



FCC RF Test Report

APPLICANT : Lenovo(Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT : Notebook Computer
BRAND NAME : Lenovo
MODEL NAME : Lenovo YB-J912L
FCC ID : O57YBJ912L
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M), 27(F), 27(H)
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product were integrated the WWAN module (Brand Name: Fibocom, Model Name: L850-GL, FCC ID: ZMOL850GL) and the BT/WLAN module (Brand Name: Intel®, Model Name: 8265D2W, FCC ID: PD98265D2) during the test.

The product was received on Jan. 03, 2018 and testing was completed on Fen. 05, 2018. We, Sporton International (Kunshan) Inc., 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.

This report contains data that were produced under subcontract by Laboratory SPORTON INTERNATIONAL INC.

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

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

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China



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(2)	Effective Radiated Power (Band 5) (Band 26)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 17)	ERP < 3 Watt	PASS	-
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 7)(Band 38)(Band 41)	EIRP < 2Watt	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	EIRP < 1Watt	PASS	-
-	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	1
-	§2.1049	Occupied Bandwidth	Reporting Only	PASS	1
-	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2)(4) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	1
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7) (Band 38) (Band 41)	§27.53(m)(4)		
-	§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 17) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	1
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10log ₁₀ (P[Watts])		
-	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	1
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2)(Band 12/17) (Band 13) (Band 5/26) (Band 4/66)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 14.51 dB at 8016.00 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7) (Band 38/41)	< 55+10log ₁₀ (P[Watts])		

Remark 1:

The conducted test items can be referred to module RF report “RF170106C02, RF170106C02-1, RF170106C02-2, RF170106C02-4”.



1 General Description

1.1 Applicant

Lenovo(Shanghai) Electronics Technology Co., Ltd.
NO.68 BUILDING, 199 FENJU RD, Pilot Free Trade Zone, 200131, China

1.2 Manufacturer

Lenovo PC HK Limited
23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Notebook Computer
Brand Name	Lenovo
Model Name	Lenovo YB-J912L
FCC ID	O57YBJ912L
EUT supports Radios application	WCDMA/HSPA/HSPA+ (16QAM uplink is not supported)/ DC-HSDPA/LTE WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0+EDR/ Bluetooth v4.0 LE/ Bluetooth v4.1 LE/ Bluetooth v4.2 LE
IMEI Code	Radiation: N/A
HW Version	Lenovo YB-J912L
SW Version	Windows 10
EUT Stage	Identical Prototype



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
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 17 : 706.5 MHz ~ 713.5 MHz LTE Band 26 : 824.7MHz ~ 848.3 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 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 : 2622.5MHz ~ 2687.5 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 13 : 748.5 MHz ~ 753.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz LTE Band 26 : 869.7MHz ~ 893.3MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 66 : 2110.7 MHz~ 2199.3 MHz
Bandwidth	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 17 : 5MHz / 10MHz LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.93 dBm LTE Band 4 : 23.32 dBm LTE Band 5 : 22.79 dBm LTE Band 7 : 23.27 dBm LTE Band 12 : 22.96 dBm LTE Band 13 : 23.13 dBm LTE Band 17 : 22.93 dBm LTE Band 26 : 22.98 dBm LTE Band 38 : 22.94 dBm LTE Band 41 : 22.99 dBm LTE Band 66 : 23.26 dBm



Antenna Gain	LTE Band 2 : 1.32 dBi
	LTE Band 4 : 1.53 dBi
	LTE Band 5 : -0.08 dBi
	LTE Band 7 : 1.81 dBi
	LTE Band 12 : -0.69 dBi
	LTE Band 13 : -0.66 dBi
	LTE Band 17 : -0.69 dBi
	LTE Band 26 : -0.08 dBi
	LTE Band 38 : 1.84 dBi
	LTE Band 41 : 2.12 dBi
LTE Band 66 : 1.75 dBi	
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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



1.6 Emission Designator

LTE Band 2		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	-	-	0.2642	-	-	0.2080
3	1851.5 ~ 1908.5	-	-	0.2600	-	-	0.2143
5	1852.5 ~ 1907.5	-	-	0.2630	-	-	0.2094
10	1855.0 ~ 1905.0	-	-	0.2630	-	-	0.2089
15	1857.5 ~ 1902.5	-	-	0.2630	-	-	0.2099
20	1860.0 ~ 1900.0	-	-	0.2661	-	-	0.2128
LTE Band 4		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	-	-	0.3055	-	-	0.2500
3	1711.5 ~ 1753.5	-	-	0.3013	-	-	0.2495
5	1712.5 ~ 1752.5	-	-	0.3048	-	-	0.2506
10	1715.0 ~ 1750.0	-	-	0.3020	-	-	0.2512
15	1717.5 ~ 1747.5	-	-	0.3006	-	-	0.2512
20	1720.0 ~ 1745.0	-	-	0.3034	-	-	0.2523
LTE Band 5		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	824.7 ~ 848.3	-	-	0.1125	-	-	0.0935
3	825.5 ~ 847.5	-	-	0.1114	-	-	0.0933
5	826.5 ~ 846.5	-	-	0.1130	-	-	0.0940
10	829.0 ~ 844.0	-	-	0.1138	-	-	0.0942
LTE Band 7		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	-	-	0.3148	-	-	0.2612
10	2505.0 ~ 2565.0	-	-	0.3177	-	-	0.2685
15	2507.5 ~ 2562.5	-	-	0.3177	-	-	0.2692
20	2510.0 ~ 2560.0	-	-	0.3221	-	-	0.2655



LTE Band 12		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	699.7 ~ 715.3	-	-	0.1007	-	-	0.0818
3	700.5 ~ 714.5	-	-	0.1007	-	-	0.0820
5	701.5 ~ 713.5	-	-	0.1007	-	-	0.0824
10	704.0 ~ 711.0	-	-	0.1028	-	-	0.0824
LTE Band 13		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
5	779.5 ~ 784.5	-	-	0.1069	-	-	0.0927
10	782.0	-	-	0.1076	-	-	0.0931
LTE Band 17		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
5	706.5 ~ 713.5	-	-	0.1014	-	-	0.0817
10	709.0 ~ 711.0	-	-	0.1021	-	-	0.0817
LTE Band 26		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	824.7 ~ 848.3	-	-	0.1175	-	-	0.0948
3	825.5 ~ 847.5	-	-	0.1172	-	-	0.0944
5	826.5 ~ 846.5	-	-	0.1169	-	-	0.0938
10	829.0 ~ 844.0	-	-	0.1189	-	-	0.0938
15	831.5 ~ 841.5	-	-	0.1151	-	-	0.0946
LTE Band 38		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2572.5 ~ 2617.5	-	-	0.2992	-	-	0.2239
10	2575.0 ~ 2615.0	-	-	0.3006	-	-	0.2249
15	2577.5 ~ 2612.5	-	-	0.2999	-	-	0.2234
20	2580.0 ~ 2610.0	-	-	0.2985	-	-	0.2223



LTE Band 41		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2498.5 ~ 2687.5	-	-	0.3177	-	-	0.2360
10	2501.0 ~ 2685.0	-	-	0.3206	-	-	0.2393
15	2503.5 ~ 2682.5	-	-	0.3192	-	-	0.2371
20	2506.0 ~ 2680.0	-	-	0.3243	-	-	0.2421
LTE Band 66		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1779.3	-	-	0.3062	-	-	0.2630
3	1711.5 ~ 1778.5	-	-	0.3055	-	-	0.2582
5	1712.5 ~ 1777.5	-	-	0.3090	-	-	0.2588
10	1715.0 ~ 1775.0	-	-	0.3097	-	-	0.2630
15	1717.5 ~ 1772.5	-	-	0.3126	-	-	0.2594
20	1720.0 ~ 1770.0	-	-	0.3170	-	-	0.2600



1.7 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

Test Site	Sporton International (Kunshan) Inc.	
Test Site Location	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	Sporton Site No.	FCC Test Firm Registration No.
	TH01-KS	630927

SPORTON INTERNATIONAL INC. is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and under the FCC-recognized accredited testing laboratories by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No.58, Aly. 75, Ln. 564 Wenhua 3rd Rd. Guishan Dist. Taoyuan City Taiwan TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.	FCC designation No.	FCC Test Firm Registration No.
	03CH12-HY	TW0007	214511

Note:

1. The test site complies with ANSI C63.4 2014 requirement.
2. Test data subcontracted: Radiation Spurious Emission in section 4.4 of this report.



1.8 Applicable Standards

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

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M), 27(F), 27(H)
- ♦ ANSI/TIA-603-E
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

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



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03 with maximum output power.

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

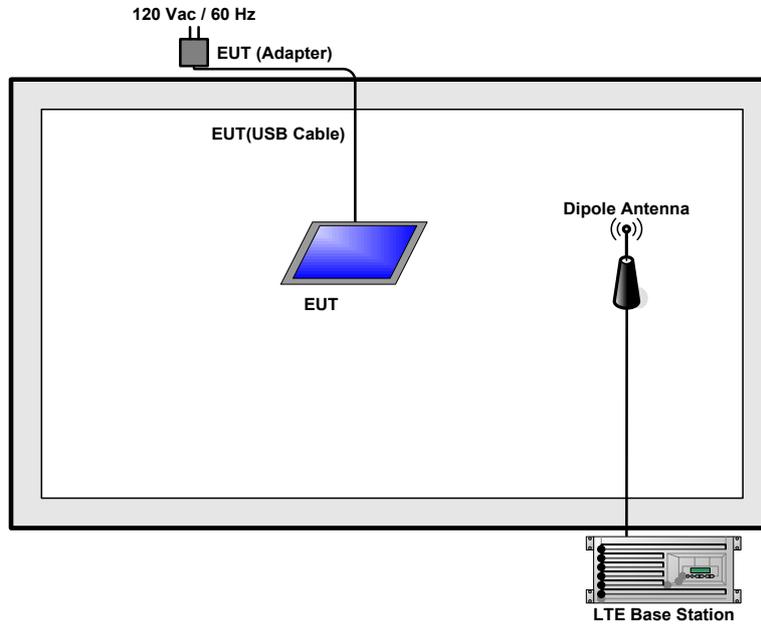
Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel			
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H	
Max. Output Power	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	5	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓	
	7	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	38	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	12	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓	
	13	-	-	✓		-	-	✓	✓	✓	✓	✓	✓	✓	✓	
	13	-	-		✓	-	-	✓	✓	✓	✓	✓		✓		
	17	-	-	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓	
	26	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	
	66	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
41	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
E.R.P./ E.I.R.P.	2	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	
	5	✓	✓	✓	✓	-	-	✓	✓	✓			✓	✓	✓	
	7	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	
	38	-	-	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	
	12	✓	✓	✓	✓	-	-	✓	✓	✓			✓	✓	✓	
	13	-	-	✓		-	-	✓	✓	✓			✓	✓	✓	
	13	-	-		✓	-	-	✓	✓	✓				✓		
	17	-	-	✓	✓	-	-	✓	✓	✓	✓			✓	✓	✓
	25	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓
	26	✓	✓	✓	✓	✓	-	✓	✓	✓				✓	✓	✓
	41	-	-	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓
66	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	



