

FCC TEST REPORT

(PART 27)

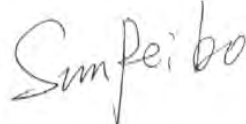
Applicant:	BARTEC GmbH
Address:	Max-Eyth-Str.16 , 97980 Bad Mergentheim, Germany

Manufacturer or Supplier:	BARTEC GmbH
Address:	Max-Eyth-Str.16 , 97980 Bad Mergentheim, Germany
Product:	Smartscanner / Smartphone
Brand Name:	BARTEC
Model Name:	SP9EX1/SC9EX1/SP9EX2/SC9EX2
FCC ID	TBUSX9EX
Date of tests	Jan. 02, 2024~ Jul. 26, 2024

The tests have been carried out according to the requirements of the following standard:

☒ FCC Part 27 ☒ ANSI/TIA/EIA-603-D
☒ FCC Part 2 ☒ ANSI/TIA/EIA-603-E ☒ ANSI C63.26-2015

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
 Date: Jul. 26, 2024	 Date: Jul. 26, 2024

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

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Test Report No.: PSU-QSU2312140113RF04

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSU2312140113RF04	Original release	Jul. 26, 2024

1 SUMMARY OF TEST RESULTS

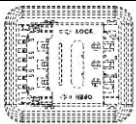
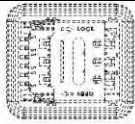
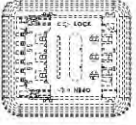
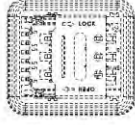
The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 27 & PART 2			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	TEST LAB*
§2.1046	Conducted Output Power	Compliance	A
§27.50(d)(4) §27.50(h)(2)	Equivalent Isotropically Radiated Power (Band 4) (Band 38) (Band 41) (Band 66)	Compliance	A
§2.1055 §27.54	Frequency Stability	Compliance	A/B
§2.1049	Occupied Bandwidth	Compliance	A/B
§2.1051 §27.53(h) §27.53(m)(4)(6)	Conducted Band Edge Measurements (Band 4) (Band 38) (Band 41) (Band 66)	Compliance	A/B
§2.1051 §27.53(h) §27.53(m)(4)(6)	Conducted Spurious Emissions (Band 4) (Band 38) (Band 41) (Band 66)	Compliance	A/B
§2.1053 §27.53(h) §27.53(m)(4)(6)	Radiated Spurious Emissions (Band 4) (Band 38) (Band 41) (Band 42) (Band 66)	Compliance	A
§27.50(d)(5)	Peak to average ratio	Compliance	A/B

* Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

1. In this report, the test EUT version is EVT, after the test is completed, the customer optimizes the product to DVT, and the final customer's shipment is PVT. For differences between EVT and DVT and PVT, please refer to the documentation provided by the customer (SC9EX1_SP9EX1 PCBA HW Release Note rev 2_0).
2. There are no differences on the PCBA between the Model SC9EX1 (FCC ID: TBUSX9EX) and the variants SP9EX1 (FCC ID: TBUSX9EX). All mounted components are the same. No functionality related to any radio interface is affected. The only difference is the presence of the barcode scanner module and the "bump" on the back cover that incorporates the barcode scanner module. Testing has been run on parent product SC9EX1 and the worst cases of power and RSE have been verified also on SP9EX1 variant. Only the worst-case data (SC9EX1) have been reported.

3. The devices BARTEC SP9EX1 Smartphone and BARTEC SP9EX2 Smartphone share the same hardware and software. The same applies for the devices BARTEC SC9EX1 Smartscanner and BARTEC SC9EX2 Smartscanner. The only difference are the hazardous area marking of the devices, see table for clarification.

BARTEC SP9EX1 Smartphone	BARTEC SP9EX2 Smartphone
BARTEC SP9EX1 Type: 17-S19P-****/***** Mfr: BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim, DE www.bartec.com  UL 24 ATEX 3153X II 1G Ex ia IIC T4 Ga II 2D Ex ia IIC T135°C Db IP64 IECEx UL 24.0004X Class I, Div 1, Groups A, B, C and D; Class II, Div 1, Groups E, F and G; Class III, T4 Zone 0, AEx ia IIC T4 Ga Zone 21, AEx ia IIC T135°C Db Zone 0, Ex ia IIC T4 Ga Zone 21, Ex ia IIC T135°C Db -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: 17-S120-0020/**** Utiliser uniquement la batterie BARTEC GmbH type: 17-S120-0020/**** INTRINSICALLY SAFE/SECURITÉ INTRINSÈQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.	BARTEC SP9EX2 Type: B7-S29P-****/***** Mfr: BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim, DE www.bartec.com  UL 24 ATEX xxxxx II 3G Ex ic IIC T4 Gc II 3D Ex ic IIC T135°C Dc IP64 IECEx UL 24.xxxxx Class I, Div 2, Groups A, B, C and D; Class II, Div 2, Groups E, F and G; Class III, T4 Zone 2, AEx ic IIC T4 Gc Zone 22, AEx ic IIC T135°C Dc Zone 2, Ex ic IIC T4 Gc Zone 22, Ex ic IIC T135°C Dc -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: B7-A220-0098/**** Utiliser uniquement la batterie BARTEC GmbH type: B7-A220-0098/**** INTRINSICALLY SAFE/SECURITÉ INTRINSÈQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.
BARTEC SC9EX1 Smartscanner	BARTEC SC9EX2 Smartscanner
BARTEC SC9EX1 Type: 17-S19C-****/***** Mfr: BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim, DE www.bartec.com  UL 24 ATEX 3153X II 1G Ex ia op is IIC T4 Ga II 2D Ex ia op is IIC T135°C Db IP64 IECEx UL 24.0004X Class I, Div 1, Groups A, B, C and D; Class II, Div 1, Groups E, F and G; Class III, T4 Zone 0, AEx ia op is IIC T4 Ga Zone 21, AEx ia op is IIC T135°C Db Zone 0, Ex ia op is IIC T4 Ga Zone 21, Ex ia op is IIC T135°C Db -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: 17-S120-0020/**** Utiliser uniquement la batterie BARTEC GmbH type: 17-S120-0020/**** INTRINSICALLY SAFE/SECURITÉ INTRINSÈQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.	BARTEC SC9EX2 Type: B7-S29C-****/***** Mfr: BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim, DE www.bartec.com  UL 24 ATEX xxxxx II 3G Ex ic op is IIC T4 Gc II 3D Ex ic op is IIC T135°C Dc IP64 IECEx UL 24.xxxxx Class I, Div 2, Groups A, B, C and D; Class II, Div 2, Groups E, F and G; Class III, T4 Zone 2, AEx ic op is IIC T4 Gc Zone 22, AEx ic op is IIC T135°C Dc Zone 2, Ex ic op is IIC T4 Gc Zone 22, Ex ic op is IIC T135°C Dc -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSS MFD: MONTHY reserved for logos of country approvals USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: B7-A220-0098/**** Utiliser uniquement la batterie BARTEC GmbH type: B7-A220-0098/**** INTRINSICALLY SAFE/SECURITÉ INTRINSÈQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.



Test Report No.: PSU-QSU2312140113RF04

***Test Lab Information Reference**

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province

Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

Lab B:

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

Lab Address:

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District
Shenzhen, Guangdong, People's Republic of China

Accredited Test Lab Cert 3939.01

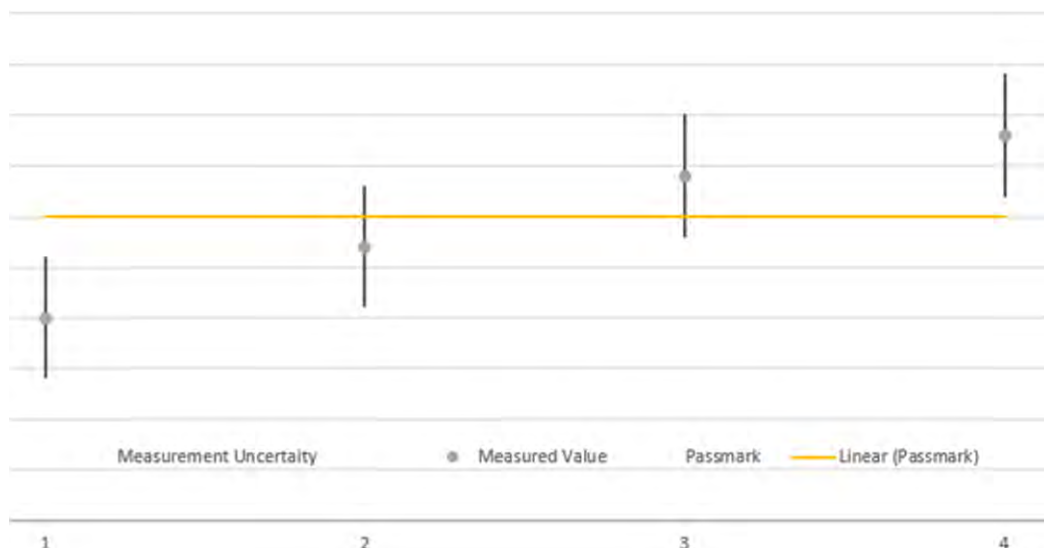
The FCC Site Registration No. is 525120; The Designation No. is CN1171.

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions & Radiated Power (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Band Edge Measurements	$\pm 4.70\text{dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

1.2 TEST SITE AND INSTRUMENTS

Lab A:

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,22	Aug.29,24
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
Vector Signal Generator	R&S	SMBV100B	102176	Feb.16,22	Feb.15,24
Vector Signal Generator	R&S	SMBV100B	102176	Feb.15,24	Feb.14,26
Signal Generator	R&S	SMB100A	182185	Feb.16,22	Feb.15,24
Signal Generator	R&S	SMB100A	182185	Feb.15,24	Feb.14,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-E MC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-E MC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Feb.25,22	Feb.24,24
EMI TEST Receiver	R&S	ESR26	101734	Feb.24,24	Feb.23,26
EMI TEST Receiver	R&S	ESW44	101973	Feb.25,22	Feb.24,24
EMI TEST Receiver	R&S	ESW44	101973	Feb.24,24	Feb.23,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.28,22	Feb.27,24
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.27,24	Feb.26,26
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,22	Aug.21,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.23,22	Feb.22,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.22,24	Feb.21,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,22	Aug.21,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,22	Feb.22,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,24	Feb.21,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.27,22	Jun.26,24
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.26,24	Jun.25,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	Oct.01,22	Sep.30,24
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.0	N/A	N/A	N/A

LE)		OM			
CABLE	R&S	W13.02	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.28,23	Apr.27,24
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.28,23	Apr.27,24
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.27,24	Apr.26,25
Temperature Chamber	votsch	VT4002	58566078100050	May.31,22	May.30,24
Temperature Chamber	votsch	VT4002	58566078100050	May.30,24	May.29,26

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 24 / 36 months and the calibrations are traceable to CEPREI/CHINA, GREGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
 3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

Lab B:

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 28,23	Mar. 27,24
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 27,24	Mar. 26,25
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.10,23	May.09,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.09,24	May.08,25
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.02,23	Sep.01,24
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Feb. 18,23	Feb. 17,24
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Feb. 17,24	Feb. 16,25
Horn Antenna	ETS-LINDGREN	3117	00168692	Feb. 18,23	Feb. 17,24
Horn Antenna	ETS-LINDGREN	3117	00168692	Feb. 17,24	Feb. 16,25
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.03, 23	Sep.02, 24
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 14,23	Feb. 13,24
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 13,24	Feb. 12,25
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 06,23	May. 05,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 05,24	May. 04,25
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.10,23	May.09,24
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.09,24	May.08,25
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 17,23	Feb.16,24

Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb.16,24	Feb.15,25
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn-CT0001143-1216	Nov. 14,23	Nov. 13,26
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 06,23	May. 05,24
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 05,24	May. 04,25
Power Meter	Anritsu	ML2495A	1506002	Feb. 14,23	Feb. 13,24
Power Meter	Anritsu	ML2495A	1506002	Feb. 13,24	Feb. 12,25
Power Sensor	Anritsu	MA2411B	1339352	Feb. 14,23	Feb. 13,24
Power Sensor	Anritsu	MA2411B	1339352	Feb. 13,24	Feb. 12,25
Temperature Chamber	ESPEC	SH-242	93000855	May. 06,23	May. 05,24
Temperature Chamber	ESPEC	SH-242	93000855	May. 05,24	May. 04,25
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 14,23	Feb. 13,24
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 13,24	Feb. 12,25
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.10,23	May.09,24
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.09,24	May.08,25
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
 3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Smartscanner / Smartphone	
BRAND NAME*	BARTEC	
MODEL NAME*	SP9EX1/SC9EX1/SP9EX2/SC9EX2	
NOMINAL VOLTAGE*	5.0V/9.0V/12.0Vdc (adapter) 3.2V/3.8V/4.2V/dc (battery)	
MODULATION TECHNOLOGY	LTE	QPSK, 16QAM, 64QAM, 256QAM
FREQUENCY RANGE	LTE Band 4 Channel Bandwidth: 1.4MHz	1710.7MHz ~ 1754.3MHz
	LTE Band 4 Channel Bandwidth: 3MHz	1711.5MHz ~ 1753.5MHz
	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~ 1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715MHz ~ 1750MHz
	LTE Band 4 Channel Bandwidth: 15MHz	1717.5MHz ~ 1747.5 MHz
	LTE Band 4 Channel Bandwidth: 20MHz	1720MHz ~ 1745MHz
	LTE Band 38 Channel Bandwidth: 5MHz	2572.5MHz ~ 2617.5MHz
	LTE Band 38 Channel Bandwidth: 10MHz	2575MHz ~ 2615MHz
	LTE Band 38 Channel Bandwidth: 15MHz	2577.5MHz ~ 2612.5MHz
	LTE Band 38 Channel Bandwidth: 20MHz	2580MHz ~ 2610MHz
	LTE Band 41 Channel Bandwidth: 5MHz	2498.5MHz ~ 2687.5MHz
	LTE Band 41 Channel Bandwidth: 10MHz	2501MHz ~ 2685MHz
	LTE Band 41 Channel Bandwidth: 15MHz	2503.5MHz ~ 2682.5MHz
	LTE Band 41 Channel Bandwidth: 20MHz	2506MHz ~ 2680MHz
	LTE Band 66 Channel Bandwidth: 1.4MHz	1710.7MHz ~ 1779.3MHz
	LTE Band 66 Channel Bandwidth: 3MHz	1711.5MHz ~ 1778.5MHz
	LTE Band 66 Channel Bandwidth: 5MHz	1712.5MHz ~ 1777.5MHz
	LTE Band 66 Channel Bandwidth: 10MHz	1715MHz ~ 1775MHz

	LTE Band 66 Channel Bandwidth: 15MHz	1717.5MHz ~ 1772.5MHz
	LTE Band 66 Channel Bandwidth: 20MHz	1720MHz ~ 1770MHz
MAX. EIRP POWER	LTE Band 4 Channel Bandwidth: 1.4MHz	153.46mW
	LTE Band 4 Channel Bandwidth: 3MHz	152.05mW
	LTE Band 4 Channel Bandwidth: 5MHz	151.01mW
	LTE Band 4 Channel Bandwidth: 10MHz	153.46mW
	LTE Band 4 Channel Bandwidth: 15MHz	151.71mW
	LTE Band 4 Channel Bandwidth: 20MHz	154.17mW
	LTE Band 38 Channel Bandwidth: 5MHz	206.54mW
	LTE Band 38 Channel Bandwidth: 10MHz	206.06mW
	LTE Band 38 Channel Bandwidth: 15MHz	204.64mW
	LTE Band 38 Channel Bandwidth: 20MHz	209.41mW
	LTE Band 41 Channel Bandwidth: 5MHz	209.41mW
	LTE Band 41 Channel Bandwidth: 10MHz	209.41mW
	LTE Band 41 Channel Bandwidth: 15MHz	207.97mW
	LTE Band 41 Channel Bandwidth: 20MHz	211.35mW
	LTE Band 66 Channel Bandwidth: 1.4MHz	186.64mW
	LTE Band 66 Channel Bandwidth: 3MHz	188.36mW
	LTE Band 66 Channel Bandwidth: 5MHz	188.8mW
	LTE Band 66 Channel Bandwidth: 10MHz	186.64mW
	LTE Band 66 Channel Bandwidth: 15MHz	187.07mW
	LTE Band 66 Channel Bandwidth: 20MHz	190.11mW
EMISSION DESIGNATOR	LTE Band 41 Channel Bandwidth: 5MHz	QPSK: 4M49G7D
		16QAM: 4M48W7D
		64QAM: 4M49W7D

