

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

FCC ID: 2ANMU-24139

Product: Smart Phone
Trade Mark: OUKITEL
Model No.: WP200 Pro
Family Model: WP200, WP200 S, WP200 Plus,
WP200 Ultra, WP200 TITAN, WP200 GT,
WP210, WP210 S, WP210 Pro, WP210 Plus,
WP210 Ultra, WP210 GT
Report No.: S24110702505006
Issue Date: Jan. 07, 2025

Prepared for

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

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name : SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address..... : A2 2F BUILDING ENET NEW INDUSTRIAL PARK,DAFU
INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN,
518XXX China
Manufacturer's Name..... : SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address..... : A2 2F BUILDING ENET NEW INDUSTRIAL PARK,DAFU
INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN,
518XXX China
Product name..... : Smart Phone
Model and/or type reference .. : WP200 Pro
Trade Mark..... : OUKITEL
WP200, WP200 S, WP200 Plus, WP200 Ultra, WP200 TITAN, WP200
Family Model..... : GT, WP210, WP210 S, WP210 Pro, WP210 Plus, WP210 Ultra,
WP210 GT
Test Sample Number..... S241107025007
Standards..... : FCC CFR 47 Part 22H, Part 24E, Part 27, Part 90S
Test procedure : ANSI C63.26:2015
ANSI/TIA-603-E-2016

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

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Date of Test

Date (s) of performance of tests..... Nov. 07, 2024 ~ Jan. 07, 2025

Date of Issue Jan. 07, 2025

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

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Smart Phone
Trade Mark	OUKITEL
Model Name	WP200 Pro
Family Model	WP200, WP200 S, WP200 Plus, WP200 Ultra, WP200 TITAN, WP200 GT, WP210, WP210 S, WP210 Pro, WP210 Plus, WP210 Ultra, WP210 GT
Model Difference	All models are the same circuit and RF module, except for model names.
FCC ID:	2ANMU-24139
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2,4,5,7,12,17, 25, 26, 66
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE FDD Band 12 Uplink: 699MHz-716MHz, Downlink: 729MHz-746MHz; LTE FDD Band 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE FDD Band 25 Uplink: 1850MHz-1915MHz, Downlink: 1930MHz-1995MHz; LTE FDD Band 26A Uplink: 814MHz-824MHz, Downlink: 859MHz-869MHz; LTE FDD Band 26B Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Power Class	Class 3
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna:	FPC Antenna
Antenna gain:	Band 2: 1.02 dBi, Band 4:0.94dBi, Band 5: -2.74 dBi, Band 7:0.55dBi, Band 12: -4.01dBi, Band 17: -4.01 dBi, Band25:1.02dBi, Band 26: -2.74 dBi, Band66:0.94 dBi;
Adapter	Model: HJ-45WPD-US Input: 100-240V~50/60Hz 1.5A Output(PD): 5.0V---3.0A 15.0W or 9V---3.0A 27.0W or 12.0V---2.5A 30.0W or 15.0V---2.0A 30.0W or 20.0V---2.25A 45.0W MAX

	(PPS)5.0V-11.0V---4.0A 44.0W MAX (PPS)5.0V-20.0V---2.25A 45.0W MAX
Battery	DC 3.87V, 8800mAh, 34.056Wh
Power supply	DC 3.87V from battery or DC 5V/9V/12V/15V/20V from adapter
Extreme Vol. Limits:	DC 3.29V to DC 4.45V (Nominal DC 3.87V) (Note 1)
HW Version	G3382P-ME-V1.1
FW Version	N/A
SW Version	V04
** Note1: The High Voltage DC 4.45V and Low Voltage 3.29V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage.	

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2ANMU-24139** filing to comply with the FCC Part 22H&24E&27&90S

1.3 TEST METHODOLOGY

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

1.4 TEST FACILITY

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

ShenZhen NTEK Testing Technology Co., Ltd.

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

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

FCC Registration No.:463705

IC Registration No.:9270A,

CNAS Registration No.:L5516

MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	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 2/4/5/7/12/17/25/26/66

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

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

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

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

2.3 CONFIGURATION OF EUT SYSTEM

Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Smart Phone	WP200 Pro	FCC ID: 2ANMU-24139	EUT

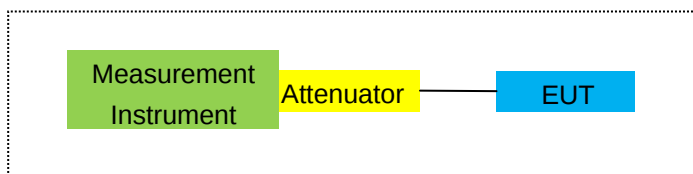
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

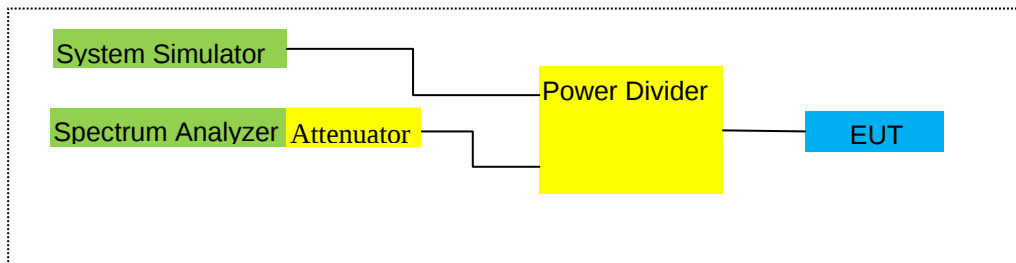
For Radiated Test Cases



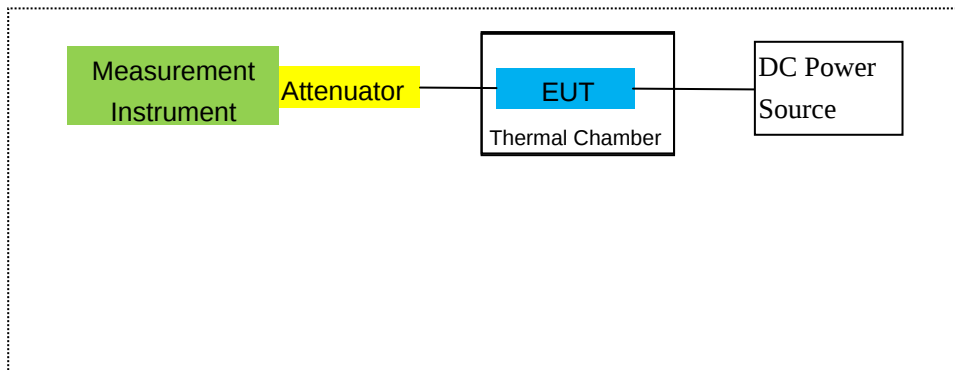
For Conducted Output Power



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



For Frequency Stability



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

3.TEST AND MEASUREMENT EQUIPMENT

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

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	MXA Signal Analyzer	Agilent	N9020A	MY49100060	2024.04.25	2025.04.24	1 year
2	Test Receiver	R&S	ESPI	101318	2024.04.26	2025.04.25	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12	2025.05.11	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
5	Horn Antenna	EM	EM-AH-10180	2011071402	2024.05.12	2027.05.11	3 year
6	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2024.05.12	2027.05.11	3 year
7	Amplifier	EM	EM-30180	060538	2024.04.26	2025.04.25	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2024.03.12	2025.03.11	1 year
9	Power Meter	R&S	NRVS	100696	2024.04.26	2025.04.25	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2024.04.26	2025.04.25	1 year
11	Test Cable	N/A	R-01	N/A	2022.06.17	2025.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	1 year
15	LISN	R&S	ENV216	101313	2024.04.25	2025.04.24	1 year
16	LISN	EMCO	3816/2	00042990	2024.04.25	2025.04.24	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2024.03.12	2025.03.11	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2024.03.12	2025.03.11	1 year
19	Test Cable	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
20	Test Cable	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
21	Test Cable	N/A	C03	N/A	2023.05.06	2026.05.05	3 year
22	Spectrum Analyzer	agilent	e4440a	us44300399	2024.03.12	2025.03.11	1 year
23	test receiver	R&S	ESCI	a0304218	2024.03.12	2025.03.11	1 year
24	Communication Tester	R&S	CMU200	A0304247	2024.03.12	2025.03.11	1 year
25	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2024.03.12	2025.03.11	1 year

26	DC Power Source	N/A	PS-6005D	2017040292 3	2024.04.25	2027.04.24	3 year
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Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& DC Power Source which is scheduled for calibration every 3 years

Measurement Software

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

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

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

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

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

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

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

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

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

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

Test data reference attachment.

5. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

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

MODES TESTED

☐

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

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

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

FCC: §22.359

LIMITS

FCC: §22.917, §24.238, §27.53

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

(m)(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Show citation box.

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

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

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

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

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

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

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

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

LIMITS

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

TEST PROCEDURE

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

For each out of band emissions measurement:

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

MODES TESTED

- ☐ Band 2/4/5/7/12/17/25/26/66
- ☐

7.1 MEASUREMENT METHOD

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

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

LIMITS:

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.

27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

27.50 (h)(2) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

90.635(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

TEST PROCEDURE

ANSI/TIA-603-E Clause 2.2.17

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

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

MODES TESTED

☐ Band 2/4/5/7/12/17/25/26/66

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	-0.05	3.76	28.24	24.43	277.332	Horizontal	Pass
		1880	-0.08	3.91	28.22	24.23	264.850	Horizontal	Pass
		1909.3	0.19	3.93	28.20	24.46	279.254	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-0.09	3.77	28.23	24.37	273.527	Horizontal	Pass
		1880	-0.10	3.91	28.24	24.23	264.850	Horizontal	Pass
		1908.5	0.13	3.94	28.25	24.44	277.971	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-0.19	3.77	28.31	24.35	272.270	Horizontal	Pass
		1880	-0.05	3.91	28.22	24.26	266.686	Horizontal	Pass
		1907.5	0.23	3.94	28.20	24.49	281.190	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-0.21	3.79	28.33	24.33	271.019	Horizontal	Pass
		1880	0.03	3.95	28.22	24.30	269.153	Horizontal	Pass
		1905	0.24	3.97	28.19	24.46	279.254	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-0.19	3.79	28.34	24.36	272.898	Horizontal	Pass
		1880	0.01	3.95	28.22	24.28	267.917	Horizontal	Pass
		1902.5	0.15	3.97	28.18	24.36	272.898	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-0.20	3.81	28.35	24.34	271.644	Horizontal	Pass
		1880	0.03	3.96	28.22	24.29	268.534	Horizontal	Pass
		1900	0.21	4.00	28.16	24.37	273.527	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-0.54	3.76	28.24	23.94	247.742	Vertical	Pass
		1880	-0.66	3.91	28.22	23.65	231.739	Vertical	Pass
		1909.3	-0.39	3.93	28.20	23.88	244.343	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.04	3.77	28.23	23.42	219.786	Vertical	Pass
		1880	-0.58	3.91	28.24	23.75	237.137	Vertical	Pass
		1908.5	-1.10	3.94	28.25	23.21	209.411	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-1.23	3.77	28.31	23.31	214.289	Vertical	Pass
		1880	-0.42	3.91	28.22	23.89	244.906	Vertical	Pass
		1907.5	-0.52	3.94	28.20	23.74	236.592	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-1.49	3.79	28.33	23.05	201.837	Vertical	Pass
		1880	-0.49	3.95	28.22	23.78	238.781	Vertical	Pass
		1905	-0.31	3.97	28.19	23.91	246.037	Vertical	Pass
15.0MHz Band	1/#Mid	1857.5	-1.33	3.79	28.34	23.22	209.894	Vertical	Pass
		1880	-0.95	3.95	28.22	23.32	214.783	Vertical	Pass

