.01	21.30	21.06		
10	25	25		21.04	21.10	21.18		
10	50	0		21.03	21.13	21.09		
10	1	0	16-QAM	21.16	21.39	21.40	19.55	0.0902
10	1	25		21.26	21.53	21.20		
10	1	49		21.36	21.41	21.19		
10	25	0		20.18	20.15	20.10		
10	25	12		20.15	20.17	20.01		
10	25	25		20.10	20.08	20.13		
10	50	0		20.03	20.07	20.11		
10	1	0	64-QAM	20.14	20.42	20.22	18.44	0.0698
10	1	25		20.06	20.27	20.19		
10	1	49		20.18	20.34	20.16		
10	25	0		19.17	19.14	19.12		
10	25	12		19.20	19.22	19.04		
10	25	25		19.06	19.21	19.09		
10	50	0		19.11	19.13	19.15		
Limit	ERP < 7W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.34	22.50	22.12	20.52	0.1127
5	1	12		22.39	22.19	22.06		
5	1	24		22.35	22.24	22.11		
5	12	0		21.15	21.14	21.12		
5	12	7		21.02	21.22	21.11		
5	12	13		21.15	21.21	21.02		
5	25	0		21.06	21.21	21.00		
5	1	0	16-QAM	21.18	21.50	21.33	19.52	0.0895
5	1	12		21.35	21.41	21.19		
5	1	24		21.38	21.45	21.10		
5	12	0		20.15	20.18	20.04		
5	12	7		20.10	20.14	20.12		
5	12	13		20.15	20.21	20.23		
5	25	0		20.10	20.03	20.09		
5	1	0	64-QAM	20.05	20.33	20.36	18.44	0.0698
5	1	12		20.06	20.42	20.07		
5	1	24		20.07	20.33	20.21		
5	12	0		19.18	19.21	19.22		
5	12	7		19.10	19.21	19.01		
5	12	13		19.04	19.20	19.05		
5	25	0		19.16	19.09	19.19		
Limit	ERP < 7W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	22.48	22.53	22.22	20.55	0.1135
3	1	8		22.43	22.30	22.10		
3	1	14		22.40	22.08	22.12		
3	8	0		21.21	21.12	21.18		
3	8	4		21.09	21.27	21.05		
3	8	7		21.06	21.14	21.01		
3	15	0		21.10	21.20	21.04		
3	1	0	16-QAM	21.22	21.41	21.42	19.46	0.0883
3	1	8		21.39	21.44	21.21		
3	1	14		21.32	21.37	21.05		
3	8	0		20.12	20.14	20.06		
3	8	4		20.05	20.06	20.12		
3	8	7		20.40	20.25	20.22		
3	15	0		20.13	20.14	20.04		
3	1	0	64-QAM	20.01	20.35	20.21	18.37	0.0687
3	1	8		20.10	20.29	20.04		
3	1	14		20.13	20.19	20.05		
3	8	0		19.10	19.22	19.13		
3	8	4		19.03	19.24	19.18		
3	8	7		19.09	19.10	19.17		
3	15	0		19.16	19.05	19.21		
Limit	ERP < 7W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 0.17 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	22.44	22.47	22.23	20.49	0.1119
1.4	1	3		22.38	22.19	22.09		
1.4	1	5		22.35	22.08	22.06		
1.4	3	0		22.38	22.42	22.22		
1.4	3	1		22.46	22.28	22.15		
1.4	3	3		22.34	22.06	22.12		
1.4	6	0		21.23	21.23	21.17		
1.4	1	0	16-QAM	21.14	21.18	21.08	19.56	0.0904
1.4	1	3		21.06	21.18	21.05		
1.4	1	5		21.08	21.13	21.07		
1.4	3	0		21.25	21.42	21.49		
1.4	3	1		21.41	21.54	21.16		
1.4	3	3		21.30	21.37	21.03		
1.4	6	0		20.16	20.10	20.15		
1.4	1	0	64-QAM	20.13	20.23	20.10	18.43	0.0697
1.4	1	3		20.05	20.14	20.07		
1.4	1	5		20.02	20.20	20.01		
1.4	3	0		20.10	20.40	20.41		
1.4	3	1		20.07	20.25	20.10		
1.4	3	3		20.11	20.24	20.16		
1.4	6	0		19.16	19.23	19.20		
Limit	ERP < 7W			Result			Pass	



