



FCC PART 22/24/27/90 TEST REPORT

Report Reference No.	LCSA060122034EE
Date of Issue	July 04, 2022
Testing Laboratory Name	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Applicant's name	ChargePoint, Inc.
Address	254 E. Hacienda Ave, Campbell, CA 95008, USA
Test specification	FCC CFR Title 47 Part 2, Part 22H, Part 24E, Part 27, Part 90 TIA-603-E: 2016 KDB971168 D01 Power Meas License Digital Systems v03r01 IC RSS-Gen (Issue 5, November 2018);
Standard	IC RSS-130 (Issue 2, February 2019); IC RSS-132 (Issue 3, January 2013); IC RSS-133 (Issue 6, January 2018); IC RSS-139 (Issue 3, July 2015); IC RSS-199 (Issue 3, December 2016)
Test Report Form No	LCSEMC-1.0
TRF Originator	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF	Dated 2011-03
Shenzhen LCS Compliance Testing Laboratory Ltd. All rights reserved.	
This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen LCS Compliance Testing Laboratory Ltd. is acknowledged as copyright owner and source of the material. Shenzhen LCS Compliance Testing Laboratory Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.	
Test item description	LTE Module
Trade Mark	ChargePoint
Test Model	EG25-G
Modulation Type	QPSK, 16QAM
Rating	Input: DC 5V
Hardware version	R1.0
Software version	EG25GGBR07A06M4G
Result	PASS

Compiled by:

Vera Deng/ Administrator

Supervised by:

Jin Wang/ Technique principal

Approved by:

Gavin Liang/ Manager





TEST REPORT

Test Report No. : LCS220419031AEE	July 04, 2022
	Date of issue

EUT.....	: LTE Module
Test Model.....	: EG25-G
Applicant.....	: ChargePoint, Inc.
Address.....	: 254 E. Hacienda Ave, Campbell, CA 95008, USA
Telephone.....	: /
Fax.....	: /
Manufacturer.....	: ChargePoint, Inc.
Address.....	: 254 E. Hacienda Ave, Campbell, CA 95008, USA
Telephone.....	: /
Fax.....	: /
Factory.....	: ChargePoint, Inc.
Address.....	: 254 E. Hacienda Ave, Campbell, CA 95008, USA
Telephone.....	: /
Fax.....	: /

Test Result:	PASS
---------------------	-------------

The test report merely corresponds to the test sample.
 It is not permitted to copy extracts of these test result without the written permission of the test laboratory.





Revision History

Report Version	Issue Date	Revision Content	Revised By
000	July 04, 2022	Initial Issue	--





Contents

1	<u>TEST STANDARDS</u>	5
2	<u>SUMMARY</u>	6
2.1	General Remarks	6
2.2	Product Description	6
2.3	Equipment under Test	7
2.4	Short description of the Equipment under Test (EUT)	7
2.5	Internal Identification of AE used during the test	7
2.6	Normal Accessory setting	7
2.7	EUT configuration	8
2.8	Related Submittal(s) / Grant (s)	8
2.9	Modifications	8
2.10	General Test Conditions/Configurations	8
3	<u>TEST ENVIRONMENT</u>	9
3.1	Address of the test laboratory	9
3.2	Test Facility	9
3.3	Environmental conditions	9
3.4	Test Description	9
3.5	Equipments Used during the Test	13
3.6	Measurement uncertainty	14
4	<u>TEST CONDITIONS AND RESULTS</u>	15
4.1	Radiated Spurious Emission	33
5	<u>TEST SETUP PHOTOS OF THE EUT</u>	51
6	<u>EXTERNAL PHOTOS OF THE EUT</u>	51
7	<u>INTERNAL PHOTOS OF THE EUT</u>	51





1 TEST STANDARDS

The tests were performed according to following standards:

[FCC Part 22H](#): Cellular Radiotelephone Service

[FCC Part 24E](#): Broadband PCS

[FCC Part 27](#): MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

[FCC Part 90](#): PRIVATE LAND MOBILE RADIO SERVICES

[TIA-603-E March 2016](#): Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

[47 CFR FCC Part 15 Subpart B](#): Unintentional Radiators

[FCC Part 2](#): FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

[ANSI C63.4:2014](#): Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

[FCC KDB971168 D01](#) Power Meas License Digital Systems v03r01

[RSS-130 Issue 1, October 2013](#): Mobile Broadband Services (MBS) Equipment Operating in the Frequency Bands 698-756 MHz and 777-787 MHz

[RSS-132 Issue 3, January 2013](#): Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz

[RSS-133 Issue 6, January 2013 Amendment January 2018](#): 2 GHz Personal Communications Services

[RSS-139 Issue 3, July 2015](#): Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz

[RSS-199 Issue 3, December 2016](#): Broadband Radio Service (BRS) Equipment Operating in the Band 2500–2690 MHz

[TIA-603-E March 2016](#): Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

[RSS-Gen Issue 5](#): General Requirements for Compliance of Radio Apparatus

[ANSI C63.4:2014](#): Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



2 SUMMARY

2.1 General Remarks

Date of receipt of test sample	:	May 09, 2022
Date of Test	:	May 09, 2022 ~ July 04, 2022
Date of Report	:	July 04, 2022

2.2 Product Description

The **ChargePoint, Inc.**'s Model: EG25-G, EG25-G MINIPCIE or the "EUT" as referred to in this report; more general information as follows, for more details, refer to the user's manual of the EUT.

EUT	:	LTE Module
Test Model	:	EG25-G
2G	:	
Support Band	:	<input checked="" type="checkbox"/> GSM 900 (EU-Band) <input checked="" type="checkbox"/> DCS 1800 (EU-Band) <input checked="" type="checkbox"/> GSM 850 (U.S.-Band) <input checked="" type="checkbox"/> PCS 1900 (U.S.-Band)
Type Of Modulation	:	GMSK for GSM/GPRS
Antenna Description	:	Monopole Antenna 0dBi (max.) For 698MHz – 960 MHz 2dBi (max.) For 1710MHz – 2690 MHz
3G	:	
Support Band	:	<input checked="" type="checkbox"/> WCDMA Band II (U.S.-Band) <input checked="" type="checkbox"/> WCDMA Band V (U.S.-Band) <input checked="" type="checkbox"/> WCDMA Band IV (U.S.-Band) <input checked="" type="checkbox"/> WCDMA Band I (EU-Band) <input checked="" type="checkbox"/> WCDMA Band VIII (EU-Band)
Type Of Modulation	:	WCDMA: QPSK; HSDPA/HSUPA: QPSK
Antenna Description	:	Monopole Antenna 0dBi (max.) For 698MHz – 960 MHz 2dBi (max.) For 1710MHz – 2690 MHz
LTE	:	
Support Band	:	<input checked="" type="checkbox"/> E-UTRA Band 2 <input checked="" type="checkbox"/> E-UTRA Band 4 <input checked="" type="checkbox"/> E-UTRA Band 5 <input checked="" type="checkbox"/> E-UTRA Band 7 <input checked="" type="checkbox"/> E-UTRA Band 12 <input checked="" type="checkbox"/> E-UTRA Band 13 <input checked="" type="checkbox"/> E-UTRA Band 25 <input checked="" type="checkbox"/> E-UTRA Band 26 <input checked="" type="checkbox"/> E-UTRA Band 38 <input checked="" type="checkbox"/> E-UTRA Band 41
Type Of Modulation	:	QPSK/16QAM
Antenna Description	:	Monopole Antenna 0dBi (max.) For 698MHz – 960 MHz 2dBi (max.) For 1710MHz – 2690 MHz





2.3 Equipment under Test

Power supply system utilised

Power supply voltage	:	<input type="radio"/> 120V / 60 Hz	<input type="radio"/> 115V / 60Hz
		<input type="radio"/> 12 V DC	<input type="radio"/> 24 V DC
		<input checked="" type="radio"/> Other (specified in blank below) 5.0V DC	

2.4 Short description of the Equipment under Test (EUT)

2.4.1 GeneralDescription

LTE Module is subscriber equipment in the GSM/WCDMA/LTE system. GSM/GPRS frequency band is Band II/V. The HSPA/UMTS frequency band is Band II/IV/V. LTE frequency band is band 2/4/5/7/12/13/25/26/38/41. The HSPA/UMTS frequency band II, band IV and Band V test data included in this report. The LTE Module implements such functions as RF signal receiving/transmitting, GSM/GPRS/HSPA/UMTS/LTE protocol processing, video MMS service and etc. Externally it provides SIM card interface.

2.5 Internal Identification of AE used during the test

AE ID*	Description
AE1	Notebook

2.6 Normal Accessory setting

Fully charged battery was used during the test.





2.7 EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- - supplied by the manufacturer
- - supplied by the lab

○ Power Cable	Length (m) :	/
	Shield :	/
	Detachable :	/
○ Multimeter	Manufacturer :	/
	Model No. :	/

2.8 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: W38-201903EG25G & IC: 8854A-201903EG25G** filing to comply with FCC Part 22, Part 24 , Part 27, Part 90 Rules , RSS-132 Issue 3, RSS-133 Issue 6, IC RSS-Gen Issue 5, IC RSS-130 Issue 2 and IC RSS-139 Issue 3

2.9 Modifications

No modifications were implemented to meet testing criteria.

2.10 General Test Conditions/Configurations

2.10.1 Test Environment

EnvironmentParameter	SelectedValuesDuringTests	
Relative Humidity	Ambient	
Temperature	TN	Ambient
Voltage	VN	DC 5.0V

NOTE: VN=nominal voltage,TN=normal temperature





3 TEST ENVIRONMENT

3.1 Address of the test laboratory

Shenzhen LCS Compliance Testing Laboratory Ltd

101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

The sites are constructed in conformance with the requirements of ANSI C63.4 (2014) and CISPR Publication 32.

3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.

Test Firm Registration Number: 254912.

ISED Designation Number is 9642A

3.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4 Test Description

Band 2 (1850-1910MHz pairedwith 1930-1990MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Output Power	§2.1046, §24.232 RSS-Gen, §6.12;	EIRP ≤ 2W	PASS
Field Strength of Spurious Radiation	§2.1053, §24.238 RSS-133, §6.5	≤ -13dBm/1MHz.	PASS

NOTE 1:For the verdict, the“N/A”denotes“not applicable”,the“N/T”de notes “not tested”.