EMISSION DESIGNATOR	LTE Band 41 Channel Bandwidth: 10MHz	QPSK: 8M96G7D
		16QAM: 8M95W7D
		64QAM: 8M97W7D
	LTE Band 41 Channel Bandwidth: 15MHz	QPSK: 13M4G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
	LTE Band 41 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D
EMISSION DESIGNATOR	LTE Band 66 Channel Bandwidth: 1.4MHz	QPSK: 1M09G7D
		16QAM: 1M09W7D
		64QAM: 1M09W7D
	LTE Band 66 Channel Bandwidth: 3MHz	QPSK: 2M69G7D
		16QAM: 2M69W7D
		64QAM: 2M69W7D
	LTE Band 66 Channel Bandwidth: 5MHz	QPSK: 4M49G7D
		16QAM: 4M49W7D
		64QAM: 4M48W7D
	LTE Band 66 Channel Bandwidth: 10MHz	QPSK: 8M97G7D
		16QAM: 8M96W7D
		64QAM: 8M97W7D
	LTE Band 66 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
	LTE Band 66 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D

ANTENNA TYPE*	Main TX/RX ANT0: IFA Antenna with -0.4dBi gain for LTE 4 IFA Antenna with 0.4dBi gain for LTE 66 IFA Antenna with 0.7dBi gain for LTE 38 IFA Antenna with 0.6dBi gain for LTE 41 RX ANT PRIM. MIMO ANT1: IFA Antenna with -2.8dBi gain for LTE 4 IFA Antenna with -2.5dBi gain for LTE 66 IFA Antenna with -0.2dBi gain for LTE 38 IFA Antenna with -0.2dBi gain for LTE 41 RX ANT SEC. ANT2: IFA Antenna with -2.8dBi gain for LTE 4 IFA Antenna with -2.7dBi gain for LTE 66 IFA Antenna with 0.3dBi gain for LTE 38 IFA Antenna with -0.8dBi gain for LTE 41 RX ANT SEC. MIMO ANT3: IFA Antenna with -1.4dBi gain for LTE 4 IFA Antenna with -1.3dBi gain for LTE 66 IFA Antenna with -0.1dBi gain for LTE 38 IFA Antenna with -0.2dBi gain for LTE 41
HW VERSION*	E
SW VERSION*	TWG1.240820.261
I/O PORTS*	Refer to user's manual
CABLE SUPPLIED*	USB cable: non-shielded cable, with w/o ferrite core, 0.8 meter
EXTREME TEMPERATURE*	-20°C-60 °C
EXTREME VOLTAGE*	3.2V – 4.2V

NOTE:

1. *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and four receivers.

MODULATION MODE	TX FUNCTION
LTE	1TX/4RX

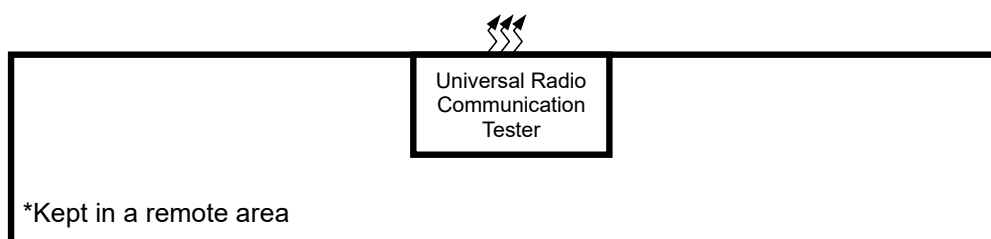
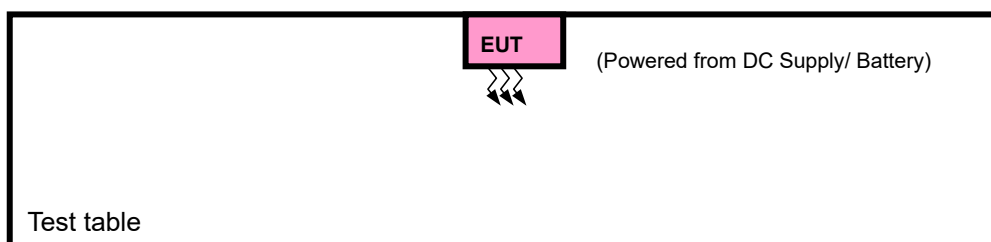
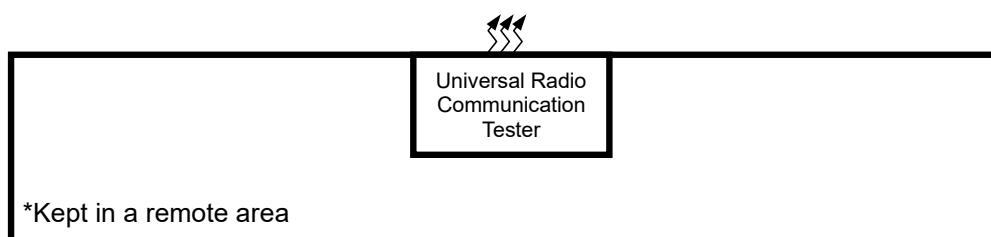
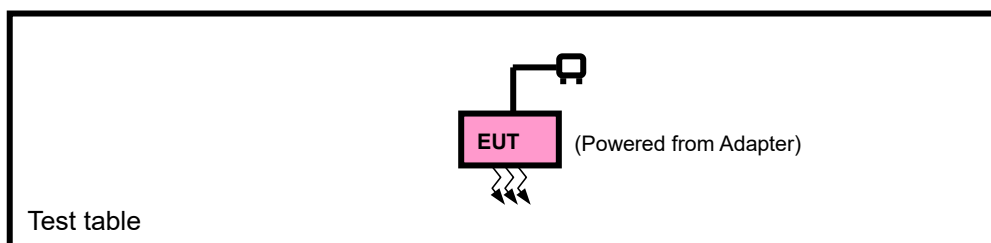
4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

5. List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Display(AMOLED)	Xiao Xin	N/A	XX611OLED-A002.1	N/A
Back cover	IV Techmould	N/A	N/A	N/A
Bezel	IV Techmould	N/A	N/A	N/A
Photo/Video Camera 1	Sunny Optical	N/A	F48N03A (Auto focus)	N/A
Photo/Video Camera 2	TrulyOpto	N/A	CSF208-B8BF-E(Fix focus)	N/A
CPU	Qualcomm	N/A	QCM6490	N/A
UFS	Kioxia	N/A	THGJFAT0T44BAIL	N/A
BT/WLAN Module	Murata	N/A	LBEE5QG2CX-830	N/A
NFC chipset	NXP	N/A	SN110TUK1	N/A
Battery	BARTEC	N/A	17-S1Z0-0020/****	4300 mAh, 3.68V
USB-C Cable	BARTEC	N/A	G7-A0Z0-0010	Length: 0.8m

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Adapter	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 0.8m;

2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter + USB Cable with LTE link
B	EUT + Battery with LTE link

LTE BAND 4 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. LTE Band 4 are covered by LTE Band 66, Because it is a subset of LTE Band 66 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 66.

3. Output power measurements were measured on QPSK,16QAM,64QAM and 256QAM modulations. And tests other than output power are performed only in worst-case QPSK and 16QAM,64QAM modes.

LTE BAND 38 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0RB Offset
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
		37850 to38150	37850, 38000, 38150	20MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset

Note:

1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. LTE Band 38 are covered by LTE Band 41, Because it is a subset of LTE Band 41 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 41

3. Output power measurements were measured on QPSK,16QAM,64QAM and 256QAM modulations. And tests other than output power are performed only in worst-case QPSK and 16QAM,64QAM modes.

LTE BAND 41 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset

A	BAND EDGE	39675 to 41565	39675	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
			41565	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		39700 to 41540	39700	10MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
			41540	10MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		39725 to 41515	39725	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
			41515	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		39750 to 41490	39750	20MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset
			41490	20MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
			39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
A	CONDUCTED EMISSION	39675 to 41565	40620	5MHz	QPSK	1 RB / 0 RB Offset
		39700 to 41540	39700, 40620, 41540	10MHz	QPSK	1 RB / 0 RB Offset
		39725 to 41515	40620	15MHz	QPSK	1 RB / 0 RB Offset
		39750 to 41490	40620	20MHz	QPSK	1 RB / 0 RB Offset

Note: 1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. Output power measurements were measured on QPSK, 16QAM, 64QAM and 256QAM modulations. And tests other than output power are performed only in worst-case QPSK and 16QAM, 64QAM modes.

LTE BAND 66 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	131979 to 132665	131979,132322,132665	1.4MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		131987 to 132657	131987,132322,132657	3MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		131997 to 132647	131997,132322,132647	5MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		132022 to 132622	132022,132322,132622	10MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		132047 to 132597	132047,132322,132597	15MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM,64QAM	100 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	131979 to 132665	131979,132322,132665	1.4MHz	QPSK,16QAM,64QAM	6 RB / 0 RB Offset
		131987 to 132657	131987,132322,132657	3MHz	QPSK,16QAM,64QAM	15 RB / 0 RB Offset
		131997 to 132647	131997,132322,132647	5MHz	QPSK,16QAM,64QAM	25 RB / 0 RB Offset
		132022 to 132622	132022,132322,132622	10MHz	QPSK,16QAM,64QAM	50 RB / 0 RB Offset
		132047 to 132597	132047,132322,132597	15MHz	QPSK,16QAM,64QAM	75 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM,64QAM	100 RB / 0 RB Offset
A	BAND EDGE	131979 to 132322	131979	1.4MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
		132322	132322	1.4MHz	QPSK,16QAM, 64QAM	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		131987 to 132657	131987	3MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
		132657	132657	3MHz	QPSK,16QAM, 64QAM	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		131997 to 132647	131997	5MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
		132647	132647	5MHz	QPSK,16QAM, 64QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		132022 to 132622	132022	10MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
		132622	132622	10MHz	QPSK,16QAM, 64QAM	1 RB / 49 RB Offset
						50 RB / 0 RB Offset

		132047 to 132597	132047	15MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
		132072 to 132572	132597	15MHz	QPSK,16QAM, 64QAM	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
			132072	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
A	CONDCUDED EMISSION	131979 to 132665	131979,132322,132665	1.4MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						1 RB / 0 RB Offset
		131987 to 132657	131987,132322,132657	3MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						1 RB / 0 RB Offset
		131997 to 132647	131997,132322,132647	5MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						1 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	132022 to 132622	132022,132322,132622	10MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		132047 to 132597	132047,132322,132597	15MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. Output power measurements were measured on QPSK,16QAM,64QAM and 256QAM modulations. And tests other than output power are performed only in worst-case QPSK and 16QAM,64QAM modes.

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.2V/ 3.8V/ 4.2V By Battery	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
CONDUCTED EMISSION	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu



Test Report No.: PSU-QSU2312140113RF04

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

NOTE: All test items have been performed and recorded as per the above standards.

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T - L_C$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively
(expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

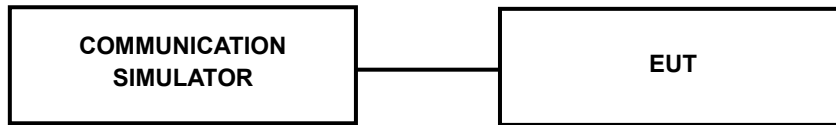
L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

CONDUCTED POWER MEASUREMENT:

- The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

LTE Band 4(ANT0)

Band/BW	Modulation	RB Size	RB Offset	Low CH 19957	Mid CH 20175	High CH 20393
				Frequency 1710.7 MHz	Frequency 1732.5 MHz	Frequency 1754.3 MHz
4/ 1.4	QPSK	1	0	22.13	22.01	22.13
		1	2	22.01	22.18	22.15
		1	5	22.17	22.15	22.26
		3	0	21.92	21.94	22.02
		3	1	21.98	22.13	22.03
		3	3	21.99	22.01	22.05
		6	0	21.18	21.19	21.37
	16QAM	1	0	21.48	21.39	21.47
		1	2	21.28	21.35	21.51
		1	5	21.38	21.44	21.71
		3	0	20.90	20.95	21.12
		3	1	20.93	21.10	21.15
		3	3	21.05	21.02	21.18
		6	0	20.12	20.20	20.45
	64QAM	1	0	20.08	20.32	20.39
		1	2	20.16	20.41	20.52
		1	5	20.41	20.42	20.55
		3	0	19.86	19.97	20.19
		3	1	20.02	20.06	20.29
		3	3	19.95	20.13	20.26
		6	0	19.14	19.31	19.44
	256QAM	1	0	18.95	19.30	19.32
		1	2	19.15	19.23	19.44
		1	5	19.36	19.33	19.46
		3	0	18.79	18.90	19.03
		3	1	18.82	19.03	19.16
		3	3	18.78	19.09	19.06
		6	0	18.11	18.31	18.33

Band/BW	Modulation	RB Size	RB Offset	Low CH 19965	Mid CH 20175	High CH 20385
				Frequency 1711.5 MHz	Frequency 1732.5 MHz	Frequency 1753.5 MHz
4/ 3	QPSK	1	0	22.05	22.06	22.22
		1	7	22.05	22.19	22.05
		1	14	22.20	22.16	22.14
		8	0	21.09	21.10	21.13
		8	3	21.25	21.31	21.20
		8	7	21.24	21.21	21.22
		15	0	21.18	21.24	21.26
	16QAM	1	0	21.52	21.41	21.55
		1	7	21.20	21.34	21.50
		1	14	21.40	21.54	21.62
		8	0	20.01	20.11	20.42
		8	3	20.12	20.23	20.42
		8	7	20.21	20.17	20.42
		15	0	20.25	20.17	20.35
	64QAM	1	0	20.14	20.37	20.46
		1	7	20.21	20.30	20.42
		1	14	20.50	20.42	20.63
		8	0	19.02	19.15	19.35
		8	3	19.23	19.20	19.37
		8	7	19.24	19.35	19.47
		15	0	19.15	19.30	19.36
	256QAM	1	0	18.99	19.31	19.33
		1	7	19.10	19.28	19.34
		1	14	19.35	19.38	19.45
		8	0	18.02	18.10	18.31
		8	3	18.16	18.19	18.42
		8	7	17.99	18.25	18.25
		15	0	18.12	18.29	18.36

Band/BW	Modulation	RB Size	RB Offset	Low CH 19975	Mid CH 20175	High CH 20375
				Frequency 1712.5 MHz	Frequency 1732.5 MHz	Frequency 1752.5 MHz
4/ 5	QPSK	1	0	22.10	22.08	22.19
		1	12	22.08	22.09	22.05
		1	24	22.09	22.19	22.18
		12	0	21.12	21.23	21.07
		12	6	21.12	21.23	21.25
		12	13	21.21	21.17	21.25
		25	0	21.15	21.16	21.29
	16QAM	1	0	21.43	21.47	21.49
		1	12	21.24	21.33	21.62
		1	24	21.40	21.52	21.66
		12	0	20.08	20.19	20.30
		12	6	20.10	20.27	20.34
		12	13	20.23	20.26	20.40
		25	0	20.18	20.16	20.34
	64QAM	1	0	20.08	20.28	20.48
		1	12	20.15	20.36	20.53
		1	24	20.44	20.56	20.62
		12	0	19.07	19.19	19.29
		12	6	19.19	19.32	19.45
		12	13	19.15	19.29	19.44
		25	0	19.14	19.22	19.44
	256QAM	1	0	19.01	19.25	19.40
		1	12	19.17	19.24	19.36
		1	24	19.43	19.38	19.49
		12	0	18.01	18.14	18.20
		12	6	18.02	18.25	18.42
		12	13	18.04	18.23	18.33
		25	0	18.15	18.29	18.25

