



## Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

### RF TEST REPORT

<b>PRODUCT</b>	Smart POS system
<b>BRAND</b>	SUNMI
<b>MODEL</b>	T6F10
<b>APPLICANT</b>	Shanghai Sunmi Technology Co.,Ltd.
<b>FCC ID</b>	2AH25T6F10NA
<b>IC</b>	22621-T6F10
<b>ISSUE DATE</b>	September 9, 2024
<b>STANDARD(S)</b>	FCC Part 2, FCC Part 22H, FCC Part 24E, FCC Part 27, RSS-Gen Issue 5, RSS-130 Issue 2, RSS-132 Issue 4, RSS-133 Issue 7, RSS-139 Issue 4, RSS-199 Issue 4

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## 1. Summary of Test Report

### 1.1 Test Standard (s)

No.	Test Standard	Title	Version
1	FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	-
2	FCC Part 22H	CELLULAR RADIOTELEPHONE SERVICE	-
3	FCC Part 24E	BROADBAND PCS	-
4	FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	-
5	RSS-Gen Issue 5	RSS-Gen —General Requirements for Compliance of Radio Apparatus	2021-02
6	RSS-130 Issue 2	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz,698-756 MHz and 777-787 MHz	2019-02
7	RSS-132 Issue 4	Cellular Telephone Systems Operating in the Bands 824- 849 MHz and 869-894 MHz	2023-01
8	RSS-133 Issue 7	Personal Communications Service Equipment Operating in the Bands 1850-1915 MHz and 1930-1995 MHz	2024-07
9	RSS-139 Issue 4	Advanced Wireless Services Equipment Operating in the Bands 1710-1780 MHz and 2110-2200 MHz	2022-09
10	RSS-199 Issue 4	Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz	2023-07

Note: The standard of FCC Part 2 has not been accredited by A2LA.

### 1.2 Reference Documents

No.	Test Standard	Title	Version
1	ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
2	ANSI C63.26	American National Standard of Procedures for Compliance Testing of Licensed Transmitters Used in Licensed Radio	2015
3	KDB 971168 D01	Measurement Guidance for Certification of Licensed Digital Transmitters	v03r01

Note: The standard of KDB 971168 D01 has not been accredited by A2LA.

### 1.3 Summary of Test Results

#### LTE Band 2

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	2.1046/24.232(c)	RSS-133 5.5	Pass
2	Emission Limit	2.1053/24.238(a)	RSS-133 5.6	Pass
3	Frequency Stability	2.1055/24.235	RSS-133 5.4	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass



6	Band Edge Compliance	2.1051/24.238(a)	RSS-133 5.6	Pass
7	Conducted Spurious Emission	2.1051/24.238(a)	RSS-133 5.6	Pass
8	Peak to Average Power Ratio	24.232 (d)	RSS-133 5.5	Pass

## LTE Band 4

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	2.1046/27.50(d)(4)	RSS-139 5.5	Pass
2	Emission Limit	2.1053/27.53(h)	RSS-139 5.6	Pass
3	Frequency Stability	2.1055/27.54	RSS-139 5.4	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(h)	RSS-139 5.6	Pass
7	Conducted Spurious Emission	2.1051/27.53(h)	RSS-139 5.6	Pass
8	Peak to Average Power Ratio	27.50(d)(5)	RSS-139 5.5	Pass

## LTE Band 5

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/ERP	2.1046/22.913(a)	RSS-132 5.4	Pass
2	Emission Limit	2.1053/22.917(a)	RSS-132 5.5	Pass
3	Frequency Stability	2.1055/22.355	RSS-132 5.3	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/22.917(a)	RSS-132 5.5	Pass
7	Conducted Spurious Emission	2.1051/22.917(a)	RSS-132 5.5	Pass
8	Peak to Average Power Ratio	N/A	RSS-132 5.4	Pass

## LTE Band 7

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	2.1046/27.50(h)	RSS-199 5.5	Pass
2	Emission Limit	2.1053/27.53(m)	RSS-199 5.6	Pass
3	Frequency Stability	2.1055/27.54	RSS-199 5.4	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(m)	RSS-199 5.6	Pass
7	Conducted Spurious Emission	2.1051/27.53(m)	RSS-199 5.6	Pass
8	Peak to Average Power Ratio	N/A	RSS-199 5.5	Pass

## LTE Band 12

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/ERP	2.1046/27.50(c)(10)	RSS 130 4.6	Pass
2	Emission Limit	2.1053/27.53(g)	RSS 130 4.7	Pass
3	Frequency Stability	2.1055/27.54	RSS 130 4.5	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(g)	RSS 130 4.7	Pass
7	Conducted Spurious Emission	2.1051/27.53(g)	RSS 130 4.7	Pass
8	Peak to Average Power Ratio	N/A	RSS 130 4.6	Pass

## LTE Band 13

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/ERP	2.1046/27.50(b)(10)	RSS 130 4.6	Pass
2	Emission Limit	2.1053/27.53(c)(2)/27.53(f)	RSS 130 4.7	Pass
3	Frequency Stability	2.1055/27.54	RSS 130 4.5	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(c)(2)/27.53(f)	RSS 130 4.7	Pass
7	Conducted Spurious Emission	2.1051/27.53(c)(2)/27.53(f)	RSS 130 4.7	Pass
8	Peak to Average Power Ratio	N/A	RSS 130 4.6	Pass

## LTE Band 17

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/ERP	2.1046/27.50(c)(10)	RSS 130 4.6	Pass
2	Emission Limit	2.1053/27.53(g)	RSS 130 4.7	Pass
3	Frequency Stability	2.1055/27.54	RSS 130 4.5	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(g)	RSS 130 4.7	Pass
7	Conducted Spurious Emission	2.1051/27.53(g)	RSS 130 4.7	Pass
8	Peak to Average Power Ratio	N/A	RSS 130 4.6	Pass

## LTE Band 25

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	2.1046/24.232(c)	RSS-133 5.5	Pass
2	Emission Limit	2.1053/24.238(a)	RSS-133 5.6	Pass
3	Frequency Stability	2.1055/24.235	RSS-133 5.4	Pass



4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/24.238(a)	RSS-133 5.6	Pass
7	Conducted Spurious Emission	2.1051/24.238(a)	RSS-133 5.6	Pass
8	Peak to Average Power Ratio	24.232 (d)	RSS-133 5.5	Pass

## LTE Band 26(Part 22) 824-849MHz

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/ERP	2.1046/22.913(a)	RSS-132 5.4	Pass
2	Emission Limit	2.1053/22.917(a)	RSS-132 5.5	Pass
3	Frequency Stability	2.1055/22.355	RSS-132 5.3	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/22.917(a)	RSS-132 5.5	Pass
7	Conducted Spurious Emission	2.1051/22.917(a)	RSS-132 5.5	Pass
8	Peak to Average Power Ratio	N/A	RSS-132 5.4	Pass

## LTE Band 38

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	2.1046/27.50(h)	RSS 199 5.5	Pass
2	Emission Limit	2.1053/27.53(m)	RSS 199 5.6	Pass
3	Frequency Stability	2.1055/27.54	RSS 199 5.4	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(m)	RSS 199 5.6	Pass
7	Conducted Spurious Emission	2.1051/27.53(m)	RSS 199 5.6	Pass
8	Peak to Average Power Ratio	N/A	RSS 199 5.5	Pass

## LTE Band 41

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	2.1046/27.50(h)	RSS 199 5.5	Pass
2	Emission Limit	2.1053/27.53(m)	RSS 199 5.6	Pass
3	Frequency Stability	2.1055/27.54	RSS 199 5.4	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(m)	RSS 199 5.6	Pass
7	Conducted Spurious Emission	2.1051/27.53(m)	RSS 199 5.6	Pass

8	Peak to Average Power Ratio	N/A	RSS 199 5.5	Pass
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**LTE Band 66**

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	27.50(d)(4)	RSS-139 5.5	Pass
2	Emission Limit	2.1053/27.53(h)	RSS-139 5.6	Pass
3	Frequency Stability	2.1055/27.54	RSS-139 5.4	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(h)	RSS-139 5.6	Pass
7	Conducted Spurious Emission	2.1051/27.53(h)	RSS-139 5.6	Pass
8	Peak to Average Power Ratio	27.50(d)(5)	RSS-139 5.5	Pass

**LTE Band 71**

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power/EIRP	27.50(c)(10)	RSS 130 4.6	Pass
2	Emission Limit	2.1053/27.53(g)	RSS 130 4.7	Pass
3	Frequency Stability	2.1055/27.54	RSS 130 4.5	Pass
4	Occupied Bandwidth	2.1049	RSS-GEN 6.7	Pass
5	Emission Bandwidth	2.1049	RSS-GEN 6.7	Pass
6	Band Edge Compliance	2.1051/27.53(g)	RSS 130 4.7	Pass
7	Conducted Spurious Emission	2.1051/27.53(g)	RSS 130 4.7	Pass
8	Peak to Average Power Ratio	N/A	RSS 130 4.6	Pass

**Note1:**

The T6F10 manufactured by Shanghai Sunmi Technology Co.,Ltd. is a new product for testing.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 1.3.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 4 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 1 of this test report.

**1.4 Data Provided by Applicant**

No.	Item(s)	Data
1	LTE band 2 Antenna gain	-0.32 dBi
2	LTE band 4 Antenna gain	0.2 dBi
3	LTE band 5 Antenna gain	-1.04 dBi
4	LTE band 7 Antenna gain	-1.64 dBi



5	LTE band 12 Antenna gain	-1.08 dBi
6	LTE band 13 Antenna gain	-2.88 dBi
7	LTE band 17 Antenna gain	1.08 dBi
8	LTE band 25 Antenna gain	-0.32 dBi
9	LTE band 26 Antenna gain	-1.04 dBi
10	LTE band 38 Antenna gain	-0.91 dBi
11	LTE band 41 Antenna gain	-0.04 dBi
12	LTE band 66 Antenna gain	0.2 dBi
13	LTE band 71 Antenna gain	0.59 dBi

Note: The data of antenna gain is provided by Antenna specification may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.

## 2. General Information of The Laboratory

### 2.1 Testing Laboratory

Lab Name	Industrial Internet Innovation Center (Shanghai) Co.,Ltd.
Address	Building 4, No. 766, Jingang Road, Pudong, Shanghai, China
Telephone	021-68866880
FCC Registration No.	708870
FCC Designation No.	CN1364
IC Designation No.	10766A
CAB identifier	CN0067

### 2.2 Laboratory Environmental Requirements

Temperature	15°C~35°C
Relative Humidity	25%RH~75%RH
Atmospheric Pressure	86kPa~106kPa

### 2.3 Project Information

Project Manager	Gao Hongning
Test Date	July 11, 2024 to August 29, 2024



### 3. General Information of The Customer

#### 3.1 Applicant

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, No.388, Song Hu Road, Yang Pu District, Shanghai, China
Telephone	18826519551

#### 3.2 Manufacturer

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, No.388,Song Hu Road, Yang Pu District, Shanghai, China
Telephone	18826519551

## 4. General Information of The Product

### 4.1 Product Description for Equipment under Test (EUT)

Product	Smart POS System
Model	T6F10
Date of Receipt	S05aa: July 10, 2024 S08aa: July 10, 2024
EUT ID*	S05aa/S08aa
SN/IMEI	S05aa: 868393070000286'868393070002282 S08aa: 868393070000351'868393070002357
Supported Radio Technology and Bands	WCDMA Band II/IV/V LTE Band 2/4/5/7/12/13/14/17/25/26/30/38/41/66/71 WLAN 802.11b/g/n WLAN 802.11a/n/ac BT 5.0 BR/EDR/BLE NFC GPS/Galileo
Hardware Version	V1.0(NA)
Software Version	V3.0.0
HVIN	T6F10
FCC ID	2AH25T6F10NA
IC	22621-T6F10
Power Rating	DC 7.7V form battery, DC 5V form adapter
NOTE1: EUT ID is the internal identification code of the laboratory.	
NOTE2: Samples in the test report are provided by the customer. The test results are only applicable to the samples received by the laboratory.	

### 4.2 Description for Auxiliary Equipment (AE)

AE ID*	Description	Model	SN/Remark
AE1	RF Cable	N/A	N/A
CA01	Adapter	TPA-141A050200UU01	N/A
CB01	Adapter	UC13US	N/A
CC01	Adapter	TPA-23A050200UU01	N/A
UA01	AC Cable	N/A	N/A
BA02	Battery	HPPA	Guangdong Highpower NewEnergy Technology Co., Ltd.
NOTE1: AE ID is the internal identification code of the laboratory.			
NOTE2: By verifying that CC01+BA02 is the worst battery and adapter combination, this battery and			



adapter are used in all tests.

### 4.3 Additional Information

Modulation:

Type of modulation	QPSK/16QAM
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Band Frequency Range:

Band	Frequency Range
Band 2	1850 - 1910 MHz
Band 4	1710 - 1755 MHz
Band 5	824 - 849 MHz
Band 7	2500 - 2570 MHz
Band 12	699-716 MHz
Band 13	777-787 MHz
Band 17	704-716 MHz
Band 25	1850-1915 MHz
Band 26	824 - 849 MHz
Band 38	2570 - 2620 MHz
Band 41	2496 - 2690 MHz
Band 41(Note 1)	2500 - 2690 MHz
Band 66	1710-1780 MHz
Band 71	663-698 MHz

Note 1: This frequency range is only applicable for IC certification.

