

FCC CFR47 PART 22H, 24E, 27, Part 90 CERTIFICATION TEST REPORT FCC ID: 2BAK2-F107PRO

Product: Smartphone

Trade Mark: 

Model No.: F107 Pro

Family Model: F107, F107 Plus, F107 Ultra, F107 S

Report No.: S25032804802006

Issue Date: Jun. 20, 2025

Prepared for

Shenzhen Qichang Intelligent Technology Co., Ltd
Room 510, Building 7, Yunli Intelligent Park, No. 7, Bantian Street, Longgang ,
Shenzhen

Prepared by

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

TEST RESULT CERTIFICATION

Applicant's name	Shenzhen Qichang Intelligent Technology Co., Ltd
Address.....	Room 510, Building 7, Yunli Intelligent Park, No. 7, Bantian Street, Longgang , Shenzhen
Manufacturer's Name	Shenzhen Qichang Intelligent Technology Co., Ltd
Address.....	Room 510, Building 7, Yunli Intelligent Park, No. 7, Bantian Street, Longgang , Shenzhen
Product name.....	Smartphone
Model and/or type reference ..	F107 Pro
Trade Mark.....	
Family Model.....	F107, F107 Plus, F107 Ultra, F107 S
Test Sample Number.....	S250328048014
Standards	FCC CFR 47 Part 22H, Part 24E, Part 27, Part 90
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..... Apr. 03, 2025 ~ Jun. 20, 2025

Date of Issue Jun. 20, 2025

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

Prepared By : Gavan Zhang
Gavan Zhang
(Project Engineer)

Reviewed By : Aaron Cheng
Aaron Cheng
(Supervisor)

Approved : Alex Li
By : Alex Li
(Manager)

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Smartphone
Trade Mark	
Model Name	F107 Pro
Family Model	F107, F107 Plus, F107 Ultra, F107 S
Model Difference	All models have the same circuit and RF module, except for model names and colors.
FCC ID:	2BAK2-F107PRO
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2,4,5,7,12,13,17, 25, 26, 66 TDD Band 38, 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 38 Uplink & Downlink: 2570 MHz to 2620 MHz 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:	PIFA Antenna
Antenna gain:	Band 2: 0.2dBi, Band 4: 1.8dBi, Band 5: -4.5dBi, Band 7: -2.9dBi, Band 12: -1.2dBi, Band 13: -2.5dBi, Band 17: -1.2dBi, Band25: 0.2dBi, Band 26: -4.5dBi, Band 38: -0.6dBi, Band41: -0.2dBi, Band66: 1.8dBi;

Adapter	Model: HJ-PD66W-US Input: 100-240V~50/60Hz 1.5A Output: 5.0V $\overline{\text{---}}$ 3.0A or 9.0V $\overline{\text{---}}$ 3.0A or 12.0V $\overline{\text{---}}$ 3.0A or 15.0V $\overline{\text{---}}$ 3.0A or 20.0V $\overline{\text{---}}$ 3.25A or 11.0V $\overline{\text{---}}$ 6.0A 66.0W MAX
Battery	DC 3.85V, 28000mAh, 107.8Wh
Power supply	DC 3.85V from battery or DC 5V/9V/12V/15V/20V/11V from adapter
Extreme Vol. Limits:	DC 3.29V to DC 4.45V (Nominal DC 3.85V) (Note 1)
HW Version	V1.2
SW Version	N/A
** Note1: The High Voltage DC 4.43V and Low Voltage 3.27V 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: 2BAK2-F107PRO** filing to comply with the FCC Part 22H&24E&27

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, 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 2/4/5/7/12/13/17/25/26/38/41/66

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	Smartphone	F107 Pro	FCC ID: 2BAK2-F107PRO	EUT

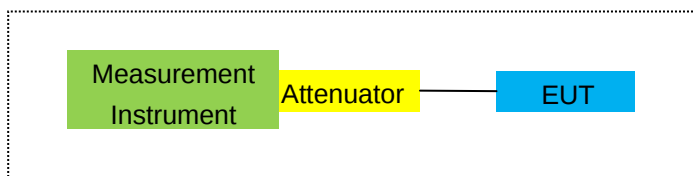
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

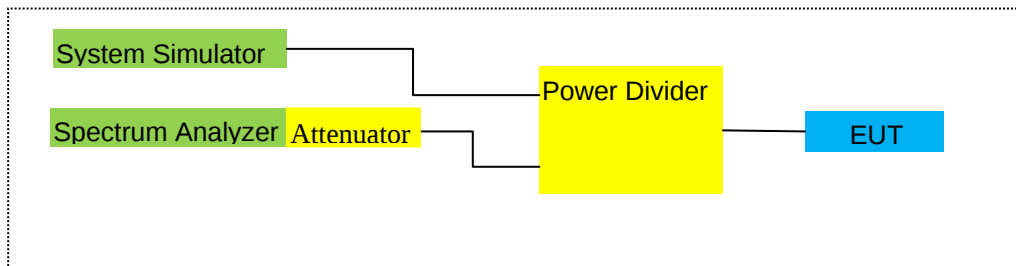
For Radiated Test Cases



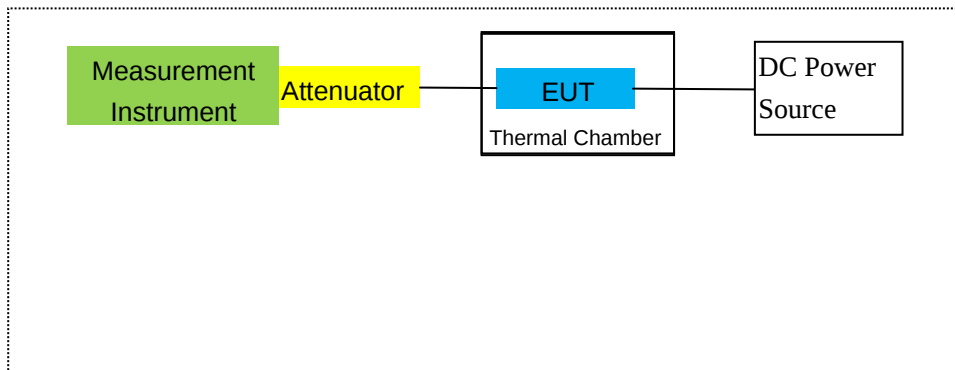
For Conducted Output Power



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	2025.04.17	2026.04.16	1 year
2	Test Receiver	R&S	ESPI	101318	2025.04.17	2026.04.16	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12 2025.05.11	2025.05.11 2026.05.10	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
5	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2816	2024.05.18	2027.05.17	3 year
6	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2817	2024.05.18	2027.05.17	3 year
7	Amplifier	EM	EM-30180	060538	2025.04.17	2026.04.16	1 year
8	Active Loop Antenna	SCHWARZBECK	FMZB 1519 B	055	2024.05.17	2027.05.16	3 year
9	Power Meter	R&S	NRVS	100696	2025.04.17	2026.04.16	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2025.04.17	2026.04.16	1 year
11	Test Cable	N/A	R-01	N/A	2022.06.17 2025.06.16	2025.06.16 2026.06.15	3 year
12	Test Cable	N/A	R-02	N/A	2022.06.17 2025.06.16	2025.06.16 2026.06.15	3 year
13	Test Cable	N/A	R-03	N/A	2022.06.17 2025.06.16	2025.06.16 2026.06.15	3 year
14	Test Receiver	R&S	ESCI	101160	2025.04.17	2026.04.16	1 year
15	LISN	R&S	ENV216	101313	2025.04.17	2026.04.16	1 year
16	LISN	EMCO	3816/2	00042990	2025.04.17	2026.04.16	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
18	Field strength probe	narda	EP601	711WX81278	2025.04.17	2026.04.16	1 year
19	Test Cable	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
20	Test Cable	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
21	Test Cable	N/A	C03	N/A	2023.05.06	2026.05.05	3 year
22	Spectrum Analyzer	Agilent	E4440A	MY41000130	2025.04.17	2026.04.16	1 year

23	EMI Test Receiver	R&S	ESCI	101160	2025.04.17	2026.04.16	1 year
24	Universal Radio Communication Tester	R&S	CMU200	105747	2025.04.17	2026.04.16	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

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	MWRFTest	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 2/4/5/7/12/13/17/25/26/38/41/66

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 2/4/5/7/12/13/17/25/26/38/41/66

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 2/4/5/7/12/13/17/25/26/38/41/66
- ☐

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 2/4/5/7/12/13/17/25/26/38/41/66

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-3.24	3.76	28.24	21.24	133.045	Horizontal	Pass
		1880	-3.08	3.91	28.22	21.23	132.739	Horizontal	Pass
		1909.3	-3.02	3.93	28.20	21.25	133.352	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.88	3.77	28.23	21.58	143.880	Horizontal	Pass
		1880	-2.73	3.91	28.24	21.60	144.544	Horizontal	Pass
		1908.5	-2.62	3.94	28.25	21.69	147.571	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.86	3.77	28.31	21.68	147.231	Horizontal	Pass
		1880	-2.60	3.91	28.22	21.71	148.252	Horizontal	Pass
		1907.5	-2.99	3.94	28.20	21.27	133.968	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-3.32	3.79	28.33	21.22	132.434	Horizontal	Pass
		1880	-3.00	3.95	28.22	21.27	133.968	Horizontal	Pass
		1905	-2.86	3.97	28.19	21.36	136.773	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-3.28	3.79	28.34	21.27	133.968	Horizontal	Pass
		1880	-2.97	3.95	28.22	21.30	134.896	Horizontal	Pass
		1902.5	-2.86	3.97	28.18	21.35	136.458	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	0.26	3.81	28.35	24.80	301.995	Horizontal	Pass
		1880	-0.62	3.96	28.22	23.64	231.206	Horizontal	Pass
		1900	-2.40	4.00	28.16	21.76	149.968	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-3.38	3.76	28.24	21.10	128.825	Vertical	Pass
		1880	-3.39	3.91	28.22	20.92	123.595	Vertical	Pass
		1909.3	-4.04	3.93	28.20	20.23	105.439	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-3.70	3.77	28.23	20.76	119.124	Vertical	Pass
		1880	-3.16	3.91	28.24	21.17	130.918	Vertical	Pass
		1908.5	-4.10	3.94	28.25	20.21	104.954	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-3.47	3.77	28.31	21.07	127.938	Vertical	Pass
		1880	-3.82	3.91	28.22	20.49	111.944	Vertical	Pass
		1907.5	-4.06	3.94	28.20	20.20	104.713	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-4.27	3.79	28.33	20.27	106.414	Vertical	Pass
		1880	-3.74	3.95	28.22	20.53	112.980	Vertical	Pass
		1905	-3.58	3.97	28.19	20.64	115.878	Vertical	Pass

15.0MHz Band QPSK	1/#Mid	1857.5	-3.76	3.79	28.34	20.79	119.950	Vertical	Pass
		1880	-3.95	3.95	28.22	20.32	107.647	Vertical	Pass
		1902.5	-3.46	3.97	28.18	20.75	118.850	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1860	-1.89	3.81	28.35	22.65	184.077	Vertical	Pass
		1880	-1.24	3.96	28.22	23.02	200.447	Vertical	Pass
		1900	-1.71	4.00	28.16	22.45	175.792	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1850.7	-2.99	3.76	28.24	21.49	140.929	Horizontal	Pass
		1880	-2.82	3.91	28.22	21.49	140.929	Horizontal	Pass
		1909.3	-2.78	3.93	28.20	21.49	140.929	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-2.65	3.77	28.23	21.81	151.705	Horizontal	Pass
		1880	-2.47	3.91	28.24	21.86	153.462	Horizontal	Pass
		1908.5	-2.31	3.94	28.25	22.00	158.489	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-2.61	3.77	28.31	21.93	155.955	Horizontal	Pass
		1880	-2.38	3.91	28.22	21.93	155.955	Horizontal	Pass
		1907.5	-2.64	3.94	28.20	21.62	145.211	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-3.09	3.79	28.33	21.45	139.637	Horizontal	Pass
		1880	-2.70	3.95	28.22	21.57	143.549	Horizontal	Pass
		1905	-2.69	3.97	28.19	21.53	142.233	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-2.97	3.79	28.34	21.58	143.880	Horizontal	Pass
		1880	-2.71	3.95	28.22	21.56	143.219	Horizontal	Pass
		1902.5	-2.71	3.97	28.18	21.50	141.254	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-2.62	3.81	28.35	21.92	155.597	Horizontal	Pass
		1880	-2.40	3.96	28.22	21.86	153.462	Horizontal	Pass
		1900	-2.14	4.00	28.16	22.02	159.221	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-3.54	3.76	28.24	20.94	124.165	Vertical	Pass
		1880	-3.38	3.91	28.22	20.93	123.880	Vertical	Pass
		1909.3	-3.38	3.93	28.20	20.89	122.744	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-4.01	3.77	28.23	20.45	110.917	Vertical	Pass
		1880	-3.74	3.91	28.24	20.59	114.551	Vertical	Pass
		1908.5	-3.99	3.94	28.25	20.32	107.647	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-3.58	3.77	28.31	20.96	124.738	Vertical	Pass
		1880	-3.86	3.91	28.22	20.45	110.917	Vertical	Pass
		1907.5	-3.12	3.94	28.20	21.14	130.017	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-4.28	3.79	28.33	20.26	106.170	Vertical	Pass
		1880	-3.08	3.95	28.22	21.19	131.522	Vertical	Pass
		1905	-3.35	3.97	28.19	20.87	122.180	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-3.94	3.79	28.34	20.61	115.080	Vertical	Pass
		1880	-3.58	3.95	28.22	20.69	117.220	Vertical	Pass
		1902.5	-3.70	3.97	28.18	20.51	112.460	Vertical	Pass

20.0MHz Band 16 QAM	1/#Mid	1860	-3.78	3.81	28.35	20.76	119.124	Vertical	Pass
		1880	-3.62	3.96	28.22	20.64	115.878	Vertical	Pass
		1900	-3.85	4.00	28.16	20.31	107.399	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-1.13	3.12	27.58	23.33	215.278	Horizontal	Pass
		1732.5	-0.90	3.27	27.61	23.44	220.800	Horizontal	Pass
		1754.3	-1.45	3.29	27.63	22.89	194.536	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.50	3.13	27.61	22.98	198.609	Horizontal	Pass
		1732.5	-1.35	3.27	27.61	22.99	199.067	Horizontal	Pass
		1753.5	-1.46	3.30	27.62	22.86	193.197	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-1.41	3.13	27.63	23.09	203.704	Horizontal	Pass
		1732.5	-1.25	3.27	27.61	23.09	203.704	Horizontal	Pass
		1752.5	-1.36	3.30	27.60	22.94	196.789	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-1.40	3.15	27.64	23.09	203.704	Horizontal	Pass
		1732.5	-1.23	3.31	27.61	23.07	202.768	Horizontal	Pass
		1750	-1.33	3.33	27.59	22.93	196.336	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-1.37	3.15	27.65	23.13	205.589	Horizontal	Pass
		1732.5	-1.20	3.31	27.61	23.10	204.174	Horizontal	Pass
		1747.5	-1.24	3.33	27.57	23.00	199.526	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-1.38	3.17	27.66	23.11	204.644	Horizontal	Pass
		1732.5	-1.19	3.32	27.61	23.10	204.174	Horizontal	Pass
		1745	-0.71	3.36	27.56	23.49	223.357	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-1.78	3.12	27.58	22.68	185.353	Vertical	Pass
		1732.5	-2.29	3.27	27.61	22.05	160.325	Vertical	Pass
		1754.3	-2.53	3.29	27.63	21.81	151.705	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.16	3.13	27.61	22.32	170.608	Vertical	Pass
		1732.5	-2.46	3.27	27.61	21.88	154.170	Vertical	Pass
		1753.5	-2.12	3.30	27.62	22.20	165.959	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.09	3.13	27.63	22.41	174.181	Vertical	Pass
		1732.5	-1.80	3.27	27.61	22.54	179.473	Vertical	Pass
		1752.5	-2.25	3.30	27.60	22.05	160.325	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.39	3.15	27.64	22.10	162.181	Vertical	Pass
		1732.5	-2.32	3.31	27.61	21.98	157.761	Vertical	Pass
		1750	-2.07	3.33	27.59	22.19	165.577	Vertical	Pass