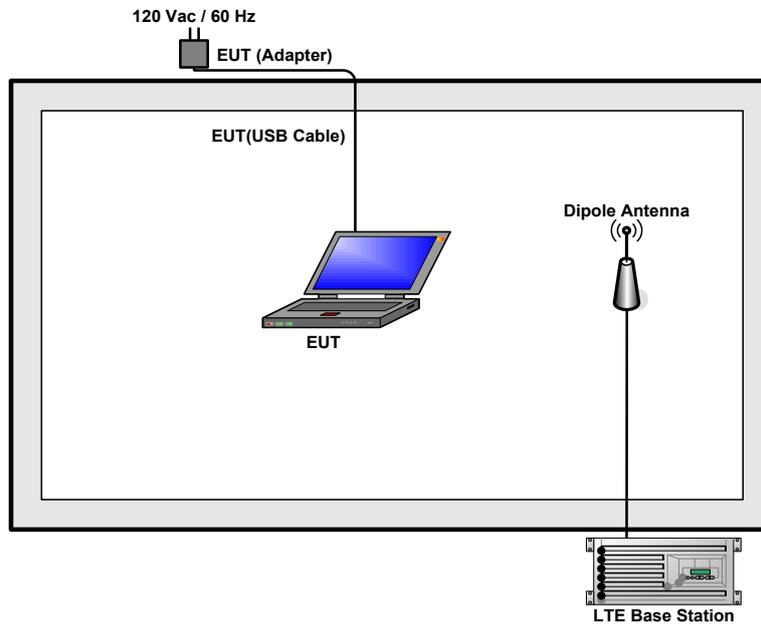
Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel			
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H	
Radiated Spurious Emission	2						√	√		√			√	√	√	
	7	-	-				√	√		√			√	√	√	
	12				√	-	-	√		√			√	√	√	
	13	-	-	√		-	-	√		√			√	√	√	
	13				√			√		√				√		
	26					√		√		√			√	√	√	
	41	-	-					√	√		√			√	√	√
	66							√	√			√		√	√	√
Note	<ol style="list-style-type: none"> The mark “√” means that this configuration is chosen for testing. The mark “-” means that this bandwidth is not supported. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different BW/RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. For RSE test items, LTE Band 66 cover Band 4, LTE Band 26 cover Band 5, LTE Band 12 cover Band 17, LTE Band 41 cover Band 38. 															

2.2 Connection Diagram of Test System

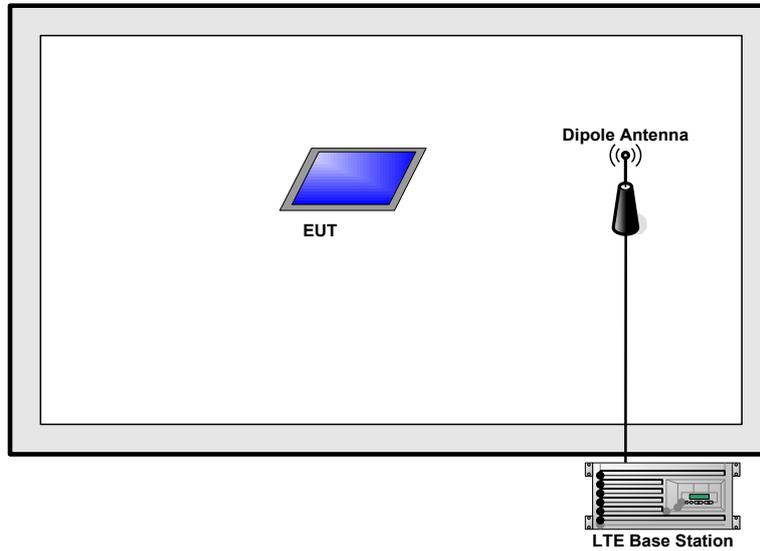
For LTE Band 26/66 (Tablet Mode)



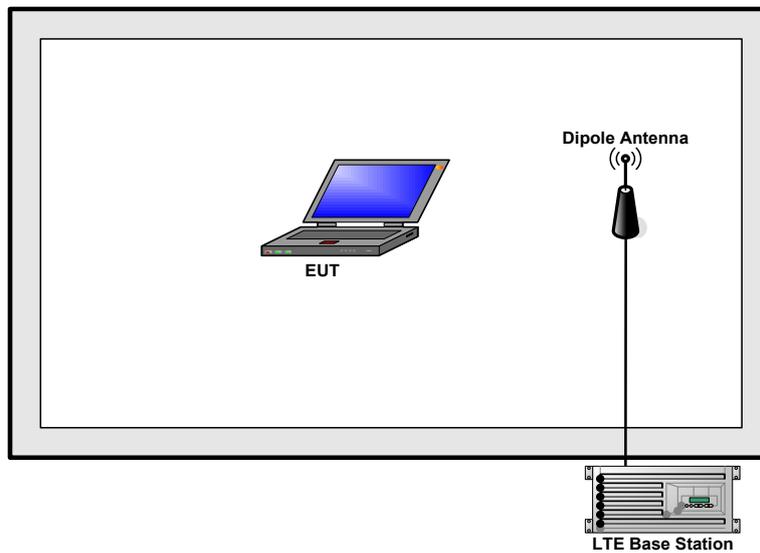
For LTE Band 7/13/41 (Notebook Mode)



For LTE Band 2 (Tablet Mode)



For LTE Band 12 (Notebook Mode)



2.3 Support Unit used in test configuration and system

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



2.4 Frequency List of Low/Middle/High Channels

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

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



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

LTE Band 7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
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



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

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

LTE Band 17 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23780	23790	23800
	Frequency	709	710	711
5	Channel	23755	23790	23825
	Frequency	706.5	710	713.5



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

LTE Band 38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	37850	38000	38150
	Frequency	2580	2595	2610
15	Channel	37825	38000	38175
	Frequency	2577.5	2595	2612.5
10	Channel	37800	38000	38200
	Frequency	2575	2595	2615
5	Channel	37775	38000	38225
	Frequency	2572.5	2595	2617.5

LTE Band 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	39750	40620	41490
	Frequency	2506	2593	2680
15	Channel	39725	40620	41515
	Frequency	2503.5	2593	2682.5
10	Channel	39700	40620	41540
	Frequency	2501	2593	2685
5	Channel	39675	40620	41565
	Frequency	2498.5	2593	2687.5



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

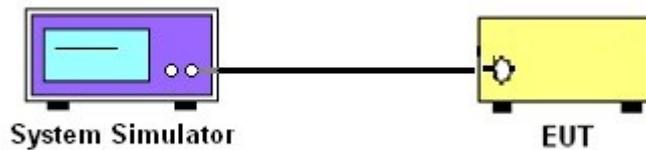
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted and ERP/EIRP Test

Please refer to Appendix A.



3.4 Conducted Output Power and ERP/EIRP

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

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

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

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, Band 13 and Band 17.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 7 and Band 38 and Band 41.

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

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 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.

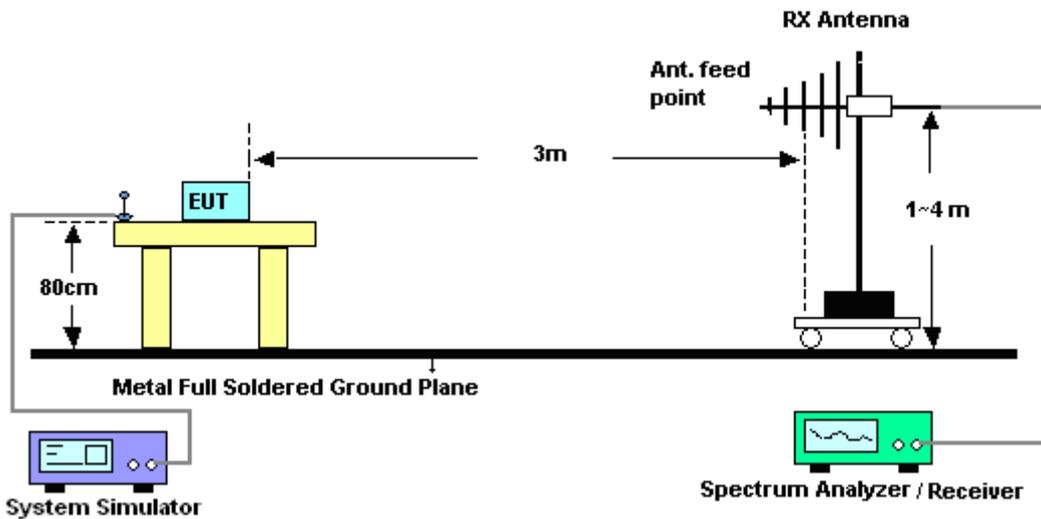
4 Radiated Test Items

4.1 Measuring Instruments

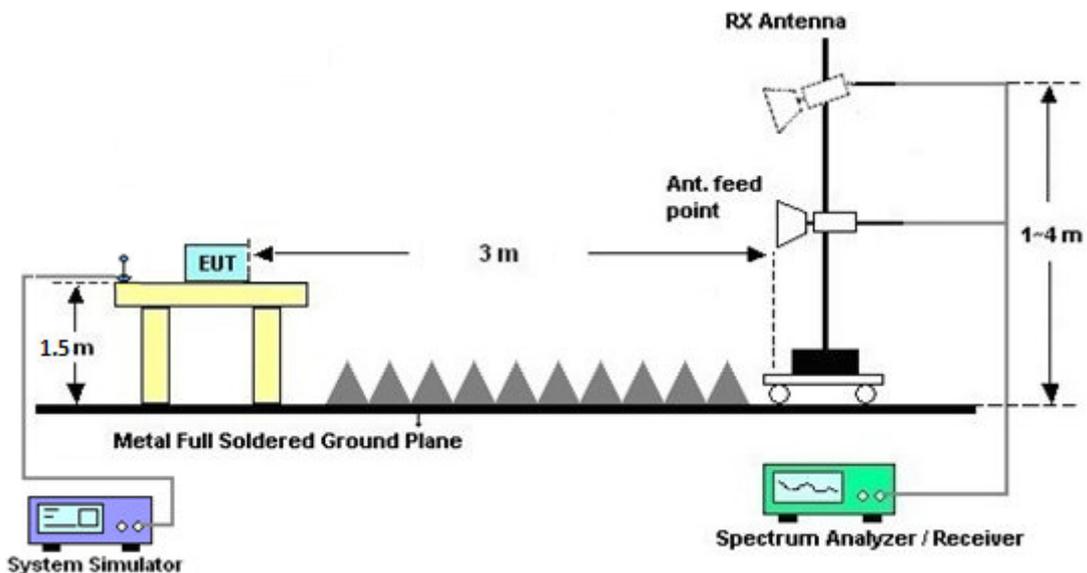
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.



