FCC RADIO TEST REPORT

FCC ID	:	**2AJN7-TP00128A**
Equipment	:	**Notebook Computer**
Brand Name	:	**Lenovo**
Model Name	:	**TP00128A**
Applicant	:	**LC Future Center Limited Taiwan Branch 7F., No. 780, Bei'an Rd., Zhongshan Dist., Taipei City 104, Taiwan**
Manufacturer	:	**LCFC (HeFei) Electronics Technology Co., Ltd. No. 3188-1, Yungu Road (Hefei Export Processing Zone), Hefei Economics & Technology Development Area, Anhui, CHINA**
Standard	:	**FCC 47 CFR Part 2, 22(H), 24(E), 27**

Equipment: Quectel EM120R-GL tested inside of Lenovo Notebook Computer.

The product was received on Jun. 03, 2021 and testing was started from Jun. 26, 2021 and completed on Jun. 30, 2021. We, Sporton International Inc. Wensan 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. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

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History of this test report

Report No.	Version	Description	Issued Date
FG0N2652-01B	01	Initial issue of report	Sep. 29, 2021
FG0N2652-01B	02	1. Revise Product Feature of Equipment Under Test 2. Revise Product Specification of Equipment Under Test 3. Revise Antenna Information 4. Revise EUT three orthogonal axis description	Oct. 21, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	§2.1046	Conducted Output Power	Not Required	-
	§22.913 (a)(2)	Effective Radiated Power (Band 5) (Band 26)	Not Required	
	§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 25) (Band 7) (Band 38) (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	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 25) (Band 26) (Band 66)	Not Required	-
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (Band 7) (Band 38) (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 25) (Band 26) (Band 66)	Not Required	-
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (Band 7) (Band 38) (Band 41)		
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Not Required	-

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§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 25) (Band 26) (Band 66)	Pass	Under limit 4.62 dB at 4992.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (Band 7) (Band 38) (Band 41)		

Remark:

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a variant report by adding antenna. All the test cases were performed on original report which can be referred to Sporton Report Number FG0N2652B. 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: Sheng Kuo

Report Producer: Ruby Zou

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Notebook Computer
Brand Name	Lenovo
Model Name	TP00128A
FCC ID	2AJN7-TP00128A
EUT supports Radios application	WCDMA/HSPA/LTE/GNSS/NFC/UWB
EUT Stage	Production Unit

Remark:

1. The above EUT's information was declared by manufacturer.
2. Equipment: Quectel EM120R-GL tested inside of Lenovo Notebook Computer.

WWAN Antenna Information				
Main Antenna	**Manufacturer**	JYT/NVC	**Peak gain (dBi)**	LTE Band 2 : -1.83 LTE Band 4 : -1.18 LTE Band 5 : -2.02 LTE Band 7 : -4.23 LTE Band 12 : -3.81 LTE Band 13 : -3.29 LTE Band 25 : -1.67 LTE Band 26 : -2.02 LTE Band 38 : -5.78 LTE Band 41 : -4.12 LTE Band 66 : -1.21
	Part number	JYAAE0154HR	**Type**	PIFA

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

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 25: 1850.7MHz ~ 1914.3 MHz LTE Band 26: 824.7MHz ~ 848.3 MHz LTE Band 38: 2572.5MHz ~ 2617.5MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz
Rx Frequency	LTE Band 2: 1930.7 MHz ~ 1989.3 MHz LTE Band 4: 2110.7 MHz ~ 2154.3 MHz LTE Band 5: 869.7 MHz ~ 893.3 MHz LTE Band 7: 2622.5MHz ~ 2687.5 MHz LTE Band 12: 729.7 MHz ~ 745.3 MHz LTE Band 13: 748.5 MHz ~ 753.5 MHz LTE Band 25: 1930.7MHz ~ 1994.3 MHz LTE Band 26: 869.7MHz ~ 893.3MHz LTE Band 38: 2572.5MHz ~ 2617.5MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 2110.7 MHz ~ 2199.3 MHz
Bandwidth	LTE Band 2: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5: 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7: 5MHz/ 10MHz / 15MHz / 20MHz LTE Band 12: 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13: 5MHz / 10MHz LTE Band 25: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 26: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz LTE Band 38: 5MHz / 10MHz / 15MHz / 20MHz LTE Band 41: 5MHz / 10MHz / 15MHz / 20MHz LTE Band 66: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
Type of Modulation	QPSK / 16QAM / 64QAM/ 256QAM (Downlink only)

1.3 Modification of EUT

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

1.4 Testing Location

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
Test Site No.	**Sporton Site No.**
	03CH11-HY
Test Engineer	Harvey Guo, Fu Chen and Troye Hsieh
Temperature	18.1~23.1℃
Relative Humidity	55.3~69.9%

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

FCC Designation No.: TW3786

1.5 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 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. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

