



FCC RADIO TEST REPORT

FCC ID : XV2SC415C61
Equipment : SC415 Universal Tank Monitor
Brand Name : Anova
Model Name : SC415C6-E2
Applicant : Silicon Controls Pty Ltd
Suite 1, 33 Waterloo Road; Macquarie Park NSW
2113 AUSTRALIA
Manufacturer : Silicon Controls Pty Ltd
Suite 1, 33 Waterloo Road; Macquarie Park NSW
2113 AUSTRALIA
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27

The product was received on Jan. 21, 2021 and testing was started from Feb. 01, 2021 and completed on Feb. 18, 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
FG111807B	01	Initial issue of report	Jun. 04, 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) (Band 85)		
	§24.232 (c)	Equivalent Isotropic Radiated Power (Band 2) (Band 25)		
	§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 25) (Band 26) (Band 66) (Band 85)	-	See Note
-	§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) (Band 85)	-	See Note
-	§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 25) (Band 26) (Band 66) (Band 85)	Pass	Under limit 3.16 dB at 1560.000 MHz

Remark: The module (Model: ME910G1-WW) 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: Wii Chang

Report Producer: Cindy Liu



1 General Description

1.1 Product Feature of Equipment Under Test

GSM and LTE.

Product Specification subjective to this standard	
Antenna Type	WWAN: PCB Antenna
Antenna Gain	Band 2: 1.40dBi Band 4: 1.60dBi Band 5: 0.50dBi Band 12: -1.30dBi Band 13: -0.30dBi Band 25: 1.40dBi Band 26: 0.50dBi Band 66: 1.60dBi Band 85: -1.20dBi

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

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.	
	TH02-HY	03CH07-HY
Test Engineer	Benjamin Lin	Jesse Wang, Stan Hsieh and Ken Wu
Temperature	20~21℃	19~25℃
Relative Humidity	50~52%	46~60%

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

FCC Designation No.: TW1190



1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168

D01 Power Meas. License Digital Systems v03r01 with maximum output power.

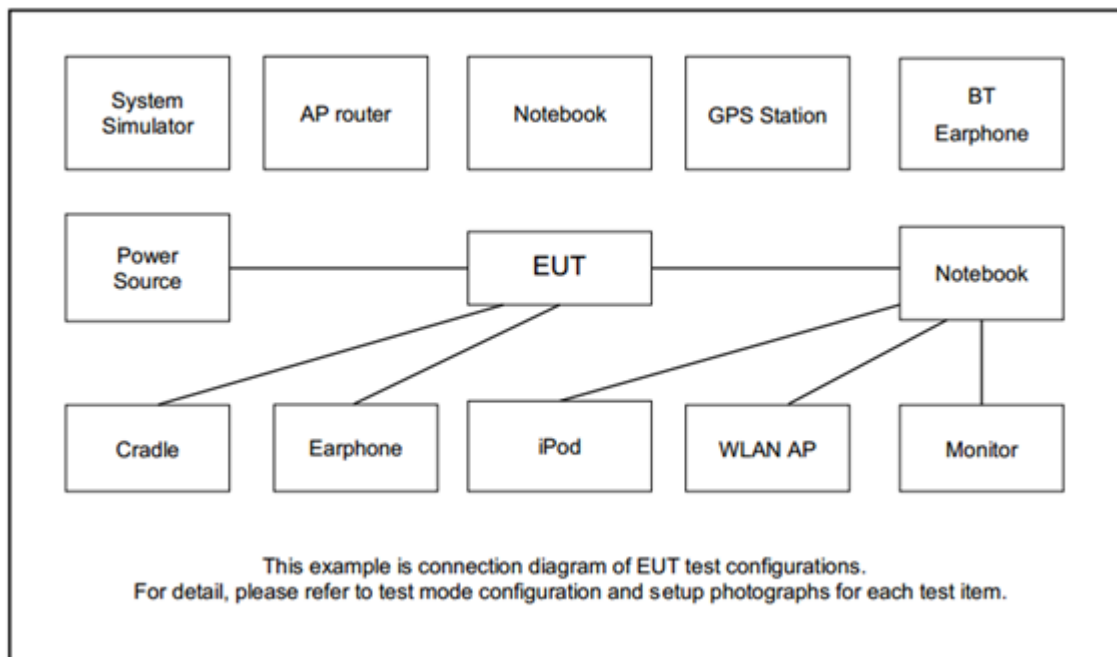
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v		v		v	v	v	v
	4	v	v	v	v	v	v	v	v		v		v	v	v	v
	5	v	v	v	v	-	-	v	v		v		v	v	v	v
	12	v	v	v	v	-	-	v	v		v		v	v	v	v
	13	-	-	v	v	-	-	v	v		v		v	v	v	v
	25	v	v	v	v	v	v	v	v		v		v	v	v	v
	26	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
	85	-	-	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		Max Power					
	4	v	v	v	v	v	v	v	v							
	5	v	v	v	v	-	-	v	v							
	12	v	v	v	v	-	-	v	v							
	13	-	-	v	v	-	-	v	v							
	25	v	v	v	v	v	v	v	v							
	26	v	v	v	v	v	-	v	v							
	66	v	v	v	v	v	v	v	v							
	85	-	-	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	Worst Case												v	v	v
	4	Worst Case												v	v	v
	5	Worst Case												v	v	v
	12	Worst Case												v	v	v
	13	Worst Case												v	v	v
	25	Worst Case												v	v	v
	26	Worst Case												v	v	v
	66	Worst Case												v	v	v
	85	Worst Case												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	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 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 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 85 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	134052	134092	134132
	Frequency	703	707	711
5	Channel	134027	134092	134157
	Frequency	700.5	707	713.5

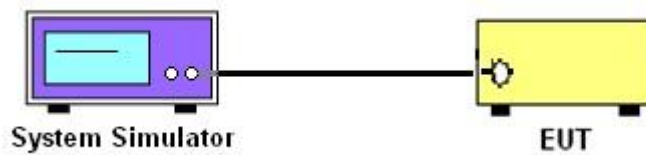
3 Conducted Test Items

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, Band 13 and Band 85

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 25

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

According to KDB 412172 D01 Power Approach,

$EIRP = PT + GT - LC$, $ERP = EIRP - 2.15$, where

PT = transmitter output power in dBm

GT = gain of the transmitting antenna in dBi

LC = 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.