4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI/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 Band 7, 38, 41

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

For LTE Band 13

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

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

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v03 Section 5.8 and ANSI/TIA-603-E Section 2.2.12.
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP (dBm) = S.G. Power - Tx Cable Loss + Tx Antenna Gain$
11. $ERP (dBm) = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 08, 2017	Jan. 31, 2018	Aug. 07, 2018	Conducted (TH01-KS)
Radio communication analyzer	Anritsu	MT8820C	6201300652	2G/3G/LTE_ full band	Aug. 08, 2017	Jan. 31, 2018	Aug. 07, 2018	Conducted (TH01-KS)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 25, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Dec. 24, 2018	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 15, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Mar. 14, 2018	Radiation (03CH12-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May. 22, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	May. 21, 2018	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D&N-6-	35414&AT-N0602	30MHz~1GHz	Oct. 14, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Oct. 13, 2018	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Oct. 20, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Oct. 19, 2018	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~ 40GHz	Apr. 27, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Apr. 26, 2018	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 23, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Mar. 22, 2018	Radiation (03CH12-HY)
Preamplifier	Keysight	83017A	MY53270148	1GHz~26.5GHz	Jan. 15, 2018	Jan. 27, 2018 ~ Feb. 05, 2018	Jan. 14, 2019	Radiation (03CH12-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VS WR : 2.5:1 max	Jul. 18, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Jul. 17, 2018	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Oct. 12, 2017	Jan. 27, 2018 ~ Feb. 05, 2018	Oct. 11, 2018	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jan. 27, 2018 ~ Feb. 05, 2018	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-450 0-B	N/A	1m~4m	N/A	Jan. 27, 2018 ~ Feb. 05, 2018	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jan. 27, 2018 ~ Feb. 05, 2018	N/A	Radiation (03CH12-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.4dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.7dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.0dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.71	22.93	22.75
20	1	49		22.68	22.82	22.37
20	1	99		22.54	22.79	22.71
20	50	0		21.8	21.86	21.59
20	50	24		21.72	21.83	21.49
20	50	50		21.58	21.81	21.57
20	100	0		21.84	21.9	21.66
20	1	0	16-QAM	21.96	21.66	21.65
20	1	49		21.69	21.86	21.4
20	1	99		21.5	21.79	21.74
20	50	0		20.53	20.6	20.25
20	50	24		20.44	20.57	20.19
20	50	50		20.32	20.54	20.35
20	100	0		20.57	20.6	20.45
15	1	0	QPSK	22.88	22.81	22.55
15	1	37		22.73	22.77	22.46
15	1	74		22.51	22.81	22.75
15	36	0		21.77	21.83	21.45
15	36	20		21.74	21.83	21.46
15	36	39		21.64	21.77	21.59
15	75	0		21.76	21.79	21.63
15	1	0	16-QAM	21.9	21.73	21.52
15	1	37		21.74	21.73	21.31
15	1	74		21.48	21.76	21.69
15	36	0		20.53	20.6	20.19
15	36	20		20.5	20.61	20.2
15	36	39		20.39	20.55	20.32
15	75	0		20.47	20.54	20.32



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.88	22.88	22.44
10	1	25		22.71	22.88	22.51
10	1	49		22.68	22.83	22.81
10	25	0		21.83	21.87	21.53
10	25	12		21.76	21.86	21.58
10	25	25		21.74	21.83	21.78
10	50	0		21.74	21.82	21.59
10	1	0	16-QAM	21.84	21.82	21.46
10	1	25		21.75	21.85	21.48
10	1	49		21.66	21.88	21.77
10	25	0		20.59	20.67	20.3
10	25	12		20.53	20.66	20.32
10	25	25		20.51	20.58	20.51
10	50	0		20.47	20.52	20.35
5	1	0	QPSK	22.85	22.88	22.48
5	1	12		22.8	22.76	22.67
5	1	24		22.77	22.76	22.74
5	12	0		21.98	21.98	21.8
5	12	7		21.95	21.99	21.84
5	12	13		21.89	21.96	21.83
5	25	0		21.46	21.44	21.38
5	1	0	16-QAM	21.77	21.89	21.4
5	1	12		21.75	21.73	21.58
5	1	24		21.7	21.74	21.65
5	12	0		20.97	20.95	20.76
5	12	7		21	20.96	20.85
5	12	13		20.95	20.92	20.86
5	25	0		20.5	20.49	20.34



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.82	22.76	22.62
3	1	8		22.83	22.76	22.68
3	1	14		22.74	22.77	22.68
3	8	0		21.8	21.78	21.67
3	8	4		21.72	21.72	21.69
3	8	7		21.73	21.75	21.71
3	15	0		21.72	21.71	21.67
3	1	0	16-QAM	21.9	21.94	21.88
3	1	8		21.95	21.95	21.98
3	1	14		21.95	21.99	21.94
3	8	0		20.87	20.79	20.69
3	8	4		20.81	20.72	20.71
3	8	7		20.85	20.74	20.71
3	15	0		20.78	20.71	20.69
1.4	1	0	QPSK	22.88	22.86	22.72
1.4	1	3		22.84	22.82	22.68
1.4	1	5		22.9	22.81	22.73
1.4	3	0		22.86	22.83	22.71
1.4	3	1		22.85	22.84	22.71
1.4	3	3		22.85	22.79	22.72
1.4	6	0		21.86	21.78	21.73
1.4	1	0	16-QAM	21.77	21.81	21.75
1.4	1	3		21.82	21.79	21.72
1.4	1	5		21.86	21.79	21.66
1.4	3	0		21.68	21.59	21.5
1.4	3	1		21.67	21.56	21.44
1.4	3	3		21.68	21.55	21.47
1.4	6	0		20.63	20.49	20.41



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.22	23.29	23.27
20	1	49		23.04	23.04	22.95
20	1	99		23.08	22.95	23.19
20	50	0		22.21	22.24	22.05
20	50	24		22.17	22.09	22.03
20	50	50		22.14	21.99	22.15
20	100	0		22.12	22.31	22.29
20	1	0	16-QAM	22.37	22.46	22.38
20	1	49		22.49	22.29	22.2
20	1	99		22.33	22.2	22.42
20	50	0		21.27	21.19	21.07
20	50	24		21.27	21.1	21.04
20	50	50		21.16	21.02	21.17
20	100	0		21.3	21.14	21.29
15	1	0	QPSK	22.98	23.21	22.98
15	1	37		23.18	23.07	23.09
15	1	74		23.09	22.95	23.25
15	36	0		22.09	22.14	22.05
15	36	20		22.21	22.08	22.15
15	36	39		22.16	22.03	22.18
15	75	0		22.26	22.05	22.21
15	1	0	16-QAM	22.3	22.41	22.24
15	1	37		22.42	22.32	22.26
15	1	74		22.35	22.16	22.47
15	36	0		21.12	21.18	21.09
15	36	20		21.24	21.12	21.18
15	36	39		21.18	21.05	21.19
15	75	0		21.27	21.06	21.2



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.04	23.17	23.12
10	1	25		23.08	23.08	23.16
10	1	49		23.17	22.99	23.27
10	25	0		22.06	22.13	22.17
10	25	12		22.07	22.07	22.2
10	25	25		22.19	22.03	22.26
10	50	0		22.12	22.05	22.16
10	1	0	16-QAM	22.3	22.43	22.39
10	1	25		22.39	22.32	22.47
10	1	49		22.43	22.26	22.42
10	25	0		21.2	21.24	21.29
10	25	12		21.2	21.23	21.29
10	25	25		21.3	21.17	21.36
10	50	0		21.21	21.1	21.24
5	1	0	QPSK	22.98	23.13	23.17
5	1	12		22.98	23.03	23.21
5	1	24		23.04	23	23.31
5	12	0		22.44	22.47	22.41
5	12	7		22.49	22.43	22.44
5	12	13		22.4	22.45	22.47
5	25	0		22.06	22.04	22.21
5	1	0	16-QAM	22.24	22.41	22.31
5	1	12		22.24	22.31	22.39
5	1	24		22.3	22.3	22.46
5	12	0		21.48	21.41	21.42
5	12	7		21.41	21.49	21.45
5	12	13		21.42	21.46	21.43
5	25	0		21.08	21.12	21.22



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.91	23.05	23.15
3	1	8		22.94	23.05	23.24
3	1	14		22.95	22.96	23.26
3	8	0		21.97	22.08	22.24
3	8	4		21.93	22.04	22.25
3	8	7		21.99	22.03	22.29
3	15	0		21.92	22.05	22.26
3	1	0	16-QAM	22.09	22.3	22.44
3	1	8		22.12	22.32	22.41
3	1	14		22.17	22.25	22.43
3	8	0		20.95	21.14	21.25
3	8	4		20.91	21.09	21.27
3	8	7		20.98	21.07	21.27
3	15	0		20.92	21.08	21.24
1.4	1	0	QPSK	22.96	23.08	23.29
1.4	1	3		22.9	23.04	23.27
1.4	1	5		22.93	23.06	23.32
1.4	3	0		22.93	23.06	23.27
1.4	3	1		22.93	23.05	23.25
1.4	3	3		22.93	23.06	23.26
1.4	6	0		21.96	22.08	22.28
1.4	1	0	16-QAM	22.15	22.32	22.42
1.4	1	3		22.18	22.39	22.41
1.4	1	5		22.18	22.31	22.45
1.4	3	0		22	22.13	22.33
1.4	3	1		21.98	22.14	22.35
1.4	3	3		22	22.12	22.33
1.4	6	0		20.95	21.12	21.29



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.79	22.44	22.39
10	1	25		22.59	22.43	22.46
10	1	49		22.47	22.4	22.6
10	25	0		21.71	21.55	21.47
10	25	12		21.64	21.5	21.51
10	25	25		21.49	21.44	21.67
10	50	0		21.58	21.48	21.7
10	1	0	16-QAM	21.97	21.77	21.74
10	1	25		21.82	21.79	21.78
10	1	49		21.71	21.77	21.88
10	25	0		20.78	20.64	20.59
10	25	12		20.74	20.59	20.61
10	25	25		20.6	20.53	20.74
10	50	0		20.71	20.56	20.76
5	1	0	QPSK	22.76	22.45	22.48
5	1	12		22.6	22.37	22.55
5	1	24		22.55	22.33	22.51
5	12	0		21.74	21.42	21.6
5	12	7		21.67	21.38	21.54
5	12	13		21.55	21.33	21.49
5	25	0		21.63	21.4	21.58
5	1	0	16-QAM	21.96	21.7	21.81
5	1	12		21.88	21.63	21.82
5	1	24		21.82	21.67	21.8
5	12	0		20.79	20.53	20.62
5	12	7		20.74	20.48	20.6
5	12	13		20.63	20.4	20.55
5	25	0		20.68	20.45	20.61



