

TEST REPORT

Applicant: Quectel Wireless Solutions Company Limited
Address: Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Equipment Type: LTE-A Cat 6 M.2 Module
Model Name: EM060K-GL
Brand Name: N/A
FCC ID: XMR2022EM060KGL
Test Standard: 47 CFR Part 2
(Others refer to chapter 3.1)
Sample Arrival Date: Oct. 31, 2023
Test Date: Nov. 14, 2023 - Nov. 17, 2023
Date of Issue: Dec. 11, 2023

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Zhong Weiqiang

Checked by: Wu Huihui

Approved by: Tolan Tu
(Testing Director)

Zhong Weiqiang

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Dec. 11, 2023</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Quectel Wireless Solutions Company Limited
Address	Building 5, Shanghai Business Park PhaseIII (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

2.2 Manufacturer Information

Manufacturer	Quectel Wireless Solutions Company Limited
Address	Building 5, Shanghai Business Park PhaseIII (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

2.3 General Description for Equipment under Test (EUT)

EUT Name	LTE-A Cat 6 M.2 Module
Model Name Under Test	EM060K-GL
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.3.1 Host Information:

Product Name	Notebook Computer
Model Name	Lenovo 100e Chromebook Gen 4
Brand Name	Lenovo

2.4 Technical Information

All Network and Wireless connectivity for EUT	3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network FDD LTE Band 2/4/5/7/12/13/14/17/25/26/30/66/71 TDD LTE Band 38/41/42/43/48 Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n, VHT, 802.11ac and 802.11ax U-NII-1/2A/2C/3
About the Product	The equipment is LTE-A Cat 6 M.2 Module, intended for used with information technology equipment.

The following is the technical information of the EUT tested frequency bands in this report.

Operating Bands	WCDMA/HSDPA/HSUPA Band 2/4/5 LTE FDD Band 2/4/5/7/12/13/14/17/25/26/30/66/71 LTE TDD Band 38/41/42/43/48	
Modulation Type	WCDMA	QPSK
	HSDPA	QPSK
	/HSUPA	16QAM
	LTE	QPSK
		16QAM
		64QAM
Antenna Type	PIFA Antenna	
Antenna Gain	WCDMA/HSDPA/HSUPA Band 2: 1.812 dBi WCDMA/HSDPA/HSUPA Band 4: 2.76 dBi WCDMA/HSDPA/HSUPA Band 5: 0.94 dBi FDD LTE Band 2: 1.812 dBi FDD LTE Band 4: 2.76 dBi FDD LTE Band 5: 0.94 dBi FDD LTE Band 7: 0.823 dBi FDD LTE Band 12: 0.115 dBi FDD LTE Band 13: 1.725 dBi FDD LTE Band 14: 1.425 dBi FDD LTE Band 17: 0.115 dBi FDD LTE Band 25: 1.803 dBi FDD LTE Band 26: 0.94 dBi FDD LTE Band 30: 0.894 dBi FDD LTE Band 66: 2.378 dBi FDD LTE Band 71: 0.173 dBi TDD LTE Band 38: 1.29 dBi TDD LTE Band 41: 0.915 dBi TDD LTE Band 42: 0.901 dBi TDD LTE Band 43: 0.912 dBi TDD LTE Band 48: 0.897 dBi	

The Max RF Output Power (EIRP/ERP)		WCDMA/HSDPA/HSUPA Band 2: 25.48 dBm WCDMA/HSDPA/HSUPA Band 4: 26.35 dBm WCDMA/HSDPA/HSUPA Band 5: 22.40 dBm FDD LTE Band 2: 25.57 dBm FDD LTE Band 4: 26.51 dBm FDD LTE Band 5: 22.54 dBm FDD LTE Band 7: 24.17 dBm FDD LTE Band 12: 21.55 dBm FDD LTE Band 13: 23.34 dBm FDD LTE Band 14: 22.95 dBm FDD LTE Band 17: 21.55 dBm FDD LTE Band 25: 25.57 dBm FDD LTE Band 26(814-824): 22.58 dBm FDD LTE Band 26(824-849): 22.54 dBm FDD LTE Band 30: 22.99 dBm FDD LTE Band 66: 26.51 dBm FDD LTE Band 71: 21.79 dBm TDD LTE Band 38: 24.85 dBm TDD LTE Band 41: 24.85 dBm TDD LTE Band 42(3450 MHz ~ 3550 MHz): 22.36 dBm TDD LTE Band 42(3550 MHz ~ 3700 MHz): 22.36 dBm TDD LTE Band 43(3550 MHz ~ 3700 MHz): 22.36 dBm TDD LTE Band 43(3700 MHz ~ 3800 MHz): 22.47 dBm TDD LTE Band 48: 22.36 dBm		
Band	Power Class		Tx Frequency Range	Rx Frequency Range
	GMSK	GMSK		
WCDMA B2	3		1850 MHz ~ 1910 MHz	1930 MHz ~ 1990 MHz
WCDMA B4	3		1710 MHz ~ 1755 MHz	2110 MHz ~ 2155 MHz
WCDMA B5	3		824 MHz ~ 849 MHz	869 MHz ~ 894 MHz
LTE B2	3		1850 MHz ~ 1910 MHz	1930 MHz ~ 1990 MHz
LTE B4	3		1710 MHz ~ 1755 MHz	2110 MHz ~ 2155 MHz
LTE B5	3		824 MHz ~ 849 MHz	869 MHz ~ 894 MHz
LTE B7	3		2500 MHz ~ 2570 MHz	2620 MHz ~ 2690 MHz
LTE B12	3		699 MHz ~ 716 MHz	729 MHz ~ 746 MHz
LTE B13	3		777 MHz ~ 787 MHz	746 MHz ~ 756 MHz
LTE B14	3		788 MHz ~ 798 MHz	758 MHz ~ 768 MHz
LTE B17	3		704 MHz ~ 716 MHz	734 MHz ~ 746 MHz
LTE B25	3		1850 MHz ~ 1915 MHz	1930 MHz ~ 1995 MHz
LTE B26	3		814 MHz ~ 824 MHz	859 MHz ~ 869 MHz
			824 MHz ~ 849 MHz	869 MHz ~ 894 MHz
LTE B30	3		2305 MHz ~ 2315 MHz	2350 MHz ~ 2360 MHz
LTE B66	3		1710 MHz ~ 1780 MHz	2110 MHz ~ 2180 MHz
LTE B71	3		663 MHz ~ 698 MHz	617 MHz ~ 652 MHz
LTE B38	3		2570 MHz ~ 2620 MHz	2570 MHz ~ 2620 MHz

LTE B41	3	2496 MHz ~ 2690 MHz	2496 MHz ~ 2690 MHz
LTE B42	3	3450 MHz ~ 3550 MHz	3450 MHz ~ 3550 MHz
		3550 MHz ~ 3600 MHz	3550 MHz ~ 3600 MHz
LTE B43	3	3600 MHz ~ 3700 MHz	3600 MHz ~ 3700 MHz
		3700 MHz ~ 3800 MHz	3700 MHz ~ 3800 MHz
LTE B48	3	3550 MHz ~ 3700 MHz	3550 MHz ~ 3700 MHz

Note1: The EUT information provided by the applicant, except for The Max RF Conducted Power. For more detailed band specifications and features description, please refer to the manufacturer's specifications or user's manual.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 Subpart H	Cellular Radiotelephone Service
3	47 CFR Part 24 Subpart E	Broadband PCS
4	47 CFR Part 27	Miscellaneous Wireless Communications Services
5	47 CFR Part 90 Subpart S	Regulations Governing Licensing and Use of Frequencies in the 806-824, 851-869, 896-901, and 935-940 MHz Bands
6	47 CFR Part 96	CITIZENS BROADBAND RADIO SERVICE
7	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
8	KDB 971168 D01 v03	Measurement Guidance for Certification of Licensed Digital Transmitters

3.2 Test Verdict

No.	Test Description	FCC Part No.	Test Result	Test Verdict
1	Conducted RF Output Power	2.1046	Reporting only (ANNEX A.1)	Pass
2	Effective (Isotropic) Radiated Power	2.1046 22.913 24.232 27.50 90.635(b) 90.542(a) 96.41(b)	ANNEX A.1	Pass
3	Peak to Average Ratio	2.1046 24.232(d) 27.50(d)	ANNEX A.2	Pass
4	Occupied Bandwidth	2.1049 22.917 24.238 27.53 90.209	ANNEX A.3	Pass
5	Frequency Stability	2.1055 22.355 24.235 27.54 90.213	ANNEX A.4	Pass
6	Spurious Emission at Antenna Terminals	2.1051 22.917 24.238 27.53 90.691 90.543 96.41(e)	ANNEX A.5	Pass
7	Band Edge	2.1051 22.917 24.238 27.53 90.691 90.543 96.41(e)	ANNEX A.6	Pass
8	Field Strength of Spurious Radiation	2.1053 22.917 24.238 27.53	ANNEX A.7	Pass

No.	Test Description	FCC Part No.	Test Result	Test Verdict
		90.691 90.543 96.41(e)		

Note: The RF module (Model Name: EM060K-GL, FCC ID: XMR2022EM060KGL) installed in the EUT is electronically and mechanically identical to the original certified module in the test report No. 2309RSU052-U1 & No. 2309RSU052-U2 & No. 2309RSU052-U3 & No. 2309RSU052-U4 & No. 2309RSU052-U5 & No. 2309RSU052-U6 & No. 2309RSU052-U7, which issued by MRT Technology (Suzhou) Co., Ltd on Oct. 26, 2023, so just the Field Strength of Spurious Radiation were retested in this report. Other test items please refer to the report No. 2309RSU052-U1 & No. 2309RSU052-U2 & No. 2309RSU052-U3 & No. 2309RSU052-U4 & No. 2309RSU052-U5 & No. 2309RSU052-U6 & No. 2309RSU052-U7, which issued by MRT Technology (Suzhou) Co., Ltd on Oct. 26, 2023.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the environmental conditions were within the listed ranges:

Relative Humidity		20% to 75%
Atmospheric Pressure		98 kPa to 102 kPa
Test Voltage of the EUT	NV (Normal Voltage)	11.31 V
	LV (Low Voltage)	10.18 V
	HV (High Voltage)	12.44 V
Test Temperature of the EUT	NT (Normal Temperature)	15 °C to 35 °C
	LT (Low Temperature)	5° C
	HT (High Temperature)	50°C

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Version	Cal. Date	Cal. Due
Radiated Test System						
Radiated Test System Test Software	BALUN	BL410-E	N/A	V22.930	N/A	N/A
Wideband Radio Communication Tester	R&S	CMW 500	167190	V4.0.60	2023.05.11	2024.05.10
Wideband Radio Communication Tester	R&S	CMW 500	102318	V3.2.71	2023.05.16	2024.05.15
Spectrum Analyzer	R&S	FSV40	101544	2.30.SP4	2023.01.03	2024.01.02
Test Antenna-Bi-Log (30 MHz-3 GHz)	Schwarzbeck	VULB 9163	9163-624	N/A	2021.08.20	2024.08.19
Test Antenna-Horn (1-18 GHz)	Schwarzbeck	BBHA 9120D	01917	N/A	2022.06.09	2025.06.08
Test Antenna-Horn (18-40 GHz)	A-INFO	LB- 180400KF	J211060273	N/A	2021.07.02	2024.07.01
Anechoic Chamber	YIHENG	9m*6m*6m	144	N/A	2022.02.09	2024.09.03
EMI Receiver	Keysight	N9038A	MY53220118	A.14.16	2023.09.05	2024.09.04

4.3 Test Configurations

Test Items	Test Mode	Test Channel		
		LCH	MCH	HCH
Field Strength of Spurious Radiation	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Note 1: The mark “v” means that this configuration is chosen for testing.				

Test Mode	UL Channel	UL Channel No.	UL Frequency (MHz)
WCDMA Band 2	Low Channel	9262	1852.4
	Middle Channel	9400	1880.0
	High Channel	9538	1907.6
WCDMA Band 4	Low Channel	1312	1712.4
	Middle Channel	1412	1732.4
	High Channel	1513	1752.6
WCDMA Band 5	Low Channel	4132	826.4
	Middle Channel	4182	836.4
	High Channel	4233	846.6

LTE Band	Bandwidth (MHz)						Modulation Type		RB#			Test Channel		
	1.4	3	5	10	15	20	QPSK	16-QAM	1	Half	Full	LCH	MCH	HCH
Field Strength of Spurious Radiation														
2	Worst Case													
4	Worst Case													
5	Worst Case													
7	Worst Case													
12	Worst Case													
13	Worst Case													
14	Worst Case													
17	Worst Case													
25	Worst Case													
26	Worst Case													
30	Worst Case													
66	Worst Case													
71	Worst Case													
38	Worst Case													
41	Worst Case													
42	Worst Case													
43	Worst Case													
48	Worst Case													

Test Mode	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL Frequency (MHz)
LTE Band 2	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Middle Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900
LTE Band 4	Low Range	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle Range	1.4/3/5/10/15/20	20175	1732.5
	High Range	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5
		20	20300	1745
LTE Band 5	Low Range	1.4	20407	824.7
		3	20415	825.5
		5	20425	826.5
		10	20450	829
	Middle Range	1.4/3/5/10	20525	836.5
	High Range	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844
LTE Band 7	Low Range	5	20775	2502.5
		10	20800	2505
		15	20825	2507.5
		20	20850	2510
	Middle Range	5/10/15/20	21100	2535

Test Mode	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL Frequency (MHz)
	High Range	5	21425	2567.5
		10	21400	2565
		15	21375	2562.5
		20	21350	2560
LTE Band 12	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Middle Range	1.4/3/5/10	23095	707.5
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5
		10	23130	711
	LTE Band 13	Low Range	5	23205
10			---	---
Middle Range		5/10	23230	782
High Range		5	23255	784.5
		10	---	---
LTE Band 14	Low Range	5	23305	790.5
		10	---	---
	Middle Range	5/10	23330	793
	High Range	5	23355	795.5
		10	---	---
LTE Band 17	Low Range	5	23755	706.5
		10	23780	709
	Middle Range	5/10	23790	710
	High Range	5	23825	713.5
		10	23800	711
LTE Band 26 (814 MHz ~ 824 MHz)	Low Range	1.4	26697	814.7
		3	26705	815.5
		5	26715	816.5
		10	---	---
	Middle Range	1.4/3/5/10	26740	819
	High Range	1.4	26783	823.3
		3	26775	822.5
		5	26765	821.5
		10	---	---
LTE Band 26 (824 MHz ~ 849 MHz)	Low Range	1.4	26797	824.7
		3	26805	825.5
		5	26815	826.5
		10	26840	829