QPSK		1902.5	-0.83	3.97	28.18	23.38	217.771	Vertical	Pass
20.0MHz	1/#Mid	1860	-1.26	3.81	28.35	23.28	212.814	Vertical	Pass
Band		1880	-0.90	3.96	28.22	23.36	216.770	Vertical	Pass
QPSK		1900	-0.74	4.00	28.16	23.42	219.786	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/##Mid	1850.7	-0.83	3.76	28.24	23.65	231.739	Horizontal	Pass
		1880	-0.85	3.91	28.22	23.46	221.820	Horizontal	Pass
		1909.3	-0.53	3.93	28.20	23.74	236.592	Horizontal	Pass
3.0MHz Band 16 QAM	1/##Mid	1851.5	-0.81	3.77	28.23	23.65	231.739	Horizontal	Pass
		1880	-0.87	3.91	28.24	23.46	221.820	Horizontal	Pass
		1908.5	-0.56	3.94	28.25	23.75	237.137	Horizontal	Pass
5.0MHz Band 16 QAM	1/##Mid	1852.5	-0.99	3.77	28.31	23.55	226.464	Horizontal	Pass
		1880	-0.83	3.91	28.22	23.48	222.844	Horizontal	Pass
		1907.5	-0.49	3.94	28.20	23.77	238.232	Horizontal	Pass
10.0MHz Band 16 QAM	1/##Mid	1855	-0.97	3.79	28.33	23.57	227.510	Horizontal	Pass
		1880	-0.83	3.95	28.22	23.44	220.800	Horizontal	Pass
		1905	-0.51	3.97	28.19	23.71	234.963	Horizontal	Pass
15.0MHz Band 16 QAM	1/##Mid	1857.5	-0.90	3.79	28.34	23.65	231.739	Horizontal	Pass
		1880	-0.69	3.95	28.22	23.58	228.034	Horizontal	Pass
		1902.5	-0.55	3.97	28.18	23.66	232.274	Horizontal	Pass
20.0MHz Band 16 QAM	1/##Mid	1860	-0.97	3.81	28.35	23.57	227.510	Horizontal	Pass
		1880	-0.69	3.96	28.22	23.57	227.510	Horizontal	Pass
		1900	-0.60	4.00	28.16	23.56	226.986	Horizontal	Pass
1.4MHz Band 16 QAM	1/##Mid	1850.7	-1.79	3.76	28.24	22.69	185.780	Vertical	Pass
		1880	-2.24	3.91	28.22	22.07	161.065	Vertical	Pass
		1909.3	-1.29	3.93	28.20	22.98	198.609	Vertical	Pass
3.0MHz Band 16 QAM	1/##Mid	1851.5	-2.22	3.77	28.23	22.24	167.494	Vertical	Pass
		1880	-1.81	3.91	28.24	22.52	178.649	Vertical	Pass
		1908.5	-1.85	3.94	28.25	22.46	176.198	Vertical	Pass
5.0MHz Band 16 QAM	1/##Mid	1852.5	-1.87	3.77	28.31	22.67	184.927	Vertical	Pass
		1880	-1.31	3.91	28.22	23.00	199.526	Vertical	Pass
		1907.5	-2.21	3.94	28.20	22.05	160.325	Vertical	Pass
10.0MHz Band 16 QAM	1/##Mid	1855	-2.21	3.79	28.33	22.33	171.002	Vertical	Pass
		1880	-1.26	3.95	28.22	23.01	199.986	Vertical	Pass
		1905	-1.88	3.97	28.19	22.34	171.396	Vertical	Pass
15.0MHz Band 16 QAM	1/##Mid	1857.5	-2.17	3.79	28.34	22.38	172.982	Vertical	Pass
		1880	-1.26	3.95	28.22	23.01	199.986	Vertical	Pass
		1902.5	-1.70	3.97	28.18	22.51	178.238	Vertical	Pass

20.0MHz	1/#Mid	1860	-2.48	3.81	28.35	22.06	160.694	Vertical	Pass
Band 16		1880	-1.65	3.96	28.22	22.61	182.390	Vertical	Pass
QAM		1900	-2.10	4.00	28.16	22.06	160.694	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-0.38	3.12	27.58	24.08	255.859	Horizontal	Pass
		1732.5	-0.05	3.27	27.61	24.29	268.534	Horizontal	Pass
		1754.3	-0.10	3.29	27.63	24.24	265.461	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-0.40	3.13	27.61	24.08	255.859	Horizontal	Pass
		1732.5	-0.08	3.27	27.61	24.26	266.686	Horizontal	Pass
		1753.5	-0.07	3.30	27.62	24.25	266.073	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-0.37	3.13	27.63	24.13	258.821	Horizontal	Pass
		1732.5	-0.03	3.27	27.61	24.31	269.774	Horizontal	Pass
		1752.5	-0.03	3.30	27.60	24.27	267.301	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-0.32	3.15	27.64	24.17	261.216	Horizontal	Pass
		1732.5	0.05	3.31	27.61	24.35	272.270	Horizontal	Pass
		1750	0.06	3.33	27.59	24.32	270.396	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-0.28	3.15	27.65	24.22	264.241	Horizontal	Pass
		1732.5	0.00	3.31	27.61	24.30	269.153	Horizontal	Pass
		1747.5	0.08	3.33	27.57	24.32	270.396	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-0.19	3.17	27.66	24.30	269.153	Horizontal	Pass
		1732.5	0.06	3.32	27.61	24.35	272.270	Horizontal	Pass
		1745	0.13	3.36	27.56	24.33	271.019	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-0.59	3.12	27.58	23.87	243.781	Vertical	Pass
		1732.5	-0.84	3.27	27.61	23.50	223.872	Vertical	Pass
		1754.3	-1.08	3.29	27.63	23.26	211.836	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.41	3.13	27.61	23.07	202.768	Vertical	Pass
		1732.5	-0.78	3.27	27.61	23.56	226.986	Vertical	Pass
		1753.5	-0.75	3.30	27.62	23.57	227.510	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-0.93	3.13	27.63	23.57	227.510	Vertical	Pass
		1732.5	-0.46	3.27	27.61	23.88	244.343	Vertical	Pass
		1752.5	-0.70	3.30	27.60	23.60	229.087	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-1.26	3.15	27.64	23.23	210.378	Vertical	Pass
		1732.5	-1.00	3.31	27.61	23.30	213.796	Vertical	Pass
		1750	-0.90	3.33	27.59	23.36	216.770	Vertical	Pass

15.0MHz	1/#Mid	1717.5	-0.99	3.15	27.65	23.51	224.388	Vertical	Pass
Band		1732.5	-0.79	3.31	27.61	23.51	224.388	Vertical	Pass
QPSK		1747.5	-0.52	3.33	27.57	23.72	235.505	Vertical	Pass
20.0MHz	1/#Mid	1720	-0.68	3.17	27.66	23.81	240.436	Vertical	Pass
Band		1732.5	-0.50	3.32	27.61	23.79	239.332	Vertical	Pass
QPSK		1745	-1.21	3.36	27.56	22.99	199.067	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	-1.11	3.12	27.58	23.35	216.272	Horizontal	Pass
		1732.5	-0.77	3.27	27.61	23.57	227.510	Horizontal	Pass
		1754.3	-0.88	3.29	27.63	23.46	221.820	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.27	3.13	27.61	23.21	209.411	Horizontal	Pass
		1732.5	-0.77	3.27	27.61	23.57	227.510	Horizontal	Pass
		1753.5	-0.77	3.30	27.62	23.55	226.464	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	-0.76	3.27	27.61	23.58	228.034	Horizontal	Pass
		1752.5	-0.85	3.30	27.60	23.45	221.309	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-1.05	3.15	27.64	23.44	220.800	Horizontal	Pass
		1732.5	-0.73	3.31	27.61	23.57	227.510	Horizontal	Pass
		1750	-0.64	3.33	27.59	23.62	230.144	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-0.99	3.15	27.65	23.51	224.388	Horizontal	Pass
		1732.5	-0.81	3.31	27.61	23.49	223.357	Horizontal	Pass
		1747.5	-0.73	3.33	27.57	23.51	224.388	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-0.92	3.17	27.66	23.57	227.510	Horizontal	Pass
		1732.5	-0.66	3.32	27.61	23.63	230.675	Horizontal	Pass
		1745	-0.60	3.36	27.56	23.60	229.087	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-1.87	3.12	27.58	22.59	181.552	Vertical	Pass
		1732.5	-1.61	3.27	27.61	22.73	187.499	Vertical	Pass
		1754.3	-1.65	3.29	27.63	22.69	185.780	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-2.06	3.13	27.61	22.42	174.582	Vertical	Pass
		1732.5	-2.15	3.27	27.61	22.19	165.577	Vertical	Pass
		1753.5	-1.72	3.30	27.62	22.60	181.970	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.43	3.13	27.63	22.07	161.065	Vertical	Pass
		1732.5	-1.89	3.27	27.61	22.45	175.792	Vertical	Pass
		1752.5	-1.74	3.30	27.60	22.56	180.302	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-1.85	3.15	27.64	22.64	183.654	Vertical	Pass
		1732.5	-2.18	3.31	27.61	22.12	162.930	Vertical	Pass
		1750	-2.23	3.33	27.59	22.03	159.588	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-1.68	3.15	27.65	22.82	191.426	Vertical	Pass
		1732.5	-2.09	3.31	27.61	22.21	166.341	Vertical	Pass
		1747.5	-1.87	3.33	27.57	22.37	172.584	Vertical	Pass

20.0MHz	1/#Mid	1720	-1.83	3.17	27.66	22.66	184.502	Vertical	Pass
Band 16		1732.5	-2.02	3.32	27.61	22.27	168.655	Vertical	Pass
QAM		1745	-1.65	3.36	27.56	22.55	179.887	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. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	3/#Mid	824.7	6.25	2.01	19.68	2.15	21.77	150.314	Horizontal	Pass
		836.5	6.31	2.01	19.77	2.15	21.92	155.597	Horizontal	Pass
		848.3	5.96	2.02	19.82	2.15	21.61	144.877	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	6.22	2.01	19.70	2.15	21.76	149.968	Horizontal	Pass
		836.5	6.33	2.01	19.77	2.15	21.94	156.315	Horizontal	Pass
		847.5	6.04	2.02	19.81	2.15	21.68	147.231	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	6.24	2.01	19.71	2.15	21.79	151.008	Horizontal	Pass
		836.5	6.38	2.01	19.77	2.15	21.99	158.125	Horizontal	Pass
		846.5	6.09	2.02	19.79	2.15	21.71	148.252	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	6.33	2.01	19.73	2.15	21.90	154.882	Horizontal	Pass
		836.5	6.38	2.01	19.77	2.15	21.99	158.125	Horizontal	Pass
		844	6.22	2.02	19.78	2.15	21.83	152.405	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	5.50	2.01	19.68	2.15	21.02	126.474	Vertical	Pass
		836.5	4.80	2.01	19.77	2.15	20.41	109.901	Vertical	Pass
		848.3	4.87	2.02	19.82	2.15	20.52	112.720	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.80	2.01	19.70	2.15	20.34	108.143	Vertical	Pass
		836.5	5.58	2.01	19.77	2.15	21.19	131.522	Vertical	Pass
		847.5	5.31	2.02	19.81	2.15	20.95	124.451	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	5.53	2.01	19.71	2.15	21.08	128.233	Vertical	Pass
		836.5	5.52	2.01	19.77	2.15	21.13	129.718	Vertical	Pass
		846.5	5.34	2.02	19.79	2.15	20.96	124.738	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	5.39	2.01	19.73	2.15	20.96	124.738	Vertical	Pass
		836.5	4.91	2.01	19.77	2.15	20.52	112.720	Vertical	Pass
		844	4.73	2.02	19.78	2.15	20.34	108.143	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. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	3/#Mid	824.7	5.41	2.01	19.68	2.15	20.93	123.880	Horizontal	Pass
		836.5	5.59	2.01	19.77	2.15	21.20	131.826	Horizontal	Pass
		848.3	5.19	2.02	19.82	2.15	20.84	121.339	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	5.50	2.01	19.70	2.15	21.04	127.057	Horizontal	Pass
		836.5	5.51	2.01	19.77	2.15	21.12	129.420	Horizontal	Pass
		847.5	5.20	2.02	19.81	2.15	20.84	121.339	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	5.42	2.01	19.71	2.15	20.97	125.026	Horizontal	Pass
		836.5	5.58	2.01	19.77	2.15	21.19	131.522	Horizontal	Pass
		846.5	5.37	2.02	19.79	2.15	20.99	125.603	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	5.62	2.01	19.73	2.15	21.19	131.522	Horizontal	Pass
		836.5	5.54	2.01	19.77	2.15	21.15	130.317	Horizontal	Pass
		844	5.46	2.02	19.78	2.15	21.07	127.938	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	4.65	2.01	19.68	2.15	20.17	103.992	Vertical	Pass
		836.5	4.27	2.01	19.77	2.15	19.88	97.275	Vertical	Pass
		848.3	4.20	2.02	19.82	2.15	19.85	96.605	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.52	2.01	19.70	2.15	20.06	101.391	Vertical	Pass
		836.5	2.72	2.01	19.77	2.15	18.33	68.077	Vertical	Pass
		847.5	4.32	2.02	19.81	2.15	19.96	99.083	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.09	2.01	19.71	2.15	18.64	73.114	Vertical	Pass
		836.5	3.46	2.01	19.77	2.15	19.07	80.724	Vertical	Pass
		846.5	2.93	2.02	19.79	2.15	18.55	71.614	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	4.43	2.01	19.73	2.15	20.00	100.000	Vertical	Pass
		836.5	4.38	2.01	19.77	2.15	19.99	99.770	Vertical	Pass
		844	3.53	2.02	19.78	2.15	19.14	82.035	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2502.5	0.74	4.54	27.75	23.95	248.313	Horizontal	Pass
		2535	1.09	4.69	27.72	24.12	258.226	Horizontal	Pass
		2567.5	1.23	4.71	27.71	24.23	264.850	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	0.65	4.55	27.76	23.86	243.220	Horizontal	Pass
		2535	1.10	4.69	27.72	24.13	258.821	Horizontal	Pass
		2565	1.28	4.72	27.70	24.26	266.686	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	0.68	4.55	27.77	23.90	245.471	Horizontal	Pass
		2535	1.06	4.69	27.72	24.09	256.448	Horizontal	Pass
		2562.5	1.25	4.72	27.69	24.22	264.241	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	0.69	4.57	27.78	23.90	245.471	Horizontal	Pass
		2535	1.15	4.73	27.72	24.14	259.418	Horizontal	Pass
		2560	1.29	4.75	27.68	24.22	264.241	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	0.27	4.54	27.75	23.48	222.844	Vertical	Pass
		2535	-0.22	4.69	27.72	22.81	190.985	Vertical	Pass
		2567.5	0.42	4.71	27.71	23.42	219.786	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-0.39	4.55	27.76	22.82	191.426	Vertical	Pass
		2535	0.32	4.69	27.72	23.35	216.272	Vertical	Pass
		2565	0.22	4.72	27.70	23.20	208.930	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-0.29	4.55	27.77	22.93	196.336	Vertical	Pass
		2535	-0.24	4.69	27.72	22.79	190.108	Vertical	Pass
		2562.5	-0.38	4.72	27.69	22.59	181.552	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	0.03	4.57	27.78	23.24	210.863	Vertical	Pass
		2535	0.35	4.73	27.72	23.34	215.774	Vertical	Pass
		2560	-0.17	4.75	27.68	22.76	188.799	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	-0.27	4.54	27.75	22.94	196.789	Horizontal	Pass
		2535	0.23	4.69	27.72	23.26	211.836	Horizontal	Pass
		2567.5	0.38	4.71	27.71	23.38	217.771	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-0.19	4.55	27.76	23.02	200.447	Horizontal	Pass
		2535	0.32	4.69	27.72	23.35	216.272	Horizontal	Pass
		2565	0.45	4.72	27.70	23.43	220.293	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-0.16	4.55	27.77	23.06	202.302	Horizontal	Pass
		2535	0.24	4.69	27.72	23.27	212.324	Horizontal	Pass
		2562.5	0.40	4.72	27.69	23.37	217.270	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-0.22	4.57	27.78	22.99	199.067	Horizontal	Pass
		2535	0.31	4.73	27.72	23.30	213.796	Horizontal	Pass
		2560	0.40	4.75	27.68	23.33	215.278	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-0.45	4.54	27.75	22.76	188.799	Vertical	Pass
		2535	-1.23	4.69	27.72	21.80	151.356	Vertical	Pass
		2567.5	-0.30	4.71	27.71	22.70	186.209	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-1.20	4.55	27.76	22.01	158.855	Vertical	Pass
		2535	-0.46	4.69	27.72	22.57	180.717	Vertical	Pass
		2565	-0.54	4.72	27.70	22.44	175.388	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-0.89	4.55	27.77	22.33	171.002	Vertical	Pass
		2535	-0.38	4.69	27.72	22.65	184.077	Vertical	Pass
		2562.5	-0.94	4.72	27.69	22.03	159.588	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-0.71	4.57	27.78	22.50	177.828	Vertical	Pass
		2535	0.38	4.73	27.72	23.37	217.270	Vertical	Pass
		2560	-1.10	4.75	27.68	21.83	152.405	Vertical	Pass