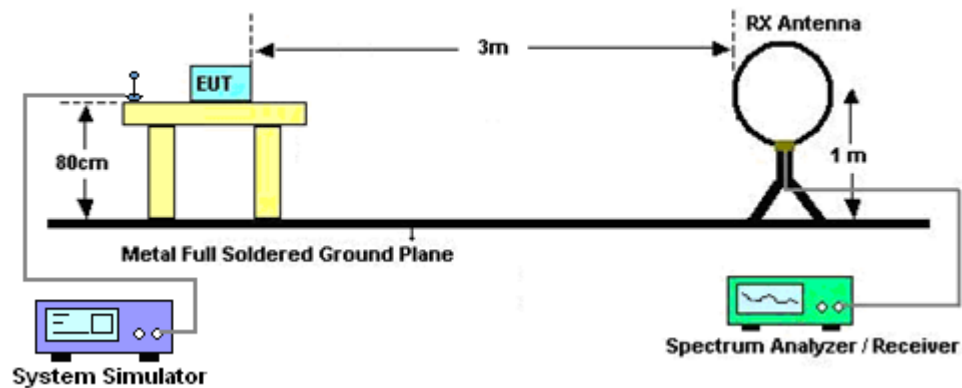
4 Radiated Test Items

4.1 Measuring Instruments

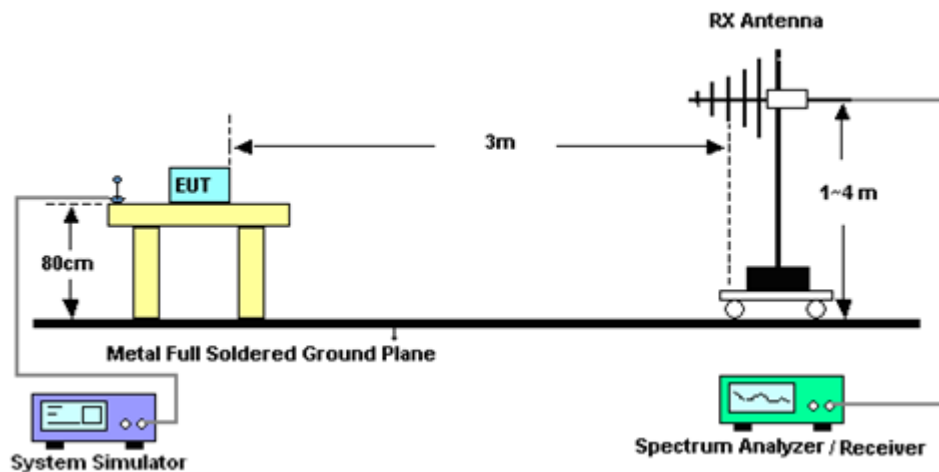
See list of measuring instruments of this test report.

4.1.1 Test Setup

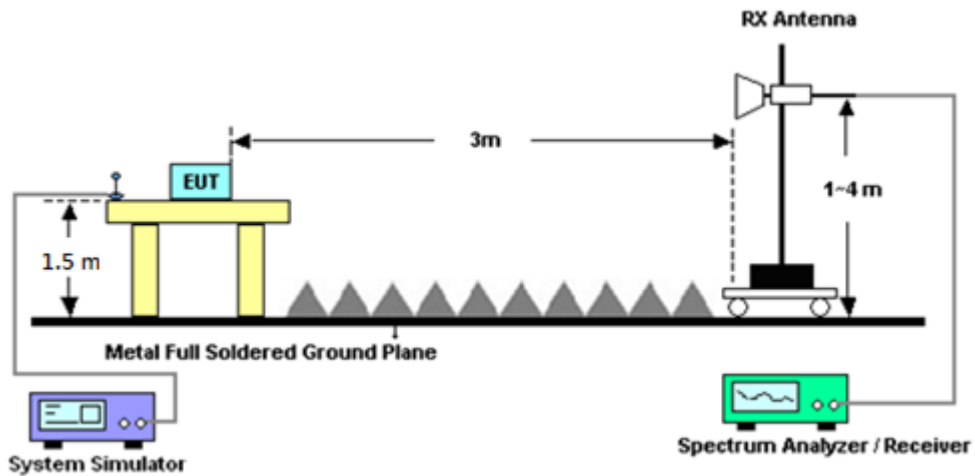
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

