

FCC CFR47 PART 22H, 24E, 27,90S CERTIFICATION TEST REPORT

FCC ID: 2ANMU-25157

Product: Smart Phone
Trade Mark: OUKITEL
Model No.: WP55
Family Model: WP55 Pro, WP55 S, WP55 Plus, WP55 Ultra,
WP55 TITAN, WP55 GT, WP55 E
Report No.: S25022002906006
Issue Date: Mar. 28, 2025

Prepared for

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A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE,
GUANLAN, LONGHUA SHENZHEN,
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Prepared by

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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 .. : WP55

Trade Mark..... : OUKITEL

Family Model..... : WP55 Pro, WP55 S, WP55 Plus, WP55 Ultra, WP55 TITAN, WP55
GT, WP55 E

Test Sample Number..... S250220029007

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.

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Date of Test

Date (s) of performance of tests..... Feb. 20, 2025 ~Mar. 28, 2025

Date of Issue Mar. 28, 2025

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

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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	WP55
Family Model	WP55 Pro, WP55 S, WP55 Plus, WP55 Ultra, WP55 TITAN, WP55 GT, WP55 E
Model Difference	All models are the same circuit and RF module, except for model names.
FCC ID:	2ANMU-25157
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2,4,5,7,12,13, 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 13 Uplink: 777MHz-787MHz, Downlink: 746MHz-756MHz; 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: 2496MHz-2690MHz 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: 0.47 dBi, Band 4: 0.54 dBi, Band 5: -0.87 dBi, Band 7: -0.47 dBi, Band 12: -1.22 dBi, Band 13: -1.45 dBi, Band 17: -1.25 dBi, Band25: 0.47 dBi, Band 26: -0.87 dBi, Band 41: -0.79 dBi , Band66: 0.58 dBi;

Adapter	Model: HJ-PD33W-US Input: 100-240V~50/60Hz 0.8A Output: 5.0V $\overline{\text{---}}$ 3.0A OR 9.0V $\overline{\text{---}}$ 3.0A OR 12.0V $\overline{\text{---}}$ 2.75A 33.0W MAX
Battery	DC 3.87V, 11000mAh, 42.57Wh
Power supply	DC 3.87V from battery or DC 5V/9V/12V from adapter
Extreme Vol. Limits:	DC 3.29V to DC 4.45V (Nominal DC 3.87V) (Note 1)
HW Version	G3355V-MQ
FW Version	N/A
SW Version	OUKITEK_WP55_EEA_V06
** 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-25157** 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 expended 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% ($U = 2U_c(y)$)	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 2/4/5/7/12/13/17/25/26/41/66

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	WP55	FCC ID: 2ANMU-25157	EUT

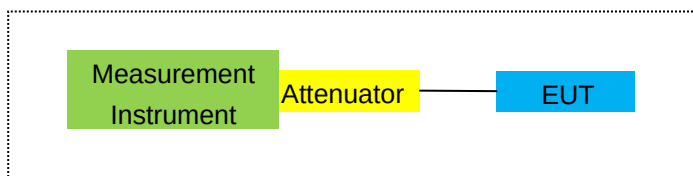
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

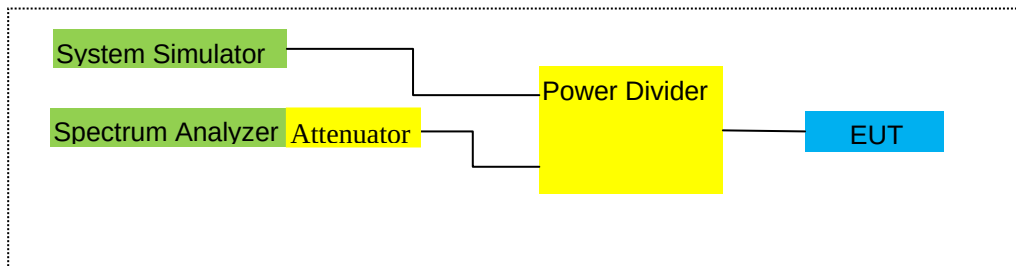
For Radiated Test Cases



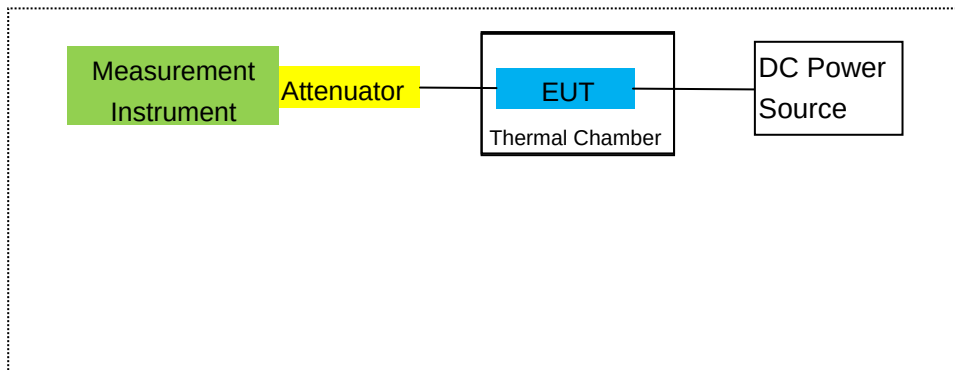
For Conducted Output Power



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	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	055	2024.05.17	2027.05.16	3 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	N/A	N/A	N/A
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	N/A	N/A	N/A
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	MY41000130	2024.04.26	2025.04.25	1 year
23	test receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	1 year
24	Communication Tester	R&S	CMU200	105747	2024/4/26	2025/4/25	1 year

25	High and Low Temperature Box	WEISS	WT 20/40 EMC Simpac	58226119460030	2024.05.30	2027.05.29	3 year
26	DC Power Source	N/A	PS-6005D	20170402923	2024.04.25	2027.04.24	3 year
27	Wideband Radio Communication Tester Specifications	R&S	CMW500	148500	2024.05.30	2025.05.29	1 year
28	Bilog Antenna	ETS	3142E	00214344	2024.07.19	2025.07.18	1 year
29	Horn Antenna	SCHWARZBECK	BBHA 9120 D	2817	2024.07.20	2025.07.19	1 year
30	Signal Generator	Keysight	N5183B	MY57280984	2024.07.18	2025.07.17	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	MWRFTtest	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 2/4/5/7/12/13/17/25/26/41/66

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 2/4/5/7/12/13/17/25/26/41/66

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 2/4/5/7/12/13/17/25/26/41/66
- ☐

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 2/4/5/7/12/13/17/25/26/41/66

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 (dBi)	Max. EIRP	Max. EIRP Average (mW)	Polarization Of Max. ERP	
						Average			
						(dBm)			
1.4MHz Band QPSK	6/0	1850.7	16.08	3.76	8.90	21.22	132.355	Horizontal	Pass
		1880	15.00	3.91	8.90	19.99	99.852	Horizontal	Pass
		1909.3	14.88	3.93	8.90	19.85	96.598	Horizontal	Pass
3.0MHz Band QPSK	15/0	1851.5	13.60	3.77	8.90	18.73	74.631	Horizontal	Pass
		1880	14.92	3.91	8.90	19.91	97.989	Horizontal	Pass
		1908.5	15.95	3.94	8.90	20.91	123.303	Horizontal	Pass
5.0MHz Band QPSK	25/0	1852.5	15.58	3.77	8.90	20.71	117.676	Horizontal	Pass
		1880	16.96	3.91	8.90	21.95	156.717	Horizontal	Pass
		1907.5	16.80	3.94	8.90	21.76	150.141	Horizontal	Pass
10.0MHz Band QPSK	50/0	1855	17.35	3.79	8.90	22.46	176.161	Horizontal	Pass
		1880	18.33	3.95	8.90	23.28	212.574	Horizontal	Pass
		1905	15.87	3.97	8.90	20.80	120.316	Horizontal	Pass
15.0MHz Band QPSK	75/0	1857.5	15.83	3.79	8.90	20.94	124.185	Horizontal	Pass
		1880	17.21	3.95	8.90	22.16	164.299	Horizontal	Pass
		1902.5	15.66	3.97	8.90	20.59	114.522	Horizontal	Pass
20.0MHz Band QPSK	100/0	1860	16.49	3.81	8.90	21.58	144.025	Horizontal	Pass
		1880	14.83	3.96	8.90	19.77	94.854	Horizontal	Pass
		1900	17.01	4.00	8.90	21.91	155.114	Horizontal	Pass
1.4MHz Band QPSK	6/0	1850.7	15.68	3.76	8.90	20.82	120.889	Vertical	Pass
		1880	15.00	3.91	8.90	19.99	99.871	Vertical	Pass
		1909.3	16.62	3.93	8.90	21.59	144.175	Vertical	Pass
3.0MHz Band QPSK	15/0	1851.5	15.92	3.77	8.90	21.05	127.396	Vertical	Pass
		1880	17.10	3.91	8.90	22.09	161.784	Vertical	Pass
		1908.5	15.50	3.94	8.90	20.46	111.064	Vertical	Pass
5.0MHz Band QPSK	25/0	1852.5	16.01	3.77	8.90	21.14	129.949	Vertical	Pass
		1880	15.42	3.91	8.90	20.41	110.023	Vertical	Pass
		1907.5	16.30	3.94	8.90	21.26	133.708	Vertical	Pass
10.0MHz Band QPSK	50/0	1855	14.70	3.79	8.90	19.81	95.722	Vertical	Pass
		1880	13.58	3.95	8.90	18.53	71.251	Vertical	Pass
		1905	14.98	3.97	8.90	19.91	97.925	Vertical	Pass
15.0MHz	75/0	1857.5	14.99	3.79	8.90	20.10	102.395	Vertical	Pass

Band QPSK		1880	15.86	3.95	8.90	20.81	120.439	Vertical	Pass
		1902.5	16.53	3.97	8.90	21.46	139.888	Vertical	Pass
20.0MHz Band QPSK	100/0	1860	18.22	3.81	8.90	23.31	214.100	Vertical	Pass
		1880	16.21	3.96	8.90	21.15	130.347	Vertical	Pass
		1900	15.39	4.00	8.90	20.29	106.793	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	1850.7	14.60	3.76	8.90	20.74	118.463	Horizontal	Pass
		1880	15.75	3.91	8.90	19.33	85.677	Horizontal	Pass
		1909.3	15.45	3.93	8.90	21.05	127.401	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1851.5	15.29	3.77	8.90	19.13	81.928	Horizontal	Pass
		1880	14.95	3.91	8.90	20.99	125.642	Horizontal	Pass
		1908.5	14.55	3.94	8.90	18.77	75.312	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1852.5	15.14	3.77	8.90	21.53	142.220	Horizontal	Pass
		1880	15.50	3.91	8.90	19.62	91.676	Horizontal	Pass
		1907.5	14.00	3.94	8.90	18.70	74.177	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1855	15.35	3.79	8.90	20.20	104.823	Horizontal	Pass
		1880	14.05	3.95	8.90	20.44	110.622	Horizontal	Pass
		1905	15.36	3.97	8.90	20.59	114.458	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1857.5	13.68	3.79	8.90	20.26	106.247	Horizontal	Pass
		1880	15.77	3.95	8.90	19.61	91.441	Horizontal	Pass
		1902.5	15.65	3.97	8.90	20.95	124.524	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1860	13.84	3.81	8.90	18.64	73.134	Horizontal	Pass
		1880	16.17	3.96	8.90	20.18	104.211	Horizontal	Pass
		1900	14.55	4.00	8.90	18.39	69.013	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1850.7	14.61	3.76	8.90	20.82	120.810	Vertical	Pass
		1880	15.84	3.91	8.90	18.65	73.199	Vertical	Pass
		1909.3	15.13	3.93	8.90	19.88	97.359	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1851.5	13.77	3.77	8.90	18.89	77.391	Vertical	Pass
		1880	14.83	3.91	8.90	20.65	116.119	Vertical	Pass
		1908.5	14.56	3.94	8.90	18.98	79.034	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1852.5	13.76	3.77	8.90	22.08	161.312	Vertical	Pass
		1880	15.05	3.91	8.90	21.64	145.984	Vertical	Pass
		1907.5	15.69	3.94	8.90	20.01	100.245	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1855	13.98	3.79	8.90	20.30	107.153	Vertical	Pass
		1880	15.57	3.95	8.90	20.24	105.612	Vertical	Pass
		1905	15.12	3.97	8.90	20.59	114.602	Vertical	Pass
15.0MHz Band 16	75/0	1857.5	13.85	3.79	8.90	19.79	95.383	Vertical	Pass
		1880	14.87	3.95	8.90	21.00	125.828	Vertical	Pass

QAM		1902.5	13.66	3.97	8.90	19.92	98.112	Vertical	Pass
20.0MHz	100/0	1860	14.29	3.81	8.90	22.17	164.857	Vertical	Pass
Band 16		1880	14.90	3.96	8.90	22.17	164.910	Vertical	Pass
QAM		1900	13.78	4.00	8.90	19.57	90.567	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 (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1710.7	14.76	3.12	8.90	20.54	113.277	Horizontal	Pass
		1732.5	13.72	3.27	8.90	19.35	86.034	Horizontal	Pass
		1754.3	15.85	3.29	8.90	21.46	139.923	Horizontal	Pass
3.0MHz Band QPSK	15/0	1711.5	14.06	3.13	8.90	19.83	96.256	Horizontal	Pass
		1732.5	14.67	3.27	8.90	20.30	107.141	Horizontal	Pass
		1753.5	14.99	3.30	8.90	20.59	114.455	Horizontal	Pass
5.0MHz Band QPSK	25/0	1712.5	15.73	3.13	8.90	21.50	141.416	Horizontal	Pass
		1732.5	15.22	3.27	8.90	20.85	121.517	Horizontal	Pass
		1752.5	14.56	3.30	8.90	20.16	103.803	Horizontal	Pass
10.0MHz Band QPSK	50/0	1715	14.78	3.15	8.90	20.53	112.866	Horizontal	Pass
		1732.5	14.76	3.31	8.90	20.35	108.465	Horizontal	Pass
		1750	15.92	3.33	8.90	21.49	141.024	Horizontal	Pass
15.0MHz Band QPSK	75/0	1717.5	15.29	3.15	8.90	21.04	126.990	Horizontal	Pass
		1732.5	15.75	3.31	8.90	21.34	136.218	Horizontal	Pass
		1747.5	16.76	3.33	8.90	22.33	170.934	Horizontal	Pass
20.0MHz Band QPSK	100/0	1720	13.42	3.17	8.90	19.15	82.201	Horizontal	Pass
		1732.5	15.14	3.32	8.90	20.72	117.948	Horizontal	Pass
		1745	15.31	3.36	8.90	20.85	121.651	Horizontal	Pass
1.4MHz Band QPSK	6/0	1710.7	14.48	3.12	8.90	20.26	106.104	Vertical	Pass
		1732.5	14.96	3.27	8.90	20.59	114.512	Vertical	Pass
		1754.3	15.84	3.29	8.90	21.45	139.700	Vertical	Pass
3.0MHz Band QPSK	15/0	1711.5	15.41	3.13	8.90	21.18	131.228	Vertical	Pass
		1732.5	16.66	3.27	8.90	22.29	169.608	Vertical	Pass
		1753.5	16.33	3.30	8.90	21.93	155.836	Vertical	Pass
5.0MHz Band QPSK	25/0	1712.5	14.44	3.13	8.90	20.21	104.980	Vertical	Pass
		1732.5	15.07	3.27	8.90	20.70	117.561	Vertical	Pass
		1752.5	13.67	3.30	8.90	19.27	84.473	Vertical	Pass
10.0MHz Band	50/0	1715	12.37	3.15	8.90	18.12	64.879	Vertical	Pass
		1732.5	15.60	3.31	8.90	21.19	131.611	Vertical	Pass

