FCC RADIO TEST REPORT

FCC ID	**:**	**RAXKVD21**
Equipment	**:**	**5G Gateway**
Brand Name	**:**	**T-Mobile**
Model Name	**:**	**KVD21**
Applicant	**:**	**Arcadyan Technology Corporation No.8, Sec.2, Guangfu Rd.,Hsinchu, 30071 Taiwan**
Manufacturer	**:**	**Arcadyan Technology Corporation No.8, Sec.2, Guangfu Rd.,Hsinchu, 30071 Taiwan**
Standard	**:**	**FCC 47 CFR Part 2, 22(H), 24(E), 27**

The product was received on Sep. 07, 2021 and testing was started from Oct. 04, 2021 and completed on Oct. 20, 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

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History of this test report

Report No.	Version	Description	Issued Date
FG190215A	01	Initial issue of report	Oct. 25, 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)	Pass	
	§27.50 (c)(10)	Effective Radiated Power (Band 12) (Band 71)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)		
-	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	-	See Note
-	§2.1049	Occupied Bandwidth	-	See Note
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 66) (Band 71)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (Band 41)		
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 66) (Band 71)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (Band 41)		
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	-	See Note

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
4.2	§2.1053 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 66) (Band 71)	Pass	Under limit 17.86 dB at 2120.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (Band 41)		
Note: The module (Model: FG360-NA) 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: Lewis Ho

Report Producer: Vivian Hsu

1 General Description

1.1 Product Feature of Equipment Under Test

LTE/5G NR, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax and Wi-Fi 5GHz 802.11a/n/ac/ax

Product Specification subjective to this standard	
Antenna Type	WWAN: Dipole Antenna WLAN: **<Ant. 8>:** Dipole Antenna **<Ant. 3>:** Dipole Antenna **<Ant. 5>:** Dipole Antenna **<Ant. 7>:** Dipole Antenna Bluetooth: Dipole Antenna
Antenna Gain	**<Ant. 8>:** LTE Band 2: 3.07dBi LTE Band 4: 3.55dBi LTE Band 5: 1.09dBi LTE Band 12: 1.12dBi LTE Band 66: 3.56dBi LTE Band 71: 1.63dBi **<Ant. 3>:** LTE Band 41: 5.15dBi

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.**	
	TH03-HY	03CH07-HY
Test Engineer	Benjamin Lin	Jesse Wang, Stan Hsieh and Ken Wu
Temperature	23.9~24.7℃	19~27℃
Relative Humidity	49.1~51.1%	48~63%

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.

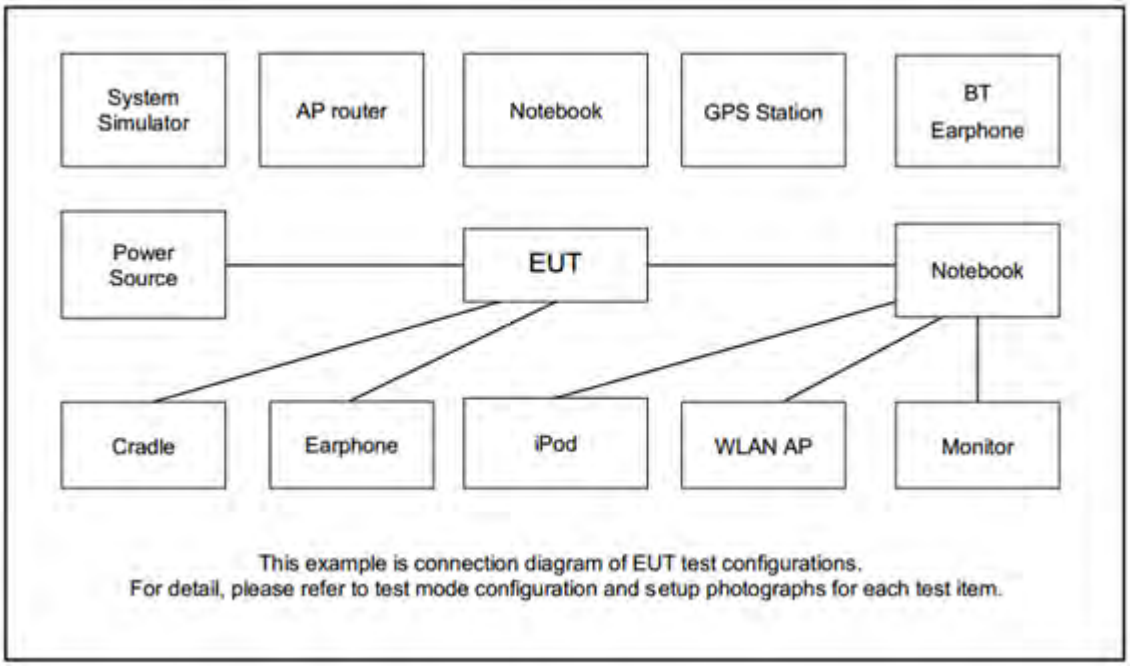
For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find Y plane as worst plane.

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	2				v			v	v	v	v	v	v	v	v	v	v
	4			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
	41	-	-				v	v	v	v	v	v	v	v	v	v	v
	66						v	v	v	v	v	v	v	v	v	v	v
	71	-	-		v			v	v	v	v	v	v	v	v	v	v
E.R.P / E.I.R.P	2				v			v	v	v	v	Max. Power					
	4			v				v	v	v	v						
	5				v	-	-	v	v	v	v						
	12			v		-	-	v	v	v	v						
	41	-	-				v	v	v	v	v						
	66						v	v	v	v	v						
	71	-	-		v			v	v	v	v						

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Radiated Spurious Emission	2				v			v						v	v	v	v
	4	Covered by Band 66															
	5				v	-	-	v						v	v	v	v
	12			v		-	-	v						v	v	v	v
	41	-	-				v	v						v	v	v	v
	66						v	v						v	v	v	v
	71	-	-		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. Test combination is LTE Band 2A+12A, LTE Band 12A+66A. 5. 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
Max. Output Power	41_CA					v						v	v	v	v	v	v	v	v	v
E.I.R.P.	41_CA					v						v	v	v	Max. Power					
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	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**
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905

