



# FCC RADIO TEST REPORT

**FCC ID** : LHJ-FE5NA0010  
**Equipment** : FE5NA0010, FE5NA0011  
**Brand Name** : Continental  
**Model Name** : FE5NA0010, FE5NA0011  
**Applicant** : Continental Automotive Systems, Inc.  
21440 W Lake Cook Rd., Deer Park, IL 60010, USA  
**Manufacturer** : Continental Automotive Systems, Inc.  
21440 W Lake Cook Rd., Deer Park, IL 60010, USA  
**Standard** : FCC 47 CFR Part 2, 22(H), 24(E), 27

The product was received on Nov. 22, 2022 and testing was performed from Jan. 17, 2023 to Mar. 23, 2023. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

*Louis Wu*

Approved by: Louis Wu

**Sporton International Inc. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§22.913 (a)(5)	Effective Radiated Power (Band 5)	Pass	
	§27.50 (b)(10) §27.50 (c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 71)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (Band 2)(Band 7)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)		
-	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	-	See Note
-	§2.1049	Occupied Bandwidth	-	See Note
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (c)(2)(4) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 66) (Band 71)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (Band 7)		
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (c)(2) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 66) (Band 71)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (Band 7)		
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	-	See Note



Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
4.2	§2.1053 §22.917 (a) §24.238 (a) §27.53 (c)(2) §27.53 (f) §27.53 (g) §27.53 (h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 66) (Band 71)	Pass	10.47 dB under the limit at 10122.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (Band 7)		

**Note:**

- For host device, Radiated Spurious Emission, Equivalent Isotropic Radiated Power and Effective Radiated Power are verified and complies with the limit in this test report.
- For host device, the Conducted Output Power is no difference after compared to module (Model: FE5NA0010, FE5NA0011).

**Conformity Assessment Condition:**

- 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/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
- Please refer to the section "Uncertainty of Evaluation" for 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.

**Reviewed by: Yun Huang**

**Report Producer: Lucy Wu**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	FE5NA0010, FE5NA0011
Brand Name	Continental
Model Name	FE5NA0010, FE5NA0011
FCC ID	LHJ-FE5NA0010
Installed into the Host	Equipment name: G12N510G1, G12N500G1 Brand name: Continental Model name: G12N510G1, G12N500G1
EUT supports Radios application	WCDMA/HSPA/LTE/5G NR/GNSS
EUT Stage	Identical Prototype

Sample Information			
Sample	TA-code	L2/L5 GNSS	Band Difference
1	FE5NA0010	Support	/
2	FE5NA0011	Not Support	BOM change: depopulated passive components from the GNSS RF front-end

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

## 1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Tx Frequency	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 66: 1710.7 MHz ~ 1754.3 MHz LTE Band 71: 665.5 MHz ~ 695.5 MHz
Rx Frequency	LTE Band 2: 1930.7 MHz ~ 1989.3 MHz LTE Band 4: 2110.7 MHz ~ 2154.3 MHz LTE Band 5: 869.7 MHz ~ 893.3 MHz LTE Band 7: 2622.5 MHz ~ 2687.5 MHz LTE Band 12: 729.7 MHz ~ 745.3 MHz LTE Band 13: 748.5 MHz ~ 753.5 MHz LTE Band 66: 2110.7 MHz ~ 2154.3 MHz LTE Band 71: 619.5 MHz ~ 649.5 MHz



Product Specification is subject to this standard	
<b>Bandwidth</b>	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 7: 5MHz / 10MHz / 15MHz / 20MHz LTE Band 12: 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13: 5MHz / 10MHz LTE Band 66: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 71: 5MHz / 10MHz / 15MHz / 20MHz
<b>Maximum Output Power to Antenna</b>	LTE Band 2 : 22.44 dBm LTE Band 4 : 22.61 dBm LTE Band 5 : 22.81 dBm LTE Band 5B : 22.90 dBm LTE Band 7 : 22.52 dBm LTE Band 7C : 23.29 dBm LTE Band 12 : 22.94 dBm LTE Band 13 : 22.97 dBm LTE Band 66 : 22.80 dBm LTE Band 66B : 23.96 dBm LTE Band 66C : 23.14 dBm LTE Band 71 : 22.92 dBm
<b>Antenna Type / Gain</b>	<b>&lt;Internal Antenna&gt;: TCP Antenna</b> LTE Band 2 : 5.15 dBi LTE Band 4 : 4.86 dBi LTE Band 5 : 4.69 dBi LTE Band 7 : 6.70 dBi LTE Band 12 : 0.05 dBi LTE Band 13 : 1.92 dBi LTE Band 66 : 4.86 dBi LTE Band 71 : 0.06 dBi  <b>&lt;External Antenna&gt;: External Sharkfin Antenna + XM + Dual GNSS +5G</b> LTE Band 2 : 3.50 dBi LTE Band 4 : 2.60 dBi LTE Band 5 : 4.00 dBi LTE Band 7 : 6.10 dBi LTE Band 12 : 1.30 dBi LTE Band 13 : 3.50 dBi LTE Band 66 : 2.60 dBi LTE Band 71 : 1.70 dBi
<b>Type of Modulation</b>	QPSK / 16QAM / 64QAM

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

### 1.3 Modification of EUT

No modifications made to the EUT during the testing.



### 1.4 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	<b>Sporton Site No.</b> TH03-HY
Test Engineer	Cotty Hsu and Luffy Lim
Temperature (°C )	22.1~22.8 °C
Relative Humidity (%)	53~55 %

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	<b>Sporton Site No.</b> 03CH12-HY (TAF Code: 3786)
Test Engineer	Jack Cheng, Wilson Wu, Jesse Fan and Tim Lee
Temperature (°C )	20~25
Relative Humidity (%)	50~60
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

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

FCC Designation No.: TW1190 and TW3786

### 1.5 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.

**Remark:**

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.





## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

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

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	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	v
	7	-	-	v	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	v
	13	-	-	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	v
	71	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
ERP / E.I.R.P	2	v	v	v	v	v	v	v	v	v	Max. Power					
	4	v	v	v	v	v	v	v	v	v						
	5	v	v	v	v	-	-	v	v	v						
	7	-	-	v	v	v	v	v	v	v						
	12	v	v	v	v	-	-	v	v	v						
	13	-	-	v	v	-	-	v	v	v						
	66	v	v	v	v	v	v	v	v	v						
	71	-	-	v	v	v	v	v	v	v						
Radiated Spurious Emission	2			v				v			v			v	v	v
	4				v			v			v			v	v	v
	5				v	-	-	v			v			v	v	v
	7	-	-		v			v			v			v	v	v
	12				v	-	-	v			v			v	v	v
	13	-	-	v		-	-	v			v			v	v	v
	66	v						v			v			v	v	v
	71	-	-		v			v			v			v	v	v
Remark	<ol style="list-style-type: none"> <li>The mark "v" means that this configuration is chosen for testing</li> <li>The mark "-" means that this bandwidth is not supported.</li> <li>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.</li> <li>All the radiated test cases were performed with Sample 1.</li> </ol>															

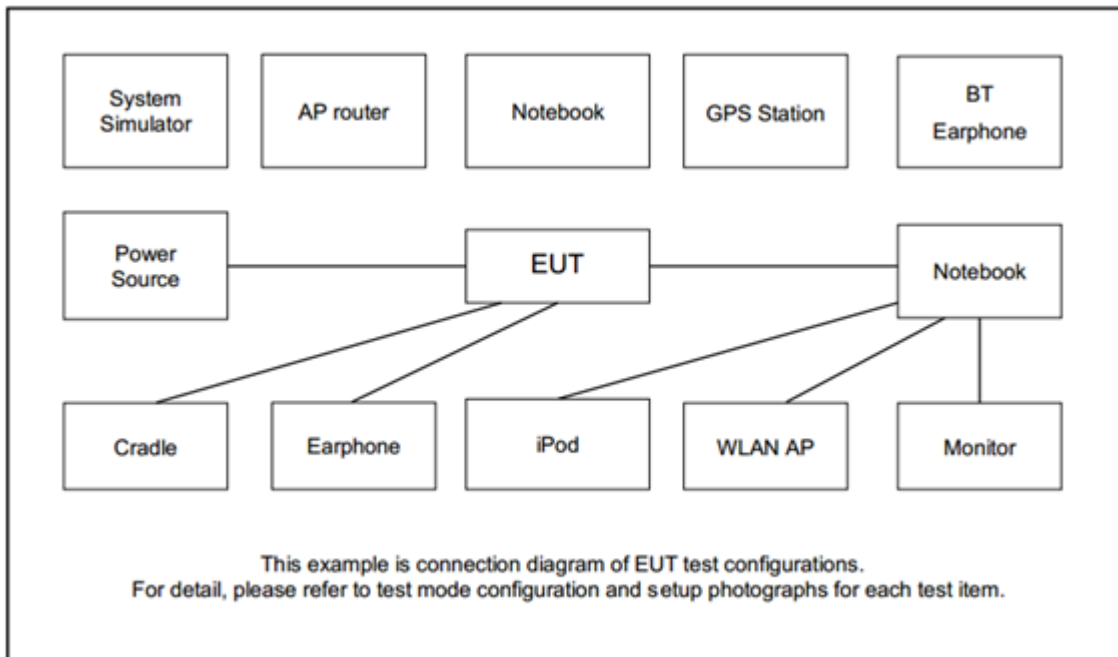


Test Items	Band	Bandwidth (MHz)					Modulation			RB #			Test Channel			
		3+5	5+3	5+10	10+5	10+10	QPSK	16QAM	64QAM	1	Half	Full	L	M	H	
Max. Output Power	5B_CA	v	v	v	v	v	v	v	v	v				v	v	v
E.R.P.	5B_CA	v	v	v	v	v	v	v	v	Max. Power						
Radiated Spurious Emission	5B_CA		v				v			v			v	v	v	
Remark	<ol style="list-style-type: none"> <li>The mark "v" means that this configuration is chosen for testing</li> <li>The mark "-" means that this bandwidth is not supported.</li> <li>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.</li> <li>All the radiated test cases were performed with Sample 1.</li> </ol>															

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel			
		5+5	5+10	10+5	5+15	15+5	10+10	QPSK	16QAM	64QAM	1	Half	Full	L	M	H	
Max. Output Power	66B_CA	v	v	v	v	v	v	v	v	v	v				v	v	v
E.I.R.P.	66B_CA	v	v	v	v	v	v	v	v	v	Max. Power						
Radiated Spurious Emission	66B_CA		v					v			v			v	v	v	
Remark	<ol style="list-style-type: none"> <li>The mark "v" means that this configuration is chosen for testing</li> <li>The mark "-" means that this bandwidth is not supported.</li> <li>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.</li> <li>All the radiated test cases were performed with Sample 1.</li> </ol>																

Test Items	Band	Bandwidth (MHz)										Modulation			RB #			Test Channel		
		20+20	20+15	15+20	20+10	10+20	20+5	5+20	15+15	15+10	10+15	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v			v	v	v
	66C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v			v	v
E.I.R.P	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	Max. Power					
	66C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v						
Radiated Spurious Emission	7C_CA						-	-		v	-	v			v			v	v	v
	66C_CA							v				v			v			v	v	v
Remark	<ol style="list-style-type: none"> <li>The mark "v" means that this configuration is chosen for testing</li> <li>The mark "-" means that this bandwidth is not supported.</li> <li>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.</li> <li>All the radiated test cases were performed with Sample 1.</li> </ol>																			

## 2.2 Connection Diagram of Test System





### 2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Sharkfin Antenna	Continental	86783279	N/A	N/A	Unshielded, 1.8 m
2.	Metal Plate	N/A	N/A	N/A	N/A	Unshielded, 1.8 m
3.	Adapter	TePoo	PT-WC-03	N/A	N/A	N/A
4.	Teddy Jr Load Box	Continental	N/A	N/A	N/A	N/A
5.	System Simulator	Anritsu	MT8821C	N/A	N/A	N/A

### 2.4 Frequency List of Low/Middle/High Channels

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

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



<b>LTE Band 5 Channel and Frequency List</b>				
<b>BW [MHz]</b>	<b>Channel/Frequency(MHz)</b>	<b>Lowest</b>	<b>Middle</b>	<b>Highest</b>
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

<b>LTE Band 7 Channel and Frequency List</b>				
<b>BW [MHz]</b>	<b>Channel/Frequency(MHz)</b>	<b>Lowest</b>	<b>Middle</b>	<b>Highest</b>
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

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



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

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

LTE Band 71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	133222	133297	133372
	Frequency	673.0	680.5	688.0
15	Channel	133197	133297	133397
	Frequency	670.5	680.5	690.5
10	Channel	133172	133297	133422
	Frequency	668.0	680.5	693.0
5	Channel	133147	133297	133447
	Frequency	665.5	680.5	695.5



LTE Band 5B Channel and Frequency List_CA					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
3 + 5	PCC	Channel	20416	20501	20586
		Frequency	825.6	834.1	842.6
	SCC	Channel	20455	20540	20625
		Frequency	829.5	838.0	846.5
5 + 3	PCC	Channel	20425	20510	20595
		Frequency	826.5	835.0	843.5
	SCC	Channel	20464	20549	20634
		Frequency	830.4	838.9	847.4
5 + 10	PCC	Channel	20428	20478	20528
		Frequency	826.8	831.8	836.8
	SCC	Channel	20500	20550	20600
		Frequency	834.0	839.0	844.0
10 + 5	PCC	Channel	20450	20500	20550
		Frequency	829.0	834.0	839.0
	SCC	Channel	20522	20572	20622
		Frequency	836.2	841.2	846.2
10 + 10	PCC	Channel	20450	20476	20501
		Frequency	829.0	831.6	834.1
	SCC	Channel	20549	20575	20600
		Frequency	838.9	841.5	844.0



LTE Band 7C Channel and Frequency List_CA					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	20850	21001	21152
		Frequency	2510.0	2525.1	2540.2
	SCC	Channel	21048	21199	21350
		Frequency	2529.8	2544.9	2560.0
20 + 15	PCC	Channel	20850	21026	21201
		Frequency	2510.0	2527.6	2545.1
	SCC	Channel	21021	21197	21372
		Frequency	2527.1	2544.7	2562.2
15 + 20	PCC	Channel	20828	21003	21179
		Frequency	2507.8	2525.3	2542.9
	SCC	Channel	20999	21174	21350
		Frequency	2524.9	2542.4	2560.0
20 + 10	PCC	Channel	20850	21051	21251
		Frequency	2510.0	2530.1	2550.1
	SCC	Channel	20994	21195	21395
		Frequency	2524.4	2544.5	2564.5
10 + 20	PCC	Channel	20805	21006	21206
		Frequency	2505.5	2525.6	2545.6
	SCC	Channel	20949	21150	21350
		Frequency	2519.9	2540.0	2560.0
15 + 15	PCC	Channel	20825	21025	21225
		Frequency	2507.5	2527.5	2547.5
	SCC	Channel	20975	21175	21375
		Frequency	2522.5	2542.5	2562.5
15 + 10	PCC	Channel	20825	21051	21277
		Frequency	2507.5	2530.1	2552.7
	SCC	Channel	20945	21171	21397
		Frequency	2519.5	2542.1	2564.7