15.0MHz Band QPSK	1/#Mid	1717.5	-2.47	3.15	27.65	22.03	159.588	Vertical	Pass
		1732.5	-1.80	3.31	27.61	22.50	177.828	Vertical	Pass
		1747.5	-1.85	3.33	27.57	22.39	173.380	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.22	3.17	27.66	22.27	168.655	Vertical	Pass
		1732.5	-2.28	3.32	27.61	22.01	158.855	Vertical	Pass
		1745	-1.88	3.36	27.56	22.32	170.608	Vertical	Pass

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-0.90	3.12	27.58	23.56	226.986	Horizontal	Pass
		1732.5	-0.67	3.27	27.61	23.67	232.809	Horizontal	Pass
		1754.3	-1.21	3.29	27.63	23.13	205.589	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.28	3.13	27.61	23.20	208.930	Horizontal	Pass
		1732.5	-1.10	3.27	27.61	23.24	210.863	Horizontal	Pass
		1753.5	-1.13	3.30	27.62	23.19	208.449	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-1.22	3.13	27.63	23.28	212.814	Horizontal	Pass
		1732.5	-1.00	3.27	27.61	23.34	215.774	Horizontal	Pass
		1752.5	-1.12	3.30	27.60	23.18	207.970	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-1.05	3.15	27.64	23.44	220.800	Horizontal	Pass
		1732.5	-1.05	3.31	27.61	23.25	211.349	Horizontal	Pass
		1750	-0.98	3.33	27.59	23.28	212.814	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-1.09	3.15	27.65	23.41	219.280	Horizontal	Pass
		1732.5	-0.97	3.31	27.61	23.33	215.278	Horizontal	Pass
		1747.5	-0.94	3.33	27.57	23.30	213.796	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-0.80	3.17	27.66	23.69	233.884	Horizontal	Pass
		1732.5	-0.92	3.32	27.61	23.37	217.270	Horizontal	Pass
		1745	-0.95	3.36	27.56	23.25	211.349	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-2.01	3.12	27.58	22.45	175.792	Vertical	Pass
		1732.5	-1.80	3.27	27.61	22.54	179.473	Vertical	Pass
		1754.3	-1.85	3.29	27.63	22.49	177.419	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.96	3.13	27.61	22.52	178.649	Vertical	Pass
		1732.5	-2.31	3.27	27.61	22.03	159.588	Vertical	Pass
		1753.5	-1.87	3.30	27.62	22.45	175.792	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.05	3.13	27.63	22.45	175.792	Vertical	Pass
		1732.5	-2.23	3.27	27.61	22.11	162.555	Vertical	Pass
		1752.5	-1.72	3.30	27.60	22.58	181.134	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-2.60	3.15	27.64	21.89	154.525	Vertical	Pass
		1732.5	-2.42	3.31	27.61	21.88	154.170	Vertical	Pass
		1750	-2.08	3.33	27.59	22.18	165.196	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-2.39	3.15	27.65	22.11	162.555	Vertical	Pass
		1732.5	-1.72	3.31	27.61	22.58	181.134	Vertical	Pass
		1747.5	-1.67	3.33	27.57	22.57	180.717	Vertical	Pass

20.0MHz	1/#Mid	1720	-1.93	3.17	27.66	22.56	180.302	Vertical	Pass
Band 16		1732.5	-1.87	3.32	27.61	22.42	174.582	Vertical	Pass
QAM		1745	-2.20	3.36	27.56	22.00	158.489	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	3/#Mid	824.7	1.20	2.01	19.68	2.15	16.72	46.989	Horizontal	Pass
		836.5	0.98	2.01	19.77	2.15	16.59	45.604	Horizontal	Pass
		848.3	1.17	2.02	19.82	2.15	16.82	48.084	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	1.28	2.01	19.70	2.15	16.82	48.084	Horizontal	Pass
		836.5	0.97	2.01	19.77	2.15	16.58	45.499	Horizontal	Pass
		847.5	1.11	2.02	19.81	2.15	16.75	47.315	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	0.78	2.01	19.71	2.15	16.33	42.954	Horizontal	Pass
		836.5	0.51	2.01	19.77	2.15	16.12	40.926	Horizontal	Pass
		846.5	0.83	2.02	19.79	2.15	16.45	44.157	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	1.74	2.01	19.73	2.15	17.31	53.827	Horizontal	Pass
		836.5	1.52	2.01	19.77	2.15	17.13	51.642	Horizontal	Pass
		844	1.62	2.02	19.78	2.15	17.23	52.845	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	0.65	2.01	19.68	2.15	16.17	41.400	Vertical	Pass
		836.5	0.43	2.01	19.77	2.15	16.04	40.179	Vertical	Pass
		848.3	0.49	2.02	19.82	2.15	16.14	41.115	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	0.72	2.01	19.70	2.15	16.26	42.267	Vertical	Pass
		836.5	-0.07	2.01	19.77	2.15	15.54	35.810	Vertical	Pass
		847.5	-0.01	2.02	19.81	2.15	15.63	36.559	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	0.81	2.01	19.71	2.15	16.36	43.251	Vertical	Pass
		836.5	0.66	2.01	19.77	2.15	16.27	42.364	Vertical	Pass
		846.5	-0.06	2.02	19.79	2.15	15.56	35.975	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	-0.03	2.01	19.73	2.15	15.54	35.810	Vertical	Pass
		836.5	0.31	2.01	19.77	2.15	15.92	39.084	Vertical	Pass
		844	0.35	2.02	19.78	2.15	15.96	39.446	Vertical	Pass

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	3/#Mid	824.7	1.38	2.01	19.68	2.15	16.90	48.978	Horizontal	Pass
		836.5	1.25	2.01	19.77	2.15	16.86	48.529	Horizontal	Pass
		848.3	1.45	2.02	19.82	2.15	17.10	51.286	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	1.70	2.01	19.70	2.15	17.24	52.966	Horizontal	Pass
		836.5	0.82	2.01	19.77	2.15	16.43	43.954	Horizontal	Pass
		847.5	1.00	2.02	19.81	2.15	16.64	46.132	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	1.19	2.01	19.71	2.15	16.74	47.206	Horizontal	Pass
		836.5	0.84	2.01	19.77	2.15	16.45	44.157	Horizontal	Pass
		846.5	1.10	2.02	19.79	2.15	16.72	46.989	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	0.97	2.01	19.73	2.15	16.54	45.082	Horizontal	Pass
		836.5	1.88	2.01	19.77	2.15	17.49	56.105	Horizontal	Pass
		844	0.94	2.02	19.78	2.15	16.55	45.186	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	0.10	2.01	19.68	2.15	15.62	36.475	Vertical	Pass
		836.5	0.56	2.01	19.77	2.15	16.17	41.400	Vertical	Pass
		848.3	0.80	2.02	19.82	2.15	16.45	44.157	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	0.49	2.01	19.70	2.15	16.03	40.087	Vertical	Pass
		836.5	0.19	2.01	19.77	2.15	15.80	38.019	Vertical	Pass
		847.5	0.73	2.02	19.81	2.15	16.37	43.351	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	0.87	2.01	19.71	2.15	16.42	43.853	Vertical	Pass
		836.5	0.09	2.01	19.77	2.15	15.70	37.154	Vertical	Pass
		846.5	0.36	2.02	19.79	2.15	15.98	39.628	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	0.74	2.01	19.73	2.15	16.31	42.756	Vertical	Pass
		836.5	0.33	2.01	19.77	2.15	15.94	39.264	Vertical	Pass
		844	0.38	2.02	19.78	2.15	15.99	39.719	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2502.5	-4.76	4.54	27.75	18.45	69.984	Horizontal	Pass
		2535	-4.33	4.69	27.72	18.70	74.131	Horizontal	Pass
		2567.5	-4.37	4.71	27.71	18.63	72.946	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	-4.73	4.55	27.76	18.48	70.469	Horizontal	Pass
		2535	-4.25	4.69	27.72	18.78	75.509	Horizontal	Pass
		2565	-4.30	4.72	27.70	18.68	73.790	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-4.62	4.55	27.77	18.60	72.444	Horizontal	Pass
		2535	-4.25	4.69	27.72	18.78	75.509	Horizontal	Pass
		2562.5	-4.25	4.72	27.69	18.72	74.473	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	-4.61	4.57	27.78	18.60	72.444	Horizontal	Pass
		2535	-4.19	4.73	27.72	18.80	75.858	Horizontal	Pass
		2560	-4.17	4.75	27.68	18.76	75.162	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-5.91	4.54	27.75	17.30	53.703	Vertical	Pass
		2535	-5.34	4.69	27.72	17.69	58.749	Vertical	Pass
		2567.5	-5.79	4.71	27.71	17.21	52.602	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-5.75	4.55	27.76	17.46	55.719	Vertical	Pass
		2535	-5.49	4.69	27.72	17.54	56.754	Vertical	Pass
		2565	-5.12	4.72	27.70	17.86	61.094	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-5.63	4.55	27.77	17.59	57.412	Vertical	Pass
		2535	-5.48	4.69	27.72	17.55	56.885	Vertical	Pass
		2562.5	-5.71	4.72	27.69	17.26	53.211	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	-5.42	4.57	27.78	17.79	60.117	Vertical	Pass
		2535	-5.56	4.73	27.72	17.43	55.335	Vertical	Pass
		2560	-5.13	4.75	27.68	17.80	60.256	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-4.42	4.54	27.75	18.79	75.683	Horizontal	Pass
		2535	-4.16	4.69	27.72	18.87	77.090	Horizontal	Pass
		2567.5	-4.04	4.71	27.71	18.96	78.705	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-4.42	4.55	27.76	18.79	75.683	Horizontal	Pass
		2535	-3.95	4.69	27.72	19.08	80.910	Horizontal	Pass
		2565	-3.98	4.72	27.70	19.00	79.433	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-4.33	4.55	27.77	18.89	77.446	Horizontal	Pass
		2535	-3.94	4.69	27.72	19.09	81.096	Horizontal	Pass
		2562.5	-4.03	4.72	27.69	18.94	78.343	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-4.39	4.57	27.78	18.82	76.208	Horizontal	Pass
		2535	-3.90	4.73	27.72	19.09	81.096	Horizontal	Pass
		2560	-3.98	4.75	27.68	18.95	78.524	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-5.28	4.54	27.75	17.93	62.087	Vertical	Pass
		2535	-5.03	4.69	27.72	18.00	63.096	Vertical	Pass
		2567.5	-4.96	4.71	27.71	18.04	63.680	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-5.94	4.55	27.76	17.27	53.333	Vertical	Pass
		2535	-5.81	4.69	27.72	17.22	52.723	Vertical	Pass
		2565	-5.30	4.72	27.70	17.68	58.614	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-5.87	4.55	27.77	17.35	54.325	Vertical	Pass
		2535	-5.88	4.69	27.72	17.15	51.880	Vertical	Pass
		2562.5	-5.12	4.72	27.69	17.85	60.954	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-5.30	4.57	27.78	17.91	61.802	Vertical	Pass
		2535	-5.45	4.73	27.72	17.54	56.754	Vertical	Pass
		2560	-5.71	4.75	27.68	17.22	52.723	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

