

FCC CFR47 PART 22H, 24E, 27,90S CERTIFICATION TEST REPORT FCC ID: 2ANMU-2565

Product: Smart Phone
Trade Mark: OUKITEL
Model No.: C65
Family Model: C65 E, C65 S, C65 Pro, C65 Plus,
C65 TITAN, C65 GT
Report No.: S25021304405006
Issue Date: Mar. 14, 2025

Prepared for

SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE,
GUANLAN, LONGHUA SHENZHEN, 518XXX China

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.
No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street,
Baoan District, Shenzhen, Guangdong, People's Republic of China
Tel. 0755-23200050 Website: <http://www.ntek.org.cn>

TEST RESULT CERTIFICATION

Applicant's name : SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD

Address..... : A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU
INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX
China

Manufacturer's Name..... : SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD

Address..... : A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU
INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX
China

Product name..... : Smart Phone

Model and/or type reference .. : C65

Trade Mark..... : OUKITEL

Family Model..... : C65 E, C65 S, C65 Pro, C65 Plus, C65 TITAN, C65 GT

Test Sample Number..... S250213044006

Standards..... : FCC CFR 47 Part 22H, Part 24E, Part 27, Part 90S

Test procedure : ANSI C63.26:2015
ANSI/TIA-603-E-2016

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of NTEK, this document may be altered or revised by NTEK, personal only, and shall be noted in the revision of the document.

Date of Test

Date (s) of performance of tests..... Feb. 13, 2025 ~ Mar. 14, 2025

Date of Issue Mar. 14, 2025

Test Result..... **Pass**

Prepared : Gavan Zhang
By : Gavan Zhang
(Project Engineer)

Reviewed : Aaron Cheng
By : Aaron Cheng
(Supervisor)

Approved : Alex Li
By : Alex Li
(Manager)

TABLE OF CONTENTS

1. GENERAL INFORMATION.....	6
1. GENERAL INFORMATION.....	6
1.1 PRODUCT DESCRIPTION	6
1.2 RELATED SUBMITTAL(S) / GRANT (S).....	8
1.3 TEST METHODOLOGY	8
1.4 TEST FACILITY.....	8
MEASUREMENT UNCERTAINTY	8
1.5 SPECIAL ACCESSORIES.....	8
1.6 WORST-CASE CONFIGURATION AND MODE.....	8
2. SYSTEM TEST CONFIGURATION	9
2.1 EUT CONFIGURATION.....	9
2.2 EUT EXERCISE	9
2.3 CONFIGURATION OF EUT SYSTEM.....	9
2.4 TEST SETUP	10
3.TEST AND MEASUREMENT EQUIPMENT	11
4. OUTPUT POWER.....	13
4.1 OUTPUT POWER MEASUREMENT	13
5. OCCUPIED BANDWIDTH	15
6. BANEDGE AND EMISSION MASK.....	16
7. OUT OF BAND EMISSIONS	18
7.1 MEASUREMENT METHOD	18
8. RADIATED MEASUREMENT	19
8.1. RADIATED POWER (ERP & EIRP).....	19
8.2 LTE BAND 2.....	20

8.3 LTE BAND 4.....	24
8.4 LTE BAND 5.....	28
8.5 LTE BAND 7.....	30
8.6 LTE BAND 12	32
8.7 LTE BAND 17	34
8.6 LTE BAND 25	36
8.8 LTE BAND 26 A	40
8.9 LTE BAND 26 B	42
8.10 LTE BAND 41	45
8.11 LTE BAND 66	47
9. SPURIOUS RADIATION EMISSION	51
9.1 LTE BAND 2.....	53
9.2 LTE BAND 4.....	55
9.3 LTE BAND 5.....	57
9.4 LTE BAND 7.....	59
9.5 LTE BAND 12	61
9.6 LTE BAND 17	63
9.7 LTE BAND 25	65
9.8 LTE BAND 26 A	67
9.9 LTE BAND 26 B	69
9.10 LTE BAND 41	71
9.11 LTE BAND 66	73
10. FREQUENCY STABILITY	75
10.1 LTE BAND 2	76
10.2 LTE BAND 4	78
10.3 LTE BAND 5	80
10.4 LTE BAND 7	82
10.5 LTE BAND 12	84
10.6 LTE BAND 17	86

10.7 LTE BAND 25	88
10.8 LTE BAND 26 A	90
10.9 LTE BAND 26 B	92
10.10 LTE BAND 41	94
10.11 LTE BAND 66	96
11. PEAK-TO-AVERAGE RATIO	98
11.1 Description of the PAR Measurement	98
11.2 Measuring Instruments	98
11.3 Test Procedures	98
11.4 Test Setup	99

1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Smart Phone
Trade Mark	OUKITEL
Model Name	C65
Family Model	C65 E, C65 S, C65 Pro, C65 Plus, C65 TITAN, C65 GT
Model Difference	All models are the same circuit and RF module, except for model names.
FCC ID:	2ANMU-2565
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2,4,5,7,12,17, 25, 26, 66 ☒ LTE TDD Band 41
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE FDD Band 12 Uplink: 699MHz-716MHz, Downlink: 729MHz-746MHz; LTE FDD Band 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE FDD Band 25 Uplink: 1850MHz-1915MHz, Downlink: 1930MHz-1995MHz; LTE FDD Band 26A Uplink: 814MHz-824MHz, Downlink: 859MHz-869MHz; LTE FDD Band 26B Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE TDD Band 41 Uplink& Downlink: 2545MHz -2655MHz LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Power Class	Class 3
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna:	FPC Antenna
Antenna gain:	Band 2: 0.81 dBi, Band 4: 0.92 dBi, Band 5: -0.71 dBi, Band 7: 1.12 dBi, Band 12: -1.42 dBi, Band 17: -1.42 dBi, Band25: 0.81 dBi, Band 26: -0.71 dBi, Band 41: 1.12 dBi, Band66: 0.92 dBi;
Adapter	Model: HJ-0502000N2-US Input: 100-240V~50/60Hz 0.3A Output(PD): 5.0V---2.0A 10.0W
Battery	DC 3.87V, 5150mAh, 19.93Wh
Power supply	DC 3.87V from battery or DC 5V from adapter
Extreme Vol. Limits:	DC 3.29V to DC 4.45V (Nominal DC 3.87V) (Note 1)

HW Version	SC6019U_MB_V2.0.0
FW Version	version:7 29 ff 4
SW Version	OUKITEL_C65_EEA_V01
** Note1: The High Voltage DC 4.45V and Low Voltage 3.29V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage.	

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2ANMU-2565** filing to comply with the FCC Part 22H&24E&27&90S

1.3 TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI/TIA-603-E-2016, FCC CFR 47 Part 2, Part 22, Part 24, Part 27, Part 90S, ANSI C63.26:2015.

1.4 TEST FACILITY

The test site used to collect the radiated data is located at:

ShenZhen NTEK Testing Technology Co., Ltd.

No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China.

The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.26:2015& ANSI C63.4: 2014.

FCC Registration No.:463705

IC Registration No.:9270A,

CNAS Registration No.:L5516

MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.5dB

1.5 SPECIAL ACCESSORIES

The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with EUT intended for FCC grant together.

1.6 WORST-CASE CONFIGURATION AND MODE

The worst-case scenario for all measurements is based on the investigation results.

The device has LTE Bands of: Band 2/4/5/7/12/17/25/26/41/66

The RB Size was selected to measure for peak or average ERP and EIRP, which was based on the conducted power verification baseline data.

For the fundamental investigation of radiated emissions, the EUT is investigated for vertical and horizontal antenna orientations and X Y and Z orientations of the EUT alone. After the investigations the worst case was determined to be at X orientation for all LTE bands.

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

2.3 CONFIGURATION OF EUT SYSTEM

Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Smart Phone	C65	FCC ID: 2ANMU-2565	EUT

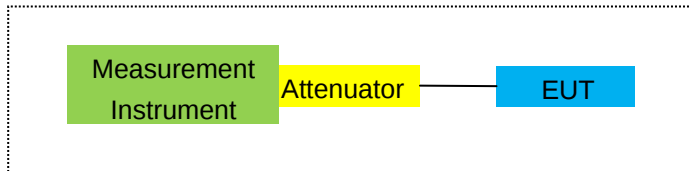
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

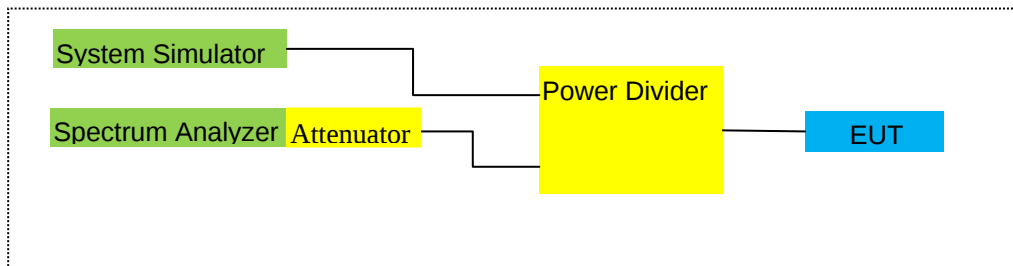
For Radiated Test Cases



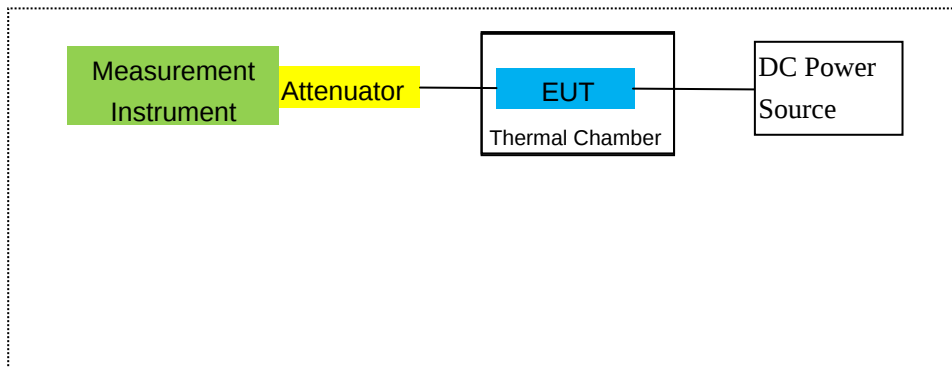
For Conducted Output Power



For Peak-to Average Ratio, Occupied Bandwidth, Conducted Band edge and Conducted Spurious Emission



For Frequency Stability



Note: EUT built-in battery-powered, the battery is fully-charged.

3.TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	MXA Signal Analyzer	Agilent	N9020A	MY49100060	2024.04.25	2025.04.24	1 year
2	Test Receiver	R&S	ESPI	101318	2024.04.26	2025.04.25	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12	2025.05.11	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
5	Horn Antenna	EM	EM-AH-10180	2011071402	2024.05.12	2027.05.11	3 year
6	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2024.05.12	2027.05.11	3 year
7	Amplifier	EM	EM-30180	060538	2024.04.26	2025.04.25	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2024.05.12	2025.05.11	1 year
9	Power Meter	R&S	NRVS	100696	2024.04.26	2025.04.25	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2024.04.26	2025.04.25	1 year
11	Test Cable	N/A	R-01	N/A	2022.06.17	2025.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	1 year
15	LISN	R&S	ENV216	101313	2024.04.25	2025.04.24	1 year
16	LISN	EMCO	3816/2	00042990	2024.04.25	2025.04.24	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2024.04.26	2027.04.25	3 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2024.05.12	2025.05.11	1 year
19	Test Cable	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
20	Test Cable	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
21	Test Cable	N/A	C03	N/A	2023.05.06	2026.05.05	3 year
22	Spectrum Analyzer	agilent	e4440a	us44300399	2024.04.26	2025.04.25	1 year
23	test receiver	R&S	ESCI	a0304218	2024.04.26	2025.04.25	1 year
24	Communication Tester	R&S	CMU200	A0304247	2024.04.26	2025.04.25	1 year
25	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2024.05.12	2025.05.11	1 year

26	DC Power Source	N/A	PS-6005D	20170402923	2024.04.25	2027.04.24	3 year
27	MXG Vector Signal Generator	Agilent	N5182A	MY47070317	2024.04.25	2025.04.24	1 year
28	Communication Tester	R&S	CMW500	148500	2024.05.30	2025.05.29	1 year
29	MXG Vector Signal Generator	Agilent	N5183B	MY57280984	2024.05.30	2025.05.29	1 year
30	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	584	2024.05.25	2025.05.24	1 year
31	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	586	2024.05.12	2025.05.11	1 year

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& DC Power Source which is scheduled for calibration every 3 years

Measurement Software

Item	Manufacturer	Software Name	Software Version	Description
1	MWRTest	MTS 8200	2.0	RF Conducted Test
2	Farad	EZ-EMC_RE	AIT-03A	RadiatedTest
3	raditeq	RadiMation	2023.1.3	RadiatedTest

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

All LTE bands conducted power peak and average are obtained from the CMW500 telecommunication test set. The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS_01".³

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	NA
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	See Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10, 15, 20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	n/a
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	Table 6.2.4-2
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23 ¹	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
..					
NS_32	-	-	-	-	-

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

Test data reference attachment.

5. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

MODES TESTED

☐

Band 2/4/5/7/12/17/25/26/41/66

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53, and §90.691

FCC: §22.359

LIMITS

FCC: §22.917, §24.238, §27.53

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

(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. Show citation box.

(c)(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

FCC: §90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

TEST PROCEDURE

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

Set a marker to point the corresponding band edge frequency in each test case.

Set resolution bandwidth to at least 1% of emission bandwidth.

MODES TESTED

Band 2/4/5/7/12/17/25/26/41/66

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53 and §90.691

LIMITS

1. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.
2. The Band 7/41 emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $55 + 10 \log (P)$ dB.

TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

- ☐
- ☐ Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

MODES TESTED

- ☐ Band 2/4/5/7/12/17/25/26/41/66
- ☐

7.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, §27.50 and §90.635

LIMITS:

- 22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
- 27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.
- 27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.
- 27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.
- 27.50 (h)(2) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
- 90.635(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

TEST PROCEDURE

ANSI/TIA-603-E Clause 2.2.17

KDB 971168 v02r01 RF power output using broadband peak and average power meter method.

