

FCC CFR47 PART 22H, 24E, 27,90S CERTIFICATION TEST REPORT FCC ID: 2ANMU-24138B

Product: Smart Phone
Trade Mark: OUKITEL
Model No.: WP56
Family Model: WP56 Pro, WP56 S, WP56 Plus, WP56 Ultra,
WP56 TITAN, WP56 GT
Report No.: S25022204506006
Issue Date: Mar. 20, 2025

Prepared for

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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 .. : WP56

Trade Mark..... : OUKITEL

Family Model..... : WP56 Pro, WP56 S, WP56 Plus, WP56 Ultra, WP56 TITAN, WP56
GT

Test Sample Number..... : S241224022007

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

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

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

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Date of Test

Date (s) of performance of tests..... Feb. 25, 2025 ~ Mar. 20, 2025

Date of Issue Mar. 20, 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	WP56
Family Model	WP56 Pro, WP56 S, WP56 Plus, WP56 Ultra, WP56 TITAN, WP56 GT
Model Difference	All models are the same circuit and RF module, except for model names.
FCC ID:	2ANMU-24138B
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2, 4, 5, 7, 12, 17, 25, 26, 66 TDD Band 41
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE FDD Band 12 Uplink: 699MHz-716MHz, Downlink: 729MHz-746MHz; LTE FDD Band 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE FDD Band 25 Uplink: 1850MHz-1915MHz, Downlink: 1930MHz-1995MHz; LTE FDD Band 26A Uplink: 814MHz-824MHz, Downlink: 859MHz-869MHz; LTE FDD Band 26B Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE TDD Band 41 Uplink & Downlink: 2496MHz-2690MHz, LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Power Class	Class 3
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna:	LDS Antenna
Antenna gain:	Band 2: -0.3 dBi, Band 4: -0.65 dBi, Band 5: -2.85 dBi, Band 7: 1.04 dBi, Band 12: -3.11 dBi, Band 17: -3.11 dBi, Band25: -0.3 dBi, Band 26: -2.85 dBi, Band 41: -1.04 dBi, Band66: -0.65 dBi;
Adapter	Model: HJ-45WPD-US Input: 100-240V~50/60Hz 1.5A Output(PD): 5.0V~3.0A 15.0W or 9.0V~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, 16000mAh,61.92Wh
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	M1702-MUB-V1
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-24138B** filing to comply with the FCC Part 22H&24E&27&90S

1.3 TEST METHODOLOGY

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

1.4 TEST FACILITY

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

ShenZhen NTEK Testing Technology Co., Ltd.

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

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

FCC Registration No.:463705

IC Registration No.:9270A,

CNAS Registration No.:L5516

MEASUREMENT UNCERTAINTY

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

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

1.5 SPECIAL ACCESSORIES

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

1.6 WORST-CASE CONFIGURATION AND MODE

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

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

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

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

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

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

2.3 CONFIGURATION OF EUT SYSTEM

Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Smart Phone	WP56	FCC ID: 2ANMU-24138B	EUT

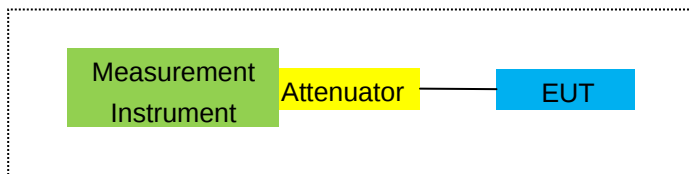
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

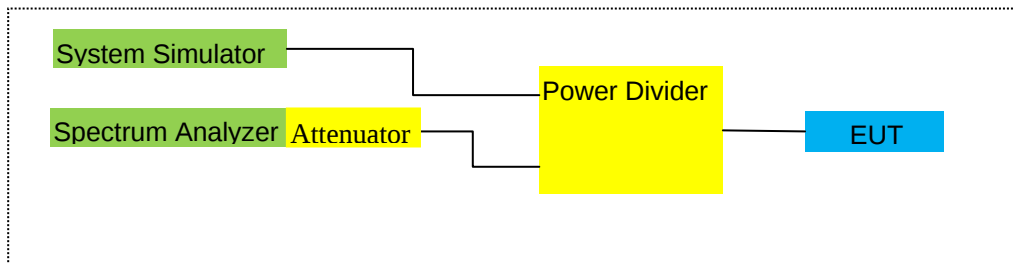
For Radiated Test Cases



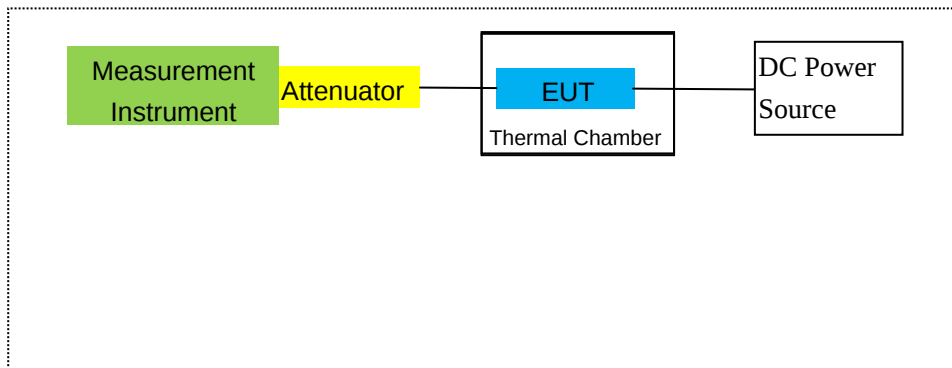
For Conducted Output Power



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	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2816	2024.5.18	2027.5.17	3 year
6	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2817	2024.5.18	2027.5.17	3 year
7	Amplifier	EM	EM-30180	060538	2024.04.26	2025.04.25	1 year
8	Active Loop Antenna	SCHWARZBECK	FMZB 1519 B	055	2024.05.17	2027.05.16	3 year
9	Power Meter	R&S	NRVS	100696	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	6200983705	2024.04.26	2027.04.25	3 year
18	Field strength probe	narda	EP601	711WX81278	2024.03.20	2025.03.19	1 year
19	Test Cable	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
20	Test Cable	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
21	Test Cable	N/A	C03	N/A	2023.05.06	2026.05.05	3 year
22	Spectrum Analyzer	Agilent	E4440A	MY41000130	2024.04.26	2025.04.25	1 year
23	EMI Test Receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	1 year
24	Universal Radio	R&S	CMU200	105747	2024.04.26	2025.04.25	1 year

	Communication Tester						
25	High and Low Temperature Box	WEISS	WT 20/40 EMC Simpac	58226119460030	2024.05.30	2027.05.29	3 year
26	DC Power Source	N/A	PS-6005D	20170402923	2024.04.25	2027.04.24	3 year
27	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	584	2024.5.25	2025.5.24	1 year
28	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	586	2024.5.25	2025.5.24	1 year
29	Communication Tester	R&S	CMW500	148500	2024.5.30	2025.5.29	1 year
30	MXG Vector Signal Generator	Agilent	N5183B	MY57280984	2024.5.30	2025.5.29	1 year

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

Measurement Software

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

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

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

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

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

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
64 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".

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

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

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

Test data reference attachment.

5. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

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

MODES TESTED

☐

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

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

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

FCC: §22.359

LIMITS

FCC: §22.917, §24.238, §27.53

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

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

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

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

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

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

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

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

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

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

LIMITS

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

TEST PROCEDURE

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

For each out of band emissions measurement:

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

MODES TESTED

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

7.1 MEASUREMENT METHOD

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

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

LIMITS:

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

24.232 (c) Mobile and portable stations are limited to 2 watts EIRP.

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

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

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

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

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

TEST PROCEDURE

ANSI/TIA-603-E Clause 2.2.17

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

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

MODES TESTED

☐ Band 2/4/5/7/12/17/25/26/41/66

RESULTS

Pass

8.2 LTE BAND 2

	Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency		Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP		
							Average			
							(mW)		Limit	
								(W)		
1.4MHz Band QPSK	1/#Mid	1850.7	-4.60	3.76	28.24	19.88	97.27	2	Horizontal	Pass
		1880	-3.66	3.91	28.22	20.65	116.14	2	Horizontal	Pass
		1909.3	-4.36	3.93	28.20	19.91	98.05	2	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-3.96	3.77	28.23	20.50	112.12	2	Horizontal	Pass
		1880	-4.88	3.91	28.24	19.45	88.12	2	Horizontal	Pass
		1908.5	-4.14	3.94	28.25	20.17	104.10	2	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-4.58	3.77	28.31	19.96	99.02	2	Horizontal	Pass
		1880	-3.99	3.91	28.22	20.32	107.60	2	Horizontal	Pass
		1907.5	-4.27	3.94	28.20	19.99	99.87	2	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-4.79	3.79	28.33	19.75	94.47	2	Horizontal	Pass
		1880	-3.50	3.95	28.22	20.77	119.28	2	Horizontal	Pass
		1905	-4.14	3.97	28.19	20.08	101.86	2	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-4.33	3.79	28.34	20.22	105.23	2	Horizontal	Pass
		1880	-4.15	3.95	28.22	20.12	102.69	2	Horizontal	Pass
		1902.5	-4.18	3.97	28.18	20.03	100.70	2	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-5.18	3.81	28.35	19.36	86.27	2	Horizontal	Pass
		1880	-4.55	3.96	28.22	19.71	93.62	2	Horizontal	Pass
		1900	-4.43	4.00	28.16	19.73	93.91	2	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-4.64	3.76	28.24	19.84	96.32	2	Vertical	Pass
		1880	-4.15	3.91	28.22	20.16	103.80	2	Vertical	Pass
		1909.3	-3.35	3.93	28.20	20.92	123.49	2	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-3.86	3.77	28.23	20.60	114.72	2	Vertical	Pass
		1880	-3.52	3.91	28.24	20.81	120.57	2	Vertical	Pass
		1908.5	-4.03	3.94	28.25	20.28	106.57	2	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-3.91	3.77	28.31	20.63	115.55	2	Vertical	Pass
		1880	-3.31	3.91	28.22	21.00	125.83	2	Vertical	Pass
		1907.5	-4.08	3.94	28.20	20.18	104.31	2	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-4.18	3.79	28.33	20.36	108.59	2	Vertical	Pass
		1880	-4.27	3.95	28.22	20.00	100.09	2	Vertical	Pass
		1905	-3.62	3.97	28.19	20.60	114.81	2	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-4.82	3.79	28.34	19.73	93.87	2	Vertical	Pass

Band QPSK		1880	-3.71	3.95	28.22	20.56	113.71	2	Vertical	Pass
		1902.5	-3.72	3.97	28.18	20.49	111.94	2	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1860	-4.60	3.81	28.35	19.94	98.64	2	Vertical	Pass
		1880	-3.23	3.96	28.22	21.03	126.78	2	Vertical	Pass
		1900	-3.24	4.00	28.16	20.92	123.62	2	Vertical	Pass

	Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency		Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization		
								Of Max. ERP	Limit	
									(W)	
1.4MHz Band 16 QAM	1/#Mid	1850.7	-5.05	3.76	28.24	19.43	87.79	2	Horizontal	Pass
		1880	-4.39	3.91	28.22	19.92	98.19	2	Horizontal	Pass
		1909.3	-4.61	3.93	28.20	19.66	92.37	2	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-5.03	3.77	28.23	19.43	87.78	2	Horizontal	Pass
		1880	-5.52	3.91	28.24	18.81	75.99	2	Horizontal	Pass
		1908.5	-5.59	3.94	28.25	18.72	74.46	2	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-5.33	3.77	28.31	19.21	83.41	2	Horizontal	Pass
		1880	-5.49	3.91	28.22	18.82	76.18	2	Horizontal	Pass
		1907.5	-5.04	3.94	28.20	19.22	83.51	2	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-6.02	3.79	28.33	18.52	71.18	2	Horizontal	Pass
		1880	-5.32	3.95	28.22	18.95	78.58	2	Horizontal	Pass
		1905	-4.33	3.97	28.19	19.89	97.50	2	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-5.61	3.79	28.34	18.94	78.27	2	Horizontal	Pass
		1880	-5.17	3.95	28.22	19.10	81.33	2	Horizontal	Pass
		1902.5	-4.61	3.97	28.18	19.60	91.24	2	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-6.61	3.81	28.35	17.93	62.13	2	Horizontal	Pass
		1880	-4.85	3.96	28.22	19.41	87.32	2	Horizontal	Pass
		1900	-5.76	4.00	28.16	18.40	69.26	2	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-5.96	3.76	28.24	18.52	71.17	2	Vertical	Pass
		1880	-4.85	3.91	28.22	19.46	88.24	2	Vertical	Pass
		1909.3	-4.36	3.93	28.20	19.91	97.96	2	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-5.09	3.77	28.23	19.37	86.41	2	Vertical	Pass
		1880	-4.52	3.91	28.24	19.81	95.73	2	Vertical	Pass
		1908.5	-4.80	3.94	28.25	19.51	89.33	2	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-5.14	3.77	28.31	19.40	87.06	2	Vertical	Pass
		1880	-5.16	3.91	28.22	19.15	82.21	2	Vertical	Pass
		1907.5	-5.23	3.94	28.20	19.03	79.89	2	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-5.53	3.79	28.33	19.01	79.62	2	Vertical	Pass
		1880	-5.80	3.95	28.22	18.47	70.29	2	Vertical	Pass
		1905	-4.68	3.97	28.19	19.54	89.87	2	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-6.01	3.79	28.34	18.54	71.48	2	Vertical	Pass
		1880	-4.60	3.95	28.22	19.67	92.70	2	Vertical	Pass
		1902.5	-4.28	3.97	28.18	19.93	98.40	2	Vertical	Pass

