



# FCC RF Test Report

**FCC ID** : 2AD9M-003A  
**EQUIPMENT** : Smartphone  
**BRAND NAME** : LEOMO  
**MODEL NAME** : LEM-TS1  
**MARKETING NAME** : LEOMO TYPE-S  
**APPLICANT** : LEOMO, Inc.  
7-22-17 Nishi Gotanda TOC Bldg. 7F  
Shinagawa-ku, Tokyo, 1410031, Japan  
**MANUFACTURER** : LEOMO, Inc.  
2000 Central Avenue, Suite 150, Boulder CO  
80301, USA  
**STANDARD** : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(M)  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Apr. 24, 2019 and completely tested on Jun. 20, 2019. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

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



Jason Jia

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**Reviewed by: Jason Jia / Supervisor**

James Huang

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**Approved by: James Huang / Manager**



***Sporton International (Kunshan) Inc.***

***No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300  
People's Republic of China***



## TABLE OF CONTENTS

<b>REVISION HISTORY .....</b>	<b>4</b>
<b>SUMMARY OF TEST RESULT .....</b>	<b>5</b>
<b>1 GENERAL DESCRIPTION .....</b>	<b>6</b>
1.1 Applicant .....	6
1.2 Manufacturer .....	6
1.3 Product Feature of Equipment Under Test .....	6
1.4 Product Specification of Equipment Under Test .....	7
1.5 Modification of EUT .....	7
1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator .....	8
1.7 Testing Location .....	12
1.8 Applicable Standards .....	12
<b>2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST .....</b>	<b>13</b>
2.1 Test Mode .....	13
2.2 Connection Diagram of Test System .....	16
2.3 Support Unit used in test configuration and system .....	16
2.4 Measurement Results Explanation Example .....	16
2.5 Frequency List of Low/Middle/High Channels .....	17
<b>3 CONDUCTED TEST ITEMS .....</b>	<b>20</b>
3.1 Measuring Instruments .....	20
3.2 Test Setup .....	20
3.3 Test Result of Conducted Test .....	20
3.4 Conducted Output Power and ERP/EIRP .....	21
3.5 Peak-to-Average Ratio .....	22
3.6 Occupied Bandwidth .....	23
3.7 Conducted Band Edge .....	24
3.8 Conducted Spurious Emission .....	26
3.9 Frequency Stability .....	27
<b>4 RADIATED TEST ITEMS .....</b>	<b>28</b>
4.1 Measuring Instruments .....	28
4.2 Test Setup .....	28
4.3 Test Result of Radiated Test .....	28
4.4 Radiated Spurious Emission .....	29
<b>5 LIST OF MEASURING EQUIPMENT .....</b>	<b>30</b>
<b>6 UNCERTAINTY OF EVALUATION .....</b>	<b>31</b>
<b>APPENDIX A. TEST RESULTS OF CONDUCTED TEST</b>	
<b>APPENDIX B. TEST RESULTS OF RADIATED TEST</b>	
<b>APPENDIX C. TEST SETUP PHOTOGRAPHS</b>	



## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG942441B	Rev. 01	Initial issue of report	Jun. 24, 2019
FG942441B	Rev. 02	Update the address of Appilicant.	Jul. 15, 2019

## 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)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(c)(10)	Effective Radiated Power (Band 12) (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)	EIRP < 1Watt	PASS	-
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)	< 43+10log <sub>10</sub> (P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7) (Band 38) (Band 41)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)	< 43+10log <sub>10</sub> (P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10log <sub>10</sub> (P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22H	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)	< 43+10log <sub>10</sub> (P[Watts])	PASS	Under limit 12.28 dB at 13182.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10log <sub>10</sub> (P[Watts])		



# 1 General Description

## 1.1 Applicant

**LEOMO, Inc.**

7-22-17 Nishi Gotanda TOC Bldg. 7F Shinagawa-ku, Tokyo, 1410031, Japan

## 1.2 Manufacturer

**LEOMO, Inc.**

2000 Central Avenue, Suite 150, Boulder CO 80301, USA

## 1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Brand Name	LEOMO
Model Name	LEM-TS1
FCC ID	2AD9M-003A
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 Bluetooth BR/EDR/LE/ANT+ NFC and GNSS
IMEI Code	Conducted : 355681100009594 Radiation : 355681100008919
HW Version	DVT
SW Version	000T_1_020
EUT Stage	Identical Prototype

## 1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
<b>Tx Frequency</b>	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 17 : 706.5 MHz ~ 713.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2557.5 MHz ~ 2652.5 MHz
<b>Rx Frequency</b>	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 17 : 736.5 MHz ~ 743.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2557.5 MHz ~ 2652.5 MHz
<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 17 : 5MHz / 10MHz LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz
<b>Maximum Output Power to Antenna</b>	LTE Band 2 : 23.43 dBm LTE Band 4 : 24.00 dBm LTE Band 5 : 22.96 dBm LTE Band 7 : 23.98 dBm LTE Band 12 : 23.37 dBm LTE Band 17 : 23.10 dBm LTE Band 38 : 23.91 dBm LTE Band 41 : 23.89 dBm
<b>Antenna Gain</b>	LTE Band 2 : -2.03 dBi LTE Band 4 : -3.96 dBi LTE Band 5 : -5.11 dBi LTE Band 7 : -0.44 dBi LTE Band 12 : -5.78 dBi LTE Band 17 : -5.78 dBi LTE Band 38 : -0.27 dBi LTE Band 41 : -0.27 dBi
<b>Type of Modulation</b>	QPSK / 16QAM / 64QAM

## 1.5 Modification of EUT

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



## 1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and 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	1M09G7D	-	0.1315	1M10W7D	-	0.1064
3	1851.5 ~ 1908.5	2M72G7D	-	0.1285	2M73W7D	-	0.1033
5	1852.5 ~ 1907.5	4M49G7D	-	0.1377	4M51W7D	-	0.1164
10	1855.0 ~ 1905.0	8M99G7D	0.0043	0.1318	9M01W7D	-	0.1026
15	1857.5 ~ 1902.5	13M5G7D	-	0.1368	13M5W7D	-	0.1014
20	1860.0 ~ 1900.0	18M3G7D	-	0.1380	18M4W7D	-	0.1074
LTE Band 2		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum EIRP(W)	
1.4	1850.7 ~ 1909.3	1M10W7D		-		0.0891	
3	1851.5 ~ 1908.5	2M73W7D		-		0.0883	
5	1852.5 ~ 1907.5	4M53W7D		-		0.0927	
10	1855.0 ~ 1905.0	9M03W7D		-		0.0834	
15	1857.5 ~ 1902.5	13M4W7D		-		0.0881	
20	1860.0 ~ 1900.0	18M3W7D		-		0.0861	
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	1M10G7D	-	0.0959	1M10W7D	-	0.0769
3	1711.5 ~ 1753.5	2M72G7D	-	0.0957	2M72W7D	-	0.0726
5	1712.5 ~ 1752.5	4M51G7D	-	0.0929	4M50W7D	-	0.0698
10	1715.0 ~ 1750.0	9M03G7D	0.0033	0.0953	9M07W7D	-	0.0746
15	1717.5 ~ 1747.5	13M5G7D	-	0.0933	13M5W7D	-	0.0783
20	1720.0 ~ 1745.0	18M3G7D	-	0.1009	18M3W7D	-	0.0802
LTE Band 4		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum EIRP(W)	
1.4	1710.7 ~ 1754.3	1M10W7D		-		0.0630	
3	1711.5 ~ 1753.5	2M75W7D		-		0.0582	
5	1712.5 ~ 1752.5	4M51W7D		-		0.0589	
10	1715.0 ~ 1750.0	9M05W7D		-		0.0594	





15	1717.5 ~ 1747.5	13M5W7D		-		0.0611	
20	1720.0 ~ 1745.0	18M4W7D		-		0.0630	
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	1M09G7D	-	0.0368	1M10W7D	-	0.0277
3	825.5 ~ 847.5	2M75G7D	-	0.0349	2M72W7D	-	0.0286
5	826.5 ~ 846.5	4M49G7D	-	0.0369	4M51W7D	-	0.0269
10	829.0 ~ 844.0	9M05G7D	0.0069	0.0372	9M03W7D	-	0.0289
LTE Band 5		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum ERP(W)	
1.4	824.7 ~ 848.3	1M10W7D		-		0.0236	
3	825.5 ~ 847.5	2M73W7D		-		0.0220	
5	826.5 ~ 846.5	4M52W7D		-		0.0232	
10	829.0 ~ 844.0	9M07W7D		-		0.0234	
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	4M56G7D	-	0.2254	4M55W7D	-	0.1791
10	2505.0 ~ 2565.0	9M05G7D	0.0032	0.2254	9M05W7D	-	0.1770
15	2507.5 ~ 2562.5	13M5G7D	-	0.2254	13M5W7D	-	0.1803
20	2510.0 ~ 2560.0	18M4G7D	-	0.2259	18M6W7D	-	0.1799
LTE Band 7		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum EIRP(W)	
5	2502.5 ~ 2567.5	4M52W7D		-		0.1429	
10	2505.0 ~ 2565.0	9M09W7D		-		0.1419	
15	2507.5 ~ 2562.5	13M5W7D		-		0.1432	
20	2510.0 ~ 2560.0	18M5W7D		-		0.1429	
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	1M09G7D	-	0.0350	1M10W7D	-	0.0284
3	700.5 ~ 714.5	2M72G7D	-	0.0324	2M73W7D	-	0.0255