**Band 4 (1710-1755MHz pairedwith 2110-2155MHz)**

Test Item	FCC RuleNo.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §27.50(d) RSS-Gen, §6.12; RSS-139, §6.4	EIRP ≤ 1W;	PASS
Field Strength of Spurious Radiation	§2.1053, §27.53(h) RSS-139, §6.5	≤ -13 dBm/100 kHz.	PASS

Band 5 (824-849MHz pairedwith 869-894MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Output Power	§2.1046, §22.913 RSS-Gen, §6.12; RSS-132, §5.4	ERP ≤ 7W.	Pass
Field Strength of Spurious Radiation	§2.1053, §22.917 RSS-Gen, §6.13; RSS-132, §5.5	≤ -13dBm/100kHz.	Pass

Band 7 (2500-2570MHz pairedwith 2620-2690MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Output Power	§2.1046, §27.50(h) RSS-Gen, §6.12;	EIRP ≤ 2W.	Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(m) RSS-199, §4.5;	More details specified in §27.53(m)(4)	Pass

Band 12 (699-716MHz paired with 729-746MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §27.50(c) RSS-Gen, §6.12;	FCCID: ERP ≤ 3W; IC: ERP ≤ 5 W.	PASS
Field Strength of Spurious Radiation	§2.1053, §27.53(g) RSS-130, §4.6	≤ -13dBm/100KHz.	PASS



**Band 13 (777-787MHz paired with 746-756MHz)**

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §27.50(b) RSS-130, §4.4	FCC:ERP ≤ 3W; IC: ERP ≤ 5 W	PASS
Field Strength of Spurious Radiation	§2.1053, §27.53(c) RSS-130, §4.6	≤ -13dBm/100KHz.	PASS

Band 25(1850-1915MHz pairedwith 1930-1995MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §24.232 RSS-Gen, §6.12	ERP ≤ 2W;	PASS
Field Strength of Spurious Radiation	§2.1055, §24.235 RSS-133, §6.5	≤ -13dBm/100KHz.	PASS

Band 26(814-824MHz pairedwith 859-869MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §90.635	ERP ≤ 100W;	PASS
Field Strength of Spurious Radiation	§2.1053, §90.669	≤ -13dBm/100KHz.	PASS

Band 26(824-849MHz pairedwith 869-894MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §22.913 RSS-Gen, §6.12; RSS-132, §5.4	ERP ≤ 7W;	PASS
Field Strength of Spurious Radiation	§2.1053, §22.917 RSS-Gen, §6.13; RSS-132, §5.5	≤ -13dBm/100KHz.	PASS





Band 38 (2570-2620MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §27.50(h) RSS-Gen, §6.12;	ERP ≤ 2W;	PASS
Field Strength of Spurious Radiation	§2.1053, §27.53(m) RSS-199, §4.5;	≤ -25dBm/1MHz.	PASS

TDD Band 41(2496-2690MHz)

Test Item	FCC Rule No.	Requirements	Verdict
Effective(Isotropic) Radiated Power Output Data	§2.1046, §27.50(h) RSS-Gen, §6.12;	ERP ≤ 2W;	PASS
Radiated spurious emission	§2.1053, §27.53(m) RSS-199, §4.5;	≤ -25dBm/1MHz.	PASS





3.5 Equipments Used during the Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	Power Meter	R&S	NRVS	100444	2022-06-16	2023-06-15
2	Power Sensor	R&S	NRV-Z81	100458	2022-06-16	2023-06-15
3	Power Sensor	R&S	NRV-Z32	10057	2022-06-16	2023-06-15
4	LTE Test Software	Tonscend	JS1120-1	N/A	N/A	N/A
5	RF Control Unit	Tonscend	JS0806	158060009	2021-11-25	2022-11-24
6	MXA Signal Analyzer	Agilent	N9020A	MY51250905	2021-11-16	2022-11-15
7	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW 500	103818	2022-06-16	2023-06-15
8	DC Power Supply	Agilent	E3642A	N/A	2021-11-25	2022-11-24
9	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
10	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2022-06-16	2023-06-15
11	Positioning Controller	MF	MF7082	MF78020803	2022-06-16	2023-06-15
12	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00005	2021-07-25	2024-07-24
13	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-07-25	2024-07-24
14	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-07-01	2024-06-30
15	Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	791	2020-09-20	2023-09-19
16	Broadband Preampfier	SCHWARZBECK	BBV9745	9719-025	2022-06-16	2023-06-15
17	EMI Test Receiver	R&S	ESR 7	101181	2022-06-16	2023-06-15
18	RS SPECTRUM ANALYZER	R&S	FSP40	100503	2021-11-16	2022-11-15
19	Broadband Preampfier	/	BP-01M18G	P190501	2022-06-16	2023-06-15
20	6dB Attenuator	/	100W/6dB	1172040	2022-06-16	2023-06-15
21	3dB Attenuator	/	2N-3dB	/	2021-11-16	2022-11-15
22	Temperature & Humidity Chamber	GUANGZHOU GOGNWEN	GDS-100	70932	2021-10-07	2022-10-06
23	EMI Test Software	Farad	EZ	N/A	N/A	N/A





3.6 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to ETSI TR 100 028“Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics” and is documented in the Shenzhen LCS Compliance Testing Laboratory Ltd.quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen LCS Compliance Testing Laboratory Ltd. is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	3.10 dB	(1)
Radiated Emission	1~18GHz	3.80 dB	(1)
Radiated Emission	18-40GHz	3.90 dB	(1)
Conducted Disturbance	0.15~30MHz	1.63 dB	(1)
Conducted Power	9KHz~18GHz	0.61 dB	(1)
Spurious RF Conducted Emission	9KHz~40GHz	1.22 dB	(1)
Band Edge Compliance of RF Emission	9KHz~40GHz	1.22 dB	(1)
Occupied Bandwidth	9KHz~40GHz	-	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.



4 TEST CONDITIONS AND RESULTS

4.1.2. Radiated Output Power

LIMIT

This is the test for the maximum radiated power from the EUT.

Per §22.913(2) Extend coverage on a secondary basis into cellular unserved areas, as those areas are defined in §22.949, the ERP of base transmitters and cellular repeaters of such systems must not exceed 1000 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

Rule Part 24.232(c) specifies, "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power" and 24.232(e) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

Per Part 27.50(d) (4) specifies, Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755MHz band are limited to 1W EIRP. Fixed stations operating in this band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in this band must employ a means for limiting power to the minimum necessary for successful communications.

Per Part 27.50(c) (10) specifies, Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

Per Part 27.50(h) (2) specifies 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.

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

RSS-132 section 5.4 specifies that "The transmitter output power shall be measured in terms of average power. The equivalent isotropically radiated power (e.i.r.p.) for mobile equipment shall not exceed 11.5 watts. Refer to SRSP-503 for base station e.i.r.p. limits."

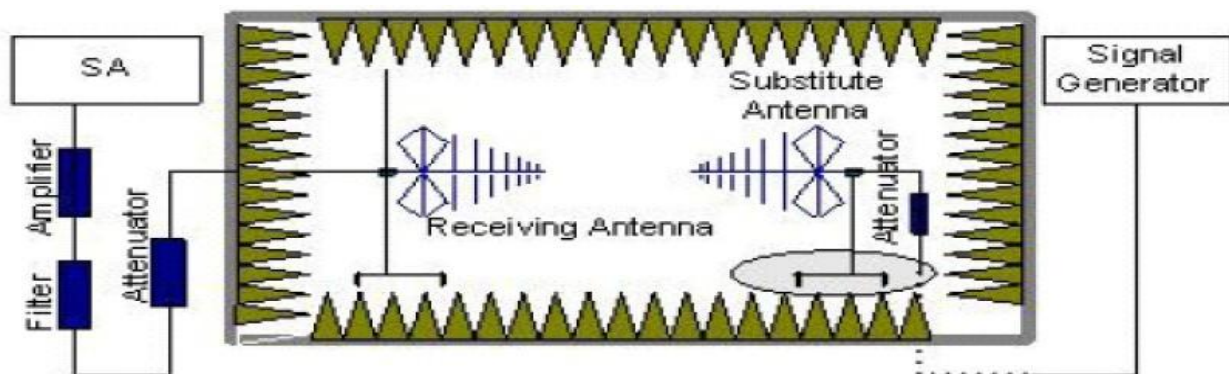
RSS-133 section 6.4 specifies that " The equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits given in SRSP-510 (2 watts)."

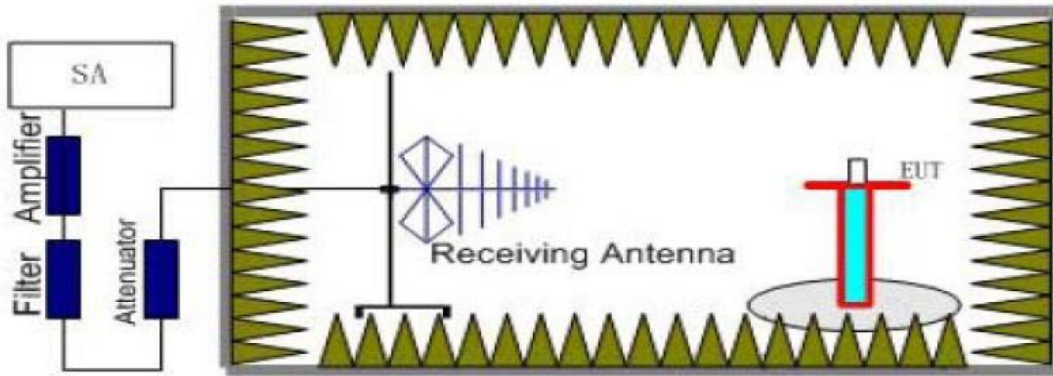
Rule RSS-139 section 6.5 specifies " The equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters shall not exceed one watt."

RSS-199 section 4.4 specifies that " For mobile subscriber equipment, the e.i.r.p. shall not exceed 2 watts. For fixed subscriber equipment, the transmitter output power shall not exceed 2 watts and the e.i.r.p. shall be limited to 40 watts."

RSS-130 section 4.4 specifies that "The transmitter output power shall be measured in terms of average power. The e.i.r.p. shall not exceed 50 watts for mobile equipment or for outdoor fixed subscriber equipment, nor shall it exceed 5 watts for portable equipment or for indoor fixed subscriber equipment. Refer to SRSP-518 for base and fixed equipment e.i.r.p. limits."

TEST CONFIGURATION





TEST PROCEDURE

1. EUT was placed on a 1.50 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.50m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, And the maximum value of the receiver should be recorded as (P_r).
4. The EUT shall be replaced by a substitution antenna. In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. An amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (P_{cl}), the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be recorded after test. The measurement results are obtained as described below:
$$\text{Power(EIRP)} = P_{Mea} + P_{Ag} - P_{cl} + G_a$$
6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
7. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

TEST RESULTS

Radiated Measurement:

Remark:

1. We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 2, LTE FDD Band 4, LTE FDD Band 5, LTE FDD Band 7, LTE FDD Band 12, LTE FDD Band 13, LTE FDD Band 25, LTE FDD Band 26, LTE FDD Band 38, LTE FDD Band 41; recorded worst case for each Channel Bandwidth of LTE FDD Band 2, LTE FDD Band 4, LTE FDD Band 5, LTE FDD Band 7, LTE FDD Band 12, LTE FDD Band 13, LTE FDD Band 25, LTE FDD Band 26, LTE FDD Band 38, LTE FDD Band 41.
2. $EIRP = P_{Mea}(\text{dBm}) - P_{cl}(\text{dB}) + P_{Ag}(\text{dB}) + G_a(\text{dBi})$
3. $ERP = EIRP - 2.15\text{dBi}$ as ERP by subtracting the gain of the dipole.
4. Margin = Emission Level - Limit
5. We tested the worst-case records for H and V directions, and only the worst-case records for V direction were recorded in the report.