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	699.7	4.64	1.91	19.21	2.15	19.79	95.280	Horizontal	Pass
		707.5	4.68	1.91	19.26	2.15	19.88	97.275	Horizontal	Pass
		715.3	4.53	1.93	19.34	2.15	19.79	95.280	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	4.1	1.91	19.21	2.15	19.25	84.140	Horizontal	Pass
		707.5	4.16	1.91	19.26	2.15	19.36	86.298	Horizontal	Pass
		714.5	4.18	1.93	19.34	2.15	19.44	87.902	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	4.14	1.91	19.23	2.15	19.31	85.310	Horizontal	Pass
		707.5	4.23	1.91	19.26	2.15	19.43	87.700	Horizontal	Pass
		713.5	4.15	1.92	19.33	2.15	19.41	87.297	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	704	5.23	1.91	19.25	2.15	20.42	110.154	Horizontal	Pass
		707.5	5.22	1.91	19.26	2.15	20.42	110.154	Horizontal	Pass
		711	5.15	1.92	19.32	2.15	20.40	109.648	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	699.7	4.24	1.91	19.21	2.15	19.39	86.896	Vertical	Pass
		707.5	3.9	1.91	19.26	2.15	19.10	81.283	Vertical	Pass
		715.3	4.4	1.93	19.34	2.15	19.66	92.470	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	4.12	1.91	19.21	2.15	19.27	84.528	Vertical	Pass
		707.5	3.74	1.91	19.26	2.15	18.94	78.343	Vertical	Pass
		714.5	3.68	1.93	19.34	2.15	18.94	78.343	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	3.72	1.91	19.23	2.15	18.89	77.446	Vertical	Pass
		707.5	3.74	1.91	19.26	2.15	18.94	78.343	Vertical	Pass
		713.5	4.09	1.92	19.33	2.15	19.35	86.099	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	704	4.12	1.91	19.25	2.15	19.31	85.310	Vertical	Pass
		707.5	4.31	1.91	19.26	2.15	19.51	89.331	Vertical	Pass
		711	3.78	1.92	19.32	2.15	19.03	79.983	Vertical	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	699.7	4.92	1.91	19.21	2.15	20.07	101.625	Horizontal	Pass
		707.5	5.03	1.91	19.26	2.15	20.23	105.439	Horizontal	Pass
		715.3	4.29	1.93	19.34	2.15	19.55	90.157	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	4.36	1.91	19.21	2.15	19.51	89.331	Horizontal	Pass
		707.5	4.36	1.91	19.26	2.15	19.56	90.365	Horizontal	Pass
		714.5	4.55	1.93	19.34	2.15	19.81	95.719	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	4.56	1.91	19.23	2.15	19.73	93.972	Horizontal	Pass
		707.5	4.5	1.91	19.26	2.15	19.70	93.325	Horizontal	Pass
		713.5	4.47	1.92	19.33	2.15	19.73	93.972	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	704	4.56	1.91	19.25	2.15	19.75	94.406	Horizontal	Pass
		707.5	4.43	1.91	19.26	2.15	19.63	91.833	Horizontal	Pass
		711	5.1	1.92	19.32	2.15	20.35	108.393	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	699.7	3.99	1.91	19.21	2.15	19.14	82.035	Vertical	Pass
		707.5	4.15	1.91	19.26	2.15	19.35	86.099	Vertical	Pass
		715.3	4.35	1.93	19.34	2.15	19.61	91.411	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	4.44	1.91	19.21	2.15	19.59	90.991	Vertical	Pass
		707.5	4.34	1.91	19.26	2.15	19.54	89.950	Vertical	Pass
		714.5	4.18	1.93	19.34	2.15	19.44	87.902	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	3.72	1.91	19.23	2.15	18.89	77.446	Vertical	Pass
		707.5	4.35	1.91	19.26	2.15	19.55	90.157	Vertical	Pass
		713.5	3.9	1.92	19.33	2.15	19.16	82.414	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	704	4.36	1.91	19.25	2.15	19.55	90.157	Vertical	Pass
		707.5	4.12	1.91	19.26	2.15	19.32	85.507	Vertical	Pass
		711	4.52	1.92	19.32	2.15	19.77	94.842	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	2.57	2.02	19.75	2.15	18.15	65.313	Horizontal	Pass
		782	2.58	2.02	19.83	2.15	18.24	66.681	Horizontal	Pass
		784.5	2.51	2.03	19.94	2.15	18.27	67.143	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	782	3.57	2.02	19.83	2.15	19.23	83.753	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	779.5	2.64	2.02	19.75	2.15	18.22	66.374	Vertical	Pass
		782	2.78	2.02	19.83	2.15	18.44	69.823	Vertical	Pass
		784.5	2.41	2.03	19.94	2.15	18.17	65.615	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	782	1.98	2.02	19.83	2.15	17.64	58.076	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. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	779.5	5.26	2.02	19.75	2.15	20.84	121.339	Horizontal	Pass
		782	5.33	2.02	19.83	2.15	20.99	125.603	Horizontal	Pass
		784.5	5.35	2.03	19.92	2.15	21.09	128.529	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	782	5.63	2.02	19.84	2.15	21.30	134.896	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	779.5	4.50	2.02	19.75	2.15	20.08	101.859	Vertical	Pass
		782	4.88	2.02	19.83	2.15	20.54	113.240	Vertical	Pass
		784.5	4.81	2.03	19.94	2.15	20.57	114.025	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	782	4.84	2.02	19.83	2.15	20.50	112.202	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 (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	4.96	1.91	19.23	2.15	20.13	103.039	Vertical	Pass
		710	4.89	1.91	19.26	2.15	20.09	102.094	Vertical	Pass
		713.5	4.90	1.92	19.33	2.15	20.16	103.753	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	5.52	1.91	19.25	2.15	20.71	117.761	Vertical	Pass
		710	5.45	1.91	19.26	2.15	20.65	116.145	Vertical	Pass
		711	5.27	1.92	19.32	2.15	20.52	112.720	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	4.03	1.91	19.23	2.15	19.20	83.176	Horizontal	Pass
		710	4.28	1.91	19.26	2.15	19.48	88.716	Horizontal	Pass
		713.5	4.22	1.92	19.33	2.15	19.48	88.716	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	3.74	1.91	19.25	2.15	18.93	78.163	Horizontal	Pass
		710	4.39	1.91	19.26	2.15	19.59	90.991	Horizontal	Pass
		711	3.65	1.92	19.32	2.15	18.90	77.625	Horizontal	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	706.5	5.24	1.91	19.23	2.15	20.41	109.901	Vertical	Pass
		710	4.66	1.91	19.26	2.15	19.86	96.828	Vertical	Pass
		713.5	4.77	1.92	19.33	2.15	20.03	100.693	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	4.76	1.91	19.25	2.15	19.95	98.855	Vertical	Pass
		710	5.32	1.91	19.26	2.15	20.52	112.720	Vertical	Pass
		711	4.62	1.92	19.32	2.15	19.87	97.051	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	4.36	1.91	19.23	2.15	19.53	89.743	Horizontal	Pass
		710	4.37	1.91	19.26	2.15	19.57	90.573	Horizontal	Pass
		713.5	4.02	1.92	19.33	2.15	19.28	84.723	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	4.47	1.91	19.25	2.15	19.66	92.470	Horizontal	Pass
		710	4.43	1.91	19.26	2.15	19.63	91.833	Horizontal	Pass
		711	3.88	1.92	19.32	2.15	19.13	81.846	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)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-2.93	3.12	27.58	21.53	142.233	Horizontal	Pass
		1882.5	-2.78	3.27	27.61	21.56	143.219	Horizontal	Pass
		1914.3	-2.66	3.29	27.63	21.68	147.231	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.99	3.13	27.61	21.49	140.929	Horizontal	Pass
		1882.5	-2.85	3.27	27.61	21.49	140.929	Horizontal	Pass
		1753.5	-2.74	3.30	27.62	21.58	143.880	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.95	3.13	27.63	21.55	142.889	Horizontal	Pass
		1882.5	-2.73	3.27	27.61	21.61	144.877	Horizontal	Pass
		1912.5	-2.59	3.30	27.60	21.71	148.252	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-2.89	3.15	27.64	21.60	144.544	Horizontal	Pass
		1882.5	-2.58	3.31	27.61	21.72	148.594	Horizontal	Pass
		1910	-2.46	3.33	27.59	21.80	151.356	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-2.82	3.15	27.65	21.68	147.231	Horizontal	Pass
		1882.5	-2.64	3.31	27.61	21.66	146.555	Horizontal	Pass
		1907.5	-2.47	3.33	27.57	21.77	150.314	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-2.61	3.17	27.66	21.88	154.170	Horizontal	Pass
		1882.5	-2.60	3.32	27.61	21.69	147.571	Horizontal	Pass
		1905	-2.50	3.36	27.56	21.70	147.911	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-4.13	3.12	27.58	20.33	107.895	Vertical	Pass
		1882.5	-3.27	3.27	27.61	21.07	127.938	Vertical	Pass
		1914.3	-3.26	3.29	27.63	21.08	128.233	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-3.90	3.13	27.61	20.58	114.288	Vertical	Pass
		1882.5	-3.51	3.27	27.61	20.83	121.060	Vertical	Pass
		1753.5	-3.14	3.30	27.62	21.18	131.220	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-3.73	3.13	27.63	20.77	119.399	Vertical	Pass
		1882.5	-3.27	3.27	27.61	21.07	127.938	Vertical	Pass
		1912.5	-3.18	3.30	27.60	21.12	129.420	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-4.04	3.15	27.64	20.45	110.917	Vertical	Pass
		1882.5	-3.36	3.31	27.61	20.94	124.165	Vertical	Pass
		1910	-3.12	3.33	27.59	21.14	130.017	Vertical	Pass

15.0MHz Band QPSK	1/#Mid	1857.5	-3.41	3.15	27.65	21.09	128.529	Vertical	Pass
		1882.5	-3.91	3.31	27.61	20.39	109.396	Vertical	Pass
		1907.5	-3.42	3.33	27.57	20.82	120.781	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1860	-3.60	3.17	27.66	20.89	122.744	Vertical	Pass
		1882.5	-4.07	3.32	27.61	20.22	105.196	Vertical	Pass
		1905	-3.13	3.36	27.56	21.07	127.938	Vertical	Pass

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1850.7	-2.70	3.12	27.58	21.76	149.968	Horizontal	Pass
		1882.5	-2.48	3.27	27.61	21.86	153.462	Horizontal	Pass
		1914.3	-2.45	3.29	27.63	21.89	154.525	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-2.77	3.13	27.61	21.71	148.252	Horizontal	Pass
		1882.5	-2.48	3.27	27.61	21.86	153.462	Horizontal	Pass
		1753.5	-2.46	3.30	27.62	21.86	153.462	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-2.71	3.13	27.63	21.79	151.008	Horizontal	Pass
		1882.5	-2.46	3.27	27.61	21.88	154.170	Horizontal	Pass
		1912.5	-2.33	3.30	27.60	21.97	157.398	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-2.65	3.15	27.64	21.84	152.757	Horizontal	Pass
		1882.5	-2.36	3.31	27.61	21.94	156.315	Horizontal	Pass
		1910	-2.32	3.33	27.59	21.94	156.315	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-2.57	3.15	27.65	21.93	155.955	Horizontal	Pass
		1882.5	-2.77	3.31	27.61	21.53	142.233	Horizontal	Pass
		1907.5	-2.18	3.33	27.57	22.06	160.694	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-2.51	3.17	27.66	21.98	157.761	Horizontal	Pass
		1882.5	-2.17	3.32	27.61	22.12	162.930	Horizontal	Pass
		1905	-2.26	3.36	27.56	21.94	156.315	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-3.42	3.12	27.58	21.04	127.057	Vertical	Pass
		1882.5	-3.31	3.27	27.61	21.03	126.765	Vertical	Pass
		1914.3	-3.63	3.29	27.63	20.71	117.761	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-4.27	3.13	27.61	20.21	104.954	Vertical	Pass
		1882.5	-3.78	3.27	27.61	20.56	113.763	Vertical	Pass
		1753.5	-4.03	3.30	27.62	20.29	106.905	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-3.36	3.13	27.63	21.14	130.017	Vertical	Pass
		1882.5	-3.22	3.27	27.61	21.12	129.420	Vertical	Pass
		1912.5	-3.16	3.30	27.60	21.14	130.017	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-3.40	3.15	27.64	21.09	128.529	Vertical	Pass
		1882.5	-3.16	3.31	27.61	21.14	130.017	Vertical	Pass
		1910	-3.46	3.33	27.59	20.80	120.226	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-3.58	3.15	27.65	20.92	123.595	Vertical	Pass
		1882.5	-3.85	3.31	27.61	20.45	110.917	Vertical	Pass
		1907.5	-3.31	3.33	27.57	20.93	123.880	Vertical	Pass

20.0MHz Band 16 QAM	1/#Mid	1860	-3.67	3.17	27.66	20.82	120.781	Vertical	Pass
		1882.5	-3.11	3.32	27.61	21.18	131.220	Vertical	Pass
		1905	-3.61	3.36	27.56	20.59	114.551	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 Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW QPSK	6/0	814.7	0.86	1.91	19.21	2.15	16.01	39.902	Horizontal	Pass
		819	0.92	1.91	19.26	2.15	16.12	40.926	Horizontal	Pass
		823.3	0.89	1.93	19.34	2.15	16.15	41.210	Horizontal	Pass
3.0MHz BW QPSK	15/0	815.5	1.85	1.91	19.21	2.15	17.00	50.119	Horizontal	Pass
		819	1.90	1.91	19.26	2.15	17.10	51.286	Horizontal	Pass
		822.5	1.78	1.93	19.34	2.15	17.04	50.582	Horizontal	Pass
5.0MHz BW QPSK	25/0	816.5	1.92	1.91	19.23	2.15	17.09	51.168	Horizontal	Pass
		819	1.94	1.91	19.26	2.15	17.14	51.761	Horizontal	Pass
		821.5	1.84	1.92	19.33	2.15	17.10	51.286	Horizontal	Pass
10.0MHz BW QPSK	50/0	819	5.01	1.93	19.25	2.15	20.18	104.232	Horizontal	Pass
1.4MHz BW QPSK	6/0	814.7	1.26	1.91	19.21	2.15	16.41	43.752	Vertical	Pass
		819	0.46	1.91	19.26	2.15	15.66	36.813	Vertical	Pass
		823.3	1.04	1.93	19.34	2.15	16.30	42.658	Vertical	Pass
3.0MHz BW QPSK	15/0	815.5	0.71	1.91	19.21	2.15	15.86	38.548	Vertical	Pass
		819	1.10	1.91	19.26	2.15	16.30	42.658	Vertical	Pass
		822.5	1.18	1.93	19.34	2.15	16.44	44.055	Vertical	Pass
5.0MHz BW QPSK	25/0	816.5	0.65	1.91	19.23	2.15	15.82	38.194	Vertical	Pass
		819	0.92	1.91	19.26	2.15	16.12	40.926	Vertical	Pass
		821.5	0.26	1.92	19.33	2.15	15.52	35.645	Vertical	Pass
10.0MHz BW QPSK	50/0	819	1.18	1.93	19.25	2.15	16.35	43.152	Vertical	Pass

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW 16 QAM	6/0	814.7	2	1.91	19.21	2.15	17.15	51.880	Horizontal	Pass
		819	2.21	1.91	19.26	2.15	17.41	55.081	Horizontal	Pass
		823.3	1.99	1.93	19.34	2.15	17.25	53.088	Horizontal	Pass
3.0MHz BW 16 QAM	15/0	815.5	2.2	1.91	19.21	2.15	17.35	54.325	Horizontal	Pass
		819	2.23	1.91	19.26	2.15	17.43	55.335	Horizontal	Pass
		822.5	1.96	1.93	19.34	2.15	17.22	52.723	Horizontal	Pass
5.0MHz BW 16 QAM	25/0	816.5	2.23	1.91	19.23	2.15	17.40	54.954	Horizontal	Pass
		819	2.34	1.91	19.26	2.15	17.54	56.754	Horizontal	Pass
		821.5	2.19	1.92	19.33	2.15	17.45	55.590	Horizontal	Pass
10.0MHz BW 16 QAM	50/0	819	3.72	1.93	19.25	2.15	17.63	57.943	Horizontal	Pass
1.4MHz BW 16 QAM	6/0	814.7	0.37	1.91	19.21	2.15	15.52	35.645	Vertical	Pass
		819	0.77	1.91	19.26	2.15	15.97	39.537	Vertical	Pass
		823.3	0.89	1.93	19.34	2.15	16.15	41.210	Vertical	Pass
3.0MHz BW 16 QAM	15/0	815.5	0.97	1.91	19.21	2.15	16.12	40.926	Vertical	Pass
		819	0.42	1.91	19.26	2.15	15.62	36.475	Vertical	Pass
		822.5	0.44	1.93	19.34	2.15	15.70	37.154	Vertical	Pass
5.0MHz BW 16 QAM	25/0	816.5	0.4	1.91	19.23	2.15	15.57	36.058	Vertical	Pass
		819	0.96	1.91	19.26	2.15	16.16	41.305	Vertical	Pass
		821.5	0.74	1.92	19.33	2.15	16.00	39.811	Vertical	Pass
10.0MHz BW 16 QAM	50/0	819	3.77	1.93	19.25	2.15	15.55	35.892	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 Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	824.7	0.93	2.02	19.72	2.15	16.48	44.463	Horizontal	Pass
		836.5	0.71	2.02	19.83	2.15	16.37	43.351	Horizontal	Pass
		848.3	0.75	2.03	19.95	2.15	16.52	44.875	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	0.86	2.02	19.84	2.15	16.53	44.978	Horizontal	Pass
		836.5	0.66	2.02	19.94	2.15	16.43	43.954	Horizontal	Pass
		847.5	0.67	2.03	19.98	2.15	16.47	44.361	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	1.02	2.02	19.75	2.15	16.60	45.709	Horizontal	Pass
		836.5	0.79	2.02	19.83	2.15	16.45	44.157	Horizontal	Pass
		846.5	0.77	2.03	19.92	2.15	16.51	44.771	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	0.88	2.02	19.84	2.15	16.55	45.186	Horizontal	Pass
		836.5	0.74	2.02	19.90	2.15	16.47	44.361	Horizontal	Pass
		844	0.75	2.03	19.96	2.15	16.53	44.978	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	1.66	2.02	19.33	2.15	16.82	48.084	Horizontal	Pass
		836.5	1.32	2.02	19.37	2.15	16.52	44.875	Horizontal	Pass
		841.5	1.17	2.03	19.52	2.15	16.51	44.771	Horizontal	Pass
1.4MHz Band QPSK	6/0	824.7	0.81	2.02	19.76	2.15	16.40	43.652	Vertical	Pass
		836.5	0.46	2.02	19.78	2.15	16.07	40.458	Vertical	Pass
		848.3	0.62	2.03	19.94	2.15	16.38	43.451	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	0.82	2.02	19.83	2.15	16.48	44.463	Vertical	Pass
		836.5	0.71	2.02	19.96	2.15	16.50	44.668	Vertical	Pass
		847.5	-0.03	2.03	19.87	2.15	15.66	36.813	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	0.23	2.02	19.86	2.15	15.92	39.084	Vertical	Pass
		836.5	0.13	2.02	19.81	2.15	15.77	37.757	Vertical	Pass
		846.5	0.61	2.03	19.83	2.15	16.26	42.267	Vertical	Pass
10.0MHz Band QPSK	50/0	829	0.88	2.02	19.75	2.15	16.46	44.259	Vertical	Pass
		836.5	-0.11	2.02	19.85	2.15	15.57	36.058	Vertical	Pass
		844	0.19	2.03	19.80	2.15	15.81	38.107	Vertical	Pass
15.0MHz Band QPSK	75/0	831.5	0.67	2.02	19.31	2.15	15.81	38.107	Vertical	Pass
		836.5	0.99	2.02	19.33	2.15	16.15	41.210	Vertical	Pass
		841.5	0.97	2.03	19.38	2.15	16.17	41.400	Vertical	Pass