5	701.5 ~ 713.5	4M53G7D	-	0.0313	4M52W7D	-	0.0258
10	704.0 ~ 711.0	9M01G7D	0.0106	0.0324	9M01W7D	-	0.0267
LTE Band 12		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum ERP(W)	
1.4	699.7 ~ 715.3	1M09W7D		-		0.0222	
3	700.5 ~ 714.5	2M73W7D		-		0.0217	
5	701.5 ~ 713.5	4M50W7D		-		0.0212	
10	704.0 ~ 711.0	9M15W7D		-		0.0210	
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	4M53G7D	-	0.0313	4M52W7D	-	0.0258
10	709.0 ~ 711.0	9M01G7D	0.0106	0.0324	9M01W7D	-	0.0267
LTE Band 17		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum ERP(W)	
5	706.5 ~ 713.5	4M50W7D		-		0.0212	
10	709.0 ~ 711.0	9M15W7D		-		0.0210	
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	4M52G7D	-	0.2301	4M51W7D	-	0.1710
10	2575.0 ~ 2615.0	9M09G7D	0.0020	0.2218	9M01W7D	-	0.1667
15	2577.5 ~ 2612.5	13M5G7D	-	0.2234	13M5W7D	-	0.1663
20	2580.0 ~ 2610.0	18M3G7D	-	0.2234	18M3W7D	-	0.1762
LTE Band 38		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum EIRP(W)	
5	2572.5 ~ 2617.5	4M50W7D		-		0.1285	
10	2575.0 ~ 2615.0	9M01W7D		-		0.1330	
15	2577.5 ~ 2612.5	13M4W7D		-		0.1321	
20	2580.0 ~ 2610.0	18M5W7D		-		0.1233	



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	2557.5 ~ 2652.5	4M52G7D	-	0.2301	4M51W7D	-	0.1710
10	2560.0 ~ 2650.0	9M09G7D	0.0020	0.2218	9M01W7D	-	0.1667
15	2562.5 ~ 2647.5	13M5G7D	-	0.2234	13M5W7D	-	0.1663
20	2565.0 ~ 2645.0	18M3G7D	-	0.2234	18M3W7D	-	0.1762
LTE Band 41		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum EIRP(W)	
5	2557.5 ~ 2652.5	4M50W7D		-		0.1285	
10	2560.0 ~ 2650.0	9M01W7D		-		0.1330	
15	2562.5 ~ 2647.5	13M4W7D		-		0.1321	
20	2565.0 ~ 2645.0	18M5W7D		-		0.1233	

## 1.7 Testing Location

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

<b>Test Firm</b>	Sporton International (Kunshan) Inc.		
<b>Test Site Location</b>	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Designation No.</b>	<b>FCC Test Firm Registration No.</b>
	03CH06-KS TH01-KS	CN1257	314309

## 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(H), 27(M)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

### Remark:

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



## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

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

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

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
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v
	38	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	2						v	v	v	v	v		v	v	v	v
	4						v	v	v	v	v		v	v	v	v
	5				v	-	-	v	v	v	v		v	v	v	v
	7	-	-				v	v	v	v	v		v	v	v	v
	12				v	-	-	v	v	v	v		v	v	v	v
	41	-	-				v	v	v	v	v		v	v	v	v

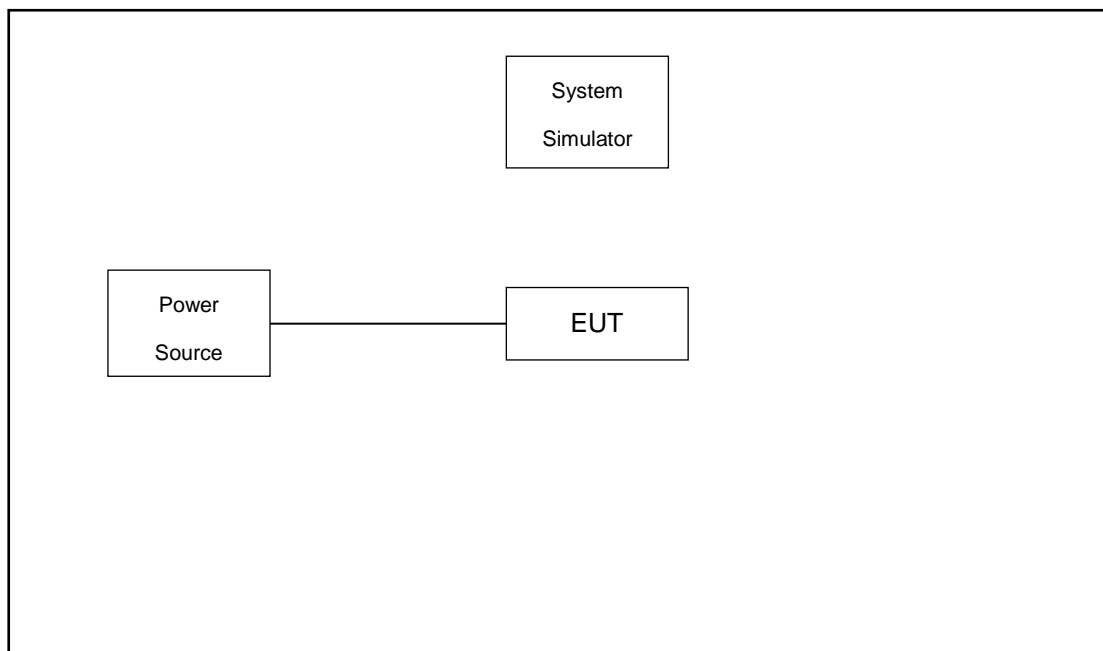


Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
26dB and 99% Bandwidth	2	v	v	v	v	v	v	v	v	v			v	v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v	v
	5	v	v	v	v	-	-	v	v	v			v	v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v	v
	12	v	v	v	v	-	-	v	v	v			v	v	v	v
	41	-	-	v	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	2	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
	5	v	v	v	v	-	-	v	v	v	v		v	v		v
	7	-	-	v	v	v	v	v	v	v	v		v	v		v
	12	v	v	v	v	-	-	v	v	v	v		v	v		v
	41	-	-	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	2	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
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v	v			v	v	v
	12	v	v	v	v	-	-	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v	v			v	v	v
Frequency Stability	2				v			v					v		v	
	4				v			v					v		v	
	5				v	-	-	v					v		v	
	7	-	-		v			v					v		v	
	12				v	-	-	v					v		v	
	41	-	-		v			v					v		v	



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
E.R.P / E.I.R.P	2	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
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v	v			v	v	v
	12	v	v	v	v	-	-	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	Worst Case												v	v	v
	4	Worst Case												v	v	v
	5	Worst Case												v	v	v
	7	Worst Case												v	v	v
	12	Worst Case												v	v	v
	41	Worst Case												v	v	v
Note	<div> 1. The mark “v “ means that this configuration is chosen for testing 2. The mark “-“ means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. LTE Band 12 overlaps the entire frequency range of LTE Band 17. Therefore, the test results provided in this report covers Band 12 as well as Band 17. 5. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38. </div>															

## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GW INSTRON	GPS-3030D	N/A	N/A	Unshielded, 1.8 m

## 2.4 Measurement Results Explanation Example

### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss

$$\text{Offset} = \text{RF cable loss}$$

Following shows an offset computation example with cable loss 4.9 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 4.9 \text{ (dB)} \end{aligned}$$





## 2.5 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 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 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	40340	40740	41140
	Frequency	2565	2605	2645
15	Channel	40315	40740	41165
	Frequency	2562.5	2605	2647.5
10	Channel	40290	40740	41190
	Frequency	2560	2605	2650
5	Channel	40265	40740	41215
	Frequency	2557.5	2605	2652.5

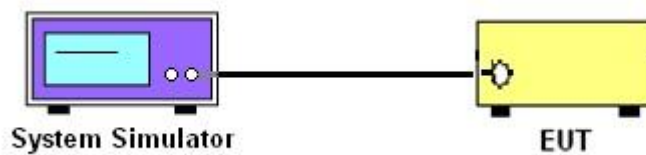
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

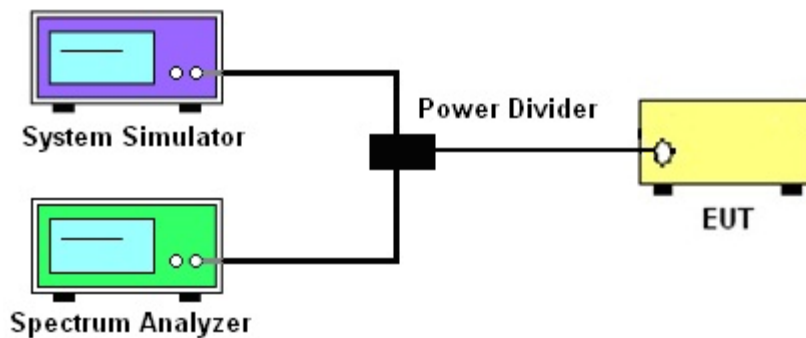
See list of measuring instruments of this test report.