Band/BW	Modulation	RB Size	RB Offset	Low CH 20000	Mid CH 20175	High CH 20350
				Frequency 1715 MHz	Frequency 1732.5 MHz	Frequency 1750 MHz
4/ 10	QPSK	1	0	22.02	22.07	22.18
		1	24	22.11	22.09	22.10
		1	49	22.15	22.26	22.21
		25	0	21.04	21.20	21.15
		25	12	21.23	21.19	21.33
		25	25	21.14	21.19	21.24
		50	0	21.20	21.20	21.33
	16QAM	1	0	21.47	21.46	21.50
		1	24	21.21	21.29	21.57
		1	49	21.33	21.48	21.61
		25	0	20.04	20.13	20.32
		25	12	20.17	20.18	20.34
		25	25	20.22	20.14	20.37
		50	0	20.14	20.15	20.36
	64QAM	1	0	20.14	20.36	20.47
		1	24	20.22	20.35	20.51
		1	49	20.49	20.43	20.49
		25	0	19.07	19.21	19.29
		25	12	19.26	19.31	19.36
		25	25	19.14	19.29	19.42
		50	0	19.16	19.23	19.41
	256QAM	1	0	18.96	19.26	19.31
		1	24	19.11	19.22	19.45
		1	49	19.38	19.42	19.41
		25	0	18.06	18.20	18.30
		25	12	18.12	18.16	18.33
		25	25	18.12	18.24	18.39
		50	0	18.07	18.25	18.23

Band/BW	Modulation	RB Size	RB Offset	Low CH 20025	Mid CH 20175	High CH 20325
				Frequency 1717.5 MHz	Frequency 1732.5 MHz	Frequency 1747.5 MHz
4/ 15	QPSK	1	0	22.09	22.02	22.21
		1	37	22.01	22.17	22.15
		1	74	22.08	22.17	22.16
		36	0	21.05	21.23	21.11
		36	19	21.20	21.21	21.23
		36	39	21.11	21.21	21.21
		75	0	21.15	21.14	21.35
	16QAM	1	0	21.41	21.45	21.51
		1	37	21.24	21.35	21.58
		1	74	21.39	21.45	21.61
		36	0	20.13	20.11	20.41
		36	19	20.22	20.27	20.38
		36	39	20.19	20.21	20.39
		75	0	20.21	20.22	20.46
	64QAM	1	0	20.07	20.38	20.39
		1	37	20.21	20.42	20.47
		1	74	20.51	20.51	20.51
		36	0	19.04	19.21	19.36
		36	19	19.13	19.24	19.36
		36	39	19.14	19.30	19.48
		75	0	19.14	19.31	19.32
	256QAM	1	0	18.96	19.19	19.35
		1	37	19.14	19.18	19.31
		1	74	19.41	19.32	19.45
		36	0	18.05	18.08	18.31
		36	19	18.06	18.24	18.34
		36	39	18.06	18.23	18.26
		75	0	18.07	18.29	18.30

Band/BW	Modulation	RB Size	RB Offset	Low CH 20050	Mid CH 20175	High CH 20300
				Frequency 1720 MHz	Frequency 1732.5 MHz	Frequency 1745 MHz
4/ 20	QPSK	1	0	22.17	22.14	22.25
		1	50	22.16	22.21	22.18
		1	99	22.22	22.27	22.28
		50	0	21.16	21.24	21.21
		50	25	21.27	21.32	21.34
		50	50	21.25	21.25	21.31
		100	0	21.24	21.25	21.41
	16QAM	1	0	21.54	21.50	21.57
		1	50	21.33	21.44	21.63
		1	99	21.47	21.59	21.74
		50	0	20.16	20.23	20.43
		50	25	20.25	20.31	20.46
		50	50	20.28	20.29	20.51
		100	0	20.26	20.28	20.48
	64QAM	1	0	20.20	20.42	20.52
		1	50	20.24	20.44	20.57
		1	99	20.53	20.57	20.64
		50	0	19.16	19.26	19.44
		50	25	19.27	19.35	19.49
		50	50	19.25	19.37	19.52
		100	0	19.28	19.35	19.47
	256QAM	1	0	19.07	19.34	19.45
		1	50	19.18	19.31	19.46
		1	99	19.45	19.45	19.51
		50	0	18.09	18.22	18.35
		50	25	18.17	18.30	18.44
		50	50	18.13	18.30	18.40
		100	0	18.16	18.34	18.37

LTE Band 38 (ANT0)

Band/BW	Modulation	RB Size	RB Offset	Low CH (37775)	Low Mid CH (38000)	Mid CH (38225)
				Frequency (2572.5)MHz	Frequency (2595)MHz	Frequency (2617.5)MHz
38/ 5	QPSK	1	0	22.45	22.27	22.36
		1	12	22.27	22.20	22.36
		1	24	22.13	22.15	22.21
		12	0	21.52	21.30	21.33
		12	6	21.41	21.35	21.32
		12	13	21.28	21.27	21.35
		25	0	21.30	21.16	21.35
	16QAM	1	0	21.50	21.45	21.38
		1	12	21.43	21.41	21.51
		1	24	21.26	21.37	21.39
		12	0	20.42	20.42	20.47
		12	6	20.36	20.30	20.47
		12	13	20.29	20.29	20.31
		25	0	20.41	20.21	20.39
	64QAM	1	0	20.08	20.01	20.40
		1	12	20.00	19.93	19.99
		1	24	19.93	19.84	19.94
		12	0	19.52	19.38	19.44
		12	6	19.34	19.33	19.41
		12	13	19.25	19.33	19.36
		25	0	19.40	19.24	19.41
	256QAM	1	0	18.98	18.90	19.21
		1	12	18.91	18.81	18.84
		1	24	18.73	18.83	18.75
		12	0	18.23	18.18	18.23
		12	6	18.10	18.11	18.19
		12	13	18.04	18.12	18.21
		25	0	18.14	18.23	18.26

Band/BW	Modulation	RB Size	RB Offset	Low CH (37800)	Low Mid CH (38000)	Mid CH (38200)
				Frequency (2575)MHz	Frequency (2595)MHz	Frequency (2615)MHz
38/ 10	QPSK	1	0	22.44	22.25	22.36
		1	24	22.35	22.19	22.22
		1	49	22.22	22.15	22.30
		25	0	21.45	21.38	21.33
		25	12	21.33	21.34	21.39
		25	25	21.31	21.22	21.28
		50	0	21.41	21.25	21.27
	16QAM	1	0	21.62	21.49	21.44
		1	24	21.43	21.44	21.44
		1	49	21.31	21.33	21.36
		25	0	20.50	20.41	20.36
		25	12	20.42	20.32	20.38
		25	25	20.24	20.20	20.30
		50	0	20.29	20.25	20.40
	64QAM	1	0	20.19	20.13	20.35
		1	24	20.02	19.93	20.02
		1	49	19.95	19.92	20.00
		25	0	19.52	19.38	19.41
		25	12	19.35	19.21	19.43
		25	25	19.28	19.28	19.33
		50	0	19.33	19.35	19.42
	256QAM	1	0	19.04	18.93	19.20
		1	24	18.86	18.85	18.90
		1	49	18.76	18.85	18.65
		25	0	18.26	18.25	18.28
		25	12	18.09	18.19	18.19
		25	25	18.12	18.11	18.14
		50	0	18.26	18.19	18.22

Band/BW	Modulation	RB Size	RB Offset	Low CH (37825)	Low Mid CH (38000)	Mid CH (38175)
				Frequency (2577.5)MHz	Frequency (2595)MHz	Frequency (2612.5)MHz
38/ 15	QPSK	1	0	22.41	22.24	22.31
		1	37	22.26	22.25	22.32
		1	74	22.16	22.19	22.24
		36	0	21.43	21.31	21.38
		36	19	21.37	21.27	21.35
		36	39	21.19	21.22	21.30
		75	0	21.30	21.16	21.39
	16QAM	1	0	21.57	21.39	21.48
		1	37	21.34	21.33	21.49
		1	74	21.34	21.40	21.42
		36	0	20.41	20.40	20.38
		36	19	20.43	20.30	20.48
		36	39	20.27	20.20	20.38
		75	0	20.31	20.29	20.42
	64QAM	1	0	20.17	20.00	20.37
		1	37	20.12	19.98	19.90
		1	74	19.87	19.95	19.98
		36	0	19.50	19.34	19.32
		36	19	19.38	19.35	19.40
		36	39	19.25	19.25	19.39
		75	0	19.32	19.31	19.33
	256QAM	1	0	18.92	18.86	19.28
		1	37	18.92	18.81	18.84
		1	74	18.68	18.80	18.79
		36	0	18.25	18.25	18.17
		36	19	18.13	18.08	18.21
		36	39	18.01	18.18	18.24
		75	0	18.24	18.20	18.32

Band/BW	Modulation	RB Size	RB Offset	Low CH (37850)	Low Mid CH (38000)	Mid CH (38150)
				Frequency (2580)MHz	Frequency (2595)MHz	Frequency (2610)MHz
38/ 20	QPSK	1	0	22.51	22.36	22.39
		1	50	22.41	22.30	22.37
		1	99	22.28	22.27	22.31
		50	0	21.53	21.40	21.46
		50	25	21.42	21.36	21.44
		50	50	21.32	21.28	21.42
		100	0	21.43	21.29	21.41
	16QAM	1	0	21.64	21.52	21.49
		1	50	21.47	21.48	21.52
		1	99	21.38	21.44	21.48
		50	0	20.56	20.45	20.48
		50	25	20.46	20.36	20.51
		50	50	20.36	20.35	20.44
		100	0	20.43	20.36	20.46
	64QAM	1	0	20.23	20.14	20.42
		1	50	20.13	20.03	20.03
		1	99	19.99	19.98	20.01
		50	0	19.56	19.45	19.45
		50	25	19.44	19.36	19.49
		50	50	19.37	19.34	19.47
		100	0	19.44	19.37	19.46
	256QAM	1	0	19.07	18.98	19.33
		1	50	18.99	18.92	18.94
		1	99	18.77	18.86	18.80
		50	0	18.36	18.30	18.29
		50	25	18.23	18.20	18.30
		50	50	18.14	18.21	18.25
		100	0	18.28	18.25	18.35

LTE Band 41(ANT0)

Band/BW	Modulation	RB Size	RB Offset	Low CH (39675)	Mid CH (40620)	High CH (41565)
				Frequency (2498.5)MHz	Frequency (2593)MHz	Frequency (2687.5)MHz
41/ 5	QPSK	1	0	22.35	22.59	22.54
		1	12	22.30	22.41	22.26
		1	24	22.18	22.61	22.31
		12	0	21.50	21.57	21.42
		12	6	21.45	21.63	21.49
		12	13	21.41	21.48	21.35
		25	0	21.57	21.57	21.50
	16QAM	1	0	21.43	21.55	21.41
		1	12	21.42	21.34	21.24
		1	24	21.14	21.40	21.31
		12	0	20.53	20.57	20.46
		12	6	20.48	20.54	20.41
		12	13	20.39	20.56	20.36
		25	0	20.48	20.63	20.52
	64QAM	1	0	20.09	20.16	20.20
		1	12	20.09	20.15	20.12
		1	24	20.03	20.08	19.90
		12	0	19.56	19.66	19.46
		12	6	19.51	19.55	19.49
		12	13	19.44	19.62	19.45
		25	0	19.50	19.59	19.49
	256QAM	1	0	18.84	18.91	19.03
		1	12	18.91	19.07	18.85
		1	24	18.88	18.87	18.74
		12	0	18.31	18.48	18.39
		12	6	18.43	18.40	18.30
		12	13	18.42	18.44	18.25
		25	0	18.41	18.38	18.42

Band/BW	Modulation	RB Size	RB Offset	Low CH (39700)	Mid CH (40620)	High CH (41540)
				Frequency (2501)MHz	Frequency (2593)MHz	Frequency (2685)MHz
41/ 10	QPSK	1	0	22.30	22.61	22.58
		1	24	22.21	22.37	22.28
		1	49	22.10	22.58	22.19
		25	0	21.61	21.60	21.42
		25	12	21.50	21.60	21.42
		25	25	21.44	21.56	21.29
		50	0	21.45	21.58	21.40
	16QAM	1	0	21.44	21.61	21.41
		1	24	21.40	21.33	21.34
		1	49	21.22	21.38	21.21
		25	0	20.53	20.64	20.43
		25	12	20.52	20.54	20.38
		25	25	20.39	20.64	20.39
		50	0	20.52	20.63	20.52
	64QAM	1	0	20.12	20.19	20.23
		1	24	20.01	20.21	20.12
		1	49	19.93	20.12	19.90
		25	0	19.64	19.73	19.52
		25	12	19.62	19.61	19.53
		25	25	19.55	19.69	19.44
		50	0	19.52	19.58	19.53
	256QAM	1	0	18.87	18.94	19.05
		1	24	18.93	19.07	18.86
		1	49	18.85	18.93	18.70
		25	0	18.36	18.59	18.31
		25	12	18.42	18.41	18.22
		25	25	18.46	18.48	18.36
		50	0	18.49	18.46	18.37

Band/BW	Modulation	RB Size	RB Offset	Low CH (39725)	Mid CH (40620)	High CH (41515)
				Frequency (2503.5)MHz	Frequency (2593)MHz	Frequency (2682.5)MHz
41/ 15	QPSK	1	0	22.38	22.58	22.48
		1	37	22.30	22.34	22.32
		1	74	22.19	22.50	22.19
		36	0	21.51	21.59	21.45
		36	19	21.54	21.50	21.37
		36	39	21.37	21.52	21.33
		75	0	21.58	21.55	21.47
	16QAM	1	0	21.44	21.50	21.48
		1	37	21.40	21.41	21.26
		1	74	21.17	21.39	21.32
		36	0	20.47	20.68	20.46
		36	19	20.49	20.61	20.46
		36	39	20.49	20.51	20.45
		75	0	20.55	20.60	20.47
	64QAM	1	0	20.15	20.21	20.11
		1	37	20.10	20.15	20.05
		1	74	20.03	20.11	19.88
		36	0	19.62	19.69	19.57
		36	19	19.55	19.55	19.46
		36	39	19.57	19.65	19.38
		75	0	19.49	19.64	19.46
	256QAM	1	0	18.94	18.98	19.03
		1	37	18.95	19.00	18.90
		1	74	18.82	18.97	18.66
		36	0	18.32	18.48	18.25
		36	19	18.47	18.47	18.31
		36	39	18.36	18.46	18.27
		75	0	18.41	18.41	18.40

Band/BW	Modulation	RB Size	RB Offset	Low CH (39750)	Mid CH (40620)	High CH (41490)
				Frequency (2506)MHz	Frequency (2593)MHz	Frequency (2680)MHz
41/ 20	QPSK	1	0	22.42	22.65	22.61
		1	50	22.34	22.49	22.41
		1	99	22.20	22.63	22.34
		50	0	21.63	21.70	21.52
		50	25	21.56	21.64	21.50
		50	50	21.47	21.62	21.44
		100	0	21.59	21.63	21.51
	16QAM	1	0	21.53	21.65	21.49
		1	50	21.43	21.47	21.36
		1	99	21.28	21.48	21.33
		50	0	20.61	20.70	20.55
		50	25	20.60	20.68	20.50
		50	50	20.51	20.65	20.49
		100	0	20.56	20.73	20.57
	64QAM	1	0	20.19	20.22	20.25
		1	50	20.14	20.23	20.13
		1	99	20.06	20.20	20.02
		50	0	19.65	19.79	19.60
		50	25	19.66	19.63	19.57
		50	50	19.58	19.75	19.51
		100	0	19.60	19.70	19.59
	256QAM	1	0	18.99	19.03	19.11
		1	50	19.03	19.09	18.92
		1	99	18.90	18.99	18.80
		50	0	18.45	18.61	18.40
		50	25	18.52	18.51	18.36
		50	50	18.48	18.53	18.37
		100	0	18.51	18.51	18.47

LTE Band 66(ANT0)

