



FCC RF Test Report

APPLICANT : FoxInsights GmbH
EQUIPMENT : FoxRadar
BRAND NAME : FoxInsights
MODEL NAME : FoxRadar-V1
FCC ID : 2BKML-FOXRADAR
STANDARD : 47 CFR Part 22(H), 24(E), 27(L), 27(F), 27(H)
CLASSIFICATION : PCS Licensed Transmitter (PCB)
TEST DATE(S) : Nov. 01, 2024

This product installed a RF module (Brand Name: Quectel, Model Name: BG95-M3, FCC ID: XMR201910BG95M3) during the test, only Conducted Power, ERP/EIRP are tested in this report, RSE worst mode was verified, all the other test results are leveraged from module RF report.

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG492504B	Rev. 01	Initial issue of report	Nov. 20, 2024

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§22.913(a)(5)	Effective Radiated Power (Band 5) (Band 26)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 85)	ERP < 3 Watt		-
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2) (Band 25)	EIRP < 2Watt		-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	EIRP < 1Watt		-
-	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	1
-	§2.1049	Occupied Bandwidth	-	Report Only	1
-	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2)(4) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 85) (Band 25) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	1
-	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 85) (Band 25) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	1
-	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	1
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 85) (Band 25) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 2.05 dB at 1560.000 MHz



Remark 1: Verify the maximum conducted power of the host is lower than and very close to the module, all the conducted test results were leveraged from module RF report which can refer to Report No. R2003A0152-R1 (for LTE B5) & R2003A0152-R2 (for LTE B2/25) & R2003A0152-R3 (for LTE B4/12/13/66/85) & R2003A0152-R4 (for NB-IOT B5) & R2003A0152-R5 (for NB-IOT B2/25) & R2003A0152-R6 (for NB-IOT B4/12/13/66/85) & R2003A0152-R7 (for LTE B26).

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

Disclaimer:

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



1 General Description

1.1 Applicant

FoxInsights GmbH
Ridlerstr. 57 80339 Munich Germany

1.2 Manufacturer

FoxInsights GmbH
Ridlerstr. 57 80339 Munich Germany

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	FoxRadar
Brand Name	FoxInsights
Model Name	FoxRadar-V1
FCC ID	2BKML-FOXRADAR
SN Code	Conducted: ONR223408769 Radiation: ONR223408769
HW Version	1.0
SW Version	1.0.0
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Category M1: LTE Band 2 : 1850 MHz ~ 1910 MHz LTE Band 4 : 1710 MHz ~ 1755 MHz LTE Band 5 : 824 MHz ~ 849 MHz LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 25 : 1850 MHz ~ 1915 MHz LTE Band 26 : 814 MHz ~ 849 MHz LTE Band 66 : 1710 MHz ~ 1780 MHz LTE Band 85: 698 MHz ~ 716 MHz NB-IOT Category NB2: Band 2 : 1850 MHz ~ 1910 MHz Band 4 : 1710 MHz ~ 1755 MHz Band 5 : 824 MHz ~ 849 MHz Band 12 : 699 MHz ~ 716 MHz Band 13 : 777 MHz ~ 787 MHz Band 25 : 1850 MHz ~ 1915 MHz Band 66 : 1710 MHz ~ 1780 MHz Band 85: 698 MHz ~ 716 MHz
Rx Frequency	LTE Category M1: LTE Band 2 : 1930 MHz ~ 1990 MHz LTE Band 4 : 2110 MHz ~ 2155 MHz LTE Band 5 : 869 MHz ~ 894 MHz LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 25 : 1930 MHz ~ 1995 MHz LTE Band 26 : 859 MHz ~ 894 MHz LTE Band 66 : 2110 MHz~ 2180 MHz LTE Band 85 : 728 MHz ~ 746 MHz NB-IOT Category NB2: Band 2 : 1930 MHz ~ 1990 MHz Band 4 : 2110 MHz ~ 2155 MHz Band 5 : 869 MHz ~ 894 MHz Band 12 : 729 MHz ~ 746 MHz Band 13 : 746 MHz ~ 756 MHz Band 25 : 1930 MHz ~ 1995 MHz Band 66 : 2110 MHz~ 2180 MHz Band 85 : 728 MHz ~ 746 MHz
Bandwidth	LTE Category M1: LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 25 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 85 : 5MHz / 10MHz NB-IOT Category NB2: 200kHz
Sub-carrier Speacing	NB-IOT Category NB2: 3.75KHz /15 KHz

Maximum Output Power to Antenna	LTE Category M1: LTE Band 2 : 20.41 dBm LTE Band 4 : 19.93 dBm LTE Band 5 : 20.13 dBm LTE Band 12 : 20.36 dBm LTE Band 13 : 20.30 dBm LTE Band 25 : 20.18 dBm LTE Band 26 : 20.21 dBm LTE Band 66 : 19.46 dBm LTE Band 85 : 20.79 dBm NB-IOT Category NB2: LTE Band 2 : 20.08 dBm LTE Band 4 : 20.15 dBm LTE Band 5 : 20.73 dBm LTE Band 12 : 20.65 dBm LTE Band 13 : 20.48 dBm LTE Band 25 : 18.77 dBm LTE Band 66 : 19.98 dBm LTE Band 85 : 20.80 dBm
Antenna Gain	LTE Band 2 : 3.1 dBi LTE Band 4 : 3.1 dBi LTE Band 5 : 1.2 dBi LTE Band 12 : 1.2 dBi LTE Band 13 : 1.2 dBi LTE Band 25 : 3.1 dBi LTE Band 26 : 1.2 dBi LTE Band 66 : 3.1 dBi LTE Band 85 : 1.2 dBi
Type of Modulation	LTE Category M1: QPSK / 16QAM NB-IOT Category NB2 : BPSK / QPSK

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum ERP/EIRP

LTE Category M1:

LTE Band 2		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	0.1315	0.1112
3	1851.5 ~ 1908.5	0.1349	0.1114
5	1852.5 ~ 1907.5	0.2028	0.2123
10	1855.0 ~ 1905.0	0.2046	0.2183
15	1857.5 ~ 1902.5	0.2070	0.2153
20	1860.0 ~ 1900.0	0.2075	0.2244



LTE Band 25		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	1850.7 ~ 1914.3	0.1276	0.1067
3	1851.5 ~ 1913.5	0.1294	0.1047
5	1852.5 ~ 1912.5	0.1972	0.2037
10	1855.0 ~ 1910.0	0.1982	0.2094
15	1857.5 ~ 1907.5	0.2004	0.2028
20	1860.0 ~ 1905.0	0.1982	0.2128
LTE Band 4		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	0.1247	0.0977
3	1711.5 ~ 1753.5	0.1239	0.0979
5	1712.5 ~ 1752.5	0.1972	0.1995
10	1715.0 ~ 1750.0	0.1963	0.2000
15	1717.5 ~ 1747.5	0.1977	0.1963
20	1720.0 ~ 1745.0	0.1982	0.2009
LTE Band 5		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	824.7 ~ 848.3	0.0499	0.0434
3	825.5 ~ 847.5	0.0497	0.0431
5	826.5 ~ 846.5	0.0753	0.0766
10	829.0 ~ 844.0	0.0774	0.0828
LTE Band 12		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	699.7 ~ 715.3	0.0555	0.0441
3	700.5 ~ 714.5	0.0540	0.0436
5	701.5 ~ 713.5	0.0857	0.0867
10	704.0 ~ 711.0	0.0863	0.0873
LTE Band 13		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
5	779.5 ~ 784.5	0.0484	0.0470
10	782.0	0.0855	0.0861



LTE Band 26		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	824.7 ~ 848.3	0.0526	0.0466
3	825.5 ~ 847.5	0.0533	0.0461
5	826.5 ~ 846.5	0.0800	0.0828
10	829.0 ~ 844.0	0.0843	0.0830
15	831.5 ~ 841.5	0.0796	0.0843
CH26790	824.0	0.0869	0.0822
LTE Band 66		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	1710.7 ~ 1779.3	0.1138	0.0979
3	1711.5 ~ 1778.5	0.1143	0.0971
5	1712.5 ~ 1777.5	0.1734	0.1866
10	1715.0 ~ 1775.0	0.1742	0.1914
15	1717.5 ~ 1772.5	0.1914	0.1884
20	1720.0 ~ 1770.0	0.1774	0.1803
LTE Band 85		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
5	700.5 ~ 713.5	0.0946	0.0993
10	703.0 ~ 711.0	0.0912	0.0964

NB-IOT Category NB2:

LTE Band 2		BPSK/QPSK
Sub-carrier Spacing (KHz)	Frequency Range (MHz)	Maximum EIRP(W)
3.75	1850.1 ~ 1909.9	0.1570
15	1850.1 ~ 1909.9	0.2080
LTE Band 25		BPSK/QPSK
Sub-carrier Spacing (KHz)	Frequency Range (MHz)	Maximum EIRP(W)
3.75	1850.1 ~ 1914.9	0.1538
15	1850.1 ~ 1914.9	0.1406