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

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



4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For LTE Band 13

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

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

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

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

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



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Base Station(Measure)	Anritsu	MT8821C	6201664755	2/3/4G/LTE FDD/TDD with44)/LTE-3C C DLCA/2CC ULCA, CatM1/NB1/NB2	Jul. 12, 2020	Feb. 01, 2021~ Feb. 08, 2021	Jul. 11, 2021	Conducted (TH02-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#A	1-18GHz	Jan. 12, 2021	Feb. 01, 2021~ Feb. 08, 2021	Jan. 11, 2022	Conducted (TH02-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-0 6	35419 & 03	30MHz~1GHz	Apr. 29, 2020	Feb. 05, 2021~ Feb. 18, 2021	Apr. 28, 2021	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 01, 2020	Feb. 05, 2021~ Feb. 18, 2021	Nov. 30, 2021	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 04, 2021	Feb. 05, 2021~ Feb. 18, 2021	Jan. 03, 2022	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 31, 2020	Feb. 05, 2021~ Feb. 18, 2021	Oct. 30, 2021	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Jun. 09, 2020	Feb. 05, 2021~ Feb. 18, 2021	Jun. 08, 2021	Radiation (03CH07-HY)
Filter	Microwave	H1G013G1	SN477215	1GHz High Pass Filter	Oct. 31, 2020	Feb. 05, 2021~ Feb. 18, 2021	Oct. 30, 2021	Radiation (03CH07-HY)
Filter	Microwave	H3G018G1	SN477219	3GHz High Pass Filter	Oct. 31, 2020	Feb. 05, 2021~ Feb. 18, 2021	Oct. 30, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2,80 1606/2	18GHz~40GHz	Feb. 25, 2020	Feb. 05, 2021~ Feb. 18, 2021	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4, MY28655/4	9kHz~30MHz	Feb. 25, 2020	Feb. 05, 2021~ Feb. 18, 2021	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 25, 2020	Feb. 05, 2021~ Feb. 18, 2021	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 25, 2020	Feb. 05, 2021~ Feb. 18, 2021	Feb. 24, 2021	Radiation (03CH07-HY)
Controller	ChainTek	Chaintek 3000	N/A	Control Turn table	N/A	Feb. 05, 2021~ Feb. 18, 2021	N/A	Radiation (03CH07-HY)
Controller	Max-Full	MF7802	MF78020836 8	Control Ant Mast	N/A	Feb. 05, 2021~ Feb. 18, 2021	N/A	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Feb. 05, 2021~ Feb. 18, 2021	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Feb. 05, 2021~ Feb. 18, 2021	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB249 5	N/A	N/A	Feb. 05, 2021~ Feb. 18, 2021	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZB ECK	BBHA 9170	BBHA91702 51	18GHz~40GHz	Dec. 02, 2020	Feb. 05, 2021~ Feb. 18, 2021	Dec. 01, 2021	Radiation (03CH07-HY)
Double Ridge Horn Antenna	EMCO	3117	00227880	1 -18 GHz	N/A	Feb. 05, 2021~ Feb. 18, 2021	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZB ECK	BBHA9170	BBHA91709 80	18GHz-40GHz	N/A	Feb. 05, 2021~ Feb. 18, 2021	N/A	Radiation (03CH07-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	Dec. 04, 2020	Feb. 05, 2021~ Feb. 18, 2021	Dec. 03, 2021	Radiation (03CH07-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.35
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.81
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.85
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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 = 1.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	23.60	23.43	23.57	25.00	0.3162
20	1	5		23.34	23.25	23.30		
20	6	0		23.50	23.51	23.52		
20	1	0	16-QAM	23.54	23.54	23.50	24.94	0.3119
20	1	5		23.31	23.27	23.28		
20	5	0		23.25	23.15	23.10		
15	1	0	QPSK	23.46	23.25	23.46	24.86	0.3062
15	1	5		23.21	23.11	23.21		
15	6	0		23.45	23.32	23.35		
15	1	0	16-QAM	23.63	23.35	23.56	25.03	0.3184
15	1	5		23.41	23.23	23.34		
15	5	0		23.40	23.00	23.31		
10	1	0	QPSK	23.58	23.50	23.51	24.98	0.3148
10	1	5		23.40	23.27	23.38		
10	6	0		22.54	22.42	22.39		
10	1	0	16-QAM	23.45	23.35	23.40	24.85	0.3055
10	1	5		23.20	23.08	23.23		
10	5	0		23.22	23.00	23.10		
5	1	0	QPSK	23.44	23.38	23.39	24.84	0.3048
5	1	5		23.31	23.14	23.09		
5	6	0		22.50	22.41	22.40		
5	1	0	16-QAM	23.51	23.54	23.48	24.94	0.3119
5	1	5		23.32	23.16	23.18		
5	5	0		23.31	23.10	23.10		
3	1	0	QPSK	23.67	23.58	23.56	25.07	0.3214
3	1	5		23.59	23.47	23.38		
3	6	0		21.54	21.50	21.47		
3	1	0	16-QAM	22.68	22.66	22.63	24.08	0.2559
3	1	5		22.57	22.53	22.44		
3	5	0		22.51	22.48	22.43		
1.4	1	0	QPSK	23.61	23.67	23.65	25.07	0.3214
1.4	1	5		23.59	23.65	23.60		
1.4	6	0		21.92	21.47	21.48		
1.4	1	0	16-QAM	22.76	22.74	22.71	25.01	0.3170
1.4	1	5		22.64	22.65	22.51		
1.4	5	0		22.63	23.61	22.10		
Limit	EIRP < 2W			Result			Pass	



