

FCC TEST REPORT

(PART 27)

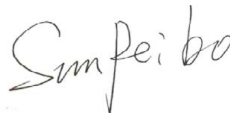
Applicant:	PepperlFuchs SE
Address:	Lilienthalstrasse 200, 68307, Mannheim, Germany

Manufacturer or Supplier:	PepperlFuchs SE
Address:	Lilienthalstrasse 200, 68307, Mannheim, Germany
Product:	Smart-Ex 203
Brand Name:	PEPPERL+FUCHS
Model Name:	Smart-Ex 203
FCC ID	2AXZAS203GR01
Date of tests	Nov. 22, 2024 ~ Jul. 31, 2025

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

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

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. 31, 2025	Date: Jul. 31, 2025

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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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSU2411180418RF04	Original release	Jul. 31, 2025



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(c)(10) §27.50(b)(10)	Effective Radiated Power (Band 7) (Band 12)(Band 71) (Band 13) (Band 30)	Compliance	A
§27.50(d)(4) §27.50(h)(2)	Equivalent Isotropically Radiated Power (Band 7)	Compliance	A
§2.1055 §27.54	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§2.1051 §27.53(c)(2) §27.53(g) §27.53(h) §27.53(m)(4)	Conducted Band Edge Measurements (Band 7) (Band 12) (Band 71) (Band 13) (Band 30)	Compliance	A
§2.1051 §27.53(g) §27.53(c)(2) §27.53(f) §27.53(h) §27.53(m)(4)	Conducted Spurious Emissions (Band 7) (Band 12) (Band 71) (Band 13) (Band 30)	Compliance	A
§2.1053 §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h) §27.53(m)(4)	Radiated Spurious Emissions (Band 7) (Band 12) (Band 71) (Band 13) (Band 30)	Compliance	A
§27.50	Peak to average ratio*	Compliance	A

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



***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, China

Accredited Test Lab Cert 6613.01

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

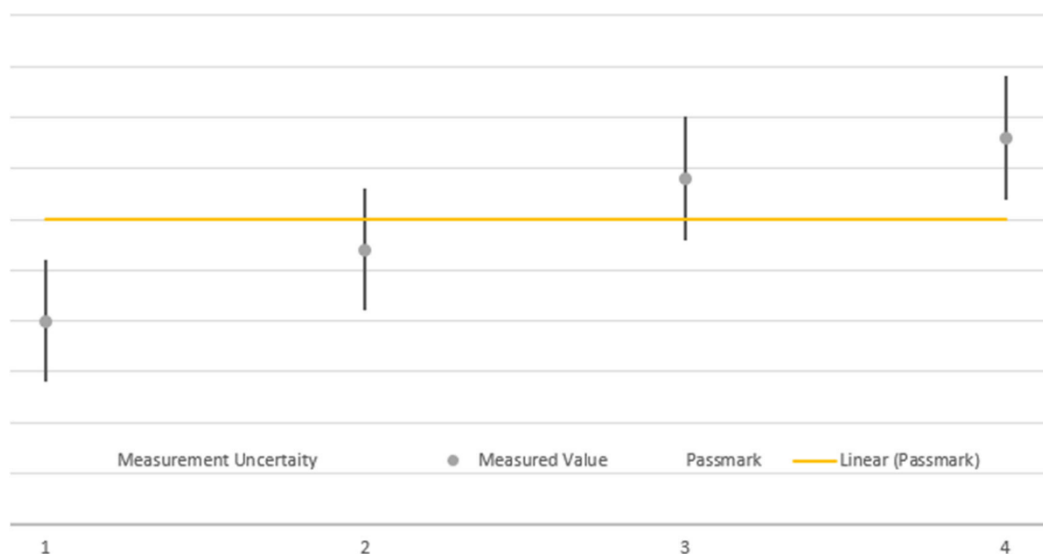


1.1 MEASUREMENT UNCERTAINTY

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	±76.97Hz
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions & Radiated Power (30MHz~1GHz)	±4.98dB
Radiated emissions & Radiated Power (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Band Edge Measurements	±4.70dB

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****#1**

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.29,24	Aug.28,26
Pre-Amplifier	R&S	SCU08F1	101028	Sep.15,24	Sep.14,26
Vector Signal Generator	R&S	SMBV100B	102176	Feb.15,24	Feb.14,26
Signal Generator	R&S	SMB100A	182185	Feb.15,24	Feb.14,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Feb.24,24	Feb.23,26
EMI TEST Receiver	R&S	ESW44	101973	Feb.24,24	Feb.23,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.27,24	Feb.26,26
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.21,24	Aug.20,26
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.21,24	Aug.20,26
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,24	Feb.21,26
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	Sep.30,24	Sep.29,26
DC Source	HYELEC	HY3010B	551016	Aug.30,24	Aug.29,26
Hygrothermograph	DELI	20210528	SZ014	Sep.05,24	Sep.04,26
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-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Oct.25,24	Apr.24,25
CABLE	R&S	W13.02	N/A	Apr.24,25	Oct.23,25
CABLE	R&S	W12.14	N/A	Oct.25,24	Apr.24,25
CABLE	R&S	W12.14	N/A	Apr.24,25	Oct.23,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Oct.25,24	Apr.24,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.24,25	Oct.23,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Oct.25,24	Apr.24,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.24,25	Oct.23,25
Temperature Chamber	votsch	VT4002	58566078100050	May.30,24	May.29,26

#2

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 19,24	Feb. 18,25
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 18,25	Feb. 17,26



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EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.13,24	May.12,25
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.12,25	May.11,26
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.02,24	Sep.01,25
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 04,24	Mar. 03,25
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 03,25	Mar. 02,26
Horn Antenna	ETS-LINDGREN	3117	00168692	Mar. 04,24	Mar. 03,25
Horn Antenna	ETS-LINDGREN	3117	00168692	Mar. 03,25	Mar. 02,26
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40- K-SG/QMS- 00361	15433	Aug. 22, 24	Aug. 21, 25
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 13,24	Feb. 12,25
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 12,25	Feb. 11,26
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.10,24	May.09,25
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.09,25	May.08,26
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.10,24	May.09,25
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.09,25	May.08,26
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 19,24	Feb.18,25
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 18,25	Feb.17,26
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn- CT0001143- 1216	May. 18,23	May. 17,26
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	1505	May. 05,24	May. 04,25
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	May. 04,25	May. 03,26
Power Meter	Anritsu	ML2495A	1506002	Feb. 20,24	Feb. 19,25
Power Meter	Anritsu	ML2495A	1506002	Feb. 19,25	Feb. 18,26
Power Sensor	Anritsu	MA2411B	1339352	May. 05,24	May. 04,25
Power Sensor	Anritsu	MA2411B	1339352	May. 04,25	May. 03,26
Temperature Chamber	ESPEC	SH-242	93000855	May. 10,24	May. 09,25
Temperature Chamber	ESPEC	SH-242	93000855	May. 09,25	May. 08,26
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 16,24	Feb. 15,25
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 15,25	Feb. 14,26
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.10,24	May.09,25
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.09,25	May.08,26
DC Source	Kikusui/JP	PMX18-5A	0000001	Aug. 22,24	Aug. 21,25

NOTE:

1. The calibration interval of the above test instruments is 12/24/ 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 434559; The Designation No. is CN1325.

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2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Smart-Ex 203	
BRAND NAME*	PEPPERL+FUCHS	
MODEL NAME*	Smart-Ex 203	
NOMINAL VOLTAGE*	3.8V	
MODULATION TECHNOLOGY	LTE	QPSK, 16QAM, 64QAM, 256QAM
FREQUENCY RANGE	LTE Band 7 Channel Bandwidth: 5MHz	2502.5MHz ~ 2567.5MHz
	LTE Band 7 Channel Bandwidth: 10MHz	2505MHz ~ 2565MHz
	LTE Band 7 Channel Bandwidth: 15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band 7 Channel Bandwidth: 20MHz	2510MHz ~ 2560MHz
	LTE Band 12 Channel Bandwidth: 1.4MHz	699.7MHz ~ 715.3MHz
	LTE Band 12 Channel Bandwidth: 3MHz	700.5MHz ~ 714.5MHz
	LTE Band 12 Channel Bandwidth: 5MHz	701.5MHz ~ 713.5MHz
	LTE Band 12 Channel Bandwidth: 10MHz	704MHz ~ 711MHz
	LTE Band 13 Channel Bandwidth: 5MHz	779.5MHz ~ 784.5MHz
	LTE Band 13 Channel Bandwidth: 10MHz	782MHz
	LTE Band 30 Channel Bandwidth: 5MHz	2307.5MHz ~ 2312.5MHz
	LTE Band 30 Channel Bandwidth: 10MHz	2310MHz
	LTE Band 71 Channel Bandwidth: 5MHz	665.5MHz ~ 695.5MHz
	LTE Band 71 Channel Bandwidth: 10MHz	668MHz ~ 693MHz
	LTE Band 71 Channel Bandwidth: 15MHz	670.5MHz ~ 690.5MHz
	LTE Band 71 Channel Bandwidth: 20MHz	673MHz ~ 688MHz
	CA	CA UL&DL: CA_2A-7A CA_14A-30A



MAX. EIRP/ERP POWER	LTE Band 7 Channel Bandwidth: 5MHz	267.30mW
	LTE Band 7 Channel Bandwidth: 10MHz	266.07mW
	LTE Band 7 Channel Bandwidth: 15MHz	265.46mW
	LTE Band 7 Channel Bandwidth: 20MHz	273.53mW
	LTE Band 12 Channel Bandwidth: 1.4MHz	61.66mW
	LTE Band 12 Channel Bandwidth: 3MHz	61.24mW
	LTE Band 12 Channel Bandwidth: 5MHz	61.38mW
	LTE Band 12 Channel Bandwidth: 10MHz	63.24mW
	LTE Band 13 Channel Bandwidth: 5MHz	84.72mW
	LTE Band 13 Channel Bandwidth: 10MHz	87.10mW
	LTE Band 30 Channel Bandwidth: 5MHz	204.17mW
	LTE Band 30 Channel Bandwidth: 10MHz	204.64mW
	LTE Band 71 Channel Bandwidth: 5MHz	80.54mW
	LTE Band 71 Channel Bandwidth: 10MHz	78.52mW
	LTE Band 71 Channel Bandwidth: 15MHz	78.89mW
	LTE Band 71 Channel Bandwidth: 20MHz	80.91mW
EMISSION DESIGNATOR	LTE Band 7 Channel Bandwidth: 5MHz	QPSK:4M53G7D
		16QAM: 4M52W7D
		64QAM: 4M52W7D
		256QAM: 5M52W7D
	LTE Band 7 Channel Bandwidth: 10MHz	QPSK:9M01G7D
		16QAM: 9M01W7D
		64QAM: 9M01W7D
		256QAM: 9M01W7D
EMISSION DESIGNATOR	LTE Band 7	QPSK: 13M5G7D



	Channel Bandwidth: 15MHz	16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	LTE Band 7 Channel Bandwidth: 20MHz	QPSK: 18M0G7D
		16QAM: 18M0W7D
		64QAM: 18M0W7D
		256QAM: 18M0W7D
	LTE Band 12 Channel Bandwidth: 1.4MHz	QPSK: 1M11G7D
		16QAM: 1M10W7D
		64QAM: 1M10W7D
		256QAM: 1M10W7D
	LTE Band 12 Channel Bandwidth: 3MHz	QPSK: 2M69G7D
		16QAM: 2M69W7D
		64QAM: 2M69W7D
		256QAM: 2M69W7D
	LTE Band 12 Channel Bandwidth: 5MHz	QPSK: 4M53G7D
		16QAM: 4M52W7D
		64QAM: 4M52W7D
		256QAM: 4M53W7D
	LTE Band 12 Channel Bandwidth: 10MHz	QPSK: 9M00G7D
		16QAM: 9M00W7D
		64QAM: 9M00W7D
		256QAM: 9M01W7D
	LTE Band 13 Channel Bandwidth: 5MHz	QPSK: 4M54G7D
		16QAM: 4M53W7D
		64QAM: 4M53W7D
		256QAM: 4M53W7D
	LTE Band 13 Channel Bandwidth: 10MHz	QPSK: 8M98G7D
		16QAM: 8M99W7D



		64QAM: 8M96W7D
		256QAM: 8M97W7D
	LTE Band 30 Channel Bandwidth: 5MHz	QPSK: 4M53G7D
		16QAM: 4M53W7D
		64QAM: 4M53W7D
		256QAM: 4M53W7D
	LTE Band 30 Channel Bandwidth: 10MHz	QPSK: 9M03G7D
		16QAM: 9M02W7D
		64QAM: 9M00W7D
		256QAM: 9M01W7D
	LTE Band 71 Channel Bandwidth: 5MHz	QPSK: 4M53G7D
		16QAM: 4M53W7D
		64QAM: 4M54W7D
		256QAM: 4M53W7D
	LTE Band 71 Channel Bandwidth: 10MHz	QPSK: 9M00G7D
		16QAM: 9M01W7D
		64QAM: 9M01W7D
		256QAM: 9M00W7D
	LTE Band 71 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	CLTE Band 71 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 18M0W7D
		64QAM: 17M9W7D
		256QAM: 18M0W7D
ANTENNA GAIN*	LTE BAND7	Ant 0: 2.05dBi Ant 2: 1.34dBi
	LTE BAND12	Ant 0: -3dBi Ant 2: -2.02dBi

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	LTE BAND13	Ant 0: -2.06dBi Ant 2: -1.05dBi
	LTE BAND30	Ant 0: -1.02dBi Ant 2: 0.48dBi
	LTE BAND71	Ant 0: -2.27dBi Ant 2: -1.42dBi
ANTENNA TYPE*	Main Ant: PIFA Antenna Div Ant: Coupling type (LDS)	
HW VERSION*	DVT2	
SW VERSION*	S203.14.00.00.056.4_USERDEBUG	
I/O PORTS*	Refer to user's manual	
CABLE SUPPLIED*	USB cable: non-shielded cable, with w/o ferrite core, 1.2 meter	
EXTREME TEMPERATURE*	Tmin=-20 °C Tmax=+55 °C	
EXTREME VOLTAGE*	Vmin= 3.4V Vmax= 4.35V	

NOTE:

- *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.
- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receivers.

MODULATION MODE	TX FUNCTION
LTE	1TX/1RX

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

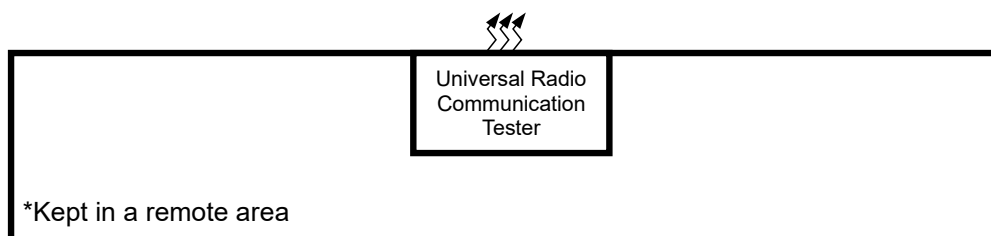
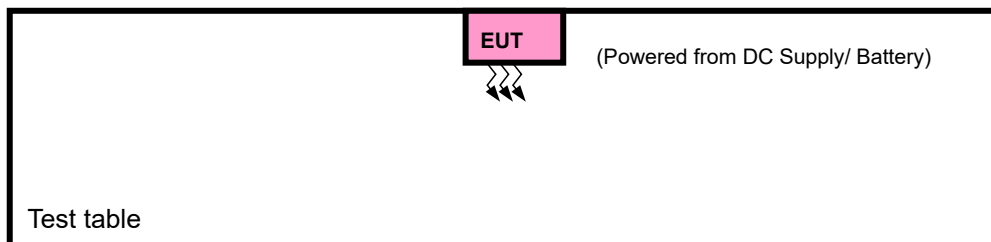
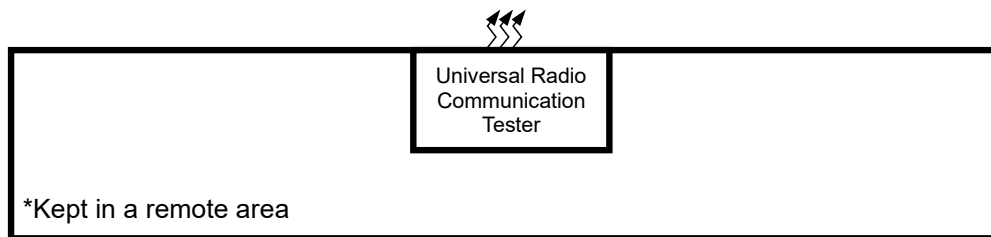
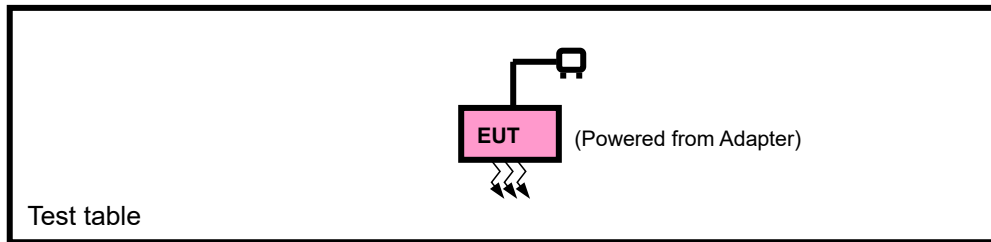
5. List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
AC Adapter	N/A	Shenzhen ABP Technology Co., Ltd.	NFC05B5403C	I/P: 100-240Vac, 0.5A, O/P: 5.4Vdc, 3A, 16.2W
Battery	Pepper+Fuchs	Shenzhen Cholibpower Technology Co., Ltd.	Ex-BP S203	Capacity: 3.8Vdc, 4500mAh
USB Cable	Delock	TRAGANT Handels- und Beteiligungs GmbH	35156	Signal Line, 1.2meter



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	Laptop	Lenovo	ThinkPad E14	HRSW00024	N/A
2	DC Source	HYELEC	HY3010B	551016	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable, 1.0m;
2	USB Line: Unshielded, Detachable, 1.2m;

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 with LTE link
B	EUT + DC Supply/ Battery with LTE link

LTE BAND 7 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset
B	FREQUENCY STABILITY	20800 to 21400	20800, 21400	10MHz	QPSK	100 RB / 0 RB offset
A	OCCUPIED BANDWIDTH	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM, 256QAM	25 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM, 256QAM	50 RB / 0 RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM, 256QAM	75 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM, 256QAM	100 RB / 0 RB offset
A	PEAK TO AVERAGE RATIO	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset 25 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset 50 RB / 0 RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset 75 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset 100 RB / 0 RB offset
A	BAND EDGE	20775 to 21425	20775	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset 25 RB / 0 RB offset
			21425	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 24 RB offset 25 RB / 0 RB offset
		20800 to	20800	10MHz	QPSK, 16QAM,	1 RB / 0 RB offset



		21400			64QAM,256QAM	50 RB / 0 RB offset
			21400	10MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 49 RB offset
						50 RB / 0 RB offset
		20825 to 21375	20825	15MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset
						75 RB / 0 RB offset
			21375	15MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 74 RB offset
						75 RB / 0 RB offset
		20850 to 21350	20850	20MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset
						100 RB / 0 RB offset
			21350	20MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 99 RB offset
						100 RB / 0 RB offset
A	CONDCUDED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK	1 RB / 0RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK	1 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK	1 RB / 0 RB offset
A	RADIATED EMISSION	20775 to 21425	21100	5MHz	QPSK	1 RB / 0 RB offset
		20800 to 21400	21100	10MHz	QPSK	1 RB / 0 RB offset
		20825 to 21375	20825,21100,21375	15MHz	QPSK	1 RB / 0 RB offset
		20850 to 21350	21100	20MHz	QPSK	1 RB / 0 RB offset

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

LTE BAND 12 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23017 to 23173	23017, 23095 , 23173	1.4MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset
		23025 to 23165	23025, 23095 ,23165	3MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset
		23035 to 23155	23035, 23095 ,23155	5MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset
		23060 to 23130	23060, 23095 ,23130	10MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset
B	FREQUENCY STABILITY	23060 to 23130	23060, 23130	10MHz	QPSK	50 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	23017 to 23173	23017, 23095 , 23173	1.4MHz	QPSK, 16QAM, 64QAM,256QAM	6 RB / 0 RB offset
		23025 to 23165	23025, 23095 ,23165	3MHz	QPSK, 16QAM, 64QAM,256QAM	15 RB / 0 RB offset
		23035 to 23155	23035, 23095 ,23155	5MHz	QPSK, 16QAM, 64QAM,256QAM	25 RB / 0 RB offset
		23060 to 23130	23060, 23095 ,23130	10MHz	QPSK, 16QAM, 64QAM,256QAM	50 RB / 0 RB offset
A	PEAK TO AVERAGE RATIO	23017 to 23173	23017, 23095 , 23173	1.4MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB Offset 6 RB / 0 RB Offset



		23025 to 23165	23025, 23095 ,23165	3MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB Offset 15 RB / 0 RB Offset
		23035 to 23155	23035, 23095 ,23155	5MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset
		23060 to 23130	23060, 23095 ,23130	10MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
A	BAND EDGE	23017 to 23173	23017	1.4MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset 6 RB / 0 RB offset
			23173	1.4MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 5 RB offset 6 RB / 0 RB offset
		23025 to 23165	23025	3MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset 15 RB / 0 RB offset
			23165	3MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 14 RB offset 15 RB / 0 RB offset
		23035 to 23155	23035	5MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset 25 RB / 0 RB offset
			23155	5MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 24 RB offset 25 RB / 0 RB offset
		23060 to 23130	23060	10MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 0 RB offset 50 RB / 0 RB offset
			23130	10MHz	QPSK, 16QAM, 64QAM,256QAM	1 RB / 49 RB offset 50 RB / 0 RB offset
A	CONDCUDED EMISSION	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK	1 RB / 0 RB offset
		23025 to 23165	23025, 23095 ,23165	3MHz	QPSK	1 RB / 0 RB offset
		23035 to 23155	23035, 23095 ,23155	5MHz	QPSK	1 RB / 0 RB offset
		23060 to 23130	23060, 23095 ,23130	10MHz	QPSK	1 RB / 0 RB offset
A	RADIATED EMISSION	23017 to 23173	23095	1.4MHz	QPSK	1 RB / 0 RB offset
		23025 to 23165	23095	3MHz	QPSK	1 RB / 0 RB offset
		23035 to 23155	23095	5MHz	QPSK	1 RB / 0 RB offset
		23060 to 23130	23060,23095,23130	10MHz	QPSK	1 RB / 0 RB offset

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



LTE BAND 13 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23205 to 23255	23205, 20175, 23255	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset
		23230	23230	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset
B	FREQUENCY STABILITY	23205 to 23255	23205, 23255	5MHz	QPSK	50 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	23205 to 23255	23205, 20175, 23255	5MHz	QPSK, 16QAM, 64QAM, 256QAM	25 RB / 0 RB offset
		23230	23230	10MHz	QPSK, 16QAM, 64QAM, 256QAM	50 RB / 0 RB offset
A	PEAK TO AVERAGE RATIO	23205 to 23255	23205, 23230, 23255	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset
		23230	23230	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
A	BAND EDGE	23205 to 23255	23205	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset 25 RB / 0 RB offset
			23255	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 24 RB offset 25 RB / 0 RB offset
		23230	23230	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB offset 1 RB / 49 RB offset 50 RB / 0 RB offset
A	CONDCUETED EMISSION	23205 to 23255	23205, 20175, 23255	5MHz	QPSK	1 RB / 0 RB offset
		23230	23230	10MHz	QPSK	1 RB / 0 RB offset
A	RADIATED EMISSION	23205 to 23255	23230	5MHz	QPSK	1 RB / 0 RB offset
		23230	23230	10MHz	QPSK	1 RB / 0 RB offset

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

LTE BAND 30 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	27685 to 27735	27685, 27710, 27735	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		27710	27710	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	27685 to 27735	27685, 27735	5MHz	QPSK, 16QAM, 64QAM, 256QAM	50 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	27685 to 27735	27685, 27710, 27735	5MHz	QPSK, 16QAM, 64QAM, 256QAM	25 RB / 0 RB Offset



		27710	27710	10MHz	QPSK,16QAM,64QAM,256QAM	50 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	27685 to 27735	27685, 27710, 27735	5MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset
		27710	27710	10MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset
A	BAND EDGE	27685 to 27735	27685, 27710, 27735	5MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
		27710	27710	10MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		27710	27710	10MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
A	CONDUCTED EMISSION	27685 to 27735	27685, 27710, 27735	5MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
		27710	27710	10MHz	QPSK	1 RB / 24 RB Offset
						1 RB / 0 RB Offset
		27710	27710	10MHz	QPSK	50 RB / 0 RB Offset
						1 RB / 49 RB Offset
A	RADIATED EMISSION	23755 to 23825	23790	5MHz	QPSK	1 RB / 0 RB Offset
		23780 to 23800	23780, 23790, 23800	10MHz	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.

LTE BAND 71 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	133147 to 133447	133147, 133297, 133447	5MHz	QPSK,16QAM,64QAM	1 RB / 0 RB offset
		133172 to 133422	133172, 133297 133422	10MHz	QPSK,16QAM,64QAM	1 RB / 0 RB offset
		133197 to 133397	133197, 133297, 133397	15MHz	QPSK,16QAM,64QAM	1 RB / 0 RB offset
		133222 to 133372	133222, 133322, 133372	20MHz	QPSK,16QAM,64QAM	1 RB / 0 RB offset
B	FREQUENCY STABILITY	133172 to 133422	133172, 133422	10MHz	QPSK	50 RB / 0 RB offset
A	OCCUPIED BANDWIDTH	133147 to 133447	133147, 133297, 133447	5MHz	QPSK,16QAM,64QAM	25 RB / 0 RB offset



		133172 to 133422	133172, 133297 133422	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB offset
		133197 to 133397	133197, 133297, 133397	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB offset
		133222 to 133372	133222, 133322, 133372	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB offset
A	PEAK TO AVERAGE RATIO	133147 to 133447	133147, 133297, 133447	5MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB offsett 25 RB / 0 RB offset
		133172 to 133422	133172, 133297 133422	10MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB offsett 50 RB / 0 RB offset
		133197 to 133397	133197, 133297, 133397	15MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB offsett 75 RB / 0 RB offset
		133222 to 133372	133222, 133322, 133372	20MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB offsett 100 RB / 0 RB offset
A	BAND EDGE	133147 to 133447	133147	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 25 RB / 0 RB offset
			133447	5MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB offset 25 RB / 0 RB offset
		133172 to 133422	133172	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 50 RB / 0 RB offset
			133422	10MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB offset 50 RB / 0 RB offset
		133197 to 133397	133197	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 75 RB / 0 RB offset
			133397	15MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB offset 75 RB / 0 RB offset
		133222 to 133372	133222	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 100 RB / 0 RB offset
			133372	20MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB offset 100 RB / 0 RB offset
A	CONDCUDED EMISSION	133147 to 133447	133147, 133297, 133447	5MHz	QPSK	1 RB / 0 RB offset
		133172 to 133422	133172, 133297 133422	10MHz	QPSK	1 RB / 0 RB offset
		133197 to 133397	133197, 133297, 133397	15MHz	QPSK	1 RB / 0 RB offset
		133222 to 133372	133222, 133322, 133372	20MHz	QPSK	1 RB / 0 RB offset
A	RADIATED EMISSION	133147 to 133447	133147, 133297, 133447	5MHz	QPSK	1 RB / 0 RB offset
		133172 to 133422	133297	10MHz	QPSK	1 RB / 0 RB offset
		133197 to 133397	133297	15MHz	QPSK	1 RB / 0 RB offset

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		133222 to 133372	133322	20MHz	QPSK	1 RB / 0 RB offset
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Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

TEST CONDITION			
TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	DC 5.4V By Adapter	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.4/3.8/4,35V By Battery	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5.4V By Adapter	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 5.4V By Adapter	Hanwen Xu
CONDCUDED EMISSION	23deg. C, 70%RH	DC 5.4V By Adapter	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	DC 5.4V By Adapter	Hanwen Xu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 5.4V By Adapter	Hanwen Xu



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.