**LTE FDD Band 2_Channel Bandwidth 1.4MHz_QPSK**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1850.7	-14.18	4.03	8.38	35.51	25.68	33.01	-7.33	V
1880.0	-15.13	4.08	8.33	35.56	24.68	33.01	-8.33	V
1909.3	-14.79	4.14	8.26	35.63	24.96	33.01	-8.05	V

LTE FDD Band 2_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1851.5	-14.76	4.03	8.38	35.51	25.10	33.01	-7.91	V
1880.0	-14.55	4.08	8.33	35.56	25.26	33.01	-7.75	V
1908.5	-14.83	4.14	8.26	35.63	24.92	33.01	-8.09	V

LTE FDD Band 2_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1852.5	-20.57	4.03	8.38	35.51	19.29	33.01	-13.72	V
1880.0	-20.98	4.08	8.33	35.56	18.83	33.01	-14.18	V
1907.5	-20.05	4.14	8.26	35.63	19.70	33.01	-13.31	V

LTE FDD Band 2_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1855.0	-15.43	4.03	8.38	35.51	24.43	33.01	-8.58	V
1880.0	-15.43	4.08	8.33	35.56	24.38	33.01	-8.63	V
1905.0	-15.02	4.14	8.26	35.63	24.73	33.01	-8.28	V

LTE FDD Band 2_Channel Bandwidth 15MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1857.5	-15.56	4.03	8.38	35.51	24.30	33.01	-8.71	V
1880.0	-15.00	4.08	8.33	35.56	24.81	33.01	-8.20	V
1902.5	-16.02	4.14	8.26	35.63	23.73	33.01	-9.28	V

LTE FDD Band 2_Channel Bandwidth 20MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1860.0	-16.23	4.03	8.38	35.51	23.63	33.01	-9.38	V
1880.0	-16.12	4.08	8.33	35.56	23.69	33.01	-9.32	V
1900.0	-15.10	4.14	8.26	35.63	24.65	33.01	-8.36	V



*LTE FDD Band 2_Channel Bandwidth 1.4MHz_16QAM*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1850.7	-16.41	4.03	8.38	35.51	23.45	33.01	-9.56	V
1880.0	-16.48	4.08	8.33	35.56	23.33	33.01	-9.68	V
1909.3	-16.02	4.14	8.26	35.63	23.73	33.01	-9.28	V

LTE FDD Band 2_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1851.5	-15.03	4.03	8.38	35.51	24.83	33.01	-8.18	V
1880.0	-15.06	4.08	8.33	35.56	24.75	33.01	-8.26	V
1908.5	-16.02	4.14	8.26	35.63	23.73	33.01	-9.28	V

LTE FDD Band 2_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1852.5	-15.32	4.03	8.38	35.51	24.54	33.01	-8.47	V
1880.0	-15.07	4.08	8.33	35.56	24.74	33.01	-8.27	V
1907.5	-15.14	4.14	8.26	35.63	24.61	33.01	-8.40	V

LTE FDD Band 2_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1855.0	-14.84	4.03	8.38	35.51	25.02	33.01	-7.99	V
1880.0	-14.69	4.08	8.33	35.56	25.12	33.01	-7.89	V
1905.0	-15.54	4.14	8.26	35.63	24.21	33.01	-8.80	V

LTE FDD Band 2_Channel Bandwidth 15MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1857.5	-16.68	4.03	8.38	35.51	23.18	33.01	-9.83	V
1880.0	-16.97	4.08	8.33	35.56	22.84	33.01	-10.17	V
1902.5	-16.48	4.14	8.26	35.63	23.27	33.01	-9.74	V

LTE FDD Band 2_Channel Bandwidth 20MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1860.0	-15.93	4.03	8.38	35.51	23.93	33.01	-9.08	V
1880.0	-16.90	4.08	8.33	35.56	22.91	33.01	-10.10	V
1900.0	-15.90	4.14	8.26	35.63	23.85	33.01	-9.16	V



**LTE FDD Band 4_Channel Bandwidth 1.4MHz_QPSK**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1710.7	-14.66	3.93	9.05	34.96	25.42	30.00	-4.58	V
1732.5	-16.31	3.93	8.89	35.01	23.66	30.00	-6.34	V
1754.3	-15.77	3.94	8.76	35.08	24.13	30.00	-5.87	V

LTE FDD Band 4_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1711.5	-14.74	3.93	9.05	34.96	25.34	30.00	-4.66	V
1732.5	-15.87	3.93	8.89	35.01	24.10	30.00	-5.90	V
1753.5	-15.55	3.94	8.76	35.08	24.35	30.00	-5.65	V

LTE FDD Band 4_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1712.5	-15.83	3.93	9.05	34.96	24.25	30.00	-5.75	V
1732.5	-16.27	3.93	8.89	35.01	23.70	30.00	-6.30	V
1752.5	-16.33	3.94	8.76	35.08	23.57	30.00	-6.43	V

LTE FDD Band 4_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1715.0	-17.08	3.93	9.05	34.96	23.00	30.00	-7.00	V
1732.5	-17.34	3.93	8.89	35.01	22.63	30.00	-7.37	V
1750.0	-17.05	3.94	8.76	35.08	22.85	30.00	-7.15	V

LTE FDD Band 4_Channel Bandwidth 15MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1717.5	-17.08	3.93	9.05	34.96	23.00	30.00	-7.00	V
1732.5	-17.34	3.93	8.89	35.01	22.63	30.00	-7.37	V
1747.5	-17.05	3.94	8.76	35.08	22.85	30.00	-7.15	V

LTE FDD Band 4_Channel Bandwidth 20MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1720.0	-17.08	3.93	9.05	34.96	23.00	30.00	-7.00	V
1732.5	-17.34	3.93	8.89	35.01	22.63	30.00	-7.37	V
1745.0	-17.05	3.94	8.76	35.08	22.85	30.00	-7.15	V





LTE FDD Band 4_Channel Bandwidth 1.4MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1710.7	-17.13	3.93	9.05	34.96	22.95	30.00	-7.05	V
1732.5	-17.96	3.93	8.89	35.01	22.01	30.00	-7.99	V
1754.3	-17.57	3.94	8.76	35.08	22.33	30.00	-7.67	V

LTE FDD Band 4_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1711.5	-16.02	3.93	9.05	34.96	24.06	30.00	-5.94	V
1732.5	-16.20	3.93	8.89	35.01	23.77	30.00	-6.23	V
1753.5	-16.22	3.94	8.76	35.08	23.68	30.00	-6.32	V

LTE FDD Band 4_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1712.5	-17.40	3.93	9.05	34.96	22.68	30.00	-7.32	V
1732.5	-17.37	3.93	8.89	35.01	22.60	30.00	-7.40	V
1752.5	-17.01	3.94	8.76	35.08	22.89	30.00	-7.11	V

LTE FDD Band 4_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1715.0	-19.03	3.93	9.05	34.96	21.05	30.00	-8.95	V
1732.5	-18.64	3.93	8.89	35.01	21.33	30.00	-8.67	V
1750.0	-18.65	3.94	8.76	35.08	21.25	30.00	-8.75	V

LTE FDD Band 4_Channel Bandwidth 15MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1717.5	-18.42	3.93	9.05	34.96	21.66	30.00	-8.34	V
1732.5	-18.12	3.93	8.89	35.01	21.85	30.00	-8.15	V
1747.5	-18.24	3.94	8.76	35.08	21.66	30.00	-8.34	V

LTE FDD Band 4_Channel Bandwidth 20MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1720.0	-18.33	3.93	9.05	34.96	21.75	30.00	-8.25	V
1732.5	-18.64	3.93	8.89	35.01	21.33	30.00	-8.67	V
1745.0	-18.22	3.94	8.76	35.08	21.68	30.00	-8.32	V



*LTE FDD Band 5_Channel Bandwidth 1.4MHz_QPSK*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
824.70	-13.15	3.45	8.45	2.15	33.79	23.49	38.45	-14.96	V
836.50	-14.33	3.49	8.45	2.15	33.85	22.33	38.45	-16.12	V
848.30	-14.11	3.55	8.36	2.15	33.88	22.43	38.45	-16.02	V

LTE FDD Band 5_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
825.50	-13.04	3.45	8.45	2.15	33.79	23.60	38.45	-14.85	V
836.50	-14.46	3.49	8.45	2.15	33.85	22.20	38.45	-16.25	V
847.50	-14.14	3.55	8.36	2.15	33.88	22.40	38.45	-16.05	V

LTE FDD Band 5_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
826.50	-13.43	3.45	8.45	2.15	33.79	23.21	38.45	-15.24	V
836.50	-13.67	3.49	8.45	2.15	33.85	22.99	38.45	-15.46	V
846.50	-14.36	3.55	8.36	2.15	33.88	22.18	38.45	-16.27	V

LTE FDD Band 5_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
829.00	-14.59	3.45	8.45	2.15	33.79	22.05	38.45	-16.40	V
836.50	-15.57	3.49	8.45	2.15	33.85	21.09	38.45	-17.36	V
844.00	-14.35	3.55	8.36	2.15	33.88	22.19	38.45	-16.26	V

LTE FDD Band 5_Channel Bandwidth 1.4MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
824.70	-15.17	3.45	8.45	2.15	33.79	21.47	38.45	-16.98	V
836.50	-15.76	3.49	8.45	2.15	33.85	20.90	38.45	-17.55	V
848.30	-14.33	3.55	8.36	2.15	33.88	22.21	38.45	-16.24	V

LTE FDD Band 5_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
825.50	-15.23	3.45	8.45	2.15	33.79	21.41	38.45	-17.04	V
836.50	-15.83	3.49	8.45	2.15	33.85	20.83	38.45	-17.62	V
847.50	-14.24	3.55	8.36	2.15	33.88	22.30	38.45	-16.15	V

LTE FDD Band 5_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
826.50	-14.55	3.45	8.45	2.15	33.79	22.09	38.45	-16.36	V
836.50	-15.21	3.49	8.45	2.15	33.85	21.45	38.45	-17.00	V
846.50	-14.57	3.55	8.36	2.15	33.88	21.97	38.45	-16.48	V



*LTE FDD Band 5_Channel Bandwidth 10MHz_16QAM*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Correction (dB)	P _{Aq} (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
829.00	-14.67	3.45	8.45	2.15	33.79	21.97	38.45	-16.48	V
836.50	-15.11	3.49	8.45	2.15	33.85	21.55	38.45	-16.90	V
844.00	-14.17	3.55	8.36	2.15	33.88	22.37	38.45	-16.08	V

LTE FDD Band 7_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2502.5	-13.20	4.32	6.80	36.14	25.42	33.01	-7.59	V
2535.0	-14.33	4.32	6.61	36.17	24.13	33.01	-8.88	V
2567.5	-14.21	4.33	6.57	36.22	24.25	33.01	-8.76	V

LTE FDD Band 7_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2505.0	-13.20	4.32	6.80	36.14	25.42	33.01	-7.59	V
2535.0	-14.38	4.32	6.61	36.17	24.08	33.01	-8.93	V
2565.0	-14.37	4.33	6.57	36.22	24.09	33.01	-8.92	V

LTE FDD Band 7_Channel Bandwidth 15MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2507.5	-14.66	4.32	6.80	36.14	23.96	33.01	-9.05	V
2535.0	-14.64	4.32	6.61	36.17	23.82	33.01	-9.19	V
2562.5	-14.84	4.33	6.57	36.22	23.62	33.01	-9.39	V

LTE FDD Band 7_Channel Bandwidth 20MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2510.0	-14.63	4.32	6.80	36.14	23.99	33.01	-9.02	V
2535.0	-15.39	4.32	6.61	36.17	23.07	33.01	-9.94	V
2560.0	-14.94	4.33	6.57	36.22	23.52	33.01	-9.49	V