#### 3.2 Test Setup

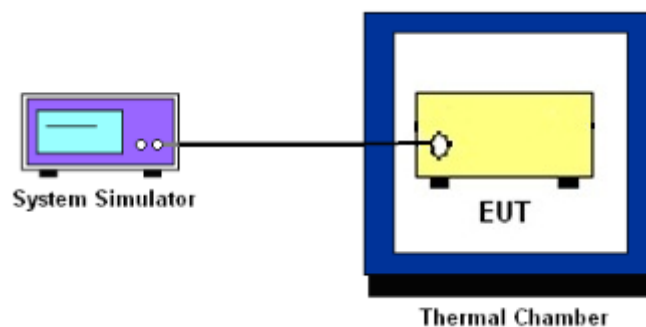
##### 3.2.1 Conducted Output Power



##### 3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



##### 3.2.3 Frequency Stability



### 3.3 Test Result of Conducted Test

Please refer to Appendix A.

### 3.4 Conducted Output Power and ERP/EIRP

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

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

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

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12 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.

According to KDB 412172 D01 Power Approach,

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

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

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

#### 3.4.2 Test Procedures

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

## 3.5 Peak-to-Average Ratio

### 3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

### 3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

## 3.6 Occupied Bandwidth

### 3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

### 3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.  
(this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

## 3.7 Conducted Band Edge

### 3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.



27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

### 3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW  $\geq 1\%$  EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used and the measured power was integrated over the full required measurement bandwidth of 1 MHz.
6. Set spectrum analyzer with RMS detector.
7. Offset has included the duty factor for LTE Band 38/41. Duty factor  $= 10 \log (1/x)$ , where x is the measured duty cycle.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. Checked that all the results comply with the emission limit line.

Example:

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

$$= P(W) - [43 + 10 \log (P)] \text{ (dB)}$$

$$= [30 + 10 \log (P)] \text{ (dBm)} - [43 + 10 \log (P)] \text{ (dB)} = -13 \text{ dBm.}$$

10. For LTE Band 7, 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.

## 3.8 Conducted Spurious Emission

### 3.8.1 Description of Conducted Spurious Emission Measurement

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

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

### 3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.  
The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Offset has included the duty factor for LTE Band 38/41. Duty factor =  $10 \log (1/x)$ , where x is the measured duty cycle.
9. Taking the record of maximum spurious emission.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. 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)  
 $= -13$  dBm.
12. For Band 7, 38, 41  
The limit line is derived from  $55 + 10 \log (P)$  dB below the transmitter power P(Watts)  
 $= P(W) - [55 + 10 \log (P)]$  (dB)  
 $= [30 + 10 \log (P)]$  (dBm) -  $[55 + 10 \log (P)]$  (dB)  
 $= -25$  dBm.

### **3.9 Frequency Stability**

#### **3.9.1 Description of Frequency Stability Measurement**

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

#### **3.9.2 Test Procedures for Temperature Variation**

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

#### **3.9.3 Test Procedures for Voltage Variation**

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at  $20\pm 5^{\circ}\text{C}$  and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

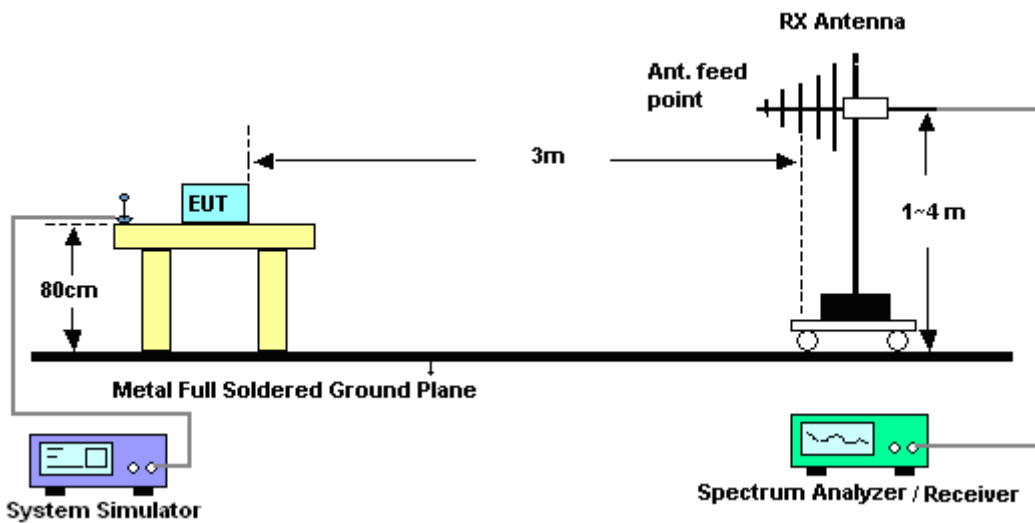
## 4 Radiated Test Items

### 4.1 Measuring Instruments

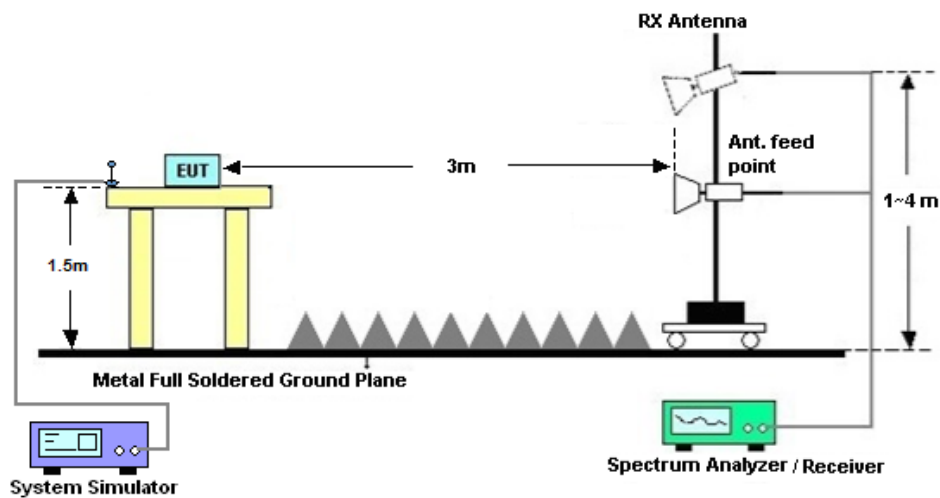
See list of measuring instruments of this test report.

### 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 C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For 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.

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

### 4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10.  $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11.  $ERP \text{ (dBm)} = EIRP - 2.15$
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)  
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$   
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$   
 $= -13\text{dBm}.$

13. For Band 7, 38, 41:

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



## 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. 07, 2018	Jun. 17, 2019~ Jun. 20, 2019	Aug. 06, 2019	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Nov. 19, 2018	Jun. 17, 2019~ Jun. 20, 2019	Nov. 18, 2019	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471084	10Hz~44GHz	Jun. 25, 2018	May 31, 2019	Jun. 24, 2019	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Dec. 28, 2018	May 31, 2019	Dec. 27, 2019	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 20, 2018	May 31, 2019	Oct. 19, 2019	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2019	May 31, 2019	Jan. 04, 2020	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	187289	9KHz ~1GHZ	Aug. 06, 2018	May 31, 2019	Aug. 05, 2019	Radiation (03CH06-KS)
Amplifier	MITEQ	TTA1840-35-HG	2014749	18~40GHz	Jan. 14, 2019	May 31, 2019	Jan. 13, 2020	Radiation (03CH06-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 QP	2025788	1Ghz-18Ghz	Apr. 17, 2019	May 31, 2019	Apr. 16, 2020	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270203	500MHz~26.5GHz	Apr. 15, 2019	May 31, 2019	Apr. 14, 2020	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 31, 2019	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 31, 2019	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 31, 2019	NCR	Radiation (03CH06-KS)

NCR: No Calibration Required

## 6 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.5dB
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.1dB
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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	22.86	22.89	23.17
20	1	49		23.18	23.14	23.43
20	1	99		22.81	23.18	23.24
20	50	0		21.94	22.06	22.14
20	50	24		21.98	21.99	22.11
20	50	50		22.01	21.94	22.17
20	100	0		21.90	21.97	22.31
20	1	0	16-QAM	21.50	21.33	21.57
20	1	49		22.34	21.68	21.85
20	1	99		21.42	21.37	21.79
20	50	0		21.03	20.99	21.28
20	50	24		21.10	21.02	21.13
20	50	50		21.01	21.04	21.17
20	100	0		20.96	21.00	21.34
20	1	0	64-QAM	20.63	20.91	21.01
20	1	49		21.07	21.38	21.26
20	1	99		21.04	21.26	21.38
20	50	0		19.99	19.91	20.30
20	50	24		20.05	20.05	20.28
20	50	50		20.00	19.95	20.19
20	100	0		20.02	19.84	20.12
15	1	0	QPSK	22.76	22.89	23.13
15	1	37		23.16	23.20	23.39
15	1	74		22.86	22.97	23.27
15	36	0		21.82	22.07	22.08
15	36	20		21.85	21.97	22.33
15	36	39		21.90	21.86	22.17
15	75	0		21.77	21.96	22.20





15	1	0	16-QAM	21.43	21.39	21.75
15	1	37		21.85	21.79	22.09
15	1	74		21.65	21.71	21.34
15	36	0		20.76	20.94	21.10
15	36	20		21.10	20.99	21.14
15	36	39		21.00	20.89	21.24
15	75	0		20.90	20.99	21.25
15	1	0	64-QAM	20.57	20.76	21.00
15	1	37		21.09	21.10	21.48
15	1	74		20.70	21.00	20.99
15	36	0		19.96	19.96	20.14
15	36	20		19.98	19.99	20.26
15	36	39		19.98	20.00	20.17
15	75	0		19.88	19.78	20.06