LTE Band 41 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.17	22.31	22.26	21.61	0.1449
20	1	49		21.93	22.12	21.91		
20	1	99		21.91	22.11	21.88		
20	50	0		21.13	21.25	21.18		
20	50	24		20.99	21.21	21.02		
20	50	50		20.91	21.17	20.93		
20	100	0		20.99	21.17	21.06		
20	1	0	16-QAM	21.39	21.36	21.33	20.69	0.1172
20	1	49		20.98	21.20	21.07		
20	1	99		21.06	21.13	21.10		
20	50	0		20.18	20.24	20.20		
20	50	24		20.02	20.20	20.03		
20	50	50		19.96	20.18	20.00		
20	100	0		20.01	20.24	20.07		
20	1	0	64-QAM	19.99	20.00	20.07	19.37	0.0865
20	1	49		19.89	19.90	19.83		
20	1	99		19.86	19.92	19.86		
20	50	0		19.18	19.25	19.16		
20	50	24		18.97	19.21	19.05		
20	50	50		18.97	19.19	19.00		
20	100	0		19.01	19.24	19.08		
Limit	EIRP < 2W			Result			Pass	



LTE Band 41 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	21.99	22.12	22.12	21.42	0.1387
15	1	37		21.80	22.04	21.71		
15	1	74		21.90	22.07	21.83		
15	36	0		20.95	21.10	21.02		
15	36	20		20.96	21.05	20.96		
15	36	39		20.91	21.07	20.92		
15	75	0		20.89	21.16	21.03		
15	1	0	16-QAM	21.34	21.27	21.14	20.64	0.1159
15	1	37		20.94	21.18	21.01		
15	1	74		20.98	21.05	21.02		
15	36	0		20.05	20.19	20.11		
15	36	20		19.90	20.03	19.98		
15	36	39		19.90	20.06	19.80		
15	75	0		19.93	20.17	20.05		
15	1	0	64-QAM	19.96	19.99	19.89	19.29	0.0849
15	1	37		19.78	19.77	19.71		
15	1	74		19.75	19.86	19.83		
15	36	0		19.09	19.25	19.14		
15	36	20		18.88	19.11	18.88		
15	36	39		18.94	19.10	18.95		
15	75	0		18.89	19.19	18.91		
Limit	EIRP < 2W			Result			Pass	



LTE Band 41 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.08	22.09	22.19	21.49	0.1409
10	1	25		21.84	21.93	21.88		
10	1	49		21.85	21.98	21.79		
10	25	0		21.13	21.25	21.08		
10	25	12		20.83	21.07	20.87		
10	25	25		20.89	21.02	20.81		
10	50	0		20.96	21.05	20.90		
10	1	0	16-QAM	21.38	21.19	21.32	20.68	0.1169
10	1	25		20.93	21.06	20.93		
10	1	49		21.04	21.08	21.04		
10	25	0		20.14	20.06	20.17		
10	25	12		19.95	20.11	20.03		
10	25	25		19.89	20.12	20.00		
10	50	0		19.87	20.21	19.88		
10	1	0	64-QAM	19.81	19.96	19.88	19.26	0.0843
10	1	25		19.84	19.80	19.70		
10	1	49		19.79	19.92	19.81		
10	25	0		19.08	19.13	19.16		
10	25	12		18.84	19.09	18.89		
10	25	25		18.95	19.18	18.95		
10	50	0		18.81	19.10	18.92		
Limit	EIRP < 2W			Result			Pass	