QPSK		1750	14.41	3.33	8.90	19.98	99.551	Vertical	Pass
15.0MHz	75/0	1717.5	15.50	3.15	8.90	21.25	133.395	Vertical	Pass
Band		1732.5	16.63	3.31	8.90	22.22	166.678	Vertical	Pass
QPSK		1747.5	14.62	3.33	8.90	20.19	104.531	Vertical	Pass
20.0MHz	100/0	1720	16.98	3.17	8.90	22.71	186.522	Vertical	Pass
Band		1732.5	16.35	3.32	8.90	21.93	155.821	Vertical	Pass
QPSK		1745	14.56	3.36	8.90	20.10	102.320	Vertical	Pass

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	1710.7	15.25	3.12	8.90	21.03	126.674	Horizontal	Pass
		1732.5	15.76	3.27	8.90	21.39	137.818	Horizontal	Pass
		1754.3	15.81	3.29	8.90	21.42	138.783	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1711.5	13.79	3.13	8.90	19.56	90.401	Horizontal	Pass
		1732.5	14.90	3.27	8.90	20.53	113.108	Horizontal	Pass
		1753.5	16.76	3.30	8.90	22.36	172.085	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1712.5	14.40	3.13	8.90	20.17	103.938	Horizontal	Pass
		1732.5	12.96	3.27	8.90	18.59	72.211	Horizontal	Pass
		1752.5	14.34	3.30	8.90	19.94	98.609	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1715	15.38	3.15	8.90	21.13	129.849	Horizontal	Pass
		1732.5	13.39	3.31	8.90	18.98	78.989	Horizontal	Pass
		1750	13.25	3.33	8.90	18.82	76.157	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1717.5	14.73	3.15	8.90	20.48	111.672	Horizontal	Pass
		1732.5	15.33	3.31	8.90	20.92	123.518	Horizontal	Pass
		1747.5	15.09	3.33	8.90	20.66	116.538	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1720	13.83	3.17	8.90	19.56	90.432	Horizontal	Pass
		1732.5	15.44	3.32	8.90	21.02	126.498	Horizontal	Pass
		1745	15.64	3.36	8.90	21.18	131.179	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1710.7	16.15	3.12	8.90	21.93	155.811	Vertical	Pass
		1732.5	14.77	3.27	8.90	20.40	109.658	Vertical	Pass
		1754.3	14.75	3.29	8.90	20.36	108.583	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1711.5	14.94	3.13	8.90	20.71	117.642	Vertical	Pass
		1732.5	14.42	3.27	8.90	20.05	101.172	Vertical	Pass
		1753.5	15.76	3.30	8.90	21.36	136.723	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1712.5	16.51	3.13	8.90	22.28	169.116	Vertical	Pass
		1732.5	15.79	3.27	8.90	21.42	138.640	Vertical	Pass
		1752.5	13.86	3.30	8.90	19.46	88.406	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1715	13.63	3.15	8.90	19.38	86.706	Vertical	Pass
		1732.5	14.55	3.31	8.90	20.14	103.313	Vertical	Pass
		1750	16.86	3.33	8.90	22.43	174.990	Vertical	Pass

15.0MHz	75/0	1717.5	14.31	3.15	8.90	20.06	101.329	Vertical	Pass
Band 16		1732.5	14.16	3.31	8.90	19.75	94.398	Vertical	Pass
QAM		1747.5	15.02	3.33	8.90	20.59	114.527	Vertical	Pass
20.0MHz	100/0	1720	15.75	3.17	8.90	21.48	140.622	Vertical	Pass
Band 16		1732.5	16.99	3.32	8.90	22.57	180.515	Vertical	Pass
QAM		1745	14.88	3.36	8.90	20.42	110.165	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	6/0	824.7	20.43	2.01	5.30	2.15	21.57	143.445	Horizontal	Pass
		836.5	21.21	2.01	5.30	2.15	22.35	171.629	Horizontal	Pass
		848.3	20.26	2.02	5.70	2.15	21.79	151.033	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	21.73	2.01	5.30	2.15	22.87	193.697	Horizontal	Pass
		836.5	21.42	2.01	5.30	2.15	22.56	180.482	Horizontal	Pass
		847.5	21.02	2.02	5.70	2.15	22.55	179.801	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	21.09	2.01	5.30	2.15	22.23	167.293	Horizontal	Pass
		836.5	22.11	2.01	5.30	2.15	23.25	211.340	Horizontal	Pass
		846.5	21.56	2.02	5.70	2.15	23.09	203.623	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	20.67	2.01	5.30	2.15	21.81	151.633	Horizontal	Pass
		836.5	22.21	2.01	5.30	2.15	23.35	216.374	Horizontal	Pass
		844	20.57	2.02	5.70	2.15	22.10	162.099	Horizontal	Pass
1.4MHz Band QPSK	6/0	824.7	22.98	2.01	5.30	2.15	24.12	258.038	Vertical	Pass
		836.5	22.57	2.01	5.30	2.15	23.71	234.806	Vertical	Pass
		848.3	20.80	2.02	5.70	2.15	22.33	171.085	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	22.18	2.01	5.30	2.15	23.32	214.722	Vertical	Pass
		836.5	21.49	2.01	5.30	2.15	22.63	183.317	Vertical	Pass
		847.5	19.91	2.02	5.70	2.15	21.44	139.177	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	19.70	2.01	5.30	2.15	20.84	121.368	Vertical	Pass
		836.5	22.15	2.01	5.30	2.15	23.29	213.543	Vertical	Pass
		846.5	20.97	2.02	5.70	2.15	22.50	177.838	Vertical	Pass
10.0MHz Band QPSK	50/0	829	20.05	2.01	5.30	2.15	21.19	131.464	Vertical	Pass
		836.5	23.56	2.01	5.30	2.15	24.70	294.858	Vertical	Pass
		844	20.66	2.02	5.70	2.15	22.19	165.629	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	6/0	824.7	20.34	2.01	5.30	2.15	21.48	140.498	Horizontal	Pass
		836.5	20.95	2.01	5.30	2.15	22.09	161.682	Horizontal	Pass
		848.3	20.23	2.02	5.70	2.15	21.76	149.885	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	21.14	2.01	5.30	2.15	22.28	168.907	Horizontal	Pass
		836.5	19.88	2.01	5.30	2.15	21.02	126.517	Horizontal	Pass
		847.5	20.37	2.02	5.70	2.15	21.90	154.880	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	20.82	2.01	5.30	2.15	21.96	157.110	Horizontal	Pass
		836.5	19.91	2.01	5.30	2.15	21.05	127.463	Horizontal	Pass
		846.5	19.94	2.02	5.70	2.15	21.47	140.277	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	829	19.83	2.01	5.30	2.15	20.97	125.099	Horizontal	Pass
		836.5	20.01	2.01	5.30	2.15	21.15	130.178	Horizontal	Pass
		844	20.03	2.02	5.70	2.15	21.56	143.247	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	21.71	2.01	5.30	2.15	22.85	192.792	Vertical	Pass
		836.5	20.80	2.01	5.30	2.15	21.94	156.378	Vertical	Pass
		848.3	20.31	2.02	5.70	2.15	21.84	152.694	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	18.84	2.01	5.30	2.15	19.98	99.605	Vertical	Pass
		836.5	20.63	2.01	5.30	2.15	21.77	150.419	Vertical	Pass
		847.5	19.52	2.02	5.70	2.15	21.05	127.397	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	20.33	2.01	5.30	2.15	21.47	140.330	Vertical	Pass
		836.5	17.71	2.01	5.30	2.15	18.85	76.807	Vertical	Pass
		846.5	20.46	2.02	5.70	2.15	21.99	158.049	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	19.40	2.01	5.30	2.15	20.54	113.164	Vertical	Pass
		836.5	22.16	2.01	5.30	2.15	23.30	213.944	Vertical	Pass
		844	21.71	2.02	5.70	2.15	23.24	210.808	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 (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	25/0	2502.5	17.91	4.54	9.00	22.37	172.644	Horizontal	Pass
		2535	18.18	4.69	9.00	22.49	177.573	Horizontal	Pass
		2567.5	15.58	4.71	9.00	19.87	97.106	Horizontal	Pass
10.0MHz Band QPSK	50/0	2505	15.49	4.55	9.00	19.94	98.700	Horizontal	Pass
		2535	18.28	4.69	9.00	22.59	181.581	Horizontal	Pass
		2565	18.30	4.72	9.00	22.58	181.230	Horizontal	Pass
15.0MHz Band QPSK	75/0	2507.5	19.16	4.55	9.00	23.61	229.766	Horizontal	Pass
		2535	18.87	4.69	9.00	23.18	207.834	Horizontal	Pass
		2562.5	17.62	4.72	9.00	21.90	154.899	Horizontal	Pass
20.0MHz Band QPSK	100/0	2510	16.21	4.57	9.00	20.64	115.987	Horizontal	Pass
		2535	19.00	4.73	9.00	23.27	212.142	Horizontal	Pass
		2560	17.57	4.75	9.00	21.82	152.163	Horizontal	Pass
5.0MHz Band QPSK	25/0	2502.5	17.43	4.54	9.00	21.89	154.421	Vertical	Pass
		2535	18.72	4.69	9.00	23.03	201.006	Vertical	Pass
		2567.5	18.45	4.71	9.00	22.74	187.803	Vertical	Pass
10.0MHz Band QPSK	50/0	2505	16.60	4.55	9.00	21.05	127.310	Vertical	Pass
		2535	19.35	4.69	9.00	23.66	232.486	Vertical	Pass
		2565	18.28	4.72	9.00	22.56	180.273	Vertical	Pass
15.0MHz Band QPSK	75/0	2507.5	17.75	4.55	9.00	22.20	165.831	Vertical	Pass
		2535	19.95	4.69	9.00	24.26	266.618	Vertical	Pass
		2562.5	17.92	4.72	9.00	22.20	165.906	Vertical	Pass
20.0MHz Band QPSK	100/0	2510	20.28	4.57	9.00	24.71	295.481	Vertical	Pass
		2535	19.34	4.73	9.00	23.61	229.848	Vertical	Pass
		2560	19.54	4.75	9.00	23.79	239.493	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	25/0	2502.5	16.59	4.54	9.00	21.05	127.207	Horizontal	Pass
		2535	18.15	4.69	9.00	22.46	176.131	Horizontal	Pass
		2567.5	17.76	4.71	9.00	22.05	160.390	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	2505	17.09	4.55	9.00	21.54	142.619	Horizontal	Pass
		2535	17.47	4.69	9.00	21.78	150.709	Horizontal	Pass
		2565	18.74	4.72	9.00	23.02	200.317	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	2507.5	18.41	4.55	9.00	22.86	193.162	Horizontal	Pass
		2535	18.36	4.69	9.00	22.67	184.923	Horizontal	Pass
		2562.5	17.22	4.72	9.00	21.50	141.153	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	2510	17.31	4.57	9.00	21.74	149.222	Horizontal	Pass
		2535	16.52	4.73	9.00	20.79	119.954	Horizontal	Pass
		2560	17.57	4.75	9.00	21.82	152.192	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	2502.5	18.45	4.54	9.00	22.91	195.561	Vertical	Pass
		2535	19.42	4.69	9.00	23.73	236.216	Vertical	Pass
		2567.5	18.38	4.71	9.00	22.67	184.782	Vertical	Pass
10.0MHz Band 16 QAM	50/0	2505	17.87	4.55	9.00	22.32	170.552	Vertical	Pass
		2535	19.81	4.69	9.00	24.12	258.354	Vertical	Pass
		2565	17.09	4.72	9.00	21.37	137.025	Vertical	Pass
15.0MHz Band 16 QAM	75/0	2507.5	18.02	4.55	9.00	22.47	176.691	Vertical	Pass
		2535	18.16	4.69	9.00	22.47	176.585	Vertical	Pass
		2562.5	16.67	4.72	9.00	20.95	124.327	Vertical	Pass
20.0MHz Band 16 QAM	100/0	2510	19.98	4.57	9.00	24.41	276.206	Vertical	Pass
		2535	17.99	4.73	9.00	22.26	168.109	Vertical	Pass
		2560	18.64	4.75	9.00	22.89	194.608	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. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	699.7	18.22	1.91	5.60	2.15	19.76	94.566	Horizontal	Pass
		707.5	20.06	1.91	5.70	2.15	21.70	148.006	Horizontal	Pass
		715.3	16.76	1.93	5.80	2.15	18.48	70.430	Horizontal	Pass
3.0MHz Band QPSK	15/0	700.5	17.42	1.91	5.60	2.15	18.96	78.651	Horizontal	Pass
		707.5	17.24	1.91	5.70	2.15	18.88	77.342	Horizontal	Pass
		714.5	17.80	1.93	5.80	2.15	19.52	89.636	Horizontal	Pass
5.0MHz Band QPSK	25/0	701.5	17.76	1.91	5.60	2.15	19.30	85.104	Horizontal	Pass
		707.5	18.80	1.91	5.70	2.15	20.44	110.786	Horizontal	Pass
		713.5	18.43	1.92	5.80	2.15	20.16	103.759	Horizontal	Pass
10.0MHz Band QPSK	50/0	704	18.41	1.91	5.60	2.15	19.95	98.942	Horizontal	Pass
		707.5	17.29	1.91	5.70	2.15	18.93	78.221	Horizontal	Pass
		711	16.14	1.92	5.80	2.15	17.87	61.281	Horizontal	Pass
1.4MHz Band QPSK	6/0	699.7	17.22	1.91	5.60	2.15	18.76	75.115	Vertical	Pass
		707.5	17.00	1.91	5.70	2.15	18.64	73.042	Vertical	Pass
		715.3	16.80	1.93	5.80	2.15	18.52	71.113	Vertical	Pass
3.0MHz Band QPSK	15/0	700.5	17.77	1.91	5.60	2.15	19.31	85.220	Vertical	Pass
		707.5	15.97	1.91	5.70	2.15	17.61	57.650	Vertical	Pass
		714.5	18.79	1.93	5.80	2.15	20.51	112.479	Vertical	Pass
5.0MHz Band QPSK	25/0	701.5	18.00	1.91	5.60	2.15	19.54	89.954	Vertical	Pass
		707.5	17.33	1.91	5.70	2.15	18.97	78.938	Vertical	Pass
		713.5	17.16	1.92	5.80	2.15	18.89	77.369	Vertical	Pass
10.0MHz Band QPSK	50/0	704	17.74	1.91	5.60	2.15	19.28	84.810	Vertical	Pass
		707.5	20.38	1.91	5.70	2.15	22.02	159.302	Vertical	Pass
		711	19.05	1.92	5.80	2.15	20.78	119.729	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. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	699.7	20.62	1.91	5.60	2.15	22.16	164.345	Horizontal	Pass
		707.5	20.85	1.91	5.70	2.15	22.49	177.310	Horizontal	Pass
		715.3	20.86	1.93	5.80	2.15	22.58	181.026	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	700.5	21.71	1.91	5.60	2.15	23.25	211.133	Horizontal	Pass
		707.5	19.60	1.91	5.70	2.15	21.24	132.893	Horizontal	Pass
		714.5	20.27	1.93	5.80	2.15	21.99	158.165	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	701.5	20.05	1.91	5.60	2.15	21.59	144.092	Horizontal	Pass
		707.5	21.79	1.91	5.70	2.15	23.43	220.191	Horizontal	Pass
		713.5	21.86	1.92	5.80	2.15	23.59	228.618	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	704	21.62	1.91	5.60	2.15	23.16	207.101	Horizontal	Pass
		707.5	20.23	1.91	5.70	2.15	21.87	153.711	Horizontal	Pass
		711	21.72	1.92	5.80	2.15	23.45	221.563	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	699.7	18.79	1.91	5.60	2.15	20.33	108.015	Vertical	Pass
		707.5	20.83	1.91	5.70	2.15	22.47	176.708	Vertical	Pass
		715.3	21.20	1.93	5.80	2.15	22.92	195.858	Vertical	Pass
3.0MHz Band 16 QAM	15/0	700.5	22.11	1.91	5.60	2.15	23.65	231.757	Vertical	Pass
		707.5	20.80	1.91	5.70	2.15	22.44	175.380	Vertical	Pass
		714.5	21.92	1.93	5.80	2.15	23.64	231.109	Vertical	Pass
5.0MHz Band 16 QAM	25/0	701.5	20.58	1.91	5.60	2.15	22.12	163.038	Vertical	Pass
		707.5	21.73	1.91	5.70	2.15	23.37	217.232	Vertical	Pass
		713.5	19.43	1.92	5.80	2.15	21.16	130.700	Vertical	Pass
10.0MHz Band 16 QAM	50/0	704	21.45	1.91	5.60	2.15	22.99	199.105	Vertical	Pass
		707.5	22.55	1.91	5.70	2.15	24.19	262.705	Vertical	Pass
		711	21.04	1.92	5.80	2.15	22.77	189.135	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 13