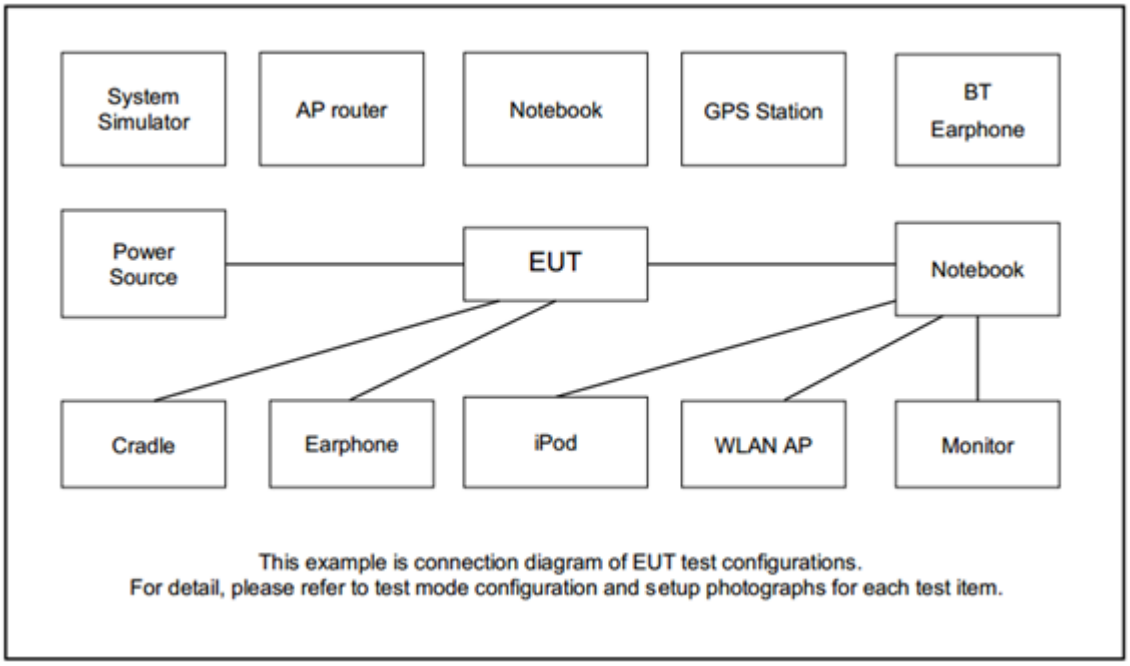
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

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 Tablet Type (three orthogonal axis (X: flat, Y: portrait, Z: landscape)) and Notebook Type, adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find Notebook type for LTE Band 5, 26, 41, X Plane for LTE Band 41C, Y Plane for LTE Band 2, 7, 12, 13, 41 (HPUE), 66; and Z Plane for LTE Band 25 as worst plan

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
	4	Covered by Band 66												v	v	v
	5				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	v
	25						v	v			v			v	v	v
	26					v	-	v			v			v	v	v
	38	Covered by Band 41												v	v	v
	41	-	-				v	v			v			v	v	v
	66						v	v			v			v	v	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. 4. Wider operating range bandwidth covers narrower one when the power is higher or the same.															

Test Items	Band	Bandwidth (MHz)										Modulation			RB #			Test Channel		
		20+20	20+15	15+20	20+10	10+20	20+5	5+20	15+15	15+10	10+15	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Radiated Spurious Emission	41_CA				v							v			v			v	v	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	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

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 25 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	26140	26340	26590
	Frequency	1860	1880	1905
15	Channel	26115	26340	26615
	Frequency	1857.5	1880	1907.5
10	Channel	26090	26340	26640
	Frequency	1855	1880	1910
5	Channel	26065	26340	26665
	Frequency	1852.5	1880	1912.5
3	Channel	26055	26340	26675
	Frequency	1851.5	1880	1913.5
1.4	Channel	26047	26340	26683
	Frequency	1850.7	1880	1914.3

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 38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	37850	38000	38150
	Frequency	2580.0	2595.0	2610.0
15	Channel	37825	38000	38175
	Frequency	2577.5	2595.0	2612.5
10	Channel	37800	38000	38200
	Frequency	2575.0	2595.0	2615.0
5	Channel	37775	38000	38225
	Frequency	2572.5	2595.0	2617.5