KDB 971168 D01 Power Meas License Digital Systems v02r01, "Measurement Guidance for Certification of Licensed Digital Transmitters"

MODES TESTED

- ☐ Band 2/4/5/7/12/17/25/26/41/66

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-1.01	3.76	28.24	23.47	222.331	Horizontal	Pass
		1880	-0.50	3.91	28.22	23.81	240.436	Horizontal	Pass
		1909.3	-0.80	3.93	28.20	23.47	222.331	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.80	3.77	28.23	21.66	146.555	Horizontal	Pass
		1880	-0.60	3.91	28.24	23.73	236.048	Horizontal	Pass
		1908.5	-0.60	3.94	28.25	23.71	234.963	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-0.81	3.77	28.31	23.73	236.048	Horizontal	Pass
		1880	-0.53	3.91	28.22	23.78	238.781	Horizontal	Pass
		1907.5	-0.75	3.94	28.20	23.51	224.388	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-0.42	3.79	28.33	24.12	258.226	Horizontal	Pass
		1880	-0.35	3.95	28.22	23.92	246.604	Horizontal	Pass
		1905	-0.35	3.97	28.19	23.87	243.781	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-0.50	3.79	28.34	24.05	254.097	Horizontal	Pass
		1880	-0.35	3.95	28.22	23.92	246.604	Horizontal	Pass
		1902.5	-0.19	3.97	28.18	24.02	252.348	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-0.42	3.81	28.35	24.12	258.226	Horizontal	Pass
		1880	-0.50	3.96	28.22	23.76	237.684	Horizontal	Pass
		1900	0.05	4.00	28.16	24.21	263.633	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-1.09	3.76	28.24	23.39	218.273	Vertical	Pass
		1880	-1.12	3.91	28.22	23.19	208.449	Vertical	Pass
		1909.3	-0.74	3.93	28.20	23.53	225.424	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.04	3.77	28.23	23.42	219.786	Vertical	Pass
		1880	-1.47	3.91	28.24	22.86	193.197	Vertical	Pass
		1908.5	-0.72	3.94	28.25	23.59	228.560	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-1.09	3.77	28.31	23.45	221.309	Vertical	Pass
		1880	-0.77	3.91	28.22	23.54	225.944	Vertical	Pass
		1907.5	-0.61	3.94	28.20	23.65	231.739	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-1.39	3.79	28.33	23.15	206.538	Vertical	Pass
		1880	-0.84	3.95	28.22	23.43	220.293	Vertical	Pass
		1905	-0.67	3.97	28.19	23.55	226.464	Vertical	Pass
15.0MHz Band	1/#Mid	1857.5	-0.90	3.79	28.34	23.65	231.739	Vertical	Pass
		1880	-0.61	3.95	28.22	23.66	232.274	Vertical	Pass

QPSK		1902.5	-1.00	3.97	28.18	23.21	209.411	Vertical	Pass
20.0MHz	1/#Mid	1860	-1.49	3.81	28.35	23.05	201.837	Vertical	Pass
Band		1880	-0.97	3.96	28.22	23.29	213.304	Vertical	Pass
QPSK		1900	-0.86	4.00	28.16	23.30	213.796	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1850.7	-0.85	3.76	28.24	23.63	230.675	Horizontal	Pass
		1880	-1.26	3.91	28.22	23.05	201.837	Horizontal	Pass
		1909.3	-0.87	3.93	28.20	23.40	218.776	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-0.86	3.77	28.23	23.60	229.087	Horizontal	Pass
		1880	-1.80	3.91	28.24	22.53	179.061	Horizontal	Pass
		1908.5	-0.79	3.94	28.25	23.52	224.905	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-0.84	3.77	28.31	23.70	234.423	Horizontal	Pass
		1880	-0.63	3.91	28.22	23.68	233.346	Horizontal	Pass
		1907.5	-0.74	3.94	28.20	23.52	224.905	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-1.11	3.79	28.33	23.43	220.293	Horizontal	Pass
		1880	-1.23	3.95	28.22	23.04	201.372	Horizontal	Pass
		1905	-1.14	3.97	28.19	23.08	203.236	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-0.62	3.79	28.34	23.93	247.172	Horizontal	Pass
		1880	-0.53	3.95	28.22	23.74	236.592	Horizontal	Pass
		1902.5	-0.46	3.97	28.18	23.75	237.137	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-0.55	3.81	28.35	23.99	250.611	Horizontal	Pass
		1880	-1.21	3.96	28.22	23.05	201.837	Horizontal	Pass
		1900	-0.78	4.00	28.16	23.38	217.771	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-2.56	3.76	28.24	21.92	155.597	Vertical	Pass
		1880	-1.65	3.91	28.22	22.66	184.502	Vertical	Pass
		1909.3	-1.92	3.93	28.20	22.35	171.791	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-2.13	3.77	28.23	22.33	171.002	Vertical	Pass
		1880	-1.82	3.91	28.24	22.51	178.238	Vertical	Pass
		1908.5	-2.00	3.94	28.25	22.31	170.216	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-1.91	3.77	28.31	22.63	183.231	Vertical	Pass
		1880	-1.71	3.91	28.22	22.60	181.970	Vertical	Pass
		1907.5	-1.69	3.94	28.20	22.57	180.717	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-2.32	3.79	28.33	22.22	166.725	Vertical	Pass
		1880	-1.57	3.95	28.22	22.70	186.209	Vertical	Pass
		1905	-1.85	3.97	28.19	22.37	172.584	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-2.40	3.79	28.34	22.15	164.059	Vertical	Pass
		1880	-1.58	3.95	28.22	22.69	185.780	Vertical	Pass
		1902.5	-1.74	3.97	28.18	22.47	176.604	Vertical	Pass

20.0MHz	1/#Mid	1860	-2.08	3.81	28.35	22.46	176.198	Vertical	Pass
Band 16		1880	-2.16	3.96	28.22	22.10	162.181	Vertical	Pass
QAM		1900	-1.68	4.00	28.16	22.48	177.011	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-0.41	3.12	27.58	24.05	254.097	Horizontal	Pass
		1732.5	0.44	3.27	27.61	24.78	300.608	Horizontal	Pass
		1754.3	0.45	3.29	27.63	24.79	301.301	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-0.18	3.13	27.61	24.30	269.153	Horizontal	Pass
		1732.5	0.39	3.27	27.61	24.73	297.167	Horizontal	Pass
		1753.5	0.61	3.30	27.62	24.93	311.172	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-0.03	3.13	27.63	24.47	279.898	Horizontal	Pass
		1732.5	0.58	3.27	27.61	24.92	310.456	Horizontal	Pass
		1752.5	0.65	3.30	27.60	24.95	312.608	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	0.15	3.15	27.64	24.64	291.072	Horizontal	Pass
		1732.5	0.54	3.31	27.61	24.84	304.789	Horizontal	Pass
		1750	0.38	3.33	27.59	24.64	291.072	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-0.10	3.15	27.65	24.40	275.423	Horizontal	Pass
		1732.5	0.46	3.31	27.61	24.76	299.226	Horizontal	Pass
		1747.5	0.25	3.33	27.57	24.49	281.190	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	0.36	3.17	27.66	24.85	305.492	Horizontal	Pass
		1732.5	0.76	3.32	27.61	25.05	319.890	Horizontal	Pass
		1745	0.39	3.36	27.56	24.59	287.740	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-1.34	3.12	27.58	23.12	205.116	Vertical	Pass
		1732.5	-0.89	3.27	27.61	23.45	221.309	Vertical	Pass
		1754.3	-0.78	3.29	27.63	23.56	226.986	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-0.56	3.13	27.61	23.92	246.604	Vertical	Pass
		1732.5	-1.09	3.27	27.61	23.25	211.349	Vertical	Pass
		1753.5	-0.62	3.30	27.62	23.70	234.423	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-0.95	3.13	27.63	23.55	226.464	Vertical	Pass
		1732.5	-1.04	3.27	27.61	23.30	213.796	Vertical	Pass
		1752.5	-0.46	3.30	27.60	23.84	242.103	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-1.02	3.15	27.64	23.47	222.331	Vertical	Pass
		1732.5	-1.09	3.31	27.61	23.21	209.411	Vertical	Pass
		1750	-1.09	3.33	27.59	23.17	207.491	Vertical	Pass

15.0MHz	1/#Mid	1717.5	-1.31	3.15	27.65	23.19	208.449	Vertical	Pass
Band		1732.5	-1.06	3.31	27.61	23.24	210.863	Vertical	Pass
QPSK		1747.5	-0.90	3.33	27.57	23.34	215.774	Vertical	Pass
20.0MHz	1/#Mid	1720	-0.67	3.17	27.66	23.82	240.991	Vertical	Pass
Band		1732.5	-1.10	3.32	27.61	23.19	208.449	Vertical	Pass
QPSK		1745	-1.18	3.36	27.56	23.02	200.447	Vertical	Pass

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-0.25	3.12	27.58	24.21	263.633	Horizontal	Pass
		1732.5	0.41	3.27	27.61	24.75	298.538	Horizontal	Pass
		1754.3	-0.10	3.29	27.63	24.24	265.461	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-0.12	3.13	27.61	24.36	272.898	Horizontal	Pass
		1732.5	0.39	3.27	27.61	24.73	297.167	Horizontal	Pass
		1753.5	0.43	3.30	27.62	24.75	298.538	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-0.74	3.13	27.63	23.76	237.684	Horizontal	Pass
		1732.5	0.48	3.27	27.61	24.82	303.389	Horizontal	Pass
		1752.5	-0.19	3.30	27.60	24.11	257.632	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-0.55	3.15	27.64	23.94	247.742	Horizontal	Pass
		1732.5	0.49	3.31	27.61	24.79	301.301	Horizontal	Pass
		1750	-0.26	3.33	27.59	24.00	251.189	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-0.09	3.15	27.65	24.41	276.058	Horizontal	Pass
		1732.5	0.39	3.31	27.61	24.69	294.442	Horizontal	Pass
		1747.5	0.39	3.33	27.57	24.63	290.402	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-0.39	3.17	27.66	24.10	257.040	Horizontal	Pass
		1732.5	0.55	3.32	27.61	24.84	304.789	Horizontal	Pass
		1745	-0.02	3.36	27.56	24.18	261.818	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-2.53	3.12	27.58	21.93	155.955	Vertical	Pass
		1732.5	-2.14	3.27	27.61	22.20	165.959	Vertical	Pass
		1754.3	-1.70	3.29	27.63	22.64	183.654	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.74	3.13	27.61	22.74	187.932	Vertical	Pass
		1732.5	-2.32	3.27	27.61	22.02	159.221	Vertical	Pass
		1753.5	-1.58	3.30	27.62	22.74	187.932	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.12	3.13	27.63	22.38	172.982	Vertical	Pass
		1732.5	-2.22	3.27	27.61	22.12	162.930	Vertical	Pass
		1752.5	-1.44	3.30	27.60	22.86	193.197	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-1.60	3.15	27.64	22.89	194.536	Vertical	Pass
		1732.5	-1.92	3.31	27.61	22.38	172.982	Vertical	Pass
		1750	-2.08	3.33	27.59	22.18	165.196	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-1.92	3.15	27.65	22.58	181.134	Vertical	Pass
		1732.5	-1.70	3.31	27.61	22.60	181.970	Vertical	Pass
		1747.5	-1.47	3.33	27.57	22.77	189.234	Vertical	Pass

20.0MHz	1/#Mid	1720	-2.00	3.17	27.66	22.49	177.419	Vertical	Pass
Band 16		1732.5	-2.30	3.32	27.61	21.99	158.125	Vertical	Pass
QAM		1745	-1.87	3.36	27.56	22.33	171.002	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	3/#Mid	824.7	6.23	2.01	19.68	2.15	21.75	149.624	Horizontal	Pass
		836.5	6.02	2.01	19.77	2.15	21.63	145.546	Horizontal	Pass
		848.3	5.94	2.02	19.82	2.15	21.59	144.212	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	6.39	2.01	19.70	2.15	21.93	155.955	Horizontal	Pass
		836.5	5.98	2.01	19.77	2.15	21.59	144.212	Horizontal	Pass
		847.5	5.60	2.02	19.81	2.15	21.24	133.045	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	6.39	2.01	19.71	2.15	21.94	156.315	Horizontal	Pass
		836.5	6.12	2.01	19.77	2.15	21.73	148.936	Horizontal	Pass
		846.5	5.64	2.02	19.79	2.15	21.26	133.660	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	6.52	2.01	19.73	2.15	22.09	161.808	Horizontal	Pass
		836.5	5.94	2.01	19.77	2.15	21.55	142.889	Horizontal	Pass
		844	5.77	2.02	19.78	2.15	21.38	137.404	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	5.00	2.01	19.68	2.15	20.52	112.720	Vertical	Pass
		836.5	4.81	2.01	19.77	2.15	20.42	110.154	Vertical	Pass
		848.3	4.78	2.02	19.82	2.15	20.43	110.408	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.94	2.01	19.70	2.15	20.48	111.686	Vertical	Pass
		836.5	5.42	2.01	19.77	2.15	21.03	126.765	Vertical	Pass
		847.5	5.51	2.02	19.81	2.15	21.15	130.317	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	5.74	2.01	19.71	2.15	21.29	134.586	Vertical	Pass
		836.5	5.15	2.01	19.77	2.15	20.76	119.124	Vertical	Pass
		846.5	4.95	2.02	19.79	2.15	20.57	114.025	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	5.16	2.01	19.73	2.15	20.73	118.304	Vertical	Pass
		836.5	4.73	2.01	19.77	2.15	20.34	108.143	Vertical	Pass
		844	5.65	2.02	19.78	2.15	21.26	133.660	Vertical	Pass