Note:

SG Level= Signal generator output

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

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	699.7	5.36	1.91	19.21	2.15	20.51	112.460	Horizontal	Pass
		707.5	5.08	1.91	19.26	2.15	20.28	106.660	Horizontal	Pass
		715.3	5.25	1.93	19.34	2.15	20.51	112.460	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	5.28	1.91	19.21	2.15	20.43	110.408	Horizontal	Pass
		707.5	5.07	1.91	19.26	2.15	20.27	106.414	Horizontal	Pass
		714.5	5.17	1.93	19.34	2.15	20.43	110.408	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	5.27	1.91	19.23	2.15	20.44	110.662	Horizontal	Pass
		707.5	5.13	1.91	19.26	2.15	20.33	107.895	Horizontal	Pass
		713.5	5.14	1.92	19.33	2.15	20.40	109.648	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	704	5.19	1.91	19.25	2.15	20.38	109.144	Horizontal	Pass
		707.5	5.19	1.91	19.26	2.15	20.39	109.396	Horizontal	Pass
		711	5.16	1.92	19.32	2.15	20.41	109.901	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	699.7	4.18	1.91	19.21	2.15	19.33	85.704	Vertical	Pass
		707.5	4.51	1.91	19.26	2.15	19.71	93.541	Vertical	Pass
		715.3	3.99	1.93	19.34	2.15	19.25	84.140	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	4.36	1.91	19.21	2.15	19.51	89.331	Vertical	Pass
		707.5	4.59	1.91	19.26	2.15	19.79	95.280	Vertical	Pass
		714.5	3.97	1.93	19.34	2.15	19.23	83.753	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	4.55	1.91	19.23	2.15	19.72	93.756	Vertical	Pass
		707.5	4.72	1.91	19.26	2.15	19.92	98.175	Vertical	Pass
		713.5	4.55	1.92	19.33	2.15	19.81	95.719	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	704	4.19	1.91	19.25	2.15	19.38	86.696	Vertical	Pass
		707.5	3.86	1.91	19.26	2.15	19.06	80.538	Vertical	Pass
		711	4.42	1.92	19.32	2.15	19.67	92.683	Vertical	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz	1/#Mid	699.7	4.49	1.91	19.21	2.15	19.64	92.045	Horizontal	Pass
Band 16		707.5	4.36	1.91	19.26	2.15	19.56	90.365	Horizontal	Pass
QAM		715.3	4.37	1.93	19.34	2.15	19.63	91.833	Horizontal	Pass
3.0MHz	1/#Mid	700.5	4.48	1.91	19.21	2.15	19.63	91.833	Horizontal	Pass
Band 16		707.5	4.35	1.91	19.26	2.15	19.55	90.157	Horizontal	Pass
QAM		714.5	4.36	1.93	19.34	2.15	19.62	91.622	Horizontal	Pass
5.0MHz	1/#Mid	701.5	4.4	1.91	19.23	2.15	19.57	90.573	Horizontal	Pass
Band 16		707.5	4.32	1.91	19.26	2.15	19.52	89.536	Horizontal	Pass
QAM		713.5	4.26	1.92	19.33	2.15	19.52	89.536	Horizontal	Pass
10.0MHz	1/#Mid	704	4.41	1.91	19.25	2.15	19.60	91.201	Horizontal	Pass
Band 16		707.5	4.32	1.91	19.26	2.15	19.52	89.536	Horizontal	Pass
QAM		711	4.32	1.92	19.32	2.15	19.57	90.573	Horizontal	Pass
1.4MHz	1/#Mid	699.7	3.25	1.91	19.21	2.15	18.40	69.183	Vertical	Pass
Band 16		707.5	3.64	1.91	19.26	2.15	18.84	76.560	Vertical	Pass
QAM		715.3	2.87	1.93	19.34	2.15	18.13	65.013	Vertical	Pass
3.0MHz	1/#Mid	700.5	3.56	1.91	19.21	2.15	18.71	74.302	Vertical	Pass
Band 16		707.5	3.27	1.91	19.26	2.15	18.47	70.307	Vertical	Pass
QAM		714.5	3.28	1.93	19.34	2.15	18.54	71.450	Vertical	Pass
5.0MHz	1/#Mid	701.5	3.15	1.91	19.23	2.15	18.32	67.920	Vertical	Pass
Band 16		707.5	3.27	1.91	19.26	2.15	18.47	70.307	Vertical	Pass
QAM		713.5	2.92	1.92	19.33	2.15	18.18	65.766	Vertical	Pass
10.0MHz	1/#Mid	704	3.42	1.91	19.25	2.15	18.61	72.611	Vertical	Pass
Band 16		707.5	3.77	1.91	19.26	2.15	18.97	78.886	Vertical	Pass
QAM		711	3.24	1.92	19.32	2.15	18.49	70.632	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.7 LTE BAND 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	5.01	1.91	19.23	2.15	20.18	104.232	Vertical	Pass
		710	4.87	1.91	19.26	2.15	20.07	101.625	Vertical	Pass
		713.5	4.77	1.92	19.33	2.15	20.03	100.693	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	5.02	1.91	19.25	2.15	20.21	104.954	Vertical	Pass
		710	4.97	1.91	19.26	2.15	20.17	103.992	Vertical	Pass
		711	4.93	1.92	19.32	2.15	20.18	104.232	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	3.36	1.91	19.23	2.15	18.53	71.285	Horizontal	Pass
		710	4.48	1.91	19.26	2.15	19.68	92.897	Horizontal	Pass
		713.5	3.78	1.92	19.33	2.15	19.04	80.168	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	4.33	1.91	19.25	2.15	19.52	89.536	Horizontal	Pass
		710	4.46	1.91	19.26	2.15	19.66	92.470	Horizontal	Pass
		711	2.97	1.92	19.32	2.15	18.22	66.374	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. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	706.5	4.32	1.91	19.23	2.15	19.49	88.920	Vertical	Pass
		710	3.18	1.91	19.26	2.15	18.38	68.865	Vertical	Pass
		713.5	3.54	1.92	19.33	2.15	18.80	75.858	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.50	1.91	19.25	2.15	18.69	73.961	Vertical	Pass
		710	4.15	1.91	19.26	2.15	19.35	86.099	Vertical	Pass
		711	4.60	1.92	19.32	2.15	19.85	96.605	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	3.68	1.91	19.23	2.15	18.85	76.736	Horizontal	Pass
		710	3.41	1.91	19.26	2.15	18.61	72.611	Horizontal	Pass
		713.5	3.17	1.92	19.33	2.15	18.43	69.663	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.47	1.91	19.25	2.15	18.66	73.451	Horizontal	Pass
		710	3.64	1.91	19.26	2.15	18.84	76.560	Horizontal	Pass
		711	3.46	1.92	19.32	2.15	18.71	74.302	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)

8.6 LTE BAND 25

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-0.12	3.12	27.58	24.34	271.644	Horizontal	Pass
		1882.5	-0.08	3.27	27.61	24.26	266.686	Horizontal	Pass
		1914.3	0.19	3.29	27.63	24.53	283.792	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-0.19	3.13	27.61	24.29	268.534	Horizontal	Pass
		1882.5	-0.08	3.27	27.61	24.26	266.686	Horizontal	Pass
		1753.5	0.22	3.30	27.62	24.54	284.446	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-0.12	3.13	27.63	24.38	274.157	Horizontal	Pass
		1882.5	-0.06	3.27	27.61	24.28	267.917	Horizontal	Pass
		1912.5	0.27	3.30	27.60	24.57	286.418	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-0.14	3.15	27.64	24.35	272.270	Horizontal	Pass
		1882.5	0.02	3.31	27.61	24.32	270.396	Horizontal	Pass
		1910	0.29	3.33	27.59	24.55	285.102	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-0.14	3.15	27.65	24.36	272.898	Horizontal	Pass
		1882.5	-0.01	3.31	27.61	24.29	268.534	Horizontal	Pass
		1907.5	0.21	3.33	27.57	24.45	278.612	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-0.15	3.17	27.66	24.34	271.644	Horizontal	Pass
		1882.5	0.04	3.32	27.61	24.33	271.019	Horizontal	Pass
		1905	0.29	3.36	27.56	24.49	281.190	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-1.41	3.12	27.58	23.05	201.837	Vertical	Pass
		1882.5	-0.35	3.27	27.61	23.99	250.611	Vertical	Pass
		1914.3	-1.23	3.29	27.63	23.11	204.644	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-0.64	3.13	27.61	23.84	242.103	Vertical	Pass
		1882.5	-1.30	3.27	27.61	23.04	201.372	Vertical	Pass
		1753.5	-0.30	3.30	27.62	24.02	252.348	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-0.72	3.13	27.63	23.78	238.781	Vertical	Pass
		1882.5	-1.01	3.27	27.61	23.33	215.278	Vertical	Pass
		1912.5	-0.90	3.30	27.60	23.40	218.776	Vertical	Pass
10.0MHz Band	1/#Mid	1855	-1.19	3.15	27.64	23.30	213.796	Vertical	Pass
		1882.5	-0.66	3.31	27.61	23.64	231.206	Vertical	Pass