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

LTE Band 41 Channel and Frequency List_CA					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	39750	40521	41292
		Frequency	2506.0	2583.1	2660.2
	SCC	Channel	39948	40719	41490
		Frequency	2525.8	2602.9	2680.0
20 + 15	PCC	Channel	39750	40546	41341
		Frequency	2506.0	2585.6	2665.1
	SCC	Channel	39921	40717	41512
		Frequency	2523.1	2602.7	2682.2
15 + 20	PCC	Channel	39728	40523	41319
		Frequency	2503.8	2593.3	2662.9
	SCC	Channel	39899	40694	41490
		Frequency	2520.9	2600.4	2680.0
20 + 10	PCC	Channel	39750	40571	41391
		Frequency	2506.0	2588.1	2670.1
	SCC	Channel	39894	40715	41535
		Frequency	2520.4	2602.5	2684.5
10 + 20	PCC	Channel	39705	40526	41346
		Frequency	2501.5	2583.6	2665.6
	SCC	Channel	39849	40670	41490
		Frequency	2515.9	2598.0	2680.0

LTE Band 41 Channel and Frequency List_CA					
20 + 5	PCC	Channel	39750	40595	41440
		Frequency	2506.0	2590.5	2675.0
	SCC	Channel	39867	40712	41557
		Frequency	2517.7	2602.2	2686.7
5 + 20	PCC	Channel	39683	40528	41373
		Frequency	2499.3	2583.8	2668.3
	SCC	Channel	39800	40645	41490
		Frequency	2511.0	2595.5	2680.0
15 + 15	PCC	Channel	39725	40545	41365
		Frequency	2503.5	2585.5	2667.5
	SCC	Channel	39875	40695	41515
		Frequency	2518.5	2600.5	2682.5
10 + 15	PCC	Channel	39703	40549	41395
		Frequency	2501.3	2585.9	2670.5
	SCC	Channel	39823	40669	41515
		Frequency	2513.3	2597.9	2682.5
15 + 10	PCC	Channel	39725	40571	41417
		Frequency	2503.5	2588.1	2672.7
	SCC	Channel	39845	40691	41537
		Frequency	2515.5	2600.1	2684.7

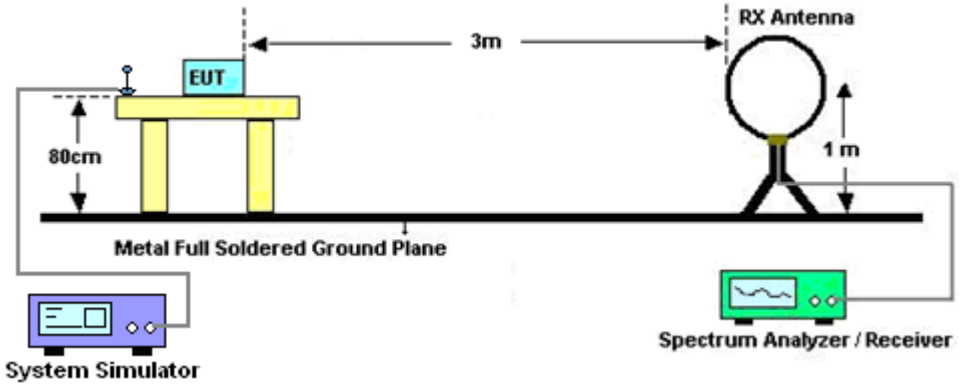
3 Radiated Test Items

3.1 Measuring Instruments

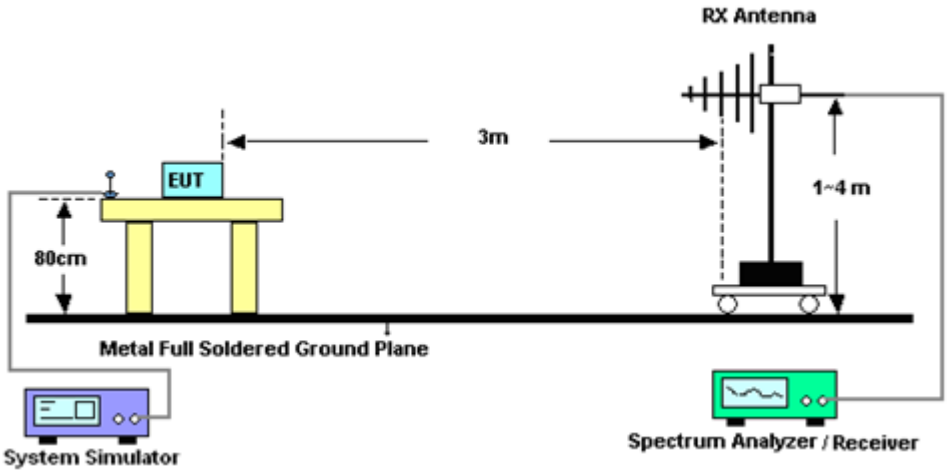
See list of measuring instruments of this test report.