LTE Band 4 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5

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

LTE Band 12 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5

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

LTE Band 66 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	132072	132322	132572
	Frequency	1720	1745	1770

LTE Band 71 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	133172	133297	133422
	Frequency	668.0	680.5	693.0

LTE Band 41 Channel and Frequency List_CA					
BW [MHz]	**Channel/Frequency(MHz)**		**Lowest**	**Middle**	**Highest**
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

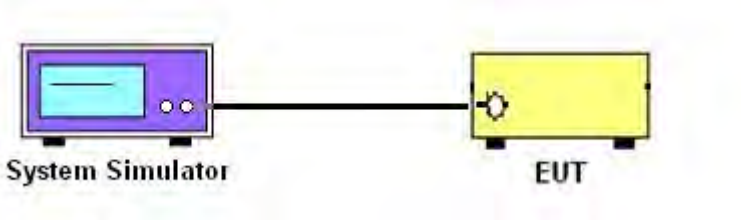
3 Conducted Test Items

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 71

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

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

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.2.2 Test Procedures

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

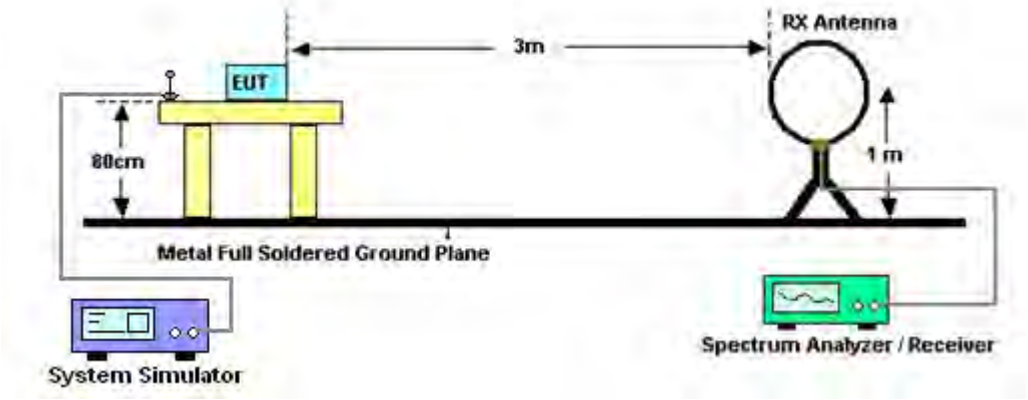
4 Radiated Test Items

4.1 Measuring Instruments

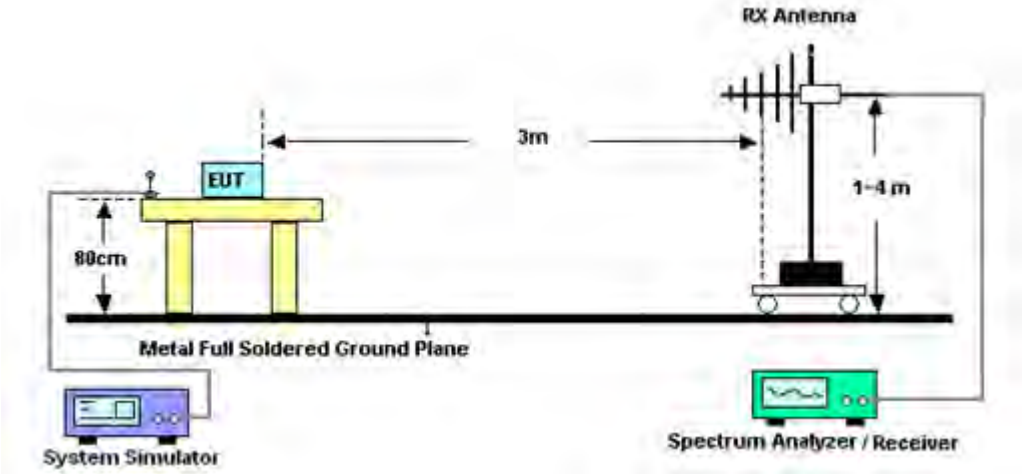
See list of measuring instruments of this test report.

4.1.1 Test Setup

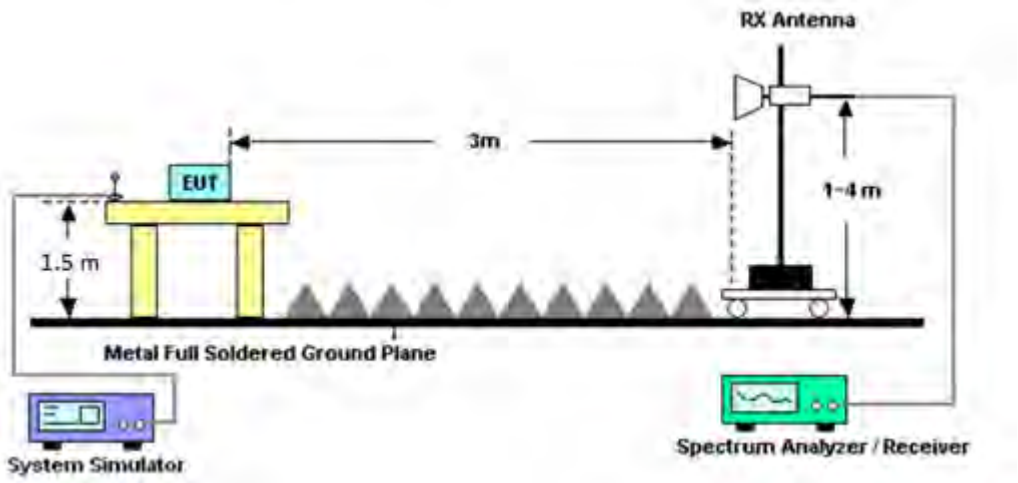
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test 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 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 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.