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	824.7	1.33	2.02	19.72	2.15	16.88	48.753	Horizontal	Pass
		836.5	1.10	2.02	19.83	2.15	16.76	47.424	Horizontal	Pass
		848.3	1.11	2.03	19.95	2.15	16.88	48.753	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	1.09	2.02	19.84	2.15	16.76	47.424	Horizontal	Pass
		836.5	0.98	2.02	19.94	2.15	16.75	47.315	Horizontal	Pass
		847.5	0.88	2.03	19.98	2.15	16.68	46.559	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	1.38	2.02	19.75	2.15	16.96	49.659	Horizontal	Pass
		836.5	1.22	2.02	19.83	2.15	16.88	48.753	Horizontal	Pass
		846.5	1.08	2.03	19.92	2.15	16.82	48.084	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	829	1.12	2.02	19.84	2.15	16.79	47.753	Horizontal	Pass
		836.5	1.62	2.02	19.90	2.15	17.35	54.325	Horizontal	Pass
		844	1.02	2.03	19.96	2.15	16.80	47.863	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	2.31	2.02	19.33	2.15	17.47	55.847	Horizontal	Pass
		836.5	1.52	2.02	19.37	2.15	16.72	46.989	Horizontal	Pass
		841.5	1.39	2.03	19.52	2.15	16.73	47.098	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	-0.03	2.02	19.76	2.15	15.56	35.975	Vertical	Pass
		836.5	0.80	2.02	19.78	2.15	16.41	43.752	Vertical	Pass
		848.3	0.21	2.03	19.94	2.15	15.97	39.537	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	0.76	2.02	19.83	2.15	16.42	43.853	Vertical	Pass
		836.5	-0.21	2.02	19.96	2.15	15.58	36.141	Vertical	Pass
		847.5	0.05	2.03	19.87	2.15	15.74	37.497	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	0.72	2.02	19.86	2.15	16.41	43.752	Vertical	Pass
		836.5	0.53	2.02	19.81	2.15	16.17	41.400	Vertical	Pass
		846.5	-0.11	2.03	19.83	2.15	15.54	35.810	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	0.77	2.02	19.75	2.15	16.35	43.152	Vertical	Pass
		836.5	0.64	2.02	19.85	2.15	16.32	42.855	Vertical	Pass
		844	0.30	2.03	19.80	2.15	15.92	39.084	Vertical	Pass

15.0MHz	75/0	831.5	1.18	2.02	19.31	2.15	16.32	42.855	Vertical	Pass
Band		836.5	1.30	2.02	19.33	2.15	16.46	44.259	Vertical	Pass
QPSK		841.5	1.29	2.03	19.38	2.15	16.49	44.566	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 38

Radiated Power (EIRP) for Band38									
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)			
5.0MHz Band QPSK	25/0	2572.5	15.72	4.54	9.00	20.18	104.23	Horizontal	Pass
		2595	16.71	4.69	9.00	21.02	126.47	Horizontal	Pass
		2617.5	16.47	4.71	9.00	20.76	119.12	Horizontal	Pass
10.0MHz Band QPSK	50/0	2575	15.95	4.55	9.00	20.40	109.65	Horizontal	Pass
		2595	16.68	4.69	9.00	20.99	125.60	Horizontal	Pass
		2615	16.40	4.72	9.00	20.68	116.95	Horizontal	Pass
15.0MHz Band QPSK	75/0	2577.5	15.96	4.55	9.00	20.41	109.90	Horizontal	Pass
		2595	16.73	4.69	9.00	21.04	127.06	Horizontal	Pass
		2612.5	16.37	4.72	9.00	20.65	116.14	Horizontal	Pass
20.0MHz Band QPSK	100/0	2580	16.03	4.57	9.00	20.46	111.17	Horizontal	Pass
		2595	16.78	4.73	9.00	21.05	127.35	Horizontal	Pass
		2610	16.08	4.75	9.00	20.33	107.89	Horizontal	Pass
5.0MHz Band QPSK	25/0	2572.5	14.63	4.54	9.00	19.09	81.10	Vertical	Pass
		2595	15.14	4.69	9.00	19.45	88.10	Vertical	Pass
		2617.5	15.10	4.71	9.00	19.39	86.90	Vertical	Pass
10.0MHz Band QPSK	50/0	2575	14.35	4.55	9.00	18.80	75.86	Vertical	Pass
		2595	14.95	4.69	9.00	19.26	84.33	Vertical	Pass
		2615	14.70	4.72	9.00	18.98	79.07	Vertical	Pass
15.0MHz Band QPSK	75/0	2577.5	14.49	4.55	9.00	18.94	78.34	Vertical	Pass
		2595	14.69	4.69	9.00	19.00	79.43	Vertical	Pass
		2612.5	14.95	4.72	9.00	19.23	83.75	Vertical	Pass
20.0MHz Band QPSK	100/0	2580	14.92	4.57	9.00	19.35	86.10	Vertical	Pass
		2595	15.26	4.73	9.00	19.53	89.74	Vertical	Pass
		2610	15.01	4.75	9.00	19.26	84.33	Vertical	Pass

Radiated Power (EIRP) for Band38									
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	2572.5	16.08	4.54	9.00	20.54	113.24	Horizontal	Pass
		2595	16.82	4.69	9.00	21.13	129.72	Horizontal	Pass
		2617.5	16.61	4.71	9.00	20.90	123.03	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	2575	16.14	4.55	9.00	20.59	114.55	Horizontal	Pass
		2595	16.84	4.69	9.00	21.15	130.32	Horizontal	Pass
		2615	16.53	4.72	9.00	20.81	120.50	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	2577.5	16.11	4.55	9.00	20.56	113.76	Horizontal	Pass
		2595	16.89	4.69	9.00	21.20	131.83	Horizontal	Pass
		2612.5	16.50	4.72	9.00	20.78	119.67	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	2580	16.17	4.57	9.00	20.60	114.82	Horizontal	Pass
		2595	17.11	4.73	9.00	21.38	137.40	Horizontal	Pass
		2610	16.29	4.75	9.00	20.54	113.24	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	2572.5	15.22	4.54	9.00	19.68	92.90	Vertical	Pass
		2595	14.94	4.69	9.00	19.25	84.14	Vertical	Pass
		2617.5	14.57	4.71	9.00	18.86	76.91	Vertical	Pass
10.0MHz Band 16 QAM	50/0	2575	14.53	4.55	9.00	18.98	79.07	Vertical	Pass
		2595	14.97	4.69	9.00	19.28	84.72	Vertical	Pass
		2615	15.35	4.72	9.00	19.63	91.83	Vertical	Pass
15.0MHz Band 16 QAM	75/0	2577.5	15.26	4.55	9.00	19.71	93.54	Vertical	Pass
		2595	15.26	4.69	9.00	19.57	90.57	Vertical	Pass
		2612.5	14.54	4.72	9.00	18.82	76.21	Vertical	Pass
20.0MHz Band 16 QAM	100/0	2580	14.62	4.57	9.00	19.05	80.35	Vertical	Pass
		2595	15.00	4.73	9.00	19.27	84.53	Vertical	Pass
		2610	15.44	4.75	9.00	19.69	93.11	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

8.13 LTE BAND 41

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
						Average	Average		
						(dBm)	(mW)		
5.0MHz Band QPSK	1/#Mid	2498.5	1.32	4.54	27.75	24.53	283.792	Horizontal	Pass
		2595	0.88	4.69	27.72	23.91	246.037	Horizontal	Pass
		2687.5	0.34	4.71	27.71	23.34	215.774	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2501	1.08	4.55	27.76	24.29	268.534	Horizontal	Pass
		2595	0.87	4.69	27.72	23.90	245.471	Horizontal	Pass
		2685	0.44	4.72	27.70	23.42	219.786	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2503.5	1.09	4.55	27.77	24.31	269.774	Horizontal	Pass
		2595	0.95	4.69	27.72	23.98	250.035	Horizontal	Pass
		2682.5	0.44	4.72	27.69	23.41	219.280	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2506	1.13	4.57	27.78	24.34	271.644	Horizontal	Pass
		2595	0.99	4.73	27.72	23.98	250.035	Horizontal	Pass
		2680	1.71	4.75	27.68	24.64	291.072	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2498.5	-0.78	4.54	27.75	22.43	174.985	Vertical	Pass
		2595	-0.39	4.69	27.72	22.64	183.654	Vertical	Pass
		2687.5	-1.04	4.71	27.71	21.96	157.036	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2501	-0.50	4.55	27.76	22.71	186.638	Vertical	Pass
		2595	-1.01	4.69	27.72	22.02	159.221	Vertical	Pass
		2685	-0.80	4.72	27.70	22.18	165.196	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2503.5	-1.33	4.55	27.77	21.89	154.525	Vertical	Pass
		2595	-0.74	4.69	27.72	22.29	169.434	Vertical	Pass
		2682.5	-0.58	4.72	27.69	22.39	173.380	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2506	-0.84	4.57	27.78	22.37	172.584	Vertical	Pass
		2595	-1.08	4.73	27.72	21.91	155.239	Vertical	Pass
		2680	-0.97	4.75	27.68	21.96	157.036	Vertical	Pass

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
						Average	Average		
						(dBm)	(mW)		
5.0MHz Band 16 QAM	1/##Mid	2498.5	0.26	4.54	27.75	23.47	222.331	Horizontal	Pass
		2595	0.09	4.69	27.72	23.12	205.116	Horizontal	Pass
		2687.5	-0.43	4.71	27.71	22.57	180.717	Horizontal	Pass
10.0MHz Band 16 QAM	1/##Mid	2501	0.32	4.55	27.76	23.53	225.424	Horizontal	Pass
		2595	0.11	4.69	27.72	23.14	206.063	Horizontal	Pass
		2685	-0.33	4.72	27.70	22.65	184.077	Horizontal	Pass
15.0MHz Band 16 QAM	1/##Mid	2503.5	0.30	4.55	27.77	23.52	224.905	Horizontal	Pass
		2595	0.17	4.69	27.72	23.20	208.930	Horizontal	Pass
		2682.5	-0.34	4.72	27.69	22.63	183.231	Horizontal	Pass
20.0MHz Band 16 QAM	1/##Mid	2506	0.37	4.57	27.78	23.58	228.034	Horizontal	Pass
		2595	0.23	4.73	27.72	23.22	209.894	Horizontal	Pass
		2680	-0.27	4.75	27.68	22.66	184.502	Horizontal	Pass
5.0MHz Band 16 QAM	1/##Mid	2498.5	-0.73	4.54	27.75	22.48	177.011	Vertical	Pass
		2595	-1.09	4.69	27.72	21.94	156.315	Vertical	Pass
		2687.5	-0.27	4.71	27.71	22.73	187.499	Vertical	Pass
10.0MHz Band 16 QAM	1/##Mid	2501	-0.90	4.55	27.76	22.31	170.216	Vertical	Pass
		2595	-1.00	4.69	27.72	22.03	159.588	Vertical	Pass
		2685	-0.42	4.72	27.70	22.56	180.302	Vertical	Pass
15.0MHz Band 16 QAM	1/##Mid	2503.5	-1.26	4.55	27.77	21.96	157.036	Vertical	Pass
		2595	-0.75	4.69	27.72	22.28	169.044	Vertical	Pass
		2682.5	-0.76	4.72	27.69	22.21	166.341	Vertical	Pass
20.0MHz Band 16 QAM	1/##Mid	2506	-0.48	4.57	27.78	22.73	187.499	Vertical	Pass
		2595	-0.21	4.73	27.72	22.78	189.671	Vertical	Pass
		2680	-0.28	4.75	27.68	22.65	184.077	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)

8.14 LTE BAND 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band QPSK	1/#Mid	1710.7	-1.21	3.76	28.24	23.27	212.324	Horizontal	Pass
		1745	-0.88	3.91	28.22	23.43	220.293	Horizontal	Pass
		1779.3	-0.95	3.93	28.2	23.32	214.783	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.06	3.77	28.23	23.40	218.776	Horizontal	Pass
		1745	-0.92	3.91	28.24	23.41	219.280	Horizontal	Pass
		1778.5	-0.97	3.94	28.25	23.34	215.774	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-1.03	3.77	28.31	23.51	224.388	Horizontal	Pass
		1745	-0.83	3.91	28.22	23.48	222.844	Horizontal	Pass
		1777.5	-0.81	3.94	28.2	23.45	221.309	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-0.95	3.79	28.33	23.59	228.560	Horizontal	Pass
		1745	-0.76	3.95	28.22	23.51	224.388	Horizontal	Pass
		1775	-0.78	3.97	28.19	23.44	220.800	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-0.96	3.79	28.34	23.59	228.560	Horizontal	Pass
		1745	-0.71	3.95	28.22	23.56	226.986	Horizontal	Pass
		1772.5	-0.85	3.97	28.18	23.36	216.770	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-0.89	3.81	28.35	23.65	231.739	Horizontal	Pass
		1745	-1.12	3.96	28.22	23.14	206.063	Horizontal	Pass
		1770	-1.18	4	28.16	22.98	198.609	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-1.79	3.76	28.24	22.69	185.780	Vertical	Pass
		1745	-2.25	3.91	28.22	22.06	160.694	Vertical	Pass
		1779.3	-1.62	3.93	28.2	22.65	184.077	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.77	3.77	28.23	22.69	185.780	Vertical	Pass
		1745	-2.50	3.91	28.24	21.83	152.405	Vertical	Pass
		1778.5	-1.98	3.94	28.25	22.33	171.002	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.13	3.77	28.31	22.41	174.181	Vertical	Pass
		1745	-2.05	3.91	28.22	22.26	168.267	Vertical	Pass
		1777.5	-2.34	3.94	28.2	21.92	155.597	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-1.81	3.79	28.34	22.74	187.932	Vertical	Pass
		1745	-2.47	3.95	28.22	21.80	151.356	Vertical	Pass
		1775	-1.42	3.97	28.18	22.79	190.108	Vertical	Pass