Band/BW	Modulation	RB Size	RB Offset	Low CH 131979	Mid CH 132322	High CH 132665
				Frequency 1710.7MHz	Frequency 1745MHz	Frequency 1779.3MHz
66/ 1.4	QPSK	1	0	22.08	22.21	22.22
		1	2	21.99	22.17	22.30
		1	5	22.12	22.31	22.26
		3	0	21.86	21.93	22.15
		3	1	21.87	21.93	21.93
		3	3	21.99	22.18	22.12
		6	0	21.16	21.22	21.09
	16QAM	1	0	21.37	21.44	21.45
		1	2	21.44	21.44	21.57
		1	5	21.42	21.47	21.58
		3	0	20.88	21.04	21.04
		3	1	20.93	21.07	21.29
		3	3	21.12	21.10	21.26
		6	0	20.13	20.37	20.35
	64QAM	1	0	20.24	20.38	20.53
		1	2	20.28	20.40	20.39
		1	5	20.41	20.51	20.54
		3	0	19.92	20.18	20.20
		3	1	19.95	20.22	20.24
		3	3	19.96	20.29	20.26
		6	0	19.26	19.34	19.27
	256QAM	1	0	19.28	19.45	19.45
		1	2	19.19	19.40	19.31
		1	5	19.36	19.44	19.50
		3	0	18.02	18.34	18.31
		3	1	18.06	18.39	18.35
		3	3	18.14	18.27	18.28
		6	0	18.19	18.19	18.12

Band/BW	Modulation	RB Size	RB Offset	Low CH 131987	Mid CH 132322	High CH 132657
				Frequency 1711.5MHz	Frequency 1745MHz	Frequency 1778.5MHz
66/ 3	QPSK	1	0	21.99	22.24	22.22
		1	7	21.92	22.20	22.22
		1	14	22.08	22.35	22.31
		8	0	20.92	21.07	21.20
		8	3	21.09	21.17	21.11
		8	7	21.11	21.38	21.32
		15	0	21.18	21.25	21.10
	16QAM	1	0	21.41	21.47	21.43
		1	7	21.37	21.57	21.61
		1	14	21.36	21.45	21.52
		8	0	20.02	20.24	20.29
		8	3	20.19	20.28	20.50
		8	7	20.20	20.37	20.36
		15	0	20.18	20.39	20.37
	64QAM	1	0	20.30	20.52	20.43
		1	7	20.34	20.37	20.52
		1	14	20.35	20.57	20.50
		8	0	19.13	19.46	19.29
		8	3	19.23	19.38	19.43
		8	7	19.19	19.42	19.41
		15	0	19.27	19.32	19.24
	256QAM	1	0	19.26	19.44	19.41
		1	7	19.27	19.28	19.27
		1	14	19.30	19.46	19.38
		8	0	18.03	18.33	18.31
		8	3	18.08	18.34	18.26
		8	7	18.17	18.36	18.36
		15	0	18.09	18.24	18.15

Band/BW	Modulation	RB Size	RB Offset	Low CH 131997	Mid CH 132322	High CH 132647
				Frequency 1712.5MHz	Frequency 1745MHz	Frequency 1777.5MHz
66/ 5	QPSK	1	0	22.01	22.23	22.16
		1	12	22.05	22.11	22.31
		1	24	22.14	22.36	22.31
		12	0	21.02	21.12	21.33
		12	6	21.08	21.20	21.12
		12	13	21.22	21.26	21.31
		25	0	21.24	21.20	21.16
	16QAM	1	0	21.46	21.51	21.42
		1	12	21.38	21.54	21.52
		1	24	21.44	21.50	21.51
		12	0	20.00	20.18	20.30
		12	6	20.19	20.35	20.48
		12	13	20.18	20.27	20.46
		25	0	20.17	20.26	20.40
	64QAM	1	0	20.34	20.40	20.45
		1	12	20.33	20.51	20.49
		1	24	20.37	20.54	20.43
		12	0	19.09	19.47	19.30
		12	6	19.14	19.46	19.33
		12	13	19.21	19.43	19.39
		25	0	19.26	19.33	19.33
	256QAM	1	0	19.26	19.40	19.35
		1	12	19.21	19.27	19.27
		1	24	19.27	19.46	19.45
		12	0	17.98	18.38	18.25
		12	6	18.12	18.31	18.35
		12	13	18.12	18.28	18.25
		25	0	18.10	18.29	18.16

Band/BW	Modulation	RB Size	RB Offset	Low CH 132022	Mid CH 132322	High CH 132622
				Frequency 1715MHz	Frequency 1745MHz	Frequency 1775MHz
66/ 10	QPSK	1	0	21.97	22.28	22.19
		1	24	22.01	22.20	22.18
		1	49	22.01	22.31	22.21
		25	0	21.04	21.04	21.27
		25	12	21.06	21.11	21.18
		25	25	21.18	21.24	21.29
		50	0	21.14	21.17	21.19
	16QAM	1	0	21.40	21.43	21.45
		1	24	21.32	21.51	21.52
		1	49	21.40	21.53	21.58
		25	0	19.98	20.21	20.24
		25	12	20.13	20.33	20.47
		25	25	20.24	20.26	20.47
		50	0	20.12	20.38	20.35
	64QAM	1	0	20.34	20.43	20.48
		1	24	20.26	20.47	20.46
		1	49	20.34	20.59	20.57
		25	0	19.09	19.45	19.42
		25	12	19.16	19.48	19.42
		25	25	19.22	19.35	19.41
		50	0	19.15	19.36	19.29
	256QAM	1	0	19.32	19.49	19.37
		1	24	19.14	19.34	19.27
		1	49	19.36	19.55	19.38
		25	0	18.12	18.40	18.29
		25	12	18.10	18.32	18.31
		25	25	18.23	18.37	18.25
		50	0	18.15	18.19	18.22

Band/BW	Modulation	RB Size	RB Offset	Low CH 132047	Mid CH 132322	High CH 132597
				Frequency 1717.5 MHz	Frequency 1745MHz	Frequency 1772.5 MHz
66/ 15	QPSK	1	0	22.05	22.31	22.19
		1	37	22.02	22.06	22.31
		1	74	22.10	22.31	22.32
		36	0	20.95	21.06	21.21
		36	19	21.07	21.21	21.13
		36	39	21.09	21.38	21.24
		75	0	21.17	21.23	21.11
	16QAM	1	0	21.41	21.37	21.50
		1	37	21.35	21.51	21.61
		1	74	21.39	21.52	21.55
		36	0	19.98	20.26	20.31
		36	19	20.11	20.36	20.54
		36	39	20.30	20.28	20.49
		75	0	20.20	20.28	20.32
	64QAM	1	0	20.24	20.45	20.45
		1	37	20.36	20.39	20.53
		1	74	20.42	20.56	20.49
		36	0	19.12	19.36	19.38
		36	19	19.23	19.52	19.30
		36	39	19.27	19.37	19.44
		75	0	19.29	19.34	19.36
	256QAM	1	0	19.19	19.37	19.42
		1	37	19.23	19.36	19.28
		1	74	19.32	19.53	19.41
		36	0	18.10	18.44	18.28
		36	19	18.07	18.40	18.31
		36	39	18.20	18.24	18.34
		75	0	18.06	18.27	18.19

Band/BW	Modulation	RB Size	RB Offset	Low CH 132072	Mid CH 132322	High CH 132572
				Frequency 1720MHz	Frequency 1745MHz	Frequency 1770MHz
66/ 20	QPSK	1	0	22.12	22.35	22.24
		1	50	22.14	22.21	22.33
		1	99	22.16	22.39	22.34
		50	0	21.06	21.19	21.34
		50	25	21.19	21.25	21.23
		50	50	21.24	21.39	21.37
		100	0	21.25	21.28	21.24
	16QAM	1	0	21.50	21.52	21.53
		1	50	21.47	21.58	21.64
		1	99	21.45	21.60	21.61
		50	0	20.11	20.31	20.32
		50	25	20.22	20.37	20.56
		50	50	20.32	20.39	20.51
		100	0	20.25	20.40	20.46
	64QAM	1	0	20.36	20.53	20.57
		1	50	20.39	20.52	20.54
		1	99	20.49	20.63	20.58
		50	0	19.20	19.48	19.43
		50	25	19.26	19.53	19.44
		50	50	19.29	19.50	19.53
		100	0	19.30	19.47	19.39
	256QAM	1	0	19.33	19.50	19.46
		1	50	19.29	19.41	19.41
		1	99	19.39	19.56	19.51
		50	0	18.13	18.45	18.33
		50	25	18.18	18.45	18.39
		50	50	18.27	18.38	18.39
		100	0	18.20	18.32	18.25

EIRP

LTE BAND 4(ANT0)

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	22.17	-0.4	21.77	150.31	1
20175	1732.5	22.18	-0.4	21.78	150.66	1
20393	1754.3	22.26	-0.4	21.86	153.46	1

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	21.48	-0.4	21.08	128.23	1
20175	1732.5	21.44	-0.4	21.04	127.06	1
20393	1754.3	21.71	-0.4	21.31	135.21	1

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	20.41	-0.4	20.01	100.23	1
20175	1732.5	20.42	-0.4	20.02	100.46	1
20393	1754.3	20.55	-0.4	20.15	103.51	1

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	19.36	-0.4	18.96	78.7	1
20175	1732.5	19.33	-0.4	18.93	78.16	1
20393	1754.3	19.46	-0.4	19.06	80.54	1

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	22.2	-0.4	21.8	151.36	1
20175	1732.5	22.19	-0.4	21.79	151.01	1
20385	1753.5	22.22	-0.4	21.82	152.05	1

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	21.52	-0.4	21.12	129.42	1
20175	1732.5	21.54	-0.4	21.14	130.02	1
20385	1753.5	20.35	-0.4	19.95	98.86	1

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	20.5	-0.4	20.1	102.33	1
20175	1732.5	20.42	-0.4	20.02	100.46	1
20385	1753.5	20.63	-0.4	20.23	105.44	1

CHANNEL BANDWIDTH: 3MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	19.35	-0.4	18.95	78.52	1
20175	1732.5	19.38	-0.4	18.98	79.07	1
20385	1753.5	19.45	-0.4	19.05	80.35	1

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	22.1	-0.4	21.7	147.91	1
20175	1732.5	22.19	-0.4	21.79	151.01	1
20375	1752.5	22.19	-0.4	21.79	151.01	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	21.43	-0.4	21.03	126.77	1
20175	1732.5	21.52	-0.4	21.12	129.42	1
20375	1752.5	21.66	-0.4	21.26	133.66	1

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	20.44	-0.4	20.04	100.93	1
20175	1732.5	20.56	-0.4	20.16	103.75	1
20375	1752.5	20.62	-0.4	20.22	105.2	1

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	19.43	-0.4	19.03	79.98	1
20175	1732.5	19.38	-0.4	18.98	79.07	1
20375	1752.5	19.49	-0.4	19.09	81.1	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	22.15	-0.4	21.75	149.62	1
20175	1732.5	22.26	-0.4	21.86	153.46	1
20350	1750	22.21	-0.4	21.81	151.71	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	21.47	-0.4	21.07	127.94	1
20175	1732.5	21.48	-0.4	21.08	128.23	1
20350	1750	21.61	-0.4	21.21	132.13	1

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	20.49	-0.4	20.09	102.09	1
20175	1732.5	20.43	-0.4	20.03	100.69	1
20350	1750	20.51	-0.4	20.11	102.57	1

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	19.38	-0.4	18.98	79.07	1
20175	1732.5	19.42	-0.4	19.02	79.8	1
20350	1750	19.45	-0.4	19.05	80.35	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	22.09	-0.4	21.69	147.57	1
20175	1732.5	22.17	-0.4	21.77	150.31	1
20325	1747.5	22.21	-0.4	21.81	151.71	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	21.41	-0.4	21.01	126.18	1
20175	1732.5	21.45	-0.4	21.05	127.35	1
20325	1747.5	21.61	-0.4	21.21	132.13	1

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	20.51	-0.4	20.11	102.57	1
20175	1732.5	20.51	-0.4	20.11	102.57	1
20325	1747.5	20.51	-0.4	20.11	102.57	1

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	19.41	-0.4	19.01	79.62	1
20175	1732.5	19.32	-0.4	18.92	77.98	1
20325	1747.5	19.45	-0.4	19.05	80.35	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	22.22	-0.4	21.82	152.05	1
20175	1732.5	22.27	-0.4	21.87	153.82	1
20300	1745	22.28	-0.4	21.88	154.17	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	21.54	-0.4	21.14	130.02	1
20175	1732.5	21.59	-0.4	21.19	131.52	1
20300	1745	21.74	-0.4	21.34	136.14	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	20.53	-0.4	20.13	103.04	1
20175	1732.5	20.57	-0.4	20.17	103.99	1
20300	1745	20.64	-0.4	20.24	105.68	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	19.45	-0.4	19.05	80.35	1
20175	1732.5	19.45	-0.4	19.05	80.35	1
20300	1745	19.51	-0.4	19.11	81.47	1

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CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	22.45	0.7	23.15	206.54	2
38000	2595.0	22.27	0.7	22.97	198.15	2
38225	2617.5	22.36	0.7	23.06	202.3	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	21.5	0.7	22.2	165.96	2
38000	2595.0	21.45	0.7	22.15	164.06	2
38225	2617.5	21.51	0.7	22.21	166.34	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	20.08	0.7	20.78	119.67	2
38000	2595	20.01	0.7	20.71	117.76	2
38225	2617.5	20.4	0.7	21.1	128.82	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	18.98	0.7	19.68	92.9	2
38000	2595	18.9	0.7	19.6	91.2	2
38225	2617.5	19.21	0.7	19.91	97.95	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575.0	22.44	0.7	23.14	206.06	2
38000	2595.0	22.25	0.7	22.95	197.24	2
38200	2615.0	22.36	0.7	23.06	202.3	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575.0	21.62	0.7	22.32	170.61	2
38000	2595.0	21.49	0.7	22.19	165.58	2
38200	2615.0	21.44	0.7	22.14	163.68	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575	20.19	0.7	20.89	122.74	2
38000	2595	20.13	0.7	20.83	121.06	2
38200	2615	20.35	0.7	21.05	127.35	2

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575	19.04	0.7	19.74	94.19	2
38000	2595	18.93	0.7	19.63	91.83	2
38200	2615	19.2	0.7	19.9	97.72	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	22.41	0.7	23.11	204.64	2
38000	2595.0	22.25	0.7	22.95	197.24	2
38175	2612.5	22.32	0.7	23.02	200.45	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	21.57	0.7	22.27	168.66	2
38000	2595.0	21.4	0.7	22.1	162.18	2
38175	2612.5	21.49	0.7	22.19	165.58	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	20.17	0.7	20.87	122.18	2
38000	2595	20	0.7	20.7	117.49	2
38175	2612.5	20.37	0.7	21.07	127.94	2

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	18.92	0.7	19.62	91.62	2
38000	2595	18.86	0.7	19.56	90.36	2
38175	2612.5	19.28	0.7	19.98	99.54	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	22.51	0.7	23.21	209.41	2
38000	2595.0	22.36	0.7	23.06	202.3	2
38150	2610.0	22.39	0.7	23.09	203.7	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	21.64	0.7	22.34	171.4	2
38000	2595.0	21.52	0.7	22.22	166.72	2
38150	2610.0	21.52	0.7	22.22	166.72	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580	20.23	0.7	20.93	123.88	2
38000	2595	20.14	0.7	20.84	121.34	2
38150	2610	20.42	0.7	21.12	129.42	2

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580	19.07	0.7	19.77	94.84	2
38000	2595	18.98	0.7	19.68	92.9	2
38150	2610	19.33	0.7	20.03	100.69	2

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CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	22.35	0.6	22.95	197.24	2
40620	2593	22.61	0.6	23.21	209.41	2
41565	2687.5	22.54	0.6	23.14	206.06	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	21.43	0.6	22.03	159.59	2
40620	2593	21.55	0.6	22.15	164.06	2
41565	2687.5	21.41	0.6	22.01	158.85	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	20.09	0.6	20.69	117.22	2
40620	2593	20.16	0.6	20.76	119.12	2
41565	2687.5	20.2	0.6	20.8	120.23	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	18.91	0.6	19.51	89.33	2
40620	2593	19.07	0.6	19.67	92.68	2
41565	2687.5	19.03	0.6	19.63	91.83	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501	22.3	0.6	22.9	194.98	2
40620	2593	22.61	0.6	23.21	209.41	2
41540	2685	22.58	0.6	23.18	207.97	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501	21.44	0.6	22.04	159.96	2
40620	2593	21.61	0.6	22.21	166.34	2
41540	2685	21.41	0.6	22.01	158.85	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501	20.12	0.6	20.72	118.03	2
40620	2593	20.21	0.6	20.81	120.5	2
41540	2685	20.23	0.6	20.83	121.06	2