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.69	22.36	22.51
3	1	8		22.7	22.38	22.51
3	1	14		22.56	22.24	22.45
3	8	0		21.73	21.38	21.51
3	8	4		21.71	21.35	21.47
3	8	7		21.66	21.3	21.47
3	15	0		21.77	21.36	21.45
3	1	0	16-QAM	21.92	21.71	21.79
3	1	8		21.93	21.7	21.81
3	1	14		21.89	21.6	21.8
3	8	0		20.77	20.46	20.57
3	8	4		20.75	20.43	20.5
3	8	7		20.7	20.36	20.55
3	15	0		20.78	20.43	20.48
1.4	1	0	QPSK	22.74	22.38	22.52
1.4	1	3		22.71	22.33	22.47
1.4	1	5		22.74	22.37	22.46
1.4	3	0		22.74	22.37	22.46
1.4	3	1		22.72	22.35	22.45
1.4	3	3		22.72	22.35	22.44
1.4	6	0		21.72	21.36	21.46
1.4	1	0	16-QAM	21.91	21.73	21.72
1.4	1	3		21.94	21.67	21.84
1.4	1	5		21.92	21.65	21.74
1.4	3	0		21.81	21.49	21.56
1.4	3	1		21.76	21.47	21.58
1.4	3	3		21.83	21.45	21.56
1.4	6	0		20.8	20.45	20.49



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.63	22.68	23.27
20	1	49		22.67	22.96	23.12
20	1	99		22.68	23.26	23.21
20	50	0		21.74	21.9	22.23
20	50	24		21.74	22.02	22.19
20	50	50		21.7	22.16	22.24
20	100	0		21.8	22.16	22.28
20	1	0	16-QAM	21.88	21.98	22.41
20	1	49		22.01	22.25	22.43
20	1	99		21.98	22.42	22.41
20	50	0		20.77	20.94	21.3
20	50	24		20.77	21.07	21.24
20	50	50		20.75	21.18	21.32
20	100	0		20.87	21.2	21.33
15	1	0	QPSK	22.61	22.7	23.21
15	1	37		22.71	22.99	23.18
15	1	74		22.7	23.2	23.21
15	36	0		21.74	21.92	22.23
15	36	20		21.77	22.04	22.25
15	36	39		21.81	22.12	22.24
15	75	0		21.76	22.08	22.27
15	1	0	16-QAM	21.87	21.93	22.49
15	1	37		21.99	22.23	22.42
15	1	74		22.01	22.47	22.42
15	36	0		20.78	20.93	21.27
15	36	20		20.82	21.05	21.29
15	36	39		20.86	21.15	21.29
15	75	0		20.81	21.08	21.31



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.63	22.85	23.19
10	1	25		22.69	22.98	23.15
10	1	49		22.76	23.15	23.21
10	25	0		21.67	22.01	22.22
10	25	12		21.73	22.05	22.23
10	25	25		21.73	22.12	22.22
10	50	0		21.72	22.03	22.23
10	1	0	16-QAM	21.87	22.06	22.41
10	1	25		22.02	22.21	22.44
10	1	49		22	22.41	22.48
10	25	0		20.74	21.04	21.29
10	25	12		20.86	21.08	21.32
10	25	25		20.86	21.14	21.3
10	50	0		20.81	21.03	21.29
5	1	0	QPSK	22.58	22.93	23.13
5	1	12		22.59	22.94	23.08
5	1	24		22.68	23.04	23.17
5	12	0		21.66	21.95	22.14
5	12	7		21.63	21.96	22.13
5	12	13		21.67	21.99	22.19
5	25	0		21.65	21.99	22.15
5	1	0	16-QAM	21.83	22.15	22.36
5	1	12		21.81	22.16	22.33
5	1	24		21.89	22.3	22.35
5	12	0		20.73	20.96	21.2
5	12	7		20.68	20.99	21.19
5	12	13		20.71	21	21.23
5	25	0		20.66	20.96	21.17



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.89	22.96	22.86
10	1	25		22.85	22.81	22.76
10	1	49		22.84	22.88	22.82
10	25	0		21.95	21.97	21.92
10	25	12		21.92	21.88	21.86
10	25	25		21.87	21.9	21.86
10	50	0		21.95	21.98	21.96
10	1	0	16-QAM	21.93	22	21.92
10	1	25		21.95	21.9	21.94
10	1	49		21.93	21.94	21.93
10	25	0		20.83	20.8	20.81
10	25	12		20.79	20.77	20.88
10	25	25		20.83	20.82	20.75
10	50	0		20.83	20.86	20.84
5	1	0	QPSK	22.79	22.81	22.83
5	1	12		22.84	22.77	22.76
5	1	24		22.87	22.85	22.73
5	12	0		21.86	21.81	21.78
5	12	7		21.84	21.77	21.73
5	12	13		21.8	21.8	21.76
5	25	0		21.83	21.81	21.72
5	1	0	16-QAM	21.95	21.91	22
5	1	12		21.96	21.91	21.94
5	1	24		21.97	22	21.89
5	12	0		20.74	20.69	20.64
5	12	7		20.72	20.69	20.55
5	12	13		20.67	20.71	20.6
5	25	0		20.67	20.67	20.53



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.75	22.75	22.69
3	1	8		22.87	22.79	22.74
3	1	14		22.81	22.77	22.63
3	8	0		21.83	21.79	21.67
3	8	4		21.85	21.79	21.67
3	8	7		21.82	21.81	21.7
3	15	0		21.89	21.79	21.64
3	1	0	16-QAM	21.94	21.89	21.89
3	1	8		21.98	21.94	21.91
3	1	14		21.98	21.89	21.78
3	8	0		20.73	20.71	20.5
3	8	4		20.76	20.65	20.54
3	8	7		20.73	20.68	20.56
3	15	0		20.75	20.69	20.53
1.4	1	0	QPSK	22.82	22.78	22.7
1.4	1	3		22.8	22.75	22.7
1.4	1	5		22.87	22.77	22.66
1.4	3	0		22.78	22.76	22.7
1.4	3	1		22.78	22.77	22.68
1.4	3	3		22.8	22.77	22.65
1.4	6	0		21.82	21.78	21.72
1.4	1	0	16-QAM	21.97	21.85	21.81
1.4	1	3		21.92	21.94	21.85
1.4	1	5		21.92	21.94	21.8
1.4	3	0		21.72	21.69	21.66
1.4	3	1		21.71	21.7	21.64
1.4	3	3		21.73	21.72	21.66
1.4	6	0		20.69	20.71	20.55



LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK		23.13	
10	1	25			23.04	
10	1	49			23.07	
10	25	0			22.17	
10	25	12			22.08	
10	25	25			22.05	
10	50	0			22.27	
10	1	0	16-QAM	-	22.45	-
10	1	25			22.5	
10	1	49			22.45	
10	25	0			21.09	
10	25	12			21.14	
10	25	25			21.24	
10	50	0			21.31	
5	1	0	QPSK	23.03	22.95	23.09
5	1	12		22.96	23.06	23.08
5	1	24		23.03	23.1	23.08
5	12	0		21.89	21.89	21.99
5	12	7		21.92	21.89	22.01
5	12	13		21.88	22.01	21.96
5	25	0		21.91	22.01	22.03
5	1	0	16-QAM	22.41	22.39	22.41
5	1	12		22.41	22.43	22.41
5	1	24		22.4	22.43	22.48
5	12	0		20.97	20.9	21.06
5	12	7		20.99	20.95	21.11
5	12	13		20.93	21.03	21.01
5	25	0		20.98	21.03	21.08



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.8	22.83	22.83
10	1	25		22.82	22.87	22.93
10	1	49		22.88	22.9	22.86
10	25	0		21.89	21.9	21.9
10	25	12		21.91	21.96	21.98
10	25	25		21.97	21.94	21.89
10	50	0		21.84	21.9	21.86
10	1	0	16-QAM	21.92	21.94	21.96
10	1	25		21.93	21.91	21.92
10	1	49		21.91	21.94	21.96
10	25	0		20.79	20.82	20.84
10	25	12		20.81	20.86	20.88
10	25	25		20.85	20.83	20.77
10	50	0		20.91	20.93	20.9
5	1	0	QPSK	22.85	22.81	22.85
5	1	12		22.84	22.84	22.8
5	1	24		22.86	22.9	22.77
5	12	0		21.87	21.84	21.81
5	12	7		21.85	21.88	21.77
5	12	13		21.86	21.91	21.78
5	25	0		21.88	21.88	21.76
5	1	0	16-QAM	21.94	21.92	21.9
5	1	12		21.92	21.93	21.95
5	1	24		21.94	21.92	21.96
5	12	0		20.94	20.98	20.87
5	12	7		20.93	20.99	20.8
5	12	13		20.94	20.92	20.85
5	25	0		20.93	20.96	20.78



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.82	22.84	22.55
15	1	37		22.82	22.48	22.50
15	1	74		22.59	22.41	22.62
15	36	0		21.89	21.94	21.47
15	36	20		21.92	21.57	21.54
15	36	39		21.91	21.59	21.73
15	75	0		21.80	21.99	21.82
15	1	0	16-QAM	21.91	20.96	21.91
15	1	37		21.92	21.77	21.86
15	1	74		21.98	21.79	21.99
15	36	0		20.93	20.79	20.55
15	36	20		20.95	20.60	20.64
15	36	39		20.92	20.65	20.79
15	75	0		20.94	20.71	20.88



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.98	22.71	22.42
10	1	25		22.84	22.47	22.48
10	1	49		22.90	22.53	22.59
10	25	0		21.96	21.64	21.54
10	25	12		21.89	21.55	21.57
10	25	25		21.91	21.54	21.71
10	50	0		21.91	21.54	21.73
10	1	0	16-QAM	21.95	21.91	21.80
10	1	25		21.91	21.81	21.84
10	1	49		21.91	21.89	21.91
10	25	0		20.95	20.71	20.63
10	25	12		20.95	20.59	20.62
10	25	25		20.91	20.62	20.74
10	50	0		20.97	20.58	20.78
5	1	0	QPSK	22.91	22.54	22.56
5	1	12		22.82	22.40	22.57
5	1	24		22.82	22.44	22.57
5	12	0		21.92	21.51	21.62
5	12	7		21.84	21.43	21.58
5	12	13		21.84	21.44	21.51
5	25	0		21.88	21.47	21.60
5	1	0	16-QAM	21.93	21.80	21.80
5	1	12		21.95	21.66	21.83
5	1	24		21.93	21.73	21.84
5	12	0		20.97	20.50	20.69
5	12	7		20.90	20.46	20.62
5	12	13		20.93	20.48	20.56
5	25	0		20.91	20.45	20.60