Radiated Power (ERP) for Band 13										
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	
5.0MHz Band QPSK	1/#Mid	779.5	19.88	1.91	5.60	2.15	21.42	138.831	Horizontal	Pass
		782	19.66	1.91	5.70	2.15	21.30	134.889	Horizontal	Pass
		784.5	20.12	1.92	5.80	2.15	21.85	153.035	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	782	20.55	1.91	5.70	2.15	22.19	165.745	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	779.5	20.64	1.91	5.60	2.15	22.18	165.044	Vertical	Pass
		782	20.51	1.91	5.70	2.15	22.15	164.141	Vertical	Pass
		784.5	20.06	1.92	5.80	2.15	21.79	150.979	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	782	20.80	1.91	5.70	2.15	22.44	175.254	Horizontal	Pass

Radiated Power (ERP) for Band 13										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR Average (dBm)	Max. EPR Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	779.5	20.17	1.91	5.60	2.15	21.71	148.284	Horizontal	Pass
		782	20.14	1.91	5.70	2.15	21.78	150.673	Horizontal	Pass
		784.5	20.31	1.92	5.80	2.15	22.04	159.972	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	782	20.55	1.91	5.70	2.15	22.19	165.745	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	779.5	20.52	1.91	5.60	2.15	22.06	160.693	Vertical	Pass
		782	20.46	1.91	5.70	2.15	22.10	162.078	Vertical	Pass
		784.5	20.09	1.92	5.80	2.15	21.82	152.052	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	782	19.70	1.91	5.70	2.15	21.34	136.034	Horizontal	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

8.8 LTE BAND 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dBi)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	25/0	706.5	16.50	1.91	5.60	2.15	18.04	63.708	Vertical	Pass
		710	17.70	1.91	5.70	2.15	19.34	85.923	Vertical	Pass
		713.5	18.79	1.92	5.80	2.15	20.52	112.640	Vertical	Pass
10.0MHz Band QPSK	50/0	709	15.83	1.91	5.60	2.15	17.37	54.514	Vertical	Pass
		710	17.65	1.91	5.70	2.15	19.29	85.008	Vertical	Pass
		711	15.34	1.92	5.80	2.15	17.07	50.875	Vertical	Pass
5.0MHz Band QPSK	25/0	706.5	16.98	1.91	5.60	2.15	18.52	71.183	Horizontal	Pass
		710	15.78	1.91	5.70	2.15	17.42	55.206	Horizontal	Pass
		713.5	17.36	1.92	5.80	2.15	19.09	81.042	Horizontal	Pass
10.0MHz Band QPSK	50/0	709	18.46	1.91	5.60	2.15	20.00	100.019	Horizontal	Pass
		710	19.05	1.91	5.70	2.15	20.69	117.223	Horizontal	Pass
		711	18.39	1.92	5.80	2.15	20.12	102.870	Horizontal	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dBi)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	25/0	706.5	16.81	1.91	5.6	2.15	21.86	153.614	Vertical	Pass
		710	16.39	1.91	5.7	2.15	20.99	125.740	Vertical	Pass
		713.5	17.43	1.92	5.8	2.15	21.71	148.262	Vertical	Pass
10.0MHz Band 16 QAM	50/0	709	15.91	1.91	5.6	2.15	20.96	124.604	Vertical	Pass
		710	15.84	1.91	5.7	2.15	22.56	180.443	Vertical	Pass
		711	15.59	1.92	5.8	2.15	21.65	146.364	Vertical	Pass
5.0MHz Band 16 QAM	25/0	706.5	17.52	1.91	5.6	2.15	21.25	133.417	Horizontal	Pass
		710	17.46	1.91	5.7	2.15	21.88	154.243	Horizontal	Pass
		713.5	16.25	1.92	5.8	2.15	21.55	142.952	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	709	17.30	1.91	5.6	2.15	21.38	137.355	Horizontal	Pass
		710	17.57	1.91	5.7	2.15	22.37	172.748	Horizontal	Pass
		711	16.65	1.92	5.8	2.15	22.71	186.656	Horizontal	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.9 LTE BAND 25

Radiated Power (EIRP) for Band 25									
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	6/0	1850.7	16.17	3.12	8.90	21.95	156.761	Horizontal	Pass
		1882.5	16.31	3.27	8.90	21.94	156.296	Horizontal	Pass
		1914.3	15.76	3.29	8.90	21.37	137.219	Horizontal	Pass
3.0MHz Band QPSK	15/0	1851.5	17.03	3.13	8.90	22.80	190.489	Horizontal	Pass
		1882.5	17.25	3.27	8.90	22.88	193.918	Horizontal	Pass
		1913.5	15.94	3.30	8.90	21.54	142.577	Horizontal	Pass
5.0MHz Band QPSK	25/0	1852.5	15.20	3.13	8.90	20.97	125.037	Horizontal	Pass
		1882.5	15.11	3.27	8.90	20.74	118.476	Horizontal	Pass
		1912.5	15.66	3.30	8.90	21.26	133.807	Horizontal	Pass
10.0MHz Band QPSK	50/0	1855	16.60	3.15	8.90	22.35	171.659	Horizontal	Pass
		1882.5	16.81	3.31	8.90	22.40	173.637	Horizontal	Pass
		1910	15.65	3.33	8.90	21.22	132.473	Horizontal	Pass
15.0MHz Band QPSK	75/0	1857.5	16.81	3.15	8.90	22.56	180.342	Horizontal	Pass
		1882.5	16.67	3.31	8.90	22.26	168.273	Horizontal	Pass
		1907.5	16.54	3.33	8.90	22.11	162.459	Horizontal	Pass
20.0MHz Band QPSK	100/0	1860	14.30	3.17	8.90	20.03	100.675	Horizontal	Pass
		1882.5	17.44	3.32	8.90	23.02	200.557	Horizontal	Pass
		1905	16.12	3.36	8.90	21.66	146.424	Horizontal	Pass
1.4MHz Band QPSK	6/0	1850.7	17.61	3.12	8.90	23.39	218.172	Vertical	Pass
		1882.5	16.13	3.27	8.90	21.76	149.839	Vertical	Pass
		1914.3	15.36	3.29	8.90	20.97	124.960	Vertical	Pass
3.0MHz Band QPSK	15/0	1851.5	16.71	3.13	8.90	22.48	177.155	Vertical	Pass
		1882.5	15.94	3.27	8.90	21.57	143.584	Vertical	Pass
		1913.5	17.38	3.30	8.90	22.98	198.413	Vertical	Pass
5.0MHz Band QPSK	25/0	1852.5	16.74	3.13	8.90	22.51	178.101	Vertical	Pass
		1882.5	15.85	3.27	8.90	21.48	140.711	Vertical	Pass
		1912.5	16.81	3.30	8.90	22.41	174.338	Vertical	Pass
10.0MHz Band QPSK	50/0	1855	14.82	3.15	8.90	20.57	114.060	Vertical	Pass
		1882.5	17.25	3.31	8.90	22.84	192.268	Vertical	Pass
		1910	16.52	3.33	8.90	22.09	161.987	Vertical	Pass

15.0MHz	75/0	1857.5	15.34	3.15	8.90	21.09	128.398	Vertical	Pass
Band		1882.5	16.07	3.31	8.90	21.66	146.433	Vertical	Pass
QPSK		1907.5	15.42	3.33	8.90	20.99	125.476	Vertical	Pass
20.0MHz	100/0	1860	14.29	3.17	8.90	20.02	100.455	Vertical	Pass
Band		1882.5	18.00	3.32	8.90	23.58	227.904	Vertical	Pass
QPSK		1905	17.54	3.36	8.90	23.08	203.323	Vertical	Pass

Radiated Power (EIRP) for Band 25									
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	6/0	1850.7	16.39	3.12	8.90	22.17	164.694	Horizontal	Pass
		1882.5	16.42	3.27	8.90	22.05	160.506	Horizontal	Pass
		1914.3	16.48	3.29	8.90	22.09	161.638	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1851.5	16.95	3.13	8.90	22.72	187.108	Horizontal	Pass
		1882.5	16.16	3.27	8.90	21.79	151.150	Horizontal	Pass
		1913.5	17.60	3.30	8.90	23.20	208.849	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1852.5	17.44	3.13	8.90	23.21	209.480	Horizontal	Pass
		1882.5	16.81	3.27	8.90	22.44	175.540	Horizontal	Pass
		1912.5	16.31	3.30	8.90	21.91	155.147	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1855	16.15	3.15	8.90	21.90	154.708	Horizontal	Pass
		1882.5	17.07	3.31	8.90	22.66	184.660	Horizontal	Pass
		1910	15.85	3.33	8.90	21.42	138.594	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1857.5	16.21	3.15	8.90	21.96	157.001	Horizontal	Pass
		1882.5	15.54	3.31	8.90	21.13	129.617	Horizontal	Pass
		1907.5	17.19	3.33	8.90	22.76	188.759	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1860	16.78	3.17	8.90	22.51	178.116	Horizontal	Pass
		1882.5	16.81	3.32	8.90	22.39	173.464	Horizontal	Pass
		1905	16.51	3.36	8.90	22.05	160.283	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1850.7	17.13	3.12	8.90	22.91	195.379	Vertical	Pass
		1882.5	16.76	3.27	8.90	22.39	173.268	Vertical	Pass
		1914.3	16.67	3.29	8.90	22.28	168.991	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1851.5	15.74	3.13	8.90	21.51	141.556	Vertical	Pass
		1882.5	16.47	3.27	8.90	22.10	162.139	Vertical	Pass
		1913.5	16.65	3.30	8.90	22.25	167.774	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1852.5	17.12	3.13	8.90	22.89	194.734	Vertical	Pass
		1882.5	16.66	3.27	8.90	22.29	169.289	Vertical	Pass
		1912.5	16.49	3.30	8.90	22.09	161.911	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1855	16.18	3.15	8.90	21.93	156.126	Vertical	Pass
		1882.5	17.05	3.31	8.90	22.64	183.695	Vertical	Pass
		1910	17.37	3.33	8.90	22.94	196.794	Vertical	Pass
15.0MHz Band 16	75/0	1857.5	16.57	3.15	8.90	22.32	170.524	Vertical	Pass
		1882.5	17.74	3.31	8.90	23.33	215.478	Vertical	Pass

QAM		1907.5	17.10	3.33	8.90	22.67	184.934	Vertical	Pass
20.0MHz	100/0	1860	18.07	3.17	8.90	23.80	239.665	Vertical	Pass
Band 16		1882.5	17.18	3.32	8.90	22.76	188.655	Vertical	Pass
QAM		1905	16.30	3.36	8.90	21.84	152.747	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)