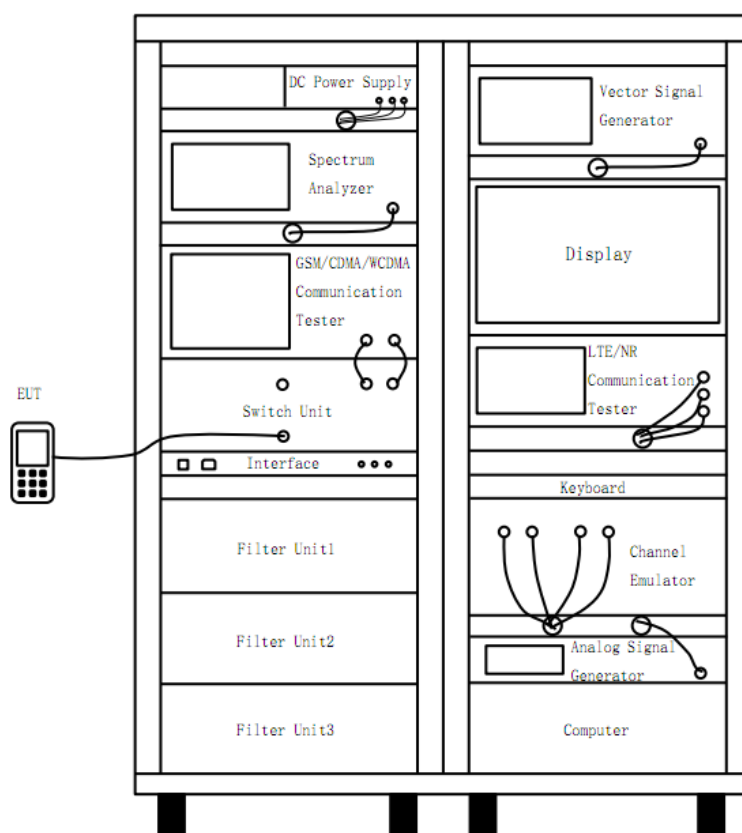
Test Mode	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL Frequency (MHz)
	Middle Range	15	26865	831.5
		1.4/3/5/10/15	26915	836.5
	High Range	1.4	27033	848.3
		3	27025	847.5
		5	27015	846.5
		10	26990	844
		15	26965	841.5
LTE Band 30	Low Range	5	27685	2307.5
		10	---	---
	Middle Range	5/10	27710	2310
	High Range	5	27735	2312.5
		10	---	---
LTE Band 66	Low Range	1.4	131979	1710.7
		3	131987	1711.5
		5	131997	1712.5
		10	132022	1715
		15	132047	1717.5
		20	132072	1720
	Middle Range	1.4/3/5/10/15/20	132322	1745
	High Range	1.4	132665	1779.3
		3	132657	1778.5
		5	132647	1777.5
		10	132622	1775
		15	132597	1772.5
		20	132572	1770
LTE Band 71	Low Range	5	133147	665.5
		10	133172	668
		15	133197	670.5
		20	133222	673
	Middle Range	5/10/15/20	133322	683
	High Range	5	133447	695.5
		10	133422	693
		15	133397	690.5
		20	133372	688
LTE Band 38	Low Range	5	37775	2572.5
		10	37800	2575
		15	37825	2577.5
		20	37850	2580
	Middle Range	5/10/15/20	38000	2595
	High Range	5	38225	2617.5
		10	38200	2615

Test Mode	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL Frequency (MHz)
		15	38175	2612.5
		20	38150	2610
LTE Band 41	Low Range	5	39675	2498.5
		10	39700	2501
		15	39725	2503.5
		20	39750	2506
	Middle Range	5/10/15/20	40620	2593
	High Range	5	41565	2687.5
		10	41540	2685
		15	41515	2682.5
		20	41490	2680
LTE Band 66	Low Range	1.4	131979	1710.7
		3	131987	1711.5
		5	131997	1712.5
		10	132022	1715
		15	132047	1717.5
		20	132072	1720
	Middle Range	1.4/3/5/10/15/20	132322	1745
	High Range	1.4	132665	1779.3
		3	132657	1778.5
		5	132647	1777.5
		10	132622	1775
		15	132597	1772.5
		20	132572	1770
LTE Band 42 (3550 MHz ~ 3600 MHz)	Low Range	5	43115	3552.5
		10	43140	3555
		15	43165	3557.5
		20	43190	3560
	Middle Range	5/10/15/20	43340	3575
	High Range	5	43565	3597.5
		10	43540	3595
		15	43515	3592.5
20		43490	3590	
LTE Band 43 (3600 MHz ~ 3700 MHz)	Low Range	5	43615	3602.5
		10	43640	3605
		15	43665	3607.5
		20	43690	3610
	Middle Range	5/10/15/20	44090	3650
	High Range	5	44565	3697.5
		10	44540	3695
		15	44515	3692.5

Test Mode	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL Frequency (MHz)
		20	44490	3690
LTE Band 48 (3550 MHz ~ 3700 MHz)	Low Range	5	55265	3552.5
		10	55290	3555
		15	55315	3557.5
		20	55340	3560
	Middle Range	5/10/15/20	55990	3625
	High Range	5	56715	3697.5
		10	56690	3695
		15	56665	3692.5
		20	56640	3690
LTE Band 42 (3450 MHz ~ 3550 MHz)	Low Range	5	42115	3452.5
		10	42140	3455
		15	42165	3457.5
		20	42190	3460
	Middle Range	5/10/15/20	42590	3500
	High Range	5	43065	3547.5
		10	43040	3545
		15	43015	3542.5
		20	42990	3540
LTE Band 43 (3700 MHz ~ 3800 MHz)	Low Range	5	44615	3702.5
		10	44640	3705
		15	44665	3707.5
		20	44690	3710
	Middle Range	5/10/15/20	45090	3750
	High Range	5	45565	3797.5
		10	45540	3795
		15	45515	3792.5
		20	45490	3790

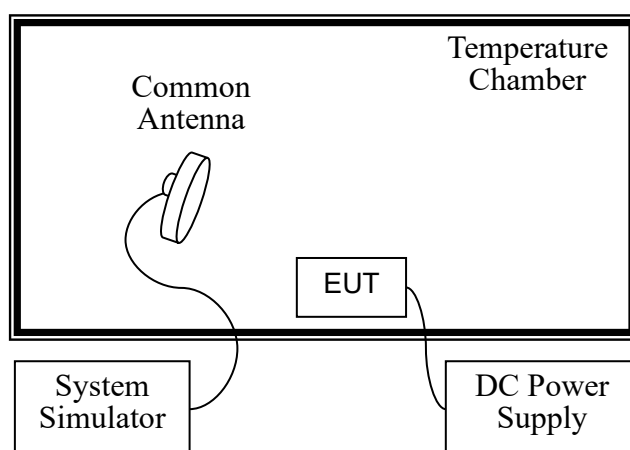
4.4 Test Setup

4.4.1 For Antenna Port Test



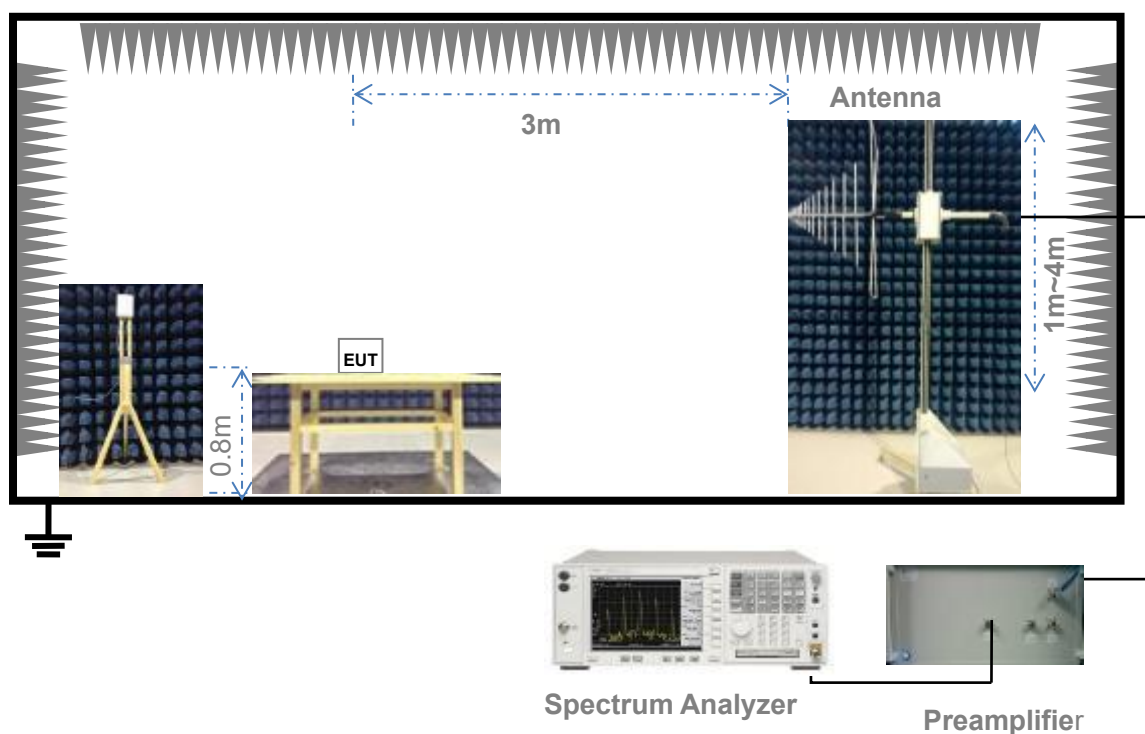
(Diagram 1)

4.4.2 For Frequency Stability Test



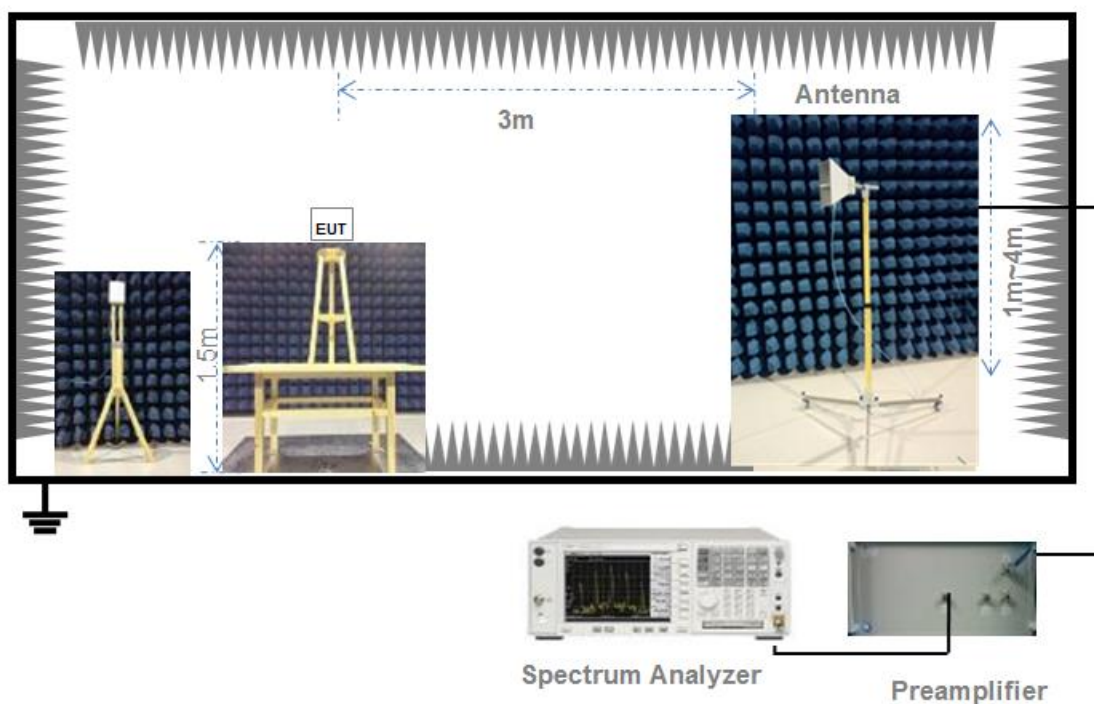
(Diagram 2)

4.4.3 For Radiated Test (30 MHz ~ 1 GHz)



(Diagram 3)

4.4.4 For Radiated Test (Above 1 GHz)



(Diagram 4)

5 TEST ITEMS

5.1 Transmitter Radiated Power (EIRP/ERP)

5.1.1 Limit

FCC § 2.1046 & 22.913(a) & 24.232(c) & 27.50(a) & 27.50(b) & 27.50(c) & 27.50(d) & 27.50(h) & 27.50(j) & 27.50(k) & 90.635(b) & 90.542(a) & 96.41(b)

According to FCC section 22.913(a) (5), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to FCC section 27.50(a) (3), for mobile and portable stations transmitting in the 2305-2315MHz band or the 2350-2360MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands.

FCC section 27.50(b) (10), portable stations (hand-held devices) transmitting in the 746-757MHz, 776-788MHz, and 805-806MHz bands are limited to 3 watts ERP.

FCC section 27.50(c) (10), portable stations (hand-held devices) in the 600MHz uplink band and the 698-746MHz band, and fixed and mobile stations in the 600MHz uplink band are limited to 3 watts ERP.

FCC section 27.50(d) (4), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(7) Fixed, mobile, and portable (hand-held) stations operating in the 2000-2020 MHz band are limited to 2 watts EIRP.

And FCC section 27.50(h) (2), for mobile and other user stations, mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

FCC section 27.50(j) (3), for mobile, and portable (hand-held) stations operating in the 3700-3980 MHz band are limited to 1 watt EIRP.

FCC section 27.50(k) (3), Mobile devices are limited to 1Watt (30 dBm) EIRP in the 3450-3550 MHz band.

According to FCC section 90.635(b), the maximum output power of the transmitter for mobile stations is 100 watts (20dBW).

According to FCC section 90.542(a) (7), portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

FCC section 96.41(b), the maximum effective isotropic radiated power (EIRP) and maximum Power Spectral Density (PSD) of any CBSD and End User Device must comply with the limits shown in the table in this paragraph below:

Device	Maximum EIRP (dBm/10 megahertz)	Maximum PSD (dBm/MHz)
End User Device	23	N/A
Category A CBSD	30	20
Category B CBSD ^{note1}	47	37
Note1: Category B CBSDs will only be authorized for use after an ESC is approved and commercially deployed consistent with §§ 96.15 and 96.67.		

5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is used for conducted test, and the section 4.4.3 and 4.4.4 (Diagram 3, 4) test setup description is used for radiated test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

Description of the Conducted Output Power Measurement

The EUT is coupled to the SS with attenuator through power splitter; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. A system simulator is used to establish communication with the EUT, and its parameters are 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 relevant equation for determining the conducted measured value is:

$$\text{Conducted Output Power Value (dBm)} = \text{Measured Value (dBm)} + \text{Path Loss (dB)}$$

where:

Conducted Output Power Value = final conducted measured value in the conducted power test, in dBm;

Measured Value = measured conducted power received by spectrum analyzer or power meter, in dBm;

Path Loss = signal attenuation in the connecting cable between the transmitter and spectrum analyzer or power meter, including external cable loss, in dB;

During the test, the data of Path Loss (dB) is added in the spectrum analyzer or power meter, so Measured Value (dBm) is the final values which contains the data of Path Loss (dB).