LTE Band 25 Maximum Average Power [dBm] (GT - LC = 1.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	23.58	23.31	23.65	25.05	0.3199
20	1	5		23.42	23.16	23.53		
20	6	0		23.60	23.35	23.61		
20	1	0	16-QAM	23.69	23.45	23.59	25.09	0.3228
20	1	5		23.29	23.16	23.44		
20	6	0		23.60	23.46	23.59		
15	1	0	QPSK	23.55	23.36	23.63	25.03	0.3184
15	1	5		23.32	23.11	23.36		
15	6	0		23.43	23.34	23.49		
15	1	0	16-QAM	23.62	23.46	23.73	25.13	0.3258
15	1	5		23.41	23.34	23.61		
15	6	0		23.53	23.49	23.66		
10	1	0	QPSK	23.58	23.43	23.64	25.04	0.3192
10	1	5		23.38	23.24	23.51		
10	6	0		22.56	22.48	22.68		
10	1	0	16-QAM	23.52	23.37	23.57	24.97	0.3141
10	1	5		23.22	23.20	23.40		
10	6	0		22.71	22.39	22.83		
5	1	0	QPSK	23.47	23.42	23.55	24.95	0.3126
5	1	5		23.29	23.28	23.36		
5	6	0		22.60	22.53	22.68		
5	1	0	16-QAM	23.60	23.52	23.65	25.05	0.3199
5	1	5		23.34	23.26	23.43		
5	6	0		21.66	21.54	21.74		
3	1	0	QPSK	23.64	23.66	23.66	25.06	0.3206
3	1	5		23.49	23.49	23.51		
3	6	0		21.50	21.57	21.72		
3	1	0	16-QAM	22.62	22.73	22.74	24.14	0.2594
3	1	5		22.37	22.56	22.64		
3	6	0		21.72	21.87	21.90		
1.4	1	0	QPSK	23.74	23.73	23.69	25.14	0.3266
1.4	1	5		23.61	23.68	23.65		
1.4	6	0		21.83	21.57	21.67		
1.4	1	0	16-QAM	22.76	22.83	22.95	24.35	0.2723
1.4	1	5		22.65	22.64	22.79		
1.4	6	0		21.60	21.64	21.66		
Limit	EIRP < 2W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 1.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	23.00	22.97	23.13	24.78	0.3006
20	1	5		22.83	22.83	23.03		
20	6	0		22.97	23.03	23.18		
20	1	0	16-QAM	22.94	23.06	23.20	24.80	0.3020
20	1	5		22.66	22.80	22.97		
20	6	0		22.61	22.85	23.00		
15	1	0	QPSK	22.97	23.04	23.33	24.93	0.3112
15	1	5		22.78	22.81	23.05		
15	6	0		22.89	22.91	23.19		
15	1	0	16-QAM	23.01	23.13	23.17	24.77	0.2999
15	1	5		22.79	22.86	23.07		
15	6	0		22.80	22.81	23.05		
10	1	0	QPSK	23.01	23.11	23.26	24.86	0.3062
10	1	5		22.79	22.88	23.05		
10	6	0		22.04	22.10	22.27		
10	1	0	16-QAM	22.83	22.91	23.23	24.83	0.3041
10	1	5		22.59	22.67	22.98		
10	6	0		22.59	22.60	23.00		
5	1	0	QPSK	22.98	23.13	23.21	24.81	0.3027
5	1	5		22.83	22.93	23.03		
5	6	0		22.02	22.16	22.39		
5	1	0	16-QAM	23.08	23.17	23.35	24.95	0.3126
5	1	5		22.69	22.92	23.12		
5	6	0		22.59	22.82	23.10		
3	1	0	QPSK	23.22	23.30	23.38	24.98	0.3148
3	1	5		22.97	23.06	23.28		
3	6	0		20.93	21.09	21.33		
3	1	0	16-QAM	22.00	22.06	22.32	23.92	0.2466
3	1	5		21.85	21.99	22.20		
3	6	0		21.90	22.00	22.01		
1.4	1	0	QPSK	23.22	23.31	23.40	25.00	0.3162
1.4	1	5		23.12	23.19	23.16		
1.4	6	0		21.24	21.08	21.27		
1.4	1	0	16-QAM	22.28	22.40	22.42	24.02	0.2523
1.4	1	5		22.11	22.31	22.19		
1.4	6	0		22.10	22.30	22.10		
Limit	EIRP < 1W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 0.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	23.43	23.47	23.33	21.82	0.1521
10	1	5		23.25	23.29	23.31		
10	6	0		22.40	22.39	22.44		
10	1	0	16-QAM	23.08	23.18	23.21	21.56	0.1432
10	1	5		22.95	22.91	22.94		
10	6	0		22.98	22.81	22.95		
5	1	0	QPSK	23.36	23.23	23.28	21.71	0.1483
5	1	5		23.20	23.15	23.12		
5	6	0		22.36	22.34	22.28		
5	1	0	16-QAM	23.39	23.24	23.26	21.74	0.1493
5	1	5		22.97	22.93	22.96		
5	6	0		23.00	22.95	22.98		
3	1	0	QPSK	23.20	23.33	23.21	21.68	0.1472
3	1	5		23.16	23.19	23.00		
3	6	0		21.32	21.36	21.23		
3	1	0	16-QAM	22.23	22.38	22.17	20.73	0.1183
3	1	5		22.17	22.24	21.79		
3	6	0		22.10	22.10	21.70		
1.4	1	0	QPSK	23.47	23.49	23.23	21.84	0.1528
1.4	1	5		23.32	23.41	22.89		
1.4	6	0		21.30	21.24	21.10		
1.4	1	0	16-QAM	22.38	23.48	22.26	21.83	0.1524
1.4	1	5		22.28	23.33	22.12		
1.4	6	0		22.10	23.10	22.10		
Limit	ERP < 7W			Result			Pass	



LTE Band 12 Maximum Average Power [dBm] (GT - LC = -1.3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	23.85	23.82	23.85	20.40	0.1096
10	1	5		23.71	23.74	23.69		
10	6	0		22.86	22.79	22.88		
10	1	0	16-QAM	23.59	23.50	23.64	20.19	0.1045
10	1	5		23.55	23.39	23.58		
10	6	0		22.85	22.86	22.89		
5	1	0	QPSK	23.71	23.78	23.57	20.33	0.1079
5	1	5		23.74	23.68	23.51		
5	6	0		22.81	22.89	22.74		
5	1	0	16-QAM	23.73	23.88	23.71	20.43	0.1104
5	1	5		23.54	23.65	23.38		
5	6	0		21.82	23.81	21.73		
3	1	0	QPSK	23.91	23.74	23.63	20.46	0.1112
3	1	5		23.70	23.45	23.52		
3	6	0		21.74	21.93	21.66		
3	1	0	16-QAM	22.82	22.83	22.73	19.38	0.0867
3	1	5		22.71	22.47	22..54		
3	6	0		21.96	22.02	21.93		
1.4	1	0	QPSK	24.09	23.87	23.80	20.64	0.1159
1.4	1	5		23.90	23.81	23.72		
1.4	6	0		21.77	21.69	21.64		
1.4	1	0	16-QAM	23.04	23.04	22.89	19.59	0.0910
1.4	1	5		22.91	22.95	22.79		
1.4	6	0		21.67	21.62	21.44		
Limit	ERP < 3W			Result			Pass	



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LTE Band 13 Maximum Average Power [dBm] (GT - LC = -0.3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	-	23.88	-	20.43	0.1104
10	1	5			23.82			
10	6	0			22.89			
10	1	0	16-QAM		23.79		20.34	0.1081
10	1	5			23.61			
10	6	0			22.97			
5	1	0	QPSK	23.79	23.97	23.88	20.52	0.1127
5	1	5		23.71	23.74	23.71		
5	6	0		22.87	22.88	22.95		
5	1	0	16-QAM	23.93	23.93	24.03	20.58	0.1143
5	1	5		23.65	23.68	23.76		
5	6	0		21.97	22.02	21.96		
Limit	ERP < 3W			Result			Pass	



