FCC RADIO TEST REPORT

FCC ID	**:**	**LHJ-FE4NA0210**
Equipment	**:**	**FE4NA0110**
Brand Name	**:**	**Continental**
Model Name	**:**	**FE4NA0110**
Applicant	**:**	**Continental Automotive Systems, Inc. 21440 W Lake Cook Rd.**
Manufacturer	**:**	**Continental Automotive Systems, Inc. 21440 W Lake Cook Rd.**
Standard	**:**	**FCC 47 CFR Part 2, 22(H), 24(E), 27**

The product was received on Jun. 08, 2022 and testing was performed from Feb. 07, 2023 to Feb. 17, 2023. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval from 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	Issue Date
FG260854-01B	01	Initial issue of report	Feb. 27, 2023

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)	Pass	
	§27.50 (b)(10) §27.50 (c)(10)	Effective Radiated Power (Band 12) (Band 13)		
	§24.232 (c)	Equivalent Isotropic Radiated Power (Band 2)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)		
-	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	Not Required	-
-	§2.1049	Occupied Bandwidth	Not Required	-
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (c)(2)(4) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 66)	Not Required	-
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (c)(2) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 66)	Not Required	-
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Not Required	-

Report Clause	Ref Std. Clause	Test Items	Result (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 66)	Pass	4.90 dB under the limit at 1559.000 MHz

Remark:

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a variant report by adding external antennas and enhancing LTE Band 13 power via software. All the test cases were performed on original report which can be referred to Sporton Report Number FG260854B. Based on the original report, the test cases were verified.
3. The test configuration was designated by the manufacturer based on input from the Automotive OEM.

Declaration of Conformity:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
   It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Uncertainty of Evaluation".

Comments and Explanations:

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang

Report Producer: Ruby Zou

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	FE4NA0110
Brand Name	Continental
Model Name	FE4NA0110
FCC ID	LHJ-FE4NA0210
Installed into the Host	Equipment name: G12N400G1 Brand name: Continental Model name: G12N400G1 HW Version: P5
EUT supports Radios application	WCDMA/HSPA/LTE/GNSS
HW Version	P4
SW Version	v.162
EUT Stage	Identical Prototype

Remark: The EUT's information above is declared by manufacturer.

1.2 Product Specification of Equipment Under Test

Product Specification is subject 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 12 : 699.7 MHz ~ 715.3 MHz LTE Band 13 : 779.5 MHz ~ 784.5 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 12 : 729.7 MHz ~ 745.3 MHz LTE Band 13 : 748.5 MHz ~ 753.5 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 12: 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13: 5MHz / 10MHz LTE Band 66: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.56 dBm LTE Band 4 : 22.36 dBm LTE Band 5 : 22.66 dBm LTE Band 12 : 22.52 dBm LTE Band 13 : 22.61 dBm LTE Band 66: 22.82 dBm
Antenna Type	**<Primary Internal Antenna 1>:** Fixed Internal Antenna **<External Antenna - Continental>:** Fixed External Antenna **<External Antenna – Molex>:** Fixed External Antenna

Product Specification is subject to this standard	
Antenna Gain	**<Primary Internal Antenna 1>:** LTE Band 2: 3.90 dBi LTE Band 4: 4.88 dBi LTE Band 5: 3.88 dBi LTE Band 12: -0.28 dBi LTE Band 13: 0.06 dBi LTE Band 66: 4.88 dBi **<External Antenna - Continental>:** LTE Band 2: 2.67 dBi LTE Band 4: 1.43 dBi LTE Band 5: 3.97 dBi LTE Band 12: 2.39 dBi LTE Band 13: 3.68 dBi LTE Band 66: 1.43 dBi **<External Antenna - Molex>:** LTE Band 2: 6.40 dBi LTE Band 4: 4.30 dBi LTE Band 5: 4.10 dBi LTE Band 12: 0.60 dBi LTE Band 13: 2.20 dBi LTE Band 66: 4.30 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

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

1.3 Modification of EUT

No modifications made to the EUT during the testing.

1.4 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	03CH07-HY
Test Engineer	HaoEn Zhang	Jesse Wang, Stan Hsieh and Ken Wu
Temperature (℃)	21.5~22.6	21.7~24.5
Relative Humidity (%)	52.5~53.8	57.8~64.3

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

FCC Designation No.: TW1190

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 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01.

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
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.