15.0MHz	Band QPSK	1/#Mid	1717.5	-2.73	3.81	28.35	21.81	151.705	Vertical	Pass
			1745	-2.19	3.96	28.22	22.07	161.065	Vertical	Pass
			1772.5	-1.68	4	28.16	22.48	177.011	Vertical	Pass
20.0MHz	Band QPSK	1/#Mid	1720	-1.96	3.79	28.34	22.59	181.552	Vertical	Pass
			1745	-2.29	3.95	28.22	21.98	157.761	Vertical	Pass
			1770	-1.88	3.97	28.18	22.33	171.002	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band 16 QAM	1/#Mid	1710.7	-1.51	3.76	28.24	22.97	198.153	Horizontal	Pass
		1745	-0.64	3.91	28.22	23.67	232.809	Horizontal	Pass
		1779.3	-0.73	3.93	28.2	23.54	225.944	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-0.72	3.77	28.23	23.74	236.592	Horizontal	Pass
		1745	-0.79	3.91	28.24	23.54	225.944	Horizontal	Pass
		1778.5	-0.74	3.94	28.25	23.57	227.510	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-0.73	3.77	28.31	23.81	240.436	Horizontal	Pass
		1745	-0.56	3.91	28.22	23.75	237.137	Horizontal	Pass
		1777.5	-0.67	3.94	28.2	23.59	228.560	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-0.73	3.79	28.33	23.81	240.436	Horizontal	Pass
		1745	-0.47	3.95	28.22	23.80	239.883	Horizontal	Pass
		1775	-0.55	3.97	28.19	23.67	232.809	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-0.76	3.79	28.34	23.79	239.332	Horizontal	Pass
		1745	-0.43	3.95	28.22	23.84	242.103	Horizontal	Pass
		1772.5	-0.79	3.97	28.18	23.42	219.786	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-0.53	3.81	28.35	24.01	251.768	Horizontal	Pass
		1745	-0.78	3.96	28.22	23.48	222.844	Horizontal	Pass
		1770	-0.85	4	28.16	23.31	214.289	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-2.07	3.76	28.24	22.41	174.181	Vertical	Pass
		1745	-1.64	3.91	28.22	22.67	184.927	Vertical	Pass
		1779.3	-1.98	3.93	28.2	22.29	169.434	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-2.54	3.77	28.23	21.92	155.597	Vertical	Pass
		1745	-1.60	3.91	28.24	22.73	187.499	Vertical	Pass
		1778.5	-2.18	3.94	28.25	22.13	163.305	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.64	3.77	28.31	21.90	154.882	Vertical	Pass
		1745	-2.35	3.91	28.22	21.96	157.036	Vertical	Pass
		1777.5	-2.40	3.94	28.2	21.86	153.462	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-1.89	3.79	28.34	22.66	184.502	Vertical	Pass
		1745	-2.21	3.95	28.22	22.06	160.694	Vertical	Pass
		1775	-2.28	3.97	28.18	21.93	155.955	Vertical	Pass

15.0MHz		1717.5	-1.93	3.81	28.35	22.61	182.390	Vertical	Pass
Band 16	1/#Mid	1745	-2.42	3.96	28.22	21.84	152.757	Vertical	Pass
QAM		1772.5	-1.44	4	28.16	22.72	187.068	Vertical	Pass
20.0MHz		1720	-2.11	3.79	28.34	22.44	175.388	Vertical	Pass
Band 16	1/#Mid	1745	-2.34	3.95	28.22	21.93	155.955	Vertical	Pass
QAM		1770	-1.78	3.97	28.18	22.43	174.985	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

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 2/4/5/7/12/13/17/25/26/38/41/66

RESULTS

PASS

9.1 LTE BAND 2

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

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-50.40	4.04	33.51	-20.93	-13	-7.93	Horizontal
3701.4	-47.07	4.04	33.51	-17.60	-13	-4.60	Vertical
5552.1	-45.73	5.24	35.84	-15.13	-13	-2.13	Vertical
5552.1	-52.78	5.24	35.84	-22.18	-13	-9.18	Horizontal
193.6	-43.62	1.43	16.02	-29.03	-13	-16.03	Vertical
356.0	-38.39	1.30	17.99	-21.70	-13	-8.70	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-53.29	4.04	33.56	-23.77	-13	-10.77	Horizontal
3760.0	-46.74	4.04	33.56	-17.22	-13	-4.22	Vertical
5640.0	-48.93	5.24	35.91	-18.26	-13	-5.26	Vertical
5640.0	-49.20	5.24	35.91	-18.53	-13	-5.53	Horizontal
182.3	-38.11	1.62	16.97	-22.76	-13	-9.76	Vertical
414.2	-41.78	1.74	15.98	-27.55	-13	-14.55	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-53.08	4.04	34.00	-23.12	-13	-10.12	Horizontal
3818.6	-50.77	4.04	34.00	-20.81	-13	-7.81	Vertical
5727.9	-51.62	5.24	36.04	-20.82	-13	-7.82	Vertical
5727.9	-50.87	5.24	36.04	-20.07	-13	-7.07	Horizontal
194.8	-44.63	1.42	17.29	-28.76	-13	-15.76	Vertical
336.0	-37.22	1.50	17.90	-20.81	-13	-7.81	Horizontal

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

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-45.74	4.07	33.54	-16.27	-13	-3.27	Horizontal
3720.0	-50.67	4.07	33.54	-21.20	-13	-8.20	Vertical
5580.0	-46.55	5.28	35.86	-15.97	-13	-2.97	Vertical
5580.0	-51.94	5.28	35.86	-21.36	-13	-8.36	Horizontal
183.8	-40.68	1.58	16.89	-25.36	-13	-12.36	Vertical
337.5	-43.37	1.76	17.26	-27.87	-13	-14.87	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-46.14	4.04	33.56	-16.62	-13	-3.62	Horizontal
3760.0	-49.66	4.04	33.56	-20.14	-13	-7.14	Vertical
5640.0	-46.67	5.24	35.91	-16.00	-13	-3.00	Vertical
5640.0	-52.71	5.24	35.91	-22.04	-13	-9.04	Horizontal
178.9	-35.17	1.46	16.27	-20.36	-13	-7.36	Vertical
305.6	-38.89	1.59	15.15	-25.33	-13	-12.33	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-52.76	4.04	34.00	-22.80	-13	-9.80	Horizontal
3800.0	-46.81	4.04	34.00	-16.85	-13	-3.85	Vertical
5700.0	-46.64	5.24	36.04	-15.84	-13	-2.84	Vertical
5700.0	-49.02	5.24	36.04	-18.22	-13	-5.22	Horizontal
189.0	-38.78	1.36	17.39	-22.74	-13	-9.74	Vertical
238.2	-36.60	1.66	15.39	-22.87	-13	-9.87	Horizontal

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

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

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

9.2 LTE BAND 4

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-48.91	4.02	29.80	-23.13	-13	-10.13	Horizontal
3421.4	-47.78	4.02	29.80	-22.00	-13	-9.00	Vertical
5132.1	-53.00	5.24	35.84	-22.40	-13	-9.40	Vertical
5132.1	-49.61	5.24	35.84	-19.01	-13	-6.01	Horizontal
198.3	-38.06	1.68	16.04	-23.70	-13	-10.70	Vertical
359.5	-37.12	1.78	17.74	-21.16	-13	-8.16	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-45.25	4.03	30.00	-19.28	-13	-6.28	Horizontal
3465.0	-53.16	4.03	30.00	-27.19	-13	-14.19	Vertical
5197.5	-45.16	5.25	35.86	-14.55	-13	-1.55	Vertical
5197.5	-53.29	5.25	35.86	-22.68	-13	-9.68	Horizontal
182.9	-34.54	1.72	17.69	-18.57	-13	-5.57	Vertical
423.9	-40.36	1.62	16.02	-25.95	-13	-12.95	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-45.40	4.05	30.01	-19.44	-13	-6.44	Horizontal
3508.6	-44.83	4.05	30.01	-18.87	-13	-5.87	Vertical
5262.9	-53.56	5.26	35.86	-22.96	-13	-9.96	Vertical
5262.9	-51.08	5.26	35.86	-20.48	-13	-7.48	Horizontal
175.8	-39.14	1.80	16.69	-24.25	-13	-11.25	Vertical
264.8	-41.98	1.75	16.66	-27.08	-13	-14.08	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-48.16	4.02	29.80	-22.38	-13	-9.38	Horizontal
3440.0	-46.07	4.02	29.80	-20.29	-13	-7.29	Vertical
5160.0	-49.25	5.24	35.84	-18.65	-13	-5.65	Vertical
5160.0	-52.69	5.24	35.84	-22.09	-13	-9.09	Horizontal
185.9	-36.06	1.57	17.26	-20.37	-13	-7.37	Vertical
233.0	-34.78	1.78	16.35	-20.21	-13	-7.21	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-51.98	4.03	30.00	-26.01	-13	-13.01	Horizontal
3465.0	-44.38	4.03	30.00	-18.41	-13	-5.41	Vertical
5197.5	-53.05	5.25	35.86	-22.44	-13	-9.44	Vertical
5197.5	-52.47	5.25	35.86	-21.86	-13	-8.86	Horizontal
201.2	-36.81	1.44	17.95	-20.30	-13	-7.30	Vertical
317.8	-37.76	1.65	16.09	-23.32	-13	-10.32	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-48.67	2.91	27.68	-23.90	-13	-10.90	Horizontal
3490.0	-48.48	2.91	27.68	-23.71	-13	-10.71	Vertical
5235.0	-50.80	5.26	35.86	-20.20	-13	-7.20	Vertical
5235.0	-51.02	5.26	35.86	-20.42	-13	-7.42	Horizontal
182.6	-39.02	1.61	16.85	-23.78	-13	-10.78	Vertical
312.0	-40.54	1.61	15.19	-26.96	-13	-13.96	Horizontal

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

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

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

9.3 LTE BAND 5

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-53.29	2.78	27.50	-28.57	-13	-15.57	Horizontal
1649.4	-46.87	2.78	27.50	-22.15	-13	-9.15	Vertical
2474.1	-48.31	2.90	27.80	-23.41	-13	-10.41	Vertical
2474.1	-49.34	2.90	27.80	-24.44	-13	-11.44	Horizontal
207.0	-38.92	1.76	17.59	-23.09	-13	-10.09	Vertical
233.7	-43.97	1.63	15.87	-29.73	-13	-16.73	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-51.88	2.80	27.48	-27.20	-13	-14.20	Horizontal
1673.0	-49.53	2.80	27.48	-24.85	-13	-11.85	Vertical
2509.5	-52.10	2.91	27.70	-27.31	-13	-14.31	Vertical
2509.5	-53.54	2.91	27.70	-28.75	-13	-15.75	Horizontal
194.3	-43.16	1.61	15.68	-29.09	-13	-16.09	Vertical
448.7	-42.06	1.59	17.52	-26.14	-13	-13.14	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-51.77	2.82	27.43	-27.16	-13	-14.16	Horizontal
1696.6	-51.28	2.82	27.43	-26.67	-13	-13.67	Vertical
2544.9	-52.84	2.92	27.74	-28.02	-13	-15.02	Vertical
2544.9	-49.20	2.92	27.74	-24.38	-13	-11.38	Horizontal
194.7	-36.05	1.69	16.67	-21.06	-13	-8.06	Vertical
307.5	-34.14	1.70	17.18	-18.66	-13	-5.66	Horizontal

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

Test Results for Low Channel 829MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1658.0	-44.80	2.78	27.50	-20.08	-13	-7.08	Horizontal
1658.0	-48.77	2.78	27.50	-24.05	-13	-11.05	Vertical
2487.0	-51.17	2.90	27.80	-26.27	-13	-13.27	Vertical
2487.0	-53.82	2.90	27.80	-28.92	-13	-15.92	Horizontal
176.2	-39.77	1.71	15.57	-25.91	-13	-12.91	Vertical
414.4	-39.89	1.34	16.40	-24.83	-13	-11.83	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-52.78	2.80	27.48	-28.10	-13	-15.10	Horizontal
1673.0	-53.18	2.80	27.48	-28.50	-13	-15.50	Vertical
2509.5	-45.17	2.91	27.70	-20.38	-13	-7.38	Vertical
2509.5	-52.66	2.91	27.70	-27.87	-13	-14.87	Horizontal
189.5	-38.46	1.44	17.04	-22.86	-13	-9.86	Vertical
399.3	-36.72	1.76	17.62	-20.86	-13	-7.86	Horizontal
Test Results for High Channel 844MHz							
1688.0	-51.03	2.82	27.43	-26.42	-13	-13.42	Horizontal
1688.0	-49.78	2.82	27.43	-25.17	-13	-12.17	Vertical
2532.0	-48.75	2.92	27.74	-23.93	-13	-10.93	Vertical
2532.0	-50.84	2.92	27.74	-26.02	-13	-13.02	Horizontal
181.3	-37.98	1.74	17.70	-22.02	-13	-9.02	Vertical
422.6	-40.69	1.41	17.46	-24.63	-13	-11.63	Horizontal

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

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

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

9.4 LTE BAND 7

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

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5005.0	-61.97	5.23	35.81	-31.39	-25	-6.39	Horizontal
5005.0	-64.19	5.23	35.81	-33.61	-25	-8.61	Vertical
7507.5	-62.74	5.67	36.85	-31.56	-25	-6.56	Vertical
7507.5	-63.11	5.67	36.85	-31.93	-25	-6.93	Horizontal
212.3	-53.26	1.73	17.97	-37.02	-25	-12.02	Vertical
364.5	-48.57	1.38	15.11	-34.84	-25	-9.84	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-59.51	5.23	35.82	-28.92	-25	-3.92	Horizontal
5070.0	-63.04	5.23	35.82	-32.45	-25	-7.45	Vertical
7605.0	-63.23	5.67	36.85	-32.05	-25	-7.05	Vertical
7605.0	-59.04	5.67	36.85	-27.86	-25	-2.86	Horizontal
187.6	-50.84	1.77	16.17	-36.43	-25	-11.43	Vertical
372.6	-53.79	1.63	15.21	-40.21	-25	-15.21	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-62.59	5.24	35.83	-32.00	-25	-7.00	Horizontal
5135.0	-64.94	5.24	35.83	-34.35	-25	-9.35	Vertical
7702.5	-63.32	5.68	36.87	-32.13	-25	-7.13	Vertical
7702.5	-61.35	5.68	36.87	-30.16	-25	-5.16	Horizontal
201.1	-49.81	1.58	17.56	-33.83	-25	-8.83	Vertical
282.2	-53.29	1.45	16.58	-38.16	-25	-13.16	Horizontal

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

Test Results for Low Channel 2510MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5020.0	-63.47	5.23	35.82	-32.88	-25	-7.88	Horizontal
5020.0	-63.15	5.23	35.82	-32.56	-25	-7.56	Vertical
7530.0	-59.60	5.67	36.86	-28.41	-25	-3.41	Vertical
7530.0	-62.17	5.67	36.86	-30.98	-25	-5.98	Horizontal
180.9	-52.48	1.63	15.76	-38.35	-25	-13.35	Vertical
423.2	-48.81	1.71	15.44	-35.08	-25	-10.08	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-59.19	5.23	35.82	-28.60	-25	-3.60	Horizontal
5070.0	-64.90	5.23	35.82	-34.31	-25	-9.31	Vertical
7605.0	-59.86	5.67	36.85	-28.68	-25	-3.68	Vertical
7605.0	-64.57	5.67	36.85	-33.39	-25	-8.39	Horizontal
211.8	-52.13	1.79	16.84	-37.07	-25	-12.07	Vertical
439.2	-54.89	1.71	17.64	-38.96	-25	-13.96	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-63.97	5.24	35.83	-33.38	-25	-8.38	Horizontal
5120.0	-59.96	5.24	35.83	-29.37	-25	-4.37	Vertical
7680.0	-62.70	5.70	36.88	-31.52	-25	-6.52	Vertical
7680.0	-64.41	5.70	36.88	-33.23	-25	-8.23	Horizontal
199.3	-48.65	1.79	16.84	-33.59	-25	-8.59	Vertical
384.2	-49.58	1.71	17.64	-33.65	-25	-8.65	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.