For example:

In the conducted output power test, when measured value for GSM850 is 24.7 dBm, and path loss is 8.5 dB, then final conducted output power value is:

$$\text{Conducted Output Power Value (dBm)} = 24.7 \text{ dBm} + 8.5 \text{ dB} = 33.2 \text{ dBm}$$

Description of the Transmitter Radiated Power Measurement

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

Final measurement calculation as below:

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP/EIRP} = P_{\text{Meas}} + \text{GT} - \text{LC}$$

where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

dBd (ERP)=dBi (EIRP) -2.15 dB

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

For example:

In the EIRP test, when P_{Meas} value for GSM1900 is 30.2 dBm, LC is 0.6 dB, and GT is -3.4 dB, then final EIRP value is:

$$\text{EIRP for GSM1900} = 30.2 \text{ dBm} - 3.4 \text{ dBi} - 0.6 \text{ dB} = 26.2 \text{ dBm}$$

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP value for GSM850 is:

$$\text{ERP (dBm)} = 21\text{dBm} + 8\text{dB} = 29\text{dBm}$$

5.1.4 Test Result

Please refer to ANNEX A.1.

5.2 Peak to Average Ratio

5.2.1 Limit

FCC § 2.1046 & 24.232(d) & 27.50(d) & 27.50(j) & 27.50(k)

In addition, when the transmitter power is measured in terms of average value, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

According to FCC section 24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with 24.232 (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

FCC section 24.232(e), peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

According to FCC section 27.50(d) (5) & 27.50(j) & 27.50(k), in measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

5.2.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is used for this test. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

According to KDB 971168 D01, there is CCDF procedure for PAPR:

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval as follows:
 - 1) for continuous transmissions, set to 1 ms,

2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

e) Record the maximum PAPR level associated with a probability of 0.1%.

Alternate procedure for PAPR:

Use one of the procedures presented in 4.1 to measure the total peak power and record as P_{Pk} . Use one of the applicable procedures presented 4.2 to measure the total average power and record as P_{Avg} . Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$PAPR (dB) = P_{Pk} (dBm) - P_{Avg} (dBm).$$

5.2.4 Test Result

Please refer to ANNEX A.2.

5.3 Occupied Bandwidth

5.3.1 Limit

FCC § 2.1049

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Many of the individual rule parts specify a relative OBW in lieu of the 99% OBW. In such cases, the OBW is defined as the width of the signal between two points, one below the carrier center frequency and on above the carrier center frequency, outside of which all emissions are attenuated by at least X dB below the transmitter power, where the value of X is typically specified as 26.

5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is used for this test. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

The following procedure shall be used for measuring power bandwidth.

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the anticipated OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) For -26 dB OBW, the dynamic range of the spectrum analyzer at the selected RBW shall be at least 10dB below the target “-X dB down” requirement, e.g. -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be 36dB below the reference value.
- f) Set the detection mode to peak, and the trace mode to max hold.
- g) For 99% OBW, use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.

If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is

recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.

h) For -26 dB OBW, determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

Determine the “-X dB down amplitude” as equal to (reference value -X). Alternatively, this calculation can be performed by the analyzer by using the marker-delta function.

Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below “-X dB down amplitude” determined in step g). If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.

i) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

j) Change variable modulations, coding, or channel bandwidth settings, then repeat above test procedures.

5.3.4 Test Result

Please refer to ANNEX A.3.

5.4 Frequency Stability

5.4.1 Limit

FCC § 2.1055 & 22.355 & 24.235 & 27.54 & 90.213

FCC § 2.1055

The frequency stability shall be measured with variation of ambient temperature as follows:

- (1) The temperature is varied from -30°C to +50°C.
- (2) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10°C through the range.

The frequency stability shall be measured with variation of primary supply voltage as follows:

- (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than carried battery equipment.
- (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating and point which shall be specified by the manufacture.
- (3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

FCC § 22.355

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

Table C-1—Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency range (MHz)	Base, fixed (ppm)	Mobile > 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

FCC § 24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

FCC § 27.54

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

FCC § 90.213

The frequency stability shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

5.4.2 Test Setup

The section 4.4.2 (Diagram 2) test setup description is used for this test. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

1. The EUT is placed in a temperature chamber.
2. The temperature is set to 25°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured.
3. The temperature is increased by not more than 10 degrees, allowed to stabilize and soak, and then repeat the frequency error measurement.
4. Repeat procedure 3 until +50°C and -30°C is reached.
5. Change supply voltage, and repeat measurement until extreme voltage is reached.

5.4.4 Test Result

Please refer to ANNEX A.4.

5.5 Spurious Emission at Antenna Terminals

5.5.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(l) & 27.53(m) & 27.53(n) & 90.691 & 90.543 & 96.41(e)

In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This is calculated to be -13 dBm.

FCC § 27.53(a) (4)

For mobile and portable stations operating in the 2305-2315MHz and 2350-2360MHz bands:

(1) By a factor of not less than: $43 + 10 \log(P)$ dB on all frequencies between 2305 and 2320MHz and on all frequencies between 2345 and 2360MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log(P)$ dB on all frequencies between 2320 and 2324MHz and on all frequencies between 2341 and 2345MHz, not less than $61 + 10 \log(P)$ dB on all frequencies between 2324 and 2328MHz and on all frequencies between 2337 and 2341MHz, and not less than $67 + 10 \log(P)$ dB on all frequencies between 2328 and 2337MHz.

(2) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2300 and 2305MHz, $55 + 10 \log(P)$ dB on all frequencies between 2296 and 2300MHz, $61 + 10 \log(P)$ dB on all frequencies between 2292 and 2296MHz, $67 + 10 \log(P)$ dB on all frequencies between 2288 and 2292MHz, and $70 + 10 \log(P)$ dB below 2288MHz.

(3) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2360 and 2365MHz, and not less than $70 + 10 \log(P)$ dB above 2365MHz.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth

of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(f)

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. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43+10*\log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC § 27.53(h) (1)

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

FCC § 27.53(l) (2)

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

FCC § 27.53(m) (4)

For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- $40 + 10 \log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43 + 10 \log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55 + 10 \log P$ dB (-25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

FCC § 27.53(n) (2)

For mobile operations in the 3450 - 3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

FCC § 90.691

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

FCC § 90.543

(e) For operations in the 758 – 768 MHz and the 788 – 798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On all frequencies between 769 – 775 MHz and 799 – 805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations.

(2) On all frequencies between 769 – 775 MHz and 799 – 805 MHz, by a factor not less than $65 + 10 \log (P)$

dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 758–775 MHz and 788–805 MHz bands, all emissions including harmonics 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. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

FCC § 96.41(e)

The conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any emission shall not exceed -25 dBm/MHz. The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

5.5.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside

and adjacent to the frequency blocks a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

1. The EUT is coupled to the system simulator and spectrum analyzer; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
2. Base Station is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power.
3. The RF output of the transmitter is connected to the input of the spectrum analyzer through sufficient attenuation.
4. Spurious emissions are tested with 0.001MHz RBW for frequency less than 150kHz, 0.01MHz RBW for frequency less than 30MHz, 0.1MHz RBW for frequency less than 1GHz, and 1MHz RBW for frequency above 1GHz. And sweep point number are at least 401, referring to following formula.

Sweep point number = Span/RBW

VBW=3*RBW

Detector Mode=mean or average power

5. Record the frequencies and levels of spurious emissions.

5.5.4 Test Result

Please refer to ANNEX A.5.

5.6 Band Edge

5.6.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(a) & 27.53(c) & 27.53(g) & 27.53(h) & 27.53(l) & 27.53(m) & 27.53(n) & 90.691 & 90.543 & 96.41(e)

In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This is calculated to be -13 dBm.

FCC § 27.53(a) (4)

For mobile and portable stations operating in the 2305-2315MHz and 2350-2360MHz bands:

(1) By a factor of not less than: $43 + 10 \log(P)$ dB on all frequencies between 2305 and 2320MHz and on all frequencies between 2345 and 2360MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log(P)$ dB on all frequencies between 2320 and 2324MHz and on all frequencies between 2341 and 2345MHz, not less than $61 + 10 \log(P)$ dB on all frequencies between 2324 and 2328MHz and on all frequencies between 2337 and 2341MHz, and not less than $67 + 10 \log(P)$ dB on all frequencies between 2328 and 2337MHz.

(2) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2300 and 2305MHz, $55 + 10 \log(P)$ dB on all frequencies between 2296 and 2300MHz, $61 + 10 \log(P)$ dB on all frequencies between 2292 and 2296MHz, $67 + 10 \log(P)$ dB on all frequencies between 2288 and 2292MHz, and $70 + 10 \log(P)$ dB below 2288MHz.

(3) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2360 and 2365MHz, and not less than $70 + 10 \log(P)$ dB above 2365MHz.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth

of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43+10*\log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC § 27.53(h) (1)

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

FCC § 27.53(l) (2)

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

FCC § 27.53(m) (4)

For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- $40+10\log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43+10\log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,

- $55 + 10 \log P$ dB (-25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

FCC § 27.53(n) (2)

For mobile operations in the 3450 - 3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

FCC § 90.691

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

FCC § 90.543

(e) For operations in the 758 – 768 MHz and the 788 – 798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On all frequencies between 769 – 775 MHz and 799 – 805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations.

(2) On all frequencies between 769 – 775 MHz and 799 – 805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775 – 788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 96.41(e)

The conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any emission shall not exceed -25 dBm/MHz. The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

5.6.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

1. The EUT is coupled to the system simulator and spectrum analyzer; the RF load attached to EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

2. Base Station is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power.

3. The RF output of the transmitter is connected to the input of the spectrum analyzer through sufficient attenuation.

4. The center of the spectrum analyzer was set to block edge frequency.

5. Band edge are tested with 1%*cBW (RBW), and sweep point number referred to following formula.

$$\text{Sweep point number} = 2 * \text{Span} / \text{RBW}$$

$$\text{VBW} = 3 \text{RBW}$$

6. Record the frequencies and levels of spurious emissions.

For mobile and portable stations, on all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance. By using a 10 kHz bandwidth on the spectrum analyzer.

$$10 \cdot \log(10 \text{ kHz} / 6.25 \text{ kHz}) = 2.04 \text{ dB}$$

$$\text{Limit Line} = -35 \text{ dBm} + 2.04 \text{ dB} = -32.96 \text{ dBm}$$

5.6.4 Test Result

Please refer to ANNEX A.6.

5.7 Field Strength of Spurious Radiation

5.7.1 Limit

FCC § 2.1053 & 22.917(a) & 24.238(a) & 27.53(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(l) & 27.53(m) & 27.53(n) & 90.691 & 90.543 & 96.41(e)

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This is calculated to be -13 dBm.

FCC § 27.53(a) (4)

For mobile and portable stations operating in the 2305-2315MHz and 2350-2360MHz bands:

(1) By a factor of not less than: $43 + 10 \log(P)$ dB on all frequencies between 2305 and 2320MHz and on all frequencies between 2345 and 2360MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log(P)$ dB on all frequencies between 2320 and 2324MHz and on all frequencies between 2341 and 2345MHz, not less than $61 + 10 \log(P)$ dB on all frequencies between 2324 and 2328MHz and on all frequencies between 2337 and 2341MHz, and not less than $67 + 10 \log(P)$ dB on all frequencies between 2328 and 2337MHz.

(2) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2300 and 2305MHz, $55 + 10 \log(P)$ dB on all frequencies between 2296 and 2300MHz, $61 + 10 \log(P)$ dB on all frequencies between 2292 and 2296MHz, $67 + 10 \log(P)$ dB on all frequencies between 2288 and 2292MHz, and $70 + 10 \log(P)$ dB below 2288MHz.

(3) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2360 and 2365MHz, and not less than $70 + 10 \log(P)$ dB above 2365MHz.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of

measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth

of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(f)

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. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43+10\log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC § 27.53(h) (1)

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

FCC § 27.53(l) (2)

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

FCC § 27.53(m) (4)

For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- $40+10\log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43+10\log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55+10\log P$ dB (-25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service

licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

FCC § 27.53(n) (2)

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

FCC § 90.691

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

FCC § 90.543

(e) For operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations.

(2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log(P)$ dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 758–775 MHz and 788–805 MHz bands, all emissions including harmonics 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. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

FCC § 96.41(e)

The conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any emission shall not exceed -25 dBm/MHz. The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

5.7.2 Test Setup

The section 4.4.3 and 4.4.4 (Diagram 3, 4) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

1. On a test site, the EUT shall be placed at 80cm height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. During the measurement of the EUT, the resolution bandwidth was to 1 MHz and the average bandwidth was set to 1 MHz.
5. The transmitter shall be switched on; the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.

7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.
10. The EUT was replaced by half-wave dipole (824 ~ 849 MHz) or horn antenna (1 850 ~ 1 910 MHz) connected to a signal generator.
11. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
12. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
13. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring received, which is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
14. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.

Final measurement calculation as below:

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP value for GSM850 is:

$$\text{ERP (dBm)} = 21\text{dBm} + 8\text{dB} = 29\text{dBm}$$

5.7.4 Test Result

Please refer to ANNEX A.7.

ANNEX A TEST RESULTS

A.1 Transmitter Radiated Power (EIRP/ERP)

WCDMA Mode Test Data

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 2	LCH	23.55	1.812	25.36	0.344	2.000	Pass
	MCH	23.60	1.812	25.41	0.348	2.000	Pass
	HCH	23.67	1.812	25.48	0.353	2.000	Pass
HSDPA Band 2	LCH	22.54	1.812	24.35	0.272	2.000	Pass
	MCH	22.65	1.812	24.46	0.279	2.000	Pass
	HCH	22.72	1.812	24.53	0.284	2.000	Pass
HSUPA Band 2	LCH	22.50	1.812	24.31	0.270	2.000	Pass
	MCH	22.54	1.812	24.35	0.272	2.000	Pass
	HCH	22.69	1.812	24.50	0.282	2.000	Pass

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 4	LCH	23.53	2.76	26.29	0.426	1.000	Pass
	MCH	23.59	2.76	26.35	0.432	1.000	Pass
	HCH	23.51	2.76	26.27	0.424	1.000	Pass
HSDPA Band 4	LCH	22.49	2.76	25.25	0.335	1.000	Pass
	MCH	22.61	2.76	25.37	0.344	1.000	Pass
	HCH	22.52	2.76	25.28	0.337	1.000	Pass
HSUPA Band 4	LCH	22.52	2.76	25.28	0.337	1.000	Pass
	MCH	22.72	2.76	25.48	0.353	1.000	Pass
	HCH	22.51	2.76	25.27	0.337	1.000	Pass

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
WCDMA Band 5	LCH	23.61	0.94	-1.21	22.40	0.174	7.000	Pass
	MCH	23.54	0.94	-1.21	22.33	0.171	7.000	Pass
	HCH	23.48	0.94	-1.21	22.27	0.169	7.000	Pass
HSDPA Band 5	LCH	22.62	0.94	-1.21	21.41	0.138	7.000	Pass
	MCH	22.58	0.94	-1.21	21.37	0.137	7.000	Pass
	HCH	22.51	0.94	-1.21	21.30	0.135	7.000	Pass
HSUPA Band 5	LCH	22.55	0.94	-1.21	21.34	0.136	7.000	Pass
	MCH	22.52	0.94	-1.21	21.31	0.135	7.000	Pass
	HCH	22.50	0.94	-1.21	21.29	0.135	7.000	Pass

Note 1: For the HSDPA and HSUPA mode, all subtests were tested and just the worst data were recorded in this table.