20.0MHz	1/#Mid	1860	-6.22	3.81	28.35	18.32	67.86	2	Vertical	Pass
Band 16		1880	-4.28	3.96	28.22	19.98	99.52	2	Vertical	Pass
QAM		1900	-4.79	4.00	28.16	19.37	86.58	2	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 Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization		
								Limit	Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-5.42	3.12	27.58	19.04	80.18	1	Horizontal	Pass
		1732.5	-4.75	3.27	27.61	19.59	91.06	1	Horizontal	Pass
		1754.3	-5.51	3.29	27.63	18.83	76.45	1	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.60	3.13	27.61	18.88	77.34	1	Horizontal	Pass
		1732.5	-5.29	3.27	27.61	19.05	80.32	1	Horizontal	Pass
		1753.5	-5.20	3.30	27.62	19.12	81.67	1	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-5.33	3.13	27.63	19.17	82.65	1	Horizontal	Pass
		1732.5	-5.06	3.27	27.61	19.28	84.75	1	Horizontal	Pass
		1752.5	-5.32	3.30	27.60	18.98	78.98	1	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-5.54	3.15	27.64	18.95	78.49	1	Horizontal	Pass
		1732.5	-5.21	3.31	27.61	19.09	81.06	1	Horizontal	Pass
		1750	-5.37	3.33	27.59	18.89	77.52	1	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-5.90	3.15	27.65	18.60	72.38	1	Horizontal	Pass
		1732.5	-5.18	3.31	27.61	19.12	81.69	1	Horizontal	Pass
		1747.5	-5.22	3.33	27.57	19.02	79.74	1	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-6.76	3.17	27.66	17.73	59.32	1	Horizontal	Pass
		1732.5	-5.04	3.32	27.61	19.25	84.18	1	Horizontal	Pass
		1745	-5.65	3.36	27.56	18.55	71.62	1	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-5.10	3.12	27.58	19.36	86.37	1	Vertical	Pass
		1732.5	-5.21	3.27	27.61	19.13	81.87	1	Vertical	Pass
		1754.3	-5.26	3.29	27.63	19.08	80.82	1	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.50	3.13	27.61	18.98	79.06	1	Vertical	Pass
		1732.5	-5.19	3.27	27.61	19.15	82.16	1	Vertical	Pass
		1753.5	-4.93	3.30	27.62	19.39	86.90	1	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-5.37	3.13	27.63	19.13	81.93	1	Vertical	Pass
		1732.5	-4.61	3.27	27.61	19.73	93.97	1	Vertical	Pass
		1752.5	-4.88	3.30	27.60	19.42	87.56	1	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-5.13	3.15	27.64	19.36	86.21	1	Vertical	Pass
		1732.5	-5.34	3.31	27.61	18.96	78.63	1	Vertical	Pass
		1750	-4.83	3.33	27.59	19.43	87.61	1	Vertical	Pass

15.0MHz	1/#Mid	1717.5	-5.92	3.15	27.65	18.58	72.10	1	Vertical	Pass
Band		1732.5	-5.26	3.31	27.61	19.04	80.22	1	Vertical	Pass
QPSK		1747.5	-5.46	3.33	27.57	18.78	75.43	1	Vertical	Pass
20.0MHz	1/#Mid	1720	-5.54	3.17	27.66	18.95	78.58	1	Vertical	Pass
Band		1732.5	-4.55	3.32	27.61	19.74	94.20	1	Vertical	Pass
QPSK		1745	-5.14	3.36	27.56	19.06	80.55	1	Vertical	Pass

	Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency		Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization		
								Limit	Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.40	3.12	27.58	19.06	80.61	1	Horizontal	Pass
		1732.5	-5.14	3.27	27.61	19.20	83.08	1	Horizontal	Pass
		1754.3	-6.16	3.29	27.63	18.18	65.81	1	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-6.57	3.13	27.61	17.91	61.85	1	Horizontal	Pass
		1732.5	-5.70	3.27	27.61	18.64	73.12	1	Horizontal	Pass
		1753.5	-5.27	3.30	27.62	19.05	80.27	1	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-6.06	3.13	27.63	18.44	69.87	1	Horizontal	Pass
		1732.5	-5.86	3.27	27.61	18.48	70.43	1	Horizontal	Pass
		1752.5	-5.99	3.30	27.60	18.31	67.75	1	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.64	3.15	27.64	18.85	76.75	1	Horizontal	Pass
		1732.5	-5.81	3.31	27.61	18.49	70.57	1	Horizontal	Pass
		1750	-5.25	3.33	27.59	19.01	79.56	1	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-5.80	3.15	27.65	18.70	74.16	1	Horizontal	Pass
		1732.5	-5.55	3.31	27.61	18.75	75.01	1	Horizontal	Pass
		1747.5	-5.99	3.33	27.57	18.25	66.89	1	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-7.94	3.17	27.66	16.55	45.21	1	Horizontal	Pass
		1732.5	-5.41	3.32	27.61	18.88	77.33	1	Horizontal	Pass
		1745	-6.30	3.36	27.56	17.90	61.62	1	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-6.03	3.12	27.58	18.43	69.65	1	Vertical	Pass
		1732.5	-5.76	3.27	27.61	18.58	72.08	1	Vertical	Pass
		1754.3	-5.65	3.29	27.63	18.69	74.04	1	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-4.86	3.13	27.61	19.62	91.66	1	Vertical	Pass
		1732.5	-4.37	3.27	27.61	19.97	99.34	1	Vertical	Pass
		1753.5	-5.19	3.30	27.62	19.13	81.77	1	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-5.80	3.13	27.63	18.70	74.14	1	Vertical	Pass
		1732.5	-6.11	3.27	27.61	18.23	66.48	1	Vertical	Pass
		1752.5	-5.32	3.30	27.60	18.98	79.09	1	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.48	3.15	27.64	19.01	79.59	1	Vertical	Pass
		1732.5	-6.15	3.31	27.61	18.15	65.25	1	Vertical	Pass
		1750	-5.87	3.33	27.59	18.39	68.99	1	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-6.58	3.15	27.65	17.92	61.93	1	Vertical	Pass
		1732.5	-5.39	3.31	27.61	18.91	77.84	1	Vertical	Pass
		1747.5	-4.31	3.33	27.57	19.93	98.42	1	Vertical	Pass

20.0MHz	1/#Mid	1720	-5.67	3.17	27.66	18.82	76.21	1	Vertical	Pass
Band 16		1732.5	-4.94	3.32	27.61	19.35	86.12	1	Vertical	Pass
QAM		1745	-4.17	3.36	27.56	20.03	100.69	1	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 Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit		
1.4MHz Band QPSK	3/#Mid	824.7	4.39	2.01	19.68	2.15	19.91	97.95	7	Horizontal	Pass
		836.5	3.51	2.01	19.77	2.15	19.12	81.75	7	Horizontal	Pass
		848.3	4.48	2.02	19.82	2.15	20.13	103.04	7	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	3.89	2.01	19.70	2.15	19.43	87.64	7	Horizontal	Pass
		836.5	3.44	2.01	19.77	2.15	19.05	80.44	7	Horizontal	Pass
		847.5	4.49	2.02	19.81	2.15	20.13	102.93	7	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	4.60	2.01	19.71	2.15	20.15	103.55	7	Horizontal	Pass
		836.5	2.76	2.01	19.77	2.15	18.37	68.77	7	Horizontal	Pass
		846.5	4.76	2.02	19.79	2.15	20.38	109.15	7	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	4.42	2.01	19.73	2.15	19.99	99.80	7	Horizontal	Pass
		836.5	3.52	2.01	19.77	2.15	19.13	81.89	7	Horizontal	Pass
		844	3.47	2.02	19.78	2.15	19.08	80.98	7	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	4.49	2.01	19.68	2.15	20.01	100.22	7	Vertical	Pass
		836.5	4.76	2.01	19.77	2.15	20.37	108.87	7	Vertical	Pass
		848.3	4.61	2.02	19.82	2.15	20.26	106.08	7	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.54	2.01	19.70	2.15	20.08	101.83	7	Vertical	Pass
		836.5	5.27	2.01	19.77	2.15	20.88	122.45	7	Vertical	Pass
		847.5	4.36	2.02	19.81	2.15	20.00	99.97	7	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	4.12	2.01	19.71	2.15	19.67	92.66	7	Vertical	Pass
		836.5	5.51	2.01	19.77	2.15	21.12	129.32	7	Vertical	Pass
		846.5	4.75	2.02	19.79	2.15	20.37	108.79	7	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	3.93	2.01	19.73	2.15	19.50	89.08	7	Vertical	Pass
		836.5	5.14	2.01	19.77	2.15	20.75	118.76	7	Vertical	Pass
		844	5.72	2.02	19.78	2.15	21.33	135.77	7	Vertical	Pass

		Radiated Power (ERP) for Band 5									
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit		
1.4MHz Band 16 QAM	3/#Mid	824.7	4.82	2.01	19.68	2.15	20.34	108.14	7	Horizontal	Pass
		836.5	5.29	2.01	19.77	2.15	20.90	122.98	7	Horizontal	Pass
		848.3	4.02	2.02	19.82	2.15	19.67	92.73	7	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.92	2.01	19.70	2.15	20.46	111.13	7	Horizontal	Pass
		836.5	4.66	2.01	19.77	2.15	20.27	106.33	7	Horizontal	Pass
		847.5	5.06	2.02	19.81	2.15	20.70	117.43	7	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	4.18	2.01	19.71	2.15	19.73	93.93	7	Horizontal	Pass
		836.5	4.17	2.01	19.77	2.15	19.78	95.09	7	Horizontal	Pass
		846.5	4.03	2.02	19.79	2.15	19.65	92.16	7	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	3.62	2.01	19.73	2.15	19.19	83.03	7	Horizontal	Pass
		836.5	4.65	2.01	19.77	2.15	20.26	106.12	7	Horizontal	Pass
		844	5.00	2.02	19.78	2.15	20.61	114.98	7	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	4.80	2.01	19.68	2.15	20.32	107.65	7	Vertical	Pass
		836.5	5.08	2.01	19.77	2.15	20.69	117.22	7	Vertical	Pass
		848.3	4.90	2.02	19.82	2.15	20.55	113.46	7	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.45	2.01	19.70	2.15	19.99	99.75	7	Vertical	Pass
		836.5	4.46	2.01	19.77	2.15	20.07	101.55	7	Vertical	Pass
		847.5	3.92	2.02	19.81	2.15	19.56	90.42	7	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	5.31	2.01	19.71	2.15	20.86	121.83	7	Vertical	Pass
		836.5	3.14	2.01	19.77	2.15	18.75	74.93	7	Vertical	Pass
		846.5	4.75	2.02	19.79	2.15	20.37	108.79	7	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	5.48	2.01	19.73	2.15	21.05	127.35	7	Vertical	Pass
		836.5	4.50	2.01	19.77	2.15	20.11	102.65	7	Vertical	Pass
		844	4.81	2.02	19.78	2.15	20.42	110.09	7	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 Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization		
								Of Max.		
								Limit	ERP	
			(W)							
5.0MHz Band QPSK	1/#Mid	2502.5	-3.64	4.54	27.75	19.57	90.573	2	Horizontal	Pass
		2535	-4.10	4.69	27.72	18.93	78.163	2	Horizontal	Pass
		2567.5	-4.10	4.71	27.71	18.90	77.625	2	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	-3.58	4.55	27.76	19.63	91.833	2	Horizontal	Pass
		2535	-4.12	4.69	27.72	18.91	77.804	2	Horizontal	Pass
		2565	-3.18	4.72	27.70	19.80	95.499	2	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-3.82	4.55	27.77	19.40	87.096	2	Horizontal	Pass
		2535	-4.14	4.69	27.72	18.89	77.446	2	Horizontal	Pass
		2562.5	-4.08	4.72	27.69	18.89	77.446	2	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	-3.59	4.57	27.78	19.62	91.622	2	Horizontal	Pass
		2535	-4.08	4.73	27.72	18.91	77.804	2	Horizontal	Pass
		2560	-3.35	4.75	27.68	19.58	90.782	2	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-3.39	4.54	27.75	19.82	95.940	2	Vertical	Pass
		2535	-3.72	4.69	27.72	19.31	85.310	2	Vertical	Pass
		2567.5	-3.45	4.71	27.71	19.55	90.157	2	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-3.90	4.55	27.76	19.31	85.310	2	Vertical	Pass
		2535	-3.99	4.69	27.72	19.04	80.168	2	Vertical	Pass
		2565	-3.98	4.72	27.70	19.00	79.433	2	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-3.96	4.55	27.77	19.26	84.333	2	Vertical	Pass
		2535	-3.32	4.69	27.72	19.71	93.541	2	Vertical	Pass
		2562.5	-3.35	4.72	27.69	19.62	91.622	2	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	-4.08	4.57	27.78	19.13	81.846	2	Vertical	Pass
		2535	-3.07	4.73	27.72	19.92	98.175	2	Vertical	Pass
		2560	-3.64	4.75	27.68	19.29	84.918	2	Vertical	Pass

	Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
									Limit	
									(W)	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-4.15	4.54	27.75	19.06	80.538	2	Horizontal	Pass
		2535	-4.00	4.69	27.72	19.03	79.983	2	Horizontal	Pass
		2567.5	-4.55	4.71	27.71	18.45	69.984	2	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-5.13	4.55	27.76	18.08	64.269	2	Horizontal	Pass
		2535	-5.21	4.69	27.72	17.82	60.534	2	Horizontal	Pass
		2565	-4.54	4.72	27.70	18.44	69.823	2	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-5.40	4.55	27.77	17.82	60.534	2	Horizontal	Pass
		2535	-3.32	4.69	27.72	19.71	93.541	2	Horizontal	Pass
		2562.5	-4.72	4.72	27.69	18.25	66.834	2	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-3.44	4.57	27.78	19.77	94.842	2	Horizontal	Pass
		2535	-3.79	4.73	27.72	19.20	83.176	2	Horizontal	Pass
		2560	-4.03	4.75	27.68	18.90	77.625	2	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-4.76	4.54	27.75	18.45	69.984	2	Vertical	Pass
		2535	-3.70	4.69	27.72	19.33	85.704	2	Vertical	Pass
		2567.5	-3.94	4.71	27.71	19.06	80.538	2	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-3.40	4.55	27.76	19.81	95.719	2	Vertical	Pass
		2535	-3.19	4.69	27.72	19.84	96.383	2	Vertical	Pass
		2565	-4.73	4.72	27.70	18.25	66.834	2	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-4.27	4.55	27.77	18.95	78.524	2	Vertical	Pass
		2535	-4.37	4.69	27.72	18.66	73.451	2	Vertical	Pass
		2562.5	-3.65	4.72	27.69	19.32	85.507	2	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-4.93	4.57	27.78	18.28	67.298	2	Vertical	Pass
		2535	-3.14	4.73	27.72	19.85	96.605	2	Vertical	Pass
		2560	-3.83	4.75	27.68	19.10	81.283	2	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 Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit		
1.4MHz Band QPSK	1/#Mid	699.7	6.24	1.91	19.21	2.15	21.39	137.64	3	Horizontal	Pass
		707.5	6.09	1.91	19.26	2.15	21.29	134.67	3	Horizontal	Pass
		715.3	5.87	1.93	19.34	2.15	21.13	129.77	3	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	5.92	1.91	19.21	2.15	21.07	127.86	3	Horizontal	Pass
		707.5	5.35	1.91	19.26	2.15	20.55	113.61	3	Horizontal	Pass
		714.5	4.68	1.93	19.34	2.15	19.94	98.66	3	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	5.29	1.91	19.23	2.15	20.46	111.19	3	Horizontal	Pass
		707.5	5.68	1.91	19.26	2.15	20.88	122.58	3	Horizontal	Pass
		713.5	5.15	1.92	19.33	2.15	20.41	109.85	3	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	704	5.29	1.91	19.25	2.15	20.48	111.77	3	Horizontal	Pass
		707.5	5.81	1.91	19.26	2.15	21.01	126.07	3	Horizontal	Pass
		711	5.48	1.92	19.32	2.15	20.73	118.18	3	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	699.7	6.44	1.91	19.21	2.15	21.59	144.36	3	Vertical	Pass
		707.5	6.01	1.91	19.26	2.15	21.21	132.19	3	Vertical	Pass
		715.3	5.50	1.93	19.34	2.15	20.76	119.16	3	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	5.58	1.91	19.21	2.15	20.73	118.41	3	Vertical	Pass
		707.5	5.83	1.91	19.26	2.15	21.03	126.88	3	Vertical	Pass
		714.5	5.21	1.93	19.34	2.15	20.47	111.54	3	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	5.33	1.91	19.23	2.15	20.50	112.30	3	Vertical	Pass
		707.5	4.84	1.91	19.26	2.15	20.04	100.84	3	Vertical	Pass
		713.5	5.52	1.92	19.33	2.15	20.78	119.80	3	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	704	6.06	1.91	19.25	2.15	21.25	133.34	3	Vertical	Pass
		707.5	6.50	1.91	19.26	2.15	21.70	147.96	3	Vertical	Pass
		711	6.26	1.92	19.32	2.15	21.51	141.72	3	Vertical	Pass

Radiated Power (ERP) for Band 12											
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. ERP	Max. ERP		Polarization	
			(dBm)	(dBm)	(dB)	(dB)	Average	Average	Limit	Of Max. ERP	
							(dBm)	(mW)	(W)		
1.4MHz Band 16 QAM	1/#Mid	699.7	6.11	1.91	19.21	2.15	21.26	133.68	3	Horizontal	Pass
		707.5	5.75	1.91	19.26	2.15	20.95	124.38	3	Horizontal	Pass
		715.3	5.24	1.93	19.34	2.15	20.50	112.16	3	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	5.27	1.91	19.21	2.15	20.42	110.13	3	Horizontal	Pass
		707.5	5.41	1.91	19.26	2.15	20.61	114.99	3	Horizontal	Pass
		714.5	5.84	1.93	19.34	2.15	21.10	128.72	3	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	5.56	1.91	19.23	2.15	20.73	118.38	3	Horizontal	Pass
		707.5	5.15	1.91	19.26	2.15	20.35	108.33	3	Horizontal	Pass
		713.5	5.55	1.92	19.33	2.15	20.81	120.41	3	Horizontal	Pass
10.0MHz z Band 16 QAM	1/#Mid	704	5.61	1.91	19.25	2.15	20.80	120.10	3	Horizontal	Pass
		707.5	5.73	1.91	19.26	2.15	20.93	123.83	3	Horizontal	Pass
		711	6.17	1.92	19.32	2.15	21.42	138.58	3	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	699.7	6.08	1.91	19.21	2.15	21.23	132.71	3	Vertical	Pass
		707.5	5.45	1.91	19.26	2.15	20.65	116.19	3	Vertical	Pass
		715.3	5.39	1.93	19.34	2.15	20.65	116.16	3	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	6.10	1.91	19.21	2.15	21.25	133.41	3	Vertical	Pass
		707.5	5.75	1.91	19.26	2.15	20.95	124.46	3	Vertical	Pass
		714.5	5.92	1.93	19.34	2.15	21.18	131.15	3	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	5.47	1.91	19.23	2.15	20.64	115.75	3	Vertical	Pass
		707.5	5.85	1.91	19.26	2.15	21.05	127.43	3	Vertical	Pass
		713.5	5.81	1.92	19.33	2.15	21.07	127.81	3	Vertical	Pass
10.0MHz z Band 16 QAM	1/#Mid	704	6.26	1.91	19.25	2.15	21.45	139.64	3	Vertical	Pass
		707.5	5.36	1.91	19.26	2.15	20.56	113.66	3	Vertical	Pass
		711	5.48	1.92	19.32	2.15	20.73	118.26	3	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/R B SIZE	Freque ncy	Result								Conclusio n
			SG Level (dBm)	Cable Loss (dBm)	Antenn a Factor (dB)	Correctio n (dB)	Max. ERP Averag e (dBm)	Max. ERP Averag e (mW)		Polarizatio n Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	4.44	1.91	19.23	2.15	19.61	91.32	3	Vertical	Pass
		710	4.33	1.91	19.26	2.15	19.53	89.79	3	Vertical	Pass
		713.5	4.35	1.92	19.33	2.15	19.61	91.35	3	Vertical	Pass
10.0MH z Band QPSK	1/#Mid	709	4.57	1.91	19.25	2.15	19.76	94.61	3	Vertical	Pass
		710	4.61	1.91	19.26	2.15	19.81	95.64	3	Vertical	Pass
		711	4.33	1.92	19.32	2.15	19.58	90.83	3	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	4.55	1.91	19.23	2.15	19.72	93.74	3	Horizontal	Pass
		710	4.39	1.91	19.26	2.15	19.59	90.94	3	Horizontal	Pass
		713.5	4.40	1.92	19.33	2.15	19.66	92.37	3	Horizontal	Pass
10.0MH z Band QPSK	1/#Mid	709	4.53	1.91	19.25	2.15	19.72	93.74	3	Horizontal	Pass
		710	4.64	1.91	19.26	2.15	19.84	96.32	3	Horizontal	Pass
		711	4.28	1.92	19.32	2.15	19.53	89.68	3	Horizontal	Pass

		Radiated Power (ERP) for Band 17									
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit		
5.0MHz Band 16 QAM	1/#Mid	706.5	4.34	1.91	19.23	2.15	19.51	89.28	3	Vertical	Pass
		710	4.31	1.91	19.26	2.15	19.51	89.38	3	Vertical	Pass
		713.5	4.25	1.92	19.33	2.15	19.51	89.24	3	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	4.23	1.91	19.25	2.15	19.42	87.57	3	Vertical	Pass
		710	4.13	1.91	19.26	2.15	19.33	85.68	3	Vertical	Pass
		711	4.16	1.92	19.32	2.15	19.41	87.29	3	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	4.24	1.91	19.23	2.15	19.41	87.24	3	Horizontal	Pass
		710	4.31	1.91	19.26	2.15	19.51	89.37	3	Horizontal	Pass
		713.5	4.26	1.92	19.33	2.15	19.52	89.50	3	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	4.21	1.91	19.25	2.15	19.40	87.13	3	Horizontal	Pass
		710	4.42	1.91	19.26	2.15	19.62	91.68	3	Horizontal	Pass
		711	4.09	1.92	19.32	2.15	19.34	85.94	3	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)

8.8 LTE BAND 25

	Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP		Polarization Of Max. ERP	
						Average	Average	Limit		
						(dBm)	(mW)	(W)		
1.4MHz Band QPSK	1/#Mid	1850.7	-5.79	3.12	28.24	19.33	85.73	2	Horizontal	Pass
		1882.5	-6.17	3.27	28.22	18.78	75.48	2	Horizontal	Pass
		1914.3	-5.82	3.29	28.2	19.09	81.01	2	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-5.87	3.13	28.23	19.23	83.77	2	Horizontal	Pass
		1882.5	-5.94	3.27	28.24	19.03	80.00	2	Horizontal	Pass
		1913.5	-6.43	3.30	28.25	18.52	71.04	2	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-6.61	3.13	28.31	18.57	71.90	2	Horizontal	Pass
		1882.5	-6.05	3.27	28.22	18.90	77.59	2	Horizontal	Pass
		1912.5	-6.29	3.30	28.2	18.61	72.68	2	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-6.52	3.15	28.33	18.66	73.43	2	Horizontal	Pass
		1882.5	-5.84	3.31	28.22	19.07	80.66	2	Horizontal	Pass
		1910	-6.05	3.33	28.19	18.81	75.95	2	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-5.90	3.15	28.34	19.29	84.93	2	Horizontal	Pass
		1882.5	-6.30	3.31	28.22	18.61	72.64	2	Horizontal	Pass
		1907.5	-5.90	3.33	28.18	18.95	78.52	2	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-7.35	3.17	28.35	17.83	60.68	2	Horizontal	Pass
		1882.5	-6.01	3.32	28.22	18.89	77.45	2	Horizontal	Pass
		1905	-6.48	3.36	28.16	18.32	67.94	2	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-5.83	3.12	28.24	19.29	84.98	2	Vertical	Pass
		1882.5	-6.17	3.27	28.22	18.78	75.58	2	Vertical	Pass
		1914.3	-5.86	3.29	28.2	19.05	80.40	2	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-5.83	3.13	28.23	19.27	84.48	2	Vertical	Pass
		1882.5	-5.95	3.27	28.24	19.02	79.76	2	Vertical	Pass
		1913.5	-5.62	3.30	28.25	19.33	85.75	2	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-5.98	3.13	28.31	19.20	83.10	2	Vertical	Pass
		1882.5	-5.71	3.27	28.22	19.24	83.87	2	Vertical	Pass
		1912.5	-6.50	3.30	28.2	18.40	69.19	2	Vertical	Pass
10.0MHz Band	1/#Mid	1855	-5.80	3.15	28.33	19.38	86.70	2	Vertical	Pass
		1882.5	-5.61	3.31	28.22	19.30	85.04	2	Vertical	Pass

QPSK		1910	-6.40	3.33	28.19	18.46	70.09	2	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-6.51	3.15	28.34	18.68	73.81	2	Vertical	Pass
Band		1882.5	-5.83	3.31	28.22	19.08	80.90	2	Vertical	Pass
QPSK		1907.5	-6.25	3.33	28.18	18.60	72.38	2	Vertical	Pass
20.0MHz	1/#Mid	1860	-7.39	3.17	28.35	17.79	60.13	2	Vertical	Pass
Band		1882.5	-5.88	3.32	28.22	19.02	79.78	2	Vertical	Pass
QPSK		1905	-5.41	3.36	28.16	19.39	86.90	2	Vertical	Pass

Radiated Power (EIRP) for Band 25										
Mode	RB/RB SIZE	Frequency	Result						Polarization Of Max. ERP	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP			
						Average	Average	Limit		
						(dBm)	(mW)	(W)		
1.4MHz Band 16 QAM	1/#Mid	1850.7	-6.37	3.12	28.24	18.75	74.94	2	Horizontal	Pass
		1882.5	-6.17	3.27	28.22	18.78	75.54	2	Horizontal	Pass
		1914.3	-6.22	3.29	28.2	18.69	73.90	2	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-6.42	3.13	28.23	18.68	73.71	2	Horizontal	Pass
		1882.5	-6.47	3.27	28.24	18.50	70.72	2	Horizontal	Pass
		1913.5	-6.31	3.30	28.25	18.64	73.12	2	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-6.29	3.13	28.31	18.89	77.52	2	Horizontal	Pass
		1882.5	-6.21	3.27	28.22	18.74	74.78	2	Horizontal	Pass
		1912.5	-6.08	3.30	28.2	18.82	76.25	2	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-6.31	3.15	28.33	18.87	77.02	2	Horizontal	Pass
		1882.5	-6.38	3.31	28.22	18.53	71.32	2	Horizontal	Pass
		1910	-6.46	3.33	28.19	18.40	69.23	2	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-6.22	3.15	28.34	18.97	78.86	2	Horizontal	Pass
		1882.5	-6.45	3.31	28.22	18.46	70.13	2	Horizontal	Pass
		1907.5	-6.22	3.33	28.18	18.63	72.88	2	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-6.48	3.17	28.35	18.70	74.21	2	Horizontal	Pass
		1882.5	-6.34	3.32	28.22	18.56	71.84	2	Horizontal	Pass
		1905	-6.63	3.36	28.16	18.17	65.67	2	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-6.07	3.12	28.24	19.05	80.44	2	Vertical	Pass
		1882.5	-6.69	3.27	28.22	18.26	66.92	2	Vertical	Pass
		1914.3	-6.17	3.29	28.2	18.74	74.88	2	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-6.48	3.13	28.23	18.62	72.77	2	Vertical	Pass
		1882.5	-6.56	3.27	28.24	18.41	69.32	2	Vertical	Pass
		1913.5	-6.02	3.30	28.25	18.93	78.24	2	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-6.02	3.13	28.31	19.16	82.48	2	Vertical	Pass
		1882.5	-6.52	3.27	28.22	18.43	69.63	2	Vertical	Pass
		1912.5	-6.07	3.30	28.2	18.83	76.46	2	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-6.71	3.15	28.33	18.47	70.25	2	Vertical	Pass
		1882.5	-6.09	3.31	28.22	18.82	76.28	2	Vertical	Pass
		1910	-6.14	3.33	28.19	18.72	74.52	2	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-6.66	3.15	28.34	18.53	71.31	2	Vertical	Pass
		1882.5	-6.09	3.31	28.22	18.82	76.16	2	Vertical	Pass
		1907.5	-5.95	3.33	28.18	18.90	77.64	2	Vertical	Pass

20.0MHz		1860	-5.84	3.17	28.35	19.34	85.80	2	Vertical	Pass
Band 16	1/#Mid	1882.5	-5.53	3.32	28.22	19.37	86.52	2	Vertical	Pass
QAM		1905	-6.07	3.36	28.16	18.73	74.62	2	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)