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)

    For LTE Band 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

5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	35419 & 03	30MHz~1GHz	Apr. 28, 2021	Oct. 13, 2021~ Oct. 20, 2021	Apr. 27, 2022	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 01, 2020	Oct. 13, 2021~ Oct. 20, 2021	Nov. 30, 2021	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz~18GHz	Apr. 22, 2021	Oct. 13, 2021~ Oct. 20, 2021	Apr. 21, 2022	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	May 18, 2021	Oct. 13, 2021~ Oct. 20, 2021	May 17, 2022	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 31, 2020	Oct. 13, 2021~ Oct. 20, 2021	Oct. 30, 2021	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Jul. 23, 2021	Oct. 13, 2021~ Oct. 20, 2021	Jul. 22, 2022	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Jul. 22, 2021	Oct. 13, 2021~ Oct. 20, 2021	Jul. 21, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682-4	30MHz to 18GHz	Feb. 24, 2021	Oct. 13, 2021~ Oct. 20, 2021	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971-4	9kHz to 18GHz	Feb. 24, 2021	Oct. 13, 2021~ Oct. 20, 2021	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655-4	9kHz to 18GHz	Feb. 24, 2021	Oct. 13, 2021~ Oct. 20, 2021	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2,80 1606/2	18GHz~40GHz	Feb. 24, 2021	Oct. 13, 2021~ Oct. 20, 2021	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126	532078/126E	30MHz~18GHz	Sep. 17, 2021	Oct. 13, 2021~ Oct. 20, 2021	Sep. 16, 2022	Radiation (03CH07-HY)
Controller	EMEC	EM1000	N/A	Control Ant Mast	Apr. 28, 2021	Oct. 13, 2021~ Oct. 20, 2021	Apr. 27, 2022	Radiation (03CH07-HY)
Controller	MF	MF-7802	N/A	Control Turn table	N/A	Oct. 13, 2021~ Oct. 20, 2021	N/A	Radiation (03CH07-HY)
Antenna Mast	EMEC	AM-BS-4500E	N/A	Boresight mast 1M~4M	Apr. 28, 2021	Oct. 13, 2021~ Oct. 20, 2021	Apr. 27, 2022	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Oct. 13, 2021~ Oct. 20, 2021	N/A	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	N/A	N/A	N/A	Oct. 13, 2021~ Oct. 20, 2021	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	Mar. 09, 2021	Oct. 13, 2021~ Oct. 20, 2021	Mar. 08, 2022	Radiation (03CH07-HY)
Horn Antenna	EMCO	3117	00143261	1GHz~18GHz	Jan. 26, 2021	Oct. 13, 2021~ Oct. 20, 2021	Jan. 25, 2022	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Dec. 02, 2020	Oct. 13, 2021~ Oct. 20, 2021	Dec. 01, 2021	Radiation (03CH07-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	Dec. 04, 2020	Oct. 13, 2021~ Oct. 20, 2021	Dec. 03, 2021	Radiation (03CH07-HY)
Radio Communication Analyzer	Anritsu	MT8821C	6262025341	LTE FDD/TDD LTE-2CC ULCA/DLCA	Oct. 06, 2020	Oct. 04, 2021	Oct. 05, 2021	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#B	1-18GHz	Jan. 09, 2021	Oct. 04, 2021	Jan. 08, 2022	Conducted (TH03-HY)

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.16 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.71 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.16 dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power (Average power & ERP/EIRP)

LTE Band 2 Maximum Average Power [dBm] (GT - LC = 3.07 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	21.73	21.94	21.63	25.01	0.3170
10	1	25		21.89	21.93	21.86		
10	1	49		21.73	21.64	21.61		
10	25	0		20.60	20.42	20.49		
10	25	12		20.67	20.54	20.45		
10	25	25		20.75	20.49	20.44		
10	50	0		20.69	20.49	20.44		
10	1	0	16-QAM	21.57	21.53	21.52	24.80	0.3020
10	1	25		21.73	21.71	21.73		
10	1	49		21.53	21.51	21.55		
10	25	0		20.63	20.46	20.48		
10	25	12		20.67	20.58	20.51		
10	25	25		20.68	20.62	20.47		
10	50	0		20.63	20.51	20.44		
10	1	0	64-QAM	20.60	20.54	20.43	23.82	0.2410
10	1	25		20.75	20.71	20.55		
10	1	49		20.55	20.47	20.34		
10	25	0		19.67	19.59	19.67		
10	25	12		19.68	19.67	19.62		
10	25	25		19.68	19.63	19.57		
10	50	0		19.60	19.56	19.67		
10	1	0	256-QAM	17.63	17.71	17.51	20.91	0.1233
10	1	25		17.69	17.84	17.69		
10	1	49		17.62	17.64	17.49		
10	25	0		17.56	17.49	17.60		
10	25	12		17.51	17.64	17.47		
10	25	25		17.69	17.80	17.64		
10	50	0		17.59	17.63	17.45		
Limit	EIRP < 2W			Result			Pass	

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 3.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	21.69	21.79	21.68	25.34	0.3420
5	1	12		21.67	21.52	21.73		
5	1	24		21.60	21.64	21.73		
5	12	0		20.44	20.65	20.52		
5	12	7		20.52	20.53	20.58		
5	12	13		20.52	20.62	20.60		
5	25	0		20.46	20.55	20.49		
5	1	0	16-QAM	21.49	21.43	21.48	25.18	0.3296
5	1	12		21.57	21.63	21.62		
5	1	24		21.45	21.37	21.49		
5	12	0		20.46	20.54	20.46		
5	12	7		20.48	20.53	20.48		
5	12	13		20.55	20.56	20.61		
5	25	0		20.40	20.53	20.55		
5	1	0	64-QAM	20.57	20.54	20.58	24.21	0.2636
5	1	12		20.66	20.65	20.62		
5	1	24		20.46	20.40	20.63		
5	12	0		19.61	19.54	19.64		
5	12	7		19.57	19.60	19.57		
5	12	13		19.58	19.51	19.57		
5	25	0		19.57	19.50	19.55		
5	1	0	256-QAM	17.59	17.54	17.46	21.22	0.1324
5	1	12		17.62	17.60	17.59		
5	1	24		17.55	17.46	17.50		
5	12	0		17.56	17.59	17.62		
5	12	7		17.46	17.51	17.44		
5	12	13		17.67	17.49	17.58		
5	25	0		17.48	17.44	17.46		
Limit	EIRP < 1W			Result			Pass	