LTE FDD Band 7_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2502.5	-14.52	4.32	6.80	36.14	24.10	33.01	-8.91	V
2535.0	-14.19	4.32	6.61	36.17	24.27	33.01	-8.74	V
2567.5	-14.28	4.33	6.57	36.22	24.18	33.01	-8.83	V

LTE FDD Band 7_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2505.0	-14.47	4.32	6.80	36.14	24.15	33.01	-8.86	V
2535.0	-13.73	4.32	6.61	36.17	24.73	33.01	-8.28	V
2565.0	-14.06	4.33	6.57	36.22	24.40	33.01	-8.61	V



**LTE FDD Band 7_Channel Bandwidth 15MHz_16QAM**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2507.5	-15.15	4.32	6.80	36.14	23.47	33.01	-9.54	V
2535.0	-15.30	4.32	6.61	36.17	23.16	33.01	-9.85	V
2562.5	-14.79	4.33	6.57	36.22	23.67	33.01	-9.34	V

LTE FDD Band 7_Channel Bandwidth 20MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2510.0	-15.20	4.32	6.80	36.14	23.42	33.01	-9.59	V
2535.0	-14.89	4.32	6.61	36.17	23.57	33.01	-9.44	V
2560.0	-14.33	4.33	6.57	36.22	24.13	33.01	-8.88	V

LTE FDD Band 12_Channel Bandwidth 1.4MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
699.70	-13.36	3.01	8.29	33.52	2.15	23.29	34.77	-13.36	V
707.50	-14.47	3.02	8.29	33.52	2.15	22.17	34.77	-14.47	V
715.30	-13.69	3.06	8.29	33.52	2.15	22.91	34.77	-13.69	V

LTE FDD Band 12_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
700.50	-13.28	3.01	8.29	33.52	2.15	23.37	34.77	-11.40	V
707.50	-14.42	3.02	8.29	33.52	2.15	22.22	34.77	-12.55	V
714.50	-13.90	3.06	8.29	33.52	2.15	22.70	34.77	-12.07	V

LTE FDD Band 12_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
701.50	-12.70	3.01	8.29	33.52	2.15	23.95	34.77	-10.82	V
707.50	-13.78	3.02	8.29	33.52	2.15	22.86	34.77	-11.91	V
713.50	-12.84	3.06	8.29	33.52	2.15	23.76	34.77	-11.01	V

LTE FDD Band 12_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
704.00	-13.10	3.01	8.29	33.52	2.15	23.55	34.77	-11.22	V
707.50	-13.93	3.02	8.29	33.52	2.15	22.71	34.77	-12.06	V
711.00	-13.49	3.06	8.29	33.52	2.15	23.11	34.77	-11.66	V





LTE FDD Band 12_Channel Bandwidth 1.4MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
699.70	-13.95	3.01	8.29	33.52	2.15	22.70	34.77	-12.07	V
707.50	-13.86	3.02	8.29	33.52	2.15	22.78	34.77	-11.99	V
715.30	-14.04	3.06	8.29	33.52	2.15	22.56	34.77	-12.21	V

LTE FDD Band 12_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
700.50	-13.19	3.01	8.29	33.52	2.15	23.46	34.77	-11.31	V
707.50	-14.18	3.02	8.29	33.52	2.15	22.46	34.77	-12.31	V
714.50	-14.39	3.06	8.29	33.52	2.15	22.21	34.77	-12.56	V

LTE FDD Band 12_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
701.50	-12.77	3.01	8.29	33.52	2.15	23.88	34.77	-10.89	V
707.50	-13.27	3.02	8.29	33.52	2.15	23.37	34.77	-11.40	V
713.50	-13.85	3.06	8.29	33.52	2.15	22.75	34.77	-12.02	V

LTE FDD Band 12_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
704.00	-12.97	3.01	8.29	33.52	2.15	23.68	34.77	-11.09	V
707.50	-13.89	3.02	8.29	33.52	2.15	22.75	34.77	-12.02	V
711.00	-14.42	3.06	8.29	33.52	2.15	22.18	34.77	-12.59	V

LTE FDD Band 13_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Correction (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
779.5	-12.67	3.21	9.61	33.89	2.15	25.47	34.77	-9.30	V
782.0	-13.67	3.23	9.52	34.74	2.15	25.21	34.77	-9.56	V
784.5	-13.55	3.25	9.43	34.85	2.15	25.33	34.77	-9.44	V

LTE FDD Band 13_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Correction (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
782.0	-13.22	3.23	9.52	34.74	2.15	25.66	34.77	-9.11	V



**LTE FDD Band 13_Channel Bandwidth 5MHz_16QAM**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Correction (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
779.5	-13.56	3.21	9.61	33.89	2.15	24.58	34.77	-10.19	V
782.0	-13.06	3.23	9.52	34.74	2.15	25.82	34.77	-8.95	V
784.5	-13.75	3.25	9.43	34.85	2.15	25.13	34.77	-9.64	V

LTE FDD Band 13_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Correction (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
782.0	-13.61	3.23	9.52	34.74	2.15	25.27	34.77	-9.50	V

LTE FDD Band 25_Channel Bandwidth 1.4MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1850.7	-15.63	4.03	8.38	35.51	24.23	33.01	-8.78	V
1882.5	-15.89	4.08	8.33	35.56	23.92	33.01	-9.09	V
1914.3	-15.90	4.14	8.26	35.63	23.85	33.01	-9.16	V

LTE FDD Band 25_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1851.5	-15.70	4.03	8.38	35.51	24.16	33.01	-8.85	V
1882.5	-15.10	4.08	8.33	35.56	24.71	33.01	-8.30	V
1913.5	-15.71	4.14	8.26	35.63	24.04	33.01	-8.97	V

LTE FDD Band 25_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1852.5	-15.60	4.03	8.38	35.51	24.26	33.01	-8.75	V
1882.5	-15.82	4.08	8.33	35.56	23.99	33.01	-9.02	V
1912.5	-15.90	4.14	8.26	35.63	23.85	33.01	-9.16	V

LTE FDD Band 25_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1855.0	-15.06	4.03	8.38	35.51	24.80	33.01	-8.21	V
1882.5	-15.84	4.08	8.33	35.56	23.97	33.01	-9.04	V
1910.0	-16.09	4.14	8.26	35.63	23.66	33.01	-9.35	V



*LTE FDD Band 25_Channel Bandwidth 15MHz_QPSK*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1857.5	-16.24	4.03	8.38	35.51	23.62	33.01	-9.39	V
1882.5	-15.18	4.08	8.33	35.56	24.63	33.01	-8.38	V
1907.5	-15.72	4.14	8.26	35.63	24.03	33.01	-8.98	V

LTE FDD Band 25_Channel Bandwidth 20MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1860.0	-16.32	4.03	8.38	35.51	23.54	33.01	-9.47	V
1882.5	-15.35	4.08	8.33	35.56	24.46	33.01	-8.55	V
1905.0	-15.77	4.14	8.26	35.63	23.98	33.01	-9.03	V

LTE FDD Band 25_Channel Bandwidth 1.4MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1850.7	-16.39	4.03	8.38	35.51	23.47	33.01	-9.54	V
1882.5	-15.95	4.08	8.33	35.56	23.86	33.01	-9.15	V
1914.3	-16.26	4.14	8.26	35.63	23.49	33.01	-9.52	V

LTE FDD Band 25_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1851.5	-15.53	4.03	8.38	35.51	24.33	33.01	-8.68	V
1882.5	-15.80	4.08	8.33	35.56	24.01	33.01	-9.00	V
1913.5	-15.95	4.14	8.26	35.63	23.80	33.01	-9.21	V

LTE FDD Band 25_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1852.5	-16.42	4.03	8.38	35.51	23.44	33.01	-9.57	V
1882.5	-16.49	4.08	8.33	35.56	23.32	33.01	-9.69	V
1912.5	-15.54	4.14	8.26	35.63	24.21	33.01	-8.80	V

LTE FDD Band 25_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1855.0	-16.36	4.03	8.38	35.51	23.50	33.01	-9.51	V
1882.5	-16.50	4.08	8.33	35.56	23.31	33.01	-9.70	V
1910.0	-16.02	4.14	8.26	35.63	23.73	33.01	-9.28	V



**LTE FDD Band 25_Channel Bandwidth 15MHz_16QAM**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1857.5	-16.17	4.03	8.38	35.51	23.69	33.01	-9.32	V
1882.5	-16.04	4.08	8.33	35.56	23.77	33.01	-9.24	V
1907.5	-15.81	4.14	8.26	35.63	23.94	33.01	-9.07	V

LTE FDD Band 25_Channel Bandwidth 20MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1860.0	-15.54	4.03	8.38	35.51	24.32	33.01	-8.69	V
1882.5	-16.35	4.08	8.33	35.56	23.46	33.01	-9.55	V
1905.0	-16.34	4.14	8.26	35.63	23.41	33.01	-9.60	V

LTE FDD Band 26: 814MHz~824MHz**LTE FDD Band 26_Channel Bandwidth 1.4MHz_QPSK**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Average ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
814.70	-15.24	3.58	9.62	33.79	2.15	22.44	50.00	-27.56	V
819.00	-14.83	3.61	9.22	34.64	2.15	23.27	50.00	-26.73	V
823.30	-14.78	3.64	9.04	34.75	2.15	23.22	50.00	-26.78	V

LTE FDD Band 26_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Average ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
815.50	-15.23	3.58	9.62	33.79	2.15	22.45	50.00	-27.55	V
819.00	-14.87	3.61	9.22	34.64	2.15	23.23	50.00	-26.77	V
822.50	-15.04	3.64	9.04	34.75	2.15	22.96	50.00	-27.04	V

LTE FDD Band 26_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Average ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
816.50	-15.48	3.58	9.62	33.79	2.15	22.20	50.00	-27.80	V
819.00	-15.10	3.61	9.22	34.64	2.15	23.00	50.00	-27.00	V
821.50	-14.66	3.64	9.04	34.75	2.15	23.34	50.00	-26.66	V

LTE FDD Band 26_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Average ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
819.00	-15.23	3.64	9.04	34.75	2.15	22.77	50.00	-27.23	V



**LTE FDD Band 26_Channel Bandwidth 1.4MHz_16QAM**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
814.70	-15.78	3.58	9.62	33.79	2.15	21.90	50.00	-28.10	V
819.00	-15.13	3.61	9.22	34.64	2.15	22.97	50.00	-27.03	V
823.30	-15.22	3.64	9.04	34.75	2.15	22.78	50.00	-27.22	V

LTE FDD Band 26_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
815.50	-15.31	3.58	9.62	33.79	2.15	22.37	50.00	-27.63	V
819.00	-15.13	3.61	9.22	34.64	2.15	22.97	50.00	-27.03	V
822.50	-15.31	3.64	9.04	34.75	2.15	22.69	50.00	-27.31	V

LTE FDD Band 26_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
816.50	-15.64	3.58	9.62	33.79	2.15	22.04	50.00	-27.96	V
819.00	-15.06	3.61	9.22	34.64	2.15	23.04	50.00	-26.96	V
821.50	-15.33	3.64	9.04	34.75	2.15	22.67	50.00	-27.33	V

LTE FDD Band 26_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
819.00	-14.64	3.64	9.04	34.75	2.15	23.36	50.00	-26.64	V