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501	18.93	0.6	19.53	89.74	2
40620	2593	19.07	0.6	19.67	92.68	2
41540	2685	19.05	0.6	19.65	92.26	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	22.38	0.6	22.98	198.61	2
40620	2593	22.58	0.6	23.18	207.97	2
41515	2682.5	22.48	0.6	23.08	203.24	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	21.44	0.6	22.04	159.96	2
40620	2593	21.5	0.6	22.1	162.18	2
41515	2682.5	21.48	0.6	22.08	161.44	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	20.15	0.6	20.75	118.85	2
40620	2593	20.21	0.6	20.81	120.5	2
41515	2682.5	20.11	0.6	20.71	117.76	2

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	18.95	0.6	19.55	90.16	2
40620	2593	19	0.6	19.6	91.2	2
41515	2682.5	19.03	0.6	19.63	91.83	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506	22.42	0.6	23.02	200.45	2
40620	2593	22.65	0.6	23.25	211.35	2
41490	2680	22.61	0.6	23.21	209.41	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506	21.53	0.6	22.13	163.31	2
40620	2593	21.65	0.6	22.25	167.88	2
41490	2680	21.49	0.6	22.09	161.81	2

CHANNEL BANDWIDTH: 20 MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506	20.19	0.6	20.79	119.95	2
40620	2593	20.23	0.6	20.83	121.06	2
41490	2680	20.25	0.6	20.85	121.62	2

CHANNEL BANDWIDTH: 20 MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506	19.03	0.6	19.63	91.83	2
40620	2593	19.09	0.6	19.69	93.11	2
41490	2680	19.11	0.6	19.71	93.54	2

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CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	22.12	0.4	22.52	178.65	1
132322	1745	22.31	0.4	22.71	186.64	1
132665	1779.3	22.3	0.4	22.7	186.21	1

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	21.44	0.4	21.84	152.76	1
132322	1745	21.47	0.4	21.87	153.82	1
132665	1779.3	21.58	0.4	21.98	157.76	1

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	20.41	0.4	20.81	120.5	1
132322	1745	20.51	0.4	20.91	123.31	1
132665	1779.3	20.54	0.4	20.94	124.17	1

CHANNEL BANDWIDTH: 1.4MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	19.36	0.4	19.76	94.62	1
132322	1745	19.45	0.4	19.85	96.61	1
132665	1779.3	19.5	0.4	19.9	97.72	1

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	22.08	0.4	22.48	177.01	1
132322	1745	22.35	0.4	22.75	188.36	1
132657	1778.5	22.31	0.4	22.71	186.64	1

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	21.41	0.4	21.81	151.71	1
132322	1745	21.57	0.4	21.97	157.4	1
132657	1778.5	21.61	0.4	22.01	158.85	1

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	20.35	0.4	20.75	118.85	1
132322	1745	20.57	0.4	20.97	125.03	1
132657	1778.5	20.52	0.4	20.92	123.59	1

CHANNEL BANDWIDTH: 3MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	19.3	0.4	19.7	93.33	1
132322	1745	19.46	0.4	19.86	96.83	1
132657	1778.5	19.41	0.4	19.81	95.72	1

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	22.14	0.4	22.54	179.47	1
132322	1745	22.36	0.4	22.76	188.8	1
132647	1777.5	22.31	0.4	22.71	186.64	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	21.46	0.4	21.86	153.46	1
132322	1745	21.54	0.4	21.94	156.31	1
132647	1777.5	21.52	0.4	21.92	155.6	1

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	20.37	0.4	20.77	119.4	1
132322	1745	20.54	0.4	20.94	124.17	1
132647	1777.5	20.49	0.4	20.89	122.74	1

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	19.27	0.4	19.67	92.68	1
132322	1745	19.46	0.4	19.86	96.83	1
132647	1777.5	19.45	0.4	19.85	96.61	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	22.01	0.4	22.41	174.18	1
132322	1745	22.31	0.4	22.71	186.64	1
132622	1775	22.21	0.4	22.61	182.39	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	21.4	0.4	21.8	151.36	1
132322	1745	21.53	0.4	21.93	155.96	1
132622	1775	21.58	0.4	21.98	157.76	1

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	20.34	0.4	20.74	118.58	1
132322	1745	20.59	0.4	20.99	125.6	1
132622	1775	20.57	0.4	20.97	125.03	1

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	19.36	0.4	19.76	94.62	1
132322	1745	19.55	0.4	19.95	98.86	1
132622	1775	19.38	0.4	19.78	95.06	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	22.1	0.4	22.5	177.83	1
132322	1745	22.31	0.4	22.71	186.64	1
132597	1772.5	22.32	0.4	22.72	187.07	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	21.41	0.4	21.81	151.71	1
132322	1745	21.52	0.4	21.92	155.6	1
132597	1772.5	21.61	0.4	22.01	158.85	1

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	20.42	0.4	20.82	120.78	1
132322	1745	20.56	0.4	20.96	124.74	1
132597	1772.5	20.53	0.4	20.93	123.88	1

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	19.32	0.4	19.72	93.76	1
132322	1745	19.53	0.4	19.93	98.4	1
132597	1772.5	19.42	0.4	19.82	95.94	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	22.16	0.4	22.56	180.3	1
132322	1745	22.39	0.4	22.79	190.11	1
132572	1770	22.34	0.4	22.74	187.93	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	21.5	0.4	21.9	154.88	1
132322	1745	21.6	0.4	22	158.49	1
132572	1770	21.64	0.4	22.04	159.96	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	20.49	0.4	20.89	122.74	1
132322	1745	20.63	0.4	21.03	126.77	1
132572	1770	20.58	0.4	20.98	125.31	1

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	19.39	0.4	19.79	95.28	1
132322	1745	19.56	0.4	19.96	99.08	1
132572	1770	19.51	0.4	19.91	97.95	1

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

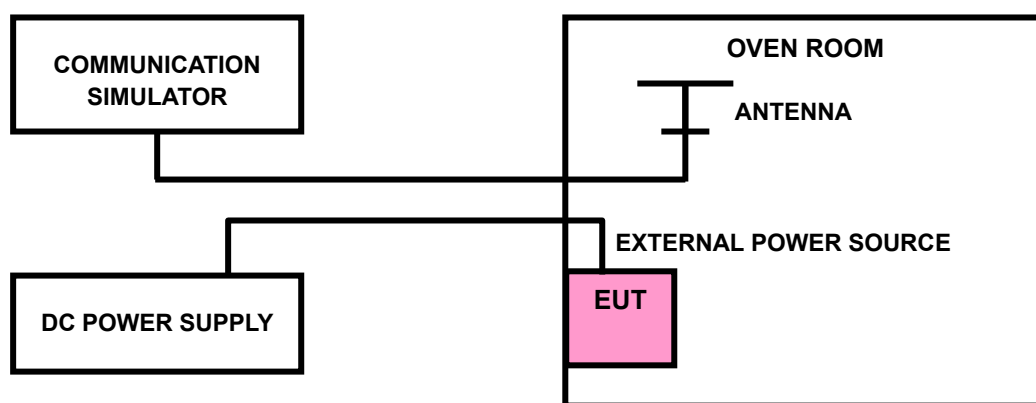
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP





Test Report No.: PSU-QSU2312140113RF04

3.2.4 TEST RESULTS

Please Refer to Appendix Of this test report.

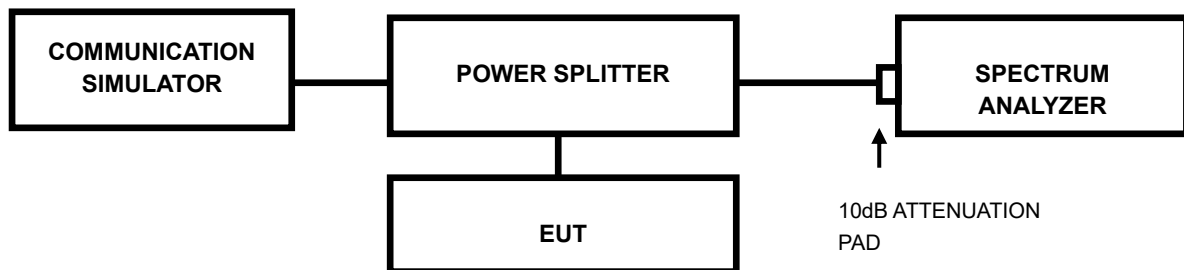
Note: VL = Low voltage(3.2V); VN/NV = Normal voltage(3.8V); VH = High voltage(4.2V);
NT = Normal temperature (25°C)

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.



Test Report No.: PSU-QSU2312140113RF04

3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.4 BAND EDGE MEASUREMENT

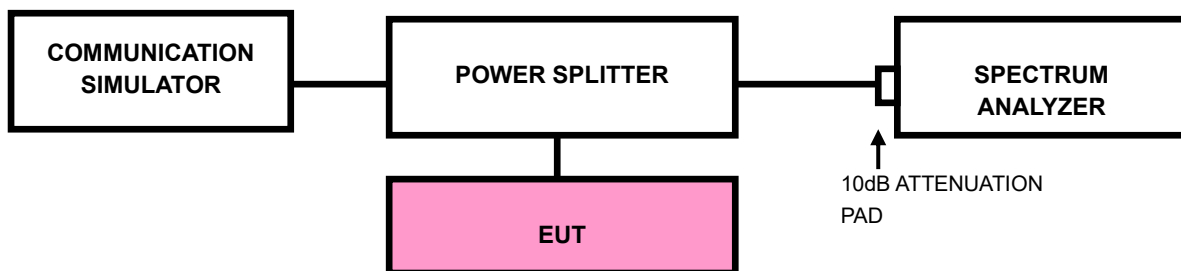
3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC Part 27.53(h) specified that for operations in the 1710-1755 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. However, in the 1-megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

47 CFR 27.50(d)(4)

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695–1710 MHz and 1755–1780 MHz bands are limited to 1-watt EIRP. Fixed stations operating in the 1710–1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

- a) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b) Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).
- c) Set the resolution bandwidth (RBW) $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
- d) Beyond the 1MHz band from the band edge, RBW=1MHz was used.
- e) Set the video bandwidth (VBW) to $\geq 3 \times$ RBW.
- f) Select the average power (RMS) display detector.
- g) Set the number of measurement points to ≥ 1001 .
- h) Use auto-coupled sweep time.
- i) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.
- j) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.
- k) Record the max trace plot into the test report.



Test Report No.: PSU-QSU2312140113RF04

3.4.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

For LTE Band4/66

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. The emission limit is equal to -13dBm .

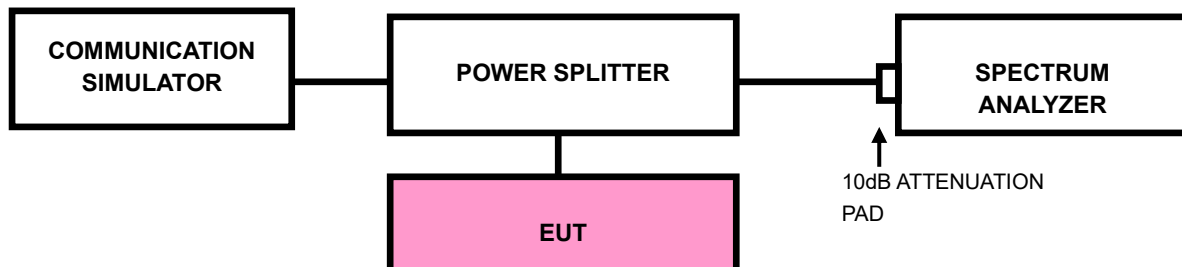
For LTE Band38/41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

3.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP





Test Report No.: PSU-QSU2312140113RF04

3.5.4 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

For LTE Band4/66

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. The emission limit is equal to -13dBm .

For LTE Band38/41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

3.6.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$.

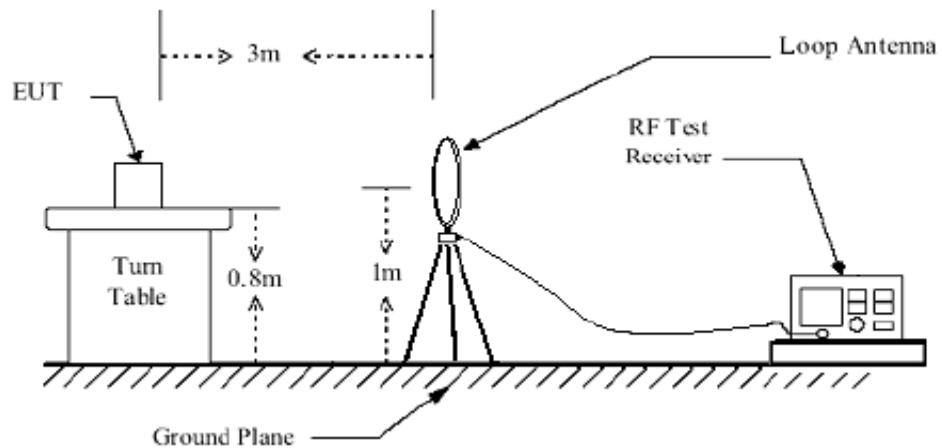
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

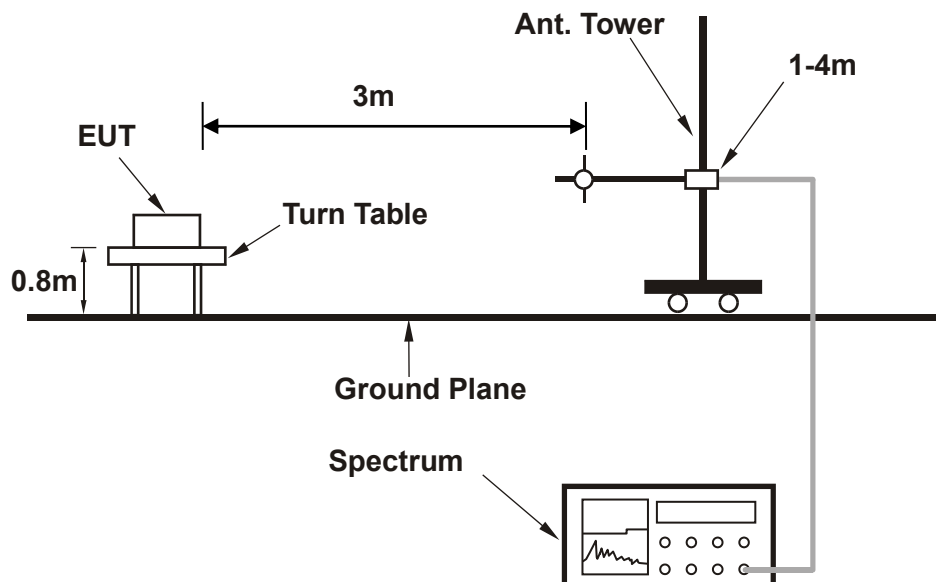
No deviation

3.6.4 TEST SETUP

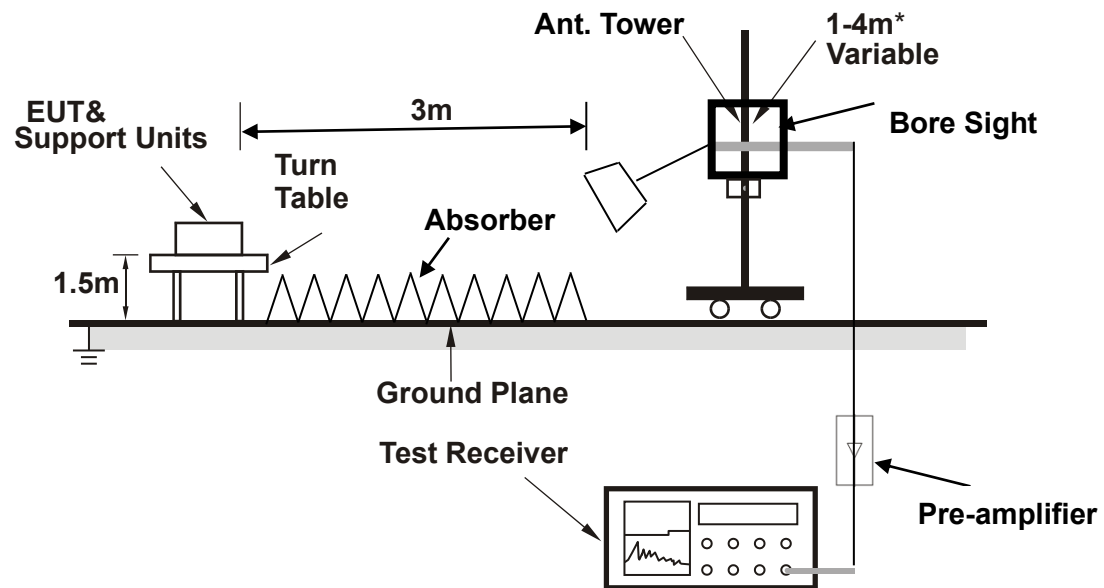
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.6.5 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA

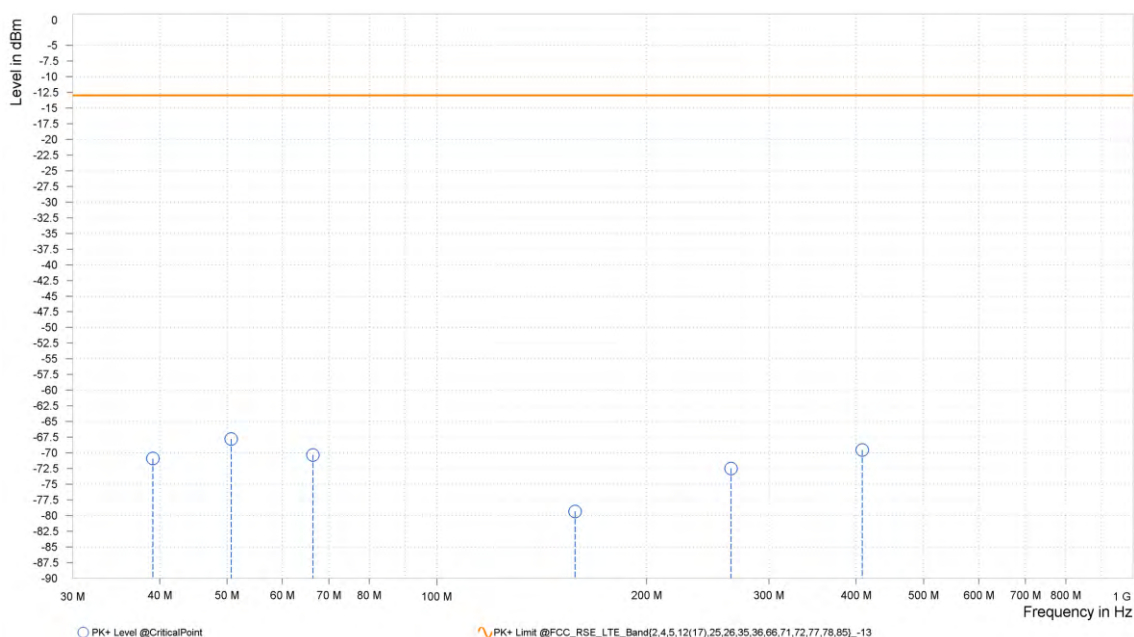
30 MHz – 1GHz data:

LTE Band 41

CHANNEL BANDWIDTH: 10MHz / QPSK

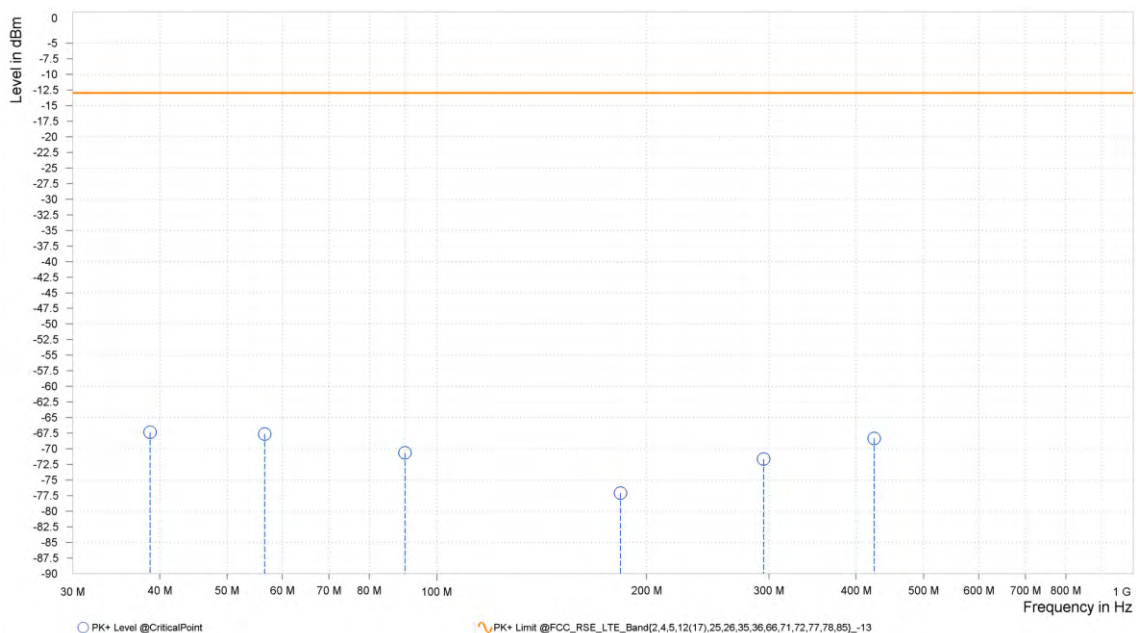
MODE	TX channel 39725	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	39.100	-70.91	-13.00	57.91	1.73	H	0.9	2.00
1	50.650	-67.77	-13.00	54.77	3.45	H	1	1.00
1	66.400	-70.33	-13.00	57.33	0.89	H	328.2	1.00
1	157.900	-79.33	-13.00	66.33	-4.73	H	30.6	2.00
1	264.550	-72.48	-13.00	59.48	3.41	H	328.2	1.00
1	408.250	-69.54	-13.00	56.54	7.03	H	328.2	1.00



MODE	TX channel 39725	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	38.750	-67.35	-13.00	54.35	2.79	V	355.5	2.00
1	56.600	-67.64	-13.00	54.64	3.11	V	31.8	2.00
1	90.000	-70.65	-13.00	57.65	1.78	V	229	2.00
1	183.500	-77.09	-13.00	64.09	-0.10	V	0.9	2.00
1	294.550	-71.64	-13.00	58.64	5.27	V	129.8	1.00
1	424.850	-68.33	-13.00	55.33	7.90	V	359.1	1.00



ABOVE 1GHz

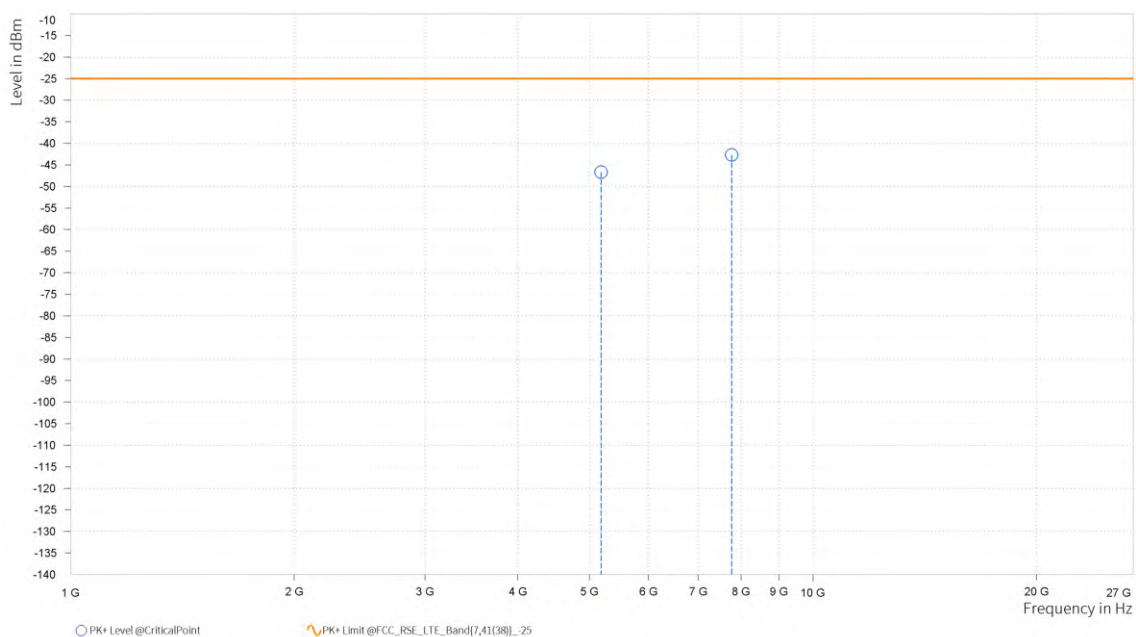
Note: For higher frequency, the emission is too low to be detected.

LTE BAND 41

CHANNEL BANDWIDTH: 5MHz / QPSK

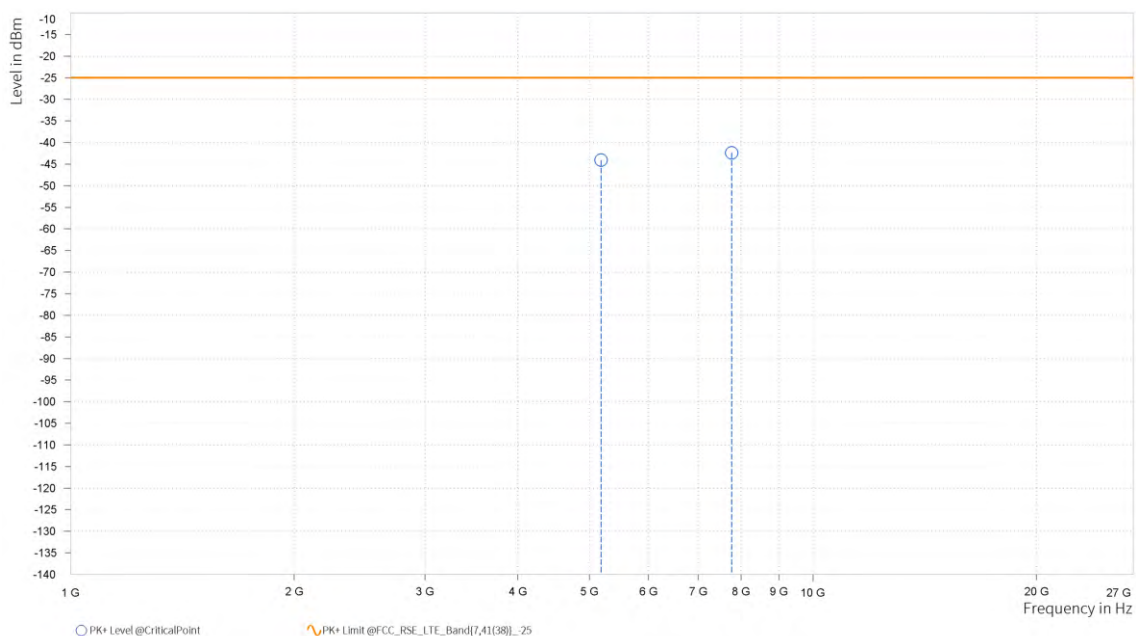
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,181.500	-46.65	-25.00	21.65	25.39	H	1	1.00
5	7,772.000	-42.71	-25.00	17.71	29.58	H	1	1.00



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

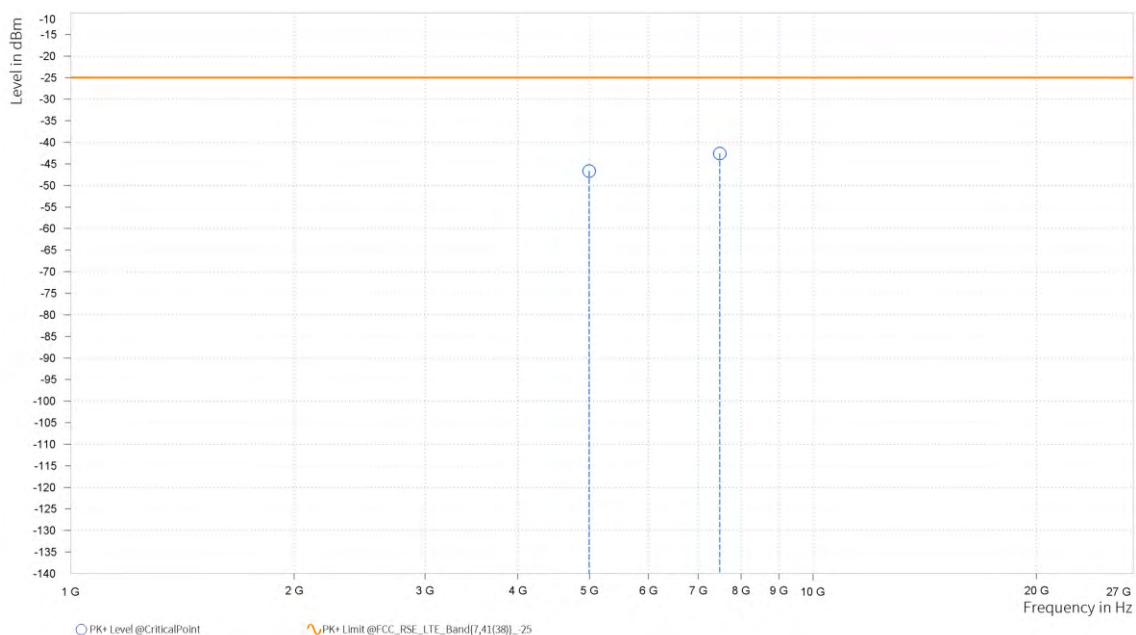
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,181.500	-44.10	-25.00	19.10	25.85	V	359.1	1.00
5	7,772.000	-42.38	-25.00	17.38	29.35	V	0.9	2.00



**CHANNEL BANDWIDTH: 10MHz / QPSK
CH39700**

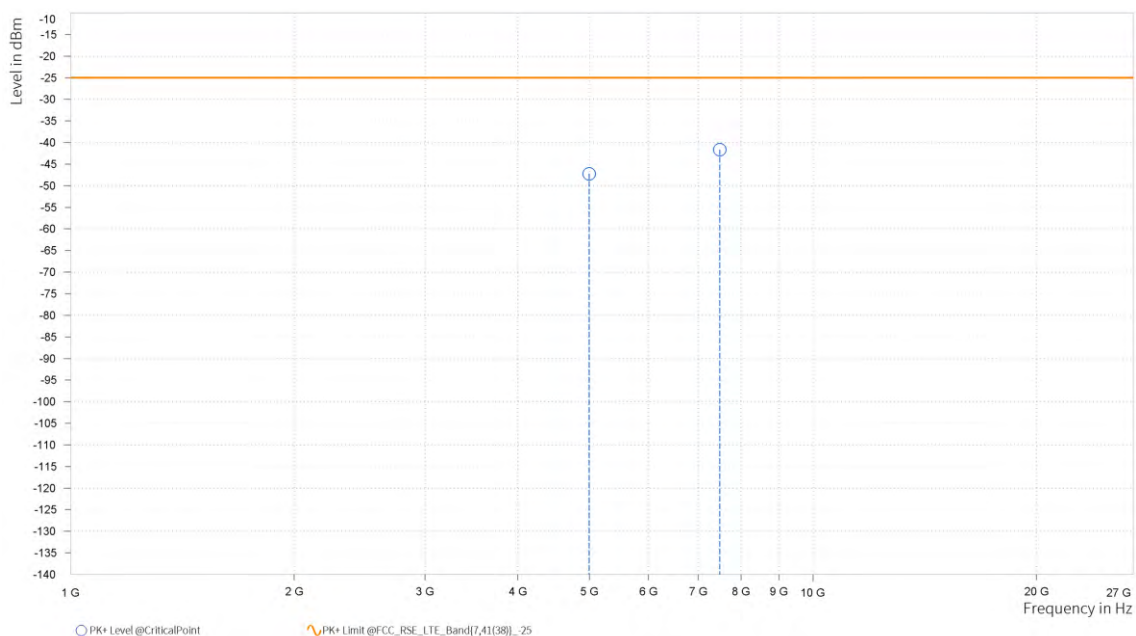
MODE	TX channel 39700	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	4,993.000	-46.66	-25.00	21.66	25.14	H	1	1.00
5	7,489.500	-42.57	-25.00	17.57	29.01	H	1	1.00