LTE Band 5 Maximum Average Power [dBm] (GT - LC = 1.09 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	22.07	21.91	21.87	21.01	0.1262
10	1	25		22.06	22.03	21.98		
10	1	49		21.89	21.92	21.83		
10	25	0		20.75	20.81	20.64		
10	25	12		20.69	20.68	20.64		
10	25	25		20.69	20.67	20.54		
10	50	0		20.67	20.69	20.54		
10	1	0	16-QAM	21.85	21.79	21.75	20.81	0.1205
10	1	25		21.87	21.87	21.85		
10	1	49		21.81	21.74	21.72		
10	25	0		20.77	20.79	20.63		
10	25	12		20.73	20.71	20.62		
10	25	25		20.68	20.68	20.54		
10	50	0		20.72	20.73	20.59		
10	1	0	64-QAM	20.73	20.69	20.66	19.75	0.0944
10	1	25		20.77	20.81	20.66		
10	1	49		20.67	20.59	20.60		
10	25	0		19.69	19.76	19.56		
10	25	12		19.68	19.64	19.65		
10	25	25		19.62	19.69	19.54		
10	50	0		19.66	19.67	19.55		
10	1	0	256-QAM	17.97	17.89	17.84	16.91	0.0491
10	1	25		17.90	17.90	17.75		
10	1	49		17.89	17.84	17.72		
10	25	0		17.84	17.89	17.65		
10	25	12		17.88	17.84	17.73		
10	25	25		17.79	17.84	17.70		
10	50	0		17.75	17.82	17.70		
Limit	ERP < 7W			Result			Pass	

LTE Band 12 Maximum Average Power [dBm] (GT - LC = 1.12 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.18	22.27	22.21	21.24	0.1330
5	1	12		22.24	22.14	22.06		
5	1	24		22.01	21.99	21.92		
5	12	0		20.89	20.82	20.80		
5	12	7		20.84	20.80	20.78		
5	12	13		20.90	20.72	20.77		
5	25	0		20.89	20.74	20.78		
5	1	0	16-QAM	21.99	22.09	21.90	21.06	0.1276
5	1	12		22.03	21.93	21.89		
5	1	24		21.85	21.93	21.76		
5	12	0		20.92	20.80	20.85		
5	12	7		20.89	20.80	20.84		
5	12	13		20.85	20.70	20.79		
5	25	0		20.92	20.71	20.81		
5	1	0	64-QAM	20.95	20.99	20.86	19.96	0.0991
5	1	12		20.98	20.86	20.92		
5	1	24		20.83	20.79	20.76		
5	12	0		20.02	19.88	19.97		
5	12	7		20.02	19.94	20.04		
5	12	13		20.03	19.87	19.83		
5	25	0		20.08	19.86	19.85		
5	1	0	256-QAM	18.10	18.06	18.08	17.10	0.0513
5	1	12		18.13	18.08	18.01		
5	1	24		17.99	17.97	17.91		
5	12	0		18.00	17.79	17.88		
5	12	7		17.97	18.06	17.92		
5	12	13		17.99	17.83	17.89		
5	25	0		18.01	17.79	17.90		
Limit	ERP < 3W			Result			Pass	

LTE Band 41 (HPUE) Maximum Average Power [dBm] (GT - LC = 5.15 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	24.27	24.89	24.59	30.04	1.0093
20	1	49		24.42	24.85	24.68		
20	1	99		24.40	24.57	24.55		
20	50	0		23.16	23.63	23.44		
20	50	24		23.23	23.59	23.41		
20	50	50		23.18	23.54	23.39		
20	100	0		23.21	23.59	23.41		
20	1	0	16-QAM	24.26	24.80	24.60	29.99	0.9977
20	1	49		24.41	24.84	24.68		
20	1	99		24.42	24.58	24.59		
20	50	0		23.19	23.64	23.43		
20	50	24		23.21	23.61	23.43		
20	50	50		23.18	23.53	23.39		
20	100	0		23.22	23.61	23.44		
20	1	0	64-QAM	23.13	23.58	23.42	28.76	0.7516
20	1	49		23.28	23.61	23.48		
20	1	99		23.23	23.40	23.32		
20	50	0		22.14	22.61	22.39		
20	50	24		22.17	22.59	22.41		
20	50	50		22.14	22.52	22.41		
20	100	0		22.56	22.53	22.37		
20	1	0	256-QAM	20.46	20.47	20.34	25.81	0.3811
20	1	49		20.56	20.48	20.38		
20	1	99		20.37	20.31	20.26		
20	50	0		20.66	20.65	20.44		
20	50	24		20.55	20.40	20.37		
20	50	50		20.30	20.30	20.18		
20	100	0		20.66	20.55	20.37		
Limit	EIRP < 2W			Result			Pass	

LTE Band 66 Maximum Average Power [dBm] (GT - LC = 3.56 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	21.65	21.77	21.64	25.33	0.3412
20	1	49		21.70	21.53	21.64		
20	1	99		21.56	21.54	21.46		
20	50	0		20.63	20.45	20.44		
20	50	24		20.60	20.56	20.50		
20	50	50		20.51	20.44	20.46		
20	100	0		20.58	20.46	20.45		
20	1	0	16-QAM	21.50	21.45	21.44	25.19	0.3304
20	1	49		21.60	21.63	21.59		
20	1	99		21.44	21.41	21.19		
20	50	0		20.65	20.46	20.48		
20	50	24		20.60	20.58	20.49		
20	50	50		20.50	20.47	20.45		
20	100	0		20.56	20.44	20.42		
20	1	0	64-QAM	20.51	20.54	20.52	24.23	0.2649
20	1	49		20.67	20.67	20.56		
20	1	99		20.56	20.54	20.29		
20	50	0		19.63	19.45	19.45		
20	50	24		19.59	19.56	19.42		
20	50	50		19.50	19.42	19.45		
20	100	0		19.56	19.41	19.45		
20	1	0	256-QAM	17.53	17.53	17.54	21.30	0.1349
20	1	49		17.72	17.74	17.60		
20	1	99		17.49	17.51	17.27		
20	50	0		17.62	17.42	17.39		
20	50	24		17.50	17.49	17.44		
20	50	50		17.69	17.64	17.54		
20	100	0		17.41	17.44	17.21		
Limit	EIRP < 1W			Result			Pass	