LTE Band 4		BPSK/QPSK
Sub-carrier Speacing (KHz)	Frequency Range (MHz)	Maximum EIRP(W)
3.75	1710.2 ~ 1754.8	0.2070
15	1710.2 ~ 1754.8	0.2113
LTE Band 5		BPSK/QPSK
Sub-carrier Speacing (KHz)	Frequency Range (MHz)	Maximum ERP(W)
3.75	824.1 ~ 848.9	0.0931
15	824.1 ~ 848.9	0.0951
LTE Band 12		BPSK/QPSK
Sub-carrier Speacing (KHz)	Frequency Range (MHz)	Maximum ERP(W)
3.75	699.1 ~ 715.9	0.0897
15	699.1 ~ 715.9	0.0933
LTE Band 13		BPSK/QPSK
Sub-carrier Speacing (KHz)	Frequency Range (MHz)	Maximum ERP(W)
3.75	777.1 ~ 786.9	0.0897
15	777.1 ~ 786.9	0.0885
LTE Band 66		BPSK/QPSK
Sub-carrier Speacing (KHz)	Frequency Range (MHz)	Maximum EIRP(W)
3.75	1710.1 ~ 1779.9	0.1932
15	1710.1 ~ 1779.9	0.2032
LTE Band 85		BPSK/QPSK
Sub-carrier Speacing (KHz)	Frequency Range (MHz)	Maximum ERP(W)
3.75	698.1 ~ 715.9	0.0916
15	698.1 ~ 715.9	0.0966



1.7 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC LTE_Ver2.0 Auto_china_210503	2.0
2.	03CH04-KS	AUDIX	E3	210616

1.9 Applicable Standards

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

- ♦ 47 CFR Part 22(H), 24(E), 27(L), 27(F), 27(H)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission. (X Plane)

LTE Category M1:

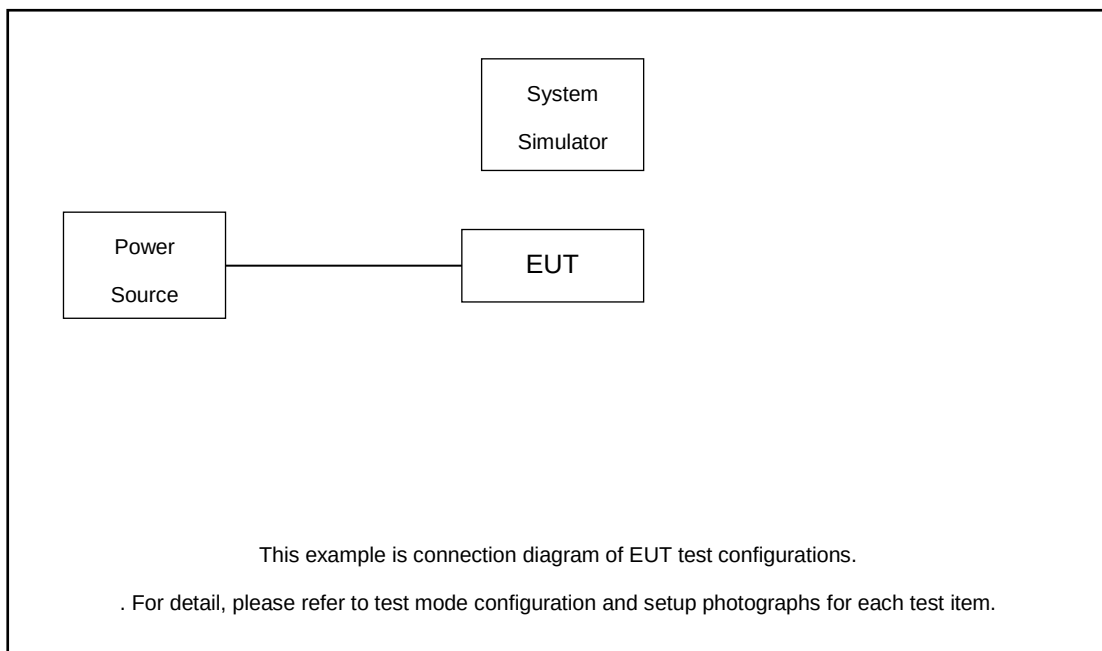
Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	-	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	-	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	-	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	-	v	v	v	v	v	v
	13	-	-	v	v	-	-	v	v	-	v	v	v	v	v	v
	25	v	v	v	v	v	v	v	v	-	v	v	v	v	v	v
	26	v	v	v	v	v	-	v	v	-	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	-	v	v	v	v	v	v
	85	-	-	v	v	v	v	v	v	-	v	v	v	v	v	v
E.R.P / E.I.R.P	2	v	v	v	v	v	v	v	v	-	v			v	v	v
	4	v	v	v	v	v	v	v	v	-	v			v	v	v
	5	v	v	v	v	-	-	v	v	-	v			v	v	v
	12	v	v	v	v	-	-	v	v	-	v			v	v	v
	13	-	-	v	v	-	-	v	v	-	v			v	v	v
	25	v	v	v	v	v	v	v	v	-	v			v	v	v
	26	v	v	v	v	v	-	v	v	-	v			v	v	v
	66	v	v	v	v	v	v	v	v	-	v			v	v	v
	85	-	-	v	v	v	v	v	v	-	v			v	v	v
Radiated Spurious Emission	2	Worst Case												v	v	v
	4	Worst Case												v	v	v
	5	Worst Case													v	
	12	Worst Case													v	
	13	Worst Case													v	
	25	Worst Case												v	v	v
	26	Worst Case													v	
	66	Worst Case												v	v	v
	85	Worst Case													v	
Note	1. The mark "v " means that this configuration is chosen for testing															
	2. The mark "- " means that this bandwidth is not supported.															
	3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.															
	4. For RSE testing, B5/12/13/26/85 were verified the worst cases from the RF module reports in accordance with the same Gain, others for testing LMH channels because of the higher Gain of the Host.															



NB-IOT Category NB2:

Test Items	Band	Sub-carrier Speacing(KHz)		Modulation			RB #			Test Channel		
		3.75	15	BPSK	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	-	v		v	v	v	v
	4	v	v	v	v	-	v		v	v	v	v
	5	v	v	v	v	-	v		v	v	v	v
	12	v	v	v	v	-	v		v	v	v	v
	13	v	v	v	v	-	v		v	v	v	v
	25	v	v	v	v	-	v		v	v	v	v
	66	v	v	v	v	-	v		v	v	v	v
	85	v	v	v	v	-	v		v	v	v	v
E.R.P / E.I.R.P	2	v	v	v	v	-	v		v	v	v	v
	4	v	v	v	v	-	v		v	v	v	v
	5	v	v	v	v	-	v		v	v	v	v
	12	v	v	v	v	-	v		v	v	v	v
	13	v	v	v	v	-	v		v	v	v	v
	25	v	v	v	v	-	v		v	v	v	v
	66	v	v	v	v	-	v		v	v	v	v
	85	v	v	v	v	-	v		v	v	v	v
Radiated Spurious Emission	2	Worst Case								v	v	v
	4	Worst Case								v	v	v
	5	Worst Case									v	
	12	Worst Case									v	
	13	Worst Case									v	
	25	Worst Case								v	v	v
	66	Worst Case								v	v	v
	85	Worst Case									v	
Note	1. The mark “v ” means that this configuration is chosen for testing											
	2. The mark “-” means that this bandwidth is not supported.											
	3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.											
	4. For RSE testing, B5/12/13/85 were verified the worst cases from the RF module reports in accordance with the same Gain. others for testing LMH channels because of higher Gain of the Host.											

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m



2.4 Frequency List of Low/Middle/High Channels

LTE Category M1:

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3



LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3

LTE Band 13 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5



LTE Band 25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	26140	26340	26590
	Frequency	1860	1880	1905
15	Channel	26115	26340	26615
	Frequency	1857.5	1880	1907.5
10	Channel	26090	26340	26640
	Frequency	1855	1880	1910
5	Channel	26065	26340	26665
	Frequency	1852.5	1880	1912.5
3	Channel	26055	26340	26675
	Frequency	1851.5	1880	1913.5
1.4	Channel	26047	26340	26683
	Frequency	1850.7	1880	1914.3

LTE Band 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829	836.5	844
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3



LTE Band 66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	132072	132322	132572
	Frequency	1720	1745	1770
15	Channel	132047	132322	132597
	Frequency	1717.5	1745	1772.5
10	Channel	132022	132322	132622
	Frequency	1715	1745	1775
5	Channel	131997	132322	132647
	Frequency	1712.5	1745	1777.5
3	Channel	131987	132322	132657
	Frequency	1711.5	1745	1778.5
1.4	Channel	131979	132322	132665
	Frequency	1710.7	1745	1779.3

LTE Band 85 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	134052	134092	134132
	Frequency	703	707	711
5	Channel	134027	134092	134157
	Frequency	700.5	707	713.5



NB-IOT Category NB2:

LTE Band 2 Channel and Frequency List				
Sub-carrier Spacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	18601	18900	19199
	Frequency	1850.1	1880	1909.9
15	Channel	18601	18900	19199
	Frequency	1850.1	1880	1909.9

LTE Band 4 Channel and Frequency List				
Sub-carrier Spacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	19952	20175	20398
	Frequency	1710.2	1732.5	1754.8
15	Channel	19952	20175	20398
	Frequency	1710.2	1732.5	1754.8