9.5 LTE BAND 12

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

Test Results for Low Channel 699.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1399.4	-53.51	2.60	27.20	-28.91	-13	-15.91	Horizontal
1399.4	-47.14	2.60	27.20	-22.54	-13	-9.54	Vertical
2099.1	-45.96	2.85	27.54	-21.27	-13	-8.27	Vertical
2099.1	-51.79	2.85	27.54	-27.10	-13	-14.10	Horizontal
207.0	-43.30	1.49	17.78	-27.01	-13	-14.01	Vertical
444.2	-34.87	1.36	17.33	-18.90	-13	-5.90	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-53.38	2.61	27.28	-28.71	-13	-15.71	Horizontal
1415.0	-48.07	2.61	27.28	-23.40	-13	-10.40	Vertical
2122.5	-47.28	2.87	27.59	-22.56	-13	-9.56	Vertical
2122.5	-51.28	2.87	27.59	-26.56	-13	-13.56	Horizontal
186.2	-36.50	1.73	15.74	-22.49	-13	-9.49	Vertical
430.3	-44.44	1.62	15.79	-30.27	-13	-17.27	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-48.69	2.63	27.28	-24.04	-13	-11.04	Horizontal
1430.6	-52.99	2.63	27.28	-28.34	-13	-15.34	Vertical
2145.9	-48.15	2.88	27.60	-23.43	-13	-10.43	Vertical
2145.9	-53.43	2.88	27.60	-28.71	-13	-15.71	Horizontal
175.1	-37.93	1.61	18.00	-21.54	-13	-8.54	Vertical
333.1	-39.02	1.45	15.49	-24.99	-13	-11.99	Horizontal

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

Test Results for Low Channel 704MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1408.0	-47.71	2.61	27.26	-23.06	-13	-10.06	Horizontal
1408.0	-50.10	2.61	27.26	-25.45	-13	-12.45	Vertical
2112.0	-53.37	2.87	27.58	-28.66	-13	-15.66	Vertical
2112.0	-49.05	2.87	27.58	-24.34	-13	-11.34	Horizontal
180.3	-37.33	1.31	16.97	-21.67	-13	-8.67	Vertical
348.8	-37.05	1.65	16.70	-22.00	-13	-9.00	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-46.53	2.61	27.28	-21.86	-13	-8.86	Horizontal
1415.0	-53.36	2.61	27.28	-28.69	-13	-15.69	Vertical
2122.5	-48.22	2.87	27.59	-23.50	-13	-10.50	Vertical
2122.5	-49.83	2.87	27.59	-25.11	-13	-12.11	Horizontal
182.2	-37.64	1.72	17.99	-21.37	-13	-8.37	Vertical
467.1	-42.60	1.73	17.94	-26.39	-13	-13.39	Horizontal
Test Results for High Channel 711MHz							
1422.0	-48.36	2.62	27.28	-23.70	-13	-10.70	Horizontal
1422.0	-48.63	2.62	27.28	-23.97	-13	-10.97	Vertical
2133.0	-50.69	2.87	27.60	-25.96	-13	-12.96	Vertical
2133.0	-51.84	2.87	27.60	-27.11	-13	-14.11	Horizontal
191.8	-43.10	1.58	15.93	-28.75	-13	-15.75	Vertical
294.5	-43.60	1.36	15.59	-29.37	-13	-16.37	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	-70.19	2.61	27.28	-45.52	-40	-5.52	Horizontal
1559.0	-69.29	2.61	27.28	-44.62	-40	-4.62	Vertical
2338.5	-40.98	2.87	27.59	-16.26	-13	-3.26	Vertical
2338.5	-41.73	2.87	27.59	-17.01	-13	-4.01	Horizontal
120.1	-36.89	1.54	15.61	-22.82	-13	-9.82	Vertical
197.8	-39.99	1.51	15.21	-26.29	-13	-13.29	Horizontal
Test Results For Mid Channel 782MHz							
1564.0	-73.41	2.62	27.30	-48.73	-40	-8.73	Horizontal
1564.0	-73.74	2.62	27.30	-49.06	-40	-9.06	Vertical
2346.0	-40.90	2.87	27.62	-16.15	-13	-3.15	Vertical
2346.0	-40.96	2.87	27.62	-16.21	-13	-3.21	Horizontal
131.2	-35.98	1.65	16.17	-21.46	-13	-8.46	Vertical
267.5	-36.80	1.48	16.88	-21.40	-13	-8.40	Horizontal
Test Results for High Channel 784.5MHz							
1569.0	-74.93	2.66	27.28	-50.31	-40	-10.31	Horizontal
1569.0	-69.33	2.66	27.28	-44.71	-40	-4.71	Vertical
2353.5	-43.76	2.88	27.60	-19.04	-13	-6.04	Vertical
2353.5	-44.68	2.88	27.60	-19.96	-13	-6.96	Horizontal
80.8	-35.68	1.54	16.40	-20.82	-13	-7.82	Vertical
155.6	-37.34	1.43	15.77	-23.00	-13	-10.00	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
1564.0	-69.18	2.62	27.30	-44.50	-40	-4.50	Horizontal
1564.0	-74.11	2.62	27.30	-49.43	-40	-9.43	Vertical
2346.0	-39.46	2.87	27.62	-14.71	-13	-1.71	Vertical
2346.0	-41.62	2.87	27.62	-16.87	-13	-3.87	Horizontal
129.1	-34.42	1.43	17.03	-18.82	-13	-5.82	Vertical
86.9	-34.15	1.62	16.63	-19.14	-13	-6.14	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 Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413.0	-46.97	2.61	27.28	-22.30	-13	-9.30	Horizontal
1413.0	-53.77	2.61	27.28	-29.10	-13	-16.10	Vertical
2119.5	-45.56	2.87	27.59	-20.84	-13	-7.84	Vertical
2119.5	-49.93	2.87	27.59	-25.21	-13	-12.21	Horizontal
177.2	-44.71	1.71	16.15	-30.27	-13	-17.27	Vertical
462.2	-42.32	1.41	17.32	-26.41	-13	-13.41	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-53.49	2.62	27.30	-28.81	-13	-15.81	Horizontal
1420.0	-46.84	2.62	27.30	-22.16	-13	-9.16	Vertical
2130.0	-52.92	2.87	27.62	-28.17	-13	-15.17	Vertical
2130.0	-51.48	2.87	27.62	-26.73	-13	-13.73	Horizontal
184.1	-38.27	1.42	15.25	-24.45	-13	-11.45	Vertical
251.5	-38.47	1.36	17.19	-22.64	-13	-9.64	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-51.26	2.66	27.28	-26.64	-13	-13.64	Horizontal
1427.0	-44.84	2.66	27.28	-20.22	-13	-7.22	Vertical
2140.5	-46.84	2.88	27.60	-22.12	-13	-9.12	Vertical
2140.5	-53.33	2.88	27.60	-28.61	-13	-15.61	Horizontal
186.1	-44.65	1.32	17.29	-28.68	-13	-15.68	Vertical
327.1	-41.81	1.72	16.89	-26.64	-13	-13.64	Horizontal

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

Test Results for Low Channel 709MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1418.0	-53.53	2.62	27.30	-28.85	-13	-15.85	Horizontal
1418.0	-48.59	2.62	27.30	-23.91	-13	-10.91	Vertical
2127.0	-53.94	2.87	27.62	-29.19	-13	-16.19	Vertical
2127.0	-50.01	2.87	27.62	-25.26	-13	-12.26	Horizontal
199.4	-34.10	1.35	16.91	-18.54	-13	-5.54	Vertical
377.8	-43.34	1.62	16.31	-28.65	-13	-15.65	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-45.00	2.62	27.30	-20.32	-13	-7.32	Horizontal
1420.0	-53.30	2.62	27.30	-28.62	-13	-15.62	Vertical
2130.0	-51.45	2.87	27.62	-26.70	-13	-13.70	Vertical
2130.0	-51.52	2.87	27.62	-26.77	-13	-13.77	Horizontal
182.5	-38.50	1.51	17.14	-22.87	-13	-9.87	Vertical
449.9	-40.00	1.77	16.88	-24.89	-13	-11.89	Horizontal
Test Results for High Channel 711MHz							
1422.0	-49.05	2.62	27.30	-24.37	-13	-11.37	Horizontal
1422.0	-52.81	2.62	27.30	-28.13	-13	-15.13	Vertical
2133.0	-50.73	2.87	27.62	-25.98	-13	-12.98	Vertical
2133.0	-49.41	2.87	27.62	-24.66	-13	-11.66	Horizontal
210.0	-38.08	1.78	15.95	-23.91	-13	-10.91	Vertical
258.8	-39.64	1.34	17.95	-23.04	-13	-10.04	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.

9.8 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
3701.4	-50.28	4.26	29.80	-24.74	-13	-11.74	Horizontal
3701.4	-52.30	4.26	29.80	-26.76	-13	-13.76	Vertical
5552.1	-50.42	5.36	35.84	-19.94	-13	-6.94	Vertical
5552.1	-49.69	5.36	35.84	-19.21	-13	-6.21	Horizontal
207.7	-43.27	1.68	16.04	-28.91	-13	-15.91	Vertical
396.1	-44.61	1.78	17.74	-28.65	-13	-15.65	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-52.11	4.28	30.00	-26.39	-13	-13.39	Horizontal
3765.0	-52.50	4.28	30.00	-26.78	-13	-13.78	Vertical
5647.5	-53.11	5.41	35.86	-22.66	-13	-9.66	Vertical
5647.5	-53.93	5.41	35.86	-23.48	-13	-10.48	Horizontal
208.0	-35.98	1.72	17.69	-20.01	-13	-7.01	Vertical
422.1	-39.78	1.62	16.02	-25.37	-13	-12.37	Horizontal
Test Results for High Channel 1914.3MHz							
3828.6	-52.48	4.31	30.01	-26.78	-13	-13.78	Horizontal
3828.6	-52.61	4.31	30.01	-26.91	-13	-13.91	Vertical
5742.9	-53.62	5.43	35.86	-23.19	-13	-10.19	Vertical
5742.9	-52.62	5.43	35.86	-22.19	-13	-9.19	Horizontal
195.9	-40.42	1.80	16.69	-25.53	-13	-12.53	Vertical
330.7	-42.58	1.75	16.66	-27.68	-13	-14.68	Horizontal

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

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-51.80	4.29	29.80	-26.29	-13	-13.29	Horizontal
3720.0	-52.99	4.29	29.80	-27.48	-13	-14.48	Vertical
5580.0	-52.91	5.38	35.84	-22.45	-13	-9.45	Vertical
5580.0	-51.88	5.38	35.84	-21.42	-13	-8.42	Horizontal
190.8	-34.35	1.57	17.26	-18.66	-13	-5.66	Vertical
344.8	-44.23	1.78	16.35	-29.66	-13	-16.66	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-53.27	4.28	30.00	-27.55	-13	-14.55	Horizontal
3765.0	-52.65	4.28	30.00	-26.93	-13	-13.93	Vertical
5647.5	-53.72	5.41	35.86	-23.27	-13	-10.27	Vertical
5647.5	-50.00	5.41	35.86	-19.55	-13	-6.55	Horizontal
189.7	-34.63	1.44	17.95	-18.12	-13	-5.12	Vertical
295.1	-37.00	1.65	16.09	-22.56	-13	-9.56	Horizontal
Test Results for High Channel 1905MHz							
3810.0	-50.60	4.35	27.68	-27.27	-13	-14.27	Horizontal
3810.0	-50.96	4.35	27.68	-27.63	-13	-14.63	Vertical
5715.0	-50.54	5.42	35.86	-20.10	-13	-7.10	Vertical
5715.0	-53.70	5.42	35.86	-23.26	-13	-10.26	Horizontal
207.6	-41.41	1.61	16.85	-26.17	-13	-13.17	Vertical
258.2	-38.43	1.61	15.19	-24.85	-13	-11.85	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.

9.9 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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1629.4	-51.33	4.26	29.80	-25.79	-13	-12.79	Horizontal
1629.4	-49.92	4.26	29.80	-24.38	-13	-11.38	Vertical
2444.1	-49.06	5.36	35.84	-18.58	-13	-5.58	Vertical
2444.1	-49.89	5.36	35.84	-19.41	-13	-6.41	Horizontal
180.8	-42.30	1.68	16.04	-27.94	-13	-14.94	Vertical
271.8	-37.79	1.78	17.74	-21.83	-13	-8.83	Horizontal
Test Results For Mid Channel 819MHz							
1638.0	-49.10	4.28	30.00	-23.38	-13	-10.38	Horizontal
1638.0	-52.38	4.28	30.00	-26.66	-13	-13.66	Vertical
2457.0	-49.62	5.41	35.86	-19.17	-13	-6.17	Vertical
2457.0	-53.43	5.41	35.86	-22.98	-13	-9.98	Horizontal
206.9	-37.65	1.72	17.69	-21.68	-13	-8.68	Vertical
441.4	-34.07	1.62	16.02	-19.66	-13	-6.66	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-49.98	4.31	30.01	-24.28	-13	-11.28	Horizontal
1646.6	-53.58	4.31	30.01	-27.88	-13	-14.88	Vertical
2469.9	-53.88	5.43	35.86	-23.45	-13	-10.45	Vertical
2469.9	-51.37	5.43	35.86	-20.94	-13	-7.94	Horizontal
190.4	-43.64	1.80	16.69	-28.75	-13	-15.75	Vertical
371.7	-40.35	1.75	16.66	-25.45	-13	-12.45	Horizontal