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LTE Band 41 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	21.94	22.01	22.07	21.37	0.1371
5	1	12		21.79	21.81	21.86		
5	1	24		21.79	21.98	21.70		
5	12	0		21.03	21.06	20.90		
5	12	7		20.66	20.87	20.79		
5	12	13		20.89	20.84	20.65		
5	25	0		20.84	20.99	20.86		
5	1	0	16-QAM	21.20	21.13	21.27	20.57	0.1140
5	1	12		20.85	20.86	20.85		
5	1	24		20.95	20.92	20.96		
5	12	0		20.00	19.96	20.05		
5	12	7		19.81	20.05	19.90		
5	12	13		19.81	20.07	19.85		
5	25	0		19.71	20.15	19.72		
5	1	0	64-QAM	19.68	19.85	19.87	19.17	0.0826
5	1	12		19.65	19.70	19.60		
5	1	24		19.59	19.81	19.79		
5	12	0		19.02	19.06	19.10		
5	12	7		18.75	18.89	18.88		
5	12	13		18.92	19.05	18.87		
5	25	0		18.62	19.09	18.73		
Limit	EIRP < 2W			Result			Pass	



FCC RADIO TEST REPORT

Report No. : FG710507-21B

LTE Band 66 Maximum Average Power [dBm] (GT - LC = 1.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.49	23.16	22.82	24.85	0.3055
20	1	49		22.41	22.68	22.57		
20	1	99		22.45	22.55	22.53		
20	50	0		21.38	21.74	21.73		
20	50	24		21.29	21.65	21.71		
20	50	50		21.37	21.50	21.70		
20	100	0		21.35	21.82	21.80		
20	1	0	16-QAM	21.97	22.20	22.32	24.01	0.2518
20	1	49		21.90	21.91	21.96		
20	1	99		21.75	21.93	21.58		
20	50	0		20.26	20.92	20.56		
20	50	24		20.04	20.86	20.83		
20	50	50		20.04	20.70	20.77		
20	100	0		20.19	20.80	20.79		
20	1	0	64-QAM	20.37	21.20	21.24	22.93	0.1963
20	1	49		20.11	20.87	20.89		
20	1	99		20.16	20.82	20.87		
20	50	0		19.26	19.91	19.93		
20	50	24		19.45	19.82	19.94		
20	50	50		19.30	19.64	19.78		
20	100	0		19.46	19.74	19.72		
Limit	EIRP < 1W			Result			Pass	