3.1.1 Test Setup

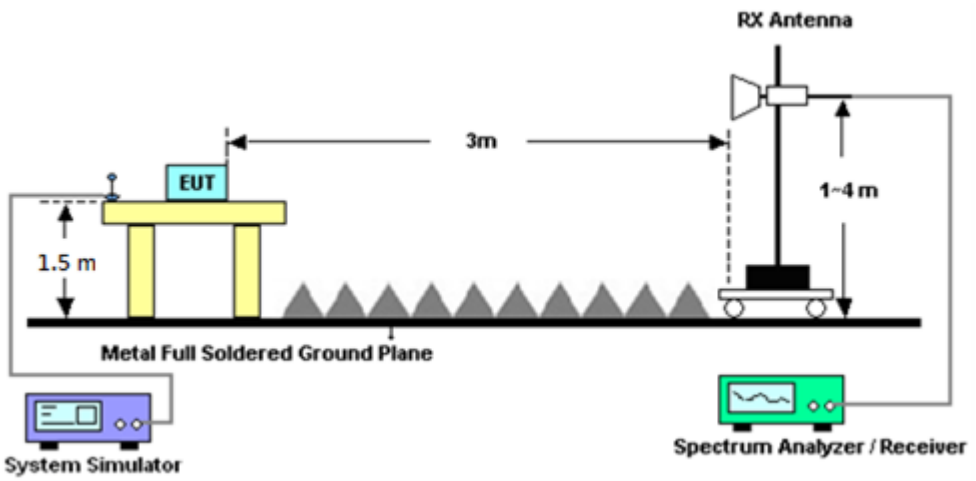
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.1.2 Test Result of Radiated Test

Please refer to Appendix A.

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.

3.2 Radiated Spurious Emission Measurement

3.2.1 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, 38, 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.

3.2.2 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 + 10log(P)dB below the transmitter power P(Watts)

    For LTE Band 7, 38, 41

    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

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

    ERP (dBm) = EIRP - 2.15

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Nov. 03, 2020	Jun. 26, 2021~ Jun. 30, 2021	Nov. 02, 2021	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz ~ 18GHz	May 18, 2021	Jun. 26, 2021~ Jun. 30, 2021	May 17, 2022	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00993	18GHz~40GHz	Nov. 19, 2020	Jun. 26, 2021~ Jun. 30, 2021	Nov. 18, 2021	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00994	18GHz~40GHz	Nov. 19, 2020	Jun. 26, 2021~ Jun. 30, 2021	Nov. 18, 2021	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 11, 2020	Jun. 26, 2021~ Jun. 30, 2021	Oct. 10, 2021	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	37059 & 01	30MHz~1GHz	Oct. 11, 2020	Jun. 26, 2021~ Jun. 30, 2021	Oct. 10, 2021	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 04, 2021	Jun. 26, 2021~ Jun. 30, 2021	Jan. 03, 2022	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 12, 2020	Jun. 26, 2021~ Jun. 30, 2021	Nov. 11, 2021	Radiation (03CH11-HY)
Preamplifier	EMEC	EM1G18G	060812	1GHz~18GHz	Oct. 27, 2020	Jun. 26, 2021~ Jun. 30, 2021	Oct. 26, 2021	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Jun. 26, 2021~ Jun. 30, 2021	Jun. 21, 2022	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 02, 2020	Jun. 26, 2021~ Jun. 30, 2021	Dec. 01, 2021	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 23, 2020	Jun. 26, 2021~ Jun. 30, 2021	Oct. 22, 2021	Radiation (03CH11-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	Dec. 14, 2020	Jun. 26, 2021~ Jun. 30, 2021	Dec. 13, 2021	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Jun. 26, 2021~ Jun. 30, 2021	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jun. 26, 2021~ Jun. 30, 2021	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Jun. 26, 2021~ Jun. 30, 2021	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Jun. 26, 2021~ Jun. 30, 2021	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz-30MHz	Mar. 11, 2021	Jun. 26, 2021~ Jun. 30, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Mar. 11, 2021	Jun. 26, 2021~ Jun. 30, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	30M-18G	Mar. 11, 2021	Jun. 26, 2021~ Jun. 30, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30MHz-40GHz	Mar. 11, 2021	Jun. 26, 2021~ Jun. 30, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-900 -1000-15000-60SS	SN12	1GHz High Pass Filter	Nov. 05, 2020	Jun. 26, 2021~ Jun. 30, 2021	Nov. 04, 2021	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60SS	SN3	3GHz High Pass Filter	Sep. 14, 2020	Jun. 26, 2021~ Jun. 30, 2021	Sep. 13, 2021	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Nov. 18, 2020	Jun. 26, 2021~ Jun. 30, 2021	Nov. 17, 2021	Radiation (03CH11-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.29**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.32**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.08**