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

Test Results for Channel 819MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1638.0	-49.92	4.28	30.00	-24.20	-13	-11.20	Horizontal
1638.0	-53.15	4.28	30.00	-27.43	-13	-14.43	Vertical
2457.0	-52.69	5.41	35.86	-22.24	-13	-9.24	Vertical
2457.0	-53.76	5.41	35.86	-23.31	-13	-10.31	Horizontal
183.4	-35.11	1.44	17.95	-18.60	-13	-5.60	Vertical
282.1	-41.28	1.65	16.09	-26.84	-13	-13.84	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-50.96	4.26	29.80	-25.42	-13	-12.42	Horizontal
1649.4	-52.44	4.26	29.80	-26.90	-13	-13.90	Vertical
2474.1	-53.39	5.36	35.84	-22.91	-13	-9.91	Vertical
2474.1	-53.85	5.36	35.84	-23.37	-13	-10.37	Horizontal
211.3	-44.18	1.68	16.04	-29.82	-13	-16.82	Vertical
372.9	-41.97	1.78	17.74	-26.01	-13	-13.01	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-51.12	4.28	30.00	-25.40	-13	-12.40	Horizontal
1673.0	-51.18	4.28	30.00	-25.46	-13	-12.46	Vertical
2509.5	-52.36	5.41	35.86	-21.91	-13	-8.91	Vertical
2509.5	-53.24	5.41	35.86	-22.79	-13	-9.79	Horizontal
197.6	-41.99	1.72	17.69	-26.02	-13	-13.02	Vertical
388.2	-37.20	1.62	16.02	-22.79	-13	-9.79	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-50.99	4.31	30.01	-25.29	-13	-12.29	Horizontal
1696.6	-49.15	4.31	30.01	-23.45	-13	-10.45	Vertical
2544.9	-53.67	5.43	35.86	-23.24	-13	-10.24	Vertical
2544.9	-49.03	5.43	35.86	-18.60	-13	-5.60	Horizontal
198.1	-40.85	1.80	16.69	-25.96	-13	-12.96	Vertical
446.4	-35.73	1.75	16.66	-20.83	-13	-7.83	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1663.0	-50.15	4.29	29.80	-24.64	-13	-11.64	Horizontal
1663.0	-53.34	4.29	29.80	-27.83	-13	-14.83	Vertical
2494.5	-52.21	5.38	35.84	-21.75	-13	-8.75	Vertical
2494.5	-52.21	5.38	35.84	-21.75	-13	-8.75	Horizontal
202.2	-35.61	1.57	17.26	-19.92	-13	-6.92	Vertical
390.3	-34.58	1.78	16.35	-20.01	-13	-7.01	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-49.13	4.28	30.00	-23.41	-13	-10.41	Horizontal
1673.0	-52.22	4.28	30.00	-26.50	-13	-13.50	Vertical
2509.5	-52.58	5.41	35.86	-22.13	-13	-9.13	Vertical
2509.5	-52.55	5.41	35.86	-22.10	-13	-9.10	Horizontal
206.2	-43.31	1.44	17.95	-26.80	-13	-13.80	Vertical
268.9	-40.53	1.65	16.09	-26.09	-13	-13.09	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-49.34	4.35	27.68	-26.01	-13	-13.01	Horizontal
1683.0	-49.22	4.35	27.68	-25.89	-13	-12.89	Vertical
2524.5	-52.89	5.42	35.86	-22.45	-13	-9.45	Vertical
2524.5	-53.44	5.42	35.86	-23.00	-13	-10.00	Horizontal
186.5	-38.27	1.61	16.85	-23.03	-13	-10.03	Vertical
287.3	-41.92	1.61	15.19	-28.34	-13	-15.34	Horizontal

9.11 LTE BAND 38

QPSK EIRP POWER FOR LTE BAND 38 (5MHZ BANDWIDTH)

Test Results for Low Channel 2572.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5145	-61.60	2.63	27.26	-36.97	-25	-11.97	Horizontal
5145	-62.03	2.63	27.26	-37.40	-25	-12.40	Vertical
7717.5	-63.59	2.67	27.58	-38.68	-25	-13.68	Vertical
7717.5	-62.07	2.67	27.58	-37.16	-25	-12.16	Horizontal
Test Results For Mid Channel 2595MHz							
5190	-59.30	2.62	27.28	-34.64	-25	-9.64	Horizontal
5190	-63.83	2.62	27.28	-39.17	-25	-14.17	Vertical
7785	-60.33	2.85	27.62	-35.56	-25	-10.56	Vertical
7785	-63.62	2.85	27.62	-38.85	-25	-13.85	Horizontal
Test Results for High Channel 2617.5MHz							
5235	-62.76	2.64	27.28	-38.12	-25	-13.12	Horizontal
5235	-61.94	2.64	27.28	-37.30	-25	-12.30	Vertical
7852.5	-64.90	2.85	27.70	-40.05	-25	-15.05	Vertical
7852.5	-62.28	2.85	27.70	-37.43	-25	-12.43	Horizontal

QPSK EIRP POWER FOR LTE BAND 38 (20MHZ BANDWIDTH)

Test Results for Low Channel 2580MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5160	-63.84	2.63	27.30	-39.17	-25	-14.17	Horizontal
5160	-61.66	2.63	27.30	-36.99	-25	-11.99	Vertical
7740	-59.27	2.67	27.62	-34.32	-25	-9.32	Vertical
7740	-60.71	2.67	27.62	-35.76	-25	-10.76	Horizontal
Test Results for Mid Channel 2595MHz							
5190	-61.89	2.62	27.33	-37.18	-25	-12.18	Horizontal
5190	-59.24	2.62	27.33	-34.53	-25	-9.53	Vertical
7785	-64.38	2.85	27.67	-39.56	-25	-14.56	Vertical
7785	-60.97	2.85	27.67	-36.15	-25	-11.15	Horizontal
Test Results for High Channel 2610MHz							
5220	-63.86	2.64	27.33	-39.17	-25	-14.17	Horizontal
5220	-59.99	2.64	27.33	-35.30	-25	-10.30	Vertical
7830	-61.07	2.85	27.67	-36.25	-25	-11.25	Vertical
7830	-59.41	2.85	27.67	-34.59	-25	-9.59	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.

9.12 LTE BAND 41

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

Test Results for Low Channel 2537.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5145.0	-61.56	5.23	35.81	-30.98	-25	-5.98	Horizontal
5145.0	-59.44	5.23	35.81	-28.86	-25	-3.86	Vertical
7717.5	-61.17	5.67	36.85	-29.99	-25	-4.99	Vertical
7717.5	-61.50	5.67	36.85	-30.32	-25	-5.32	Horizontal
179.7	-44.03	1.38	15.98	-29.43	-25	-4.43	Vertical
317.4	-47.11	1.62	15.66	-33.07	-25	-8.07	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-63.35	5.23	35.82	-32.76	-25	-7.76	Horizontal
5190.0	-62.92	5.23	35.82	-32.33	-25	-7.33	Vertical
7785.0	-62.28	5.67	36.85	-31.10	-25	-6.10	Vertical
7785.0	-60.82	5.67	36.85	-29.64	-25	-4.64	Horizontal
191.8	-50.91	1.62	16.17	-36.36	-25	-11.36	Vertical
325.8	-49.50	1.74	17.63	-33.61	-25	-8.61	Horizontal
Test Results for High Channel 2652.5MHz							
5235.0	-62.18	5.24	35.83	-31.59	-25	-6.59	Horizontal
5235.0	-63.68	5.24	35.83	-33.09	-25	-8.09	Vertical
7852.5	-60.93	5.68	36.87	-29.74	-25	-4.74	Vertical
7852.5	-62.99	5.68	36.87	-31.80	-25	-6.80	Horizontal
189.3	-52.95	1.55	15.84	-38.66	-25	-13.66	Vertical
433.3	-54.77	1.51	17.06	-39.22	-25	-14.22	Horizontal

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

Test Results for Low Channel 2545MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5160.0	-64.76	5.23	35.82	-34.17	-25	-9.17	Horizontal
5160.0	-61.20	5.23	35.82	-30.61	-25	-5.61	Vertical
7740.0	-64.62	5.67	36.86	-33.43	-25	-8.43	Vertical
7740.0	-63.92	5.67	36.86	-32.73	-25	-7.73	Horizontal
195.2	-54.11	1.43	15.51	-40.03	-25	-15.03	Vertical
387.0	-45.32	1.40	16.97	-29.75	-25	-4.75	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-64.70	5.23	35.82	-34.11	-25	-9.11	Horizontal
5190.0	-59.57	5.23	35.82	-28.98	-25	-3.98	Vertical
7785.0	-64.05	5.67	36.85	-32.87	-25	-7.87	Vertical
7785.0	-61.37	5.67	36.85	-30.19	-25	-5.19	Horizontal
202.1	-48.87	1.77	16.72	-33.92	-25	-8.92	Vertical
461.5	-46.25	1.31	16.99	-30.57	-25	-5.57	Horizontal
Test Results for High Channel 2645MHz							
5220.0	-63.79	5.24	35.83	-33.20	-25	-8.20	Horizontal
5220.0	-62.35	5.24	35.83	-31.76	-25	-6.76	Vertical
7830.0	-60.74	5.70	36.88	-29.56	-25	-4.56	Vertical
7830.0	-63.78	5.70	36.88	-32.60	-25	-7.60	Horizontal
186.4	-44.21	1.70	15.73	-30.18	-25	-5.18	Vertical
435.7	-51.13	1.75	17.33	-35.55	-25	-10.55	Horizontal

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

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

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

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

9.13 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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-49.31	3.84	35.81	-17.34	-13	-4.34	Horizontal
3421.4	-53.54	3.84	35.81	-21.57	-13	-8.57	Vertical
5132.1	-49.74	5.18	36.85	-18.07	-13	-5.07	Vertical
5132.1	-50.24	5.18	36.85	-18.57	-13	-5.57	Horizontal
177.0	-36.45	1.56	17.97	-20.04	-13	-7.04	Vertical
302.2	-41.79	1.33	15.11	-28.01	-13	-15.01	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-53.22	3.85	35.82	-21.25	-13	-8.25	Horizontal
3490.0	-53.56	3.85	35.82	-21.59	-13	-8.59	Vertical
5235.0	-49.35	5.21	36.85	-17.71	-13	-4.71	Vertical
5235.0	-49.44	5.21	36.85	-17.80	-13	-4.80	Horizontal
190.5	-36.58	1.77	16.17	-22.17	-13	-9.17	Vertical
413.5	-37.56	1.63	15.21	-23.98	-13	-10.98	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-53.73	3.86	35.83	-21.76	-13	-8.76	Horizontal
3558.6	-51.80	3.86	35.83	-19.83	-13	-6.83	Vertical
5337.9	-52.55	5.24	36.87	-20.92	-13	-7.92	Vertical
5337.9	-49.28	5.24	36.87	-17.65	-13	-4.65	Horizontal
209.5	-35.29	1.58	17.56	-19.31	-13	-6.31	Vertical
281.1	-40.27	1.45	16.58	-25.14	-13	-12.14	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-49.08	3.84	35.82	-17.10	-13	-4.10	Horizontal
3440.0	-53.15	3.84	35.82	-21.17	-13	-8.17	Vertical
5160.0	-52.48	5.18	36.86	-20.80	-13	-7.80	Vertical
5160.0	-49.27	5.18	36.86	-17.59	-13	-4.59	Horizontal
201.7	-38.40	1.56	15.76	-24.20	-13	-11.20	Vertical
327.1	-35.98	1.33	15.44	-21.87	-13	-8.87	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-53.82	3.85	35.82	-21.85	-13	-8.85	Horizontal
3490.0	-50.65	3.85	35.82	-18.68	-13	-5.68	Vertical
5235.0	-52.22	5.21	36.85	-20.58	-13	-7.58	Vertical
5235.0	-49.33	5.21	36.85	-17.69	-13	-4.69	Horizontal
182.1	-44.37	1.77	16.84	-29.29	-13	-16.29	Vertical
244.9	-40.10	1.63	17.64	-24.09	-13	-11.09	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-53.31	3.86	35.83	-21.34	-13	-8.34	Horizontal
3540.0	-49.91	3.86	35.83	-17.94	-13	-4.94	Vertical
5310.0	-50.42	5.24	36.88	-18.78	-13	-5.78	Vertical
5310.0	-51.46	5.24	36.88	-19.82	-13	-6.82	Horizontal
178.5	-34.37	1.58	16.84	-19.10	-13	-6.10	Vertical
277.3	-39.91	1.45	17.64	-23.72	-13	-10.72	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 3.27V, Normal, DC 3.85V and High voltage, DC 4.43V.

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 2/4/5/7/12/13/17/25/26/38/41/66

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]
3.27	1880	12.7	0.006756	2.5
3.85	1880	13.7	0.007292	2.5
4.43	1880	13.0	0.006932	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.8	0.006815	2.5
Extreme (50C)	1880	11.7	0.006226	2.5
Extreme (40C)	1880	13.5	0.007196	2.5
Extreme (30C)	1880	13.9	0.007389	2.5
Extreme (10C)	1880	13.6	0.007235	2.5
Extreme (0C)	1880	12.1	0.006428	2.5
Extreme (-10C)	1880	13.1	0.006947	2.5
Extreme (-20C)	1880	14.5	0.007704	2.5
Extreme (-30C)	1880	15.0	0.008000	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]
3.27	1880	9.5	0.005073	2.5
3.85	1880	9.1	0.004842	2.5
4.43	1880	8.3	0.004419	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.4	0.005015	2.5
Extreme (50C)	1880	9.0	0.004813	2.5
Extreme (40C)	1880	7.9	0.004179437	2.5
Extreme (30C)	1880	9.3	0.004929364	2.5
Extreme (10C)	1880	8.6	0.00459038	2.5
Extreme (0C)	1880	8.0	0.004234451	2.5
Extreme (-10C)	1880	9.4	0.004989071	2.5
Extreme (-20C)	1880	9.1	0.00482819	2.5
Extreme (-30C)	1880	8.2	0.004381388	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]
3.27	1732.5	8.6	0.004939	2.5
3.85	1732.5	9.3	0.005352	2.5
4.43	1732.5	8.3	0.004767	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.9	0.005116	2.5
Extreme (50C)	1732.5	8.4	0.004869	2.5
Extreme (40C)	1732.5	7.0	0.004027	2.5
Extreme (30C)	1732.5	5.6	0.003238	2.5
Extreme (10C)	1732.5	7.2	0.004134	2.5
Extreme (0C)	1732.5	9.5	0.005498	2.5
Extreme (-10C)	1732.5	8.2	0.004747	2.5
Extreme (-20C)	1732.5	7.1	0.004087	2.5
Extreme (-30C)	1732.5	8.1	0.004679	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]
3.27	1732.5	9.9	0.005733	2.5
3.85	1732.5	8.8	0.005089	2.5
4.43	1732.5	8.5	0.004878	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.8	0.005666	2.5
Extreme (50C)	1732.5	9.1	0.005236	2.5
Extreme (40C)	1732.5	7.8	0.004503	2.5
Extreme (30C)	1732.5	8.8	0.005104	2.5
Extreme (10C)	1732.5	8.5	0.004883	2.5
Extreme (0C)	1732.5	8.4	0.004831	2.5
Extreme (-10C)	1732.5	8.9	0.005158	2.5
Extreme (-20C)	1732.5	9.0	0.005182	2.5
Extreme (-30C)	1732.5	7.7	0.004433	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]
3.27	836.5	5.9	0.007061	2.5
3.85	836.5	6.5	0.007755	2.5
4.43	836.5	5.2	0.006263	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.6	0.007886	2.5
Extreme (50C)	836.5	5.7	0.006761	2.5
Extreme (40C)	836.5	6.5	0.007758	2.5
Extreme (30C)	836.5	6.9	0.008230	2.5
Extreme (10C)	836.5	5.3	0.006311	2.5
Extreme (0C)	836.5	5.7	0.006873	2.5
Extreme (-10C)	836.5	5.5	0.006612	2.5
Extreme (-20C)	836.5	5.8	0.006944	2.5
Extreme (-30C)	836.5	6.4	0.007667	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]
3.27	836.5	5.8	0.006895	2.5
3.85	836.5	7.2	0.008552	2.5
4.43	836.5	4.6	0.005467	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.5	0.007737	2.5
Extreme (50C)	836.5	6.2	0.007423	2.5
Extreme (40C)	836.5	6.0	0.007166	2.5
Extreme (30C)	836.5	6.7	0.008023	2.5
Extreme (10C)	836.5	4.9	0.005906	2.5
Extreme (0C)	836.5	5.2	0.006204	2.5
Extreme (-10C)	836.5	5.1	0.006140	2.5
Extreme (-20C)	836.5	6.0	0.007115	2.5
Extreme (-30C)	836.5	6.3	0.007571	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]
3.27	2535	10.0	0.003943	2.5
3.85	2535	8.7	0.003440	2.5
4.43	2535	8.2	0.003217	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.0	0.003558	2.5
Extreme (50C)	2535	8.8	0.003483	2.5
Extreme (40C)	2535	8.6	0.003396	2.5
Extreme (30C)	2535	9.1	0.003600	2.5
Extreme (10C)	2535	7.6	0.003000	2.5
Extreme (0C)	2535	8.7	0.003419	2.5
Extreme (-10C)	2535	9.1	0.003582	2.5
Extreme (-20C)	2535	9.1	0.003598	2.5
Extreme (-30C)	2535	8.9	0.003500	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]
3.27	2535	6.9	0.002722	2.5
3.85	2535	6.0	0.002354	2.5
4.43	2535	5.4	0.002135	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.9	0.002722	2.5
Extreme (50C)	2535	5.1	0.002021	2.5
Extreme (40C)	2535	5.6	0.002201	2.5
Extreme (30C)	2535	6.4	0.002510	2.5
Extreme (10C)	2535	5.8	0.002276	2.5
Extreme (0C)	2535	5.2	0.002034	2.5
Extreme (-10C)	2535	5.6	0.002210	2.5
Extreme (-20C)	2535	6.1	0.002409	2.5
Extreme (-30C)	2535	6.2	0.002426	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]
3.27	707.5	8.5	0.012072	2.5
3.85	707.5	9.6	0.013506	2.5
4.43	707.5	8.6	0.012120	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	9.2	0.012934	2.5
Extreme (50C)	707.5	7.2	0.010166	2.5
Extreme (40C)	707.5	7.4	0.010423	2.5
Extreme (30C)	707.5	8.2	0.011620	2.5
Extreme (10C)	707.5	7.5	0.010628	2.5
Extreme (0C)	707.5	9.4	0.013333	2.5
Extreme (-10C)	707.5	8.5	0.012040	2.5
Extreme (-20C)	707.5	8.5	0.011982	2.5
Extreme (-30C)	707.5	8.0	0.011249	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]
3.27	707.5	7.6	0.010712	2.5
3.85	707.5	8.4	0.011821	2.5
4.43	707.5	7.4	0.010522	2.5