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.85	22.43	22.54
3	1	8		22.92	22.41	22.55
3	1	14		22.81	22.40	22.50
3	8	0		21.89	21.46	21.56
3	8	4		21.90	21.41	21.51
3	8	7		21.84	21.42	21.52
3	15	0		21.86	21.35	21.46
3	1	0	16-QAM	21.96	21.67	21.78
3	1	8		21.96	21.73	21.80
3	1	14		21.98	21.69	21.84
3	8	0		20.94	20.50	20.63
3	8	4		20.95	20.44	20.56
3	8	7		20.93	20.48	20.60
3	15	0		20.91	20.43	20.50
1.4	1	0	QPSK	22.92	22.45	22.56
1.4	1	3		22.86	22.43	22.55
1.4	1	5		22.93	22.46	22.57
1.4	3	0		22.89	22.41	22.54
1.4	3	1		22.88	22.42	22.51
1.4	3	3		22.90	22.44	22.51
1.4	6	0		21.93	21.46	21.57
1.4	1	0	16-QAM	21.91	21.75	21.93
1.4	1	3		21.99	21.77	21.87
1.4	1	5		21.91	21.78	21.93
1.4	3	0		22.00	21.52	21.66
1.4	3	1		22.00	21.54	21.72
1.4	3	3		21.92	21.53	21.67
1.4	6	0		20.97	20.48	20.60



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.83	22.8	22.91
20	1	49		22.72	22.7	22.8
20	1	99		22.74	22.72	22.79
20	50	0		21.79	21.73	21.86
20	50	24		21.75	21.7	21.81
20	50	50		21.73	21.69	21.78
20	100	0		21.73	21.73	21.83
20	1	0	16-QAM	21.49	21.36	21.47
20	1	49		21.37	21.36	21.52
20	1	99		21.44	21.49	21.63
20	50	0		20.81	20.7	20.82
20	50	24		20.77	20.71	20.85
20	50	50		20.76	20.74	20.93
20	100	0		20.79	20.75	20.91
15	1	0	QPSK	22.87	22.73	22.83
15	1	37		22.82	22.76	22.89
15	1	74		22.78	22.79	22.93
15	36	0		21.81	21.72	21.87
15	36	20		21.8	21.74	21.91
15	36	39		21.77	21.75	21.93
15	75	0		21.78	21.72	21.88
15	1	0	16-QAM	21.51	21.36	21.53
15	1	37		21.45	21.4	21.6
15	1	74		21.4	21.47	21.65
15	36	0		20.92	20.82	20.99
15	36	20		20.9	20.84	20.93
15	36	39		20.87	20.85	20.95
15	75	0		20.81	20.72	20.89



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.84	22.71	22.87
10	1	25		22.77	22.7	22.87
10	1	49		22.78	22.75	22.94
10	25	0		21.84	21.72	21.93
10	25	12		21.8	21.72	21.93
10	25	25		21.8	21.74	21.96
10	50	0		21.81	21.72	21.91
10	1	0	16-QAM	21.52	21.39	21.62
10	1	25		21.44	21.38	21.62
10	1	49		21.44	21.44	21.68
10	25	0		21	20.88	20.91
10	25	12		20.97	20.87	20.91
10	25	25		20.95	20.9	20.93
10	50	0		20.79	20.73	20.95
5	1	0	QPSK	22.79	22.69	22.88
5	1	12		22.76	22.67	22.88
5	1	24		22.77	22.71	22.92
5	12	0		21.84	21.74	21.96
5	12	7		21.81	21.72	21.94
5	12	13		21.8	21.74	21.95
5	25	0		21.77	21.69	21.91
5	1	0	16-QAM	21.49	21.37	21.62
5	1	12		21.45	21.36	21.62
5	1	24		21.45	21.41	21.66
5	12	0		20.81	20.72	20.97
5	12	7		20.78	20.71	20.96
5	12	13		20.78	20.73	20.96
5	25	0		20.89	20.82	20.93



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.68	22.54	22.99
20	1	49		22.67	22.55	22.84
20	1	99		22.91	22.59	22.72
20	50	0		21.7	21.58	21.96
20	50	24		21.73	21.6	21.91
20	50	50		21.77	21.61	21.86
20	100	0		21.83	21.58	21.9
20	1	0	16-QAM	21.36	21.27	21.72
20	1	49		21.35	21.27	21.58
20	1	99		21.62	21.3	21.47
20	50	0		20.69	20.6	21
20	50	24		20.73	20.61	20.94
20	50	50		20.79	20.62	20.89
20	100	0		20.86	20.6	20.95
15	1	0	QPSK	22.65	22.52	22.92
15	1	37		22.66	22.57	22.89
15	1	74		22.74	22.6	22.79
15	36	0		21.66	21.56	21.95
15	36	20		21.68	21.57	21.91
15	36	39		21.7	21.58	21.84
15	75	0		21.73	21.57	21.9
15	1	0	16-QAM	21.32	21.22	21.63
15	1	37		21.32	21.27	21.6
15	1	74		21.42	21.28	21.5
15	36	0		20.79	20.7	20.91
15	36	20		20.8	20.71	20.95
15	36	39		20.81	20.71	20.98
15	75	0		20.75	20.64	20.96



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.66	22.52	22.94
10	1	25		22.6	22.52	22.86
10	1	49		22.67	22.57	22.77
10	25	0		21.62	21.57	21.93
10	25	12		21.62	21.57	21.93
10	25	25		21.66	21.58	21.87
10	50	0		21.68	21.58	21.86
10	1	0	16-QAM	21.33	21.25	21.67
10	1	25		21.27	21.25	21.6
10	1	49		21.35	21.29	21.53
10	25	0		20.79	20.76	20.94
10	25	12		20.79	20.76	20.93
10	25	25		20.82	20.78	20.98
10	50	0		20.66	20.59	20.9
5	1	0	QPSK	22.63	22.5	22.9
5	1	12		22.55	22.48	22.77
5	1	24		22.59	22.53	22.75
5	12	0		21.61	21.58	21.89
5	12	7		21.57	21.57	21.88
5	12	13		21.6	21.58	21.88
5	25	0		21.54	21.52	21.82
5	1	0	16-QAM	21.28	21.22	21.61
5	1	12		21.23	21.2	21.53
5	1	24		21.27	21.26	21.52
5	12	0		20.6	20.6	20.91
5	12	7		20.55	20.58	20.89
5	12	13		20.6	20.58	20.9
5	25	0		20.66	20.66	21



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.11	23.12	23.26
20	1	49		23.07	22.9	23.1
20	1	99		23.04	23.08	23.11
20	50	0		22.07	22.09	22.26
20	50	24		22.04	21.98	22.13
20	50	50		22.02	22.05	21.98
20	100	0		22.17	22.24	22.25
20	1	0	16-QAM	22.23	22.3	21.49
20	1	49		22.21	22.11	22.4
20	1	99		22.22	22.33	22.38
20	50	0		21.01	21.06	21.16
20	50	24		21	20.93	21.02
20	50	50		20.97	21	20.94
20	100	0		21.21	21.18	21.22
15	1	0	QPSK	22.59	22.97	23.2
15	1	37		23.08	22.98	22.95
15	1	74		23.03	23.04	23.11
15	36	0		22.05	21.97	22.06
15	36	20		22.09	21.93	22.01
15	36	39		22.1	22.03	22.05
15	75	0		22.21	22.13	22.15
15	1	0	16-QAM	22.17	22.19	21.44
15	1	37		22.34	22.18	22.23
15	1	74		22.32	22.29	22.39
15	36	0		20.92	20.87	21
15	36	20		20.98	20.83	20.96
15	36	39		20.98	20.9	20.95
15	75	0		21.12	21.08	21.09



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.94	23.02	23.05
10	1	25		23.03	22.91	22.93
10	1	49		23.11	23.04	23.16
10	25	0		21.98	21.94	21.92
10	25	12		21.99	21.86	21.94
10	25	25		22.03	21.91	22.02
10	50	0		22.1	22.04	22.07
10	1	0	16-QAM	22.11	22.21	22.36
10	1	25		22.26	22.12	22.23
10	1	49		22.34	22.25	22.45
10	25	0		20.89	20.82	20.84
10	25	12		20.89	20.74	20.84
10	25	25		20.93	20.78	20.89
10	50	0		21	20.97	21.04
5	1	0	QPSK	22.84	22.91	22.95
5	1	12		22.92	22.94	22.99
5	1	24		22.98	22.9	23.15
5	12	0		21.72	21.7	21.79
5	12	7		21.78	21.68	21.83
5	12	13		21.77	21.73	21.91
5	25	0		21.93	21.92	22.06
5	1	0	16-QAM	22.04	22.16	22.17
5	1	12		22.11	22.18	22.25
5	1	24		22.19	22.15	22.38
5	12	0		20.64	20.62	20.7
5	12	7		20.68	20.55	20.78
5	12	13		20.64	20.66	20.8
5	25	0		20.83	20.81	20.92



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.78	22.78	22.92
3	1	8		22.86	22.92	23.02
3	1	14		22.83	22.84	23.1
3	8	0		21.73	21.71	21.86
3	8	4		21.7	21.74	21.94
3	8	7		21.78	21.76	21.97
3	15	0		21.77	21.81	21.97
3	1	0	16-QAM	22	22.02	22.22
3	1	8		22.1	22.14	22.37
3	1	14		22.09	22.03	22.29
3	8	0		20.58	20.58	20.74
3	8	4		20.59	20.58	20.79
3	8	7		20.67	20.6	20.82
3	15	0		20.69	20.72	20.89
1.4	1	0	QPSK	22.77	22.84	23.09
1.4	1	3		22.77	22.85	23.09
1.4	1	5		22.85	22.82	23.11
1.4	3	0		22.74	22.72	22.98
1.4	3	1		22.69	22.73	23.02
1.4	3	3		22.7	22.74	23.05
1.4	6	0		21.77	21.77	22.02
1.4	1	0	16-QAM	22.06	22.09	22.44
1.4	1	3		22.07	22.16	22.45
1.4	1	5		22.1	22.21	22.42
1.4	3	0		21.77	21.74	22.09
1.4	3	1		21.75	21.73	22.05
1.4	3	3		21.8	21.8	22.12
1.4	6	0		20.62	20.58	20.9



ERP/EIRP

LTE Band 2 (G _T - L _C = 1.32 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
(MHz)									
Conducted Power (dBm)	22.90	22.81	22.73	22.83	22.76	22.68	22.85	22.88	22.48
Conducted Power (Watts)	0.1950	0.1910	0.1875	0.1919	0.1888	0.1854	0.1928	0.1941	0.1770
EIRP(dBm)	24.22	24.13	24.05	24.15	24.08	24.00	24.17	24.20	23.80
EIRP(Watts)	0.2642	0.2588	0.2541	0.2600	0.2559	0.2512	0.2612	0.2630	0.2399

LTE Band 2 (G _T - L _C = 1.32 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
(MHz)									
Conducted Power (dBm)	22.88	22.88	22.44	22.88	22.81	22.55	22.71	22.93	22.75
Conducted Power (Watts)	0.1941	0.1941	0.1754	0.1941	0.1910	0.1799	0.1866	0.1963	0.1884
EIRP(dBm)	24.20	24.20	23.76	24.20	24.13	23.87	24.03	24.25	24.07
EIRP(Watts)	0.2630	0.2630	0.2377	0.2630	0.2588	0.2438	0.2529	0.2661	0.2553