Appendix A. Test Results of Radiated Test

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	-50.39	-13	-37.39	-67.66	-62.18	0.72	12.52	H
	5556	-54.02	-13	-41.02	-75.97	-66.19	1.00	13.17	H
	7404	-53.25	-13	-40.25	-78.16	-62.64	1.18	10.57	H
									H
									H
									H
	3702	-42.01	-13	-29.01	-60.48	-53.8	0.72	12.52	V
	5556	-49.53	-13	-36.53	-71.61	-61.7	1.00	13.17	V
	7404	-53.78	-13	-40.78	-78.49	-63.17	1.18	10.57	V
									V
									V
									V
Middle	3744	-45.32	-13	-32.32	-62.72	-57.12	0.70	12.50	H
	5616	-53.29	-13	-40.29	-75.18	-65.44	0.98	13.13	H
	7488	-53.25	-13	-40.25	-77.88	-62.49	1.18	10.42	H
									H
									H
									H
	3744	-42.03	-13	-29.03	-60.62	-53.83	0.70	12.50	V
	5616	-49.85	-13	-36.85	-71.91	-62	0.98	13.13	V
	7488	-53.16	-13	-40.16	-77.88	-62.4	1.18	10.42	V
									V
									V
									V

Highest	3780	-50.89	-13	-37.89	-68.37	-62.7	0.68	12.49	H
	5670	-54.81	-13	-41.81	-76.75	-66.92	0.99	13.10	H
	9451.5	-44.20	-13	-31.20	-73.83	-54.01	1.53	11.34	H
									H
									H
									H
	3780	-47.52	-13	-34.52	-66.21	-59.33	0.68	12.49	V
	5670	-54.54	-13	-41.54	-76.66	-66.65	0.99	13.10	V
	9451.5	-42.49	-13	-29.49	-73.75	-52.3	1.53	11.34	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)
Lowest	1649	-57.71	-13	-44.71	-67.74	-64.66	0.53	9.63	H
	2474	-56.94	-13	-43.94	-70.57	-64.92	0.65	10.78	H
	3298	-58.87	-13	-45.87	-75.35	-67.96	0.76	11.99	H
									H
									H
									H
	1649	-54.99	-13	-41.99	-64.72	-61.94	0.53	9.63	V
	2474	-57.11	-13	-44.11	-71.26	-65.09	0.65	10.78	V
	3298	-58.40	-13	-45.40	-74.85	-67.49	0.76	11.99	V
									V
									V
									V
Middle	1664	-58.11	-13	-45.11	-68.28	-65.09	0.53	9.66	H
	2496	-58.65	-13	-45.65	-72.25	-66.64	0.65	10.80	H
	3327	-57.97	-13	-44.97	-74.49	-67.14	0.76	12.08	H
									H
									H
									H
	1664	-55.40	-13	-42.40	-65.16	-62.38	0.53	9.66	V
	2496	-57.86	-13	-44.86	-71.9	-65.85	0.65	10.80	V
	3327	-58.65	-13	-45.65	-75.04	-67.82	0.76	12.08	V
									V
									V
									V

Highest	1679	-55.38	-13	-42.38	-65.69	-62.39316	0.53	9.69	H
	2519	-58.72	-13	-45.72	-72.37	-66.72146	0.66	10.81	H
	3358	-58.46	-13	-45.46	-75.05	-67.7183	0.77	12.17	H
									H
									H
									H
	1679	-52.40	-13	-39.40	-62.19	-59.41316	0.53	9.69	V
	2519	-58.73	-13	-45.73	-72.76	-66.73146	0.66	10.81	V
	3358	-58.57	-13	-45.57	-74.88	-67.8283	0.77	12.17	V
									V
									V
									V

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

LTE Band 7

LTE Band 7 / 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	5004	-36.13	-25	-11.13	-57.01	-47.4	0.94	12.21	H
	7506	-41.25	-25	-16.25	-65.84	-50.49	1.18	10.42	H
	10008	-45.97	-25	-20.97	-77.29	-56.69	1.37	12.08	H
									H
									H
									H
	5004	-33.11	-25	-8.11	-54.18	-44.38	0.94	12.21	V
	7506	-39.03	-25	-14.03	-63.75	-48.27	1.18	10.42	V
	10008	-43.69	-25	-18.69	-76.68	-54.41	1.37	12.08	V
									V
									V
									V
Middle	5052	-41.85	-25	-16.85	-62.76	-53.2	0.95	12.30	H
	7578	-39.65	-25	-14.65	-64.41	-49.09	1.18	10.62	H
	10098	-45.87	-25	-20.87	-77.08	-56.41	1.38	11.91	H
									H
									H
									H
	5052	-38.47	-25	-13.47	-59.59	-49.82	0.95	12.30	V
	7578	-39.70	-25	-14.70	-64.25	-49.14	1.18	10.62	V
	10098	-43.99	-25	-18.99	-76.9	-54.53	1.38	11.91	V
									V
									V
									V