LTE Band 66B Channel and Frequency List_CA					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
5 + 5	PCC	Channel	131997	132398	132599
		Frequency	1712.5	1752.6	1772.7
	SCC	Channel	132045	132446	132647
		Frequency	1717.3	1757.4	1777.5
5 + 10	PCC	Channel	132000	132375	132550
		Frequency	1712.8	1750.3	1767.8
	SCC	Channel	132072	132447	132622
		Frequency	1720.0	1757.5	1775.0
10 + 5	PCC	Channel	132022	132397	132572
		Frequency	1715.0	1752.5	1770.0
	SCC	Channel	132094	132469	132644
		Frequency	1722.2	1759.7	1777.2
5 + 15	PCC	Channel	132002	132353	132504
		Frequency	1713.0	1748.1	1763.2
	SCC	Channel	132095	132446	132597
		Frequency	1722.3	1757.4	1772.5
15 + 5	PCC	Channel	132047	132398	132549
		Frequency	1717.5	1752.6	1767.7
	SCC	Channel	132140	132491	132642
		Frequency	1726.8	1761.9	1777.0
10 + 10	PCC	Channel	132022	132373	132523
		Frequency	1715.0	1750.1	1765.1
	SCC	Channel	132121	132472	132622
		Frequency	1724.9	1760.0	1775.0



LTE Band 66C Channel and Frequency List_CA					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
10 + 15	PCC	Channel	132025	132351	132477
		Frequency	1715.3	1747.9	1760.5
	SCC	Channel	132145	132471	132597
		Frequency	1727.3	1759.9	1772.5
15 + 10	PCC	Channel	132047	132373	132499
		Frequency	1717.5	1750.1	1762.7
	SCC	Channel	132167	132493	132619
		Frequency	1729.5	1762.1	1774.7
10 + 20	PCC	Channel	132027	132328	132428
		Frequency	1715.5	1745.6	1755.6
	SCC	Channel	132171	132472	132572
		Frequency	1729.9	1760.0	1770.0
20 + 10	PCC	Channel	132072	132373	132473
		Frequency	1720.0	1750.1	1760.1
	SCC	Channel	132216	132517	132617
		Frequency	1734.4	1764.5	1774.5
15 + 15	PCC	Channel	132047	132347	132447
		Frequency	1717.5	1747.5	1757.5
	SCC	Channel	132197	132497	132597
		Frequency	1732.5	1762.5	1772.5
15 + 20	PCC	Channel	132050	132325	132401
		Frequency	1717.8	1745.3	1752.9
	SCC	Channel	132221	132496	132572
		Frequency	1734.9	1762.4	1770.0
20 + 15	PCC	Channel	132072	132348	132423
		Frequency	1720.0	1747.6	1755.1
	SCC	Channel	132243	132519	132594
		Frequency	1737.1	1764.7	1772.2
20 + 5	PCC	Channel	132072	132397	132522
		Frequency	1720.0	1752.5	1765.0
	SCC	Channel	132189	132514	132639
		Frequency	1731.7	1764.2	1776.7



LTE Band 66C Channel and Frequency List_CA					
5 + 20	PCC	Channel	132005	132330	132455
		Frequency	1713.3	1745.8	1758.3
	SCC	Channel	132122	132447	132572
		Frequency	1725.0	1757.5	1770.0
20 + 20	PCC	Channel	132072	132323	132374
		Frequency	1720.0	1745.1	1750.2
	SCC	Channel	132270	132521	132572
		Frequency	1739.8	1764.9	1770.0

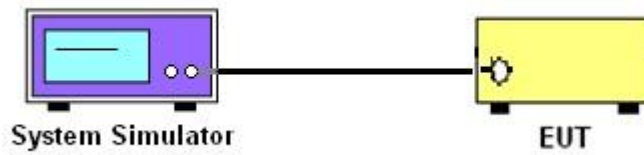
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.1 Test Setup

##### 3.1.2 Conducted Output Power



##### 3.1.3 Test Result of Conducted Test

Please refer to Appendix A.



## **3.2 Conducted Output Power and ERP/EIRP**

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

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

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

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12 and Band 13 and Band 71

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 7

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

According to KDB 412172 D01 Power Approach,

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

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

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

### **3.2.2 Test Procedures**

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

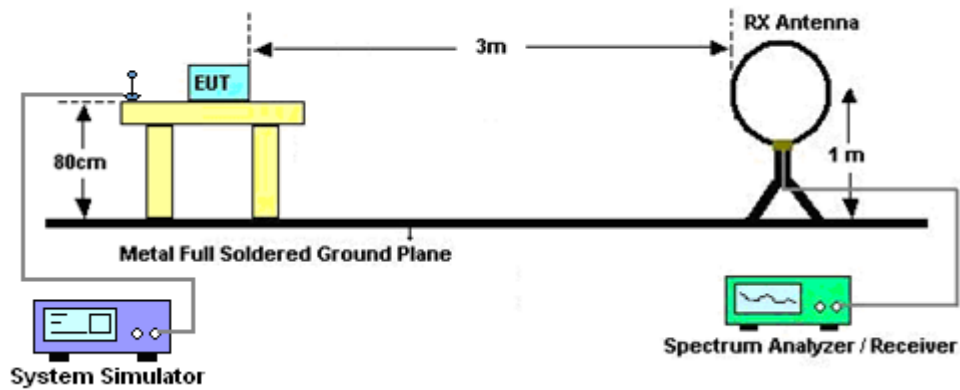
## 4 Radiated Test Items

### 4.1 Measuring Instruments

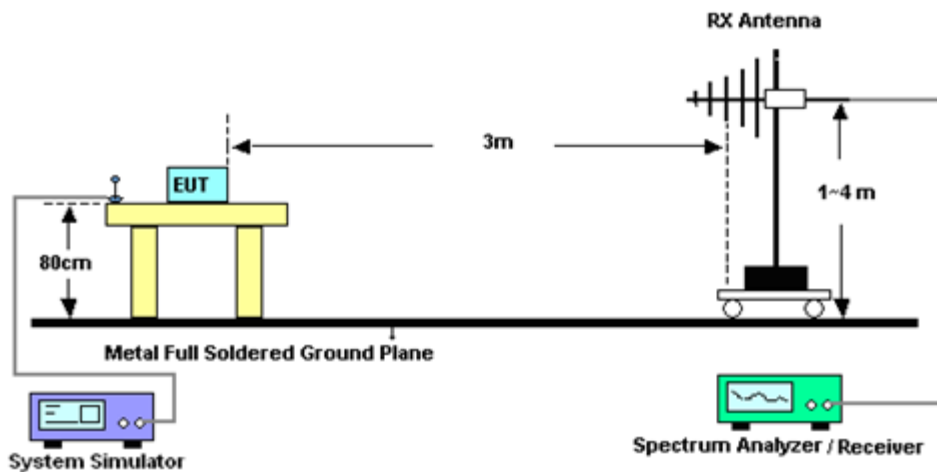
See list of measuring instruments of this test report.

#### 4.1.1 Test Setup

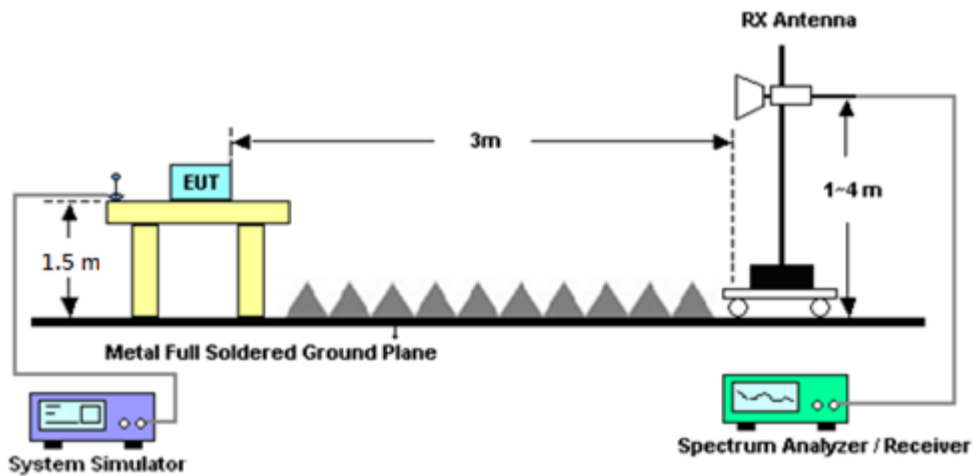
For radiated test below 30MHz



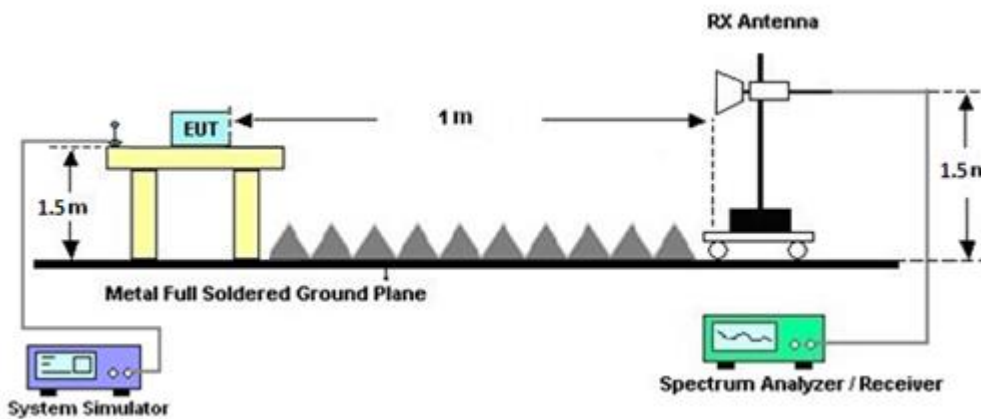
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



### 4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

**Note:**

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

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



## 4.2 Radiated Spurious Emission Measurement

### 4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For LTE Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

For LTE Band 13

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

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

### 4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)

For LTE Band 7

The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)

EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

ERP (dBm) = EIRP - 2.15





## 5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Feb. 14, 2023~ Mar. 21, 2023	Sep. 19, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Nov. 10, 2022	Feb. 14, 2023~ Mar. 21, 2023	Nov. 09, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1GHz~18GHz	Aug. 09, 2022	Feb. 14, 2023~ Mar. 21, 2023	Aug. 08, 2023	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz-40GHz	Nov. 24, 2022	Feb. 14, 2023~ Mar. 21, 2023	Nov. 23, 2023	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 23, 2022	Feb. 14, 2023~ Mar. 21, 2023	Mar. 22, 2023	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	Feb. 14, 2023~ Mar. 21, 2023	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-5 6-01-A70	EC1900249	1GHz-18GHz	Dec. 21, 2022	Feb. 14, 2023~ Mar. 21, 2023	Dec. 20, 2023	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 07, 2022	Feb. 14, 2023~ Mar. 21, 2023	Dec. 06, 2023	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 10, 2023	Feb. 14, 2023~ Mar. 21, 2023	Jan. 09, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2GHz Low Pass Filter	Mar. 15, 2022	Feb. 14, 2023~ Mar. 13, 2023	Mar. 14, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2GHz Low Pass Filter	Mar. 13, 2023	Mar. 14, 2023~ Mar. 21, 2023	Mar. 12, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Jul. 11, 2022	Feb. 14, 2023~ Mar. 21, 2023	Jul. 10, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 15, 2022	Feb. 14, 2023~ Mar. 13, 2023	Mar. 14, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 13, 2023	Mar. 14, 2023~ Mar. 21, 2023	Mar. 12, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Feb. 14, 2023~ Mar. 08, 2023	Mar. 09, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 07, 2023	Mar. 09, 2023~ Mar. 21, 2023	Mar. 06, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 20, 2022	Feb. 14, 2023~ Mar. 21, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Dec. 20, 2022	Feb. 14, 2023~ Mar. 21, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP210090	N/A	Oct. 03, 2022	Feb. 14, 2023~ Mar. 21, 2023	Oct. 02, 2023	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Feb. 14, 2023~ Mar. 21, 2023	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Feb. 14, 2023~ Mar. 21, 2023	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Feb. 14, 2023~ Mar. 21, 2023	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Feb. 14, 2023~ Mar. 21, 2023	N/A	Radiation (03CH12-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 13, 2022	Jan. 17, 2023~ Mar. 23, 2023	Oct. 12, 2023	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40°C ~90°C	Sep. 07, 2022	Jan. 17, 2023~ Mar. 23, 2023	Sep. 06, 2023	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Dec. 29, 2022	Jan. 17, 2023~ Mar. 23, 2023	Dec. 28, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#B	1-18GHz	Jan. 06, 2023	Jan. 17, 2023~ Mar. 23, 2023	Jan. 05, 2024	Conducted (TH03-HY)



## 6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.31 dB
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.25 dB
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### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.81 dB
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## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power & ERP/EIRP)

LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5.15 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.44	22.37	22.38	27.59	0.5741
20	1	49		22.31	22.33	22.35		
20	1	99		22.30	22.40	22.43		
20	50	0		21.46	21.30	21.35		
20	50	24		21.51	21.47	21.54		
20	50	50		21.47	21.46	21.53		
20	100	0		21.46	21.41	21.50		
20	1	0	16-QAM	21.82	21.77	21.73	26.97	0.4977
20	1	49		21.77	21.74	21.70		
20	1	99		21.74	21.77	21.75		
20	50	0		20.46	20.32	20.40		
20	50	24		20.54	20.49	20.56		
20	50	50		20.49	20.48	20.56		
20	100	0		20.47	20.43	20.51		
20	1	0	64-QAM	20.78	20.57	20.62	25.93	0.3917
20	1	49		20.69	20.64	20.64		
20	1	99		20.70	20.69	20.68		
20	50	0		19.50	19.32	19.41		
20	50	24		19.55	19.52	19.59		
20	50	50		19.49	19.48	19.57		
20	100	0		19.49	19.43	19.52		
Limit	EIRP < 2W			Result			Pass	



LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5.15 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	22.35	22.29	22.22	27.58	0.5728
15	1	37		22.18	22.16	22.34		
15	1	74		22.28	22.36	22.43		
15	36	0		21.41	21.14	21.34		
15	36	20		21.39	21.37	21.48		
15	36	39		21.40	21.45	21.35		
15	75	0		21.31	21.31	21.47		
15	1	0	16-QAM	21.79	21.70	21.61	26.94	0.4943
15	1	37		21.67	21.65	21.63		
15	1	74		21.57	21.58	21.65		
15	36	0		20.36	20.12	20.25		
15	36	20		20.45	20.41	20.54		
15	36	39		20.48	20.29	20.49		
15	75	0		20.41	20.30	20.34		
15	1	0	64-QAM	20.70	20.37	20.60	25.85	0.3846
15	1	37		20.53	20.61	20.45		
15	1	74		20.62	20.55	20.67		
15	36	0		19.35	19.19	19.23		
15	36	20		19.37	19.42	19.46		
15	36	39		19.39	19.46	19.39		
15	75	0		19.46	19.36	19.33		
Limit	EIRP < 2W			Result			Pass	



LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5.15 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.31	22.23	22.19	27.57	0.5715
10	1	25		22.19	22.16	22.28		
10	1	49		22.16	22.33	22.42		
10	25	0		21.28	21.14	21.22		
10	25	12		21.34	21.46	21.35		
10	25	25		21.32	21.35	21.37		
10	50	0		21.29	21.26	21.39		
10	1	0	16-QAM	21.62	21.64	21.69	26.89	0.4887
10	1	25		21.74	21.54	21.58		
10	1	49		21.61	21.64	21.70		
10	25	0		20.32	20.15	20.36		
10	25	12		20.45	20.35	20.55		
10	25	25		20.31	20.45	20.36		
10	50	0		20.30	20.23	20.33		
10	1	0	64-QAM	20.71	20.51	20.52	25.86	0.3855
10	1	25		20.53	20.57	20.56		
10	1	49		20.69	20.60	20.64		
10	25	0		19.31	19.15	19.31		
10	25	12		19.36	19.44	19.41		
10	25	25		19.47	19.33	19.38		
10	50	0		19.30	19.32	19.36		
Limit	EIRP < 2W			Result			Pass	



LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5.15 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.41	22.23	22.22	27.56	0.5702
5	1	12		22.13	22.29	22.19		
5	1	24		22.29	22.32	22.29		
5	12	0		21.44	21.15	21.18		
5	12	7		21.45	21.30	21.36		
5	12	13		21.46	21.36	21.38		
5	25	0		21.39	21.23	21.32		
5	1	0	16-QAM	21.81	21.75	21.69	26.96	0.4966
5	1	12		21.58	21.59	21.56		
5	1	24		21.68	21.77	21.58		
5	12	0		20.37	20.12	20.22		
5	12	7		20.34	20.39	20.44		
5	12	13		20.36	20.29	20.36		
5	25	0		20.44	20.30	20.49		
5	1	0	64-QAM	20.69	20.48	20.47	25.84	0.3837
5	1	12		20.62	20.44	20.47		
5	1	24		20.53	20.60	20.55		
5	12	0		19.45	19.16	19.28		
5	12	7		19.35	19.47	19.58		
5	12	13		19.39	19.39	19.51		
5	25	0		19.36	19.28	19.45		
Limit	EIRP < 2W			Result			Pass	



LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5.15 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	22.28	22.26	22.18	27.47	0.5585
3	1	8		22.12	22.30	22.23		
3	1	14		22.21	22.32	22.26		
3	8	0		21.33	21.30	21.30		
3	8	4		21.38	21.31	21.51		
3	8	7		21.34	21.36	21.35		
3	15	0		21.43	21.37	21.39		
3	1	0	16-QAM	21.68	21.73	21.57	26.88	0.4875
3	1	8		21.59	21.62	21.64		
3	1	14		21.70	21.58	21.68		
3	8	0		20.42	20.32	20.30		
3	8	4		20.34	20.34	20.38		
3	8	7		20.35	20.37	20.44		
3	15	0		20.39	20.23	20.39		
3	1	0	64-QAM	20.62	20.52	20.59	25.83	0.3828
3	1	8		20.64	20.63	20.45		
3	1	14		20.67	20.68	20.68		
3	8	0		19.30	19.14	19.21		
3	8	4		19.43	19.41	19.48		
3	8	7		19.32	19.39	19.48		
3	15	0		19.49	19.29	19.45		
Limit	EIRP < 2W			Result			Pass	





LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5.15 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	22.42	22.33	22.33	27.57	0.5715
1.4	1	3		22.29	22.19	22.24		
1.4	1	5		22.12	22.32	22.24		
1.4	3	0		22.30	22.28	22.36		
1.4	3	1		22.16	22.23	22.33		
1.4	3	3		22.22	22.21	22.24		
1.4	6	0		21.46	21.40	21.33		
1.4	1	0	16-QAM	21.65	21.63	21.61	26.90	0.4898
1.4	1	3		21.75	21.55	21.60		
1.4	1	5		21.63	21.57	21.62		
1.4	3	0		21.44	21.23	21.42		
1.4	3	1		21.68	21.71	21.66		
1.4	3	3		21.74	21.60	21.54		
1.4	6	0		20.43	20.41	20.46		
1.4	1	0	64-QAM	20.68	20.46	20.47	25.85	0.3846
1.4	1	3		20.57	20.59	20.45		
1.4	1	5		20.70	20.67	20.64		
1.4	3	0		20.43	20.31	20.26		
1.4	3	1		20.45	20.40	20.44		
1.4	3	3		20.42	20.42	20.53		
1.4	6	0		19.46	19.24	19.33		
Limit	EIRP < 2W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.32	22.43	22.42	27.47	0.5585
20	1	49		22.59	22.61	22.60		
20	1	99		22.40	22.33	22.32		
20	50	0		21.62	21.62	21.63		
20	50	24		21.76	21.67	21.69		
20	50	50		21.66	21.69	21.67		
20	100	0		21.68	21.60	21.59		
20	1	0	16-QAM	21.64	21.75	21.73	26.83	0.4819
20	1	49		21.97	21.97	21.95		
20	1	99		21.76	21.65	21.69		
20	50	0		20.61	20.66	20.64		
20	50	24		20.78	20.72	20.70		
20	50	50		20.71	20.70	20.69		
20	100	0		20.68	20.62	20.61		
20	1	0	64-QAM	20.56	20.63	20.59	25.72	0.3733
20	1	49		20.85	20.86	20.84		
20	1	99		20.64	20.57	20.61		
20	50	0		19.66	19.68	19.64		
20	50	24		19.79	19.73	19.73		
20	50	50		19.72	19.72	19.70		
20	100	0		19.71	19.65	19.63		
Limit	EIRP < 1W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	22.27	22.26	22.35	27.40	0.5495
15	1	37		22.42	22.44	22.54		
15	1	74		22.38	22.32	22.14		
15	36	0		21.57	21.44	21.63		
15	36	20		21.61	21.52	21.50		
15	36	39		21.57	21.52	21.54		
15	75	0		21.58	21.43	21.47		
15	1	0	16-QAM	21.57	21.74	21.56	26.80	0.4786
15	1	37		21.81	21.94	21.83		
15	1	74		21.57	21.47	21.67		
15	36	0		20.46	20.63	20.60		
15	36	20		20.58	20.56	20.68		
15	36	39		20.65	20.66	20.56		
15	75	0		20.64	20.49	20.50		
15	1	0	64-QAM	20.36	20.56	20.46	25.62	0.3648
15	1	37		20.76	20.68	20.75		
15	1	74		20.53	20.44	20.53		
15	36	0		19.47	19.48	19.44		
15	36	20		19.63	19.61	19.61		
15	36	39		19.60	19.66	19.60		
15	75	0		19.68	19.57	19.57		
Limit	EIRP < 1W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.18	22.41	22.38	27.39	0.5483
10	1	25		22.52	22.53	22.46		
10	1	49		22.30	22.27	22.15		
10	25	0		21.43	21.51	21.43		
10	25	12		21.76	21.65	21.69		
10	25	25		21.48	21.58	21.53		
10	50	0		21.50	21.59	21.41		
10	1	0	16-QAM	21.49	21.71	21.53	26.76	0.4742
10	1	25		21.77	21.78	21.90		
10	1	49		21.69	21.55	21.52		
10	25	0		20.46	20.52	20.44		
10	25	12		20.68	20.70	20.61		
10	25	25		20.60	20.55	20.57		
10	50	0		20.62	20.43	20.59		
10	1	0	64-QAM	20.37	20.45	20.48	25.63	0.3656
10	1	25		20.73	20.77	20.65		
10	1	49		20.60	20.39	20.45		
10	25	0		19.47	19.49	19.61		
10	25	12		19.69	19.67	19.63		
10	25	25		19.57	19.56	19.52		
10	50	0		19.57	19.59	19.46		
Limit	EIRP < 1W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.18	22.41	22.34	27.45	0.5559
5	1	12		22.50	22.59	22.55		
5	1	24		22.25	22.16	22.24		
5	12	0		21.43	21.46	21.49		
5	12	7		21.60	21.57	21.57		
5	12	13		21.46	21.67	21.56		
5	25	0		21.56	21.50	21.47		
5	1	0	16-QAM	21.52	21.59	21.68	26.82	0.4808
5	1	12		21.96	21.84	21.87		
5	1	24		21.70	21.56	21.49		
5	12	0		20.45	20.48	20.50		
5	12	7		20.60	20.65	20.66		
5	12	13		20.55	20.54	20.59		
5	25	0		20.53	20.49	20.49		
5	1	0	64-QAM	20.46	20.55	20.46	25.67	0.3690
5	1	12		20.78	20.81	20.65		
5	1	24		20.58	20.49	20.44		
5	12	0		19.52	19.63	19.59		
5	12	7		19.64	19.60	19.70		
5	12	13		19.54	19.71	19.57		
5	25	0		19.52	19.65	19.56		
Limit	EIRP < 1W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	22.22	22.40	22.26	27.46	0.5572
3	1	8		22.55	22.50	22.60		
3	1	14		22.37	22.21	22.27		
3	8	0		21.59	21.60	21.43		
3	8	4		21.57	21.58	21.59		
3	8	7		21.55	21.54	21.49		
3	15	0		21.68	21.44	21.41		
3	1	0	16-QAM	21.50	21.73	21.64	26.79	0.4775
3	1	8		21.93	21.93	21.91		
3	1	14		21.66	21.46	21.51		
3	8	0		20.45	20.46	20.56		
3	8	4		20.76	20.69	20.50		
3	8	7		20.58	20.66	20.49		
3	15	0		20.50	20.56	20.55		
3	1	0	64-QAM	20.36	20.52	20.50	25.63	0.3656
3	1	8		20.72	20.66	20.77		
3	1	14		20.48	20.45	20.59		
3	8	0		19.63	19.52	19.44		
3	8	4		19.78	19.58	19.57		
3	8	7		19.69	19.53	19.51		
3	15	0		19.69	19.55	19.51		
Limit	EIRP < 1W			Result			Pass	



LTE Band 4 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	22.32	22.28	22.41	27.43	0.5534
1.4	1	3		22.49	22.54	22.55		
1.4	1	5		22.39	22.19	22.19		
1.4	3	0		22.19	22.28	22.35		
1.4	3	1		22.57	22.56	22.51		
1.4	3	3		22.31	22.25	22.31		
1.4	6	0		21.68	21.54	21.54		
1.4	1	0	16-QAM	21.64	21.68	21.58	26.78	0.4764
1.4	1	3		21.86	21.92	21.77		
1.4	1	5		21.57	21.52	21.52		
1.4	3	0		21.53	21.50	21.59		
1.4	3	1		21.57	21.56	21.47		
1.4	3	3		21.55	21.71	21.69		
1.4	6	0		20.59	20.42	20.49		
1.4	1	0	64-QAM	20.55	20.59	20.51	25.72	0.3733
1.4	1	3		20.82	20.86	20.84		
1.4	1	5		20.60	20.49	20.45		
1.4	3	0		20.39	20.46	20.51		
1.4	3	1		20.82	20.71	20.82		
1.4	3	3		20.64	20.54	20.41		
1.4	6	0		19.70	19.49	19.49		
Limit	EIRP < 1W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 4.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	22.70	22.81	22.72	25.35	0.3428
10	1	25		22.66	22.76	22.58		
10	1	49		22.62	22.74	22.70		
10	25	0		21.77	21.84	21.68		
10	25	12		21.74	21.82	21.67		
10	25	25		21.83	21.89	21.70		
10	50	0		21.66	21.75	21.70		
10	1	0	16-QAM	22.10	22.11	21.93	24.74	0.2979
10	1	25		22.05	22.15	22.06		
10	1	49		22.12	22.20	22.06		
10	25	0		20.62	20.82	20.62		
10	25	12		20.74	20.83	20.67		
10	25	25		20.80	20.91	20.82		
10	50	0		20.55	20.74	20.57		
10	1	0	64-QAM	20.89	20.95	20.94	23.60	0.2291
10	1	25		21.03	21.06	20.87		
10	1	49		20.70	20.89	20.74		
10	25	0		19.78	19.85	19.85		
10	25	12		19.78	19.90	19.84		
10	25	25		19.76	19.92	19.85		
10	50	0		19.64	19.80	19.62		
Limit	ERP < 7W			Result			Pass	