8.10 LTE BAND 26 A

Radiated Power (ERP) for Band 26(814-824)										
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 BW QPSK	6/0	814.7	21.73	3.76	5.60	2.15	21.42	138.786	Horizontal	Pass
		819	21.68	3.91	5.70	2.15	21.32	135.532	Horizontal	Pass
		823.3	20.46	3.93	5.80	2.15	20.18	104.131	Horizontal	Pass
3.0MHz BW QPSK	15/0	815.5	21.16	3.77	5.60	2.15	20.84	121.271	Horizontal	Pass
		819	22.02	3.91	5.70	2.15	21.66	146.629	Horizontal	Pass
		822.5	20.94	3.94	5.80	2.15	20.65	116.257	Horizontal	Pass
5.0MHz BW QPSK	25/0	816.5	20.60	3.77	5.60	2.15	20.28	106.662	Horizontal	Pass
		819	21.34	3.91	5.70	2.15	20.98	125.323	Horizontal	Pass
		821.5	21.74	3.94	5.80	2.15	21.45	139.531	Horizontal	Pass
10.0MHz BW QPSK	50/0	819	21.89	3.91	5.70	2.15	21.53	142.191	Horizontal	Pass
1.4MHz BW QPSK	6/0	814.7	20.29	3.79	5.60	2.15	19.95	98.813	Vertical	Pass
		819	21.67	3.95	5.70	2.15	21.27	133.840	Vertical	Pass
		823.3	20.58	3.97	5.80	2.15	20.26	106.170	Vertical	Pass
3.0MHz BW QPSK	15/0	815.5	21.31	3.77	5.60	2.15	20.99	125.744	Vertical	Pass
		819	20.99	3.91	5.70	2.15	20.63	115.490	Vertical	Pass
		822.5	20.93	3.94	5.80	2.15	20.64	115.776	Vertical	Pass
5.0MHz BW QPSK	25/0	816.5	21.51	3.77	5.60	2.15	21.19	131.615	Vertical	Pass
		819	22.49	3.91	5.70	2.15	22.13	163.161	Vertical	Pass
		821.5	21.44	3.94	5.80	2.15	21.15	130.460	Vertical	Pass
10.0MHz BW QPSK	50/0	819	22.58	3.91	5.70	2.15	22.22	166.690	Vertical	Pass

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW 16 QAM	6/0	814.7	23.81	3.76	5.60	2.15	23.50	223.813	Horizontal	Pass
		819	22.66	3.91	5.70	2.15	22.30	169.911	Horizontal	Pass
		823.3	23.39	3.93	5.80	2.15	23.11	204.711	Horizontal	Pass
3.0MHz BW 16 QAM	15/0	815.5	23.31	3.77	5.60	2.15	22.99	198.892	Horizontal	Pass
		819	22.62	3.91	5.70	2.15	22.26	168.410	Horizontal	Pass
		822.5	22.37	3.94	5.80	2.15	22.08	161.473	Horizontal	Pass
5.0MHz BW 16 QAM	25/0	816.5	22.63	3.77	5.60	2.15	22.31	170.406	Horizontal	Pass
		819	22.31	3.91	5.70	2.15	21.95	156.606	Horizontal	Pass
		821.5	23.35	3.94	5.80	2.15	23.06	202.147	Horizontal	Pass
10.0MHz BW 16 QAM	50/0	819	22.36	3.91	5.70	2.15	22.00	158.455	Horizontal	Pass
1.4MHz BW 16 QAM	6/0	814.7	22.80	3.79	5.60	2.15	22.46	176.253	Vertical	Pass
		819	23.99	3.95	5.70	2.15	23.59	228.330	Vertical	Pass
		823.3	22.33	3.97	5.80	2.15	22.01	158.738	Vertical	Pass
3.0MHz BW 16 QAM	15/0	815.5	24.09	3.77	5.60	2.15	23.77	238.283	Vertical	Pass
		819	22.48	3.91	5.70	2.15	22.12	163.059	Vertical	Pass
		822.5	22.36	3.94	5.80	2.15	22.07	161.206	Vertical	Pass
5.0MHz BW 16 QAM	25/0	816.5	23.15	3.77	5.60	2.15	22.83	191.717	Vertical	Pass
		819	22.77	3.91	5.70	2.15	22.41	174.265	Vertical	Pass
		821.5	22.36	3.94	5.80	2.15	22.07	161.107	Vertical	Pass
10.0MHz BW 16 QAM	50/0	819	24.25	3.91	5.70	2.15	23.89	244.898	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

8.11 LTE BAND 26 B

Radiated Power (ERP) for Band 26(824-849)										
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	6/0	824.7	22.10	2.01	5.30	2.15	23.24	210.936	Horizontal	Pass
		836.5	20.53	2.01	5.30	2.15	21.67	146.763	Horizontal	Pass
		848.3	21.47	2.02	5.70	2.15	23.00	199.682	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	20.66	2.01	5.30	2.15	21.80	151.310	Horizontal	Pass
		836.5	20.92	2.01	5.30	2.15	22.06	160.836	Horizontal	Pass
		847.5	20.11	2.02	5.70	2.15	21.64	145.749	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	19.47	2.01	5.30	2.15	20.61	115.177	Horizontal	Pass
		836.5	19.92	2.01	5.30	2.15	21.06	127.497	Horizontal	Pass
		846.5	20.51	2.02	5.70	2.15	22.04	159.803	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	19.86	2.01	5.30	2.15	21.00	125.885	Horizontal	Pass
		836.5	19.90	2.01	5.30	2.15	21.04	126.981	Horizontal	Pass
		844	19.85	2.02	5.70	2.15	21.38	137.510	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	21.51	2.01	5.30	2.15	22.65	184.186	Horizontal	Pass
		836.5	21.00	2.01	5.30	2.15	22.14	163.666	Horizontal	Pass
		841.5	20.27	2.02	5.70	2.15	21.80	151.486	Horizontal	Pass
1.4MHz Band QPSK	6/0	824.7	21.62	2.01	5.30	2.15	22.76	188.601	Vertical	Pass
		836.5	20.93	2.01	5.30	2.15	22.07	161.047	Vertical	Pass
		848.3	21.44	2.02	5.70	2.15	22.97	198.287	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	20.16	2.01	5.30	2.15	21.30	134.920	Vertical	Pass
		836.5	21.30	2.01	5.30	2.15	22.44	175.319	Vertical	Pass
		847.5	20.75	2.02	5.70	2.15	22.28	169.056	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	20.86	2.01	5.30	2.15	22.00	158.403	Vertical	Pass
		836.5	21.57	2.01	5.30	2.15	22.71	186.512	Vertical	Pass
		846.5	20.75	2.02	5.70	2.15	22.28	169.017	Vertical	Pass
10.0MHz Band QPSK	50/0	829	20.95	2.01	5.30	2.15	22.09	161.775	Vertical	Pass
		836.5	22.51	2.01	5.30	2.15	23.65	231.499	Vertical	Pass
		844	21.31	2.02	5.70	2.15	22.84	192.098	Vertical	Pass
15.0MHz Band QPSK	75/0	831.5	21.26	2.01	5.30	2.15	22.40	173.590	Vertical	Pass
		836.5	22.53	2.01	5.30	2.15	23.67	233.037	Vertical	Pass
		841.5	20.09	2.02	5.70	2.15	21.62	145.064	Vertical	Pass

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	824.7	21.34	2.01	5.30	2.15	22.48	176.945	Horizontal	Pass
		836.5	20.43	2.01	5.30	2.15	21.57	143.476	Horizontal	Pass
		848.3	19.66	2.02	5.70	2.15	21.19	131.654	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	19.15	2.01	5.30	2.15	20.29	106.891	Horizontal	Pass
		836.5	20.59	2.01	5.30	2.15	21.73	148.885	Horizontal	Pass
		847.5	20.33	2.02	5.70	2.15	21.86	153.495	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	19.43	2.01	5.30	2.15	20.57	113.930	Horizontal	Pass
		836.5	20.24	2.01	5.30	2.15	21.38	137.333	Horizontal	Pass
		846.5	18.66	2.02	5.70	2.15	20.19	104.460	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	829	19.46	2.01	5.30	2.15	20.60	114.901	Horizontal	Pass
		836.5	21.70	2.01	5.30	2.15	22.84	192.151	Horizontal	Pass
		844	20.38	2.02	5.70	2.15	21.91	155.169	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	20.48	2.01	5.30	2.15	21.62	145.053	Horizontal	Pass
		836.5	19.80	2.01	5.30	2.15	20.94	124.237	Horizontal	Pass
		841.5	20.25	2.02	5.70	2.15	21.78	150.770	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	20.42	2.01	5.30	2.15	21.56	143.261	Vertical	Pass
		836.5	20.47	2.01	5.30	2.15	21.61	144.721	Vertical	Pass
		848.3	20.76	2.02	5.70	2.15	22.29	169.398	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	18.93	2.01	5.30	2.15	20.07	101.693	Vertical	Pass
		836.5	19.09	2.01	5.30	2.15	20.23	105.477	Vertical	Pass
		847.5	20.12	2.02	5.70	2.15	21.65	146.141	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	20.55	2.01	5.30	2.15	21.69	147.699	Vertical	Pass
		836.5	19.44	2.01	5.30	2.15	20.58	114.392	Vertical	Pass
		846.5	21.54	2.02	5.70	2.15	23.07	202.963	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	21.57	2.01	5.30	2.15	22.71	186.714	Vertical	Pass
		836.5	20.95	2.01	5.30	2.15	22.09	161.748	Vertical	Pass
		844	19.78	2.02	5.70	2.15	21.31	135.068	Vertical	Pass

15.0MHz	75/0	831.5	20.03	2.01	5.30	2.15	21.17	130.995	Vertical	Pass
Band		836.5	20.68	2.01	5.30	2.15	21.82	152.153	Vertical	Pass
QPSK		841.5	22.89	2.02	5.70	2.15	24.42	276.902	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

8.12 LTE BAND 41

Radiated Power (EIRP) for Band 41									
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	25/0	2498.5	18.59	4.54	9.00	23.05	201.614	Horizontal	Pass
		2593	18.31	4.69	9.00	22.62	182.903	Horizontal	Pass
		2687.5	17.09	4.71	9.00	21.38	137.356	Horizontal	Pass
10.0MHz Band QPSK	50/0	2501	18.15	4.55	9.00	22.60	181.908	Horizontal	Pass
		2593	17.69	4.69	9.00	22.00	158.414	Horizontal	Pass
		2685	17.35	4.72	9.00	21.63	145.439	Horizontal	Pass
15.0MHz Band QPSK	75/0	2503.5	16.11	4.55	9.00	20.56	113.873	Horizontal	Pass
		2593	19.34	4.69	9.00	23.65	231.729	Horizontal	Pass
		2682.5	18.19	4.72	9.00	22.47	176.461	Horizontal	Pass
20.0MHz Band QPSK	100/0	2506	17.51	4.57	9.00	21.94	156.448	Horizontal	Pass
		2593	17.74	4.73	9.00	22.01	158.679	Horizontal	Pass
		2680	19.03	4.75	9.00	23.28	212.970	Horizontal	Pass
5.0MHz Band QPSK	25/0	2498.5	18.31	4.54	9.00	22.77	189.049	Vertical	Pass
		2593	17.38	4.69	9.00	21.69	147.525	Vertical	Pass
		2687.5	17.39	4.71	9.00	21.68	147.242	Vertical	Pass
10.0MHz Band QPSK	50/0	2501	16.65	4.55	9.00	21.10	128.867	Vertical	Pass
		2593	16.94	4.69	9.00	21.25	133.264	Vertical	Pass
		2685	18.07	4.72	9.00	22.35	171.872	Vertical	Pass
15.0MHz Band QPSK	75/0	2503.5	16.10	4.55	9.00	20.55	113.518	Vertical	Pass
		2593	18.95	4.69	9.00	23.26	211.705	Vertical	Pass
		2682.5	17.00	4.72	9.00	21.28	134.201	Vertical	Pass
20.0MHz Band QPSK	100/0	2506	19.57	4.57	9.00	24.00	251.339	Vertical	Pass
		2593	17.98	4.73	9.00	22.25	168.054	Vertical	Pass
		2680	18.39	4.75	9.00	22.64	183.712	Vertical	Pass

Radiated Power (EIRP) for Band 41									
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	25/0	2498.5	16.40	4.54	9.00	20.86	121.957	Horizontal	Pass
		2593	16.47	4.69	9.00	20.78	119.757	Horizontal	Pass
		2687.5	18.12	4.71	9.00	22.41	174.128	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	2501	17.87	4.55	9.00	22.32	170.709	Horizontal	Pass
		2593	18.52	4.69	9.00	22.83	191.675	Horizontal	Pass
		2685	18.72	4.72	9.00	23.00	199.394	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	2503.5	19.02	4.55	9.00	23.47	222.419	Horizontal	Pass
		2593	18.78	4.69	9.00	23.09	203.645	Horizontal	Pass
		2682.5	18.44	4.72	9.00	22.72	186.876	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	2506	18.23	4.57	9.00	22.66	184.502	Horizontal	Pass
		2593	17.90	4.73	9.00	22.17	164.734	Horizontal	Pass
		2680	19.07	4.75	9.00	23.32	214.847	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	2498.5	18.90	4.54	9.00	23.36	216.538	Vertical	Pass
		2593	17.86	4.69	9.00	22.17	164.690	Vertical	Pass
		2687.5	17.97	4.71	9.00	22.26	168.379	Vertical	Pass
10.0MHz Band 16 QAM	50/0	2501	19.20	4.55	9.00	23.65	232.000	Vertical	Pass
		2593	17.49	4.69	9.00	21.80	151.308	Vertical	Pass
		2685	16.74	4.72	9.00	21.02	126.363	Vertical	Pass
15.0MHz Band 16 QAM	75/0	2503.5	18.48	4.55	9.00	22.93	196.171	Vertical	Pass
		2593	17.29	4.69	9.00	21.60	144.529	Vertical	Pass
		2682.5	17.83	4.72	9.00	22.11	162.522	Vertical	Pass
20.0MHz Band 16 QAM	100/0	2506	18.63	4.57	9.00	23.06	202.083	Vertical	Pass
		2593	19.56	4.73	9.00	23.83	241.273	Vertical	Pass
		2680	18.34	4.75	9.00	22.59	181.517	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)