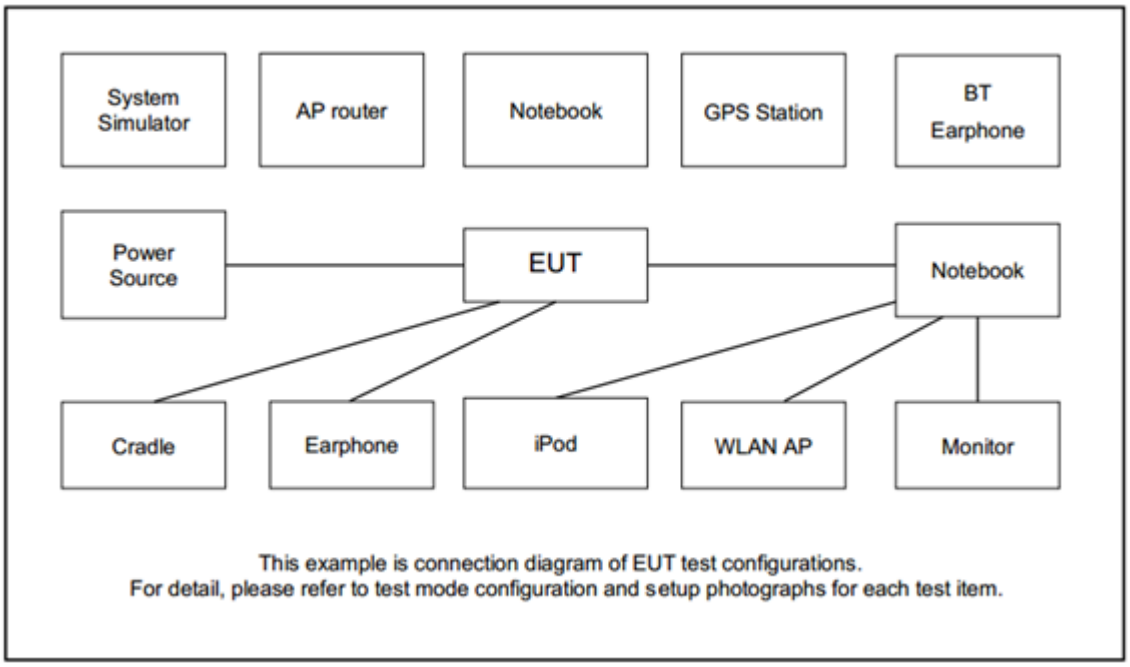
2 Test Configuration of Equipment Under Test

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.

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
	4						v	v	v	v	v	v	v	v	v	v
	5				v	-	-	v	v	v	v	v	v	v	v	v
	12				v	-	-	v	v	v	v	v	v	v	v	v
	13	-	-		v	-	-	v	v	v	v	v	v	v	v	v
	66						v	v	v	v	v	v	v	v	v	v
E.R.P / E.I.R.P	2						v	v	v	v	Max. Power					
	4						v	v	v	v						
	5				v	-	-	v	v	v						
	12				v	-	-	v	v	v						
	13	-	-		v	-	-	v	v	v						
	66						v	v	v	v						
Radiated Spurious Emission	2						v	v			v				v	v
	4						v	v			v				v	
	5				v	-	-	v			v				v	v
	12				v	-	-	v			v			v	v	v
	13	-	-	v		-	-	v			v				v	v
	66						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.	External Antenna	Molex	85660742	N/A	N/A	N/A
2.	External Antenna	Continental_GM	85556753	N/A	N/A	N/A
3.	Adapter	TePoo	PT-WC-03	N/A	N/A	N/A
4.	Teddy Jr Load Box	Continental	N/A	N/A	N/A	N/A
5.	Power Connector	mini-circuits	ZFBT-4R2G+	N/A	N/A	N/A
6.	DC Power Supply	GW Instek	GEU810960	N/A	N/A	N/A
7.	Metal Plate	N/A	N/A	N/A	N/A	N/A
8.	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 66 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	132072	132322	132572
	Frequency	1720	1745	1770
15	Channel	132047	132322	132597
	Frequency	1717.5	1745	1772.5
10	Channel	132022	132322	132622
	Frequency	1715	1745	1775
5	Channel	131997	132322	132647
	Frequency	1712.5	1745	1777.5
3	Channel	131987	132322	132657
	Frequency	1711.5	1745	1778.5
1.4	Channel	131979	132322	132665
	Frequency	1710.7	1745	1779.3

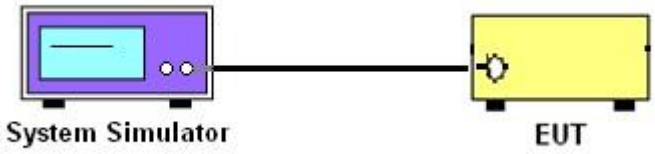
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5

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

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

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

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T – L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.2.2 Test Procedures