Highest	5100	-44.53	-25	-19.53	-65.51	-55.97	0.96	12.40	H
	7656	-43.97	-25	-18.97	-68.89	-53.62	1.18	10.84	H
	10206	-45.80	-25	-20.80	-76.87	-56.12	1.39	11.71	H
									H
									H
									H
	5100	-42.82	-25	-17.82	-63.98	-54.26	0.96	12.40	V
	7656	-45.56	-25	-20.56	-70.27	-55.21	1.18	10.84	V
	10206	-44.21	-25	-19.21	-77.03	-54.53	1.39	11.71	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)
Lowest	1399	-50.67	-13	-37.67	-61.67	-56.71	0.50	8.69	H
	2098	-60.16	-13	-47.16	-73.57	-67.90	0.59	10.48	H
	2798	-58.51	-13	-45.51	-73.21	-66.64	0.70	10.98	H
									H
									H
									V
	1399	-50.64	-13	-37.64	-61.69	-56.68	0.50	8.69	V
	2098	-59.81	-13	-46.81	-73.13	-67.55	0.59	10.48	V
	2798	-58.49	-13	-45.49	-73.60	-66.62	0.70	10.98	V
									V
									V
									V
Middle	1405	-48.55	-13	-35.55	-59.66	-54.63	0.50	8.73	H
	2107	-58.14	-13	-45.14	-71.83	-65.88	0.59	10.49	H
	2810	-59.53	-13	-46.53	-74.28	-67.66	0.70	10.99	H
									H
									H
									H
	1405	-54.69	-13	-41.69	-65.71	-60.77	0.50	8.73	V
	2107	-55.20	-13	-42.20	-68.69	-62.94	0.59	10.49	V
	2810	-59.07	-13	-46.07	-74.19	-67.20	0.70	10.99	V
									V
									V
									V

Highest	1413	-50.99	-13.00	-37.99	-62.13	-57.12	0.50	8.78	H
	2119	-59.75	-13.00	-46.75	-73.45	-67.50	0.59	10.50	H
	2826	-59.01	-13.00	-46.01	-73.83	-67.15	0.71	11.00	H
									H
									H
									H
	1413	-51.31	-13.00	-38.31	-62.28	-57.44	0.50	8.78	V
	2119	-59.78	-13.00	-46.78	-73.51	-67.53	0.59	10.50	V
	2826	-58.36	-13.00	-45.36	-73.50	-66.50	0.71	11.00	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	1554	-53.21	-13	-40.21	-63.73	-59.96	0.51	9.42	H
	2332	-46.23	-13	-33.23	-60.51	-54.12	0.62	10.67	H
	3109	-58.80	-13	-45.80	-74.68	-67.33	0.74	11.43	H
									H
									H
									H
	1554	-51.31	-13.00	-38.31	-61.30	-58.06	0.51	9.42	V
	2332	-50.93	-13	-37.93	65.72	-58.82	0.62	10.67	V
	3109	-58.39	-13	-45.39	-74.46	-66.92	0.74	11.43	V
									V
									V
									V
Middle	1559	-59.92	-42.15	-17.77	-70.43	-66.69	0.51	9.43	H
	2339	-54.20	-13	-41.20	-68.34	-62.10	0.62	10.67	H
	3119	-58.01	-13	-45.01	-73.97	-66.57	0.74	11.46	H
									H
									H
									H
	1559	-59.14	-42.15	-16.99	-69.08	-65.91	0.51	9.43	V
	2339	-53.96	-13	-40.96	-68.70	-61.86	0.62	10.67	V
	3119	-58.60	-13	-45.60	-74.74	-67.16	0.74	11.46	V
									V
									V
									V

Highest	1564	-57.56	-42.15	-15.41	-68.06	-64.34	0.52	9.44	H
	2347	-46.63	-13	-33.63	-60.77	-54.53	0.62	10.68	H
	3129	-58.83	-13	-45.83	-74.79	-67.42	0.74	11.49	H
									H
									H
									H
	1564	-57.68	-42.15	-15.53	-67.57	-64.46	0.52	9.44	V
	2347	-48.41	-13	-35.41	-63.12	-56.31	0.62	10.68	V
	3129	-58.67	-13	-45.67	-74.88	-67.26	0.74	11.49	V
									V
									V
									V

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

LTE Band 13 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1555	-53.11	-13	-40.11	-63.63	-59.87	0.51	9.42	H
	2332	-41.08	-13	-28.08	-55.36	-48.97	0.62	10.67	H
	3110	-58.78	-13	-45.78	-74.66	-67.32	0.74	11.43	H
									H
									H
									H
	1555	-51.24	-13	-38.24	-61.23	-58	0.51	9.42	V
	2332	-51.36	-13	-38.36	-66.14	-59.25	0.62	10.67	V
	3110	-58.68	-13	-45.68	-74.76	-67.22	0.74	11.43	V
									V
									V
									V