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	3/#Mid	824.7	5.83	2.01	19.68	2.15	21.35	136.458	Horizontal	Pass
		836.5	5.10	2.01	19.77	2.15	20.71	117.761	Horizontal	Pass
		848.3	4.91	2.02	19.82	2.15	20.56	113.763	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	5.76	2.01	19.70	2.15	21.30	134.896	Horizontal	Pass
		836.5	5.13	2.01	19.77	2.15	20.74	118.577	Horizontal	Pass
		847.5	5.10	2.02	19.81	2.15	20.74	118.577	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	5.09	2.01	19.71	2.15	20.64	115.878	Horizontal	Pass
		836.5	4.85	2.01	19.77	2.15	20.46	111.173	Horizontal	Pass
		846.5	5.04	2.02	19.79	2.15	20.66	116.413	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	5.80	2.01	19.73	2.15	21.37	137.088	Horizontal	Pass
		836.5	5.22	2.01	19.77	2.15	20.83	121.060	Horizontal	Pass
		844	5.44	2.02	19.78	2.15	21.05	127.350	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	5.09	2.01	19.68	2.15	20.61	115.080	Vertical	Pass
		836.5	5.22	2.01	19.77	2.15	20.83	121.060	Vertical	Pass
		848.3	5.62	2.02	19.82	2.15	21.27	133.968	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.82	2.01	19.70	2.15	20.36	108.643	Vertical	Pass
		836.5	4.70	2.01	19.77	2.15	20.31	107.399	Vertical	Pass
		847.5	4.99	2.02	19.81	2.15	20.63	115.611	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	4.85	2.01	19.71	2.15	20.40	109.648	Vertical	Pass
		836.5	4.71	2.01	19.77	2.15	20.32	107.647	Vertical	Pass
		846.5	4.68	2.02	19.79	2.15	20.30	107.152	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	4.83	2.01	19.73	2.15	20.40	109.648	Vertical	Pass
		836.5	5.57	2.01	19.77	2.15	21.18	131.220	Vertical	Pass
		844	5.39	2.02	19.78	2.15	21.00	125.893	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2502.5	-0.50	4.54	27.75	22.71	186.638	Horizontal	Pass
		2535	0.21	4.69	27.72	23.24	210.863	Horizontal	Pass
		2567.5	0.25	4.71	27.71	23.25	211.349	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	-0.23	4.55	27.76	22.98	198.609	Horizontal	Pass
		2535	-0.04	4.69	27.72	22.99	199.067	Horizontal	Pass
		2565	0.04	4.72	27.70	23.02	200.447	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-0.64	4.55	27.77	22.58	181.134	Horizontal	Pass
		2535	0.01	4.69	27.72	23.04	201.372	Horizontal	Pass
		2562.5	0.22	4.72	27.69	23.19	208.449	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	-0.73	4.57	27.78	22.48	177.011	Horizontal	Pass
		2535	0.21	4.73	27.72	23.20	208.930	Horizontal	Pass
		2560	0.33	4.75	27.68	23.26	211.836	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-0.95	4.54	27.75	22.26	168.267	Vertical	Pass
		2535	-0.37	4.69	27.72	22.66	184.502	Vertical	Pass
		2567.5	0.10	4.71	27.71	23.10	204.174	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-1.09	4.55	27.76	22.12	162.930	Vertical	Pass
		2535	-0.60	4.69	27.72	22.43	174.985	Vertical	Pass
		2565	-0.03	4.72	27.70	22.95	197.242	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-0.87	4.55	27.77	22.35	171.791	Vertical	Pass
		2535	-0.26	4.69	27.72	22.77	189.234	Vertical	Pass
		2562.5	-0.69	4.72	27.69	22.28	169.044	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	-0.97	4.57	27.78	22.24	167.494	Vertical	Pass
		2535	-0.77	4.73	27.72	22.22	166.725	Vertical	Pass
		2560	-0.31	4.75	27.68	22.62	182.810	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-1.55	4.54	27.75	21.66	146.555	Horizontal	Pass
		2535	-1.00	4.69	27.72	22.03	159.588	Horizontal	Pass
		2567.5	-0.95	4.71	27.71	22.05	160.325	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-1.57	4.55	27.76	21.64	145.881	Horizontal	Pass
		2535	-0.71	4.69	27.72	22.32	170.608	Horizontal	Pass
		2565	-0.62	4.72	27.70	22.36	172.187	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-0.94	4.55	27.77	22.28	169.044	Horizontal	Pass
		2535	-0.45	4.69	27.72	22.58	181.134	Horizontal	Pass
		2562.5	-1.14	4.72	27.69	21.83	152.405	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-0.61	4.57	27.78	22.60	181.970	Horizontal	Pass
		2535	-0.99	4.73	27.72	22.00	158.489	Horizontal	Pass
		2560	-0.98	4.75	27.68	21.95	156.675	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-1.48	4.54	27.75	21.73	148.936	Vertical	Pass
		2535	-1.14	4.69	27.72	21.89	154.525	Vertical	Pass
		2567.5	-1.33	4.71	27.71	21.67	146.893	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-1.69	4.55	27.76	21.52	141.906	Vertical	Pass
		2535	-1.34	4.69	27.72	21.69	147.571	Vertical	Pass
		2565	-0.92	4.72	27.70	22.06	160.694	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-1.75	4.55	27.77	21.47	140.281	Vertical	Pass
		2535	-1.24	4.69	27.72	21.79	151.008	Vertical	Pass
		2562.5	-0.98	4.72	27.69	21.99	158.125	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-1.54	4.57	27.78	21.67	146.893	Vertical	Pass
		2535	-1.68	4.73	27.72	21.31	135.207	Vertical	Pass
		2560	-0.99	4.75	27.68	21.94	156.315	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Factor (dB)+ SG Level (dBm)- Cable Loss(dBm)

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	699.7	5.62	1.91	19.21	2.15	20.77	119.399	Horizontal	Pass
		707.5	6.01	1.91	19.26	2.15	21.21	132.130	Horizontal	Pass
		715.3	5.51	1.93	19.34	2.15	20.77	119.399	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	6.31	1.91	19.21	2.15	21.46	139.959	Horizontal	Pass
		707.5	5.46	1.91	19.26	2.15	20.66	116.413	Horizontal	Pass
		714.5	5.62	1.93	19.34	2.15	20.88	122.462	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	5.6	1.91	19.23	2.15	20.77	119.399	Horizontal	Pass
		707.5	5.5	1.91	19.26	2.15	20.70	117.490	Horizontal	Pass
		713.5	5.59	1.92	19.33	2.15	20.85	121.619	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	704	5.56	1.91	19.25	2.15	20.75	118.850	Horizontal	Pass
		707.5	5.5	1.91	19.26	2.15	20.70	117.490	Horizontal	Pass
		711	6.24	1.92	19.32	2.15	21.49	140.929	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	699.7	4.56	1.91	19.21	2.15	19.71	93.541	Vertical	Pass
		707.5	4.93	1.91	19.26	2.15	20.13	103.039	Vertical	Pass
		715.3	4.71	1.93	19.34	2.15	19.97	99.312	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	5.26	1.91	19.21	2.15	20.41	109.901	Vertical	Pass
		707.5	4.83	1.91	19.26	2.15	20.03	100.693	Vertical	Pass
		714.5	4.72	1.93	19.34	2.15	19.98	99.541	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	4.44	1.91	19.23	2.15	19.61	91.411	Vertical	Pass
		707.5	4.49	1.91	19.26	2.15	19.69	93.111	Vertical	Pass
		713.5	4.44	1.92	19.33	2.15	19.70	93.325	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	704	4.78	1.91	19.25	2.15	19.97	99.312	Vertical	Pass
		707.5	4.76	1.91	19.26	2.15	19.96	99.083	Vertical	Pass
		711	4.93	1.92	19.32	2.15	20.18	104.232	Vertical	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	699.7	5.64	1.91	19.21	2.15	20.79	119.950	Horizontal	Pass
		707.5	5.85	1.91	19.26	2.15	21.05	127.350	Horizontal	Pass
		715.3	5.59	1.93	19.34	2.15	20.85	121.619	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	5.94	1.91	19.21	2.15	21.09	128.529	Horizontal	Pass
		707.5	5.98	1.91	19.26	2.15	21.18	131.220	Horizontal	Pass
		714.5	6.21	1.93	19.34	2.15	21.47	140.281	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	6.26	1.91	19.23	2.15	21.43	138.995	Horizontal	Pass
		707.5	5.92	1.91	19.26	2.15	21.12	129.420	Horizontal	Pass
		713.5	5.72	1.92	19.33	2.15	20.98	125.314	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	704	6.28	1.91	19.25	2.15	21.47	140.281	Horizontal	Pass
		707.5	6.05	1.91	19.26	2.15	21.25	133.352	Horizontal	Pass
		711	5.52	1.92	19.32	2.15	20.77	119.399	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	699.7	5	1.91	19.21	2.15	20.15	103.514	Vertical	Pass
		707.5	4.91	1.91	19.26	2.15	20.11	102.565	Vertical	Pass
		715.3	4.93	1.93	19.34	2.15	20.19	104.472	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	4.93	1.91	19.21	2.15	20.08	101.859	Vertical	Pass
		707.5	5.29	1.91	19.26	2.15	20.49	111.944	Vertical	Pass
		714.5	4.52	1.93	19.34	2.15	19.78	95.060	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	5.07	1.91	19.23	2.15	20.24	105.682	Vertical	Pass
		707.5	4.85	1.91	19.26	2.15	20.05	101.158	Vertical	Pass
		713.5	4.94	1.92	19.33	2.15	20.20	104.713	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	704	4.4	1.91	19.25	2.15	19.59	90.991	Vertical	Pass
		707.5	5.1	1.91	19.26	2.15	20.30	107.152	Vertical	Pass
		711	4.84	1.92	19.32	2.15	20.09	102.094	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.7 LTE BAND 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	5.55	1.91	19.23	2.15	20.72	118.032	Horizontal	Pass
		710	5.62	1.91	19.26	2.15	20.82	120.781	Horizontal	Pass
		713.5	5.72	1.92	19.33	2.15	20.98	125.314	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	5.51	1.91	19.25	2.15	20.70	117.490	Horizontal	Pass
		710	5.82	1.91	19.26	2.15	21.02	126.474	Horizontal	Pass
		711	5.51	1.92	19.32	2.15	20.76	119.124	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	706.5	4.93	1.91	19.23	2.15	20.10	102.329	Vertical	Pass
		710	4.75	1.91	19.26	2.15	19.95	98.855	Vertical	Pass
		713.5	4.62	1.92	19.33	2.15	19.88	97.275	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	4.86	1.91	19.25	2.15	20.05	101.158	Vertical	Pass
		710	4.83	1.91	19.26	2.15	20.03	100.693	Vertical	Pass
		711	4.84	1.92	19.32	2.15	20.09	102.094	Vertical	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	706.5	4.48	1.91	19.23	2.15	19.65	92.257	Horizontal	Pass
		710	4.32	1.91	19.26	2.15	19.52	89.536	Horizontal	Pass
		713.5	4.30	1.92	19.33	2.15	19.56	90.365	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	4.44	1.92	19.32	2.15	19.69	93.111	Horizontal	Pass
		710	4.24	1.91	19.26	2.15	19.44	87.902	Horizontal	Pass
		711	4.29	1.92	19.32	2.15	19.54	89.950	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	3.84	1.91	19.23	2.15	19.01	79.616	Vertical	Pass
		710	3.74	1.91	19.26	2.15	18.94	78.343	Vertical	Pass
		713.5	3.71	1.92	19.33	2.15	18.97	78.886	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.95	1.91	19.25	2.15	19.14	82.035	Vertical	Pass
		710	4.37	1.91	19.26	2.15	19.57	90.573	Vertical	Pass
		711	3.35	1.92	19.32	2.15	18.60	72.444	Vertical	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Factor (dB)+ SG Level (dBm)- Cable Loss(dBm)

8.6 LTE BAND 25

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-2.66	3.12	27.58	21.80	151.356	Horizontal	Pass
		1882.5	-2.05	3.27	27.61	22.29	169.434	Horizontal	Pass
		1914.3	-2.88	3.29	27.63	21.46	139.959	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.51	3.13	27.61	21.97	157.398	Horizontal	Pass
		1882.5	-2.12	3.27	27.61	22.22	166.725	Horizontal	Pass
		1753.5	-2.93	3.30	27.62	21.39	137.721	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.57	3.13	27.63	21.93	155.955	Horizontal	Pass
		1882.5	-2.06	3.27	27.61	22.28	169.044	Horizontal	Pass
		1912.5	-2.66	3.30	27.60	21.64	145.881	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-2.71	3.15	27.64	21.78	150.661	Horizontal	Pass
		1882.5	-2.31	3.31	27.61	21.99	158.125	Horizontal	Pass
		1910	-2.90	3.33	27.59	21.36	136.773	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-2.33	3.15	27.65	22.17	164.816	Horizontal	Pass
		1882.5	-2.31	3.31	27.61	21.99	158.125	Horizontal	Pass
		1907.5	-2.55	3.33	27.57	21.69	147.571	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-2.29	3.17	27.66	22.20	165.959	Horizontal	Pass
		1882.5	-1.99	3.32	27.61	22.30	169.824	Horizontal	Pass
		1905	-2.44	3.36	27.56	21.76	149.968	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-3.79	3.12	27.58	20.67	116.681	Vertical	Pass
		1882.5	-3.54	3.27	27.61	20.80	120.226	Vertical	Pass
		1914.3	-4.20	3.29	27.63	20.14	103.276	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-4.11	3.13	27.61	20.37	108.893	Vertical	Pass
		1882.5	-4.39	3.27	27.61	19.95	98.855	Vertical	Pass
		1753.5	-3.87	3.30	27.62	20.45	110.917	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-3.89	3.13	27.63	20.61	115.080	Vertical	Pass
		1882.5	-4.39	3.27	27.61	19.95	98.855	Vertical	Pass
		1912.5	-3.61	3.30	27.60	20.69	117.220	Vertical	Pass
10.0MHz Band	1/#Mid	1855	-3.98	3.15	27.64	20.51	112.460	Vertical	Pass
		1882.5	-4.11	3.31	27.61	20.19	104.472	Vertical	Pass

QPSK		1910	-3.95	3.33	27.59	20.31	107.399	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-4.08	3.15	27.65	20.42	110.154	Vertical	Pass
Band		1882.5	-3.59	3.31	27.61	20.71	117.761	Vertical	Pass
QPSK		1907.5	-3.50	3.33	27.57	20.74	118.577	Vertical	Pass
20.0MHz	1/#Mid	1860	-4.11	3.17	27.66	20.38	109.144	Vertical	Pass
Band		1882.5	-4.25	3.32	27.61	20.04	100.925	Vertical	Pass
QPSK		1905	-3.83	3.36	27.56	20.37	108.893	Vertical	Pass

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1850.7	-3.53	3.12	27.58	20.93	123.880	Horizontal	Pass
		1882.5	-4.39	3.27	27.61	19.95	98.855	Horizontal	Pass
		1914.3	-4.11	3.29	27.63	20.23	105.439	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-3.47	3.13	27.61	21.01	126.183	Horizontal	Pass
		1882.5	-3.95	3.27	27.61	20.39	109.396	Horizontal	Pass
		1753.5	-4.10	3.30	27.62	20.22	105.196	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-4.33	3.13	27.63	20.17	103.992	Horizontal	Pass
		1882.5	-3.85	3.27	27.61	20.49	111.944	Horizontal	Pass
		1912.5	-4.46	3.30	27.60	19.84	96.383	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-3.84	3.15	27.64	20.65	116.145	Horizontal	Pass
		1882.5	-3.23	3.32	27.61	21.06	127.644	Horizontal	Pass
		1910	-3.71	3.36	27.56	20.49	111.944	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-4.18	3.15	27.65	20.32	107.647	Horizontal	Pass
		1882.5	-3.39	3.31	27.61	20.91	123.310	Horizontal	Pass
		1907.5	-4.31	3.33	27.57	19.93	98.401	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-3.93	3.17	27.66	20.56	113.763	Horizontal	Pass
		1882.5	-4.45	3.32	27.61	19.84	96.383	Horizontal	Pass
		1905	-4.23	3.36	27.56	19.97	99.312	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-4.23	3.12	27.58	20.23	105.439	Vertical	Pass
		1882.5	-3.87	3.27	27.61	20.47	111.429	Vertical	Pass
		1914.3	-3.91	3.29	27.63	20.43	110.408	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-4.33	3.13	27.61	20.15	103.514	Vertical	Pass
		1882.5	-4.05	3.27	27.61	20.29	106.905	Vertical	Pass
		1753.5	-4.24	3.30	27.62	20.08	101.859	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-4.13	3.13	27.63	20.37	108.893	Vertical	Pass
		1882.5	-3.76	3.27	27.61	20.58	114.288	Vertical	Pass
		1912.5	-4.07	3.30	27.60	20.23	105.439	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-4.51	3.15	27.64	19.98	99.541	Vertical	Pass
		1882.5	-4.17	3.31	27.61	20.13	103.039	Vertical	Pass
		1910	-4.01	3.33	27.59	20.25	105.925	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-3.91	3.15	27.65	20.59	114.551	Vertical	Pass
		1882.5	-4.22	3.31	27.61	20.08	101.859	Vertical	Pass
		1907.5	-4.03	3.33	27.57	20.21	104.954	Vertical	Pass