Band List:

Band	BW (MHz)	Low Channel	Low Freq. (MHz)	Mid Channel	Mid Freq. (MHz)	High Channel	High Freq. (MHz)
Band 2	1.4	18607	1850.7	18900	1880	19193	1909.3
	3	18615	1851.5	18900	1880	19185	1908.5
	5	18625	1852.5	18900	1880	19175	1907.5
	10	18650	1855	18900	1880	19150	1905
	15	18675	1857.5	18900	1880	19125	1902.5
	20	18700	1860	18900	1880	19100	1900
Band 4	1.4	19957	1710.7	20175	1732.5	20393	1754.3
	3	19965	1711.5	20175	1732.5	20385	1753.5
	5	19975	1712.5	20175	1732.5	20375	1752.5
	10	20000	1715	20175	1732.5	20350	1750
	15	20025	1717.5	20175	1732.5	20325	1747.5
	20	20050	1720	20175	1732.5	20300	1745
Band 5	1.4	20407	824.7	20525	836.5	20643	848.3
	3	20415	825.5	20525	836.5	20635	847.5
	5	20425	826.5	20525	836.5	20625	846.5

Band	BW (MHz)	Low Channel	Low Freq. (MHz)	Mid Channel	Mid Freq. (MHz)	High Channel	High Freq. (MHz)
	10	20450	829	20525	836.5	20600	844
Band 7	5	20775	2502.5	21100	2535	21425	2567.5
	10	20800	2505	21100	2535	21400	2565
	15	20825	2507.5	21100	2535	21375	2562.5
	20	20850	2510	21100	2535	21350	2560
Band 12	1.4	23017	699.7	23095	707.5	23173	715.3
	3	23025	700.5	23095	707.5	23165	714.5
	5	23035	701.5	23095	707.5	23155	713.5
	10	23060	704	23095	707.5	23130	711
Band 13	5	23205	779.5	23230	782	23255	784.5
	10	23230	782	23230	782	23230	782
Band 17	5	23755	706.5	23790	710	23825	713.5
	10	23780	709	23790	710	23800	711
Band 25	1.4	26047	1850.7	26365	1882.5	26683	1914.3
	3	26055	1851.5	26365	1882.5	26675	1913.5
	5	26065	1852.5	26365	1882.5	26665	1912.5
	10	26090	1855	26365	1882.5	26640	1910
	15	26115	1857.5	26365	1882.5	26615	1907.5
	20	26140	1860	26365	1882.5	26590	1905
Band 26 (824-849MHz)	1.4	26797	824.7	26915	836.5	27033	848.3
	3	26805	825.5	26915	836.5	27025	847.5
	5	26815	826.5	26915	836.5	27015	846.5
	10	26840	829	26915	836.5	26990	844
	15	26865	831.5	26915	836.5	26965	841.5
Band 38	5	37775	2572.5	38000	2595	38225	2617.5
	10	37800	2575	38000	2595	38200	2615
	15	37825	2577.5	38000	2595	38175	2612.5
	20	37850	2580	38000	2595	38150	2610
Band 41	5	39675	2498.5	40620	2593	41565	2687.5
	10	39700	2501	40620	2593	41540	2685
	15	39725	2503.5	40620	2593	41515	2682.5
	20	39750	2506	40620	2593	41490	2680
Band 41 (Note 1)	5	39715	2502.5	40620	2593	41565	2687.5
	10	39740	2505	40620	2593	41540	2685
	15	39765	2507.5	40620	2593	41515	2682.5
	20	39790	2510	40620	2593	41490	2680
Band66	1.4	131979	1710.7	132322	1745	132665	1779.3
	3	131987	1711.5	132322	1745	132657	1778.5
	5	131997	1712.5	132322	1745	132647	1777.5
	10	132022	1715	132322	1745	132622	1775
	15	132047	1717.5	132322	1745	132597	1772.5
	20	132072	1720	132322	1745	132572	1770
Band 71	5	133147	665.5	133297	680.5	133447	695.5
	10	133172	668	133297	680.5	133422	693



Band	BW (MHz)	Low Channel	Low Freq. (MHz)	Mid Channel	Mid Freq. (MHz)	High Channel	High Freq. (MHz)
	15	133197	670.5	133297	680.5	133397	690.5
	20	133222	673	133322	683	133372	688

Note 1: This frequency range is only applicable for IC certification.

### Emissions Information FDD02

Band	Frequency Min(MHz)	Frequency Max(MHz)	Bandwidth (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD02	1850.7	1909.3	1.4	QPSK	22.38	0.173	0.1054	1090	1M09G7D
FDD02	1850.7	1909.3	1.4	16QAM	21.54	0.1426	0.0869	1080	1M08W7D
FDD02	1851.5	1908.5	3	QPSK	22.33	0.171	0.1042	2680	2M68G7D
FDD02	1851.5	1908.5	3	16QAM	21.57	0.1435	0.0875	2680	2M68W7D
FDD02	1852.5	1907.5	5	QPSK	22.34	0.1714	0.1045	4480	4M48G7D
FDD02	1852.5	1907.5	5	16QAM	21.53	0.1422	0.0867	4480	4M48W7D
FDD02	1855	1905	10	QPSK	22.32	0.1706	0.104	8940	8M94G7D
FDD02	1855	1905	10	16QAM	21.42	0.1387	0.0845	8940	8M94W7D
FDD02	1857.5	1902.5	15	QPSK	22.32	0.1706	0.104	13420	13M4G7D
FDD02	1857.5	1902.5	15	16QAM	21.52	0.1419	0.0865	13430	13M4W7D
FDD02	1860	1900	20	QPSK	22.42	0.1746	0.1064	17870	17M9G7D
FDD02	1860	1900	20	16QAM	21.54	0.1426	0.0869	17900	17M9W7D

### Emissions Information FDD04

Band	Frequency Min(MHz)	Frequency Max(MHz)	Bandwidth (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD04	1710.7	1754.3	1.4	QPSK	22.82	0.1914	0.1167	1090	1M09G7D
FDD04	1710.7	1754.3	1.4	16QAM	21.79	0.151	0.092	1080	1M08W7D
FDD04	1711.5	1753.5	3	QPSK	22.78	0.1897	0.1156	2690	2M69G7D
FDD04	1711.5	1753.5	3	16QAM	21.81	0.1517	0.0925	2680	2M68W7D
FDD04	1712.5	1752.5	5	QPSK	22.83	0.1919	0.1169	4480	4M48G7D
FDD04	1712.5	1752.5	5	16QAM	21.77	0.1503	0.0916	4480	4M48W7D
FDD04	1715	1750	10	QPSK	22.81	0.191	0.1164	8950	8M95G7D

FDD04	1715	1750	10	16QAM	21.77	0.1503	0.0916	8950	8M95W7D
FDD04	1717.5	1747.5	15	QPSK	22.81	0.191	0.1164	13410	13M4G7D
FDD04	1717.5	1747.5	15	16QAM	21.84	0.1528	0.0931	13440	13M4W7D
FDD04	1720	1745	20	QPSK	22.9	0.195	0.1189	17870	17M9G7D
FDD04	1720	1745	20	16QAM	21.8	0.1514	0.0923	17880	17M9W7D

**Emissions Information FDD05**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD05	824.7	848.3	1.4	QPSK	21.59	0.1442	0.0879	1080	1M08G7D
FDD05	824.7	848.3	1.4	16QAM	20.68	0.1169	0.0713	1090	1M09W7D
FDD05	825.5	847.5	3	QPSK	21.6	0.1445	0.0881	2680	2M68G7D
FDD05	825.5	847.5	3	16QAM	20.6	0.1148	0.07	2680	2M68W7D
FDD05	826.5	846.5	5	QPSK	21.63	0.1455	0.0887	4480	4M48G7D
FDD05	826.5	846.5	5	16QAM	20.7	0.1175	0.0716	4470	4M47W7D
FDD05	829	844	10	QPSK	21.67	0.1469	0.0895	8940	8M94G7D
FDD05	829	844	10	16QAM	20.66	0.1164	0.071	8940	8M94W7D

**Emissions Information FDD07**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD07	2502.5	2567.5	5	QPSK	21.45	0.1396	0.0851	4480	4M48G7D
FDD07	2502.5	2567.5	5	16QAM	20.43	0.1104	0.0673	4470	4M47W7D
FDD07	2505	2565	10	QPSK	21.42	0.1387	0.0845	8930	8M93G7D
FDD07	2505	2565	10	16QAM	20.49	0.1119	0.0682	8950	8M95W7D
FDD07	2507.5	2562.5	15	QPSK	21.43	0.139	0.0847	13390	13M4G7D
FDD07	2507.5	2562.5	15	16QAM	20.45	0.1109	0.0676	13420	13M4W7D
FDD07	2510	2560	20	QPSK	21.52	0.1419	0.0865	17870	17M9G7D
FDD07	2510	2560	20	16QAM	20.46	0.1112	0.0678	17880	17M9W7D

**Emissions Information FDD12**



Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD12	699.7	715.3	1.4	QPSK	21.77	0.1503	0.0916	1090	1M09G7D
FDD12	699.7	715.3	1.4	16QAM	20.82	0.1208	0.0736	1080	1M08W7D
FDD12	700.5	714.5	3	QPSK	21.77	0.1503	0.0916	2690	2M69G7D
FDD12	700.5	714.5	3	16QAM	20.78	0.1197	0.0729	2690	2M69W7D
FDD12	701.5	713.5	5	QPSK	21.77	0.1503	0.0916	4490	4M49G7D
FDD12	701.5	713.5	5	16QAM	20.85	0.1216	0.0741	4490	4M49W7D
FDD12	704	711	10	QPSK	21.84	0.1528	0.0931	8960	8M96G7D
FDD12	704	711	10	16QAM	20.89	0.1227	0.0748	8970	8M97W7D

**Emissions Information FDD13**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD13	779.5	784.5	5	QPSK	19.87	0.0971	0.0592	4490	4M49G7D
FDD13	779.5	784.5	5	16QAM	19.04	0.0802	0.0489	4480	4M48W7D
FDD13	782	782	10	QPSK	19.94	0.0986	0.0601	8920	8M92G7D
FDD13	782	782	10	16QAM	18.95	0.0785	0.0479	8930	8M93W7D

**Emissions Information FDD17**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD17	706.5	713.5	5	QPSK	23.91	0.246	0.15	4490	4M49G7D
FDD17	706.5	713.5	5	16QAM	22.94	0.1968	0.1199	4480	4M48W7D
FDD17	709	711	10	QPSK	23.97	0.2495	0.1521	8950	8M95G7D
FDD17	709	711	10	16QAM	22.92	0.1959	0.1194	8950	8M95W7D

**Emissions Information FDD25**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD25	1850.7	1914.3	1.4	QPSK	22.42	0.1746	0.1064	1080	1M08G7D

FDD25	1850.7	1914.3	1.4	16QAM	21.29	0.1346	0.082	1090	1M09W7D
FDD25	1851.5	1913.5	3	QPSK	22.4	0.1738	0.1059	2680	2M68G7D
FDD25	1851.5	1913.5	3	16QAM	21.28	0.1343	0.0818	2680	2M68W7D
FDD25	1852.5	1912.5	5	QPSK	22.45	0.1758	0.1072	4490	4M49G7D
FDD25	1852.5	1912.5	5	16QAM	21.3	0.1349	0.0822	4490	4M49W7D
FDD25	1855	1910	10	QPSK	22.42	0.1746	0.1064	8950	8M95G7D
FDD25	1855	1910	10	16QAM	21.27	0.134	0.0817	8950	8M95W7D
FDD25	1857.5	1907.5	15	QPSK	22.43	0.175	0.1067	13420	13M4G7D
FDD25	1857.5	1907.5	15	16QAM	21.34	0.1361	0.083	13440	13M4W7D
FDD25	1860	1905	20	QPSK	22.52	0.1786	0.1089	17850	17M9G7D
FDD25	1860	1905	20	16QAM	21.32	0.1355	0.0826	17890	17M9W7D

**Emissions Information FDD26\_22**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD26	824.7	848.3	1.4	QPSK	21.72	0.1486	0.0906	1090	1M09G7D
FDD26	824.7	848.3	1.4	16QAM	20.87	0.1222	0.0745	1080	1M08W7D
FDD26	825.5	847.5	3	QPSK	21.75	0.1496	0.0912	2680	2M68G7D
FDD26	825.5	847.5	3	16QAM	20.84	0.1213	0.074	2680	2M68W7D
FDD26	826.5	846.5	5	QPSK	21.75	0.1496	0.0912	4480	4M48G7D
FDD26	826.5	846.5	5	16QAM	20.88	0.1225	0.0746	4480	4M48W7D
FDD26	829	844	10	QPSK	21.76	0.15	0.0914	8930	8M93G7D
FDD26	829	844	10	16QAM	20.85	0.1216	0.0741	8940	8M94W7D
FDD26	831.5	841.5	15	QPSK	21.91	0.1552	0.0946	13390	13M4G7D
FDD26	831.5	841.5	15	16QAM	20.9	0.123	0.075	13440	13M4W7D

**Emissions Information TDD38**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Band Width (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
TDD38	2572.5	2617.5	5	QPSK	21.99	0.1581	0.0964	4470	4M47G7D
TDD38	2572.5	2617.5	5	16QAM	21	0.1259	0.0767	4470	4M47W7D



TDD38	2575	2615	10	QPSK	21.97	0.1574	0.0959	8940	8M94G7D
TDD38	2575	2615	10	16QAM	20.96	0.1247	0.076	8940	8M94W7D
TDD38	2577.5	2612.5	15	QPSK	22.01	0.1589	0.0968	13420	13M4G7D
TDD38	2577.5	2612.5	15	16QAM	21.02	0.1265	0.0771	13420	13M4W7D
TDD38	2580	2610	20	QPSK	22.05	0.1603	0.0977	17880	17M9G7D
TDD38	2580	2610	20	16QAM	21.01	0.1262	0.0769	17840	17M8W7D