LTE Band 71 Maximum Average Power [dBm] (GT - LC = 1.63 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	21.95	21.94	22.14	21.62	0.1452
10	1	25		21.92	22.09	21.88		
10	1	49		21.91	22.02	21.98		
10	25	0		20.67	20.94	20.83		
10	25	12		20.69	20.91	20.76		
10	25	25		20.63	20.75	20.72		
10	50	0		20.67	21.00	20.64		
10	1	0	16-QAM	21.78	21.73	21.80	21.38	0.1374
10	1	25		21.80	21.90	21.83		
10	1	49		21.78	21.73	21.82		
10	25	0		20.78	21.01	20.78		
10	25	12		20.80	20.94	20.70		
10	25	25		20.65	20.77	20.68		
10	50	0		20.63	20.94	20.67		
10	1	0	64-QAM	20.87	20.75	20.87	20.39	0.1094
10	1	25		20.88	20.91	20.87		
10	1	49		20.82	20.66	20.71		
10	25	0		19.64	19.95	19.91		
10	25	12		19.77	19.93	19.87		
10	25	25		19.58	19.91	19.84		
10	50	0		19.67	19.94	19.74		
10	1	0	256-QAM	18.34	18.32	18.41	17.95	0.0624
10	1	25		18.37	18.41	18.40		
10	1	49		18.25	18.39	18.35		
10	25	0		18.13	18.47	18.31		
10	25	12		18.37	18.27	18.44		
10	25	25		18.30	18.38	18.29		
10	50	0		18.17	18.34	18.27		
Limit	ERP < 3W			Result			Pass	

LTE Band 41C_CA Maximum Average Power [dBm] (GT - LC = 5.15 dB)										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
	RB Size	RB Offset	RB Size	RB Offset						
10+20	50	0	100	0	QPSK	20.13	20.26	20.18	27.18	0.5224
10+20	1	0	1	99		13.24	13.23	13.30		
10+20	1	49	1	0		21.94	22.03	21.91		
10+20	50	0	100	0	16-QAM	19.26	19.40	19.32	26.26	0.4227
10+20	1	0	1	99		13.31	13.27	13.31		
10+20	1	49	1	0		21.02	21.11	20.96		
10+20	50	0	100	0	64-QAM	19.26	19.41	19.33	24.56	0.2858
10+20	1	0	1	99		12.94	12.94	13.00		
10+20	1	49	1	0		18.77	18.86	18.70		
10+20	50	0	100	0	256-QAM	17.28	17.42	17.35	22.57	0.1807
10+20	1	0	1	99		13.11	13.14	13.20		
10+20	1	49	1	0		16.92	16.97	16.86		
Limit	EIRP < 2W					Result			Pass	

Appendix B. Test Results of Radiated Test

<Ant. 8>

LTE Band 2

LTE Band 2 / 10MHz / 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	-58.23	-13	-45.23	-78.83	-64.8	1.67	8.24	H
	5550	-55.73	-13	-42.73	-80.97	-62.8	2.65	9.72	H
	7400	-53.76	-13	-40.76	-80.81	-62.9	2.46	11.60	H
									H
									H
									H
	3702	-57.93	-13	-44.93	-78.57	-64.5	1.67	8.24	V
	5550	-56.03	-13	-43.03	-81.42	-63.1	2.65	9.72	V
	7400	-54.16	-13	-41.16	-81.14	-63.3	2.46	11.60	V
									V
									V
									V
Middle	3750	-56.18	-13	-43.18	-76.83	-62.8	1.68	8.30	H
	5628	-40.75	-13	-27.75	-66.2	-47.8	2.70	9.75	H
	7500	-53.93	-13	-40.93	-80.9	-63.3	2.43	11.80	H
									H
									H
									H
	3750	-52.68	-13	-39.68	-73.16	-59.3	1.68	8.30	V
	5628	-49.35	-13	-36.35	-74.83	-56.4	2.70	9.75	V
	7500	-53.73	-13	-40.73	-80.87	-63.1	2.43	11.80	V
									V
									V
									V

LTE Band 2 / 10MHz / 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)
Highest	3804	-57.73	-13	-44.73	-78.46	-64.4	1.70	8.36	H
	5700	-54.36	-13	-41.36	-80.01	-61.4	2.74	9.78	H
	7600	-53.64	-13	-40.64	-80.96	-63.1	2.40	11.86	H
									H
									H
									H
	3804	-54.83	-13	-41.83	-75.44	-61.5	1.70	8.36	V
	5700	-55.66	-13	-42.66	-81.31	-62.7	2.74	9.78	V
	7600	-53.74	-13	-40.74	-81.14	-63.2	2.40	11.86	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	-56.39	-13	-43.39	-77.04	-62.46	1.58	7.65	H
	5136	-54.61	-13	-41.61	-78.9	-61.89	2.42	9.70	H
	6840	-54.45	-13	-41.45	-81.16	-62.42	2.64	10.61	H
									H
									H
									H
									H
	3420	-57.02	-13	-44.02	-77.75	-63.09	1.58	7.65	V
	5136	-56.27	-13	-43.27	-80.31	-63.55	2.42	9.70	V
	6840	-54.85	-13	-41.85	-81.51	-62.82	2.64	10.61	V
									V
									V
									V
									V
Middle	3468	-57.27	-13	-44.27	-78.1	-63.53	1.59	7.86	H
	5208	-56.32	-13	-43.32	-80.82	-63.56	2.46	9.70	H
	6942	-54.76	-13	-41.76	-81.77	-62.88	2.61	10.73	H
									H
									H
									H
									H
	3468	-57.28	-13	-44.28	-78.06	-63.54	1.59	7.86	V
	5208	-56.52	-13	-43.52	-80.85	-63.76	2.46	9.70	V
	6942	-54.76	-13	-41.76	-81.6	-62.88	2.61	10.73	V
									V
									V
									V
									V