LTE Band 5 Channel and Frequency List				
Sub-carrier Spacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	20410	20525	20649
	Frequency	824.1	836.5	848.9
15	Channel	20410	20525	20649
	Frequency	824.1	836.5	848.9

LTE Band 12 Channel and Frequency List				
Sub-carrier Spacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	23011	23095	23179
	Frequency	699.1	707.5	715.9
15	Channel	23011	23095	23179
	Frequency	699.1	707.5	715.9



LTE Band 13 Channel and Frequency List				
Sub-carrier Speacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	23181	23230	23279
	Frequency	777.1	782	786.9
15	Channel	23181	23230	23279
	Frequency	777.1	782	786.9

LTE Band 25 Channel and Frequency List				
Sub-carrier Speacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	26041	26365	26689
	Frequency	1850.1	1882.5	1914.9
15	Channel	26041	26365	26689
	Frequency	1850.1	1882.5	1914.9

LTE Band 66 Channel and Frequency List				
Sub-carrier Speacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	131973	132322	132671
	Frequency	1710.1	1745	1779.9
15	Channel	131973	132322	132671
	Frequency	1710.1	1745	1779.9

LTE Band 85 Channel and Frequency List				
Sub-carrier Speacing (kHz)	Channel / Frequency (MHz)	Lowest	Middle	Highest
3.75	Channel	134003	134082	134181
	Frequency	698.1	706	715.9
15	Channel	134003	134082	134181
	Frequency	698.1	706	715.9

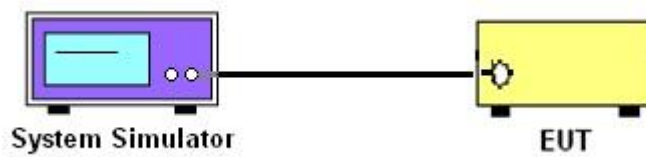
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

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

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

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5 and Band 26.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, Band 13 and Band 85.

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

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

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

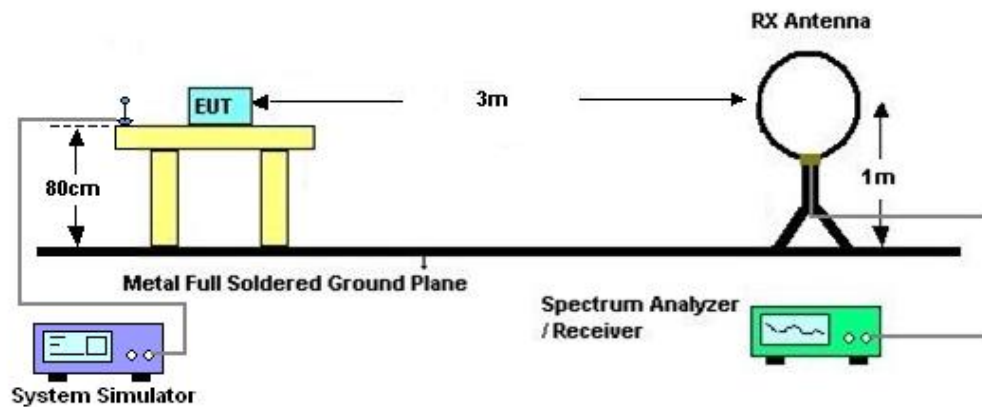
4 Radiated Test Items

4.1 Measuring Instruments

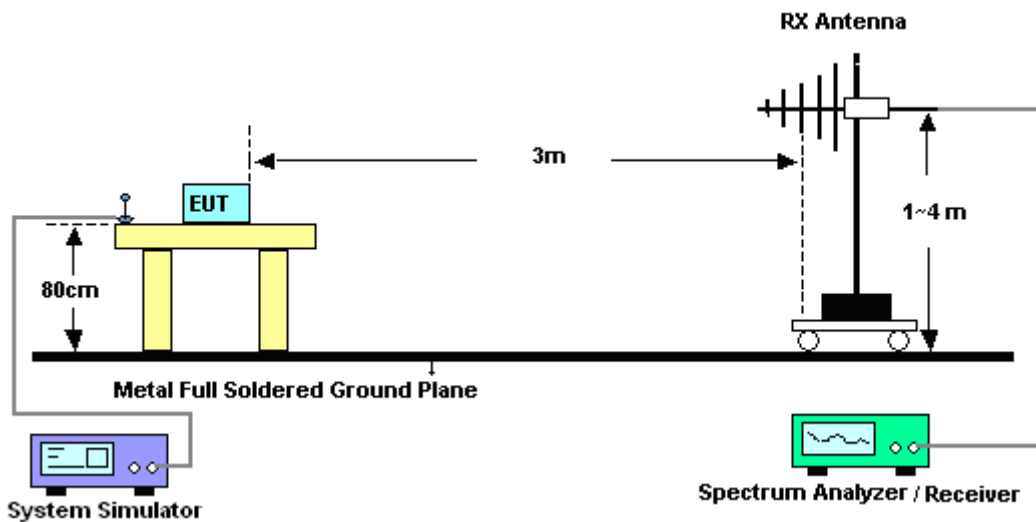
See list of measuring instruments of this test report.

4.2 Test Setup

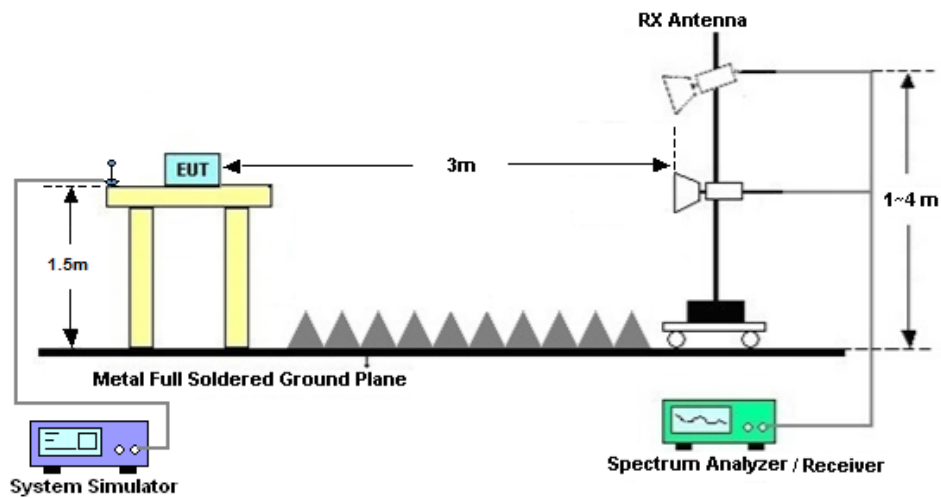
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.



4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For LTE Band 13

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

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

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
11. $\text{ERP (dBm)} = \text{EIRP} - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 01, 2024	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Nov. 01, 2024	NCR	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Oct. 11, 2024	Nov. 01, 2024	Oct. 10, 2025	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Nov. 01, 2024	Sep. 07, 2025	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 06, 2023	Nov. 01, 2024	Dec. 05, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00227860	1GHz~18GHz	Aug. 16, 2024	Nov. 01, 2024	Aug. 15, 2025	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Nov. 01, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz-1GHz	Jan. 03, 2024	Nov. 01, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40G A	060728	18~40GHz	Jan. 02, 2024	Nov. 01, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 10, 2024	Nov. 01, 2024	Oct. 09, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM01G18G A	060892	1Ghz-18Ghz	Oct. 10, 2024	Nov. 01, 2024	Oct. 09, 2025	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 01, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 01, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 01, 2024	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required



6 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Conducted Power	± 0.50 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.82 dB
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----- THE END -----



Appendix A. Test Results of Conducted Test

Test Engineer :	Smile Wang	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and ERP/EIRP

LTE Cat M1:

LTE Band 2:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				18700	18900	19100			
Frequency (MHz)				1860	1880	1900	L	M	H
20	QPSK	1	0	20.04	20.02	20.07	0.2061	0.2051	0.2075
20	QPSK	1	5	19.94	19.97	19.93	0.2014	0.2028	0.2009
20	QPSK	3	0	20.00	20.01	20.04	0.2042	0.2046	0.2061
20	QPSK	3	3	19.93	19.94	19.97	0.2009	0.2014	0.2028
20	QPSK	6	0	19.96	19.98	20.05	0.2023	0.2032	0.2065
20	16QAM	1	0	20.28	20.41	19.96	0.2178	0.2244	0.2023
Channel				18675	18900	19125	EIRP(W)		
Frequency (MHz)				1857.5	1880	1902.5	L	M	H
15	QPSK	1	0	20.06	19.86	19.75	0.2070	0.1977	0.1928
15	16QAM	1	0	20.16	20.23	19.92	0.2118	0.2153	0.2004
Channel				18650	18900	19150	EIRP(W)		
Frequency (MHz)				1855	1880	1905	L	M	H
10	QPSK	1	0	20.01	19.98	19.79	0.2046	0.2032	0.1945
10	16QAM	1	0	20.22	20.29	20.02	0.2148	0.2183	0.2051
Channel				18625	18900	19175	EIRP(W)		
Frequency (MHz)				1852.5	1880	1907.5	L	M	H
5	QPSK	1	0	19.97	19.93	19.79	0.2028	0.2009	0.1945
5	16QAM	1	0	20.17	20.04	19.93	0.2123	0.2061	0.2009
Channel				18615	18900	19185	EIRP(W)		
Frequency (MHz)				1851.5	1880	1908.5	L	M	H
3	QPSK	1	0	18.16	18.20	18.05	0.1337	0.1349	0.1303
3	16QAM	1	0	17.27	17.37	17.12	0.1089	0.1114	0.1052
Channel				18607	18900	19193	EIRP(W)		
Frequency (MHz)				1850.7	1880	1909.3	L	M	H
1.4	QPSK	1	0	18.09	18.07	17.98	0.1315	0.1309	0.1282
1.4	16QAM	1	0	17.36	17.27	17.12	0.1112	0.1089	0.1052