**Emissions Information TDD41**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Bandwidth (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
TDD41	2498.5	2687.5	5	QPSK	23.14	0.2061	0.1256	4500	4M50G7D
TDD41	2498.5	2687.5	5	16QAM	21.9	0.1549	0.0944	4470	4M47W7D
TDD41	2501	2685	10	QPSK	23.18	0.208	0.1268	8990	8M99G7D
TDD41	2501	2685	10	16QAM	21.94	0.1563	0.0953	8990	8M99W7D
TDD41	2503.5	2682.5	15	QPSK	23.22	0.2099	0.1279	13490	13M5G7D
TDD41	2503.5	2682.5	15	16QAM	21.92	0.1556	0.0948	13490	13M5W7D
TDD41	2506	2680	20	QPSK	23.24	0.2109	0.1285	17890	17M9G7D
TDD41	2506	2680	20	16QAM	21.93	0.156	0.0951	17980	18M0W7D

**Emissions Information TDD41(Note 1)**

Band	Frequency Min(MHz)	Frequency Max(MHz)	Bandwidth (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
TDD41	2502.5	2687.5	5	QPSK	23.14	0.2061	0.1256	4500	4M50G7D
TDD41	2502.5	2687.5	5	16QAM	21.87	0.1538	0.0938	4470	4M47W7D
TDD41	2505	2685	10	QPSK	23.18	0.208	0.1268	8990	8M99G7D
TDD41	2505	2685	10	16QAM	21.87	0.1538	0.0938	8990	8M99W7D
TDD41	2507.5	2682.5	15	QPSK	23.22	0.2099	0.1279	13490	13M5G7D
TDD41	2507.5	2682.5	15	16QAM	21.89	0.1545	0.0942	13490	13M5W7D
TDD41	2510	2680	20	QPSK	23.24	0.2109	0.1285	17890	17M9G7D
TDD41	2510	2680	20	16QAM	21.92	0.1556	0.0948	17980	18M0W7D

Note 1: This frequency range is only applicable for IC certification.

### Emissions Information FDD66

Band	Frequency Min(MHz)	Frequency Max(MHz)	Bandwidth (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD66	1710.7	1779.3	1.4	QPSK	22.94	0.1968	0.1199	1090	1M09G7D
FDD66	1710.7	1779.3	1.4	16QAM	22.02	0.1592	0.0971	1080	1M09G7D
FDD66	1711.5	1778.5	3	QPSK	22.92	0.1959	0.1194	2680	2M68G7D
FDD66	1711.5	1778.5	3	16QAM	21.95	0.1567	0.0955	2690	2M69W7D
FDD66	1712.5	1777.5	5	QPSK	23.01	0.2	0.1219	4480	4M48G7D
FDD66	1712.5	1777.5	5	16QAM	21.89	0.1545	0.0942	4490	4M49W7D
FDD66	1715	1775	10	QPSK	22.98	0.1986	0.1211	8950	8M95G7D
FDD66	1715	1775	10	16QAM	21.98	0.1578	0.0962	8960	8M96W7D
FDD66	1717.5	1772.5	15	QPSK	22.99	0.1991	0.1213	13430	13M4G7D
FDD66	1717.5	1772.5	15	16QAM	21.96	0.157	0.0957	13460	13M5W7D
FDD66	1720	1770	20	QPSK	23.03	0.2009	0.1225	17880	17M9G7D
FDD66	1720	1770	20	16QAM	21.92	0.1556	0.0948	17900	17M9W7D

### Emissions Information FDD71

Band	Frequency Min(MHz)	Frequency Max(MHz)	Bandwidth (MHz)	Modulation	Max OutPut Power EIRP(dBm)	Max OutPut Power EIRP(W)	Max OutPut Power ERP(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
FDD71	665.5	695.5	5	QPSK	23	0.1995	0.1216	4490	4M49G7D
FDD71	665.5	695.5	5	16QAM	21.97	0.1574	0.0959	4490	4M49W7D
FDD71	668	693	10	QPSK	22.97	0.1982	0.1208	8960	8M96G7D
FDD71	668	693	10	16QAM	21.97	0.1574	0.0959	8960	8M96W7D
FDD71	670.5	690.5	15	QPSK	22.98	0.1986	0.1211	13430	13M4G7D
FDD71	670.5	690.5	15	16QAM	22.08	0.1614	0.0984	13450	13M5W7D
FDD71	673	688	20	QPSK	23.06	0.2023	0.1233	17890	17M9G7D
FDD71	673	688	20	16QAM	21.99	0.1581	0.0964	17890	17M9W7D



## 5. Test Configuration Information

### 5.1 Laboratory Environmental Conditions

#### 5.1.1 Permanent Facilities

<b>Relative Humidity</b>	Min. = 45%, Max. = 55%		
<b>Atmospheric Pressure</b>	101kPa		
<b>Temperature</b>	Normal	Minimum	Maximum
	25°C	-10°C	50°C
<b>Working Voltage of EUT</b>	Normal	Minimum	Maximum
	7.7V	6.0V	8.8 V

### 5.2 Test Equipments Utilized

#### Conduction test system

No.	Name	Model	S/N	SW Version	HW Version	Manufacturer	Cal. Date	Cal. Interval
1	Software	Eagle V3.3	N/A	V3.3	N/A	3IN	N/A	N/A
2	Frequency spectrum analyzer	FSQ	101091	V4.75	V11.00	R&S	2023-07-26 2024-07-25	1 Year
3	Frequency spectrum analyzer	FSW43	101943	1.12	00	R&S	2023-08-31	1 Year
4	Wideband Radio Communication Tester	CMW 500	148874	V3.5.136	N/A	R&S	2023-07-27 2024-07-26	1 Year
5	Temperature Chamber	B-TF-107C	201804107	N/A	N/A	BoYi	2024-06-07	1 Year
6	Programmable power supply	Keithley 2303	4039070	N/A	N/A	Keithley	2024-06-07	1 Year
7	RF Test Automation Box	RF 2021B	2001	V3.3	N/A	RANATEC	N/A	N/A

#### Radiated emission test system

No.	Name	Model	S/N	SW Version	HW Version	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication Tester	CMU200	123126	V5.2.1	B12	R&S	2023-10-16	1 Year
2	Universal Radio Communication Tester	CMW500	104178	V3.7.20	1206.0600.00	R&S	2023-10-16	1 Year

3	EMI Test Receiver	ESU40	100307	V5.1-24-3	01	R&S	2023-12-19	1 Year
4	TRILOG Broadband Antenna	VULB9163	01345	N/A	N/A	Schwarzbeck	2024-03-29	1 Year
5	Double-ridged Waveguide Antenna	ETS-3117	00135890	N/A	N/A	ETS	2024-03-16	1 Years
6	EMI Test Software	EMC32 V10.35.02	N/A	V10.35.02	N/A	R&S	N/A	N/A
7	Preamplifier	SCU08F1	8320024	N/A	N/A	R&S	2023-10-16	1 year
8	Preamplifier	SCU18	10155	N/A	N/A	R&S	2023-10-16	1 year
9	Antenna	SWB-VUBA 9117	9117-266	N/A	N/A	Schwarzbeck	2023-09-08	1 year
10	Trilog Antenna	VULB9162	00426	N/A	N/A	Schwarzbeck	2023-07-18 2024-07-17	1 year
11	Signal Generator	SMF100A	102314	3.20.390.24	05.10	R&S	2023-10-16	1 year
12	Antenna Tower	TPMDC-LF	N/A	N/A	N/A	Top Precision	N/A	N/A
13	Antenna Tower	TPMDC-HF	N/A	N/A	N/A	Top Precision	N/A	N/A

### 5.3 Measurement Uncertainty

#### Measurement Uncertainty of Radiation test

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 1\text{GHz}$	$\pm 5.10$
$1\text{GHz} \leq f \leq 18\text{GHz}$	$\pm 5.66$
$18\text{GHz} \leq f \leq 40\text{GHz}$	$\pm 5.22$

#### Measurement Uncertainty of Conduction test

No	Item	Extended uncertainty (k=2)	
1	Frequency Tolerance	23Hz	
2	RF Output Power	0.7dB	
3	conducted spurious	9kHz~3.6GHz	1.5dB
		3.6GHz~8.4GHz	2.8dB
		8.4GHz~12.75GHz	3.4dB
4	EVM	2.1%	
5	Occupied Bandwidth	Bandwidth 1.4MHz	0.03MHz
		Bandwidth 3MHz	0.03MHz
		Bandwidth 5MHz	0.03MHz



		Bandwidth 10MHz	0.05MHz
		Bandwidth 15MHz	0.06MHz
		Bandwidth 20MHz	0.08MHz
6	Emission intermodulation	Adjacent channel	1.4dB
		Alternate channel	1.4dB
7	Range of frequency	0.08MHz	

## 6. Test Results

### 6.1 Output Power

#### 6.1.1 Measurement Limit

FCC §22.913(a) (5) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

FCC §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.

FCC §27.50(a) For mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz 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 or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. ( $EIRP \leq 24dBm/5MHz$ ).

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

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

FCC §27.50(d) (4) Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band is limited to 1 watt EIRP.

FCC §27.50(h): 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.

RSS 130 4.6 Frequency bands 698-756 MHz and 777-787 MHz

The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment. For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

RSS-132 5.4 The transmitter output power shall be measured in terms of average power. The equivalent radiated power (e.r.p.) shall not exceed 7 watts for mobile equipment and 3 watts for portable equipment.

RSS-133 5.5 The maximum power spectral density of the equipment, measured in terms of average values, shall comply with the limits specified below. Equipment type: Subscriber equipment, Maximum power spectral density: 2 W /channel bandwidth e.i.r.p.

RSS-139 5.5 The maximum output power of the equipment shall comply with the limits specified below. In the tables, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average value. Equipment type: Subscriber equipment, Maximum power spectral density: 30 dBm e.i.r.p./channel bandwidth.

RSS-199 5.5 The maximum output power of the equipment shall comply with the limits specified in table 3. In this table, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

Subscriber equipment other than fixed subscriber equipment shall not exceed an e.i.r.p of 2W per channel bandwidth.

#### 6.1.2 Method of Measurements

Method of measurements please refer to KDB971168 D01 v03 clause 5.



The EUT was set up for the max output power with pseudo random data modulation.

The power was measured with Rhode & Schwarz base station CMW500.

These measurements were done at 3 frequencies.(bottom, middle and top of operational frequency range).

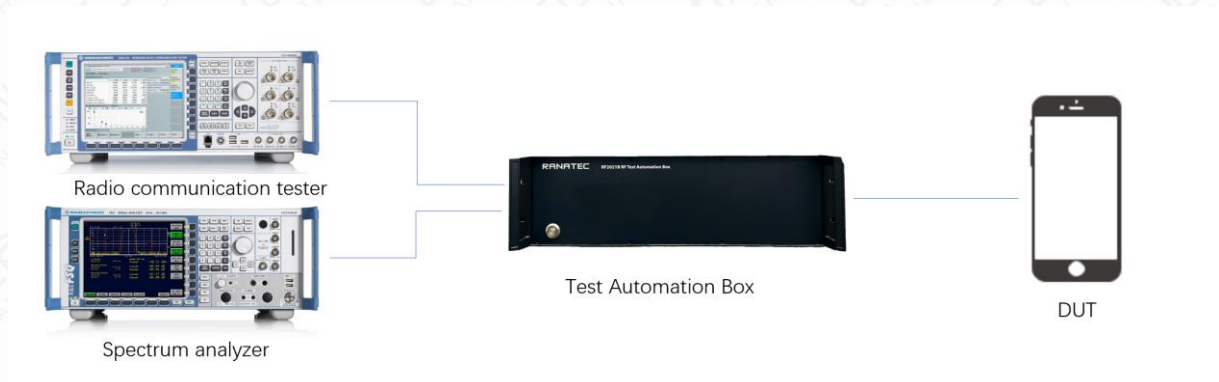
1. The transmitter output port was connected to base station.
2. Set the EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record maximum average power for other modulation signal.
5. During the process of testing, the EUT was controlled Rhode & Schwarz Digital Radio.
6. Communication tester to ensure max power transmission and proper modulation.
7. This result contains output power and EIRP measurements for the EUT. In all cases, output power is within the specified limits.

EIRP= Conducted power+Gain, ERP = EIRP -2.15dBi.

### 6.1.3 Test procedures

The transmitter output power was connected to calibrated attenuator, the other end of which was connected to signal analyzer. Transmitter output power was read off the power in dBm. The power outputs at the transmitter antenna port was determined by adding the value of attenuator to the base station reading.