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

Part 27.50(b)(10): Portable stations (hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

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.

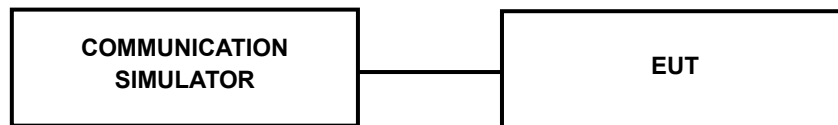
CONDUCTED POWER MEASUREMENT:

- 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 7						
Band/BW	Modulation	RB Size	RB offset	Low CH 20775	Mid CH 21100	High CH 21425
				Frequency 2502.5 MHz	Frequency 2535 MHz	Frequency 2567.5 MHz
7/ 5	QPSK	1	0	23.53	23.17	23.36
		1	12	23.32	23.14	23.32
		1	24	23.09	23.09	23.25
		12	0	22.43	22.20	22.35
		12	6	22.30	22.28	22.29
		12	13	22.16	22.12	22.33
		25	0	22.26	22.20	22.09
	16QAM	1	0	22.63	22.60	22.60
		1	12	22.49	22.37	22.54
		1	24	22.36	22.27	22.51
		12	0	21.37	21.29	21.20
		12	6	21.39	21.22	21.23
		12	13	21.22	21.23	21.29
		25	0	21.27	21.19	21.27
	64QAM	1	0	21.67	21.37	21.46
		1	12	21.33	21.34	21.52
		1	24	21.10	21.23	21.38
		12	0	20.55	20.26	20.28
		12	6	20.37	20.13	20.25
		12	13	20.24	20.16	20.34
		25	0	20.32	20.20	20.22
	256QAM	1	0	18.56	18.35	18.32
		1	12	18.42	18.33	18.36
		1	24	18.07	18.36	18.26
		12	0	18.52	18.23	18.31
		12	6	18.30	18.13	18.28
		12	13	18.14	18.08	18.34
		25	0	18.38	18.24	18.29
Band/BW	Modulation	RB Size	RB offset	Low CH 20800	Mid CH 21100	High CH 21400
				Frequency 2505 MHz	Frequency 2535 MHz	Frequency 2565 MHz
7/ 10	QPSK	1	0	23.51	23.15	23.38
		1	24	23.33	23.13	23.27
		1	49	23.11	23.05	23.14
		25	0	22.33	22.21	22.32
		25	12	22.31	22.30	22.29
		25	25	22.11	22.10	22.25
		50	0	22.27	22.17	22.21
	16QAM	1	0	22.71	22.56	22.62
		1	24	22.63	22.45	22.52
		1	49	22.41	22.29	22.54
		25	0	21.46	21.25	21.25
		25	12	21.26	21.19	21.20



		25	25	21.14	21.25	21.30
		50	0	21.23	21.19	21.18
	64QAM	1	0	21.53	21.33	21.46
		1	24	21.42	21.33	21.53
		1	49	21.23	21.27	21.36
		25	0	20.46	20.28	20.32
		25	12	20.31	20.21	20.21
		25	25	20.23	20.28	20.31
		50	0	20.26	20.17	20.22
		1	0	18.55	18.34	18.32
	256QAM	1	24	18.30	18.26	18.48
		1	49	18.08	18.28	18.31
		25	0	18.49	18.21	18.29
		25	12	18.24	18.26	18.25
		25	25	18.23	18.10	18.39
		50	0	18.30	18.20	18.27

LTE Band 7						
Band/BW	Modulation	RB Size	RB offset	Low CH 20825	Mid CH 21100	High CH 21375
				Frequency 2507.5 MHz	Frequency 2535 MHz	Frequency 2562.5 MHz
7/ 15	QPSK	1	0	23.50	23.14	23.27
		1	37	23.27	23.18	23.23
		1	74	23.15	23.16	23.11
		36	0	22.45	22.20	22.37
		36	19	22.26	22.20	22.28
		36	39	22.15	22.15	22.19
		75	0	22.23	22.21	22.18
	16QAM	1	0	22.71	22.61	22.50
		1	37	22.53	22.46	22.43
		1	74	22.37	22.32	22.43
		36	0	21.42	21.22	21.28
		36	19	21.28	21.24	21.26
		36	39	21.13	21.19	21.16
		75	0	21.26	21.13	21.18
	64QAM	1	0	21.57	21.43	21.45
		1	37	21.40	21.31	21.52
		1	74	21.18	21.18	21.46
		36	0	20.53	20.21	20.23
		36	19	20.35	20.11	20.16
		36	39	20.13	20.24	20.25
		75	0	20.31	20.21	20.34
	256QAM	1	0	18.52	18.36	18.32
		1	37	18.32	18.25	18.35
		1	74	18.09	18.40	18.30
		36	0	18.40	18.32	18.34
		36	19	18.31	18.24	18.21
		36	39	18.19	18.12	18.36
		75	0	18.31	18.24	18.27



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Band/BW	Modulation	RB Size	RB offset	Low CH 20850	Mid CH 21100	High CH 21350
				Frequency 2510 MHz	Frequency 2535 MHz	Frequency 2560 MHz
7/ 20	QPSK	1	0	23.63	23.24	23.40
		1	50	23.35	23.22	23.38
		1	99	23.18	23.19	23.26
		50	0	22.47	22.35	22.38
		50	25	22.36	22.33	22.30
		50	50	22.22	22.20	22.34
		100	0	22.34	22.26	22.23
	16QAM	1	0	22.72	22.66	22.63
		1	50	22.64	22.48	22.58
		1	99	22.47	22.39	22.55
		50	0	21.52	21.31	21.29
		50	25	21.41	21.29	21.32
		50	50	21.28	21.26	21.31
		100	0	21.37	21.24	21.33
	64QAM	1	0	21.68	21.45	21.57
		1	50	21.44	21.37	21.54
		1	99	21.25	21.33	21.47
		50	0	20.56	20.29	20.34
		50	25	20.38	20.26	20.28
		50	50	20.25	20.30	20.40
		100	0	20.38	20.28	20.37
	256QAM	1	0	18.57	18.49	18.42
		1	50	18.44	18.35	18.49
		1	99	18.20	18.41	18.38
		50	0	18.55	18.35	18.37
		50	25	18.39	18.28	18.35
		50	50	18.27	18.23	18.44
		100	0	18.43	18.26	18.34

LTE Band 12

Band/BW	Modulation	RB Size	RB offset	Low CH 23017	Mid CH 23095	High CH 23173
				Frequency 699.7 MHz	Frequency 707.5 MHz	Frequency 715.3 MHz
12/ 1.4	QPSK	1	0	23.03	22.99	23.05
		1	2	22.87	22.88	22.95
		1	5	22.87	22.91	22.99
		3	0	22.99	22.93	22.98
		3	1	22.72	22.85	22.88
		3	3	22.73	22.89	22.85
		6	0	21.89	22.00	22.01
	16QAM	1	0	22.19	22.09	22.12
		1	2	22.14	22.24	22.16
		1	5	22.09	22.13	22.19
		3	0	22.07	21.97	22.03
		3	1	22.03	22.19	22.13
		3	3	21.99	22.09	22.09
		6	0	21.02	21.01	21.08



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	64QAM	1	0	21.01	21.03	21.03
		1	2	20.99	21.06	21.12
		1	5	20.94	21.03	21.04
		3	0	20.92	20.91	20.91
		3	1	20.91	21.03	21.01
		3	3	20.89	20.89	20.92
		6	0	19.97	19.95	19.93
	256QAM	1	0	17.96	17.85	17.99
		1	2	18.04	17.97	18.12
		1	5	18.01	17.95	18.02
		3	0	17.92	17.89	17.91
		3	1	17.98	18.01	18.03
		3	3	17.89	18.03	18.01
		6	0	17.88	17.94	17.91
Band/BW	Modulation	RB Size	RB offset	Low CH 23025	Mid CH 23095	High CH 23165
				Frequency 700.5 MHz	Frequency 707.5 MHz	Frequency 714.5 MHz
12/ 3	QPSK	1	0	23.02	23.00	23.01
		1	7	22.88	22.82	22.99
		1	14	22.84	22.88	22.88
		8	0	21.86	21.87	21.89
		8	3	21.94	21.90	21.98
		8	7	22.02	21.99	21.98
		15	0	21.97	21.98	22.00
	16QAM	1	0	22.19	22.15	22.10
		1	7	22.09	22.12	22.16
		1	14	22.01	22.13	22.27
		8	0	20.92	20.96	20.96
		8	3	21.04	20.98	21.03
		8	7	20.89	20.90	21.11
		15	0	20.93	20.89	21.01
	64QAM	1	0	21.12	21.10	21.16
		1	7	20.97	21.19	21.11
		1	14	21.05	21.14	21.14
		8	0	19.82	19.85	19.97
		8	3	19.95	20.01	20.00
		8	7	19.90	20.01	20.16
		15	0	19.93	19.92	20.01
	256QAM	1	0	17.99	17.94	18.05
		1	7	17.97	17.98	18.18
		1	14	17.93	18.04	18.06
		8	0	17.85	17.90	17.94
		8	3	17.90	17.96	18.06
		8	7	17.88	17.95	18.13
		15	0	17.88	17.85	18.01
LTE Band 12						
Band/BW	Modulation	RB Size	RB offset	Low CH 23035	Mid CH 23095	High CH 23155
				Frequency 701.5 MHz	Frequency 707.5 MHz	Frequency 713.5 MHz

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12/ 5	QPSK	1	0	22.94	22.92	23.03
		1	12	22.84	22.83	22.95
		1	24	22.85	22.88	22.88
		12	0	21.77	21.93	21.98
		12	6	21.89	21.83	21.95
		12	13	21.96	21.99	21.93
		25	0	21.93	21.93	21.94
	16QAM	1	0	22.25	22.05	22.18
		1	12	22.04	22.10	22.11
		1	24	22.05	22.15	22.19
		12	0	20.87	21.00	21.01
		12	6	20.93	20.99	21.08
		12	13	20.91	20.92	21.09
		25	0	20.93	20.94	20.94
	64QAM	1	0	21.08	21.11	21.06
		1	12	20.91	21.09	21.17
		1	24	20.95	21.13	21.07
		12	0	19.82	19.93	19.85
		12	6	19.94	19.98	20.01
		12	13	19.96	20.06	20.05
		25	0	19.89	19.90	19.99
	256QAM	1	0	18.03	17.96	18.04
		1	12	18.06	17.94	18.15
		1	24	17.91	18.03	18.01
		12	0	17.85	17.82	17.94
		12	6	17.97	17.92	17.99
		12	13	17.92	18.01	18.00
		25	0	17.96	17.96	18.03
Band/BW	Modulation	RB Size	RB offset	Low CH 23060	Mid CH 23095	High CH 23130
				Frequency 704 MHz	Frequency 707.5 MHz	Frequency 711 MHz
12/ 10	QPSK	1	0	23.05	23.07	23.16
		1	24	22.98	22.97	23.02
		1	49	22.95	22.94	23.00
		25	0	21.91	21.94	22.01
		25	12	22.00	21.98	22.07
		25	25	22.05	22.07	22.09
		50	0	21.98	22.01	22.09
		50	12	21.98	22.01	22.09
	16QAM	1	0	22.28	22.16	22.19
		1	24	22.19	22.25	22.26
		1	49	22.14	22.20	22.29
		25	0	20.95	21.02	21.04
		25	12	21.05	21.08	21.09
		25	25	21.01	21.05	21.15
		50	0	21.03	21.02	21.09
		50	12	21.03	21.02	21.09
	64QAM	1	0	21.13	21.16	21.18
		1	24	21.04	21.20	21.23
		1	49	21.08	21.18	21.15
		25	0	19.95	20.00	19.98
		25	12	20.09	20.05	20.12



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		25	25	20.01	20.10	20.18
		50	0	20.04	19.99	20.06
	256QAM	1	0	18.08	18.00	18.11
		1	24	18.11	18.06	18.20
		1	49	18.04	18.08	18.14
		25	0	17.96	17.96	18.05
		25	12	17.99	18.02	18.11
		25	25	18.01	18.04	18.14
		50	0	17.98	17.97	18.06
LTE Band 13						
Band/BW	Modulation	RB Size	RB offset	Low CH 23205	Mid CH 23230	High CH 23255
				Frequency 779.5 MHz	Frequency 782.0 MHz	Frequency 784.5 MHz
13/ 5	QPSK	1	0	23.31	23.40	23.29
		1	12	23.39	23.49	23.36
		1	24	23.33	23.47	23.41
		12	0	22.47	22.49	22.39
		12	6	22.37	22.50	22.43
		12	13	22.37	22.42	22.30
		25	0	22.37	22.41	22.33
	16QAM	1	0	22.56	22.70	22.67
		1	12	22.67	22.74	22.62
		1	24	22.55	22.68	22.60
		12	0	21.50	21.63	21.59
		12	6	21.45	21.55	21.45
		12	13	21.48	21.51	21.48
		25	0	21.51	21.58	21.45
	64QAM	1	0	21.61	21.62	21.59
		1	12	21.63	21.69	21.56
		1	24	21.33	21.48	21.36
		12	0	20.52	20.56	20.43
		12	6	20.41	20.56	20.48
		12	13	20.36	20.50	20.47
		25	0	20.48	20.58	20.57
	256QAM	1	0	18.56	18.67	18.64
		1	12	18.43	18.56	18.48
		1	24	18.51	18.60	18.53
		12	0	18.58	18.67	18.61
		12	6	18.35	18.50	18.44
		12	13	18.37	18.51	18.49
		25	0	18.50	18.58	18.57
Band/BW	Modulation	RB Size	RB offset	/	Mid CH 23230	/
				/	Frequency 782.0 MHz	/
13/ 10	QPSK	1	0	/	23.53	/
		1	24	/	23.61	/
		1	49	/	23.49	/
		25	0	/	22.59	/
		25	12	/	22.54	/



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		25	25	/	22.51	/
		50	0	/	22.53	/
	16QAM	1	0	/	22.81	/
		1	24	/	22.87	/
		1	49	/	22.72	/
		25	0	/	21.67	/
		25	12	/	21.63	/
		25	25	/	21.56	/
		50	0	/	21.64	/
		1	0	/	21.72	/
	64QAM	1	24	/	21.77	/
		1	49	/	21.63	/
		25	0	/	20.61	/
		25	12	/	20.59	/
		25	25	/	20.55	/
		50	0	/	20.66	/
		1	0	/	18.69	/
	256QAM	1	24	/	18.66	/
		1	49	/	18.61	/
		25	0	/	18.71	/
		25	12	/	18.59	/
		25	25	/	18.56	/
		50	0	/	18.70	/

LTE Band 30

Band/BW	Modulation	RB Size	RB offset	Low CH 27685	Mid CH 27710	High CH 27735
				Frequency 2307.5 MHz	Frequency 2310MHz	Frequency 2312.5MHz
30/ 5	QPSK	1	0	23.97	24.06	23.99
		1	12	23.99	24.08	24.12
		1	24	23.77	23.78	23.71
		12	0	23.02	22.99	22.99
		12	6	23.09	23.02	23.07
		12	13	22.87	22.95	22.99
		25	0	22.91	23.03	22.96
	16QAM	1	0	23.39	23.36	23.38
		1	12	23.27	23.22	23.33
		1	24	22.96	23.00	22.95
		12	0	22.37	22.35	22.33
		12	6	22.08	22.10	22.08
		12	13	22.01	21.98	21.96
		25	0	22.09	21.97	22.04
	64QAM	1	0	22.29	22.21	22.30
		1	12	22.21	22.28	22.24
		1	24	21.96	21.92	21.97
		12	0	21.07	21.01	21.06
		12	6	21.03	21.09	21.11
		12	13	20.98	20.92	20.92
		25	0	20.99	20.97	20.95
	256QAM	1	0	19.26	19.12	19.21
		1	12	19.15	19.24	19.24

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		1	24	18.89	18.96	18.89
		12	0	19.12	19.06	19.07
		12	6	18.99	18.99	18.99
		12	13	18.98	18.94	19.02
		25	0	19.09	19.07	19.02
Band/BW	Modulation	RB Size	RB offset	Low CH 27685	Mid CH 27710	High CH 27735
				Frequency 2307.5 MHz	Frequency 2310MHz	Frequency 2312.5MHz
30/ 10	QPSK	1	0	/	24.11	/
		1	24	/	24.13	/
		1	49	/	23.82	/
		25	0	/	23.11	/
		25	12	/	23.16	/
		25	25	/	23.01	/
		50	0	/	23.04	/
	16QAM	1	0	/	23.46	/
		1	24	/	23.35	/
		1	49	/	23.07	/
		25	0	/	22.38	/
		25	12	/	22.16	/
		25	25	/	22.05	/
		50	0	/	22.12	/
	64QAM	1	0	/	22.36	/
		1	24	/	22.32	/
		1	49	/	22.07	/
		25	0	/	21.13	/
		25	12	/	21.17	/
		25	25	/	21.02	/
		50	0	/	21.08	/
	256QAM	1	0	/	19.27	/
		1	24	/	19.28	/
		1	49	/	19.03	/
		25	0	/	19.20	/
		25	12	/	19.13	/
		25	25	/	19.09	/
		50	0	/	19.11	/
LTE Band 71						
Band/BW	Modulation	RB Size	RB offset	Low CH 133147	Mid CH 133297	High CH 133447
				Frequency 665.5MHz	Frequency 680.5MHz	Frequency 695.5MHz
71/ 5	QPSK	1	0	23.48	23.25	23.11
		1	12	23.19	23.03	22.97
		1	24	22.92	22.86	22.87
		12	0	22.47	22.38	22.05
		12	6	22.17	22.11	21.97
		12	13	22.03	22.00	22.02
		25	0	22.14	22.07	21.98
	16QAM	1	0	22.59	22.25	22.30
		1	12	22.30	22.16	22.20



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		1	24	22.21	21.99	21.94
		12	0	21.34	21.08	21.13
		12	6	21.24	21.08	21.03
		12	13	21.16	21.02	21.03
		25	0	21.15	21.12	21.09
	64QAM	1	0	21.51	21.16	21.05
		1	12	21.36	21.17	21.19
		1	24	21.03	20.92	20.88
		12	0	20.33	20.17	20.14
		12	6	20.22	20.07	19.98
		12	13	20.00	19.97	19.98
		25	0	20.25	20.10	19.91
	256QAM	1	0	18.55	18.23	18.19
		1	12	18.29	18.11	18.13
		1	24	18.16	18.05	18.15
		12	0	18.38	18.19	18.07
		12	6	18.26	18.09	18.01
		12	13	18.11	18.04	18.03
		25	0	18.33	18.08	18.03
Band/BW	Modulation	RB Size	RB offset	Low CH 133172	Mid CH 133297	High CH 133172
				Frequency 668MHz	Frequency 680.5MHz	Frequency 693MHz
71/ 10	QPSK	1	0	23.37	23.17	23.05
		1	24	23.18	23.01	22.91
		1	49	23.02	22.88	22.84
		25	0	22.42	22.36	22.05
		25	12	22.12	22.06	21.91
		25	25	22.08	22.04	22.02
		50	0	22.16	22.10	21.94
	16QAM	1	0	22.45	22.37	22.27
		1	24	22.34	22.14	22.08
		1	49	22.12	22.01	21.99
		25	0	21.30	21.10	21.14
		25	12	21.19	20.95	20.97
		25	25	21.08	20.96	20.95
		50	0	21.13	21.09	20.95
	64QAM	1	0	21.49	21.24	21.11
		1	24	21.36	21.18	21.14
		1	49	21.11	20.95	20.82
		25	0	20.39	20.16	20.04
		25	12	20.16	20.06	20.05
		25	25	20.00	19.99	20.04
		50	0	20.27	20.04	19.94
	256QAM	1	0	18.61	18.27	18.25
		1	24	18.25	18.12	18.14
		1	49	18.16	18.11	18.08
		25	0	18.41	18.11	18.13
		25	12	18.24	18.15	17.97
		25	25	18.15	18.03	18.01
		50	0	18.30	18.09	18.02



LTE Band 71						
Band/BW	Modulation	RB Size	RB offset	Low CH 133197	Mid CH 133297	High CH 133397
				Frequency 670.5MHz	Frequency 680.5MHz	Frequency 690.5MHz
71/ 15	QPSK	1	0	23.39	23.24	23.08
		1	37	23.06	22.92	22.92
		1	74	23.02	22.84	22.75
		36	0	22.40	22.42	22.05
		36	19	22.12	22.11	22.01
		36	39	22.04	21.96	22.02
		75	0	22.19	22.14	22.02
	16QAM	1	0	22.48	22.25	22.31
		1	37	22.37	22.09	22.15
		1	74	22.23	22.02	21.93
		36	0	21.40	21.08	21.17
		36	19	21.26	20.96	21.05
		36	39	21.15	21.00	21.03
		75	0	21.25	21.13	21.04
	64QAM	1	0	21.48	21.14	21.09
		1	37	21.26	21.15	21.16
		1	74	21.09	20.95	20.96
		36	0	20.36	20.14	20.04
		36	19	20.23	19.95	19.96
		36	39	20.10	19.94	20.04
		75	0	20.25	20.04	19.94
	256QAM	1	0	18.58	18.35	18.24
		1	37	18.29	18.08	18.04
		1	74	18.12	18.00	18.02
		36	0	18.36	18.18	18.15
		36	19	18.23	18.17	18.06
		36	39	18.24	18.07	18.09
		75	0	18.38	18.16	18.10
Band/BW	Modulation	RB Size	RB offset	Low CH 133222	Mid CH 133322	High CH 133372
				Frequency 673MHz	Frequency 683MHz	Frequency 688MHz
71/ 20	QPSK	1	0	23.50	23.27	23.14
		1	50	23.21	23.05	23.02
		1	99	23.04	22.94	22.89
		50	0	22.50	22.48	22.16
		50	25	22.26	22.13	22.05
		50	50	22.18	22.09	22.06
		100	0	22.24	22.19	22.07
	16QAM	1	0	22.60	22.40	22.35
		1	50	22.40	22.24	22.22
		1	99	22.24	22.12	22.04
		50	0	21.41	21.19	21.18
		50	25	21.33	21.10	21.08
		50	50	21.22	21.07	21.04
		100	0	21.28	21.16	21.10



	64QAM	1	0	21.58	21.29	21.20
		1	50	21.39	21.20	21.26
		1	99	21.14	21.02	20.97
		50	0	20.42	20.19	20.15
		50	25	20.25	20.10	20.07
		50	50	20.14	20.09	20.08
		100	0	20.33	20.17	20.06
	256QAM	1	0	18.69	18.38	18.29
		1	50	18.39	18.18	18.19
		1	99	18.25	18.14	18.16
		50	0	18.47	18.22	18.17
		50	25	18.35	18.21	18.11
		50	50	18.25	18.13	18.14
		100	0	18.44	18.23	18.15



EIRP

LTE BAND 7

5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	23.53	0.74	24.27	267.30	2
21100	2535	23.17	0.74	23.91	246.04	2
21425	2567.5	23.36	0.74	24.10	257.04	2

5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	22.63	0.74	23.37	217.27	2
21100	2535	22.60	0.74	23.34	215.77	2
21425	2567.5	22.60	0.74	23.34	215.77	2

5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	21.67	0.74	22.41	174.18	2
21100	2535	21.37	0.74	22.11	162.55	2
21425	2567.5	21.52	0.74	22.26	168.27	2

5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	18.56	0.74	19.30	85.11	2
21100	2535	18.36	0.74	19.10	81.28	2
21425	2567.5	18.36	0.74	19.10	81.28	2

10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505	23.51	0.74	24.25	266.07	2
21100	2535	23.15	0.74	23.89	244.91	2
21400	2565	23.38	0.74	24.12	258.23	2

10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505	22.71	0.74	23.45	221.31	2
21100	2535	22.56	0.74	23.30	213.80	2
21400	2565	22.62	0.74	23.36	216.77	2

**10MHz 64QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505	21.53	0.74	22.27	168.66	2
21100	2535	21.33	0.74	22.07	161.06	2
21400	2565	21.53	0.74	22.27	168.66	2

10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505	18.55	0.74	19.29	84.92	2
21100	2535	18.34	0.74	19.08	80.91	2
21400	2565	18.48	0.74	19.22	83.56	2

15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	23.50	0.74	24.24	265.46	2
21100	2535	23.18	0.74	23.92	246.60	2
21375	2562.5	23.27	0.74	24.01	251.77	2

15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	22.71	0.74	23.45	221.31	2
21100	2535	22.61	0.74	23.35	216.27	2
21375	2562.5	22.50	0.74	23.24	210.86	2

15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	21.57	0.74	22.31	170.22	2
21100	2535	21.43	0.74	22.17	164.82	2
21375	2562.5	21.52	0.74	22.26	168.27	2

15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	18.52	0.74	19.26	84.33	2
21100	2535	18.40	0.74	19.14	82.04	2
21375	2562.5	18.36	0.74	19.10	81.28	2



20MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510	23.63	0.74	24.37	273.53	2
21100	2535	23.24	0.74	23.98	250.03	2
21350	2560	23.40	0.74	24.14	259.42	2

20MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510	22.72	0.74	23.46	221.82	2
21100	2535	22.66	0.74	23.40	218.78	2
21350	2560	22.63	0.74	23.37	217.27	2

20MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510	21.68	0.74	22.42	174.58	2
21100	2535	21.45	0.74	22.19	165.58	2
21350	2560	21.57	0.74	22.31	170.22	2

20MHz 256QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510	18.57	0.74	19.31	85.31	2
21100	2535	18.49	0.74	19.23	83.75	2
21350	2560	18.49	0.74	19.23	83.75	2



LTE BAND 12

1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23017	699.7	23.03	-3	17.88	61.38	3
23095	707.5	22.99	-3	17.84	60.81	3
23173	715.3	23.05	-3	17.90	61.66	3

1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23017	699.7	22.19	-3	17.04	50.58	3
23095	707.5	22.24	-3	17.09	51.17	3
23173	715.3	22.19	-3	17.04	50.58	3

1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23017	699.7	21.01	-3	15.86	38.55	3
23095	707.5	21.06	-3	15.91	38.99	3
23173	715.3	21.12	-3	15.97	39.54	3

1.4MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23017	699.7	18.04	-3	12.89	19.45	3
23095	707.5	18.03	-3	12.88	19.41	3
23173	715.3	18.12	-3	12.97	19.82	3

3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23025	700.5	23.02	-3	17.87	61.24	3
23095	707.5	23.00	-3	17.85	60.95	3
23165	714.5	23.01	-3	17.86	61.09	3

3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23025	700.5	22.19	-3	17.04	50.58	3
23095	707.5	22.15	-3	17.00	50.12	3
23165	714.5	22.27	-3	17.12	51.52	3

**3MHz 64QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23025	700.5	21.12	-3	15.97	39.54	3
23095	707.5	21.19	-3	16.04	40.18	3
23165	714.5	21.16	-3	16.01	39.90	3

3MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23025	700.5	17.99	-3	12.84	19.23	3
23095	707.5	18.04	-3	12.89	19.45	3
23165	714.5	18.18	-3	13.03	20.09	3

5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23035	701.5	22.94	-3	17.79	60.12	3
23095	707.5	22.92	-3	17.77	59.84	3
23155	713.5	23.03	-3	17.88	61.38	3

5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23035	701.5	22.25	-3	17.10	51.29	3
23095	707.5	22.15	-3	17.00	50.12	3
23155	713.5	22.19	-3	17.04	50.58	3

5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23035	701.5	21.08	-3	15.93	39.17	3
23095	707.5	21.13	-3	15.98	39.63	3
23155	713.5	21.17	-3	16.02	39.99	3

5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23035	701.5	18.06	-3	12.91	19.54	3
23095	707.5	18.03	-3	12.88	19.41	3
23155	713.5	18.15	-3	13.00	19.95	3



10MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23060	704	23.05	-3	17.90	61.66	3
23095	707.5	23.07	-3	17.92	61.94	3
23130	711	23.16	-3	18.01	63.24	3

10MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23060	704	22.28	-3	17.13	51.64	3
23095	707.5	22.25	-3	17.10	51.29	3
23130	711	22.29	-3	17.14	51.76	3

10MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23060	704	21.13	-3	15.98	39.63	3
23095	707.5	21.20	-3	16.05	40.27	3
23130	711	21.23	-3	16.08	40.55	3

10MHz 256QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23060	704	18.11	-3	12.96	19.77	3
23095	707.5	18.08	-3	12.93	19.63	3
23130	711	18.20	-3	13.05	20.18	3

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



LTE BAND 13

5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23205	779.5	23.39	-2.06	19.18	82.79	3
23230	782	23.49	-2.06	19.28	84.72	3
23255	784.5	23.41	-2.06	19.20	83.18	3

5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23205	779.5	22.67	-2.06	18.46	70.15	3
23230	782	22.74	-2.06	18.53	71.29	3
23255	784.5	22.67	-2.06	18.46	70.15	3

5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23205	779.5	21.63	-2.06	17.42	55.21	3
23230	782	21.69	-2.06	17.48	55.98	3
23255	784.5	21.59	-2.06	17.38	54.70	3

5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23205	779.5	18.58	-2.06	14.37	27.35	3
23230	782	18.67	-2.06	14.46	27.93	3
23255	784.5	18.64	-2.06	14.43	27.73	3

10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23230	782	23.61	-2.06	19.40	87.10	3

10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23230	782	22.87	-2.06	18.66	73.45	3



10MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23230	782	21.77	-2.06	17.56	57.02	3

10MHz 256QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23230	782	18.71	-2.06	14.50	28.18	3

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

LTE BAND 30

5MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27685	2307.5	23.99	-1.02	22.97	198.15	0.25
27710	2310	24.08	-1.02	23.06	202.30	0.25
27735	2312.5	24.12	-1.02	23.10	204.17	0.25

5MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27685	2307.5	23.39	-1.02	22.37	172.58	0.25
27710	2310	23.36	-1.02	22.34	171.40	0.25
27735	2312.5	23.38	-1.02	22.36	172.19	0.25

5MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27685	2307.5	22.29	-1.02	21.27	133.97	0.25
27710	2310	22.28	-1.02	21.26	133.66	0.25
27735	2312.5	22.30	-1.02	21.28	134.28	0.25

5MHz 256QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27685	2307.5	19.26	-1.02	18.24	66.68	0.25
27710	2310	19.24	-1.02	18.22	66.37	0.25
27735	2312.5	19.24	-1.02	18.22	66.37	0.25



10MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27710	2310	24.13	-1.02	23.11	204.64	0.25

10MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27710	2310	23.46	-1.02	22.44	175.39	0.25

10MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27710	2310	22.36	-1.02	21.34	136.14	0.25

10MHz 256QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
27710	2310	19.28	-1.02	18.26	66.99	0.25

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

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5MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133147	665.5	23.48	-2.27	19.06	80.54	3
133297	680.5	23.25	-2.27	18.83	76.38	3
133447	695.5	23.11	-2.27	18.69	73.96	3

5MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133147	665.5	22.59	-2.27	18.17	65.61	3
133297	680.5	22.25	-2.27	17.83	60.67	3
133447	695.5	22.30	-2.27	17.88	61.38	3

5MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133147	665.5	21.51	-2.27	17.09	51.17	3
133297	680.5	21.17	-2.27	16.75	47.32	3
133447	695.5	21.19	-2.27	16.77	47.53	3

**5MHz 256QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133147	665.5	18.55	-2.27	14.13	25.88	3
133297	680.5	18.23	-2.27	13.81	24.04	3
133447	695.5	18.19	-2.27	13.77	23.82	3

10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133172	668	23.37	-2.27	18.95	78.52	3
133297	680.5	23.17	-2.27	18.75	74.99	3
133422	693	23.05	-2.27	18.63	72.95	3

10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133172	668	22.45	-2.27	18.03	63.53	3
133297	680.5	22.37	-2.27	17.95	62.37	3
133422	693	22.27	-2.27	17.85	60.95	3

10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133172	668	21.49	-2.27	17.07	50.93	3
133297	680.5	21.24	-2.27	16.82	48.08	3
133422	693	21.14	-2.27	16.72	46.99	3

10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133172	668	18.61	-2.27	14.19	26.24	3
133297	680.5	18.27	-2.27	13.85	24.27	3
133422	693	18.25	-2.27	13.83	24.15	3



15MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133197	670.5	23.39	-2.27	18.97	78.89	3
133297	680.5	23.24	-2.27	18.82	76.21	3
133397	690.5	23.08	-2.27	18.66	73.45	3

15MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133197	670.5	22.48	-2.27	18.06	63.97	3
133297	680.5	22.25	-2.27	17.83	60.67	3
133397	690.5	22.31	-2.27	17.89	61.52	3

15MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133197	670.5	21.48	-2.27	17.06	50.82	3
133297	680.5	21.15	-2.27	16.73	47.10	3
133397	690.5	21.16	-2.27	16.74	47.21	3

15MHz 256QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133197	670.5	18.58	-2.27	14.16	26.06	3
133297	680.5	18.35	-2.27	13.93	24.72	3
133397	690.5	18.24	-2.27	13.82	24.10	3

20MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133222	673	23.50	-2.27	19.08	80.91	3
133322	683	23.27	-2.27	18.85	76.74	3
133372	688	23.14	-2.27	18.72	74.47	3

20MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133222	673	22.60	-2.27	18.18	65.77	3
133322	683	22.40	-2.27	17.98	62.81	3
133372	688	22.35	-2.27	17.93	62.09	3



20MHz 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133222	673	21.58	-2.27	17.16	52.00	3
133322	683	21.29	-2.27	16.87	48.64	3
133372	688	21.26	-2.27	16.84	48.31	3

20MHz 256QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
133222	673	18.69	-2.27	14.27	26.73	3
133322	683	18.38	-2.27	13.96	24.89	3
133372	688	18.29	-2.27	13.87	24.38	3

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



3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

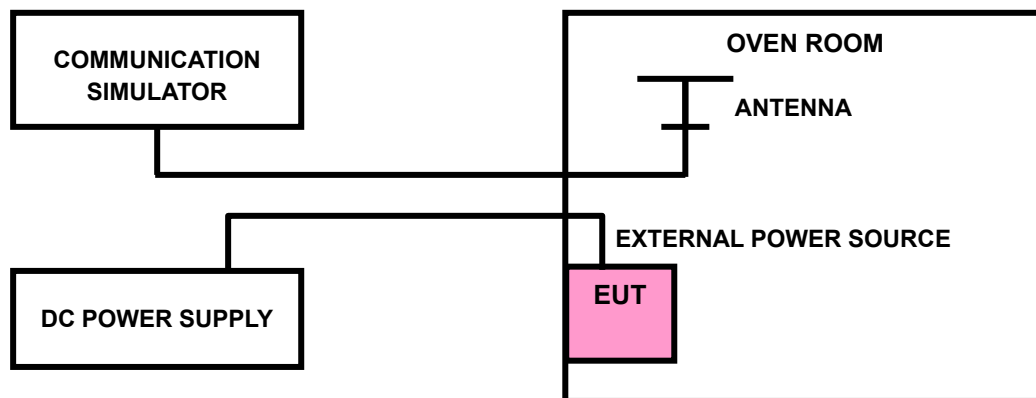
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

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.

3.3.3 TEST SETUP





3.2.3 TEST RESULTS

Please Refer to Appendix of this test report.

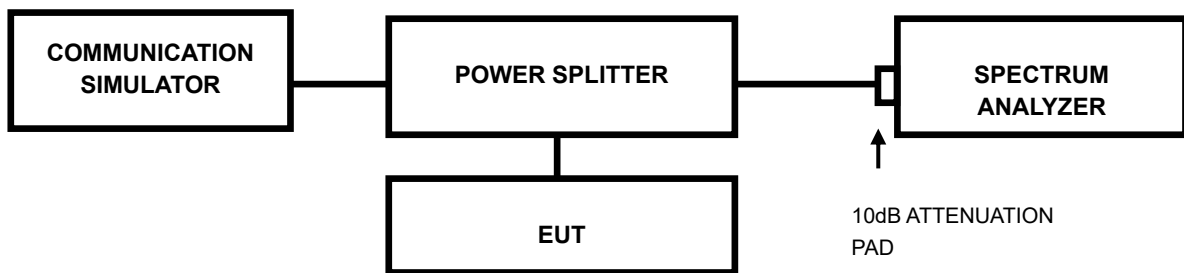


3.3 OCCUPIED BANDWIDTH MEASUREMENT

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.

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 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 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.

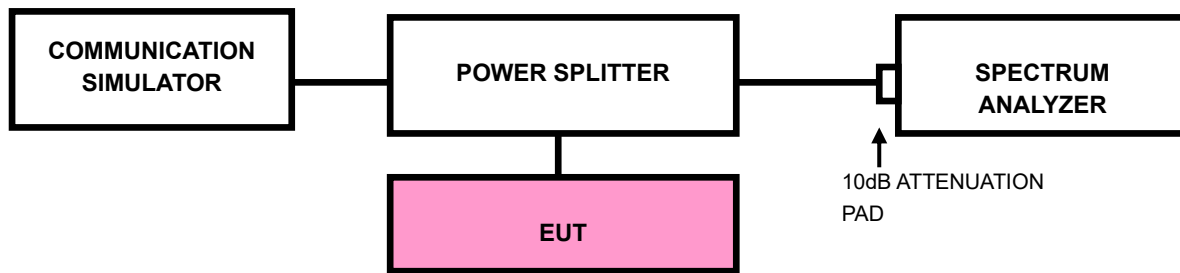
According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.



3.4.2 TEST SETUP





3.4.3 TEST PROCEDURES

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

3.4.4 TEST RESULTS

Please Refer to Appendix of this test report.



CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 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.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

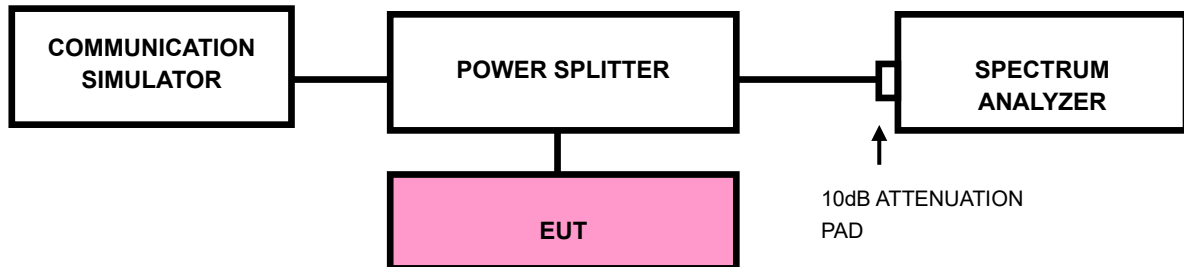
47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.



3.5.2 TEST PROCEDURE

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- 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



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

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 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.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.



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. EIRP = Output power level of S.G – TX cable loss + 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.

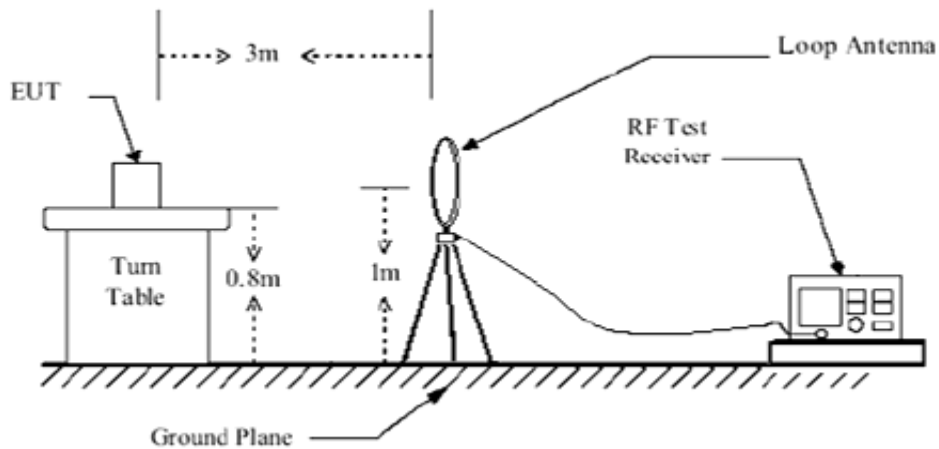
3.6.3 DEVIATION FROM TEST STANDARD

No deviation

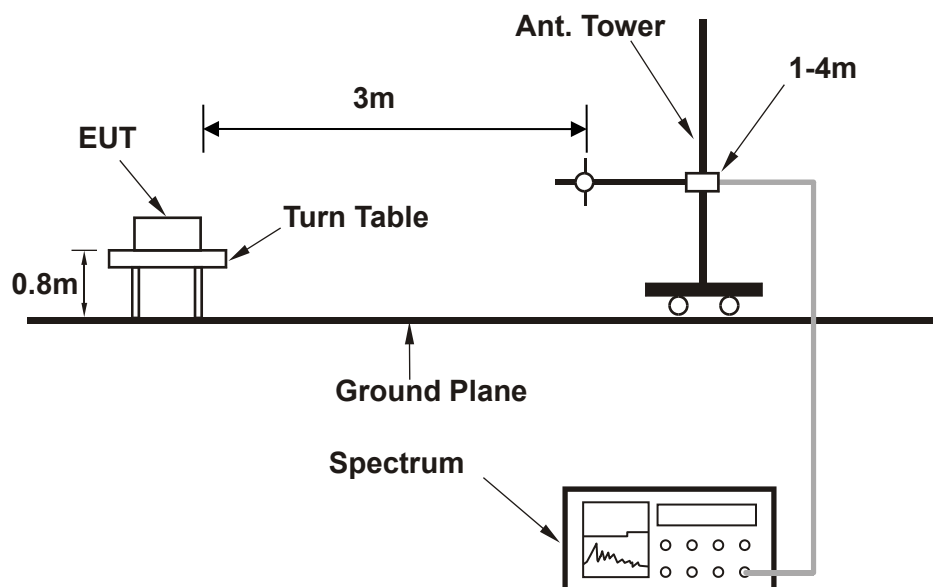


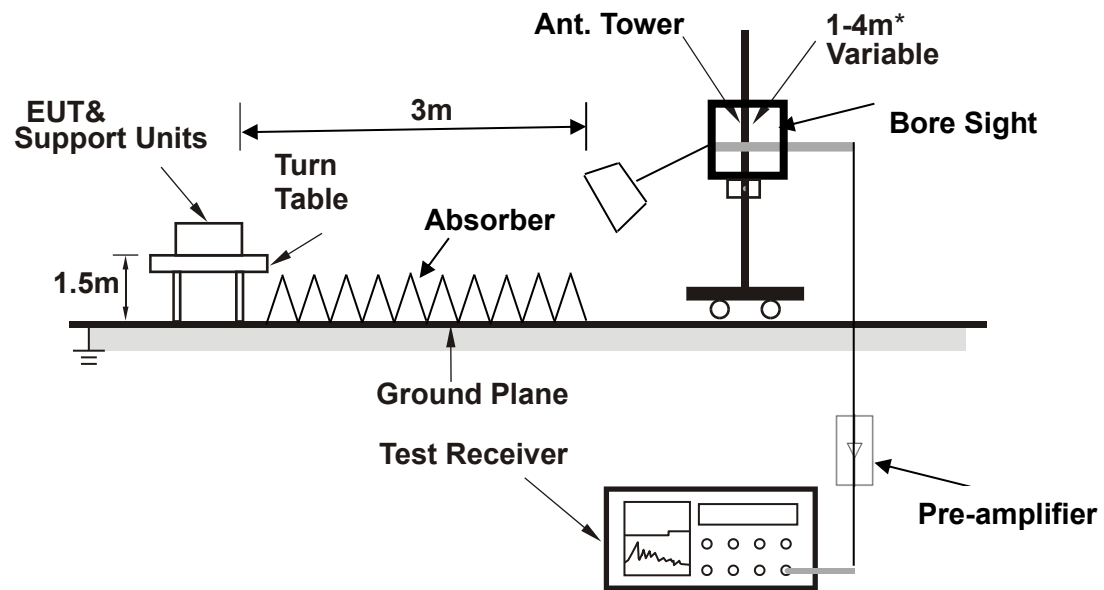
3.6.4 TEST SETUP

< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >





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.

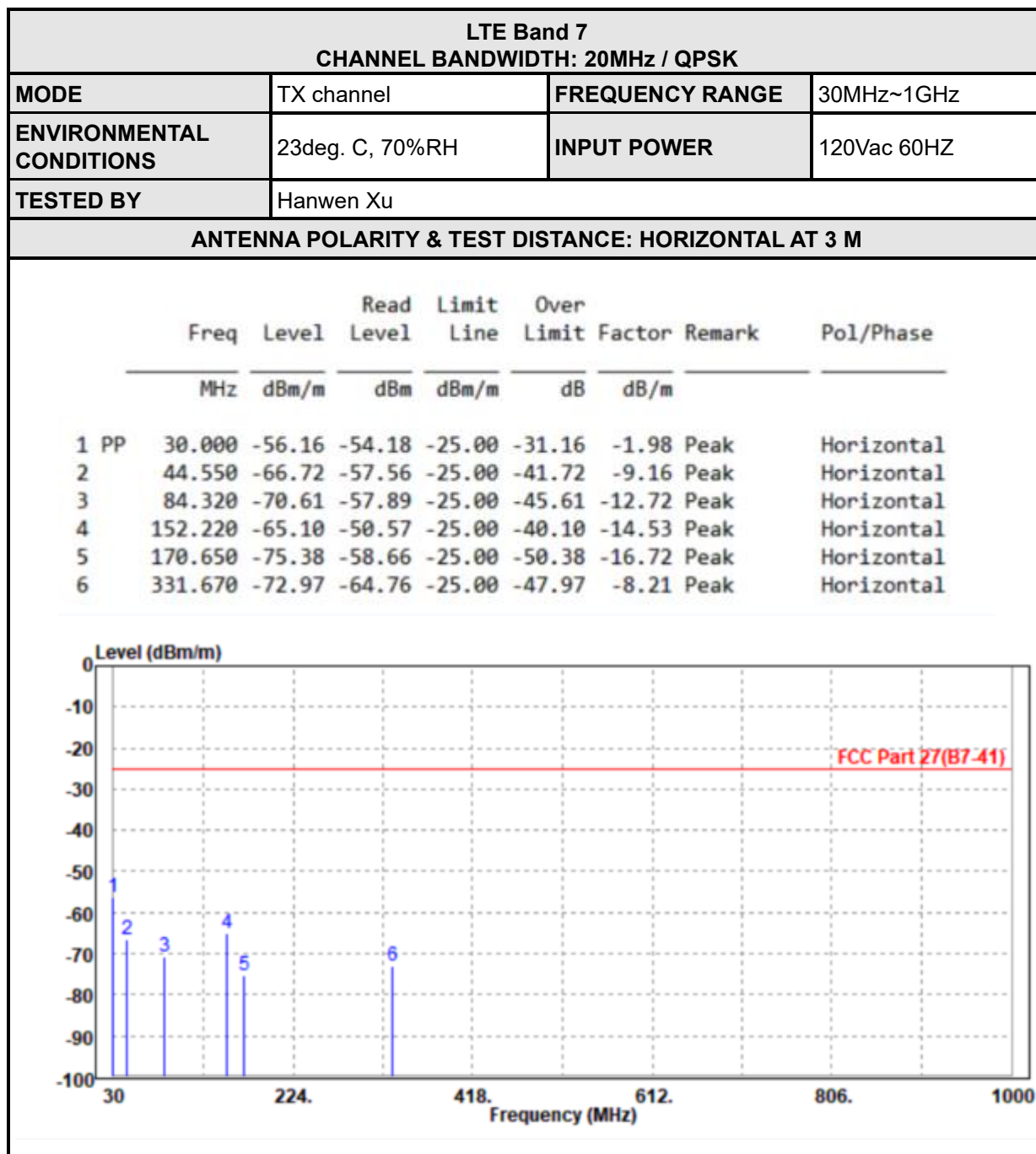
For the actual test configuration, please refer to the attached file (Test Setup Photo).



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

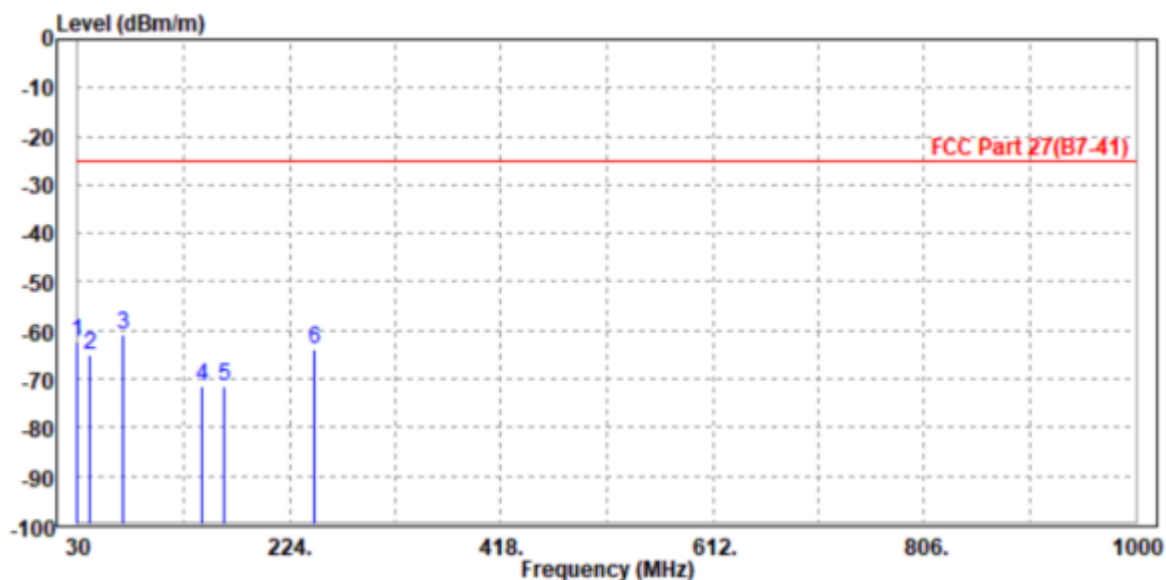




MODE	TX channel	FREQUENCY RANGE	30MHz~1GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	30.000	-62.32	-40.62	-25.00	-37.32	-21.70	Peak	Vertical
2	41.640	-65.17	-44.92	-25.00	-40.17	-20.25	Peak	Vertical
3 PP	71.710	-60.91	-40.61	-25.00	-35.91	-20.30	Peak	Vertical
4	143.490	-71.59	-57.43	-25.00	-46.59	-14.16	Peak	Vertical
5	163.860	-71.35	-60.72	-25.00	-46.35	-10.63	Peak	Vertical
6	247.280	-63.94	-59.90	-25.00	-38.94	-4.04	Peak	Vertical





ABOVE 1GHz

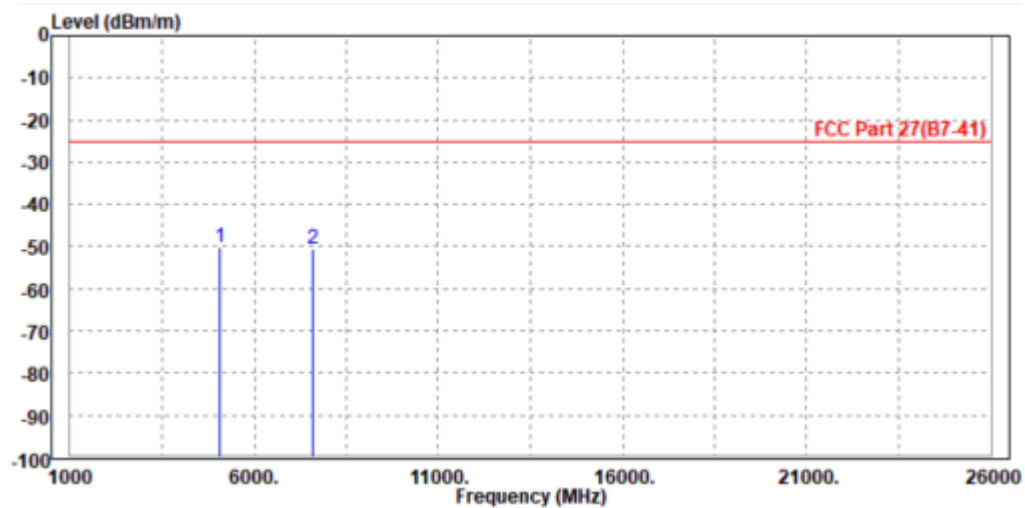
Note: For higher frequency, the emission is too low to be detected.