MODE	TX channel 39700	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

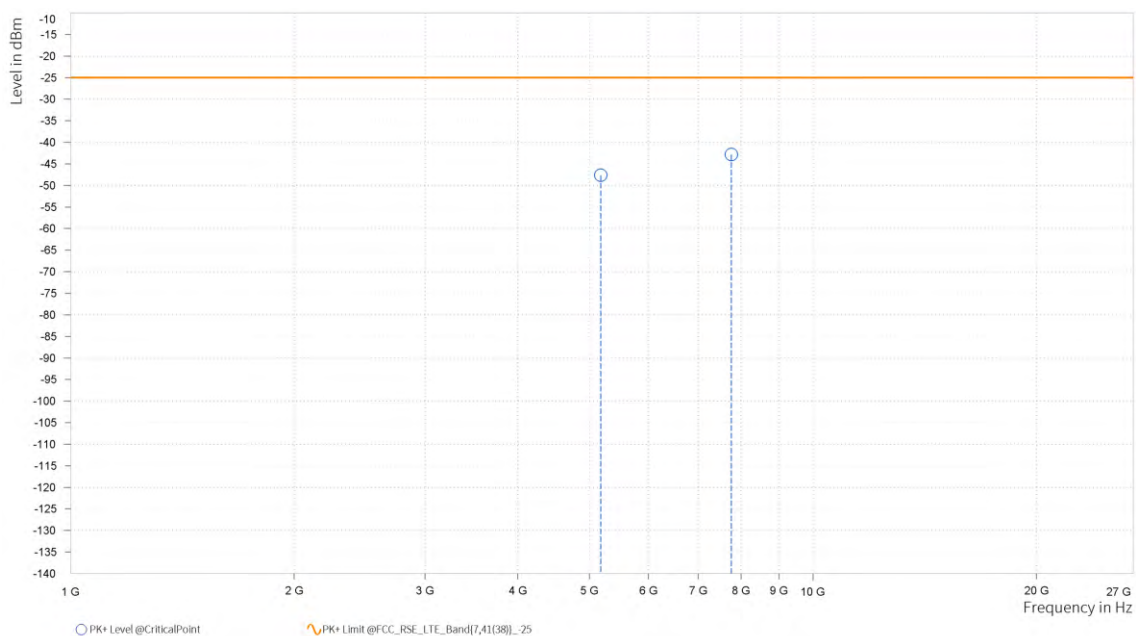
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	4,993.000	-47.25	-25.00	22.25	25.38	V	359	2.00
5	7,489.500	-41.64	-25.00	16.64	28.99	V	1	1.00



CH40620

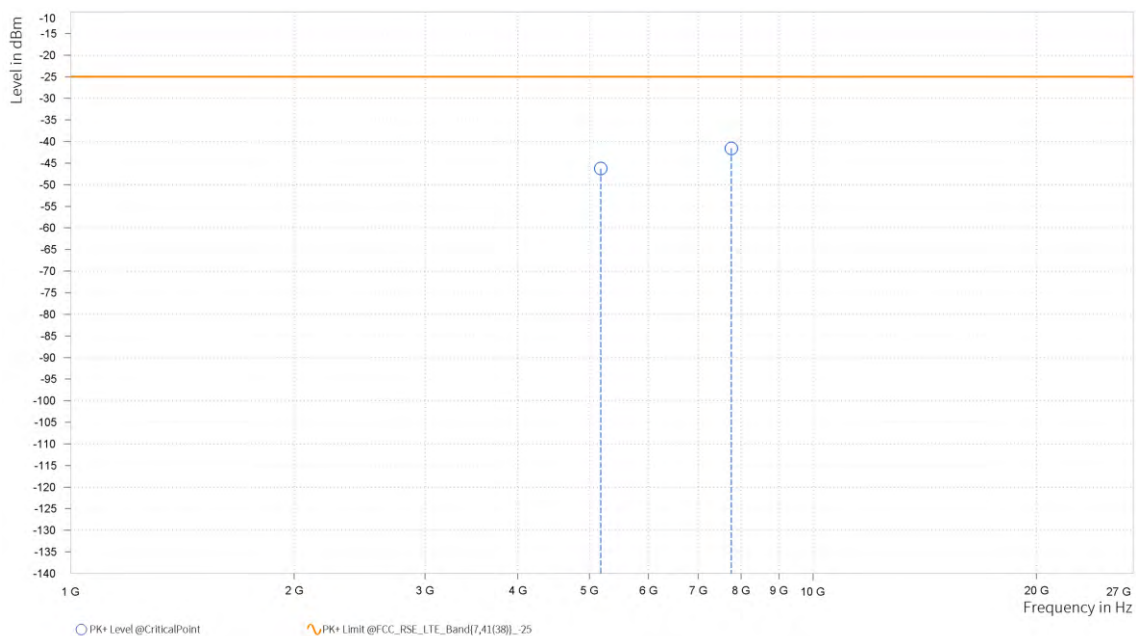
CH 1002			
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,177.000	-47.62	-25.00	22.62	25.35	H	1	1.00
5	7,765.500	-42.83	-25.00	17.83	29.61	H	24.8	2.00



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

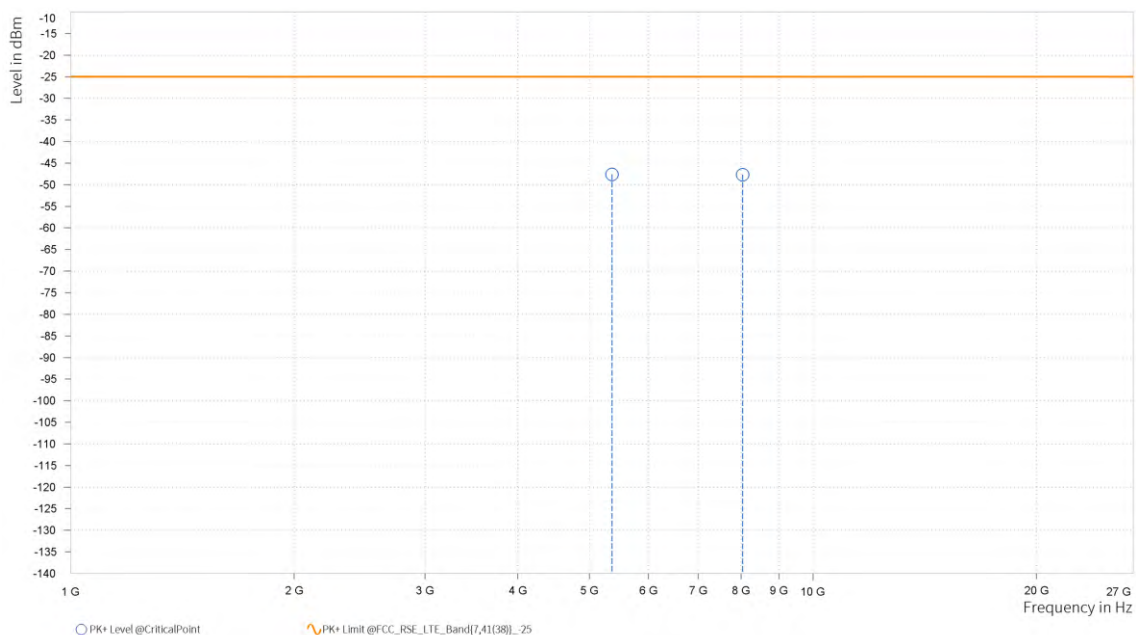
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,177.000	-46.26	-25.00	21.26	25.77	V	1	1.00
5	7,765.500	-41.56	-25.00	16.56	29.38	V	25.9	2.00



CH41540

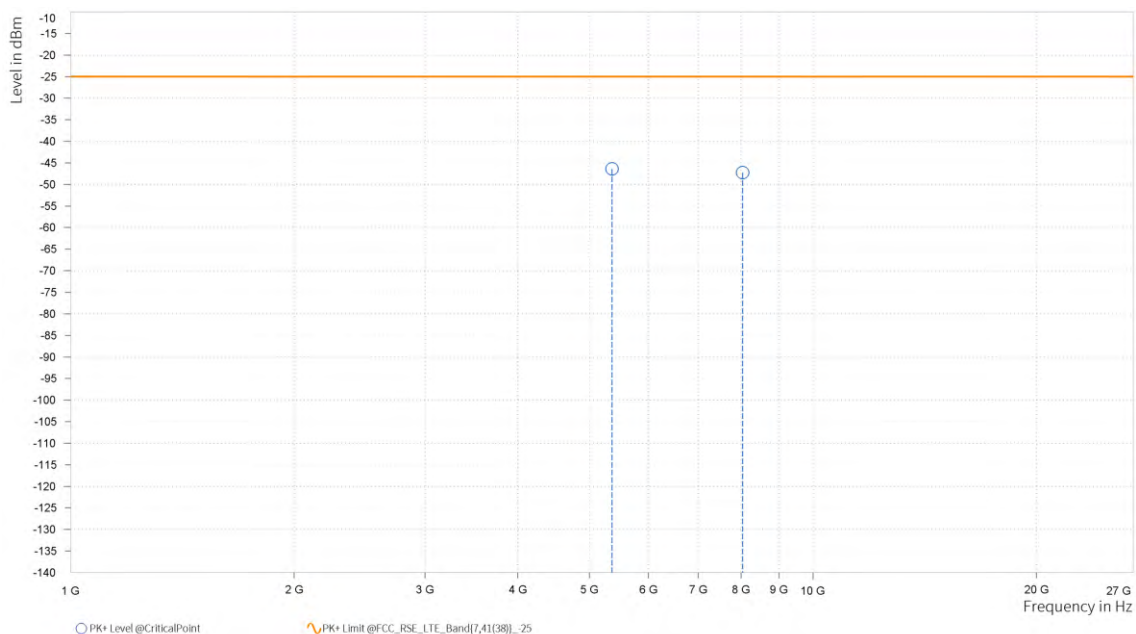
MODE	TX channel 41540	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,361.000	-47.60	-25.00	22.60	25.87	H	359	1.00
6	8,041.500	-47.69	-25.00	22.69	17.10	H	353.4	1.00



MODE	TX channel 41540	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

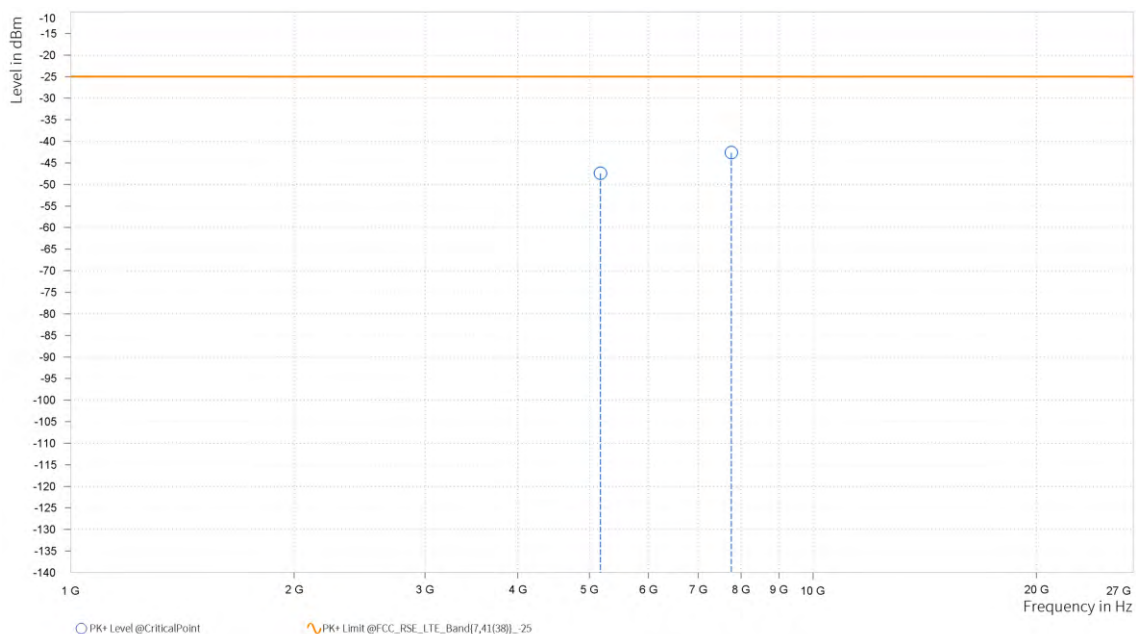
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,361.000	-46.39	-25.00	21.39	26.31	V	160.6	1.00
6	8,041.500	-47.29	-25.00	22.29	16.95	V	1	1.00



CHANNEL BANDWIDTH: 15MHz / QPSK

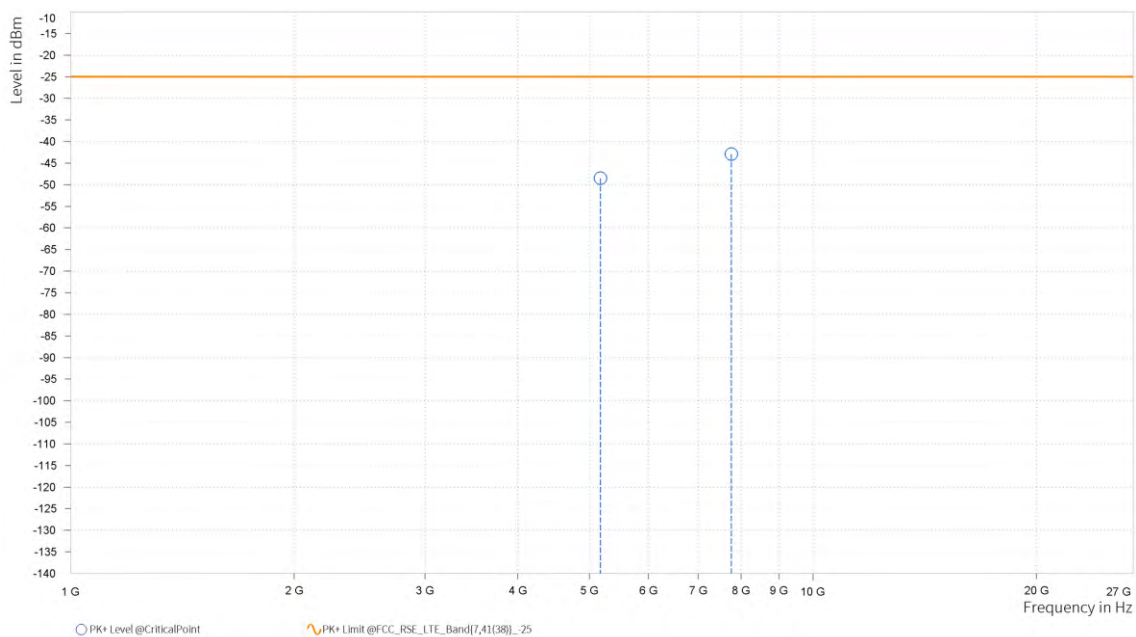
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,172.500	-47.44	-25.00	22.44	25.27	H	1	1.00
5	7,758.750	-42.64	-25.00	17.64	29.64	H	146.7	2.00