### 6.1.4 Test Setup



### 6.1.5 Output Power Measurement result

#### LTE band 2

LTE B2			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	1.4MHz		
			Channel/Frequency(MHz)		
			18607/1850.7	18900/1880	19193/1909.3
QPSK	1	Low	22.51	22.59	22.55
		Middle	22.62	22.63	22.63
		High	22.35	22.28	22.42
	50%	Low	22.70	22.44	22.70
		Middle	22.67	22.67	22.70
		High	22.60	22.54	22.64
100%	/	21.52	21.66	21.61	
16QAM	1	Low	21.63	21.59	21.51

		Middle	21.65	21.86	21.72
		High	21.60	21.55	21.56
		Low	21.55	21.52	21.61
	50%	Middle	21.68	21.44	21.54
		High	21.45	21.49	21.44
	100%	/	20.53	20.60	20.52
Modulation	RB	RB Offset	3MHz		
			Channel/Frequency(MHz)		
			18615/1851.5	18900/1880	19185/1908.5
QPSK	1	Low	22.53	22.47	22.45
		Middle	22.58	22.61	22.65
		High	22.32	22.28	22.41
	50%	Low	21.76	21.66	21.74
		Middle	21.72	21.88	21.86
		High	21.78	21.59	21.79
100%	/	21.56	21.54	21.60	
16QAM	1	Low	21.78	21.61	21.51
		Middle	21.77	21.89	21.71
		High	21.70	21.48	21.56
	50%	Low	20.70	20.63	20.67
		Middle	20.76	20.67	20.63
		High	20.56	20.71	20.50
100%	/	20.59	20.76	20.62	
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			18625/1852.5	18900/1880	19175/1907.5
QPSK	1	Low	22.43	22.49	22.53
		Middle	22.60	22.66	22.64
		High	22.40	22.33	22.31
	50%	Low	21.80	21.61	21.80
		Middle	21.75	21.82	21.76
		High	21.68	21.61	21.80
100%	/	21.55	21.55	21.52	
16QAM	1	Low	21.66	21.51	21.44
		Middle	21.68	21.85	21.74
		High	21.63	21.50	21.60
	50%	Low	20.62	20.73	20.70
		Middle	20.73	20.56	20.62
		High	20.53	20.76	20.51
100%	/	20.67	20.72	20.54	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			18650/1855	18900/1880	19150/1905
QPSK	1	Low	22.54	22.48	22.46



		Middle	22.64	22.63	22.64
		High	22.30	22.29	22.36
		Low	21.73	21.48	21.70
	50%	Middle	21.81	21.67	21.75
		High	21.66	21.57	21.85
	100%	/	21.59	21.71	21.48
16QAM	1	Low	21.61	21.45	21.49
		Middle	21.74	21.68	21.68
		High	21.57	21.45	21.54
	50%	Low	20.71	20.75	20.66
		Middle	20.78	20.52	20.59
		High	20.56	20.53	20.47
100%	/	20.50	20.59	20.50	
Modulation	RB	RB Offset	15MHz		
			Channel/Frequency(MHz)		
			18675/1857.5	18900/1880	19125/1902.5
QPSK	1	Low	22.51	22.52	22.48
		Middle	22.58	22.64	22.64
		High	22.33	22.34	22.36
	50%	Low	21.75	21.52	21.73
		Middle	21.78	21.88	21.79
		High	21.69	21.60	21.81
100%	/	21.54	21.52	21.45	
16QAM	1	Low	21.73	21.58	21.68
		Middle	21.75	21.84	21.81
		High	21.67	21.58	21.64
	50%	Low	20.68	20.64	20.75
		Middle	20.76	20.65	20.69
		High	20.54	20.67	20.58
100%	/	20.57	20.72	20.60	
Modulation	RB	RB Offset	20MHz		
			Channel/Frequency(MHz)		
			18700/1860	18900/1880	19100/1900
QPSK	1	Low	22.58	22.56	22.51
		Middle	22.70	22.74	22.72
		High	22.38	22.41	22.48
	50%	Low	21.81	21.63	21.80
		Middle	21.76	21.84	21.82
		High	21.72	21.65	21.77
100%	/	21.54	21.62	21.57	
16QAM	1	Low	21.45	21.54	21.59
		Middle	21.71	21.86	21.77
		High	21.65	21.55	21.62
	50%	Low	20.65	20.68	20.72

		Middle	20.69	20.59	20.66
		High	20.51	20.62	20.54
	100%	/	20.55	20.68	20.57

**LTE Band 4**

LTE B4			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	1.4MHz		
			Channel/Frequency(MHz)		
			19957/1710.7	20175/1732.5	20393/1754.3
QPSK	1	Low	22.32	22.43	22.44
		Middle	22.62	22.53	22.50
		High	22.24	22.25	22.11
	50%	Low	22.42	22.41	22.45
		Middle	22.34	22.36	22.51
		High	22.44	22.51	22.37
100%	/	21.57	21.51	21.61	
16QAM	1	Low	21.40	21.59	21.41
		Middle	21.42	21.51	21.34
		High	21.39	21.42	21.40
	50%	Low	21.49	21.45	21.48
		Middle	21.50	21.45	21.42
		High	21.42	21.43	21.49
100%	/	20.51	20.56	20.46	
Modulation	RB	RB Offset	3MHz		
			Channel/Frequency(MHz)		
			19965/1711.5	20175/1732.5	20385/1753.5
QPSK	1	Low	22.34	22.37	22.34
		Middle	22.58	22.57	22.55
		High	22.21	22.19	22.13
	50%	Low	21.48	21.57	21.52
		Middle	21.45	21.57	21.67
		High	21.68	21.56	21.52
100%	/	21.64	21.39	21.60	
16QAM	1	Low	21.58	21.61	21.44
		Middle	21.57	21.45	21.30
		High	21.49	21.32	21.37
	50%	Low	20.64	20.53	20.54
		Middle	20.58	20.68	20.45
		High	20.53	20.65	20.49
100%	/	20.57	20.72	20.56	
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			19975/1712.5	20175/1732.5	20375/1752.5
QPSK	1	Low	22.24	22.33	22.42
		Middle	22.63	22.56	22.54



	50%	High	22.32	22.24	22.03	
		Low	21.55	21.52	21.58	
		Middle	21.51	21.54	21.60	
		High	21.58	21.64	21.53	
16QAM	1	Low	21.46	21.57	21.37	
		Middle	21.48	21.47	21.39	
		High	21.42	21.34	21.47	
50%	1	Low	20.56	20.63	20.63	
		Middle	20.55	20.57	20.50	
		High	20.50	20.70	20.56	
100%	/	20.65	20.68	20.48		
Modulation	RB	RB Offset	10MHz			
			Channel/Frequency(MHz)			
			20000/1715	20175/1732.5	20350/1750	
QPSK	1	Low	22.35	22.38	22.35	
		Middle	22.61	22.53	22.48	
		High	22.16	22.20	22.02	
	50%	1	Low	21.42	21.39	21.42
			Middle	21.48	21.36	21.50
			High	21.56	21.54	21.52
100%	/	21.67	21.62	21.42		
16QAM	1	Low	21.44	21.54	21.45	
		Middle	21.57	21.33	21.36	
		High	21.39	21.32	21.44	
	50%	1	Low	20.65	20.65	20.59
			Middle	20.60	20.53	20.47
			High	20.53	20.47	20.52
100%	/	20.48	20.55	20.44		
Modulation	RB	RB Offset	15MHz			
			Channel/Frequency(MHz)			
			20025/1717.5	20175/1732.5	20325/1747.5	
QPSK	1	Low	22.32	22.42	22.37	
		Middle	22.61	22.54	22.57	
		High	22.19	22.25	22.05	
	50%	1	Low	21.44	21.40	21.45
			Middle	21.45	21.60	21.54
			High	21.53	21.63	21.48
100%	/	21.65	21.46	21.48		
16QAM	1	Low	21.53	21.64	21.61	
		Middle	21.55	21.46	21.46	
		High	21.46	21.42	21.51	
	50%	1	Low	20.62	20.54	20.68
			Middle	20.58	20.66	20.57

Modulation	RB	RB Offset	High	20.51	20.61	20.63	
			100%	/	20.55	20.68	20.54
			20MHz				
			Channel/Frequency(MHz)				
			20050/1720	20175/1732.5	20300/1745		
QPSK	1	Low	22.39	22.46	22.40		
		Middle	22.70	22.64	22.59		
		High	22.27	22.32	22.17		
	50%	Low	21.53	21.54	21.55		
		Middle	21.49	21.56	21.63		
		High	21.62	21.68	21.50		
100%	/	21.62	21.53	21.57			
16QAM	1	Low	21.55	21.60	21.52		
		Middle	21.51	21.48	21.42		
		High	21.44	21.39	21.49		
	50%	Low	20.59	20.58	20.65		
		Middle	20.51	20.60	20.54		
		High	20.48	20.56	20.59		
100%	/	20.53	20.64	20.51			

**LTE Band 5**

LTE B5			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	1.4MHz		
			Channel/Frequency(MHz)		
			20407/824.7	20525/836.5	20643/848.3
QPSK	1	Low	22.37	22.56	22.49
		Middle	22.56	22.63	22.54
		High	22.39	22.43	22.44
	50%	Low	22.36	22.41	22.47
		Middle	22.46	22.47	22.42
		High	22.50	22.44	22.38
100%	/	21.62	21.55	21.55	
16QAM	1	Low	21.45	21.72	21.57
		Middle	21.47	21.46	21.52
		High	21.51	21.60	21.48
	50%	Low	21.51	21.38	21.41
		Middle	21.65	21.26	21.47
		High	21.47	21.38	21.51
100%	/	20.46	20.36	20.48	
Modulation	RB	RB Offset	3MHz		
			Channel/Frequency(MHz)		
			20415/825.5	20525/836.5	20635/847.5
QPSK	1	Low	22.40	22.48	22.40
		Middle	22.64	22.63	22.58
		High	22.40	22.44	22.41



	50%	Low	21.45	21.42	21.53	
		Middle	21.60	21.47	21.50	
		High	21.56	21.47	21.62	
	100%	/	21.66	21.60	21.45	
16QAM	1	Low	21.43	21.64	21.58	
		Middle	21.56	21.31	21.48	
		High	21.51	21.53	21.46	
	50%	Low	20.67	20.61	20.46	
		Middle	20.75	20.34	20.52	
		High	20.58	20.42	20.54	
	100%	/	20.43	20.35	20.46	
	Modulation	RB	RB Offset	5MHz		
				Channel/Frequency(MHz)		
20425/826.5				20525/836.5	20625/846.5	
QPSK	1	Low	22.37	22.52	22.42	
		Middle	22.58	22.67	22.61	
		High	22.43	22.52	22.44	
	50%	Low	21.47	21.43	21.56	
		Middle	21.57	21.62	21.54	
		High	21.59	21.47	21.58	
	100%	/	21.64	21.41	21.45	
	16QAM	1	Low	21.52	21.71	21.74
			Middle	21.54	21.44	21.58
High			21.58	21.63	21.53	
50%		Low	20.64	20.50	20.55	
		Middle	20.73	20.47	20.62	
		High	20.56	20.56	20.65	
100%		/	20.50	20.48	20.56	
Modulation		RB	RB Offset	10MHz		
				Channel/Frequency(MHz)		
	20450/829			20525/836.5	20600/844	
QPSK	1	Low	22.44	22.56	22.45	
		Middle	22.67	22.71	22.63	
		High	22.45	22.53	22.50	
	50%	Low	21.50	21.54	21.60	
		Middle	21.55	21.61	21.57	
		High	21.62	21.55	21.54	
	100%	/	21.61	21.51	21.54	
	16QAM	1	Low	21.52	21.70	21.65
			Middle	21.50	21.46	21.54
High			21.56	21.60	21.51	
50%		Low	20.61	20.54	20.52	
		Middle	20.66	20.41	20.59	
		High	20.53	20.51	20.61	

	100%	/	20.48	20.44	20.53
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## LTE Band 7

LTE B7			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			20775/2502.5	21100/2535	21425/2567.5
QPSK	1	Low	22.68	22.70	22.71
		Middle	22.96	23.09	22.92
		High	22.84	22.78	22.62
	50%	Low	22.04	21.95	21.90
		Middle	22.00	22.03	21.94
		High	22.00	22.01	22.04
100%	/	21.91	21.77	21.82	
16QAM	1	Low	22.02	22.04	21.85
		Middle	22.04	22.02	22.07
		High	21.90	21.99	21.94
	50%	Low	20.88	21.00	21.01
		Middle	20.93	20.97	20.85
		High	20.87	21.05	20.91
100%	/	20.97	20.91	20.96	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			20800/2505	21100/2535	21400/2565
QPSK	1	Low	22.79	22.69	22.64
		Middle	23.00	23.06	22.92
		High	22.69	22.69	22.62
	50%	Low	21.97	21.82	21.80
		Middle	22.03	21.85	21.90
		High	21.98	21.97	22.09
100%	/	21.95	21.93	21.78	
16QAM	1	Low	22.00	22.01	21.93
		Middle	22.13	21.88	22.04
		High	21.87	21.97	21.91
	50%	Low	20.97	21.02	20.97
		Middle	20.98	20.93	20.82
		High	20.90	20.82	20.87
100%	/	20.80	20.84	20.92	
Modulation	RB	RB Offset	15MHz		
			Channel/Frequency(MHz)		
			20825/2507.5	21100/2535	21375/2562.5
QPSK	1	Low	22.76	22.73	22.66
		Middle	22.94	23.07	22.95
		High	22.72	22.74	22.65
	50%	Low	21.99	21.83	21.83



Modulation	RB	RB Offset	20MHz			
			Channel/Frequency(MHz)			
			20850/2510	21100/2535	21350/2560	
	100%	Middle	22.00	22.03	21.94	
		High	22.01	22.00	22.05	
		/	21.93	21.77	21.78	
16QAM	1	Low	22.04	22.06	22.04	
		Middle	22.06	21.96	22.09	
		High	21.89	22.02	21.93	
	50%	Low	20.89	20.86	21.01	
		Middle	20.96	21.06	20.92	
		High	20.88	20.96	20.98	
	100%	/	20.78	20.91	21.02	
	QPSK	1	Low	22.83	22.77	22.69
			Middle	23.08	<b>23.16</b>	23.02
High			22.79	22.80	22.76	
50%		Low	22.02	21.91	21.87	
		Middle	21.98	21.99	21.97	
		High	22.04	<b>22.05</b>	22.01	
100%		/	<b>21.90</b>	21.84	21.87	
16QAM		1	Low	21.98	22.07	22.00
			Middle	22.07	22.03	22.10
	High		21.92	22.04	21.96	
	50%	Low	20.91	20.95	21.03	
		Middle	20.89	21.00	20.89	
		High	20.85	20.91	20.94	
	100%	/	20.85	20.93	20.99	