LTE Band 2 (G _T - L _C = 1.32 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
Conducted Power (dBm)	21.86	21.79	21.66	21.95	21.99	21.94	21.77	21.89	21.40
Conducted Power (Watts)	0.1535	0.1510	0.1466	0.1567	0.1581	0.1563	0.1503	0.1545	0.1380
EIRP(dBm)	23.18	23.11	22.98	23.27	23.31	23.26	23.09	23.21	22.72
EIRP(Watts)	0.2080	0.2046	0.1986	0.2123	0.2143	0.2118	0.2037	0.2094	0.1871

LTE Band 2 (G _T - L _C = 1.32 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
Conducted Power (dBm)	21.66	21.88	21.77	21.90	21.73	21.52	21.96	21.66	21.65
Conducted Power (Watts)	0.1466	0.1542	0.1503	0.1549	0.1489	0.1419	0.1570	0.1466	0.1462
EIRP(dBm)	22.98	23.20	23.09	23.22	23.05	22.84	23.28	22.98	22.97
EIRP(Watts)	0.1986	0.2089	0.2037	0.2099	0.2018	0.1923	0.2128	0.1986	0.1982



LTE Band 4 (G _T - L _C = 1.53 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
(MHz)									
Conducted Power (dBm)	22.93	23.06	23.32	22.95	22.96	23.26	23.04	23.00	23.31
Conducted Power (Watts)	0.1963	0.2023	0.2148	0.1972	0.1977	0.2118	0.2014	0.1995	0.2143
EIRP(dBm)	24.46	24.59	24.85	24.48	24.49	24.79	24.57	24.53	24.84
EIRP(Watts)	0.2793	0.2877	0.3055	0.2805	0.2812	0.3013	0.2864	0.2838	0.3048

LTE Band 4 (G _T - L _C = 1.53 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
(MHz)									
Conducted Power (dBm)	23.17	22.99	23.27	23.09	22.95	23.25	23.22	23.29	23.27
Conducted Power (Watts)	0.2075	0.1991	0.2123	0.2037	0.1972	0.2113	0.2099	0.2133	0.2123
EIRP(dBm)	24.70	24.52	24.80	24.62	24.48	24.78	24.75	24.82	24.80
EIRP(Watts)	0.2951	0.2831	0.3020	0.2897	0.2805	0.3006	0.2985	0.3034	0.3020



LTE Band 4 (G _T - L _C = 1.53 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
Conducted Power (dBm)	22.18	22.31	22.45	22.09	22.30	22.44	22.30	22.30	22.46
Conducted Power (Watts)	0.1652	0.1702	0.1758	0.1618	0.1698	0.1754	0.1698	0.1698	0.1762
EIRP(dBm)	23.71	23.84	23.98	23.62	23.83	23.97	23.83	23.83	23.99
EIRP(Watts)	0.2350	0.2421	0.2500	0.2301	0.2415	0.2495	0.2415	0.2415	0.2506

LTE Band 4 (G _T - L _C = 1.53 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
Conducted Power (dBm)	22.39	22.32	22.47	22.35	22.16	22.47	22.49	22.29	22.20
Conducted Power (Watts)	0.1734	0.1706	0.1766	0.1718	0.1644	0.1766	0.1774	0.1694	0.1660
EIRP(dBm)	23.92	23.85	24.00	23.88	23.69	24.00	24.02	23.82	23.73
EIRP(Watts)	0.2466	0.2427	0.2512	0.2443	0.2339	0.2512	0.2523	0.2410	0.2360



LTE Band 5 (G _T - L _C = -0.08 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
Conducted Power (dBm)	22.74	22.38	22.52	22.70	22.38	22.51	22.76	22.45	22.48
Conducted Power (Watts)	0.1879	0.1730	0.1786	0.1862	0.1730	0.1782	0.1888	0.1758	0.1770
ERP(dBm)	20.51	20.15	20.29	20.47	20.15	20.28	20.53	20.22	20.25
ERP(Watts)	0.1125	0.1035	0.1069	0.1114	0.1035	0.1067	0.1130	0.1052	0.1059

LTE Band 5 (G _T - L _C = -0.08 dB) QPSK			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	22.79	22.44	22.39
Conducted Power (Watts)	0.1901	0.1754	0.1734
ERP(dBm)	20.56	20.21	20.16
ERP(Watts)	0.1138	0.1050	0.1038



LTE Band 5 ($G_T - L_C = -0.08$ dB 16QAM)									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	21.94	21.67	21.84	21.93	21.70	21.81	21.96	21.70	21.81
Conducted Power (Watts)	0.1563	0.1469	0.1528	0.1560	0.1479	0.1517	0.1570	0.1479	0.1517
ERP(dBm)	19.71	19.44	19.61	19.70	19.47	19.58	19.73	19.47	19.58
ERP(Watts)	0.0935	0.0879	0.0914	0.0933	0.0885	0.0908	0.0940	0.0885	0.0908

LTE Band 5 ($G_T - L_C = -0.08$ dB 16QAM)			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency	829	836.5	844
(MHz)			
Conducted Power (dBm)	21.97	21.77	21.74
Conducted Power (Watts)	0.1574	0.1503	0.1493
ERP(dBm)	19.74	19.54	19.51
ERP(Watts)	0.0942	0.0899	0.0893



LTE Band 7 ($G_T - L_C = 1.81$ dB) QPSK			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency	2502.5	2535	2567.5
(MHz)			
Conducted Power (dBm)	22.68	23.04	23.17
Conducted Power (Watts)	0.1854	0.2014	0.2075
EIRP(dBm)	24.49	24.85	24.98
EIRP(Watts)	0.2812	0.3055	0.3148

LTE Band 7 ($G_T - L_C = 1.81$ dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	20800	21100	21400	20825	21100	21375	20850	21100	21350
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2505	2535	2565	2507.5	2535	2562.5	2510	2535	2560
(MHz)									
Conducted Power (dBm)	22.76	23.15	23.21	22.61	22.70	23.21	22.63	22.68	23.27
Conducted Power (Watts)	0.1888	0.2065	0.2094	0.1824	0.1862	0.2094	0.1832	0.1854	0.2123
EIRP(dBm)	24.57	24.96	25.02	24.42	24.51	25.02	24.44	24.49	25.08
EIRP(Watts)	0.2864	0.3133	0.3177	0.2767	0.2825	0.3177	0.2780	0.2812	0.3221



LTE Band 7 ($G_T - L_C = 1.81$ dB) 16QAM			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency	2502.5	2535	2567.5
(MHz)			
Conducted Power (dBm)	21.83	22.15	22.36
Conducted Power (Watts)	0.1524	0.1641	0.1722
EIRP(dBm)	23.64	23.96	24.17
EIRP(Watts)	0.2312	0.2489	0.2612

LTE Band 7 ($G_T - L_C = 1.81$ dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	20800	21100	21400	20825	21100	21375	20850	21100	21350
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2505	2535	2565	2507.5	2535	2562.5	2510	2535	2560
(MHz)									
Conducted Power (dBm)	22.00	22.41	22.48	21.87	21.93	22.49	22.01	22.25	22.43
Conducted Power (Watts)	0.1585	0.1742	0.1770	0.1538	0.1560	0.1774	0.1589	0.1679	0.1750
EIRP(dBm)	23.81	24.22	24.29	23.68	23.74	24.30	23.82	24.06	24.24
EIRP(Watts)	0.2404	0.2642	0.2685	0.2333	0.2366	0.2692	0.2410	0.2547	0.2655



LTE Band 12 (G _T - L _C = -0.69 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	22.87	22.77	22.66	22.87	22.79	22.74	22.87	22.85	22.73
Conducted Power (Watts)	0.1936	0.1892	0.1845	0.1936	0.1901	0.1879	0.1936	0.1928	0.1875
ERP(dBm)	20.03	19.93	19.82	20.03	19.95	19.90	20.03	20.01	19.89
ERP(Watts)	0.1007	0.0984	0.0959	0.1007	0.0989	0.0977	0.1007	0.1002	0.0975

LTE Band 12 (G _T - L _C = -0.69 dB) QPSK			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	22.89	22.96	22.86
Conducted Power (Watts)	0.1945	0.1977	0.1932
ERP(dBm)	20.05	20.12	20.02
ERP(Watts)	0.1012	0.1028	0.1005



LTE Band 12 (G _T - L _C = -0.69 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	21.97	21.85	21.81	21.98	21.94	21.91	21.95	21.91	22.00
Conducted Power (Watts)	0.1574	0.1531	0.1517	0.1578	0.1563	0.1552	0.1567	0.1552	0.1585
ERP(dBm)	19.13	19.01	18.97	19.14	19.10	19.07	19.11	19.07	19.16
ERP(Watts)	0.0818	0.0796	0.0789	0.0820	0.0813	0.0807	0.0815	0.0807	0.0824

LTE Band 12 (G _T - L _C = -0.69 dB) 16QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	21.93	22.00	21.92
Conducted Power (Watts)	0.1560	0.1585	0.1556
ERP(dBm)	19.09	19.16	19.08
ERP(Watts)	0.0811	0.0824	0.0809



LTE Band 13 (G _T - L _C = -0.66 dB) QPSK						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency	779.5	782	784.5	-	782	-
(MHz)						
Conducted Power (dBm)	23.03	23.10	23.08	-	23.13	-
Conducted Power (Watts)	0.2009	0.2042	0.2032	-	0.2056	-
ERP(dBm)	20.22	20.29	20.27	-	20.32	-
ERP(Watts)	0.1052	0.1069	0.1064	-	0.1076	-

LTE Band 13 (G _T - L _C = -0.66 dB) 16QAM						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency	779.5	782	784.5	-	782	-
(MHz)						
Conducted Power (dBm)	22.40	22.43	22.48	-	22.50	-
Conducted Power (Watts)	0.1738	0.1750	0.1770	-	0.1778	-
ERP(dBm)	19.59	19.62	19.67	-	19.69	-
ERP(Watts)	0.0910	0.0916	0.0927	-	0.0931	-



LTE Band 17 (G _T - L _C = -0.69 dB) QPSK						
Bandwidth	5M			10M		
Channel	23755	23790	23825	23780	23790	23800
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	706.5	710	713.5	709	710	711
(MHz)						
Conducted Power (dBm)	22.86	22.90	22.77	22.82	22.87	22.93
Conducted Power (Watts)	0.1932	0.1950	0.1892	0.1914	0.1936	0.1963
ERP(dBm)	20.02	20.06	19.93	19.98	20.03	20.09
ERP(Watts)	0.1005	0.1014	0.0984	0.0995	0.1007	0.1021

LTE Band 17 (G _T - L _C = -0.69 dB) 16QAM						
Bandwidth	5M			10M		
Channel	23755	23790	23825	23780	23790	23800
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	706.5	710	713.5	709	710	711
(MHz)						
Conducted Power (dBm)	21.94	21.92	21.96	21.92	21.94	21.96
Conducted Power (Watts)	0.1563	0.1556	0.1570	0.1556	0.1563	0.1570
ERP(dBm)	19.10	19.08	19.12	19.08	19.10	19.12
ERP(Watts)	0.0813	0.0809	0.0817	0.0809	0.0813	0.0817