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

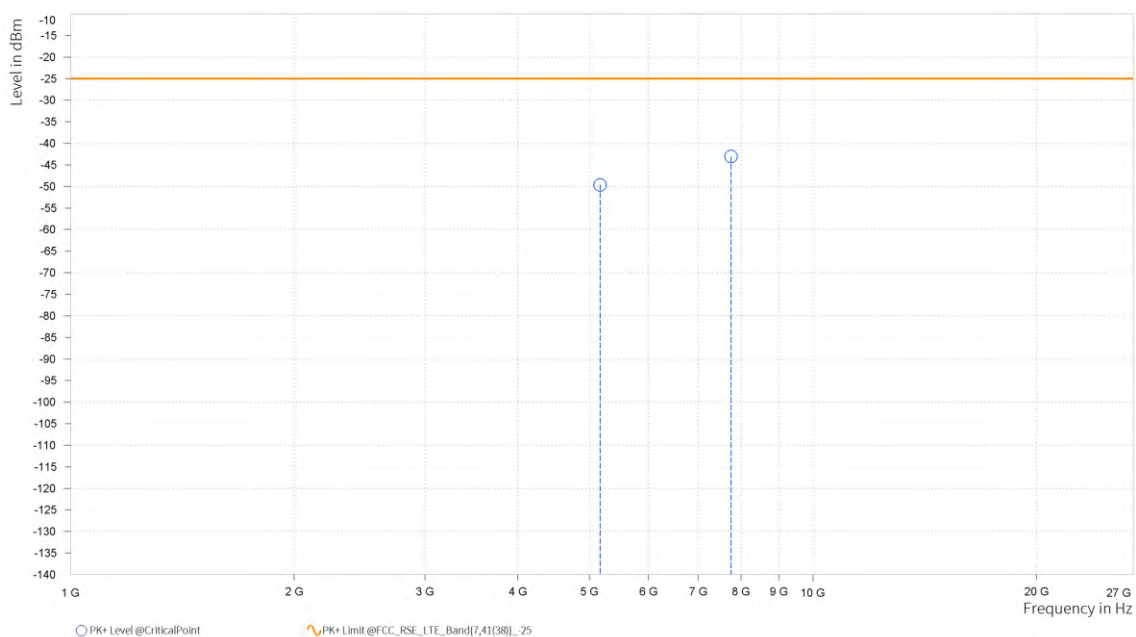
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,172.500	-48.50	-25.00	23.50	25.66	V	1	2.00
5	7,758.750	-42.90	-25.00	17.90	29.39	V	359	2.00



CHANNEL BANDWIDTH: 20MHz / QPSK

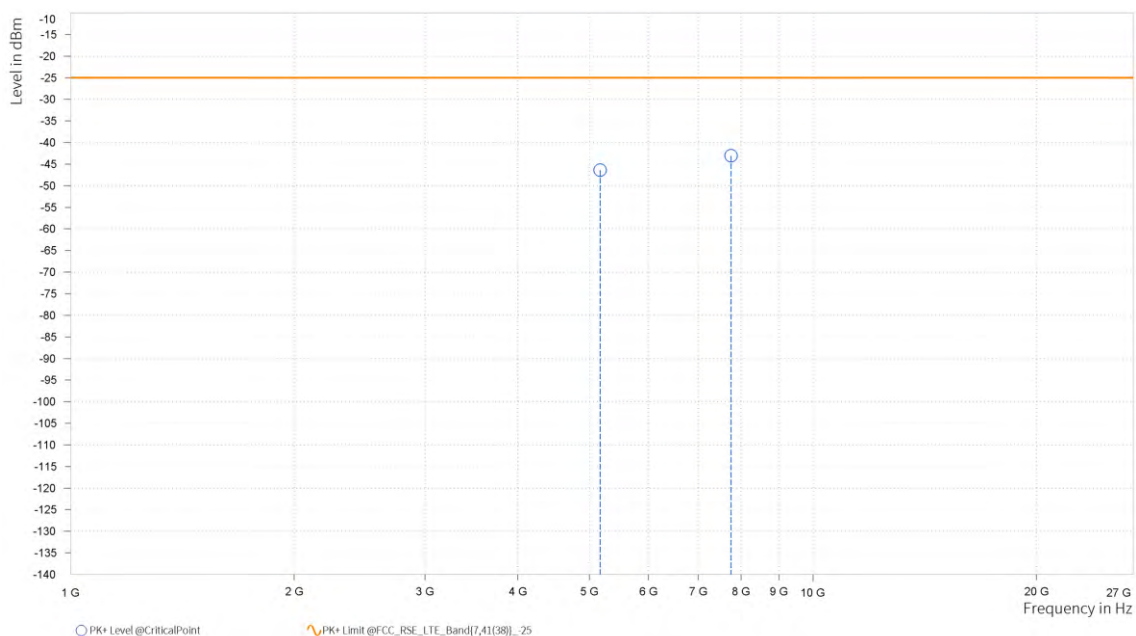
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,168.000	-49.64	-25.00	24.64	25.23	H	359	1.00
5	7,752.000	-43.06	-25.00	18.06	29.66	H	342.2	1.00



MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,168.000	-46.41	-25.00	21.41	25.58	V	1	2.00
5	7,752.000	-43.07	-25.00	18.07	29.40	V	1	1.00

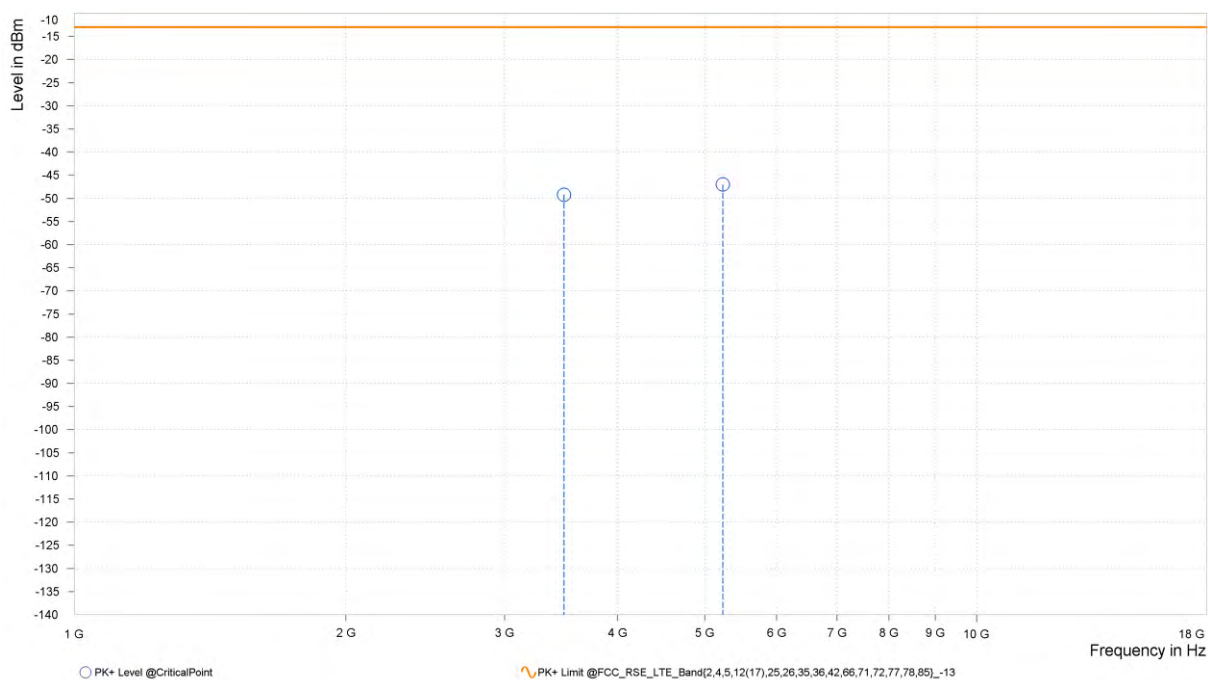


LTE B66

CHANNEL BANDWIDTH: 1.4MHz / QPSK

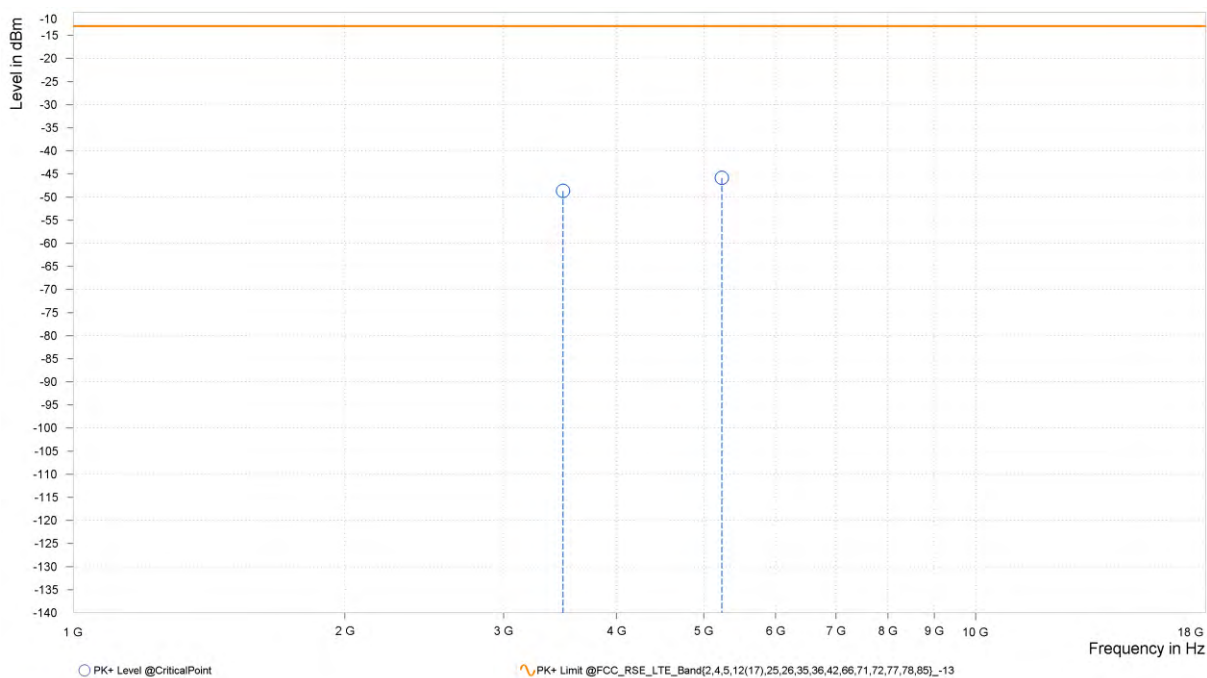
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,488.700	-49.22	-13.00	36.22	20.51	H	1	2.00
4	5,233.100	-47.01	-13.00	34.01	23.57	H	1	1.00



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

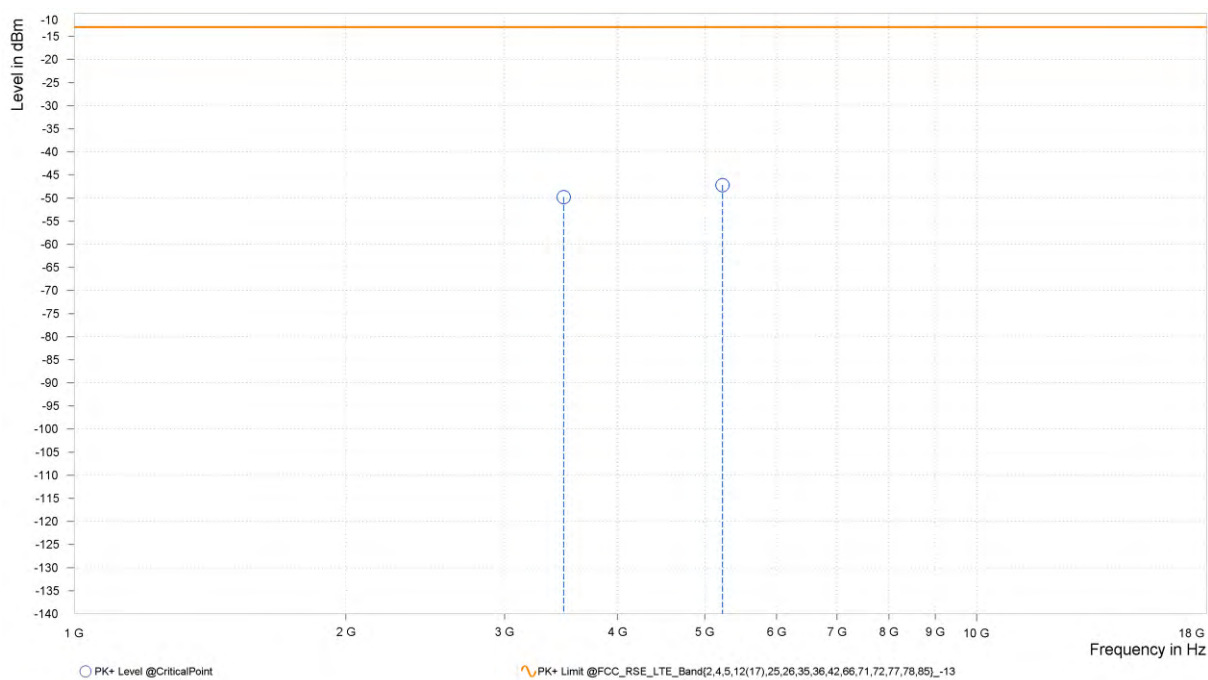
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,488.700	-48.66	-13.00	35.66	21.30	V	1	1.00
4	5,233.100	-45.87	-13.00	32.87	24.10	V	250.4	1.00



CHANNEL BANDWIDTH: 3MHz / QPSK

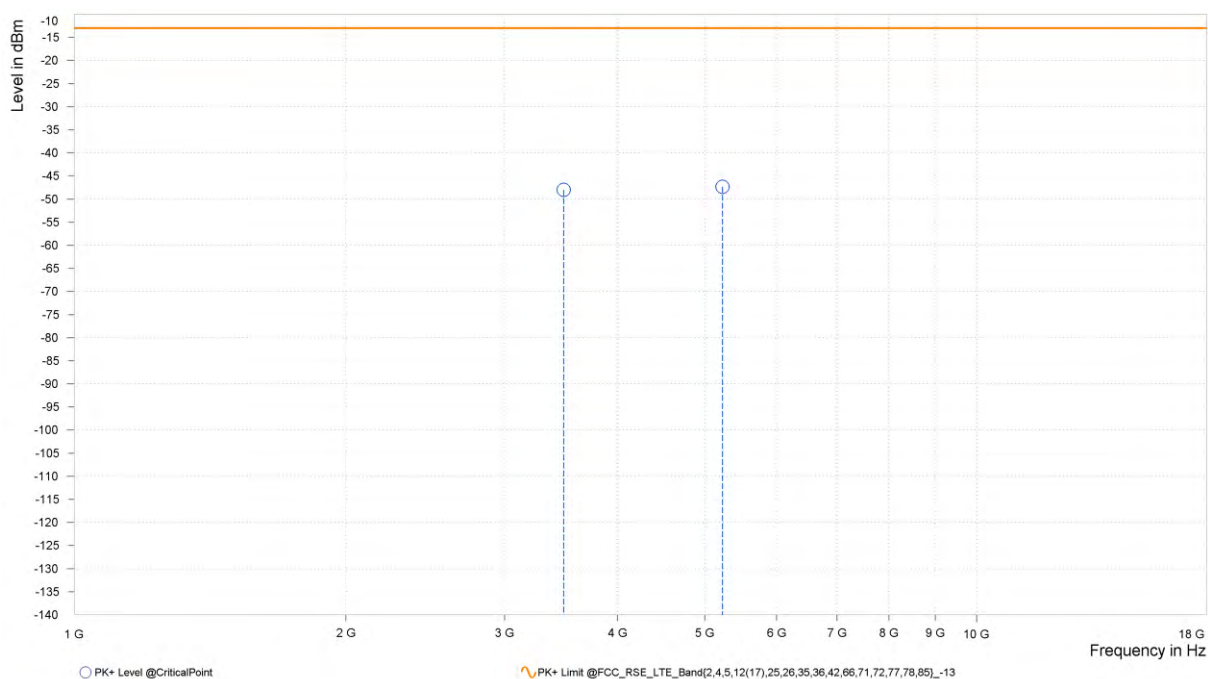
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,487.300	-49.81	-13.00	36.81	20.50	H	359.5	1.00
4	5,230.950	-47.20	-13.00	34.20	23.56	H	359.5	1.00



MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,487.300	-48.02	-13.00	35.02	21.29	V	316.2	1.00
4	5,230.950	-47.32	-13.00	34.32	24.09	V	1	2.00



CHANNEL BANDWIDTH: 5MHz / QPSK

CH131997

MODE	TX channel 131997	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,420.500	-49.23	-13.00	36.23	20.66	H	234.8	1.00
4	5,130.750	-47.70	-13.00	34.70	23.07	H	359.5	2.00