FCC RADIO TEST REPORT

Report No. : FG710507-21B

LTE Band 66 Maximum Average Power [dBm] (GT - LC = 1.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	22.62	23.14	23.01	24.83	0.3041
15	1	37		22.46	22.72	22.61		
15	1	74		22.57	22.70	22.64		
15	36	0		21.41	21.76	21.85		
15	36	20		21.41	21.71	21.78		
15	36	39		21.53	21.68	21.93		
15	75	0		21.45	21.91	21.80		
15	1	0	16-QAM	21.99	22.25	22.49	24.18	0.2618
15	1	37		22.06	21.92	21.99		
15	1	74		21.80	22.11	21.72		
15	36	0		20.30	20.96	20.76		
15	36	20		20.19	21.05	20.97		
15	36	39		20.06	20.89	20.79		
15	75	0		20.32	20.99	20.87		
15	1	0	64-QAM	20.41	21.21	21.31	23.00	0.1995
15	1	37		20.19	21.07	21.01		
15	1	74		20.25	20.97	21.02		
15	36	0		19.35	20.09	19.98		
15	36	20		19.47	19.90	19.94		
15	36	39		19.38	19.67	19.97		
15	75	0		19.29	19.89	19.90		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 1.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.65	23.00	23.01	24.70	0.2951
10	1	25		22.55	22.88	22.70		
10	1	49		22.60	22.71	22.67		
10	25	0		21.49	21.82	21.97		
10	25	12		21.48	21.83	21.88		
10	25	25		21.49	21.68	21.92		
10	50	0		21.40	21.87	21.90		
10	1	0	16-QAM	21.98	22.30	22.47	24.16	0.2606
10	1	25		22.05	22.02	22.10		
10	1	49		21.92	21.94	21.65		
10	25	0		20.45	20.92	20.73		
10	25	12		20.21	20.92	20.96		
10	25	25		20.24	20.80	20.89		
10	50	0		20.22	20.91	20.91		
10	1	0	64-QAM	20.57	21.37	21.36	23.06	0.2023
10	1	25		20.12	21.06	21.08		
10	1	49		20.28	20.83	20.90		
10	25	0		19.42	20.11	20.05		
10	25	12		19.63	19.94	19.98		
10	25	25		19.40	19.83	19.82		
10	50	0		19.35	19.86	19.73		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 1.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.56	23.05	23.01	24.74	0.2979
5	1	12		22.43	22.68	22.60		
5	1	24		22.63	22.64	22.58		
5	12	0		21.57	21.78	21.81		
5	12	7		21.42	21.70	21.95		
5	12	13		21.41	21.59	21.89		
5	25	0		21.55	21.74	21.86		
5	1	0	16-QAM	22.12	22.35	22.48	24.17	0.2612
5	1	12		21.99	22.11	22.16		
5	1	24		21.80	22.03	21.62		
5	12	0		20.30	21.12	20.58		
5	12	7		20.21	20.87	20.97		
5	12	13		20.17	20.79	20.80		
5	25	0		20.28	20.85	20.95		
5	1	0	64-QAM	20.51	21.39	21.38	23.08	0.2032
5	1	12		20.16	20.93	21.04		
5	1	24		20.35	20.91	20.94		
5	12	0		19.26	20.10	20.04		
5	12	7		19.61	19.87	20.08		
5	12	13		19.25	19.84	19.87		
5	25	0		19.36	19.78	19.72		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 1.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	22.63	23.05	22.82	24.74	0.2979
3	1	8		22.49	22.70	22.74		
3	1	14		22.61	22.71	22.67		
3	8	0		21.56	21.79	21.80		
3	8	4		21.32	21.82	21.90		
3	8	7		21.48	21.53	21.89		
3	15	0		21.44	21.77	21.91		
3	1	0	16-QAM	22.14	22.28	22.51	24.20	0.2630
3	1	8		21.91	22.06	21.96		
3	1	14		21.85	22.08	21.63		
3	8	0		20.31	21.11	20.70		
3	8	4		20.20	20.90	21.01		
3	8	7		20.13	20.82	20.78		
3	15	0		20.34	20.88	20.94		
3	1	0	64-QAM	20.53	21.24	21.29	22.98	0.1986
3	1	8		20.30	21.04	20.95		
3	1	14		20.39	20.96	20.97		
3	8	0		19.40	20.00	20.06		
3	8	4		19.50	19.82	19.98		
3	8	7		19.30	19.66	19.86		
3	15	0		19.12	19.83	19.76		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 1.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	22.68	23.01	22.86	24.70	0.2951
1.4	1	3		22.42	22.77	22.70		
1.4	1	5		22.48	22.64	22.65		
1.4	3	0		22.50	23.01	22.95		
1.4	3	1		22.55	22.88	22.74		
1.4	3	3		22.50	22.66	22.70		
1.4	6	0		21.41	21.76	21.90		
1.4	1	0	16-QAM	21.29	21.79	21.85	24.02	0.2523
1.4	1	3		21.54	21.53	21.89		
1.4	1	5		21.54	21.84	21.99		
1.4	3	0		21.97	22.24	22.33		
1.4	3	1		22.06	21.94	22.05		
1.4	3	3		21.88	22.12	21.74		
1.4	6	0		20.35	21.10	20.60		
1.4	1	0	64-QAM	20.11	20.92	20.92	23.04	0.2014
1.4	1	3		20.04	20.70	20.89		
1.4	1	5		20.29	20.80	20.81		
1.4	3	0		20.53	21.34	21.35		
1.4	3	1		20.26	20.96	21.03		
1.4	3	3		20.30	20.99	20.94		
1.4	6	0		19.54	19.75	19.89		
Limit	EIRP < 1W			Result			Pass	