LTE Band 4:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				20050	20175	20300			
Frequency (MHz)				1720	1732.5	1745	L	M	H
20	QPSK	1	0	19.58	19.45	19.65	0.1854	0.1799	0.1884
20	QPSK	1	5	19.87	19.28	19.61	0.1982	0.1730	0.1866
20	QPSK	3	0	19.86	19.58	19.73	0.1977	0.1854	0.1919
20	QPSK	3	3	19.85	19.36	19.64	0.1972	0.1762	0.1879
20	QPSK	6	0	19.82	19.41	19.58	0.1959	0.1782	0.1854
20	16QAM	1	0	19.93	19.66	19.89	0.2009	0.1888	0.1991
Channel				20025	20175	20325	EIRP(W)		
Frequency (MHz)				1717.5	1732.5	1747.5	L	M	H
15	QPSK	1	0	19.54	19.44	19.86	0.1837	0.1795	0.1977
15	16QAM	1	0	19.83	19.78	19.83	0.1963	0.1941	0.1963
Channel				20000	20175	20350	EIRP(W)		
Frequency (MHz)				1715	1732.5	1750	L	M	H
10	QPSK	1	0	19.58	19.57	19.83	0.1854	0.1849	0.1963
10	16QAM	1	0	19.88	19.91	19.89	0.1986	0.2000	0.1991
Channel				19975	20175	20375	EIRP(W)		
Frequency (MHz)				1712.5	1732.5	1752.5	L	M	H
5	QPSK	1	0	19.51	19.56	19.85	0.1824	0.1845	0.1972
5	16QAM	1	0	19.86	19.87	19.90	0.1977	0.1982	0.1995
Channel				19965	20175	20385	EIRP(W)		
Frequency (MHz)				1711.5	1732.5	1753.5	L	M	H
3	QPSK	1	0	17.83	17.75	17.77	0.1239	0.1216	0.1222
3	16QAM	1		16.81	16.74	16.71	0.0979	0.0964	0.0957
Channel				19957	20175	20393	EIRP(W)		
Frequency (MHz)				1710.7	1732.5	1754.3	L	M	H
1.4	QPSK	1	0	17.66	17.56	17.86	0.1191	0.1164	0.1247
1.4	16QAM	1	0	16.73	16.80	16.77	0.0962	0.0977	0.0971



LTE Band 5:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				20450	20525	20600			
Frequency (MHz)				829	836.5	844	L	M	H
10	QPSK	1	0	19.84	19.57	19.37	0.0774	0.0728	0.0695
10	QPSK	1	5	19.78	19.40	19.19	0.0764	0.0700	0.0667
10	QPSK	3	0	19.61	19.53	19.24	0.0735	0.0721	0.0675
10	QPSK	3	3	19.46	19.41	19.21	0.0710	0.0701	0.0670
10	QPSK	6	0	19.03	18.92	18.72	0.0643	0.0627	0.0598
10	16QAM	1	0	20.13	19.73	19.53	0.0828	0.0755	0.0721
Channel				20425	20525	20625	ERP(W)		
Frequency (MHz)				826.5	836.5	846.5	L	M	H
5	QPSK	1	0	19.66	19.72	19.23	0.0743	0.0753	0.0673
5	16QAM	1	0	19.79	19.68	19.46	0.0766	0.0746	0.0710
Channel				20415	20525	20635	ERP(W)		
Frequency (MHz)				825.5	836.5	847.5	L	M	H
3	QPSK	1	0	17.91	17.86	17.43	0.0497	0.0491	0.0445
3	16QAM	1	0	17.29	17.26	16.78	0.0431	0.0428	0.0383
Channel				20407	20525	20643	ERP(W)		
Frequency (MHz)				824.7	836.5	848.3	L	M	H
1.4	QPSK	1	0	17.93	17.86	17.56	0.0499	0.0491	0.0458
1.4	16QAM	1	0	17.32	17.29	16.70	0.0434	0.0431	0.0376

LTE Band 12:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				23060	23095	23130			
Frequency (MHz)				704	707.5	711	L	M	H
10	QPSK	1	0	20.29	20.24	20.29	0.0859	0.0849	0.0859
10	QPSK	1	5	20.16	20.12	20.12	0.0834	0.0826	0.0826
10	QPSK	3	0	20.31	20.20	20.24	0.0863	0.0841	0.0849
10	QPSK	3	3	20.05	20.12	20.11	0.0813	0.0826	0.0824
10	QPSK	6	0	19.61	19.59	19.64	0.0735	0.0731	0.0740
10	16QAM	1	0	20.32	20.28	20.36	0.0865	0.0857	0.0873
Channel				23035	23095	23155	ERP(W)		
Frequency (MHz)				701.5	707.5	713.5	L	M	H
5	QPSK	1	0	20.10	20.26	20.28	0.0822	0.0853	0.0857
5	16QAM	1	0	20.32	20.33	20.23	0.0865	0.0867	0.0847
Channel				23025	23095	23165	ERP(W)		
Frequency (MHz)				700.5	707.5	714.5	L	M	H
3	QPSK	1	0	18.26	18.02	18.27	0.0538	0.0509	0.0540
3	16QAM	1	0	17.34	17.20	17.29	0.0436	0.0422	0.0431
Channel				23017	23095	23173	ERP(W)		
Frequency (MHz)				699.7	707.5	715.3	L	M	H
1.4	QPSK	1	0	18.18	18.14	18.39	0.0528	0.0524	0.0555
1.4	16QAM	1	0	17.19	17.15	17.39	0.0421	0.0417	0.0441



LTE Band 13:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel					23230				
Frequency (MHz)					782		L	M	H
10	QPSK	1	0		20.27			0.0855	
10	QPSK	1	5		20.01			0.0805	
10	QPSK	3	0		20.04			0.0811	
10	QPSK	3	3		20.02			0.0807	
10	QPSK	6	0		19.78			0.0764	
10	16QAM	1	0		20.30			0.0861	
Channel				23205	23230	23255	ERP(W)		
Frequency (MHz)				779.5	782	784.5	L	M	H
5	QPSK	1	0	17.80	17.77	17.69	0.0484	0.0481	0.0472
5	16QAM	1	0	17.62	17.67	17.58	0.0465	0.0470	0.0460

LTE Band 25:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				26140	26365	26590			
Frequency (MHz)				1860	1882.5	1905	L	M	H
20	QPSK	1	0	19.84	19.87	19.81	0.1968	0.1982	0.1954
20	QPSK	1	5	19.72	19.77	19.63	0.1914	0.1936	0.1875
20	QPSK	3	0	19.70	19.84	19.65	0.1905	0.1968	0.1884
20	QPSK	3	3	19.65	19.75	19.59	0.1884	0.1928	0.1858
20	QPSK	6	0	19.69	19.80	19.80	0.1901	0.1950	0.1950
20	16QAM	1	0	20.13	20.18	20.09	0.2104	0.2128	0.2084
Channel				26115	26365	26615	EIRP(W)		
Frequency (MHz)				1857.5	1882.5	1907.5	L	M	H
15	QPSK	1	0	19.75	19.92	19.58	0.1928	0.2004	0.1854
15	16QAM	1	0	19.96	19.97	19.89	0.2023	0.2028	0.1991
Channel				26090	26365	26640	EIRP(W)		
Frequency (MHz)				1855	1882.5	1910	L	M	H
10	QPSK	1	0	19.64	19.87	19.62	0.1879	0.1982	0.1871
10	16QAM	1	0	19.93	20.11	19.80	0.2009	0.2094	0.1950
Channel				26065	26365	26665	EIRP(W)		
Frequency (MHz)				1852.5	1882.5	1912.5	L	M	H
5	QPSK	1	0	19.80	19.85	19.67	0.1950	0.1972	0.1892
5	16QAM	1	0	19.98	19.99	19.94	0.2032	0.2037	0.2014
Channel				26055	26365	26675	EIRP(W)		
Frequency (MHz)				1851.5	1882.5	1913.5	L	M	H
3	QPSK	1	0	18.02	18.00	17.93	0.1294	0.1288	0.1268
3	16QAM	1	0	17.10	17.08	16.91	0.1047	0.1042	0.1002
Channel				26047	26365	26683	EIRP(W)		
Frequency (MHz)				1850.7	1882.5	1914.3	L	M	H
1.4	QPSK	1	0	17.96	17.95	17.82	0.1276	0.1274	0.1236
1.4	16QAM	1	0	17.06	17.18	16.93	0.1038	0.1067	0.1007