QPSK		1910	-0.95	3.33	27.59	23.31	214.289	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-0.81	3.15	27.65	23.69	233.884	Vertical	Pass
Band		1882.5	-0.92	3.31	27.61	23.38	217.771	Vertical	Pass
QPSK		1907.5	-0.48	3.33	27.57	23.76	237.684	Vertical	Pass
20.0MHz	1/#Mid	1860	-0.51	3.17	27.66	23.98	250.035	Vertical	Pass
Band		1882.5	-0.53	3.32	27.61	23.76	237.684	Vertical	Pass
QPSK		1905	-0.38	3.36	27.56	23.82	240.991	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	-0.97	3.12	27.58	23.49	223.357	Horizontal	Pass
		1882.5	-0.83	3.27	27.61	23.51	224.388	Horizontal	Pass
		1914.3	-0.48	3.29	27.63	23.86	243.220	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-1.00	3.13	27.61	23.48	222.844	Horizontal	Pass
		1882.5	-0.83	3.27	27.61	23.51	224.388	Horizontal	Pass
		1753.5	-0.49	3.30	27.62	23.83	241.546	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-0.88	3.13	27.63	23.62	230.144	Horizontal	Pass
		1882.5	-0.86	3.27	27.61	23.48	222.844	Horizontal	Pass
		1912.5	-0.55	3.30	27.60	23.75	237.137	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-0.93	3.15	27.64	23.56	226.986	Horizontal	Pass
		1882.5	-0.83	3.31	27.61	23.47	222.331	Horizontal	Pass
		1910	-0.36	3.33	27.59	23.90	245.471	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-0.89	3.15	27.65	23.61	229.615	Horizontal	Pass
		1882.5	-0.71	3.31	27.61	23.59	228.560	Horizontal	Pass
		1907.5	-0.56	3.33	27.57	23.68	233.346	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-0.95	3.17	27.66	23.54	225.944	Horizontal	Pass
		1882.5	-0.69	3.32	27.61	23.60	229.087	Horizontal	Pass
		1905	-0.55	3.36	27.56	23.65	231.739	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-1.92	3.12	27.58	22.54	179.473	Vertical	Pass
		1882.5	-1.91	3.27	27.61	22.43	174.985	Vertical	Pass
		1914.3	-1.94	3.29	27.63	22.40	173.780	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-2.19	3.13	27.61	22.29	169.434	Vertical	Pass
		1882.5	-1.80	3.27	27.61	22.54	179.473	Vertical	Pass
		1753.5	-1.56	3.30	27.62	22.76	188.799	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-1.71	3.13	27.63	22.79	190.108	Vertical	Pass
		1882.5	-2.13	3.27	27.61	22.21	166.341	Vertical	Pass
		1912.5	-1.69	3.30	27.60	22.61	182.390	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-2.05	3.15	27.64	22.44	175.388	Vertical	Pass
		1882.5	-1.73	3.31	27.61	22.57	180.717	Vertical	Pass
		1910	-1.31	3.33	27.59	22.95	197.242	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-2.36	3.15	27.65	22.14	163.682	Vertical	Pass
		1882.5	-1.69	3.31	27.61	22.61	182.390	Vertical	Pass
		1907.5	-2.20	3.33	27.57	22.04	159.956	Vertical	Pass

20.0MHz	1/#Mid	1860	-1.91	3.17	27.66	22.58	181.134	Vertical	Pass
Band 16		1882.5	-2.13	3.32	27.61	22.16	164.437	Vertical	Pass
QAM		1905	-2.17	3.36	27.56	22.03	159.588	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.8 LTE BAND 26 A

Radiated Power (ERP) for Band 26a										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR Average (dBm)	Max. EPR Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	814.7	2.67	1.91	19.21	2.15	17.82	60.534	Horizontal	Pass
		819	2.72	1.91	19.26	2.15	17.92	61.944	Horizontal	Pass
		823.3	2.67	1.93	19.34	2.15	17.93	62.087	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	815.5	2.73	1.91	19.21	2.15	17.88	61.376	Horizontal	Pass
		819	2.65	1.91	19.26	2.15	17.85	60.954	Horizontal	Pass
		822.5	2.99	1.93	19.34	2.15	18.25	66.834	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	816.5	2.64	1.91	19.23	2.15	17.81	60.395	Horizontal	Pass
		819	2.65	1.91	19.26	2.15	17.85	60.954	Horizontal	Pass
		821.5	2.60	1.92	19.33	2.15	17.86	61.094	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	819	2.60	1.93	19.25	2.15	17.77	59.841	Horizontal	Pass
			0.00							
			0.00							
1.4MHz Band QPSK	1/#Mid	814.7	2.12	1.91	19.21	2.15	17.27	53.333	Vertical	Pass
		819	2.51	1.91	19.26	2.15	17.71	59.020	Vertical	Pass
		823.3	2.94	1.93	19.34	2.15	18.20	66.069	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	815.5	2.73	1.91	19.21	2.15	17.88	61.376	Vertical	Pass
		819	2.76	1.91	19.26	2.15	17.96	62.517	Vertical	Pass
		822.5	2.47	1.93	19.34	2.15	17.73	59.293	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	816.5	2.12	1.91	19.23	2.15	17.29	53.580	Vertical	Pass
		819	2.16	1.91	19.26	2.15	17.36	54.450	Vertical	Pass
		821.5	2.49	1.92	19.33	2.15	17.75	59.566	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	819	2.84	1.93	19.25	2.15	18.01	63.241	Vertical	Pass
			0.00							
			0.00							

Radiated Power (ERP) for Band 26a										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR Average (dBm)	Max. EPR Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	814.7	2.69	1.91	19.21	2.15	17.84	60.814	Horizontal	Pass
		819	2.8	1.91	19.26	2.15	18.00	63.096	Horizontal	Pass
		823.3	2.89	1.93	19.34	2.15	18.15	65.313	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	2.29	1.91	19.21	2.15	17.44	55.463	Horizontal	Pass
		819	2.22	1.91	19.26	2.15	17.42	55.208	Horizontal	Pass
		822.5	2.74	1.93	19.34	2.15	18.00	63.096	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	2.69	1.91	19.23	2.15	17.86	61.094	Horizontal	Pass
		819	2.2	1.91	19.26	2.15	17.40	54.954	Horizontal	Pass
		821.5	2.38	1.92	19.33	2.15	17.64	58.076	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	819	3.72	1.93	19.25	2.15	17.30	53.703	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	814.7	2.62	1.91	19.21	2.15	17.77	59.841	Vertical	Pass
		819	2.91	1.91	19.26	2.15	18.11	64.714	Vertical	Pass
		823.3	2.82	1.93	19.34	2.15	18.08	64.269	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	2.45	1.91	19.21	2.15	17.60	57.544	Vertical	Pass
		819	2.67	1.91	19.26	2.15	17.87	61.235	Vertical	Pass
		822.5	2.79	1.93	19.34	2.15	18.05	63.826	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	2.67	1.91	19.23	2.15	17.84	60.814	Vertical	Pass
		819	2.44	1.91	19.26	2.15	17.64	58.076	Vertical	Pass
		821.5	2.39	1.92	19.33	2.15	17.65	58.210	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	819	3.77	1.93	19.25	2.15	17.59	57.412	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.9 LTE BAND 26 B

Radiated Power (ERP) for Band 26b										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	824.7	2.46	2.02	19.72	2.15	18.01	63.241	Horizontal	Pass
		836.5	2.33	2.02	19.83	2.15	17.99	62.951	Horizontal	Pass
		848.3	2.18	2.03	19.95	2.15	17.95	62.373	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	2.39	2.02	19.84	2.15	18.06	63.973	Horizontal	Pass
		836.5	2.18	2.02	19.94	2.15	17.95	62.373	Horizontal	Pass
		847.5	2.12	2.03	19.98	2.15	17.92	61.944	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	2.43	2.02	19.75	2.15	18.01	63.241	Horizontal	Pass
		836.5	2.22	2.02	19.83	2.15	17.88	61.376	Horizontal	Pass
		846.5	2.24	2.03	19.92	2.15	17.98	62.806	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	2.31	2.02	19.84	2.15	17.98	62.806	Horizontal	Pass
		836.5	2.18	2.02	19.90	2.15	17.91	61.802	Horizontal	Pass
		844	1.52	2.03	19.96	2.15	17.30	53.703	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	831.5	3.04	2.02	19.33	2.15	18.20	66.069	Horizontal	Pass
		836.5	2.73	2.02	19.37	2.15	17.93	62.087	Horizontal	Pass
		841.5	2.63	2.03	19.52	2.15	17.97	62.661	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	2.07	2.02	19.76	2.15	17.66	58.345	Vertical	Pass
		836.5	1.82	2.02	19.78	2.15	17.43	55.335	Vertical	Pass
		848.3	1.52	2.03	19.94	2.15	17.28	53.456	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	1.96	2.02	19.83	2.15	17.62	57.810	Vertical	Pass
		836.5	1.60	2.02	19.96	2.15	17.39	54.828	Vertical	Pass
		847.5	2.03	2.03	19.87	2.15	17.72	59.156	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	1.80	2.02	19.86	2.15	17.49	56.105	Vertical	Pass
		836.5	2.47	2.02	19.81	2.15	18.11	64.714	Vertical	Pass
		846.5	2.26	2.03	19.83	2.15	17.91	61.802	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	2.44	2.02	19.75	2.15	18.02	63.387	Vertical	Pass
		836.5	2.32	2.02	19.85	2.15	18.00	63.096	Vertical	Pass
		844	2.01	2.03	19.80	2.15	17.63	57.943	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	831.5	2.87	2.02	19.31	2.15	18.01	63.241	Vertical	Pass
		836.5	2.75	2.02	19.33	2.15	17.91	61.802	Vertical	Pass
		841.5	2.73	2.03	19.38	2.15	17.93	62.087	Vertical	Pass

Radiated Power (ERP) for Band 26b										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR Average (dBm)	Max. EPR Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	824.7	2.55	2.02	19.72	2.15	18.10	64.565	Horizontal	Pass
		836.5	2.31	2.02	19.83	2.15	17.97	62.661	Horizontal	Pass
		848.3	2.44	2.03	19.95	2.15	18.21	66.222	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	2.45	2.02	19.84	2.15	18.12	64.863	Horizontal	Pass
		836.5	1.58	2.02	19.94	2.15	17.35	54.325	Horizontal	Pass
		847.5	2.30	2.03	19.98	2.15	18.10	64.565	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	2.45	2.02	19.75	2.15	18.03	63.533	Horizontal	Pass
		836.5	2.50	2.02	19.83	2.15	18.16	65.464	Horizontal	Pass
		846.5	1.54	2.03	19.92	2.15	17.28	53.456	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	1.67	2.02	19.84	2.15	17.34	54.200	Horizontal	Pass
		836.5	2.29	2.02	19.90	2.15	18.02	63.387	Horizontal	Pass
		844	2.32	2.03	19.96	2.15	18.10	64.565	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	831.5	2.85	2.02	19.33	2.15	18.01	63.241	Horizontal	Pass
		836.5	2.24	2.02	19.37	2.15	17.44	55.463	Horizontal	Pass
		841.5	2.42	2.03	19.52	2.15	17.76	59.704	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	0.80	2.02	19.76	2.15	16.39	43.551	Vertical	Pass
		836.5	1.14	2.02	19.78	2.15	16.75	47.315	Vertical	Pass
		848.3	1.34	2.03	19.94	2.15	17.10	51.286	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	1.27	2.02	19.83	2.15	16.93	49.317	Vertical	Pass
		836.5	0.76	2.02	19.96	2.15	16.55	45.186	Vertical	Pass
		847.5	0.63	2.03	19.87	2.15	16.32	42.855	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	1.34	2.02	19.86	2.15	17.03	50.466	Vertical	Pass
		836.5	0.81	2.02	19.81	2.15	16.45	44.157	Vertical	Pass
		846.5	0.87	2.03	19.83	2.15	16.52	44.875	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	1.13	2.02	19.75	2.15	16.71	46.881	Vertical	Pass
		836.5	0.95	2.02	19.85	2.15	16.63	46.026	Vertical	Pass
		844	1.12	2.03	19.80	2.15	16.74	47.206	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	831.5	1.27	2.02	19.31	2.15	16.41	43.752	Vertical	Pass
		836.5	1.85	2.02	19.33	2.15	17.01	50.234	Vertical	Pass
		841.5	1.37	2.03	19.38	2.15	16.57	45.394	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.10 LTE BAND 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band QPSK	1/#Mid	1710.7	-0.41	3.76	28.24	24.07	255.270	Horizontal	Pass
		1745	-0.04	3.91	28.22	24.27	267.301	Horizontal	Pass
		1779.3	-0.06	3.93	28.2	24.21	263.633	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-0.36	3.77	28.23	24.10	257.040	Horizontal	Pass
		1745	-0.02	3.91	28.24	24.31	269.774	Horizontal	Pass
		1778.5	-0.08	3.94	28.25	24.23	264.850	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-0.38	3.77	28.31	24.16	260.615	Horizontal	Pass
		1745	0.02	3.91	28.22	24.33	271.019	Horizontal	Pass
		1777.5	-0.01	3.94	28.2	24.25	266.073	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-0.31	3.79	28.33	24.23	264.850	Horizontal	Pass
		1745	0.09	3.95	28.22	24.36	272.898	Horizontal	Pass
		1775	0.11	3.97	28.19	24.33	271.019	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-0.29	3.79	28.34	24.26	266.686	Horizontal	Pass
		1745	0.04	3.95	28.22	24.31	269.774	Horizontal	Pass
		1772.5	0.05	3.97	28.18	24.26	266.686	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-0.26	3.81	28.35	24.28	267.917	Horizontal	Pass
		1745	0.07	3.96	28.22	24.33	271.019	Horizontal	Pass
		1770	0.06	4	28.16	24.22	264.241	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-0.82	3.76	28.24	23.66	232.274	Vertical	Pass
		1745	-0.43	3.91	28.22	23.88	244.343	Vertical	Pass
		1779.3	-0.55	3.93	28.2	23.72	235.505	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.34	3.77	28.23	23.12	205.116	Vertical	Pass
		1745	-0.74	3.91	28.24	23.59	228.560	Vertical	Pass
		1778.5	-0.52	3.94	28.25	23.79	239.332	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-1.32	3.77	28.31	23.22	209.894	Vertical	Pass
		1745	-0.70	3.91	28.22	23.61	229.615	Vertical	Pass
		1777.5	-1.08	3.94	28.2	23.18	207.970	Vertical	Pass
10.0MHz Band	1/#Mid	1715	-0.86	3.79	28.34	23.69	233.884	Vertical	Pass
		1745	-0.39	3.95	28.22	23.88	244.343	Vertical	Pass