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)
Highest	3522	-55.78	-13	-42.78	-76.42	-62.2	1.61	8.03	H
	5286	-52.90	-13	-39.90	-77.48	-60.1	2.50	9.70	H
	7040	-54.70	-13	-41.70	-81.49	-63	2.58	10.88	H
									H
									H
									H
									H
	3522	-57.08	-13	-44.08	-77.8	-63.5	1.61	8.03	V
	5286	-55.90	-13	-42.90	-80.37	-63.1	2.50	9.70	V
	7040	-54.80	-13	-41.80	-81.61	-63.1	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 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	-63.74	-13	-50.74	-75.43	-65.5	0.98	4.89	H
	2472	-59.62	-13	-46.62	-76.69	-61.5	1.28	5.32	H
	3296	-57.89	-13	-44.89	-77.29	-61.3	1.54	7.10	H
									H
									H
									H
									H
	1648	-63.34	-13	-50.34	-75.43	-65.1	0.98	4.89	V
	2472	-59.82	-13	-46.82	-76.79	-61.7	1.28	5.32	V
	3296	-57.49	-13	-44.49	-77.31	-60.9	1.54	7.10	V
									V
									V
									V
									V
Middle	1664	-63.39	-13	-50.39	-75.29	-65.10	0.98	4.84	H
	2496	-59.15	-13	-46.15	-76.06	-61.1	1.29	5.39	H
	3328	-57.96	-13	-44.96	-77.36	-61.5	1.55	7.24	H
									H
									H
									H
									H
	1664	-63.39	-13	-50.39	-75.58	-65.1	0.98	4.84	V
	2496	-59.25	-13	-46.25	-76.71	-61.2	1.29	5.39	V
	3328	-58.06	-13	-45.06	-77.52	-61.6	1.55	7.24	V
									V
									V
									V
									V

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)
Highest	1680	-63.85	-13	-50.85	-75.67	-65.5	0.99	4.80	H
	2520	-59.83	-13	-46.83	-76.98	-61.8	1.30	5.42	H
	3352	-58.56	-13	-45.56	-77.85	-62.2	1.56	7.35	H
									H
									H
									H
									H
	1680	-62.95	-13	-49.95	-75.49	-64.6	0.99	4.80	V
	2520	-59.23	-13	-46.23	-76.86	-61.2	1.30	5.42	V
	3352	-58.16	-13	-45.16	-77.65	-61.8	1.56	7.35	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 / 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	1400	-49.14	-13.00	-36.14	-58.91	-50.80	0.87	4.68	H
	2096	-43.23	-13.00	-30.23	-58.51	-44.10	1.16	4.19	H
	2800	-59.09	-13.00	-46.09	-76.51	-61.20	1.38	5.64	H
									H
									H
									H
									H
	1400	-52.44	-13.00	-39.44	-62.79	-54.10	0.87	4.68	V
	2096	-46.03	-13.00	-33.03	-61.37	-46.90	1.16	4.19	V
	2800	-58.09	-13.00	-45.09	-76.27	-60.20	1.38	5.64	V
									V
									V
									V
									V
Middle	1408	-55.49	-13.00	-42.49	-65.61	-57.20	0.87	4.73	H
	2120	-54.26	-13.00	-41.26	-69.31	-55.20	1.17	4.26	H
	2824	-58.98	-13.00	-45.98	-76.57	-61.10	1.39	5.66	H
	3528	-58.23	-13.00	-45.23	-78.01	-62.50	1.61	8.03	H
									H
									H
									H
	1408	-43.79	-13.00	-30.79	-54.20	-45.50	0.87	4.73	V
	2120	-30.86	-13.00	-17.86	-46.67	-31.80	1.17	4.26	V
	2824	-57.78	-13.00	-44.78	-75.85	-59.90	1.39	5.66	V
	3528	-48.93	-13.00	-35.93	-69.19	-53.20	1.61	8.03	V
									V
									V
									V

LTE Band 12 / 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)
Highest	1424	-55.30	-13.00	-42.30	-65.30	-57.10	0.88	4.83	H
	2136	-52.02	-13.00	-39.02	-67.54	-53.00	1.18	4.31	H
	2848	-59.47	-13.00	-46.47	-76.83	-61.60	1.40	5.68	H
									H
									H
									H
									H
	1424	-52.10	-13.00	-39.10	-62.49	-53.90	0.88	4.83	V
	2136	-49.12	-13.00	-36.12	-64.79	-50.10	1.18	4.31	V
	2848	-58.27	-13.00	-45.27	-76.42	-60.40	1.40	5.68	V
									V
									V
									V
									V

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

LTE Band 71

LTE Band 71 / 10MHz / 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	1328	-57.51	-13	-44.51	-67.32	-58.76	0.84	4.23	H
	1992	-52.98	-13	-39.98	-67.83	-53.62	1.13	3.92	H
	2648	-60.35	-13	-47.35	-77.6	-62.38	1.34	5.52	H
									H
									H
									H
									H
	1328	-60.76	-13	-47.76	-71.04	-62.01	0.84	4.23	V
	1992	-53.18	-13	-40.18	-68.29	-53.82	1.13	3.92	V
	2648	-59.76	-13	-46.76	-77.69	-61.79	1.34	5.52	V
									V
									V
									V
									V
Middle	1344	-54.68	-13	-41.68	-64.6	-56.02	0.84	4.33	H
	2024	-42.84	-13	-29.84	-57.86	-43.52	1.14	3.97	H
	2696	-59.93	-13	-46.93	-77.31	-61.98	1.35	5.56	H
									H
									H
									H
									H
	1344	-62.04	-13	-49.04	-72.38	-63.38	0.84	4.33	V
	2024	-52.34	-13	-39.34	-67.7	-53.02	1.14	3.97	V
	2696	-58.82	-13	-45.82	-76.87	-60.87	1.35	5.56	V
									V
									V
									V
									V