20.0MHz	1/#Mid	1860	-4.52	3.17	27.66	19.97	99.312	Vertical	Pass
Band 16		1882.5	-3.56	3.32	27.61	20.73	118.304	Vertical	Pass
QAM		1905	-3.71	3.36	27.56	20.49	111.944	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.8 LTE BAND 26 A

Radiated Power (ERP) for Band 26a										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	814.7	7.08	1.91	19.21	2.15	22.23	167.109	Horizontal	Pass
		819	7.03	1.91	19.26	2.15	22.23	167.109	Horizontal	Pass
		823.3	7.15	1.93	19.34	2.15	22.41	174.181	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	815.5	7.01	1.91	19.21	2.15	22.16	164.437	Horizontal	Pass
		819	6.90	1.91	19.26	2.15	22.10	162.181	Horizontal	Pass
		822.5	7.09	1.93	19.34	2.15	22.35	171.791	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	816.5	7.17	1.91	19.23	2.15	22.34	171.396	Horizontal	Pass
		819	7.22	1.91	19.26	2.15	22.42	174.582	Horizontal	Pass
		821.5	7.39	1.92	19.33	2.15	22.65	184.077	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	819	7.50	1.93	19.25	2.15	22.67	184.927	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	814.7	4.84	1.91	19.21	2.15	19.99	99.770	Vertical	Pass
		819	4.96	1.91	19.26	2.15	20.16	103.753	Vertical	Pass
		823.3	4.26	1.93	19.34	2.15	19.52	89.536	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	815.5	4.92	1.91	19.21	2.15	20.07	101.625	Vertical	Pass
		819	4.45	1.91	19.26	2.15	19.65	92.257	Vertical	Pass
		822.5	4.94	1.93	19.34	2.15	20.20	104.713	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	816.5	5.08	1.91	19.23	2.15	20.25	105.925	Vertical	Pass
		819	4.50	1.91	19.26	2.15	19.70	93.325	Vertical	Pass
		821.5	4.61	1.92	19.33	2.15	19.87	97.051	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	819	4.50	1.93	19.25	2.15	19.67	92.683	Vertical	Pass

Radiated Power (ERP) for Band 26a										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	814.7	6.21	1.91	19.21	2.15	21.36	136.773	Horizontal	Pass
		819	5.59	1.91	19.26	2.15	20.79	119.950	Horizontal	Pass
		823.3	5.96	1.93	19.34	2.15	21.22	132.434	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	6	1.91	19.21	2.15	21.15	130.317	Horizontal	Pass
		819	6.2	1.91	19.26	2.15	21.40	138.038	Horizontal	Pass
		822.5	6.11	1.93	19.34	2.15	21.37	137.088	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	5.21	1.91	19.23	2.15	20.38	109.144	Horizontal	Pass
		819	5.77	1.91	19.26	2.15	20.97	125.026	Horizontal	Pass
		821.5	5.53	1.92	19.33	2.15	20.79	119.950	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	819	3.72	1.93	19.25	2.15	21.42	138.676	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	814.7	5.09	1.91	19.21	2.15	20.24	105.682	Vertical	Pass
		819	4.99	1.91	19.26	2.15	20.19	104.472	Vertical	Pass
		823.3	4.73	1.93	19.34	2.15	19.99	99.770	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	4.35	1.91	19.21	2.15	19.50	89.125	Vertical	Pass
		819	4.92	1.91	19.26	2.15	20.12	102.802	Vertical	Pass
		822.5	4.64	1.93	19.34	2.15	19.90	97.724	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	5.01	1.91	19.23	2.15	20.18	104.232	Vertical	Pass
		819	4.95	1.91	19.26	2.15	20.15	103.514	Vertical	Pass
		821.5	4.67	1.92	19.33	2.15	19.93	98.401	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	819	3.77	1.93	19.25	2.15	20.05	101.158	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.9 LTE BAND 26 B

Radiated Power (ERP) for Band 26b										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	824.7	6.62	2.02	19.72	2.15	22.17	164.816	Horizontal	Pass
		836.5	6.36	2.02	19.83	2.15	22.02	159.221	Horizontal	Pass
		848.3	6.43	2.03	19.95	2.15	22.20	165.959	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	6.66	2.02	19.84	2.15	22.33	171.002	Horizontal	Pass
		836.5	6.26	2.02	19.94	2.15	22.03	159.588	Horizontal	Pass
		847.5	6.14	2.03	19.98	2.15	21.94	156.315	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	6.53	2.02	19.75	2.15	22.11	162.555	Horizontal	Pass
		836.5	6.63	2.02	19.83	2.15	22.29	169.434	Horizontal	Pass
		846.5	6.35	2.03	19.92	2.15	22.09	161.808	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	6.64	2.02	19.84	2.15	22.31	170.216	Horizontal	Pass
		836.5	6.37	2.02	19.90	2.15	22.10	162.181	Horizontal	Pass
		844	6.41	2.03	19.96	2.15	22.19	165.577	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	831.5	7.22	2.02	19.33	2.15	22.38	172.982	Horizontal	Pass
		836.5	7.00	2.02	19.37	2.15	22.20	165.959	Horizontal	Pass
		841.5	7.28	2.03	19.52	2.15	22.62	182.810	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	6.41	2.02	19.76	2.15	22.00	158.489	Vertical	Pass
		836.5	5.93	2.02	19.78	2.15	21.54	142.561	Vertical	Pass
		848.3	6.00	2.03	19.94	2.15	21.76	149.968	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	6.19	2.02	19.83	2.15	21.85	153.109	Vertical	Pass
		836.5	5.92	2.02	19.96	2.15	21.71	148.252	Vertical	Pass
		847.5	6.57	2.03	19.87	2.15	22.26	168.267	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	6.36	2.02	19.86	2.15	22.05	160.325	Vertical	Pass
		836.5	6.29	2.02	19.81	2.15	21.93	155.955	Vertical	Pass
		846.5	6.29	2.03	19.83	2.15	21.94	156.315	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	6.39	2.02	19.75	2.15	21.97	157.398	Vertical	Pass
		836.5	6.49	2.02	19.85	2.15	22.17	164.816	Vertical	Pass
		844	6.15	2.03	19.80	2.15	21.77	150.314	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	831.5	7.13	2.02	19.31	2.15	22.27	168.655	Vertical	Pass
		836.5	6.76	2.02	19.33	2.15	21.92	155.597	Vertical	Pass
		841.5	6.92	2.03	19.38	2.15	22.12	162.930	Vertical	Pass

Radiated Power (ERP) for Band 26b										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	824.7	5.66	2.02	19.72	2.15	21.21	132.130	Horizontal	Pass
		836.5	5.48	2.02	19.83	2.15	21.14	130.017	Horizontal	Pass
		848.3	4.77	2.03	19.95	2.15	20.54	113.240	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	5.46	2.02	19.84	2.15	21.13	129.718	Horizontal	Pass
		836.5	5.60	2.02	19.94	2.15	21.37	137.088	Horizontal	Pass
		847.5	5.10	2.03	19.98	2.15	20.90	123.027	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	4.78	2.02	19.75	2.15	20.36	108.643	Horizontal	Pass
		836.5	5.22	2.02	19.83	2.15	20.88	122.462	Horizontal	Pass
		846.5	5.38	2.03	19.92	2.15	21.12	129.420	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	-61.96	2.02	19.84	2.15	-46.29	0.000	Horizontal	Pass
		836.5	5.52	2.02	19.90	2.15	21.25	133.352	Horizontal	Pass
		844	5.36	2.03	19.96	2.15	21.14	130.017	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	831.5	6.23	2.02	19.33	2.15	21.39	137.721	Horizontal	Pass
		836.5	5.62	2.02	19.37	2.15	20.82	120.781	Horizontal	Pass
		841.5	5.49	2.03	19.52	2.15	20.83	121.060	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	4.65	2.02	19.76	2.15	20.24	105.682	Vertical	Pass
		836.5	3.97	2.02	19.78	2.15	19.58	90.782	Vertical	Pass
		848.3	4.53	2.03	19.94	2.15	20.29	106.905	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	3.90	2.02	19.83	2.15	19.56	90.365	Vertical	Pass
		836.5	4.10	2.02	19.96	2.15	19.89	97.499	Vertical	Pass
		847.5	4.06	2.03	19.87	2.15	19.75	94.406	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.80	2.02	19.86	2.15	19.49	88.920	Vertical	Pass
		836.5	4.26	2.02	19.81	2.15	19.90	97.724	Vertical	Pass
		846.5	4.37	2.03	19.83	2.15	20.02	100.462	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	4.66	2.02	19.75	2.15	20.24	105.682	Vertical	Pass
		836.5	3.72	2.02	19.85	2.15	19.40	87.096	Vertical	Pass

		844	3.73	2.03	19.80	2.15	19.35	86.099	Vertical	Pass
15.0MHz	1/#Mid	831.5	4.99	2.02	19.31	2.15	20.13	103.039	Vertical	Pass
Band 16		836.5	4.49	2.02	19.33	2.15	19.65	92.257	Vertical	Pass
QAM		841.5	4.13	2.03	19.38	2.15	19.33	85.704	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.10 LTE BAND 41

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			Average	Average		
						(dBm)	(mW)		
5.0MHz Band QPSK	1/#Mid	2547.5	1.39	4.54	27.75	24.60	288.403	Horizontal	Pass
		2600	1.49	4.69	27.72	24.52	283.139	Horizontal	Pass
		2652.5	1.33	4.71	27.71	24.33	271.019	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2550	1.55	4.55	27.76	24.76	299.226	Horizontal	Pass
		2600	1.67	4.69	27.72	24.70	295.121	Horizontal	Pass
		2650	1.68	4.72	27.70	24.66	292.415	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2552.5	1.71	4.55	27.77	24.93	311.172	Horizontal	Pass
		2600	1.58	4.69	27.72	24.61	289.068	Horizontal	Pass
		2647.5	1.65	4.72	27.69	24.62	289.734	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2555	1.35	4.57	27.78	24.56	285.759	Horizontal	Pass
		2600	-1.48	3.96	28.22	22.78	189.671	Horizontal	Pass
		2645	2.04	4.75	27.68	24.97	314.051	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2547.5	0.68	4.54	27.75	23.89	244.906	Vertical	Pass
		2600	0.49	4.69	27.72	23.52	224.905	Vertical	Pass
		2652.5	0.98	4.71	27.71	23.98	250.035	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2550	0.32	4.55	27.76	23.53	225.424	Vertical	Pass
		2600	0.16	4.69	27.72	23.19	208.449	Vertical	Pass
		2650	0.85	4.72	27.70	23.83	241.546	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2552.5	0.34	4.55	27.77	23.56	226.986	Vertical	Pass
		2600	0.66	4.69	27.72	23.69	233.884	Vertical	Pass
		2647.5	1.03	4.72	27.69	24.00	251.189	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2555	0.75	4.57	27.78	23.96	248.886	Vertical	Pass
		2600	0.72	4.73	27.72	23.71	234.963	Vertical	Pass
		2645	0.96	4.75	27.68	23.89	244.906	Vertical	Pass

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			Average	Average		
						(dBm)	(mW)		
5.0MHz Band 16 QAM	1/##Mid	2547.5	0.40	4.54	27.75	23.61	229.615	Horizontal	Pass
		2600	0.83	4.69	27.72	23.86	243.220	Horizontal	Pass
		2652.5	0.42	4.71	27.71	23.42	219.786	Horizontal	Pass
10.0MHz Band 16 QAM	1/##Mid	2550	0.52	4.55	27.76	23.73	236.048	Horizontal	Pass
		2600	0.34	4.69	27.72	23.37	217.270	Horizontal	Pass
		2650	0.73	4.72	27.70	23.71	234.963	Horizontal	Pass
15.0MHz Band 16 QAM	1/##Mid	2552.5	0.44	4.55	27.77	23.66	232.274	Horizontal	Pass
		2600	0.36	4.69	27.72	23.39	218.273	Horizontal	Pass
		2647.5	0.47	4.72	27.69	23.44	220.800	Horizontal	Pass
20.0MHz Band 16 QAM	1/##Mid	2555	0.91	4.57	27.78	24.12	258.226	Horizontal	Pass
		2600	-1.33	3.96	28.22	22.93	196.336	Horizontal	Pass
		2645	0.51	4.75	27.68	23.44	220.800	Horizontal	Pass
5.0MHz Band 16 QAM	1/##Mid	2547.5	-0.88	4.54	27.75	22.33	171.002	Vertical	Pass
		2600	-0.25	4.69	27.72	22.78	189.671	Vertical	Pass
		2652.5	0.27	4.71	27.71	23.27	212.324	Vertical	Pass
10.0MHz Band 16 QAM	1/##Mid	2550	0.70	4.55	27.76	23.91	246.037	Vertical	Pass
		2600	-0.11	4.69	27.72	22.92	195.884	Vertical	Pass
		2650	0.31	4.72	27.70	23.29	213.304	Vertical	Pass
15.0MHz Band 16 QAM	1/##Mid	2552.5	0.13	4.55	27.77	23.35	216.272	Vertical	Pass
		2600	-0.88	4.69	27.72	22.15	164.059	Vertical	Pass
		2647.5	0.31	4.72	27.69	23.28	212.814	Vertical	Pass
20.0MHz Band 16 QAM	1/##Mid	2555	0.75	4.57	27.78	23.96	248.886	Vertical	Pass
		2600	0.17	4.73	27.72	23.16	207.014	Vertical	Pass
		2645	-0.33	4.75	27.68	22.60	181.970	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.11 LTE BAND 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band QPSK	1/#Mid	1710.7	-2.57	3.76	28.24	21.91	155.239	Horizontal	Pass
		1745	-1.72	3.91	28.22	22.59	181.552	Horizontal	Pass
		1779.3	-1.65	3.93	28.2	22.62	182.810	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.34	3.77	28.23	22.12	162.930	Horizontal	Pass
		1745	-1.62	3.91	28.24	22.71	186.638	Horizontal	Pass
		1778.5	-1.89	3.94	28.25	22.42	174.582	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.14	3.77	28.31	22.40	173.780	Horizontal	Pass
		1745	-1.83	3.91	28.22	22.48	177.011	Horizontal	Pass
		1777.5	-1.76	3.94	28.2	22.50	177.828	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.08	3.79	28.33	22.46	176.198	Horizontal	Pass
		1745	-1.85	3.95	28.22	22.42	174.582	Horizontal	Pass
		1775	-1.72	3.97	28.19	22.50	177.828	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-2.05	3.79	28.34	22.50	177.828	Horizontal	Pass
		1745	-1.89	3.95	28.22	22.38	172.982	Horizontal	Pass
		1772.5	-1.78	3.97	28.18	22.43	174.985	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.04	3.81	28.35	22.50	177.828	Horizontal	Pass
		1745	-1.58	3.96	28.22	22.68	185.353	Horizontal	Pass
		1770	-1.56	4	28.16	22.60	181.970	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-2.84	3.76	28.24	21.64	145.881	Vertical	Pass
		1745	-2.59	3.91	28.22	21.72	148.594	Vertical	Pass
		1779.3	-2.96	3.93	28.2	21.31	135.207	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.58	3.77	28.23	21.88	154.170	Vertical	Pass
		1745	-3.41	3.91	28.24	20.92	123.595	Vertical	Pass
		1778.5	-3.33	3.94	28.25	20.98	125.314	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.80	3.77	28.31	21.74	149.279	Vertical	Pass
		1745	-2.79	3.91	28.22	21.52	141.906	Vertical	Pass
		1777.5	-2.69	3.94	28.2	21.57	143.549	Vertical	Pass
10.0MHz Band	1/#Mid	1715	-3.41	3.79	28.34	21.14	130.017	Vertical	Pass
		1745	-2.77	3.95	28.22	21.50	141.254	Vertical	Pass