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.10	23.10	23.12
10	1	25		23.01	23.23	23.14
10	1	49		22.92	22.86	23.19
10	25	0		21.87	22.07	22.31
10	25	12		21.97	22.06	22.35
10	25	25		21.91	21.96	22.16
10	50	0		21.88	21.91	22.23
10	1	0	16-QAM	21.68	21.92	21.67
10	1	25		22.01	22.14	21.99
10	1	49		21.53	21.51	21.79
10	25	0		20.83	21.05	21.39
10	25	12		20.98	21.02	21.31
10	25	25		21.01	20.95	21.20
10	50	0		20.85	21.09	21.30
10	1	0	64-QAM	20.74	20.50	21.03
10	1	25		21.24	21.00	21.10
10	1	49		20.77	20.52	20.95
10	25	0		19.89	19.87	20.41
10	25	12		20.08	20.10	20.44
10	25	25		19.97	20.07	20.29
10	50	0		19.84	19.94	20.19
5	1	0	QPSK	22.93	22.89	23.36
5	1	12		23.09	23.08	23.40
5	1	24		22.99	23.09	23.42
5	12	0		21.81	22.03	22.43
5	12	7		21.87	22.05	22.39
5	12	13		21.88	22.02	22.33
5	25	0		21.79	21.98	22.42
5	1	0	16-QAM	22.15	21.48	22.67
5	1	12		21.98	21.83	22.69
5	1	24		21.41	21.35	22.36
5	12	0		20.81	21.02	21.43
5	12	7		20.93	21.12	21.45



5	12	13		20.78	21.01	21.32
5	25	0		20.88	21.10	21.44
5	1	0	64-QAM	20.61	21.07	21.18
5	1	12		21.17	21.30	21.70
5	1	24		20.79	21.02	21.12
5	12	0		19.74	19.90	20.39
5	12	7		19.93	20.03	20.40
5	12	13		19.97	19.93	20.44
5	25	0		19.80	19.93	20.35



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.49	22.81	23.12
3	1	8		22.56	22.72	22.90
3	1	14		22.81	22.89	22.94
3	8	0		21.81	21.84	22.33
3	8	4		21.80	21.89	22.11
3	8	7		21.89	21.83	22.21
3	15	0		21.81	21.82	22.07
3	1	0	16-QAM	21.80	21.46	21.76
3	1	8		21.33	21.78	22.17
3	1	14		21.30	21.54	21.81
3	8	0		20.82	20.84	21.46
3	8	4		20.82	20.99	21.10
3	8	7		20.86	20.98	21.23
3	15	0		20.73	20.79	21.15
3	1	0	64-QAM	20.89	20.62	21.49
3	1	8		20.39	20.58	21.04
3	1	14		20.72	20.80	21.20
3	8	0		19.67	19.79	20.08
3	8	4		19.85	19.79	19.91
3	8	7		19.77	19.76	20.02
3	15	0		19.61	19.87	20.07
1.4	1	0	QPSK	22.51	22.64	23.11
1.4	1	3		22.80	22.93	23.01
1.4	1	5		22.62	22.68	23.11
1.4	3	0		22.61	22.86	23.22
1.4	3	1		22.67	22.89	23.18
1.4	3	3		22.71	22.92	23.18
1.4	6	0		21.50	21.86	22.06
1.4	1	0	16-QAM	21.09	22.03	22.30
1.4	1	3		21.21	22.02	22.06
1.4	1	5		21.21	21.65	22.18
1.4	3	0		21.33	21.55	22.07
1.4	3	1		21.35	21.50	22.14



1.4	3	3		21.30	21.58	22.05
1.4	6	0		20.30	20.41	20.97
1.4	1	0	64-QAM	20.25	20.64	21.53
1.4	1	3		20.58	20.67	21.02
1.4	1	5		20.30	20.61	20.88
1.4	3	0		20.07	20.62	20.78
1.4	3	1		20.65	20.52	21.22
1.4	3	3		20.39	20.50	20.97
1.4	6	0		19.54	19.70	19.92



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.07	22.16	23.34
20	1	49		23.41	24.00	23.74
20	1	99		23.38	23.39	22.36
20	50	0		22.67	22.39	23.00
20	50	24		22.47	22.50	22.79
20	50	50		22.58	22.62	22.69
20	100	0		22.45	22.57	22.83
20	1	0	16-QAM	21.00	21.37	22.02
20	1	49		22.35	23.00	22.41
20	1	99		22.09	22.72	21.61
20	50	0		21.47	21.23	21.96
20	50	24		21.55	21.33	21.72
20	50	50		21.63	21.65	21.73
20	100	0		21.40	21.54	21.80
20	1	0	64-QAM	20.00	20.22	21.44
20	1	49		21.19	21.95	21.73
20	1	99		21.23	21.25	20.52
20	50	0		20.36	20.33	20.79
20	50	24		20.60	20.43	20.80
20	50	50		20.74	20.58	20.70
20	100	0		20.56	20.64	20.68
15	1	0	QPSK	21.24	22.39	23.37
15	1	37		22.28	23.66	23.54
15	1	74		22.08	23.40	22.32
15	36	0		21.84	22.25	23.00
15	36	20		22.27	22.31	22.65
15	36	39		22.28	22.42	22.63
15	75	0		22.06	22.29	22.71
15	1	0	16-QAM	20.48	21.73	22.71
15	1	37		21.56	22.68	22.90
15	1	74		21.34	21.80	21.60
15	36	0		20.85	21.27	22.00
15	36	20		21.30	21.44	21.48



15	36	39		21.32	21.52	21.54
15	75	0		21.10	21.40	21.70
15	1	0	64-QAM	19.38	20.46	21.36
15	1	37		20.44	21.71	21.82
15	1	74		20.28	21.50	20.51
15	36	0		19.89	20.30	20.75
15	36	20		20.32	20.50	20.77
15	36	39		20.34	20.43	20.74
15	75	0		20.11	20.54	20.65



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	21.31	22.89	23.33
10	1	25		22.20	23.71	23.75
10	1	49		21.50	23.18	22.47
10	25	0		21.88	22.34	23.00
10	25	12		22.12	22.33	22.81
10	25	25		21.96	22.42	22.84
10	50	0		21.91	22.42	22.85
10	1	0	16-QAM	20.51	21.72	22.26
10	1	25		21.49	21.89	22.69
10	1	49		20.85	22.50	21.76
10	25	0		20.93	21.34	22.00
10	25	12		21.18	21.51	21.79
10	25	25		21.02	21.48	21.70
10	50	0		20.97	21.57	21.81
10	1	0	64-QAM	19.44	20.62	21.49
10	1	25		20.43	21.23	21.70
10	1	49		19.71	21.33	20.71
10	25	0		19.94	20.52	21.00
10	25	12		20.21	20.35	20.69
10	25	25		20.05	20.52	20.81
10	50	0		20.02	20.33	20.81
5	1	0	QPSK	21.43	23.29	23.01
5	1	12		21.46	23.64	22.88
5	1	24		21.35	23.57	22.61
5	12	0		21.45	22.47	22.97
5	12	7		21.47	22.59	22.91
5	12	13		21.41	22.49	22.77
5	25	0		21.41	22.46	22.86
5	1	0	16-QAM	20.65	22.40	22.25
5	1	12		20.66	22.13	22.19
5	1	24		20.62	22.14	21.87
5	12	0		20.45	21.34	22.00
5	12	7		20.49	21.53	21.89





5	12	13		20.44	21.45	21.76
5	25	0		20.44	21.49	21.93
5	1	0	64-QAM	19.52	21.14	21.21
5	1	12		19.55	21.66	21.10
5	1	24		19.49	21.41	20.89
5	12	0		19.47	20.40	21.00
5	12	7		19.51	20.58	21.00
5	12	13		19.47	20.52	20.95
5	25	0		19.45	20.50	20.96



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.63	23.27	23.77
3	1	8		22.63	23.25	23.65
3	1	14		22.50	23.31	23.61
3	8	0		22.55	22.45	22.93
3	8	4		22.27	22.43	22.76
3	8	7		22.22	22.55	22.69
3	15	0		22.24	22.45	22.73
3	1	0	16-QAM	21.74	21.73	22.38
3	1	8		21.78	22.57	22.38
3	1	14		21.73	21.66	22.32
3	8	0		21.50	21.46	21.67
3	8	4		21.34	21.50	21.77
3	8	7		21.42	21.63	21.79
3	15	0		21.40	21.52	21.71
3	1	0	64-QAM	20.75	21.46	21.61
3	1	8		20.78	21.30	21.38
3	1	14		20.71	21.25	21.50
3	8	0		20.40	20.46	20.84
3	8	4		20.07	20.50	20.66
3	8	7		20.09	20.53	20.70
3	15	0		20.43	20.47	20.72
1.4	1	0	QPSK	22.77	23.42	23.73
1.4	1	3		22.79	23.57	23.78
1.4	1	5		22.69	23.46	23.67
1.4	3	0		22.73	23.49	23.72
1.4	3	1		22.75	23.55	23.74
1.4	3	3		22.69	23.54	23.66
1.4	6	0		22.60	22.58	23.00
1.4	1	0	16-QAM	21.75	22.05	22.23
1.4	1	3		21.96	22.06	22.40
1.4	1	5		21.97	21.64	22.07
1.4	3	0		21.75	22.36	22.41
1.4	3	1		21.77	22.63	22.82