LTE Band 26:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)			
Channel				26790	26765	26865	26965				
Frequency (MHz)				824	821.5	831.5	841.5	Straddle channel	L	M	H
15	QPSK	1	0	20.34	19.96	19.67	19.70	0.0869	0.0796	0.0745	0.0750
15	QPSK	1	5	20.06	19.78	19.49	19.56	0.0815	0.0764	0.0714	0.0726
15	QPSK	3	0	19.94	19.87	19.57	19.66	0.0793	0.0780	0.0728	0.0743
15	QPSK	3	3	20.03	19.80	19.51	19.57	0.0809	0.0767	0.0718	0.0728
15	QPSK	6	0	20.17	19.92	19.55	19.64	0.0836	0.0789	0.0724	0.0740
15	16QAM	1	0	20.10	20.21	19.84	19.88	0.0822	0.0843	0.0774	0.0782
Channel					26740	26865	26990		ERP(W)		
Frequency (MHz)					819	831.5	844		L	M	H
10	QPSK	1	0		19.79	19.86	20.21		0.0766	0.0778	0.0843
10	16QAM	1	0		20.04	19.87	20.14		0.0811	0.0780	0.0830
Channel					26715	26865	27015		ERP(W)		
Frequency (MHz)					816.5	831.5	846.5		L	M	H
5	QPSK	1	0		19.90	19.83	19.98		0.0785	0.0773	0.0800
5	16QAM	1	0		20.02	20.13	20.09		0.0807	0.0828	0.0820
Channel					26705	26865	27025		ERP(W)		
Frequency (MHz)					815.5	831.5	847.5		L	M	H
3	QPSK	1	0		18.16	17.92	18.22		0.0526	0.0498	0.0533
3	16QAM	1	0		17.59	17.25	17.57		0.0461	0.0427	0.0459
Channel					26697	26865	27033		ERP(W)		
Frequency (MHz)					814.7	831.5	848.3		L	M	H
1.4	QPSK	1	0		18.16	17.93	18.12		0.0526	0.0499	0.0521
1.4	16QAM	1	0		17.58	17.34	17.63		0.0460	0.0436	0.0466



LTE Band 66:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				132072	132322	132572			
Frequency (MHz)				1720	1745	1770	L	M	H
20	QPSK	1	0	19.22	19.14	18.94	0.1706	0.1675	0.1600
20	QPSK	1	5	19.08	18.98	18.78	0.1652	0.1614	0.1542
20	QPSK	3	0	19.32	19.36	18.89	0.1746	0.1762	0.1581
20	QPSK	3	3	19.34	19.28	18.79	0.1754	0.1730	0.1545
20	QPSK	6	0	19.39	19.39	18.87	0.1774	0.1774	0.1574
20	16QAM	1	0	19.46	19.32	19.20	0.1803	0.1746	0.1698
Channel				132047	132322	132597	EIRP(W)		
Frequency (MHz)				1717.5	1745	1772.5	L	M	H
15	QPSK	1	0	19.72	18.95	19.02	0.1914	0.1603	0.1629
15	16QAM	1	0	19.65	19.18	19.14	0.1884	0.1690	0.1675
Channel				132022	132322	132622	EIRP(W)		
Frequency (MHz)				1715	1745	1775	L	M	H
10	QPSK	1	0	19.31	19.22	18.93	0.1742	0.1706	0.1596
10	16QAM	1	0	19.72	19.53	19.25	0.1914	0.1832	0.1718
Channel				131997	132322	132647	EIRP(W)		
Frequency (MHz)				1712.5	1745	1777.5	L	M	H
5	QPSK	1	0	19.29	19.07	19.11	0.1734	0.1648	0.1663
5	16QAM	1	0	19.61	19.23	19.54	0.1866	0.1710	0.1837
Channel				131987	132322	132657	EIRP(W)		
Frequency (MHz)				1711.5	1745	1778.5	L	M	H
3	QPSK	1	0	17.37	17.08	17.48	0.1114	0.1042	0.1143
3	16QAM	1	0	16.48	16.22	16.77	0.0908	0.0855	0.0971
Channel				131979	132322	132665	EIRP(W)		
Frequency (MHz)				1710.7	1745	1779.3	L	M	H
1.4	QPSK	1	0	17.46	17.05	17.32	0.1138	0.1035	0.1102
1.4	16QAM	1	0	16.59	16.22	16.81	0.0931	0.0855	0.0979

LTE Band 85:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				134052	134092	134132			
Frequency (MHz)				703	707	711	L	M	H
10	QPSK	1	0	20.32	20.51	20.43	0.0865	0.0904	0.0887
10	QPSK	1	5	20.36	20.45	20.55	0.0873	0.0891	0.0912
10	QPSK	3	0	20.34	20.38	20.45	0.0869	0.0877	0.0891
10	QPSK	3	3	20.25	20.36	20.42	0.0851	0.0873	0.0885
10	QPSK	6	0	19.54	19.84	19.68	0.0723	0.0774	0.0746
10	16QAM	1	0	20.61	20.79	20.66	0.0925	0.0964	0.0935
Channel				134027	134092	134157	ERP(W)		
Frequency (MHz)				700.5	707	713.5	L	M	H
5	QPSK	1	0	20.31	20.45	20.71	0.0863	0.0891	0.0946
5	16QAM	1	0	20.56	20.73	20.92	0.0914	0.0951	0.0993



NB-IOT Cat NB2:

Band 2:

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				18601	18900	19199			
Frequency (MHz)				1850.1	1880	1909.9	L	M	H
3.75	BPSK	1	0	18.86	18.66	18.73	0.1570	0.1500	0.1524
3.75	BPSK	1	47	18.50	18.62	18.78	0.1445	0.1486	0.1542
3.75	QPSK	1	0	18.45	18.69	18.70	0.1429	0.1510	0.1514
3.75	QPSK	1	47	18.39	18.55	18.67	0.1409	0.1462	0.1503
15	BPSK	1	0	19.67	19.80	19.91	0.1892	0.1950	0.2000
15	BPSK	1	11	19.44	19.72	19.68	0.1795	0.1914	0.1897
15	QPSK	1	0	19.80	19.93	20.08	0.1950	0.2009	0.2080
15	QPSK	1	11	19.61	19.55	19.68	0.1866	0.1841	0.1897
15	QPSK	12	0	17.23	17.49	17.80	0.1079	0.1146	0.1230

Band 4:

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				19952	20175	20398			
Frequency (MHz)				1710.2	1732.5	1754.8	L	M	H
3.75	BPSK	1	0	20.05	19.95	20.02	0.2065	0.2018	0.2051
3.75	BPSK	1	47	20.04	19.84	20.06	0.2061	0.1968	0.2070
3.75	QPSK	1	0	19.95	19.82	20.05	0.2018	0.1959	0.2065
3.75	QPSK	1	47	19.96	19.83	20.03	0.2023	0.1963	0.2056
15	BPSK	1	0	20.06	19.54	20.08	0.2070	0.1837	0.2080
15	BPSK	1	11	20.04	19.56	20.11	0.2061	0.1845	0.2094
15	QPSK	1	0	20.11	19.62	20.15	0.2094	0.1871	0.2113
15	QPSK	1	11	20.09	19.60	20.13	0.2084	0.1862	0.2104
15	QPSK	12	0	17.84	17.62	17.84	0.1242	0.1180	0.1242

Band 5:

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				1	0	-1			
Frequency (MHz)				0.1	0	-0.1	L	M	H
3.75	BPSK	1	0	20.64	20.60	20.21	0.0931	0.0923	0.0843
3.75	BPSK	1	47	20.58	20.62	20.25	0.0918	0.0927	0.0851
3.75	QPSK	1	0	20.60	20.55	20.36	0.0923	0.0912	0.0873
3.75	QPSK	1	47	20.53	20.58	20.22	0.0908	0.0918	0.0845
15	BPSK	1	0	20.73	20.69	20.43	0.0951	0.0942	0.0887
15	BPSK	1	11	20.69	20.73	20.38	0.0942	0.0951	0.0877
15	QPSK	1	0	20.71	20.66	20.46	0.0946	0.0935	0.0893
15	QPSK	1	11	20.72	20.70	20.42	0.0948	0.0944	0.0885
15	QPSK	12	0	18.69	18.79	18.37	0.0594	0.0608	0.0552

**Band 12:**

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				23011	23095	23179			
Frequency (MHz)				699.1	707.5	715.9	L	M	H
3.75	BPSK	1	0	20.37	20.28	20.36	0.0875	0.0857	0.0873
3.75	BPSK	1	47	20.48	20.15	20.32	0.0897	0.0832	0.0865
3.75	QPSK	1	0	20.36	20.17	20.31	0.0873	0.0836	0.0863
3.75	QPSK	1	47	20.32	20.13	20.27	0.0865	0.0828	0.0855
15	BPSK	1	0	20.65	20.31	20.45	0.0933	0.0863	0.0891
15	BPSK	1	11	20.64	20.28	20.42	0.0931	0.0857	0.0885
15	QPSK	1	0	20.60	20.33	20.48	0.0923	0.0867	0.0897
15	QPSK	1	11	20.65	20.31	20.46	0.0933	0.0863	0.0893
15	QPSK	12	0	18.31	18.13	18.28	0.0545	0.0522	0.0541