8.9 LTE BAND 26 A

		Radiated Power (ERP) for Band 26(814-824)									
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit		
1.4MHz BW QPSK	6/0	814.7	-2.12	3.76	28.24	2.15	20.21	104.98	100	Horizontal	Pass
		819	-1.73	3.91	28.22	2.15	20.43	110.46	100	Horizontal	Pass
		823.3	-1.88	3.93	28.20	2.15	20.24	105.63	100	Horizontal	Pass
3.0MHz BW QPSK	15/0	815.5	-1.94	3.77	28.23	2.15	20.37	108.82	100	Horizontal	Pass
		819	-1.83	3.91	28.24	2.15	20.35	108.34	100	Horizontal	Pass
		822.5	-1.78	3.94	28.25	2.15	20.38	109.04	100	Horizontal	Pass
5.0MHz BW QPSK	25/0	816.5	-2.64	3.77	28.31	2.15	19.75	94.34	100	Horizontal	Pass
		819	-2.20	3.91	28.22	2.15	19.96	99.17	100	Horizontal	Pass
		821.5	-1.78	3.94	28.20	2.15	20.33	107.90	100	Horizontal	Pass
10.0MHz z BW QPSK	50/0	819	-1.76	3.91	28.22	2.15	20.40	109.65	100	Horizontal	Pass
1.4MHz BW QPSK	6/0	814.7	-2.02	3.79	28.34	2.15	20.38	109.14	100	Vertical	Pass
		819	-1.96	3.95	28.22	2.15	20.16	103.64	100	Vertical	Pass
		823.3	-1.91	3.97	28.18	2.15	20.15	103.52	100	Vertical	Pass
3.0MHz BW QPSK	15/0	815.5	-2.34	3.77	28.23	2.15	19.97	99.25	100	Vertical	Pass
		819	-1.78	3.91	28.24	2.15	20.40	109.63	100	Vertical	Pass
		822.5	-1.73	3.94	28.25	2.15	20.43	110.41	100	Vertical	Pass
5.0MHz BW QPSK	25/0	816.5	-1.98	3.77	28.31	2.15	20.41	109.81	100	Vertical	Pass
		819	-1.72	3.91	28.22	2.15	20.44	110.55	100	Vertical	Pass
		821.5	-1.78	3.94	28.20	2.15	20.33	107.89	100	Vertical	Pass
10.0MHz z BW QPSK	50/0	819	-1.63	3.91	28.22	2.15	20.53	112.98	100	Vertical	Pass

		Radiated Power (ERP) for Band 26(814-824)									
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit		
1.4MHz BW 16 QAM	6/0	814.7	-1.94	3.76	28.24	2.15	20.39	109.38	100	Horizontal	Pass
		819	-1.67	3.91	28.22	2.15	20.49	111.94	100	Horizontal	Pass
		823.3	-1.58	3.93	28.20	2.15	20.54	113.22	100	Horizontal	Pass
3.0MHz BW 16 QAM	15/0	815.5	-1.91	3.77	28.23	2.15	20.40	109.65	100	Horizontal	Pass
		819	-1.70	3.91	28.24	2.15	20.48	111.69	100	Horizontal	Pass
		822.5	-1.95	3.94	28.25	2.15	20.21	105.03	100	Horizontal	Pass
5.0MHz BW 16 QAM	25/0	816.5	-2.00	3.77	28.31	2.15	20.39	109.37	100	Horizontal	Pass
		819	-2.24	3.91	28.22	2.15	19.92	98.07	100	Horizontal	Pass
		821.5	-1.85	3.94	28.20	2.15	20.26	106.07	100	Horizontal	Pass
10.0MHz z BW 16 QAM	50/0	819	-1.74	3.91	28.24	2.15	20.44	110.68	100	Horizontal	Pass
1.4MHz BW 16 QAM	6/0	814.7	-1.92	3.79	28.34	2.15	20.48	111.69	100	Vertical	Pass
		819	-1.74	3.95	28.22	2.15	20.38	109.14	100	Vertical	Pass
		823.3	-1.78	3.97	28.18	2.15	20.28	106.61	100	Vertical	Pass
3.0MHz BW 16 QAM	15/0	815.5	-1.82	3.77	28.23	2.15	20.49	111.94	100	Vertical	Pass
		819	-1.69	3.91	28.24	2.15	20.49	111.94	100	Vertical	Pass
		822.5	-2.14	3.94	28.25	2.15	20.02	100.36	100	Vertical	Pass
5.0MHz BW 16 QAM	25/0	816.5	-2.40	3.77	28.31	2.15	19.99	99.83	100	Vertical	Pass
		819	-2.34	3.91	28.22	2.15	19.82	95.90	100	Vertical	Pass
		821.5	-1.59	3.94	28.20	2.15	20.52	112.72	100	Vertical	Pass
10.0MHz z BW 16 QAM	50/0	819	-1.62	3.91	28.24	2.15	20.56	113.76	100	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 26 B

	Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit (W)		
1.4MHz Band QPSK	6/0	824.7	5.40	2.01	19.68	2.15	20.92	123.51	7	Horizontal	Pass
		836.5	4.06	2.01	19.77	2.15	19.67	92.58	7	Horizontal	Pass
		848.3	5.48	2.02	19.82	2.15	21.13	129.80	7	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	4.32	2.01	19.70	2.15	19.86	96.92	7	Horizontal	Pass
		836.5	4.69	2.01	19.77	2.15	20.30	107.10	7	Horizontal	Pass
		847.5	4.66	2.02	19.81	2.15	20.30	107.20	7	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	4.54	2.01	19.71	2.15	20.09	102.05	7	Horizontal	Pass
		836.5	4.03	2.01	19.77	2.15	19.64	92.02	7	Horizontal	Pass
		846.5	4.95	2.02	19.79	2.15	20.57	113.94	7	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	4.32	2.01	19.73	2.15	19.89	97.41	7	Horizontal	Pass
		836.5	4.18	2.01	19.77	2.15	19.79	95.37	7	Horizontal	Pass
		844	4.09	2.02	19.78	2.15	19.70	93.25	7	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	4.97	2.01	19.73	2.15	20.54	113.12	7	Horizontal	Pass
		836.5	4.26	2.01	19.77	2.15	19.87	97.13	7	Horizontal	Pass
		841.5	4.80	2.02	19.78	2.15	20.41	109.99	7	Horizontal	Pass
1.4MHz Band QPSK	6/0	824.7	5.90	2.01	19.68	2.15	21.42	138.77	7	Vertical	Pass
		836.5	5.23	2.01	19.77	2.15	20.84	121.21	7	Vertical	Pass
		848.3	5.08	2.02	19.82	2.15	20.73	118.37	7	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	4.76	2.01	19.70	2.15	20.30	107.03	7	Vertical	Pass
		836.5	5.27	2.01	19.77	2.15	20.88	122.56	7	Vertical	Pass
		847.5	5.25	2.02	19.81	2.15	20.89	122.63	7	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	4.95	2.01	19.71	2.15	20.50	112.13	7	Vertical	Pass
		836.5	5.98	2.01	19.77	2.15	21.59	144.24	7	Vertical	Pass
		846.5	4.80	2.02	19.79	2.15	20.42	110.06	7	Vertical	Pass
10.0MHz Band QPSK	50/0	829	5.03	2.01	19.73	2.15	20.60	114.71	7	Vertical	Pass
		836.5	5.78	2.01	19.77	2.15	21.39	137.83	7	Vertical	Pass
		844	5.88	2.02	19.78	2.15	21.49	140.80	7	Vertical	Pass
15.0MHz Band QPSK	75/0	831.5	4.56	2.01	19.73	2.15	20.13	103.02	7	Vertical	Pass
		836.5	5.93	2.01	19.77	2.15	21.54	142.48	7	Vertical	Pass
		841.5	6.27	2.02	19.78	2.15	21.88	154.11	7	Vertical	Pass

		Radiated Power (ERP) for Band 26(824-849)									
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)		Polarization Of Max. ERP	
									Limit		
1.4MHz Band 16 QAM	6/0	824.7	5.44	2.01	19.68	2.15	20.96	124.72	7	Horizontal	Pass
		836.5	4.36	2.01	19.77	2.15	19.97	99.28	7	Horizontal	Pass
		848.3	3.69	2.02	19.82	2.15	19.34	85.96	7	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	3.92	2.01	19.70	2.15	19.46	88.37	7	Horizontal	Pass
		836.5	4.27	2.01	19.77	2.15	19.88	97.30	7	Horizontal	Pass
		847.5	4.30	2.02	19.81	2.15	19.94	98.72	7	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	3.78	2.01	19.71	2.15	19.33	85.67	7	Horizontal	Pass
		836.5	4.17	2.01	19.77	2.15	19.78	95.08	7	Horizontal	Pass
		846.5	3.79	2.02	19.79	2.15	19.41	87.26	7	Horizontal	Pass
10.0MHz z Band 16 QAM	50/0	829	4.24	2.01	19.73	2.15	19.81	95.77	7	Horizontal	Pass
		836.5	4.57	2.01	19.77	2.15	20.18	104.34	7	Horizontal	Pass
		844	4.71	2.02	19.78	2.15	20.32	107.73	7	Horizontal	Pass
15.0MHz z Band QPSK	75/0	831.5	4.11	2.01	19.73	2.15	19.68	92.85	7	Horizontal	Pass
		836.5	4.26	2.01	19.77	2.15	19.87	97.13	7	Horizontal	Pass
		841.5	4.37	2.02	19.78	2.15	19.98	99.63	7	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	4.65	2.01	19.68	2.15	20.17	103.92	7	Vertical	Pass
		836.5	5.06	2.01	19.77	2.15	20.67	116.73	7	Vertical	Pass
		848.3	4.89	2.02	19.82	2.15	20.54	113.33	7	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	3.69	2.01	19.70	2.15	19.23	83.70	7	Vertical	Pass
		836.5	4.17	2.01	19.77	2.15	19.78	94.98	7	Vertical	Pass
		847.5	4.57	2.02	19.81	2.15	20.21	104.93	7	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	4.53	2.01	19.71	2.15	20.08	101.78	7	Vertical	Pass
		836.5	3.75	2.01	19.77	2.15	19.36	86.37	7	Vertical	Pass
		846.5	5.16	2.02	19.79	2.15	20.78	119.63	7	Vertical	Pass
10.0MHz z Band 16 QAM	50/0	829	5.54	2.01	19.73	2.15	21.11	129.03	7	Vertical	Pass
		836.5	4.68	2.01	19.77	2.15	20.29	106.92	7	Vertical	Pass
		844	4.32	2.02	19.78	2.15	19.93	98.32	7	Vertical	Pass

15.0MHz	75/0	831.5	4.96	2.01	19.73	2.15	20.53	112.87	7	Vertical	Pass
Band		836.5	4.86	2.01	19.77	2.15	20.47	111.35	7	Vertical	Pass
QPSK		841.5	5.93	2.02	19.78	2.15	21.54	142.48	7	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.11 LTE BAND 41

		Radiated Power (EIRP) for Band 41								
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP		Polarization Of Max. ERP	
						Average	Average	Limit		
						(dBm)	(mW)	(W)		
5.0MHz Band QPSK	1/#Mid	2498.5	-3.86	4.54	27.75	19.35	86.01	2	Horizontal	Pass
		2593	-4.24	4.69	27.72	18.79	75.68	2	Horizontal	Pass
		2687.5	-3.61	4.71	27.71	19.39	86.81	2	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2685	-4.12	4.55	27.76	19.09	81.04	2	Horizontal	Pass
		2593	-3.51	4.69	27.72	19.52	89.46	2	Horizontal	Pass
		2501	-3.75	4.72	27.7	19.23	83.84	2	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2503.5	-3.38	4.55	27.77	19.84	96.30	2	Horizontal	Pass
		2593	-3.79	4.69	27.72	19.24	84.02	2	Horizontal	Pass
		2682.5	-4.00	4.72	27.69	18.97	78.87	2	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2506	-4.08	4.57	27.78	19.13	81.93	2	Horizontal	Pass
		2593	-3.62	4.73	27.72	19.37	86.56	2	Horizontal	Pass
		2680	-3.48	4.75	27.68	19.45	88.07	2	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2498.5	-3.50	4.54	27.75	19.71	93.48	2	Vertical	Pass
		2593	-3.74	4.69	27.72	19.29	84.92	2	Vertical	Pass
		2687.5	-3.88	4.71	27.71	19.12	81.73	2	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2685	-3.83	4.55	27.76	19.38	86.61	2	Vertical	Pass
		2593	-3.79	4.69	27.72	19.24	83.94	2	Vertical	Pass
		2501	-3.28	4.72	27.7	19.70	93.42	2	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2503.5	-3.42	4.55	27.77	19.80	95.48	2	Vertical	Pass
		2593	-3.71	4.69	27.72	19.32	85.58	2	Vertical	Pass
		2682.5	-3.64	4.72	27.69	19.33	85.70	2	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2506	-3.81	4.57	27.78	19.40	87.04	2	Vertical	Pass
		2593	-3.46	4.73	27.72	19.53	89.66	2	Vertical	Pass
		2680	-3.08	4.75	27.68	19.85	96.61	2	Vertical	Pass

		Radiated Power (EIRP) for Band 41								
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP		Polarization Of Max. ERP	
						Average	Average	Limit		
						(dBm)	(mW)	(W)		
5.0MHz Band 16 QAM	1/##Mid	2498.5	-3.90	4.54	27.75	19.31	85.22	2	Horizontal	Pass
		2593	-4.28	4.69	27.72	18.75	74.99	2	Horizontal	Pass
		2687.5	-3.65	4.71	27.71	19.35	86.02	2	Horizontal	Pass
10.0MHz Band 16 QAM	1/##Mid	2685	-4.16	4.55	27.76	19.05	80.29	2	Horizontal	Pass
		2593	-3.55	4.69	27.72	19.48	88.65	2	Horizontal	Pass
		2501	-3.79	4.72	27.7	19.19	83.07	2	Horizontal	Pass
15.0MHz Band 16 QAM	1/##Mid	2503.5	-3.42	4.55	27.77	19.80	95.41	2	Horizontal	Pass
		2593	-3.83	4.69	27.72	19.20	83.24	2	Horizontal	Pass
		2682.5	-4.04	4.72	27.69	18.93	78.14	2	Horizontal	Pass
20.0MHz Band 16 QAM	1/##Mid	2506	-4.12	4.57	27.78	19.09	81.17	2	Horizontal	Pass
		2593	-3.66	4.73	27.72	19.33	85.77	2	Horizontal	Pass
		2680	-3.52	4.75	27.68	19.41	87.25	2	Horizontal	Pass
5.0MHz Band 16 QAM	1/##Mid	2498.5	-3.54	4.54	27.75	19.67	92.62	2	Vertical	Pass
		2593	-3.78	4.69	27.72	19.25	84.15	2	Vertical	Pass
		2687.5	-3.92	4.71	27.71	19.08	80.98	2	Vertical	Pass
10.0MHz Band 16 QAM	1/##Mid	2685	-3.87	4.55	27.76	19.34	85.81	2	Vertical	Pass
		2593	-3.83	4.69	27.72	19.20	83.17	2	Vertical	Pass
		2501	-3.32	4.72	27.7	19.66	92.55	2	Vertical	Pass
15.0MHz Band 16 QAM	1/##Mid	2503.5	-3.46	4.55	27.77	19.76	94.59	2	Vertical	Pass
		2593	-3.75	4.69	27.72	19.28	84.80	2	Vertical	Pass
		2682.5	-3.68	4.72	27.69	19.29	84.92	2	Vertical	Pass
20.0MHz Band 16 QAM	1/##Mid	2506	-3.85	4.57	27.78	19.36	86.23	2	Vertical	Pass
		2593	-3.50	4.73	27.72	19.49	88.84	2	Vertical	Pass
		2680	-3.12	4.75	27.68	19.81	95.72	2	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)