**LTE Band 12**

LTE B12			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	1.4MHz		
			Channel/Frequency(MHz)		
			23017/699.7	23095/707.5	23173/715.3
QPSK	1	Low	22.68	22.72	22.78
		Middle	22.77	22.84	22.73
		High	22.80	22.69	22.66
	50%	Low	22.66	22.76	22.72
		Middle	22.79	22.77	22.83
		High	22.83	22.85	22.74
100%	/	21.89	21.87	21.88	
16QAM	1	Low	21.76	21.83	21.81
		Middle	21.78	21.90	21.90
		High	21.74	21.73	21.80
	50%	Low	21.75	21.79	21.76
		Middle	21.82	21.73	21.67

Modulation	RB	RB Offset	High	21.81	21.81	21.77
			100%	/	20.90	20.90
Modulation	RB	RB Offset	3MHz			
			Channel/Frequency(MHz)			
			23025/700.5	23095/707.5	23165/714.5	
QPSK	1	Low	22.71	22.61	22.69	
		Middle	22.85	22.84	22.80	
		High	22.81	22.70	22.66	
	50%	Low	21.75	21.80	21.78	
		Middle	21.96	21.77	21.91	
		High	21.89	21.91	21.98	
100%	/	22.05	22.12	21.88		
16QAM	1	Low	21.71	21.69	21.79	
		Middle	21.84	21.69	21.86	
		High	21.71	21.60	21.81	
	50%	Low	20.91	21.02	20.84	
		Middle	20.92	20.84	20.75	
		High	20.92	20.85	20.80	
100%	/	20.87	20.89	20.74		
Modulation	RB	RB Offset	5MHz			
			Channel/Frequency(MHz)			
			23035/701.5	23095/707.5	23155/713.5	
QPSK	1	Low	22.68	22.65	22.71	
		Middle	22.79	22.85	22.83	
		High	22.84	22.75	22.69	
	50%	Low	21.77	21.81	21.81	
		Middle	21.90	21.95	21.95	
		High	21.89	21.94	21.91	
100%	/	22.00	21.96	21.85		
16QAM	1	Low	21.83	21.82	21.92	
		Middle	21.85	21.85	21.93	
		High	21.81	21.73	21.88	
	50%	Low	20.88	20.91	20.93	
		Middle	20.90	20.97	20.85	
		High	20.90	20.99	20.91	
100%	/	20.94	21.02	20.84		
Modulation	RB	RB Offset	10MHz			
			Channel/Frequency(MHz)			
			23060/704	23095/707.5	23130/711	
QPSK	1	Low	22.75	22.69	22.74	
		Middle	22.88	<b>22.92</b>	22.85	
		High	22.86	22.79	22.75	
	50%	Low	21.80	21.92	21.85	
		Middle	21.91	21.94	21.98	



		High	21.95	<b>21.99</b>	21.90
	100%	/	22.00	<b>22.03</b>	21.97
16QAM	1	Low	21.97	21.78	21.86
		Middle	21.81	21.87	21.92
		High	21.79	21.70	21.86
	50%	Low	20.85	20.95	20.90
		Middle	20.83	20.91	20.82
		High	20.87	20.94	20.87
100%	/	20.92	20.98	20.81	

**LTE Band 13**

LTE B13			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			23205/779.5	23230/782	23255/784.5
QPSK	1	Low	22.60	22.62	22.67
		Middle	22.75	22.70	22.72
		High	22.66	22.69	22.61
	50%	Low	21.45	21.48	21.57
		Middle	21.60	21.62	21.62
		High	21.78	21.72	21.71
100%	/	21.53	21.53	21.55	
16QAM	1	Low	21.76	21.92	21.66
		Middle	21.76	21.86	21.79
		High	21.56	21.63	21.61
	50%	Low	20.53	20.62	20.59
		Middle	20.63	20.73	20.68
		High	20.63	20.72	20.67
100%	/	20.55	20.65	20.59	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			/	23230/782	/
QPSK	1	Low	/	22.65	/
		Middle	/	22.82	/
		High	/	22.77	/
	50%	Low	/	21.54	/
		Middle	/	21.67	/
		High	/	21.70	/
100%	/	/	21.62	/	
16QAM	1	Low	/	21.83	/
		Middle	/	21.82	/
		High	/	21.63	/
	50%	Low	/	20.61	/
		Middle	/	20.72	/
		High	/	20.70	/

	100%	/	/	20.62	/
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**LTE Band 17**

LTE B17			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			23755/706.5	23790/710	23825/713.5
QPSK	1	Low	22.52	22.59	22.59
		Middle	22.74	22.83	22.76
		High	22.65	22.64	22.59
	50%	Low	21.75	21.62	21.71
		Middle	21.77	21.77	21.78
		High	21.71	21.70	21.73
100%	/	21.86	21.70	21.65	
16QAM	1	Low	21.81	21.68	21.79
		Middle	21.83	21.75	21.86
		High	21.69	21.56	21.74
	50%	Low	20.89	20.74	20.85
		Middle	20.88	20.80	20.82
		High	20.85	20.78	20.72
100%	/	20.92	20.86	20.91	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			23780/709	23790/710	23800/711
QPSK	1	Low	22.59	22.63	22.62
		Middle	22.83	22.89	22.78
		High	22.67	22.67	22.65
	50%	Low	21.78	21.72	21.75
		Middle	21.75	21.75	21.81
		High	21.74	21.77	21.69
100%	/	21.83	21.77	21.74	
16QAM	1	Low	21.78	21.64	21.72
		Middle	21.81	21.77	21.84
		High	21.69	21.53	21.74
	50%	Low	20.88	20.78	20.84
		Middle	20.81	20.74	20.79
		High	20.82	20.73	20.68
100%	/	20.90	20.82	20.88	

**LTE Band 25**

LTE B25			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	1.4MHz		
			Channel/Frequency(MHz)		
			26047/1850.7	26365/1882,5	26683/1914.3
QPSK	1	Low	22.23	22.57	22.15
		Middle	22.27	22.74	22.36



	50%	High	22.19	22.31	22.24
		Low	22.56	22.53	22.52
		Middle	22.53	22.49	22.42
	100%	/	22.54	22.44	22.47
16QAM	1	Low	21.59	21.63	21.58
		Middle	21.44	21.57	21.52
		High	21.41	21.60	21.59
	50%	Low	21.43	21.45	21.61
		Middle	21.24	21.02	21.21
		High	21.32	21.13	21.09
100%	/	21.23	21.03	21.14	
100%	/	20.38	20.14	20.26	
Modulation	RB	RB Offset	3MHz		
			Channel/Frequency(MHz)		
			26055/1851.5	26365/1882,5	26675/1913.5
QPSK	1	Low	22.25	22.45	22.05
		Middle	22.23	22.72	22.36
		High	22.16	22.31	22.26
	50%	Low	21.62	21.75	21.64
		Middle	21.58	21.70	21.63
		High	21.72	21.49	21.67
100%	/	21.60	21.51	21.62	
16QAM	1	Low	21.56	21.59	21.54
		Middle	21.55	21.60	21.55
		High	21.58	21.35	21.58
	50%	Low	20.44	20.10	20.27
		Middle	20.40	20.36	20.18
		High	20.34	20.25	20.20
100%	/	20.44	20.30	20.36	
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			26065/1852.5	26365/1882.5	26665/1912.5
QPSK	1	Low	22.15	22.47	22.13
		Middle	22.28	22.77	22.40
		High	22.22	22.36	22.16
	50%	Low	21.64	21.70	21.65
		Middle	21.59	21.67	21.51
		High	21.62	21.51	21.63
100%	/	21.59	21.57	21.49	
16QAM	1	Low	21.44	21.49	21.47
		Middle	21.46	21.56	21.58
		High	21.51	21.37	21.62
	50%	Low	20.36	20.20	20.30
		Middle	20.37	20.25	20.17

		High	20.31	20.30	20.21
	100%	/	20.52	20.26	20.28
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			26090/1855	26365/1882.5	26640/1910
QPSK	1	Low	22.26	22.46	22.06
		Middle	22.32	22.74	22.40
		High	22.17	22.32	22.21
	50%	Low	21.62	21.57	21.60
		Middle	21.62	21.54	21.52
		High	21.55	21.52	21.73
100%	/	21.58	21.73	21.45	
16QAM	1	Low	21.37	21.46	21.50
		Middle	21.55	21.42	21.50
		High	21.48	21.35	21.59
	50%	Low	20.45	20.22	20.26
		Middle	20.42	20.21	20.14
		High	20.34	20.07	20.17
100%	/	20.35	20.13	20.24	
Modulation	RB	RB Offset	15MHz		
			Channel/Frequency(MHz)		
			26115/1857.5	26365/1882.5	26615/1907.5
QPSK	1	Low	22.23	22.45	22.08
		Middle	22.26	22.75	22.43
		High	22.20	22.37	22.24
	50%	Low	21.64	21.58	21.63
		Middle	21.59	21.72	21.56
		High	21.58	21.55	21.69
100%	/	21.56	21.52	21.45	
16QAM	1	Low	21.51	21.51	21.66
		Middle	21.53	21.50	21.60
		High	21.55	21.45	21.61
	50%	Low	20.42	20.11	20.30
		Middle	20.40	20.29	20.24
		High	20.32	20.16	20.28
100%	/	20.42	20.26	20.34	
Modulation	RB	RB Offset	20MHz		
			Channel/Frequency(MHz)		
			26140/1860	26365/1882.5	26590/1905
QPSK	1	Low	22.30	22.54	22.11
		Middle	22.35	22.84	22.45
		High	22.22	22.43	22.30
	50%	Low	21.67	21.71	21.67
		Middle	21.62	21.68	21.59



		High	21.66	21.60	21.65
	100%	/	21.58	21.64	21.59
16QAM	1	Low	21.61	21.52	21.62
		Middle	21.49	21.57	21.61
		High	21.53	21.42	21.64
	50%	Low	20.39	20.15	20.32
		Middle	20.33	20.28	20.21
		High	20.29	20.16	20.24
	100%	/	20.40	20.22	20.31

**LTE Band 26(824-849)**

LTE B26			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	1.4MHz		
			Channel/Frequency(MHz)		
			26797/824.7	26915/836.5	27033/848.3
QPSK	1	Low	22.67	22.69	22.71
		Middle	22.70	22.71	22.70
		High	22.63	22.73	22.71
	50%	Low	22.70	22.55	22.76
		Middle	22.71	22.69	22.68
		High	22.66	22.67	22.69
100%	/	21.82	21.86	21.84	
16QAM	1	Low	21.76	21.89	21.71
		Middle	21.75	21.86	21.85
		High	21.65	21.78	21.91
	50%	Low	21.74	21.69	21.76
		Middle	21.85	21.71	21.67
		High	21.76	21.68	21.72
100%	/	20.94	20.74	20.73	
Modulation	RB	RB Offset	3MHz		
			Channel/Frequency(MHz)		
			26805/825.5	26915/836.5	27025/847.5
QPSK	1	Low	22.56	22.65	22.61
		Middle	22.71	22.79	22.75
		High	22.71	22.78	22.73
	50%	Low	21.83	21.72	21.83
		Middle	21.85	21.90	21.80
		High	21.77	21.77	21.80
100%	/	21.82	21.75	21.79	
16QAM	1	Low	21.76	21.81	21.64
		Middle	21.78	21.79	21.81
		High	21.68	21.70	21.88
	50%	Low	20.81	20.90	20.82
		Middle	20.90	20.86	20.76
		High	20.84	20.95	20.78
100%	/	21.08	20.86	20.83	

Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			26815/826.5	26915/836.5	27015/846.5
QPSK	1	Low	22.70	22.69	22.69
		Middle	22.78	22.79	22.74
		High	22.64	22.77	22.59
	50%	Low	21.79	21.59	21.85
		Middle	21.85	21.69	21.73
		High	21.72	21.70	21.81
100%	/	21.83	21.91	21.75	
16QAM	1	Low	21.71	21.78	21.61
		Middle	21.87	21.68	21.84
		High	21.68	21.71	21.92
	50%	Low	20.93	20.92	20.85
		Middle	20.95	20.82	20.75
		High	20.87	20.72	20.79
100%	/	20.91	20.73	20.75	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			26840/829	26915/836.5	26990/844
QPSK	1	Low	22.67	22.73	22.62
		Middle	22.72	22.80	22.70
		High	22.67	22.79	22.64
	50%	Low	21.81	21.60	21.75
		Middle	21.82	21.87	21.69
		High	21.75	21.73	21.90
100%	/	21.81	21.75	21.71	
16QAM	1	Low	21.80	21.88	21.69
		Middle	21.85	21.81	21.81
		High	21.75	21.81	21.89
	50%	Low	20.90	20.78	20.81
		Middle	20.93	20.92	20.72
		High	20.85	20.83	20.75
100%	/	20.98	20.86	20.71	
Modulation	RB	RB Offset	15MHz		
			Channel/Frequency(MHz)		
			26865/831.5	26915/836.5	26965/841.5
QPSK	1	Low	22.69	22.77	22.67
		Middle	22.95	22.84	22.79
		High	22.71	22.83	22.77
	50%	Low	21.89	21.71	21.86
		Middle	21.82	21.86	21.80
		High	21.87	21.81	21.82
100%	/	21.84	21.82	21.80	
16QAM	1	Low	21.80	21.84	21.76