1.4	3	3		21.69	22.59	22.69
1.4	6	0		21.44	21.51	21.66
1.4	1	0	64-QAM	20.93	21.59	21.71
1.4	1	3		21.01	21.42	21.71
1.4	1	5		20.88	21.64	21.95
1.4	3	0		20.84	21.22	21.86
1.4	3	1		20.92	21.42	21.75
1.4	3	3		20.85	21.34	21.45
1.4	6	0		20.76	20.36	20.68



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.45	22.52	22.53
10	1	25		22.87	22.60	22.96
10	1	49		22.48	22.52	22.62
10	25	0		21.64	21.69	21.72
10	25	12		21.71	21.70	21.81
10	25	25		21.65	21.68	21.79
10	50	0		21.68	21.74	21.77
10	1	0	16-QAM	21.00	21.34	21.06
10	1	25		21.39	21.87	21.46
10	1	49		21.11	21.28	21.23
10	25	0		20.63	20.64	20.88
10	25	12		20.81	20.74	20.77
10	25	25		20.65	20.72	20.87
10	50	0		20.67	20.78	20.83
10	1	0	64-QAM	20.50	20.37	20.23
10	1	25		20.75	20.53	20.95
10	1	49		20.80	20.41	20.78
10	25	0		19.75	19.68	19.85
10	25	12		19.50	19.80	19.54
10	25	25		19.80	19.78	19.53
10	50	0		19.74	19.74	19.68
5	1	0	QPSK	22.56	22.51	22.68
5	1	12		22.54	22.93	22.77
5	1	24		22.37	22.57	22.52
5	12	0		21.58	21.65	21.71
5	12	7		21.64	21.73	21.77
5	12	13		21.61	21.65	21.67
5	25	0		21.64	21.75	21.71
5	1	0	16-QAM	21.13	21.21	21.06
5	1	12		21.44	21.31	21.56
5	1	24		21.00	21.00	21.10
5	12	0		20.38	20.50	20.58
5	12	7		20.51	21.00	20.70



5	12	13		20.52	20.80	20.69
5	25	0		20.66	20.81	20.66
5	1	0	64-QAM	20.56	20.54	20.80
5	1	12		20.64	20.88	20.92
5	1	24		20.19	20.32	20.73
5	12	0		19.62	19.73	19.67
5	12	7		19.51	20.00	19.88
5	12	13		19.56	19.60	19.89
5	25	0		19.53	19.65	19.58



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.39	22.69	22.69
3	1	8		22.53	22.41	22.53
3	1	14		22.33	22.53	22.33
3	8	0		21.73	21.65	21.68
3	8	4		21.72	21.76	21.65
3	8	7		21.57	21.78	21.66
3	15	0	16-QAM	21.58	21.80	21.62
3	1	0		21.71	21.07	21.07
3	1	8		21.17	21.31	21.83
3	1	14		21.24	21.26	21.57
3	8	0		20.63	20.82	20.79
3	8	4		20.77	20.77	20.74
3	8	7	64-QAM	20.73	20.89	20.75
3	15	0		20.68	20.67	20.69
3	1	0		20.32	20.38	20.50
3	1	8		20.39	20.56	20.69
3	1	14		20.63	20.58	20.55
3	8	0		19.59	19.72	19.65
3	8	4	QPSK	19.66	19.63	19.62
3	8	7		19.61	19.66	19.53
3	15	0		19.52	19.56	19.57
1.4	1	0		22.51	22.57	22.67
1.4	1	3		22.60	22.58	22.65
1.4	1	5		22.67	22.55	22.67
1.4	3	0	16-QAM	22.64	22.81	22.86
1.4	3	1		22.70	22.74	22.92
1.4	3	3		22.60	22.75	22.69
1.4	6	0		21.59	21.69	21.66
1.4	1	0		21.69	21.26	21.23
1.4	1	3		21.52	21.63	21.51
1.4	1	5	16-QAM	21.20	21.34	21.21
1.4	3	0		21.55	21.52	21.47
1.4	3	1		21.56	21.69	21.57



1.4	3	3		21.51	21.41	21.45
1.4	6	0		20.67	20.60	20.60
1.4	1	0	64-QAM	20.65	20.61	20.53
1.4	1	3		20.98	20.65	20.62
1.4	1	5		20.63	20.99	20.52
1.4	3	0		20.70	20.73	20.62
1.4	3	1		20.51	20.95	20.40
1.4	3	3		20.42	20.62	20.45
1.4	6	0		19.53	19.44	19.59



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.80	23.84	23.44
20	1	49		23.98	23.90	23.67
20	1	99		23.74	23.40	23.45
20	50	0		22.99	22.78	22.70
20	50	24		22.98	22.83	22.68
20	50	50		22.84	22.75	22.52
20	100	0		22.81	22.74	22.60
20	1	0	16-QAM	22.55	22.33	22.60
20	1	49		22.99	22.35	22.95
20	1	99		22.97	22.25	22.32
20	50	0		22.04	21.92	21.73
20	50	24		22.14	21.85	21.72
20	50	50		21.84	21.76	21.65
20	100	0		21.81	21.65	21.65
20	1	0	64-QAM	21.90	21.99	21.47
20	1	49		21.97	21.97	21.79
20	1	99		21.85	21.52	21.38
20	50	0		20.89	20.81	20.58
20	50	24		21.02	20.89	20.53
20	50	50		20.86	20.77	20.54
20	100	0		20.92	20.69	20.63
15	1	0	QPSK	23.87	23.86	23.72
15	1	37		23.97	23.77	23.72
15	1	74		23.80	23.69	23.60
15	36	0		22.95	22.91	22.67
15	36	20		22.82	22.83	22.65
15	36	39		22.85	22.85	22.67
15	75	0		22.91	22.81	22.62
15	1	0	16-QAM	22.90	22.99	22.49
15	1	37		22.98	22.97	22.72
15	1	74		23.00	22.93	22.31
15	36	0		22.16	21.93	21.70
15	36	20		22.03	21.95	21.59





15	36	39		21.96	21.82	21.54
15	75	0		22.29	21.76	21.66
15	1	0	64-QAM	21.97	22.00	21.94
15	1	37		22.00	21.99	21.98
15	1	74		21.96	21.49	21.88
15	36	0		21.24	20.85	20.69
15	36	20		21.15	20.85	20.68
15	36	39		20.96	20.86	20.63
15	75	0		20.90	20.70	20.46



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.88	23.57	23.51
10	1	25		23.95	23.77	23.82
10	1	49		23.97	23.74	23.70
10	25	0		22.99	22.77	22.64
10	25	12		23.00	22.70	22.68
10	25	25		22.98	22.72	22.59
10	50	0		22.97	22.77	22.62
10	1	0	16-QAM	22.55	22.52	22.42
10	1	25		22.92	22.67	22.85
10	1	49		22.61	22.53	22.23
10	25	0		22.12	21.86	21.68
10	25	12		22.12	21.62	21.82
10	25	25		22.07	21.90	21.75
10	50	0		21.99	21.90	21.58
10	1	0	64-QAM	21.86	21.89	21.49
10	1	25		21.96	21.91	21.37
10	1	49		21.82	21.69	21.47
10	25	0		21.00	20.75	20.73
10	25	12		21.16	20.64	20.73
10	25	25		21.20	20.51	20.74
10	50	0		21.00	20.60	20.66
5	1	0	QPSK	23.80	23.62	23.46
5	1	12		23.97	23.96	23.64
5	1	24		23.96	23.62	23.42
5	12	0		22.84	22.89	22.63
5	12	7		23.00	22.85	22.63
5	12	13		22.97	22.86	22.62
5	25	0		22.88	22.80	22.62
5	1	0	16-QAM	22.91	22.97	22.45
5	1	12		22.94	22.77	22.80
5	1	24		22.92	22.45	22.64
5	12	0		22.16	21.79	21.61
5	12	7		22.33	21.86	21.65



5	12	13		22.30	21.93	21.72
5	25	0		22.27	21.87	21.70
5	1	0	64-QAM	21.97	21.77	21.27
5	1	12		21.97	21.99	21.89
5	1	24		21.93	21.39	21.49
5	12	0		21.26	20.82	20.71
5	12	7		21.55	20.96	20.92
5	12	13		21.00	20.87	20.34
5	25	0		21.44	20.86	20.66



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.78	22.76	22.69
10	1	25		23.04	22.91	22.76
10	1	49		22.90	22.91	22.78
10	25	0		21.89	21.95	22.03
10	25	12		21.84	21.93	21.99
10	25	25		21.78	21.86	21.82
10	50	0		21.80	21.83	21.99
10	1	0	16-QAM	21.61	21.67	21.51
10	1	25		22.20	22.16	21.55
10	1	49		21.51	21.04	21.48
10	25	0		20.85	20.84	20.90
10	25	12		20.98	21.02	21.04
10	25	25		20.89	20.95	20.87
10	50	0		21.05	20.88	20.92
10	1	0	64-QAM	21.15	20.96	20.74
10	1	25		20.99	20.70	21.13
10	1	49		20.59	20.75	20.81
10	25	0		19.80	19.80	19.91
10	25	12		19.75	20.11	19.79
10	25	25		19.65	20.02	19.75
10	50	0		19.74	19.79	20.00
5	1	0	QPSK	22.58	22.81	22.77
5	1	12		22.89	22.87	22.73
5	1	24		22.67	22.71	22.50
5	12	0		21.85	21.83	21.88
5	12	7		21.86	21.90	21.83
5	12	13		21.78	21.93	21.67
5	25	0		21.85	21.84	21.78
5	1	0	16-QAM	21.67	21.17	21.77
5	1	12		22.04	21.67	21.80
5	1	24		21.62	21.29	21.33
5	12	0		20.84	20.73	20.72
5	12	7		20.84	20.90	20.73