LTE Band 71 / 10MHz / 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)
Highest	1376	-57.78	-13	-44.78	-67.96	-59.3	0.86	4.53	H
	2064	-50.81	-13	-37.81	-66.09	-51.6	1.15	4.09	H
	2752	-60.22	-13	-47.22	-77.6	-62.3	1.37	5.60	H
									H
									H
									H
									H
	1376	-59.98	-13	-46.98	-70.4	-61.5	0.86	4.53	V
	2064	-53.91	-13	-40.91	-69.05	-54.7	1.15	4.09	V
	2752	-59.42	-13	-46.42	-77.53	-61.5	1.37	5.60	V
									V
									V
									V
									V

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

<Ant. 3>

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	-56.78	-25	-31.78	-80.67	-64.13	2.33	9.68	H
	7488	-54.12	-25	-29.12	-81.3	-63.46	2.43	11.78	H
	9990	-50.08	-25	-25.08	-81.44	-59.59	2.69	12.21	H
									H
									H
									H
	4992	-57.51	-25	-32.51	-80.99	-64.86	2.33	9.68	V
	7488	-53.71	-25	-28.71	-81.13	-63.05	2.43	11.78	V
	9990	-50.07	-25	-25.07	-81.44	-59.58	2.69	12.21	V
									V
									V
									V
Middle	5166	-56.26	-25	-31.26	-80.57	-63.53	2.43	9.70	H
	7752	-53.41	-25	-28.41	-81.11	-63.01	2.35	11.95	H
	10332	-49.38	-25	-24.38	-81.71	-59.02	2.69	12.33	H
									H
									H
									H
	5166	-55.82	-25	-30.82	-80.02	-63.09	2.43	9.70	V
	7752	-53.07	-25	-28.07	-81.21	-62.67	2.35	11.95	V
	10332	-49.51	-25	-24.51	-81.72	-59.15	2.69	12.33	V
									V
									V
									V

LTE Band 41 / 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)
Highest	5340	-54.28	-25	-29.28	-79.23	-61.45	2.53	9.70	H
	8010	-52.32	-25	-27.32	-80.76	-62.16	2.27	12.11	H
	10674	-47.87	-25	-22.87	-81.27	-57.61	2.69	12.43	H
									H
									H
									H
	5340	-55.85	-25	-30.85	-80.69	-63.02	2.53	9.70	V
	8010	-52.27	-25	-27.27	-81.01	-62.11	2.27	12.11	V
	10674	-48.29	-25	-23.29	-81.43	-58.03	2.69	12.43	V
									V
									V
									V

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

LTE Band 41C

LTE Band 41C / 10MHz+20MHz / 1RB49 QPSK+1RB0 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	5010	-56.77	-25	-31.77	-80.6	-64.13	2.34	9.70	H
	7515	-54.40	-25	-29.40	-81.63	-63.78	2.42	11.81	H
	10026	-51.52	-25	-26.52	-82.96	-61.03	2.70	12.21	H
									H
									H
									H
									H
	5010	-56.34	-25	-31.34	-79.98	-63.7	2.34	9.70	V
	7515	-54.17	-25	-29.17	-81.64	-63.55	2.42	11.81	V
	10026	-51.60	-25	-26.60	-82.97	-61.11	2.70	12.21	V
									V
									V
									V
									V
Middle	5178	-56.15	-25	-31.15	-80.57	-63.41	2.44	9.70	H
	7764	-53.76	-25	-28.76	-81.56	-63.37	2.34	11.96	H
	10350	-50.19	-25	-25.19	-82.62	-59.84	2.69	12.34	H
									H
									H
									H
									H
	5178	-56.35	-25	-31.35	-80.63	-63.61	2.44	9.70	V
	7764	-53.49	-25	-28.49	-81.58	-63.1	2.34	11.96	V
	10350	-50.20	-25	-25.20	-82.49	-59.85	2.69	12.34	V
									V
									V
									V
									V

LTE Band 41C / 10MHz+20MHz / 1RB49 QPSK+1RB0 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)
Highest	5340	-56.20	-25	-31.20	-81.19	-63.37	2.53	9.70	H
	8010	-53.31	-25	-28.31	-81.7	-63.15	2.27	12.11	H
	10680	-49.51	-25	-24.51	-82.83	-59.26	2.69	12.44	H
									H
									H
									H
									H
	5340	-56.45	-25	-31.45	-81.36	-63.62	2.53	9.70	V
	8010	-52.58	-25	-27.58	-81.31	-62.42	2.27	12.11	V
	10680	-49.60	-25	-24.60	-82.74	-59.35	2.69	12.44	V
									V
									V
									V
									V

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

<Ant. 8+8>

LTE Band 2A+12A

LTE Band 2A+12A / 10MHz+5MHz / 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)
2A Lowest	3702	-57.91	-13	-44.91	-78.83	-64.48	1.67	8.24	H
	5550	-56.08	-13	-43.08	-81.55	-63.15	2.65	9.72	H
	7398	-54.75	-13	-41.75	-81.83	-63.88	2.46	11.60	H
									H
									H
									H
	3702	-58.18	-13	-45.18	-79	-64.75	1.67	8.24	V
	5550	-55.82	-13	-42.82	-81.38	-62.89	2.65	9.72	V
	7398	-54.74	-13	-41.74	-81.97	-63.87	2.46	11.60	V
									V
									V
									V
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)
12A Lowest	1398	-55.17	-13.00	-42.17	-75.26	-56.82	0.87	4.67	H
	2096	-51.32	-13.00	-38.32	-76.68	-52.19	1.16	4.19	H
	2796	-49.97	-13.00	-36.97	-77.49	-52.07	1.38	5.64	H
									H
									H
									H
	1398	-54.73	-13.00	-41.73	-75.31	-56.38	0.87	4.67	V
	2096	-50.89	-13.00	-37.89	-76.59	-51.76	1.16	4.19	V
	2796	-49.13	-13.00	-36.13	-77.30	-51.23	1.38	5.64	V
									V
									V
									V