Frequency error vs. Temperature

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

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

10.6 LTE BAND 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]
3.27	710.0	12.2	0.017210	2.5
3.85	710.0	14.2	0.019942	2.5
4.43	710.0	13.8	0.019428	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	14.5	0.020468	2.5
Extreme (50C)	710.0	13.8	0.019417	2.5
Extreme (40C)	710.0	14.8	0.020849	2.5
Extreme (30C)	710.0	14.5	0.020372	2.5
Extreme (10C)	710.0	13.9	0.019572	2.5
Extreme (0C)	710.0	14.4	0.020337	2.5
Extreme (-10C)	710.0	14.2	0.019958	2.5
Extreme (-20C)	710	13.9	0.019596	2.5
Extreme (-30C)	710	13.9	0.019512	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]
3.27	710.0	13.2	0.018582	2.5
3.85	710.0	13.8	0.019390	2.5
4.43	710.0	13.7	0.019324	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	13.1	0.018504	2.5
Extreme (50C)	710.0	11.8	0.016574	2.5
Extreme (40C)	710.0	13.3	0.018754	2.5
Extreme (30C)	710.0	13.3	0.018743	2.5
Extreme (10C)	710.0	14.3	0.020207	2.5
Extreme (0C)	710.0	12.5	0.017580	2.5
Extreme (-10C)	710.0	12.6	0.017734	2.5
Extreme (-20C)	710.0	14.4	0.020288	2.5
Extreme (-30C)	710.0	14.2	0.020036	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]
3.27	710.0	10.1	0.014279	2.5
3.85	710.0	8.8	0.012454	2.5
4.43	710.0	8.1	0.011465	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.6	0.013534	2.5
Extreme (50C)	710.0	8.7	0.012314	2.5
Extreme (40C)	710.0	8.6	0.012092	2.5
Extreme (30C)	710.0	9.3	0.013157	2.5
Extreme (10C)	710.0	8.9	0.012516	2.5
Extreme (0C)	710.0	7.7	0.010908	2.5
Extreme (-10C)	710.0	9.5	0.013331	2.5
Extreme (-20C)	710.0	8.7	0.012218	2.5
Extreme (-30C)	710.0	7.9	0.011058	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]
3.27	710.0	9.8	0.013857	2.5
3.85	710.0	8.9	0.012591	2.5
4.43	710.0	8.4	0.011872	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.9	0.013892	2.5
Extreme (50C)	710.0	8.6	0.012069	2.5
Extreme (40C)	710.0	8.0	0.011273	2.5
Extreme (30C)	710.0	8.8	0.012453	2.5
Extreme (10C)	710.0	8.1	0.011445	2.5
Extreme (0C)	710.0	8.3	0.011691	2.5
Extreme (-10C)	710.0	9.1	0.012870	2.5
Extreme (-20C)	710.0	8.5	0.011952	2.5
Extreme (-30C)	710.0	8.3	0.011623	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

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 QPSK, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.27	1882.5	9.8	0.005195	2.5
3.85	1882.5	8.8	0.004692	2.5
4.43	1882.5	8.1	0.004277	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 QPSK, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1882.5	9.3	0.004942	2.5
Extreme (50C)	1882.5	8.5	0.004523	2.5
Extreme (40C)	1882.5	8.0	0.004229	2.5
Extreme (30C)	1882.5	8.5	0.004539	2.5
Extreme (10C)	1882.5	9.4	0.004988	2.5
Extreme (0C)	1882.5	7.8	0.004128	2.5
Extreme (-10C)	1882.5	8.8	0.004653	2.5
Extreme (-20C)	1882.5	9.0	0.004771	2.5
Extreme (-30C)	1882.5	7.7	0.004074	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 16QAM, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.27	1882.5	9.9	0.005240	2.5
3.85	1882.5	9.3	0.004960	2.5
4.43	1882.5	8.9	0.004706	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 16QAM, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1882.5	9.9	0.005239	2.5
Extreme (50C)	1882.5	9.1	0.004838	2.5
Extreme (40C)	1882.5	8.2	0.004379	2.5
Extreme (30C)	1882.5	9.2	0.004867	2.5
Extreme (10C)	1882.5	8.0	0.004233	2.5
Extreme (0C)	1882.5	8.7	0.004608	2.5
Extreme (-10C)	1882.5	9.0	0.004776	2.5
Extreme (-20C)	1882.5	8.5	0.004512	2.5
Extreme (-30C)	1882.5	8.5	0.004536	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 BANDWIDTH)				
3.27	819.0	10.2	0.012461	2.5
3.85	819.0	8.5	0.010436	2.5
4.43	819.0	7.8	0.009536	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 BANDWIDTH)				
Normal (25C)	819.0	9.8	0.012004	2.5
Extreme (50C)	819.0	8.5	0.010384	2.5
Extreme (40C)	819.0	8.5	0.010384	2.5
Extreme (30C)	819.0	9.1	0.011070	2.5
Extreme (10C)	819.0	9.3	0.011364	2.5
Extreme (0C)	819.0	8.3	0.010123	2.5
Extreme (-10C)	819.0	9.0	0.010933	2.5
Extreme (-20C)	819.0	9.3	0.011414	2.5
Extreme (-30C)	819.0	8.1	0.009942	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 BANDWIDTH)				
3.27	819.0	10.2	0.012511	2.5
3.85	819.0	9.1	0.011132	2.5
4.43	819.0	7.9	0.009653	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819.0	9.5	0.011580	2.5
Extreme (50C)	819.0	9.2	0.011287	2.5
Extreme (40C)	819.0	8.3	0.010178	2.5
Extreme (30C)	819.0	9.2	0.011248	2.5
Extreme (10C)	819.0	8.1	0.009877	2.5
Extreme (0C)	819.0	8.0	0.009771	2.5
Extreme (-10C)	819.0	9.3	0.011413	2.5
Extreme (-20C)	819.0	8.9	0.010874	2.5
Extreme (-30C)	819.0	8.4	0.010209	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, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz)				
3.27	836.5	9.3	0.011120	2.5
3.85	836.5	8.5	0.010194	2.5
4.43	836.5	7.9	0.009430	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	836.5	10.1	0.012017	2.5
Extreme (50C)	836.5	9.0	0.010752	2.5
Extreme (40C)	836.5	8.3	0.009912	2.5
Extreme (30C)	836.5	9.1	0.010937	2.5
Extreme (10C)	836.5	8.7	0.010439	2.5
Extreme (0C)	836.5	7.6	0.009131	2.5
Extreme (-10C)	836.5	9.4	0.011287	2.5
Extreme (-20C)	836.5	8.8	0.010546	2.5
Extreme (-30C)	836.5	8.3	0.009895	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 26740 RB size 75 RB Offset 0 10MHz)				
3.27	836.5	9.7	0.011648	2.5
3.85	836.5	8.5	0.010109	2.5
4.43	836.5	8.8	0.010480	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	836.5	9.3	0.011157	2.5
Extreme (50C)	836.5	8.8	0.010513	2.5
Extreme (40C)	836.5	8.2	0.009833	2.5
Extreme (30C)	836.5	8.9	0.010661	2.5
Extreme (10C)	836.5	8.5	0.010112	2.5
Extreme (0C)	836.5	8.7	0.010452	2.5
Extreme (-10C)	836.5	9.6	0.011442	2.5
Extreme (-20C)	836.5	9.4	0.011199	2.5
Extreme (-30C)	836.5	8.4	0.010068	2.5

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

10.11 LTE BAND 38

Band 38 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]
3.27	2595	8.8	0.003387	2.5
3.85	2595	9.2	0.003555	2.5
4.43	2595	8.0	0.003064	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	8.8	0.003384	2.5
Extreme (50C)	2595	8.2	0.003148	2.5
Extreme (40C)	2595	8.6	0.003312	2.5
Extreme (30C)	2595	7.6	0.002917	2.5
Extreme (10C)	2595	8.5	0.003278	2.5
Extreme (0C)	2595	6.6	0.002543	2.5
Extreme (-10C)	2595	9.0	0.003450	2.5
Extreme (-20C)	2595	8.7	0.003354	2.5
Extreme (-30C)	2595	5.6	0.002151	2.5

Band 38 16QAM, (15MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.27	2595	8.9	0.003431	2.5
3.85	2595	8.4	0.003240	2.5
4.43	2595	8.6	0.003323	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	8.5	0.003289	2.5
Extreme (50C)	2595	7.8	0.002998	2.5
Extreme (40C)	2595	8.7	0.003340	2.5
Extreme (30C)	2595	8.2	0.003142	2.5
Extreme (10C)	2595	8.9	0.003419	2.5
Extreme (0C)	2595	6.6	0.002546	2.5
Extreme (-10C)	2595	8.2	0.003169	2.5
Extreme (-20C)	2595	8.7	0.003335	2.5
Extreme (-30C)	2595	5.9	0.002286	2.5

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

10.12 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]
3.27	2595	8.7	0.003341	2.5
3.85	2595	8.9	0.003430	2.5
4.43	2595	8.4	0.003235	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	8.3	0.003193	2.5
Extreme (50C)	2595	8.0	0.003102	2.5
Extreme (40C)	2595	9.0	0.003462	2.5
Extreme (30C)	2595	8.4	0.003238	2.5
Extreme (10C)	2595	8.7	0.003353	2.5
Extreme (0C)	2595	6.7	0.002595	2.5
Extreme (-10C)	2595	8.4	0.003238	2.5
Extreme (-20C)	2595	8.3	0.003206	2.5
Extreme (-30C)	2595	5.0	0.001930	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]
3.27	2595	8.6	0.003329	2.5
3.85	2595	8.7	0.003353	2.5
4.43	2595	7.9	0.003055	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	9.2	0.003536	2.5
Extreme (50C)	2595	8.0	0.003087	2.5
Extreme (40C)	2595	8.3	0.003203	2.5
Extreme (30C)	2595	7.5	0.002905	2.5
Extreme (10C)	2595	8.8	0.003377	2.5
Extreme (0C)	2595	6.9	0.002663	2.5
Extreme (-10C)	2595	8.7	0.003358	2.5
Extreme (-20C)	2595	8.8	0.003409	2.5
Extreme (-30C)	2595	5.1	0.001975	2.5

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

10.13 LTE BAND 66

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.27	1745	7.3	0.003915	2.5
3.85	1745	7.2	0.003812	2.5
4.43	1745	7.5	0.004172	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	5.5	0.002985	2.5
Extreme (50C)	1745	8.3	0.004317	2.5
Extreme (40C)	1745	6.5	0.003454	2.5
Extreme (30C)	1745	7.4	0.003974	2.5
Extreme (10C)	1745	8.0	0.004509	2.5
Extreme (0C)	1745	6.4	0.003463	2.5
Extreme (-10C)	1745	6.6	0.003313	2.5
Extreme (-20C)	1745	7.2	0.003852	2.5
Extreme (-30C)	1745	6.2	0.003423	2.5

16QAM, (20MHz BANDWIDTH)

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)				
3.27	1745	9.0	0.00462	2.5
3.85	1745	8.1	0.004436	2.5
4.43	1745	9.9	0.005194	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	8.9	0.005061	2.5
Extreme (50C)	1745	8.1	0.004447	2.5
Extreme (40C)	1745	9.2	0.004757	2.5
Extreme (30C)	1745	8.5	0.004539	2.5
Extreme (10C)	1745	8.3	0.004636	2.5
Extreme (0C)	1745	7.3	0.003824	2.5
Extreme (-10C)	1745	8.7	0.004745	2.5
Extreme (-20C)	1745	9.0	0.004918	2.5
Extreme (-30C)	1745	6.1	0.003037	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.

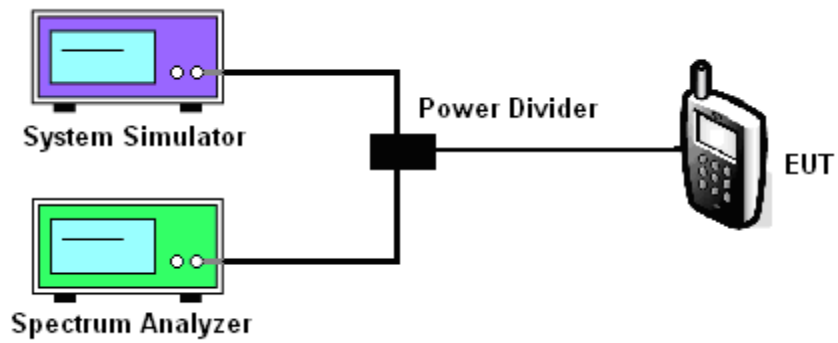
11.2 Measuring Instruments

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 2/4/5/7/12/13/17/25/26/38/41/66

Test data reference attachment.

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