QPSK		1775	-0.74	3.97	28.18	23.47	222.331	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-0.82	3.81	28.35	23.72	235.505	Vertical	Pass
Band		1745	-0.47	3.96	28.22	23.79	239.332	Vertical	Pass
QPSK		1772.5	-0.35	4	28.16	23.81	240.436	Vertical	Pass
20.0MHz	1/#Mid	1720	-0.74	3.79	28.34	23.81	240.436	Vertical	Pass
Band		1745	-0.40	3.95	28.22	23.87	243.781	Vertical	Pass
QPSK		1770	-1.06	3.97	28.18	23.15	206.538	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band 16 QAM	1/#Mid	1710.7	-1.18	3.76	28.24	23.30	213.796	Horizontal	Pass
		1745	-0.77	3.91	28.22	23.54	225.944	Horizontal	Pass
		1779.3	-0.82	3.93	28.2	23.45	221.309	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.12	3.77	28.23	23.34	215.774	Horizontal	Pass
		1745	-0.82	3.91	28.24	23.51	224.388	Horizontal	Pass
		1778.5	-0.88	3.94	28.25	23.43	220.293	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-1.19	3.77	28.31	23.35	216.272	Horizontal	Pass
		1745	-0.71	3.91	28.22	23.60	229.087	Horizontal	Pass
		1777.5	-0.75	3.94	28.2	23.51	224.388	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-1.11	3.79	28.33	23.43	220.293	Horizontal	Pass
		1745	-0.65	3.95	28.22	23.62	230.144	Horizontal	Pass
		1775	-0.76	3.97	28.19	23.46	221.820	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-1.01	3.79	28.34	23.54	225.944	Horizontal	Pass
		1745	-0.72	3.95	28.22	23.55	226.464	Horizontal	Pass
		1772.5	-0.73	3.97	28.18	23.48	222.844	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-1.06	3.81	28.35	23.48	222.844	Horizontal	Pass
		1745	-0.69	3.96	28.22	23.57	227.510	Horizontal	Pass
		1770	-0.76	4	28.16	23.40	218.776	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-1.94	3.76	28.24	22.54	179.473	Vertical	Pass
		1745	-0.64	3.91	28.22	23.67	232.809	Vertical	Pass
		1779.3	-1.49	3.93	28.2	22.78	189.671	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.12	3.77	28.23	23.34	215.774	Vertical	Pass
		1745	-1.82	3.91	28.24	22.51	178.238	Vertical	Pass
		1778.5	-1.01	3.94	28.25	23.30	213.796	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-1.29	3.77	28.31	23.25	211.349	Vertical	Pass
		1745	-2.31	3.91	28.22	22.00	158.489	Vertical	Pass
		1777.5	-0.41	3.94	28.2	23.85	242.661	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-2.34	3.79	28.34	22.21	166.341	Vertical	Pass
		1745	-0.39	3.95	28.22	23.88	244.343	Vertical	Pass
		1775	-0.64	3.97	28.18	23.57	227.510	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-2.39	3.81	28.35	22.15	164.059	Vertical	Pass

Band 16		1745	-0.50	3.96	28.22	23.76	237.684	Vertical	Pass
QAM		1772.5	-1.38	4	28.16	22.78	189.671	Vertical	Pass
20.0MHz	1/#Mid	1720	-2.35	3.79	28.34	22.20	165.959	Vertical	Pass
Band 16		1745	-1.48	3.95	28.22	22.79	190.108	Vertical	Pass
QAM		1770	-1.81	3.97	28.18	22.40	173.780	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

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

LIMIT

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

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

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

TEST PROCEDURE

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

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

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

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

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

MODES TESTED

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

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	-49.90	4.04	33.51	-20.43	-13	-7.43	Horizontal
3701.4	-53.39	4.04	33.51	-23.92	-13	-10.92	Vertical
5552.1	-47.01	5.24	35.84	-16.41	-13	-3.41	Vertical
5552.1	-52.39	5.24	35.84	-21.79	-13	-8.79	Horizontal
193.1	-38.17	1.43	16.02	-23.58	-13	-10.58	Vertical
421.0	-38.33	1.30	17.99	-21.64	-13	-8.64	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-52.49	4.04	33.56	-22.97	-13	-9.97	Horizontal
3760.0	-52.00	4.04	33.56	-22.48	-13	-9.48	Vertical
5640.0	-53.52	5.24	35.91	-22.85	-13	-9.85	Vertical
5640.0	-53.03	5.24	35.91	-22.36	-13	-9.36	Horizontal
175.6	-35.61	1.62	16.97	-20.26	-13	-7.26	Vertical
412.0	-43.73	1.74	15.98	-29.50	-13	-16.50	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-47.66	4.04	34.00	-17.70	-13	-4.70	Horizontal
3818.6	-45.93	4.04	34.00	-15.97	-13	-2.97	Vertical
5727.9	-53.33	5.24	36.04	-22.53	-13	-9.53	Vertical
5727.9	-50.61	5.24	36.04	-19.81	-13	-6.81	Horizontal
191.2	-35.67	1.42	17.29	-19.80	-13	-6.80	Vertical
333.4	-35.73	1.50	17.90	-19.32	-13	-6.32	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	-52.13	4.07	33.54	-22.66	-13	-9.66	Horizontal
3720.0	-52.51	4.07	33.54	-23.04	-13	-10.04	Vertical
5580.0	-46.22	5.28	35.86	-15.64	-13	-2.64	Vertical
5580.0	-49.47	5.28	35.86	-18.89	-13	-5.89	Horizontal
177.9	-36.70	1.58	16.89	-21.38	-13	-8.38	Vertical
339.4	-37.54	1.76	17.26	-22.04	-13	-9.04	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-52.40	4.04	33.56	-22.88	-13	-9.88	Horizontal
3760.0	-44.27	4.04	33.56	-14.75	-13	-1.75	Vertical
5640.0	-53.02	5.24	35.91	-22.35	-13	-9.35	Vertical
5640.0	-51.08	5.24	35.91	-20.41	-13	-7.41	Horizontal
205.1	-43.10	1.46	16.27	-28.29	-13	-15.29	Vertical
303.4	-42.46	1.59	15.15	-28.90	-13	-15.90	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-45.67	4.04	34.00	-15.71	-13	-2.71	Horizontal
3800.0	-47.50	4.04	34.00	-17.54	-13	-4.54	Vertical
5700.0	-47.02	5.24	36.04	-16.22	-13	-3.22	Vertical
5700.0	-49.65	5.24	36.04	-18.85	-13	-5.85	Horizontal
201.9	-34.92	1.36	17.39	-18.88	-13	-5.88	Vertical
266.1	-34.73	1.66	15.39	-21.00	-13	-8.00	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	-47.87	4.02	29.80	-22.09	-13	-9.09	Horizontal
3421.4	-44.01	4.02	29.80	-18.23	-13	-5.23	Vertical
5132.1	-48.72	5.24	35.84	-18.12	-13	-5.12	Vertical
5132.1	-50.61	5.24	35.84	-20.01	-13	-7.01	Horizontal
208.7	-39.68	1.68	16.04	-25.32	-13	-12.32	Vertical
235.2	-38.82	1.78	17.74	-22.86	-13	-9.86	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-44.48	4.03	30.00	-18.51	-13	-5.51	Horizontal
3465.0	-48.78	4.03	30.00	-22.81	-13	-9.81	Vertical
5197.5	-46.79	5.25	35.86	-16.18	-13	-3.18	Vertical
5197.5	-52.63	5.25	35.86	-22.02	-13	-9.02	Horizontal
195.4	-43.11	1.72	17.69	-27.14	-13	-14.14	Vertical
257.5	-38.17	1.62	16.02	-23.76	-13	-10.76	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-51.33	4.05	30.01	-25.37	-13	-12.37	Horizontal
3508.6	-46.06	4.05	30.01	-20.10	-13	-7.10	Vertical
5262.9	-46.92	5.26	35.86	-16.32	-13	-3.32	Vertical
5262.9	-49.84	5.26	35.86	-19.24	-13	-6.24	Horizontal
200.4	-37.29	1.80	16.69	-22.40	-13	-9.40	Vertical
276.9	-39.99	1.75	16.66	-25.09	-13	-12.09	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	-45.96	4.02	29.80	-20.18	-13	-7.18	Horizontal
3440.0	-47.38	4.02	29.80	-21.60	-13	-8.60	Vertical
5160.0	-45.11	5.24	35.84	-14.51	-13	-1.51	Vertical
5160.0	-49.77	5.24	35.84	-19.17	-13	-6.17	Horizontal
182.5	-35.17	1.57	17.26	-19.48	-13	-6.48	Vertical
459.0	-35.45	1.78	16.35	-20.88	-13	-7.88	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-49.41	4.03	30.00	-23.44	-13	-10.44	Horizontal
3465.0	-48.41	4.03	30.00	-22.44	-13	-9.44	Vertical
5197.5	-51.89	5.25	35.86	-21.28	-13	-8.28	Vertical
5197.5	-50.80	5.25	35.86	-20.19	-13	-7.19	Horizontal
194.4	-40.13	1.44	17.95	-23.62	-13	-10.62	Vertical
463.8	-36.81	1.65	16.09	-22.37	-13	-9.37	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-46.57	2.91	27.68	-21.80	-13	-8.80	Horizontal
3490.0	-48.07	2.91	27.68	-23.30	-13	-10.30	Vertical
5235.0	-49.77	5.26	35.86	-19.17	-13	-6.17	Vertical
5235.0	-51.33	5.26	35.86	-20.73	-13	-7.73	Horizontal
201.7	-39.28	1.61	16.85	-24.04	-13	-11.04	Vertical
436.9	-44.17	1.61	15.19	-30.59	-13	-17.59	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.