LTE Band 7

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5070.000	-50.17	-60.73	-25.00	-25.17	10.56	Peak	Horizontal
2	7600.000	-50.49	-64.22	-25.00	-25.49	13.73	Peak	Horizontal

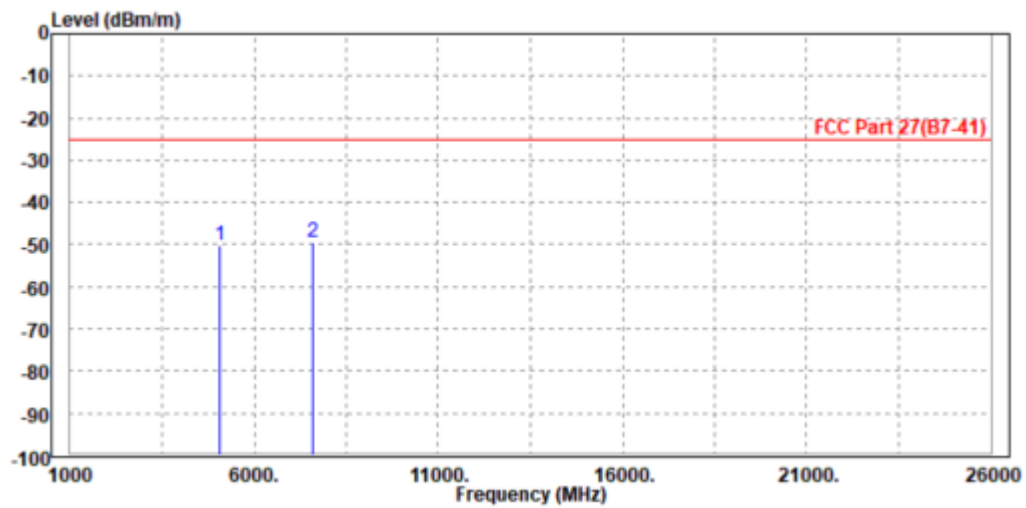


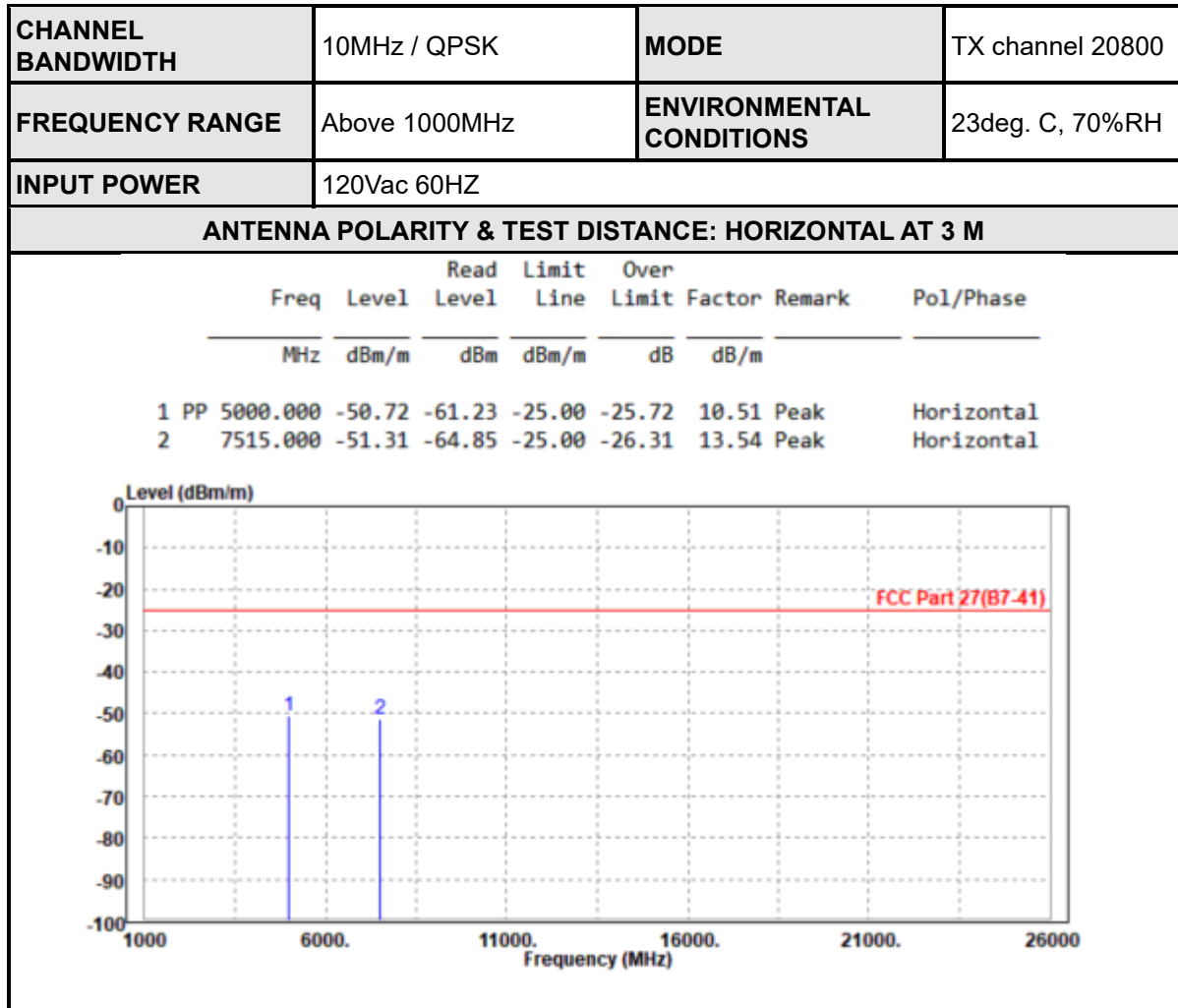


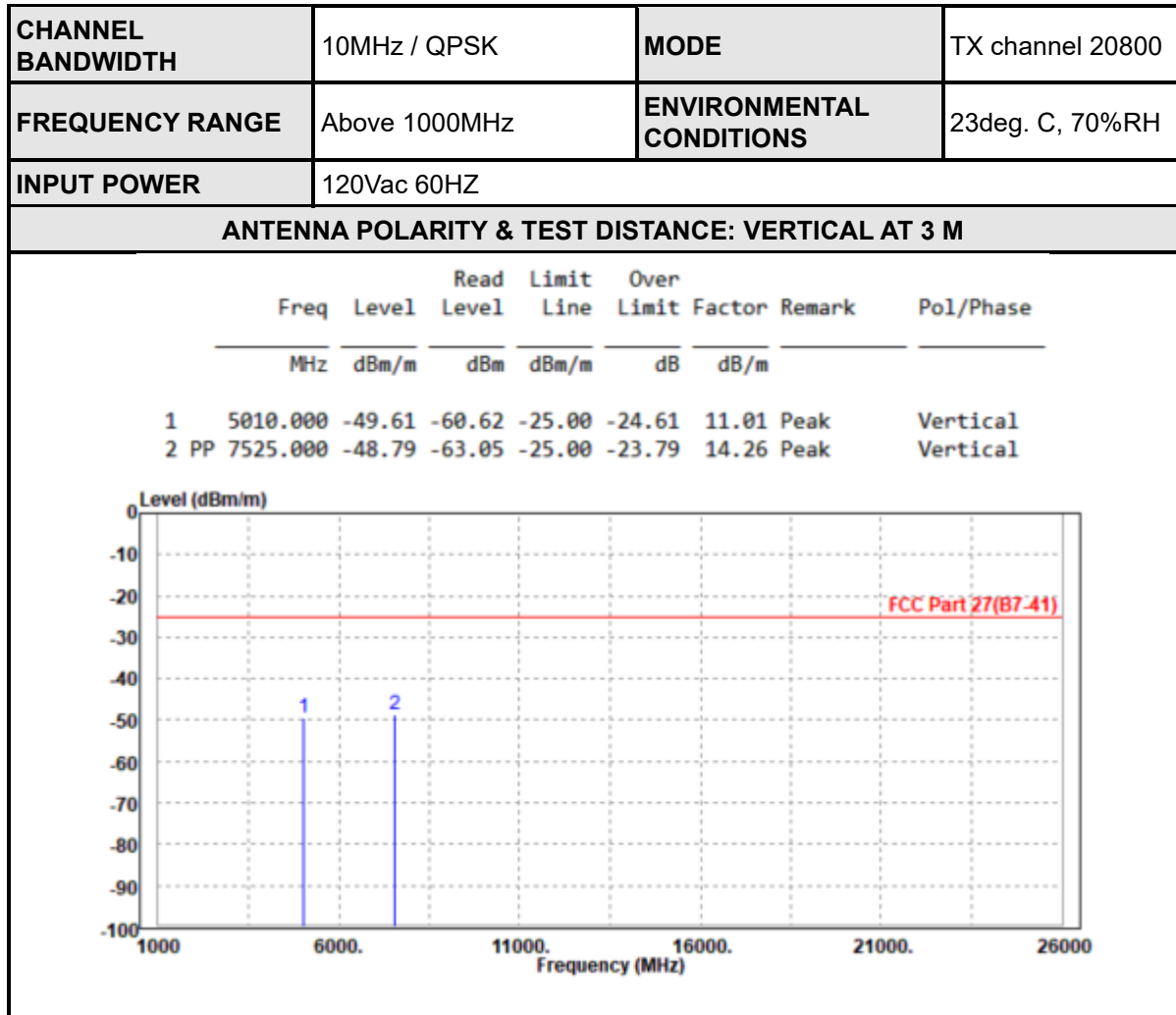
CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5075.000	-50.14	-61.15	-25.00	-25.14	11.01	Peak	Vertical
2 PP	7605.000	-49.40	-63.71	-25.00	-24.40	14.31	Peak	Vertical





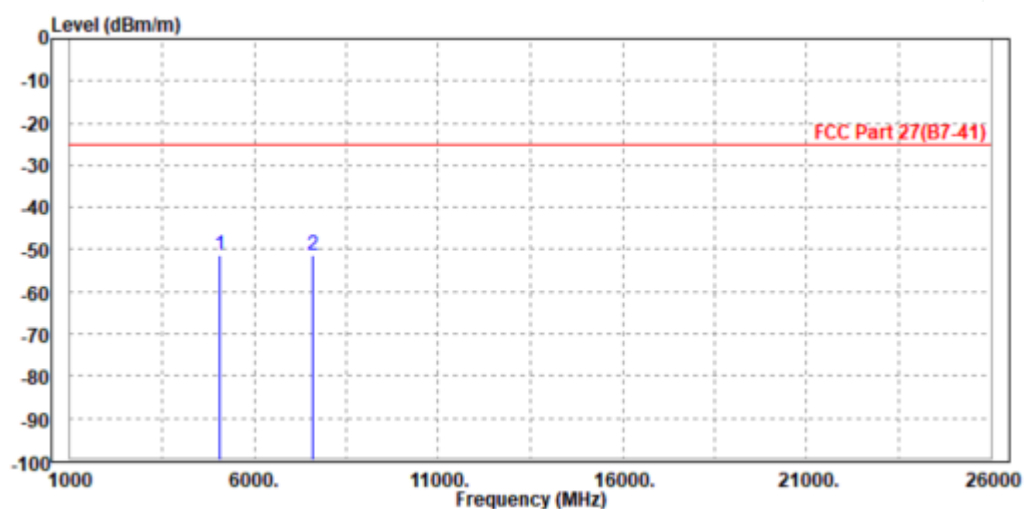


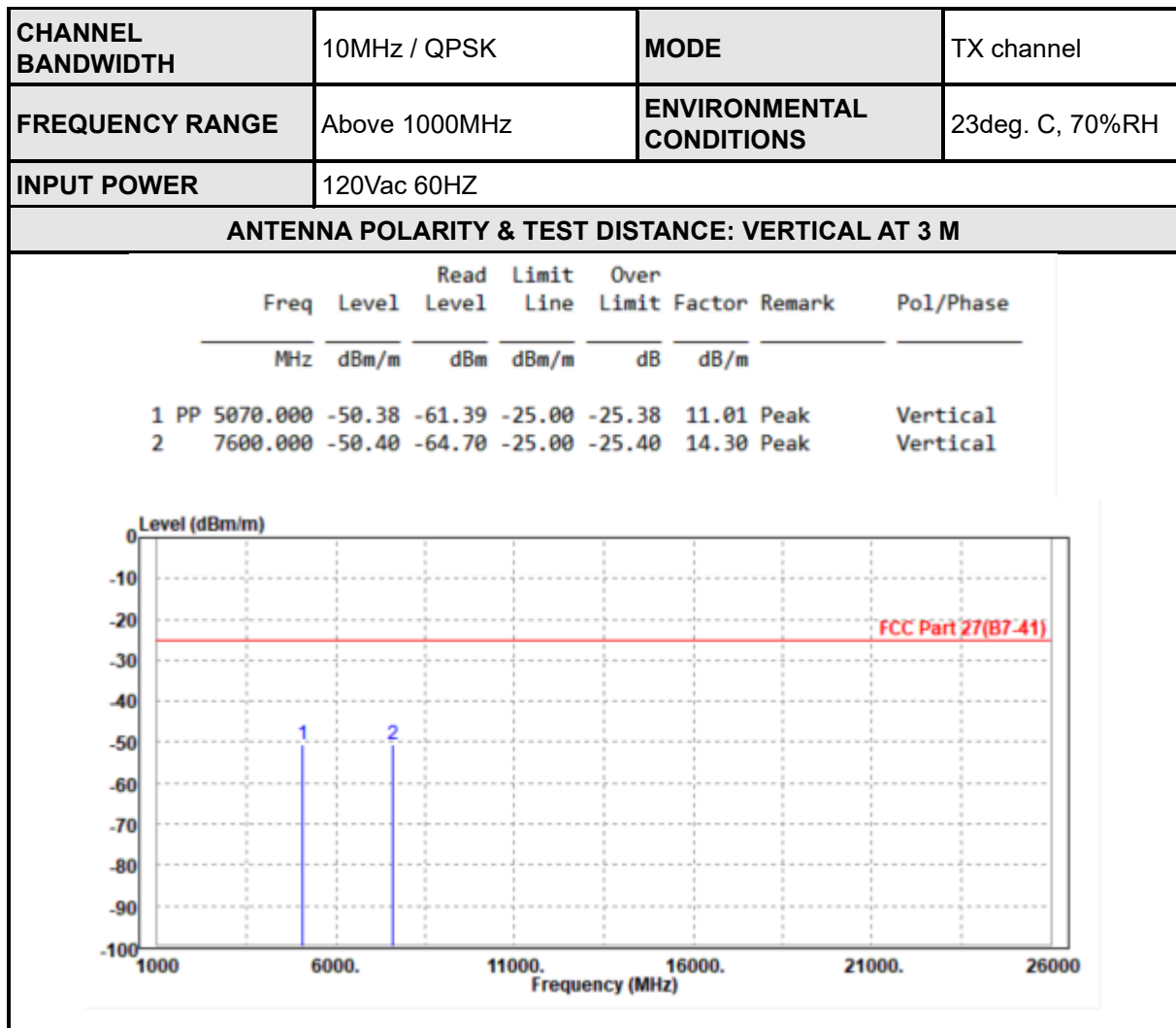


CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

			Read	Limit	Over			
	Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5075.000	-51.43	-61.99	-25.00	-26.43	10.56	Peak	Horizontal
2	7605.000	-51.47	-65.21	-25.00	-26.47	13.74	Peak	Horizontal



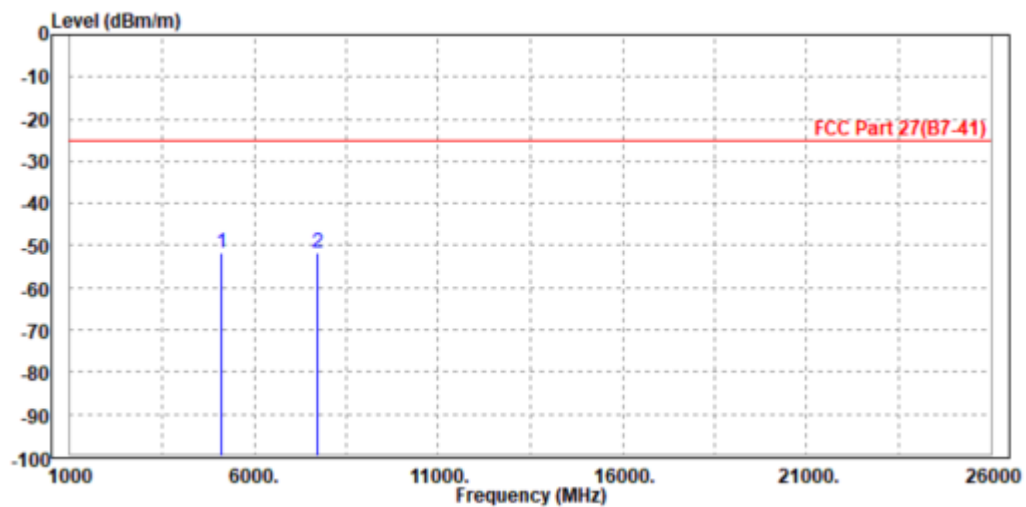




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 21400
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5130.000	-51.58	-62.19	-25.00	-26.58	10.61	Peak	Horizontal
2		7700.000	-51.87	-65.82	-25.00	-26.87	13.95	Peak	Horizontal

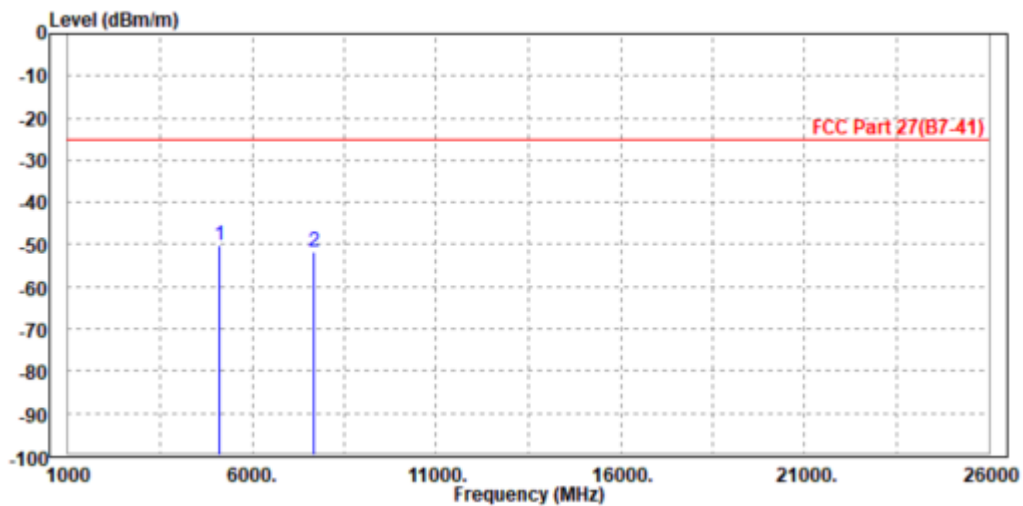




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 21400
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5125.000	-50.30	-61.31	-25.00	-25.30	11.01	Peak	Vertical
2	7695.000	-51.60	-65.95	-25.00	-26.60	14.35	Peak	Vertical

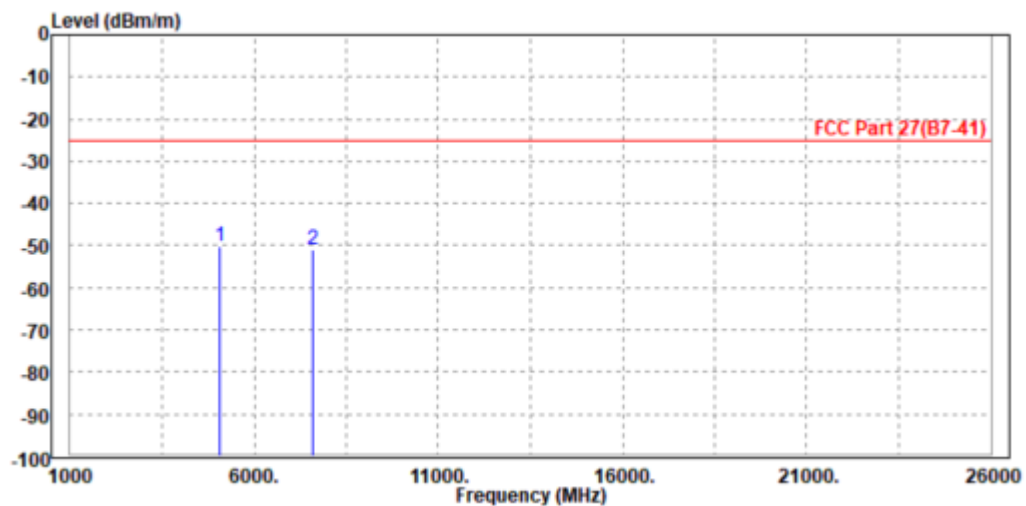


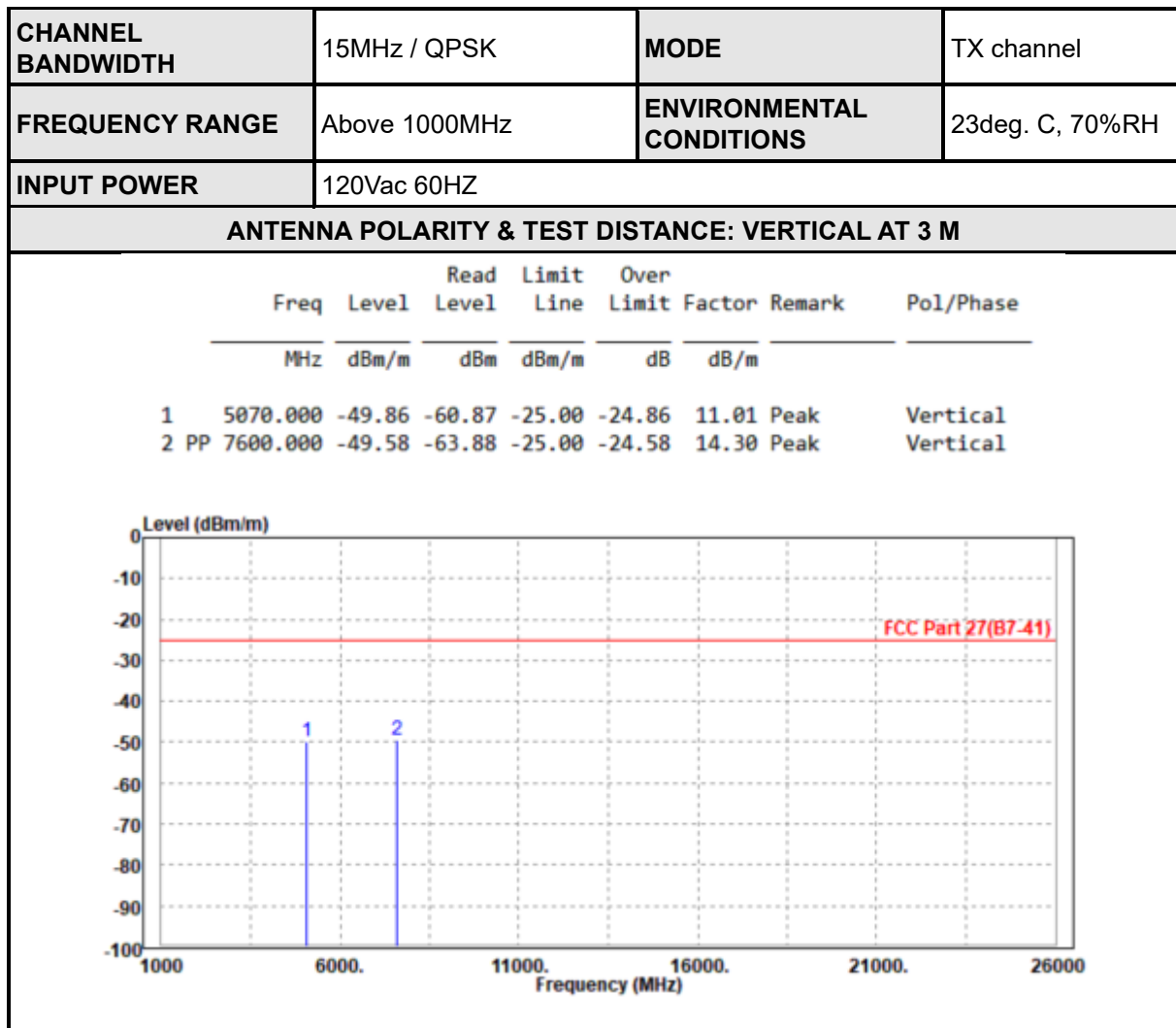


CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5075.000	-50.12	-60.68	-25.00	-25.12	10.56	Peak	Horizontal
2		7605.000	-51.07	-64.81	-25.00	-26.07	13.74	Peak	Horizontal



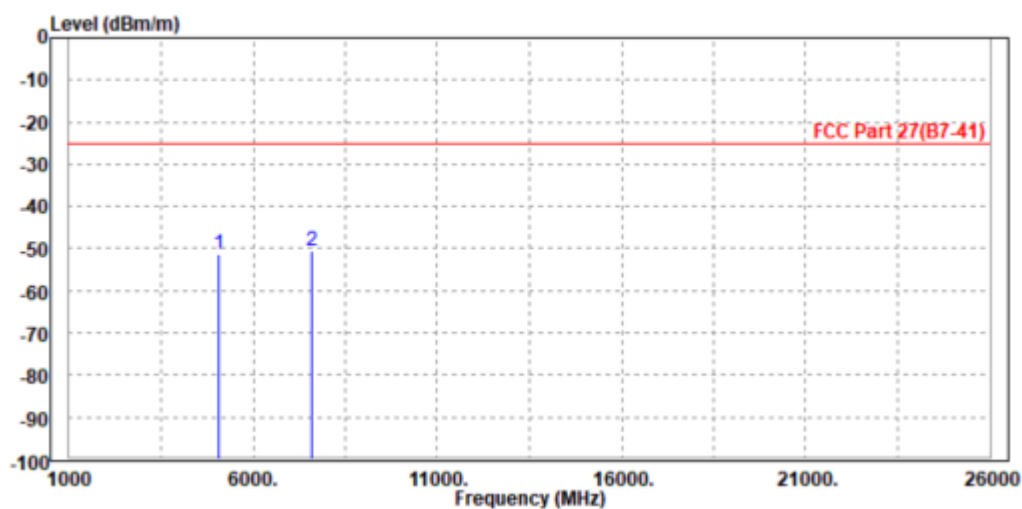




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5070.000	-51.46	-62.02	-25.00	-26.46	10.56	Peak	Horizontal
2 PP	7600.000	-50.43	-64.16	-25.00	-25.43	13.73	Peak	Horizontal

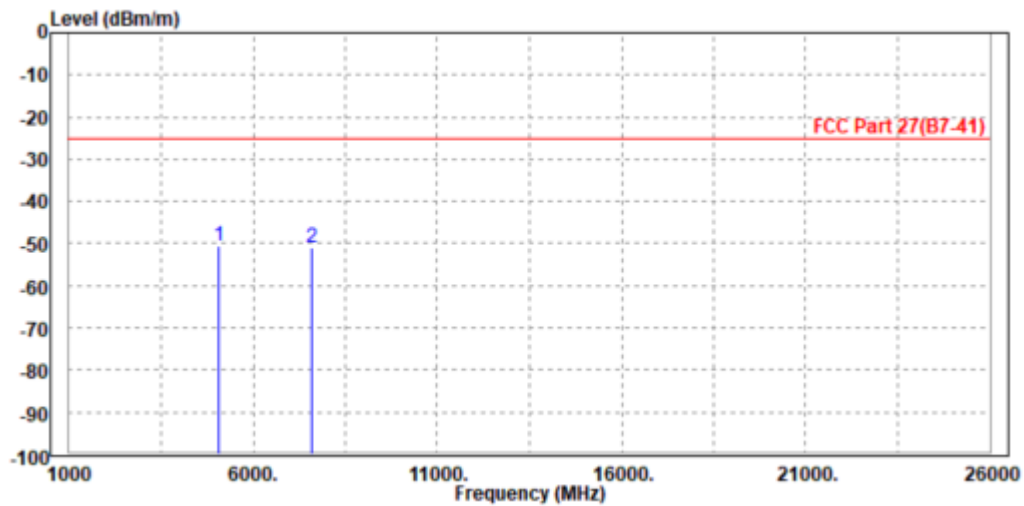




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5075.000	-50.42	-61.43	-25.00	-25.42	11.01	Peak	Vertical
2	7605.000	-51.11	-65.42	-25.00	-26.11	14.31	Peak	Vertical

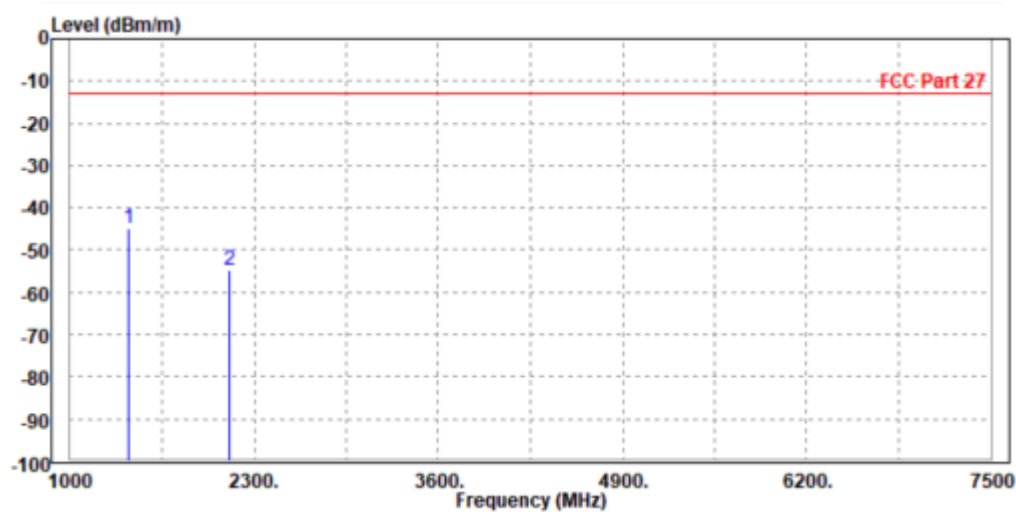




LTE Band 12			
CHANNEL BANDWIDTH	1.4MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1415.000	-44.94	-47.88	-13.00	-31.94	2.94	Peak	Horizontal
2	2124.500	-54.84	-59.93	-13.00	-41.84	5.09	Peak	Horizontal