5	12	13		20.73	20.89	20.66
5	25	0		20.93	20.84	20.70
5	1	0	64-QAM	20.75	20.85	20.83
5	1	12		21.20	21.07	20.93
5	1	24		20.52	20.68	20.45
5	12	0		19.85	19.73	19.69
5	12	7		19.95	19.70	19.60
5	12	13		19.81	19.57	19.50
5	25	0		19.83	19.93	19.57



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	23.03	22.99	22.80
3	1	8		23.02	22.89	22.75
3	1	14		22.77	22.83	22.72
3	8	0		22.24	22.06	22.00
3	8	4		22.22	22.03	21.96
3	8	7		22.23	22.06	21.90
3	15	0		22.14	21.98	21.94
3	1	0	16-QAM	21.92	21.92	21.51
3	1	8		21.91	21.56	21.36
3	1	14		22.00	21.79	21.73
3	8	0		21.25	21.10	20.78
3	8	4		21.34	21.11	21.04
3	8	7		21.34	21.06	21.08
3	15	0		21.19	21.04	20.94
3	1	0	64-QAM	21.25	21.24	20.97
3	1	8		21.29	20.71	20.90
3	1	14		21.19	20.73	20.92
3	8	0		20.01	19.86	19.74
3	8	4		20.05	19.97	19.87
3	8	7		20.14	19.99	19.73
3	15	0		19.98	19.92	19.78
1.4	1	0	QPSK	22.99	22.99	22.83
1.4	1	3		23.14	23.12	23.06
1.4	1	5		23.05	23.10	22.96
1.4	3	0		23.20	23.05	22.98
1.4	3	1		23.37	23.08	23.00
1.4	3	3		23.20	23.15	22.96
1.4	6	0		22.06	21.97	21.85
1.4	1	0	16-QAM	22.19	22.33	21.68
1.4	1	3		22.47	21.79	21.86
1.4	1	5		21.62	21.50	21.79
1.4	3	0		21.95	22.04	21.71
1.4	3	1		22.21	22.03	22.00



1.4	3	3		21.91	22.02	21.91
1.4	6	0		21.01	20.92	20.72
1.4	1	0	64-QAM	21.08	21.00	21.12
1.4	1	3		21.16	20.86	20.99
1.4	1	5		21.40	20.75	20.92
1.4	3	0		21.03	20.59	20.73
1.4	3	1		21.12	20.66	20.87
1.4	3	3		21.06	20.96	20.89
1.4	6	0		19.98	19.90	19.76



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.66	22.74	22.70
10	1	25		23.10	22.91	23.09
10	1	49		23.02	22.50	22.54
10	25	0		21.99	22.02	21.95
10	25	12		22.00	21.96	22.00
10	25	25		21.96	21.90	21.94
10	50	0		22.00	21.93	21.89
10	1	0	16-QAM	21.53	21.94	21.68
10	1	25		21.55	22.21	21.67
10	1	49		21.54	21.35	21.29
10	25	0		20.93	20.86	21.12
10	25	12		21.13	20.92	21.06
10	25	25		21.14	20.76	21.01
10	50	0		21.06	20.86	21.12
10	1	0	64-QAM	21.10	20.77	20.53
10	1	25		21.02	21.10	21.09
10	1	49		21.02	20.37	20.80
10	25	0		19.99	19.74	20.04
10	25	12		19.79	19.97	20.07
10	25	25		19.91	19.92	19.95
10	50	0		19.86	19.83	19.90
5	1	0	QPSK	22.77	22.76	22.71
5	1	12		23.06	23.05	22.75
5	1	24		22.92	22.65	22.59
5	12	0		21.81	21.90	21.88
5	12	7		21.92	21.96	21.91
5	12	13		21.90	21.84	21.66
5	25	0		21.80	21.92	21.77
5	1	0	16-QAM	21.22	21.41	21.35
5	1	12		21.55	21.50	21.37
5	1	24		21.94	21.12	21.56
5	12	0		20.89	20.72	20.72
5	12	7		21.09	20.90	20.68





5	12	13		20.99	20.91	20.58
5	25	0		20.90	20.90	20.79
5	1	0	64-QAM	20.75	20.49	20.74
5	1	12		20.87	20.98	20.96
5	1	24		20.67	20.79	20.47
5	12	0		19.69	19.77	19.68
5	12	7		19.64	19.53	19.81
5	12	13		19.78	19.72	19.61
5	25	0		19.84	19.86	19.51



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.36	23.29	23.48
20	1	49		23.50	23.77	23.91
20	1	99		23.08	23.30	23.59
20	50	0		22.60	22.83	22.90
20	50	24		22.64	22.67	22.88
20	50	50		22.53	22.76	22.77
20	100	0		22.67	22.78	22.87
20	1	0	16-QAM	22.01	22.30	22.32
20	1	49		22.49	22.54	22.75
20	1	99		21.94	22.14	22.10
20	50	0		21.62	21.88	21.88
20	50	24		21.53	21.84	21.95
20	50	50		21.56	21.62	21.95
20	100	0		21.57	21.85	21.88
20	1	0	64-QAM	20.71	20.95	21.22
20	1	49		21.20	21.13	21.33
20	1	99		20.82	20.97	20.94
20	50	0		20.65	20.88	20.91
20	50	24		20.75	20.83	20.98
20	50	50		20.67	20.76	20.87
20	100	0		20.70	20.73	20.82
15	1	0	QPSK	23.35	23.53	23.74
15	1	37		23.68	23.76	23.88
15	1	74		23.40	23.52	23.64
15	36	0		22.56	22.83	22.98
15	36	20		22.67	22.82	22.99
15	36	39		22.63	22.75	22.79
15	75	0		22.59	22.81	22.80
15	1	0	16-QAM	22.36	22.48	22.47
15	1	37		22.44	22.63	22.71
15	1	74		22.15	22.41	22.34
15	36	0		21.58	21.75	21.80
15	36	20		21.73	21.67	21.94



15	36	39		21.71	21.74	21.91
15	75	0		21.63	21.80	21.88
15	1	0	64-QAM	20.91	21.11	21.19
15	1	37		21.40	21.34	21.81
15	1	74		21.05	21.11	21.07
15	36	0		20.48	20.69	20.74
15	36	20		20.61	20.81	20.89
15	36	39		20.60	20.64	20.67
15	75	0		20.52	20.73	20.84



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.40	23.75	23.53
10	1	25		23.50	23.74	23.76
10	1	49		23.33	23.79	23.64
10	25	0		22.66	22.80	22.92
10	25	12		22.66	22.86	22.88
10	25	25		22.65	22.76	22.81
10	50	0		22.64	22.77	22.74
10	1	0	16-QAM	22.18	22.36	22.39
10	1	25		22.46	22.68	22.29
10	1	49		22.21	22.29	22.28
10	25	0		21.51	21.86	22.00
10	25	12		21.79	21.87	21.97
10	25	25		21.72	21.96	21.75
10	50	0		21.57	21.70	21.85
10	1	0	64-QAM	20.87	21.10	21.19
10	1	25		21.04	21.15	21.22
10	1	49		20.94	21.03	21.02
10	25	0		20.59	20.96	20.87
10	25	12		20.91	20.00	20.97
10	25	25		20.69	20.77	20.75
10	50	0		20.62	20.76	20.79
5	1	0	QPSK	23.25	23.47	23.42
5	1	12		23.59	23.70	23.71
5	1	24		23.49	23.58	23.33
5	12	0		22.39	22.77	22.66
5	12	7		22.46	22.86	22.84
5	12	13		22.49	22.66	22.77
5	25	0		22.47	22.62	22.70
5	1	0	16-QAM	21.88	22.56	22.15
5	1	12		22.48	22.73	22.56
5	1	24		22.32	22.35	22.57
5	12	0		21.34	21.76	21.76
5	12	7		21.58	21.66	21.75



5	12	13		21.45	21.74	21.64
5	25	0		21.71	21.67	21.84
5	1	0	64-QAM	20.67	21.04	21.02
5	1	12		21.10	21.44	21.46
5	1	24		20.77	20.94	21.01
5	12	0		20.49	20.77	20.58
5	12	7		20.55	20.42	20.72
5	12	13		20.43	20.70	20.55
5	25	0		20.31	20.76	20.76



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.31	23.51	23.37
20	1	49		23.52	23.76	23.45
20	1	99		23.28	23.62	22.89
20	50	0		22.72	22.63	22.51
20	50	24		22.63	22.76	22.46
20	50	50		22.61	22.72	22.25
20	100	0		22.63	22.79	22.43
20	1	0	16-QAM	22.21	22.31	22.09
20	1	49		22.40	22.73	22.31
20	1	99		21.84	22.14	21.96
20	50	0		21.78	21.79	21.50
20	50	24		21.69	21.76	21.46
20	50	50		21.59	21.70	21.36
20	100	0		21.59	21.70	21.40
20	1	0	64-QAM	20.87	20.93	20.72
20	1	49		21.12	21.18	20.85
20	1	99		20.78	20.93	20.50
20	50	0		20.64	20.74	20.36
20	50	24		20.65	20.86	20.31
20	50	50		20.56	20.78	20.11
20	100	0		20.56	20.79	20.12
15	1	0	QPSK	23.48	23.47	23.25
15	1	37		23.63	23.76	23.41
15	1	74		23.50	23.72	23.02
15	36	0		22.75	22.78	22.50
15	36	20		22.74	22.73	22.34
15	36	39		22.52	22.76	22.21
15	75	0		22.62	22.62	22.21
15	1	0	16-QAM	22.48	22.31	22.02
15	1	37		22.47	22.40	22.25
15	1	74		22.12	22.23	22.12
15	36	0		21.65	21.66	21.42
15	36	20		21.58	21.56	21.13