8.12 LTE BAND 66

		Radiated Power (EIRP) for Band 66								
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP		Polarization Of Max. ERP	
							Average	Limit		
							(mW)	(W)		
1.4MHz Band QPSK	1/#Mid	1710.7	-2.34	3.76	28.24	19.34	85.91	1	Horizontal	Pass
		1745	-2.03	3.91	28.22	19.48	88.73	1	Horizontal	Pass
		1779.3	-2.39	3.93	28.2	19.08	80.92	1	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.86	3.77	28.23	18.80	75.86	1	Horizontal	Pass
		1745	-2.67	3.91	28.24	18.86	76.93	1	Horizontal	Pass
		1778.5	-2.4	3.94	28.25	19.11	81.49	1	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.44	3.77	28.31	19.30	85.13	1	Horizontal	Pass
		1745	-2.82	3.91	28.22	18.69	73.97	1	Horizontal	Pass
		1777.5	-2.26	3.94	28.2	19.20	83.19	1	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.4	3.79	28.33	19.34	85.90	1	Horizontal	Pass
		1745	-1.9	3.95	28.22	19.57	90.59	1	Horizontal	Pass
		1775	-2.08	3.97	28.19	19.34	85.92	1	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-2.72	3.79	28.34	19.03	79.99	1	Horizontal	Pass
		1745	-1.96	3.95	28.22	19.51	89.34	1	Horizontal	Pass
		1772.5	-2.62	3.97	28.18	18.79	75.69	1	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.9	3.81	28.35	18.84	76.57	1	Horizontal	Pass
		1745	-2.59	3.96	28.22	18.87	77.10	1	Horizontal	Pass
		1770	-2.6	4	28.16	18.76	75.17	1	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-2.74	3.76	28.24	18.94	78.34	1	Vertical	Pass
		1745	-2.97	3.91	28.22	18.54	71.45	1	Vertical	Pass
		1779.3	-2.91	3.93	28.2	18.56	71.78	1	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.31	3.77	28.23	19.35	86.11	1	Vertical	Pass
		1745	-2.48	3.91	28.24	19.05	80.36	1	Vertical	Pass
		1778.5	-2.03	3.94	28.25	19.48	88.72	1	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.35	3.77	28.31	19.39	86.91	1	Vertical	Pass
		1745	-2.42	3.91	28.22	19.09	81.11	1	Vertical	Pass
		1777.5	-2.7	3.94	28.2	18.76	75.17	1	Vertical	Pass

10.0MHz Band QPSK	1/#Mid	1715	-2.25	3.79	28.34	19.50	89.15	1	Vertical	Pass
		1745	-2.49	3.95	28.22	18.98	79.08	1	Vertical	Pass
		1775	-1.72	3.97	28.18	19.69	93.11	1	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-3.03	3.81	28.35	18.71	74.31	1	Vertical	Pass
		1745	-2.54	3.96	28.22	18.92	77.99	1	Vertical	Pass
		1772.5	-1.58	4	28.16	19.78	95.08	1	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.25	3.79	28.34	19.52	89.54	1	Vertical	Pass
		1745	-2.49	3.95	28.22	18.98	79.08	1	Vertical	Pass
		1770	-1.72	3.97	28.18	19.79	95.28	1	Vertical	Pass

		Radiated Power (EIRP) for Band 66								
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP		
									Average	
							(mW)		(W)	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.6	3.76	28.24	18.08	64.28	1	Horizontal	Pass
		1745	-2.73	3.91	28.22	18.78	75.53	1	Horizontal	Pass
		1779.3	-2.97	3.93	28.2	18.50	70.80	1	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-3.32	3.77	28.23	18.34	68.25	1	Horizontal	Pass
		1745	-3.41	3.91	28.24	18.12	64.87	1	Horizontal	Pass
		1778.5	-2.91	3.94	28.25	18.60	72.45	1	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.16	3.77	28.31	18.58	72.12	1	Horizontal	Pass
		1745	-2.6	3.91	28.22	18.91	77.82	1	Horizontal	Pass
		1777.5	-2.76	3.94	28.2	18.70	74.13	1	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.28	3.79	28.33	18.46	70.16	1	Horizontal	Pass
		1745	-3.14	3.95	28.22	18.33	68.08	1	Horizontal	Pass
		1775	-3.08	3.97	28.19	18.34	68.24	1	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.72	3.79	28.34	18.03	63.54	1	Horizontal	Pass
		1745	-3.08	3.95	28.22	18.39	69.03	1	Horizontal	Pass
		1772.5	-3.3	3.97	28.18	18.11	64.72	1	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-2.71	3.81	28.35	19.03	79.99	1	Horizontal	Pass
		1745	-2.94	3.96	28.22	18.52	71.13	1	Horizontal	Pass
		1770	-3.08	4	28.16	18.28	67.30	1	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.18	3.76	28.24	18.50	70.80	1	Vertical	Pass
		1745	-2.98	3.91	28.22	18.53	71.30	1	Vertical	Pass
		1779.3	-2.53	3.93	28.2	18.94	78.34	1	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-2.94	3.77	28.23	18.72	74.49	1	Vertical	Pass
		1745	-2.87	3.91	28.24	18.66	73.46	1	Vertical	Pass
		1778.5	-3.16	3.94	28.25	18.35	68.40	1	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.34	3.77	28.31	18.40	69.20	1	Vertical	Pass
		1745	-2.88	3.91	28.22	18.63	72.96	1	Vertical	Pass
		1777.5	-2.49	3.94	28.2	18.97	78.90	1	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.82	3.79	28.33	17.92	61.95	1	Vertical	Pass
		1745	-2.57	3.95	28.22	18.90	77.64	1	Vertical	Pass
		1775	-3.6	3.97	28.19	17.82	60.54	1	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-3.52	3.79	28.34	18.23	66.54	1	Vertical	Pass

Band 16 QAM		1745	-3.48	3.95	28.22	17.99	62.96	1	Vertical	Pass
		1772.5	-3.4	3.97	28.18	18.01	63.26	1	Vertical	Pass
20.0MHz	1/#Mid	1720	-2.95	3.81	28.35	18.79	75.70	1	Vertical	Pass
Band 16		1745	-2.42	3.96	28.22	19.04	80.19	1	Vertical	Pass
QAM		1770	-2.51	4	28.16	18.85	76.75	1	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

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

LIMIT

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

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

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

TEST PROCEDURE

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

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

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

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

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

MODES TESTED

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

RESULTS

PASS

9.1 LTE BAND 2

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

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-50.59	4.04	33.51	-21.12	-13	-8.12	Horizontal
3701.4	-46.05	4.04	33.51	-16.58	-13	-3.58	Vertical
5552.1	-46.49	5.24	35.84	-15.89	-13	-2.89	Vertical
5552.1	-52.77	5.24	35.84	-22.17	-13	-9.17	Horizontal
200.0	-44.68	1.43	16.02	-30.09	-13	-17.09	Vertical
254.6	-41.51	1.30	17.99	-24.82	-13	-11.82	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-50.47	4.04	33.56	-20.95	-13	-7.95	Horizontal
3760.0	-44.05	4.04	33.56	-14.53	-13	-1.53	Vertical
5640.0	-49.34	5.24	35.91	-18.67	-13	-5.67	Vertical
5640.0	-51.76	5.24	35.91	-21.09	-13	-8.09	Horizontal
193.6	-34.43	1.62	16.97	-19.08	-13	-6.08	Vertical
305.8	-36.33	1.74	15.98	-22.10	-13	-9.10	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-46.06	4.04	34.00	-16.10	-13	-3.10	Horizontal
3818.6	-53.86	4.04	34.00	-23.90	-13	-10.90	Vertical
5727.9	-45.99	5.24	36.04	-15.19	-13	-2.19	Vertical
5727.9	-52.09	5.24	36.04	-21.29	-13	-8.29	Horizontal
179.1	-41.27	1.42	17.29	-25.40	-13	-12.40	Vertical
452.2	-42.03	1.50	17.90	-25.62	-13	-12.62	Horizontal

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

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-50.11	4.07	33.54	-20.64	-13	-7.64	Horizontal
3720.0	-53.86	4.07	33.54	-24.39	-13	-11.39	Vertical
5580.0	-48.78	5.28	35.86	-18.20	-13	-5.20	Vertical
5580.0	-53.80	5.28	35.86	-23.22	-13	-10.22	Horizontal
201.0	-43.39	1.58	16.89	-28.07	-13	-15.07	Vertical
382.7	-39.80	1.76	17.26	-24.30	-13	-11.30	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-51.56	4.04	33.56	-22.04	-13	-9.04	Horizontal
3760.0	-51.82	4.04	33.56	-22.30	-13	-9.30	Vertical
5640.0	-53.72	5.24	35.91	-23.05	-13	-10.05	Vertical
5640.0	-50.50	5.24	35.91	-19.83	-13	-6.83	Horizontal
204.8	-40.75	1.46	16.27	-25.94	-13	-12.94	Vertical
392.6	-34.31	1.59	15.15	-20.75	-13	-7.75	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-45.97	4.04	34.00	-16.01	-13	-3.01	Horizontal
3800.0	-46.61	4.04	34.00	-16.65	-13	-3.65	Vertical
5700.0	-50.27	5.24	36.04	-19.47	-13	-6.47	Vertical
5700.0	-52.51	5.24	36.04	-21.71	-13	-8.71	Horizontal
177.6	-39.81	1.36	17.39	-23.77	-13	-10.77	Vertical
343.2	-35.79	1.66	15.39	-22.06	-13	-9.06	Horizontal

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

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

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

9.2 LTE BAND 4

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-49.08	4.02	29.80	-23.30	-13	-10.30	Horizontal
3421.4	-50.47	4.02	29.80	-24.69	-13	-11.69	Vertical
5132.1	-53.21	5.24	35.84	-22.61	-13	-9.61	Vertical
5132.1	-50.45	5.24	35.84	-19.85	-13	-6.85	Horizontal
176.6	-40.89	1.68	16.04	-26.53	-13	-13.53	Vertical
399.0	-34.21	1.78	17.74	-18.25	-13	-5.25	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-53.82	4.03	30.00	-27.85	-13	-14.85	Horizontal
3465.0	-44.19	4.03	30.00	-18.22	-13	-5.22	Vertical
5197.5	-52.18	5.25	35.86	-21.57	-13	-8.57	Vertical
5197.5	-50.15	5.25	35.86	-19.54	-13	-6.54	Horizontal
182.1	-42.47	1.72	17.69	-26.50	-13	-13.50	Vertical
280.2	-43.70	1.62	16.02	-29.29	-13	-16.29	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-50.15	4.05	30.01	-24.19	-13	-11.19	Horizontal
3508.6	-45.22	4.05	30.01	-19.26	-13	-6.26	Vertical
5262.9	-45.71	5.26	35.86	-15.11	-13	-2.11	Vertical
5262.9	-50.35	5.26	35.86	-19.75	-13	-6.75	Horizontal
205.3	-36.23	1.80	16.69	-21.34	-13	-8.34	Vertical
331.1	-34.86	1.75	16.66	-19.96	-13	-6.96	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-44.51	4.02	29.80	-18.73	-13	-5.73	Horizontal
3440.0	-53.76	4.02	29.80	-27.98	-13	-14.98	Vertical
5160.0	-53.62	5.24	35.84	-23.02	-13	-10.02	Vertical
5160.0	-49.93	5.24	35.84	-19.33	-13	-6.33	Horizontal
209.5	-36.24	1.57	17.26	-20.55	-13	-7.55	Vertical
250.7	-43.48	1.78	16.35	-28.91	-13	-15.91	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-49.48	4.03	30.00	-23.51	-13	-10.51	Horizontal
3465.0	-44.93	4.03	30.00	-18.96	-13	-5.96	Vertical
5197.5	-48.58	5.25	35.86	-17.97	-13	-4.97	Vertical
5197.5	-53.43	5.25	35.86	-22.82	-13	-9.82	Horizontal
197.8	-41.61	1.44	17.95	-25.10	-13	-12.10	Vertical
291.5	-37.00	1.65	16.09	-22.56	-13	-9.56	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-52.44	2.91	27.68	-27.67	-13	-14.67	Horizontal
3490.0	-44.67	2.91	27.68	-19.90	-13	-6.90	Vertical
5235.0	-52.70	5.26	35.86	-22.10	-13	-9.10	Vertical
5235.0	-51.56	5.26	35.86	-20.96	-13	-7.96	Horizontal
176.1	-40.56	1.61	16.85	-25.32	-13	-12.32	Vertical
243.0	-36.07	1.61	15.19	-22.49	-13	-9.49	Horizontal