LTE Band 5 Maximum Average Power [dBm] (GT - LC = 4.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.55	22.70	22.63	25.24	0.3342
5	1	12		22.61	22.69	22.49		
5	1	24		22.42	22.65	22.66		
5	12	0		21.74	21.71	21.59		
5	12	7		21.57	21.66	21.47		
5	12	13		21.75	21.82	21.62		
5	25	0		21.62	21.70	21.61		
5	1	0	16-QAM	22.09	21.91	21.80	24.63	0.2904
5	1	12		21.90	21.98	21.89		
5	1	24		21.99	22.04	21.93		
5	12	0		20.50	20.67	20.55		
5	12	7		20.69	20.83	20.60		
5	12	13		20.63	20.78	20.63		
5	25	0		20.39	20.65	20.38		
5	1	0	64-QAM	20.69	20.81	20.81	23.59	0.2286
5	1	12		20.99	21.05	20.71		
5	1	24		20.65	20.83	20.64		
5	12	0		19.78	19.79	19.73		
5	12	7		19.63	19.80	19.84		
5	12	13		19.56	19.73	19.69		
5	25	0		19.62	19.63	19.46		
Limit	ERP < 7W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 4.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	22.65	22.73	22.62	25.27	0.3365
3	1	8		22.63	22.67	22.48		
3	1	14		22.59	22.72	22.54		
3	8	0		21.65	21.74	21.66		
3	8	4		21.73	21.72	21.47		
3	8	7		21.76	21.81	21.55		
3	15	0		21.64	21.63	21.67		
3	1	0	16-QAM	21.92	22.06	21.92	24.65	0.2917
3	1	8		21.93	22.11	21.91		
3	1	14		21.95	22.06	22.05		
3	8	0		20.45	20.80	20.62		
3	8	4		20.65	20.67	20.62		
3	8	7		20.70	20.76	20.67		
3	15	0		20.41	20.67	20.38		
3	1	0	64-QAM	20.77	20.76	20.81	23.51	0.2244
3	1	8		20.84	20.97	20.79		
3	1	14		20.51	20.79	20.55		
3	8	0		19.76	19.81	19.72		
3	8	4		19.69	19.82	19.71		
3	8	7		19.67	19.72	19.80		
3	15	0		19.52	19.63	19.61		
Limit	ERP < 7W			Result			Pass	



LTE Band 5 Maximum Average Power [dBm] (GT - LC = 4.69 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	22.63	22.64	22.63	25.33	0.3412
1.4	1	3		22.50	22.59	22.41		
1.4	1	5		22.50	22.79	22.50		
1.4	3	0		22.69	22.55	22.58		
1.4	3	1		22.60	22.74	22.58		
1.4	3	3		22.51	22.67	22.51		
1.4	6	0		21.48	21.60	21.70		
1.4	1	0	16-QAM	21.98	21.96	21.80	24.64	0.2911
1.4	1	3		22.04	22.10	22.06		
1.4	1	5		22.10	22.09	21.93		
1.4	3	0		21.76	21.67	21.64		
1.4	3	1		21.56	21.76	21.54		
1.4	3	3		21.82	21.81	21.66		
1.4	6	0		20.52	20.57	20.44		
1.4	1	0	64-QAM	20.74	20.77	20.80	23.44	0.2208
1.4	1	3		20.83	20.88	20.85		
1.4	1	5		20.62	20.70	20.65		
1.4	3	0		20.66	20.82	20.64		
1.4	3	1		20.60	20.90	20.82		
1.4	3	3		20.50	20.54	20.37		
1.4	6	0		19.46	19.65	19.62		
Limit	ERP < 7W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = 6.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.42	22.23	22.32	29.22	0.8356
20	1	49		22.43	22.20	22.37		
20	1	99		22.47	22.38	22.52		
20	50	0		21.44	21.29	21.39		
20	50	24		21.55	21.35	21.56		
20	50	50		21.45	21.29	21.47		
20	100	0		21.50	21.30	21.46		
20	1	0	16-QAM	21.80	21.61	21.63	28.56	0.7178
20	1	49		21.77	21.55	21.73		
20	1	99		21.80	21.79	21.86		
20	50	0		20.45	20.30	20.43		
20	50	24		20.57	20.36	20.56		
20	50	50		20.46	20.30	20.47		
20	100	0		20.50	20.31	20.47		
20	1	0	64-QAM	21.69	20.45	20.47	28.39	0.6902
20	1	49		21.60	20.41	20.63		
20	1	99		21.69	20.54	20.80		
20	50	0		20.44	19.33	19.42		
20	50	24		20.58	19.40	19.56		
20	50	50		20.46	19.33	19.47		
20	100	0		20.49	19.32	19.48		
Limit	EIRP < 2W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = 6.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	22.38	22.09	22.26	29.10	0.8128
15	1	37		22.39	22.19	22.26		
15	1	74		22.40	22.21	22.34		
15	36	0		21.38	21.13	21.36		
15	36	20		21.52	21.19	21.51		
15	36	39		21.30	21.25	21.39		
15	75	0		21.45	21.11	21.33		
15	1	0	16-QAM	21.71	21.52	21.51	28.55	0.7161
15	1	37		21.57	21.48	21.68		
15	1	74		21.70	21.65	21.85		
15	36	0		20.30	20.21	20.31		
15	36	20		20.42	20.36	20.55		
15	36	39		20.29	20.26	20.34		
15	75	0		20.40	20.20	20.33		
15	1	0	64-QAM	21.50	20.35	20.47	28.35	0.6839
15	1	37		21.52	20.28	20.53		
15	1	74		21.65	20.50	20.75		
15	36	0		20.33	19.16	19.38		
15	36	20		20.54	19.37	19.40		
15	36	39		20.35	19.27	19.34		
15	75	0		20.47	19.21	19.30		
Limit	EIRP < 2W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = 6.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.40	22.15	22.18	29.15	0.8222
10	1	25		22.36	22.02	22.33		
10	1	49		22.45	22.27	22.33		
10	25	0		21.41	21.10	21.22		
10	25	12		21.47	21.17	21.55		
10	25	25		21.35	21.21	21.45		
10	50	0		21.50	21.24	21.28		
10	1	0	16-QAM	21.76	21.55	21.57	28.46	0.7015
10	1	25		21.61	21.42	21.70		
10	1	49		21.74	21.71	21.73		
10	25	0		20.44	20.16	20.36		
10	25	12		20.40	20.24	20.37		
10	25	25		20.29	20.24	20.43		
10	50	0		20.31	20.27	20.45		
10	1	0	64-QAM	21.61	20.28	20.42	28.31	0.6776
10	1	25		21.56	20.39	20.48		
10	1	49		21.57	20.49	20.71		
10	25	0		20.32	19.13	19.23		
10	25	12		20.38	19.28	19.50		
10	25	25		20.34	19.20	19.37		
10	50	0		20.38	19.29	19.30		
Limit	EIRP < 2W			Result			Pass	



LTE Band 7 Maximum Average Power [dBm] (GT - LC = 6.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.40	22.04	22.15	29.15	0.8222
5	1	12		22.27	22.06	22.19		
5	1	24		22.45	22.19	22.39		
5	12	0		21.25	21.24	21.38		
5	12	7		21.39	21.25	21.44		
5	12	13		21.25	21.22	21.46		
5	25	0		21.34	21.21	21.42		
5	1	0	16-QAM	21.77	21.56	21.47	28.47	0.7031
5	1	12		21.75	21.40	21.65		
5	1	24		21.67	21.67	21.70		
5	12	0		20.28	20.15	20.42		
5	12	7		20.39	20.24	20.51		
5	12	13		20.43	20.14	20.36		
5	25	0		20.38	20.21	20.36		
5	1	0	64-QAM	21.57	20.25	20.32	28.38	0.6887
5	1	12		21.44	20.37	20.55		
5	1	24		21.68	20.51	20.73		
5	12	0		20.27	19.23	19.26		
5	12	7		20.46	19.38	19.48		
5	12	13		20.33	19.23	19.45		
5	25	0		20.40	19.13	19.47		
Limit	EIRP < 2W			Result			Pass	



LTE Band 12 Maximum Average Power [dBm] (GT - LC = 1.3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	22.94	22.76	22.81	22.09	0.1618
10	1	25		22.75	22.82	22.75		
10	1	49		22.76	22.87	22.78		
10	25	0		21.77	21.84	21.80		
10	25	12		21.97	21.92	21.97		
10	25	25		21.92	21.96	21.91		
10	50	0		21.91	21.88	21.81		
10	1	0	16-QAM	22.11	22.14	22.15	21.45	0.1396
10	1	25		22.16	22.22	22.15		
10	1	49		22.30	22.23	22.15		
10	25	0		20.81	20.84	20.82		
10	25	12		21.00	20.96	20.97		
10	25	25		20.95	20.93	20.90		
10	50	0		20.95	20.89	20.82		
10	1	0	64-QAM	20.98	20.98	21.05	20.33	0.1079
10	1	25		21.10	21.15	21.09		
10	1	49		21.18	21.13	21.03		
10	25	0		19.84	19.86	19.82		
10	25	12		20.03	19.97	20.02		
10	25	25		19.97	19.98	19.92		
10	50	0		19.97	19.90	19.82		
Limit	ERP < 3W			Result			Pass	





LTE Band 12 Maximum Average Power [dBm] (GT - LC = 1.3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.76	22.56	22.71	21.91	0.1552
5	1	12		22.56	22.72	22.73		
5	1	24		22.57	22.68	22.63		
5	12	0		21.74	21.79	21.64		
5	12	7		21.83	21.79	21.95		
5	12	13		21.91	21.87	21.75		
5	25	0		21.83	21.87	21.69		
5	1	0	16-QAM	21.93	21.98	22.06	21.32	0.1355
5	1	12		22.05	22.16	22.12		
5	1	24		22.17	22.15	22.07		
5	12	0		20.61	20.77	20.77		
5	12	7		20.93	20.94	20.90		
5	12	13		20.75	20.87	20.73		
5	25	0		20.92	20.78	20.68		
5	1	0	64-QAM	20.89	20.79	20.89	20.27	0.1064
5	1	12		21.04	21.12	20.92		
5	1	24		21.05	21.09	20.93		
5	12	0		19.81	19.67	19.79		
5	12	7		19.93	19.88	19.87		
5	12	13		19.94	19.80	19.84		
5	25	0		19.94	19.90	19.63		
Limit	ERP < 3W			Result			Pass	



LTE Band 12 Maximum Average Power [dBm] (GT - LC = 1.3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	22.82	22.67	22.61	21.98	0.1578
3	1	8		22.64	22.73	22.70		
3	1	14		22.73	22.83	22.68		
3	8	0		21.77	21.76	21.68		
3	8	4		21.82	21.84	21.89		
3	8	7		21.73	21.80	21.88		
3	15	0		21.84	21.68	21.63		
3	1	0	16-QAM	21.94	21.99	21.95	21.44	0.1393
3	1	8		22.09	22.12	22.07		
3	1	14		22.29	22.16	22.10		
3	8	0		20.74	20.64	20.62		
3	8	4		20.93	20.90	20.85		
3	8	7		20.81	20.74	20.70		
3	15	0		20.89	20.74	20.73		
3	1	0	64-QAM	20.90	20.98	21.05	20.24	0.1057
3	1	8		21.08	21.02	20.94		
3	1	14		21.09	20.99	20.88		
3	8	0		19.70	19.85	19.73		
3	8	4		19.83	19.96	19.84		
3	8	7		19.95	19.78	19.84		
3	15	0		19.77	19.75	19.62		
Limit	ERP < 3W			Result			Pass	



LTE Band 12 Maximum Average Power [dBm] (GT - LC = 1.3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	22.77	22.76	22.70	22.04	0.1600
1.4	1	3		22.63	22.65	22.66		
1.4	1	5		22.76	22.70	22.73		
1.4	3	0		22.89	22.63	22.79		
1.4	3	1		22.75	22.67	22.55		
1.4	3	3		22.68	22.80	22.66		
1.4	6	0		21.75	21.78	21.71		
1.4	1	0	16-QAM	21.97	22.02	22.07	21.42	0.1387
1.4	1	3		22.05	22.12	21.95		
1.4	1	5		22.27	22.20	22.07		
1.4	3	0		21.61	21.81	21.63		
1.4	3	1		21.90	21.73	21.86		
1.4	3	3		21.82	21.95	21.87		
1.4	6	0		20.85	20.82	20.67		
1.4	1	0	64-QAM	20.83	20.85	20.87	20.19	0.1045
1.4	1	3		20.91	20.95	21.01		
1.4	1	5		21.00	21.04	20.90		
1.4	3	0		20.72	20.76	20.80		
1.4	3	1		20.83	20.92	20.87		
1.4	3	3		20.84	20.85	20.86		
1.4	6	0		19.83	19.84	19.82		
Limit	ERP < 3W			Result			Pass	



LTE Band 13 Maximum Average Power [dBm] (GT - LC = 3.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK		22.97		24.32	0.2704
10	1	25			22.92			
10	1	49			22.91			
10	25	0			22.01			
10	25	12			22.02			
10	25	25			22.05			
10	50	0			21.97			
10	1	0	16-QAM	-	22.32	-	23.68	0.2333
10	1	25			22.33			
10	1	49			22.28			
10	25	0			21.02			
10	25	12			21.02			
10	25	25			21.03			
10	50	0			20.97			
10	1	0	64-QAM		21.10		22.62	0.1828
10	1	25			21.27			
10	1	49			21.23			
10	25	0			20.04			
10	25	12			20.05			
10	25	25			20.08			
10	50	0			19.98			
Limit	ERP < 3W			Result			Pass	