Band 13:

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				1	0	-1			
Frequency (MHz)				0.1	0	-0.1	L	M	H
3.75	BPSK	1	0	20.43	20.39	20.29	0.0887	0.0879	0.0859
3.75	BPSK	1	47	20.48	20.34	20.33	0.0897	0.0869	0.0867
3.75	QPSK	1	0	20.45	20.36	20.30	0.0891	0.0873	0.0861
3.75	QPSK	1	47	20.44	20.41	20.35	0.0889	0.0883	0.0871
15	BPSK	1	0	20.38	20.33	20.39	0.0877	0.0867	0.0879
15	BPSK	1	11	20.36	20.33	20.36	0.0873	0.0867	0.0873
15	QPSK	1	0	20.42	20.37	20.42	0.0885	0.0875	0.0885
15	QPSK	1	11	20.39	20.34	20.39	0.0879	0.0869	0.0879
15	QPSK	12	0	18.43	18.33	18.38	0.0560	0.0547	0.0553

Band 25:

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				26041	26365	26689			
Frequency (MHz)				1850.1	1882.5	1914.9	L	M	H
3.75	BPSK	1	0	18.55	18.63	18.71	0.1462	0.1489	0.1517
3.75	BPSK	1	47	18.53	18.59	18.77	0.1455	0.1476	0.1538
3.75	QPSK	1	0	18.47	18.65	18.68	0.1435	0.1496	0.1507
3.75	QPSK	1	47	18.55	18.75	18.67	0.1462	0.1531	0.1503
15	BPSK	1	0	17.44	17.56	17.80	0.1132	0.1164	0.1230
15	BPSK	1	11	17.63	17.56	17.58	0.1183	0.1164	0.1169
15	QPSK	1	0	17.45	17.49	17.61	0.1135	0.1146	0.1178
15	QPSK	1	11	17.44	17.39	17.51	0.1132	0.1119	0.1151
15	QPSK	12	0	18.38	15.56	15.67	0.1406	0.0735	0.0753


Band 66:

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				131973	132322	132671			
Frequency (MHz)				1710.1	1745	1779.9	L	M	H
3.75	BPSK	1	0	19.69	19.45	19.76	0.1901	0.1799	0.1932
3.75	BPSK	1	47	19.65	19.54	19.71	0.1884	0.1837	0.1910
3.75	QPSK	1	0	19.63	19.43	19.74	0.1875	0.1791	0.1923
3.75	QPSK	1	47	19.66	19.51	19.70	0.1888	0.1824	0.1905
15	BPSK	1	0	19.84	19.26	19.93	0.1968	0.1722	0.2009
15	BPSK	1	11	19.82	19.28	19.94	0.1959	0.1730	0.2014
15	QPSK	1	0	19.86	19.29	19.98	0.1977	0.1734	0.2032
15	QPSK	1	11	19.83	19.27	19.96	0.1963	0.1726	0.2023
15	QPSK	12	0	17.56	17.34	17.61	0.1164	0.1107	0.1178

Band 85:

Sub-carrier Spacing (KHz)	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				134003	134082	134181			
Frequency (MHz)				698.1	706	715.9	L	M	H
3.75	BPSK	1	0	20.42	20.25	20.57	0.0885	0.0851	0.0916
3.75	BPSK	1	47	20.43	20.28	20.53	0.0887	0.0857	0.0908
3.75	QPSK	1	0	20.38	20.20	20.48	0.0877	0.0841	0.0897
3.75	QPSK	1	47	20.45	20.23	20.55	0.0891	0.0847	0.0912
15	BPSK	1	0	20.77	20.39	20.33	0.0959	0.0879	0.0867
15	BPSK	1	11	20.76	20.38	20.31	0.0957	0.0877	0.0863
15	QPSK	1	0	20.80	20.42	20.35	0.0966	0.0885	0.0871
15	QPSK	1	11	20.78	20.41	20.33	0.0962	0.0883	0.0867
15	QPSK	12	0	18.41	18.15	18.31	0.0557	0.0525	0.0545



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Carry Xu	Temperature :	23~25°C
		Relative Humidity :	41~42%

LTE Cat M1:

LTE Band 2 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3705	-19.35	-13	-6.35	-31.61	2.64	14.90	H
	5550	-28.25	-13	-15.25	-40.11	2.94	14.80	H
	7410	-47.77	-13	-34.77	-57.54	3.39	13.16	H
	9255	-40.09	-13	-27.09	-50.57	4.00	14.48	H
	3705	-20.08	-13	-7.08	-32.34	2.64	14.90	V
	5550	-28.52	-13	-15.52	-40.38	2.94	14.80	V
	7410	-44.51	-13	-31.51	-54.28	3.39	13.16	V
	9255	-39.10	-13	-26.10	-49.58	4.00	14.48	V
Middle	3735	-21.40	-13	-8.40	-33.66	2.64	14.90	H
	5610	-29.72	-13	-16.72	-41.58	2.94	14.80	H
	7485	-49.26	-13	-36.26	-59.03	3.39	13.16	H
	9360	-40.35	-13	-27.35	-50.83	4.00	14.48	H
	3750	-21.59	-13	-8.59	-33.85	2.64	14.90	V
	5610	-30.12	-13	-17.12	-41.98	2.94	14.80	V
	7485	-45.67	-13	-32.67	-55.44	3.39	13.16	V
	9360	-37.90	-13	-24.90	-48.38	4.00	14.48	V
Highest	3780	-23.80	-13	-10.80	-36.06	2.64	14.90	H
	5673	-29.87	-13	-16.87	-41.73	2.94	14.80	H
	7560	-49.96	-13	-36.96	-59.73	3.39	13.16	H
	9450	-40.60	-13	-27.60	-51.08	4.00	14.48	H
	3780	-24.18	-13	-11.18	-36.44	2.64	14.90	V
	5670	-30.53	-13	-17.53	-42.39	2.94	14.80	V
	7560	-46.23	-13	-33.23	-56.00	3.39	13.16	V
	9450	-39.59	-13	-26.59	-50.07	4.00	14.48	V

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



LTE Band 4 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-22.30	-13	-9.30	-33.04	2.604	13.34	H
	5130	-23.38	-13	-10.38	-33.89	3.011	13.52	H
	6840	-51.28	-13	-38.28	-61.48	3.271	13.47	H
	8550	-38.28	-13	-25.28	-45.25	5.527	12.5	H
	10275	-47.68	-13	-34.68	-54.54	6.038	12.9	H
	3420	-24.17	-13	-11.17	-34.91	2.604	13.34	V
	5130	-27.76	-13	-14.76	-38.27	3.011	13.52	V
	6840	-49.67	-13	-36.67	-59.87	3.271	13.47	V
	8550	-37.23	-13	-24.23	-44.20	5.527	12.50	V
	10275	-43.84	-13	-30.84	-50.70	6.038	12.90	V
Middle	3450	-19.01	-13	-6.01	-29.75	2.604	13.34	H
	5175	-23.01	-13	-10.01	-33.52	3.011	13.52	H
	6900	-50.45	-13	-37.45	-60.65	3.271	13.47	H
	8625	-37.49	-13	-24.49	-44.46	5.527	12.5	H
	10350	-45.58	-13	-32.58	-52.44	6.038	12.9	H
	3450	-23.87	-13	-10.87	-34.61	2.604	13.34	V
	5175	-26.07	-13	-13.07	-36.58	3.011	13.52	V
	6900	-48.99	-13	-35.99	-59.19	3.271	13.47	V
	8625	-37.66	-13	-24.66	-44.63	5.527	12.50	V
	10350	-44.31	-13	-31.31	-51.17	6.038	12.90	V
Highest	3465	-19.23	-13	-6.23	-29.97	2.604	13.34	H
	5205	-24.07	-13	-11.07	-34.58	3.011	13.52	H
	6945	-50.97	-13	-37.97	-61.17	3.271	13.47	H
	8685	-40.17	-13	-27.17	-47.14	5.527	12.5	H
	10425	-48.14	-13	-35.14	-55.00	6.038	12.9	H
	3465	-22.25	-13	-9.25	-32.99	2.604	13.34	V
	5205	-25.84	-13	-12.84	-36.35	3.011	13.52	V
	6945	-51.03	-13	-38.03	-61.23	3.271	13.47	V
	8685	-42.01	-13	-29.01	-48.98	5.527	12.50	V
	10425	-44.04	-13	-31.04	-50.90	6.038	12.90	V

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

LTE Band 5 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-40.66	-13	-27.66	-47.63	1.58	10.70	H
	2504	-52.34	-13	-39.34	-60.59	2.102	12.50	H
	3336	-57.33	-13	-44.33	-66.22	2.856	13.90	H
	1672	-37.98	-13	-24.98	-44.95	1.58	10.70	V
	2504	-55.38	-13	-42.38	-63.63	2.10	12.50	V
	3336	-56.83	-13	-43.83	-65.72	2.86	13.90	V