QPSK		1775	-3.00	3.97	28.18	21.21	132.130	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-2.73	3.81	28.35	21.81	151.705	Vertical	Pass
Band		1745	-2.77	3.96	28.22	21.49	140.929	Vertical	Pass
QPSK		1772.5	-3.20	4	28.16	20.96	124.738	Vertical	Pass
20.0MHz	1/#Mid	1720	-3.52	3.79	28.34	21.03	126.765	Vertical	Pass
Band		1745	-3.32	3.95	28.22	20.95	124.451	Vertical	Pass
QPSK		1770	-3.13	3.97	28.18	21.08	128.233	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band 16 QAM	1/#Mid	1710.7	-2.50	3.76	28.24	21.98	157.761	Horizontal	Pass
		1745	-1.82	3.91	28.22	22.49	177.419	Horizontal	Pass
		1779.3	-1.87	3.93	28.2	22.40	173.780	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-2.36	3.77	28.23	22.10	162.181	Horizontal	Pass
		1745	-1.72	3.91	28.24	22.61	182.390	Horizontal	Pass
		1778.5	-1.45	3.94	28.25	22.86	193.197	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.87	3.77	28.31	21.67	146.893	Horizontal	Pass
		1745	-1.79	3.91	28.22	22.52	178.649	Horizontal	Pass
		1777.5	-1.35	3.94	28.2	22.91	195.434	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-2.85	3.79	28.33	21.69	147.571	Horizontal	Pass
		1745	-1.62	3.95	28.22	22.65	184.077	Horizontal	Pass
		1775	-1.85	3.97	28.19	22.37	172.584	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-2.33	3.79	28.34	22.22	166.725	Horizontal	Pass
		1745	-1.76	3.95	28.22	22.51	178.238	Horizontal	Pass
		1772.5	-1.70	3.97	28.18	22.51	178.238	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-2.24	3.81	28.35	22.30	169.824	Horizontal	Pass
		1745	-1.61	3.96	28.22	22.65	184.077	Horizontal	Pass
		1770	-1.62	4	28.16	22.54	179.473	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.02	3.76	28.24	21.46	139.959	Vertical	Pass
		1745	-2.63	3.91	28.22	21.68	147.231	Vertical	Pass
		1779.3	-2.92	3.93	28.2	21.35	136.458	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-2.73	3.77	28.23	21.73	148.936	Vertical	Pass
		1745	-3.20	3.91	28.24	21.13	129.718	Vertical	Pass
		1778.5	-2.75	3.94	28.25	21.56	143.219	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.19	3.77	28.31	21.35	136.458	Vertical	Pass
		1745	-2.66	3.91	28.22	21.65	146.218	Vertical	Pass
		1777.5	-2.97	3.94	28.2	21.29	134.586	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-2.82	3.79	28.34	21.73	148.936	Vertical	Pass
		1745	-3.24	3.95	28.22	21.03	126.765	Vertical	Pass
		1775	-3.07	3.97	28.18	21.14	130.017	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-3.29	3.81	28.35	21.25	133.352	Vertical	Pass

Band 16 QAM		1745	-3.20	3.96	28.22	21.06	127.644	Vertical	Pass
		1772.5	-2.50	4	28.16	21.66	146.555	Vertical	Pass
20.0MHz	1/#Mid	1720	-3.44	3.79	28.34	21.11	129.122	Vertical	Pass
Band 16		1745	-2.79	3.95	28.22	21.48	140.605	Vertical	Pass
QAM		1770	-2.52	3.97	28.18	21.69	147.571	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53 and §90.691

LIMIT

§22.917 (e) and §24.238 and §90.691 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

§27.53 (g) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB.

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The unwanted emission power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth in the 1 MHz band immediately outside and adjacent to the channel edge of the equipment. Beyond the 1 MHz band immediately outside the channel edge of the equipment, a resolution bandwidth of 1 MHz shall be employed. A narrower resolution bandwidth is allowed to be used provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz or 1% of the occupied bandwidth as applicable.

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:

- a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than $43 + 10 \log_{10}(p)$, dB; and
- b. for mobile subscriber equipment, the attenuation shall not be less than $43 + 10 \log_{10}(p)$, dB at the channel edges and $55 + 10 \log_{10}(p)$ at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

MODES TESTED

LTE Band 2/4/5/7/12/17/25/26/41/66

RESULTS

PASS

9.1 LTE BAND 2

QPSK EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-53.16	4.04	33.51	-23.69	-13	-10.69	Horizontal
3701.4	-51.99	4.04	33.51	-22.52	-13	-9.52	Vertical
5552.1	-51.75	5.24	35.84	-21.15	-13	-8.15	Vertical
5552.1	-52.17	5.24	35.84	-21.57	-13	-8.57	Horizontal
203.8	-36.12	1.43	16.02	-21.53	-13	-8.53	Vertical
421.6	-42.17	1.30	17.99	-25.48	-13	-12.48	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-44.88	4.04	33.56	-15.36	-13	-2.36	Horizontal
3760.0	-49.02	4.04	33.56	-19.50	-13	-6.50	Vertical
5640.0	-53.38	5.24	35.91	-22.71	-13	-9.71	Vertical
5640.0	-50.23	5.24	35.91	-19.56	-13	-6.56	Horizontal
199.3	-35.38	1.62	16.97	-20.03	-13	-7.03	Vertical
363.0	-44.29	1.74	15.98	-30.06	-13	-17.06	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-44.10	4.04	34.00	-14.14	-13	-1.14	Horizontal
3818.6	-44.34	4.04	34.00	-14.38	-13	-1.38	Vertical
5727.9	-51.63	5.24	36.04	-20.83	-13	-7.83	Vertical
5727.9	-53.87	5.24	36.04	-23.07	-13	-10.07	Horizontal
194.2	-35.89	1.42	17.29	-20.02	-13	-7.02	Vertical
251.1	-39.89	1.50	17.90	-23.48	-13	-10.48	Horizontal

QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-53.55	4.07	33.54	-24.08	-13	-11.08	Horizontal
3720.0	-46.65	4.07	33.54	-17.18	-13	-4.18	Vertical
5580.0	-51.87	5.28	35.86	-21.29	-13	-8.29	Vertical
5580.0	-51.41	5.28	35.86	-20.83	-13	-7.83	Horizontal
195.3	-37.78	1.58	16.89	-22.46	-13	-9.46	Vertical
263.6	-36.58	1.76	17.26	-21.08	-13	-8.08	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-48.79	4.04	33.56	-19.27	-13	-6.27	Horizontal
3760.0	-46.77	4.04	33.56	-17.25	-13	-4.25	Vertical
5640.0	-53.33	5.24	35.91	-22.66	-13	-9.66	Vertical
5640.0	-52.34	5.24	35.91	-21.67	-13	-8.67	Horizontal
204.0	-38.02	1.46	16.27	-23.21	-13	-10.21	Vertical
438.9	-43.00	1.59	15.15	-29.44	-13	-16.44	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-44.18	4.04	34.00	-14.22	-13	-1.22	Horizontal
3800.0	-53.17	4.04	34.00	-23.21	-13	-10.21	Vertical
5700.0	-51.78	5.24	36.04	-20.98	-13	-7.98	Vertical
5700.0	-51.28	5.24	36.04	-20.48	-13	-7.48	Horizontal
183.7	-41.32	1.36	17.39	-25.28	-13	-12.28	Vertical
249.0	-39.74	1.66	15.39	-26.01	-13	-13.01	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.2 LTE BAND 4

QPSK EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-48.95	4.02	29.80	-23.17	-13	-10.17	Horizontal
3421.4	-49.59	4.02	29.80	-23.81	-13	-10.81	Vertical
5132.1	-52.46	5.24	35.84	-21.86	-13	-8.86	Vertical
5132.1	-51.97	5.24	35.84	-21.37	-13	-8.37	Horizontal
176.0	-40.07	1.68	16.04	-25.71	-13	-12.71	Vertical
254.1	-36.18	1.78	17.74	-20.22	-13	-7.22	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-44.53	4.03	30.00	-18.56	-13	-5.56	Horizontal
3465.0	-44.59	4.03	30.00	-18.62	-13	-5.62	Vertical
5197.5	-45.10	5.25	35.86	-14.49	-13	-1.49	Vertical
5197.5	-50.51	5.25	35.86	-19.90	-13	-6.90	Horizontal
208.1	-36.10	1.72	17.69	-20.13	-13	-7.13	Vertical
461.0	-37.32	1.62	16.02	-22.91	-13	-9.91	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-49.75	4.05	30.01	-23.79	-13	-10.79	Horizontal
3508.6	-45.16	4.05	30.01	-19.20	-13	-6.20	Vertical
5262.9	-51.94	5.26	35.86	-21.34	-13	-8.34	Vertical
5262.9	-50.57	5.26	35.86	-19.97	-13	-6.97	Horizontal
197.0	-41.68	1.80	16.69	-26.79	-13	-13.79	Vertical
335.7	-42.04	1.75	16.66	-27.14	-13	-14.14	Horizontal

QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-48.45	4.02	29.80	-22.67	-13	-9.67	Horizontal
3440.0	-47.10	4.02	29.80	-21.32	-13	-8.32	Vertical
5160.0	-48.91	5.24	35.84	-18.31	-13	-5.31	Vertical
5160.0	-51.69	5.24	35.84	-21.09	-13	-8.09	Horizontal
205.1	-39.62	1.57	17.26	-23.93	-13	-10.93	Vertical
400.9	-37.25	1.78	16.35	-22.68	-13	-9.68	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-48.40	4.03	30.00	-22.43	-13	-9.43	Horizontal
3465.0	-52.99	4.03	30.00	-27.02	-13	-14.02	Vertical
5197.5	-52.83	5.25	35.86	-22.22	-13	-9.22	Vertical
5197.5	-52.34	5.25	35.86	-21.73	-13	-8.73	Horizontal
177.9	-43.15	1.44	17.95	-26.64	-13	-13.64	Vertical
363.6	-35.00	1.65	16.09	-20.56	-13	-7.56	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-51.40	2.91	27.68	-26.63	-13	-13.63	Horizontal
3490.0	-44.84	2.91	27.68	-20.07	-13	-7.07	Vertical
5235.0	-51.79	5.26	35.86	-21.19	-13	-8.19	Vertical
5235.0	-49.85	5.26	35.86	-19.25	-13	-6.25	Horizontal
201.5	-37.53	1.61	16.85	-22.29	-13	-9.29	Vertical
422.9	-43.60	1.61	15.19	-30.02	-13	-17.02	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.3 LTE BAND 5

QPSK EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-48.51	2.78	27.50	-23.79	-13	-10.79	Horizontal
1649.4	-50.47	2.78	27.50	-25.75	-13	-12.75	Vertical
2474.1	-52.97	2.90	27.80	-28.07	-13	-15.07	Vertical
2474.1	-53.89	2.90	27.80	-28.99	-13	-15.99	Horizontal
187.4	-38.13	1.76	17.59	-22.30	-13	-9.30	Vertical
291.1	-41.24	1.63	15.87	-27.00	-13	-14.00	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-53.83	2.80	27.48	-29.15	-13	-16.15	Horizontal
1673.0	-51.07	2.80	27.48	-26.39	-13	-13.39	Vertical
2509.5	-52.39	2.91	27.70	-27.60	-13	-14.60	Vertical
2509.5	-53.60	2.91	27.70	-28.81	-13	-15.81	Horizontal
179.0	-43.47	1.61	15.68	-29.40	-13	-16.40	Vertical
238.0	-35.60	1.59	17.52	-19.68	-13	-6.68	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-51.58	2.82	27.43	-26.97	-13	-13.97	Horizontal
1696.6	-51.19	2.82	27.43	-26.58	-13	-13.58	Vertical
2544.9	-47.89	2.92	27.74	-23.07	-13	-10.07	Vertical
2544.9	-51.56	2.92	27.74	-26.74	-13	-13.74	Horizontal
204.4	-39.42	1.69	16.67	-24.43	-13	-11.43	Vertical
302.1	-38.65	1.70	17.18	-23.17	-13	-10.17	Horizontal

QPSK EIRP POWER FOR LTE BAND 5 (10MHZ BANDWIDTH)