LTE Band 13 Maximum Average Power [dBm] (GT - LC = 3.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.64	22.80	22.73	24.25	0.2661
5	1	12		22.63	22.86	22.60		
5	1	24		22.57	22.90	22.72		
5	12	0		21.75	22.01	21.87		
5	12	7		21.91	21.89	21.83		
5	12	13		21.94	22.04	21.85		
5	25	0		21.71	21.82	21.89		
5	1	0	16-QAM	22.01	22.16	22.11	23.55	0.2265
5	1	12		22.11	22.19	22.18		
5	1	24		22.02	22.20	22.07		
5	12	0		20.92	20.89	20.85		
5	12	7		20.99	20.86	20.82		
5	12	13		20.69	20.84	20.78		
5	25	0		20.70	20.93	20.76		
5	1	0	64-QAM	20.90	20.99	20.93	22.59	0.1816
5	1	12		21.15	21.24	21.04		
5	1	24		21.03	21.07	21.04		
5	12	0		19.69	19.93	19.89		
5	12	7		19.80	19.92	19.85		
5	12	13		19.93	20.01	19.81		
5	25	0		19.82	19.83	19.67		
Limit	ERP < 3W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	22.24	22.40	22.80	27.66	0.5834
20	1	49		22.54	22.68	22.70		
20	1	99		22.35	22.44	22.62		
20	50	0		21.59	21.74	21.78		
20	50	24		21.74	21.77	21.80		
20	50	50		21.62	21.74	21.75		
20	100	0		21.65	21.71	21.74		
20	1	0	16-QAM	21.60	21.71	22.16	27.02	0.5035
20	1	49		21.90	22.04	22.10		
20	1	99		21.68	21.78	21.98		
20	50	0		20.61	20.77	20.80		
20	50	24		20.74	20.79	20.83		
20	50	50		20.63	20.77	20.78		
20	100	0		20.63	20.71	20.74		
20	1	0	64-QAM	20.41	20.59	21.02	25.88	0.3873
20	1	49		20.80	20.94	20.97		
20	1	99		20.62	20.68	20.90		
20	50	0		19.64	19.78	19.83		
20	50	24		19.75	19.82	19.85		
20	50	50		19.63	19.79	19.79		
20	100	0		19.66	19.73	19.75		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	22.17	22.29	22.64	27.51	0.5636
15	1	37		22.53	22.52	22.65		
15	1	74		22.21	22.36	22.45		
15	36	0		21.39	21.61	21.66		
15	36	20		21.67	21.64	21.62		
15	36	39		21.61	21.72	21.73		
15	75	0		21.50	21.54	21.55		
15	1	0	16-QAM	21.51	21.56	22.14	27.00	0.5012
15	1	37		21.74	21.92	21.93		
15	1	74		21.58	21.68	21.83		
15	36	0		20.45	20.73	20.79		
15	36	20		20.54	20.74	20.66		
15	36	39		20.52	20.75	20.64		
15	75	0		20.58	20.64	20.58		
15	1	0	64-QAM	20.38	20.52	20.82	25.72	0.3733
15	1	37		20.61	20.81	20.78		
15	1	74		20.51	20.52	20.86		
15	36	0		19.61	19.69	19.74		
15	36	20		19.68	19.63	19.78		
15	36	39		19.46	19.75	19.79		
15	75	0		19.46	19.68	19.60		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.04	22.37	22.74	27.60	0.5754
10	1	25		22.43	22.57	22.57		
10	1	49		22.17	22.30	22.59		
10	25	0		21.49	21.54	21.73		
10	25	12		21.69	21.74	21.78		
10	25	25		21.42	21.68	21.68		
10	50	0		21.59	21.56	21.60		
10	1	0	16-QAM	21.57	21.70	22.14	27.00	0.5012
10	1	25		21.84	22.04	21.91		
10	1	49		21.53	21.68	21.84		
10	25	0		20.56	20.68	20.68		
10	25	12		20.66	20.79	20.80		
10	25	25		20.44	20.59	20.59		
10	50	0		20.50	20.66	20.56		
10	1	0	64-QAM	20.28	20.50	20.87	25.76	0.3767
10	1	25		20.72	20.90	20.89		
10	1	49		20.57	20.64	20.82		
10	25	0		19.51	19.78	19.71		
10	25	12		19.64	19.74	19.72		
10	25	25		19.55	19.65	19.79		
10	50	0		19.56	19.66	19.74		
Limit	EIRP < 1W			Result			Pass	





LTE Band 66 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.08	22.20	22.75	27.61	0.5768
5	1	12		22.52	22.55	22.63		
5	1	24		22.32	22.28	22.60		
5	12	0		21.50	21.70	21.69		
5	12	7		21.67	21.65	21.62		
5	12	13		21.50	21.59	21.74		
5	25	0		21.56	21.58	21.69		
5	1	0	16-QAM	21.57	21.66	22.16	27.02	0.5035
5	1	12		21.79	22.00	22.00		
5	1	24		21.68	21.68	21.98		
5	12	0		20.58	20.72	20.80		
5	12	7		20.58	20.78	20.78		
5	12	13		20.45	20.65	20.60		
5	25	0		20.48	20.65	20.64		
5	1	0	64-QAM	20.33	20.44	20.82	25.68	0.3698
5	1	12		20.78	20.74	20.77		
5	1	24		20.42	20.50	20.78		
5	12	0		19.46	19.78	19.80		
5	12	7		19.67	19.73	19.66		
5	12	13		19.45	19.67	19.64		
5	25	0		19.66	19.55	19.63		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	22.12	22.35	22.69	27.55	0.5689
3	1	8		22.36	22.56	22.68		
3	1	14		22.33	22.41	22.53		
3	8	0		21.51	21.74	21.60		
3	8	4		21.65	21.69	21.80		
3	8	7		21.56	21.57	21.57		
3	15	0		21.61	21.61	21.71		
3	1	0	16-QAM	21.47	21.66	21.99	26.90	0.4898
3	1	8		21.90	21.95	22.04		
3	1	14		21.48	21.72	21.80		
3	8	0		20.43	20.67	20.64		
3	8	4		20.68	20.71	20.71		
3	8	7		20.53	20.61	20.62		
3	15	0		20.58	20.61	20.74		
3	1	0	64-QAM	20.28	20.45	20.95	25.81	0.3811
3	1	8		20.71	20.81	20.81		
3	1	14		20.43	20.66	20.71		
3	8	0		19.50	19.59	19.82		
3	8	4		19.75	19.71	19.72		
3	8	7		19.50	19.60	19.70		
3	15	0		19.52	19.70	19.66		
Limit	EIRP < 1W			Result			Pass	



LTE Band 66 Maximum Average Power [dBm] (GT - LC = 4.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	22.11	22.26	22.77	27.63	0.5794
1.4	1	3		22.50	22.59	22.53		
1.4	1	5		22.21	22.41	22.53		
1.4	3	0		22.13	22.27	22.71		
1.4	3	1		22.49	22.61	22.53		
1.4	3	3		22.35	22.31	22.49		
1.4	6	0		21.53	21.69	21.63		
1.4	1	0	16-QAM	21.41	21.56	21.98	26.95	0.4955
1.4	1	3		21.75	22.00	21.91		
1.4	1	5		21.61	21.60	21.83		
1.4	3	0		21.51	21.70	21.70		
1.4	3	1		21.52	21.67	21.61		
1.4	3	3		21.60	21.53	22.09		
1.4	6	0		20.44	20.62	20.56		
1.4	1	0	64-QAM	20.25	20.40	20.88	25.81	0.3811
1.4	1	3		20.78	20.86	20.95		
1.4	1	5		20.47	20.67	20.89		
1.4	3	0		20.28	20.49	20.95		
1.4	3	1		20.68	20.76	20.82		
1.4	3	3		20.51	20.66	20.89		
1.4	6	0		19.53	19.63	19.58		
Limit	EIRP < 1W			Result			Pass	



LTE Band 71 Maximum Average Power [dBm] (GT - LC = 1.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
20	1	0	QPSK	22.92	22.69	22.62	22.47	0.1766
20	1	49		22.70	22.58	22.63		
20	1	99		22.61	22.64	22.66		
20	50	0		21.77	21.65	21.60		
20	50	24		21.88	21.78	21.75		
20	50	50		21.75	21.76	21.81		
20	100	0		21.79	21.72	21.75		
20	1	0	16-QAM	22.26	22.04	21.98	21.81	0.1517
20	1	49		22.03	21.95	21.96		
20	1	99		21.99	21.99	22.02		
20	50	0		20.78	20.66	20.60		
20	50	24		20.87	20.80	20.73		
20	50	50		20.79	20.76	20.82		
20	100	0		20.81	20.72	20.74		
20	1	0	64-QAM	21.07	20.89	20.82	20.62	0.1153
20	1	49		20.89	20.80	20.83		
20	1	99		20.88	20.90	20.90		
20	50	0		19.80	19.67	19.63		
20	50	24		19.91	19.81	19.77		
20	50	50		19.81	19.79	19.85		
20	100	0		19.85	19.72	19.76		
Limit	ERP < 3W			Result			Pass	



LTE Band 71 Maximum Average Power [dBm] (GT - LC = 1.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0	QPSK	22.78	22.49	22.47	22.33	0.1710
15	1	37		22.70	22.40	22.61		
15	1	74		22.58	22.45	22.49		
15	36	0		21.61	21.49	21.42		
15	36	20		21.71	21.77	21.55		
15	36	39		21.55	21.70	21.74		
15	75	0		21.63	21.57	21.55		
15	1	0	16-QAM	22.16	21.95	21.83	21.71	0.1483
15	1	37		21.99	21.77	21.83		
15	1	74		21.83	21.80	21.96		
15	36	0		20.67	20.53	20.59		
15	36	20		20.82	20.70	20.59		
15	36	39		20.60	20.75	20.69		
15	75	0		20.70	20.66	20.73		
15	1	0	64-QAM	20.93	20.75	20.64	20.48	0.1117
15	1	37		20.74	20.65	20.64		
15	1	74		20.77	20.70	20.84		
15	36	0		19.65	19.59	19.62		
15	36	20		19.83	19.80	19.61		
15	36	39		19.77	19.78	19.80		
15	75	0		19.85	19.69	19.65		
Limit	ERP < 3W			Result			Pass	



LTE Band 71 Maximum Average Power [dBm] (GT - LC = 1.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	22.82	22.56	22.58	22.37	0.1726
10	1	25		22.57	22.56	22.48		
10	1	49		22.57	22.54	22.48		
10	25	0		21.66	21.54	21.56		
10	25	12		21.68	21.68	21.57		
10	25	25		21.60	21.72	21.63		
10	50	0		21.68	21.57	21.57		
10	1	0	16-QAM	22.24	21.97	21.80	21.79	0.1510
10	1	25		21.89	21.89	21.79		
10	1	49		21.89	21.97	21.84		
10	25	0		20.60	20.65	20.45		
10	25	12		20.86	20.80	20.70		
10	25	25		20.78	20.62	20.75		
10	50	0		20.61	20.64	20.70		
10	1	0	64-QAM	21.01	20.82	20.62	20.56	0.1138
10	1	25		20.73	20.69	20.78		
10	1	49		20.68	20.70	20.88		
10	25	0		19.72	19.54	19.44		
10	25	12		19.87	19.78	19.76		
10	25	25		19.64	19.63	19.84		
10	50	0		19.80	19.54	19.61		
Limit	ERP < 3W			Result			Pass	



LTE Band 71 Maximum Average Power [dBm] (GT - LC = 1.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.82	22.50	22.56	22.37	0.1726
5	1	12		22.58	22.54	22.58		
5	1	24		22.46	22.46	22.49		
5	12	0		21.77	21.62	21.60		
5	12	7		21.84	21.62	21.74		
5	12	13		21.75	21.66	21.70		
5	25	0		21.64	21.62	21.72		
5	1	0	16-QAM	22.21	21.91	21.88	21.76	0.1500
5	1	12		21.85	21.89	21.78		
5	1	24		21.94	21.89	21.83		
5	12	0		20.78	20.66	20.51		
5	12	7		20.68	20.60	20.71		
5	12	13		20.77	20.65	20.70		
5	25	0		20.73	20.54	20.61		
5	1	0	64-QAM	21.03	20.75	20.75	20.58	0.1143
5	1	12		20.82	20.69	20.67		
5	1	24		20.86	20.74	20.78		
5	12	0		19.63	19.50	19.62		
5	12	7		19.74	19.62	19.58		
5	12	13		19.80	19.78	19.70		
5	25	0		19.83	19.55	19.61		
Limit	ERP < 3W			Result			Pass	



LTE Band 5B_CA Maximum Average Power [dBm] (GT - LC = 4 dB)										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
	RB Size	RB Offset	RB Size	RB Offset						
10+10	1	0	0	0	QPSK	22.00	21.97	21.97	24.74	0.2979
10+10	1	0	1	49		13.17	13.24	13.34		
10+10	1	49	1	0		22.80	22.89	22.56		
10+10	1	0	0	0	16-QAM	21.24	21.11	21.22	24.63	0.2904
10+10	1	0	1	49		13.39	13.38	13.36		
10+10	1	49	1	0		22.54	22.78	21.70		
10+10	1	0	0	0	64-QAM	20.83	20.65	20.62	23.61	0.2296
10+10	1	0	1	49		13.41	13.30	13.45		
10+10	1	49	1	0		21.46	21.76	20.69		
10+5	1	49	1	0	QPSK	22.80	22.70	22.90	24.75	0.2985
10+5	1	49	1	0	16-QAM	22.59	22.51	22.70	24.55	0.2851
10+5	1	49	1	0	64-QAM	21.28	21.03	20.70	23.13	0.2056
5+10	1	24	1	0	QPSK	22.90	22.89	22.88	24.75	0.2985
5+10	1	24	1	0	16-QAM	22.53	22.50	22.10	24.38	0.2742
5+10	1	24	1	0	64-QAM	19.99	21.46	20.09	23.31	0.2143
5+3	1	24	1	0	QPSK	22.78	22.84	22.59	25.42	0.3483
5+3	1	24	1	0	16-QAM	22.32	22.71	20.26	24.56	0.2858
5+3	1	24	1	0	64-QAM	21.32	21.69	20.71	23.54	0.2259
3+5	1	14	1	0	QPSK	22.87	22.89	22.56	25.23	0.3334
3+5	1	14	1	0	16-QAM	22.54	22.78	21.70	24.63	0.2904
3+5	1	14	1	0	64-QAM	21.46	21.76	20.69	23.61	0.2296
Limit	ERP < 7W					Result			Pass	





LTE Band 66B_CA Maximum Average Power [dBm] (GT - LC = 2.6 dB)										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
	RB Size	RB Offset	RB Size	RB Offset						
10+10	1	0	0	0	QPSK	21.72	21.76	21.80	25.62	0.3648
10+10	1	0	1	49		12.72	12.61	12.55		
10+10	1	49	1	0		23.02	23.01	23.01		
10+10	1	0	0	0	16-QAM	21.22	20.80	21.00	25.09	0.3228
10+10	1	0	1	49		12.92	12.80	12.68		
10+10	1	49	1	0		22.45	22.49	22.44		
10+10	1	0	0	0	64-QAM	19.87	19.71	19.68	23.60	0.2291
10+10	1	0	1	49		12.75	12.65	12.56		
10+10	1	49	1	0		21.00	20.69	20.54		
15+5	1	74	1	0	QPSK	23.03	23.02	22.89	26.71	0.4688
15+5	1	74	1	0	16-QAM	22.50	22.46	22.01	26.98	0.4989
15+5	1	74	1	0	64-QAM	20.22	20.21	19.12	26.85	0.4842
5+15	1	24	1	0	QPSK	23.01	22.90	22.98	26.47	0.4436
5+15	1	24	1	0	16-QAM	22.48	22.60	22.47	26.59	0.4560
5+15	1	24	1	0	64-QAM	20.54	20.88	20.43	26.77	0.4753
10+5	1	49	1	0	QPSK	23.01	23.96	23.00	26.56	0.4529
10+5	1	49	1	0	16-QAM	22.45	22.57	22.51	25.17	0.3289
10+5	1	49	1	0	64-QAM	20.46	20.78	20.15	23.38	0.2178
5+10	1	24	1	0	QPSK	22.97	23.03	23.02	25.63	0.3656
5+10	1	24	1	0	16-QAM	22.64	22.60	22.54	25.24	0.3342
5+10	1	24	1	0	64-QAM	21.22	21.05	20.62	23.82	0.2410
5+5	1	24	1	0	QPSK	22.97	22.97	23.01	26.30	0.4266
5+5	1	24	1	0	16-QAM	22.53	22.50	22.42	26.75	0.4732
5+5	1	24	1	0	64-QAM	21.01	21.15	20.10	26.07	0.4046
Limit	EIRP < 1W					Result			Pass	