LTE Band 26 Maximum Average Power [dBm] (GT - LC = 0.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0	QPSK	23.70	23.71	23.67	20.26	0.1062
15	1	5		23.56	23.53	23.47		
15	6	0		22.73	23.65	23.59		
15	1	0	16-QAM	23.73	23.79	23.86	20.41	0.1099
15	1	5		23.45	23.53	23.61		
15	6	0		21.71	23.76	23.71		
10	1	0	QPSK	23.75	23.66	23.78	20.33	0.1079
10	1	5		23.74	23.62	23.57		
10	6	0		22.79	22.69	22.57		
10	1	0	16-QAM	23.57	23.54	23.67	20.22	0.1052
10	1	5		23.52	23.24	23.43		
10	6	0		22.74	22.68	22.56		
5	1	0	QPSK	23.65	23.54	23.56	20.20	0.1047
5	1	5		23.61	23.46	23.39		
5	6	0		22.75	22.60	22.54		
5	1	0	16-QAM	23.78	23.68	23.65	20.33	0.1079
5	1	5		23.63	23.30	23.32		
5	6	0		21.82	21.39	21.45		
3	1	0	QPSK	23.67	23.50	23.49	20.22	0.1052
3	1	5		23.54	23.31	23.27		
3	6	0		21.65	21.51	21.38		
3	1	0	16-QAM	22.62	22.49	22.45	19.17	0.0826
3	1	5		22.54	22.35	22.28		
3	6	0		21.89	21.73	21.63		
1.4	1	0	QPSK	23.84	23.82	23.87	20.42	0.1102
1.4	1	5		23.79	23.77	23.71		
1.4	6	0		21.48	21.39	21.18		
1.4	1	0	16-QAM	22.78	22.74	22.68	19.33	0.0857
1.4	1	5		22.53	22.49	22.54		
1.4	6	0		21.55	21.02	21.18		
Limit	ERP < 7W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 1.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	23.03	22.96	22.73	24.68	0.2938
20	1	5		22.75	22.81	22.54		
20	6	0		22.90	22.84	22.69		
20	1	0	16-QAM	23.08	22.94	22.78	24.69	0.2944
20	1	5		22.80	22.68	22.44		
20	6	0		22.97	23.00	22.71		
15	1	0	QPSK	23.09	22.91	22.64	24.73	0.2972
15	1	5		22.84	22.74	22.40		
15	6	0		22.96	22.86	22.50		
15	1	0	16-QAM	23.02	23.13	22.65	24.73	0.2972
15	1	5		22.78	22.86	22.54		
15	6	0		23.02	23.00	22.62		
10	1	0	QPSK	23.04	21.22	22.57	24.64	0.2911
10	1	5		22.86	22.90	22.32		
10	6	0		22.07	22.67	21.63		
10	1	0	16-QAM	22.85	22.07	22.48	24.72	0.2965
10	1	5		22.71	22.89	22.18		
10	6	0		22.08	22.65	21.76		
5	1	0	QPSK	23.06	22.96	23.12	24.72	0.2965
5	1	5		22.78	22.70	23.01		
5	6	0		22.00	22.09	22.22		
5	1	0	16-QAM	23.05	23.04	23.11	24.71	0.2958
5	1	5		22.67	22.79	22.74		
5	6	0		21.22	21.22	21.25		
3	1	0	QPSK	23.11	23.08	23.07	24.71	0.2958
3	1	5		22.85	22.84	22.89		
3	6	0		21.18	21.16	21.13		
3	1	0	16-QAM	22.06	22.04	22.18	24.93	0.3112
3	1	5		21.89	22.04	22.11		
3	6	0		21.25	21.35	21.41		
1.4	1	0	QPSK	23.18	23.16	23.33	24.93	0.3112
1.4	1	5		23.06	23.01	23.10		
1.4	6	0		21.18	21.14	21.04		
1.4	1	0	16-QAM	22.29	22.41	22.31	24.01	0.2518
1.4	1	5		22.22	22.17	22.05		
1.4	6	0		21.20	21.26	21.07		
Limit	EIRP < 1W			Result			Pass	



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LTE Band 85 Maximum Average Power [dBm] (GT - LC = -1.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	23.83	23.70	23.65	20.48	0.1117
10	1	5		23.66	23.53	23.48		
10	6	0		22.82	22.69	22.64		
10	1	0	16-QAM	23.68	23.56	23.43	20.36	0.1086
10	1	5		23.45	23.44	23.28		
10	6	0		22.88	22.71	22.55		
5	1	0	QPSK	23.71	23.47	23.61	20.44	0.1107
5	1	5		23.69	23.36	23.42		
5	6	0		22.78	22.61	22.59		
5	1	0	16-QAM	23.79	23.59	23.53	20.44	0.1107
5	1	5		23.53	23.30	23.24		
5	6	0		21.53	21.27	21.65		
Limit	ERP < 3W			Result			Pass	



Appendix B. 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	-47.73	-13	-34.73	-68.53	-54.3	1.67	8.24	H
	5550	-56.53	-13	-43.53	-81.64	-63.6	2.65	9.72	H
	7400	-54.06	-13	-41.06	-81.47	-63.2	2.46	11.60	H
									H
									H
									H
	3702	-51.13	-13	-38.13	-72.23	-57.7	1.67	8.24	V
	5550	-56.23	-13	-43.23	-81.83	-63.3	2.65	9.72	V
	7400	-53.96	-13	-40.96	-81.42	-63.1	2.46	11.60	V
									V
									V
									V
Middle	3744	-48.99	-13	-35.99	-69.79	-55.6	1.68	8.29	H
	5610	-56.04	-13	-43.04	-81.62	-63.1	2.69	9.74	H
	7480	-53.28	-13	-40.28	-80.88	-62.6	2.44	11.76	H
									H
									H
									H
	3744	-50.79	-13	-37.79	-71.24	-57.4	1.68	8.29	V
	5610	-55.94	-13	-42.94	-81.48	-63	2.69	9.74	V
	7480	-53.78	-13	-40.78	-81.34	-63.1	2.44	11.76	V
									V
									V
									V