Appendix B. Test Results of Radiated Test

LTE Band 26

LTE Band 26 / 1.4MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-61.90	-13	-48.90	-73.87	-67.20	1.83	9.28	H
	2472	-58.55	-13	-45.55	-75.13	-64.78	2.25	10.63	H
	3297	-60.19	-13	-47.19	-78.89	-67.71	2.62	12.29	H
									H
									H
									H
	1648	-63.27	-13	-50.27	-75.7	-68.57	1.83	9.28	V
	2472	-55.79	-13	-42.79	-72.6	-62.02	2.25	10.63	V
	3297	-59.78	-13	-46.78	-78.88	-67.30	2.62	12.29	V
									V
									V
									V
Middle	1672	-62.26	-13	-49.26	-74.41	-67.70	1.85	9.43	H
	2504	-58.33	-13	-45.33	-75.09	-64.72	2.26	10.80	H
	3344	-59.81	-13	-46.81	-78.4	-67.67	2.65	12.65	H
									H
									H
									H
	1672	-62.98	-13	-49.98	-75.6	-68.42	1.85	9.43	V
	2504	-59.33	-13	-46.33	-76.16	-65.72	2.26	10.80	V
	3344	-59.72	-13	-46.72	-78.7	-67.58	2.65	12.65	V
									V
									V
									V



Highest	1696	-62.68	-13	-49.68	-75.02	-68.25	1.86	9.58	H
	2544	-51.58	-13	-38.58	-68.18	-57.95	2.28	10.80	H
	3391	-60.56	-13	-47.56	-79.03	-68.36	2.67	12.62	H
									H
									H
									H
									H
	1696	-62.62	-13	-49.62	-75.44	-68.19	1.86	9.58	V
	2544	-53.93	-13	-40.93	-70.85	-60.30	2.28	10.80	V
	3391	-60.33	-13	-47.33	-79.17	-68.13	2.67	12.62	V
									V
									V
									V
									V

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

**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	3702	-57.55	-13	-44.55	-78.44	-67.19	2.77	12.40	H
	5553	-54.64	-13	-41.64	-79.67	-64.57	3.46	13.39	H
	7404	-50.38	-13	-37.38	-79.89	-57.58	3.98	11.18	H
	9255	-44.43	-13	-31.43	-77.08	-50.75	4.47	10.79	H
									H
									H
									H
	3702	-57.01	-13	-44.01	-78.31	-66.65	2.77	12.40	V
	5553	-52.87	-13	-39.87	-77.97	-62.80	3.46	13.39	V
	7404	-49.63	-13	-36.63	-79.62	-56.83	3.98	11.18	V
	9255	-44.80	-13	-31.80	-76.87	-51.12	4.47	10.79	V
									V
									V
									V
Middle	3742	-57.58	-13	-44.58	-78.61	-67.29	2.78	12.48	H
	5613	-53.97	-13	-40.97	-78.84	-63.84	3.48	13.35	H
	7484	-50.75	-13	-37.75	-80.27	-57.92	4.00	11.17	H
	9355	-43.57	-13	-30.57	-76.58	-49.88	4.50	10.81	H
									H
									H
									H
	3742	-57.39	-13	-44.39	-78.82	-67.10	2.78	12.48	V
	5613	-50.90	-13	-37.90	-75.99	-60.77	3.48	13.35	V
	7484	-50.23	-13	-37.23	-80.12	-57.40	4.00	11.17	V
	9355	-43.42	-13	-30.42	-75.59	-49.73	4.50	10.81	V
									V
									V
									V



Highest	3782	-57.78	-13	-44.78	-78.94	-67.43	2.79	12.44	H
	5673	-52.70	-13	-39.70	-77.9	-62.66	3.49	13.45	H
	7564	-50.92	-13	-37.92	-80.13	-58.15	4.02	11.26	H
	9455	-43.26	-13	-30.26	-76.82	-49.76	4.52	11.02	H
									H
									H
									H
	3782	-57.60	-13	-44.60	-79.15	-67.25	2.79	12.44	V
	5673	-53.26	-13	-40.26	-78.69	-63.22	3.49	13.45	V
	7564	-50.22	-13	-37.22	-79.91	-57.45	4.02	11.26	V
	9455	-44.27	-13	-31.27	-76.75	-50.77	4.52	11.02	V
									V
									V
									V