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

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

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

9.3 LTE BAND 5

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-49.29	2.78	27.50	-24.57	-13	-11.57	Horizontal
1649.4	-51.73	2.78	27.50	-27.01	-13	-14.01	Vertical
2474.1	-51.88	2.90	27.80	-26.98	-13	-13.98	Vertical
2474.1	-51.53	2.90	27.80	-26.63	-13	-13.63	Horizontal
191.1	-36.33	1.76	17.59	-20.50	-13	-7.50	Vertical
320.8	-37.73	1.63	15.87	-23.49	-13	-10.49	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-47.80	2.80	27.48	-23.12	-13	-10.12	Horizontal
1673.0	-44.25	2.80	27.48	-19.57	-13	-6.57	Vertical
2509.5	-49.66	2.91	27.70	-24.87	-13	-11.87	Vertical
2509.5	-49.10	2.91	27.70	-24.31	-13	-11.31	Horizontal
187.9	-37.23	1.61	15.68	-23.16	-13	-10.16	Vertical
268.0	-35.34	1.59	17.52	-19.42	-13	-6.42	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-45.19	2.82	27.43	-20.58	-13	-7.58	Horizontal
1696.6	-50.39	2.82	27.43	-25.78	-13	-12.78	Vertical
2544.9	-44.41	2.92	27.74	-19.59	-13	-6.59	Vertical
2544.9	-49.50	2.92	27.74	-24.68	-13	-11.68	Horizontal
186.0	-37.90	1.69	16.67	-22.91	-13	-9.91	Vertical
425.5	-44.70	1.70	17.18	-29.22	-13	-16.22	Horizontal

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

Test Results for Low Channel 829MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1658.0	-52.85	2.78	27.50	-28.13	-13	-15.13	Horizontal
1658.0	-46.44	2.78	27.50	-21.72	-13	-8.72	Vertical
2487.0	-52.20	2.90	27.80	-27.30	-13	-14.30	Vertical
2487.0	-53.22	2.90	27.80	-28.32	-13	-15.32	Horizontal
190.1	-36.39	1.71	15.57	-22.53	-13	-9.53	Vertical
429.6	-37.69	1.34	16.40	-22.63	-13	-9.63	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-49.38	2.80	27.48	-24.70	-13	-11.70	Horizontal
1673.0	-52.47	2.80	27.48	-27.79	-13	-14.79	Vertical
2509.5	-45.46	2.91	27.70	-20.67	-13	-7.67	Vertical
2509.5	-52.25	2.91	27.70	-27.46	-13	-14.46	Horizontal
175.4	-43.37	1.44	17.04	-27.77	-13	-14.77	Vertical
450.3	-42.67	1.76	17.62	-26.81	-13	-13.81	Horizontal
Test Results for High Channel 844MHz							
1688.0	-53.70	2.82	27.43	-29.09	-13	-16.09	Horizontal
1688.0	-53.50	2.82	27.43	-28.89	-13	-15.89	Vertical
2532.0	-47.89	2.92	27.74	-23.07	-13	-10.07	Vertical
2532.0	-49.78	2.92	27.74	-24.96	-13	-11.96	Horizontal
195.1	-44.26	1.74	17.70	-28.30	-13	-15.30	Vertical
307.0	-44.80	1.41	17.46	-28.74	-13	-15.74	Horizontal

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

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

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

9.4 LTE BAND 7

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

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5005.0	-64.19	5.23	35.81	-33.61	-25	-8.61	Horizontal
5005.0	-61.39	5.23	35.81	-30.81	-25	-5.81	Vertical
7507.5	-62.27	5.67	36.85	-31.09	-25	-6.09	Vertical
7507.5	-62.43	5.67	36.85	-31.25	-25	-6.25	Horizontal
210.1	-52.26	1.73	17.97	-36.02	-25	-11.02	Vertical
390.8	-53.35	1.38	15.11	-39.62	-25	-14.62	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-62.83	5.23	35.82	-32.24	-25	-7.24	Horizontal
5070.0	-63.21	5.23	35.82	-32.62	-25	-7.62	Vertical
7605.0	-61.50	5.67	36.85	-30.32	-25	-5.32	Vertical
7605.0	-61.65	5.67	36.85	-30.47	-25	-5.47	Horizontal
200.2	-53.85	1.77	16.17	-39.44	-25	-14.44	Vertical
376.5	-54.31	1.63	15.21	-40.73	-25	-15.73	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-60.17	5.24	35.83	-29.58	-25	-4.58	Horizontal
5135.0	-59.81	5.24	35.83	-29.22	-25	-4.22	Vertical
7702.5	-59.33	5.68	36.87	-28.14	-25	-3.14	Vertical
7702.5	-64.61	5.68	36.87	-33.42	-25	-8.42	Horizontal
209.2	-45.29	1.58	17.56	-29.31	-25	-4.31	Vertical
241.6	-50.79	1.45	16.58	-35.66	-25	-10.66	Horizontal

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

Test Results for Low Channel 2510MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5020.0	-61.30	5.23	35.82	-30.71	-25	-5.71	Horizontal
5020.0	-61.57	5.23	35.82	-30.98	-25	-5.98	Vertical
7530.0	-59.51	5.67	36.86	-28.32	-25	-3.32	Vertical
7530.0	-61.68	5.67	36.86	-30.49	-25	-5.49	Horizontal
207.9	-47.11	1.63	15.76	-32.98	-25	-7.98	Vertical
401.9	-53.52	1.71	15.44	-39.79	-25	-14.79	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-64.12	5.23	35.82	-33.53	-25	-8.53	Horizontal
5070.0	-63.00	5.23	35.82	-32.41	-25	-7.41	Vertical
7605.0	-61.07	5.67	36.85	-29.89	-25	-4.89	Vertical
7605.0	-64.64	5.67	36.85	-33.46	-25	-8.46	Horizontal
180.2	-52.47	1.79	16.84	-37.41	-25	-12.41	Vertical
305.1	-50.55	1.71	17.64	-34.62	-25	-9.62	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-61.90	5.24	35.83	-31.31	-25	-6.31	Horizontal
5120.0	-63.56	5.24	35.83	-32.97	-25	-7.97	Vertical
7680.0	-60.49	5.70	36.88	-29.31	-25	-4.31	Vertical
7680.0	-60.37	5.70	36.88	-29.19	-25	-4.19	Horizontal
182.7	-49.65	1.79	16.84	-34.59	-25	-9.59	Vertical
271.1	-46.03	1.71	17.64	-30.10	-25	-5.10	Horizontal

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

. Margin = Spurious Emission Level - Limit

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

9.5 LTE BAND 12

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

Test Results for Low Channel 699.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1399.4	-48.05	2.60	27.20	-23.45	-13	-10.45	Horizontal
1399.4	-49.50	2.60	27.20	-24.90	-13	-11.90	Vertical
2099.1	-46.04	2.85	27.54	-21.35	-13	-8.35	Vertical
2099.1	-50.06	2.85	27.54	-25.37	-13	-12.37	Horizontal
189.2	-41.66	1.49	17.78	-25.37	-13	-12.37	Vertical
278.7	-37.81	1.36	17.33	-21.84	-13	-8.84	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-53.43	2.61	27.28	-28.76	-13	-15.76	Horizontal
1415.0	-48.92	2.61	27.28	-24.25	-13	-11.25	Vertical
2122.5	-45.02	2.87	27.59	-20.30	-13	-7.30	Vertical
2122.5	-50.67	2.87	27.59	-25.95	-13	-12.95	Horizontal
206.4	-40.16	1.73	15.74	-26.15	-13	-13.15	Vertical
360.9	-44.41	1.62	15.79	-30.24	-13	-17.24	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-49.31	2.63	27.28	-24.66	-13	-11.66	Horizontal
1430.6	-47.74	2.63	27.28	-23.09	-13	-10.09	Vertical
2145.9	-52.69	2.88	27.60	-27.97	-13	-14.97	Vertical
2145.9	-50.24	2.88	27.60	-25.52	-13	-12.52	Horizontal
192.3	-41.21	1.61	18.00	-24.82	-13	-11.82	Vertical
272.1	-34.42	1.45	15.49	-20.39	-13	-7.39	Horizontal

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

Test Results for Low Channel 704MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1408.0	-48.80	2.61	27.26	-24.15	-13	-11.15	Horizontal
1408.0	-46.85	2.61	27.26	-22.20	-13	-9.20	Vertical
2112.0	-52.84	2.87	27.58	-28.13	-13	-15.13	Vertical
2112.0	-51.74	2.87	27.58	-27.03	-13	-14.03	Horizontal
185.3	-34.10	1.31	16.97	-18.44	-13	-5.44	Vertical
394.5	-39.95	1.65	16.70	-24.90	-13	-11.90	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-52.24	2.61	27.28	-27.57	-13	-14.57	Horizontal
1415.0	-52.23	2.61	27.28	-27.56	-13	-14.56	Vertical
2122.5	-49.82	2.87	27.59	-25.10	-13	-12.10	Vertical
2122.5	-51.67	2.87	27.59	-26.95	-13	-13.95	Horizontal
193.2	-44.35	1.72	17.99	-28.08	-13	-15.08	Vertical
308.5	-40.65	1.73	17.94	-24.44	-13	-11.44	Horizontal
Test Results for High Channel 711MHz							
1422.0	-49.95	2.62	27.28	-25.29	-13	-12.29	Horizontal
1422.0	-53.14	2.62	27.28	-28.48	-13	-15.48	Vertical
2133.0	-48.09	2.87	27.60	-23.36	-13	-10.36	Vertical
2133.0	-53.97	2.87	27.60	-29.24	-13	-16.24	Horizontal
195.4	-43.13	1.58	15.93	-28.78	-13	-15.78	Vertical
259.1	-39.25	1.36	15.59	-25.02	-13	-12.02	Horizontal

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

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

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

9.6 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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413.0	-48.62	2.61	27.28	-23.95	-13	-10.95	Horizontal
1413.0	-49.70	2.61	27.28	-25.03	-13	-12.03	Vertical
2119.5	-50.47	2.87	27.59	-25.75	-13	-12.75	Vertical
2119.5	-50.61	2.87	27.59	-25.89	-13	-12.89	Horizontal
192.6	-34.27	1.71	16.15	-19.83	-13	-6.83	Vertical
342.0	-37.15	1.41	17.32	-21.24	-13	-8.24	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-48.60	2.62	27.30	-23.92	-13	-10.92	Horizontal
1420.0	-49.54	2.62	27.30	-24.86	-13	-11.86	Vertical
2130.0	-51.63	2.87	27.62	-26.88	-13	-13.88	Vertical
2130.0	-49.59	2.87	27.62	-24.84	-13	-11.84	Horizontal
198.0	-36.82	1.42	15.25	-23.00	-13	-10.00	Vertical
440.0	-43.59	1.36	17.19	-27.76	-13	-14.76	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-49.47	2.66	27.28	-24.85	-13	-11.85	Horizontal
1427.0	-45.33	2.66	27.28	-20.71	-13	-7.71	Vertical
2140.5	-52.01	2.88	27.60	-27.29	-13	-14.29	Vertical
2140.5	-53.76	2.88	27.60	-29.04	-13	-16.04	Horizontal
194.8	-35.38	1.32	17.29	-19.41	-13	-6.41	Vertical
265.7	-37.30	1.72	16.89	-22.13	-13	-9.13	Horizontal

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

Test Results for Low Channel 709MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1418.0	-46.76	2.62	27.30	-22.08	-13	-9.08	Horizontal
1418.0	-52.84	2.62	27.30	-28.16	-13	-15.16	Vertical
2127.0	-50.24	2.87	27.62	-25.49	-13	-12.49	Vertical
2127.0	-53.70	2.87	27.62	-28.95	-13	-15.95	Horizontal
200.7	-36.08	1.35	16.91	-20.52	-13	-7.52	Vertical
291.9	-35.07	1.62	16.31	-20.38	-13	-7.38	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-47.82	2.62	27.30	-23.14	-13	-10.14	Horizontal
1420.0	-53.62	2.62	27.30	-28.94	-13	-15.94	Vertical
2130.0	-51.94	2.87	27.62	-27.19	-13	-14.19	Vertical
2130.0	-50.36	2.87	27.62	-25.61	-13	-12.61	Horizontal
175.4	-43.25	1.51	17.14	-27.62	-13	-14.62	Vertical
418.2	-34.02	1.77	16.88	-18.91	-13	-5.91	Horizontal
Test Results for High Channel 711MHz							
1422.0	-53.06	2.62	27.30	-28.38	-13	-15.38	Horizontal
1422.0	-44.59	2.62	27.30	-19.91	-13	-6.91	Vertical
2133.0	-47.23	2.87	27.62	-22.48	-13	-9.48	Vertical
2133.0	-49.30	2.87	27.62	-24.55	-13	-11.55	Horizontal
193.1	-43.13	1.78	15.95	-28.96	-13	-15.96	Vertical
305.5	-41.97	1.34	17.95	-25.37	-13	-12.37	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 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-46.40	4.02	29.80	-20.62	-13	-7.62	Horizontal
3701.4	-45.66	4.02	29.80	-19.88	-13	-6.88	Vertical
5552.1	-47.48	5.24	35.84	-16.88	-13	-3.88	Vertical
5552.1	-49.34	5.24	35.84	-18.74	-13	-5.74	Horizontal
93.9	-32.33	1.59	15.11	-18.81	-13	-5.81	Vertical
119.7	-34.88	1.80	15.61	-21.07	-13	-8.07	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-47.22	4.03	30.00	-21.25	-13	-8.25	Horizontal
3765.0	-46.48	4.03	30.00	-20.51	-13	-7.51	Vertical
5647.5	-49.22	5.25	35.86	-18.61	-13	-5.61	Vertical
5647.5	-46.17	5.25	35.86	-15.56	-13	-2.56	Horizontal
166.1	-33.39	1.37	15.62	-19.14	-13	-6.14	Vertical
274.4	-34.49	1.55	17.51	-18.53	-13	-5.53	Horizontal
Test Results for High Channel 1754.3MHz							
3828.6	-48.97	4.05	30.01	-23.01	-13	-10.01	Horizontal
3828.6	-48.62	4.05	30.01	-22.66	-13	-9.66	Vertical
5742.9	-47.18	5.26	35.86	-16.58	-13	-3.58	Vertical
5742.9	-47.30	5.26	35.86	-16.70	-13	-3.70	Horizontal
108.6	-32.50	1.66	17.19	-16.97	-13	-3.97	Vertical
138.7	-32.82	1.35	17.94	-16.23	-13	-3.23	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-46.01	4.02	29.80	-20.23	-13	-7.23	Horizontal
3720.0	-43.06	4.02	29.80	-17.28	-13	-4.28	Vertical
5580.0	-46.26	5.24	35.84	-15.66	-13	-2.66	Vertical
5580.0	-46.83	5.24	35.84	-16.23	-13	-3.23	Horizontal
146.2	-32.48	1.70	15.24	-18.94	-13	-5.94	Vertical
215.4	-32.92	1.42	16.58	-17.76	-13	-4.76	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-48.12	4.03	30.00	-22.15	-13	-9.15	Horizontal
3765.0	-47.16	4.03	30.00	-21.19	-13	-8.19	Vertical
5647.5	-47.11	5.25	35.86	-16.50	-13	-3.50	Vertical
5647.5	-47.38	5.25	35.86	-16.77	-13	-3.77	Horizontal
132.2	-32.72	1.64	16.16	-18.20	-13	-5.20	Vertical
133.3	-32.88	1.62	17.37	-17.13	-13	-4.13	Horizontal
Test Results for High Channel 1745MHz							
3810.0	-46.56	2.91	27.68	-21.79	-13	-8.79	Horizontal
3810.0	-41.72	2.91	27.68	-16.95	-13	-3.95	Vertical
5715.0	-49.86	5.26	35.86	-19.26	-13	-6.26	Vertical
5715.0	-47.72	5.26	35.86	-17.12	-13	-4.12	Horizontal
212.6	-33.78	1.49	15.29	-19.98	-13	-6.98	Vertical
275.8	-33.48	1.79	16.42	-18.85	-13	-5.85	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1629.4	-46.73	2.78	27.50	-22.01	-13	-9.01	Horizontal
1629.4	-42.54	2.78	27.50	-17.82	-13	-4.82	Vertical
2444.1	-47.85	2.90	27.80	-22.95	-13	-9.95	Vertical
2444.1	-49.05	2.90	27.80	-24.15	-13	-11.15	Horizontal
229.6	-34.34	1.54	16.98	-18.90	-13	-5.90	Vertical
83.3	-33.51	1.47	15.82	-19.16	-13	-6.16	Horizontal
Test Results For Mid Channel 819MHz							
1638.0	-46.37	2.80	27.48	-21.69	-13	-8.69	Horizontal
1638.0	-43.98	2.80	27.48	-19.30	-13	-6.30	Vertical
2457.0	-49.03	2.91	27.70	-24.24	-13	-11.24	Vertical
2457.0	-49.44	2.91	27.70	-24.65	-13	-11.65	Horizontal
168.2	-33.54	1.74	16.19	-19.09	-13	-6.09	Vertical
92.9	-32.48	1.46	15.43	-18.51	-13	-5.51	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-49.42	2.82	27.43	-24.81	-13	-11.81	Horizontal
1646.6	-49.58	2.82	27.43	-24.97	-13	-11.97	Vertical
2469.9	-47.46	2.92	27.74	-22.64	-13	-9.64	Vertical
2469.9	-49.22	2.92	27.74	-24.40	-13	-11.40	Horizontal
213.1	-34.42	1.67	17.05	-19.04	-13	-6.04	Vertical
121.7	-33.29	1.42	16.12	-18.59	-13	-5.59	Horizontal