Highest	3786	-49.95	-13	-36.95	-71.04	-56.6	1.69	8.34	H
	5670	-55.45	-13	-42.45	-81.64	-62.5	2.72	9.77	H
	7560	-53.47	-13	-40.47	-80.99	-62.9	2.41	11.84	H
									H
									H
									H
									H
	3786	-53.05	-13	-40.05	-73.89	-59.7	1.69	8.34	V
	5670	-55.45	-13	-42.45	-81.43	-62.5	2.72	9.77	V
	7560	-53.37	-13	-40.37	-80.85	-62.8	2.41	11.84	V
									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	-50.09	-13	-37.09	-71.32	-56.66	1.67	8.24	H
	5550	-55.82	-13	-42.82	-81.79	-62.89	2.65	9.72	H
	7400	-54.19	-13	-41.19	-81.77	-63.33	2.46	11.60	H
									H
									H
									H
									H
	3702	-51.67	-13	-38.67	-72.89	-58.24	1.67	8.24	V
	5550	-55.15	-13	-42.15	-81.09	-62.22	2.65	9.72	V
	7400	-53.97	-13	-40.97	-81.64	-63.11	2.46	11.60	V
									V
									V
									V
									V
Middle	3750	-51.04	-13	-38.04	-72.17	-57.66	1.68	8.30	H
	5625	-55.97	-13	-42.97	-81.79	-63.02	2.70	9.75	H
	7500	-54.65	-13	-41.65	-82.06	-64.02	2.43	11.80	H
									H
									H
									H
									H
	3750	-51.97	-13	-38.97	-73.03	-58.59	1.68	8.30	V
	5625	-55.97	-13	-42.97	-81.96	-63.02	2.70	9.75	V
	7500	-53.21	-13	-40.21	-80.98	-62.58	2.43	11.80	V
									V
									V
									V
									V



Highest	3792	-51.16	-13	-38.16	-72.35	-57.81	1.70	8.35	H
	5685	-55.23	-13	-42.23	-81.56	-62.27	2.73	9.77	H
	7580	-53.87	-13	-40.87	-81.77	-63.31	2.40	11.85	H
									H
									H
									H
									H
	3792	-53.15	-13	-40.15	-74.38	-59.8	1.70	8.35	V
	5685	-55.25	-13	-42.25	-81.57	-62.29	2.73	9.77	V
	7580	-52.97	-13	-39.97	-81.12	-62.41	2.40	11.85	V
									V
									V
									V
									V

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

**LTE Band 4**

LTE Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-53.48	-13	-40.48	-74.22	-59.55	1.58	7.65	H
	5130	-56.12	-13	-43.12	-80.75	-63.41	2.41	9.70	H
	6840	-54.84	-13	-41.84	-81.95	-62.81	2.64	10.61	H
									H
									H
									H
									H
	3420	-52.46	-13	-39.46	-73.4	-58.53	1.58	7.65	V
	5130	-56.33	-13	-43.33	-80.9	-63.62	2.41	9.70	V
	6840	-54.68	-13	-41.68	-81.88	-62.65	2.64	10.61	V
									V
									V
									V
									V
Middle	3450	-52.45	-13	-39.45	-73.34	-58.64	1.59	7.78	H
	5160	-55.31	-13	-42.31	-80.15	-62.58	2.43	9.70	H
	6900	-54.29	-13	-41.29	-81.48	-62.35	2.62	10.68	H
									H
									H
									H
									H
	3450	-53.59	-13	-40.59	-74.56	-59.78	1.59	7.78	V
	5160	-56.08	-13	-43.08	-80.72	-63.35	2.43	9.70	V
	6900	-55.96	-13	-42.96	-81.18	-64.02	2.62	10.68	V
									V
									V
									V
									V



Highest	3474	-51.21	-13	-38.21	-72.38	-57.5	1.60	7.89	H
	5208	-54.86	-13	-41.86	-79.72	-62.1	2.46	9.70	H
	6960	-53.45	-13	-40.45	-80.57	-61.6	2.60	10.75	H
									H
									H
									H
									H
	3474	-53.81	-13	-40.81	-74.43	-60.1	1.60	7.89	V
	5208	-57.26	-13	-44.26	-77.69	-64.5	2.46	9.70	V
	6960	-53.45	-13	-40.45	-80.8	-61.6	2.60	10.75	V
									V
									V
									V
									V

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

**LTE Band 5**

LTE Band 5 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-56.94	-13	-43.94	-68.53	-58.7	0.98	4.89	H
	2472	-61.72	-13	-48.72	-77.87	-63.6	1.28	5.32	H
	3296	-59.09	-13	-46.09	-77.69	-62.5	1.54	7.10	H
									H
									H
									H
									H
	1648	-55.74	-13	-42.74	-68.01	-57.5	0.98	4.89	V
	2472	-59.62	-13	-46.62	-76.9	-61.5	1.28	5.32	V
	3296	-58.79	-13	-45.79	-78.25	-62.2	1.54	7.10	V
									V
									V
									V
									V
Middle	1664	-59.79	-13	-46.79	-71.5	-61.50	0.98	4.84	H
	2496	-60.55	-13	-47.55	-77.42	-62.5	1.29	5.39	H
	3328	-58.86	-13	-45.86	-78.02	-62.4	1.55	7.24	H
									H
									H
									H
									H
	1664	-58.99	-13	-45.99	-71.09	-60.7	0.98	4.84	V
	2496	-59.15	-13	-46.15	-76.32	-61.1	1.29	5.39	V
	3328	-58.06	-13	-45.06	-77.84	-61.6	1.55	7.24	V
									V
									V
									V
									V