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

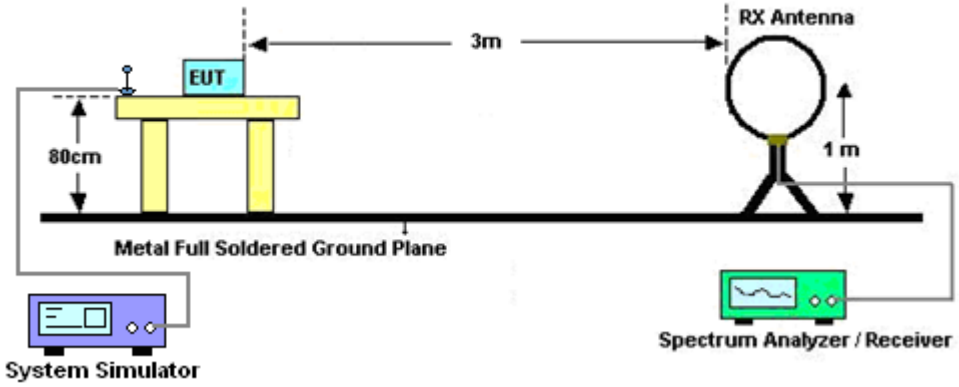
4 Radiated Test Items

4.1 Measuring Instruments

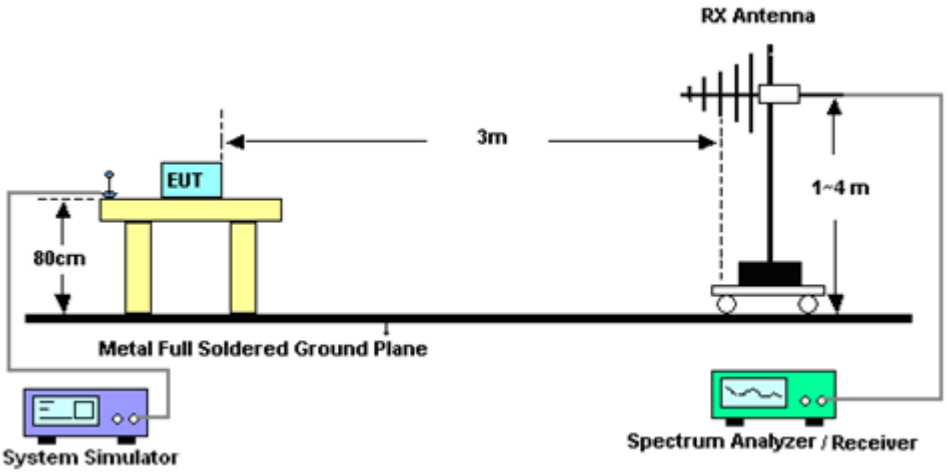
See list of measuring instruments of this test report.

4.1.1 Test Setup

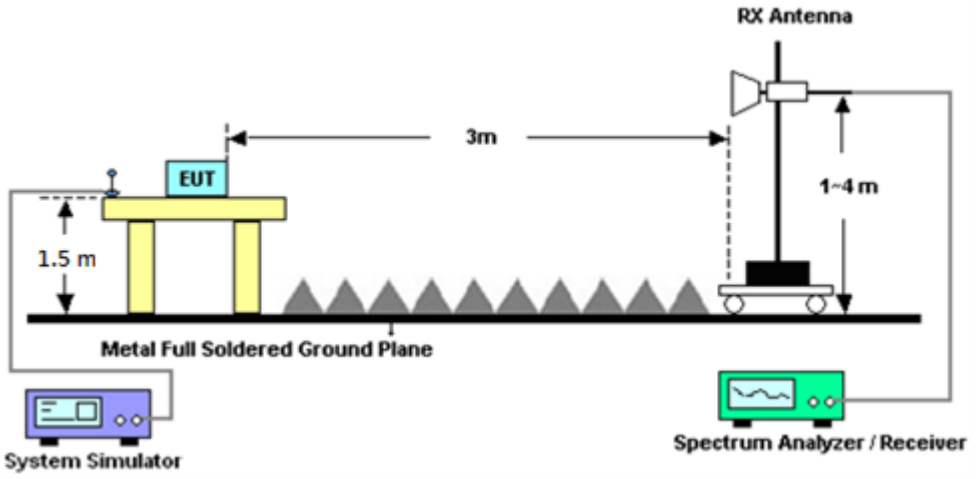
For radiated test below 30MHz



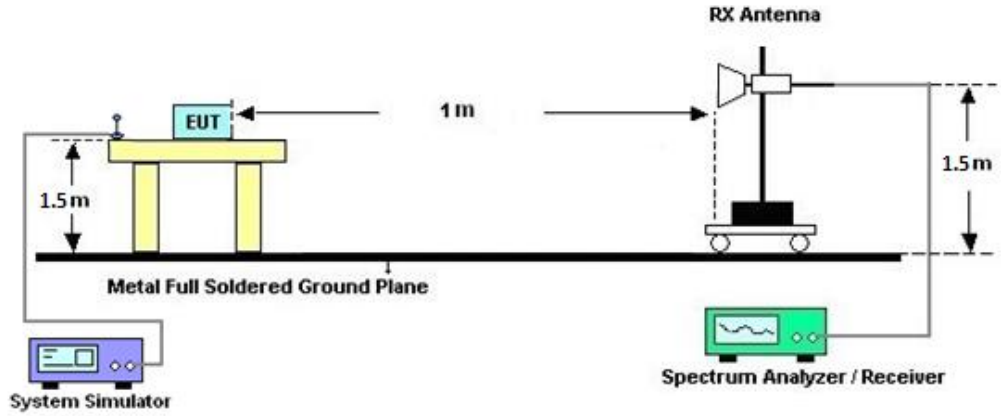
For radiated test from 30MHz to 1GHz



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 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 + 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