LTE FDD Band 26: 824MHz~849MHz**LTE FDD Band 26_Channel Bandwidth 1.4MHz_QPSK**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
824.70	-13.54	3.58	9.62	33.79	2.15	24.14	38.45	-14.31	V
836.50	-13.82	3.61	9.22	34.64	2.15	24.28	38.45	-14.17	V
848.30	-14.26	3.64	9.04	34.75	2.15	23.74	38.45	-14.71	V

LTE FDD Band 26_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
825.50	-14.39	3.58	9.62	33.79	2.15	23.29	38.45	-15.16	V
836.50	-14.26	3.61	9.22	34.64	2.15	23.84	38.45	-14.61	V
847.50	-14.15	3.64	9.04	34.75	2.15	23.85	38.45	-14.60	V



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



LTE FDD Band 26_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
826.50	-14.01	3.58	9.62	33.79	2.15	23.67	38.45	-14.78	V
836.50	-14.01	3.61	9.22	34.64	2.15	24.09	38.45	-14.36	V
846.50	-14.32	3.64	9.04	34.75	2.15	23.68	38.45	-14.77	V

LTE FDD Band 26_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
829.00	-13.91	3.58	9.62	33.79	2.15	23.77	38.45	-14.68	V
836.50	-13.52	3.61	9.22	34.64	2.15	24.58	38.45	-13.87	V
844.00	-13.58	3.64	9.04	34.75	2.15	24.42	38.45	-14.03	V

LTE FDD Band 26_Channel Bandwidth 15MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
831.50	-13.83	3.58	9.62	33.79	2.15	23.85	38.45	-14.60	V
836.50	-13.71	3.61	9.22	34.64	2.15	24.39	38.45	-14.06	V
841.50	-14.28	3.64	9.04	34.75	2.15	23.72	38.45	-14.73	V

LTE FDD Band 26_Channel Bandwidth 1.4MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
824.70	-14.92	3.58	9.62	33.79	2.15	22.76	38.45	-15.69	V
836.50	-15.09	3.61	9.22	34.64	2.15	23.01	38.45	-15.44	V
848.30	-15.19	3.64	9.04	34.75	2.15	22.81	38.45	-15.64	V

LTE FDD Band 26_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
825.50	-14.79	3.58	9.62	33.79	2.15	22.89	38.45	-15.56	V
836.50	-15.27	3.61	9.22	34.64	2.15	22.83	38.45	-15.62	V
847.50	-15.30	3.64	9.04	34.75	2.15	22.70	38.45	-15.75	V

LTE FDD Band 26_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{Aq} (dB)	Correction (dB)	Burst Avergae ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
826.50	-14.88	3.58	9.62	33.79	2.15	22.80	38.45	-15.65	V
836.50	-15.19	3.61	9.22	34.64	2.15	22.91	38.45	-15.54	V
846.50	-14.80	3.64	9.04	34.75	2.15	23.20	38.45	-15.25	V



**LTE FDD Band 26_Channel Bandwidth 10MHz_16QAM**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{AQ} (dB)	Correction (dB)	Burst Average ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
829.00	-14.68	3.58	9.62	33.79	2.15	23.00	38.45	-15.45	V
836.50	-14.51	3.61	9.22	34.64	2.15	23.59	38.45	-14.86	V
844.00	-15.22	3.64	9.04	34.75	2.15	22.78	38.45	-15.67	V

LTE FDD Band 26_Channel Bandwidth 15MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain (dB)	P _{AQ} (dB)	Correction (dB)	Burst Average ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
831.50	-14.09	3.58	9.62	33.79	2.15	23.59	38.45	-14.86	V
836.50	-14.96	3.61	9.22	34.64	2.15	23.14	38.45	-15.31	V
841.50	-15.14	3.64	9.04	34.75	2.15	22.86	38.45	-15.59	V

LTE TDD Band 38_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{AQ} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2572.5	-12.89	4.34	6.88	36.20	25.85	33.01	-7.16	V
2595.0	-13.25	4.36	6.55	36.26	25.20	33.01	-7.81	V
2617.5	-13.78	4.47	6.35	36.50	24.60	33.01	-8.41	V

LTE TDD Band 38_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{AQ} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2575.0	-12.91	4.34	6.88	36.20	25.83	33.01	-7.18	V
2595.0	-13.30	4.36	6.55	36.26	25.15	33.01	-7.86	V
2615.0	-13.81	4.47	6.35	36.50	24.57	33.01	-8.44	V

LTE TDD Band 38_Channel Bandwidth 15MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{AQ} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2577.5	-13.49	4.34	6.88	36.20	25.25	33.01	-7.76	V
2595.0	-13.74	4.36	6.55	36.26	24.71	33.01	-8.30	V
2612.5	-13.29	4.47	6.35	36.50	25.09	33.01	-7.92	V

LTE TDD Band 38_Channel Bandwidth 20MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{AQ} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2580.0	-13.11	4.34	6.88	36.20	25.63	33.01	-7.38	V
2595.0	-13.67	4.36	6.55	36.26	24.78	33.01	-8.23	V
2610.0	-13.97	4.47	6.35	36.50	24.41	33.01	-8.60	V



**LTE TDD Band 38_Channel Bandwidth 5MHz_16QAM**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2572.5	-13.60	4.34	6.88	36.20	25.14	33.01	-7.87	V
2595.0	-13.98	4.36	6.55	36.26	24.47	33.01	-8.54	V
2617.5	-14.08	4.47	6.35	36.50	24.30	33.01	-8.71	V

LTE TDD Band 38_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2575.0	-13.83	4.34	6.88	36.20	24.91	33.01	-8.10	V
2595.0	-13.86	4.36	6.55	36.26	24.59	33.01	-8.42	V
2615.0	-14.12	4.47	6.35	36.50	24.26	33.01	-8.75	V

LTE TDD Band 38_Channel Bandwidth 15MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2577.5	-13.70	4.34	6.88	36.20	25.04	33.01	-7.97	V
2595.0	-13.05	4.36	6.55	36.26	25.40	33.01	-7.61	V
2612.5	-13.69	4.47	6.35	36.50	24.69	33.01	-8.32	V

LTE TDD Band 38_Channel Bandwidth 20MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2580.0	-14.46	4.34	6.88	36.20	24.28	33.01	-8.73	V
2595.0	-13.76	4.36	6.55	36.26	24.69	33.01	-8.32	V
2610.0	-13.66	4.47	6.35	36.50	24.72	33.01	-8.29	V

LTE TDD Band 41_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2498.5	-13.31	4.32	6.8	36.13	25.30	33.01	-7.71	V
2593.0	-12.86	4.36	6.55	36.26	25.59	33.01	-7.42	V
2687.5	-13.27	4.51	6.37	36.54	25.13	33.01	-7.88	V

LTE TDD Band 41_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2501.0	-12.64	4.32	6.8	36.13	25.97	33.01	-7.04	V
2593.0	-13.47	4.36	6.55	36.26	24.98	33.01	-8.03	V
2685.0	-12.89	4.51	6.37	36.54	25.51	33.01	-7.50	V



*LTE TDD Band 41_Channel Bandwidth 15MHz_QPSK*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2503.5	-12.59	4.32	6.8	36.13	26.02	33.01	-6.99	V
2593.0	-13.33	4.36	6.55	36.26	25.12	33.01	-7.89	V
2682.5	-12.50	4.51	6.37	36.54	25.90	33.01	-7.11	V

LTE TDD Band 41_Channel Bandwidth 20MHz_QPSK

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2506.0	-12.73	4.32	6.8	36.13	25.88	33.01	-7.13	V
2593.0	-12.61	4.36	6.55	36.26	25.84	33.01	-7.17	V
2680.0	-13.09	4.51	6.37	36.54	25.31	33.01	-7.70	V

LTE TDD Band 41_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2498.5	-13.79	4.32	6.8	36.13	24.82	33.01	-8.19	V
2593.0	-12.57	4.36	6.55	36.26	25.88	33.01	-7.13	V
2687.5	-13.29	4.51	6.37	36.54	25.11	33.01	-7.90	V

LTE TDD Band 41_Channel Bandwidth 10MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2501.0	-13.82	4.32	6.8	36.13	24.79	33.01	-8.22	V
2593.0	-13.18	4.36	6.55	36.26	25.27	33.01	-7.74	V
2685.0	-13.19	4.51	6.37	36.54	25.21	33.01	-7.80	V

LTE TDD Band 41_Channel Bandwidth 15MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2503.5	-13.15	4.32	6.8	36.13	25.46	33.01	-7.55	V
2593.0	-12.84	4.36	6.55	36.26	25.61	33.01	-7.40	V
2682.5	-13.10	4.51	6.37	36.54	25.30	33.01	-7.71	V

LTE TDD Band 41_Channel Bandwidth 20MHz_16QAM

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	P _{Aq} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2506.0	-13.83	4.32	6.8	36.13	24.78	33.01	-8.23	V
2593.0	-12.71	4.36	6.55	36.26	25.74	33.01	-7.27	V
2680.0	-13.57	4.51	6.37	36.54	24.83	33.01	-8.18	V





4.1 Radiated Spurious Emission

LIMIT

For LTE FDD Band 2: Per FCC §24.238 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.

For LTE FDD Band 4: Per §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.

For LTE FDD Band 5: Per FCC §22.917 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.

For LTE FDD Band 7: Per FCC §27.53 (m)(4): For mobile digital stations, the attenuation factor shall be not less than:

- $40 + 10\log P$ dB (–10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge,
- $43 + 10\log P$ dB (–13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge, and
- $55 + 10\log P$ dB (–25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB). [§ 27.53(m)(4)]

In addition, the attenuation factor (fixed limit) 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. [§ 27.53(m)(4)]

For LTE FDD Band 12: Per §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.

For LTE FDD Band 13: Per §27.53 (c): For operations in the 776-788 MHz band, the power of any emission outside the 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, in accordance with the following:
On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10\log(P)$ dB;
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;

For LTE FDD Band 25: Per FCC §24.238 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.

For LTE FDD Band 26: Per FCC §90.669 the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10\log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation.

Per FCC §22.917 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.





For LTE TDD Band 38/41: Per §27.53 (m)(6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz 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; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent 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 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). 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. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

(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.

For LTE FDD Band 2 and LTE FDD Band 25: Per RSS-133 §6.5 Equipment shall comply with the limits in (i) and (ii) below.

(i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).

(ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

For LTE FDD Band 4: Per RSS-139 §6.6: Equipment shall comply with the limits in (i) and (ii) below.

(i) (i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

(ii) (ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

For LTE FDD Band 5 and LTE FDD Band 26: Per RSS-132 §5.5 Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

(i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).

(ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

For LTE FDD Band 7, LTE FDD Band 38 and LTE FDD Band 41: Per RSS-199 §4.5 Equipment shall comply with the following unwanted emission limits:

(a) for base station and fixed subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least $43 + 10 \log_{10} p$.



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



(b) for mobile subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least:

- (i) $40 + 10 \log_{10} p$ from the channel edges to 5 MHz away
- (ii) $43 + 10 \log_{10} p$ between 5 MHz and X MHz from the channel edges, and
- (iii) $55 + 10 \log_{10} p$ at X MHz and beyond from the channel edges

In addition, the attenuation shall not be less than $43 + 10 \log_{10} p$ on all frequencies between 2490.5 MHz and 2496 MHz, and $55 + 10 \log_{10} p$ at or below 2490.5 MHz.