8.13 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 Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1710.7	14.62	3.12	8.90	20.40	109.592	Horizontal	Pass
		1745	13.80	3.27	8.90	19.43	87.730	Horizontal	Pass
		1779.3	17.16	3.29	8.90	22.77	189.106	Horizontal	Pass
3.0MHz Band QPSK	15/0	1711.5	14.03	3.13	8.90	19.80	95.594	Horizontal	Pass
		1745	15.86	3.27	8.90	21.49	140.783	Horizontal	Pass
		1778.5	14.72	3.30	8.90	20.32	107.583	Horizontal	Pass
5.0MHz Band QPSK	25/0	1712.5	15.90	3.13	8.90	21.67	147.055	Horizontal	Pass
		1745	16.68	3.27	8.90	22.31	170.120	Horizontal	Pass
		1777.5	13.78	3.30	8.90	19.38	86.639	Horizontal	Pass
10.0MHz Band QPSK	50/0	1715	15.84	3.15	8.90	21.59	144.209	Horizontal	Pass
		1745	15.24	3.31	8.90	20.83	120.999	Horizontal	Pass
		1775	15.50	3.33	8.90	21.07	128.027	Horizontal	Pass
15.0MHz Band QPSK	75/0	1717.5	15.55	3.15	8.90	21.30	134.832	Horizontal	Pass
		1745	16.12	3.31	8.90	21.71	148.203	Horizontal	Pass
		1772.5	16.71	3.33	8.90	22.28	168.952	Horizontal	Pass
20.0MHz Band QPSK	100/0	1720	14.62	3.17	8.90	20.35	108.367	Horizontal	Pass
		1745	16.40	3.32	8.90	21.98	157.681	Horizontal	Pass
		1770	16.43	3.36	8.90	21.97	157.263	Horizontal	Pass
1.4MHz Band QPSK	6/0	1710.7	14.83	3.12	8.90	20.61	115.037	Vertical	Pass
		1745	16.41	3.27	8.90	22.04	159.983	Vertical	Pass
		1779.3	15.53	3.29	8.90	21.14	130.144	Vertical	Pass
3.0MHz Band QPSK	15/0	1711.5	16.36	3.13	8.90	22.13	163.309	Vertical	Pass
		1745	17.21	3.27	8.90	22.84	192.465	Vertical	Pass
		1778.5	16.00	3.30	8.90	21.60	144.391	Vertical	Pass
5.0MHz Band QPSK	25/0	1712.5	15.22	3.13	8.90	20.99	125.574	Vertical	Pass
		1745	15.62	3.27	8.90	21.25	133.469	Vertical	Pass
		1777.5	14.12	3.30	8.90	19.72	93.795	Vertical	Pass
10.0MHz Band QPSK	50/0	1715	13.22	3.15	8.90	18.97	78.844	Vertical	Pass
		1745	16.30	3.31	8.90	21.89	154.385	Vertical	Pass
		1775	14.81	3.33	8.90	20.38	109.023	Vertical	Pass

15.0MHz	75/0	1717.5	16.52	3.15	8.90	22.27	168.739	Vertical	Pass
Band		1745	17.25	3.31	8.90	22.84	192.228	Vertical	Pass
QPSK		1772.5	15.85	3.33	8.90	21.42	138.819	Vertical	Pass
20.0MHz	100/0	1720	17.36	3.17	8.90	23.09	203.681	Vertical	Pass
Band		1745	16.76	3.32	8.90	22.34	171.513	Vertical	Pass
QPSK		1770	14.25	3.36	8.90	19.79	95.380	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 Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	1710.7	16.73	3.12	8.9	22.51	178.239	Horizontal	Pass
		1745	17.04	3.27	8.9	22.67	184.850	Horizontal	Pass
		1779.3	16.73	3.29	8.9	22.34	171.233	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1711.5	16.49	3.13	8.9	22.26	168.219	Horizontal	Pass
		1745	16.05	3.27	8.9	21.68	147.159	Horizontal	Pass
		1778.5	16.75	3.3	8.9	22.35	171.692	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1712.5	15.47	3.13	8.9	21.24	133.032	Horizontal	Pass
		1745	14.41	3.27	8.9	20.04	100.997	Horizontal	Pass
		1777.5	15.04	3.3	8.9	20.64	115.816	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1715	16.76	3.15	8.9	22.51	178.228	Horizontal	Pass
		1745	14.80	3.31	8.9	20.39	109.290	Horizontal	Pass
		1775	14.37	3.33	8.9	19.94	98.550	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1717.5	14.59	3.15	8.9	20.34	108.198	Horizontal	Pass
		1745	15.83	3.31	8.9	21.42	138.528	Horizontal	Pass
		1772.5	16.38	3.33	8.9	21.95	156.690	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1720	16.40	3.17	8.9	22.13	163.297	Horizontal	Pass
		1745	15.83	3.32	8.9	21.41	138.488	Horizontal	Pass
		1770	15.84	3.36	8.9	21.38	137.328	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1710.7	15.84	3.12	8.9	21.62	145.191	Vertical	Pass
		1745	15.96	3.27	8.9	21.59	144.260	Vertical	Pass
		1779.3	15.76	3.29	8.9	21.37	137.021	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1711.5	15.86	3.13	8.9	21.63	145.537	Vertical	Pass
		1745	15.33	3.27	8.9	20.96	124.721	Vertical	Pass
		1778.5	16.20	3.3	8.9	21.80	151.282	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1712.5	16.79	3.13	8.9	22.56	180.315	Vertical	Pass
		1745	16.34	3.27	8.9	21.97	157.483	Vertical	Pass
		1777.5	15.15	3.3	8.9	20.75	118.943	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1715	14.72	3.15	8.9	20.47	111.470	Vertical	Pass
		1745	17.59	3.31	8.9	23.18	208.046	Vertical	Pass
		1775	16.65	3.33	8.9	22.22	166.763	Vertical	Pass
15.0MHz Band 16	75/0	1717.5	15.47	3.15	8.9	21.22	132.545	Vertical	Pass
		1745	16.72	3.31	8.9	22.31	170.072	Vertical	Pass

QAM		1772.5	15.59	3.33	8.9	21.16	130.570	Vertical	Pass
20.0MHz	100/0	1720	17.68	3.17	8.9	23.41	219.338	Vertical	Pass
Band 16		1745	16.80	3.32	8.9	22.38	172.789	Vertical	Pass
QAM		1770	16.69	3.36	8.9	22.23	166.960	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 2/4/5/7/12/13/17/25/26/41/66

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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.9	-48.53	4.04	33.51	-19.06	-13	-6.06	Horizontal
3701.9	-50.58	4.04	33.51	-21.11	-13	-8.11	Vertical
5552.8	-46.59	5.24	35.84	-15.99	-13	-2.99	Vertical
5552.8	-48.96	5.24	35.84	-18.36	-13	-5.36	Horizontal
185.5	-40.00	1.43	16.02	-25.41	-13	-12.41	Vertical
453.9	-33.02	1.30	17.99	-16.32	-13	-3.32	Horizontal
Test Results for Mid Channel 1880MHz							
3760.1	-46.70	4.04	33.56	-17.18	-13	-4.18	Horizontal
3760.1	-51.03	4.04	33.56	-21.51	-13	-8.51	Vertical
5640.1	-48.12	5.24	35.91	-17.45	-13	-4.45	Vertical
5640.1	-50.10	5.24	35.91	-19.43	-13	-6.43	Horizontal
184.0	-34.75	1.62	16.97	-19.40	-13	-6.40	Vertical
290.0	-34.23	1.74	15.98	-20.00	-13	-7.00	Horizontal
Test Results for High Channel 1909.3MHz							
3819.5	-46.21	4.04	34.00	-16.25	-13	-3.25	Horizontal
3819.5	-45.70	4.04	34.00	-15.74	-13	-2.74	Vertical
5727.9	-49.79	5.24	36.04	-18.99	-13	-5.99	Vertical
5727.9	-47.21	5.24	36.04	-16.41	-13	-3.41	Horizontal
194.5	-40.45	1.42	17.29	-24.58	-13	-11.58	Vertical
343.1	-33.78	1.50	17.90	-17.37	-13	-4.37	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.1	-45.05	4.07	33.54	-15.58	-13	-2.58	Horizontal
3720.1	-49.06	4.07	33.54	-19.59	-13	-6.59	Vertical
5580.7	-47.14	5.28	35.86	-16.56	-13	-3.56	Vertical
5580.7	-49.50	5.28	35.86	-18.92	-13	-5.92	Horizontal
209.1	-36.94	1.58	16.89	-21.62	-13	-8.62	Vertical
358.0	-41.02	1.76	17.26	-25.52	-13	-12.52	Horizontal
Test Results for Mid Channel 1880MHz							
3760.4	-45.57	4.04	33.56	-16.05	-13	-3.05	Horizontal
3760.4	-46.26	4.04	33.56	-16.74	-13	-3.74	Vertical
5640.0	-49.58	5.24	35.91	-18.91	-13	-5.91	Vertical
5640.0	-50.27	5.24	35.91	-19.60	-13	-6.60	Horizontal
200.7	-43.21	1.46	16.27	-28.41	-13	-15.41	Vertical
344.9	-38.00	1.59	15.15	-24.44	-13	-11.44	Horizontal
Test Results for High Channel 1900MHz							
3800.2	-48.10	4.04	34.00	-18.14	-13	-5.14	Horizontal
3800.2	-46.61	4.04	34.00	-16.65	-13	-3.65	Vertical
5700.1	-47.13	5.24	36.04	-16.33	-13	-3.33	Vertical
5700.1	-49.96	5.24	36.04	-19.16	-13	-6.16	Horizontal
212.8	-34.22	1.36	17.39	-18.18	-13	-5.18	Vertical
312.7	-40.42	1.66	15.39	-26.69	-13	-13.69	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3422.2	-48.35	4.02	29.80	-22.57	-13	-9.57	Horizontal
3422.2	-45.87	4.02	29.80	-20.09	-13	-7.09	Vertical
5132.9	-49.95	5.24	35.84	-19.35	-13	-6.35	Vertical
5132.9	-50.49	5.24	35.84	-19.89	-13	-6.89	Horizontal
198.4	-40.28	1.68	16.04	-25.92	-13	-12.92	Vertical
454.9	-34.06	1.78	17.74	-18.10	-13	-5.10	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.5	-49.06	4.03	30.00	-23.09	-13	-10.09	Horizontal
3465.5	-42.72	4.03	30.00	-16.75	-13	-3.75	Vertical
5197.6	-46.36	5.25	35.86	-15.75	-13	-2.75	Vertical
5197.6	-48.10	5.25	35.86	-17.49	-13	-4.49	Horizontal
208.2	-40.45	1.72	17.69	-24.48	-13	-11.48	Vertical
346.3	-41.70	1.62	16.02	-27.30	-13	-14.30	Horizontal
Test Results for High Channel 1754.3MHz							
3509.4	-47.84	4.05	30.01	-21.88	-13	-8.88	Horizontal
3509.4	-45.24	4.05	30.01	-19.28	-13	-6.28	Vertical
5263.7	-48.37	5.26	35.86	-17.77	-13	-4.77	Vertical
5263.7	-48.60	5.26	35.86	-18.00	-13	-5.00	Horizontal
183.4	-31.32	1.80	16.69	-16.43	-13	-3.43	Vertical
332.6	-38.82	1.75	16.66	-23.92	-13	-10.92	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.2	-48.43	4.02	29.80	-22.65	-13	-9.65	Horizontal
3440.2	-47.32	4.02	29.80	-21.54	-13	-8.54	Vertical
5160.6	-50.97	5.24	35.84	-20.37	-13	-7.37	Vertical
5160.6	-49.28	5.24	35.84	-18.68	-13	-5.68	Horizontal
182.5	-38.72	1.57	17.26	-23.03	-13	-10.03	Vertical
310.7	-34.51	1.78	16.35	-19.94	-13	-6.94	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.8	-48.21	4.03	30.00	-22.24	-13	-9.24	Horizontal
3465.8	-49.78	4.03	30.00	-23.81	-13	-10.81	Vertical
5198.0	-47.26	5.25	35.86	-16.65	-13	-3.65	Vertical
5198.0	-47.14	5.25	35.86	-16.53	-13	-3.53	Horizontal
209.4	-39.46	1.44	17.95	-22.95	-13	-9.95	Vertical
269.8	-31.53	1.65	16.09	-17.09	-13	-4.09	Horizontal
Test Results for High Channel 1745MHz							
3490.6	-43.98	2.91	27.68	-19.21	-13	-6.21	Horizontal
3490.6	-44.79	2.91	27.68	-20.02	-13	-7.02	Vertical
5235.9	-47.00	5.26	35.86	-16.40	-13	-3.40	Vertical
5235.9	-51.76	5.26	35.86	-21.16	-13	-8.16	Horizontal
185.7	-40.12	1.61	16.85	-24.87	-13	-11.87	Vertical
291.4	-38.79	1.61	15.19	-25.22	-13	-12.22	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1650.0	-46.08	2.78	27.50	-21.36	-13	-8.36	Horizontal
1650.0	-49.29	2.78	27.50	-24.57	-13	-11.57	Vertical
2475.0	-45.22	2.90	27.80	-20.32	-13	-7.32	Vertical
2475.0	-50.31	2.90	27.80	-25.41	-13	-12.41	Horizontal
179.0	-35.34	1.76	17.59	-19.51	-13	-6.51	Vertical
460.8	-38.72	1.63	15.87	-24.48	-13	-11.48	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.4	-45.60	2.80	27.48	-20.92	-13	-7.92	Horizontal
1673.4	-45.37	2.80	27.48	-20.69	-13	-7.69	Vertical
2510.3	-42.04	2.91	27.70	-17.25	-13	-4.25	Vertical
2510.3	-49.02	2.91	27.70	-24.23	-13	-11.23	Horizontal
213.4	-40.15	1.61	15.68	-26.08	-13	-13.08	Vertical
432.3	-35.68	1.59	17.52	-19.76	-13	-6.76	Horizontal
Test Results for High Channel 848.3MHz							
1697.6	-47.52	2.82	27.43	-22.91	-13	-9.91	Horizontal
1697.6	-50.48	2.82	27.43	-25.87	-13	-12.87	Vertical
2544.9	-42.91	2.92	27.74	-18.09	-13	-5.09	Vertical
2544.9	-49.89	2.92	27.74	-25.07	-13	-12.07	Horizontal
192.9	-34.11	1.69	16.67	-19.13	-13	-6.13	Vertical
367.1	-34.00	1.70	17.18	-18.51	-13	-5.51	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1658.5	-50.22	2.78	27.50	-25.50	-13	-12.50	Horizontal
1658.5	-40.61	2.78	27.50	-15.89	-13	-2.89	Vertical
2487.6	-51.73	2.90	27.80	-26.83	-13	-13.83	Vertical
2487.6	-47.72	2.90	27.80	-22.82	-13	-9.82	Horizontal
200.7	-41.99	1.71	15.57	-28.13	-13	-15.13	Vertical
364.8	-32.22	1.34	16.40	-17.16	-13	-4.16	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.6	-40.64	2.80	27.48	-15.96	-13	-2.96	Horizontal
1673.6	-42.64	2.80	27.48	-17.96	-13	-4.96	Vertical
2509.9	-49.67	2.91	27.70	-24.88	-13	-11.88	Vertical
2509.9	-46.39	2.91	27.70	-21.60	-13	-8.60	Horizontal
212.3	-31.30	1.44	17.04	-15.70	-13	-2.70	Vertical
344.3	-41.51	1.76	17.62	-25.65	-13	-12.65	Horizontal
Test Results for High Channel 844MHz							
1688.4	-45.46	2.82	27.43	-20.85	-13	-7.85	Horizontal
1688.4	-46.35	2.82	27.43	-21.74	-13	-8.74	Vertical
2532.5	-49.86	2.92	27.74	-25.04	-13	-12.04	Vertical
2532.5	-46.82	2.92	27.74	-22.00	-13	-9.00	Horizontal
205.9	-34.61	1.74	17.70	-18.65	-13	-5.65	Vertical
393.9	-34.08	1.41	17.46	-18.03	-13	-5.03	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5005.6	-62.56	5.23	35.81	-31.98	-25	-6.98	Horizontal
5005.6	-61.68	5.23	35.81	-31.10	-25	-6.10	Vertical
7507.5	-62.62	5.67	36.85	-31.44	-25	-6.44	Vertical
7507.5	-61.64	5.67	36.85	-30.46	-25	-5.46	Horizontal
203.5	-49.94	1.73	17.97	-33.70	-25	-8.70	Vertical
451.1	-49.31	1.38	15.11	-35.58	-25	-10.58	Horizontal
Test Results for Mid Channel 2535MHz							
5070.1	-58.11	5.23	35.82	-27.52	-25	-2.52	Horizontal
5070.1	-63.34	5.23	35.82	-32.75	-25	-7.75	Vertical
7605.0	-61.37	5.67	36.85	-30.19	-25	-5.19	Vertical
7605.0	-61.90	5.67	36.85	-30.72	-25	-5.72	Horizontal
211.6	-41.94	1.77	16.17	-27.54	-25	-2.54	Vertical
233.1	-49.27	1.63	15.21	-35.69	-25	-10.69	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-58.49	5.24	35.83	-27.90	-25	-2.90	Horizontal
5135.0	-58.65	5.24	35.83	-28.06	-25	-3.06	Vertical
7702.5	-60.66	5.68	36.87	-29.47	-25	-4.47	Vertical
7702.5	-60.03	5.68	36.87	-28.84	-25	-3.84	Horizontal
186.4	-44.17	1.58	17.56	-28.19	-25	-3.19	Vertical
264.2	-47.92	1.45	16.58	-32.79	-25	-7.79	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5020.4	-57.92	5.23	35.82	-27.33	-25	-2.33	Horizontal
5020.4	-60.77	5.23	35.82	-30.18	-25	-5.18	Vertical
7531.0	-59.81	5.67	36.86	-28.62	-25	-3.62	Vertical
7531.0	-58.59	5.67	36.86	-27.40	-25	-2.40	Horizontal
193.2	-47.56	1.63	15.76	-33.44	-25	-8.44	Vertical
379.8	-50.21	1.71	15.44	-36.48	-25	-11.48	Horizontal
Test Results for Mid Channel 2535MHz							
5070.7	-60.18	5.23	35.82	-29.59	-25	-4.59	Horizontal
5070.7	-58.78	5.23	35.82	-28.19	-25	-3.19	Vertical
7605.1	-59.36	5.67	36.85	-28.18	-25	-3.18	Vertical
7605.1	-59.49	5.67	36.85	-28.31	-25	-3.31	Horizontal
199.1	-45.64	1.79	16.84	-30.58	-25	-5.58	Vertical
346.8	-44.34	1.71	17.64	-28.40	-25	-3.40	Horizontal
Test Results for High Channel 2560MHz							
5120.7	-59.49	5.24	35.83	-28.90	-25	-3.90	Horizontal
5120.7	-59.67	5.24	35.83	-29.08	-25	-4.08	Vertical
7680.3	-58.92	5.70	36.88	-27.74	-25	-2.74	Vertical
7680.3	-60.44	5.70	36.88	-29.26	-25	-4.26	Horizontal
193.6	-44.16	1.79	16.84	-29.11	-25	-4.11	Vertical
349.6	-43.66	1.71	17.64	-27.72	-25	-2.72	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1400.4	-42.41	2.60	27.20	-17.81	-13	-4.81	Horizontal
1400.4	-42.64	2.60	27.20	-18.04	-13	-5.04	Vertical
2099.5	-48.61	2.85	27.54	-23.92	-13	-10.92	Vertical
2099.5	-47.49	2.85	27.54	-22.80	-13	-9.80	Horizontal
212.7	-35.32	1.49	17.78	-19.04	-13	-6.04	Vertical
386.9	-39.98	1.36	17.33	-24.01	-13	-11.01	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.2	-44.05	2.61	27.28	-19.38	-13	-6.38	Horizontal
1415.2	-43.91	2.61	27.28	-19.24	-13	-6.24	Vertical
2122.6	-50.27	2.87	27.59	-25.55	-13	-12.55	Vertical
2122.6	-48.63	2.87	27.59	-23.91	-13	-10.91	Horizontal
208.0	-38.55	1.73	15.74	-24.54	-13	-11.54	Vertical
384.8	-32.44	1.62	15.79	-18.27	-13	-5.27	Horizontal
Test Results for High Channel 715.3MHz							
1430.7	-50.51	2.63	27.28	-25.86	-13	-12.86	Horizontal
1430.7	-46.23	2.63	27.28	-21.58	-13	-8.58	Vertical
2146.5	-43.09	2.88	27.60	-18.37	-13	-5.37	Vertical
2146.5	-46.58	2.88	27.60	-21.86	-13	-8.86	Horizontal
186.5	-33.13	1.61	18.00	-16.74	-13	-3.74	Vertical
281.1	-34.68	1.45	15.49	-20.65	-13	-7.65	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1408.2	-51.91	2.61	27.26	-27.26	-13	-14.26	Horizontal
1408.2	-45.09	2.61	27.26	-20.44	-13	-7.44	Vertical
2112.9	-47.79	2.87	27.58	-23.08	-13	-10.08	Vertical
2112.9	-49.77	2.87	27.58	-25.06	-13	-12.06	Horizontal
197.9	-39.78	1.31	16.97	-24.12	-13	-11.12	Vertical
469.4	-41.53	1.65	16.70	-26.47	-13	-13.47	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.3	-44.23	2.61	27.28	-19.56	-13	-6.56	Horizontal
1415.3	-50.02	2.61	27.28	-25.35	-13	-12.35	Vertical
2123.3	-50.31	2.87	27.59	-25.59	-13	-12.59	Vertical
2123.3	-49.80	2.87	27.59	-25.08	-13	-12.08	Horizontal
175.6	-35.29	1.72	17.99	-19.02	-13	-6.02	Vertical
363.7	-38.73	1.73	17.94	-22.51	-13	-9.51	Horizontal
Test Results for High Channel 711MHz							
1422.3	-46.82	2.62	27.28	-22.16	-13	-9.16	Horizontal
1422.3	-42.42	2.62	27.28	-17.76	-13	-4.76	Vertical
2133.9	-50.94	2.87	27.60	-26.21	-13	-13.21	Vertical
2133.9	-48.61	2.87	27.60	-23.88	-13	-10.88	Horizontal
210.0	-35.93	1.58	15.93	-21.58	-13	-8.58	Vertical
361.2	-31.93	1.36	15.59	-17.70	-13	-4.70	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 13