Note 2: $ERP/EIRP = P_{Meas} + GT - LC$

$ERP/EIRP$ = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

$ERP = EIRP - 2.15$; where ERP and EIRP are expressed in consistent units.

HSDPA Conducted Output Power

Band	Channel	Conducted Output Average Power							
		Subtest1		Subtest2		Subtest3		Subtest4	
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
HSDPA Band 2	LCH	22.54	0.179	22.40	0.174	21.93	0.156	21.90	0.155
	MCH	22.65	0.184	22.55	0.180	22.08	0.161	22.01	0.159
	HCH	22.72	0.187	22.61	0.182	22.14	0.164	22.16	0.164
HSDPA Band 4	LCH	22.49	0.177	22.49	0.177	21.98	0.158	21.98	0.158
	MCH	22.61	0.182	22.57	0.181	22.10	0.162	22.03	0.160
	HCH	22.52	0.179	22.44	0.175	21.98	0.158	22.00	0.158
HSDPA Band 5	LCH	22.62	0.183	22.62	0.183	22.10	0.162	22.09	0.162
	MCH	22.58	0.181	22.56	0.180	22.02	0.159	22.08	0.161
	HCH	22.51	0.178	22.48	0.177	22.02	0.159	22.01	0.159

HSUPA Conducted Output Power

Band	Channel	Conducted Output Average Power									
		Subtest1		Subtest2		Subtest3		Subtest4		Subtest5	
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
HSUPA Band 2	LCH	22.50	0.178	20.39	0.109	21.40	0.138	20.38	0.109	22.50	0.178
	MCH	22.50	0.178	20.40	0.110	21.43	0.139	20.52	0.113	22.54	0.179
	HCH	22.69	0.186	20.47	0.111	21.66	0.147	20.59	0.115	22.55	0.180
HSUPA Band 4	LCH	22.52	0.179	20.46	0.111	21.35	0.136	20.53	0.113	22.40	0.174
	MCH	22.72	0.187	20.56	0.114	21.44	0.139	20.54	0.113	22.55	0.180
	HCH	22.51	0.178	20.38	0.109	21.44	0.139	20.48	0.112	22.34	0.171
HSUPA Band 5	LCH	22.55	0.180	20.65	0.116	21.64	0.146	20.64	0.116	22.50	0.178
	MCH	22.52	0.179	20.65	0.116	21.46	0.140	20.55	0.114	22.48	0.177
	HCH	22.50	0.178	20.54	0.113	21.34	0.136	20.54	0.113	22.44	0.175