Test Results for Low Channel 829MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1658.0	-45.46	2.78	27.50	-20.74	-13	-7.74	Horizontal
1658.0	-52.74	2.78	27.50	-28.02	-13	-15.02	Vertical
2487.0	-50.68	2.90	27.80	-25.78	-13	-12.78	Vertical
2487.0	-49.47	2.90	27.80	-24.57	-13	-11.57	Horizontal
176.5	-42.75	1.71	15.57	-28.89	-13	-15.89	Vertical
249.2	-44.03	1.34	16.40	-28.97	-13	-15.97	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-47.95	2.80	27.48	-23.27	-13	-10.27	Horizontal
1673.0	-48.38	2.80	27.48	-23.70	-13	-10.70	Vertical
2509.5	-50.11	2.91	27.70	-25.32	-13	-12.32	Vertical
2509.5	-50.69	2.91	27.70	-25.90	-13	-12.90	Horizontal
177.2	-38.30	1.44	17.04	-22.70	-13	-9.70	Vertical
312.0	-39.45	1.76	17.62	-23.59	-13	-10.59	Horizontal
Test Results for High Channel 844MHz							
1688.0	-45.43	2.82	27.43	-20.82	-13	-7.82	Horizontal
1688.0	-45.98	2.82	27.43	-21.37	-13	-8.37	Vertical
2532.0	-51.00	2.92	27.74	-26.18	-13	-13.18	Vertical
2532.0	-53.67	2.92	27.74	-28.85	-13	-15.85	Horizontal
208.2	-44.25	1.74	17.70	-28.29	-13	-15.29	Vertical
452.3	-38.07	1.41	17.46	-22.01	-13	-9.01	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.4 LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5005.0	-64.94	5.23	35.81	-34.36	-25	-9.36	Horizontal
5005.0	-62.52	5.23	35.81	-31.94	-25	-6.94	Vertical
7507.5	-64.38	5.67	36.85	-33.20	-25	-8.20	Vertical
7507.5	-63.82	5.67	36.85	-32.64	-25	-7.64	Horizontal
184.3	-53.51	1.73	17.97	-37.27	-25	-12.27	Vertical
321.2	-48.27	1.38	15.11	-34.54	-25	-9.54	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-59.05	5.23	35.82	-28.46	-25	-3.46	Horizontal
5070.0	-63.90	5.23	35.82	-33.31	-25	-8.31	Vertical
7605.0	-60.19	5.67	36.85	-29.01	-25	-4.01	Vertical
7605.0	-62.63	5.67	36.85	-31.45	-25	-6.45	Horizontal
192.9	-52.09	1.77	16.17	-37.68	-25	-12.68	Vertical
405.0	-49.22	1.63	15.21	-35.64	-25	-10.64	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-63.10	5.24	35.83	-32.51	-25	-7.51	Horizontal
5135.0	-61.14	5.24	35.83	-30.55	-25	-5.55	Vertical
7702.5	-62.58	5.68	36.87	-31.39	-25	-6.39	Vertical
7702.5	-62.98	5.68	36.87	-31.79	-25	-6.79	Horizontal
201.3	-47.52	1.58	17.56	-31.54	-25	-6.54	Vertical
268.1	-49.65	1.45	16.58	-34.52	-25	-9.52	Horizontal

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 2510MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5020.0	-63.13	5.23	35.82	-32.54	-25	-7.54	Horizontal
5020.0	-60.36	5.23	35.82	-29.77	-25	-4.77	Vertical
7530.0	-64.79	5.67	36.86	-33.60	-25	-8.60	Vertical
7530.0	-61.53	5.67	36.86	-30.34	-25	-5.34	Horizontal
177.3	-46.02	1.63	15.76	-31.89	-25	-6.89	Vertical
339.5	-49.91	1.71	15.44	-36.18	-25	-11.18	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-62.89	5.23	35.82	-32.30	-25	-7.30	Horizontal
5070.0	-59.26	5.23	35.82	-28.67	-25	-3.67	Vertical
7605.0	-60.50	5.67	36.85	-29.32	-25	-4.32	Vertical
7605.0	-64.90	5.67	36.85	-33.72	-25	-8.72	Horizontal
187.6	-48.13	1.79	16.84	-33.07	-25	-8.07	Vertical
434.3	-51.31	1.71	17.64	-35.38	-25	-10.38	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-62.36	5.24	35.83	-31.77	-25	-6.77	Horizontal
5120.0	-59.33	5.24	35.83	-28.74	-25	-3.74	Vertical
7680.0	-63.61	5.70	36.88	-32.43	-25	-7.43	Vertical
7680.0	-62.98	5.70	36.88	-31.80	-25	-6.80	Horizontal
182.6	-47.95	1.79	16.84	-32.89	-25	-7.89	Vertical
421.6	-48.38	1.71	17.64	-32.45	-25	-7.45	Horizontal

Note: Spurious Emission Level = Spectrum Analyzer Read Value + Cable Loss+ Antenna Factor + 11.74

. Margin = Spurious Emission Level - Limit

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.5 LTE BAND 12

QPSK EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 699.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1399.4	-51.07	2.60	27.20	-26.47	-13	-13.47	Horizontal
1399.4	-47.58	2.60	27.20	-22.98	-13	-9.98	Vertical
2099.1	-46.84	2.85	27.54	-22.15	-13	-9.15	Vertical
2099.1	-49.32	2.85	27.54	-24.63	-13	-11.63	Horizontal
177.4	-36.46	1.49	17.78	-20.17	-13	-7.17	Vertical
360.4	-37.84	1.36	17.33	-21.87	-13	-8.87	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-50.34	2.61	27.28	-25.67	-13	-12.67	Horizontal
1415.0	-45.76	2.61	27.28	-21.09	-13	-8.09	Vertical
2122.5	-51.98	2.87	27.59	-27.26	-13	-14.26	Vertical
2122.5	-49.80	2.87	27.59	-25.08	-13	-12.08	Horizontal
184.9	-41.27	1.73	15.74	-27.26	-13	-14.26	Vertical
345.9	-44.31	1.62	15.79	-30.14	-13	-17.14	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-53.69	2.63	27.28	-29.04	-13	-16.04	Horizontal
1430.6	-47.39	2.63	27.28	-22.74	-13	-9.74	Vertical
2145.9	-50.20	2.88	27.60	-25.48	-13	-12.48	Vertical
2145.9	-50.48	2.88	27.60	-25.76	-13	-12.76	Horizontal
175.2	-37.32	1.61	18.00	-20.93	-13	-7.93	Vertical
429.5	-44.37	1.45	15.49	-30.34	-13	-17.34	Horizontal

QPSK EIRP POWER FOR LTE BAND 12 (10MHZ BANDWIDTH)

Test Results for Low Channel 704MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1408.0	-51.61	2.61	27.26	-26.96	-13	-13.96	Horizontal
1408.0	-46.15	2.61	27.26	-21.50	-13	-8.50	Vertical
2112.0	-48.52	2.87	27.58	-23.81	-13	-10.81	Vertical
2112.0	-50.94	2.87	27.58	-26.23	-13	-13.23	Horizontal
205.4	-42.20	1.31	16.97	-26.54	-13	-13.54	Vertical
378.1	-41.23	1.65	16.70	-26.18	-13	-13.18	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-50.78	2.61	27.28	-26.11	-13	-13.11	Horizontal
1415.0	-46.38	2.61	27.28	-21.71	-13	-8.71	Vertical
2122.5	-47.93	2.87	27.59	-23.21	-13	-10.21	Vertical
2122.5	-49.85	2.87	27.59	-25.13	-13	-12.13	Horizontal
190.9	-44.05	1.72	17.99	-27.78	-13	-14.78	Vertical
385.6	-39.89	1.73	17.94	-23.68	-13	-10.68	Horizontal
Test Results for High Channel 711MHz							
1422.0	-44.45	2.62	27.28	-19.79	-13	-6.79	Horizontal
1422.0	-45.11	2.62	27.28	-20.45	-13	-7.45	Vertical
2133.0	-49.01	2.87	27.60	-24.28	-13	-11.28	Vertical
2133.0	-53.06	2.87	27.60	-28.33	-13	-15.33	Horizontal
207.7	-39.01	1.58	15.93	-24.66	-13	-11.66	Vertical
252.7	-39.78	1.36	15.59	-25.55	-13	-12.55	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.6 LTE BAND 17

QPSK EIRP POWER FOR LTE BAND 17 (5MHZ BANDWIDTH)

Test Results for Low Channel 706.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413.0	-50.71	2.61	27.28	-26.04	-13	-13.04	Horizontal
1413.0	-52.83	2.61	27.28	-28.16	-13	-15.16	Vertical
2119.5	-48.05	2.87	27.59	-23.33	-13	-10.33	Vertical
2119.5	-50.36	2.87	27.59	-25.64	-13	-12.64	Horizontal
204.7	-34.28	1.71	16.15	-19.84	-13	-6.84	Vertical
393.3	-43.26	1.41	17.32	-27.35	-13	-14.35	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-48.01	2.62	27.30	-23.33	-13	-10.33	Horizontal
1420.0	-52.57	2.62	27.30	-27.89	-13	-14.89	Vertical
2130.0	-47.86	2.87	27.62	-23.11	-13	-10.11	Vertical
2130.0	-53.27	2.87	27.62	-28.52	-13	-15.52	Horizontal
180.5	-43.04	1.42	15.25	-29.22	-13	-16.22	Vertical
335.0	-39.82	1.36	17.19	-23.99	-13	-10.99	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-52.35	2.66	27.28	-27.73	-13	-14.73	Horizontal
1427.0	-53.28	2.66	27.28	-28.66	-13	-15.66	Vertical
2140.5	-49.15	2.88	27.60	-24.43	-13	-11.43	Vertical
2140.5	-49.21	2.88	27.60	-24.49	-13	-11.49	Horizontal
207.6	-38.38	1.32	17.29	-22.41	-13	-9.41	Vertical
323.7	-41.03	1.72	16.89	-25.86	-13	-12.86	Horizontal

QPSK EIRP POWER FOR LTE BAND 17 (10MHZ BANDWIDTH)

Test Results for Low Channel 709MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1418.0	-45.45	2.62	27.30	-20.77	-13	-7.77	Horizontal
1418.0	-50.23	2.62	27.30	-25.55	-13	-12.55	Vertical
2127.0	-49.97	2.87	27.62	-25.22	-13	-12.22	Vertical
2127.0	-53.17	2.87	27.62	-28.42	-13	-15.42	Horizontal
179.1	-36.42	1.35	16.91	-20.86	-13	-7.86	Vertical
320.7	-34.21	1.62	16.31	-19.52	-13	-6.52	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-50.91	2.62	27.30	-26.23	-13	-13.23	Horizontal
1420.0	-45.46	2.62	27.30	-20.78	-13	-7.78	Vertical
2130.0	-46.23	2.87	27.62	-21.48	-13	-8.48	Vertical
2130.0	-52.22	2.87	27.62	-27.47	-13	-14.47	Horizontal
183.3	-38.69	1.51	17.14	-23.06	-13	-10.06	Vertical
363.4	-38.04	1.77	16.88	-22.93	-13	-9.93	Horizontal
Test Results for High Channel 711MHz							
1422.0	-44.09	2.62	27.30	-19.41	-13	-6.41	Horizontal
1422.0	-52.98	2.62	27.30	-28.30	-13	-15.30	Vertical
2133.0	-46.39	2.87	27.62	-21.64	-13	-8.64	Vertical
2133.0	-50.85	2.87	27.62	-26.10	-13	-13.10	Horizontal
201.8	-43.94	1.78	15.95	-29.77	-13	-16.77	Vertical
298.0	-34.59	1.34	17.95	-17.99	-13	-4.99	Horizontal

Note: Spurious Emission Level = Spectrum Analyzer Read Value + Cable Loss+ Antenna Factor + 11.74

. Margin = Spurious Emission Level - Limit

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.7 LTE BAND 25

QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-50.98	4.26	29.80	-25.44	-13	-12.44	Horizontal
3701.4	-52.26	4.26	29.80	-26.72	-13	-13.72	Vertical
5552.1	-52.27	5.36	35.84	-21.79	-13	-8.79	Vertical
5552.1	-53.68	5.36	35.84	-23.20	-13	-10.20	Horizontal
209.0	-44.07	1.68	16.04	-29.71	-13	-16.71	Vertical
331.4	-38.05	1.78	17.74	-22.09	-13	-9.09	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-50.44	4.28	30.00	-24.72	-13	-11.72	Horizontal
3765.0	-50.00	4.28	30.00	-24.28	-13	-11.28	Vertical
5647.5	-50.98	5.41	35.86	-20.53	-13	-7.53	Vertical
5647.5	-49.57	5.41	35.86	-19.12	-13	-6.12	Horizontal
211.4	-34.74	1.72	17.69	-18.77	-13	-5.77	Vertical
261.1	-42.62	1.62	16.02	-28.21	-13	-15.21	Horizontal
Test Results for High Channel 1914.3MHz							
3828.6	-51.76	4.31	30.01	-26.06	-13	-13.06	Horizontal
3828.6	-49.63	4.31	30.01	-23.93	-13	-10.93	Vertical
5742.9	-50.27	5.43	35.86	-19.84	-13	-6.84	Vertical
5742.9	-53.17	5.43	35.86	-22.74	-13	-9.74	Horizontal
177.8	-43.45	1.80	16.69	-28.56	-13	-15.56	Vertical
381.4	-42.62	1.75	16.66	-27.72	-13	-14.72	Horizontal

QPSK EIRP POWER FOR LTE BAND 25 (20MHZ BANDWIDTH)

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-51.18	4.29	29.80	-25.67	-13	-12.67	Horizontal
3720.0	-51.67	4.29	29.80	-26.16	-13	-13.16	Vertical
5580.0	-51.72	5.38	35.84	-21.26	-13	-8.26	Vertical
5580.0	-50.51	5.38	35.84	-20.05	-13	-7.05	Horizontal
184.3	-37.80	1.57	17.26	-22.11	-13	-9.11	Vertical
407.0	-40.69	1.78	16.35	-26.12	-13	-13.12	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-51.79	4.28	30.00	-26.07	-13	-13.07	Horizontal
3765.0	-52.88	4.28	30.00	-27.16	-13	-14.16	Vertical
5647.5	-51.44	5.41	35.86	-20.99	-13	-7.99	Vertical
5647.5	-53.52	5.41	35.86	-23.07	-13	-10.07	Horizontal
204.1	-38.73	1.44	17.95	-22.22	-13	-9.22	Vertical
344.0	-44.92	1.65	16.09	-30.48	-13	-17.48	Horizontal
Test Results for High Channel 1905MHz							
3810.0	-53.96	4.35	27.68	-30.63	-13	-17.63	Horizontal
3810.0	-52.13	4.35	27.68	-28.80	-13	-15.80	Vertical
5715.0	-50.07	5.42	35.86	-19.63	-13	-6.63	Vertical
5715.0	-53.85	5.42	35.86	-23.41	-13	-10.41	Horizontal
176.5	-41.93	1.61	16.85	-26.69	-13	-13.69	Vertical
270.7	-41.32	1.61	15.19	-27.74	-13	-14.74	Horizontal

9.8 LTE BAND 26 A

QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (1.4MHZ BANDWIDTH)