		Middle	21.71	21.83	21.87
		High	21.93	21.78	21.94
		Low	20.83	20.85	20.87
	50%	Middle	20.89	20.89	20.79
		High	20.78	20.81	20.82
	100%	/	20.82	20.82	20.78

**LTE Band 38**

LTE B38			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			37775/2572.5	38000/2595	38225/2617.5
QPSK	1	Low	22.38	22.55	22.69
		Middle	22.82	22.90	22.88
		High	22.77	22.69	22.67
	50%	Low	21.80	21.84	21.87
		Middle	21.83	21.83	21.83
		High	21.76	21.83	22.03
100%	/	21.79	21.79	21.92	
16QAM	1	Low	21.72	21.65	21.45
		Middle	21.78	21.91	21.82
		High	21.66	21.74	21.71
	50%	Low	20.78	20.92	20.91
		Middle	20.97	20.77	20.64
		High	20.89	21.08	20.81
100%	/	20.95	20.96	20.76	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			37800/2575	38000/2595	38200/2615
QPSK	1	Low	22.49	22.54	22.62
		Middle	22.86	22.87	22.88
		High	22.67	22.65	22.72
	50%	Low	21.73	21.75	21.73
		Middle	21.86	21.69	21.75
		High	21.74	21.83	22.08
100%	/	21.83	21.95	21.88	
16QAM	1	Low	21.70	21.58	21.53
		Middle	21.87	21.73	21.83
		High	21.63	21.68	21.72
	50%	Low	20.87	20.90	20.87
		Middle	21.02	20.73	20.61
		High	20.92	20.85	20.77
100%	/	20.78	20.83	20.72	
Modulation	RB	RB Offset	15MHz		
			Channel/Frequency(MHz)		
			37825/2577.5	38000/2595	38175/2612.5

QPSK	1	Low	22.46	22.58	22.64
		Middle	22.80	22.92	22.91
		High	22.70	22.70	22.75
	50%	Low	21.75	21.72	21.76
		Middle	21.83	21.83	21.79
		High	21.77	21.82	22.00
100%	/	21.81	21.79	21.88	
16QAM	1	Low	21.79	21.72	21.69
		Middle	21.85	21.90	21.93
		High	21.70	21.82	21.79
	50%	Low	20.84	20.79	20.96
		Middle	21.00	20.82	20.71
		High	20.90	20.95	20.88
100%	/	20.85	20.96	20.82	
Modulation	RB	RB Offset	20MHz		
			Channel/Frequency(MHz)		
			37850/2580	38000/2595	38150/2610
QPSK	1	Low	22.53	22.62	22.67
		Middle	22.89	22.96	22.93
		High	22.72	22.75	22.81
	50%	Low	21.78	21.84	21.84
		Middle	21.81	21.83	21.86
		High	21.84	21.91	22.00
100%	/	21.82	21.86	21.97	
16QAM	1	Low	21.63	21.68	21.60
		Middle	21.81	21.92	21.89
		High	21.68	21.79	21.77
	50%	Low	20.81	20.87	20.93
		Middle	20.93	20.80	20.68
		High	20.87	20.94	20.84
100%	/	20.83	20.92	20.79	

**LTE Band 41**

LTE B41			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			39675/2498.5	40620/2593	41565/2687.5
QPSK	1	Low	22.53	22.74	23.10
		Middle	22.87	23.18	23.17
		High	22.63	22.60	23.02
	50%	Low	21.89	21.94	22.32
		Middle	21.87	21.84	21.98
		High	21.89	22.16	22.11
100%	/	21.98	21.90	22.51	
16QAM	1	Low	21.92	21.59	21.51



	50%	Middle	21.94	21.87	21.67
		High	21.69	21.86	21.81
		Low	20.88	20.81	20.79
		Middle	20.98	20.84	20.80
		High	20.84	20.87	20.91
		100%	/	20.87	20.93
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			39700/2501	40620/2593	41540/2685
QPSK	1	Low	22.69	22.67	23.03
		Middle	22.96	23.18	23.22
		High	22.58	22.65	23.12
	50%	Low	21.82	21.79	22.27
		Middle	21.90	21.75	21.94
		High	21.87	22.16	22.16
100%	/	22.02	21.81	22.47	
16QAM	1	Low	21.90	21.67	21.59
		Middle	21.98	21.84	21.64
		High	21.61	21.83	21.78
	50%	Low	20.92	20.77	20.75
		Middle	20.98	20.86	20.77
		High	20.87	20.88	20.87
100%	/	20.70	20.89	20.82	
Modulation	RB	RB Offset	15MHz		
			Channel/Frequency(MHz)		
			39725/2503.5	40620/2593	41515/2682.5
QPSK	1	Low	22.61	22.74	23.05
		Middle	22.85	23.26	23.25
		High	22.56	22.73	23.15
	50%	Low	21.79	21.87	22.30
		Middle	21.87	21.84	21.98
		High	21.90	22.17	22.12
100%	/	21.95	21.86	22.47	
16QAM	1	Low	21.94	21.83	21.75
		Middle	21.96	21.89	21.74
		High	21.68	21.85	21.85
	50%	Low	20.89	20.81	20.89
		Middle	21.01	20.96	20.87
		High	20.85	20.99	20.98
100%	/	20.77	20.99	20.92	
Modulation	RB	RB Offset	20MHz		
			Channel/Frequency(MHz)		
			39750/2506	40620/2593	41490/2680
QPSK	1	Low	22.73	22.77	23.08

	50%	Middle	22.99	23.28	23.27
		High	22.63	22.79	23.21
		Low	21.87	21.91	22.34
	100%	Middle	21.85	21.87	22.01
		High	21.93	22.13	22.08
		/	21.97	21.95	22.56
16QAM	1	Low	21.62	21.74	21.71
		Middle	21.97	21.90	21.75
		High	21.71	21.88	21.88
	50%	Low	20.91	20.83	20.86
		Middle	20.94	20.93	20.84
		High	20.82	20.95	20.94
	100%	/	20.75	20.96	20.89

**LTE Band 41(Note 1)**

LTE B41			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			39715/2502.5	40620/2593	41565/2687.5
QPSK	1	Low	22.52	22.74	23.10
		Middle	22.81	23.18	23.17
		High	22.67	22.60	23.02
	50%	Low	21.86	21.94	22.32
		Middle	21.82	21.84	21.98
		High	21.81	22.16	22.11
100%	/	21.88	21.90	22.51	
16QAM	1	Low	21.82	21.59	21.51
		Middle	21.91	21.87	21.67
		High	21.60	21.86	21.81
	50%	Low	20.89	20.81	20.79
		Middle	20.98	20.84	20.80
		High	20.80	20.87	20.91
100%	/	20.88	20.93	20.86	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			39740/2505	40620/2593	41540/2685
QPSK	1	Low	22.61	22.67	23.03
		Middle	22.92	23.18	23.22
		High	22.59	22.65	23.12
	50%	Low	21.79	21.79	22.27
		Middle	21.85	21.75	21.94
		High	21.84	22.16	22.16
100%	/	21.95	21.81	22.47	
16QAM	1	Low	21.87	21.67	21.59
		Middle	21.91	21.84	21.64



	50%	High	21.66	21.83	21.78	
		Low	20.89	20.77	20.75	
		Middle	20.85	20.86	20.77	
		High	20.84	20.88	20.87	
	100%	/	20.67	20.89	20.82	
Modulation	RB	RB Offset	15MHz			
			Channel/Frequency(MHz)			
			39765/2507.5	40620/2593	41515/2682.5	
QPSK	1	Low	22.52	22.74	23.05	
		Middle	22.81	23.26	23.25	
		High	22.51	22.73	23.15	
	50%	Low	21.76	21.87	22.30	
		Middle	21.81	21.84	21.98	
		High	21.87	22.17	22.12	
	100%	/	21.90	21.86	22.47	
	16QAM	1	Low	21.91	21.83	21.75
			Middle	21.93	21.89	21.74
High			21.62	21.85	21.85	
50%		Low	20.86	20.81	20.89	
		Middle	20.92	20.96	20.87	
		High	20.82	20.99	20.98	
100%		/	20.74	20.99	20.92	
Modulation		RB	RB Offset	20MHz		
				Channel/Frequency(MHz)		
	39790/2510			40620/2593	41490/2680	
QPSK	1	Low	22.73	22.77	23.08	
		Middle	22.94	23.28	23.27	
		High	22.65	22.79	23.21	
	50%	Low	21.82	21.91	22.34	
		Middle	21.81	21.87	22.01	
		High	21.90	22.13	22.08	
	100%	/	21.93	21.95	22.56	
	16QAM	1	Low	21.59	21.74	21.71
			Middle	21.96	21.90	21.75
High			21.63	21.88	21.88	
50%		Low	20.88	20.83	20.86	
		Middle	20.92	20.93	20.84	
		High	20.79	20.95	20.94	
100%		/	20.71	20.96	20.89	

Note 1: This frequency range is only applicable for IC certification.

#### LTE Band 66

LTE B66			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	1.4MHz		
			Channel/Frequency(MHz)		

			131979/1710.7	132322/1745	132665/1779.3
QPSK	1	Low	22.50	22.64	22.56
		Middle	22.52	22.74	22.61
		High	22.44	22.37	22.29
	50%	Low	22.35	22.64	22.70
		Middle	22.29	22.54	22.62
		High	22.16	22.67	22.45
	100%	/	21.26	21.74	21.47
16QAM	1	Low	21.63	21.63	21.53
		Middle	21.65	21.64	21.62
		High	21.46	21.50	21.47
	50%	Low	21.82	21.64	21.63
		Middle	21.80	21.54	21.57
		High	21.68	21.50	21.62
	100%	/	20.69	20.59	20.75
Modulation	RB	RB Offset	3MHz		
			Channel/Frequency(MHz)		
			131987/1711.5	132322/1745	132657/1778.5
QPSK	1	Low	22.52	22.56	22.46
		Middle	22.48	22.72	22.66
		High	22.41	22.37	22.27
	50%	Low	21.41	21.86	21.73
		Middle	21.34	21.75	21.78
		High	21.38	21.68	21.60
	100%	/	21.31	21.62	21.50
16QAM	1	Low	21.75	21.65	21.54
		Middle	21.74	21.60	21.62
		High	21.56	21.36	21.48
	50%	Low	20.93	20.72	20.69
		Middle	20.88	20.81	20.66
		High	20.79	20.76	20.68
	100%	/	20.75	20.75	20.85
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			131997/1712.5	132322/1745	132647/1777.5
QPSK	1	Low	22.42	22.58	22.54
		Middle	22.53	22.81	22.61
		High	22.52	22.46	22.17
	50%	Low	21.44	21.85	21.79
		Middle	21.36	21.76	21.71
		High	21.24	21.70	21.61
	100%	/	21.30	21.59	21.42
16QAM	1	Low	21.67	21.51	21.47
		Middle	21.69	21.56	21.65



	50%	High	21.53	21.42	21.48	
		Low	20.89	20.86	20.68	
		Middle	20.85	20.66	20.61	
		High	20.76	20.77	20.65	
	100%	/	20.83	20.71	20.77	
Modulation	RB	RB Offset	10MHz			
			Channel/Frequency(MHz)			
			132022/1715	132322/1745	132622/1775	
QPSK	1	Low	22.49	22.57	22.47	
		Middle	22.53	22.78	22.65	
		High	22.42	22.38	22.22	
	50%	Low	21.41	21.68	21.69	
		Middle	21.43	21.54	21.67	
		High	21.26	21.70	21.66	
	100%	/	21.34	21.79	21.38	
	16QAM	1	Low	21.65	21.48	21.55
			Middle	21.78	21.42	21.62
High			21.46	21.36	21.49	
50%		Low	20.94	20.84	20.68	
		Middle	20.86	20.66	20.62	
		High	20.79	20.58	20.65	
100%		/	20.66	20.58	20.73	
Modulation		RB	RB Offset	15MHz		
				Channel/Frequency(MHz)		
	132047/1717.5			132322/1745	132597/1772.5	
QPSK	1	Low	22.50	22.61	22.45	
		Middle	22.47	22.79	22.68	
		High	22.41	22.43	22.25	
	50%	Low	21.39	21.69	21.72	
		Middle	21.36	21.72	21.71	
		High	21.29	21.73	21.66	
	100%	/	21.32	21.63	21.38	
	16QAM	1	Low	21.74	21.62	21.71
			Middle	21.76	21.55	21.72
High			21.57	21.46	21.56	
50%		Low	20.91	20.73	20.77	
		Middle	20.84	20.79	20.72	
		High	20.77	20.72	20.76	
100%		/	20.73	20.71	20.83	
Modulation		RB	RB Offset	20MHz		
				Channel/Frequency(MHz)		
	132072/1720			132322/1745	132572/1770	
QPSK	1	Low	22.57	22.65	22.52	
		Middle	22.60	22.83	22.70	

	50%	High	22.47	22.48	22.35
		Low	21.46	21.81	21.80
		Middle	21.38	21.72	21.78
		High	21.32	21.78	21.62
	100%	/	21.29	21.70	21.47
16QAM	1	Low	21.64	21.58	21.62
		Middle	21.72	21.61	21.68
		High	21.55	21.47	21.54
	50%	Low	20.92	20.81	20.74
		Middle	20.81	20.73	20.69
		High	20.74	20.67	20.72
	100%	/	20.71	20.67	20.80