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

Test Results for Channel 819MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1638.0	-49.80	2.78	27.50	-25.08	-13	-12.08	Horizontal
1638.0	-44.79	2.78	27.50	-20.07	-13	-7.07	Vertical
2457.0	-46.68	2.90	27.80	-21.78	-13	-8.78	Vertical
2457.0	-46.20	2.90	27.80	-21.30	-13	-8.30	Horizontal
253.7	-32.96	1.43	17.34	-17.05	-13	-4.05	Vertical
256.8	-34.87	1.56	15.71	-20.72	-13	-7.72	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-47.43	2.78	27.50	-22.71	-13	-9.71	Horizontal
1649.4	-42.27	2.78	27.50	-17.55	-13	-4.55	Vertical
2474.1	-47.48	2.90	27.80	-22.58	-13	-9.58	Vertical
2474.1	-47.97	2.90	27.80	-23.07	-13	-10.07	Horizontal
237.0	-33.52	1.33	17.34	-17.51	-13	-4.51	Vertical
180.5	-32.64	1.47	16.80	-17.31	-13	-4.31	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-46.79	2.80	27.48	-22.11	-13	-9.11	Horizontal
1673.0	-47.34	2.80	27.48	-22.66	-13	-9.66	Vertical
2509.5	-48.33	2.91	27.70	-23.54	-13	-10.54	Vertical
2509.5	-46.64	2.91	27.70	-21.85	-13	-8.85	Horizontal
140.8	-32.01	1.75	15.46	-18.30	-13	-5.30	Vertical
90.6	-32.09	1.52	16.14	-17.47	-13	-4.47	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-48.93	2.82	27.43	-24.32	-13	-11.32	Horizontal
1696.6	-49.57	2.82	27.43	-24.96	-13	-11.96	Vertical
2544.9	-49.10	2.92	27.74	-24.28	-13	-11.28	Vertical
2544.9	-46.30	2.92	27.74	-21.48	-13	-8.48	Horizontal
171.4	-34.74	1.67	16.09	-20.32	-13	-7.32	Vertical
247.2	-32.45	1.80	17.55	-16.70	-13	-3.70	Horizontal

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

Test Results for Low Channel 831.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1663.0	-47.93	2.78	27.50	-23.21	-13	-10.21	Horizontal
1663.0	-47.26	2.78	27.50	-22.54	-13	-9.54	Vertical
2494.5	-47.86	2.90	27.80	-22.96	-13	-9.96	Vertical
2494.5	-48.25	2.90	27.80	-23.35	-13	-10.35	Horizontal
255.4	-34.33	1.52	15.72	-20.13	-13	-7.13	Vertical
163.1	-34.37	1.40	17.03	-18.74	-13	-5.74	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-47.00	2.80	27.48	-22.32	-13	-9.32	Horizontal
1673.0	-48.98	2.80	27.48	-24.30	-13	-11.30	Vertical
2509.5	-46.93	2.91	27.70	-22.14	-13	-9.14	Vertical
2509.5	-48.86	2.91	27.70	-24.07	-13	-11.07	Horizontal
227.1	-32.20	1.74	16.38	-17.56	-13	-4.56	Vertical
101.3	-32.67	1.79	15.20	-19.26	-13	-6.26	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-48.85	2.82	27.43	-24.24	-13	-11.24	Horizontal
1683.0	-44.95	2.82	27.43	-20.34	-13	-7.34	Vertical
2524.5	-49.49	2.92	27.74	-24.67	-13	-11.67	Vertical
2524.5	-49.51	2.92	27.74	-24.69	-13	-11.69	Horizontal
261.1	-33.35	1.78	17.44	-17.69	-13	-4.69	Vertical
120.1	-32.93	1.70	15.93	-18.70	-13	-5.70	Horizontal

9.10 LTE BAND 41

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

Test Results for Low Channel 2498.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5145.0	-62.86	5.23	35.81	-32.28	-25	-7.28	Horizontal
5145.0	-62.57	5.23	35.81	-31.99	-25	-6.99	Vertical
7717.5	-62.39	5.67	36.85	-31.21	-25	-6.21	Vertical
7717.5	-63.23	5.67	36.85	-32.05	-25	-7.05	Horizontal
435.3	-48.18	1.38	15.98	-33.58	-25	-8.58	Vertical
465.8	-47.86	1.62	15.66	-33.82	-25	-8.82	Horizontal
Test Results for Mid Channel 2593MHz							
5190.0	-61.57	5.23	35.82	-30.98	-25	-5.98	Horizontal
5190.0	-62.58	5.23	35.82	-31.99	-25	-6.99	Vertical
7785.0	-61.67	5.67	36.85	-30.49	-25	-5.49	Vertical
7785.0	-59.47	5.67	36.85	-28.29	-25	-3.29	Horizontal
510.4	-48.43	1.62	16.17	-33.88	-25	-8.88	Vertical
562.9	-45.95	1.74	17.63	-30.06	-25	-5.06	Horizontal
Test Results for High Channel 2617.5MHz							
5235.0	-61.75	5.24	35.83	-31.16	-25	-6.16	Horizontal
5235.0	-61.47	5.24	35.83	-30.88	-25	-5.88	Vertical
7852.5	-61.31	5.68	36.87	-30.12	-25	-5.12	Vertical
7852.5	-63.13	5.68	36.87	-31.94	-25	-6.94	Horizontal
197.6	-49.34	1.55	15.84	-35.05	-25	-10.05	Vertical
353.1	-45.02	1.51	17.06	-29.47	-25	-4.47	Horizontal

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

Test Results for Low Channel 2506MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5160.0	-60.24	5.23	35.82	-29.65	-25	-4.65	Horizontal
5160.0	-59.72	5.23	35.82	-29.13	-25	-4.13	Vertical
7740.0	-62.66	5.67	36.86	-31.47	-25	-6.47	Vertical
7740.0	-59.19	5.67	36.86	-28.00	-25	-3.00	Horizontal
128.9	-48.83	1.43	15.51	-34.75	-25	-9.75	Vertical
344.8	-48.24	1.40	16.97	-32.67	-25	-7.67	Horizontal
Test Results for Mid Channel 2593MHz							
5190.0	-62.24	5.23	35.82	-31.65	-25	-6.65	Horizontal
5190.0	-64.10	5.23	35.82	-33.51	-25	-8.51	Vertical
7785.0	-64.02	5.67	36.85	-32.84	-25	-7.84	Vertical
7785.0	-59.91	5.67	36.85	-28.73	-25	-3.73	Horizontal
100.8	-48.94	1.77	16.72	-33.99	-25	-8.99	Vertical
263.5	-47.31	1.31	16.99	-31.63	-25	-6.63	Horizontal
Test Results for High Channel 2680MHz							
5220.0	-64.88	5.24	35.83	-34.29	-25	-9.29	Horizontal
5220.0	-61.27	5.24	35.83	-30.68	-25	-5.68	Vertical
7830.0	-59.61	5.70	36.88	-28.43	-25	-3.43	Vertical
7830.0	-60.84	5.70	36.88	-29.66	-25	-4.66	Horizontal
349.9	-45.37	1.70	15.73	-31.34	-25	-6.34	Vertical
110.3	-44.08	1.75	17.33	-28.50	-25	-3.50	Horizontal

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

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

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

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

9.11 LTE BAND 66

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-54.91	4.02	29.80	-29.13	-13	-16.13	Horizontal
3421.4	-52.85	4.02	29.80	-27.07	-13	-14.07	Vertical
5132.1	-49.38	5.24	35.84	-18.78	-13	-5.78	Vertical
5132.1	-54.03	5.24	35.84	-23.43	-13	-10.43	Horizontal
112.6	-46.26	1.52	15.57	-32.21	-13	-19.21	Vertical
220.5	-49.81	1.33	17.14	-34.00	-13	-21.00	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-48.20	4.03	30.00	-22.23	-13	-9.23	Horizontal
3490.0	-50.30	4.03	30.00	-24.33	-13	-11.33	Vertical
5235.0	-50.13	5.25	35.86	-19.52	-13	-6.52	Vertical
5235.0	-53.84	5.25	35.86	-23.23	-13	-10.23	Horizontal
157.3	-49.35	1.53	17.13	-33.75	-13	-20.75	Vertical
213.1	-50.50	1.41	15.95	-35.96	-13	-22.96	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-46.82	4.05	30.01	-20.86	-13	-7.86	Horizontal
3558.6	-46.44	4.05	30.01	-20.48	-13	-7.48	Vertical
5337.9	-50.98	5.26	35.86	-20.38	-13	-7.38	Vertical
5337.9	-49.96	5.26	35.86	-19.36	-13	-6.36	Horizontal
170.6	-51.37	1.44	15.51	-37.30	-13	-24.30	Vertical
169.0	-45.28	1.78	15.76	-31.30	-13	-18.30	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-52.85	4.02	29.80	-27.07	-13	-14.07	Horizontal
3440.0	-44.66	4.02	29.80	-18.88	-13	-5.88	Vertical
5160.0	-53.88	5.24	35.84	-23.28	-13	-10.28	Vertical
5160.0	-50.79	5.24	35.84	-20.19	-13	-7.19	Horizontal
268.8	-47.53	1.62	17.02	-32.13	-13	-19.13	Vertical
161.4	-44.00	1.32	17.31	-28.01	-13	-15.01	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-46.75	4.03	30.00	-20.78	-13	-7.78	Horizontal
3490.0	-50.13	4.03	30.00	-24.16	-13	-11.16	Vertical
5235.0	-49.99	5.25	35.86	-19.38	-13	-6.38	Vertical
5235.0	-51.41	5.25	35.86	-20.80	-13	-7.80	Horizontal
159.9	-54.74	1.45	15.17	-41.02	-13	-28.02	Vertical
172.1	-47.69	1.48	17.82	-31.35	-13	-18.35	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-50.92	2.91	27.68	-26.15	-13	-13.15	Horizontal
3540.0	-45.54	2.91	27.68	-20.77	-13	-7.77	Vertical
5310.0	-52.61	5.26	35.86	-22.01	-13	-9.01	Vertical
5310.0	-49.80	5.26	35.86	-19.20	-13	-6.20	Horizontal
197.3	-44.98	1.76	16.38	-30.36	-13	-17.36	Vertical
158.5	-48.55	1.43	17.13	-32.85	-13	-19.85	Horizontal

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

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

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

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

10. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

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

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

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

Frequency Stability vs Temperature:

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

Frequency Stability vs Voltage:

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

MODES TESTED

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

RESULTS

See the following pages.