Test Results for Low Channel 814.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1629.4	-50.80	4.26	29.80	-25.26	-13	-12.26	Horizontal
1629.4	-50.29	4.26	29.80	-24.75	-13	-11.75	Vertical
2444.1	-53.46	5.36	35.84	-22.98	-13	-9.98	Vertical
2444.1	-49.82	5.36	35.84	-19.34	-13	-6.34	Horizontal
184.3	-42.57	1.68	16.04	-28.21	-13	-15.21	Vertical
338.6	-39.58	1.78	17.74	-23.62	-13	-10.62	Horizontal
Test Results for Mid Channel 819MHz							
1638.0	-52.90	4.28	30.00	-27.18	-13	-14.18	Horizontal
1638.0	-52.62	4.28	30.00	-26.90	-13	-13.90	Vertical
2457.0	-52.35	5.41	35.86	-21.90	-13	-8.90	Vertical
2457.0	-52.61	5.41	35.86	-22.16	-13	-9.16	Horizontal
190.0	-35.45	1.72	17.69	-19.48	-13	-6.48	Vertical
272.1	-42.29	1.62	16.02	-27.88	-13	-14.88	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-53.86	4.31	30.01	-28.16	-13	-15.16	Horizontal
1646.6	-50.62	4.31	30.01	-24.92	-13	-11.92	Vertical
2469.9	-50.34	5.43	35.86	-19.91	-13	-6.91	Vertical
2469.9	-50.18	5.43	35.86	-19.75	-13	-6.75	Horizontal
204.6	-40.74	1.80	16.69	-25.85	-13	-12.85	Vertical
467.8	-38.31	1.75	16.66	-23.41	-13	-10.41	Horizontal

QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (10MHZ BANDWIDTH)

Test Results for Mid Channel 819MHz							
1638.0	-50.92	4.28	30.00	-25.20	-13	-12.20	Horizontal
1638.0	-53.03	4.28	30.00	-27.31	-13	-14.31	Vertical
2457.0	-51.10	5.41	35.86	-20.65	-13	-7.65	Vertical
2457.0	-52.31	5.41	35.86	-21.86	-13	-8.86	Horizontal
197.1	-37.73	1.44	17.95	-21.22	-13	-8.22	Vertical
233.7	-41.78	1.65	16.09	-27.34	-13	-14.34	Horizontal

9.9 LTE BAND 26 B

QPSK EIRP POWER FOR LTE BAND 26B(824MHz~849MHz) (1.4MHZ BANDWIDTH)

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-53.49	4.26	29.80	-27.95	-13	-14.95	Horizontal
1649.4	-52.86	4.26	29.80	-27.32	-13	-14.32	Vertical
2474.1	-50.78	5.36	35.84	-20.30	-13	-7.30	Vertical
2474.1	-53.05	5.36	35.84	-22.57	-13	-9.57	Horizontal
211.5	-40.46	1.68	16.04	-26.10	-13	-13.10	Vertical
396.2	-34.01	1.78	17.74	-18.05	-13	-5.05	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-51.24	4.28	30.00	-25.52	-13	-12.52	Horizontal
1673.0	-51.31	4.28	30.00	-25.59	-13	-12.59	Vertical
2509.5	-52.04	5.41	35.86	-21.59	-13	-8.59	Vertical
2509.5	-52.17	5.41	35.86	-21.72	-13	-8.72	Horizontal
180.9	-37.16	1.72	17.69	-21.19	-13	-8.19	Vertical
249.0	-37.67	1.62	16.02	-23.26	-13	-10.26	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-52.20	4.31	30.01	-26.50	-13	-13.50	Horizontal
1696.6	-52.58	4.31	30.01	-26.88	-13	-13.88	Vertical
2544.9	-49.86	5.43	35.86	-19.43	-13	-6.43	Vertical
2544.9	-50.33	5.43	35.86	-19.90	-13	-6.90	Horizontal
180.0	-35.39	1.80	16.69	-20.50	-13	-7.50	Vertical
465.6	-39.81	1.75	16.66	-24.91	-13	-11.91	Horizontal

QPSK EIRP POWER FOR LTE BAND 26B(824MHz~849MHz) (15MHZ BANDWIDTH)

Test Results for Low Channel 831.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1663.0	-51.56	4.29	29.80	-26.05	-13	-13.05	Horizontal
1663.0	-50.75	4.29	29.80	-25.24	-13	-12.24	Vertical
2494.5	-53.46	5.38	35.84	-23.00	-13	-10.00	Vertical
2494.5	-53.40	5.38	35.84	-22.94	-13	-9.94	Horizontal
201.3	-36.36	1.57	17.26	-20.67	-13	-7.67	Vertical
467.8	-43.52	1.78	16.35	-28.95	-13	-15.95	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-50.71	4.28	30.00	-24.99	-13	-11.99	Horizontal
1673.0	-51.71	4.28	30.00	-25.99	-13	-12.99	Vertical
2509.5	-49.51	5.41	35.86	-19.06	-13	-6.06	Vertical
2509.5	-49.96	5.41	35.86	-19.51	-13	-6.51	Horizontal
182.9	-43.69	1.44	17.95	-27.18	-13	-14.18	Vertical
253.6	-35.40	1.65	16.09	-20.96	-13	-7.96	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-52.32	4.35	27.68	-28.99	-13	-15.99	Horizontal
1683.0	-52.84	4.35	27.68	-29.51	-13	-16.51	Vertical
2524.5	-49.30	5.42	35.86	-18.86	-13	-5.86	Vertical
2524.5	-50.77	5.42	35.86	-20.33	-13	-7.33	Horizontal
192.4	-42.58	1.61	16.85	-27.34	-13	-14.34	Vertical
241.8	-41.49	1.61	15.19	-27.91	-13	-14.91	Horizontal

9.10 LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (5MHZ BANDWIDTH)

Test Results for Low Channel 2547.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5095	-59.66	5.23	35.81	-29.08	-25	-4.08	Horizontal
5095	-64.79	5.23	35.81	-34.21	-25	-9.21	Vertical
7642.5	-62.71	5.67	36.85	-31.53	-25	-6.53	Vertical
7642.5	-62.42	5.67	36.85	-31.24	-25	-6.24	Horizontal
176.0	-45.25	1.38	15.98	-30.65	-25	-5.65	Vertical
266.3	-44.86	1.62	15.66	-30.82	-25	-5.82	Horizontal
Test Results for Mid Channel 2600MHz							
5200	-59.99	5.23	35.82	-29.40	-25	-4.40	Horizontal
5200	-63.52	5.23	35.82	-32.93	-25	-7.93	Vertical
7800	-63.73	5.67	36.85	-32.55	-25	-7.55	Vertical
7800	-64.56	5.67	36.85	-33.38	-25	-8.38	Horizontal
177.1	-51.02	1.62	16.17	-36.47	-25	-11.47	Vertical
352.1	-47.36	1.74	17.63	-31.47	-25	-6.47	Horizontal
Test Results for High Channel 2652.5MHz							
5305	-63.51	5.24	35.83	-32.92	-25	-7.92	Horizontal
5305	-62.63	5.24	35.83	-32.04	-25	-7.04	Vertical
7957.5	-59.74	5.68	36.87	-28.55	-25	-3.55	Vertical
7957.5	-59.33	5.68	36.87	-28.14	-25	-3.14	Horizontal
194.0	-45.73	1.55	15.84	-31.44	-25	-6.44	Vertical
262.9	-50.26	1.51	17.06	-34.71	-25	-9.71	Horizontal

QPSK EIRP POWER FOR LTE BAND 41 (20MHZ BANDWIDTH)

Test Results for Low Channel 2555MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5110	-62.60	5.23	35.82	-32.01	-25	-7.01	Horizontal
5110	-59.30	5.23	35.82	-28.71	-25	-3.71	Vertical
7665	-59.09	5.67	36.86	-27.90	-25	-2.90	Vertical
7665	-60.73	5.67	36.86	-29.54	-25	-4.54	Horizontal
181.2	-49.76	1.43	15.51	-35.68	-25	-10.68	Vertical
257.9	-45.16	1.40	16.97	-29.59	-25	-4.59	Horizontal
Test Results for Mid Channel 2600MHz							
5200	-61.44	5.23	35.82	-30.85	-25	-5.85	Horizontal
5200	-59.05	5.23	35.82	-28.46	-25	-3.46	Vertical
7800	-64.88	5.67	36.85	-33.70	-25	-8.70	Vertical
7800	-60.69	5.67	36.85	-29.51	-25	-4.51	Horizontal
198.1	-52.42	1.77	16.72	-37.47	-25	-12.47	Vertical
402.3	-45.39	1.31	16.99	-29.71	-25	-4.71	Horizontal
Test Results for High Channel 2645MHz							
5290	-59.42	5.24	35.83	-28.83	-25	-3.83	Horizontal
5290	-61.65	5.24	35.83	-31.06	-25	-6.06	Vertical
7935	-59.83	5.70	36.88	-28.65	-25	-3.65	Vertical
7935	-62.44	5.70	36.88	-31.26	-25	-6.26	Horizontal
212.1	-46.84	1.70	15.73	-32.81	-25	-7.81	Vertical
449.5	-50.97	1.75	17.33	-35.39	-25	-10.39	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

Over Limit= : P_{Mea}(dBm)-Limit(dBm)

We test both H direction and V direction, recorded worst case direction.

Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.11 LTE BAND 66

QPSK EIRP POWER FOR LTE BAND 66 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-50.91	3.84	35.81	-18.94	-13	-5.94	Horizontal
3421.4	-50.28	3.84	35.81	-18.31	-13	-5.31	Vertical
5132.1	-53.81	5.18	36.85	-22.14	-13	-9.14	Vertical
5132.1	-50.51	5.18	36.85	-18.84	-13	-5.84	Horizontal
203.6	-42.32	1.56	17.97	-25.91	-13	-12.91	Vertical
384.4	-44.06	1.33	15.11	-30.28	-13	-17.28	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-52.61	3.85	35.82	-20.64	-13	-7.64	Horizontal
3490.0	-51.44	3.85	35.82	-19.47	-13	-6.47	Vertical
5235.0	-53.32	5.21	36.85	-21.68	-13	-8.68	Vertical
5235.0	-51.63	5.21	36.85	-19.99	-13	-6.99	Horizontal
185.4	-37.06	1.77	16.17	-22.65	-13	-9.65	Vertical
324.5	-34.40	1.63	15.21	-20.82	-13	-7.82	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-51.22	3.86	35.83	-19.25	-13	-6.25	Horizontal
3558.6	-51.29	3.86	35.83	-19.32	-13	-6.32	Vertical
5337.9	-52.21	5.24	36.87	-20.58	-13	-7.58	Vertical
5337.9	-52.03	5.24	36.87	-20.40	-13	-7.40	Horizontal
188.4	-40.29	1.58	17.56	-24.31	-13	-11.31	Vertical
354.9	-34.64	1.45	16.58	-19.51	-13	-6.51	Horizontal

QPSK EIRP POWER FOR LTE BAND 66 (20MHZ BANDWIDTH)

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-49.90	3.84	35.82	-17.92	-13	-4.92	Horizontal
3440.0	-52.48	3.84	35.82	-20.50	-13	-7.50	Vertical
5160.0	-52.24	5.18	36.86	-20.56	-13	-7.56	Vertical
5160.0	-50.36	5.18	36.86	-18.68	-13	-5.68	Horizontal
183.7	-34.87	1.56	15.76	-20.67	-13	-7.67	Vertical
329.8	-41.32	1.33	15.44	-27.21	-13	-14.21	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-53.80	3.85	35.82	-21.83	-13	-8.83	Horizontal
3490.0	-50.64	3.85	35.82	-18.67	-13	-5.67	Vertical
5235.0	-52.94	5.21	36.85	-21.30	-13	-8.30	Vertical
5235.0	-50.87	5.21	36.85	-19.23	-13	-6.23	Horizontal
192.8	-44.47	1.77	16.84	-29.39	-13	-16.39	Vertical
240.9	-35.19	1.63	17.64	-19.18	-13	-6.18	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-50.86	3.86	35.83	-18.89	-13	-5.89	Horizontal
3540.0	-49.06	3.86	35.83	-17.09	-13	-4.09	Vertical
5310.0	-51.91	5.24	36.88	-20.27	-13	-7.27	Vertical
5310.0	-49.37	5.24	36.88	-17.73	-13	-4.73	Horizontal
212.0	-38.96	1.58	16.84	-23.69	-13	-10.69	Vertical
376.2	-42.58	1.45	17.64	-26.39	-13	-13.39	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

Over Limit= : P_{Mea}(dBm)-Limit(dBm)

We test both H direction and V direction, recorded worst case direction.

Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

10. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, §27.54, §90.213

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- ☐ Temp. = -30° to $+50^{\circ}\text{C}$
- ☐ Voltage = low voltage, DC 3.29V, Normal, DC 3.87V and High voltage, DC 4.45V.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to -30°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

MODES TESTED

LTE Band 2/4/5/7/12/17/25/26/41/66

RESULTS

See the following pages.