**LTE Band 71**

LTE B71			Maximum Conducted Power (dBm)		
Modulation	RB	RB Offset	5MHz		
			Channel/Frequency(MHz)		
			133147/665.5	133297/680.5	133447/695.5
QPSK	1	Low	21.81	21.91	21.93
		Middle	22.27	22.41	22.28
		High	22.18	21.98	21.87
	50%	Low	21.29	21.33	21.33
		Middle	21.32	21.47	21.27
		High	21.18	21.31	21.32
100%	/	21.36	21.16	21.10	
16QAM	1	Low	21.22	21.36	21.22
		Middle	21.24	21.31	21.38
		High	21.28	21.33	21.21
	50%	Low	20.29	20.33	20.30
		Middle	20.19	20.32	20.26
		High	20.35	20.52	20.17
100%	/	20.33	20.41	20.21	
Modulation	RB	RB Offset	10MHz		
			Channel/Frequency(MHz)		
			133172/668	133297/680.5	133422/693
QPSK	1	Low	21.92	21.90	21.86
		Middle	22.34	22.38	22.28
		High	22.11	21.94	21.92
	50%	Low	21.25	21.17	21.20
		Middle	21.35	21.29	21.20
		High	21.16	21.27	21.34
100%	/	21.37	21.32	21.06	
16QAM	1	Low	21.17	21.33	21.30
		Middle	21.30	21.17	21.38
		High	21.28	21.31	21.21



	50%	Low	20.41	20.32	20.26	
		Middle	20.27	20.25	20.23	
		High	20.38	20.29	20.13	
	100%	/	20.16	20.28	20.17	
Modulation	RB	RB Offset	15MHz			
			Channel/Frequency(MHz)			
			133197/670.5	133297/680.5	133397/690.5	
QPSK	1	Low	21.89	21.94	21.88	
		Middle	22.28	22.39	22.28	
		High	22.14	21.99	21.92	
	50%	Low	21.24	21.21	21.23	
		Middle	21.32	21.50	21.27	
		High	21.19	21.30	21.33	
	100%	/	21.38	21.16	21.09	
	16QAM	1	Low	21.29	21.43	21.49
			Middle	21.31	21.27	21.45
High			21.35	21.41	21.25	
50%		Low	20.35	20.24	20.32	
		Middle	20.22	20.41	20.33	
		High	20.36	20.43	20.24	
100%		/	20.23	20.41	20.27	
Modulation		RB	RB Offset	20MHz		
				Channel/Frequency(MHz)		
	133222/673			133322/683	133372/688	
QPSK	1	Low	22.03	22.02	21.94	
		Middle	22.46	22.47	22.35	
		High	22.18	22.01	22.07	
	50%	Low	21.33	21.37	21.34	
		Middle	21.31	21.42	21.33	
		High	21.28	21.43	21.25	
	100%	/	21.32	21.33	21.27	
	16QAM	1	Low	21.15	21.38	21.31
			Middle	21.23	21.34	21.40
High			21.31	21.35	21.24	
50%		Low	20.32	20.32	20.29	
		Middle	20.11	20.29	20.27	
		High	20.30	20.33	20.16	
100%		/	20.19	20.33	20.21	

### 6.1.6 EIRP/ERP Results

#### LTE Band 2

Limits: ≤33dBm (2W)

#### LTE Band 2\_1.4MHz\_QPSK

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1850.7	22.38	33.00

1880	22.35	33.00
1909.3	22.38	33.00

**LTE Band 2\_1.4MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1850.7	21.36	33.00
1880	21.54	33.00
1909.3	21.40	33.00

**LTE Band 2\_3MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1851.5	22.26	33.00
1880	22.29	33.00
1908.5	22.33	33.00

**LTE Band 2\_3MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1851.5	21.46	33.00
1880	21.57	33.00
1908.5	21.39	33.00

**LTE Band 2\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1852.5	22.28	33.00
1880	22.34	33.00
1907.5	22.32	33.00

**LTE Band 2\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1852.5	21.36	33.00
1880	21.53	33.00
1907.5	21.42	33.00

**LTE Band 2\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1855	22.32	33.00
1880	22.31	33.00
1905	22.32	33.00

**LTE Band 2\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1855	21.42	33.00
1880	21.36	33.00
1905	21.36	33.00

**LTE Band 2\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1857.5	22.26	33.00
1880	22.32	33.00
1902.5	22.32	33.00

**LTE Band 2\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)



1857.5	21.43	33.00
1880	21.52	33.00
1902.5	21.49	33.00

**LTE Band 2\_20 MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1860	22.38	33.00
1880	22.42	33.00
1900	22.40	33.00

**LTE Band 2\_20 MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1860	21.39	33.00
1880	21.54	33.00
1900	21.45	33.00

**LTE Band 4**

Limits: ≤30dBm (1W)

**LTE Band 4\_1.4MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1710.7	22.82	30.00
1732.5	22.73	30.00
1754.3	22.71	30.00

**LTE Band 4\_1.4MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1710.7	21.70	30.00
1732.5	21.79	30.00
1754.3	21.69	30.00

**LTE Band 4\_3MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1711.5	22.78	30.00
1732.5	22.77	30.00
1753.5	22.75	30.00

**LTE Band 4\_3MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1711.5	21.78	30.00
1732.5	21.81	30.00
1753.5	21.64	30.00

**LTE Band 4\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1712.5	22.83	30.00
1732.5	22.76	30.00
1752.5	22.74	30.00

**LTE Band 4\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1712.5	21.68	30.00
1732.5	21.77	30.00

1752.5	21.67	30.00
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**LTE Band 4\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1715	22.81	30.00
1732.5	22.73	30.00
1750	22.68	30.00

**LTE Band 4\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1715	21.77	30.00
1732.5	21.74	30.00
1750.5	21.65	30.00

**LTE Band 4\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1717.5	22.81	30.00
1732.5	22.74	30.00
1747.5	22.77	30.00

**LTE Band 4\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1717.5	21.75	30.00
1732.5	21.84	30.00
1747.5	21.81	30.00

**LTE Band 4\_20MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1720	22.90	30.00
1732.5	22.84	30.00
1745	22.79	30.00

**LTE Band 4\_20MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1720	21.75	30.00
1732.5	21.80	30.00
1745	21.72	30.00

**LTE Band 5**
**Limits:** ≤38.45dBm (7W)

**LTE Band 5\_1.4MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
824.70	19.37	38.45
836.50	19.44	38.45
848.30	19.35	38.45

**LTE Band 5\_1.4MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
824.70	18.46	38.45
836.50	18.53	38.45
848.30	18.38	38.45



**LTE Band 5\_3MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
825.50	19.45	38.45
836.50	19.44	38.45
847.50	19.39	38.45

**LTE Band 5\_3MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
825.50	18.37	38.45
836.50	18.45	38.45
847.50	18.39	38.45

**LTE Band 5\_5MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
826.50	19.39	38.45
836.50	19.48	38.45
846.50	19.42	38.45

**LTE Band 5\_5MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
826.50	18.39	38.45
836.50	18.52	38.45
846.50	18.55	38.45

**LTE Band 5\_10MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
829.00	19.48	38.45
836.50	19.52	38.45
844.00	19.44	38.45

**LTE Band 5\_10MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
829.00	18.37	38.45
836.50	18.51	38.45
844.00	18.46	38.45

**LTE Band 7**
**Limits:** ≤33 dBm (2W)

**LTE Band 7\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2502.5	21.32	33.00
2535	21.45	33.00
2567.5	21.28	33.00

**LTE Band 7\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2502.5	20.40	33.00
2535	20.40	33.00
2567.5	20.43	33.00

**LTE Band 7\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2505	21.36	33.00
2535	21.42	33.00
2565	21.28	33.00

**LTE Band 7\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2505	20.49	33.00
2535	20.37	33.00
2565	20.40	33.00

**LTE Band 7\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2507.5	21.30	33.00
2535	21.43	33.00
2562.5	21.31	33.00

**LTE Band 7\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2507.5	20.42	33.00
2535	20.42	33.00
2562.5	20.45	33.00

**LTE Band 7\_20MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2510	21.44	33.00
2535	21.52	33.00
2560	21.38	33.00

**LTE Band 7\_20MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2510	20.43	33.00
2535	20.43	33.00
2560	20.46	33.00

**LTE Band 12**

Limits: ≤34.77 dBm (3W)

**LTE Band 12\_1.4MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
699.7	19.60	34.77
707.5	19.62	34.77
715.3	19.60	34.77

**LTE Band 12\_1.4MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
699.7	18.59	34.77
707.5	18.67	34.77
715.3	18.67	34.77



**LTE Band 12\_3MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
700.5	19.62	34.77
707.5	19.61	34.77
714.5	19.57	34.77

**LTE Band 12\_3MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
700.5	18.61	34.77
707.5	18.46	34.77
714.5	18.63	34.77

**LTE Band 12\_5MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
701.5	19.61	34.77
707.5	19.62	34.77
713.5	19.60	34.77

**LTE Band 12\_5MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
701.5	18.62	34.77
707.5	18.62	34.77
713.5	18.70	34.77

**LTE Band 12\_10MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
704	19.65	34.77
707.5	19.69	34.77
711	19.62	34.77

**LTE Band 12\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
704	18.74	34.77
707.5	18.64	34.77
711	18.69	34.77

**LTE Band 13**

Limits: ≤34.77 dBm (3W)

**LTE Band 13\_5MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
779.5	17.72	34.77
782	17.67	34.77
784.5	17.69	34.77

**LTE Band 13\_5MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
779.5	16.73	34.77
782	16.89	34.77
784.5	16.76	34.77

**LTE Band 13\_10MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
/	/	/
782	17.79	34.77
/	/	/

**LTE Band 13\_10MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
/	/	/
782	16.80	34.77
/	/	/

**LTE Band 17**
**Limits:** ≤34.77 dBm (3W)

**LTE Band 17\_5MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
706.5	21.67	34.77
710	21.76	34.77
713.5	21.69	34.77

**LTE Band 17\_5MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
706.5	20.76	34.77
710	20.68	34.77
713.5	20.79	34.77

**LTE Band 17\_10MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
709	21.76	34.77
710	21.82	34.77
711	21.71	34.77

**LTE Band 17\_10MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
709	20.74	34.77
710	20.70	34.77
711	20.77	34.77

**LTE Band 25**
**Limits:** ≤33 dBm (2W)

**LTE Band 25\_1.4MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1850.7	22.24	33.00
1882.5	22.42	33.00
1914.3	22.20	33.00

**LTE Band 25\_1.4MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1850.7	21.12	33.00
1882.5	21.28	33.00
1914.3	21.29	33.00



**LTE Band 25\_3MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1851.5	21.93	33.00
1882.5	22.40	33.00
1913.5	22.04	33.00

**LTE Band 25\_3MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1851.5	21.26	33.00
1882.5	21.28	33.00
1913.5	21.26	33.00

**LTE Band 25\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1852.5	21.96	33.00
1882.5	22.45	33.00
1912.5	22.08	33.00

**LTE Band 25\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1852.5	21.19	33.00
1882.5	21.24	33.00
1912.5	21.30	33.00

**LTE Band 25\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1855	22.00	33.00
1882.5	22.42	33.00
1910	22.08	33.00

**LTE Band 25\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1855	21.23	33.00
1882.5	21.14	33.00
1910	21.27	33.00

**LTE Band 25\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1857.5	21.94	33.00
1882.5	22.43	33.00
1907.5	22.11	33.00

**LTE Band 25\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1857.5	21.23	33.00
1882.5	21.19	33.00
1907.5	21.34	33.00

**LTE Band 25\_20 MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1860	22.03	33.00
1882.5	22.52	33.00

1905	22.13	33.00
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**LTE Band 25\_20 MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1860	21.29	33.00
1882.5	21.25	33.00
1905	21.32	33.00

**LTE Band 26(824-849MHz)**

Limits: ≤38.45dBm (7W)

**LTE Band 26\_1.4MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
824.7	19.52	38.45
836.5	19.54	38.45
848.3	19.57	38.45

**LTE Band 26\_1.4MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
824.7	18.66	38.45
836.5	18.70	38.45
848.3	18.72	38.45

**LTE Band 26\_3MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
825.5	19.52	38.45
836.5	19.60	38.45
847.5	19.56	38.45

**LTE Band 26\_3MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
825.5	18.59	38.45
836.5	18.62	38.45
847.5	18.69	38.45

**LTE Band 26\_5MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
826.5	19.59	38.45
836.5	19.60	38.45
846.5	19.55	38.45

**LTE Band 26\_5MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
826.5	18.68	38.45
836.5	18.59	38.45
846.5	18.73	38.45

**LTE Band 26\_10MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
829	19.53	38.45
836.5	19.61	38.45
844	19.51	38.45



**LTE Band 26\_10MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
829	18.66	38.45
836.5	18.69	38.45
844	18.70	38.45

**LTE Band 26\_15MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
831.5	19.76	38.45
836.5	19.65	38.45
841.4	19.60	38.45

**LTE Band 26\_15MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
831.5	18.74	38.45
836.5	18.65	38.45
841.4	18.75	38.45

**LTE Band 38**

Limits: ≤33 dBm (2W)

**LTE Band 38\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2572.5	21.91	33.00
2595	21.99	33.00
2617.5	21.97	33.00

**LTE Band 38\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2572.5	20.87	33.00
2595	21.00	33.00
2617.5	20.91	33.00