Highest	1680	-57.93	-13	-44.93	-69.83	-59.58	0.99	4.80	H
	2517	-61.33	-13	-48.33	-78.34	-63.3	1.30	5.41	H
	3356	-59.14	-13	-46.14	-78.51	-62.8	1.56	7.37	H
									H
									H
									H
									H
	1680	-58.65	-13	-45.65	-70.83	-60.3	0.99	4.80	V
	2517	-59.33	-13	-46.33	-76.52	-61.3	1.30	5.41	V
	3356	-59.14	-13	-46.14	-78.57	-62.8	1.56	7.37	V
									V
									V
									V
									V

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

**LTE Band 12**

LTE Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-42.85	-13	-29.85	-53.07	-44.51	0.87	4.68	H
	2096	-57.15	-13	-44.15	-72.60	-58.02	1.16	4.19	H
	2800	-54.77	-13	-41.77	-72.35	-56.88	1.38	5.64	H
	3496	-52.92	-13	-39.92	-73.50	-57.15	1.60	7.98	H
									H
									H
									H
	1400	-47.66	-13	-34.66	-58.49	-49.32	0.87	4.68	V
	2096	-55.81	-13	-42.81	-71.42	-56.68	1.16	4.19	V
	2800	-51.41	-13	-38.41	-69.76	-53.52	1.38	5.64	V
	3496	-54.99	-13	-41.99	-75.40	-59.22	1.60	7.98	V
									V
									V
									V
Middle	1408	-35.21	-13	-22.21	-45.50	-36.92	0.87	4.73	H
	2112	-48.77	-13	-35.77	-64.16	-49.69	1.17	4.24	H
	2816	-51.55	-13	-38.55	-69.30	-53.66	1.39	5.65	H
	3520	-52.39	-13	-39.39	-72.83	-56.65	1.61	8.02	H
									H
									H
									H
	1408	-36.55	-13	-23.55	-47.32	-38.26	0.87	4.73	V
	2112	-51.13	-13	-38.13	-66.70	-52.05	1.17	4.24	V
	2816	-49.91	-13	-36.91	-68.24	-52.02	1.39	5.65	V
	3520	-50.89	-13	-37.89	-71.32	-55.15	1.61	8.02	V
									V
									V
									V



Highest	1416	-34.80	-13	-21.80	-45.21	-36.55	0.87	4.78	H
	2120	-41.77	-13	-28.77	-57.31	-42.71	1.17	4.26	H
	2824	-47.89	-13	-34.89	-65.00	-50.01	1.39	5.66	H
	3536	-47.88	-13	-34.88	-68.41	-52.16	1.62	8.04	H
									H
									H
									H
	1416	-38.06	-13	-25.06	-48.88	-39.81	0.87	4.78	V
	2120	-45.07	-13	-32.07	-61.87	-46.01	1.17	4.26	V
	2824	-44.23	-13	-31.23	-62.68	-46.35	1.39	5.66	V
	3536	-51.33	-13	-38.33	-71.89	-55.61	1.62	8.04	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	-41.98	-13	-28.98	-52.99	-44.05	0.94	5.15	H
	2336	-44.86	-13	-31.86	-61.61	-46.38	1.24	4.91	H
	3112	-43.73	-13	-30.73	-62.27	-46.39	1.48	6.29	H
	3888	-46.96	-13	-33.96	-67.49	-51.55	1.73	8.47	H
									H
									H
									H
	1552	-49.59	-13	-36.59	-60.99	-51.66	0.94	5.15	V
	2336	-45.19	-13	-32.19	-62.40	-46.71	1.24	4.91	V
	3112	-45.56	-13	-32.56	-64.95	-48.22	1.48	6.29	V
	3888	-50.80	-13	-37.80	-71.56	-55.39	1.73	8.47	V
									V
									V
									V
Middle	1560	-45.31	-42.15	-3.16	-56.60	-47.35	0.94	5.13	H
	2336	-47.07	-13	-34.07	-63.67	-48.59	1.24	4.91	H
	3120	-45.36	-13	-32.36	-63.95	-48.05	1.49	6.33	H
	3896	-50.21	-13	-37.21	-70.84	-54.81	1.73	8.48	H
									H
									H
									H
	1560	-51.01	-42.15	-8.86	-62.82	-53.05	0.94	5.13	V
	2336	-48.69	-13	-35.69	-65.90	-50.21	1.24	4.91	V
	3120	-48.33	-13	-35.33	-67.54	-51.02	1.49	6.33	V
	3896	-49.22	-13	-36.22	-69.88	-53.82	1.73	8.48	V
									V
									V
									V



Highest	1568	-47.16	-42.15	-5.01	-58.30	-49.18	0.94	5.11	H
	2344	-49.01	-13	-36.01	-65.80	-50.55	1.24	4.93	H
	3128	-50.53	-13	-37.53	-69.14	-53.26	1.49	6.36	H
	3912	-55.00	-13	-42.00	-75.39	-59.61	1.73	8.49	H
									H
									H
									H
	1568	-53.03	-42.15	-10.88	-64.62	-55.05	0.94	5.11	V
	2344	-50.27	-13	-37.27	-67.41	-51.81	1.24	4.93	V
	3128	-48.82	-13	-35.82	-68.17	-51.55	1.49	6.36	V
	3912	-52.20	-13	-39.20	-72.89	-56.81	1.73	8.49	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	1552	-42.95	-13	-29.95	-53.68	-45.02	0.94	5.15	H
	2336	-43.63	-13	-30.63	-60.42	-45.15	1.24	4.91	H
	3112	-44.63	-13	-31.63	-63.25	-47.29	1.48	6.29	H
	3888	-48.29	-13	-35.29	-68.75	-52.88	1.73	8.47	H
									H
									H
									H
	1552	-45.02	-13	-32.02	-56.67	-47.09	0.94	5.15	V
	2336	-44.36	-13	-31.36	-61.52	-45.88	1.24	4.91	V
	3112	-44.53	-13	-31.53	-63.86	-47.19	1.48	6.29	V
	3888	-49.12	-13	-36.12	-69.85	-53.71	1.73	8.47	V
									V
									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	1648	-61.59	-13	-48.59	-73.47	-63.35	0.98	4.89	H
	2472	-59.87	-13	-46.87	-77.08	-61.75	1.28	5.32	H
	3296	-58.37	-13	-45.37	-77.71	-61.78	1.54	7.10	H
									H
									H
									H
									H
	1648	-59.81	-13	-46.81	-72.16	-61.57	0.98	4.89	V
	2472	-59.27	-13	-46.27	-76.92	-61.15	1.28	5.32	V
	3296	-58.32	-13	-45.32	-77.99	-61.73	1.54	7.10	V
									V
									V
									V
									V
Middle	1664	-58.28	-13	-45.28	-70.32	-59.99	0.98	4.84	H
	2487	-59.92	-13	-46.92	-77.11	-61.84	1.29	5.36	H
	3316	-57.94	-13	-44.94	-77.39	-61.43	1.55	7.19	H
									H
									H
									H
									H
	1664	-56.86	-13	-43.86	-69.37	-58.57	0.98	4.84	V
	2487	-58.27	-13	-45.27	-75.9	-60.19	1.29	5.36	V
	3316	-57.75	-13	-44.75	-77.48	-61.24	1.55	7.19	V
									V
									V
									V
									V