LTE Band 66C_CA Maximum Average Power [dBm] (GT - LC = 2.6 dB)										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
	RB Size	RB Offset	RB Size	RB Offset						
20+20	1	0	0	0	QPSK	21.75	22.02	22.09	25.74	0.3750
20+20	1	0	1	99		14.77	14.65	14.66		
20+20	1	99	1	0		23.12	23.14	23.08		
20+20	1	0	0	0	16-QAM	20.68	21.55	20.98	25.26	0.3357
20+20	1	0	1	99		14.90	14.89	14.82		
20+20	1	99	1	0		22.66	22.57	22.63		
20+20	1	0	0	0	64-QAM	20.01	20.12	20.02	23.44	0.2208
20+20	1	0	1	99		14.80	14.72	14.76		
20+20	1	99	1	0		20.84	20.84	20.66		
20+15	1	74	1	0	QPSK	23.14	23.02	23.12	25.74	0.3750
20+15	1	74	1	0	16-QAM	23.01	23.01	22.76	25.61	0.3639
20+15	1	74	1	0	64-QAM	20.67	20.60	20.08	23.27	0.2123
15+20	1	74	1	0	QPSK	23.12	23.07	23.01	25.72	0.3733
15+20	1	74	1	0	16-QAM	22.42	22.62	22.42	25.22	0.3327
15+20	1	74	1	0	64-QAM	20.75	20.75	20.58	23.35	0.2163
20+10	1	99	1	0	QPSK	23.12	23.13	22.93	25.73	0.3741
20+10	1	99	1	0	16-QAM	22.65	22.67	22.02	25.27	0.3365
20+10	1	99	1	0	64-QAM	20.75	20.56	19.27	23.35	0.2163
10+20	1	49	1	0	QPSK	23.03	23.12	22.98	25.72	0.3733
10+20	1	49	1	0	16-QAM	22.49	22.58	22.53	25.18	0.3296
10+20	1	49	1	0	64-QAM	20.86	20.79	20.64	23.46	0.2218
20+5	1	99	1	0	QPSK	23.10	23.12	23.00	25.72	0.3733
20+5	1	99	1	0	16-QAM	22.66	22.59	22.14	25.26	0.3357
20+5	1	99	1	0	64-QAM	20.71	20.54	19.30	23.31	0.2143
5+20	1	24	1	0	QPSK	23.04	23.08	23.12	25.72	0.3733
5+20	1	24	1	0	16-QAM	22.66	22.61	22.45	25.26	0.3357
5+20	1	24	1	0	64-QAM	20.68	20.89	20.65	23.49	0.2234
15+10	1	74	1	0	QPSK	23.03	23.04	22.92	25.64	0.3664
15+10	1	74	1	0	16-QAM	22.57	22.47	22.08	25.17	0.3289
15+10	1	74	1	0	64-QAM	20.75	20.75	19.27	23.35	0.2163
10+15	1	49	1	0	QPSK	23.12	23.12	23.07	25.72	0.3733
10+15	1	49	1	0	16-QAM	22.57	22.45	22.53	25.17	0.3289
10+15	1	49	1	0	64-QAM	20.87	20.82	19.99	23.47	0.2223
15+15	1	74	1	0	QPSK	23.09	23.05	23.04	25.69	0.3707
15+15	1	74	1	0	16-QAM	22.51	22.43	22.52	25.12	0.3251
15+15	1	74	1	0	64-QAM	20.75	20.79	20.21	23.39	0.2183
Limit	EIRP < 1W					Result			Pass	



LTE Band 7C_CA Maximum Average Power [dBm] (GT - LC = 6.1 dB)										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
	RB Size	RB Offset	RB Size	RB Offset						
20+20	1	0	0	0	QPSK	21.85	21.37	21.27	29.06	0.8054
20+20	1	0	1	99		11.26	12.38	10.68		
20+20	1	99	1	0		22.86	22.85	22.96		
20+20	1	0	0	0	16-QAM	20.81	20.69	20.16	28.54	0.7145
20+20	1	0	1	99		11.88	12.91	11.22		
20+20	1	99	1	0		22.39	22.29	22.44		
20+20	1	0	0	0	64-QAM	20.14	19.57	19.28	27.08	0.5105
20+20	1	0	1	99		10.57	11.78	10.07		
20+20	1	99	1	0		20.33	20.98	19.22		
20+15	1	99	1	0	QPSK	22.80	22.86	22.90	29.00	0.7943
20+15	1	99	1	0	16-QAM	23.08	23.29	23.23	29.39	0.8690
20+15	1	99	1	0	64-QAM	19.49	21.31	20.36	27.41	0.5508
15+20	1	74	1	0	QPSK	22.91	22.77	22.91	29.01	0.7962
15+20	1	74	1	0	16-QAM	22.22	22.12	22.35	28.45	0.6998
15+20	1	74	1	0	64-QAM	21.17	20.25	21.11	27.27	0.5333
20+10	1	99	1	0	QPSK	22.77	22.78	22.81	28.91	0.7780
20+10	1	99	1	0	16-QAM	22.24	22.45	22.17	28.55	0.7161
20+10	1	99	1	0	64-QAM	20.76	20.62	19.62	26.86	0.4853
10+20	1	74	1	0	QPSK	22.93	22.69	22.82	29.03	0.7998
10+20	1	74	1	0	16-QAM	22.46	22.12	22.27	28.56	0.7178
10+20	1	74	1	0	64-QAM	21.32	20.27	20.86	27.42	0.5521
15+15	1	74	1	0	QPSK	22.95	22.77	22.86	29.05	0.8035
15+15	1	74	1	0	16-QAM	22.35	22.36	22.37	28.47	0.7031
15+15	1	74	1	0	64-QAM	21.16	20.46	20.36	27.26	0.5321
15+10	1	74	1	0	QPSK	22.99	22.85	22.84	29.09	0.8110
15+10	1	74	1	0	16-QAM	22.46	22.32	22.29	28.56	0.7178
15+10	1	74	1	0	64-QAM	20.05	21.21	19.35	27.31	0.5383
Limit	EIRP < 2W					Result			Pass	



# Appendix B. Test Results of Radiated Test

<External Antenna>

## LTE Band 2

LTE Band 2 / 5MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3701	-51.84	-13	-38.84	-70.53	-62.71	1.23	12.10	H
	5551	-48.89	-13	-35.89	-72.08	-60.46	1.58	13.15	H
	7401	-42.25	-13	-29.25	-71.54	-51.71	1.94	11.40	H
									H
									H
									H
	3701	-51.92	-13	-38.92	-70.87	-62.79	1.23	12.10	V
	5551	-45.83	-13	-32.83	-71.71	-57.40	1.58	13.15	V
	7401	-42.24	-13	-29.24	-71.62	-51.70	1.94	11.40	V
									V
									V
									V
Middle	3756	-51.79	-13	-38.79	-70.44	-62.78	1.17	12.16	H
	5634	-48.43	-13	-35.43	-71.61	-60.18	1.48	13.23	H
	7511	-41.90	-13	-28.90	-70.9	-51.23	1.92	11.24	H
									H
									H
									H
	3756	-51.79	-13	-38.79	-70.73	-62.78	1.17	12.16	V
	5634	-45.59	-13	-32.59	-71.53	-57.34	1.48	13.23	V
	7511	-42.72	-13	-29.72	-71.86	-52.05	1.92	11.24	V
									V
									V
									V



Highest	3811	-52.13	-13	-39.13	-70.81	-63.21	1.14	12.22	H
	5716	-48.46	-13	-35.46	-71.72	-60.38	1.40	13.32	H
	7621	-42.12	-13	-29.12	-71.1	-51.84	1.89	11.61	H
									H
									H
									H
	3811	-49.27	-13	-36.27	-68.26	-60.35	1.14	12.22	V
	5716	-46.30	-13	-33.30	-72.04	-58.22	1.40	13.32	V
	7621	-42.41	-13	-29.41	-71.58	-52.13	1.89	11.61	V
									V
									V
									V

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



### LTE Band 4

LTE Band 4 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3421	-53.59	-13	-40.59	-71.62	-64.55	1.35	12.31	H
	5132	-49.25	-13	-36.25	-71.13	-60.39	1.64	12.78	H
	6842	-44.86	-13	-31.86	-72.19	-55.24	1.74	12.12	H
									H
									H
									H
	3421	-53.04	-13	-40.04	-71.23	-64.00	1.35	12.31	V
	5132	-48.59	-13	-35.59	-71.29	-59.73	1.64	12.78	V
	6842	-43.84	-13	-30.84	-71.93	-54.22	1.74	12.12	V
									V
									V
									V
Middle	3456	-52.63	-13	-39.63	-71.18	-63.67	1.35	12.39	H
	5184	-49.85	-13	-36.85	-71.84	-61.05	1.66	12.86	H
	6912	-44.18	-13	-31.18	-71.61	-54.47	1.73	12.02	H
									H
									H
									H
	3456	-52.97	-13	-39.97	-71.39	-64.01	1.35	12.39	V
	5184	-48.80	-13	-35.80	-71.74	-60.00	1.66	12.86	V
	6912	-44.03	-13	-31.03	-71.92	-54.32	1.73	12.02	V
									V
									V
									V



Highest	3491	-52.48	-13	-39.48	-71.56	-63.60	1.36	12.48	H
	5237	-49.54	-13	-36.54	-71.85	-60.80	1.67	12.93	H
	6982	-44.04	-13	-31.04	-71.58	-54.24	1.72	11.93	H
									H
									H
									H
	3491	-52.94	-13	-39.94	-71.6	-64.06	1.36	12.48	V
	5237	-48.64	-13	-35.64	-72.07	-59.90	1.67	12.93	V
	6982	-44.21	-13	-31.21	-71.91	-54.41	1.72	11.93	V
									V
									V
									V

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



### LTE Band 5

LTE Band 5 / 10MHz / QPSK										
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)	
Lowest	1649	-60.25	-13	-47.25	-70.96	-66.66	0.81	9.37	H	
	2473	-56.96	-13	-43.96	-70.7	-64.09	1.08	10.37	H	
	3298	-54.39	-13	-41.39	-71.24	-63.17	1.11	12.04	H	
										H
										H
										H
	1649	-59.86	-13	-46.86	-70.49	-66.27	0.81	9.37	V	
	2473	-57.14	-13	-44.14	-70.92	-64.27	1.08	10.37	V	
	3298	-53.99	-13	-40.99	-71.14	-62.77	1.11	12.04	V	
										V
										V
										V
Middle	1664	-60.26	-13	-47.26	-70.99	-66.72	0.81	9.42	H	
	2496	-56.55	-13	-43.55	-70.29	-63.77	1.11	10.48	H	
	3328	-54.20	-13	-41.20	-71.08	-63.15	1.10	12.20	H	
										H
										H
										H
	1664	-59.83	-13	-46.83	-70.5	-66.29	0.81	9.42	V	
	2496	-56.76	-13	-43.76	-70.55	-63.98	1.11	10.48	V	
	3328	-53.81	-13	-40.81	-71	-62.76	1.10	12.20	V	
										V
										V
										V





Highest	1679	-60.21	-13	-47.21	-70.95	-66.72	0.81	9.48	H
	2518	-57.30	-13	-44.30	-71.2	-64.64	1.10	10.59	H
	3358	-54.38	-13	-41.38	-71.3	-63.50	1.10	12.37	H
									H
									H
									H
	1679	-59.01	-13	-46.01	-69.73	-65.52	0.81	9.48	V
	2518	-57.55	-13	-44.55	-71.52	-64.89	1.10	10.59	V
	3358	-54.07	-13	-41.07	-71.31	-63.19	1.10	12.37	V
									V
									V
									V

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



### LTE Band 7

LTE Band 7 / 10MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5001	-50.12	-25	-25.12	-71.71	-61.37	1.35	12.60	H
	7502	-43.43	-25	-18.43	-72.44	-52.72	1.92	11.21	H
	10002	-37.92	-25	-12.92	-71.96	-46.73	2.29	11.10	H
									H
									H
									H
	5001	-49.67	-25	-24.67	-71.74	-60.92	1.35	12.60	V
	7502	-43.08	-25	-18.08	-72.22	-52.37	1.92	11.21	V
	10002	-39.27	-25	-14.27	-71.94	-48.08	2.29	11.10	V
									V
									V
									V
Middle	5061	-50.53	-25	-25.53	-72.25	-61.83	1.33	12.63	H
	7592	-43.63	-25	-18.63	-72.59	-53.31	1.89	11.57	H
	10122	-37.05	-25	-12.05	-71.24	-45.80	2.28	11.03	H
									H
									H
									H
	5061	-49.53	-25	-24.53	-71.88	-60.83	1.33	12.63	V
	7592	-43.49	-25	-18.49	-72.62	-53.17	1.89	11.57	V
	10122	-38.99	-25	-13.99	-72.01	-47.74	2.28	11.03	V
									V
									V
									V



Highest	5121	-50.40	-25	-25.40	-72.33	-61.75	1.31	12.66	H
	7682	-43.11	-25	-18.11	-72.18	-52.87	1.89	11.64	H
	10242	-37.52	-25	-12.52	-71.86	-46.20	2.27	10.95	H
									H
									H
									H
	5121	-49.64	-25	-24.64	-72.47	-60.99	1.31	12.66	V
	7682	-42.98	-25	-17.98	-72.27	-52.74	1.89	11.64	V
	10242	-38.68	-25	-13.68	-72.05	-47.36	2.27	10.95	V
									V
									V
									V