9.3 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	-47.37	2.78	27.50	-22.65	-13	-9.65	Horizontal
1649.4	-44.46	2.78	27.50	-19.74	-13	-6.74	Vertical
2474.1	-48.16	2.90	27.80	-23.26	-13	-10.26	Vertical
2474.1	-49.84	2.90	27.80	-24.94	-13	-11.94	Horizontal
201.3	-41.39	1.76	17.59	-25.56	-13	-12.56	Vertical
289.9	-34.14	1.63	15.87	-19.90	-13	-6.90	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-50.98	2.80	27.48	-26.30	-13	-13.30	Horizontal
1673.0	-48.21	2.80	27.48	-23.53	-13	-10.53	Vertical
2509.5	-53.83	2.91	27.70	-29.04	-13	-16.04	Vertical
2509.5	-53.99	2.91	27.70	-29.20	-13	-16.20	Horizontal
183.4	-40.98	1.61	15.68	-26.91	-13	-13.91	Vertical
342.1	-42.95	1.59	17.52	-27.03	-13	-14.03	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-52.88	2.82	27.43	-28.27	-13	-15.27	Horizontal
1696.6	-49.24	2.82	27.43	-24.63	-13	-11.63	Vertical
2544.9	-52.24	2.92	27.74	-27.42	-13	-14.42	Vertical
2544.9	-50.69	2.92	27.74	-25.87	-13	-12.87	Horizontal
177.0	-42.87	1.69	16.67	-27.88	-13	-14.88	Vertical
275.9	-35.46	1.70	17.18	-19.98	-13	-6.98	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	-44.87	2.78	27.50	-20.15	-13	-7.15	Horizontal
1658.0	-48.59	2.78	27.50	-23.87	-13	-10.87	Vertical
2487.0	-52.86	2.90	27.80	-27.96	-13	-14.96	Vertical
2487.0	-50.10	2.90	27.80	-25.20	-13	-12.20	Horizontal
176.8	-39.60	1.71	15.57	-25.74	-13	-12.74	Vertical
402.4	-39.51	1.34	16.40	-24.45	-13	-11.45	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-51.24	2.80	27.48	-26.56	-13	-13.56	Horizontal
1673.0	-46.01	2.80	27.48	-21.33	-13	-8.33	Vertical
2509.5	-44.71	2.91	27.70	-19.92	-13	-6.92	Vertical
2509.5	-53.06	2.91	27.70	-28.27	-13	-15.27	Horizontal
192.8	-35.55	1.44	17.04	-19.95	-13	-6.95	Vertical
448.4	-44.98	1.76	17.62	-29.12	-13	-16.12	Horizontal
Test Results for High Channel 844MHz							
1688.0	-47.21	2.82	27.43	-22.60	-13	-9.60	Horizontal
1688.0	-51.40	2.82	27.43	-26.79	-13	-13.79	Vertical
2532.0	-44.83	2.92	27.74	-20.01	-13	-7.01	Vertical
2532.0	-53.67	2.92	27.74	-28.85	-13	-15.85	Horizontal
182.5	-42.41	1.74	17.70	-26.45	-13	-13.45	Vertical
273.4	-36.27	1.41	17.46	-20.21	-13	-7.21	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	-61.80	5.23	35.81	-31.22	-25	-6.22	Horizontal
5005.0	-64.32	5.23	35.81	-33.74	-25	-8.74	Vertical
7507.5	-60.83	5.67	36.85	-29.65	-25	-4.65	Vertical
7507.5	-61.99	5.67	36.85	-30.81	-25	-5.81	Horizontal
206.3	-52.62	1.73	17.97	-36.38	-25	-11.38	Vertical
407.8	-52.12	1.38	15.11	-38.39	-25	-13.39	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-59.18	5.23	35.82	-28.59	-25	-3.59	Horizontal
5070.0	-64.44	5.23	35.82	-33.85	-25	-8.85	Vertical
7605.0	-60.81	5.67	36.85	-29.63	-25	-4.63	Vertical
7605.0	-59.28	5.67	36.85	-28.10	-25	-3.10	Horizontal
204.0	-45.65	1.77	16.17	-31.24	-25	-6.24	Vertical
398.5	-48.95	1.63	15.21	-35.37	-25	-10.37	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-63.91	5.24	35.83	-33.32	-25	-8.32	Horizontal
5135.0	-60.33	5.24	35.83	-29.74	-25	-4.74	Vertical
7702.5	-63.64	5.68	36.87	-32.45	-25	-7.45	Vertical
7702.5	-61.43	5.68	36.87	-30.24	-25	-5.24	Horizontal
183.0	-46.73	1.58	17.56	-30.75	-25	-5.75	Vertical
411.7	-54.54	1.45	16.58	-39.41	-25	-14.41	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	-60.49	5.23	35.82	-29.90	-25	-4.90	Horizontal
5020.0	-62.73	5.23	35.82	-32.14	-25	-7.14	Vertical
7530.0	-64.07	5.67	36.86	-32.88	-25	-7.88	Vertical
7530.0	-59.95	5.67	36.86	-28.76	-25	-3.76	Horizontal
182.6	-53.29	1.63	15.76	-39.16	-25	-14.16	Vertical
314.8	-54.03	1.71	15.44	-40.30	-25	-15.30	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-63.22	5.23	35.82	-32.63	-25	-7.63	Horizontal
5070.0	-59.78	5.23	35.82	-29.19	-25	-4.19	Vertical
7605.0	-63.20	5.67	36.85	-32.02	-25	-7.02	Vertical
7605.0	-63.45	5.67	36.85	-32.27	-25	-7.27	Horizontal
195.6	-54.68	1.79	16.84	-39.62	-25	-14.62	Vertical
276.1	-47.76	1.71	17.64	-31.83	-25	-6.83	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-59.29	5.24	35.83	-28.70	-25	-3.70	Horizontal
5120.0	-60.52	5.24	35.83	-29.93	-25	-4.93	Vertical
7680.0	-61.17	5.70	36.88	-29.99	-25	-4.99	Vertical
7680.0	-63.76	5.70	36.88	-32.58	-25	-7.58	Horizontal
202.9	-46.86	1.79	16.84	-31.80	-25	-6.80	Vertical
445.9	-45.93	1.71	17.64	-30.00	-25	-5.00	Horizontal

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

. Margin = Spurious Emission Level - Limit

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

9.5 LTE BAND 12

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

Test Results for Low Channel 699.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1399.4	-45.34	2.60	27.20	-20.74	-13	-7.74	Horizontal
1399.4	-53.65	2.60	27.20	-29.05	-13	-16.05	Vertical
2099.1	-47.06	2.85	27.54	-22.37	-13	-9.37	Vertical
2099.1	-51.50	2.85	27.54	-26.81	-13	-13.81	Horizontal
200.3	-42.07	1.49	17.78	-25.78	-13	-12.78	Vertical
422.0	-36.22	1.36	17.33	-20.25	-13	-7.25	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-51.11	2.61	27.28	-26.44	-13	-13.44	Horizontal
1415.0	-44.43	2.61	27.28	-19.76	-13	-6.76	Vertical
2122.5	-45.05	2.87	27.59	-20.33	-13	-7.33	Vertical
2122.5	-50.53	2.87	27.59	-25.81	-13	-12.81	Horizontal
207.4	-44.76	1.73	15.74	-30.75	-13	-17.75	Vertical
323.2	-40.07	1.62	15.79	-25.90	-13	-12.90	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-52.21	2.63	27.28	-27.56	-13	-14.56	Horizontal
1430.6	-51.16	2.63	27.28	-26.51	-13	-13.51	Vertical
2145.9	-49.30	2.88	27.60	-24.58	-13	-11.58	Vertical
2145.9	-51.33	2.88	27.60	-26.61	-13	-13.61	Horizontal
203.0	-38.17	1.61	18.00	-21.78	-13	-8.78	Vertical
329.0	-37.12	1.45	15.49	-23.09	-13	-10.09	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	-52.66	2.61	27.26	-28.01	-13	-15.01	Horizontal
1408.0	-45.40	2.61	27.26	-20.75	-13	-7.75	Vertical
2112.0	-46.38	2.87	27.58	-21.67	-13	-8.67	Vertical
2112.0	-51.88	2.87	27.58	-27.17	-13	-14.17	Horizontal
210.3	-42.08	1.31	16.97	-26.42	-13	-13.42	Vertical
398.5	-35.60	1.65	16.70	-20.55	-13	-7.55	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-45.39	2.61	27.28	-20.72	-13	-7.72	Horizontal
1415.0	-48.85	2.61	27.28	-24.18	-13	-11.18	Vertical
2122.5	-53.41	2.87	27.59	-28.69	-13	-15.69	Vertical
2122.5	-52.30	2.87	27.59	-27.58	-13	-14.58	Horizontal
202.3	-34.03	1.72	17.99	-17.76	-13	-4.76	Vertical
429.3	-35.31	1.73	17.94	-19.10	-13	-6.10	Horizontal
Test Results for High Channel 711MHz							
1422.0	-46.82	2.62	27.28	-22.16	-13	-9.16	Horizontal
1422.0	-52.36	2.62	27.28	-27.70	-13	-14.70	Vertical
2133.0	-47.80	2.87	27.60	-23.07	-13	-10.07	Vertical
2133.0	-49.07	2.87	27.60	-24.34	-13	-11.34	Horizontal
211.6	-35.48	1.58	15.93	-21.13	-13	-8.13	Vertical
335.8	-42.06	1.36	15.59	-27.83	-13	-14.83	Horizontal

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

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

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

9.6 LTE BAND 17

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

Test Results for Low Channel 706.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413.0	-44.57	2.61	27.28	-19.90	-13	-6.90	Horizontal
1413.0	-52.62	2.61	27.28	-27.95	-13	-14.95	Vertical
2119.5	-47.40	2.87	27.59	-22.68	-13	-9.68	Vertical
2119.5	-49.61	2.87	27.59	-24.89	-13	-11.89	Horizontal
187.0	-40.72	1.71	16.15	-26.28	-13	-13.28	Vertical
424.9	-38.48	1.41	17.32	-22.57	-13	-9.57	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-48.04	2.62	27.30	-23.36	-13	-10.36	Horizontal
1420.0	-51.45	2.62	27.30	-26.77	-13	-13.77	Vertical
2130.0	-44.61	2.87	27.62	-19.86	-13	-6.86	Vertical
2130.0	-51.88	2.87	27.62	-27.13	-13	-14.13	Horizontal
204.0	-39.52	1.42	15.25	-25.70	-13	-12.70	Vertical
313.2	-36.36	1.36	17.19	-20.53	-13	-7.53	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-47.86	2.66	27.28	-23.24	-13	-10.24	Horizontal
1427.0	-46.70	2.66	27.28	-22.08	-13	-9.08	Vertical
2140.5	-44.72	2.88	27.60	-20.00	-13	-7.00	Vertical
2140.5	-49.44	2.88	27.60	-24.72	-13	-11.72	Horizontal
189.9	-36.54	1.32	17.29	-20.57	-13	-7.57	Vertical
439.3	-42.26	1.72	16.89	-27.09	-13	-14.09	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	-47.54	2.62	27.30	-22.86	-13	-9.86	Horizontal
1418.0	-53.87	2.62	27.30	-29.19	-13	-16.19	Vertical
2127.0	-52.83	2.87	27.62	-28.08	-13	-15.08	Vertical
2127.0	-51.64	2.87	27.62	-26.89	-13	-13.89	Horizontal
186.8	-40.43	1.35	16.91	-24.87	-13	-11.87	Vertical
377.0	-41.43	1.62	16.31	-26.74	-13	-13.74	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-47.84	2.62	27.30	-23.16	-13	-10.16	Horizontal
1420.0	-51.86	2.62	27.30	-27.18	-13	-14.18	Vertical
2130.0	-45.77	2.87	27.62	-21.02	-13	-8.02	Vertical
2130.0	-51.36	2.87	27.62	-26.61	-13	-13.61	Horizontal
182.9	-34.64	1.51	17.14	-19.01	-13	-6.01	Vertical
264.9	-38.31	1.77	16.88	-23.20	-13	-10.20	Horizontal
Test Results for High Channel 711MHz							
1422.0	-45.23	2.62	27.30	-20.55	-13	-7.55	Horizontal
1422.0	-50.77	2.62	27.30	-26.09	-13	-13.09	Vertical
2133.0	-49.37	2.87	27.62	-24.62	-13	-11.62	Vertical
2133.0	-51.86	2.87	27.62	-27.11	-13	-14.11	Horizontal
185.6	-37.92	1.78	15.95	-23.75	-13	-10.75	Vertical
458.4	-34.12	1.34	17.95	-17.52	-13	-4.52	Horizontal