5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6262025280	LTE FDD/TDD LTE-2CC DLCA/ULCA	Dec. 09, 2022	Feb. 17, 2023	Dec. 08, 2023	Conducted (TH03-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	35419 & 03	30MHz~1GHz	Apr. 24, 2022	Feb. 07, 2023~ Feb. 11, 2023	Apr. 23, 2023	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 01, 2022	Feb. 07, 2023~ Feb. 11, 2023	Nov. 30, 2023	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Feb. 07, 2023~ Feb. 11, 2023	Sep. 19, 2023	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590075	1GHz~18GHz	Apr. 21, 2022	Feb. 07, 2023~ Feb. 11, 2023	Apr. 20, 2023	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	Oct. 03, 2022	Feb. 07, 2023~ Feb. 11, 2023	Oct. 02, 2023	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 03, 2022	Feb. 07, 2023~ Feb. 11, 2023	Oct. 02, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682/4	30MHz to 18GHz	Feb. 23, 2022	Feb. 07, 2023~ Feb. 11, 2023	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4	9kHz to 18GHz	Feb. 23, 2022	Feb. 07, 2023~ Feb. 11, 2023	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4	9kHz to 18GHz	Feb. 23, 2022	Feb. 07, 2023~ Feb. 11, 2023	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126	532078/126E	30MHz~18GHz	Sep. 16, 2022	Feb. 07, 2023~ Feb. 11, 2023	Sep. 15, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2	18GHz~40GHz	Feb. 23, 2022	Feb. 07, 2023~ Feb. 11, 2023	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801606/2	9KHz ~ 40GHz	Apr. 14, 2022	Feb. 07, 2023~ Feb. 11, 2023	Apr. 13, 2023	Radiation (03CH07-HY)
Controller	EMEC	EM1000	N/A	Control Ant Mast	N/A	Feb. 07, 2023~ Feb. 11, 2023	N/A	Radiation (03CH07-HY)
Controller	MF	MF-7802	N/A	Control Turn table	N/A	Feb. 07, 2023~ Feb. 11, 2023	N/A	Radiation (03CH07-HY)
Antenna Mast	EMEC	AM-BS-4500E	N/A	Boresight mast 1M~4M	N/A	Feb. 07, 2023~ Feb. 11, 2023	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Feb. 07, 2023~ Feb. 11, 2023	N/A	Radiation (03CH07-HY)
Software	Audix	E3	N/A	N/A	N/A	Feb. 07, 2023~ Feb. 11, 2023	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	Mar. 07, 2022	Feb. 07, 2023~ Feb. 11, 2023	Mar. 06, 2023	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Jul. 22, 2022	Feb. 07, 2023~ Feb. 11, 2023	Jul. 21, 2023	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	0600789	18GHz~40GHz	Jul. 21, 2022	Feb. 07, 2023~ Feb. 11, 2023	Jul. 20, 2023	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 24, 2022	Feb. 07, 2023~ Feb. 11, 2023	Nov. 23, 2023	Radiation (03CH07-HY)
Double Ridge Horn Antenna	EMCO	3117	00227856	1 - 18 GHz	Sep. 27, 2022	Feb. 07, 2023~ Feb. 11, 2023	Sep. 26, 2023	Radiation (03CH07-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	Jan. 11, 2023	Feb. 07, 2023~ Feb. 11, 2023	Jan. 10, 2024	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 = 2Uc(y))	**3.25 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.50 dB**

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

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

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & ERP/EIRP)

LTE Band 2 Maximum Average Power [dBm] (GT - LC = 6.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.34	22.40	22.56	28.96	0.7870
20	1	49		22.34	22.52	22.47		
20	1	99		22.29	22.41	22.40		
20	50	0		21.61	21.60	21.68		
20	50	24		21.54	21.57	21.52		
20	50	50		21.53	21.59	21.52		
20	100	0		21.59	21.55	21.50		
20	1	0	16-QAM	21.45	21.51	21.42	27.98	0.6281
20	1	49		21.42	21.50	21.40		
20	1	99		21.51	21.51	21.58		
20	50	0		20.51	20.59	20.53		
20	50	24		20.57	20.59	20.55		
20	50	50		20.51	20.57	20.43		
20	100	0		20.54	20.54	20.51		
20	1	0	64-QAM	20.59	20.71	20.61	27.11	0.5140
20	1	49		20.62	20.65	20.58		
20	1	99		20.39	20.44	20.44		
20	50	0		19.60	19.66	19.58		
20	50	24		19.62	19.70	19.61		
20	50	50		19.75	19.74	19.69		
20	100	0		19.47	19.59	19.50		
Limit	EIRP < 2W			Result			Pass	

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 4.88 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.19	22.36	22.28	27.24	0.5297
20	1	49		22.29	22.26	22.35		
20	1	99		22.28	22.22	22.26		
20	50	0		21.35	21.44	21.32		
20	50	24		21.43	21.39	21.37		
20	50	50		21.29	21.33	21.28		
20	100	0		21.35	21.33	21.36		
20	1	0	16-QAM	21.47	21.51	21.00	26.40	0.4365
20	1	49		21.25	21.45	21.01		
20	1	99		21.47	21.52	21.07		
20	50	0		20.50	20.35	20.11		
20	50	24		20.48	20.17	20.17		
20	50	50		20.51	20.44	20.17		
20	100	0		20.47	20.48	20.17		
20	1	0	64-QAM	20.22	20.37	20.25	25.30	0.3388
20	1	49		20.38	20.42	20.32		
20	1	99		19.89	20.16	20.12		
20	50	0		19.44	19.39	18.91		
20	50	24		19.50	19.48	19.38		
20	50	50		19.50	19.23	19.42		
20	100	0		19.27	19.39	18.97		
Limit	EIRP < 1W			Result			Pass	