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



**LTE Band 12**

LTE Band 12 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1399	-59.43	-13.00	-46.43	-69.87	-63.70	0.78	7.20	H
	2099	-57.27	-13.00	-44.27	-70.28	-63.70	0.92	9.51	H
	2798	-56.03	-13.00	-43.03	-71.11	-63.66	1.12	10.90	H
									H
									H
									H
	1399	-59.52	-13.00	-46.52	-70.04	-63.79	0.78	7.20	V
	2099	-57.49	-13.00	-44.49	-70.90	-63.92	0.92	9.51	V
	2798	-55.70	-13.00	-42.70	-71.27	-63.33	1.12	10.90	V
									V
									V
									V
Middle	1406	-59.48	-13.00	-46.48	-69.90	-63.80	0.78	7.25	H
	2109	-56.94	-13.00	-43.94	-70.04	-63.32	0.93	9.46	H
	2812	-55.55	-13.00	-42.55	-70.66	-63.19	1.12	10.91	H
									H
									H
									H
	1406	-59.04	-13.00	-46.04	-69.55	-63.36	0.78	7.25	V
	2109	-56.80	-13.00	-43.80	-70.34	-63.18	0.93	9.46	V
	2812	-55.10	-13.00	-42.10	-70.68	-62.74	1.12	10.91	V
									V
									V
									V



Highest	1413	-58.17	-13.00	-45.17	-68.57	-62.55	0.78	7.32	H
	2119	-57.61	-13.00	-44.61	-70.82	-63.93	0.93	9.41	H
	2826	-55.59	-13.00	-42.59	-70.75	-63.25	1.11	10.93	H
									H
									H
									H
	1413	-59.16	-13.00	-46.16	-69.66	-63.54	0.78	7.32	V
	2119	-56.94	-13.00	-43.94	-70.63	-63.26	0.93	9.41	V
	2826	-55.14	-13.00	-42.14	-70.75	-62.80	1.11	10.93	V
									V
									V
									V

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



**LTE Band 13**

LTE Band 13 / 5MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1555	-60.08	-13	-47.08	-70.48	-65.83	0.80	8.71	H
	2332	-50.78	-13	-37.78	-71.10	-57.30	0.99	9.66	H
	3109	-54.48	-13	-41.48	-70.72	-62.56	1.09	11.32	H
									H
									H
									H
	1555	-60.24	-13.00	-47.24	-70.66	-65.99	0.80	8.71	V
	2332	-56.73	-13	-43.73	-70.83	-63.25	0.99	9.66	V
	3109	-54.41	-13	-41.41	-70.87	-62.49	1.09	11.32	V
									V
									V
									V
Middle	1559	-60.04	-42.15	-17.89	-70.47	-65.84	0.80	8.75	H
	2339	-56.67	-13	-43.67	-70.46	-63.23	0.99	9.70	H
	3119	-54.64	-13	-41.64	-70.93	-62.73	1.09	11.34	H
									H
									H
									H
	1559	-59.57	-42.15	-17.42	-70.01	-65.37	0.80	8.75	V
	2339	-56.81	-13	-43.81	-70.87	-63.37	0.99	9.70	V
	3119	-54.14	-13	-41.14	-70.66	-62.23	1.09	11.34	V
									V
									V
									V



Highest	1565	-60.41	-42.15	-18.26	-70.86	-66.27	0.80	8.82	H
	2347	-56.75	-13	-43.75	-70.54	-63.35	0.99	9.74	H
	3129	-54.10	-13	-41.10	-70.45	-62.21	1.10	11.36	H
									H
									H
									H
	1565	-60.41	-42.15	-18.26	-70.85	-66.27	0.80	8.82	V
	2347	-56.70	-13	-43.70	-70.73	-63.30	0.99	9.74	V
	3129	-54.31	-13	-41.31	-70.89	-62.42	1.10	11.36	V
									V
									V
									V

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



**LTE Band 66**

LTE Band 66 / 1.4MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-53.30	-13	-40.30	-71.31	-64.73	1.13	12.56	H
	5130	-50.27	-13	-37.27	-72.14	-61.63	1.30	12.67	H
	6841	-45.24	-13	-32.24	-72.57	-55.83	1.85	12.44	H
									H
									H
									H
	3420	-53.08	-13	-40.08	-71.25	-64.51	1.13	12.56	V
	5130	-49.13	-13	-36.13	-71.82	-60.49	1.30	12.67	V
	6841	-44.32	-13	-31.32	-72.41	-54.91	1.85	12.44	V
									V
									V
									V
Middle	3489	-51.99	-13	-38.99	-71.03	-63.16	1.25	12.42	H
	5233	-49.39	-13	-36.39	-71.67	-60.84	1.35	12.80	H
	6978	-44.01	-13	-31.01	-71.54	-54.06	1.84	11.89	H
									H
									H
									H
	3489	-52.55	-13	-39.55	-71.18	-63.72	1.25	12.42	V
	5233	-48.64	-13	-35.64	-72.03	-60.09	1.35	12.80	V
	6978	-43.88	-13	-30.88	-71.59	-53.93	1.84	11.89	V
									V
									V
									V





Highest	3557	-52.77	-13	-39.77	-71.72	-63.63	1.31	12.17	H
	5336	-49.17	-13	-36.17	-72.26	-60.72	1.56	13.11	H
	7115	-44.13	-13	-31.13	-72.23	-53.80	1.84	11.51	H
									H
									H
									H
	3557	-53.26	-13	-40.26	-72.11	-64.12	1.31	12.17	V
	5336	-47.89	-13	-34.89	-72.44	-59.44	1.56	13.11	V
	7115	-44.36	-13	-31.36	-72.72	-54.03	1.84	11.51	V
									V
									V
									V

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



**LTE Band 71**

LTE Band 71 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1327	-49.34	-13	-36.34	-69.93	-55.53	0.76	6.94	H
	1991	-49.19	-13	-36.19	-71.24	-58.30	0.89	10.00	H
	2654	-45.93	-13	-32.93	-70.63	-55.83	1.08	10.97	H
									H
									H
									H
	1327	-49.10	-13	-36.10	-69.5	-55.29	0.76	6.94	V
	1991	-48.86	-13	-35.86	-70.92	-57.97	0.89	10.00	V
	2654	-45.79	-13	-32.79	-70.71	-55.69	1.08	10.97	V
									V
									V
									V
Middle	1347	-49.65	-13	-36.65	-70.2	-55.90	0.76	7.01	H
	2021	-48.43	-13	-35.43	-70.73	-57.43	0.90	9.90	H
	2694	-45.76	-13	-32.76	-70.57	-55.62	1.09	10.95	H
									H
									H
									H
	1347	-49.55	-13	-36.55	-69.99	-55.80	0.76	7.01	V
	2021	-48.51	-13	-35.51	-70.91	-57.51	0.90	9.90	V
	2694	-45.62	-13	-32.62	-70.73	-55.48	1.09	10.95	V
									V
									V
									V



Highest	1377	-49.58	-13	-36.58	-70.07	-55.93	0.77	7.12	H
	2066	-47.67	-13	-34.67	-70.39	-56.43	0.91	9.67	H
	2754	-45.87	-13	-32.87	-70.84	-55.69	1.11	10.92	H
									H
									H
									H
	1377	-49.66	-13	-36.66	-70.14	-56.01	0.77	7.12	V
	2066	-47.73	-13	-34.73	-70.72	-56.49	0.91	9.67	V
	2754	-45.31	-13	-32.31	-70.69	-55.13	1.11	10.92	V
									V
									V
									V

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



LTE Band 5B

LTE Band 5B / 5MHz+3MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1657	-59.94	-13	-46.94	-70.66	-66.38	0.81	9.40	H
	2486	-56.72	-13	-43.72	-70.47	-63.91	1.09	10.43	H
	3315	-54.36	-13	-41.36	-71.23	-63.24	1.10	12.13	H
									H
									H
									H
	1657	-59.78	-13	-46.78	-70.44	-66.22	0.81	9.40	V
	2486	-56.97	-13	-43.97	-70.77	-64.16	1.09	10.43	V
	3315	-53.36	-13	-40.36	-70.53	-62.24	1.10	12.13	V
									V
									V
									V
Middle	1674	-59.72	-13	-46.72	-70.45	-66.22	0.81	9.46	H
	2511	-56.96	-13	-43.96	-70.79	-64.26	1.10	10.56	H
	3349	-54.38	-13	-41.38	-71.29	-63.45	1.10	12.32	H
									H
									H
									H
	1674	-59.87	-13	-46.87	-70.57	-66.37	0.81	9.46	V
	2511	-57.14	-13	-44.14	-71.02	-64.44	1.10	10.56	V
	3349	-53.95	-13	-40.95	-71.17	-63.02	1.10	12.32	V
									V
									V
									V



Highest	1691	-60.26	-13	-47.26	-71.02	-66.81	0.81	9.52	H
	2537	-57.04	-13	-44.04	-71.08	-64.48	1.09	10.69	H
	3383	-54.84	-13	-41.84	-71.78	-64.10	1.10	12.51	H
									H
									H
									H
	1691	-60.21	-13	-47.21	-70.96	-66.76	0.81	9.52	V
	2537	-57.44	-13	-44.44	-71.55	-64.88	1.09	10.69	V
	3383	-54.21	-13	-41.21	-71.48	-63.47	1.10	12.51	V
									V
									V
									V

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



**LTE Band 7C**

LTE Band 7 / 15MHz+10MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5028	-49.75	-25	-24.75	-71.41	-61.02	1.34	12.61	H
	7542	-43.59	-25	-18.59	-72.58	-53.05	1.91	11.37	H
	10057	-37.46	-25	-12.46	-71.56	-46.24	2.29	11.07	H
									H
									H
									H
	5028	-49.66	-25	-24.66	-71.86	-60.93	1.34	12.61	V
	7542	-43.14	-25	-18.14	-72.27	-52.60	1.91	11.37	V
	10057	-38.94	-25	-13.94	-71.76	-47.72	2.29	11.07	V
									V
									V
									V
Middle	5074	-49.67	-25	-24.67	-71.41	-60.98	1.32	12.64	H
	7610	-43.41	-25	-18.41	-72.38	-53.13	1.89	11.61	H
	10147	-37.45	-25	-12.45	-71.68	-46.18	2.28	11.01	H
									H
									H
									H
	5074	-49.37	-25	-24.37	-71.78	-60.68	1.32	12.64	V
	7610	-43.42	-25	-18.42	-72.57	-53.14	1.89	11.61	V
	10147	-38.88	-25	-13.88	-71.98	-47.61	2.28	11.01	V
									V
									V
									V



Highest	5119	-49.89	-25	-24.89	-71.73	-61.24	1.31	12.66	H
	7678	-43.03	-25	-18.03	-72.09	-52.78	1.89	11.64	H
	10237	-37.90	-25	-12.90	-72.23	-46.59	2.27	10.96	H
									H
									H
									H
	5119	-49.09	-25	-24.09	-71.71	-60.44	1.31	12.66	V
	7678	-42.99	-25	-17.99	-72.27	-52.74	1.89	11.64	V
	10237	-38.74	-25	-13.74	-72.09	-47.43	2.27	10.96	V
									V
									V
									V

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



**LTE Band 66B**

LTE Band 66B / 5MHz+10MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3429	-53.39	-13	-40.39	-71.54	-64.78	1.15	12.54	H
	5144	-50.17	-13	-37.17	-72.07	-61.54	1.30	12.67	H
	6859	-44.95	-13	-31.95	-72.3	-55.47	1.85	12.36	H
									H
									H
									H
	3429	-53.22	-13	-40.22	-71.46	-64.61	1.15	12.54	V
	5144	-49.20	-13	-36.20	-71.95	-60.57	1.30	12.67	V
	6859	-44.33	-13	-31.33	-72.36	-54.85	1.85	12.36	V
									V
									V
									V
Middle	3504	-52.35	-13	-39.35	-71.55	-63.46	1.27	12.38	H
	5257	-49.36	-13	-36.36	-71.83	-60.83	1.40	12.87	H
	7009	-44.65	-13	-31.65	-72.26	-54.59	1.84	11.78	H
									H
									H
									H
	3504	-52.46	-13	-39.46	-71.19	-63.57	1.27	12.38	V
	5257	-48.53	-13	-35.53	-72.19	-60.00	1.40	12.87	V
	7009	-43.96	-13	-30.96	-71.66	-53.90	1.84	11.78	V
									V
									V
									V





Highest	3539	-52.52	-13	-39.52	-71.55	-63.47	1.30	12.24	H
	5309	-49.29	-13	-36.29	-72.16	-60.81	1.50	13.03	H
	7079	-44.19	-13	-31.19	-72.12	-53.95	1.84	11.60	H
									H
									H
									H
	3539	-52.28	-13	-39.28	-71.09	-63.23	1.30	12.24	V
	5309	-47.95	-13	-34.95	-72.19	-59.47	1.50	13.03	V
	7079	-44.25	-13	-31.25	-72.39	-54.01	1.84	11.60	V
									V
									V
									V

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



LTE Band 66C

LTE Band 66C / 5MHz+20MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3430	-53.01	-13	-40.01	-71.17	-64.40	1.15	12.54	H
	5146	-49.71	-13	-36.71	-71.61	-61.08	1.30	12.67	H
	6861	-44.65	-13	-31.65	-72	-55.16	1.85	12.36	H
									H
									H
									H
	3430	-52.95	-13	-39.95	-71.2	-64.34	1.15	12.54	V
	5146	-48.78	-13	-35.78	-71.54	-60.15	1.30	12.67	V
	6861	-44.20	-13	-31.20	-72.23	-54.71	1.85	12.36	V
									V
									V
									V
Middle	3495	-51.66	-13	-38.66	-70.79	-62.81	1.26	12.41	H
	5243	-48.83	-13	-35.83	-71.19	-60.29	1.37	12.83	H
	6991	-43.66	-13	-30.66	-71.21	-53.66	1.84	11.84	H
									H
									H
									H
	3495	-52.34	-13	-39.34	-71.02	-63.49	1.26	12.41	V
	5243	-48.36	-13	-35.36	-71.87	-59.82	1.37	12.83	V
	6991	-43.75	-13	-30.75	-71.42	-53.75	1.84	11.84	V
									V
									V
									V



Highest	3520	-52.08	-13	-39.08	-71.2	-63.12	1.28	12.32	H
	5281	-49.40	-13	-36.40	-72.06	-60.90	1.45	12.94	H
	7041	-44.29	-13	-31.29	-72.05	-54.15	1.84	11.70	H
									H
									H
									H
	3520	-53.07	-13	-40.07	-71.83	-64.11	1.28	12.32	V
	5281	-47.84	-13	-34.84	-71.77	-59.34	1.45	12.94	V
	7041	-43.78	-13	-30.78	-71.68	-53.64	1.84	11.70	V
									V
									V
									V