LTE Band 2A+12A / 10MHz+5MHz / 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)
2A Middle	3750	-58.05	-13	-45.05	-78.89	-64.67	1.68	8.30	H
	5625	-55.43	-13	-42.43	-81.11	-62.48	2.70	9.75	H
	7500	-54.33	-13	-41.33	-81.5	-63.7	2.43	11.80	H
									H
									H
									H
	3750	-57.71	-13	-44.71	-78.58	-64.33	1.68	8.30	V
	5625	-55.83	-13	-42.83	-81.5	-62.88	2.70	9.75	V
	7500	-54.03	-13	-41.03	-81.44	-63.4	2.43	11.80	V
									V
									V
									V
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)
12A Middle	1422	-55.22	-13	-42.22	-75.42	-57.01	0.88	4.82	H
	2132	-51.55	-13	-38.55	-77.13	-52.52	1.18	4.30	H
	2844	-49.32	-13	-36.32	-76.96	-51.45	1.40	5.68	H
									H
									H
									H
	1422	-54.62	-13	-41.62	-75.27	-56.41	0.88	4.82	V
	2132	-51.26	-13	-38.26	-77.19	-52.23	1.18	4.30	V
	2844	-48.81	-13	-35.81	-77.16	-50.94	1.40	5.68	V
									V
									V
									V

LTE Band 2A+12A / 10MHz+5MHz / 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)
2A Highest	3798	-58.87	-13	-45.87	-79.71	-65.53	1.70	8.36	H
	5700	-55.55	-13	-42.55	-81.46	-62.59	2.74	9.78	H
	7602	-54.42	-13	-41.42	-81.88	-63.88	2.40	11.86	H
									H
									H
									H
	3798	-58.86	-13	-45.86	-79.69	-65.52	1.70	8.36	V
	5700	-55.81	-13	-42.81	-81.71	-62.85	2.74	9.78	V
	7602	-53.56	-13	-40.56	-81.13	-63.02	2.40	11.86	V
									V
									V
									V
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)
12A Highest	1422	-55.22	-13.00	-42.22	-75.42	-57.01	0.88	4.82	H
	2132	-51.55	-13.00	-38.55	-77.13	-52.52	1.18	4.30	H
	2844	-49.32	-13.00	-36.32	-76.96	-51.45	1.40	5.68	H
									H
									H
									H
	1422	-54.62	-13.00	-41.62	-75.27	-56.41	0.88	4.82	V
	2132	-51.26	-13.00	-38.26	-77.19	-52.23	1.18	4.30	V
	2844	-48.81	-13.00	-35.81	-77.16	-50.94	1.40	5.68	V
									V
									V
									V

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

LTE Band 12A+66A

LTE Band 12A+66A / 5MHz+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)
12A Lowest	1398	-55.23	-13	-42.23	-75.37	-56.88	0.87	4.67	H
	2096	-51.65	-13	-38.65	-77.05	-52.52	1.16	4.19	H
	2796	-49.68	-13	-36.68	-77.22	-51.78	1.38	5.64	H
									H
									H
									H
	1398	-54.79	-13	-41.79	-75.36	-56.44	0.87	4.67	V
	2096	-51.29	-13	-38.29	-77.01	-52.16	1.16	4.19	V
	2796	-49.45	-13	-36.45	-77.71	-51.55	1.38	5.64	V
									V
									V
									V
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)
66A Lowest	3420	-57.62	-13	-44.62	-78.3	-63.69	1.58	7.65	H
	5130	-56.76	-13	-43.76	-80.93	-64.05	2.41	9.70	H
	6840	-54.95	-13	-41.95	-81.71	-62.92	2.64	10.61	H
									H
									H
									H
	3420	-57.42	-13	-44.42	-78.16	-63.49	1.58	7.65	V
	5130	-56.09	-13	-43.09	-80.24	-63.38	2.41	9.70	V
	6840	-55.06	-13	-42.06	-81.86	-63.03	2.64	10.61	V
									V
									V
									V

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

LTE Band 12A+66A / 5MHz+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)
12A Middle	1410	-55.43	-13	-42.43	-75.58	-57.15	0.87	4.74	H
	2116	-51.34	-13	-38.34	-76.85	-52.27	1.17	4.25	H
	2820	-49.25	-13	-36.25	-76.90	-51.36	1.39	5.66	H
									H
									H
									H
	1410	-54.89	-13	-41.89	-75.57	-56.61	0.87	4.74	V
	2116	-51.21	-13	-38.21	-77.02	-52.14	1.17	4.25	V
	2820	-49.12	-13	-36.12	-77.40	-51.23	1.39	5.66	V
									V
									V
									V
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)
66A Middle	3468	-57.09	-13	-44.09	-77.92	-63.35	1.59	7.86	H
	5208	-56.14	-13	-43.14	-80.83	-63.38	2.46	9.70	H
	6942	-55.23	-13	-42.23	-82.06	-63.35	2.61	10.73	H
									H
									H
									H
	3468	-57.19	-13	-44.19	-78.05	-63.45	1.59	7.86	V
	5208	-56.51	-13	-43.51	-80.85	-63.75	2.46	9.70	V
	6942	-55.22	-13	-42.22	-82.07	-63.34	2.61	10.73	V
									V
									V
									V

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

LTE Band 12A+66A / 5MHz+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)
12A Highest	1422	-54.82	-13	-41.82	-75.14	-56.61	0.88	4.82	H
	2132	-51.15	-13	-38.15	-76.73	-52.12	1.18	4.30	H
	2844	-49.89	-13	-36.89	-77.46	-52.02	1.40	5.68	H
									H
									H
									H
	1422	-54.66	-13	-41.66	-75.37	-56.45	0.88	4.82	V
	2132	-51.26	-13	-38.26	-77.23	-52.23	1.18	4.30	V
	2844	-48.74	-13	-35.74	-77.20	-50.87	1.40	5.68	V
									V
									V
									V
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)
66A Highest	3522	-57.54	-13	-44.54	-78.41	-63.96	1.61	8.03	H
	5280	-56.43	-13	-43.43	-81.22	-63.63	2.50	9.70	H
	7038	-54.99	-13	-41.99	-82	-63.29	2.58	10.88	H
									H
									H
									H
	3522	-57.42	-13	-44.42	-78.18	-63.84	1.61	8.03	V
	5280	-56.42	-13	-43.42	-81.1	-63.62	2.50	9.70	V
	7038	-54.84	-13	-41.84	-81.91	-63.14	2.58	10.88	V
									V
									V
									V

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