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

LTE Band 12 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1408	-20.29	-13	-7.29	-27.26	1.58	10.70	H
	2112	-38.77	-13	-25.77	-47.02	2.102	12.50	H
	2816	-41.72	-13	-28.72	-50.61	2.856	13.90	H
	3520	-42.89	-13	-29.86	-50.65	3.093	13.00	H
	1408	-20.50	-13	-7.50	-27.47	1.58	10.70	V
	2112	-36.37	-13	-23.37	-44.62	2.10	12.50	V
	2816	-36.84	-13	-23.84	-45.73	2.86	13.90	V
	3520	-41.61	-13	-28.61	-49.37	3.09	13.00	V

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

LTE Band 13 / 5MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1560	-44.20	-42.15	-2.05	-46.83	1.09	5.87	H
	2336	-52.66	-13	-39.66	-55.06	1.37	5.92	H
	3120	-56.70	-13	-43.70	-60.59	1.64	7.68	H
	1560	-46.38	-42.15	-4.23	-49.01	1.09	5.87	V
	2336	-53.01	-13	-40.01	-55.41	1.37	5.92	V
	3120	-55.14	-13	-42.14	-59.03	1.64	7.68	V

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

LTE Band 25 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3705	-18.43	-13	-5.43	-30.69	2.641	14.90	H
	5550	-27.65	-13	-14.65	-39.51	2.94	14.80	H
	7410	-46.76	-13	-33.76	-56.53	3.39	13.16	H
	9255	-39.83	-13	-26.83	-50.31	4.00	14.48	H
	3705	-21.55	-13	-8.55	-33.81	2.64	14.90	V
	5550	-30.70	-13	-17.70	-42.56	2.94	14.80	V
	7410	-47.26	-13	-34.26	-57.03	3.39	13.16	V
	9255	-38.38	-13	-25.38	-48.86	4.00	14.48	V
Middle	3750	-20.82	-13	-7.82	-33.08	2.64	14.90	H
	5625	-29.95	-13	-16.95	-41.81	2.94	14.80	H
	7500	-48.18	-13	-35.18	-57.95	3.39	13.16	H
	9375	-38.71	-13	-25.71	-49.19	4.00	14.48	H
	3750	-21.31	-13	-8.31	-33.57	2.64	14.90	V
	5625	-29.81	-13	-16.81	-41.67	2.94	14.80	V
	7500	-44.43	-13	-31.43	-54.20	3.39	13.16	V
	9375	-37.72	-13	-24.72	-48.20	4.00	14.48	V
Highest	3795	-23.84	-13	-10.84	-36.10	2.64	14.90	H



	5685	-29.72	-13	-16.72	-41.58	2.94	14.80	H
	7590	-46.26	-13	-33.26	-56.03	3.39	13.16	H
	9480	-42.15	-13	-29.15	-52.63	4.00	14.48	H
	3795	-24.52	-13	-11.52	-36.78	2.64	14.90	V
	5685	-32.25	-13	-19.25	-44.11	2.94	14.80	V
	7590	-45.28	-13	-32.28	-55.05	3.39	13.16	V
	9480	-37.66	-13	-24.66	-48.14	4.00	14.48	V

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

LTE Band 26 / 15MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1656	-42.32	-13	-29.32	-49.29	1.58	10.70	H
	2488	-54.00	-13	-41.00	-62.25	2.102	12.50	H
	3320	-57.74	-13	-44.74	-66.63	2.856	13.90	H
	1656	-35.30	-13	-22.30	-42.27	1.58	10.70	V
	2488	-53.92	-13	-40.92	-62.17	2.10	12.50	V
	3320	-57.71	-13	-44.71	-66.60	2.86	13.90	V

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

LTE Band 66 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-21.83	-13	-8.83	-32.57	2.604	13.34	H
	5130	-22.28	-13	-9.28	-32.79	3.011	13.52	H
	6840	-50.41	-13	-37.41	-60.61	3.271	13.47	H
	8550	-38.19	-13	-25.19	-45.16	5.527	12.5	H
	3420	-21.90	-13	-8.90	-32.64	2.604	13.34	V
	5130	-26.28	-13	-13.28	-36.79	3.011	13.52	V
	6840	-48.88	-13	-35.88	-59.08	3.271	13.47	V
	8550	-35.99	-13	-22.99	-42.96	5.527	12.50	V
Middle	3480	-18.43	-13	-5.43	-29.17	2.604	13.34	H
	5205	-23.23	-13	-10.23	-33.74	3.011	13.52	H
	6945	-49.96	-13	-36.96	-60.16	3.271	13.47	H
	8685	-37.78	-13	-24.78	-44.75	5.527	12.5	H
	3480	-21.62	-13	-8.62	-32.36	2.604	13.34	V
	5205	-24.87	-13	-11.87	-35.38	3.011	13.52	V
	6945	-47.14	-13	-34.14	-57.34	3.271	13.47	V
	8685	-37.23	-13	-24.23	-44.20	5.527	12.50	V
Highest	3525	-16.84	-13	-3.84	-27.58	2.604	13.34	H
	5280	-22.56	-13	-9.56	-33.07	3.011	13.52	H
	7050	-47.12	-13	-34.12	-57.32	3.271	13.47	H
	8805	-40.07	-13	-27.07	-47.04	5.527	12.5	H
	3525	-19.00	-13	-6.00	-29.74	2.604	13.34	V
	5280	-25.92	-13	-12.92	-36.43	3.011	13.52	V



	7050	-45.04	-13	-32.04	-55.24	3.271	13.47	V
	8805	-38.27	-13	-25.27	-45.24	5.527	12.50	V

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

LTE Band 85 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1408	-24.29	-13	-11.29	-35.03	2.604	13.34	H
	2104	-40.27	-13	-27.27	-50.78	3.011	13.52	H
	2808	-44.43	-13	-31.43	-54.63	3.271	13.47	H
	3512	-49.23	-13	-36.23	-56.20	5.527	12.5	H
	1408	-20.87	-13	-7.87	-31.61	2.604	13.34	V
	2104	-38.26	-13	-25.26	-48.77	3.011	13.52	V
	2808	-43.17	-13	-30.17	-53.37	3.271	13.47	V
	3512	-45.88	-13	-32.88	-52.85	5.527	12.50	V

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



NB-IOT Cat NB2:

Band 2 / 15kHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3705	-20.43	-13	-7.43	-32.69	2.64	14.90	H
	5550	-37.35	-13	-24.35	-49.21	2.94	14.80	H
	7404.36	-52.47	-13	-39.47	-62.24	3.39	13.16	H
	9255	-46.63	-13	-33.63	-57.11	4.00	14.48	H
	3705	-19.13	-13	-6.13	-31.39	2.64	14.90	V
	5550	-35.39	-13	-22.39	-47.25	2.94	14.80	V
	7404.36	-52.47	-13	-39.47	-62.24	3.39	13.16	V
	9255	-43.25	-13	-30.25	-53.73	4.00	14.48	V
Middle	3735	-23.13	-13	-10.13	-35.39	2.64	14.90	H
	5613.27	-40.84	-13	-27.84	-52.70	2.94	14.80	H
	7484.36	-52.30	-13	-39.30	-62.07	3.39	13.16	H
	3735	-23.25	-13	-10.25	-35.51	2.64	14.90	V
	5610	-42.01	-13	-29.01	-53.87	2.94	14.80	V
	7484.36	-50.99	-13	-37.99	-60.76	3.39	13.16	V
Highest	3780	-20.98	-13	-7.98	-33.24	2.64	14.90	H
	5670	-35.22	-13	-22.22	-47.08	2.94	14.80	H
	7564.36	-51.76	-13	-38.76	-61.53	3.39	13.16	H
	9450	-46.11	-13	-33.11	-56.59	4.00	14.48	H
	3780	-19.37	-13	-6.37	-31.63	2.64	14.90	V
	5673.27	-35.29	-13	-22.29	-47.15	2.94	14.80	V
	7564.26	-49.85	-13	-36.85	-59.62	3.39	13.16	V
	9450	-43.47	-13	-30.47	-53.95	4.00	14.48	V