LTE Mode Test Data

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2/25									
1.4 MHz	1850.7	QPSK	RB1#0	23.41	1.812	25.22	0.333	2.000	Pass
	1880		RB1#0	23.38	1.812	25.19	0.331	2.000	Pass
	1909.3		RB1#0	23.65	1.812	25.46	0.352	2.000	Pass
	1850.7		RB1#2	23.48	1.812	25.29	0.338	2.000	Pass
	1880		RB1#2	23.45	1.812	25.26	0.336	2.000	Pass
	1909.3		RB1#2	23.69	1.812	25.50	0.355	2.000	Pass
	1850.7		RB1#5	23.41	1.812	25.22	0.333	2.000	Pass
	1880		RB1#5	23.39	1.812	25.20	0.331	2.000	Pass
	1909.3		RB1#5	23.62	1.812	25.43	0.349	2.000	Pass
	1850.7		RB6#0	22.36	1.812	24.17	0.261	2.000	Pass
	1880		RB6#0	22.44	1.812	24.25	0.266	2.000	Pass
	1909.3		RB6#0	22.68	1.812	24.49	0.281	2.000	Pass
3 MHz	1851.5	QPSK	RB1#0	23.44	1.812	25.25	0.335	2.000	Pass
	1880		RB1#0	23.45	1.812	25.26	0.336	2.000	Pass
	1908.5		RB1#0	23.71	1.812	25.52	0.357	2.000	Pass
	1851.5		RB1#7	23.46	1.812	25.27	0.337	2.000	Pass
	1880		RB1#7	23.49	1.812	25.30	0.339	2.000	Pass
	1908.5		RB1#7	23.69	1.812	25.50	0.355	2.000	Pass
	1851.5		RB1#14	23.45	1.812	25.26	0.336	2.000	Pass
	1880		RB1#14	23.47	1.812	25.28	0.337	2.000	Pass
	1908.5		RB1#14	23.71	1.812	25.52	0.357	2.000	Pass
	1851.5		RB15#0	22.49	1.812	24.30	0.269	2.000	Pass
	1880		RB15#0	22.59	1.812	24.40	0.276	2.000	Pass
	1908.5		RB15#0	22.83	1.812	24.64	0.291	2.000	Pass
5 MHz	1852.5	QPSK	RB1#0	23.43	1.812	25.24	0.334	2.000	Pass
	1880		RB1#0	23.55	1.812	25.36	0.344	2.000	Pass
	1907.5		RB1#0	23.53	1.812	25.34	0.342	2.000	Pass
	1852.5		RB1#12	23.51	1.812	25.32	0.341	2.000	Pass
	1880		RB1#12	23.63	1.812	25.44	0.350	2.000	Pass
	1907.5		RB1#12	23.63	1.812	25.44	0.350	2.000	Pass
	1852.5		RB1#24	23.58	1.812	25.39	0.346	2.000	Pass
	1880		RB1#24	23.52	1.812	25.33	0.341	2.000	Pass
	1907.5		RB1#24	23.65	1.812	25.46	0.352	2.000	Pass
	1852.5		RB25#0	22.53	1.812	24.34	0.272	2.000	Pass
	1880		RB25#0	22.61	1.812	24.42	0.277	2.000	Pass
	1907.5		RB25#0	22.71	1.812	24.52	0.283	2.000	Pass
10 MHz	1855	QPSK	RB1#0	23.59	1.812	25.40	0.347	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2/25									
	1880		RB1#0	23.57	1.812	25.38	0.345	2.000	Pass
	1905		RB1#0	23.63	1.812	25.44	0.350	2.000	Pass
	1855		RB1#24	23.62	1.812	25.43	0.349	2.000	Pass
	1880		RB1#24	23.58	1.812	25.39	0.346	2.000	Pass
	1905		RB1#24	23.68	1.812	25.49	0.354	2.000	Pass
	1855		RB1#49	23.62	1.812	25.43	0.349	2.000	Pass
	1880		RB1#49	23.57	1.812	25.38	0.345	2.000	Pass
	1905		RB1#49	23.71	1.812	25.52	0.357	2.000	Pass
	1855		RB50#0	22.69	1.812	24.50	0.282	2.000	Pass
	1880		RB50#0	22.69	1.812	24.50	0.282	2.000	Pass
	1905		RB50#0	22.78	1.812	24.59	0.288	2.000	Pass
15 MHz	1857.5	QPSK	RB1#0	23.62	1.812	25.43	0.349	2.000	Pass
	1880		RB1#0	23.59	1.812	25.40	0.347	2.000	Pass
	1902.5		RB1#0	23.66	1.812	25.47	0.353	2.000	Pass
	1857.5		RB1#37	23.65	1.812	25.46	0.352	2.000	Pass
	1880		RB1#37	23.59	1.812	25.40	0.347	2.000	Pass
	1902.5		RB1#37	23.76	1.812	25.57	0.361	2.000	Pass
	1857.5		RB1#74	23.66	1.812	25.47	0.353	2.000	Pass
	1880		RB1#74	23.56	1.812	25.37	0.345	2.000	Pass
	1902.5		RB1#74	23.72	1.812	25.53	0.357	2.000	Pass
	1857.5		RB75#0	22.69	1.812	24.50	0.282	2.000	Pass
	1880		RB75#0	22.65	1.812	24.46	0.279	2.000	Pass
	1902.5		RB75#0	22.87	1.812	24.68	0.294	2.000	Pass
20 MHz	1860	QPSK	RB1#0	23.55	1.812	25.36	0.344	2.000	Pass
	1880		RB1#0	23.56	1.812	25.37	0.345	2.000	Pass
	1900		RB1#0	23.62	1.812	25.43	0.349	2.000	Pass
	1860		RB1#49	23.62	1.812	25.43	0.349	2.000	Pass
	1880		RB1#49	23.61	1.812	25.42	0.348	2.000	Pass
	1900		RB1#49	23.69	1.812	25.50	0.355	2.000	Pass
	1860		RB1#99	23.51	1.812	25.32	0.341	2.000	Pass
	1880		RB1#99	23.63	1.812	25.44	0.350	2.000	Pass
	1900		RB1#99	23.69	1.812	25.50	0.355	2.000	Pass
	1860		RB100#0	22.61	1.812	24.42	0.277	2.000	Pass
	1880		RB100#0	22.73	1.812	24.54	0.285	2.000	Pass
	1900		RB100#0	22.86	1.812	24.67	0.293	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4/66									
1.4 MHz	1710.7	QPSK	RB1#0	22.54	2.76	25.30	0.339	1.000	Pass
	1745		RB1#0	23.51	2.76	26.27	0.424	1.000	Pass
	1779.3		RB1#0	23.61	2.76	26.37	0.434	1.000	Pass
	1710.7		RB1#2	22.56	2.76	25.32	0.340	1.000	Pass
	1745		RB1#2	23.57	2.76	26.33	0.430	1.000	Pass
	1779.3		RB1#2	23.65	2.76	26.41	0.438	1.000	Pass
	1710.7		RB1#5	23.51	2.76	26.27	0.424	1.000	Pass
	1745		RB1#5	23.52	2.76	26.28	0.425	1.000	Pass
	1779.3		RB1#5	23.64	2.76	26.40	0.437	1.000	Pass
	1710.7		RB6#0	22.55	2.76	25.31	0.340	1.000	Pass
	1745		RB6#0	22.54	2.76	25.30	0.339	1.000	Pass
	1779.3		RB6#0	22.68	2.76	25.44	0.350	1.000	Pass
3 MHz	1711.5	QPSK	RB1#0	23.59	2.76	26.35	0.432	1.000	Pass
	1745		RB1#0	23.57	2.76	26.33	0.430	1.000	Pass
	1778.5		RB1#0	23.63	2.76	26.39	0.436	1.000	Pass
	1711.5		RB1#7	23.58	2.76	26.34	0.431	1.000	Pass
	1745		RB1#7	23.54	2.76	26.30	0.427	1.000	Pass
	1778.5		RB1#7	23.67	2.76	26.43	0.440	1.000	Pass
	1711.5		RB1#14	23.57	2.76	26.33	0.430	1.000	Pass
	1745		RB1#14	23.47	2.76	26.23	0.420	1.000	Pass
	1778.5		RB1#14	23.67	2.76	26.43	0.440	1.000	Pass
	1711.5		RB15#0	22.61	2.76	25.37	0.344	1.000	Pass
	1745		RB15#0	22.62	2.76	25.38	0.345	1.000	Pass
	1778.5		RB15#0	22.63	2.76	25.39	0.346	1.000	Pass
5 MHz	1712.5	QPSK	RB1#0	23.59	2.76	26.35	0.432	1.000	Pass
	1745		RB1#0	23.68	2.76	26.44	0.441	1.000	Pass
	1777.5		RB1#0	23.59	2.76	26.35	0.432	1.000	Pass
	1712.5		RB1#12	23.68	2.76	26.44	0.441	1.000	Pass
	1745		RB1#12	23.65	2.76	26.41	0.438	1.000	Pass
	1777.5		RB1#12	23.74	2.76	26.50	0.447	1.000	Pass
	1712.5		RB1#24	23.58	2.76	26.34	0.431	1.000	Pass
	1745		RB1#24	23.51	2.76	26.27	0.424	1.000	Pass
	1777.5		RB1#24	23.67	2.76	26.43	0.440	1.000	Pass
	1712.5		RB25#0	22.63	2.76	25.39	0.346	1.000	Pass
	1745		RB25#0	22.69	2.76	25.45	0.351	1.000	Pass
	1777.5		RB25#0	22.72	2.76	25.48	0.353	1.000	Pass
10 MHz	1715	QPSK	RB1#0	23.62	2.76	26.38	0.435	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4/66									
	1745		RB1#0	23.74	2.76	26.50	0.447	1.000	Pass
	1775		RB1#0	23.63	2.76	26.39	0.436	1.000	Pass
	1715		RB1#24	23.64	2.76	26.40	0.437	1.000	Pass
	1745		RB1#24	23.56	2.76	26.32	0.429	1.000	Pass
	1775		RB1#24	23.63	2.76	26.39	0.436	1.000	Pass
	1715		RB1#49	23.63	2.76	26.39	0.436	1.000	Pass
	1745		RB1#49	23.52	2.76	26.28	0.425	1.000	Pass
	1775		RB1#49	23.64	2.76	26.40	0.437	1.000	Pass
	1715		RB50#0	23.65	2.76	26.41	0.438	1.000	Pass
	1745		RB50#0	22.73	2.76	25.49	0.354	1.000	Pass
	1775		RB50#0	22.66	2.76	25.42	0.348	1.000	Pass
15 MHz	1717.5	QPSK	RB1#0	23.64	2.76	26.40	0.437	1.000	Pass
	1745		RB1#0	23.73	2.76	26.49	0.446	1.000	Pass
	1772.5		RB1#0	23.65	2.76	26.41	0.438	1.000	Pass
	1717.5		RB1#37	23.69	2.76	26.45	0.442	1.000	Pass
	1745		RB1#37	23.59	2.76	26.35	0.432	1.000	Pass
	1772.5		RB1#37	23.54	2.76	26.30	0.427	1.000	Pass
	1717.5		RB1#74	23.71	2.76	26.47	0.444	1.000	Pass
	1745		RB1#74	23.52	2.76	26.28	0.425	1.000	Pass
	1772.5		RB1#74	23.57	2.76	26.33	0.430	1.000	Pass
	1717.5		RB75#0	22.71	2.76	25.47	0.352	1.000	Pass
	1745		RB75#0	22.79	2.76	25.55	0.359	1.000	Pass
	1772.5		RB75#0	22.68	2.76	25.44	0.350	1.000	Pass
20 MHz	1720	QPSK	RB1#0	23.67	2.76	26.43	0.440	1.000	Pass
	1745		RB1#0	23.71	2.76	26.47	0.444	1.000	Pass
	1770		RB1#0	23.55	2.76	26.31	0.428	1.000	Pass
	1720		RB1#49	23.71	2.76	26.47	0.444	1.000	Pass
	1745		RB1#49	23.55	2.76	26.31	0.428	1.000	Pass
	1770		RB1#49	23.52	2.76	26.28	0.425	1.000	Pass
	1720		RB1#99	23.75	2.76	26.51	0.448	1.000	Pass
	1745		RB1#99	23.47	2.76	26.23	0.420	1.000	Pass
	1770		RB1#99	23.57	2.76	26.33	0.430	1.000	Pass
	1720		RB100#0	22.76	2.76	25.52	0.356	1.000	Pass
	1745		RB100#0	22.73	2.76	25.49	0.354	1.000	Pass
	1770		RB100#0	22.73	2.76	25.49	0.354	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Off set)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 5/26(824-849)										
1.4 MHz	824.7	QPSK	RB1#0	23.64	0.94	-1.21	22.43	0.175	7.000	Pass
	836.5		RB1#0	23.66	0.94	-1.21	22.45	0.176	7.000	Pass
	848.3		RB1#0	23.63	0.94	-1.21	22.42	0.175	7.000	Pass
	824.7		RB1#2	23.67	0.94	-1.21	22.46	0.176	7.000	Pass
	836.5		RB1#2	23.71	0.94	-1.21	22.50	0.178	7.000	Pass
	848.3		RB1#2	23.65	0.94	-1.21	22.44	0.175	7.000	Pass
	824.7		RB1#5	23.63	0.94	-1.21	22.42	0.175	7.000	Pass
	836.5		RB1#5	23.65	0.94	-1.21	22.44	0.175	7.000	Pass
	848.3		RB1#5	23.64	0.94	-1.21	22.43	0.175	7.000	Pass
	824.7		RB6#0	22.61	0.94	-1.21	21.40	0.138	7.000	Pass
	836.5		RB6#0	22.69	0.94	-1.21	21.48	0.141	7.000	Pass
	848.3		RB6#0	22.71	0.94	-1.21	21.50	0.141	7.000	Pass
3 MHz	825.5	QPSK	RB1#0	23.68	0.94	-1.21	22.47	0.177	7.000	Pass
	836.5		RB1#0	23.71	0.94	-1.21	22.50	0.178	7.000	Pass
	847.5		RB1#0	23.66	0.94	-1.21	22.45	0.176	7.000	Pass
	825.5		RB1#7	23.65	0.94	-1.21	22.44	0.175	7.000	Pass
	836.5		RB1#7	23.72	0.94	-1.21	22.51	0.178	7.000	Pass
	847.5		RB1#7	23.71	0.94	-1.21	22.50	0.178	7.000	Pass
	825.5		RB1#14	23.66	0.94	-1.21	22.45	0.176	7.000	Pass
	836.5		RB1#14	23.68	0.94	-1.21	22.47	0.177	7.000	Pass
	847.5		RB1#14	23.71	0.94	-1.21	22.50	0.178	7.000	Pass
	825.5		RB15#0	22.72	0.94	-1.21	21.51	0.142	7.000	Pass
	836.5		RB15#0	22.75	0.94	-1.21	21.54	0.143	7.000	Pass
	847.5		RB15#0	22.73	0.94	-1.21	21.52	0.142	7.000	Pass
5 MHz	826.5	QPSK	RB1#0	23.69	0.94	-1.21	22.48	0.177	7.000	Pass
	836.5		RB1#0	23.69	0.94	-1.21	22.48	0.177	7.000	Pass
	846.5		RB1#0	23.63	0.94	-1.21	22.42	0.175	7.000	Pass
	826.5		RB1#12	23.73	0.94	-1.21	22.52	0.179	7.000	Pass
	836.5		RB1#12	23.75	0.94	-1.21	22.54	0.179	7.000	Pass
	846.5		RB1#12	23.73	0.94	-1.21	22.52	0.179	7.000	Pass
	826.5		RB1#24	23.64	0.94	-1.21	22.43	0.175	7.000	Pass
	836.5		RB1#24	23.69	0.94	-1.21	22.48	0.177	7.000	Pass
	846.5		RB1#24	23.69	0.94	-1.21	22.48	0.177	7.000	Pass
	826.5		RB25#0	22.71	0.94	-1.21	21.50	0.141	7.000	Pass
	836.5		RB25#0	22.76	0.94	-1.21	21.55	0.143	7.000	Pass
	846.5		RB25#0	22.77	0.94	-1.21	21.56	0.143	7.000	Pass
10	829	QPSK	RB1#0	23.69	0.94	-1.21	22.48	0.177	7.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 5/26(824-849)										
MHz	836.5		RB1#0	23.71	0.94	-1.21	22.50	0.178	7.000	Pass
	844		RB1#0	23.75	0.94	-1.21	22.54	0.179	7.000	Pass
	829		RB1#24	23.62	0.94	-1.21	22.41	0.174	7.000	Pass
	836.5		RB1#24	23.72	0.94	-1.21	22.51	0.178	7.000	Pass
	844		RB1#24	23.61	0.94	-1.21	22.40	0.174	7.000	Pass
	829		RB1#49	23.67	0.94	-1.21	22.46	0.176	7.000	Pass
	836.5		RB1#49	23.67	0.94	-1.21	22.46	0.176	7.000	Pass
	844		RB1#49	23.65	0.94	-1.21	22.44	0.175	7.000	Pass
	829		RB50#0	22.79	0.94	-1.21	21.58	0.144	7.000	Pass
	836.5		RB50#0	22.77	0.94	-1.21	21.56	0.143	7.000	Pass
	844		RB50#0	22.77	0.94	-1.21	21.56	0.143	7.000	Pass
15 MHz	821.5	QPSK	RB1#0	23.67	0.94	-1.21	22.46	0.176	7.000	Pass
	836.5		RB1#0	23.64	0.94	-1.21	22.43	0.175	7.000	Pass
	841.5		RB1#0	23.66	0.94	-1.21	22.45	0.176	7.000	Pass
	821.5		RB1#37	23.64	0.94	-1.21	22.43	0.175	7.000	Pass
	836.5		RB1#37	23.65	0.94	-1.21	22.44	0.175	7.000	Pass
	841.5		RB1#37	23.65	0.94	-1.21	22.44	0.175	7.000	Pass
	821.5		RB1#74	23.68	0.94	-1.21	22.47	0.177	7.000	Pass
	836.5		RB1#74	23.69	0.94	-1.21	22.48	0.177	7.000	Pass
	841.5		RB1#74	23.65	0.94	-1.21	22.44	0.175	7.000	Pass
	821.5		RB75#0	22.74	0.94	-1.21	21.53	0.142	7.000	Pass
	836.5		RB75#0	22.76	0.94	-1.21	21.55	0.143	7.000	Pass
	841.5		RB75#0	22.71	0.94	-1.21	21.50	0.141	7.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 7									
5 MHz	2502.5	QPSK	RB1#0	23.09	0.823	23.91	0.246	2.000	Pass
	2535		RB1#0	23.03	0.823	23.85	0.243	2.000	Pass
	2567.5		RB1#0	23.05	0.823	23.87	0.244	2.000	Pass
	2502.5		RB1#12	23.18	0.823	24.00	0.251	2.000	Pass
	2535		RB1#12	23.07	0.823	23.89	0.245	2.000	Pass
	2567.5		RB1#12	23.12	0.823	23.94	0.248	2.000	Pass
	2502.5		RB1#24	23.21	0.823	24.03	0.253	2.000	Pass
	2535		RB1#24	22.98	0.823	23.80	0.240	2.000	Pass
	2567.5		RB1#24	23.05	0.823	23.87	0.244	2.000	Pass
	2502.5		RB25#0	22.21	0.823	23.03	0.201	2.000	Pass
	2535		RB25#0	22.06	0.823	22.88	0.194	2.000	Pass
	2567.5		RB25#0	22.13	0.823	22.95	0.197	2.000	Pass
10 MHz	2505	QPSK	RB1#0	23.17	0.823	23.99	0.251	2.000	Pass
	2535		RB1#0	23.01	0.823	23.83	0.242	2.000	Pass
	2565		RB1#0	23.01	0.823	23.83	0.242	2.000	Pass
	2505		RB1#24	23.25	0.823	24.07	0.255	2.000	Pass
	2535		RB1#24	22.94	0.823	23.76	0.238	2.000	Pass
	2565		RB1#24	23.02	0.823	23.84	0.242	2.000	Pass
	2505		RB1#49	23.24	0.823	24.06	0.255	2.000	Pass
	2535		RB1#49	22.99	0.823	23.81	0.241	2.000	Pass
	2565		RB1#49	23.02	0.823	23.84	0.242	2.000	Pass
	2505		RB50#0	22.23	0.823	23.05	0.202	2.000	Pass
	2535		RB50#0	22.06	0.823	22.88	0.194	2.000	Pass
	2565		RB50#0	22.09	0.823	22.91	0.196	2.000	Pass
15 MHz	2507.5	QPSK	RB1#0	23.23	0.823	24.05	0.254	2.000	Pass
	2535		RB1#0	23.04	0.823	23.86	0.243	2.000	Pass
	2562.5		RB1#0	23.03	0.823	23.85	0.243	2.000	Pass
	2507.5		RB1#37	23.23	0.823	24.05	0.254	2.000	Pass
	2535		RB1#37	22.95	0.823	23.77	0.238	2.000	Pass
	2562.5		RB1#37	23.03	0.823	23.85	0.243	2.000	Pass
	2507.5		RB1#74	23.35	0.823	24.17	0.261	2.000	Pass
	2535		RB1#74	23.04	0.823	23.86	0.243	2.000	Pass
	2562.5		RB1#74	23.07	0.823	23.89	0.245	2.000	Pass
	2507.5		RB75#0	22.35	0.823	23.17	0.208	2.000	Pass
	2535		RB75#0	22.11	0.823	22.93	0.196	2.000	Pass
	2562.5		RB75#0	22.16	0.823	22.98	0.199	2.000	Pass
20 MHz	2510	QPSK	RB1#0	23.13	0.823	23.95	0.248	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 7									
	2535		RB1#0	23.05	0.823	23.87	0.244	2.000	Pass
	2560		RB1#0	23.06	0.823	23.88	0.245	2.000	Pass
	2510		RB1#49	23.07	0.823	23.89	0.245	2.000	Pass
	2535		RB1#49	23.01	0.823	23.83	0.242	2.000	Pass
	2560		RB1#49	23.03	0.823	23.85	0.243	2.000	Pass
	2510		RB1#99	23.09	0.823	23.91	0.246	2.000	Pass
	2535		RB1#99	23.02	0.823	23.84	0.242	2.000	Pass
	2560		RB1#99	23.11	0.823	23.93	0.247	2.000	Pass