15	36	39		21.43	21.59	21.16
15	75	0		21.62	21.75	21.35
15	1	0	64-QAM	20.97	21.09	20.73
15	1	37		21.48	21.43	20.98
15	1	74		20.91	20.98	20.53
15	36	0		20.57	20.73	20.45
15	36	20		20.74	20.71	20.16
15	36	39		20.64	20.91	20.05
15	75	0		20.56	20.59	20.19



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.39	23.28	23.01
10	1	25		23.73	23.72	23.27
10	1	49		23.53	23.58	23.25
10	25	0		22.66	22.68	22.30
10	25	12		22.67	22.82	22.20
10	25	25		22.46	22.77	22.20
10	50	0		22.51	22.96	22.33
10	1	0	16-QAM	22.22	22.22	21.93
10	1	25		22.34	22.49	21.95
10	1	49		21.96	22.10	21.57
10	25	0		21.81	21.87	21.48
10	25	12		21.89	21.62	21.36
10	25	25		21.62	21.72	21.32
10	50	0		21.60	21.87	21.33
10	1	0	64-QAM	20.90	20.93	20.58
10	1	25		21.51	21.28	20.95
10	1	49		20.90	20.90	20.50
10	25	0		20.65	20.75	20.21
10	25	12		20.63	20.71	20.37
10	25	25		20.84	20.95	20.10
10	50	0		20.54	20.66	20.19
5	1	0	QPSK	23.35	23.39	22.97
5	1	12		23.54	23.89	23.30
5	1	24		23.34	23.40	22.85
5	12	0		22.57	22.69	22.18
5	12	7		22.55	22.79	22.19
5	12	13		22.42	22.81	22.02
5	25	0		22.51	22.62	22.17
5	1	0	16-QAM	22.39	22.51	21.93
5	1	12		22.30	22.60	22.09
5	1	24		21.93	22.01	21.61
5	12	0		21.42	21.74	21.26
5	12	7		21.63	21.83	21.15





5	12	13		21.44	21.54	21.06
5	25	0		21.56	21.89	21.36
5	1	0	64-QAM	20.75	20.85	20.50
5	1	12		21.14	21.36	20.98
5	1	24		20.78	20.74	20.50
5	12	0		20.56	20.75	20.16
5	12	7		20.66	20.67	20.13
5	12	13		20.48	20.66	20.02
5	25	0		20.51	20.79	20.17

**ERP/EIRP**

LTE Band 2 (GT - LC = -2.03 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)	22.61	22.86	23.22	22.49	22.81	23.12	22.99	23.09	23.42
Conducted Power (Watts)	0.1824	0.1932	0.2099	0.1774	0.1910	0.2051	0.1991	0.2037	0.2198
EIRP(dBm)	20.58	20.83	21.19	20.46	20.78	21.09	20.96	21.06	21.39
EIRP(Watts)	0.1143	0.1211	0.1315	0.1112	0.1197	0.1285	0.1247	0.1276	0.1377

LTE Band 2 (GT - LC = -2.03 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)	23.01	23.23	23.14	23.16	23.20	23.39	23.18	23.14	23.43
Conducted Power (Watts)	0.2000	0.2104	0.2061	0.2070	0.2089	0.2183	0.2080	0.2061	0.2203
EIRP(dBm)	20.98	21.20	21.11	21.13	21.17	21.36	21.15	21.11	21.40
EIRP(Watts)	0.1253	0.1318	0.1291	0.1297	0.1309	0.1368	0.1303	0.1291	0.1380



LTE Band 2 (GT - LC = -2.03 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	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
(MHz)									
Conducted Power (dBm)	21.09	22.03	22.30	21.33	21.78	22.17	21.98	21.83	22.69
Conducted Power (Watts)	0.1285	0.1596	0.1698	0.1358	0.1507	0.1648	0.1578	0.1524	0.1858
EIRP(dBm)	19.06	20.00	20.27	19.30	19.75	20.14	19.95	19.80	20.66
EIRP(Watts)	0.0805	0.1000	0.1064	0.0851	0.0944	0.1033	0.0989	0.0955	0.1164

LTE Band 2 (GT - LC = -2.03 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	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
(MHz)									
Conducted Power (dBm)	22.01	22.14	21.99	21.85	21.79	22.09	22.34	21.68	21.85
Conducted Power (Watts)	0.1589	0.1637	0.1581	0.1531	0.1510	0.1618	0.1714	0.1472	0.1531
EIRP(dBm)	19.98	20.11	19.96	19.82	19.76	20.06	20.31	19.65	19.82
EIRP(Watts)	0.0995	0.1026	0.0991	0.0959	0.0946	0.1014	0.1074	0.0923	0.0959



LTE Band 2 (GT - LC = -2.03 dB) 64QAM									
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)	20.25	20.64	21.53	20.89	20.62	21.49	21.17	21.30	21.70
Conducted Power (Watts)	0.1059	0.1159	0.1422	0.1227	0.1153	0.1409	0.1309	0.1349	0.1479
EIRP(dBm)	18.22	18.61	19.50	18.86	18.59	19.46	19.14	19.27	19.67
EIRP(Watts)	0.0664	0.0726	0.0891	0.0769	0.0723	0.0883	0.0820	0.0845	0.0927

LTE Band 2 (GT - LC = -2.03 dB) 64QAM									
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)	21.24	21.00	21.10	21.09	21.10	21.48	21.07	21.38	21.26
Conducted Power (Watts)	0.1330	0.1259	0.1288	0.1285	0.1288	0.1406	0.1279	0.1374	0.1337
EIRP(dBm)	19.21	18.97	19.07	19.06	19.07	19.45	19.04	19.35	19.23
EIRP(Watts)	0.0834	0.0789	0.0807	0.0805	0.0807	0.0881	0.0802	0.0861	0.0838



LTE Band 4 (GT - LC = -3.96 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)	22.79	23.57	23.78	22.63	23.27	23.77	21.46	23.64	22.88
Conducted Power (Watts)	0.1901	0.2275	0.2388	0.1832	0.2123	0.2382	0.1400	0.2312	0.1941
EIRP(dBm)	18.83	19.61	19.82	18.67	19.31	19.81	17.50	19.68	18.92
EIRP(Watts)	0.0764	0.0914	0.0959	0.0736	0.0853	0.0957	0.0562	0.0929	0.0780

LTE Band 4 (GT - LC = -3.96 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)	22.20	23.71	23.75	22.28	23.66	23.54	23.41	24.00	23.74
Conducted Power (Watts)	0.1660	0.2350	0.2371	0.1690	0.2323	0.2259	0.2193	0.2512	0.2366
EIRP(dBm)	18.24	19.75	19.79	18.32	19.70	19.58	19.45	20.04	19.78
EIRP(Watts)	0.0667	0.0944	0.0953	0.0679	0.0933	0.0908	0.0881	0.1009	0.0951



LTE Band 4 (GT - LC = -3.96 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	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
(MHz)									
Conducted Power (dBm)	21.77	22.63	22.82	21.78	22.57	22.38	20.65	22.40	22.25
Conducted Power (Watts)	0.1503	0.1832	0.1914	0.1507	0.1807	0.1730	0.1161	0.1738	0.1679
EIRP(dBm)	17.81	18.67	18.86	17.82	18.61	18.42	16.69	18.44	18.29
EIRP(Watts)	0.0604	0.0736	0.0769	0.0605	0.0726	0.0695	0.0467	0.0698	0.0675

LTE Band 4 (GT - LC = -3.96 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	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
(MHz)									
Conducted Power (dBm)	21.49	21.89	22.69	21.56	22.68	22.90	22.35	23.00	22.41
Conducted Power (Watts)	0.1409	0.1545	0.1858	0.1432	0.1854	0.1950	0.1718	0.1995	0.1742
EIRP(dBm)	17.53	17.93	18.73	17.60	18.72	18.94	18.39	19.04	18.45
EIRP(Watts)	0.0566	0.0621	0.0746	0.0575	0.0745	0.0783	0.0690	0.0802	0.0700



LTE Band 4 (GT - LC = -3.96 dB) 64QAM									
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)	20.88	21.64	21.95	20.75	21.46	21.61	19.55	21.66	21.10
Conducted Power (Watts)	0.1225	0.1459	0.1567	0.1189	0.1400	0.1449	0.0902	0.1466	0.1288
EIRP(dBm)	16.92	17.68	17.99	16.79	17.50	17.65	15.59	17.70	17.14
EIRP(Watts)	0.0492	0.0586	0.0630	0.0478	0.0562	0.0582	0.0362	0.0589	0.0518

LTE Band 4 (GT - LC = -3.96 dB) 64QAM									
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)	20.43	21.23	21.70	20.44	21.71	21.82	21.19	21.95	21.73
Conducted Power (Watts)	0.1104	0.1327	0.1479	0.1107	0.1483	0.1521	0.1315	0.1567	0.1489
EIRP(dBm)	16.47	17.27	17.74	16.48	17.75	17.86	17.23	17.99	17.77
EIRP(Watts)	0.0444	0.0533	0.0594	0.0445	0.0596	0.0611	0.0528	0.0630	0.0598