**LTE Band 38\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2575	21.95	33.00
2595	21.96	33.00
2615	21.97	33.00

**LTE Band 38\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2575	20.96	33.00
2595	20.82	33.00
2615	20.92	33.00

**LTE Band 38\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2577.5	21.89	33.00
2595	22.01	33.00
2612.5	22.00	33.00

**LTE Band 38\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2577.5	20.94	33.00
2595	20.99	33.00
2612.5	21.02	33.00

**LTE Band 38\_20MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2580	21.98	33.00
2595	22.05	33.00
2610	22.02	33.00

**LTE Band 38\_20MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2580	20.90	33.00
2595	21.01	33.00
2610	20.98	33.00

**LTE Band 41**

Limits: ≤33 dBm (2W)

**LTE Band 41\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2498.5	22.83	33.00
2593	23.14	33.00
2687.5	23.13	33.00

**LTE Band 41\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2498.5	21.90	33.00
2593	21.83	33.00
2687.5	21.77	33.00

**LTE Band 41\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2501	22.92	33.00
2593	23.14	33.00
2685	23.18	33.00

**LTE Band 41\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2501	21.94	33.00
2593	21.80	33.00
2685	21.74	33.00

**LTE Band 41\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2503.5	22.81	33.00
2593	23.22	33.00
2682.5	23.21	33.00



**LTE Band 41\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2503.5	21.92	33.00
2593	21.85	33.00
2682.5	21.81	33.00

**LTE Band 41\_20MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2506	22.95	33.00
2593	23.24	33.00
2680	23.23	33.00

**LTE Band 41\_20MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2506	21.93	33.00
2593	21.86	33.00
2680	21.84	33.00

**LTE Band 41(Note 1)**

Limits: ≤33 dBm (2W)

**LTE Band 41\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2502.5	22.77	33.00
2593	23.14	33.00
2687.5	23.13	33.00

**LTE Band 41\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2502.5	21.87	33.00
2593	21.83	33.00
2687.5	21.77	33.00

**LTE Band 41\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2505	22.88	33.00
2593	23.14	33.00
2685	23.18	33.00

**LTE Band 41\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2505	21.87	33.00
2593	21.80	33.00
2685	21.74	33.00

**LTE Band 41\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2507.5	22.77	33.00
2593	23.22	33.00
2682.5	23.21	33.00

**LTE Band 41\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2507.5	21.89	33.00
2593	21.85	33.00
2682.5	21.81	33.00

**LTE Band 41\_20MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2510	22.90	33.00
2593	23.24	33.00
2680	23.23	33.00

**LTE Band 41\_20MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
2510	21.92	33.00
2593	21.86	33.00
2680	21.84	33.00

Note 1: This frequency range is only applicable for IC certification.

**LTE Band 66**

Limits: ≤30dBm (1W)

**LTE Band 66\_1.4MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1710.7	22.72	30.00
1745	22.94	30.00
1779.3	22.90	30.00

**LTE Band 66\_1.4MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1710.7	22.02	30.00
1745	21.84	30.00
1779.3	21.83	30.00

**LTE Band 66\_3MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1711.5	22.72	30.00
1745	22.92	30.00
1778.5	22.86	30.00

**LTE Band 66\_3MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1711.5	21.95	30.00
1745	21.85	30.00
1778.5	21.82	30.00

**LTE Band 66\_5MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1712.5	22.73	30.00
1745	23.01	30.00
1777.5	22.81	30.00



**LTE Band 66\_5MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1712.5	21.89	30.00
1745	21.76	30.00
1777.5	21.85	30.00

**LTE Band 66\_10MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1715	22.73	30.00
1745	22.98	30.00
1775	22.85	30.00

**LTE Band 66\_10MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1715	21.98	30.00
1745	21.68	30.00
1775	21.82	30.00

**LTE Band 66\_15MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1717.5	22.70	30.00
1745	22.99	30.00
1772.5	22.88	30.00

**LTE Band 66\_15MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1717.5	21.96	30.00
1745	21.82	30.00
1772.5	21.92	30.00

**LTE Band 66\_20 MHz\_QPSK**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1720	22.80	30.00
1745	23.03	30.00
1770	22.90	30.00

**LTE Band 66\_20 MHz\_16QAM**

Frequency(MHz)	EIRP(dBm)	Limit(dBm)
1720	21.92	30.00
1745	21.81	30.00
1770	21.88	30.00

**LTE Band 71**

Limits: ≤34.77dBm (3W)

**LTE Band 71\_5MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
665.5	20.71	34.77
680.5	20.85	34.77
695.5	20.72	34.77

**LTE Band 71\_5MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
665.5	19.72	34.77
680.5	19.80	34.77
695.5	19.82	34.77

**LTE Band 71\_10MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
668	20.78	34.77
680.5	20.82	34.77
693	20.72	34.77

**LTE Band 71\_10MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
668	19.74	34.77
680.5	19.77	34.77
693	19.82	34.77

**LTE Band 71\_15MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
670.5	20.72	34.77
680.5	20.83	34.77
690.5	20.72	34.77

**LTE Band 71\_15MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
670.5	19.79	34.77
680.5	19.87	34.77
690.5	19.93	34.77

**LTE Band 71\_20MHz\_QPSK**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
673	20.90	34.77
683	20.91	34.77
688	20.79	34.77

**LTE Band 71\_20MHz\_16QAM**

Frequency(MHz)	ERP(dBm)	Limit(dBm)
673	19.75	34.77
683	19.82	34.77
688	19.84	34.77



## 6.2 Emission Limit

### 6.2.1 Measurement Limit

FCC §22.917(a) Out of band emissions. 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.

FCC §24.238(a) Out of band emissions. 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.

FCC §27.53(a) For mobile and portable stations operating in the 2305–2315 MHz and 2350–2360 MHz bands:

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

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

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

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(m)(4) For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log(P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log(P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log(P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. 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(h):

AWS emission limits —

(1) General protection levels. 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.

(2) Additional protection levels. Notwithstanding the foregoing paragraph (h)(1) of this section:

(i) Operations in the 2180–2200 MHz band are subject to the out-of-band emission requirements set forth in § 27.1134 for the protection of federal government operations operating in the 2200–2290 MHz band.

(ii) For operations in the 2000–2020 MHz band, the power of any emissions below 2000 MHz shall be attenuated below the transmitter power (P) in watts by at least  $70 + 10 \log_{10}(P)$  dB.

(iii) For operations in the 1915–1920 MHz band, the power of any emission between 1930–1995 MHz shall be attenuated below the transmitter power (P) in watts by at least  $70 + 10 \log_{10}(P)$  dB.

(iv) For operations in the 1995–2000 MHz band, the power of any emission between 2005–2020 MHz shall be attenuated below the transmitter power (P) in watts by at least  $70 + 10 \log_{10}(P)$  dB.

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

FCC §27.53(g) For operations in the 600 MHz band and the 698-746 MHz 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 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

RSS-133 5.6, RSS-199 5.6:

Unwanted emissions shall be measured in terms of average values while the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified in table 3, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range. For the unwanted emission limits, in the 1 MHz bands immediately outside and adjacent to the frequency



block group, the power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth (OBW). Beyond these 1 MHz bands, a resolution bandwidth of 1 MHz shall be used. A narrower resolution bandwidth may be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz, or 1% of the OBW, as applicable.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the table.

Offset frequency from the edge of the frequency block group (MHz)	Unwanted emission limit
≤ 1	-13 dBm/(1% of OBW)
> 1	-13 dBm/MHz

#### RSS-139 5.6

Unwanted emissions shall be measured in terms of average values.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors) of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in table.

Offset frequency from the edge of the frequency block group (MHz)	Unwanted emission limit
1 MHz	-13 dBm/(1% of OB*)
>1 MHz	-13 dBm/MHz

#### RSS-132 5.5

Equipment shall meet the unwanted emission limits specified below:

- i. In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated below the transmitter output power P (dBW) by at least  $43 + 10 \log(p)$  dB.
- ii. After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated below the transmitter output power P (dBW) by at least  $43 + 10 \log(p)$  dB. If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

p is the output power specified in watts.

#### RSS 130 4.7:

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least  $43 + 10 \log_{10} p$  (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

In addition to the limit outlined in section 4.7.1 above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

- a. the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:
  - i.  $76 + 10 \log_{10} p$  (watts), dB, for base and fixed equipment and
  - ii.  $65 + 10 \log_{10} p$  (watts), dB, for mobile and portable equipment
- b. the e.i.r.p. in the band 1559-1610 MHz shall not exceed  $-70$  dBW/MHz for wideband signal and  $-80$  dBW for discrete emission with bandwidth less than 700 Hz.

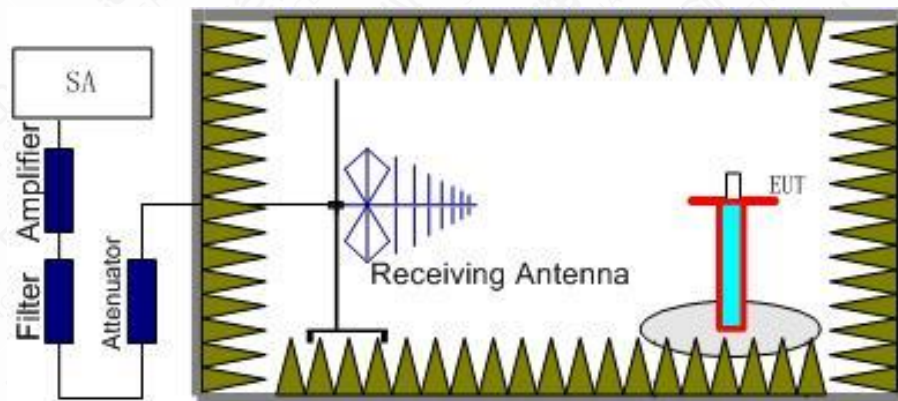
### 6.2.2 Method of Measurement

The measurements procedures in TIA-603E-2016 are used. This measurement is carried out in fully-anechoic chamber FAC-3.

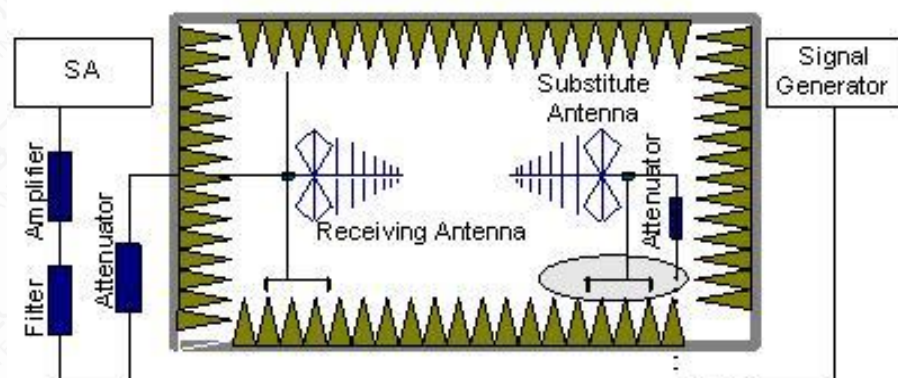
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz as outlined in standard. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE Bands.

**The procedure of radiated spurious emissions is as follows:**

1. Below 1 GHz, EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. Above 1 GHz, EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna. Adjust the level of the



signal generator output until the value of the receiver reaches the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4.The Path loss (Pcl) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain (Ga) should be recorded after test.

An amplifier should be connected in for the test.

The Path loss (Pcl) is the summation of the cable loss and the gain of the amplifier.

The measurement results are obtained as described below:

$$\text{Power (EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$

5.This value is EIRP since the measurement is calibrated using an antenna of known gain (unit: dBi) and known input power.

6.ERP can be calculated from EIRP by subtracting the gain of the dipole,  $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$ .

### 6.2.3 Measurement Results

Radiated emissions measurements were made at the upper, middle, and lower carrier frequencies of the LTE Bands.It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the LTE Bands. Into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this. The evaluated frequency range is from 30MHz to ten times the main frequency signal. The final data result takes the worst pattern data and places it in the report.

Band	BW (MHz)	RB Config	Modulation	Channel	Frequency Range	Result
Band 2	1.4	OneRB_low	QPSK	Low	30MHz~20GHz	PASS
				Middle	30MHz~20GHz	PASS
				High	30MHz~20GHz	PASS
Band 4	1.4	OneRB_low	QPSK	Low	30MHz~20GHz	PASS
				Middle	30MHz~20GHz	PASS
				High	30MHz~20GHz	PASS
Band 5	1.4	OneRB_low	QPSK	Low	30MHz~20GHz	PASS
				Middle	30MHz~20GHz	PASS
				High	30MHz~20GHz	PASS
Band 7	5	OneRB_low	QPSK	Low	30MHz~20GHz	PASS
				Middle	30MHz~20GHz	PASS
				High	30MHz~20GHz	PASS
Band 12	1.4	OneRB_low	QPSK	Low	30MHz~20GHz	PASS
				Middle	30MHz~20GHz	PASS
				High	30MHz~20GHz	PASS
Band 13	5	OneRB_low	QPSK	Low	30MHz~20GHz	PASS
				Middle	30MHz~20GHz	PASS
				High	30MHz~20GHz	PASS
Band 17	5	OneRB_low	QPSK	Low	30MHz~20GHz	PASS
				Middle	30MHz~20GHz	PASS
				High	30MHz~20GHz	PASS
Band 25	1.4	OneRB_low	QPSK	Low	30MHz~20GHz	PASS