LTE BAND 13 (5MHZ BANDWIDTH)

Test Results for Low Channel 779.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1559.0	-70.25	2.61	27.28	-45.58	-40	-5.58	Horizontal
1559.0	-73.57	2.61	27.28	-48.90	-40	-8.90	Vertical
2338.0	-41.28	2.87	27.59	-16.56	-13	-3.56	Vertical
2338.0	-42.52	2.87	27.59	-17.80	-13	-4.80	Horizontal
120.0	-39.11	1.54	15.61	-25.04	-13	-12.04	Vertical
197.4	-37.16	1.51	15.21	-23.46	-13	-10.46	Horizontal
Test Results For Mid Channel 782MHz							
1563.5	-72.04	2.62	27.30	-47.36	-40	-7.36	Horizontal
1563.5	-70.78	2.62	27.30	-46.10	-40	-6.10	Vertical
2345.5	-42.01	2.87	27.62	-17.26	-13	-4.26	Vertical
2345.5	-40.83	2.87	27.62	-16.08	-13	-3.08	Horizontal
130.7	-35.55	1.65	16.17	-21.03	-13	-8.03	Vertical
267.3	-37.77	1.48	16.88	-22.37	-13	-9.37	Horizontal
Test Results for High Channel 784.5MHz							
1569.0	-73.06	2.66	27.28	-48.44	-40	-8.44	Horizontal
1569.0	-71.08	2.66	27.28	-46.46	-40	-6.46	Vertical
2352.8	-43.52	2.88	27.60	-18.80	-13	-5.80	Vertical
2352.8	-44.76	2.88	27.60	-20.04	-13	-7.04	Horizontal
80.7	-36.92	1.54	16.40	-22.06	-13	-9.06	Vertical
154.6	-37.75	1.43	15.77	-23.41	-13	-10.41	Horizontal

LTE BAND 13 (10MHZ BANDWIDTH)

Test Results for Channel 782MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1563.7	-74.52	2.62	27.30	-49.84	-40	-9.84	Horizontal
1563.7	-70.17	2.62	27.30	-45.49	-40	-5.49	Vertical
2345.1	-42.83	2.87	27.62	-18.08	-13	-5.08	Vertical
2345.1	-44.39	2.87	27.62	-19.64	-13	-6.64	Horizontal
129.0	-38.02	1.43	17.03	-22.42	-13	-9.42	Vertical
86.3	-40.47	1.62	16.63	-25.46	-13	-12.46	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.

9.7 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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413.3	-48.01	2.61	27.28	-23.34	-13	-10.34	Horizontal
1413.3	-43.82	2.61	27.28	-19.15	-13	-6.15	Vertical
2119.9	-49.43	2.87	27.59	-24.71	-13	-11.71	Vertical
2119.9	-48.09	2.87	27.59	-23.37	-13	-10.37	Horizontal
209.7	-33.65	1.71	16.15	-19.21	-13	-6.21	Vertical
421.5	-43.66	1.41	17.32	-27.75	-13	-14.75	Horizontal
Test Results For Mid Channel 710MHz							
1420.4	-43.78	2.62	27.30	-19.10	-13	-6.10	Horizontal
1420.4	-46.20	2.62	27.30	-21.52	-13	-8.52	Vertical
2130.6	-42.64	2.87	27.62	-17.89	-13	-4.89	Vertical
2130.6	-49.01	2.87	27.62	-24.26	-13	-11.26	Horizontal
201.9	-36.31	1.42	15.25	-22.49	-13	-9.49	Vertical
320.9	-39.46	1.36	17.19	-23.63	-13	-10.63	Horizontal
Test Results for High Channel 713.5MHz							
1427.4	-49.20	2.66	27.28	-24.58	-13	-11.58	Horizontal
1427.4	-43.41	2.66	27.28	-18.79	-13	-5.79	Vertical
2141.3	-44.32	2.88	27.60	-19.60	-13	-6.60	Vertical
2141.3	-50.25	2.88	27.60	-25.53	-13	-12.53	Horizontal
176.1	-39.53	1.32	17.29	-23.56	-13	-10.56	Vertical
445.8	-36.31	1.72	16.89	-21.15	-13	-8.15	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1418.1	-47.68	2.62	27.30	-23.00	-13	-10.00	Horizontal
1418.1	-50.23	2.62	27.30	-25.55	-13	-12.55	Vertical
2127.9	-46.75	2.87	27.62	-22.00	-13	-9.00	Vertical
2127.9	-47.30	2.87	27.62	-22.55	-13	-9.55	Horizontal
196.5	-33.00	1.35	16.91	-17.43	-13	-4.43	Vertical
270.0	-40.45	1.62	16.31	-25.76	-13	-12.76	Horizontal
Test Results for Mid Channel 710MHz							
1420.4	-43.16	2.62	27.30	-18.48	-13	-5.48	Horizontal
1420.4	-41.61	2.62	27.30	-16.93	-13	-3.93	Vertical
2130.6	-45.77	2.87	27.62	-21.02	-13	-8.02	Vertical
2130.6	-48.88	2.87	27.62	-24.13	-13	-11.13	Horizontal
202.9	-42.53	1.51	17.14	-26.89	-13	-13.89	Vertical
399.1	-38.42	1.77	16.88	-23.31	-13	-10.31	Horizontal
Test Results for High Channel 711MHz							
1423.0	-44.78	2.62	27.30	-20.10	-13	-7.10	Horizontal
1423.0	-50.89	2.62	27.30	-26.21	-13	-13.21	Vertical
2133.8	-42.77	2.87	27.62	-18.02	-13	-5.02	Vertical
2133.8	-42.50	2.87	27.62	-17.75	-13	-4.75	Horizontal
202.3	-36.60	1.78	15.95	-22.43	-13	-9.43	Vertical
412.6	-35.59	1.34	17.95	-18.99	-13	-5.99	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.