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

. Margin = Spurious Emission Level - Limit

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

9.7 LTE BAND 25

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

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-53.74	4.26	29.80	-28.20	-13	-15.20	Horizontal
3701.4	-50.32	4.26	29.80	-24.78	-13	-11.78	Vertical
5552.1	-53.43	5.36	35.84	-22.95	-13	-9.95	Vertical
5552.1	-53.43	5.36	35.84	-22.95	-13	-9.95	Horizontal
209.0	-44.14	1.68	16.04	-29.78	-13	-16.78	Vertical
331.4	-42.93	1.78	17.74	-26.97	-13	-13.97	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-52.12	4.28	30.00	-26.40	-13	-13.40	Horizontal
3765.0	-51.57	4.28	30.00	-25.85	-13	-12.85	Vertical
5647.5	-52.42	5.41	35.86	-21.97	-13	-8.97	Vertical
5647.5	-51.10	5.41	35.86	-20.65	-13	-7.65	Horizontal
211.4	-43.78	1.72	17.69	-27.81	-13	-14.81	Vertical
261.1	-42.56	1.62	16.02	-28.15	-13	-15.15	Horizontal
Test Results for High Channel 1914.3MHz							
3828.6	-53.96	4.31	30.01	-28.26	-13	-15.26	Horizontal
3828.6	-52.24	4.31	30.01	-26.54	-13	-13.54	Vertical
5742.9	-52.50	5.43	35.86	-22.07	-13	-9.07	Vertical
5742.9	-49.38	5.43	35.86	-18.95	-13	-5.95	Horizontal
177.8	-38.29	1.80	16.69	-23.40	-13	-10.40	Vertical
381.4	-36.90	1.75	16.66	-22.00	-13	-9.00	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	-52.61	4.29	29.80	-27.10	-13	-14.10	Horizontal
3720.0	-52.15	4.29	29.80	-26.64	-13	-13.64	Vertical
5580.0	-53.17	5.38	35.84	-22.71	-13	-9.71	Vertical
5580.0	-50.20	5.38	35.84	-19.74	-13	-6.74	Horizontal
184.3	-41.98	1.57	17.26	-26.29	-13	-13.29	Vertical
407.0	-39.49	1.78	16.35	-24.92	-13	-11.92	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-50.43	4.28	30.00	-24.71	-13	-11.71	Horizontal
3765.0	-51.07	4.28	30.00	-25.35	-13	-12.35	Vertical
5647.5	-50.25	5.41	35.86	-19.80	-13	-6.80	Vertical
5647.5	-52.59	5.41	35.86	-22.14	-13	-9.14	Horizontal
204.1	-40.78	1.44	17.95	-24.27	-13	-11.27	Vertical
344.0	-35.30	1.65	16.09	-20.86	-13	-7.86	Horizontal
Test Results for High Channel 1905MHz							
3810.0	-52.76	4.35	27.68	-29.43	-13	-16.43	Horizontal
3810.0	-50.55	4.35	27.68	-27.22	-13	-14.22	Vertical
5715.0	-49.67	5.42	35.86	-19.23	-13	-6.23	Vertical
5715.0	-51.18	5.42	35.86	-20.74	-13	-7.74	Horizontal
176.5	-37.40	1.61	16.85	-22.16	-13	-9.16	Vertical
270.7	-44.57	1.61	15.19	-30.99	-13	-17.99	Horizontal

9.8 LTE BAND 26 A

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

Test Results for Low Channel 814.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1629.4	-52.48	4.26	29.80	-26.94	-13	-13.94	Horizontal
1629.4	-50.89	4.26	29.80	-25.35	-13	-12.35	Vertical
2444.1	-51.27	5.36	35.84	-20.79	-13	-7.79	Vertical
2444.1	-52.31	5.36	35.84	-21.83	-13	-8.83	Horizontal
184.3	-43.80	1.68	16.04	-29.44	-13	-16.44	Vertical
338.6	-37.22	1.78	17.74	-21.26	-13	-8.26	Horizontal
Test Results for Mid Channel 819MHz							
1638.0	-50.56	4.28	30.00	-24.84	-13	-11.84	Horizontal
1638.0	-52.63	4.28	30.00	-26.91	-13	-13.91	Vertical
2457.0	-50.20	5.41	35.86	-19.75	-13	-6.75	Vertical
2457.0	-52.93	5.41	35.86	-22.48	-13	-9.48	Horizontal
190.0	-37.85	1.72	17.69	-21.88	-13	-8.88	Vertical
272.1	-41.52	1.62	16.02	-27.11	-13	-14.11	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-53.81	4.31	30.01	-28.11	-13	-15.11	Horizontal
1646.6	-49.53	4.31	30.01	-23.83	-13	-10.83	Vertical
2469.9	-49.31	5.43	35.86	-18.88	-13	-5.88	Vertical
2469.9	-49.57	5.43	35.86	-19.14	-13	-6.14	Horizontal
204.6	-44.84	1.80	16.69	-29.95	-13	-16.95	Vertical
467.8	-34.25	1.75	16.66	-19.35	-13	-6.35	Horizontal

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

Test Results for Mid Channel 819MHz							
1638.0	-53.02	4.28	30.00	-27.30	-13	-14.30	Horizontal
1638.0	-49.03	4.28	30.00	-23.31	-13	-10.31	Vertical
2457.0	-53.70	5.41	35.86	-23.25	-13	-10.25	Vertical
2457.0	-52.64	5.41	35.86	-22.19	-13	-9.19	Horizontal
197.1	-44.21	1.44	17.95	-27.70	-13	-14.70	Vertical
233.7	-37.30	1.65	16.09	-22.86	-13	-9.86	Horizontal

9.9 LTE BAND 26 B

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-50.53	4.26	29.80	-24.99	-13	-11.99	Horizontal
1649.4	-49.23	4.26	29.80	-23.69	-13	-10.69	Vertical
2474.1	-51.05	5.36	35.84	-20.57	-13	-7.57	Vertical
2474.1	-52.86	5.36	35.84	-22.38	-13	-9.38	Horizontal
211.5	-43.22	1.68	16.04	-28.86	-13	-15.86	Vertical
396.2	-36.50	1.78	17.74	-20.54	-13	-7.54	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-52.47	4.28	30.00	-26.75	-13	-13.75	Horizontal
1673.0	-52.27	4.28	30.00	-26.55	-13	-13.55	Vertical
2509.5	-49.80	5.41	35.86	-19.35	-13	-6.35	Vertical
2509.5	-51.17	5.41	35.86	-20.72	-13	-7.72	Horizontal
180.9	-36.77	1.72	17.69	-20.80	-13	-7.80	Vertical
249.0	-40.82	1.62	16.02	-26.41	-13	-13.41	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-52.13	4.31	30.01	-26.43	-13	-13.43	Horizontal
1696.6	-51.76	4.31	30.01	-26.06	-13	-13.06	Vertical
2544.9	-51.34	5.43	35.86	-20.91	-13	-7.91	Vertical
2544.9	-50.45	5.43	35.86	-20.02	-13	-7.02	Horizontal
180.0	-42.19	1.80	16.69	-27.30	-13	-14.30	Vertical
465.6	-39.95	1.75	16.66	-25.05	-13	-12.05	Horizontal

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

Test Results for Low Channel 831.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1663.0	-53.99	4.29	29.80	-28.48	-13	-15.48	Horizontal
1663.0	-53.96	4.29	29.80	-28.45	-13	-15.45	Vertical
2494.5	-51.79	5.38	35.84	-21.33	-13	-8.33	Vertical
2494.5	-53.95	5.38	35.84	-23.49	-13	-10.49	Horizontal
201.3	-37.74	1.57	17.26	-22.05	-13	-9.05	Vertical
467.8	-39.43	1.78	16.35	-24.86	-13	-11.86	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-53.44	4.28	30.00	-27.72	-13	-14.72	Horizontal
1673.0	-50.54	4.28	30.00	-24.82	-13	-11.82	Vertical
2509.5	-50.70	5.41	35.86	-20.25	-13	-7.25	Vertical
2509.5	-49.86	5.41	35.86	-19.41	-13	-6.41	Horizontal
182.9	-36.31	1.44	17.95	-19.80	-13	-6.80	Vertical
253.6	-38.44	1.65	16.09	-24.00	-13	-11.00	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-49.66	4.35	27.68	-26.33	-13	-13.33	Horizontal
1683.0	-49.88	4.35	27.68	-26.55	-13	-13.55	Vertical
2524.5	-49.71	5.42	35.86	-19.27	-13	-6.27	Vertical
2524.5	-53.60	5.42	35.86	-23.16	-13	-10.16	Horizontal
192.4	-41.46	1.61	16.85	-26.22	-13	-13.22	Vertical
241.8	-44.55	1.61	15.19	-30.97	-13	-17.97	Horizontal

9.10 LTE BAND 66

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-50.75	3.84	35.81	-18.78	-13	-5.78	Horizontal
3421.4	-52.16	3.84	35.81	-20.19	-13	-7.19	Vertical
5132.1	-53.17	5.18	36.85	-21.50	-13	-8.50	Vertical
5132.1	-52.88	5.18	36.85	-21.21	-13	-8.21	Horizontal
203.6	-34.36	1.56	17.97	-17.95	-13	-4.95	Vertical
384.4	-43.49	1.33	15.11	-29.71	-13	-16.71	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-51.78	3.85	35.82	-19.81	-13	-6.81	Horizontal
3490.0	-51.19	3.85	35.82	-19.22	-13	-6.22	Vertical
5235.0	-49.09	5.21	36.85	-17.45	-13	-4.45	Vertical
5235.0	-49.76	5.21	36.85	-18.12	-13	-5.12	Horizontal
185.4	-43.59	1.77	16.17	-29.18	-13	-16.18	Vertical
324.5	-43.16	1.63	15.21	-29.58	-13	-16.58	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-49.43	3.86	35.83	-17.46	-13	-4.46	Horizontal
3558.6	-50.26	3.86	35.83	-18.29	-13	-5.29	Vertical
5337.9	-51.34	5.24	36.87	-19.71	-13	-6.71	Vertical
5337.9	-52.79	5.24	36.87	-21.16	-13	-8.16	Horizontal
188.4	-37.66	1.58	17.56	-21.68	-13	-8.68	Vertical
354.9	-42.01	1.45	16.58	-26.88	-13	-13.88	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-52.87	3.84	35.82	-20.89	-13	-7.89	Horizontal
3440.0	-51.97	3.84	35.82	-19.99	-13	-6.99	Vertical
5160.0	-50.27	5.18	36.86	-18.59	-13	-5.59	Vertical
5160.0	-53.56	5.18	36.86	-21.88	-13	-8.88	Horizontal
183.7	-35.20	1.56	15.76	-21.00	-13	-8.00	Vertical
329.8	-37.93	1.33	15.44	-23.82	-13	-10.82	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-51.06	3.85	35.82	-19.09	-13	-6.09	Horizontal
3490.0	-51.42	3.85	35.82	-19.45	-13	-6.45	Vertical
5235.0	-51.18	5.21	36.85	-19.54	-13	-6.54	Vertical
5235.0	-53.34	5.21	36.85	-21.70	-13	-8.70	Horizontal
192.8	-40.14	1.77	16.84	-25.06	-13	-12.06	Vertical
240.9	-42.18	1.63	17.64	-26.17	-13	-13.17	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-51.32	3.86	35.83	-19.35	-13	-6.35	Horizontal
3540.0	-49.42	3.86	35.83	-17.45	-13	-4.45	Vertical
5310.0	-49.81	5.24	36.88	-18.17	-13	-5.17	Vertical
5310.0	-50.49	5.24	36.88	-18.85	-13	-5.85	Horizontal
212.0	-36.34	1.58	16.84	-21.07	-13	-8.07	Vertical
376.2	-43.89	1.45	17.64	-27.70	-13	-14.70	Horizontal

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

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

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

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

10. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

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

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

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

Frequency Stability vs Temperature:

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

Frequency Stability vs Voltage:

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

MODES TESTED

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

RESULTS

See the following pages.

10.1 LTE BAND 2

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	12.6	0.006713	2.5
3.87	1880	13.7	0.007281	2.5
4.45	1880	13.3	0.007051	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.9	0.006859	2.5
Extreme (50C)	1880	11.5	0.006101	2.5
Extreme (40C)	1880	13.6	0.007232	2.5
Extreme (30C)	1880	13.2	0.007005	2.5
Extreme (10C)	1880	14.3	0.007585	2.5
Extreme (0C)	1880	11.7	0.006205	2.5
Extreme (-10C)	1880	13.2	0.007034	2.5
Extreme (-20C)	1880	14.6	0.007749	2.5
Extreme (-30C)	1880	14.4	0.007661	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	9.4	0.004994	2.5
3.87	1880	8.4	0.004473	2.5
4.45	1880	8.5	0.004496	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.3	0.004942	2.5
Extreme (50C)	1880	8.7	0.004614	2.5
Extreme (40C)	1880	8.5	0.004525313	2.5
Extreme (30C)	1880	8.6	0.004572883	2.5
Extreme (10C)	1880	9.1	0.004814408	2.5
Extreme (0C)	1880	8.3	0.004402231	2.5
Extreme (-10C)	1880	9.3	0.004931967	2.5
Extreme (-20C)	1880	9.3	0.004967478	2.5
Extreme (-30C)	1880	7.8	0.004124385	2.5

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

10.2 LTE BAND 4

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1732.5	9.2	0.005282	2.5
3.87	1732.5	9.0	0.005186	2.5
4.45	1732.5	8.2	0.004741	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.7	0.005040	2.5
Extreme (50C)	1732.5	8.8	0.005071	2.5
Extreme (40C)	1732.5	7.2	0.004182	2.5
Extreme (30C)	1732.5	5.7	0.003283	2.5
Extreme (10C)	1732.5	7.4	0.004298	2.5
Extreme (0C)	1732.5	9.0	0.005214	2.5
Extreme (-10C)	1732.5	8.6	0.004985	2.5
Extreme (-20C)	1732.5	7.0	0.004069	2.5
Extreme (-30C)	1732.5	8.4	0.004864	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1732.5	9.8	0.005635	2.5
3.87	1732.5	9.3	0.005342	2.5
4.45	1732.5	8.5	0.004921	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.7	0.005619	2.5
Extreme (50C)	1732.5	9.3	0.005340	2.5
Extreme (40C)	1732.5	8.6	0.004937	2.5
Extreme (30C)	1732.5	9.0	0.005174	2.5
Extreme (10C)	1732.5	8.6	0.004960	2.5
Extreme (0C)	1732.5	8.6	0.004950	2.5
Extreme (-10C)	1732.5	8.9	0.005144	2.5
Extreme (-20C)	1732.5	8.6	0.004967	2.5
Extreme (-30C)	1732.5	8.5	0.004926	2.5