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

**LTE Band 7**

LTE Band 7 / 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	5001	-54.95	-25	-29.95	-78.79	-64.28	3.27	12.60	H
	7502	-31.97	-25	-6.97	-61.47	-39.17	4.00	11.20	H
	10002	-43.12	-25	-18.12	-76.48	-49.65	4.67	11.20	H
	12503	-31.67	-25	-6.67	-66.05	-40.21	5.26	13.80	H
	15004	-42.57	-25	-17.57	-79.64	-48.94	5.86	12.23	H
									H
									H
	5001	-56.50	-25	-31.50	-81.02	-65.83	3.27	12.60	V
	7502	-33.55	-25	-8.55	-63.41	-40.75	4.00	11.20	V
	10002	-44.12	-25	-19.12	-77.24	-50.65	4.67	11.20	V
	12503	-31.33	-25	-6.33	-66.13	-39.87	5.26	13.80	V
	15004	-40.57	-25	-15.57	-79.5	-46.94	5.86	12.23	V
									V
									V
Middle	5061	-54.55	-25	-29.55	-78.61	-63.64	3.29	12.38	H
	7591	-32.68	-25	-7.68	-61.75	-40.01	4.03	11.36	H
	10122	-40.05	-25	-15.05	-73.7	-46.72	4.71	11.38	H
	12653	-32.63	-25	-7.63	-67.93	-41.08	5.30	13.75	H
	15183	-42.53	-25	-17.53	-79.53	-50.21	5.90	13.58	H
									H
									H
	5061	-55.79	-25	-30.79	-80.48	-64.88	3.29	12.38	V
	7591	-32.97	-25	-7.97	-62.57	-40.30	4.03	11.36	V
	10122	-41.21	-25	-16.21	-74.41	-47.88	4.71	11.38	V
	12653	-31.90	-25	-6.90	-67.02	-40.35	5.30	13.75	V
	15183	-41.25	-25	-16.25	-79.61	-48.93	5.90	13.58	V
									V
									V



Highest	5121	-53.35	-25	-28.35	-77.65	-62.42	3.31	12.38	H
	7682	-36.68	-25	-11.68	-65.8	-44.18	4.07	11.56	H
	10242	-38.17	-25	-13.17	-72.11	-44.64	4.74	11.22	H
	12803	-32.07	-25	-7.07	-68.28	-40.23	5.34	13.50	H
	15364	-42.54	-25	-17.54	-79.46	-51.35	5.95	14.76	H
									H
									H
	5121	-55.13	-25	-30.13	-79.99	-64.20	3.31	12.38	V
	7682	-38.64	-25	-13.64	-68.29	-46.14	4.07	11.56	V
	10242	-42.36	-25	-17.36	-75.63	-48.83	4.74	11.22	V
	12803	-31.11	-25	-6.11	-66.54	-39.27	5.34	13.50	V
	15364	-41.11	-25	-16.11	-78.9	-49.92	5.95	14.76	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)
Lowest	1400	-60.90	-13.00	-47.90	-72.20	-63.96	1.69	6.90	H
	2096	-52.96	-13.00	-39.96	-67.54	-58.27	2.07	9.53	H
	2798	-60.41	-13.00	-47.41	-77.98	-67.06	2.39	11.19	H
									H
									H
									H
									H
	1400	-61.01	-13.00	-48.01	-72.50	-64.07	1.69	6.90	V
	2096	-53.62	-13.00	-40.62	-68.66	-58.93	2.07	9.53	V
	2798	-60.24	-13.00	-47.24	-78.07	-66.89	2.39	11.19	V
									V
									V
									V
									V
Middle	1408	-54.26	-13.00	-41.26	-65.65	-57.38	1.69	6.96	H
	2112	-47.48	-13.00	-34.48	-62.24	-52.63	2.08	9.38	H
	2812	-60.53	-13.00	-47.53	-78.11	-67.18	2.40	11.20	H
									H
									H
									H
									H
	1408	-55.12	-13.00	-42.12	-66.66	-58.24	1.69	6.96	V
	2112	-51.20	-13.00	-38.20	-66.46	-56.35	2.08	9.38	V
	2812	-59.92	-13.00	-46.92	-77.79	-66.57	2.40	11.20	V
									V
									V
									V
									V