9.8 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
3702.3	-50.81	2.61	27.26	-26.16	-13	-13.16	Horizontal
3702.3	-53.32	2.61	27.26	-28.67	-13	-15.67	Vertical
5553.1	-49.89	2.87	27.58	-25.18	-13	-12.18	Vertical
5553.1	-55.97	2.87	27.58	-31.26	-13	-18.26	Horizontal
Test Results for Mid Channel 1882.5MHz							
3766.0	-52.27	2.63	27.28	-27.62	-13	-14.62	Horizontal
3766.0	-51.47	2.63	27.28	-26.82	-13	-13.82	Vertical
5647.7	-52.03	2.88	27.62	-27.29	-13	-14.29	Vertical
5647.7	-49.10	2.88	27.62	-24.36	-13	-11.36	Horizontal
Test Results for High Channel 1914.3MHz							
3828.8	-49.32	2.65	27.28	-24.69	-13	-11.69	Horizontal
3828.8	-52.40	2.65	27.28	-27.77	-13	-14.77	Vertical
5743.0	-50.57	2.88	27.70	-25.75	-13	-12.75	Vertical
5743.0	-50.44	2.88	27.70	-25.62	-13	-12.62	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
3720.4	-49.53	2.62	27.30	-24.85	-13	-11.85	Horizontal
3720.4	-50.59	2.62	27.30	-25.91	-13	-12.91	Vertical
5580.1	-57.65	2.87	27.62	-32.90	-13	-19.90	Vertical
5580.1	-48.65	2.87	27.62	-23.90	-13	-10.90	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.6	-54.37	2.64	27.33	-29.68	-13	-16.68	Horizontal
3765.6	-54.69	2.64	27.33	-30.00	-13	-17.00	Vertical
5648.5	-55.21	2.88	27.67	-30.42	-13	-17.42	Vertical
5648.5	-55.54	2.88	27.67	-30.75	-13	-17.75	Horizontal
Test Results for High Channel 1905MHz							
3810.8	-49.22	2.64	27.33	-24.53	-13	-11.53	Horizontal
3810.8	-47.55	2.64	27.33	-22.86	-13	-9.86	Vertical
5715.6	-55.13	2.88	27.67	-30.34	-13	-17.34	Vertical
5715.6	-51.67	2.88	27.67	-26.88	-13	-13.88	Horizontal

9.9 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
1630.3	-50.08	2.78	27.5	-25.36	-13	-12.36	Horizontal
1630.3	-46.35	2.78	27.5	-21.63	-13	-8.63	Vertical
2444.3	-52.77	2.9	27.8	-27.87	-13	-14.87	Vertical
2444.3	-51.61	2.9	27.8	-26.71	-13	-13.71	Horizontal
Test Results for Mid Channel 819MHz							
1638.7	-50.26	2.8	27.48	-25.58	-13	-12.58	Horizontal
1638.7	-46.65	2.8	27.48	-21.97	-13	-8.97	Vertical
2458.1	-53.24	2.91	27.7	-28.45	-13	-15.45	Vertical
2458.1	-51.95	2.91	27.7	-27.16	-13	-14.16	Horizontal
Test Results for High Channel 823.3MHz							
1646.7	-49.64	2.82	27.43	-25.03	-13	-12.03	Horizontal
1646.7	-50.74	2.82	27.43	-26.13	-13	-13.13	Vertical
2470.7	-52.15	2.92	27.74	-27.33	-13	-14.33	Vertical
2470.7	-48.66	2.92	27.74	-23.84	-13	-10.84	Horizontal

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

Test Results for Mid Channel 819MHz							
1638.4	-50.89	2.82	27.43	-26.28	-13	-13.28	Horizontal
1638.4	-53.46	2.82	27.43	-28.85	-13	-15.85	Vertical
2458.3	-53.36	2.91	27.74	-28.53	-13	-15.53	Vertical
2458.3	-48.84	2.91	27.74	-24.01	-13	-11.01	Horizontal

9.10 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
1650.4	-47.79	2.78	27.28	-23.29	-13	-10.29	Horizontal
1650.4	-50.23	2.78	27.28	-25.73	-13	-12.73	Vertical
2474.3	-52.25	2.9	27.59	-27.56	-13	-14.56	Vertical
2474.3	-49.68	2.9	27.59	-24.99	-13	-11.99	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.7	-48.84	2.78	27.3	-24.32	-13	-11.32	Horizontal
1673.7	-52.01	2.78	27.3	-27.49	-13	-14.49	Vertical
2509.4	-50.11	2.91	27.62	-25.40	-13	-12.40	Vertical
2509.4	-54.96	2.91	27.62	-30.25	-13	-17.25	Horizontal
Test Results for High Channel 848.3MHz							
1697.2	-52.98	2.78	27.28	-28.48	-13	-15.48	Horizontal
1697.2	-52.82	2.78	27.28	-28.32	-13	-15.32	Vertical
2545.6	-56.78	2.92	27.6	-32.10	-13	-19.10	Vertical
2545.6	-54.22	2.92	27.6	-29.54	-13	-16.54	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
1663.7	-50.83	2.78	27.3	-26.31	-13	-13.31	Horizontal
1663.7	-46.87	2.78	27.3	-22.35	-13	-9.35	Vertical
2495.3	-51.60	2.9	27.62	-26.88	-13	-13.88	Vertical
2495.3	-52.51	2.9	27.62	-27.79	-13	-14.79	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.8	-52.65	2.78	27.3	-28.13	-13	-15.13	Horizontal
1673.8	-54.37	2.78	27.3	-29.85	-13	-16.85	Vertical
2509.7	-53.12	2.91	27.62	-28.41	-13	-15.41	Vertical
2509.7	-55.69	2.91	27.62	-30.98	-13	-17.98	Horizontal
Test Results for High Channel 841.5MHz							
1683.5	-49.17	2.78	27.3	-24.65	-13	-11.65	Horizontal
1683.5	-50.41	2.78	27.3	-25.89	-13	-12.89	Vertical
2525.1	-56.32	2.92	27.62	-31.62	-13	-18.62	Vertical
2525.1	-49.55	2.92	27.62	-24.85	-13	-11.85	Horizontal

9.11 LTE BAND 41

LTE BAND 41 (5MHZ BANDWIDTH)

Test Results for Low Channel 2572.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5145.6	-58.84	5.23	35.81	-28.26	-25	-3.26	Horizontal
5145.6	-60.35	5.23	35.81	-29.77	-25	-4.77	Vertical
7718.1	-58.92	5.67	36.85	-27.74	-25	-2.74	Vertical
7718.1	-61.48	5.67	36.85	-30.30	-25	-5.30	Horizontal
435.6	-42.15	1.38	15.98	-27.55	-25	-2.55	Vertical
466.7	-41.17	1.62	15.66	-27.13	-25	-2.13	Horizontal
Test Results for Mid Channel 2595MHz							
5190.8	-62.88	5.23	35.82	-32.29	-25	-7.29	Horizontal
5190.8	-59.00	5.23	35.82	-28.41	-25	-3.41	Vertical
7785.8	-60.32	5.67	36.85	-29.14	-25	-4.14	Vertical
7785.8	-61.14	5.67	36.85	-29.96	-25	-4.96	Horizontal
510.9	-45.82	1.62	16.17	-31.27	-25	-6.27	Vertical
563.6	-43.78	1.74	17.63	-27.89	-25	-2.89	Horizontal
Test Results for High Channel 2617.5MHz							
5235.7	-58.83	5.24	35.83	-28.24	-25	-3.24	Horizontal
5235.7	-59.81	5.24	35.83	-29.22	-25	-4.22	Vertical
7853.2	-60.48	5.68	36.87	-29.29	-25	-4.29	Vertical
7853.2	-58.96	5.68	36.87	-27.77	-25	-2.77	Horizontal
198.3	-42.86	1.55	15.84	-28.57	-25	-3.57	Vertical
353.4	-45.57	1.51	17.06	-30.02	-25	-5.02	Horizontal

LTE BAND 41 (20MHZ BANDWIDTH)

Test Results for Low Channel 2580MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5160.5	-60.72	5.23	35.82	-30.13	-25	-5.13	Horizontal
5160.5	-58.45	5.23	35.82	-27.86	-25	-2.86	Vertical
7740.5	-61.59	5.67	36.86	-30.40	-25	-5.40	Vertical
7740.5	-60.04	5.67	36.86	-28.85	-25	-3.85	Horizontal
129.6	-42.97	1.43	15.51	-28.89	-25	-3.89	Vertical
345.5	-44.00	1.40	16.97	-28.43	-25	-3.43	Horizontal
Test Results for Mid Channel 2595MHz							
5190.2	-59.78	5.23	35.82	-29.19	-25	-4.19	Horizontal
5190.2	-58.56	5.23	35.82	-27.97	-25	-2.97	Vertical
7786.0	-59.83	5.67	36.85	-28.65	-25	-3.65	Vertical
7786.0	-59.67	5.67	36.85	-28.49	-25	-3.49	Horizontal
101.0	-47.96	1.77	16.72	-33.01	-25	-8.01	Vertical
263.5	-47.74	1.31	16.99	-32.06	-25	-7.06	Horizontal
Test Results for High Channel 2610MHz							
5220.0	-62.26	5.24	35.83	-31.67	-25	-6.67	Horizontal
5220.0	-60.77	5.24	35.83	-30.18	-25	-5.18	Vertical
7830.5	-59.42	5.70	36.88	-28.24	-25	-3.24	Vertical
7830.5	-60.45	5.70	36.88	-29.27	-25	-4.27	Horizontal
350.9	-45.68	1.70	15.73	-31.65	-25	-6.65	Vertical
110.8	-44.02	1.75	17.33	-28.44	-25	-3.44	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.

9.12 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
3422.1	-57.68	3.84	35.81	-25.71	-13	-12.71	Horizontal
3422.1	-60.56	3.84	35.81	-28.59	-13	-15.59	Vertical
5132.5	-61.56	5.18	36.85	-29.89	-13	-16.89	Vertical
5132.5	-60.21	5.18	36.85	-28.54	-13	-15.54	Horizontal
204.0	-47.55	1.56	17.97	-31.14	-13	-18.14	Vertical
305.9	-51.44	1.33	15.11	-37.66	-13	-24.66	Horizontal
Test Results for Mid Channel 1745MHz							
3490.1	-61.43	3.85	35.82	-29.46	-13	-16.46	Horizontal
3490.1	-60.35	3.85	35.82	-28.38	-13	-15.38	Vertical
5235.9	-58.66	5.21	36.85	-27.02	-13	-14.02	Vertical
5235.9	-61.26	5.21	36.85	-29.62	-13	-16.62	Horizontal
188.2	-46.93	1.77	16.17	-32.52	-13	-19.52	Vertical
390.9	-47.45	1.63	15.21	-33.87	-13	-20.87	Horizontal
Test Results for High Channel 1779.3MHz							
3559.4	-57.91	3.86	35.83	-25.94	-13	-12.94	Horizontal
3559.4	-57.31	3.86	35.83	-25.34	-13	-12.34	Vertical
5337.9	-57.11	5.24	36.87	-25.48	-13	-12.48	Vertical
5337.9	-59.46	5.24	36.87	-27.83	-13	-14.83	Horizontal
198.4	-45.90	1.58	17.56	-29.91	-13	-16.91	Vertical
268.9	-49.20	1.45	16.58	-34.07	-13	-21.07	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
3440.5	-61.52	3.84	35.82	-29.54	-13	-16.54	Horizontal
3440.5	-62.32	3.84	35.82	-30.34	-13	-17.34	Vertical
5160.5	-59.04	5.18	36.86	-27.36	-13	-14.36	Vertical
5160.5	-62.71	5.18	36.86	-31.03	-13	-18.03	Horizontal
180.6	-50.36	1.56	15.76	-36.16	-13	-23.16	Vertical
323.7	-45.75	1.33	15.44	-31.64	-13	-18.64	Horizontal
Test Results for Mid Channel 1745MHz							
3490.8	-58.49	3.85	35.82	-26.52	-13	-13.52	Horizontal
3490.8	-60.99	3.85	35.82	-29.02	-13	-16.02	Vertical
5235.2	-61.57	5.21	36.85	-29.93	-13	-16.93	Vertical
5235.2	-56.70	5.21	36.85	-25.06	-13	-12.06	Horizontal
183.4	-44.98	1.77	16.84	-29.90	-13	-16.90	Vertical
252.6	-51.83	1.63	17.64	-35.82	-13	-22.82	Horizontal
Test Results for High Channel 1770MHz							
3540.5	-57.87	3.86	35.83	-25.90	-13	-12.90	Horizontal
3540.5	-60.00	3.86	35.83	-28.03	-13	-15.03	Vertical
5310.7	-58.88	5.24	36.88	-27.24	-13	-14.24	Vertical
5310.7	-58.13	5.24	36.88	-26.49	-13	-13.49	Horizontal
182.3	-46.76	1.58	16.84	-31.49	-13	-18.49	Vertical
310.4	-47.55	1.45	17.64	-31.37	-13	-18.37	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 2/4/5/7/12/13/17/25/26/41/66