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

10.3 LTE BAND 5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	6.3	0.007522	2.5
3.87	836.5	6.3	0.007537	2.5
4.45	836.5	4.4	0.005211	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.0	0.007140	2.5
Extreme (50C)	836.5	5.5	0.006635	2.5
Extreme (40C)	836.5	6.3	0.007495	2.5
Extreme (30C)	836.5	6.6	0.007879	2.5
Extreme (10C)	836.5	5.5	0.006562	2.5
Extreme (0C)	836.5	5.1	0.006040	2.5
Extreme (-10C)	836.5	5.6	0.006717	2.5
Extreme (-20C)	836.5	6.0	0.007124	2.5
Extreme (-30C)	836.5	6.5	0.007771	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	6.2	0.007418	2.5
3.87	836.5	6.3	0.007516	2.5
4.45	836.5	4.7	0.005612	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.1	0.007290	2.5
Extreme (50C)	836.5	6.3	0.007497	2.5
Extreme (40C)	836.5	6.3	0.007564	2.5
Extreme (30C)	836.5	5.9	0.007113	2.5
Extreme (10C)	836.5	5.4	0.006478	2.5
Extreme (0C)	836.5	4.9	0.005867	2.5
Extreme (-10C)	836.5	5.3	0.006348	2.5
Extreme (-20C)	836.5	5.7	0.006809	2.5
Extreme (-30C)	836.5	6.2	0.007424	2.5

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

10.4 LTE BAND 7

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2535	9.5	0.003761	2.5
3.87	2535	8.8	0.003478	2.5
4.45	2535	8.4	0.003303	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.7	0.003842	2.5
Extreme (50C)	2535	9.0	0.003541	2.5
Extreme (40C)	2535	8.1	0.003197	2.5
Extreme (30C)	2535	9.2	0.003629	2.5
Extreme (10C)	2535	7.7	0.003039	2.5
Extreme (0C)	2535	8.3	0.003258	2.5
Extreme (-10C)	2535	9.8	0.003857	2.5
Extreme (-20C)	2535	8.5	0.003366	2.5
Extreme (-30C)	2535	8.2	0.003248	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2535	6.9	0.002722	2.5
3.87	2535	6.4	0.002506	2.5
4.45	2535	5.6	0.002190	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	0.002018	2.5
Extreme (40C)	2535	5.9	0.002326	2.5
Extreme (30C)	2535	6.8	0.002681	2.5
Extreme (10C)	2535	6.0	0.002376	2.5
Extreme (0C)	2535	5.4	0.002148	2.5
Extreme (-10C)	2535	5.4	0.002128	2.5
Extreme (-20C)	2535	5.5	0.002174	2.5
Extreme (-30C)	2535	6.0	0.002369	2.5

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

10.5 LTE BAND 12

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	707.5	8.8	0.012375	2.5
3.87	707.5	10.3	0.014619	2.5
4.45	707.5	8.6	0.012125	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	8.6	0.012093	2.5
Extreme (50C)	707.5	7.5	0.010650	2.5
Extreme (40C)	707.5	7.8	0.011052	2.5
Extreme (30C)	707.5	8.5	0.011960	2.5
Extreme (10C)	707.5	7.0	0.009945	2.5
Extreme (0C)	707.5	9.0	0.012703	2.5
Extreme (-10C)	707.5	8.9	0.012523	2.5
Extreme (-20C)	707.5	9.0	0.012708	2.5
Extreme (-30C)	707.5	7.9	0.011213	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	707.5	7.2	0.010114	2.5
3.87	707.5	8.0	0.011295	2.5
4.45	707.5	7.3	0.010251	2.5

Frequency error vs. Temperature

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

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

10.6 LTE BAND 17

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	710.0	9.9	0.013954	2.5
3.87	710.0	8.7	0.012315	2.5
4.45	710.0	8.6	0.012048	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.6	0.013538	2.5
Extreme (50C)	710.0	9.3	0.013131	2.5
Extreme (40C)	710.0	8.4	0.011869	2.5
Extreme (30C)	710.0	8.5	0.012040	2.5
Extreme (10C)	710.0	8.8	0.012363	2.5
Extreme (0C)	710.0	7.9	0.011145	2.5
Extreme (-10C)	710.0	9.1	0.012789	2.5
Extreme (-20C)	710.0	8.7	0.012296	2.5
Extreme (-30C)	710.0	8.0	0.011256	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	710.0	10.1	0.014274	2.5
3.87	710.0	9.0	0.012634	2.5
4.45	710.0	8.0	0.011262	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.1	0.012775	2.5
Extreme (50C)	710.0	9.0	0.012693	2.5
Extreme (40C)	710.0	8.5	0.011988	2.5
Extreme (30C)	710.0	9.3	0.013063	2.5
Extreme (10C)	710.0	7.7	0.010911	2.5
Extreme (0C)	710.0	8.8	0.012369	2.5
Extreme (-10C)	710.0	9.8	0.013766	2.5
Extreme (-20C)	710.0	9.0	0.012620	2.5
Extreme (-30C)	710.0	8.4	0.011860	2.5

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

10.7 LTE BAND 25

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 QPSK, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1882.5	9.6	0.005124	2.5
3.87	1882.5	9.0	0.004791	2.5
4.45	1882.5	7.8	0.004159	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	10.0	0.005304	2.5
Extreme (50C)	1882.5	8.6	0.004556	2.5
Extreme (40C)	1882.5	7.9	0.004198	2.5
Extreme (30C)	1882.5	9.3	0.004938	2.5
Extreme (10C)	1882.5	9.4	0.004983	2.5
Extreme (0C)	1882.5	7.9	0.004205	2.5
Extreme (-10C)	1882.5	9.5	0.005027	2.5
Extreme (-20C)	1882.5	8.7	0.004623	2.5
Extreme (-30C)	1882.5	7.9	0.004179	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)				
3.29	1882.5	10.4	0.005504	2.5
3.87	1882.5	8.8	0.004661	2.5
4.45	1882.5	8.7	0.004615	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	9.5	0.005039	2.5
Extreme (50C)	1882.5	9.1	0.004842	2.5
Extreme (40C)	1882.5	8.1	0.004304	2.5
Extreme (30C)	1882.5	8.4	0.004467	2.5
Extreme (10C)	1882.5	8.1	0.004302	2.5
Extreme (0C)	1882.5	8.6	0.004560	2.5
Extreme (-10C)	1882.5	9.7	0.005167	2.5
Extreme (-20C)	1882.5	8.9	0.004732	2.5
Extreme (-30C)	1882.5	8.6	0.004544	2.5

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

10.8 LTE BAND 26 A

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	819.0	10.0	0.012266	2.5
3.87	819.0	9.3	0.011328	2.5
4.45	819.0	8.1	0.009883	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819.0	9.5	0.011642	2.5
Extreme (50C)	819.0	9.0	0.011017	2.5
Extreme (40C)	819.0	7.8	0.009543	2.5
Extreme (30C)	819.0	9.1	0.011152	2.5
Extreme (10C)	819.0	8.9	0.010854	2.5
Extreme (0C)	819.0	8.3	0.010117	2.5
Extreme (-10C)	819.0	9.4	0.011420	2.5
Extreme (-20C)	819.0	8.5	0.010407	2.5
Extreme (-30C)	819.0	7.7	0.009386	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]
3.29	819.0	9.8	0.011928	2.5
3.87	819.0	8.8	0.010752	2.5
4.45	819.0	8.2	0.010063	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819.0	8.9	0.010905	2.5
Extreme (50C)	819.0	8.4	0.010259	2.5
Extreme (40C)	819.0	8.7	0.010662	2.5
Extreme (30C)	819.0	8.6	0.010480	2.5
Extreme (10C)	819.0	8.1	0.009830	2.5
Extreme (0C)	819.0	8.5	0.010351	2.5
Extreme (-10C)	819.0	8.9	0.010874	2.5
Extreme (-20C)	819.0	8.9	0.010851	2.5
Extreme (-30C)	819.0	8.7	0.010591	2.5

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

10.9 LTE BAND 26 B

Band 26B QPSK, (15MHz BANDWIDTH RB size 75 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	9.8	0.011735	2.5
3.87	836.5	9.0	0.010709	2.5
4.45	836.5	8.4	0.010101	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	9.6	0.011492	2.5
Extreme (50C)	836.5	9.4	0.011186	2.5
Extreme (40C)	836.5	7.7	0.009161	2.5
Extreme (30C)	836.5	9.3	0.011154	2.5
Extreme (10C)	836.5	8.5	0.010218	2.5
Extreme (0C)	836.5	8.2	0.009813	2.5
Extreme (-10C)	836.5	9.0	0.010734	2.5
Extreme (-20C)	836.5	9.4	0.011180	2.5
Extreme (-30C)	836.5	8.0	0.009531	2.5

Band 26B 16QAM, (15MHz BANDWIDTH RB size 75 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	9.6	0.011521	2.5
3.87	836.5	11.8	0.014145	2.5
4.45	836.5	10.7	0.012759	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	9.4	0.011270	2.5
Extreme (50C)	836.5	8.6	0.010224	2.5
Extreme (40C)	836.5	8.4	0.010066	2.5
Extreme (30C)	836.5	9.4	0.011205	2.5
Extreme (10C)	836.5	8.4	0.010074	2.5
Extreme (0C)	836.5	8.2	0.009782	2.5
Extreme (-10C)	836.5	9.8	0.011751	2.5
Extreme (-20C)	836.5	8.7	0.010447	2.5
Extreme (-30C)	836.5	8.5	0.010209	2.5

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

10.10 LTE BAND 66

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	6.5	0.003739	2.5
3.87	1745	7.1	0.004089	2.5
4.45	1745	8.0	0.004576	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	5.0	0.002886	2.5
Extreme (50C)	1745	7.4	0.004265	2.5
Extreme (40C)	1745	6.3	0.003621	2.5
Extreme (30C)	1745	7.3	0.004182	2.5
Extreme (10C)	1745	7.8	0.004478	2.5
Extreme (0C)	1745	6.7	0.003830	2.5
Extreme (-10C)	1745	5.9	0.003362	2.5
Extreme (-20C)	1745	7.0	0.003986	2.5
Extreme (-30C)	1745	5.0	0.002885	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)				
3.29	1745	9.0	0.005148	2.5
3.87	1745	7.3	0.004211	2.5
4.45	1745	9.5	0.005425	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	9.2	0.005256	2.5
Extreme (50C)	1745	8.3	0.004732	2.5
Extreme (40C)	1745	8.8	0.005030	2.5
Extreme (30C)	1745	8.5	0.004869	2.5
Extreme (10C)	1745	9.0	0.005140	2.5
Extreme (0C)	1745	6.3	0.003597	2.5
Extreme (-10C)	1745	8.8	0.005019	2.5
Extreme (-20C)	1745	8.1	0.004616	2.5
Extreme (-30C)	1745	5.6	0.003233	2.5

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

11. Peak-to-Average Ratio

11.1 Description of the PAR Measurement

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

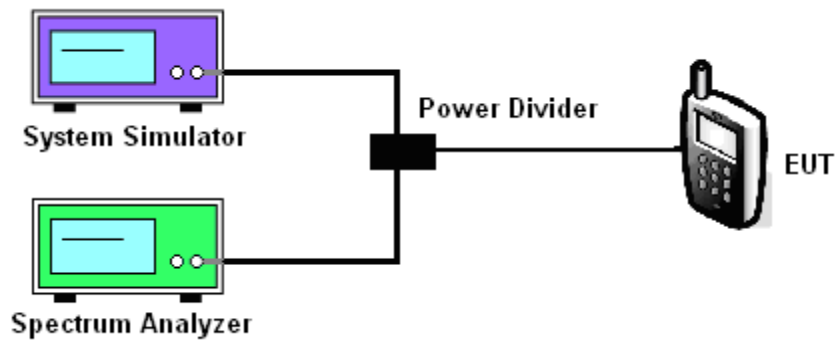
11.2 Measuring Instruments

See list of measuring instruments of this test report.

11.3 Test Procedures

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

11.4 Test Setup



MODES TESTED

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

Test data reference attachment.

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