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

LTE Band 25

LTE Band 25 / 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	-45.91	-13	-32.91	-63.18	-57.7	0.72	12.52	H
	5553	-53.04	-13	-40.04	-75.03	-65.21	1.00	13.17	H
	7404	-53.17	-13	-40.17	-78.08	-62.56	1.18	10.57	H
									H
									H
									H
	3702	-50.66	-13	-37.66	-69.13	-62.45	0.72	12.52	V
	5553	-53.64	-13	-40.64	-75.72	-65.81	1.00	13.17	V
	7404	-53.42	-13	-40.42	-78.13	-62.81	1.18	10.57	V
									V
									V
									V
Middle	3742	-46.78	-13	-33.78	-64.18	-58.58	0.70	12.50	H
	5613	-52.68	-13	-39.68	-74.57	-64.83	0.98	13.13	H
	7484	-52.91	-13	-39.91	-77.55	-62.16	1.18	10.43	H
									H
									H
									H
	3742	-49.11	-13	-36.11	-67.7	-60.91	0.70	12.50	V
	5613	-54.23	-13	-41.23	-76.29	-66.38	0.98	13.13	V
	7484	-53.33	-13	-40.33	-78.05	-62.58	1.18	10.43	V
									V
									V
									V

Highest	3792	-47.69	-13	-34.69	-65.17	-59.5	0.67	12.48	H
	5688	-53.88	-13	-40.88	-75.83	-65.98	0.99	13.09	H
	7584	-52.80	-13	-39.80	-77.55	-62.25	1.18	10.64	H
	9480	-43.57	-13	-30.57	-73.24	-53.26	1.57	11.26	H
									H
									H
									H
	3792	-47.25	-13	-34.25	-65.98	-59.06	0.67	12.48	V
	5688	-55.82	-13	-42.82	-77.96	-67.92	0.99	13.09	V
	7584	-54.02	-13	-41.02	-78.55	-63.47	1.18	10.64	V
	9480	-42.14	-13	-29.14	-73.34	-51.83	1.57	11.26	V
									V
									V
									V

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

LTE Band 26

LTE Band 26 / 15MHz / 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	1650	-55.61	-13	-42.61	-65.64	-62.56	0.53	9.63	H
	2475	-48.21	-13	-35.21	-61.84	-56.19	0.65	10.78	H
	3299	-57.83	-13	-44.83	-74.31	-66.92	0.76	12.00	H
									H
									H
									H
	1650	-53.28	-13	-40.28	-63.02	-60.23	0.53	9.63	V
	2475	-49.61	-13	-36.61	-63.75	-57.59	0.65	10.78	V
	3299	-58.15	-13	-45.15	-74.6	-67.24	0.76	12.00	V
									V
									V
									V
Middle	1660	-57.73	-13	-44.73	-67.76	-64.7044	0.53	9.65	H
	2490	-57.40	-13	-44.40	-70.99	-65.389	0.65	10.79	H
	3319	-58.57	-13	-45.57	-75.09	-67.71715	0.76	12.06	H
									H
									H
									H
	1660	-54.92	-13	-41.92	-64.66	-61.8944	0.53	9.65	V
	2490	-58.34	-13	-45.34	-72.41	-66.329	0.65	10.79	V
	3319	-58.65	-13	-45.65	-75.06	-67.79715	0.76	12.06	V
									V
									V
									V

Highest	1670	-56.22	-13	-43.22	-66.39	-63.2148	0.53	9.67	H
	2505	-49.57	-13	-36.57	-63.18	-57.5667	0.66	10.80	H
	3340	-58.38	-13	-45.38	-74.97	-67.587	0.76	12.12	H
									H
									H
									H
	1670	-54.45	-13	-41.45	-64.22	-61.4448	0.53	9.67	V
	2505	-49.34	-13	-36.34	-63.35	-57.3367	0.66	10.80	V
	3340	-58.54	-13	-45.54	-74.9	-67.747	0.76	12.12	V
									V
									V
									V

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

LTE Band 41 (HPUE)

LTE Band 41 HPUE / 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	4992	-33.89	-25	-8.89	-54.86	-45.19	0.90	12.20	H
	7494	-41.71	-25	-16.71	-66.33	-50.94	1.18	10.41	H
	9984	-47.15	-25	-22.15	-78.47	-57.49	1.40	11.73	H
									H
									H
									H
	4992	-29.62	-25	-4.62	-50.72	-40.92	0.90	12.20	V
	7494	-39.51	-25	-14.51	-64.23	-48.74	1.18	10.41	V
	9984	-45.46	-25	-20.46	-78.44	-55.8	1.40	11.73	V
									V
									V
									V
Middle	5166	-42.70	-25	-17.70	-63.77	-54.25	0.98	12.53	H
	7752	-36.28	-25	-11.28	-61.4	-46.2	1.19	11.11	H
	10332	-46.49	-25	-21.49	-77.39	-56.56	1.40	11.47	H
									H
									H
									H
	5166	-39.72	-25	-14.72	-60.95	-51.27	0.98	12.53	V
	7752	-34.80	-25	-9.80	-59.83	-44.72	1.19	11.11	V
	10332	-44.84	-25	-19.84	-77.54	-54.91	1.40	11.47	V
									V
									V
									V