10.1 LTE BAND 2

Band 2 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	13.0	0.006925	2.5
3.87	1880	13.5	0.007163	2.5
4.45	1880	13.3	0.007088	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	13.1	0.006980	2.5
Extreme (50C)	1880	11.6	0.006155	2.5
Extreme (40C)	1880	13.3	0.007097	2.5
Extreme (30C)	1880	13.8	0.007321	2.5
Extreme (10C)	1880	13.8	0.007364	2.5
Extreme (0C)	1880	11.8	0.006272	2.5
Extreme (-10C)	1880	12.7	0.006751	2.5
Extreme (-20C)	1880	13.7	0.007261	2.5
Extreme (-30C)	1880	14.4	0.007669	2.5

Band 2 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	9.8	0.005222	2.5
3.87	1880	8.8	0.004687	2.5
4.45	1880	7.8	0.004122	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.1	0.004855	2.5
Extreme (50C)	1880	8.8	0.004689	2.5
Extreme (40C)	1880	7.8	0.004150671	2.5
Extreme (30C)	1880	8.9	0.004738701	2.5
Extreme (10C)	1880	9.1	0.004819093	2.5
Extreme (0C)	1880	8.0	0.004237155	2.5
Extreme (-10C)	1880	8.5	0.004536957	2.5
Extreme (-20C)	1880	8.7	0.004610545	2.5
Extreme (-30C)	1880	7.6	0.004061939	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.2 LTE BAND 4

Band 4 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1732.5	8.4	0.004837	2.5
3.87	1732.5	9.4	0.005417	2.5
4.45	1732.5	8.1	0.004679	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.1	0.004654	2.5
Extreme (50C)	1732.5	8.7	0.005047	2.5
Extreme (40C)	1732.5	7.7	0.004452	2.5
Extreme (30C)	1732.5	5.4	0.003128	2.5
Extreme (10C)	1732.5	6.8	0.003899	2.5
Extreme (0C)	1732.5	9.5	0.005473	2.5
Extreme (-10C)	1732.5	8.8	0.005096	2.5
Extreme (-20C)	1732.5	6.7	0.003847	2.5
Extreme (-30C)	1732.5	8.1	0.004667	2.5

Band 4 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1732.5	9.7	0.005599	2.5
3.87	1732.5	8.6	0.004938	2.5
4.45	1732.5	7.8	0.004512	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.6	0.005527	2.5
Extreme (50C)	1732.5	8.9	0.005127	2.5
Extreme (40C)	1732.5	8.3	0.004810	2.5
Extreme (30C)	1732.5	8.8	0.005099	2.5
Extreme (10C)	1732.5	8.6	0.004952	2.5
Extreme (0C)	1732.5	8.2	0.004754	2.5
Extreme (-10C)	1732.5	9.3	0.005350	2.5
Extreme (-20C)	1732.5	9.0	0.005178	2.5
Extreme (-30C)	1732.5	8.4	0.004866	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.3 LTE BAND 5

Band 5 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	5.4	0.006413	2.5
3.87	836.5	6.3	0.007479	2.5
4.45	836.5	4.5	0.005390	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	5.8	0.006974	2.5
Extreme (50C)	836.5	5.5	0.006629	2.5
Extreme (40C)	836.5	5.7	0.006804	2.5
Extreme (30C)	836.5	6.3	0.007472	2.5
Extreme (10C)	836.5	5.3	0.006277	2.5
Extreme (0C)	836.5	5.4	0.006490	2.5
Extreme (-10C)	836.5	5.7	0.006839	2.5
Extreme (-20C)	836.5	6.5	0.007726	2.5
Extreme (-30C)	836.5	5.9	0.007075	2.5

Band 5 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	5.6	0.006745	2.5
3.87	836.5	7.1	0.008529	2.5
4.45	836.5	4.5	0.005386	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	5.9	0.007041	2.5
Extreme (50C)	836.5	5.9	0.007007	2.5
Extreme (40C)	836.5	5.9	0.007049	2.5
Extreme (30C)	836.5	6.0	0.007226	2.5
Extreme (10C)	836.5	5.4	0.006435	2.5
Extreme (0C)	836.5	5.5	0.006547	2.5
Extreme (-10C)	836.5	5.9	0.007004	2.5
Extreme (-20C)	836.5	6.6	0.007872	2.5
Extreme (-30C)	836.5	6.2	0.007354	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.4 LTE BAND 7

Band 7 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2535	10.3	0.004046	2.5
3.87	2535	8.8	0.003482	2.5
4.45	2535	8.2	0.003233	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.6	0.003776	2.5
Extreme (50C)	2535	9.1	0.003585	2.5
Extreme (40C)	2535	8.6	0.003383	2.5
Extreme (30C)	2535	8.7	0.003423	2.5
Extreme (10C)	2535	8.6	0.003382	2.5
Extreme (0C)	2535	8.5	0.003336	2.5
Extreme (-10C)	2535	9.6	0.003796	2.5
Extreme (-20C)	2535	8.7	0.003436	2.5
Extreme (-30C)	2535	8.2	0.003227	2.5

Band 7 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2535	6.9	0.002722	2.5
3.87	2535	6.3	0.002487	2.5
4.45	2535	5.4	0.002139	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.9	0.002722	2.5
Extreme (50C)	2535	5.5	0.002157	2.5
Extreme (40C)	2535	5.2	0.002047	2.5
Extreme (30C)	2535	7.0	0.002754	2.5
Extreme (10C)	2535	5.3	0.002075	2.5
Extreme (0C)	2535	4.7	0.001870	2.5
Extreme (-10C)	2535	4.9	0.001933	2.5
Extreme (-20C)	2535	6.0	0.002349	2.5
Extreme (-30C)	2535	5.7	0.002249	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.5 LTE BAND 12

Band 12 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	707.5	8.5	0.012042	2.5
3.87	707.5	9.6	0.013578	2.5
4.45	707.5	8.6	0.012147	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	9.1	0.012861	2.5
Extreme (50C)	707.5	7.2	0.010238	2.5
Extreme (40C)	707.5	7.3	0.010380	2.5
Extreme (30C)	707.5	8.3	0.011666	2.5
Extreme (10C)	707.5	7.7	0.010912	2.5
Extreme (0C)	707.5	8.5	0.012017	2.5
Extreme (-10C)	707.5	8.0	0.011370	2.5
Extreme (-20C)	707.5	8.4	0.011877	2.5
Extreme (-30C)	707.5	7.9	0.011231	2.5

Band 12 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	707.5	7.7	0.010852	2.5
3.87	707.5	7.9	0.011230	2.5
4.45	707.5	7.3	0.010252	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	6.5	0.009175	2.5
Extreme (50C)	707.5	5.5	0.007765	2.5
Extreme (40C)	707.5	6.4	0.009110	2.5
Extreme (30C)	707.5	-7.7	-0.010912	2.5
Extreme (10C)	707.5	-8.2	-0.011590	2.5
Extreme (0C)	707.5	2.9	0.004100	2.5
Extreme (-10C)	707.5	-5.2	-0.007292	2.5
Extreme (-20C)	707.5	-8.7	-0.012302	2.5
Extreme (-30C)	707.5	-10.2	-0.014350	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.6 LTE BAND 17

Band 17 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	710.0	10.1	0.014220	2.5
3.87	710.0	9.1	0.012860	2.5
4.45	710.0	8.3	0.011694	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.4	0.013238	2.5
Extreme (50C)	710.0	8.5	0.011937	2.5
Extreme (40C)	710.0	8.5	0.011953	2.5
Extreme (30C)	710.0	8.5	0.011992	2.5
Extreme (10C)	710.0	8.8	0.012374	2.5
Extreme (0C)	710.0	7.6	0.010724	2.5
Extreme (-10C)	710.0	8.9	0.012586	2.5
Extreme (-20C)	710.0	8.6	0.012132	2.5
Extreme (-30C)	710.0	8.2	0.011502	2.5

Band 17 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	710.0	10.3	0.014458	2.5
3.87	710.0	8.9	0.012580	2.5
4.45	710.0	8.1	0.011419	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.1	0.012837	2.5
Extreme (50C)	710.0	9.3	0.013135	2.5
Extreme (40C)	710.0	8.1	0.011380	2.5
Extreme (30C)	710.0	8.9	0.012585	2.5
Extreme (10C)	710.0	7.9	0.011189	2.5
Extreme (0C)	710.0	8.5	0.011977	2.5
Extreme (-10C)	710.0	9.3	0.013143	2.5
Extreme (-20C)	710.0	8.6	0.012072	2.5
Extreme (-30C)	710.0	8.7	0.012230	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.7 LTE BAND 25

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1882.5	10.3	0.005450	2.5
3.87	1882.5	8.8	0.004687	2.5
4.45	1882.5	8.2	0.004334	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	9.4	0.004987	2.5
Extreme (50C)	1882.5	9.2	0.004891	2.5
Extreme (40C)	1882.5	8.3	0.004387	2.5
Extreme (30C)	1882.5	8.9	0.004740	2.5
Extreme (10C)	1882.5	8.9	0.004723	2.5
Extreme (0C)	1882.5	7.9	0.004192	2.5
Extreme (-10C)	1882.5	8.6	0.004577	2.5
Extreme (-20C)	1882.5	9.3	0.004964	2.5
Extreme (-30C)	1882.5	8.0	0.004228	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1882.5	9.6	0.005094	2.5
3.87	1882.5	9.0	0.004756	2.5
4.45	1882.5	8.9	0.004725	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	9.8	0.005213	2.5
Extreme (50C)	1882.5	8.5	0.004521	2.5
Extreme (40C)	1882.5	8.6	0.004585	2.5
Extreme (30C)	1882.5	9.0	0.004784	2.5
Extreme (10C)	1882.5	8.2	0.004382	2.5
Extreme (0C)	1882.5	8.5	0.004490	2.5
Extreme (-10C)	1882.5	9.1	0.004810	2.5
Extreme (-20C)	1882.5	9.3	0.004943	2.5
Extreme (-30C)	1882.5	8.3	0.004412	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.8 LTE BAND 26 A

Band 26A QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz)				
3.29	819.0	9.7	0.011845	2.5
3.87	819.0	8.6	0.010481	2.5
4.45	819.0	7.6	0.009323	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	819.0	10.0	0.012163	2.5
Extreme (50C)	819.0	8.8	0.010790	2.5
Extreme (40C)	819.0	7.7	0.009356	2.5
Extreme (30C)	819.0	8.5	0.010432	2.5
Extreme (10C)	819.0	8.5	0.010422	2.5
Extreme (0C)	819.0	7.9	0.009696	2.5
Extreme (-10C)	819.0	8.8	0.010765	2.5
Extreme (-20C)	819.0	8.7	0.010579	2.5
Extreme (-30C)	819.0	7.7	0.009414	2.5

Band 26A 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz)				
3.29	819.0	10.3	0.012543	2.5
3.87	819.0	8.7	0.010662	2.5
4.45	819.0	8.4	0.010232	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819.0	9.0	0.011000	2.5
Extreme (50C)	819.0	8.6	0.010476	2.5
Extreme (40C)	819.0	8.7	0.010630	2.5
Extreme (30C)	819.0	9.2	0.011276	2.5
Extreme (10C)	819.0	7.7	0.009436	2.5
Extreme (0C)	819.0	8.1	0.009944	2.5
Extreme (-10C)	819.0	9.0	0.010992	2.5
Extreme (-20C)	819.0	8.9	0.010904	2.5
Extreme (-30C)	819.0	8.0	0.009829	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.9 LTE BAND 26 B

Band 26B QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz)				
3.29	836.5	9.4	0.011275	2.5
3.87	836.5	9.3	0.011129	2.5
4.45	836.5	8.0	0.009581	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	836.5	9.6	0.011465	2.5
Extreme (50C)	836.5	8.8	0.010557	2.5
Extreme (40C)	836.5	8.2	0.009826	2.5
Extreme (30C)	836.5	9.4	0.011251	2.5
Extreme (10C)	836.5	8.6	0.010329	2.5
Extreme (0C)	836.5	8.0	0.009523	2.5
Extreme (-10C)	836.5	9.4	0.011292	2.5
Extreme (-20C)	836.5	9.0	0.010760	2.5
Extreme (-30C)	836.5	7.6	0.009130	2.5

Band 26B 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 10MHz)				
3.29	836.5	9.5	0.011415	2.5
3.87	836.5	8.8	0.010540	2.5
4.45	836.5	8.4	0.010023	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	836.5	9.2	0.010954	2.5
Extreme (50C)	836.5	8.7	0.010408	2.5
Extreme (40C)	836.5	7.9	0.009473	2.5
Extreme (30C)	836.5	8.6	0.010271	2.5
Extreme (10C)	836.5	8.2	0.009764	2.5
Extreme (0C)	836.5	8.7	0.010428	2.5
Extreme (-10C)	836.5	9.6	0.011480	2.5
Extreme (-20C)	836.5	9.2	0.010939	2.5
Extreme (-30C)	836.5	8.8	0.010540	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.10 LTE BAND 41

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2600	8.7	0.003348	2.5
3.87	2600	8.9	0.003411	2.5
4.45	2600	8.5	0.003279	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2600	8.6	0.003306	2.5
Extreme (50C)	2600	8.5	0.003278	2.5
Extreme (40C)	2600	8.6	0.003327	2.5
Extreme (30C)	2600	8.2	0.003166	2.5
Extreme (10C)	2600	8.4	0.003232	2.5
Extreme (0C)	2600	6.7	0.002573	2.5
Extreme (-10C)	2600	8.8	0.003403	2.5
Extreme (-20C)	2600	8.6	0.003321	2.5
Extreme (-30C)	2600	5.9	0.002254	2.5

Band 41 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2600	8.5	0.003283	2.5
3.87	2600	9.0	0.003467	2.5
4.45	2600	8.6	0.003312	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2600	9.0	0.003478	2.5
Extreme (50C)	2600	8.3	0.003211	2.5
Extreme (40C)	2600	8.1	0.003110	2.5
Extreme (30C)	2600	7.9	0.003046	2.5
Extreme (10C)	2600	8.7	0.003355	2.5
Extreme (0C)	2600	6.9	0.002652	2.5
Extreme (-10C)	2600	8.3	0.003196	2.5
Extreme (-20C)	2600	8.8	0.003386	2.5
Extreme (-30C)	2600	6.0	0.002310	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.11 LTE BAND 66

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	6.1	0.003509	2.5
3.87	1745	7.1	0.004057	2.5
4.45	1745	7.8	0.004496	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	5.9	0.003397	2.5
Extreme (50C)	1745	7.6	0.004336	2.5
Extreme (40C)	1745	6.4	0.003655	2.5
Extreme (30C)	1745	6.9	0.003967	2.5
Extreme (10C)	1745	7.6	0.004342	2.5
Extreme (0C)	1745	6.8	0.003905	2.5
Extreme (-10C)	1745	5.9	0.003396	2.5
Extreme (-20C)	1745	6.5	0.003701	2.5
Extreme (-30C)	1745	5.1	0.002926	2.5

Band 66 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	8.1	0.004650	2.5
3.87	1745	7.8	0.004497	2.5
4.45	1745	9.1	0.005201	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	9.0	0.005134	2.5
Extreme (50C)	1745	7.8	0.004494	2.5
Extreme (40C)	1745	8.7	0.004983	2.5
Extreme (30C)	1745	7.7	0.004388	2.5
Extreme (10C)	1745	8.3	0.004783	2.5
Extreme (0C)	1745	6.8	0.003916	2.5
Extreme (-10C)	1745	8.7	0.004962	2.5
Extreme (-20C)	1745	8.4	0.004827	2.5
Extreme (-30C)	1745	5.8	0.003338	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

11. Peak-to-Average Ratio

11.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

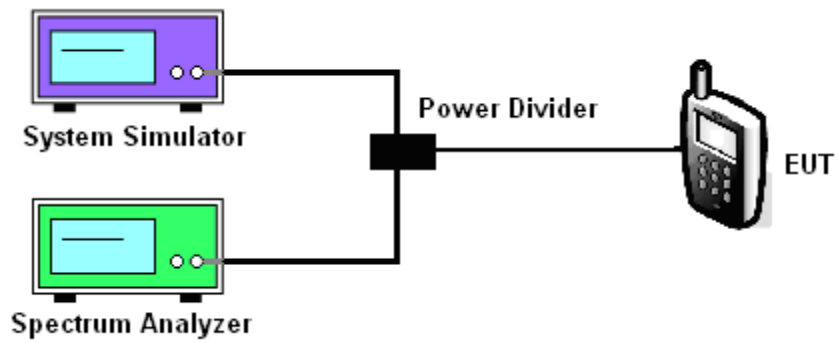
11.2 Measuring Instruments

See list of measuring instruments of this test report.

11.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. 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.
3. For LTE operating modes:
 - a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
 - b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

11.4 Test Setup



MODES TESTED

LTE Band 2/4/5/7/12/17/25/26/41/66

Test data reference attachment.

-----END OF REPORT-----