Highest	1416	-57.86	-13.00	-44.86	-69.35	-61.04	1.70	7.03	H
	2120	-49.43	-13.00	-36.43	-64.28	-54.49	2.09	9.30	H
	2826	-60.34	-13.00	-47.34	-77.92	-66.99	2.40	11.20	H
									H
									H
									H
									H
	1416	-62.35	-13.00	-49.35	-73.95	-65.53	1.70	7.03	V
	2120	-50.41	-13.00	-37.41	-65.77	-55.47	2.09	9.30	V
	2826	-60.11	-13.00	-47.11	-78.00	-66.76	2.40	11.20	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 / 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	1552	-54.21	-13	-41.21	-66.23	-58.89	1.78	8.61	H
	2328	-48.28	-13	-35.28	-64.20	-53.62	2.18	9.67	H
	3112	-56.86	-13	-43.86	-75.20	-63.50	2.53	11.32	H
									H
									H
									H
									H
	1552	-53.21	-13.00	-40.21	-65.31	-57.89	1.78	8.61	V
	2328	-53.76	-13	-40.76	-70.39	-59.10	2.18	9.67	V
	3112	-58.45	-13	-45.45	-77.34	-65.09	2.53	11.32	V
									V
									V
									V
									V
Middle	1560	-56.45	-42.15	-14.30	-68.40	-61.18	1.78	8.66	H
	2336	-57.98	-13	-44.98	-73.91	-63.36	2.18	9.72	H
	3120	-56.89	-13	-43.89	-75.28	-63.54	2.54	11.34	H
									H
									H
									H
									H
	1560	-54.25	-42.15	-12.10	-66.34	-58.98	1.78	8.66	V
	2336	-59.86	-13	-46.86	-76.50	-65.24	2.18	9.72	V
	3120	-57.99	-13	-44.99	-76.92	-64.64	2.54	11.34	V
									V
									V
									V
									V



Highest	1560	-55.89	-42.15	-13.74	-67.84	-60.62	1.78	8.66	H
	2344	-57.94	-13	-44.94	-73.87	-63.37	2.19	9.76	H
	3129	-59.48	-13	-46.48	-77.94	-66.15	2.54	11.36	H
									H
									H
									H
									H
	1560	-57.48	-42.15	-15.33	-69.57	-62.21	1.78	8.66	V
	2344	-59.44	-13	-46.44	-76.09	-64.87	2.19	9.76	V
	3129	-59.30	-13	-46.30	-78.28	-65.97	2.54	11.36	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)
Lowest	3422	-54.14	-13	-41.14	-73.58	-64.06	2.68	12.60	H
	5133	-54.17	-13	-41.17	-78.51	-63.28	3.32	12.43	H
	6844	-51.74	-13	-38.74	-79.8	-60.28	3.86	12.40	H
									H
									H
									H
									H
	3422	-55.25	-13	-42.25	-75.06	-65.17	2.68	12.60	V
	5133	-54.31	-13	-41.31	-79.2	-63.42	3.32	12.43	V
	6844	-51.34	-13	-38.34	-79.76	-59.88	3.86	12.40	V
									V
									V
									V
									V
Middle	3472	-54.27	-13	-41.27	-74.17	-64.08	2.71	12.51	H
	5208	-53.49	-13	-40.49	-78.08	-63.01	3.34	12.86	H
	6944	-50.53	-13	-37.53	-78.89	-58.64	3.89	12.00	H
									H
									H
									H
									H
	3472	-57.84	-13	-44.84	-78.11	-67.65	2.71	12.51	V
	5208	-52.63	-13	-39.63	-77.7	-62.15	3.34	12.86	V
	6944	-50.53	-13	-37.53	-78.93	-58.64	3.89	12.00	V
									V
									V
									V
									V



Highest	3522	-54.01	-13	-41.01	-74.24	-63.60	2.73	12.31	H
	5283	-55.00	-13	-42.00	-79.63	-64.96	3.37	13.33	H
	7044	-50.05	-13	-37.05	-78.62	-57.77	3.92	11.64	H
									H
									H
									H
									H
	3522	-56.96	-13	-43.96	-77.58	-66.55	2.73	12.31	V
	5283	-53.31	-13	-40.31	-78.29	-63.27	3.37	13.33	V
	7044	-50.29	-13	-37.29	-78.84	-58.01	3.92	11.64	V
									V
									V
									V
									V

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