LTE Band 26 (G _T - L _C = -0.08 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	22.93	22.46	22.57	22.92	22.41	22.55	22.91	22.54	22.56
Conducted Power (Watts)	0.1963	0.1762	0.1807	0.1959	0.1742	0.1799	0.1954	0.1795	0.1803
ERP(dBm)	20.70	20.23	20.34	20.69	20.18	20.32	20.68	20.31	20.33
ERP(Watts)	0.1175	0.1054	0.1081	0.1172	0.1042	0.1076	0.1169	0.1074	0.1079

LTE Band 26 (G _T - L _C = -0.08 dB) QPSK						
Bandwidth	10M			15M		
Channel	26840	26915	26990	26865	26915	26965
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	829	836.5	844	831.5	836.5	841.5
(MHz)						
Conducted Power (dBm)	22.98	22.71	22.42	22.82	22.84	22.55
Conducted Power (Watts)	0.1986	0.1866	0.1746	0.1914	0.1923	0.1799
ERP(dBm)	20.75	20.48	20.19	20.59	20.61	20.32
ERP(Watts)	0.1189	0.1117	0.1045	0.1146	0.1151	0.1076



LTE Band 26 (G _T - L _C = -0.08 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	22.00	21.52	21.66	21.98	21.69	21.84	21.95	21.66	21.83
Conducted Power (Watts)	0.1585	0.1419	0.1466	0.1578	0.1476	0.1528	0.1567	0.1466	0.1524
ERP(dBm)	19.77	19.29	19.43	19.75	19.46	19.61	19.72	19.43	19.60
ERP(Watts)	0.0948	0.0849	0.0877	0.0944	0.0883	0.0914	0.0938	0.0877	0.0912

LTE Band 26 (G _T - L _C = -0.08 dB) 16QAM						
Bandwidth	10M			15M		
Channel	26840	26915	26990	26865	26915	26965
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	829	836.5	844	831.5	836.5	841.5
(MHz)						
Conducted Power (dBm)	21.95	21.91	21.80	21.98	21.79	21.99
Conducted Power (Watts)	0.1567	0.1552	0.1514	0.1578	0.1510	0.1581
ERP(dBm)	19.72	19.68	19.57	19.75	19.56	19.76
ERP(Watts)	0.0938	0.0929	0.0906	0.0944	0.0904	0.0946



LTE Band 38 (G _T - L _C = 1.84dB) QPSK			
Bandwidth	5M		
Channel	37775	38000	38225
	(Low)	(Mid)	(High)
Frequency	2572.5	2595	2617.5
(MHz)			
Conducted Power (dBm)	22.77	22.71	22.92
Conducted Power (Watts)	0.1892	0.1866	0.1959
EIRP(dBm)	24.61	24.55	24.76
EIRP(Watts)	0.2891	0.2851	0.2992

LTE Band 38 (G _T - L _C = 1.84dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	37800	38000	38200	37825	38000	38175	37850	38000	38150
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency	2575	2595	2615	2577.5	2595	2612.5	2580	2595	2610
(MHz)									
Conducted Power (dBm)	22.78	22.75	22.94	22.78	22.79	22.93	22.83	22.80	22.91
Conducted Power (Watts)	0.1897	0.1884	0.1968	0.1897	0.1901	0.1963	0.1919	0.1905	0.1954
EIRP(dBm)	24.62	24.59	24.78	24.62	24.63	24.77	24.67	24.64	24.75
EIRP(Watts)	0.2897	0.2877	0.3006	0.2897	0.2904	0.2999	0.2931	0.2911	0.2985



LTE Band 38 ($G_T - L_C = 1.84\text{dB}$) 16QAM			
Bandwidth	5M		
Channel	37775	38000	38225
	(Low)	(Mid)	(High)
Frequency	2572.5	2595	2617.5
(MHz)			
Conducted Power (dBm)	21.45	21.41	21.66
Conducted Power (Watts)	0.1396	0.1384	0.1466
EIRP(dBm)	23.29	23.25	23.50
EIRP(Watts)	0.2133	0.2113	0.2239

LTE Band 38 ($G_T - L_C = 1.84\text{dB}$)16QAM									
Bandwidth	10M			15M			20M		
Channel	37800	38000	38200	37825	38000	38175	37850	38000	38150
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency	2575	2595	2615	2577.5	2595	2612.5	2580	2595	2610
(MHz)									
Conducted Power (dBm)	21.44	21.44	21.68	21.40	21.47	21.65	21.44	21.49	21.63
Conducted Power (Watts)	0.1393	0.1393	0.1472	0.1380	0.1403	0.1462	0.1393	0.1409	0.1455
EIRP(dBm)	23.28	23.28	23.52	23.24	23.31	23.49	23.28	23.33	23.47
EIRP(Watts)	0.2128	0.2128	0.2249	0.2109	0.2143	0.2234	0.2128	0.2153	0.2223



LTE Band 41 (G _T - L _C = 2.12 dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	39675	40620	41565	39700	40620	41540	39725	40620	41515
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2498.5	2593	2687.5	2501	2593	2685	2503.5	2593	2682.5
(MHz)									
Conducted Power (dBm)	22.63	22.50	22.90	22.66	22.52	22.94	22.65	22.52	22.92
Conducted Power (Watts)	0.1832	0.1778	0.1950	0.1845	0.1786	0.1968	0.1841	0.1786	0.1959
EIRP(dBm)	24.75	24.62	25.02	24.78	24.64	25.06	24.77	24.64	25.04
EIRP(Watts)	0.2985	0.2897	0.3177	0.3006	0.2911	0.3206	0.2999	0.2911	0.3192

LTE Band 41 (G _T - L _C = 2.12 dB) QPSK			
Bandwidth	20M		
Channel	39750	40620	41490
	(Low)	(Mid)	(High)
Frequency	2506	2593	2680
(MHz)			
Conducted Power (dBm)	22.68	22.54	22.99
Conducted Power (Watts)	0.1854	0.1795	0.1991
EIRP(dBm)	24.80	24.66	25.11
EIRP(Watts)	0.3020	0.2924	0.3243



LTE Band 41 (G _T - L _C = 2.12 dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	39675	40620	41565	39700	40620	41540	39725	40620	41515
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2498.5	2593	2687.5	2501	2593	2685	2503.5	2593	2682.5
Conducted Power (dBm)	21.28	21.22	21.61	21.33	21.25	21.67	21.32	21.22	21.63
Conducted Power (Watts)	0.1343	0.1324	0.1449	0.1358	0.1334	0.1469	0.1355	0.1324	0.1455
EIRP(dBm)	23.40	23.34	23.73	23.45	23.37	23.79	23.44	23.34	23.75
EIRP(Watts)	0.2188	0.2158	0.2360	0.2213	0.2173	0.2393	0.2208	0.2158	0.2371

LTE Band 41 (G _T - L _C = 2.12 dB) 16QAM			
Bandwidth	20M		
Channel	39750	40620	41490
	(Low)	(Mid)	(High)
Frequency (MHz)	2506	2593	2680
Conducted Power (dBm)	21.36	21.27	21.72
Conducted Power (Watts)	0.1368	0.1340	0.1486
EIRP(dBm)	23.48	23.39	23.84
EIRP(Watts)	0.2228	0.2183	0.2421



LTE Band 66 (G _T - L _C = 1.75dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	22.85	22.82	23.11	22.83	22.84	23.10	22.98	22.90	23.15
Conducted Power (Watts)	0.1928	0.1914	0.2046	0.1919	0.1923	0.2042	0.1986	0.1950	0.2065
EIRP(dBm)	24.60	24.57	24.86	24.58	24.59	24.85	24.73	24.65	24.90
EIRP(Watts)	0.2884	0.2864	0.3062	0.2871	0.2877	0.3055	0.2972	0.2917	0.3090

LTE Band 66 (G _T - L _C = 1.75dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	23.11	23.04	23.16	22.59	22.97	23.20	23.11	23.12	23.26
Conducted Power (Watts)	0.2046	0.2014	0.2070	0.1816	0.1982	0.2089	0.2046	0.2051	0.2118
EIRP(dBm)	24.86	24.79	24.91	24.34	24.72	24.95	24.86	24.87	25.01
EIRP(Watts)	0.3062	0.3013	0.3097	0.2716	0.2965	0.3126	0.3062	0.3069	0.3170



LTE Band 66 (G _T - L _C = 1.75dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	22.07	22.16	22.45	22.10	22.14	22.37	22.19	22.15	22.38
Conducted Power (Watts)	0.1611	0.1644	0.1758	0.1622	0.1637	0.1726	0.1656	0.1641	0.1730
EIRP(dBm)	23.82	23.91	24.20	23.85	23.89	24.12	23.94	23.90	24.13
EIRP(Watts)	0.2410	0.2460	0.2630	0.2427	0.2449	0.2582	0.2477	0.2455	0.2588

LTE Band 66 (G _T - L _C = 1.75dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	22.34	22.25	22.45	22.32	22.29	22.39	22.21	22.11	22.40
Conducted Power (Watts)	0.1714	0.1679	0.1758	0.1706	0.1694	0.1734	0.1663	0.1626	0.1738
EIRP(dBm)	24.09	24.00	24.20	24.07	24.04	24.14	23.96	23.86	24.15
EIRP(Watts)	0.2564	0.2512	0.2630	0.2553	0.2535	0.2594	0.2489	0.2432	0.2600



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-58.30	-13	-45.30	-73.68	-68.61	1.97	12.28	H
	5555	-44.09	-13	-31.09	-61.97	-54.22	2.14	12.28	H
	7404	-54.43	-13	-41.43	-74.72	-62.43	2.17	10.17	H
	3700	-59.53	-13	-46.53	-74.45	-69.84	1.97	12.28	V
	5555	-44.99	-13	-31.99	-62.88	-55.12	2.14	12.28	V
	7404	-52.75	-13	-39.75	-72.92	-60.75	2.17	10.17	V
Middle	3742	-52.14	-13	-39.14	-67.56	-62.40	2.00	12.25	H
	5611	-45.62	-13	-32.62	-63.38	-55.85	2.13	12.36	H
	7484	-53.95	-13	-40.95	-74.26	-61.85	2.12	10.03	H
	3742	-55.77	-13	-42.77	-70.7	-66.03	2.00	12.25	V
	5611	-46.44	-13	-33.44	-64.17	-56.67	2.13	12.36	V
	7484	-53.02	-13	-40.02	-73.6	-60.92	2.12	10.03	V
Highest	3784	-54.27	-13	-41.27	-69.74	-64.48	2.02	12.23	H
	5674	-47.39	-13	-34.39	-65.44	-57.72	2.11	12.44	H
	7564	-54.52	-13	-41.52	-75.04	-62.64	2.11	10.23	H
	3784	-57.09	-13	-44.09	-72.03	-67.30	2.02	12.23	V
	5674	-46.91	-13	-33.91	-64.93	-57.24	2.11	12.44	V
	7564	-51.30	-13	-38.30	-71.82	-59.42	2.11	10.23	V