LTE Band 5 Maximum Average Power [dBm] (GT - LC = 4.1 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	22.50	22.66	22.40	24.61	0.2891
10	1	25		22.56	22.49	22.62		
10	1	49		22.50	22.59	22.53		
10	25	0		21.70	21.83	21.79		
10	25	12		21.67	21.71	21.70		
10	25	25		21.71	21.61	21.62		
10	50	0		21.52	21.76	21.59		
10	1	0	16-QAM	21.70	21.70	21.52	23.65	0.2317
10	1	25		21.60	21.68	21.60		
10	1	49		21.20	21.34	21.33		
10	25	0		20.70	20.67	20.69		
10	25	12		20.73	20.71	20.63		
10	25	25		20.68	20.62	20.64		
10	50	0		20.60	20.65	20.77		
10	1	0	64-QAM	20.71	20.89	20.80	22.84	0.1923
10	1	25		20.23	20.34	20.24		
10	1	49		20.57	20.59	20.59		
10	25	0		19.69	19.72	19.50		
10	25	12		19.79	19.80	19.77		
10	25	25		19.71	19.79	19.58		
10	50	0		19.57	19.69	19.60		
Limit	ERP < 7W			Result			Pass	

LTE Band 12 Maximum Average Power [dBm] (GT - LC = 2.39 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	22.48	22.52	22.45	22.76	0.1888
10	1	25		22.39	22.43	22.28		
10	1	49		22.21	22.44	22.24		
10	25	0		21.83	21.60	21.83		
10	25	12		21.72	21.72	21.63		
10	25	25		21.60	21.69	21.77		
10	50	0		21.66	21.74	21.62		
10	1	0	16-QAM	21.75	21.83	21.65	22.07	0.1611
10	1	25		21.64	21.65	21.47		
10	1	49		21.52	21.65	21.64		
10	25	0		20.74	20.74	20.70		
10	25	12		20.65	20.66	20.54		
10	25	25		20.73	20.78	20.70		
10	50	0		20.74	20.85	20.79		
10	1	0	64-QAM	20.61	20.82	20.83	21.17	0.1309
10	1	25		20.93	20.87	20.78		
10	1	49		20.35	20.42	20.36		
10	25	0		19.58	19.75	19.85		
10	25	12		19.62	19.67	19.71		
10	25	25		19.60	19.68	19.83		
10	50	0		19.65	19.80	19.75		
Limit	ERP < 3W			Result			Pass	

LTE Band 13 Maximum Average Power [dBm] (GT - LC = 3.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	-	22.61	-	24.14	0.2594
10	1	25			22.53			
10	1	49			22.43			
10	25	0			21.74			
10	25	12			21.55			
10	25	25			21.52			
10	50	0			21.73			
10	1	0	16-QAM		21.66		23.24	0.2109
10	1	25			21.71			
10	1	49			21.66			
10	25	0			20.74			
10	25	12			20.67			
10	25	25			20.53			
10	50	0			20.53			
10	1	0	64-QAM		20.71		22.24	0.1675
10	1	25			20.61			
10	1	49			20.69			
10	25	0			19.70			
10	25	12			19.54			
10	25	25			19.53			
10	50	0			19.67			
Limit	ERP < 3W			Result			Pass	

LTE Band 66 Maximum Average Power [dBm] (GT - LC = 4.88 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.37	22.82	22.37	27.70	0.5888
20	1	49		22.61	22.65	22.60		
20	1	99		22.60	22.47	22.43		
20	50	0		21.83	21.88	21.89		
20	50	24		21.85	21.77	21.82		
20	50	50		21.64	21.67	21.58		
20	100	0		21.78	21.89	21.75		
20	1	0	16-QAM	21.84	21.85	21.88	26.76	0.4742
20	1	49		21.54	21.69	21.69		
20	1	99		21.63	21.66	21.52		
20	50	0		20.86	20.89	20.79		
20	50	24		20.70	20.80	20.64		
20	50	50		20.62	20.74	20.61		
20	100	0		20.65	20.69	20.63		
20	1	0	64-QAM	20.83	20.87	20.83	25.75	0.3758
20	1	49		20.74	20.86	20.82		
20	1	99		20.66	20.61	20.64		
20	50	0		19.72	19.83	19.83		
20	50	24		19.79	19.70	19.80		
20	50	50		19.72	19.63	19.55		
20	100	0		19.83	19.67	19.79		
Limit	EIRP < 1W			Result			Pass	