Highest	5340	-55.59	-25	-30.59	-76.98	-67.42	1.05	12.88	H
	8016	-35.49	-25	-10.49	-62.06	-46.09	1.20	11.80	H
	13356	-41.02	-25	-16.02	-74.8	-52.51	1.48	12.97	H
									H
									H
									H
	5340	-54.98	-25	-29.98	-76.52	-66.81	1.05	12.88	V
	8016	-37.62	-25	-12.62	-64.26	-48.22	1.20	11.80	V
	13356	-42.98	-25	-17.98	-76.43	-54.47	1.48	12.97	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	3420	-49.60	-13	-36.60	-66.96	-61.19	0.77	12.36	H
	5136	-41.15	-13	-28.15	-62.17	-52.65	0.97	12.47	H
	10270.5	-37.71	-13	-24.71	-68.68	-47.90	1.39	11.59	H
									H
									H
									H
	3420	-49.49	-13	-36.49	-66.66	-61.08	0.77	12.36	V
	5136	-37.54	-13	-24.54	-58.74	-49.04	0.97	12.47	V
	10270.5	-38.42	-13	-25.42	-71.17	-48.61	1.39	11.59	V
									V
									V
									V
Middle	3474	-47.25	-13	-34.25	-64.69	-58.99	0.78	12.52	H
	5208	-40.43	-13	-27.43	-61.54	-52.05	0.99	12.62	H
	10417.5	-45.68	-13	-32.68	-76.45	-55.58	1.41	11.31	H
									H
									H
									H
	3474	-45.87	-13	-32.87	-63.89	-57.61	0.78	12.52	V
	5208	-34.44	-13	-21.44	-55.73	-46.06	0.99	12.62	V
	10417.5	-43.02	-13	-30.02	-75.63	-52.92	1.41	11.31	V
									V
									V
									V

Highest	3522	-46.70	-13	-33.70	-64.08	-58.51	0.78	12.59	H
	5286	-38.95	-13	-25.95	-60.22	-50.70	1.02	12.77	H
	10564.5	-44.28	-13	-31.28	-74.9	-53.89	1.42	11.03	H
									H
									H
									H
	3522	-42.09	-13	-29.09	-60.45	-53.90	0.78	12.59	V
	5286	-33.95	-13	-20.95	-55.39	-45.70	1.02	12.77	V
	10564.5	-44.83	-13	-31.83	-77.32	-54.44	1.42	11.03	V
									V
									V
									V

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

LTE Band 41C

LTE Band 41C / 20MHz+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	5022	-51.65	-25	-26.65	-72.55	-62.95	0.94	12.24	H
	7536	-53.07	-25	-28.07	-77.75	-62.39	1.18	10.50	H
	10044	-46.60	-25	-21.60	-77.87	-57.25	1.37	12.02	H
									H
									H
									H
	5022	-45.82	-25	-20.82	-66.91	-57.12	0.94	12.24	V
	7536	-52.80	-25	-27.80	-77.45	-62.12	1.18	10.50	V
	10044	-44.73	-25	-19.73	-77.69	-55.38	1.37	12.02	V
									V
									V
									V
Middle	5178	-56.44	-25	-31.44	-77.51	-68.01	0.98	12.56	H
	7764	-51.71	-25	-26.71	-76.83	-61.66	1.19	11.14	H
	10350	-46.06	-25	-21.06	-76.93	-56.09	1.40	11.44	H
									H
									H
									H
	5178	-53.58	-25	-28.58	-74.83	-65.15	0.98	12.56	V
	7764	-51.19	-25	-26.19	-76.27	-61.14	1.19	11.14	V
	10350	-44.52	-25	-19.52	-77.2	-54.55	1.40	11.44	V
									V
									V
									V

Highest	5346	-56.16	-25	-31.16	-77.6	-68	1.05	12.89	H
	8016	-50.51	-25	-25.51	-77.08	-61.11	1.20	11.80	H
	10692	-46.69	-25	-21.69	-77.22	-56.04	1.43	10.79	H
									H
									H
									H
	5346	-56.36	-25	-31.36	-77.91	-68.2	1.05	12.89	V
	8016	-50.45	-25	-25.45	-77.09	-61.05	1.20	11.80	V
	10692	-45.29	-25	-20.29	-77.69	-54.64	1.43	10.79	V
									V
									V
									V

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