10.1 LTE BAND 2

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	12.5	0.006640	2.5
3.87	1880	13.5	0.007166	2.5
4.45	1880	13.3	0.007081	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.6	0.006693	2.5
Extreme (50C)	1880	12.1	0.006420	2.5
Extreme (40C)	1880	13.9	0.007391	2.5
Extreme (30C)	1880	13.2	0.007032	2.5
Extreme (10C)	1880	14.4	0.007642	2.5
Extreme (0C)	1880	12.5	0.006650	2.5
Extreme (-10C)	1880	13.2	0.007038	2.5
Extreme (-20C)	1880	14.6	0.007745	2.5
Extreme (-30C)	1880	14.4	0.007674	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	9.9	0.005280	2.5
3.87	1880	9.1	0.004831	2.5
4.45	1880	8.6	0.004567	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.4	0.005023	2.5
Extreme (50C)	1880	8.8	0.004663	2.5
Extreme (40C)	1880	8.1	0.004322	2.5
Extreme (30C)	1880	9.4	0.004983	2.5
Extreme (10C)	1880	8.4	0.004487	2.5
Extreme (0C)	1880	8.5	0.004504	2.5
Extreme (-10C)	1880	9.5	0.005031	2.5
Extreme (-20C)	1880	9.3	0.004942	2.5
Extreme (-30C)	1880	8.3	0.004405	2.5

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

10.2 LTE BAND 4

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1732.5	8.4	0.004843	2.5
3.87	1732.5	9.3	0.005357	2.5
4.45	1732.5	8.4	0.004850	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	7.9	0.004561	2.5
Extreme (50C)	1732.5	8.5	0.004931	2.5
Extreme (40C)	1732.5	7.0	0.004045	2.5
Extreme (30C)	1732.5	5.5	0.003193	2.5
Extreme (10C)	1732.5	7.5	0.004333	2.5
Extreme (0C)	1732.5	9.4	0.005410	2.5
Extreme (-10C)	1732.5	8.2	0.004759	2.5
Extreme (-20C)	1732.5	6.4	0.003722	2.5
Extreme (-30C)	1732.5	8.3	0.004764	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	10.2	0.005867	2.5
3.87	1732.5	8.4	0.004868	2.5
4.45	1732.5	8.2	0.004745	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.6	0.005537	2.5
Extreme (50C)	1732.5	8.6	0.004979	2.5
Extreme (40C)	1732.5	7.8	0.004522	2.5
Extreme (30C)	1732.5	9.2	0.005330	2.5
Extreme (10C)	1732.5	9.4	0.005410	2.5
Extreme (0C)	1732.5	8.2	0.004705	2.5
Extreme (-10C)	1732.5	8.8	0.005103	2.5
Extreme (-20C)	1732.5	8.7	0.005032	2.5
Extreme (-30C)	1732.5	8.2	0.004749	2.5

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

10.3 LTE BAND 5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	5.5	0.006531	2.5
3.87	836.5	6.2	0.007443	2.5
4.45	836.5	4.6	0.005506	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.1	0.007301	2.5
Extreme (50C)	836.5	6.3	0.007526	2.5
Extreme (40C)	836.5	5.7	0.006846	2.5
Extreme (30C)	836.5	6.8	0.008183	2.5
Extreme (10C)	836.5	5.4	0.006485	2.5
Extreme (0C)	836.5	4.9	0.005809	2.5
Extreme (-10C)	836.5	5.8	0.006979	2.5
Extreme (-20C)	836.5	6.1	0.007317	2.5
Extreme (-30C)	836.5	6.4	0.007677	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	5.8	0.006964	2.5
3.87	836.5	6.3	0.007554	2.5
4.45	836.5	4.4	0.005274	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.4	0.007664	2.5
Extreme (50C)	836.5	5.8	0.006877	2.5
Extreme (40C)	836.5	5.9	0.007028	2.5
Extreme (30C)	836.5	6.3	0.007565	2.5
Extreme (10C)	836.5	5.9	0.006995	2.5
Extreme (0C)	836.5	5.4	0.006456	2.5
Extreme (-10C)	836.5	5.7	0.006831	2.5
Extreme (-20C)	836.5	6.1	0.007311	2.5
Extreme (-30C)	836.5	6.3	0.007544	2.5

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

10.4 LTE BAND 7

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2535	10.4	0.004118	2.5
3.87	2535	9.3	0.003677	2.5
4.45	2535	8.0	0.003167	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.4	0.003716	2.5
Extreme (50C)	2535	9.0	0.003550	2.5
Extreme (40C)	2535	8.3	0.003257	2.5
Extreme (30C)	2535	8.9	0.003521	2.5
Extreme (10C)	2535	7.7	0.003018	2.5
Extreme (0C)	2535	8.8	0.003481	2.5
Extreme (-10C)	2535	9.8	0.003875	2.5
Extreme (-20C)	2535	8.6	0.003382	2.5
Extreme (-30C)	2535	8.0	0.003150	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	6.7	0.002655	2.5
3.87	2535	6.5	0.002569	2.5
4.45	2535	5.9	0.002327	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.7	0.002658	2.5
Extreme (50C)	2535	6.0	0.002348	2.5
Extreme (40C)	2535	5.7	0.002268	2.5
Extreme (30C)	2535	6.7	0.002629	2.5
Extreme (10C)	2535	5.9	0.002316	2.5
Extreme (0C)	2535	5.4	0.002125	2.5
Extreme (-10C)	2535	5.7	0.002235	2.5
Extreme (-20C)	2535	5.7	0.002233	2.5
Extreme (-30C)	2535	5.8	0.002293	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	8.7	0.012343	2.5
3.87	707.5	10.4	0.014691	2.5
4.45	707.5	8.6	0.012172	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	8.5	0.012025	2.5
Extreme (50C)	707.5	7.1	0.010041	2.5
Extreme (40C)	707.5	7.3	0.010294	2.5
Extreme (30C)	707.5	8.2	0.011564	2.5
Extreme (10C)	707.5	7.3	0.010367	2.5
Extreme (0C)	707.5	8.6	0.012201	2.5
Extreme (-10C)	707.5	8.8	0.012404	2.5
Extreme (-20C)	707.5	9.1	0.012893	2.5
Extreme (-30C)	707.5	8.2	0.011549	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	7.5	0.010546	2.5
3.87	707.5	8.6	0.012220	2.5
4.45	707.5	7.9	0.011115	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	0.013918	2.5
3.87	710.0	9.3	0.013041	2.5
4.45	710.0	7.7	0.010814	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.6	0.013512	2.5
Extreme (50C)	710.0	9.3	0.013119	2.5
Extreme (40C)	710.0	8.0	0.011318	2.5
Extreme (30C)	710.0	9.4	0.013169	2.5
Extreme (10C)	710.0	8.6	0.012152	2.5
Extreme (0C)	710.0	8.6	0.012103	2.5
Extreme (-10C)	710.0	9.2	0.012994	2.5
Extreme (-20C)	710.0	8.7	0.012291	2.5
Extreme (-30C)	710.0	8.5	0.011989	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	10.0	0.014145	2.5
3.87	710.0	8.8	0.012419	2.5
4.45	710.0	8.6	0.012177	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.3	0.013124	2.5
Extreme (50C)	710.0	8.9	0.012572	2.5
Extreme (40C)	710.0	8.1	0.011365	2.5
Extreme (30C)	710.0	8.5	0.011961	2.5
Extreme (10C)	710.0	7.9	0.011059	2.5
Extreme (0C)	710.0	8.0	0.011227	2.5
Extreme (-10C)	710.0	9.7	0.013676	2.5
Extreme (-20C)	710.0	9.3	0.013082	2.5
Extreme (-30C)	710.0	8.4	0.011774	2.5

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

10.7 LTE BAND 25

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1882.5	2	0.001062	2.5
3.87	1882.5	11	0.005843	2.5
4.45	1882.5	13	0.006906	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	4.0	0.002137	2.5
Extreme (50C)	1882.5	9.3	0.004965	2.5
Extreme (40C)	1882.5	6.7	0.003540	2.5
Extreme (30C)	1882.5	6.3	0.003349	2.5
Extreme (10C)	1882.5	5.3	0.002829	2.5
Extreme (0C)	1882.5	8.4	0.004474	2.5
Extreme (-10C)	1882.5	1.3	0.000715	2.5
Extreme (-20C)	1882.5	2.3	0.001220	2.5
Extreme (-30C)	1882.5	6.6	0.003500	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1882.5	9.2	0.004899	2.5
3.87	1882.5	7.8	0.004158	2.5
4.45	1882.5	5.0	0.002677	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	7.2	0.003850	2.5
Extreme (50C)	1882.5	5.2	0.002752	2.5
Extreme (40C)	1882.5	8.6	0.004566	2.5
Extreme (30C)	1882.5	1.5	0.000811	2.5
Extreme (10C)	1882.5	2.2	0.001156	2.5
Extreme (0C)	1882.5	6.4	0.003421	2.5
Extreme (-10C)	1882.5	5.2	0.002739	2.5
Extreme (-20C)	1882.5	7.2	0.003830	2.5
Extreme (-30C)	1882.5	6.1	0.003263	2.5

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

10.8 LTE BAND 26 A

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
3.29	819	8.4	0.010225	2.5
3.87	819	5.9	0.007166	2.5
4.45	819	6.2	0.007523	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819	8.8	0.010705	2.5
Extreme (50C)	819	1.9	0.002286	2.5
Extreme (40C)	819	2.1	0.002521	2.5
Extreme (30C)	819	6.5	0.007904	2.5
Extreme (10C)	819	5.3	0.006516	2.5
Extreme (0C)	819	6.2	0.007511	2.5
Extreme (-10C)	819	8.8	0.010738	2.5
Extreme (-20C)	819	6.0	0.007372	2.5
Extreme (-30C)	819	4.6	0.005590	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
3.29	819	2.1	0.002587	2.5
3.87	819	6.9	0.008440	2.5
4.45	819	5.4	0.006571	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819	6.9	0.008468	2.5
Extreme (50C)	819	9.0	0.010962	2.5
Extreme (40C)	819	6.7	0.008171	2.5
Extreme (30C)	819	4.8	0.005881	2.5
Extreme (10C)	819	6.3	0.007708	2.5
Extreme (0C)	819	5.6	0.006839	2.5
Extreme (-10C)	819	9.0	0.010946	2.5
Extreme (-20C)	819	6.7	0.008171	2.5
Extreme (-30C)	819	7.8	0.009517	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 26A QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz)				
3.29	836.5	8.2	0.009848	2.5
3.87	836.5	6.0	0.007226	2.5
4.45	836.5	8.2	0.009827	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	836.5	10.6	0.012673	2.5
Extreme (50C)	836.5	9.2	0.011015	2.5
Extreme (40C)	836.5	6.4	0.007670	2.5
Extreme (30C)	836.5	8.1	0.009716	2.5
Extreme (10C)	836.5	7.8	0.009302	2.5
Extreme (0C)	836.5	9.9	0.011780	2.5
Extreme (-10C)	836.5	1.5	0.001851	2.5
Extreme (-20C)	836.5	8.2	0.009815	2.5
Extreme (-30C)	836.5	7.5	0.008974	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 10MHz)				
3.29	836.5	9.8	0.011657	2.5
3.87	836.5	11.8	0.014051	2.5
4.45	836.5	10.9	0.013025	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	836.5	6.8	0.008150	2.5
Extreme (50C)	836.5	8.7	0.010358	2.5
Extreme (40C)	836.5	7.2	0.008562	2.5
Extreme (30C)	836.5	7.6	0.009068	2.5
Extreme (10C)	836.5	6.0	0.007220	2.5
Extreme (0C)	836.5	5.7	0.006852	2.5
Extreme (-10C)	836.5	6.0	0.007164	2.5
Extreme (-20C)	836.5	3.9	0.011237	2.5
Extreme (-30C)	836.5	8.3	0.007292	2.5

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

10.10 LTE BAND 41

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2593	8.2	0.003145	2.5
3.87	2593	6.5	0.002519	2.5
4.45	2593	7.4	0.002849	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	7.6	0.002931	2.5
Extreme (50C)	2593	4.8	0.001864	2.5
Extreme (40C)	2593	5.8	0.002223	2.5
Extreme (30C)	2593	4.7	0.001799	2.5
Extreme (10C)	2593	6.3	0.002422	2.5
Extreme (0C)	2593	5.1	0.001982	2.5
Extreme (-10C)	2593	9.7	0.003728	2.5
Extreme (-20C)	2593	11.1	0.004290	2.5
Extreme (-30C)	2593	6.6	0.002526	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2593	8.5	0.003293	2.5
3.87	2593	6.7	0.002575	2.5
4.45	2593	6.6	0.002553	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	7.8	0.003018	2.5
Extreme (50C)	2593	4.8	0.001866	2.5
Extreme (40C)	2593	5.3	0.002052	2.5
Extreme (30C)	2593	4.6	0.001760	2.5
Extreme (10C)	2593	6.2	0.002383	2.5
Extreme (0C)	2593	4.6	0.001765	2.5
Extreme (-10C)	2593	9.7	0.003751	2.5
Extreme (-20C)	2593	11.0	0.004248	2.5
Extreme (-30C)	2593	6.1	0.002355	2.5

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

10.11 LTE BAND 66

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	12.8	0.00735	2.5
3.87	1745	14.3	0.00817	2.5
4.45	1745	13.2	0.00757	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	7.5	0.004283	2.5
Extreme (50C)	1745	4.3	0.002475	2.5
Extreme (40C)	1745	4.9	0.002810	2.5
Extreme (30C)	1745	5.0	0.002868	2.5
Extreme (10C)	1745	6.2	0.003568	2.5
Extreme (0C)	1745	5.1	0.002940	2.5
Extreme (-10C)	1745	9.3	0.005314	2.5
Extreme (-20C)	1745	10.9	0.006254	2.5
Extreme (-30C)	1745	5.8	0.003316	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	13.0	0.007471	2.5
3.87	1745	14.0	0.008039	2.5
4.45	1745	13.4	0.007667	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	7.9	0.004547	2.5
Extreme (50C)	1745	4.7	0.002708	2.5
Extreme (40C)	1745	5.8	0.003299	2.5
Extreme (30C)	1745	4.9	0.002833	2.5
Extreme (10C)	1745	6.8	0.003868	2.5
Extreme (0C)	1745	5.2	0.002971	2.5
Extreme (-10C)	1745	9.1	0.005219	2.5
Extreme (-20C)	1745	11.2	0.006424	2.5
Extreme (-30C)	1745	6.5	0.003719	2.5

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

11. Peak-to-Average Ratio

11.1 Description of the PAR Measurement

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

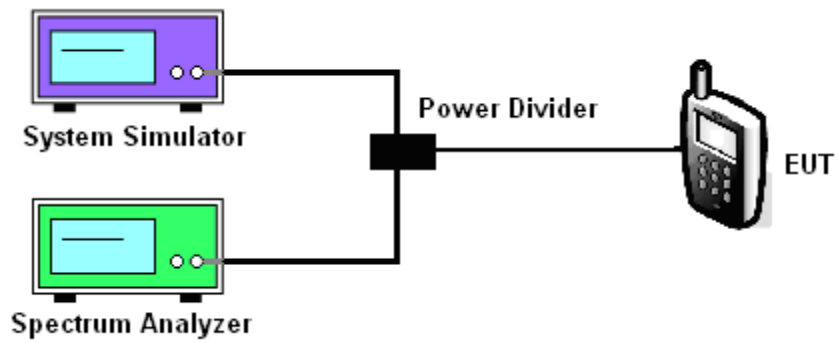
11.2 Measuring Instruments

See list of measuring instruments of this test report.

11.3 Test Procedures

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

11.4 Test Setup



MODES TESTED

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

Test data reference attachment.

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