	2510		RB100#0	22.09	0.823	22.91	0.196	2.000	Pass
	2535		RB100#0	22.08	0.823	22.90	0.195	2.000	Pass
	2560		RB100#0	22.13	0.823	22.95	0.197	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Off set)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 12/17										
1.4 MHz	699.7	QPSK	RB1#0	23.41	0.115	-2.035	21.38	0.137	3.000	Pass
	707.5		RB1#0	23.49	0.115	-2.035	21.46	0.140	3.000	Pass
	715.3		RB1#0	23.41	0.115	-2.035	21.38	0.137	3.000	Pass
	699.7		RB1#2	23.46	0.115	-2.035	21.43	0.139	3.000	Pass
	707.5		RB1#2	23.53	0.115	-2.035	21.50	0.141	3.000	Pass
	715.3		RB1#2	23.44	0.115	-2.035	21.41	0.138	3.000	Pass
	699.7		RB1#5	23.43	0.115	-2.035	21.40	0.138	3.000	Pass
	707.5		RB1#5	23.45	0.115	-2.035	21.42	0.139	3.000	Pass
	715.3		RB1#5	23.41	0.115	-2.035	21.38	0.137	3.000	Pass
	699.7		RB6#0	22.44	0.115	-2.035	20.41	0.110	3.000	Pass
	707.5		RB6#0	22.55	0.115	-2.035	20.52	0.113	3.000	Pass
	715.3		RB6#0	22.47	0.115	-2.035	20.44	0.111	3.000	Pass
3 MHz	700.5	QPSK	RB1#0	23.51	0.115	-2.035	21.48	0.140	3.000	Pass
	707.5		RB1#0	23.53	0.115	-2.035	21.50	0.141	3.000	Pass
	714.5		RB1#0	23.47	0.115	-2.035	21.44	0.139	3.000	Pass
	700.5		RB1#7	23.47	0.115	-2.035	21.44	0.139	3.000	Pass
	707.5		RB1#7	23.49	0.115	-2.035	21.46	0.140	3.000	Pass
	714.5		RB1#7	23.47	0.115	-2.035	21.44	0.139	3.000	Pass
	700.5		RB1#14	23.43	0.115	-2.035	21.40	0.138	3.000	Pass
	707.5		RB1#14	23.47	0.115	-2.035	21.44	0.139	3.000	Pass
	714.5		RB1#14	23.49	0.115	-2.035	21.46	0.140	3.000	Pass
	700.5		RB15#0	22.48	0.115	-2.035	20.45	0.111	3.000	Pass
	707.5		RB15#0	22.57	0.115	-2.035	20.54	0.113	3.000	Pass
	714.5		RB15#0	22.48	0.115	-2.035	20.45	0.111	3.000	Pass
5 MHz	701.5	QPSK	RB1#0	23.45	0.115	-2.035	21.42	0.139	3.000	Pass
	707.5		RB1#0	23.55	0.115	-2.035	21.52	0.142	3.000	Pass
	713.5		RB1#0	23.43	0.115	-2.035	21.40	0.138	3.000	Pass
	701.5		RB1#12	23.49	0.115	-2.035	21.46	0.140	3.000	Pass
	707.5		RB1#12	23.58	0.115	-2.035	21.55	0.143	3.000	Pass
	713.5		RB1#12	23.55	0.115	-2.035	21.52	0.142	3.000	Pass
	701.5		RB1#24	23.49	0.115	-2.035	21.46	0.140	3.000	Pass
	707.5		RB1#24	23.47	0.115	-2.035	21.44	0.139	3.000	Pass
	713.5		RB1#24	23.49	0.115	-2.035	21.46	0.140	3.000	Pass
	701.5		RB25#0	22.62	0.115	-2.035	20.59	0.114	3.000	Pass
	707.5		RB25#0	22.55	0.115	-2.035	20.52	0.113	3.000	Pass
	713.5		RB25#0	22.42	0.115	-2.035	20.39	0.109	3.000	Pass
10	704	QPSK	RB1#0	23.52	0.115	-2.035	21.49	0.141	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 12/17										
MHz	707.5		RB1#0	23.45	0.115	-2.035	21.42	0.139	3.000	Pass
	711		RB1#0	23.53	0.115	-2.035	21.50	0.141	3.000	Pass
	704		RB1#24	23.54	0.115	-2.035	21.51	0.141	3.000	Pass
	707.5		RB1#24	23.53	0.115	-2.035	21.50	0.141	3.000	Pass
	711		RB1#24	23.51	0.115	-2.035	21.48	0.140	3.000	Pass
	704		RB1#49	23.52	0.115	-2.035	21.49	0.141	3.000	Pass
	707.5		RB1#49	23.47	0.115	-2.035	21.44	0.139	3.000	Pass
	711		RB1#49	23.56	0.115	-2.035	21.53	0.142	3.000	Pass
	704		RB50#0	22.61	0.115	-2.035	20.58	0.114	3.000	Pass
	707.5		RB50#0	22.57	0.115	-2.035	20.54	0.113	3.000	Pass
	711		RB50#0	22.52	0.115	-2.035	20.49	0.112	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 13										
5 MHz	779.5	QPSK	RB1#0	23.58	1.725	-0.425	23.16	0.207	3.000	Pass
	782		RB1#0	23.48	1.725	-0.425	23.06	0.202	3.000	Pass
	784.5		RB1#0	23.58	1.725	-0.425	23.16	0.207	3.000	Pass
	779.5		RB1#12	23.56	1.725	-0.425	23.14	0.206	3.000	Pass
	782		RB1#12	23.62	1.725	-0.425	23.20	0.209	3.000	Pass
	784.5		RB1#12	23.76	1.725	-0.425	23.34	0.216	3.000	Pass
	779.5		RB1#24	23.58	1.725	-0.425	23.16	0.207	3.000	Pass
	782		RB1#24	23.66	1.725	-0.425	23.24	0.211	3.000	Pass
	784.5		RB1#24	23.67	1.725	-0.425	23.25	0.211	3.000	Pass
	779.5		RB25#0	22.62	1.725	-0.425	22.20	0.166	3.000	Pass
	782		RB25#0	22.63	1.725	-0.425	22.21	0.166	3.000	Pass
	784.5		RB25#0	22.61	1.725	-0.425	22.19	0.165	3.000	Pass
10 MHz	782	QPSK	RB1#0	23.59	1.725	-0.425	23.17	0.207	3.000	Pass
			RB1#24	23.55	1.725	-0.425	23.13	0.205	3.000	Pass
			RB1#49	23.62	1.725	-0.425	23.20	0.209	3.000	Pass
			RB50#0	22.64	1.725	-0.425	22.22	0.167	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 14										
5 MHz	790.5	QPSK	RB1#0	23.61	1.425	-0.725	22.89	0.194	3.000	Pass
	793		RB1#0	23.58	1.425	-0.725	22.86	0.193	3.000	Pass
	795.5		RB1#0	23.61	1.425	-0.725	22.89	0.194	3.000	Pass
	790.5		RB1#12	23.67	1.425	-0.725	22.95	0.197	3.000	Pass
	793		RB1#12	23.65	1.425	-0.725	22.93	0.196	3.000	Pass
	795.5		RB1#12	23.65	1.425	-0.725	22.93	0.196	3.000	Pass
	790.5		RB1#24	23.57	1.425	-0.725	22.85	0.193	3.000	Pass
	793		RB1#24	23.55	1.425	-0.725	22.83	0.192	3.000	Pass
	795.5		RB1#24	23.61	1.425	-0.725	22.89	0.194	3.000	Pass
	790.5		RB25#0	22.69	1.425	-0.725	21.97	0.157	3.000	Pass
	793		RB25#0	22.65	1.425	-0.725	21.93	0.156	3.000	Pass
	795.5		RB25#0	22.66	1.425	-0.725	21.94	0.156	3.000	Pass
10 MHz	793	QPSK	RB1#0	23.63	1.425	-0.725	22.91	0.195	3.000	Pass
			RB1#24	23.61	1.425	-0.725	22.89	0.194	3.000	Pass
			RB1#49	23.56	1.425	-0.725	22.84	0.192	3.000	Pass
			RB50#0	22.65	1.425	-0.725	21.93	0.156	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 26 (814 MHz ~ 824 MHz)										
1.4 MHz	814.7	QPSK	RB1#0	23.49	0.94	-1.21	22.28	0.169	100.000	Pass
	819		RB1#0	23.56	0.94	-1.21	22.35	0.172	100.000	Pass
	823.3		RB1#0	23.53	0.94	-1.21	22.32	0.171	100.000	Pass
	814.7		RB1#2	23.56	0.94	-1.21	22.35	0.172	100.000	Pass
	819		RB1#2	23.63	0.94	-1.21	22.42	0.175	100.000	Pass
	823.3		RB1#2	23.61	0.94	-1.21	22.40	0.174	100.000	Pass
	814.7		RB1#5	23.47	0.94	-1.21	22.26	0.168	100.000	Pass
	819		RB1#5	23.57	0.94	-1.21	22.36	0.172	100.000	Pass
	823.3		RB1#5	23.55	0.94	-1.21	22.34	0.171	100.000	Pass
	814.7		RB6#0	22.53	0.94	-1.21	21.32	0.136	100.000	Pass
	819		RB6#0	22.56	0.94	-1.21	21.35	0.136	100.000	Pass
	823.3		RB6#0	22.57	0.94	-1.21	21.36	0.137	100.000	Pass
3 MHz	815.5	QPSK	RB1#0	23.53	0.94	-1.21	22.32	0.171	100.000	Pass
	819		RB1#0	23.66	0.94	-1.21	22.45	0.176	100.000	Pass
	822.5		RB1#0	23.69	0.94	-1.21	22.48	0.177	100.000	Pass
	815.5		RB1#7	23.63	0.94	-1.21	22.42	0.175	100.000	Pass
	819		RB1#7	23.61	0.94	-1.21	22.40	0.174	100.000	Pass
	822.5		RB1#7	23.66	0.94	-1.21	22.45	0.176	100.000	Pass
	815.5		RB1#14	23.65	0.94	-1.21	22.44	0.175	100.000	Pass
	819		RB1#14	23.71	0.94	-1.21	22.50	0.178	100.000	Pass
	822.5		RB1#14	23.65	0.94	-1.21	22.44	0.175	100.000	Pass
	815.5		RB15#0	22.67	0.94	-1.21	21.46	0.140	100.000	Pass
	819		RB15#0	22.78	0.94	-1.21	21.57	0.144	100.000	Pass
	822.5		RB15#0	22.75	0.94	-1.21	21.54	0.143	100.000	Pass
5 MHz	816.5	QPSK	RB1#0	23.67	0.94	-1.21	22.46	0.176	100.000	Pass
	819		RB1#0	23.62	0.94	-1.21	22.41	0.174	100.000	Pass
	821.5		RB1#0	23.73	0.94	-1.21	22.52	0.179	100.000	Pass
	816.5		RB1#12	23.71	0.94	-1.21	22.50	0.178	100.000	Pass
	819		RB1#12	23.78	0.94	-1.21	22.57	0.181	100.000	Pass
	821.5		RB1#12	23.79	0.94	-1.21	22.58	0.181	100.000	Pass
	816.5		RB1#24	23.74	0.94	-1.21	22.53	0.179	100.000	Pass
	819		RB1#24	23.67	0.94	-1.21	22.46	0.176	100.000	Pass
	821.5		RB1#24	23.68	0.94	-1.21	22.47	0.177	100.000	Pass
	816.5		RB25#0	22.81	0.94	-1.21	21.60	0.145	100.000	Pass
	819		RB25#0	22.77	0.94	-1.21	21.56	0.143	100.000	Pass
	821.5		RB25#0	22.76	0.94	-1.21	21.55	0.143	100.000	Pass
10	819	QPSK	RB1#0	23.66	0.94	-1.21	22.45	0.176	100.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 26 (814 MHz ~ 824 MHz)										
MHz			RB1#24	23.72	0.94	-1.21	22.51	0.178	100.000	Pass
			RB1#49	23.69	0.94	-1.21	22.48	0.177	100.000	Pass
			RB50#0	22.78	0.94	-1.21	21.57	0.144	100.000	Pass
15 MHz	821.5	QPSK	RB1#0	23.58	0.94	-1.21	22.37	0.173	100.000	Pass
			RB1#36	23.64	0.94	-1.21	22.43	0.175	100.000	Pass
			RB1#74	23.71	0.94	-1.21	22.50	0.178	100.000	Pass
			RB75#0	22.65	0.94	-1.21	21.44	0.139	100.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 30									
5 MHz	2307.5	QPSK	RB1#0	21.92	0.894	22.81	0.191	0.250	Pass
	2310		RB1#0	21.85	0.894	22.74	0.188	0.250	Pass
	2312.5		RB1#0	21.86	0.894	22.75	0.189	0.250	Pass
	2307.5		RB1#12	21.75	0.894	22.64	0.184	0.250	Pass
	2310		RB1#12	21.75	0.894	22.64	0.184	0.250	Pass
	2312.5		RB1#12	20.8	0.894	21.69	0.148	0.250	Pass
	2307.5		RB1#24	21.88	0.894	22.77	0.189	0.250	Pass
	2310		RB1#24	21.72	0.894	22.61	0.183	0.250	Pass
	2312.5		RB1#24	20.75	0.894	21.64	0.146	0.250	Pass
	2307.5		RB25#0	20.7	0.894	21.59	0.144	0.250	Pass
	2310		RB25#0	20.78	0.894	21.67	0.147	0.250	Pass
	2312.5		RB25#0	20.89	0.894	21.78	0.151	0.250	Pass
10 MHz	2310	QPSK	RB1#0	21.85	0.894	22.74	0.188	0.250	Pass
			RB1#24	22.1	0.894	22.99	0.199	0.250	Pass
			RB1#49	21.87	0.894	22.76	0.189	0.250	Pass
			RB50#0	18.35	0.894	19.24	0.084	0.250	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Off set)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 71										
5 MHz	665.5	QPSK	RB1#0	23.63	0.173	-1.977	21.65	0.146	3.000	Pass
	680.5		RB1#0	23.61	0.173	-1.977	21.63	0.146	3.000	Pass
	695.5		RB1#0	23.71	0.173	-1.977	21.73	0.149	3.000	Pass
	665.5		RB1#12	23.66	0.173	-1.977	21.68	0.147	3.000	Pass
	680.5		RB1#12	23.65	0.173	-1.977	21.67	0.147	3.000	Pass
	695.5		RB1#12	23.75	0.173	-1.977	21.77	0.150	3.000	Pass
	665.5		RB1#24	23.57	0.173	-1.977	21.59	0.144	3.000	Pass
	680.5		RB1#24	23.53	0.173	-1.977	21.55	0.143	3.000	Pass
	695.5		RB1#24	23.61	0.173	-1.977	21.63	0.146	3.000	Pass
	665.5		RB25#0	22.62	0.173	-1.977	20.64	0.116	3.000	Pass
	680.5		RB25#0	22.65	0.173	-1.977	20.67	0.117	3.000	Pass
	695.5		RB25#0	22.77	0.173	-1.977	20.79	0.120	3.000	Pass
10 MHz	668	QPSK	RB1#0	23.69	0.173	-1.977	21.71	0.148	3.000	Pass
	680.5		RB1#0	23.64	0.173	-1.977	21.66	0.147	3.000	Pass
	693		RB1#0	23.59	0.173	-1.977	21.61	0.145	3.000	Pass
	668		RB1#24	23.64	0.173	-1.977	21.66	0.147	3.000	Pass
	680.5		RB1#24	23.69	0.173	-1.977	21.71	0.148	3.000	Pass
	693		RB1#24	23.56	0.173	-1.977	21.58	0.144	3.000	Pass
	668		RB1#49	23.61	0.173	-1.977	21.63	0.146	3.000	Pass
	680.5		RB1#49	23.63	0.173	-1.977	21.65	0.146	3.000	Pass
	693		RB1#49	23.61	0.173	-1.977	21.63	0.146	3.000	Pass
	668		RB50#0	22.81	0.173	-1.977	20.83	0.121	3.000	Pass
	680.5		RB50#0	22.67	0.173	-1.977	20.69	0.117	3.000	Pass
	693		RB50#0	22.65	0.173	-1.977	20.67	0.117	3.000	Pass
15 MHz	670.5	QPSK	RB1#0	23.62	0.173	-1.977	21.64	0.146	3.000	Pass
	680.5		RB1#0	23.68	0.173	-1.977	21.70	0.148	3.000	Pass
	690.5		RB1#0	23.59	0.173	-1.977	21.61	0.145	3.000	Pass
	670.5		RB1#37	23.73	0.173	-1.977	21.75	0.150	3.000	Pass
	680.5		RB1#37	23.69	0.173	-1.977	21.71	0.148	3.000	Pass
	690.5		RB1#37	23.56	0.173	-1.977	21.58	0.144	3.000	Pass
	670.5		RB1#74	23.68	0.173	-1.977	21.70	0.148	3.000	Pass
	680.5		RB1#74	23.71	0.173	-1.977	21.73	0.149	3.000	Pass
	690.5		RB1#74	23.63	0.173	-1.977	21.65	0.146	3.000	Pass
	670.5		RB75#0	22.82	0.173	-1.977	20.84	0.121	3.000	Pass
	680.5		RB75#0	22.73	0.173	-1.977	20.75	0.119	3.000	Pass
	690.5		RB75#0	22.69	0.173	-1.977	20.71	0.118	3.000	Pass
20	673	QPSK	RB1#0	23.61	0.173	-1.977	21.63	0.146	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 71										
MHz	683		RB1#0	23.77	0.173	-1.977	21.79	0.151	3.000	Pass
	688		RB1#0	23.69	0.173	-1.977	21.71	0.148	3.000	Pass
	673		RB1#49	23.53	0.173	-1.977	21.55	0.143	3.000	Pass
	683		RB1#49	23.68	0.173	-1.977	21.70	0.148	3.000	Pass
	688		RB1#49	23.73	0.173	-1.977	21.75	0.150	3.000	Pass
	673		RB1#99	23.62	0.173	-1.977	21.64	0.146	3.000	Pass
	683		RB1#99	23.74	0.173	-1.977	21.76	0.150	3.000	Pass
	688		RB1#99	23.76	0.173	-1.977	21.78	0.151	3.000	Pass
	673		RB100#0	22.77	0.173	-1.977	20.79	0.120	3.000	Pass
	683		RB100#0	22.76	0.173	-1.977	20.78	0.120	3.000	Pass
	688		RB100#0	22.82	0.173	-1.977	20.84	0.121	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 38/41									
5 MHz	2498.5	QPSK	RB1#0	23.39	1.29	24.68	0.294	2.000	Pass
	2593		RB1#0	23.16	1.29	24.45	0.279	2.000	Pass
	2687.5		RB1#0	23.05	1.29	24.34	0.272	2.000	Pass
	2498.5		RB1#12	23.51	1.29	24.80	0.302	2.000	Pass
	2593		RB1#12	23.25	1.29	24.54	0.284	2.000	Pass
	2687.5		RB1#12	23.11	1.29	24.40	0.275	2.000	Pass
	2498.5		RB1#24	23.44	1.29	24.73	0.297	2.000	Pass
	2593		RB1#24	23.17	1.29	24.46	0.279	2.000	Pass
	2687.5		RB1#24	23.06	1.29	24.35	0.272	2.000	Pass
	2498.5		RB25#0	22.42	1.29	23.71	0.235	2.000	Pass
	2593		RB25#0	22.19	1.29	23.48	0.223	2.000	Pass
	2687.5		RB25#0	22.16	1.29	23.45	0.221	2.000	Pass
10 MHz	2501	QPSK	RB1#0	23.47	1.29	24.76	0.299	2.000	Pass
	2593		RB1#0	23.11	1.29	24.40	0.275	2.000	Pass
	2685		RB1#0	23.12	1.29	24.41	0.276	2.000	Pass
	2501		RB1#24	23.43	1.29	24.72	0.296	2.000	Pass
	2593		RB1#24	23.13	1.29	24.42	0.277	2.000	Pass
	2685		RB1#24	23.09	1.29	24.38	0.274	2.000	Pass
	2501		RB1#49	23.49	1.29	24.78	0.301	2.000	Pass
	2593		RB1#49	23.17	1.29	24.46	0.279	2.000	Pass
	2685		RB1#49	23.13	1.29	24.42	0.277	2.000	Pass
	2501		RB50#0	22.42	1.29	23.71	0.235	2.000	Pass
	2593		RB50#0	22.22	1.29	23.51	0.224	2.000	Pass
	2685		RB50#0	22.19	1.29	23.48	0.223	2.000	Pass
15 MHz	2503.5	QPSK	RB1#0	23.45	1.29	24.74	0.298	2.000	Pass
	2593		RB1#0	23.13	1.29	24.42	0.277	2.000	Pass
	2682.5		RB1#0	23.06	1.29	24.35	0.272	2.000	Pass
	2503.5		RB1#37	23.46	1.29	24.75	0.299	2.000	Pass
	2593		RB1#37	23.08	1.29	24.37	0.274	2.000	Pass
	2682.5		RB1#37	23.06	1.29	24.35	0.272	2.000	Pass
	2503.5		RB1#74	23.56	1.29	24.85	0.305	2.000	Pass
	2593		RB1#74	23.18	1.29	24.47	0.280	2.000	Pass
	2682.5		RB1#74	23.15	1.29	24.44	0.278	2.000	Pass
	2503.5		RB75#0	22.48	1.29	23.77	0.238	2.000	Pass
	2593		RB75#0	22.13	1.29	23.42	0.220	2.000	Pass
	2682.5		RB75#0	22.21	1.29	23.50	0.224	2.000	Pass
20 MHz	2506	QPSK	RB1#0	23.49	1.29	24.78	0.301	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 38/41									