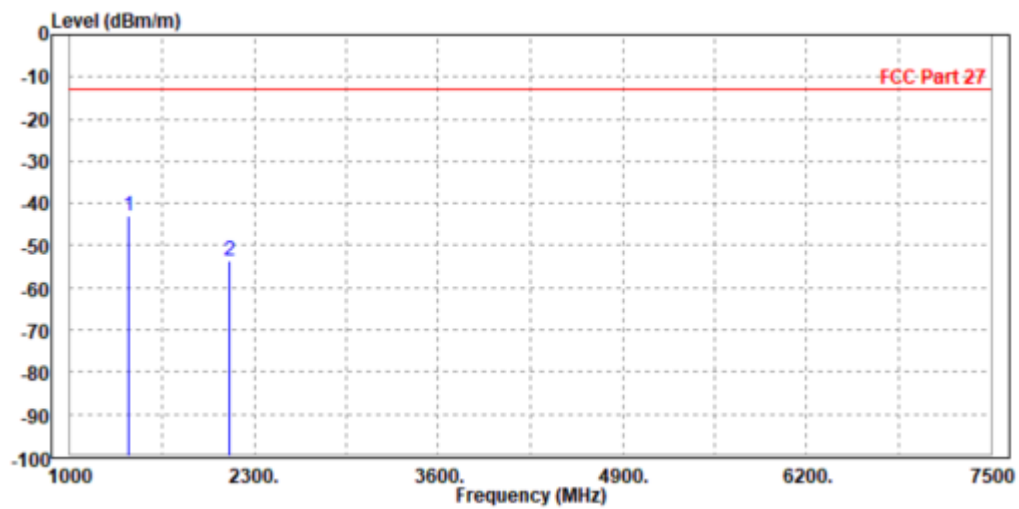




CHANNEL BANDWIDTH	1.4MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	1416.000	-43.01	-45.94	-13.00	-30.01	2.93	Peak	Vertical
2		2122.500	-53.52	-57.96	-13.00	-40.52	4.44	Peak	Vertical

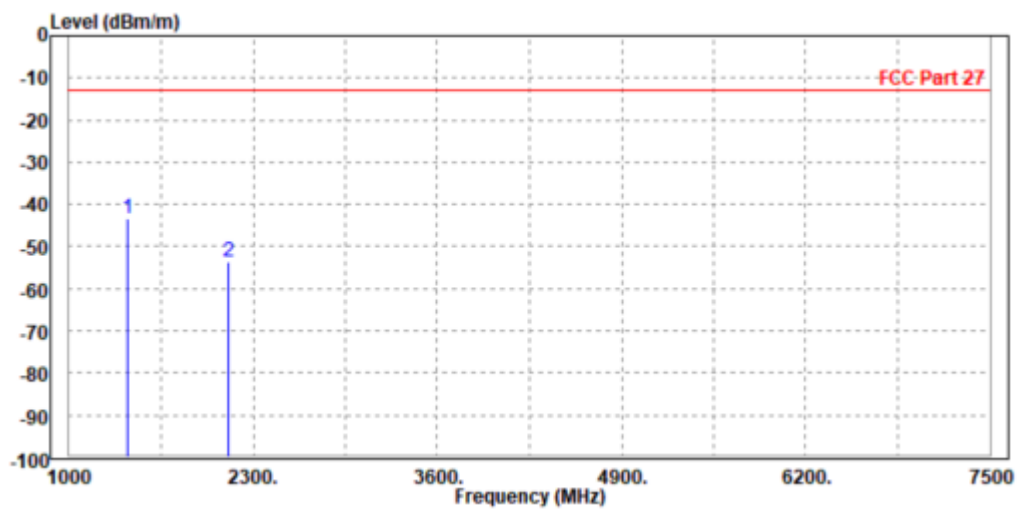




CHANNEL BANDWIDTH	3MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1416.000	-43.27	-46.21	-13.00	-30.27	2.94	Peak	Horizontal
2	2122.500	-53.57	-58.65	-13.00	-40.57	5.08	Peak	Horizontal

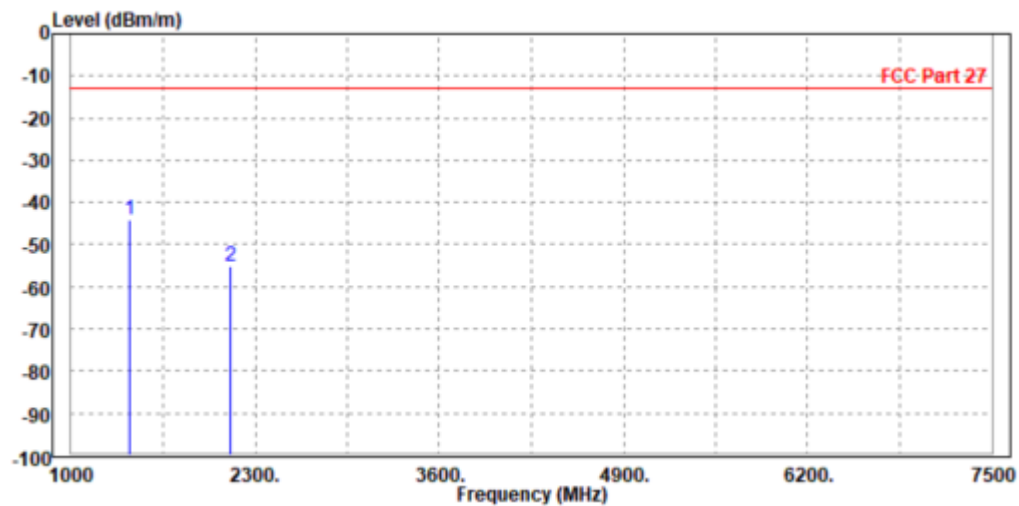




CHANNEL BANDWIDTH	3MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	1415.000	-43.98	-46.90	-13.00	-30.98	2.92	Peak	Vertical
2		2124.500	-55.20	-59.64	-13.00	-42.20	4.44	Peak	Vertical

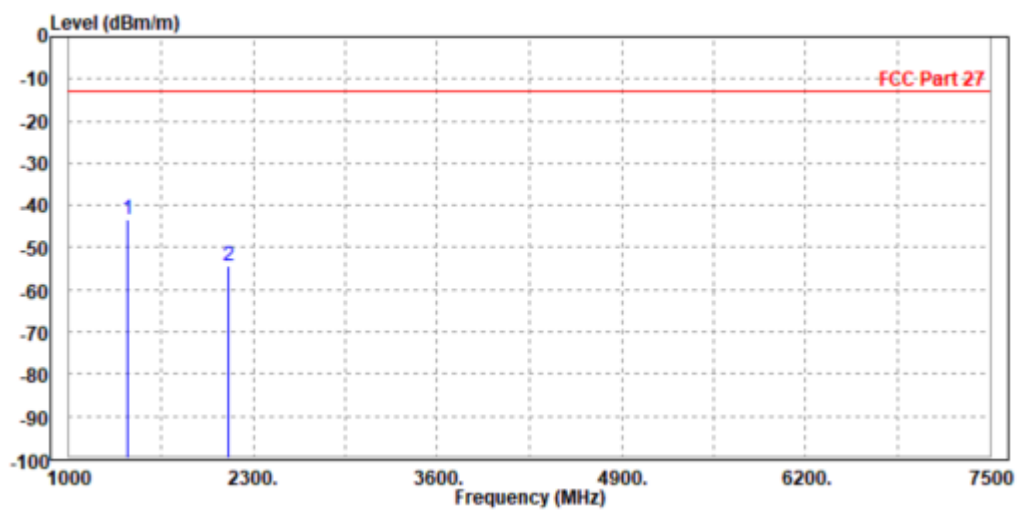


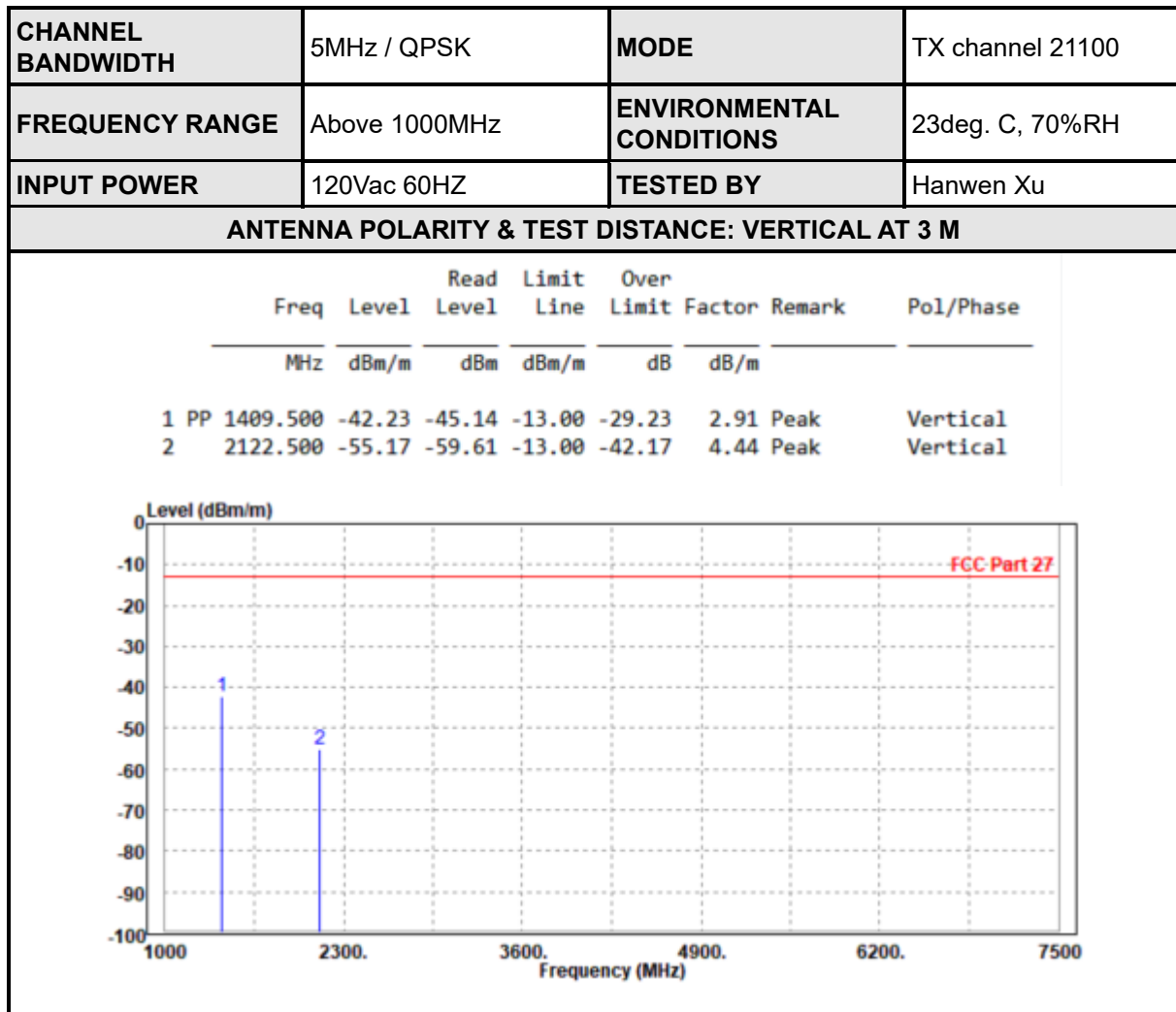


CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read	Limit	Over	Factor	Remark	Pol/Phase
			Level	Line	Limit			
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1409.500	-43.16	-46.08	-13.00	-30.16	2.92	Peak	Horizontal
2	2124.500	-54.28	-59.37	-13.00	-41.28	5.09	Peak	Horizontal



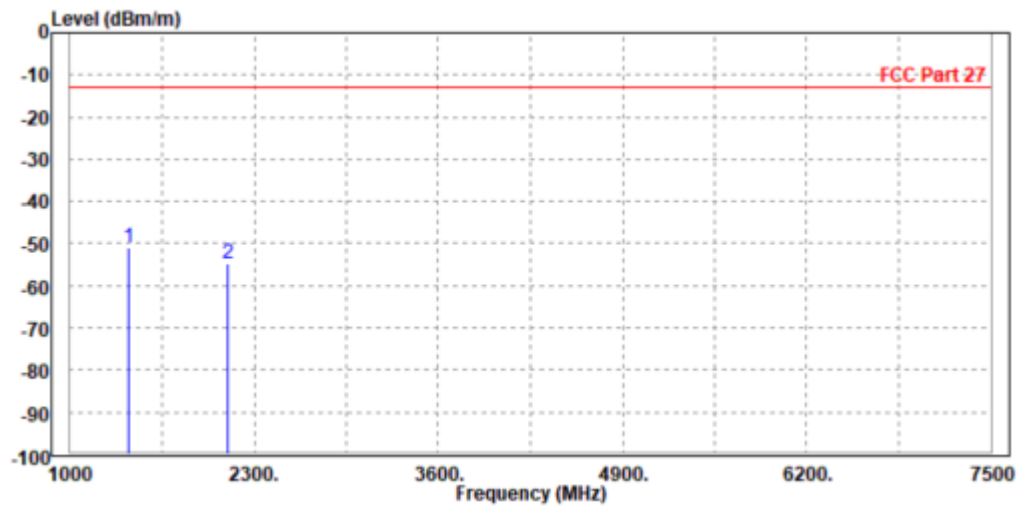




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 23060
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1408.000	-51.00	-53.92	-13.00	-38.00	2.92	Peak	Horizontal
2	2111.500	-54.85	-59.90	-13.00	-41.85	5.05	Peak	Horizontal

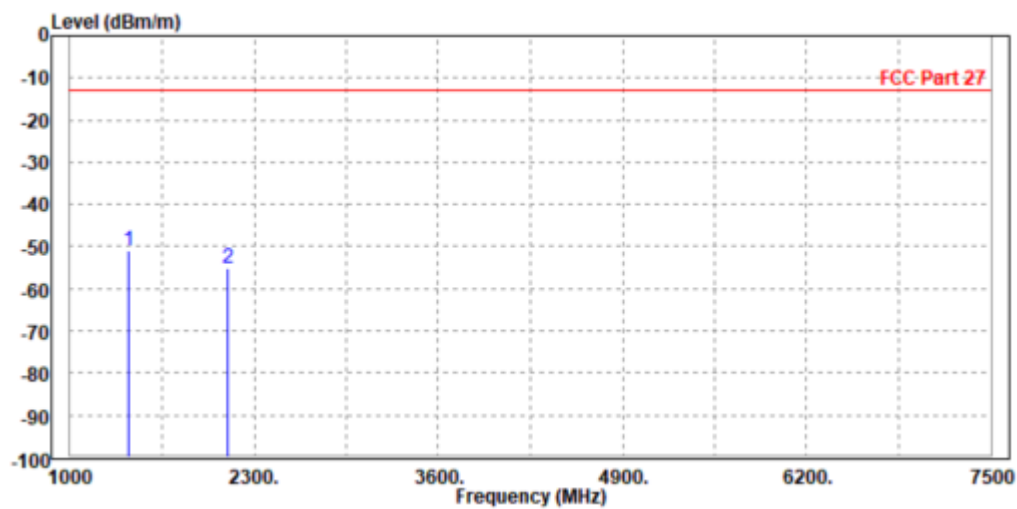




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 23060
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	1409.500	-50.79	-53.70	-13.00	-37.79	2.91	Peak	Vertical
2		2112.000	-55.08	-59.48	-13.00	-42.08	4.40	Peak	Vertical

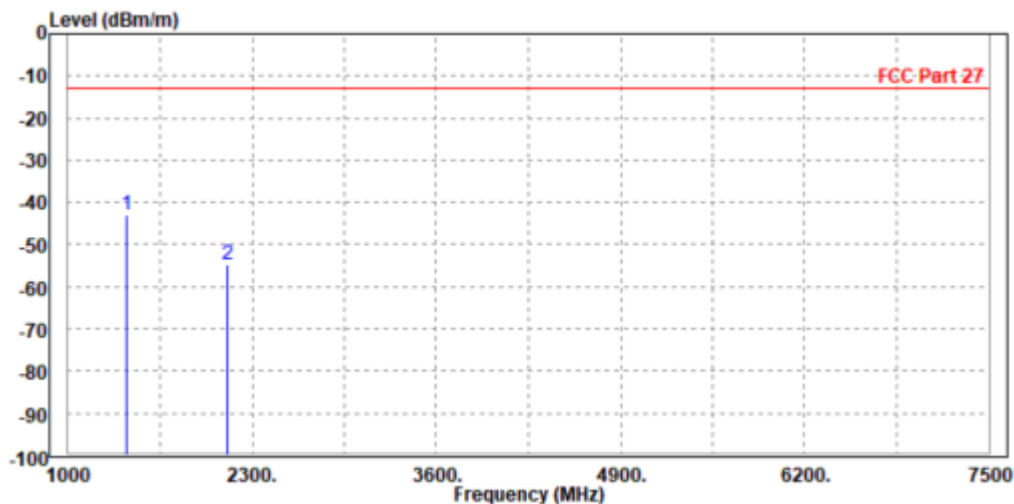




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	1415.000	-43.15	-46.09	-13.00	-30.15	2.94	Peak	Horizontal
2		2124.500	-54.76	-59.85	-13.00	-41.76	5.09	Peak	Horizontal

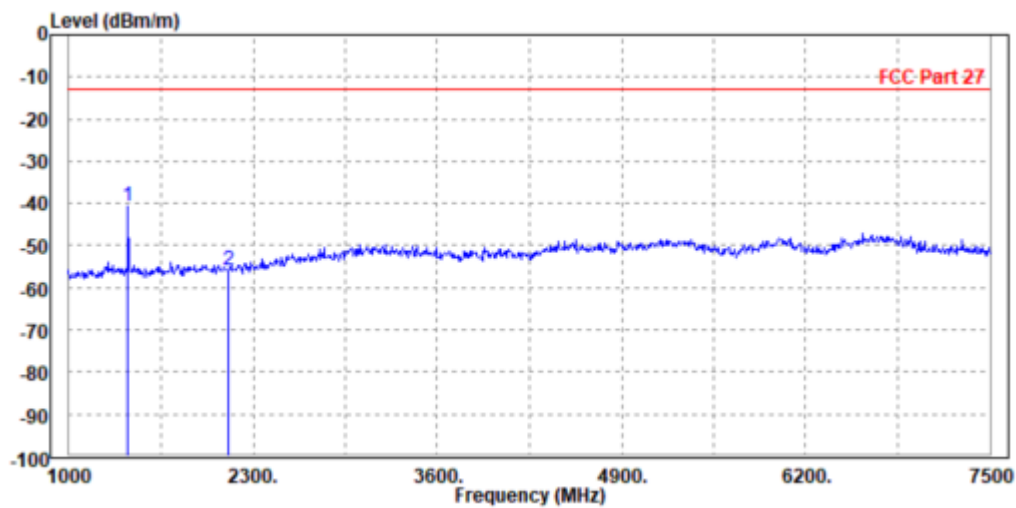




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1416.000	-40.79	-43.72	-13.00	-27.79	2.93	Peak	Vertical
2	2122.500	-56.02	-60.46	-13.00	-43.02	4.44	Peak	Vertical

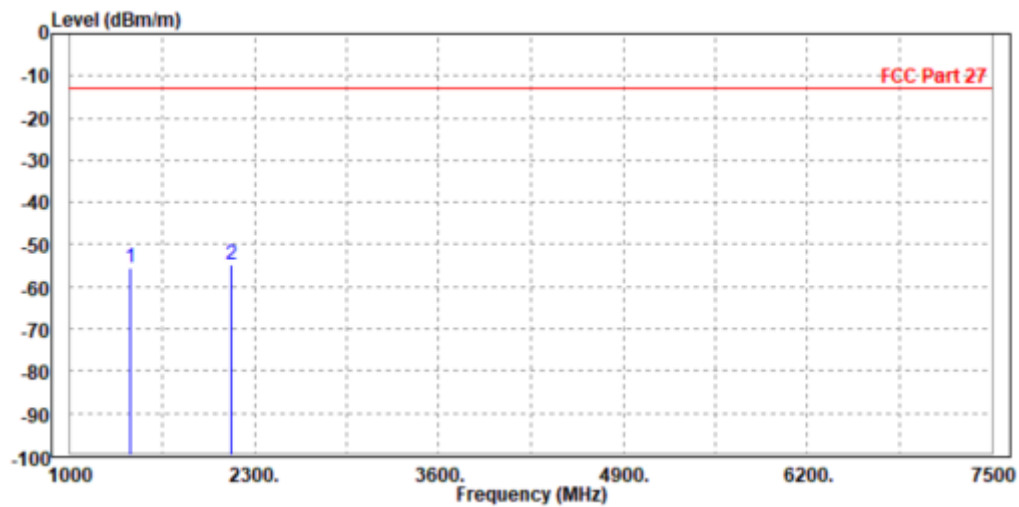


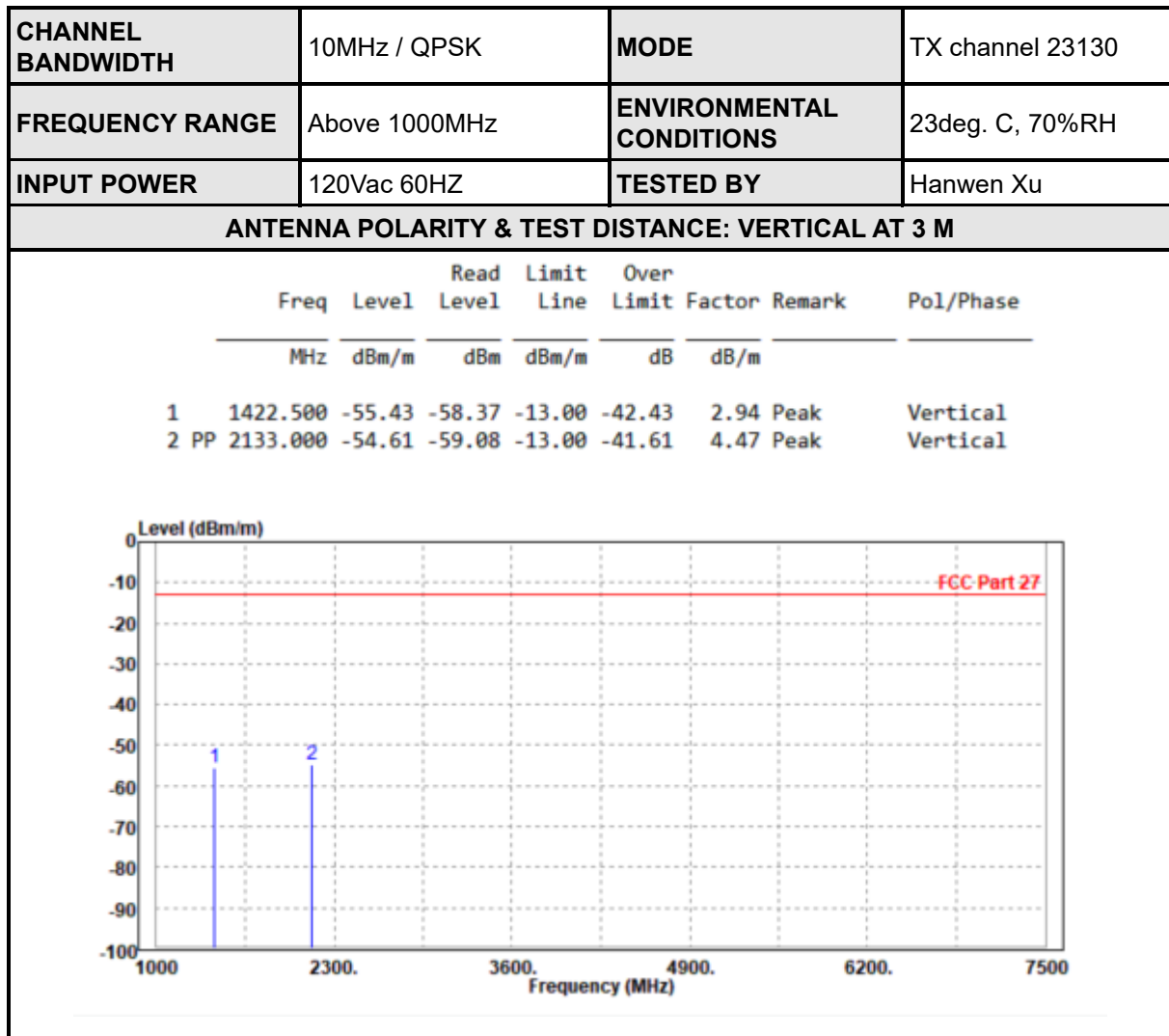


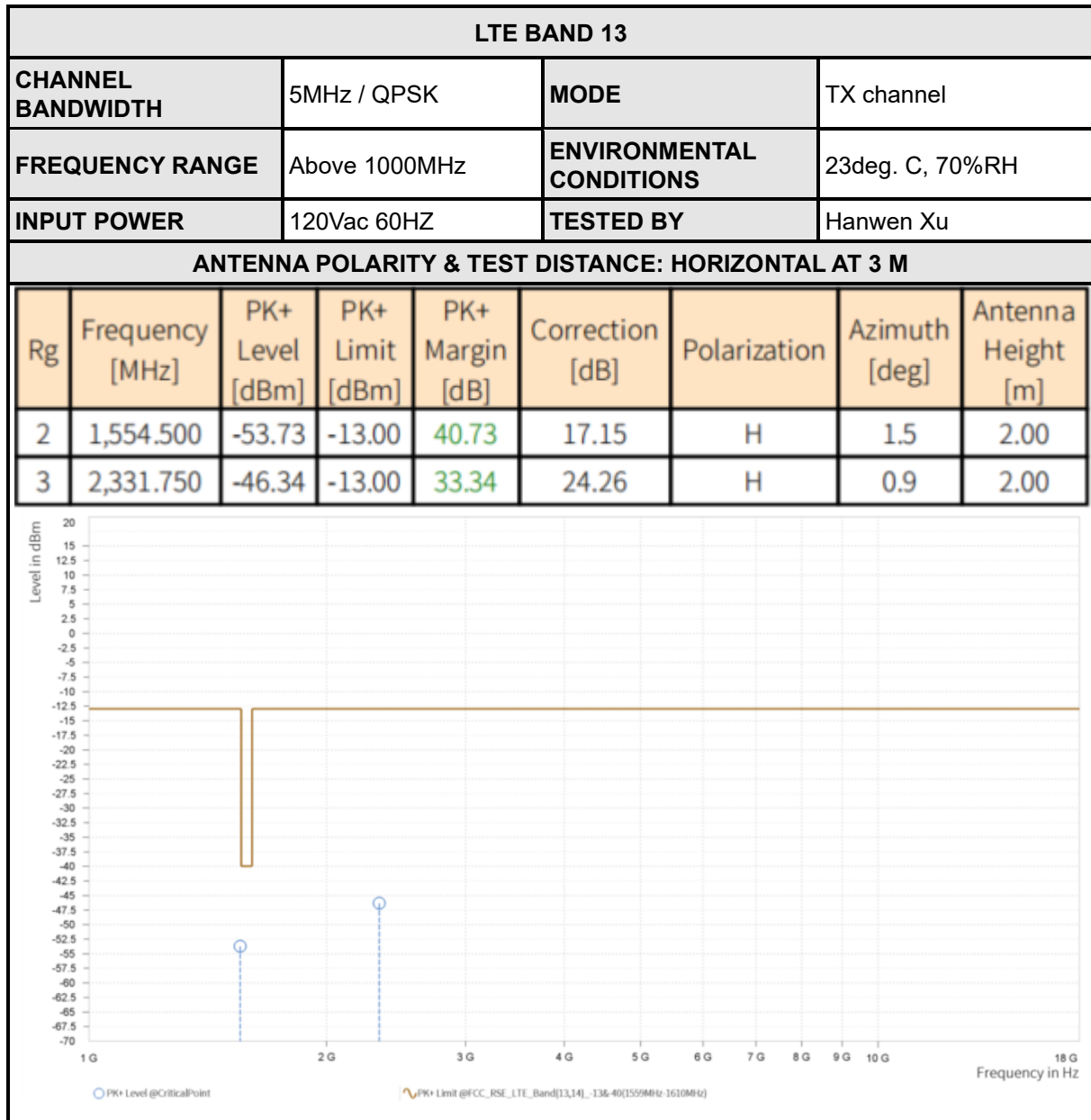
CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 23130
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1422.000	-55.55	-58.51	-13.00	-42.55	2.96	Peak	Horizontal
2 PP	2131.000	-54.76	-59.86	-13.00	-41.76	5.10	Peak	Horizontal