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



Band 4 / 15kHz / BPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-21.36	-13	-8.36	-32.10	2.604	13.34	H
	5130	-22.91	-13	-9.91	-33.42	3.011	13.52	H
	6840	-45.97	-13	-32.97	-56.17	3.271	13.47	H
	8550	-37.34	-13	-24.34	-44.31	5.527	12.5	H
	10260	-44.07	-13	-31.07	-50.93	6.038	12.9	H
	3420	-22.31	-13	-9.31	-33.05	2.604	13.34	V
	5130	-22.87	-13	-9.87	-33.38	3.011	13.52	V
	6840	-43.61	-13	-30.61	-53.81	3.271	13.47	V
	8550	-35.57	-13	-22.57	-42.54	5.527	12.50	V
	10260	-41.65	-13	-28.65	-48.51	6.038	12.90	V
Middle	3450	-20.09	-13	-7.09	-30.83	2.604	13.34	H
	5170.77	-27.36	-13	-14.36	-37.87	3.011	13.52	H
	6885	-45.28	-13	-32.28	-55.48	3.271	13.47	H
	8610	-37.58	-13	-24.58	-44.55	5.527	12.5	H
	10335	-43.99	-13	-30.99	-50.85	6.038	12.9	H
	3450	-21.48	-13	-8.48	-32.22	2.604	13.34	V
	5170.77	-28.21	-13	-15.21	-38.72	3.011	13.52	V
	6885	-43.98	-13	-30.98	-54.18	3.271	13.47	V
	8610	-34.38	-13	-21.38	-41.35	5.527	12.50	V
	10335	-41.37	-13	-28.37	-48.23	6.038	12.90	V
Highest	3465	-20.75	-13	-7.75	-31.49	2.604	13.34	H
	5205	-25.96	-13	-12.96	-36.47	3.011	13.52	H
	6945	-46.18	-13	-33.18	-56.38	3.271	13.47	H
	8670	-38.63	-13	-25.63	-45.60	5.527	12.5	H
	10410	-43.71	-13	-30.71	-50.57	6.038	12.9	H
	3465	-21.16	-13	-8.16	-31.90	2.604	13.34	V
	5205	-23.48	-13	-10.48	-33.99	3.011	13.52	V
	6945	-46.25	-13	-33.25	-56.45	3.271	13.47	V
	8670	-35.97	-13	-22.97	-42.94	5.527	12.50	V
	10410	-39.87	-13	-26.87	-46.73	6.038	12.90	V

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



Band 5 / 15kHz / BPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-42.79	-13	-29.79	-49.76	1.58	10.70	H
	2504	-57.11	-13	-44.11	-65.36	2.102	12.50	H
	3336	-54.55	-13	-41.55	-63.44	2.856	13.90	H
	1664	-41.29	-13	-28.29	-48.26	1.58	10.70	V
	2503.02	-55.43	-13	-42.43	-63.68	2.10	12.50	V
	3337.36	-54.62	-13	-41.62	-63.51	2.86	13.90	V

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

Band 12 / 15kHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1408	-27.55	-13	-14.55	-34.52	1.58	10.70	H
	2109.27	-37.06	-13	-24.06	-45.31	2.102	12.50	H
	2808	-39.79	-13	-26.79	-48.68	2.856	13.90	H
	3512	-47.98	-13	13.00	-55.74	3.093	13.00	H
	4216	-47.96	-13	13.00	-56.73	3.178	14.10	H
	1408	-24.37	-13	-11.37	-31.34	1.58	10.70	V
	2109.27	-36.65	-13	-23.65	-44.90	2.10	12.50	V
	2808	-38.23	-13	-25.23	-47.12	2.86	13.90	V
	3512	-47.42	-13	-34.42	-55.18	3.09	13.00	V
	4216	-46.36	-13	-33.36	-55.13	3.18	14.10	V

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

Band 13 / 3.75kHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1560	-49.98	-42.15	-7.83	-52.61	1.09	5.87	H
	2339.52	-52.32	-13	-39.32	-54.72	1.37	5.92	H
	3119.36	-54.04	-13	-41.04	-57.93	1.64	7.68	H
	1560	-52.07	-42.15	-9.92	-54.70	1.09	5.87	V
	2336	-48.21	-13	-35.21	-50.61	1.37	5.92	V
	3120	-56.04	-13	-43.04	-59.93	1.64	7.68	V

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



Band 13 / 15kHz / BPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1552	-48.75	-13	-35.75	-51.38	1.09	5.87	H
	2328	-46.56	-13	-33.56	-48.96	1.37	5.92	H
	3110.36	-54.29	-13	-41.29	-58.18	1.64	7.68	H
	1552	-46.56	-13	-33.56	-49.19	1.09	5.87	V
	2328	-48.76	-13	-35.76	-51.16	1.37	5.92	V
	3110.36	-55.79	-13	-42.79	-59.68	1.64	7.68	V

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

Band 25 / 3.75kHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3705	-16.11	-13	-3.11	-28.37	2.641	14.90	H
	5550	-31.87	-13	-18.87	-43.73	2.94	14.80	H
	7410	-51.82	-13	-38.82	-61.59	3.39	13.16	H
	9255	-37.57	-13	-24.57	-48.05	4.00	14.48	H
	3705	-17.27	-13	-4.27	-29.53	2.64	14.90	V
	5550	-31.35	-13	-18.35	-43.21	2.94	14.80	V
	7404.36	-51.87	-13	-38.87	-61.64	3.39	13.16	V
	9255	-37.74	-13	-24.74	-48.22	4.00	14.48	V
Middle	3750	-19.63	-13	-6.63	-31.89	2.64	14.90	H
	5610	-33.78	-13	-20.78	-45.64	2.94	14.80	H
	7494.36	-51.67	-13	-38.67	-61.44	3.39	13.16	H
	9360	-44.06	-13	-31.06	-54.54	4.00	14.48	H
	3750	-20.59	-13	-7.59	-32.85	2.64	14.90	V
	5625	-36.92	-13	-23.92	-48.78	2.94	14.80	V
	7494.36	-51.70	-13	-38.70	-61.47	3.39	13.16	V
	9360	-43.37	-13	-30.37	-53.85	4.00	14.48	V
Highest	3795	-21.53	-13	-8.53	-33.79	2.64	14.90	H
	5685	-29.91	-13	-16.91	-41.77	2.94	14.80	H
	7584.36	-51.64	-13	-38.64	-61.41	3.39	13.16	H
	9480	-44.39	-13	-31.39	-54.87	4.00	14.48	H
	3795	-17.54	-13	-4.54	-29.80	2.64	14.90	V
	5685	-34.30	-13	-21.30	-46.16	2.94	14.80	V
	7584.36	-51.88	-13	-38.88	-61.65	3.39	13.16	V
	9480.45	-41.36	-13	-28.36	-51.84	4.00	14.48	V

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



Band 66 / 3.75kHz / BPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-21.30	-13	-8.30	-32.04	2.604	13.34	H
	5130	-22.62	-13	-9.62	-33.13	3.011	13.52	H
	6840	-47.13	-13	-34.13	-57.33	3.271	13.47	H
	8550	-38.44	-13	-25.44	-45.41	5.527	12.5	H
	10260	-44.26	-13	-31.26	-51.12	6.038	12.9	H
	3420	-22.84	-13	-9.84	-33.58	2.604	13.34	V
	5130	-23.82	-13	-10.82	-34.33	3.011	13.52	V
	6840	-45.32	-13	-32.32	-55.52	3.271	13.47	V
	8550	-34.31	-13	-21.31	-41.28	5.527	12.50	V
	10260	-41.06	-13	-28.06	-47.92	6.038	12.90	V
Middle	3465	-19.45	-13	-6.45	-30.19	2.604	13.34	H
	5205	-26.05	-13	-13.05	-36.56	3.011	13.52	H
	6945	-44.75	-13	-31.75	-54.95	3.271	13.47	H
	8670	-39.00	-13	-26.00	-45.97	5.527	12.5	H
	10410	-44.18	-13	-31.18	-51.04	6.038	12.9	H
	3465	-17.04	-13	-4.04	-27.78	2.604	13.34	V
	5205	-26.75	-13	-13.75	-37.26	3.011	13.52	V
	6945	-44.19	-13	-31.19	-54.39	3.271	13.47	V
	8670	-35.28	-13	-22.28	-42.25	5.527	12.50	V
	10410	-41.24	-13	-28.24	-48.10	6.038	12.90	V
Highest	3525	-17.22	-13	-4.22	-27.96	2.604	13.34	H
	5280	-21.78	-13	-8.78	-32.29	3.011	13.52	H
	7035	-42.59	-13	-29.59	-52.79	3.271	13.47	H
	8805	-38.69	-13	-25.69	-45.66	5.527	12.5	H
	10560	-45.68	-13	-32.68	-52.54	6.038	12.9	H
	3525	-16.52	-13	-3.52	-27.26	2.604	13.34	V
	5280	-24.24	-13	-11.24	-34.75	3.011	13.52	V
	7035	-41.55	-13	-28.55	-51.75	3.271	13.47	V
	8805	-33.72	-13	-20.72	-40.69	5.527	12.50	V
	10560	-42.72	-13	-29.72	-49.58	6.038	12.90	V

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



Band 85 / 15kHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1408	-29.79	-13	-16.79	-36.76	1.58	10.70	H
	2104	-37.61	-13	-24.61	-45.86	2.102	12.50	H
	2808	-39.57	-13	-26.57	-48.46	2.856	13.90	H
	3512	-48.86	-13	-35.86	-57.32	2.689	13.30	H
	4216	-48.04	-13	-35.04	-55.80	3.093	13.00	H
	1408	-25.58	-13	-12.58	-32.55	1.58	10.70	V
	2104	-31.29	-13	-18.29	-39.54	2.10	12.50	V
	2808	-39.90	-13	-26.90	-48.79	2.86	13.90	V
	3512	-45.33	-13	-32.33	-53.79	2.69	13.30	V
	4215.54	-48.41	-13	-35.41	-56.17	3.09	13.00	V

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