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



LTE Band 7 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5002	-50.55	-25	-25.55	-68.48	-60.29	2.36	12.10	H
	7503	-52.41	-25	-27.41	-72.77	-60.31	2.11	10.01	H
	10004	-48.78	-25	-23.78	-74.98	-58.78	1.81	11.80	H
	5002	-48.34	-25	-23.34	-66.44	-58.08	2.36	12.10	V
	7503	-52.64	-25	-27.64	-73.27	-60.54	2.11	10.01	V
	10004	-49.49	-25	-24.49	-74.97	-59.49	1.81	11.80	V
Middle	5052	-50.20	-25	-25.20	-68.01	-59.97	2.34	12.11	H
	7578	-52.83	-25	-27.83	-73.4	-61.00	2.11	10.28	H
	10107	-48.99	-25	-23.99	-75.17	-58.86	1.97	11.84	H
	5052	-52.76	-25	-27.76	-70.76	-62.53	2.34	12.11	V
	7578	-52.86	-25	-27.86	-73.34	-61.03	2.11	10.28	V
	10107	-49.51	-25	-24.51	-75.19	-59.38	1.97	11.84	V
Highest	5100	-48.50	-25	-23.50	-66.14	-58.30	2.32	12.12	H
	7653	-50.04	-25	-25.04	-70.78	-58.48	2.11	10.55	H
	10204	-48.74	-25	-23.74	-74.87	-58.50	2.12	11.88	H
	5100	-53.96	-25	-28.96	-71.81	-63.76	2.32	12.12	V
	7653	-52.50	-25	-27.50	-73.17	-60.94	2.11	10.55	V
	10204	-49.41	-25	-24.41	-75.27	-59.17	2.12	11.88	V

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



LTE Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-62.49	-13.00	-49.49	-72.14	-66.93	1.15	7.74	H
	2096	-40.63	-13.00	-27.63	-52.54	-47.28	1.38	10.18	H
	3496	-53.66	-13.00	-40.66	-68.75	-62.03	1.87	12.39	H
	1400	-63.50	-13.00	-50.50	-73.00	-67.94	1.15	7.74	V
	2096	-43.37	-13.00	-30.37	-55.36	-50.02	1.38	10.18	V
	3496	-56.02	-13.00	-43.02	-70.79	-64.39	1.87	12.39	V
Middle	1408	-62.57	-13.00	-49.57	-72.22	-67.05	1.15	7.78	H
	2112	-39.95	-13.00	-26.95	-52.17	-46.61	1.38	10.19	H
	3512	-53.98	-13.00	-40.98	-69.01	-62.35	1.88	12.39	H
	1408	-63.32	-13.00	-50.32	-72.82	-67.80	1.15	7.78	V
	2112	-43.20	-13.00	-30.20	-55.53	-49.86	1.38	10.19	V
	3512	-57.19	-13.00	-44.19	-71.90	-65.56	1.88	12.39	V
Highest	1416	-61.18	-13.00	-48.18	-70.83	-65.69	1.15	7.81	H
	2120	-43.04	-13.00	-30.04	-55.57	-49.71	1.38	10.20	H
	3536	-54.78	-13.00	-41.78	-69.74	-63.12	1.89	12.38	H
	1416	-62.14	-13.00	-49.14	-71.64	-66.65	1.15	7.81	V
	2120	-43.07	-13.00	-30.07	-55.75	-49.74	1.38	10.20	V
	3536	-57.00	-13.00	-44.00	-71.62	-65.34	1.89	12.38	V

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



LTE Band 13 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1554	-63.48	-13	-50.48	-73.15	-68.54	1.19	8.41	H
	2328	-45.55	-13	-32.55	-58.80	-52.35	1.41	10.36	H
	3109	-60.35	-13	-47.35	-74.91	-67.88	1.55	11.23	H
	1554	-64.99	-13	-51.99	-73.65	-70.05	1.19	8.41	V
	2328	-46.52	-13	-33.52	-59.78	-53.32	1.41	10.36	V
	3109	-60.54	-13	-47.54	-74.66	-68.07	1.55	11.23	V
Middle	1559	-63.61	-42.15	-21.46	-73.28	-68.69	1.19	8.42	H
	2336	-48.75	-13	-35.75	-61.88	-55.56	1.41	10.37	H
	3119	-60.15	-13	-47.15	-74.80	-67.70	1.56	11.26	H
	1559	-64.57	-42.15	-22.42	-73.23	-69.65	1.19	8.42	V
	2336	-50.03	-13	-37.03	-63.12	-56.84	1.41	10.37	V
	3119	-60.54	-13	-47.54	-74.78	-68.09	1.56	11.26	V
Highest	1560	-62.90	-42.15	-20.75	-72.57	-67.99	1.19	8.43	H
	2344	-43.58	-13	-30.58	-56.72	-50.39	1.42	10.38	H
	3129	-60.25	-13	-47.25	-74.90	-67.82	1.57	11.29	H
	1560	-63.75	-42.15	-21.60	-72.41	-68.84	1.19	8.43	V
	2344	-46.03	-13	-33.03	-59.13	-52.84	1.42	10.38	V
	3129	-60.22	-13	-47.22	-74.46	-67.79	1.57	11.29	V

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

LTE Band 13 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1552	-63.73	-13	-50.73	-73.4	-68.79	1.19	8.40	H
	2336	-53.54	-13	-40.54	-66.67	-60.35	1.41	10.37	H
	3110	-60.41	-13	-47.41	-74.97	-67.94	1.55	11.23	H
	1552	-64.54	-13	-51.54	-73.2	-69.60	1.19	8.40	V
	2336	-54.44	-13	-41.44	-67.53	-61.25	1.41	10.37	V
	3110	-60.61	-13	-47.61	-74.73	-68.14	1.55	11.23	V

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



LTE Band 41 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4992	-49.80	-25	-24.80	-67.78	-59.55	2.35	12.10	H
	7494	-44.27	-25	-19.27	-64.58	-52.16	2.12	10.01	H
	9990	-48.65	-25	-23.65	-74.85	-58.64	1.81	11.80	H
	4992	-50.20	-25	-25.20	-68.35	-59.95	2.35	12.10	V
	7494	-40.17	-25	-15.17	-60.84	-48.06	2.12	10.01	V
	9990	-49.50	-25	-24.50	-74.94	-59.49	1.81	11.80	V
Middle	5166	-54.04	-25	-29.04	-71.47	-63.88	2.29	12.13	H
	7752	-45.84	-25	-20.84	-66.8	-54.63	2.11	10.91	H
	10332	-48.93	-25	-23.93	-75.03	-58.54	2.32	11.93	H
	5166	-54.21	-25	-29.21	-71.87	-64.05	2.29	12.13	V
	7752	-40.33	-25	-15.33	-61.44	-49.12	2.11	10.91	V
	10332	-48.57	-25	-23.57	-74.67	-58.18	2.32	11.93	V
Highest	5340	-52.56	-25	-27.56	-70.22	-62.51	2.22	12.17	H
	8016	-39.51	-25	-14.51	-62.52	-49.22	2.11	11.83	H
	10683	-48.91	-25	-23.91	-74.64	-58.04	2.62	11.74	H
	5340	-52.10	-25	-27.10	-69.76	-62.05	2.22	12.17	V
	8016	-39.52	-25	-14.52	-62.53	-49.23	2.11	11.83	V
	10683	-48.41	-25	-23.41	-74.65	-57.54	2.62	11.74	V

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



LTE Band 66 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-56.12	-13	-43.12	-74.15	-66.48	1.80	12.16	H
	5135	-44.28	-13	-31.28	-61.82	-54.10	2.30	12.13	H
	6843	-55.82	-13	-42.82	-74.85	-64.51	2.37	11.06	H
	3420	-53.28	-13	-40.28	-68.12	-63.64	1.80	12.16	V
	5135	-44.00	-13	-31.00	-61.76	-53.82	2.30	12.13	V
	6843	-54.79	-13	-41.79	-75.02	-63.48	2.37	11.06	V
Middle	3469	-54.64	-13	-41.64	-70.07	-65.10	1.84	12.31	H
	5205	-45.76	-13	-32.76	-63.08	-55.63	2.28	12.14	H
	6941	-53.60	-13	-40.60	-72.68	-62.16	2.40	10.96	H
	3469	-52.49	-13	-39.49	-67.66	-62.95	1.84	12.31	V
	5205	-44.67	-13	-31.67	-62.23	-54.54	2.28	12.14	V
	6941	-50.88	-13	-37.88	-71.07	-59.44	2.40	10.96	V
Highest	3525	-54.76	-13	-41.76	-70.31	-65.26	1.88	12.39	H
	5282	-48.01	-13	-35.01	-65.55	-57.92	2.24	12.16	H
	7046	-52.69	-13	-39.69	-71.97	-61.12	2.39	10.82	H
	3525	-49.95	-13	-36.95	-65.16	-60.45	1.88	12.39	V
	5282	-45.34	-13	-32.34	-63.02	-55.25	2.24	12.16	V
	7046	-52.64	-13	-39.64	-72.8	-61.07	2.39	10.82	V

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



LTE Band 26 / 15MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-51.05	-13	-38.05	-60.46	-56.44	1.23	8.76	H
	4123	-57.21	-13	-44.21	-72.41	-65.07	2.09	12.10	H
	4948	-52.88	-13	-39.88	-70.61	-60.51	2.32	12.10	H
	1648	-55.33	-13	-42.33	-63.76	-60.72	1.23	8.76	V
	4123	-59.89	-13	-46.89	-75.06	-67.75	2.09	12.10	V
	4948	-49.99	-13	-36.99	-68.01	-57.62	2.32	12.10	V
Middle	1659	-52.29	-13	-39.29	-61.61	-57.71	1.23	8.80	H
	4148	-57.34	-13	-44.34	-72.53	-65.21	2.08	12.10	H
	4978	-52.23	-13	-39.23	-70.01	-59.84	2.34	12.10	H
	1659	-55.94	-13	-42.94	-64.43	-61.36	1.23	8.80	V
	4148	-58.60	-13	-45.60	-73.77	-66.47	2.08	12.10	V
	4978	-50.21	-13	-37.21	-68.2	-57.82	2.34	12.10	V
Highest	1669	-49.39	-13	-36.39	-58.71	-54.85	1.23	8.84	H
	4173	-57.84	-13	-44.84	-73.02	-65.72	2.07	12.10	H
	5008	-52.43	-13	-39.43	-70.19	-60.02	2.36	12.10	H
	1669	-53.19	-13	-40.19	-61.72	-58.65	1.23	8.84	V
	4173	-58.47	-13	-45.47	-73.61	-66.35	2.07	12.10	V
	5008	-50.38	-13	-37.38	-68.31	-57.97	2.36	12.10	V

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