Appendix B. Test Results of Radiated Test

<Primary Internal Antenna 1>

LTE Band 13

LTE Band 13 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1559	-47.05	-42.15	-4.90	-57.82	-49.10	0.94	5.13	H
	2336	-39.88	-13	-26.88	-56.65	-41.40	1.24	4.91	H
	3118	-58.12	-13	-45.12	-77.08	-60.80	1.48	6.32	H
									H
									H
									H
	1559	-49.15	-42.15	-7.00	-60.56	-51.20	0.94	5.13	V
	2336	-38.08	-13	-25.08	-55.00	-39.60	1.24	4.91	V
	3118	-52.02	-13	-39.02	-71.60	-54.70	1.48	6.32	V
									V
									V
									V
Highest	1564	-48.77	-42.15	-6.62	-59.77	-50.80	0.94	5.12	H
	2344	-44.66	-13	-31.66	-61.33	-46.20	1.24	4.93	H
	3128	-57.07	-13	-44.07	-75.83	-59.80	1.49	6.36	H
									H
									H
									H
	1564	-50.67	-42.15	-8.52	-62.15	-52.70	0.94	5.12	V
	2344	-44.96	-13	-31.96	-61.76	-46.50	1.24	4.93	V
	3128	-52.67	-13	-39.67	-72.33	-55.40	1.49	6.36	V
									V
									V
									V

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

<External Antenna – Molex>

LTE Band 2

LTE Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3744	-57.74	-13	-44.74	-79.33	-64.35	1.68	8.29	H
	5610	-56.62	-13	-43.62	-83.32	-63.68	2.69	9.74	H
	7482	-55.41	-13	-42.41	-83.54	-64.74	2.44	11.76	H
	9357	-49.48	-13	-36.48	-81.25	-59.48	2.56	12.56	H
									H
									H
	3744	-53.22	-13	-40.22	-74.74	-59.83	1.68	8.29	V
	5610	-56.96	-13	-43.96	-83.58	-64.02	2.69	9.74	V
	7480	-54.97	-13	-41.97	-83.27	-64.29	2.44	11.76	V
	9357	-47.41	-13	-34.41	-79.57	-57.41	2.56	12.56	V
									V
									V
Highest	3786	-56.49	-13	-43.49	-78.2	-63.14	1.69	8.34	H
	5670	-56.46	-13	-43.46	-83.1	-63.51	2.72	9.77	H
	7560	-54.59	-13	-41.59	-82.89	-64.02	2.41	11.84	H
	9451.5	-46.55	-13	-33.55	-78.59	-56.49	2.58	12.52	H
									H
									H
	3786	-52.13	-13	-39.13	-73.76	-58.78	1.69	8.34	V
	5670	-56.28	-13	-43.28	-82.96	-63.33	2.72	9.77	V
	7560	-54.14	-13	-41.14	-82.74	-63.57	2.41	11.84	V
	9451	-44.09	-13	-31.09	-76.58	-54.03	2.58	12.52	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3444	-59.36	-13	-46.36	-80.52	-65.53	1.59	7.75	H
	5166	-57.98	-13	-44.98	-83.03	-65.25	2.43	9.70	H
	6888	-55.92	-13	-42.92	-83.87	-63.96	2.63	10.67	H
	10344	-45.74	-13	-32.74	-78.97	-55.38	2.69	12.34	H
									H
									H
	3444	-58.92	-13	-45.92	-80.1	-65.09	1.59	7.75	V
	5166	-58.06	-13	-45.06	-82.97	-65.33	2.43	9.70	V
	6888	-55.78	-13	-42.78	-83.82	-63.82	2.63	10.67	V
	10344	-43.17	-13	-30.17	-76.17	-52.81	2.69	12.34	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3468	-59.40	-13	-46.40	-80.69	-65.66	1.59	7.86	H
	5208	-57.99	-13	-44.99	-83.22	-65.23	2.46	9.70	H
	6942	-56.57	-13	-43.57	-84.51	-64.69	2.61	10.73	H
									H
									H
									H
	3468	-59.20	-13	-46.20	-80.42	-65.46	1.59	7.86	V
	5208	-58.16	-13	-45.16	-83.26	-65.4	2.46	9.70	V