	2593		RB1#0	23.13	1.29	24.42	0.277	2.000	Pass
	2680		RB1#0	23.05	1.29	24.34	0.272	2.000	Pass
	2506		RB1#49	23.51	1.29	24.80	0.302	2.000	Pass
	2593		RB1#49	23.08	1.29	24.37	0.274	2.000	Pass
	2680		RB1#49	23.09	1.29	24.38	0.274	2.000	Pass
	2506		RB1#99	23.56	1.29	24.85	0.305	2.000	Pass
	2593		RB1#99	23.15	1.29	24.44	0.278	2.000	Pass
	2680		RB1#99	23.14	1.29	24.43	0.277	2.000	Pass
	2506		RB100#0	22.45	1.29	23.74	0.237	2.000	Pass
	2593		RB100#0	22.19	1.29	23.48	0.223	2.000	Pass
	2680		RB100#0	22.18	1.29	23.47	0.222	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 42/43/48 (3550 MHz ~ 3700 MHz)									
5 MHz	3552.5	QPSK	RB1#0	21.37	0.912	22.28	0.169	0.200	Pass
	3625		RB1#0	21.15	0.912	22.06	0.161	0.200	Pass
	3697.5		RB1#0	21.28	0.912	22.19	0.166	0.200	Pass
	3552.5		RB1#12	21.41	0.912	22.32	0.171	0.200	Pass
	3625		RB1#12	21.19	0.912	22.10	0.162	0.200	Pass
	3697.5		RB1#12	21.29	0.912	22.20	0.166	0.200	Pass
	3552.5		RB1#24	21.37	0.912	22.28	0.169	0.200	Pass
	3625		RB1#24	21.14	0.912	22.05	0.160	0.200	Pass
	3697.5		RB1#24	21.24	0.912	22.15	0.164	0.200	Pass
	3552.5		RB25#0	20.09	0.912	21.00	0.126	0.200	Pass
	3625		RB25#0	19.79	0.912	20.70	0.118	0.200	Pass
	3697.5		RB25#0	19.79	0.912	20.70	0.118	0.200	Pass
10 MHz	3552.5	QPSK	RB1#0	21.36	0.912	22.27	0.169	0.200	Pass
	3625		RB1#0	20.12	0.912	21.03	0.127	0.200	Pass
	3697.5		RB1#0	21.29	0.912	22.20	0.166	0.200	Pass
	3552.5		RB1#24	21.34	0.912	22.25	0.168	0.200	Pass
	3625		RB1#24	21.15	0.912	22.06	0.161	0.200	Pass
	3697.5		RB1#24	21.24	0.912	22.15	0.164	0.200	Pass
	3552.5		RB1#49	21.35	0.912	22.26	0.168	0.200	Pass
	3625		RB1#49	21.19	0.912	22.10	0.162	0.200	Pass
	3697.5		RB1#49	21.23	0.912	22.14	0.164	0.200	Pass
	3552.5		RB50#0	19.98	0.912	20.89	0.123	0.200	Pass
	3625		RB50#0	20.03	0.912	20.94	0.124	0.200	Pass
	3697.5		RB50#0	19.88	0.912	20.79	0.120	0.200	Pass
15 MHz	3552.5	QPSK	RB1#0	21.29	0.912	22.20	0.166	0.200	Pass
	3625		RB1#0	21.08	0.912	21.99	0.158	0.200	Pass
	3697.5		RB1#0	21.28	0.912	22.19	0.166	0.200	Pass
	3552.5		RB1#37	21.34	0.912	22.25	0.168	0.200	Pass
	3625		RB1#37	21.13	0.912	22.04	0.160	0.200	Pass
	3697.5		RB1#37	21.24	0.912	22.15	0.164	0.200	Pass
	3552.5		RB1#74	21.39	0.912	22.30	0.170	0.200	Pass
	3625		RB1#74	21.25	0.912	22.16	0.165	0.200	Pass
	3697.5		RB1#74	21.31	0.912	22.22	0.167	0.200	Pass
	3552.5		RB75#0	18.73	0.912	19.64	0.092	0.200	Pass
	3625		RB75#0	18.45	0.912	19.36	0.086	0.200	Pass
	3697.5		RB75#0	18.77	0.912	19.68	0.093	0.200	Pass
20 MHz	3555	QPSK	RB1#0	21.36	0.912	22.27	0.169	0.200	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 42/43/48 (3550 MHz ~ 3700 MHz)									
	3625		RB1#0	21.08	0.912	21.99	0.158	0.200	Pass
	3695		RB1#0	21.23	0.912	22.14	0.164	0.200	Pass
	3555		RB1#49	21.35	0.912	22.26	0.168	0.200	Pass
	3625		RB1#49	21.14	0.912	22.05	0.160	0.200	Pass
	3695		RB1#49	21.15	0.912	22.06	0.161	0.200	Pass
	3555		RB1#99	21.45	0.912	22.36	0.172	0.200	Pass
	3625		RB1#99	21.26	0.912	22.17	0.165	0.200	Pass
	3695		RB1#99	21.16	0.912	22.07	0.161	0.200	Pass
	3555		RB100#0	18.29	0.912	19.20	0.083	0.200	Pass
	3625		RB100#0	17.41	0.912	18.32	0.068	0.200	Pass
	3695		RB100#0	17.4	0.912	18.31	0.068	0.200	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 42 (3450 MHz ~ 3550 MHz)									
5 MHz	3452.5	QPSK	RB1#0	21.42	0.901	22.32	0.171	1.000	Pass
	3500		RB1#0	21.31	0.901	22.21	0.166	1.000	Pass
	3547.5		RB1#0	21.42	0.901	22.32	0.171	1.000	Pass
	3452.5		RB1#12	21.43	0.901	22.33	0.171	1.000	Pass
	3500		RB1#12	21.33	0.901	22.23	0.167	1.000	Pass
	3547.5		RB1#12	21.44	0.901	22.34	0.171	1.000	Pass
	3452.5		RB1#24	21.39	0.901	22.29	0.169	1.000	Pass
	3500		RB1#24	21.28	0.901	22.18	0.165	1.000	Pass
	3547.5		RB1#24	21.39	0.901	22.29	0.169	1.000	Pass
	3452.5		RB25#0	20.38	0.901	21.28	0.134	1.000	Pass
	3500		RB25#0	20.29	0.901	21.19	0.132	1.000	Pass
	3547.5		RB25#0	20.41	0.901	21.31	0.135	1.000	Pass
10 MHz	3455	QPSK	RB1#0	21.44	0.901	22.34	0.171	1.000	Pass
	3500		RB1#0	21.33	0.901	22.23	0.167	1.000	Pass
	3545		RB1#0	21.29	0.901	22.19	0.166	1.000	Pass
	3455		RB1#24	21.41	0.901	22.31	0.170	1.000	Pass
	3500		RB1#24	21.29	0.901	22.19	0.166	1.000	Pass
	3545		RB1#24	21.31	0.901	22.21	0.166	1.000	Pass
	3455		RB1#49	21.43	0.901	22.33	0.171	1.000	Pass
	3500		RB1#49	21.29	0.901	22.19	0.166	1.000	Pass
	3545		RB1#49	21.38	0.901	22.28	0.169	1.000	Pass
	3455		RB50#0	20.45	0.901	21.35	0.136	1.000	Pass
	3500		RB50#0	20.31	0.901	21.21	0.132	1.000	Pass
	3545		RB50#0	20.37	0.901	21.27	0.134	1.000	Pass
15 MHz	3457.5	QPSK	RB1#0	21.39	0.901	22.29	0.169	1.000	Pass
	3500		RB1#0	21.32	0.901	22.22	0.167	1.000	Pass
	3542.5		RB1#0	21.28	0.901	22.18	0.165	1.000	Pass
	3457.5		RB1#37	21.38	0.901	22.28	0.169	1.000	Pass
	3500		RB1#37	21.29	0.901	22.19	0.166	1.000	Pass
	3542.5		RB1#37	21.31	0.901	22.21	0.166	1.000	Pass
	3457.5		RB1#74	21.45	0.901	22.35	0.172	1.000	Pass
	3500		RB1#74	21.33	0.901	22.23	0.167	1.000	Pass
	3542.5		RB1#74	21.39	0.901	22.29	0.169	1.000	Pass
	3457.5		RB75#0	20.42	0.901	21.32	0.136	1.000	Pass
	3500		RB75#0	20.34	0.901	21.24	0.133	1.000	Pass
	3542.5		RB75#0	20.41	0.901	21.31	0.135	1.000	Pass
20 MHz	3460	QPSK	RB1#0	21.39	0.901	22.29	0.169	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 42 (3450 MHz ~ 3550 MHz)									
	3500		RB1#0	21.38	0.901	22.28	0.169	1.000	Pass
	3540		RB1#0	21.29	0.901	22.19	0.166	1.000	Pass
	3460		RB1#49	21.33	0.901	22.23	0.167	1.000	Pass
	3500		RB1#49	21.32	0.901	22.22	0.167	1.000	Pass
	3540		RB1#49	21.31	0.901	22.21	0.166	1.000	Pass
	3460		RB1#99	21.38	0.901	22.28	0.169	1.000	Pass
	3500		RB1#99	21.41	0.901	22.31	0.170	1.000	Pass
	3540		RB1#99	21.46	0.901	22.36	0.172	1.000	Pass
	3460		RB100#0	20.39	0.901	21.29	0.135	1.000	Pass
	3500		RB100#0	20.36	0.901	21.26	0.134	1.000	Pass
	3540		RB100#0	20.35	0.901	21.25	0.133	1.000	Pass
5 MHz	3452.5	16QAM	RB1#0	20.63	0.901	21.53	0.142	1.000	Pass
	3500		RB1#0	20.69	0.901	21.59	0.144	1.000	Pass
	3547.5		RB1#0	20.53	0.901	21.43	0.139	1.000	Pass
	3452.5		RB1#12	20.64	0.901	21.54	0.143	1.000	Pass
	3500		RB1#12	20.73	0.901	21.63	0.146	1.000	Pass
	3547.5		RB1#12	20.6	0.901	21.50	0.141	1.000	Pass
	3452.5		RB1#24	20.57	0.901	21.47	0.140	1.000	Pass
	3500		RB1#24	20.68	0.901	21.58	0.144	1.000	Pass
	3547.5		RB1#24	20.51	0.901	21.41	0.138	1.000	Pass
	3452.5		RB25#0	19.62	0.901	20.52	0.113	1.000	Pass
	3500		RB25#0	19.39	0.901	20.29	0.107	1.000	Pass
	3547.5		RB25#0	19.54	0.901	20.44	0.111	1.000	Pass
10 MHz	3455	16QAM	RB1#0	20.46	0.901	21.36	0.137	1.000	Pass
	3500		RB1#0	20.53	0.901	21.43	0.139	1.000	Pass
	3545		RB1#0	20.65	0.901	21.55	0.143	1.000	Pass
	3455		RB1#24	20.48	0.901	21.38	0.137	1.000	Pass
	3500		RB1#24	20.48	0.901	21.38	0.137	1.000	Pass
	3545		RB1#24	20.66	0.901	21.56	0.143	1.000	Pass
	3455		RB1#49	20.51	0.901	21.41	0.138	1.000	Pass
	3500		RB1#49	20.5	0.901	21.40	0.138	1.000	Pass
	3545		RB1#49	20.75	0.901	21.65	0.146	1.000	Pass
	3455		RB50#0	19.57	0.901	20.47	0.111	1.000	Pass
	3500		RB50#0	19.44	0.901	20.34	0.108	1.000	Pass
	3545		RB50#0	19.52	0.901	20.42	0.110	1.000	Pass
15 MHz	3457.5	16QAM	RB1#0	20.77	0.901	21.67	0.147	1.000	Pass
	3500		RB1#0	20.6	0.901	21.50	0.141	1.000	Pass
	3542.5		RB1#0	20.35	0.901	21.25	0.133	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 42 (3450 MHz ~ 3550 MHz)									
	3457.5		RB1#37	20.75	0.901	21.65	0.146	1.000	Pass
	3500		RB1#37	20.55	0.901	21.45	0.140	1.000	Pass
	3542.5		RB1#37	20.41	0.901	21.31	0.135	1.000	Pass
	3457.5		RB1#74	20.83	0.901	21.73	0.149	1.000	Pass
	3500		RB1#74	20.6	0.901	21.50	0.141	1.000	Pass
	3542.5		RB1#74	20.52	0.901	21.42	0.139	1.000	Pass
	3457.5		RB75#0	19.61	0.901	20.51	0.112	1.000	Pass
	3500		RB75#0	19.37	0.901	20.27	0.106	1.000	Pass
	3542.5		RB75#0	19.5	0.901	20.40	0.110	1.000	Pass
20 MHz	3460	16QAM	RB1#0	20.53	0.901	21.43	0.139	1.000	Pass
	3500		RB1#0	20.76	0.901	21.66	0.147	1.000	Pass
	3540		RB1#0	20.45	0.901	21.35	0.136	1.000	Pass
	3460		RB1#49	20.52	0.901	21.42	0.139	1.000	Pass
	3500		RB1#49	20.65	0.901	21.55	0.143	1.000	Pass
	3540		RB1#49	20.51	0.901	21.41	0.138	1.000	Pass
	3460		RB1#99	20.57	0.901	21.47	0.140	1.000	Pass
	3500		RB1#99	20.76	0.901	21.66	0.147	1.000	Pass
	3540		RB1#99	20.65	0.901	21.55	0.143	1.000	Pass
	3460		RB100#0	19.6	0.901	20.50	0.112	1.000	Pass
	3500		RB100#0	19.51	0.901	20.41	0.110	1.000	Pass
	3540		RB100#0	19.52	0.901	20.42	0.110	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 43 (3700 MHz ~ 3800 MHz)									
5 MHz	3702.5	QPSK	RB1#0	21.29	0.912	22.20	0.166	1.000	Pass
	3750		RB1#0	21.45	0.912	22.36	0.172	1.000	Pass
	3797.5		RB1#0	21.32	0.912	22.23	0.167	1.000	Pass
	3702.5		RB1#12	21.32	0.912	22.23	0.167	1.000	Pass
	3750		RB1#12	21.56	0.912	22.47	0.177	1.000	Pass
	3797.5		RB1#12	21.34	0.912	22.25	0.168	1.000	Pass
	3702.5		RB1#24	21.25	0.912	22.16	0.165	1.000	Pass
	3750		RB1#24	21.48	0.912	22.39	0.173	1.000	Pass
	3797.5		RB1#24	21.28	0.912	22.19	0.166	1.000	Pass
	3702.5		RB25#0	20.27	0.912	21.18	0.131	1.000	Pass
	3750		RB25#0	20.39	0.912	21.30	0.135	1.000	Pass
	3797.5		RB25#0	20.28	0.912	21.19	0.132	1.000	Pass
10 MHz	3705	QPSK	RB1#0	21.28	0.912	22.19	0.166	1.000	Pass
	3750		RB1#0	21.39	0.912	22.30	0.170	1.000	Pass
	3795		RB1#0	21.38	0.912	22.29	0.170	1.000	Pass
	3705		RB1#24	21.29	0.912	22.20	0.166	1.000	Pass
	3750		RB1#24	21.47	0.912	22.38	0.173	1.000	Pass
	3795		RB1#24	21.32	0.912	22.23	0.167	1.000	Pass
	3705		RB1#49	21.26	0.912	22.17	0.165	1.000	Pass
	3750		RB1#49	21.43	0.912	22.34	0.171	1.000	Pass
	3795		RB1#49	21.34	0.912	22.25	0.168	1.000	Pass
	3705		RB50#0	20.29	0.912	21.20	0.132	1.000	Pass
	3750		RB50#0	20.41	0.912	21.32	0.136	1.000	Pass
	3795		RB50#0	20.35	0.912	21.26	0.134	1.000	Pass
15 MHz	3707.5	QPSK	RB1#0	21.32	0.912	22.23	0.167	1.000	Pass
	3750		RB1#0	21.37	0.912	22.28	0.169	1.000	Pass
	3792.5		RB1#0	21.34	0.912	22.25	0.168	1.000	Pass
	3707.5		RB1#37	21.26	0.912	22.17	0.165	1.000	Pass
	3750		RB1#37	21.44	0.912	22.35	0.172	1.000	Pass
	3792.5		RB1#37	21.32	0.912	22.23	0.167	1.000	Pass
	3707.5		RB1#74	21.31	0.912	22.22	0.167	1.000	Pass
	3750		RB1#74	21.48	0.912	22.39	0.173	1.000	Pass
	3792.5		RB1#74	21.35	0.912	22.26	0.168	1.000	Pass
	3707.5		RB75#0	20.29	0.912	21.20	0.132	1.000	Pass
	3750		RB75#0	20.38	0.912	21.29	0.135	1.000	Pass
	3792.5		RB75#0	20.3	0.912	21.21	0.132	1.000	Pass
20 MHz	3710	QPSK	RB1#0	21.34	0.912	22.25	0.168	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 43 (3700 MHz ~ 3800 MHz)									
	3750		RB1#0	21.43	0.912	22.34	0.171	1.000	Pass
	3790		RB1#0	21.37	0.912	22.28	0.169	1.000	Pass
	3710		RB1#49	21.29	0.912	22.20	0.166	1.000	Pass
	3750		RB1#49	21.46	0.912	22.37	0.173	1.000	Pass
	3790		RB1#49	21.28	0.912	22.19	0.166	1.000	Pass
	3710		RB1#99	21.38	0.912	22.29	0.170	1.000	Pass
	3750		RB1#99	21.5	0.912	22.41	0.174	1.000	Pass
	3790		RB1#99	21.3	0.912	22.21	0.166	1.000	Pass
	3710		RB100#0	20.29	0.912	21.20	0.132	1.000	Pass
	3750		RB100#0	20.44	0.912	21.35	0.137	1.000	Pass
	3790		RB100#0	20.37	0.912	21.28	0.134	1.000	Pass
5 MHz	3702.5	16QAM	RB1#0	20.49	0.912	21.40	0.138	1.000	Pass
	3750		RB1#0	20.39	0.912	21.30	0.135	1.000	Pass
	3797.5		RB1#0	20.29	0.912	21.20	0.132	1.000	Pass
	3702.5		RB1#12	20.51	0.912	21.42	0.139	1.000	Pass
	3750		RB1#12	20.52	0.912	21.43	0.139	1.000	Pass
	3797.5		RB1#12	20.35	0.912	21.26	0.134	1.000	Pass
	3702.5		RB1#24	20.45	0.912	21.36	0.137	1.000	Pass
	3750		RB1#24	20.48	0.912	21.39	0.138	1.000	Pass
	3797.5		RB1#24	20.23	0.912	21.14	0.130	1.000	Pass
	3702.5		RB25#0	19.21	0.912	20.12	0.103	1.000	Pass
	3750		RB25#0	19.39	0.912	20.30	0.107	1.000	Pass
	3797.5		RB25#0	19.25	0.912	20.16	0.104	1.000	Pass
10 MHz	3705	16QAM	RB1#0	20.29	0.912	21.20	0.132	1.000	Pass
	3750		RB1#0	20.54	0.912	21.45	0.140	1.000	Pass
	3795		RB1#0	20.18	0.912	21.09	0.129	1.000	Pass
	3705		RB1#24	20.26	0.912	21.17	0.131	1.000	Pass
	3750		RB1#24	20.59	0.912	21.50	0.141	1.000	Pass
	3795		RB1#24	20.11	0.912	21.02	0.127	1.000	Pass
	3705		RB1#49	20.3	0.912	21.21	0.132	1.000	Pass
	3750		RB1#49	20.61	0.912	21.52	0.142	1.000	Pass
	3795		RB1#49	20.13	0.912	21.04	0.127	1.000	Pass
	3705		RB50#0	19.23	0.912	20.14	0.103	1.000	Pass
	3750		RB50#0	19.35	0.912	20.26	0.106	1.000	Pass
	3795		RB50#0	19.29	0.912	20.20	0.105	1.000	Pass
15 MHz	3707.5	16QAM	RB1#0	20.49	0.912	21.40	0.138	1.000	Pass
	3750		RB1#0	20.53	0.912	21.44	0.139	1.000	Pass
	3792.5		RB1#0	20.72	0.912	21.63	0.146	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 43 (3700 MHz ~ 3800 MHz)									
	3707.5		RB1#37	20.47	0.912	21.38	0.137	1.000	Pass
	3750		RB1#37	20.6	0.912	21.51	0.142	1.000	Pass
	3792.5		RB1#37	20.62	0.912	21.53	0.142	1.000	Pass
	3707.5		RB1#74	20.57	0.912	21.48	0.141	1.000	Pass
	3750		RB1#74	20.64	0.912	21.55	0.143	1.000	Pass
	3792.5		RB1#74	20.72	0.912	21.63	0.146	1.000	Pass
	3707.5		RB75#0	19.29	0.912	20.20	0.105	1.000	Pass
	3750		RB75#0	19.62	0.912	20.53	0.113	1.000	Pass
	3792.5		RB75#0	19.51	0.912	20.42	0.110	1.000	Pass
20 MHz	3710	16QAM	RB1#0	20.61	0.912	21.52	0.142	1.000	Pass
	3750		RB1#0	20.64	0.912	21.55	0.143	1.000	Pass
	3790		RB1#0	20.49	0.912	21.40	0.138	1.000	Pass
	3710		RB1#49	20.56	0.912	21.47	0.140	1.000	Pass
	3750		RB1#49	20.73	0.912	21.64	0.146	1.000	Pass
	3790		RB1#49	20.43	0.912	21.34	0.136	1.000	Pass
	3710		RB1#99	20.65	0.912	21.56	0.143	1.000	Pass
	3750		RB1#99	20.77	0.912	21.68	0.147	1.000	Pass
	3790		RB1#99	20.39	0.912	21.30	0.135	1.000	Pass
	3710		RB100#0	19.31	0.912	20.22	0.105	1.000	Pass
	3750		RB100#0	19.61	0.912	20.52	0.113	1.000	Pass
	3790		RB100#0	19.52	0.912	20.43	0.110	1.000	Pass