Highest	1672	-58.86	-13	-45.86	-71.04	-60.54	0.99	4.82	H
	2505	-60.37	-13	-47.37	-77.64	-62.33	1.29	5.40	H
	3340	-58.30	-13	-45.30	-77.91	-61.89	1.55	7.30	H
									H
									H
									H
									H
	1672	-57.94	-13	-44.94	-70.58	-59.62	0.99	4.82	V
	2505	-59.61	-13	-46.61	-77.34	-61.57	1.29	5.40	V
	3340	-58.29	-13	-45.29	-78.11	-61.88	1.55	7.30	V
									V
									V
									V
									V

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

**LTE Band 66**

LTE Band 66 / 20MHz / QPSK									
Channel	Frequency (MHz)	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	3420	-48.73	-13	-35.73	-68.94	-54.8	1.58	7.65	H
	5130	-55.81	-13	-42.81	-79.54	-63.1	2.41	9.70	H
	6840	-54.43	-13	-41.43	-80.83	-62.4	2.64	10.61	H
									H
									H
									H
									H
	3420	-51.53	-13	-38.53	-71.79	-57.6	1.58	7.65	V
	5130	-55.81	-13	-42.81	-79.83	-63.1	2.41	9.70	V
	6840	-54.53	-13	-41.53	-81.14	-62.5	2.64	10.61	V
									V
									V
									V
									V
Middle	3474	-53.81	-13	-40.81	-74.58	-60.1	1.60	7.89	H
	5205	-55.86	-13	-42.86	-79.98	-63.1	2.46	9.70	H
	6940	-54.18	-13	-41.18	-80.85	-62.3	2.61	10.73	H
									H
									H
									H
									H
	3474	-55.51	-13	-42.51	-75.86	-61.8	1.60	7.89	V
	5205	-56.06	-13	-43.06	-80.12	-63.3	2.46	9.70	V
	6940	-53.98	-13	-40.98	-80.38	-62.1	2.61	10.73	V
									V
									V
									V
									V



Highest	3522	-51.78	-13	-38.78	-72.57	-58.2	1.61	8.03	H
	5280	-55.50	-13	-42.50	-80.15	-62.7	2.50	9.70	H
	7040	-54.10	-13	-41.10	-80.77	-62.4	2.58	10.88	H
									H
									H
									H
									H
	3522	-54.68	-13	-41.68	-74.89	-61.1	1.61	8.03	V
	5280	-55.50	-13	-42.50	-79.86	-62.7	2.50	9.70	V
	7040	-53.90	-13	-40.90	-80.66	-62.2	2.58	10.88	V
									V
									V
									V
									V

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

**LTE Band 85**

LTE Band 85 / 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	-39.44	-13	-26.44	-49.65	-41.10	0.87	4.68	H
	2096	-51.93	-13	-38.93	-67.42	-52.80	1.16	4.19	H
	2792	-55.00	-13	-42.00	-72.49	-57.10	1.38	5.63	H
	3496	-52.97	-13	-39.97	-73.30	-57.20	1.60	7.98	H
									H
									H
									H
	1400	-42.54	-13	-29.54	-53.19	-44.20	0.87	4.68	V
	2096	-53.03	-13	-40.03	-68.70	-53.90	1.16	4.19	V
	2792	-54.20	-13	-41.20	-72.17	-56.30	1.38	5.63	V
	3496	-55.07	-13	-42.07	-75.02	-59.30	1.60	7.98	V
									V
									V
									V
Middle	1408	-35.19	-13	-22.19	-45.29	-36.90	0.87	4.73	H
	2112	-46.28	-13	-33.28	-61.67	-47.20	1.17	4.24	H
	2808	-46.19	-13	-33.19	-63.37	-48.30	1.39	5.65	H
	3512	-41.94	-13	-28.94	-62.25	-46.20	1.61	8.01	H
									H
									H
									H
	1408	-39.49	-13	-26.49	-49.97	-41.20	0.87	4.73	V
	2112	-43.58	-13	-30.58	-59.44	-44.50	1.17	4.24	V
	2808	-44.99	-13	-31.99	-63.19	-47.10	1.39	5.65	V
	3512	-47.94	-13	-34.94	-68.01	-52.20	1.61	8.01	V
									V
									V
									V



Highest	1416	-34.45	-13	-21.45	-44.44	-36.20	0.87	4.78	H
	2120	-39.16	-13	-26.16	-54.60	-40.10	1.17	4.26	H
	2824	-40.98	-13	-27.98	-58.50	-43.10	1.39	5.66	H
	3536	-39.02	-13	-26.02	-59.53	-43.30	1.62	8.04	H
									H
									H
									H
	1416	-37.05	-13	-24.05	-47.65	-38.80	0.87	4.78	V
	2120	-39.86	-13	-26.86	-55.87	-40.80	1.17	4.26	V
	2824	-40.38	-13	-27.38	-58.63	-42.50	1.39	5.66	V
	3536	-46.52	-13	-33.52	-66.59	-50.80	1.62	8.04	V
									V
									V
									V

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