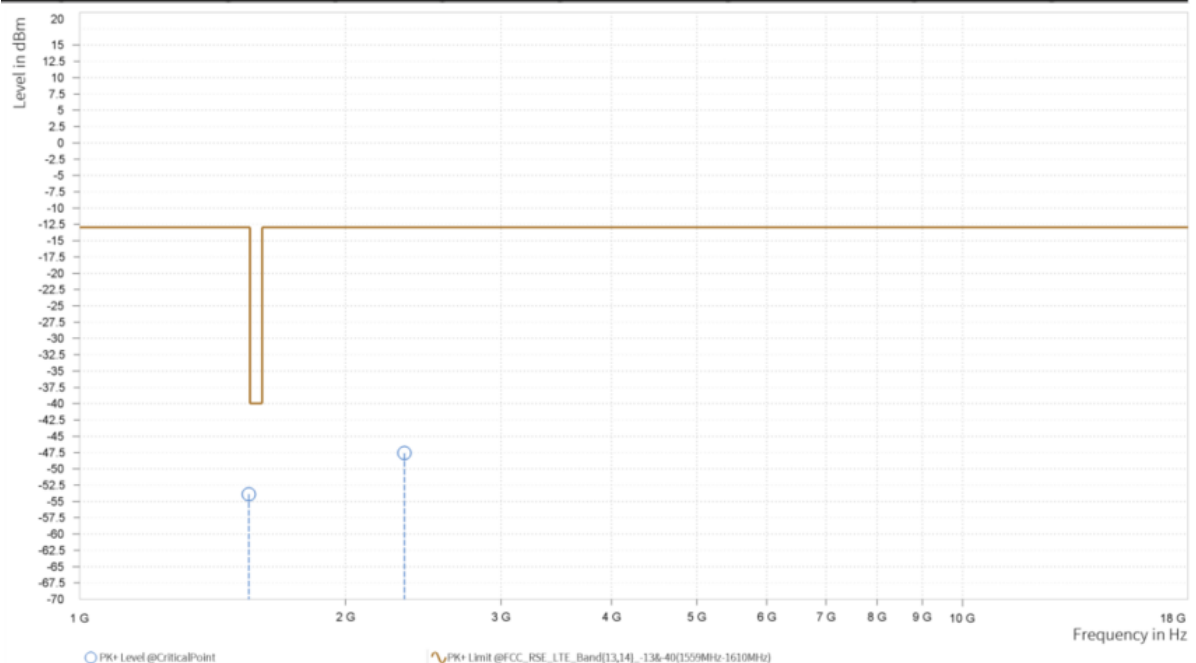




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23095
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,554.500	-53.91	-13.00	40.91	16.78	V	71.2	1.00
3	2,331.750	-47.58	-13.00	34.58	23.77	V	0.9	2.00

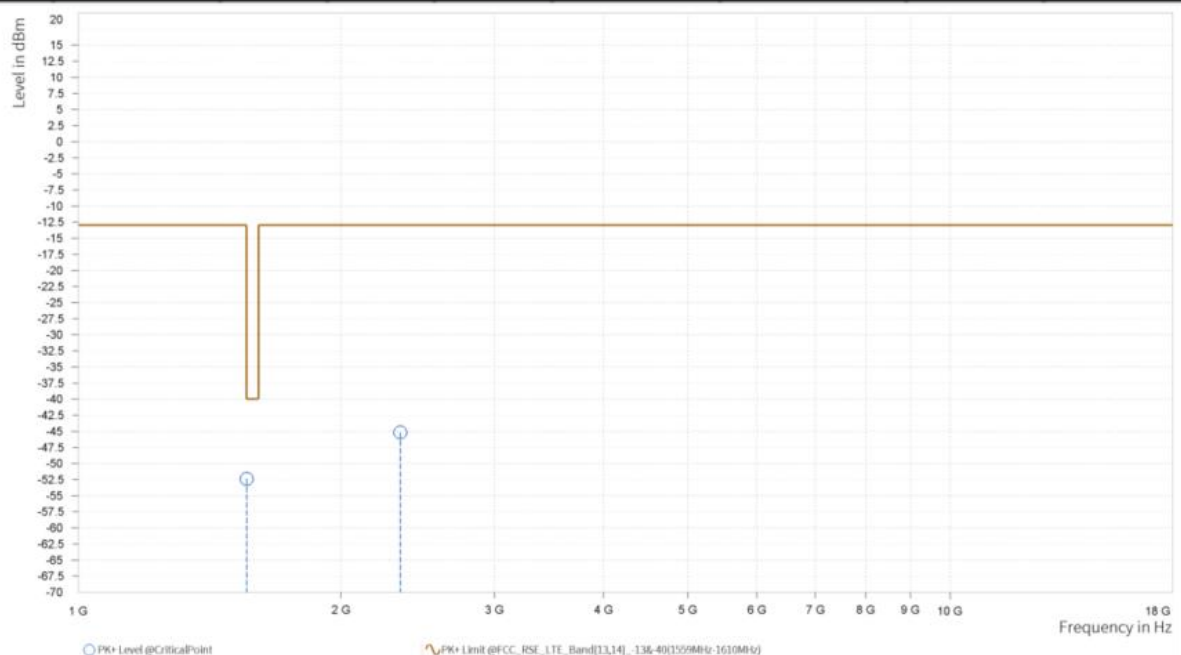




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,559.500	-52.38	-40.00	12.38	17.19	H	359	2.00
3	2,339.250	-45.18	-13.00	32.18	24.41	H	359	1.00

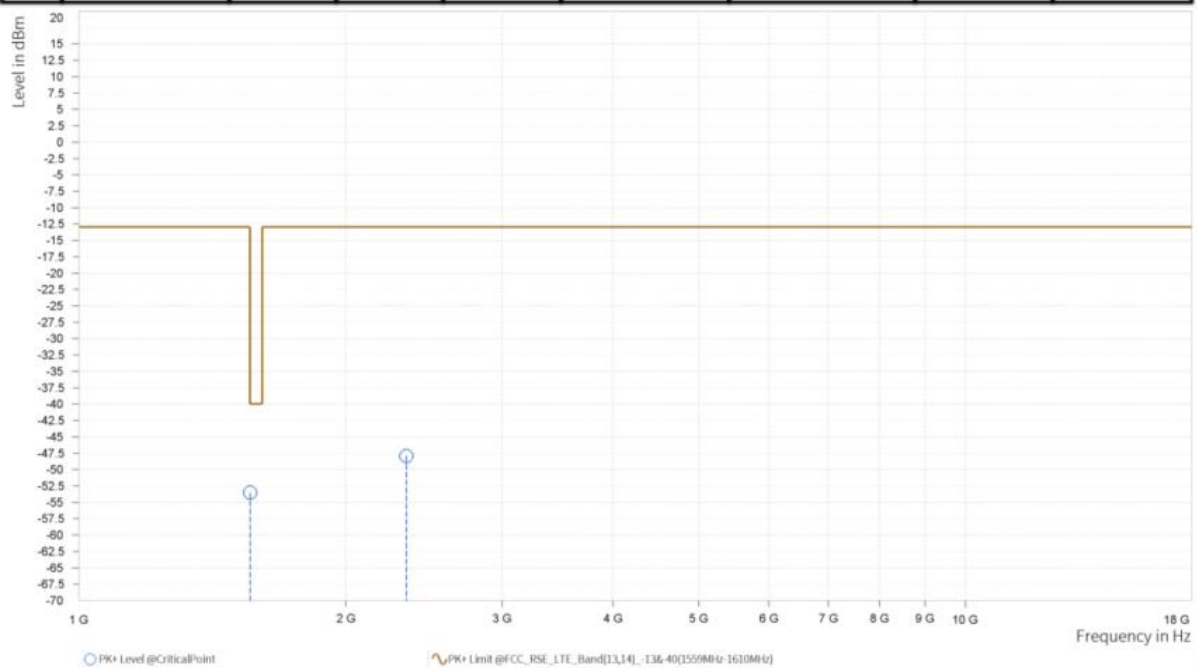




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,559.500	-53.52	-40.00	13.52	16.86	V	68.7	1.00
3	2,339.250	-47.92	-13.00	34.92	23.96	V	140.5	1.00

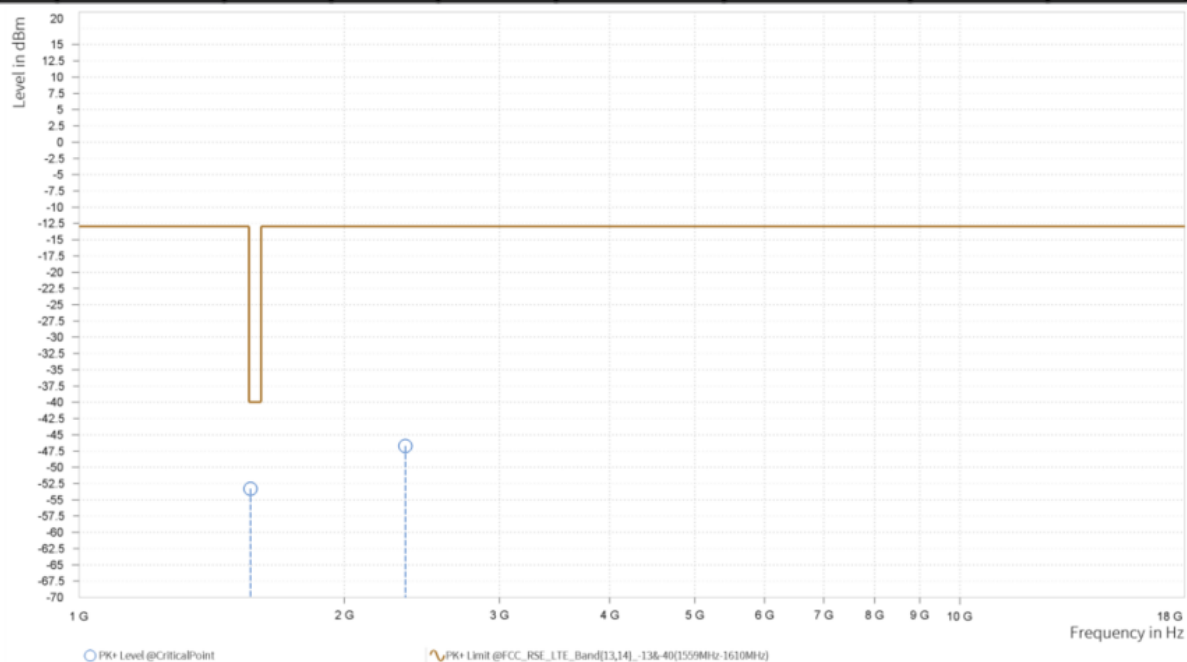




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,564.500	-53.28	-40.00	13.28	17.15	H	359	2.00
3	2,346.750	-46.71	-13.00	33.71	24.45	H	359	1.00

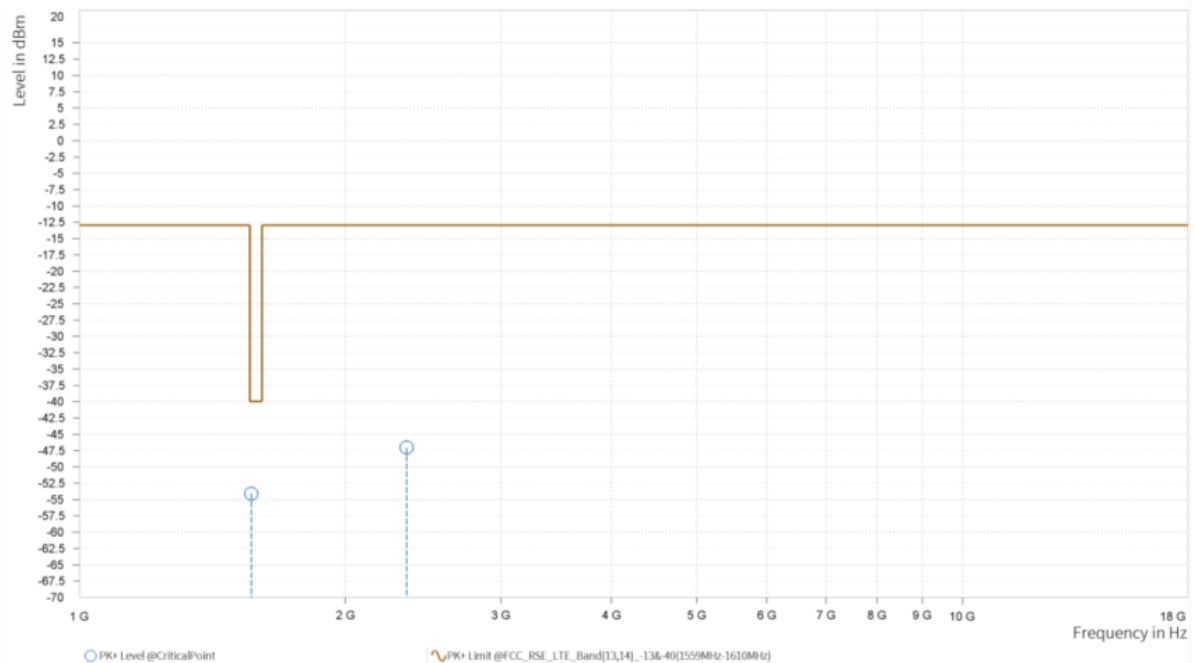




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,564.500	-54.11	-40.00	14.11	16.86	V	359	2.00
3	2,346.750	-47.04	-13.00	34.04	24.05	V	359	2.00

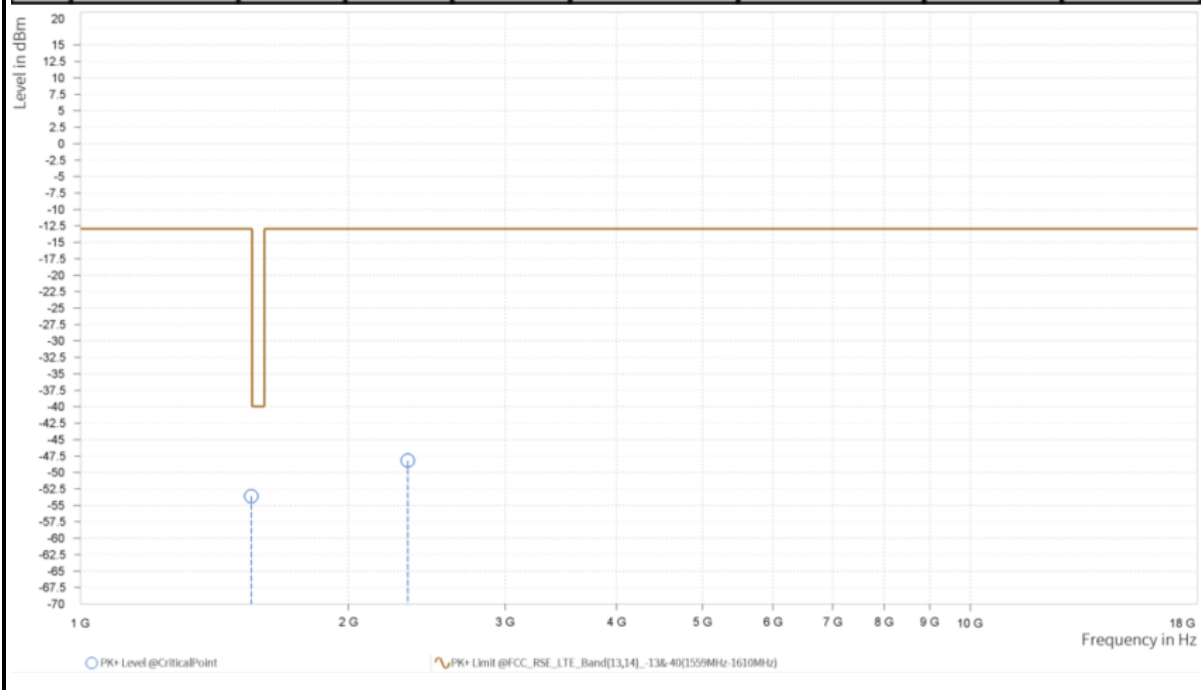




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,555.000	-53.60	-13.00	40.60	17.16	H	2.1	2.00
3	2,332.500	-48.20	-13.00	35.20	24.28	H	1	1.00

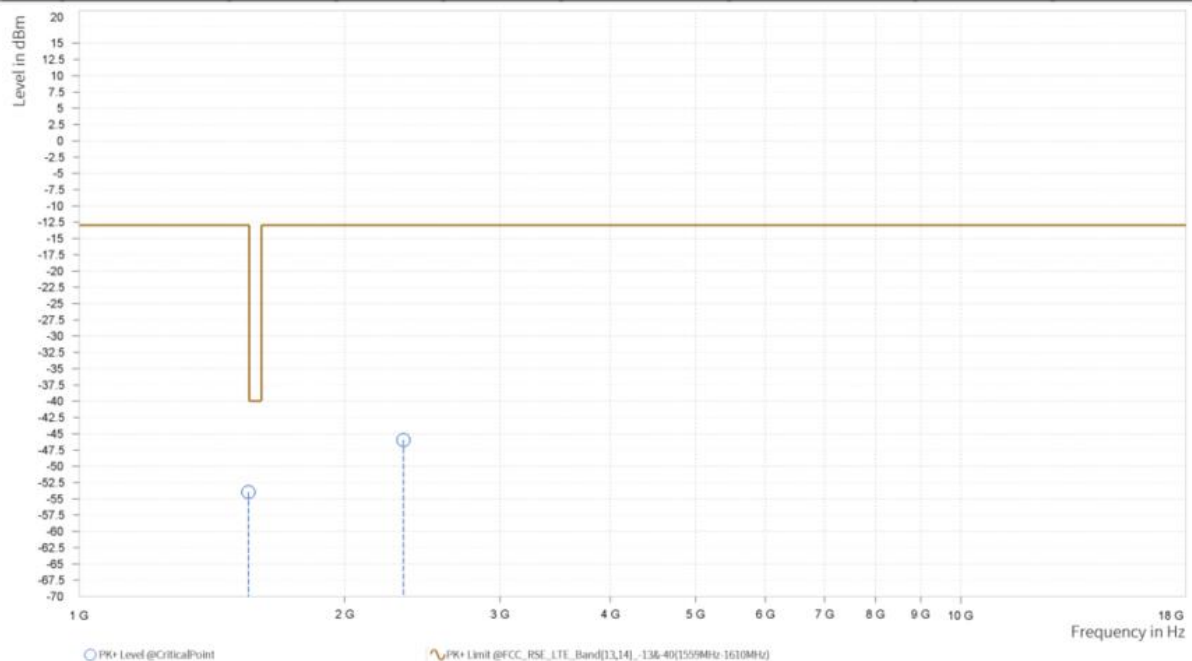


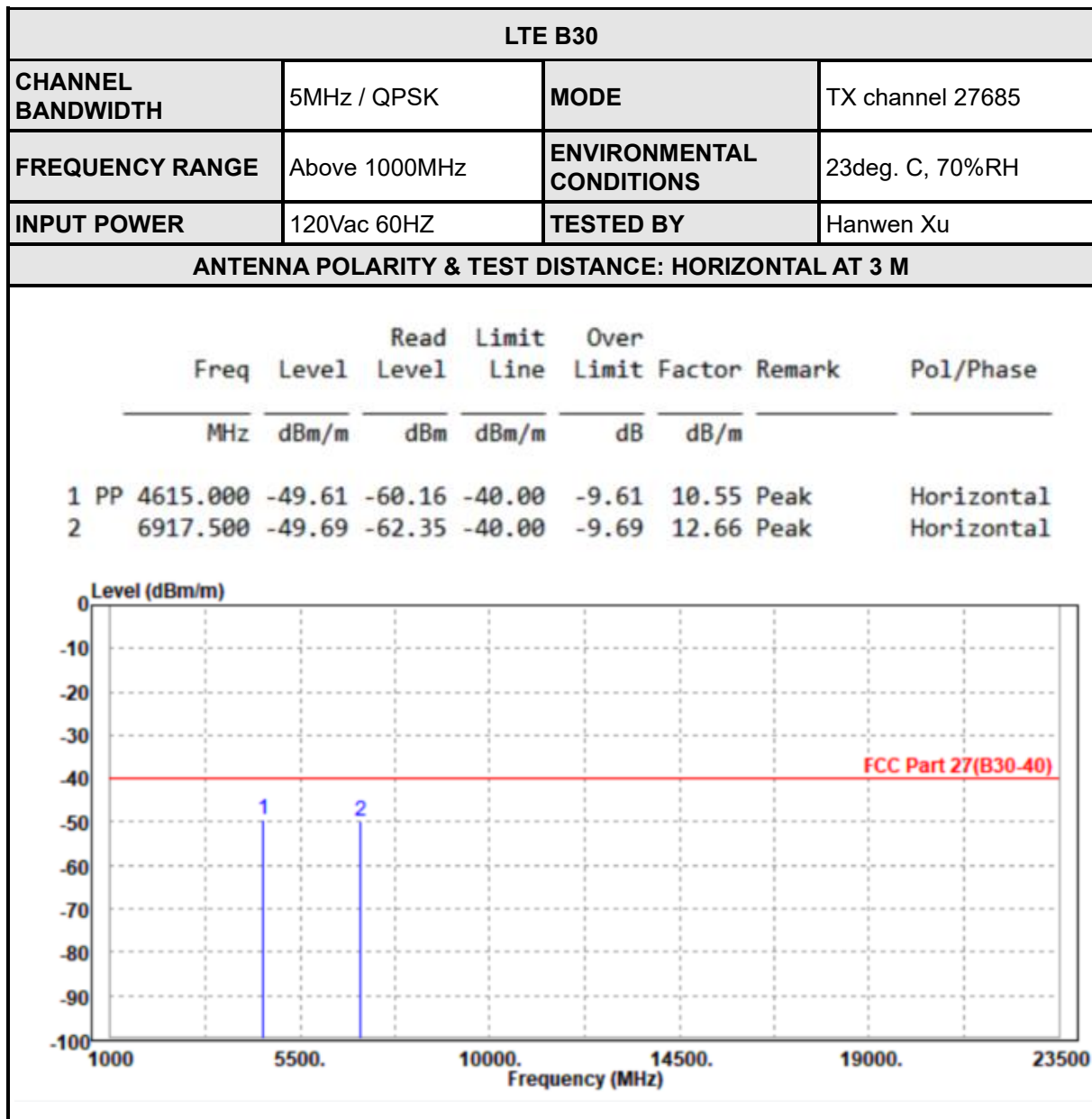


CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,555.000	-53.98	-13.00	40.98	16.80	V	358	1.00
3	2,332.500	-45.96	-13.00	32.96	23.80	V	359	2.00



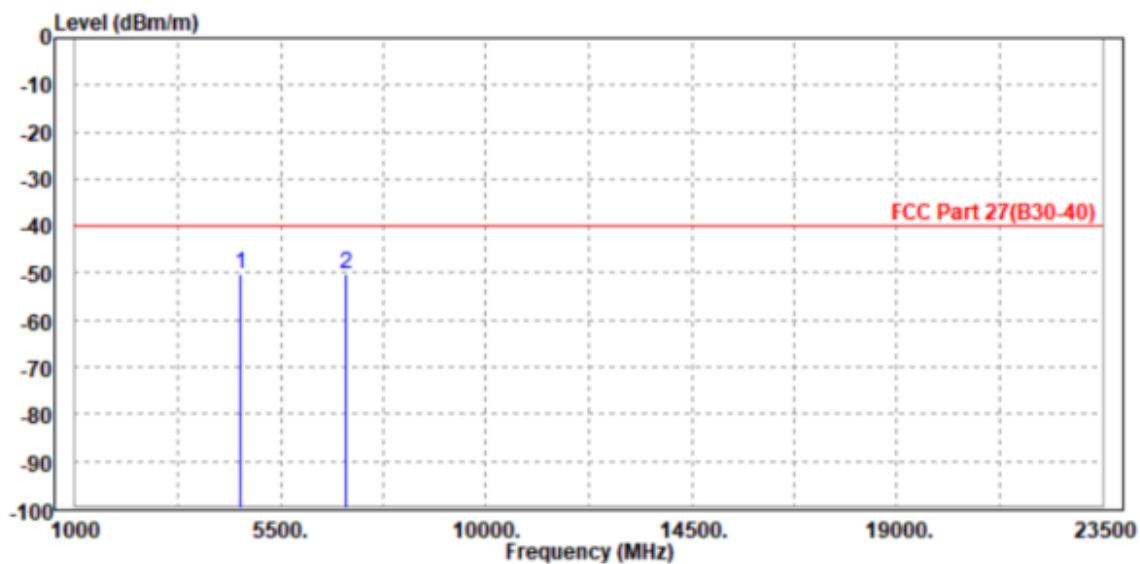




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 27685
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	4622.500	-50.09	-61.05	-40.00	-10.09	10.96	Peak	Vertical
2 PP	6922.500	-50.08	-63.05	-40.00	-10.08	12.97	Peak	Vertical

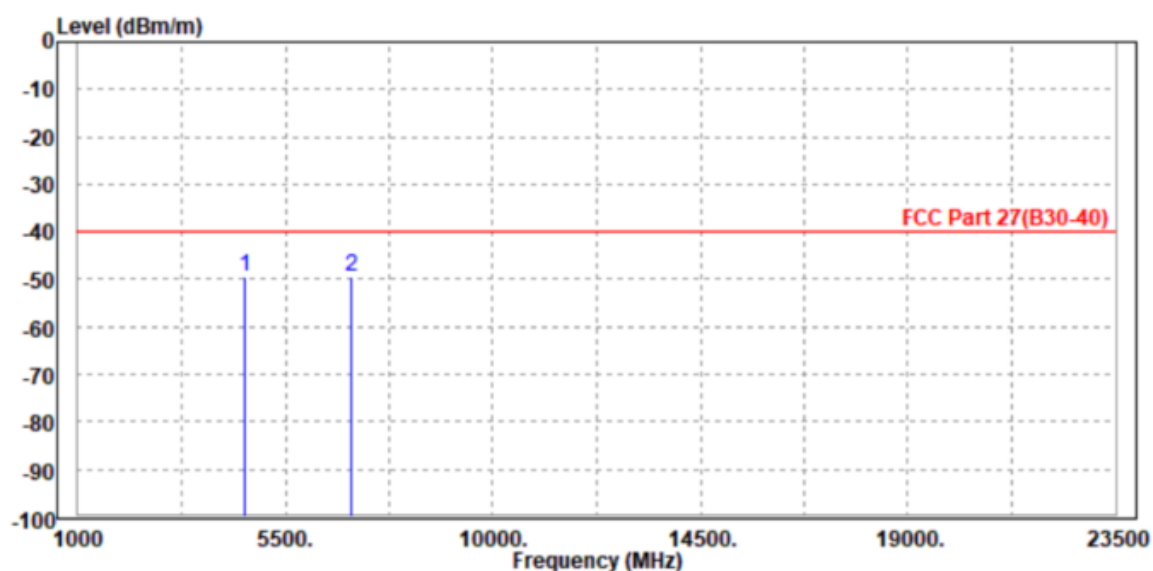




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	4622.500	-49.36	-59.91	-40.00	-9.36	10.55	Peak	Horizontal
2 PP	6930.000	-49.29	-61.96	-40.00	-9.29	12.67	Peak	Horizontal

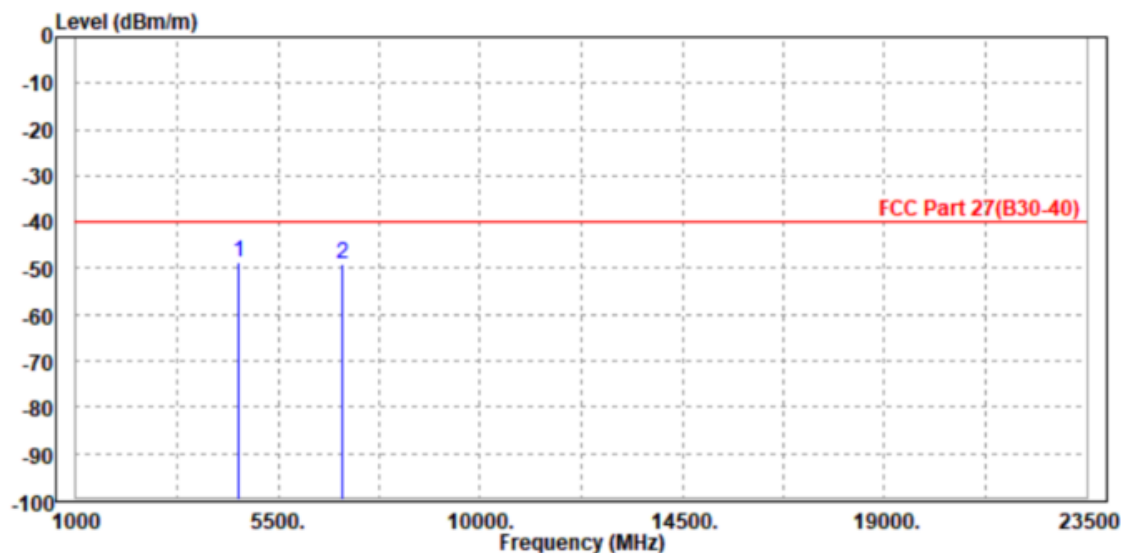




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	4620.000	-48.79	-59.75	-40.00	-8.79	10.96	Peak	Vertical
2		6940.000	-48.99	-61.96	-40.00	-8.99	12.97	Peak	Vertical