	6942	-56.46	-13	-43.46	-84.42	-64.58	2.61	10.73	V
									V
									V
									V
Highest	3522	-58.47	-13	-45.47	-79.91	-64.89	1.61	8.03	H
	5280	-58.12	-13	-45.12	-83.51	-65.32	2.50	9.70	H
	7038	-56.13	-13	-43.13	-84.03	-64.43	2.58	10.88	H
									H
									H
									H
	3522	-57.78	-13	-44.78	-79.08	-64.2	1.61	8.03	V
	5280	-58.10	-13	-45.10	-83.51	-65.3	2.50	9.70	V
	7038	-56.16	-13	-43.16	-84.13	-64.46	2.58	10.88	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1664	-62.58	-13	-49.58	-74.5	-64.29	0.98	4.84	H
	2496	-59.83	-13	-46.83	-77.41	-61.78	1.29	5.39	H
	3328	-58.29	-13	-45.29	-79.36	-61.83	1.55	7.24	H
									H
									H
									H
	1664	-62.01	-13	-49.01	-74.44	-63.72	0.98	4.84	V
	2496	-59.66	-13	-46.66	-77.69	-61.61	1.29	5.39	V
	3328	-57.47	-13	-44.47	-77.76	-61.01	1.55	7.24	V
									V
									V
									V
Highest	1680	-61.74	-13	-48.74	-73.86	-63.39	0.99	4.80	H
	2520	-60.44	-13	-47.44	-78.04	-62.41	1.30	5.42	H
	3360	-58.06	-13	-45.06	-78.24	-61.73	1.56	7.38	H
									H
									H
									H
	1680	-61.38	-13	-48.38	-73.89	-63.03	0.99	4.80	V
	2520	-59.51	-13	-46.51	-77.57	-61.48	1.30	5.42	V
	3360	-57.21	-13	-44.21	-77.43	-60.88	1.56	7.38	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-57.58	-13.00	-44.58	-67.54	-59.24	0.87	4.68	H
	2096	-57.45	-13.00	-44.45	-72.97	-58.32	1.16	4.19	H
	2800	-54.26	-13.00	-41.26	-72.49	-56.37	1.38	5.64	H
									H
									H
									H
	1400	-59.97	-13.00	-46.97	-70.40	-61.63	0.87	4.68	V
	2096	-59.40	-13.00	-46.40	-75.25	-60.27	1.16	4.19	V
	2800	-45.84	-13.00	-32.84	-64.85	-47.95	1.38	5.64	V
									V
									V
									V
Middle	1408	-59.50	-13.00	-46.50	-69.48	-61.21	0.87	4.73	H
	2104	-60.13	-13.00	-47.13	-75.73	-61.03	1.17	4.21	H
	2816	-54.49	-13.00	-41.49	-72.76	-56.60	1.39	5.65	H
									H
									H
									H
	1408	-61.62	-13.00	-48.62	-72.07	-63.33	0.87	4.73	V
	2104	-59.88	-13.00	-46.88	-75.82	-60.78	1.17	4.21	V
	2816	-48.30	-13.00	-35.30	-67.37	-50.41	1.39	5.65	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1560	-57.09	-42.15	-14.94	-68.11	-59.13	0.94	5.13	H
	2336	-56.10	-13	-43.10	-73.01	-57.62	1.24	4.91	H
	3120	-56.34	-13	-43.34	-75.46	-59.03	1.49	6.33	H
									H
									H
									H
	1560	-58.80	-42.15	-16.65	-70.32	-60.84	0.94	5.13	V
	2336	-56.97	-13	-43.97	-74.29	-58.49	1.24	4.91	V
	3120	-50.38	-13	-37.38	-70.22	-53.07	1.49	6.33	V
									V
									V
									V
Highest	1568	-56.95	-42.15	-14.80	-67.98	-58.97	0.94	5.11	H
	2344	-57.47	-13	-44.47	-74.38	-59.01	1.24	4.93	H
	3128	-57.11	-13	-44.11	-76.21	-59.84	1.49	6.36	H
									H
									H
									H
	1568	-58.65	-42.15	-16.50	-70.18	-60.67	0.94	5.11	V
	2346	-52.55	-13	-39.55	-69.87	-54.10	1.24	4.94	V
	3128	-50.24	-13	-37.24	-70.06	-52.97	1.49	6.36	V
									V
									V
									V