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



<Internal Antenna>

**LTE Band 2**

LTE Band 2 / 5MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3701	-51.91	-13	-38.91	-70.6	-62.78	1.23	12.10	H
	5551	-48.46	-13	-35.46	-71.65	-60.03	1.58	13.15	H
	7401	-42.16	-13	-29.16	-71.45	-51.62	1.94	11.40	H
									H
									H
									H
	3701	-51.85	-13	-38.85	-70.8	-62.72	1.23	12.10	V
	5551	-45.47	-13	-32.47	-71.35	-57.04	1.58	13.15	V
	7401	-42.12	-13	-29.12	-71.5	-51.58	1.94	11.40	V
									V
									V
									V
Middle	3756	-51.27	-13	-38.27	-69.92	-62.26	1.17	12.16	H
	5634	-48.11	-13	-35.11	-71.29	-59.86	1.48	13.23	H
	7511	-42.35	-13	-29.35	-71.35	-51.68	1.92	11.24	H
									H
									H
									H
	3756	-51.96	-13	-38.96	-70.9	-62.95	1.17	12.16	V
	5634	-45.46	-13	-32.46	-71.4	-57.21	1.48	13.23	V
	7511	-42.17	-13	-29.17	-71.31	-51.50	1.92	11.24	V
									V
									V
									V



Highest	3811	-52.37	-13	-39.37	-71.05	-63.45	1.14	12.22	H
	5716	-48.48	-13	-35.48	-71.74	-60.40	1.40	13.32	H
	7621	-42.49	-13	-29.49	-71.47	-52.21	1.89	11.61	H
									H
									H
									H
	3811	-52.29	-13	-39.29	-71.28	-63.37	1.14	12.22	V
	5716	-46.34	-13	-33.34	-72.08	-58.26	1.40	13.32	V
	7621	-42.73	-13	-29.73	-71.9	-52.45	1.89	11.61	V
									V
									V
									V

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



LTE Band 4

LTE Band 4 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3421	-51.12	-13	-38.12	-69.15	-62.08	1.35	12.31	H
	5132	-49.98	-13	-36.98	-71.86	-61.12	1.64	12.78	H
	6842	-45.16	-13	-32.16	-72.49	-55.54	1.74	12.12	H
									H
									H
									H
	3421	-53.54	-13	-40.54	-71.73	-64.50	1.35	12.31	V
	5132	-49.13	-13	-36.13	-71.83	-60.27	1.64	12.78	V
	6842	-44.11	-13	-31.11	-72.2	-54.49	1.74	12.12	V
									V
									V
									V
Middle	3456	-52.87	-13	-39.87	-71.42	-63.91	1.35	12.39	H
	5184	-50.25	-13	-37.25	-72.24	-61.45	1.66	12.86	H
	6912	-44.47	-13	-31.47	-71.9	-54.76	1.73	12.02	H
									H
									H
									H
	3456	-52.66	-13	-39.66	-71.08	-63.70	1.35	12.39	V
	5184	-49.29	-13	-36.29	-72.23	-60.49	1.66	12.86	V
	6912	-44.44	-13	-31.44	-72.33	-54.73	1.73	12.02	V
									V
									V
									V



Highest	3491	-43.30	-13	-30.30	-62.38	-54.42	1.36	12.48	H
	5237	-49.94	-13	-36.94	-72.25	-61.20	1.67	12.93	H
	6982	-44.55	-13	-31.55	-72.09	-54.75	1.72	11.93	H
									H
									H
									H
	3491	-52.05	-13	-39.05	-70.71	-63.17	1.36	12.48	V
	5237	-49.10	-13	-36.10	-72.53	-60.36	1.67	12.93	V
	6982	-43.85	-13	-30.85	-71.55	-54.05	1.72	11.93	V
									V
									V
									V

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



### LTE Band 5

LTE Band 5 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1649	-46.76	-13	-33.76	-57.47	-53.17	0.81	9.37	H
	2473	-57.38	-13	-44.38	-71.12	-64.51	1.08	10.37	H
	3298	-55.11	-13	-42.11	-71.96	-63.89	1.11	12.04	H
									H
									H
									H
	1649	-50.18	-13	-37.18	-60.81	-56.59	0.81	9.37	V
	2473	-57.31	-13	-44.31	-71.09	-64.44	1.08	10.37	V
	3298	-54.62	-13	-41.62	-71.77	-63.40	1.11	12.04	V
									V
									V
									V
Middle	1664	-49.15	-13	-36.15	-59.88	-55.61	0.81	9.42	H
	2496	-57.08	-13	-44.08	-70.82	-64.30	1.11	10.48	H
	3328	-54.34	-13	-41.34	-71.22	-63.29	1.10	12.20	H
									H
									H
									H
	1664	-48.39	-13	-35.39	-59.06	-54.85	0.81	9.42	V
	2496	-56.96	-13	-43.96	-70.75	-64.18	1.11	10.48	V
	3328	-53.28	-13	-40.28	-70.47	-62.23	1.10	12.20	V
									V
									V
									V





Highest	1679	-50.09	-13	-37.09	-60.83	-56.60	0.81	9.48	H
	2518	-57.97	-13	-44.97	-71.85	-65.31	1.10	10.59	H
	3358	-54.66	-13	-41.66	-71.58	-63.78	1.10	12.37	H
									H
									H
									H
	1679	-54.24	-13	-41.24	-64.96	-60.75	0.81	9.48	V
	2518	-57.68	-13	-44.68	-71.63	-65.02	1.10	10.59	V
	3358	-54.46	-13	-41.46	-71.7	-63.58	1.10	12.37	V
									V
									V
									V

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



### LTE Band 7

LTE Band 7 / 10MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5001	-48.33	-25	-23.33	-69.92	-59.58	1.35	12.60	H
	7502	-41.80	-25	-16.80	-70.81	-51.09	1.92	11.21	H
	10002	-36.28	-25	-11.28	-70.32	-45.09	2.29	11.10	H
									H
									H
									H
	5001	-48.01	-25	-23.01	-70.08	-59.26	1.35	12.60	V
	7502	-41.64	-25	-16.64	-70.78	-50.93	1.92	11.21	V
	10002	-37.54	-25	-12.54	-70.21	-46.35	2.29	11.10	V
									V
									V
									V
Middle	5061	-47.87	-25	-22.87	-69.59	-59.17	1.33	12.63	H
	7592	-41.45	-25	-16.45	-70.41	-51.13	1.89	11.57	H
	10122	-35.47	-25	-10.47	-69.66	-44.22	2.28	11.03	H
									H
									H
									H
	5061	-47.55	-25	-22.55	-69.9	-58.85	1.33	12.63	V
	7592	-41.37	-25	-16.37	-70.5	-51.05	1.89	11.57	V
	10122	-36.87	-25	-11.87	-69.89	-45.62	2.28	11.03	V
									V
									V
									V



Highest	5121	-48.21	-25	-23.21	-70.06	-59.56	1.31	12.66	H
	7682	-41.33	-25	-16.33	-70.4	-51.09	1.89	11.64	H
	10242	-36.10	-25	-11.10	-70.44	-44.78	2.27	10.95	H
									H
									H
									H
	5121	-47.74	-25	-22.74	-70.38	-59.09	1.31	12.66	V
	7682	-40.85	-25	-15.85	-70.14	-50.61	1.89	11.64	V
	10242	-36.76	-25	-11.76	-70.13	-45.44	2.27	10.95	V
									V
									V
									V

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



## LTE Band 12

LTE Band 12 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1399	-33.99	-13.00	-20.99	-44.43	-38.26	0.78	7.20	H
	2098	-46.13	-13.00	-33.13	-59.13	-52.57	0.92	9.51	H
	2798	-55.48	-13.00	-42.48	-70.56	-63.11	1.12	10.90	H
									H
									H
									H
	1399	-37.22	-13.00	-24.22	-47.74	-41.49	0.78	7.20	V
	2098	-46.53	-13.00	-33.53	-59.92	-52.97	0.92	9.51	V
	2798	-53.62	-13.00	-40.62	-69.19	-61.25	1.12	10.90	V
									V
									V
									V
Middle	1402	-35.47	-13.00	-22.47	-45.89	-39.76	0.78	7.22	H
	2112	-47.16	-13.00	-34.16	-60.26	-53.52	0.93	9.44	H
	2814	-55.74	-13.00	-42.74	-70.86	-63.39	1.12	10.91	H
									H
									H
									H
	1402	-38.79	-13.00	-25.79	-49.30	-43.08	0.78	7.22	V
	2112	-46.37	-13.00	-33.37	-59.91	-52.73	0.93	9.44	V
	2814	-53.03	-13.00	-40.03	-68.62	-60.68	1.12	10.91	V
									V
									V
									V



Highest	1413	-36.51	-13.00	-23.51	-46.91	-40.89	0.78	7.32	H
	2119	-47.86	-13.00	-34.86	-61.06	-54.18	0.93	9.41	H
	2826	-55.87	-13.00	-42.87	-71.03	-63.53	1.11	10.93	H
									H
									H
									H
	1413	-39.53	-13.00	-26.53	-50.03	-43.91	0.78	7.32	V
	2119	-45.69	-13.00	-32.69	-59.37	-52.01	0.93	9.41	V
	2826	-52.49	-13.00	-39.49	-68.10	-60.15	1.11	10.93	V
									V
									V
									V

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



### LTE Band 13

LTE Band 13 / 5MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1555	-57.97	-13	-44.97	-68.37	-63.72	0.80	8.71	H
	2332	-57.01	-13	-44.01	-70.81	-63.53	0.99	9.66	H
	3109	-54.42	-13	-41.42	-70.66	-62.50	1.09	11.32	H
									H
									H
									H
	1555	-54.88	-13.00	-41.88	-65.30	-60.63	0.80	8.71	V
	2332	-54.93	-13	-41.93	-69.03	-61.45	0.99	9.66	V
	3109	-52.83	-13	-39.83	-69.29	-60.91	1.09	11.32	V
									V
									V
									V
Middle	1559	-56.93	-42.15	-14.78	-67.36	-62.73	0.80	8.75	H
	2339	-56.49	-13	-43.49	-70.28	-63.05	0.99	9.70	H
	3119	-54.15	-13	-41.15	-70.44	-62.24	1.09	11.34	H
									H
									H
									H
	1559	-55.87	-42.15	-13.72	-66.31	-61.67	0.80	8.75	V
	2339	-56.18	-13	-43.18	-70.24	-62.74	0.99	9.70	V
	3119	-52.85	-13	-39.85	-69.37	-60.94	1.09	11.34	V
									V
									V
									V



Highest	1565	-57.38	-42.15	-15.23	-67.83	-63.24	0.80	8.82	H
	2347	-56.04	-13	-43.04	-69.83	-62.64	0.99	9.74	H
	3129	-54.30	-13	-41.30	-70.65	-62.41	1.10	11.36	H
									H
									H
									H
	1565	-54.51	-42.15	-12.36	-64.95	-60.37	0.80	8.82	V
	2347	-55.94	-13	-42.94	-69.97	-62.54	0.99	9.74	V
	3129	-53.64	-13	-40.64	-70.22	-61.75	1.10	11.36	V
									V
									V
									V

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



**LTE Band 66**

LTE Band 66 / 1.4MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-53.71	-13	-40.71	-71.72	-65.14	1.13	12.56	H
	5130	-49.83	-13	-36.83	-71.7	-61.19	1.30	12.67	H
	6841	-44.93	-13	-31.93	-72.26	-55.52	1.85	12.44	H
									H
									H
									H
	3420	-50.32	-13	-37.32	-68.49	-61.75	1.13	12.56	V
	5130	-49.04	-13	-36.04	-71.73	-60.40	1.30	12.67	V
	6841	-44.33	-13	-31.33	-72.42	-54.92	1.85	12.44	V
									V
									V
									V
Middle	3489	-52.09	-13	-39.09	-71.13	-63.26	1.25	12.42	H
	5233	-49.79	-13	-36.79	-72.07	-61.24	1.35	12.80	H
	6978	-44.16	-13	-31.16	-71.69	-54.21	1.84	11.89	H
									H
									H
									H
	3489	-52.21	-13	-39.21	-70.84	-63.38	1.25	12.42	V
	5233	-48.50	-13	-35.50	-71.89	-59.95	1.35	12.80	V
	6978	-43.75	-13	-30.75	-71.46	-53.80	1.84	11.89	V
									V
									V
									V





Highest	3557	-53.12	-13	-40.12	-72.07	-63.98	1.31	12.17	H
	5336	-49.03	-13	-36.03	-72.12	-60.58	1.56	13.11	H
	7115	-44.17	-13	-31.17	-72.27	-53.84	1.84	11.51	H
									H
									H
									H
	3557	-52.79	-13	-39.79	-71.64	-63.65	1.31	12.17	V
	5336	-47.85	-13	-34.85	-72.4	-59.40	1.56	13.11	V
	7115	-44.00	-13	-31.00	-72.36	-53.67	1.84	11.51	V
									V
									V
									V

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



**LTE Band 71**

LTE Band 71 / 10MHz / QPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1327	-49.87	-13	-36.87	-69.93	-55.53	0.76	6.94	H
	1991	-49.88	-13	-36.88	-71.24	-58.30	0.89	10.00	H
	2654	-46.12	-13	-33.12	-70.63	-55.83	1.08	10.97	H
									H
									H
									H
	1327	-49.9	-13	-36.9	-69.5	-55.29	0.76	6.94	V
	1991	-49.12	-13	-36.12	-70.92	-57.97	0.89	10.00	V
	2654	-46.31	-13	-33.31	-70.71	-55.69	1.08	10.97	V
									V
									V
									V
Middle	1347	-49.66	-13	-36.66	-70.2	-55.90	0.76	7.01	H
	2021	-49.21	-13	-36.21	-70.73	-57.43	0.90	9.90	H
	2694	-45.81	-13	-32.81	-70.57	-55.62	1.09	10.95	H
									H
									H
									H
	1347	-49.62	-13	-36.62	-69.99	-55.80	0.76	7.01	V
	2021	-48.01	-13	-35.01	-70.91	-57.51	0.90	9.90	V
	2694	-49.22	-13	-36.22	-70.73	-55.48	1.09	10.95	V
									V
									V
									V



Highest	1377	-49.61	-13	-36.61	-70.07	-55.93	0.77	7.12	H
	2066	-48.1	-13	-35.1	-70.39	-56.43	0.91	9.67	H
	2754	-45.99	-13	-32.99	-70.84	-55.69	1.11	10.92	H
									H
									H
									H
	1377	-49.71	-13	-36.71	-70.14	-56.01	0.77	7.12	V
	2066	-48.89	-13	-35.89	-70.72	-56.49	0.91	9.67	V
	2754	-47.2	-13	-34.2	-70.69	-55.13	1.11	10.92	V
									V
									V
									V

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