In (a) and (b), p is the transmitter power measured in watts and X is 6 MHz or the equipment occupied bandwidth, whichever is greater.

For LTE FDD Band 12 & LTE FDD Band 13: Per RSS-130 §4.6 Equipment shall comply with the following unwanted emission limits:

(a) The power of any unwanted emissions in any 100 kHz bandwidth on any frequency outside the frequency range(s) within which the equipment is designed to operate shall be attenuated below the transmitter power, P (dBW), by at least $43 + 10 \log_{10} p$ (watts), dB. However, in the 100 kHz band immediately outside the equipment's operating frequency range, a resolution bandwidth of 30 kHz may be employed.

(b) In addition to the limit outlined in Section 4.6.1 above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

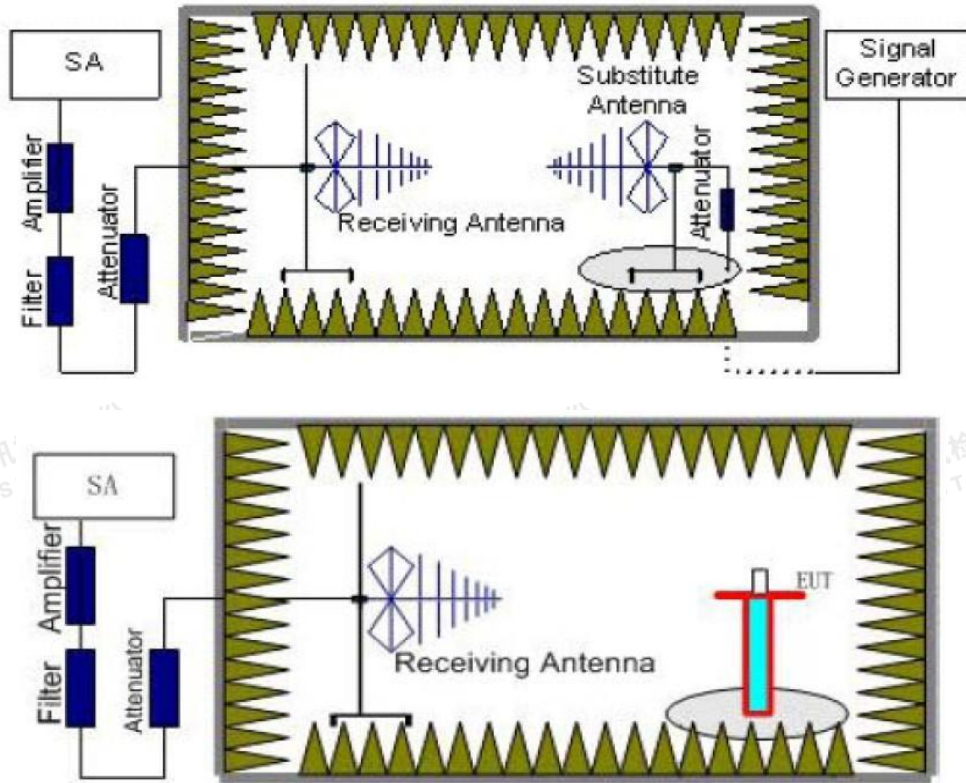
(i) The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:
 $76 + 10 \log_{10} p$ (watts), dB, for base and fixed equipment, and
 $65 + 10 \log_{10} p$ (watts), dB, for mobile and portable equipment.

(ii) The e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz.

In (a) and (b), p is the transmitter power measured in watts and X is 6 MHz or the equipment occupied bandwidth, whichever is greater.



TEST CONFIGURATION



TEST PROCEDURE

1. EUT was placed on a 1.50 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.50m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, And the maximum value of the receiver should be recorded as (P_r).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (P_{cl}), the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be recorded after test. The measurement results are obtained as described below:

$$\text{Power(EIRP)} = P_{\text{Mea}} + P_{\text{Ag}} - P_{\text{cl}} + G_a$$
6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
7. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.





8. In order to make sure test results more clearly, we set frequency range and sweep time for difference frequency range as follows table:

Working Frequency	Subrange (GHz)	RBW	VBW	Sweep time (s)
LTE FDD Band 2	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
	14~18	1 MHz	3 MHz	3
LTE FDD Band 4	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
	14~18	1 MHz	3 MHz	3
LTE FDD Band 5	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~9	1 MHz	3 MHz	3
LTE FDD Band 7	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
	14~18	1 MHz	3 MHz	3
LTE FDD Band 12	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
LTE FDD Band 13	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2





LTE FDD Band 25	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
LTE FDD Band 26	14~18	1 MHz	3 MHz	3
	18~20	1 MHz	3 MHz	2
	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
LTE FDD Band 38	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
	14~18	1 MHz	3 MHz	3
	18~20	1 MHz	3 MHz	2
	20~26	1 MHz	3 MHz	2
	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
LTE TDD Band 41	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
	14~18	1 MHz	3 MHz	3
	18~20	1 MHz	3 MHz	2
	20~26	1 MHz	3 MHz	2
	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10

Frequency	Channel	Frequency Range	Verdict
LTE FDD Band 2	Low	9KHz -20GHz	PASS
	Middle	9KHz -20GHz	PASS
	High	9KHz -20GHz	PASS
LTE FDD Band 4	Low	9KHz -18GHz	PASS
	Middle	9KHz -18GHz	PASS
	High	9KHz -18GHz	PASS
LTE FDD Band 5	Low	9KHz -9GHz	PASS
	Middle	9KHz -9GHz	PASS
	High	9KHz -26GHz	PASS
LTE FDD Band 7	Low	9KHz -9GHz	PASS
	Middle	9KHz -9GHz	PASS
	High	9KHz -26GHz	PASS





LTE FDD Band 12	Low	9KHz -8GHz	PASS
	Middle	9KHz -8GHz	PASS
	High	9KHz -8GHz	PASS
LTE FDD Band 13	Low	9KHz -8GHz	PASS
	Middle	9KHz -8GHz	PASS
	High	9KHz -8GHz	PASS
LTE FDD Band 25	Low	9KHz -20GHz	PASS
	Middle	9KHz -20GHz	PASS
	High	9KHz -20GHz	PASS
LTE FDD Band 26	Low	9KHz -8GHz	PASS
	Middle	9KHz -8GHz	PASS
	High	9KHz -8GHz	PASS
LTE FDD Band 38	Low	9KHz -26GHz	PASS
	Middle	9KHz -26GHz	PASS
	High	9KHz -26GHz	PASS
LTE TDD Band 41	Low	9KHz -26GHz	PASS
	Middle	9KHz -26GHz	PASS
	High	9KHz -26GHz	PASS

TEST RESULTS

Remark:

1. We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 2, LTE FDD Band 4, LTE FDD Band 5, LTE FDD Band 7, LTE FDD Band 12, LTE FDD Band 13, LTE FDD Band 25, LTE FDD Band 26, LTE FDD Band 38, LTE FDD Band 41; recorded worst case for each Channel Bandwidth of LTE FDD Band 2, LTE FDD Band 4, LTE FDD Band 5, LTE FDD Band 7, LTE FDD Band 12, LTE FDD Band 13, LTE FDD Band 25, LTE FDD Band 26, LTE FDD Band 38, LTE FDD Band 41.

3. We were not recorded other points as values lower than limits.

4. $Power(EIRP) = P_{Mea} + P_{Ag} - P_{cl} + G_a$

5. $Margin = EIRP - Limit$



*LTE FDD Band 2_Channel Bandwidth 20MHz_QPSK_Low Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3715.0	-40.36	5.26	3.00	9.88	-35.74	-13.00	-22.74	H
5572.5	-44.20	6.11	3.00	11.36	-38.95	-13.00	-25.95	H
3715.0	-31.65	5.26	3.00	9.88	-27.03	-13.00	-14.03	V
5572.5	-36.31	6.11	3.00	11.36	-31.06	-13.00	-18.06	V

LTE FDD Band 2_Channel Bandwidth 20MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3720.0	-40.80	5.32	3.00	10.03	-36.09	-13.00	-23.09	H
5580.0	-43.06	6.19	3.00	11.41	-37.84	-13.00	-24.84	H
3720.0	-28.63	5.32	3.00	10.03	-23.92	-13.00	-10.92	V
5580.0	-33.24	6.19	3.00	11.41	-28.02	-13.00	-15.02	V

LTE FDD Band 2_Channel Bandwidth 20MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3800.0	-40.53	5.36	3.00	9.62	-36.27	-13.00	-23.27	H
5700.0	-44.99	6.24	3.00	11.46	-39.77	-13.00	-26.77	H
3800.0	-31.58	5.36	3.00	9.62	-27.32	-13.00	-14.32	V
5700.0	-35.89	6.24	3.00	11.46	-30.67	-13.00	-17.67	V

LTE FDD Band 2_Channel Bandwidth 20MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3715.0	-42.55	5.26	3.00	9.88	-37.93	-13.00	-24.93	H
5572.5	-49.96	6.11	3.00	11.36	-44.71	-13.00	-31.71	H
3715.0	-32.38	5.26	3.00	9.88	-27.76	-13.00	-14.76	V
5572.5	-39.76	6.11	3.00	11.36	-34.51	-13.00	-21.51	V

LTE FDD Band 2_Channel Bandwidth 20MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3720.0	-43.90	5.32	3.00	10.03	-39.19	-13.00	-26.19	H
5580.0	-47.22	6.19	3.00	11.41	-42.00	-13.00	-29.00	H
3720.0	-31.70	5.32	3.00	10.03	-26.99	-13.00	-13.99	V
5580.0	-38.65	6.19	3.00	11.41	-33.43	-13.00	-20.43	V

LTE FDD Band 2_Channel Bandwidth 20MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3800.0	-42.45	5.36	3.00	9.62	-38.19	-13.00	-25.19	H
5700.0	-48.47	6.24	3.00	11.46	-43.25	-13.00	-30.25	H
3800.0	-31.34	5.36	3.00	9.62	-27.08	-13.00	-14.08	V
5700.0	-41.30	6.24	3.00	11.46	-36.08	-13.00	-23.08	V



*LTE FDD Band 4_Channel Bandwidth 20MHz_QPSK_Low Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3440.0	-43.74	4.62	3.00	9.81	-38.55	-13.00	-25.55	H
5160.0	-47.96	5.94	3.00	10.86	-43.04	-13.00	-30.04	H
3440.0	-34.79	4.62	3.00	9.81	-29.60	-13.00	-16.60	V
5160.0	-39.84	5.94	3.00	10.86	-34.92	-13.00	-21.92	V

LTE FDD Band 4_Channel Bandwidth 20MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-40.33	4.63	3.00	9.84	-35.12	-13.00	-22.12	H
5197.5	-46.16	5.94	3.00	10.86	-41.24	-13.00	-28.24	H
3465.0	-36.73	4.63	3.00	9.84	-31.52	-13.00	-18.52	V
5197.5	-39.10	5.94	3.00	10.86	-34.18	-13.00	-21.18	V

LTE FDD Band 4_Channel Bandwidth 20MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.0	-41.32	4.65	3.00	9.9	-36.07	-13.00	-23.07	H
5235.0	-46.51	5.95	3.00	10.91	-41.55	-13.00	-28.55	H
3490.0	-34.80	4.65	3.00	9.9	-29.55	-13.00	-16.55	V
5235.0	-39.09	5.95	3.00	10.91	-34.13	-13.00	-21.13	V