A.2 Peak to Average Ratio

Note: The Peak to Average Ratio please refer to the Report No. 2309RSU052-U1& No. 2309RSU052-U2& No. 2309RSU052-U3& No. 2309RSU052-U4& No. 2309RSU052-U5&No. 2309RSU052-U6& No. 2309RSU052-U7& No. 2309RSU052-U8& No. 2309RSU052-U9 issued by MRT Technology (Suzhou) Co., Ltd on Oct. 26, 2023.

A.3 Occupied Bandwidth

Note: The Occupied Bandwidth please refer to the Report No. 2309RSU052-U1& No. 2309RSU052-U2& No. 2309RSU052-U3& No. 2309RSU052-U4& No. 2309RSU052-U5&No. 2309RSU052-U6& No. 2309RSU052-U7& No. 2309RSU052-U8& No. 2309RSU052-U9 issued by MRT Technology (Suzhou) Co., Ltd on Oct. 26, 2023.

A.4 Frequency Stability

Note: The Frequency Stability please refer to the Report No. 2309RSU052-U1& No. 2309RSU052-U2& No. 2309RSU052-U3& No. 2309RSU052-U4& No. 2309RSU052-U5&No. 2309RSU052-U6& No. 2309RSU052-U7& No. 2309RSU052-U8& No. 2309RSU052-U9 issued by MRT Technology (Suzhou) Co., Ltd on Oct. 26, 2023.

A.5 Spurious Emission at Antenna Terminals

Note: The Spurious Emission at Antenna Terminals please refer to the Report No. 2309RSU052-U1& No. 2309RSU052-U2& No. 2309RSU052-U3& No. 2309RSU052-U4& No. 2309RSU052-U5&No. 2309RSU052-U6& No. 2309RSU052-U7& No. 2309RSU052-U8& No. 2309RSU052-U9 issued by MRT Technology (Suzhou) Co., Ltd on Oct. 26, 2023.

A.6 Band Edge

Note: The Band Edge please refer to the Report No. 2309RSU052-U1& No. 2309RSU052-U2& No. 2309RSU052-U3& No. 2309RSU052-U4& No. 2309RSU052-U5&No. 2309RSU052-U6& No. 2309RSU052-U7& No. 2309RSU052-U8& No. 2309RSU052-U9 issued by MRT Technology (Suzhou) Co., Ltd on Oct. 26, 2023.

A.7 Field Strength of Spurious Radiation

Note 1: All modes have been tested, and only the worst case data are shown here.

Note 2: The frequencies of verdict which are marked by "N/A" should be ignored because they are UE carrier frequency.

Note 3: Test plots please refer to the document “Annex No.: BL-SZ23A1235-501 Data Part 1.pdf”.

Note 4: The disturbance above 26.5GHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data displayed in this report.

WCDMA Mode Test Verdict

Test data of the equipment when installing INPAQ antenna

Test Band	Test Channel	Refer to Plot ^{Note3}	Verdict
WCDMA Band 2	LCH	1.1	Pass
	MCH		Pass
	HCH		Pass
WCDMA Band 4	LCH	1.2	Pass
	MCH		Pass
	HCH		Pass
WCDMA Band 5	LCH	1.3	Pass
	MCH		Pass
	HCH		Pass

Test data of the equipment when installing INNOWAVE antenna

Test Band	Test Channel	Refer to Plot ^{Note3}	Verdict
WCDMA Band 2	LCH	1.4	Pass
	MCH		Pass
	HCH		Pass
WCDMA Band 4	LCH	1.5	Pass
	MCH		Pass
	HCH		Pass
WCDMA Band 5	LCH	1.6	Pass
	MCH		Pass
	HCH		Pass

LTE Mode Test VerdictTest data of the equipment when installing INPAQ antenna

Test Band	Test Channel	Test Bandwidth	Refer to Plot ^{Note3}	Verdict
Band 2/25	HCH	15 MHz	2.1	Pass
Band 4/66	LCH	20 MHz	2.2	Pass
Band 5/26 (824 MHz ~ 849MHz)	HCH	10 MHz	2.3	Pass
Band 7	LCH	15 MHz	2.4	Pass
Band 12/17	MCH	5 MHz	2.5	Pass
Band 13	HCH	5 MHz	2.6	Pass
Band 71	MCH	20 MHz	2.7	Pass
Band 38/41	LCH	20 MHz	2.8	Pass
Band 14	LCH	5 MHz	2.9	Pass
Band 26 (814 MHz ~ 824 MHz)	HCH	5 MHz	2.10	Pass
Band 30	MCH	10 MHz	2.11	Pass
Band 42/43/48 (3550 MHz ~ 3700 MHz)	LCH	15 MHz	2.12	Pass
Band 42 (3450 MHz ~ 3550 MHz)	HCH	20 MHz	2.13	Pass
Band 43 (3700 MHz ~ 3800 MHz)	MCH	5 MHz	2.14	Pass

Test data of the equipment when installing INNOWAVE antenna

Test Band	Test Channel	Test Bandwidth	Refer to Plot ^{Note3}	Verdict
Band 2/25	HCH	15 MHz	2.15	Pass
Band 4/66	LCH	20 MHz	2.16	Pass
Band 5/26 (824 MHz ~ 849MHz)	HCH	10 MHz	2.17	Pass
Band 7	LCH	15 MHz	2.18	Pass
Band 12/17	MCH	5 MHz	2.19	Pass
Band 13	HCH	5 MHz	2.20	Pass
Band 71	MCH	20 MHz	2.21	Pass
Band 38/41	LCH	20 MHz	2.22	Pass
Band 14	LCH	5 MHz	2.23	Pass
Band 26 (814 MHz ~ 824 MHz)	HCH	5 MHz	2.24	Pass
Band 30	MCH	10 MHz	2.25	Pass
Band 42/43/48 (3550 MHz ~ 3700 MHz)	LCH	15 MHz	2.26	Pass
Band 42 (3450 MHz ~ 3550 MHz)	HCH	20 MHz	2.27	Pass
Band 43 (3700 MHz ~ 3800 MHz)	MCH	5 MHz	2.28	Pass

LTE+WLAN Mode Test Verdict
Test data of the equipment when installing INPAQ antenna

Test Band	Refer to Plot ^{Note3}	Verdict
LTE Band 13+ WLAN2.4G	3.1	Pass
LTE Band 13+ WLAN5G	3.2	Pass

ANNEX B TEST SETUP PHOTOS

Please refer to the document “BL-SZ23A1235-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer to the document “BL-SZ23A1235-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer to the document “BL-SZ23A1235-AI.PDF”.

Statement

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--END OF REPORT--