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	8.9	0.004747	2.5
3.87	1880	9.6	0.005106	2.5
4.45	1880	15.3	0.008123	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	10.2	0.005417	2.5
Extreme (50C)	1880	7.7	0.004073	2.5
Extreme (40C)	1880	10.8	0.005765	2.5
Extreme (30C)	1880	14.0	0.007447	2.5
Extreme (10C)	1880	11.2	0.005934	2.5
Extreme (0C)	1880	13.8	0.007360	2.5
Extreme (-10C)	1880	13.0	0.006922	2.5
Extreme (-20C)	1880	10.1	0.005390	2.5
Extreme (-30C)	1880	5.3	0.002831	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	14.4	0.007671	2.5
3.87	1880	11.5	0.006134	2.5
4.45	1880	10.7	0.005701	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.6	0.005084	2.5
Extreme (50C)	1880	4.2	0.002241	2.5
Extreme (40C)	1880	7.3	0.003902	2.5
Extreme (30C)	1880	6.6	0.003522	2.5
Extreme (10C)	1880	4.3	0.002298	2.5
Extreme (0C)	1880	5.7	0.003038	2.5
Extreme (-10C)	1880	13.0	0.006926	2.5
Extreme (-20C)	1880	12.8	0.006833	2.5
Extreme (-30C)	1880	6.0	0.003175	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	4.4	0.002515	2.5
3.87	1732.5	14.2	0.008202	2.5
4.45	1732.5	4.2	0.002414	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	10.0	0.005801	2.5
Extreme (50C)	1732.5	7.9	0.004537	2.5
Extreme (40C)	1732.5	11.7	0.006761	2.5
Extreme (30C)	1732.5	15.6	0.009027	2.5
Extreme (10C)	1732.5	15.6	0.008980	2.5
Extreme (0C)	1732.5	5.5	0.003153	2.5
Extreme (-10C)	1732.5	14.1	0.008145	2.5
Extreme (-20C)	1732.5	11.6	0.006699	2.5
Extreme (-30C)	1732.5	5.8	0.003344	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	11.8	0.006804	2.5
3.87	1732.5	7.9	0.004555	2.5
4.45	1732.5	8.4	0.004856	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	13.0	0.007480	2.5
Extreme (50C)	1732.5	7.2	0.004141	2.5
Extreme (40C)	1732.5	7.7	0.004434	2.5
Extreme (30C)	1732.5	7.5	0.004316	2.5
Extreme (10C)	1732.5	4.0	0.002286	2.5
Extreme (0C)	1732.5	6.9	0.003986	2.5
Extreme (-10C)	1732.5	13.9	0.008035	2.5
Extreme (-20C)	1732.5	4.9	0.002826	2.5
Extreme (-30C)	1732.5	9.7	0.005578	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	3.9	0.004628	2.5
3.87	836.5	6.7	0.008012	2.5
4.45	836.5	9.3	0.011084	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	7.3	0.008733	2.5
Extreme (50C)	836.5	6.0	0.007168	2.5
Extreme (40C)	836.5	15.5	0.018556	2.5
Extreme (30C)	836.5	5.9	0.007103	2.5
Extreme (10C)	836.5	9.3	0.011156	2.5
Extreme (0C)	836.5	10.6	0.012678	2.5
Extreme (-10C)	836.5	11.0	0.013105	2.5
Extreme (-20C)	836.5	9.5	0.011384	2.5
Extreme (-30C)	836.5	15.2	0.018118	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	14.6	0.017436	2.5
3.87	836.5	7.8	0.009379	2.5
4.45	836.5	12.8	0.015327	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	3.3	0.003955	2.5
Extreme (50C)	836.5	12.1	0.014452	2.5
Extreme (40C)	836.5	10.8	0.012950	2.5
Extreme (30C)	836.5	6.3	0.007518	2.5
Extreme (10C)	836.5	3.3	0.003986	2.5
Extreme (0C)	836.5	11.4	0.013623	2.5
Extreme (-10C)	836.5	6.6	0.007910	2.5
Extreme (-20C)	836.5	10.5	0.012515	2.5
Extreme (-30C)	836.5	13.3	0.015872	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	15.2	0.006016	2.5
3.87	2535	11.0	0.004326	2.5
4.45	2535	11.9	0.004696	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	5.7	0.002262	2.5
Extreme (50C)	2535	9.5	0.003736	2.5
Extreme (40C)	2535	13.6	0.005380	2.5
Extreme (30C)	2535	3.4	0.001340	2.5
Extreme (10C)	2535	7.8	0.003083	2.5
Extreme (0C)	2535	14.4	0.005675	2.5
Extreme (-10C)	2535	7.7	0.003029	2.5
Extreme (-20C)	2535	6.2	0.002440	2.5
Extreme (-30C)	2535	14.7	0.005815	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	6.6	0.002614	2.5
3.87	2535	11.7	0.004623	2.5
4.45	2535	12.2	0.004826	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	4.3	0.001695	2.5
Extreme (50C)	2535	5.5	0.002165	2.5
Extreme (40C)	2535	8.5	0.003343	2.5
Extreme (30C)	2535	12.1	0.004782	2.5
Extreme (10C)	2535	11.2	0.004430	2.5
Extreme (0C)	2535	6.9	0.002714	2.5
Extreme (-10C)	2535	12.7	0.005008	2.5
Extreme (-20C)	2535	12.0	0.004742	2.5
Extreme (-30C)	2535	3.2	0.001244	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	11.4	0.016062	2.5
3.87	707.5	14.2	0.020032	2.5
4.45	707.5	12.6	0.017752	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	4.1	0.005783	2.5
Extreme (50C)	707.5	9.7	0.013664	2.5
Extreme (40C)	707.5	14.4	0.020291	2.5
Extreme (30C)	707.5	10.5	0.014824	2.5
Extreme (10C)	707.5	4.1	0.005827	2.5
Extreme (0C)	707.5	3.7	0.005252	2.5
Extreme (-10C)	707.5	7.1	0.010019	2.5
Extreme (-20C)	707.5	10.6	0.014933	2.5
Extreme (-30C)	707.5	13.7	0.019389	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	13.8	0.019508	2.5
3.87	707.5	9.7	0.013741	2.5
4.45	707.5	3.9	0.005468	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	3.4	0.004868	2.5
Extreme (50C)	707.5	6.6	0.009355	2.5
Extreme (40C)	707.5	8.9	0.012597	2.5
Extreme (30C)	707.5	5.9	0.008384	2.5
Extreme (10C)	707.5	11.2	0.015895	2.5
Extreme (0C)	707.5	7.7	0.010881	2.5
Extreme (-10C)	707.5	4.6	0.006561	2.5
Extreme (-20C)	707.5	9.8	0.013909	2.5
Extreme (-30C)	707.5	8.1	0.011474	2.5

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

10.6 LTE BAND 13

Band 13 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	8.9	0.012493	2.5
3.87	710.0	9.0	0.012719	2.5
4.45	710.0	12.0	0.016907	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	12.1	0.017038	2.5
Extreme (50C)	710.0	3.3	0.004622	2.5
Extreme (40C)	710.0	6.0	0.008406	2.5
Extreme (30C)	710.0	13.4	0.018825	2.5
Extreme (10C)	710.0	5.8	0.008108	2.5
Extreme (0C)	710.0	11.6	0.016362	2.5
Extreme (-10C)	710.0	7.0	0.009799	2.5
Extreme (-20C)	710	10.7	0.015009	2.5
Extreme (-30C)	710	5.7	0.008068	2.5

Band 13 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	14.4	0.020230	2.5
3.87	710.0	14.5	0.020479	2.5
4.45	710.0	6.7	0.009497	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	4.5	0.006331	2.5
Extreme (50C)	710.0	6.0	0.008505	2.5
Extreme (40C)	710.0	3.6	0.005077	2.5
Extreme (30C)	710.0	3.3	0.004652	2.5
Extreme (10C)	710.0	4.8	0.006752	2.5
Extreme (0C)	710.0	4.1	0.005710	2.5
Extreme (-10C)	710.0	8.2	0.011522	2.5
Extreme (-20C)	710.0	3.6	0.005063	2.5
Extreme (-30C)	710.0	8.8	0.012446	2.5

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

10.7 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	8.2	0.011496	2.5
3.87	710	14.8	0.020777	2.5
4.45	710	8.4	0.011798	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	10.2	0.014425	2.5
Extreme (50C)	710	14.3	0.020170	2.5
Extreme (40C)	710	8.6	0.012169	2.5
Extreme (30C)	710	4.7	0.006567	2.5
Extreme (10C)	710	15.3	0.021511	2.5
Extreme (0C)	710	12.2	0.017115	2.5
Extreme (-10C)	710	15.7	0.022069	2.5
Extreme (-20C)	710	6.6	0.009303	2.5
Extreme (-30C)	710	3.1	0.004356	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	11.9	0.016715	2.5
3.87	710	9.2	0.012968	2.5
4.45	710	14.1	0.019923	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	5.1	0.007252	2.5
Extreme (50C)	710	11.9	0.016741	2.5
Extreme (40C)	710	14.6	0.020523	2.5
Extreme (30C)	710	3.9	0.005512	2.5
Extreme (10C)	710	13.3	0.018701	2.5
Extreme (0C)	710	11.7	0.016462	2.5
Extreme (-10C)	710	9.5	0.013369	2.5
Extreme (-20C)	710	12.6	0.017723	2.5
Extreme (-30C)	710	12.7	0.017845	2.5

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

10.8 LTE BAND 25

Band 25 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	1882.5	6.8	0.003615	2.5
3.87	1882.5	6.1	0.003230	2.5
4.45	1882.5	15.1	0.007998	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	11.4	0.006053	2.5
Extreme (50C)	1882.5	7.0	0.003710	2.5
Extreme (40C)	1882.5	9.2	0.004871	2.5
Extreme (30C)	1882.5	9.9	0.005249	2.5
Extreme (10C)	1882.5	6.9	0.003662	2.5
Extreme (0C)	1882.5	5.9	0.003119	2.5
Extreme (-10C)	1882.5	8.6	0.004583	2.5
Extreme (-20C)	1882.5	14.4	0.007673	2.5
Extreme (-30C)	1882.5	3.4	0.001809	2.5

Band 25 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	1882.5	4.5	0.002373	2.5
3.87	1882.5	8.5	0.004513	2.5
4.45	1882.5	6.1	0.003223	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	15.7	0.008321	2.5
Extreme (50C)	1882.5	8.2	0.004348	2.5
Extreme (40C)	1882.5	4.1	0.002153	2.5
Extreme (30C)	1882.5	9.2	0.004862	2.5
Extreme (10C)	1882.5	13.7	0.007269	2.5
Extreme (0C)	1882.5	8.6	0.004561	2.5
Extreme (-10C)	1882.5	3.8	0.001999	2.5
Extreme (-20C)	1882.5	13.1	0.006968	2.5
Extreme (-30C)	1882.5	10.7	0.005663	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 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	10.0	0.012243	2.5
3.87	819	3.8	0.004665	2.5
4.45	819	4.5	0.005466	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	9.7	0.011895	2.5
Extreme (50C)	819	11.1	0.013495	2.5
Extreme (40C)	819	13.9	0.016921	2.5
Extreme (30C)	819	10.2	0.012499	2.5
Extreme (10C)	819	15.1	0.018463	2.5
Extreme (0C)	819	8.9	0.010908	2.5
Extreme (-10C)	819	14.7	0.017999	2.5
Extreme (-20C)	819	5.2	0.006362	2.5
Extreme (-30C)	819	7.2	0.008797	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	13.1	0.015993	2.5
3.87	819	4.2	0.005150	2.5
4.45	819	6.8	0.008335	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	3.4	0.004104	2.5
Extreme (50C)	819	12.8	0.015625	2.5
Extreme (40C)	819	7.8	0.009497	2.5
Extreme (30C)	819	8.6	0.010454	2.5
Extreme (10C)	819	10.8	0.013193	2.5
Extreme (0C)	819	14.3	0.017436	2.5
Extreme (-10C)	819	12.8	0.015581	2.5
Extreme (-20C)	819	7.8	0.009524	2.5
Extreme (-30C)	819	11.9	0.014503	2.5

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

10.10 LTE BAND 26 B

Band 26A QPSK, (15MHz 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 15MHz)				
3.29	836.5	5.8	0.006935	2.5
3.87	836.5	3.2	0.003802	2.5
4.45	836.5	13.1	0.015678	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 15MHz)				
Normal (25C)	836.5	12.9	0.015399	2.5
Extreme (50C)	836.5	10.1	0.012095	2.5
Extreme (40C)	836.5	13.1	0.015662	2.5
Extreme (30C)	836.5	5.3	0.006320	2.5
Extreme (10C)	836.5	11.1	0.013237	2.5
Extreme (0C)	836.5	7.9	0.009414	2.5
Extreme (-10C)	836.5	9.3	0.011168	2.5
Extreme (-20C)	836.5	14.2	0.016935	2.5
Extreme (-30C)	836.5	10.9	0.012999	2.5

Band 26b 16QAM, (15MHz 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 15MHz)				
3.29	836.5	8.5	0.010189	2.5
3.87	836.5	10.2	0.012189	2.5
4.45	836.5	5.2	0.006173	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 15MHz)				
Normal (25C)	836.5	5.0	0.006004	2.5
Extreme (50C)	836.5	5.1	0.006048	2.5
Extreme (40C)	836.5	4.9	0.005809	2.5
Extreme (30C)	836.5	4.3	0.005140	2.5
Extreme (10C)	836.5	10.5	0.012596	2.5
Extreme (0C)	836.5	13.7	0.016318	2.5
Extreme (-10C)	836.5	6.5	0.007730	2.5
Extreme (-20C)	836.5	6.0	0.007130	2.5
Extreme (-30C)	836.5	9.2	0.010939	2.5

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

10.11 LTE BAND 41

Band 41 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	2593	5.2	0.001997	2.5
3.87	2593	10.9	0.004194	2.5
4.45	2593	6.3	0.002443	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	4.5	0.001740	2.5
Extreme (50C)	2593	10.7	0.004141	2.5
Extreme (40C)	2593	8.4	0.003240	2.5
Extreme (30C)	2593	9.0	0.003471	2.5
Extreme (10C)	2593	12.7	0.004915	2.5
Extreme (0C)	2593	9.4	0.003618	2.5
Extreme (-10C)	2593	12.8	0.004926	2.5
Extreme (-20C)	2593	6.2	0.002386	2.5
Extreme (-30C)	2593	14.2	0.005457	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	2593	3.5	0.001357	2.5
3.87	2593	5.8	0.002234	2.5
4.45	2593	13.8	0.005303	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	15.8	0.006080	2.5
Extreme (50C)	2593	14.0	0.005415	2.5
Extreme (40C)	2593	15.3	0.005903	2.5
Extreme (30C)	2593	9.9	0.003803	2.5
Extreme (10C)	2593	11.8	0.004548	2.5
Extreme (0C)	2593	5.3	0.002047	2.5
Extreme (-10C)	2593	14.4	0.005535	2.5
Extreme (-20C)	2593	7.6	0.002923	2.5
Extreme (-30C)	2593	7.9	0.003061	2.5

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

10.12 LTE BAND 66

Band 66 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]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	8.0	0.004578	2.5
3.87	1745	4.5	0.002583	2.5
4.45	1745	5.8	0.003302	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	4.3	0.002482	2.5
Extreme (50C)	1745	11.8	0.006776	2.5
Extreme (40C)	1745	15.5	0.008874	2.5
Extreme (30C)	1745	3.4	0.001964	2.5
Extreme (10C)	1745	15.9	0.009104	2.5
Extreme (0C)	1745	10.2	0.005840	2.5
Extreme (-10C)	1745	10.5	0.006030	2.5
Extreme (-20C)	1745	5.5	0.003150	2.5
Extreme (-30C)	1745	7.2	0.004149	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	12.9	0.007388	2.5
3.87	1745	11.4	0.006523	2.5
4.45	1745	11.1	0.006370	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	8.4	0.004840	2.5
Extreme (50C)	1745	10.4	0.005974	2.5
Extreme (40C)	1745	12.3	0.007020	2.5
Extreme (30C)	1745	5.2	0.002954	2.5
Extreme (10C)	1745	12.9	0.007404	2.5
Extreme (0C)	1745	11.3	0.006483	2.5
Extreme (-10C)	1745	14.0	0.008011	2.5
Extreme (-20C)	1745	11.8	0.006748	2.5
Extreme (-30C)	1745	15.8	0.009082	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.

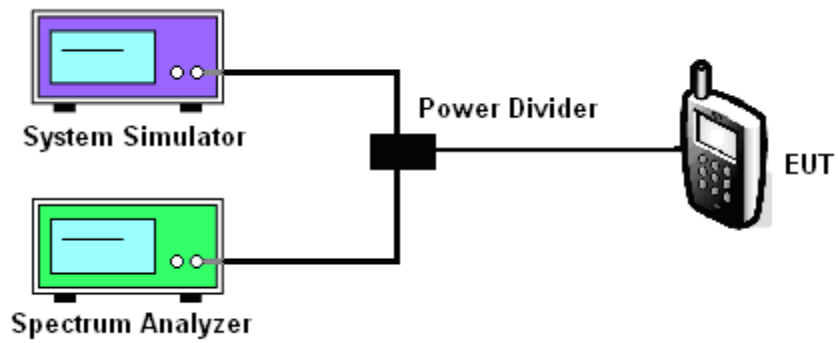
11.2 Measuring Instruments

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 2/4/5/7/12/13/17/25/26/41/66

Test data reference attachment.

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