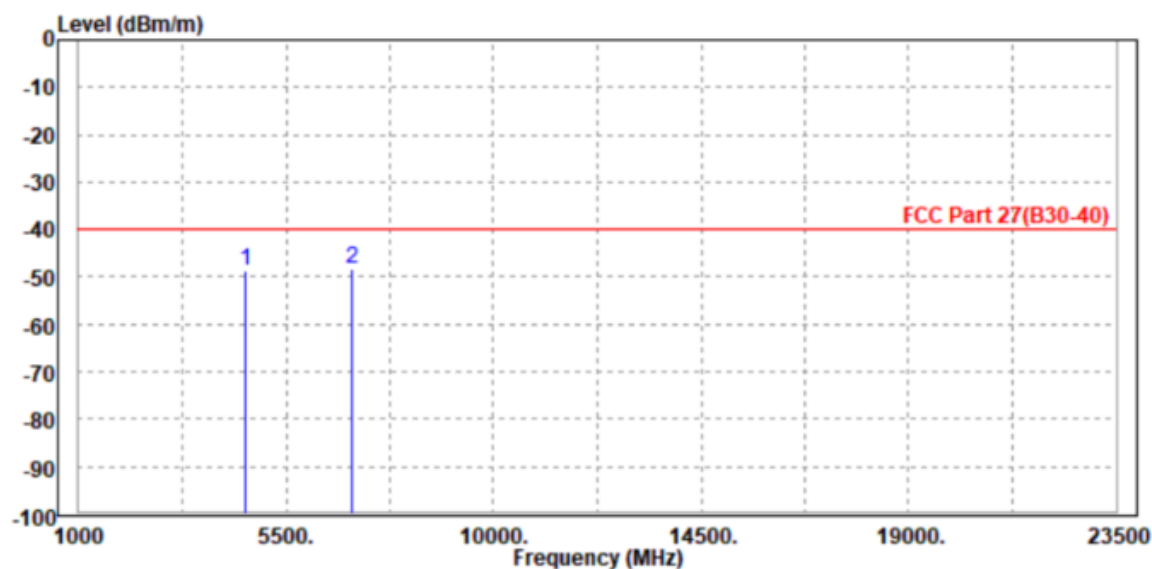




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 27735
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	4622.500	-48.58	-59.13	-40.00	-8.58	10.55	Peak	Horizontal
2 PP	6937.500	-48.45	-61.12	-40.00	-8.45	12.67	Peak	Horizontal

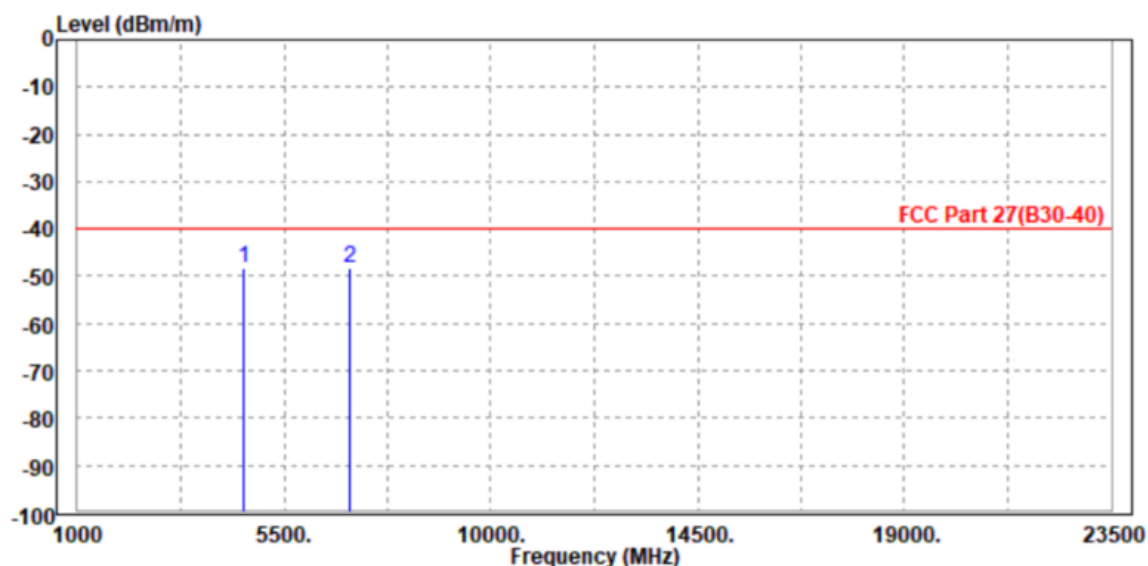


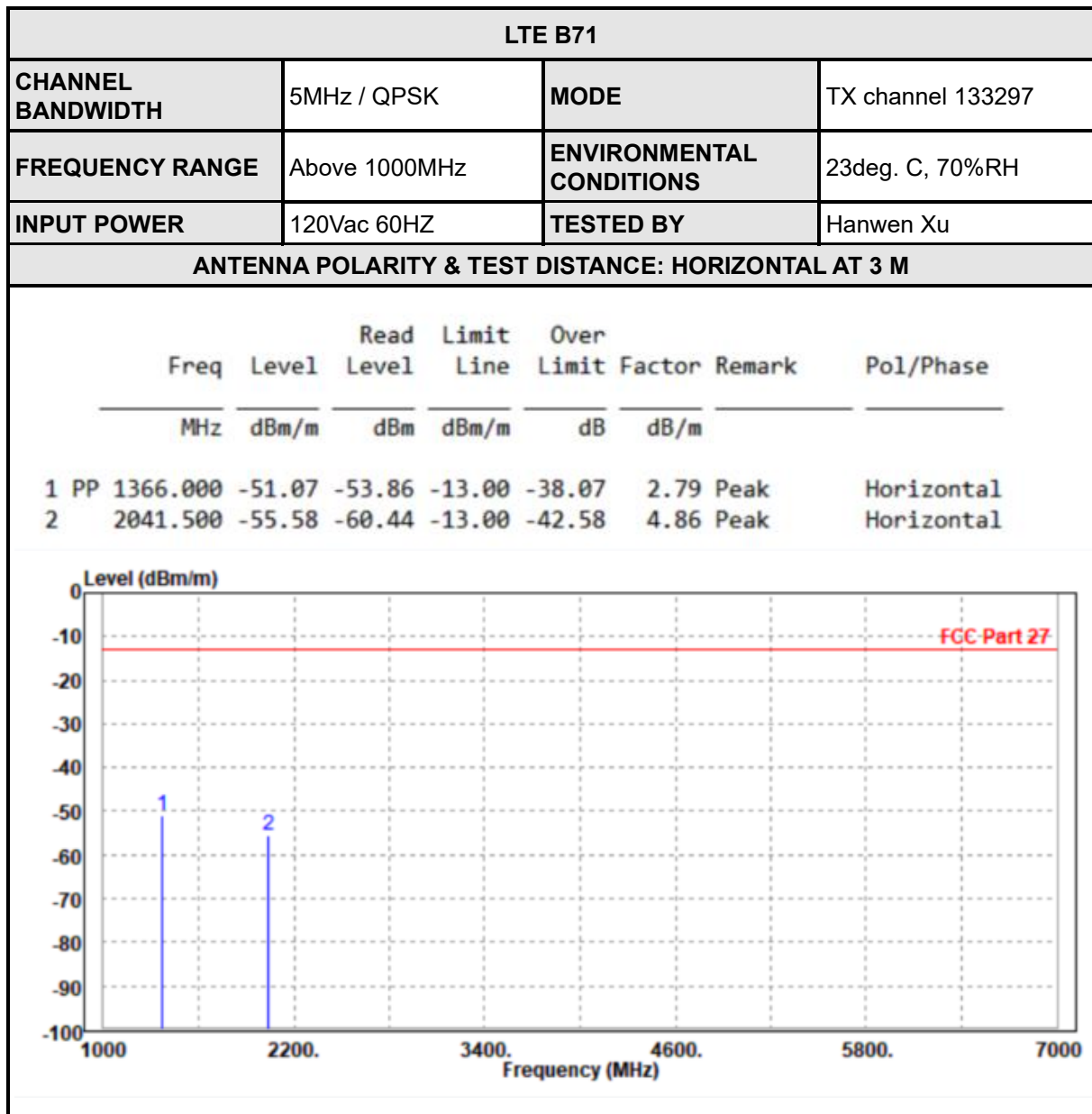


CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 27735
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	4622.500	-48.39	-59.35	-40.00	-8.39	10.96	Peak	Vertical
2		6937.500	-48.40	-61.37	-40.00	-8.40	12.97	Peak	Vertical



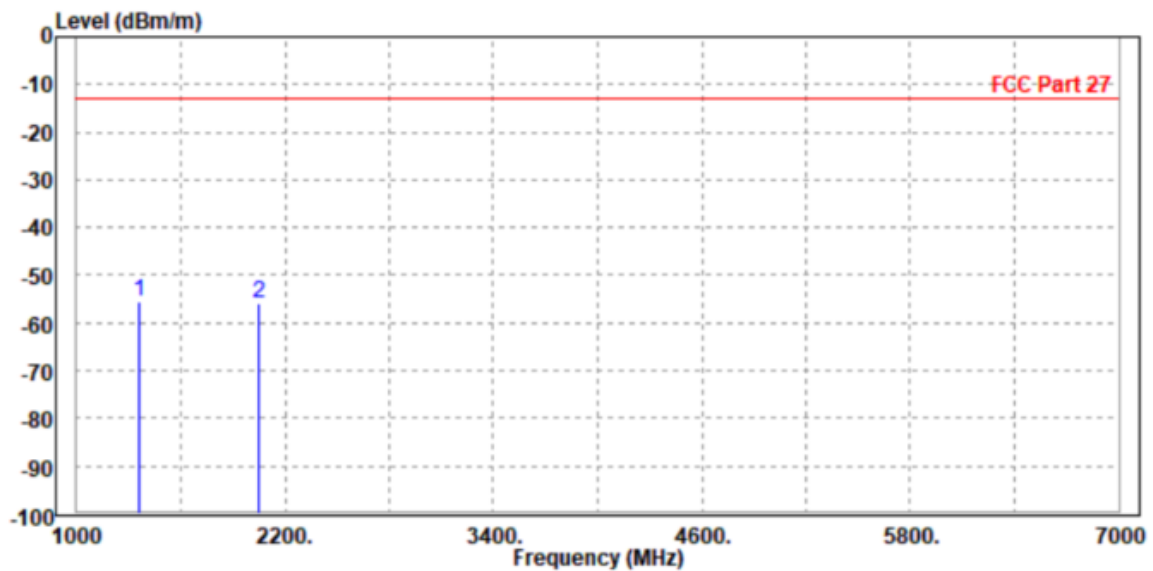




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 133297
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1361.000	-55.43	-58.22	-13.00	-42.43	2.79	Peak	Vertical
2	2044.000	-55.81	-59.97	-13.00	-42.81	4.16	Peak	Vertical

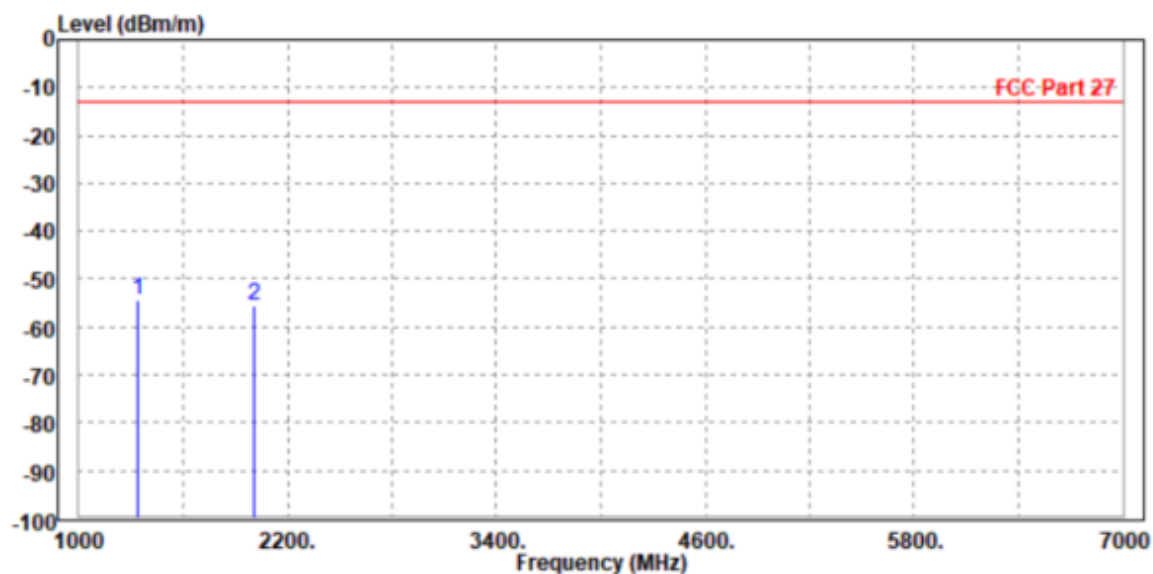




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 133197
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1342.000	-54.28	-56.99	-13.00	-41.28	2.71	Peak	Horizontal
2	2011.500	-55.47	-60.25	-13.00	-42.47	4.78	Peak	Horizontal

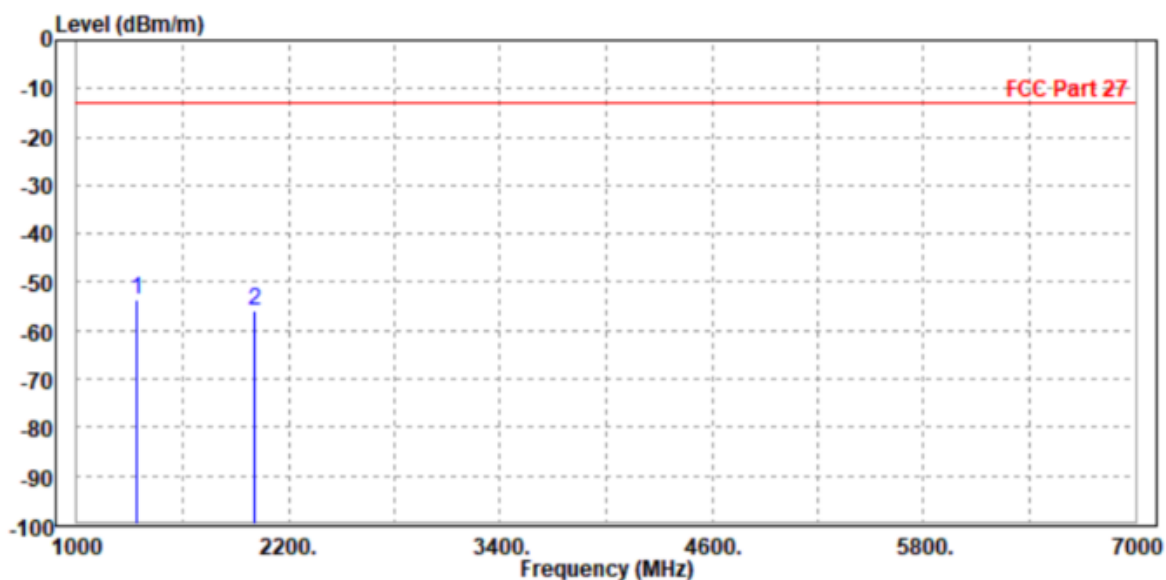




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 133197
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

			Read	Limit	Over			
	Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1336.000	-53.69	-56.42	-13.00	-40.69	2.73	Peak	Vertical
2	2011.500	-55.92	-59.96	-13.00	-42.92	4.04	Peak	Vertical

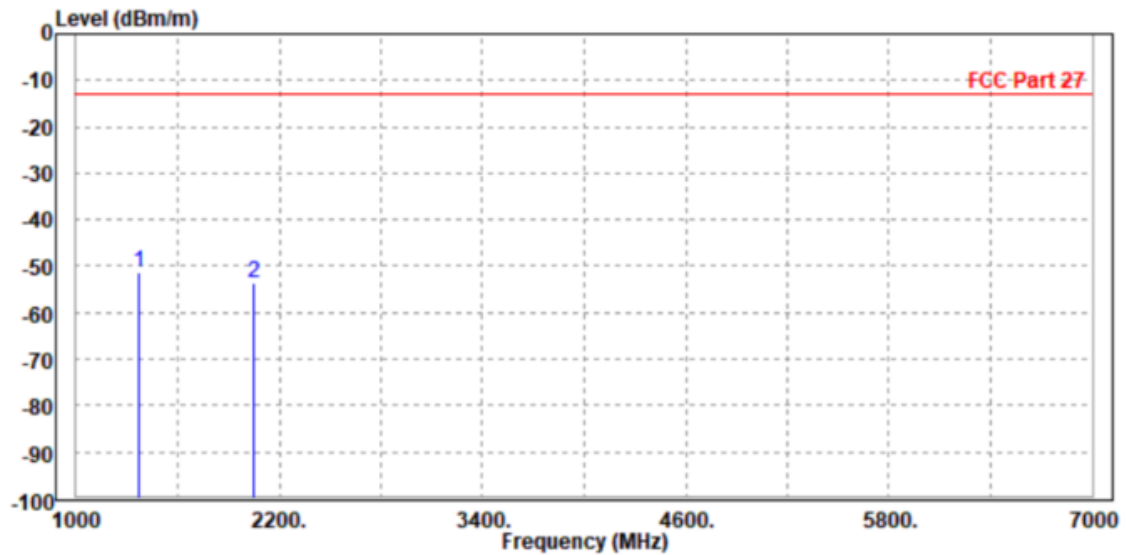




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 133297
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1366.000	-51.46	-54.25	-13.00	-38.46	2.79	Peak	Horizontal
2	2044.000	-53.44	-58.31	-13.00	-40.44	4.87	Peak	Horizontal

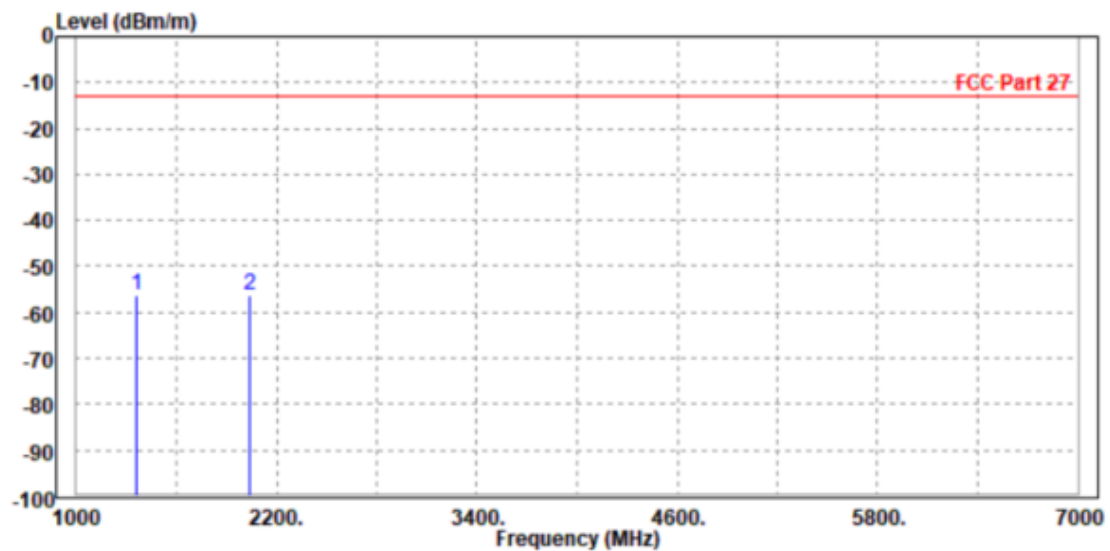




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 133297
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1360.000	-56.40	-59.19	-13.00	-43.40	2.79	Peak	Vertical
2 PP	2041.500	-56.20	-60.35	-13.00	-43.20	4.15	Peak	Vertical

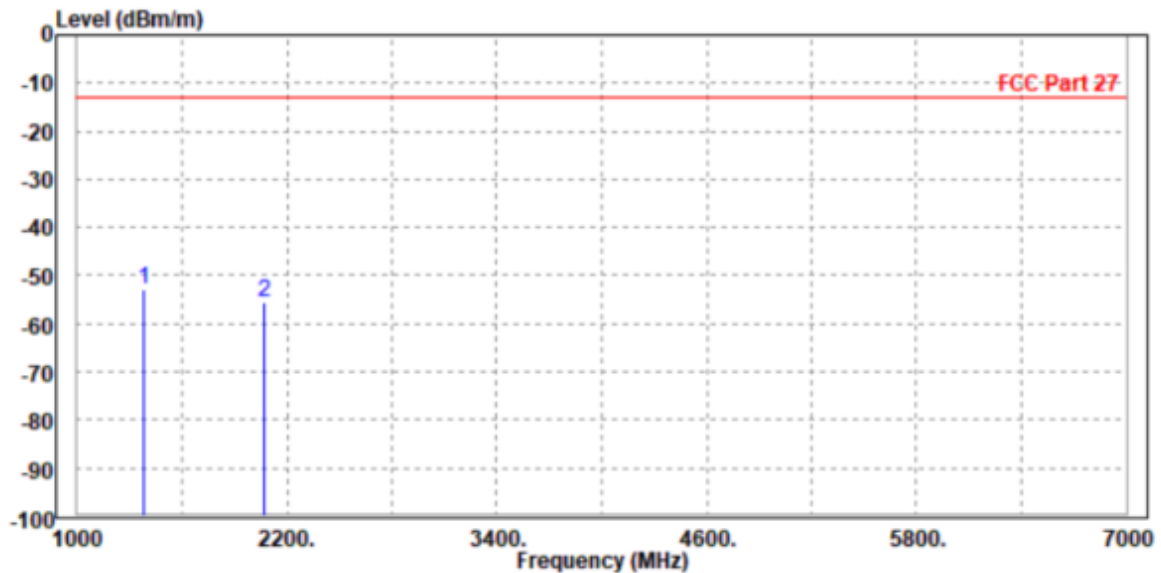




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 133397
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1384.000	-52.93	-55.77	-13.00	-39.93	2.84	Peak	Horizontal
2	2071.500	-55.38	-60.32	-13.00	-42.38	4.94	Peak	Horizontal

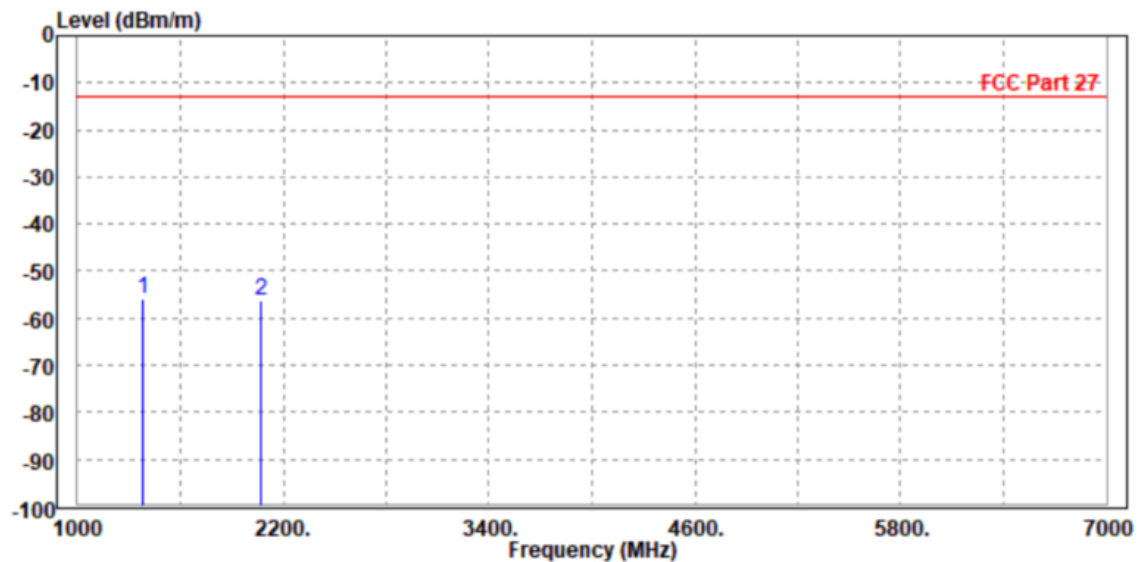




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 133397
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1381.000	-56.00	-58.84	-13.00	-43.00	2.84	Peak	Vertical
2	2074.000	-56.26	-60.52	-13.00	-43.26	4.26	Peak	Vertical

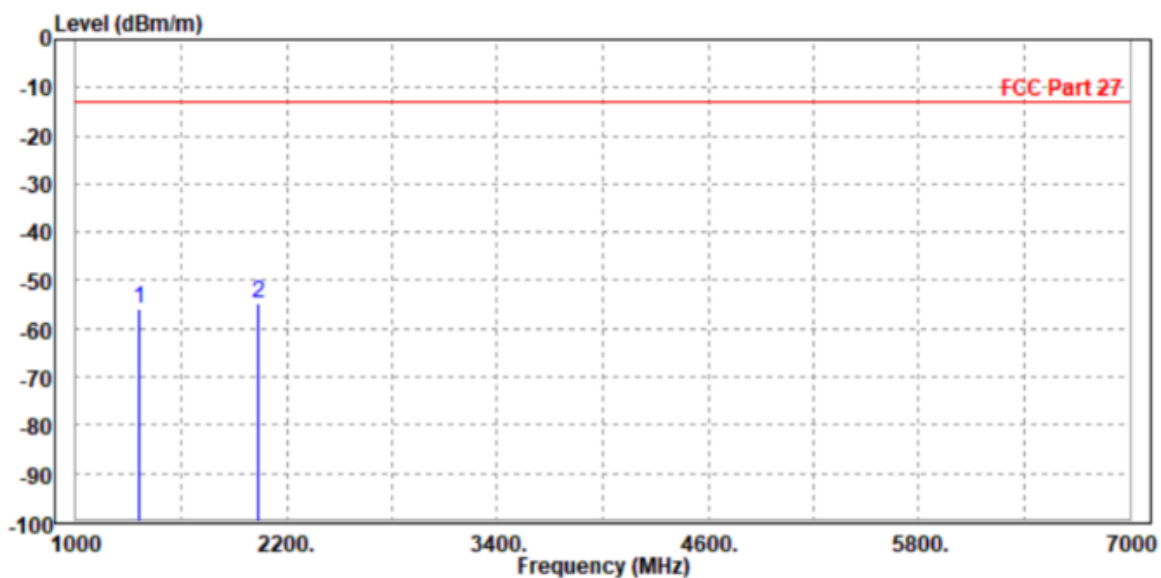




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 133297
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1360.000	-55.83	-58.60	-13.00	-42.83	2.77	Peak	Horizontal
2 PP	2041.500	-54.92	-59.78	-13.00	-41.92	4.86	Peak	Horizontal