LTE FDD Band 4_Channel Bandwidth 20MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3440.0	-43.74	4.62	3.00	9.81	-38.55	-13.00	-25.55	H
5160.0	-49.95	5.94	3.00	10.86	-45.03	-13.00	-32.03	H
3440.0	-37.88	4.62	3.00	9.81	-32.69	-13.00	-19.69	V
5160.0	-42.26	5.94	3.00	10.86	-37.34	-13.00	-24.34	V

LTE FDD Band 4_Channel Bandwidth 20MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-43.62	4.63	3.00	9.84	-38.41	-13.00	-25.41	H
5197.5	-51.65	5.94	3.00	10.86	-46.73	-13.00	-33.73	H
3465.0	-39.07	4.63	3.00	9.84	-33.86	-13.00	-20.86	V
5197.5	-41.31	5.94	3.00	10.86	-36.39	-13.00	-23.39	V

LTE FDD Band 4_Channel Bandwidth 20MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.0	-44.57	4.65	3.00	9.9	-39.32	-13.00	-26.32	H
5235.0	-48.23	5.95	3.00	10.91	-43.27	-13.00	-30.27	H
3490.0	-36.08	4.65	3.00	9.9	-30.83	-13.00	-17.83	V
5235.0	-42.92	5.95	3.00	10.91	-37.96	-13.00	-24.96	V



*LTE FDD Band 5_Channel Bandwidth 10MHz_QPSK_Low Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1658.00	-39.49	3.86	3.00	8.56	-34.79	-13.00	-21.79	H
2487.00	-44.62	4.29	3.00	6.98	-41.93	-13.00	-28.93	H
1658.00	-35.74	3.86	3.00	8.56	-31.04	-13.00	-18.04	V
2487.00	-36.91	4.29	3.00	6.98	-34.22	-13.00	-21.22	V

LTE FDD Band 5_Channel Bandwidth 10MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.00	-41.98	3.9	3.00	8.58	-37.30	-13.00	-24.30	H
2509.50	-47.33	4.32	3.00	6.8	-44.85	-13.00	-31.85	H
1673.00	-36.33	3.9	3.00	8.58	-31.65	-13.00	-18.65	V
2509.50	-39.51	4.32	3.00	6.8	-37.03	-13.00	-24.03	V

LTE FDD Band 5_Channel Bandwidth 10MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1688.00	-40.83	3.91	3.00	9.06	-35.68	-13.00	-22.68	H
2532.00	-46.19	4.32	3.00	6.65	-43.86	-13.00	-30.86	H
1688.00	-33.59	3.91	3.00	9.06	-28.44	-13.00	-15.44	V
2532.00	-38.47	4.32	3.00	6.65	-36.14	-13.00	-23.14	V

LTE FDD Band 5_Channel Bandwidth 10MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1658.00	-43.12	3.86	3.00	8.56	-38.42	-13.00	-25.42	H
2487.00	-47.61	4.29	3.00	6.98	-44.92	-13.00	-31.92	H
1658.00	-38.94	3.86	3.00	8.56	-34.24	-13.00	-21.24	V
2487.00	-42.59	4.29	3.00	6.98	-39.90	-13.00	-26.90	V

LTE FDD Band 5_Channel Bandwidth 10MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.00	-43.83	3.9	3.00	8.58	-39.15	-13.00	-26.15	H
2509.50	-47.86	4.32	3.00	6.8	-45.38	-13.00	-32.38	H
1673.00	-37.76	3.9	3.00	8.58	-33.08	-13.00	-20.08	V
2509.50	-39.06	4.32	3.00	6.8	-36.58	-13.00	-23.58	V

LTE FDD Band 5_Channel Bandwidth 10MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1688.00	-43.07	3.91	3.00	9.06	-37.92	-13.00	-24.92	H
2532.00	-49.14	4.32	3.00	6.65	-46.81	-13.00	-33.81	H
1688.00	-38.43	3.91	3.00	9.06	-33.28	-13.00	-20.28	V
2532.00	-42.12	4.32	3.00	6.65	-39.79	-13.00	-26.79	V



*LTE FDD Band 7_Channel Bandwidth 20MHz_QPSK_Low Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5020.0	-41.73	5.88	3.00	10.77	-36.84	-25.00	-11.84	H
7530.0	-47.67	7.12	3.00	12.26	-42.53	-25.00	-17.53	H
5020.0	-46.25	5.88	3.00	10.77	-41.36	-25.00	-16.36	V
7530.0	-41.19	7.12	3.00	12.26	-36.05	-25.00	-11.05	V

LTE FDD Band 7_Channel Bandwidth 20MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5070.0	-38.14	5.9	3.00	10.81	-33.23	-25.00	-8.23	H
7605.0	-45.56	7.19	3.00	12.32	-40.43	-25.00	-15.43	H
5070.0	-45.86	5.9	3.00	10.81	-40.95	-25.00	-15.95	V
7605.0	-41.65	7.19	3.00	12.32	-36.52	-25.00	-11.52	V

LTE FDD 7_Channel Bandwidth 20MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5120.0	-41.56	5.94	3.00	10.86	-36.64	-25.00	-11.64	H
7680.0	-47.38	7.25	3.00	12.98	-41.65	-25.00	-16.65	H
5120.0	-46.97	5.94	3.00	10.86	-42.05	-25.00	-17.05	V
7680.0	-42.34	7.25	3.00	12.98	-36.61	-25.00	-11.61	V

LTE FDD Band 7_Channel Bandwidth 20MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5020.0	-41.99	5.88	3.00	10.77	-37.10	-25.00	-12.10	H
7530.0	-46.52	7.12	3.00	12.26	-41.38	-25.00	-16.38	H
5020.0	-47.90	5.88	3.00	10.77	-43.01	-25.00	-18.01	V
7530.0	-40.45	7.12	3.00	12.26	-35.31	-25.00	-10.31	V

LTE FDD Band 7_Channel Bandwidth 20MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5070.0	-41.91	5.9	3.00	10.81	-37.00	-25.00	-12.00	H
7605.0	-49.95	7.19	3.00	12.32	-44.82	-25.00	-19.82	H
5070.0	-46.08	5.9	3.00	10.81	-41.17	-25.00	-16.17	V
7605.0	-43.01	7.19	3.00	12.32	-37.88	-25.00	-12.88	V

LTE FDD Band 7_Channel Bandwidth 20MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5120.0	-41.49	5.94	3.00	10.86	-36.57	-25.00	-11.57	H
7680.0	-46.72	7.25	3.00	12.98	-40.99	-25.00	-15.99	H
5120.0	-46.80	5.94	3.00	10.86	-41.88	-25.00	-16.88	V
7680.0	-42.67	7.25	3.00	12.98	-36.94	-25.00	-11.94	V



*LTE FDD Band 12_Channel Bandwidth 10MHz_QPSK_Low Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1408.00	-40.58	3.71	3.00	9.02	-35.27	-13.00	-22.27	H
2112.00	-46.11	4.22	3.00	8.64	-41.69	-13.00	-28.69	H
1408.00	-36.61	3.71	3.00	9.02	-31.30	-13.00	-18.30	V
2112.00	-37.59	4.22	3.00	8.64	-33.17	-13.00	-20.17	V

LTE FDD Band 12_Channel Bandwidth 10MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.00	-39.40	3.72	3.00	9.04	-34.08	-13.00	-21.08	H
2122.50	-46.94	4.23	3.00	8.6	-42.57	-13.00	-29.57	H
1415.00	-33.72	3.72	3.00	9.04	-28.40	-13.00	-15.40	V
2122.50	-39.13	4.23	3.00	8.6	-34.76	-13.00	-21.76	V

LTE FDD Band 12_Channel Bandwidth 10MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1422.00	-38.60	4.78	3.00	8.91	-34.47	-13.00	-21.47	H
2133.00	-44.57	4.25	3.00	8.26	-40.56	-13.00	-27.56	H
1422.00	-36.36	4.78	3.00	8.91	-32.23	-13.00	-19.23	V
2133.00	-37.29	4.25	3.00	8.26	-33.28	-13.00	-20.28	V

LTE FDD Band 12_Channel Bandwidth 10MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1408.00	-40.76	3.71	3.00	9.02	-35.45	-13.00	-22.45	H
2112.00	-47.57	4.22	3.00	8.64	-43.15	-13.00	-30.15	H
1408.00	-35.49	3.71	3.00	9.02	-30.18	-13.00	-17.18	V
2112.00	-39.41	4.22	3.00	8.64	-34.99	-13.00	-21.99	V

LTE FDD Band 12_Channel Bandwidth 10MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.00	-39.35	3.72	3.00	9.04	-34.03	-13.00	-21.03	H
2122.50	-44.48	4.23	3.00	8.6	-40.11	-13.00	-27.11	H
1415.00	-36.43	3.72	3.00	9.04	-31.11	-13.00	-18.11	V
2122.50	-36.75	4.23	3.00	8.6	-32.38	-13.00	-19.38	V

LTE FDD Band 12_Channel Bandwidth 10MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1422.00	-41.31	4.78	3.00	8.91	-37.18	-13.00	-24.18	H
2133.00	-45.14	4.25	3.00	8.26	-41.13	-13.00	-28.13	H
1422.00	-34.27	4.78	3.00	8.91	-30.14	-13.00	-17.14	V
2133.00	-36.83	4.25	3.00	8.26	-32.82	-13.00	-19.82	V



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

*LTE FDD Band 13_Channel Bandwidth 10MHz_QPSK_Middle Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.0	-60.93	4.99	3.00	11.12	-54.80	-40.00	-14.80	H
2346.0	-45.54	5.85	3.00	12.02	-39.37	-13.00	-26.37	H
1564.0	-59.03	4.99	3.00	11.12	-52.90	-40.00	-12.90	V
2346.0	-39.15	5.85	3.00	12.02	-32.98	-13.00	-19.98	V

LTE FDD Band 13_Channel Bandwidth 10MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.0	-58.82	4.99	3.00	11.12	-52.69	-40.00	-12.69	H
2346.0	-46.71	5.85	3.00	12.02	-40.54	-13.00	-27.54	H
1564.0	-60.06	4.99	3.00	11.12	-53.93	-40.00	-13.93	V
2346.0	-38.26	5.85	3.00	12.02	-32.09	-13.00	-19.09	V

LTE FDD Band 25_Channel Bandwidth 20MHz_QPSK_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3715.0	-39.09	5.26	3.00	9.88	-34.47	-13.00	-21.47	H
5572.5	-44.99	6.11	3.00	11.36	-39.74	-13.00	-26.74	H
3715.0	-28.79	5.26	3.00	9.88	-24.17	-13.00	-11.17	V
5572.5	-36.15	6.11	3.00	11.36	-30.90	-13.00	-17.90	V

LTE FDD Band 25_Channel Bandwidth 20MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3765.0	-39.46	5.32	3.00	10.03	-34.75	-13.00	-21.75	H
5647.5	-44.35	6.19	3.00	11.41	-39.13	-13.00	-26.13	H
3765.0	-29.84	5.32	3.00	10.03	-25.13	-13.00	-12.13	V
5647.5	-36.34	6.19	3.00	11.41	-31.12	-13.00	-18.12	V