LTE Band 5 (GT - LC = -5.11 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	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	22.70	22.74	22.92	22.39	22.69	22.69	22.54	22.93	22.77
Conducted Power (Watts)	0.1862	0.1879	0.1959	0.1734	0.1858	0.1858	0.1795	0.1963	0.1892
ERP(dBm)	15.44	15.48	15.66	15.13	15.43	15.43	15.28	15.67	15.51
ERP(Watts)	0.0350	0.0353	0.0368	0.0326	0.0349	0.0349	0.0337	0.0369	0.0356

LTE Band 5 (GT - LC = -5.11 dB) QPSK			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency	829	836.5	844
(MHz)			
Conducted Power (dBm)	22.87	22.60	22.96
Conducted Power (Watts)	0.1936	0.1820	0.1977
ERP(dBm)	15.61	15.34	15.70
ERP(Watts)	0.0364	0.0342	0.0372





LTE Band 5 (GT - LC = -5.11 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)	21.56	21.69	21.57	21.17	21.31	21.83	21.44	21.31	21.56
Conducted Power (Watts)	0.1432	0.1476	0.1435	0.1309	0.1352	0.1524	0.1393	0.1352	0.1432
ERP(dBm)	14.30	14.43	14.31	13.91	14.05	14.57	14.18	14.05	14.30
ERP(Watts)	0.0269	0.0277	0.0270	0.0246	0.0254	0.0286	0.0262	0.0254	0.0269

LTE Band 5 (GT - LC = -5.11 dB) 16QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency	829	836.5	844
(MHz)			
Conducted Power (dBm)	21.39	21.87	21.46
Conducted Power (Watts)	0.1377	0.1538	0.1400
ERP(dBm)	14.13	14.61	14.20
ERP(Watts)	0.0259	0.0289	0.0263



LTE Band 5 (GT - LC = -5.11 dB) 64QAM									
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)	20.63	20.99	20.52	20.39	20.56	20.69	20.64	20.88	20.92
Conducted Power (Watts)	0.1156	0.1256	0.1127	0.1094	0.1138	0.1172	0.1159	0.1225	0.1236
ERP(dBm)	13.37	13.73	13.26	13.13	13.30	13.43	13.38	13.62	13.66
ERP(Watts)	0.0217	0.0236	0.0212	0.0206	0.0214	0.0220	0.0218	0.0230	0.0232

LTE Band 5 (GT - LC = -5.11 dB) 64QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency	829	836.5	844
(MHz)			
Conducted Power (dBm)	20.75	20.53	20.95
Conducted Power (Watts)	0.1189	0.1130	0.1245
ERP(dBm)	13.49	13.27	13.69
ERP(Watts)	0.0223	0.0212	0.0234



LTE Band 7 (GT - LC = -0.44 dB) QPSK			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency	2502.5	2535	2567.5
(MHz)			
Conducted Power (dBm)	23.97	23.96	23.64
Conducted Power (Watts)	0.2495	0.2489	0.2312
EIRP(dBm)	23.53	23.52	23.20
EIRP(Watts)	0.2254	0.2249	0.2089

LTE Band 7 (GT - LC = -0.44 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)	23.97	23.74	23.70	23.97	23.77	23.72	23.98	23.90	23.67
Conducted Power (Watts)	0.2495	0.2366	0.2344	0.2495	0.2382	0.2355	0.2500	0.2455	0.2328
EIRP(dBm)	23.53	23.30	23.26	23.53	23.33	23.28	23.54	23.46	23.23
EIRP(Watts)	0.2254	0.2138	0.2118	0.2254	0.2153	0.2128	0.2259	0.2218	0.2104



LTE Band 7 (GT - LC = -0.44 dB) 16QAM			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency	2502.5	2535	2567.5
(MHz)			
Conducted Power (dBm)	22.91	22.97	22.45
Conducted Power (Watts)	0.1954	0.1982	0.1758
EIRP(dBm)	22.47	22.53	22.01
EIRP(Watts)	0.1766	0.1791	0.1589

LTE Band 7 (GT - LC = -0.44 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)	22.92	22.67	22.85	23.00	22.93	22.31	22.99	22.35	22.95
Conducted Power (Watts)	0.1959	0.1849	0.1928	0.1995	0.1963	0.1702	0.1991	0.1718	0.1972
EIRP(dBm)	22.48	22.23	22.41	22.56	22.49	21.87	22.55	21.91	22.51
EIRP(Watts)	0.1770	0.1671	0.1742	0.1803	0.1774	0.1538	0.1799	0.1552	0.1782



LTE Band 7 (GT - LC = -0.44 dB) 64QAM			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency	2502.5	2535	2567.5
(MHz)			
Conducted Power (dBm)	21.97	21.99	21.89
Conducted Power (Watts)	0.1574	0.1581	0.1545
EIRP(dBm)	21.53	21.55	21.45
EIRP(Watts)	0.1422	0.1429	0.1396

LTE Band 7 (GT - LC = -0.44 dB) 64QAM									
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)	21.96	21.91	21.37	22.00	21.99	21.98	21.90	21.99	21.47
Conducted Power (Watts)	0.1570	0.1552	0.1371	0.1585	0.1581	0.1578	0.1549	0.1581	0.1403
EIRP(dBm)	21.52	21.47	20.93	21.56	21.55	21.54	21.46	21.55	21.03
EIRP(Watts)	0.1419	0.1403	0.1239	0.1432	0.1429	0.1426	0.1400	0.1429	0.1268



LTE Band 12 (GT - LC = -5.78 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	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
(MHz)									
Conducted Power (dBm)	23.37	23.08	23.00	23.03	22.99	22.80	22.89	22.87	22.73
Conducted Power (Watts)	0.2173	0.2032	0.1995	0.2009	0.1991	0.1905	0.1945	0.1936	0.1875
ERP(dBm)	15.44	15.15	15.07	15.10	15.06	14.87	14.96	14.94	14.80
ERP(Watts)	0.0350	0.0327	0.0321	0.0324	0.0321	0.0307	0.0313	0.0312	0.0302

LTE Band 12 (GT - LC = -5.78 dB) QPSK			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency	704	707.5	711
(MHz)			
Conducted Power (dBm)	23.04	22.91	22.76
Conducted Power (Watts)	0.2014	0.1954	0.1888
ERP(dBm)	15.11	14.98	14.83
ERP(Watts)	0.0324	0.0315	0.0304



LTE Band 12 (GT - LC = -5.78 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	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
(MHz)									
Conducted Power (dBm)	22.47	21.79	21.86	22.00	21.79	21.73	22.04	21.67	21.80
Conducted Power (Watts)	0.1766	0.1510	0.1535	0.1585	0.1510	0.1489	0.1600	0.1469	0.1514
ERP(dBm)	14.54	13.86	13.93	14.07	13.86	13.80	14.11	13.74	13.87
ERP(Watts)	0.0284	0.0243	0.0247	0.0255	0.0243	0.0240	0.0258	0.0237	0.0244

LTE Band 12 (GT - LC = -5.78 dB) 16QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency	704	707.5	711
(MHz)			
Conducted Power (dBm)	22.20	22.16	21.55
Conducted Power (Watts)	0.1660	0.1644	0.1429
ERP(dBm)	14.27	14.23	13.62
ERP(Watts)	0.0267	0.0265	0.0230



LTE Band 12 (GT - LC = -5.78 dB) 64QAM									
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	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
(MHz)									
Conducted Power (dBm)	21.40	20.75	20.92	21.29	20.71	20.90	21.20	21.07	20.93
Conducted Power (Watts)	0.1380	0.1189	0.1236	0.1346	0.1178	0.1230	0.1318	0.1279	0.1239
ERP(dBm)	13.47	12.82	12.99	13.36	12.78	12.97	13.27	13.14	13.00
ERP(Watts)	0.0222	0.0191	0.0199	0.0217	0.0190	0.0198	0.0212	0.0206	0.0200

LTE Band 12 (GT - LC = -5.78 dB) 64QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency	704	707.5	711
(MHz)			
Conducted Power (dBm)	21.15	20.96	20.74
Conducted Power (Watts)	0.1303	0.1247	0.1186
ERP(dBm)	13.22	13.03	12.81
ERP(Watts)	0.0210	0.0201	0.0191





LTE Band 41 ( $G_T - L_C = -0.27\text{dB}$ ) QPSK									
Bandwidth	5M			10M			15M		
Channel	40265	40740	41215	40290	40740	41190	40315	40740	41165
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2557.5	2605	2652.5	2560	2605	2650	2562.5	2605	2647.5
(MHz)									
Conducted Power (dBm)	23.54	23.89	23.30	23.73	23.72	23.27	23.63	23.76	23.41
Conducted Power (Watts)	0.2259	0.2449	0.2138	0.2360	0.2355	0.2123	0.2307	0.2377	0.2193
EIRP(dBm)	23.27	23.62	23.03	23.46	23.45	23.00	23.36	23.49	23.14
EIRP(Watts)	0.2123	0.2301	0.2009	0.2218	0.2213	0.1995	0.2168	0.2234	0.2061

LTE Band 41 ( $G_T - L_C = -0.27\text{dB}$ ) QPSK			
Bandwidth	20M		
Channel	40340	40740	41140
	(Low)	(Mid)	(High)
Frequency	2565	2605	2645
(MHz)			
Conducted Power (dBm)	23.52	23.76	23.45
Conducted Power (Watts)	0.2249	0.2377	0.2213
EIRP(dBm)	23.25	23.49	23.18
EIRP(Watts)	0.2113	0.2234	0.2080