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

<External Antenna - Continental>

LTE Band 2

LTE Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3744	-54.76	-13	-41.76	-75.83	-61.37	1.68	8.29	H
	5610	-56.06	-13	-43.06	-82.39	-63.12	2.69	9.74	H
	7480	-53.91	-13	-40.91	-81.95	-63.23	2.44	11.76	H
	9357	-48.92	-13	-35.92	-80.29	-58.92	2.56	12.56	H
	14964	-45.22	-13	-32.22	-82.72	-55.19	3.58	13.56	H
									H
	3744	-52.68	-13	-39.68	-73.61	-59.29	1.68	8.29	V
	5610	-56.05	-13	-43.05	-82.21	-63.11	2.69	9.74	V
	7480	-54.01	-13	-41.01	-81.86	-63.33	2.44	11.76	V
	9357	-46.72	-13	-33.72	-78.36	-56.72	2.56	12.56	V
	14964	-43.34	-13	-30.34	-80.84	-53.31	3.58	13.56	V
									V
Highest	3786	-57.46	-13	-44.46	-78.54	-64.11	1.69	8.34	H
	5670	-56.29	-13	-43.29	-82.34	-63.34	2.72	9.77	H
	7560	-53.79	-13	-40.79	-81.71	-63.22	2.41	11.84	H
	9451	-44.74	-13	-31.74	-76.3	-54.68	2.58	12.52	H
									H
									H
	3786	-55.24	-13	-42.24	-76.23	-61.89	1.69	8.34	V
	5670	-55.82	-13	-42.82	-82.06	-62.87	2.72	9.77	V
	7560	-53.49	-13	-40.49	-81.64	-62.92	2.41	11.84	V
	9451	-40.79	-13	-27.79	-72.67	-50.73	2.58	12.52	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3445	-56.90	-13	-43.90	-77.68	-63.07	1.59	7.76	H
	5167.5	-56.85	-13	-43.85	-81.49	-64.12	2.43	9.70	H
	6890	-54.99	-13	-41.99	-82.51	-63.03	2.63	10.67	H
	8616	-52.28	-13	-39.28	-81.9	-62.43	2.40	12.55	H
	10344	-44.87	-13	-31.87	-77.61	-54.51	2.69	12.34	H
									H
									H
	3445	-57.31	-13	-44.31	-78.03	-63.48	1.59	7.76	V
	5167.5	-56.95	-13	-43.95	-81.59	-64.22	2.43	9.70	V
	6890	-54.93	-13	-41.93	-82.48	-62.97	2.63	10.67	V
	8616	-50.21	-13	-37.21	-80.47	-60.36	2.40	12.55	V
	10344	-40.37	-13	-27.37	-72.88	-50.01	2.69	12.34	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3468	-56.56	-13	-43.56	-77.9	-62.82	1.59	7.86	H
	5208	-56.57	-13	-43.57	-81.92	-63.81	2.46	9.70	H
	6942	-54.54	-13	-41.54	-82.47	-62.66	2.61	10.73	H
									H
									H
									H
	3468	-56.48	-13	-43.48	-77.74	-62.74	1.59	7.86	V
	5208	-56.02	-13	-43.02	-81.08	-63.26	2.46	9.70	V
	6942	-54.46	-13	-41.46	-82.46	-62.58	2.61	10.73	V
									V
									V
									V
Highest	3522	-55.83	-13	-42.83	-77.35	-62.25	1.61	8.03	H
	5280	-56.33	-13	-43.33	-81.8	-63.53	2.50	9.70	H
	7038	-54.81	-13	-41.81	-82.71	-63.11	2.58	10.88	H
									H
									H
									H
	3522	-52.34	-13	-39.34	-73.78	-58.76	1.61	8.03	V
	5280	-56.46	-13	-43.46	-81.83	-63.66	2.50	9.70	V
	7038	-55.05	-13	-42.05	-82.97	-63.35	2.58	10.88	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1664	-60.84	-13	-47.84	-72.74	-62.55	0.98	4.84	H
	2496	-54.06	-13	-41.06	-71.63	-56.01	1.29	5.39	H
	3328	-57.58	-13	-44.58	-77.71	-61.12	1.55	7.24	H
									H
									H
									H
	1664	-60.82	-13	-47.82	-73.23	-62.53	0.98	4.84	V
	2496	-56.93	-13	-43.93	-74.96	-58.88	1.29	5.39	V
	3328	-57.03	-13	-44.03	-77.37	-60.57	1.55	7.24	V
									V
									V
									V
Highest	1680	-60.98	-13	-47.98	-73.08	-62.63	0.99	4.80	H
	2520	-56.55	-13	-43.55	-74.2	-58.52	1.30	5.42	H
	3360	-57.85	-13	-44.85	-77.99	-61.52	1.56	7.38	H
									H
									H
									H
	1680	-59.56	-13	-46.56	-72.14	-61.21	0.99	4.80	V
	2520	-56.79	-13	-43.79	-74.85	-58.76	1.30	5.42	V
	3360	-56.76	-13	-43.76	-77.14	-60.43	1.56	7.38	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-59.72	-13.00	-46.72	-69.72	-61.38	0.87	4.68	H
	2096	-58.16	-13.00	-45.16	-73.68	-59.03	1.16	4.19	H
	2800	-57.14	-13.00	-44.14	-75.31	-59.25	1.38	5.64	H
									H
									H
									H
	1400	-59.47	-13.00	-46.47	-70.02	-61.13	0.87	4.68	V
	2096	-56.89	-13.00	-43.89	-72.78	-57.76	1.16	4.19	V
	2800	-53.14	-13.00	-40.14	-72.13	-55.25	1.38	5.64	V
									V
									V
									V
Middle	1408	-59.31	-13.00	-46.31	-69.30	-61.02	0.87	4.73	H
	2104	-59.08	-13.00	-46.08	-74.61	-59.98	1.17	4.21	H
	2816	-57.25	-13.00	-44.25	-75.42	-59.36	1.39	5.65	H
									H
									H
									H
	1408	-61.11	-13.00	-48.11	-71.49	-62.82	1408	-61.11	V
	2104	-57.25	-13.00	-44.25	-73.33	-58.15	2104	-57.25	V
	2816	-55.94	-13.00	-42.94	-75.93	-58.05	2816	-55.94	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1560	-61.04	-42.15	-18.89	-72.04	-63.08	0.94	5.13	H
	2336	-58.82	-13	-45.82	-75.66	-60.34	1.24	4.91	H
	3120	-58.19	-13	-45.19	-77.24	-60.88	1.49	6.33	H
									H
									H
									H
	1560	-60.64	-42.15	-18.49	-72.16	-62.68	0.94	5.13	V
	2336	-56.54	-13	-43.54	-73.82	-58.06	1.24	4.91	V
	3120	-54.86	-13	-41.86	-74.75	-57.55	1.49	6.33	V
									V
									V
									V
Highest	1568	-60.99	-42.15	-18.84	-71.96	-63.01	0.94	5.11	H
	2344	-58.78	-13	-45.78	-75.61	-60.32	1.24	4.93	H
	3128	-57.29	-13	-44.29	-76.39	-60.02	1.49	6.36	H
									H
									H
									H
	1568	-60.54	-42.15	-18.39	-72.03	-62.56	0.94	5.11	V
	2346	-56.27	-13	-43.27	-73.51	-57.82	1.24	4.94	V
	3128	-54.09	-13	-41.09	-73.92	-56.82	1.49	6.36	V
									V
									V
									V

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