LTE FDD Band 25_Channel Bandwidth 20MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3810.0	-39.46	5.36	3.00	9.62	-35.20	-13.00	-22.20	H
5715.0	-46.72	6.24	3.00	11.46	-41.50	-13.00	-28.50	H
3810.0	-28.72	5.36	3.00	9.62	-24.46	-13.00	-11.46	V
5715.0	-33.19	6.24	3.00	11.46	-27.97	-13.00	-14.97	V

LTE FDD Band 25_Channel Bandwidth 20MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3715.0	-42.63	5.26	3.00	9.88	-38.01	-13.00	-25.01	H
5572.5	-48.96	6.11	3.00	11.36	-43.71	-13.00	-30.71	H
3715.0	-34.32	5.26	3.00	9.88	-29.70	-13.00	-16.70	V
5572.5	-41.14	6.11	3.00	11.36	-35.89	-13.00	-22.89	V



**LTE FDD Band 25_Channel Bandwidth 20MHz_ 16QAM_ Middle Channel**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3765.0	-42.46	5.32	3.00	10.03	-37.75	-13.00	-24.75	H
5647.5	-47.97	6.19	3.00	11.41	-42.75	-13.00	-29.75	H
3765.0	-34.19	5.32	3.00	10.03	-29.48	-13.00	-16.48	V
5647.5	-38.04	6.19	3.00	11.41	-32.82	-13.00	-19.82	V

LTE FDD Band 25_Channel Bandwidth 20MHz_ 16QAM_ High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3810.0	-40.39	5.36	3.00	9.62	-36.13	-13.00	-23.13	H
5715.0	-47.12	6.24	3.00	11.46	-41.90	-13.00	-28.90	H
3810.0	-34.45	5.36	3.00	9.62	-30.19	-13.00	-17.19	V
5715.0	-38.28	6.24	3.00	11.46	-33.06	-13.00	-20.06	V

LTE FDD Band 26: 814-824MHz**LTE FDD Band 26_Channel Bandwidth 10MHz_ QPSK_ Middle Channel**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1638.0	-38.82	3.86	3.00	8.56	-34.12	-13.00	-21.12	H
2457.0	-45.37	4.29	3.00	6.98	-42.68	-13.00	-29.68	H
1638.0	-35.50	3.86	3.00	8.56	-30.80	-13.00	-17.80	V
2457.0	-39.57	4.29	3.00	6.98	-36.88	-13.00	-23.88	V

LTE FDD Band 26_Channel Bandwidth 10MHz_ 16QAM_ Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1638.0	-39.62	3.86	3.00	8.56	-34.92	-13.00	-21.92	H
2457.0	-45.18	4.29	3.00	6.98	-42.49	-13.00	-29.49	H
1638.0	-33.08	3.86	3.00	8.56	-28.38	-13.00	-15.38	V
2457.0	-36.10	4.29	3.00	6.98	-33.41	-13.00	-20.41	V

LTE FDD Band 26: 824-849MHz**LTE FDD Band 26_Channel Bandwidth 15MHz_ QPSK_ Low Channel**

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1663.0	-39.70	3.86	3.00	8.56	-35.00	-13.00	-22.00	H
2494.5	-44.62	4.29	3.00	6.98	-41.93	-13.00	-28.93	H
1663.0	-33.06	3.86	3.00	8.56	-28.36	-13.00	-15.36	V
2494.5	-36.01	4.29	3.00	6.98	-33.32	-13.00	-20.32	V

LTE FDD Band 26_Channel Bandwidth 15MHz_ QPSK_ Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.0	-38.62	3.90	3.00	8.58	-33.94	-13.00	-20.94	H
2509.5	-45.37	4.32	3.00	6.80	-42.89	-13.00	-29.89	H
1673.0	-33.80	3.90	3.00	8.58	-29.12	-13.00	-16.12	V
2509.5	-36.33	4.32	3.00	6.80	-33.85	-13.00	-20.85	V



*LTE FDD Band 26_Channel Bandwidth 15MHz_QPSK_High Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1683.0	-41.44	3.91	3.00	9.06	-36.29	-13.00	-23.29	H
2524.5	-45.12	4.32	3.00	6.65	-42.79	-13.00	-29.79	H
1683.0	-34.63	3.91	3.00	9.06	-29.48	-13.00	-16.48	V
2524.5	-36.07	4.32	3.00	6.65	-33.74	-13.00	-20.74	V

LTE FDD Band 26_Channel Bandwidth 15MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1663.0	-43.95	3.86	3.00	8.56	-39.25	-13.00	-26.25	H
2494.5	-46.29	4.29	3.00	6.98	-43.60	-13.00	-30.60	H
1663.0	-36.03	3.86	3.00	8.56	-31.33	-13.00	-18.33	V
2494.5	-42.21	4.29	3.00	6.98	-39.52	-13.00	-26.52	V

LTE FDD Band 26_Channel Bandwidth 15MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.0	-41.62	3.90	3.00	8.58	-36.94	-13.00	-23.94	H
2509.5	-49.44	4.32	3.00	6.80	-46.96	-13.00	-33.96	H
1673.0	-36.16	3.90	3.00	8.58	-31.48	-13.00	-18.48	V
2509.5	-39.12	4.32	3.00	6.80	-36.64	-13.00	-23.64	V

LTE FDD Band 26_Channel Bandwidth 15MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1683.0	-43.70	3.91	3.00	9.06	-38.55	-13.00	-25.55	H
2524.5	-47.76	4.32	3.00	6.65	-45.43	-13.00	-32.43	H
1683.0	-39.19	3.91	3.00	9.06	-34.04	-13.00	-21.04	V
2524.5	-40.53	4.32	3.00	6.65	-38.20	-13.00	-25.20	V



*LTE TDD Band 38_Channel Bandwidth 20MHz_QPSK_Low Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5160.0	-39.23	7.10	3.00	9.78	-36.55	-25.00	-11.55	H
7740.0	-47.38	8.32	3.00	10.86	-44.84	-25.00	-19.84	H
5160.0	-45.61	7.10	3.00	9.78	-42.93	-25.00	-17.93	V
7740.0	-41.03	8.32	3.00	10.86	-38.49	-25.00	-13.49	V

LTE TDD Band 38_Channel Bandwidth 20MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-40.02	7.18	3.00	9.88	-37.32	-25.00	-12.32	H
7785.0	-44.04	8.44	3.00	11.38	-41.10	-25.00	-16.10	H
5190.0	-45.83	7.18	3.00	9.88	-43.13	-25.00	-18.13	V
7785.0	-40.96	8.44	3.00	11.38	-38.02	-25.00	-13.02	V

LTE TDD Band 38_Channel Bandwidth 20MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-38.48	7.15	3.00	9.25	-36.38	-25.00	-11.38	H
7830.0	-44.92	8.36	3.00	11.43	-41.85	-25.00	-16.85	H
5220.0	-47.33	7.15	3.00	9.25	-45.23	-25.00	-20.23	V
7830.0	-40.61	8.36	3.00	11.43	-37.54	-25.00	-12.54	V

LTE TDD Band 38_Channel Bandwidth 20MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5160.0	-44.65	7.10	3.00	9.78	-41.97	-25.00	-16.97	H
7740.0	-47.92	8.32	3.00	10.86	-45.38	-25.00	-20.38	H
5160.0	-45.19	7.10	3.00	9.78	-42.51	-25.00	-17.51	V
7740.0	-40.32	8.32	3.00	10.86	-37.78	-25.00	-12.78	V

LTE TDD Band 38_Channel Bandwidth 20MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-43.18	7.18	3.00	9.88	-40.48	-25.00	-15.48	H
7785.0	-46.63	8.44	3.00	11.38	-43.69	-25.00	-18.69	H
5190.0	-46.00	7.18	3.00	9.88	-43.30	-25.00	-18.30	V
7785.0	-42.37	8.44	3.00	11.38	-39.43	-25.00	-14.43	V

LTE TDD Band 38_Channel Bandwidth 20MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-43.41	7.15	3.00	9.25	-41.31	-25.00	-16.31	H
7830.0	-47.43	8.36	3.00	11.43	-44.36	-25.00	-19.36	H
5220.0	-44.72	7.15	3.00	9.25	-42.62	-25.00	-17.62	V
7830.0	-41.95	8.36	3.00	11.43	-38.88	-25.00	-13.88	V



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

*LTE TDD Band 41_Channel Bandwidth 20MHz_QPSK_Low Channel*

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5012.0	-40.10	7.15	3.00	9.88	-37.37	-25.00	-12.37	H
7518.0	-45.74	8.36	3.00	11.36	-42.74	-25.00	-17.74	H
5012.0	-48.00	7.15	3.00	9.88	-45.27	-25.00	-20.27	V
7518.0	-41.76	8.36	3.00	11.36	-38.76	-25.00	-13.76	V

LTE TDD Band 41_Channel Bandwidth 20MHz_QPSK_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5186.0	-39.18	7.26	3.00	10.03	-36.41	-25.00	-11.41	H
7779.0	-47.11	8.48	3.00	11.41	-44.18	-25.00	-19.18	H
5186.0	-47.11	7.26	3.00	10.03	-44.34	-25.00	-19.34	V
7779.0	-42.87	8.48	3.00	11.41	-39.94	-25.00	-14.94	V

LTE TDD Band 41_Channel Bandwidth 20MHz_QPSK_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5360.0	-41.59	7.17	3.00	9.62	-39.14	-25.00	-14.14	H
8040.0	-44.32	8.39	3.00	11.46	-41.25	-25.00	-16.25	H
5360.0	-46.66	7.17	3.00	9.62	-44.21	-25.00	-19.21	V
8040.0	-40.78	8.39	3.00	11.46	-37.71	-25.00	-12.71	V

LTE TDD Band 41_Channel Bandwidth 20MHz_16QAM_Low Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5012.0	-41.05	7.15	3.00	9.88	-38.32	-25.00	-13.32	H
7518.0	-47.57	8.36	3.00	11.36	-44.57	-25.00	-19.57	H
5012.0	-45.60	7.15	3.00	9.88	-42.87	-25.00	-17.87	V
7518.0	-43.94	8.36	3.00	11.36	-40.94	-25.00	-15.94	V

LTE TDD Band 41_Channel Bandwidth 20MHz_16QAM_Middle Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5186.0	-44.32	7.26	3.00	10.03	-41.55	-25.00	-16.55	H
7779.0	-46.99	8.48	3.00	11.41	-44.06	-25.00	-19.06	H
5186.0	-46.08	7.26	3.00	10.03	-43.31	-25.00	-18.31	V
7779.0	-40.51	8.48	3.00	11.41	-37.58	-25.00	-12.58	V

LTE TDD Band 41_Channel Bandwidth 20MHz_16QAM_High Channel

Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5360.0	-41.28	7.17	3.00	9.62	-38.83	-25.00	-13.83	H
8040.0	-48.30	8.39	3.00	11.46	-45.23	-25.00	-20.23	H
5360.0	-45.81	7.17	3.00	9.62	-43.36	-25.00	-18.36	V
8040.0	-43.94	8.39	3.00	11.46	-40.87	-25.00	-15.87	V

Notes: All channel bandwidth were tested, the report recorded the worst data.







5 Test Setup Photos of the EUT

Pleaserefer to separated files for Test Setup Photos of the EUT.

6 External Photos of the EUT

Pleaserefer to separated files for External Photos of the EUT.

7 Internal Photos of the EUT

Pleaserefer to separated files for Internal Photos of the EUT.

*******End of Report*******