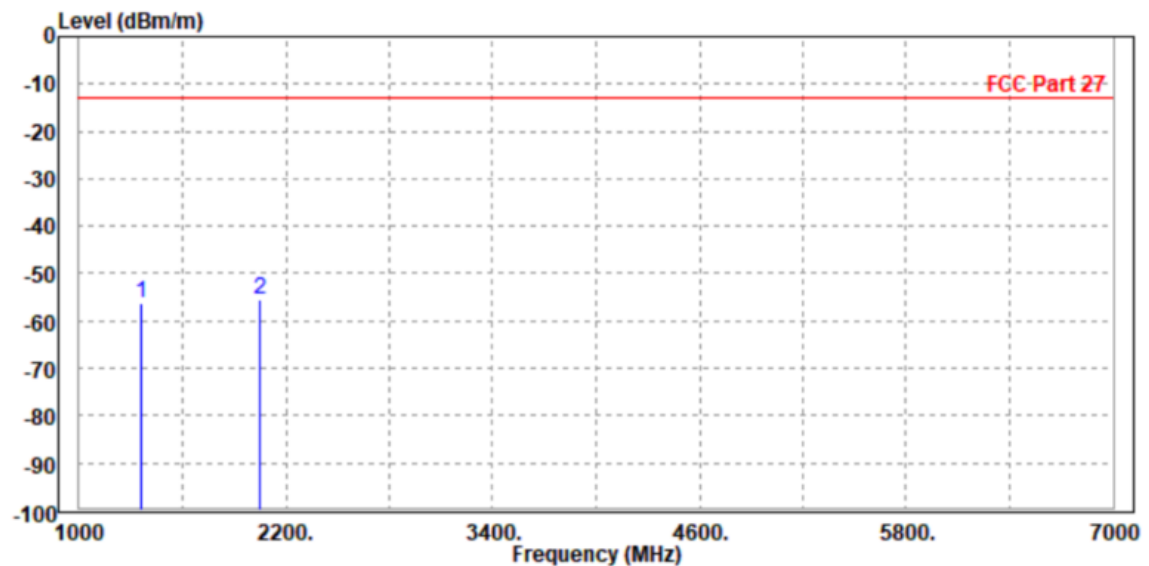


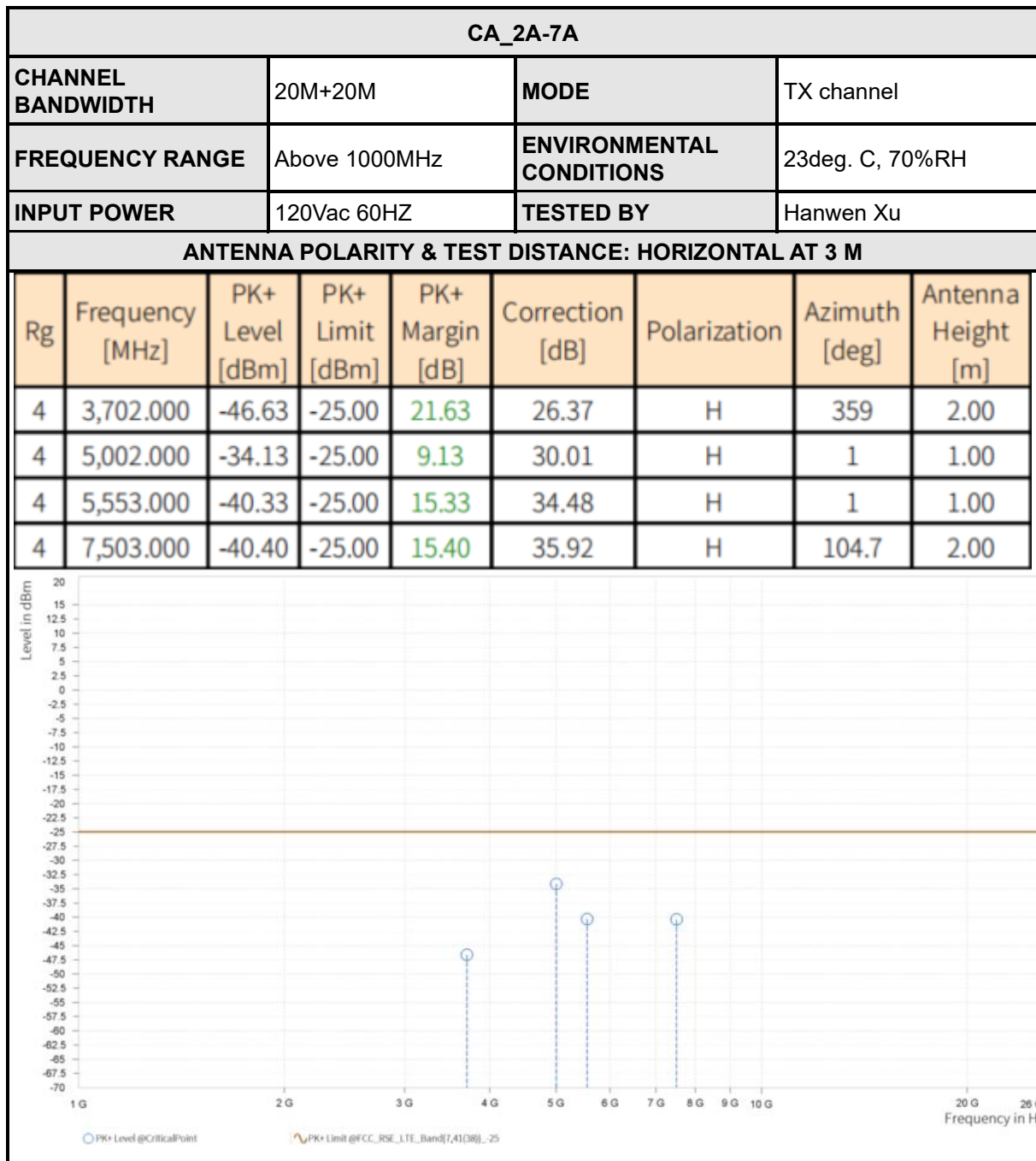


CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 133297
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1361.000	-56.35	-59.14	-13.00	-43.35	2.79	Peak	Vertical
2 PP	2044.000	-55.41	-59.57	-13.00	-42.41	4.16	Peak	Vertical



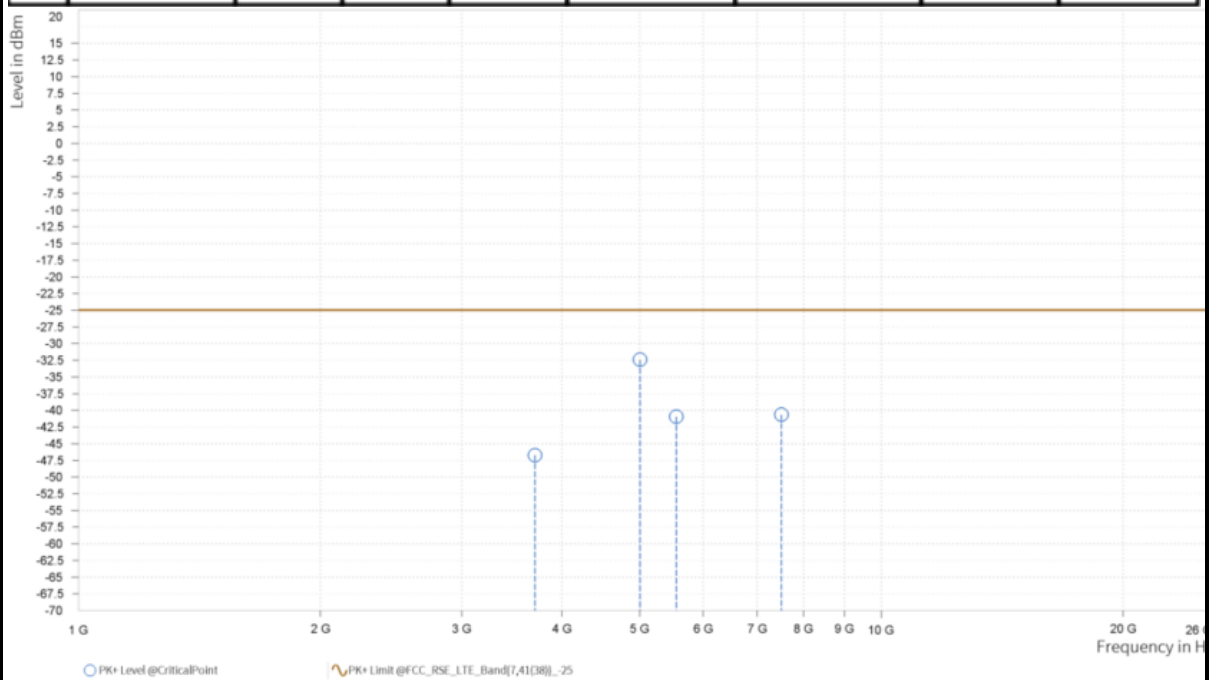




CHANNEL BANDWIDTH	20M+20M	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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	3,702.000	-46.71	-25.00	21.71	26.19	V	1	2.00
4	5,002.000	-32.40	-25.00	7.40	29.87	V	359	2.00
4	5,553.000	-40.96	-25.00	15.96	34.22	V	253	1.00
4	7,503.000	-40.66	-25.00	15.66	36.09	V	1	1.00

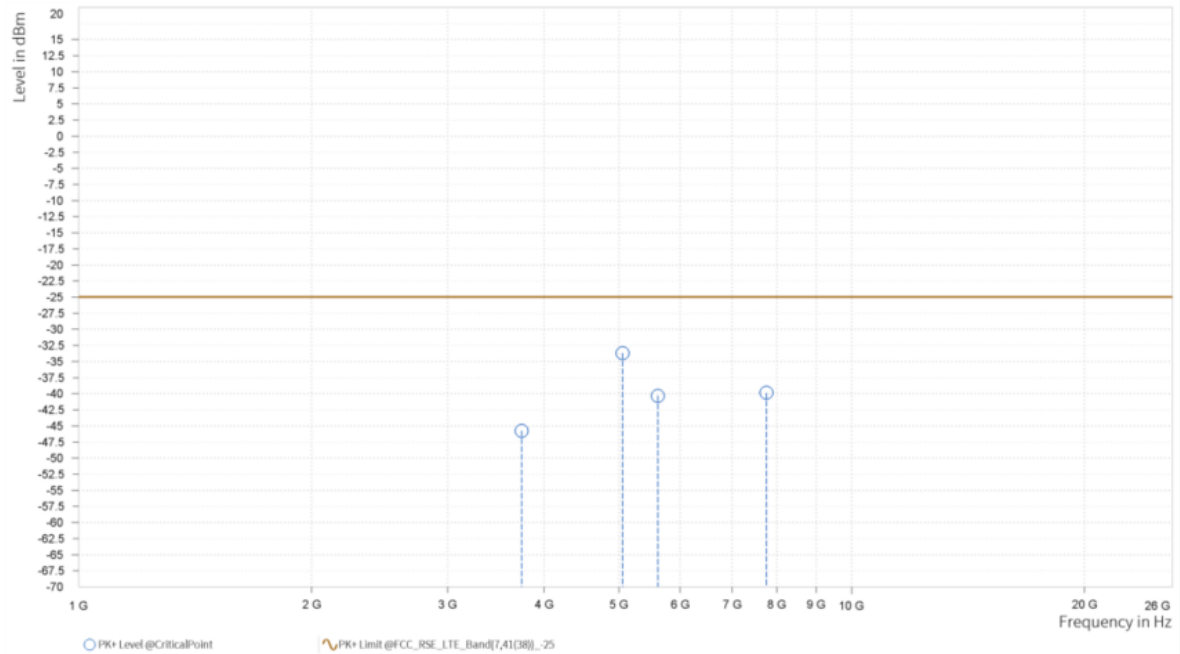




CHANNEL BANDWIDTH	20M+20M	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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	3,742.000	-45.75	-25.00	20.75	27.41	H	105.9	2.00
4	5,052.000	-33.69	-25.00	8.69	32.31	H	245.8	1.00
4	5,613.000	-40.32	-25.00	15.32	34.70	H	245.8	1.00
4	7,758.000	-39.83	-25.00	14.83	37.01	H	245.8	1.00

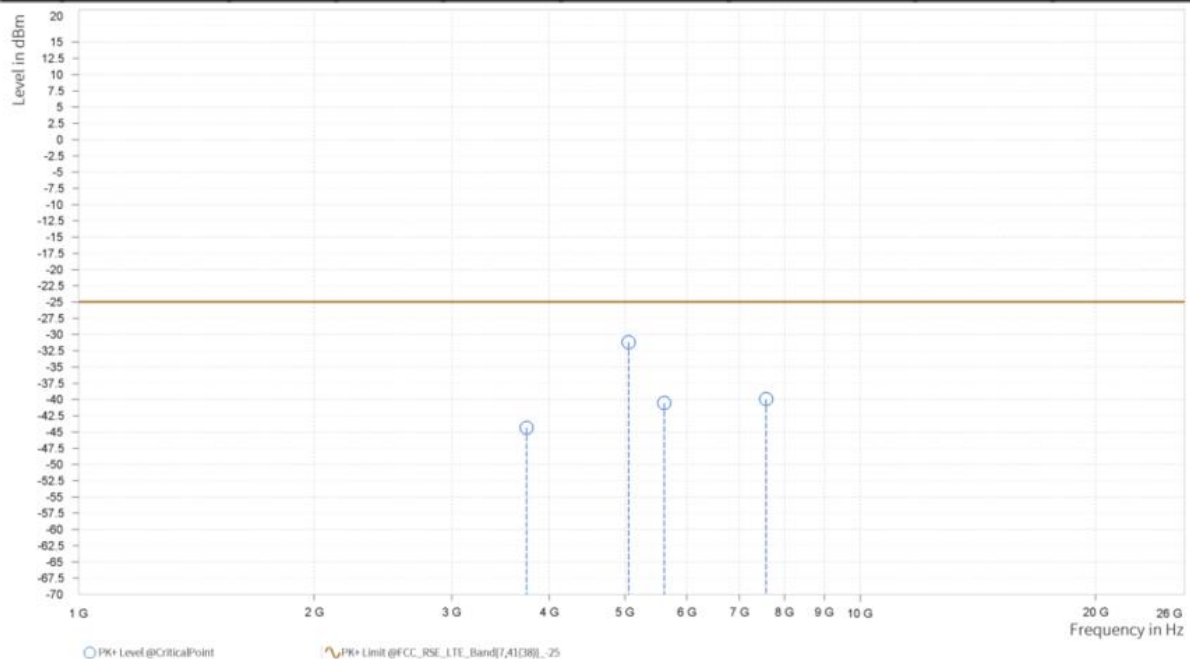




CHANNEL BANDWIDTH	20M+20M	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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	3,742.000	-44.33	-25.00	19.33	27.14	V	56.9	2.00
4	5,052.000	-31.17	-25.00	6.17	32.05	V	359	2.00
4	5,613.000	-40.51	-25.00	15.51	34.44	V	254.2	1.00
4	7,578.000	-39.95	-25.00	14.95	36.74	V	359	2.00



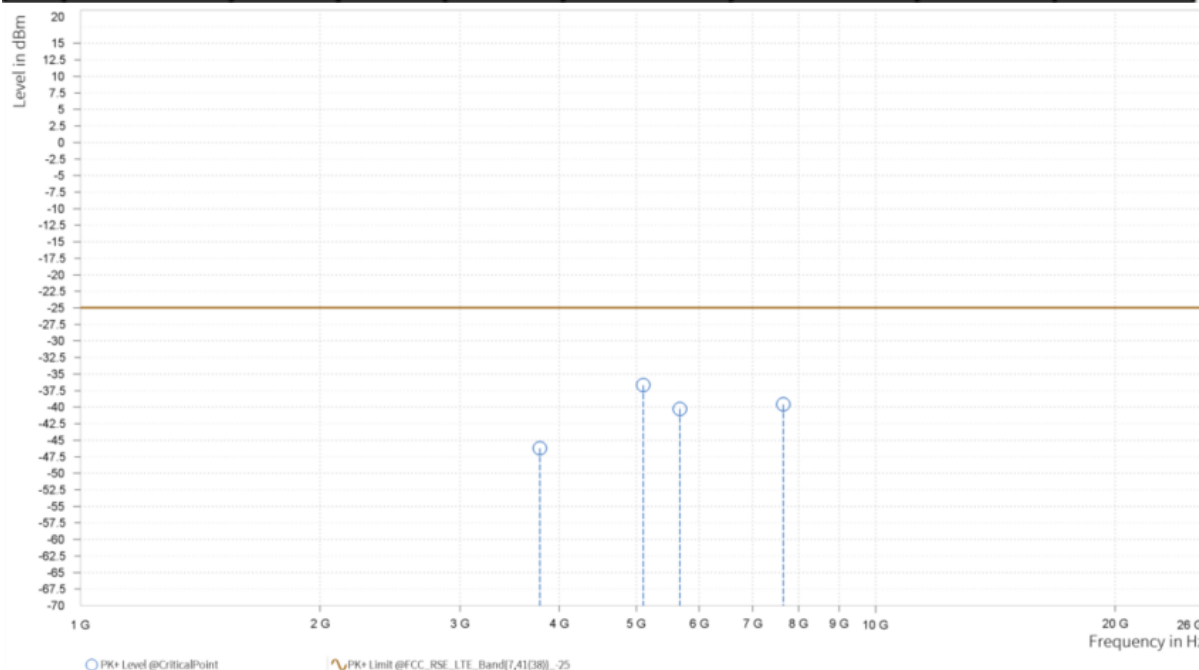


BUREAU VERITAS Test Report No.: PSU-QSU2411180418RF04

CHANNEL BANDWIDTH	20M+20M	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 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	3,782.000	-46.22	-25.00	21.22	27.26	H	1	1.00
4	5,102.000	-36.68	-25.00	11.68	30.38	H	1	1.00
4	5,673.000	-40.27	-25.00	15.27	34.24	H	126.2	2.00
4	7,653.000	-39.60	-25.00	14.60	37.01	H	126.2	2.00

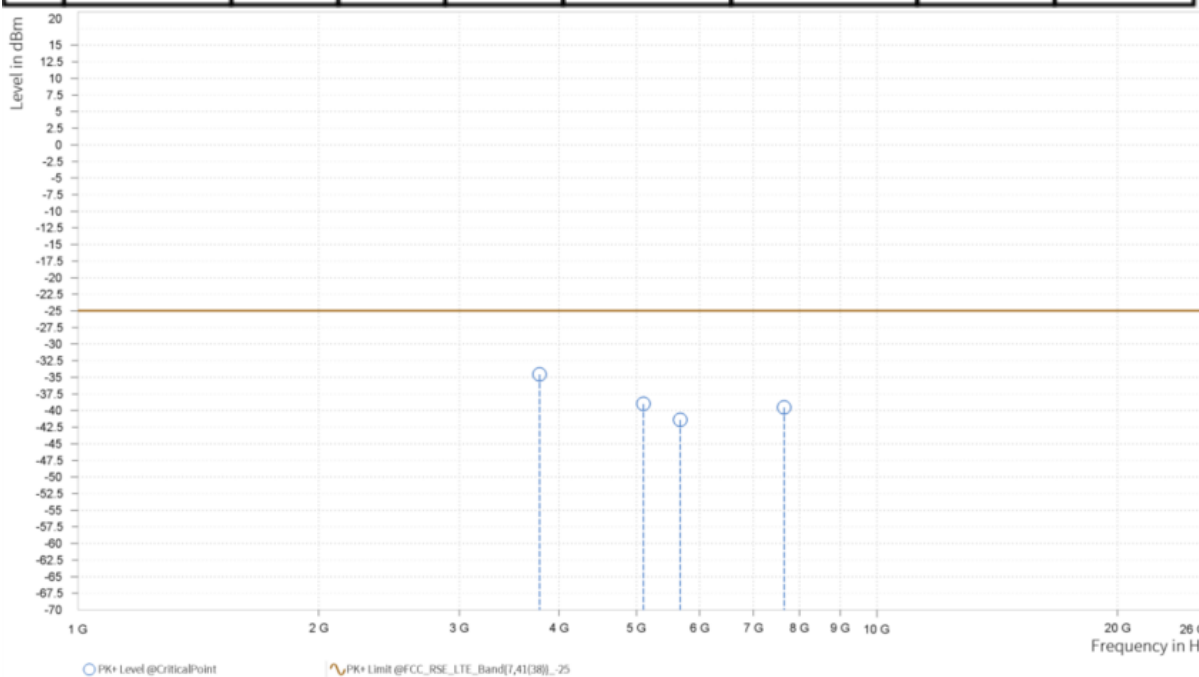




CHANNEL BANDWIDTH	20M+20M	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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	3,782.000	-34.57	-25.00	9.57	27.26	V	125	2.00
4	5,102.000	-38.98	-25.00	13.98	30.38	V	359	1.00
4	5,673.000	-41.39	-25.00	16.39	34.24	V	235	1.00
4	7,653.000	-39.53	-25.00	14.53	37.01	V	235	1.00

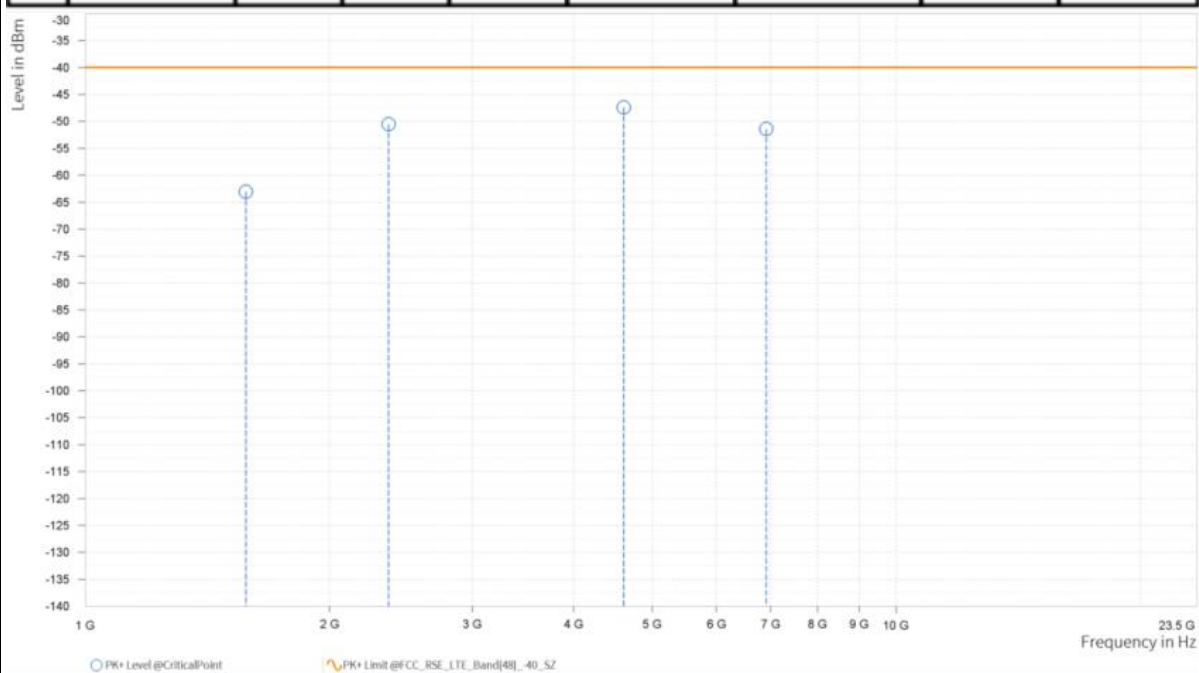


**CA_14A-30A**

CHANNEL BANDWIDTH	10M+10M	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 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]
2	1,577.000	-63.08	-40.00	23.08	4.96	H	299.8	2.00
3	2,365.500	-50.56	-40.00	10.56	20.27	H	239.9	2.00
5	4,611.500	-47.41	-40.00	7.41	18.65	H	43.9	2.00
5	6,916.500	-51.41	-40.00	11.41	23.09	H	358.9	1.00

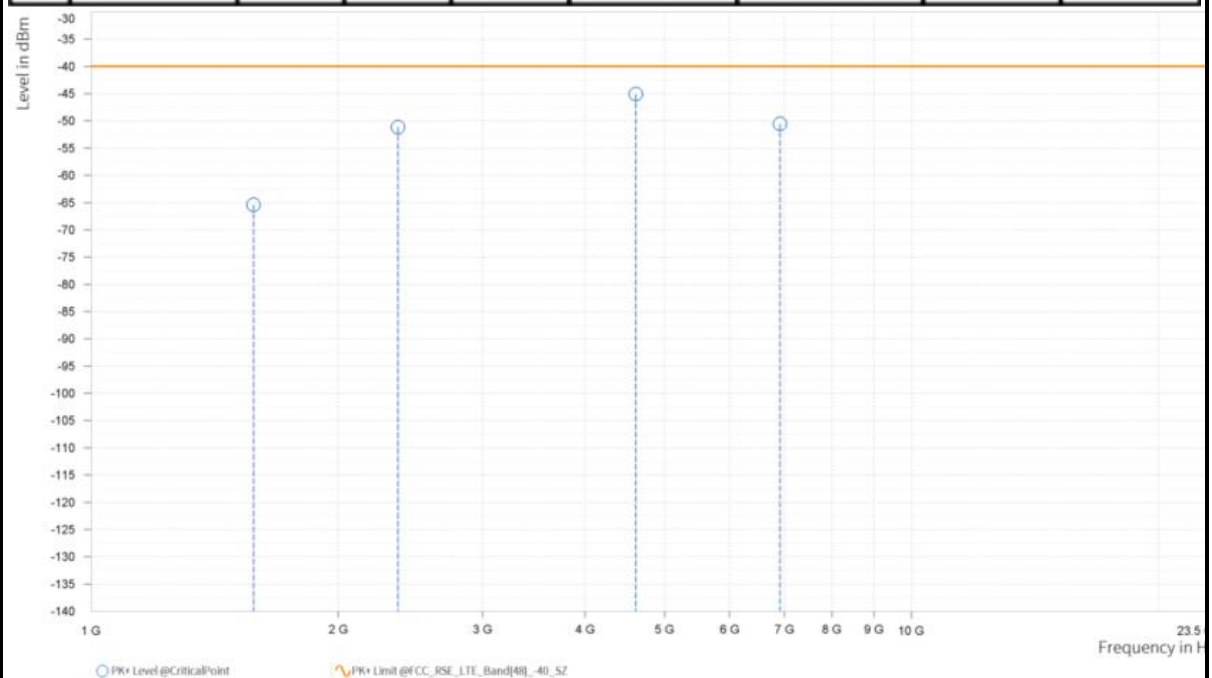




CHANNEL BANDWIDTH	10M+10M	MODE	TX channel
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

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]
2	1,577.000	-65.42	-40.00	25.42	4.96	V	359.1	1.00
3	2,365.500	-51.11	-40.00	11.11	20.27	V	114	1.00
5	4,611.000	-45.06	-40.00	5.06	18.65	V	1	1.00
5	6,916.500	-50.53	-40.00	10.53	23.09	V	21.5	2.00

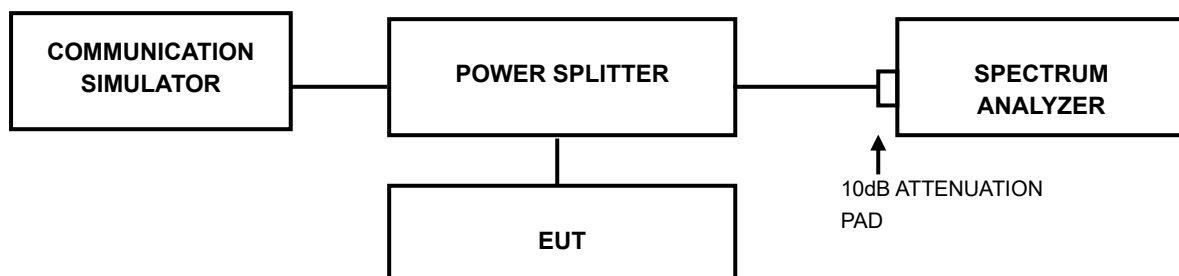


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.7.4 TEST RESULTS

Please Refer to Appendix of this test report.



4 INFORMATION ON THE TESTING LABORATORIES

We, Huarui 7layers High Technology (Suzhou) Co., Ltd. ,were founded in 2020 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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

Lab Address:

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

Accredited Test Lab Cert 6613.01

If you have any comments, please feel free to contact us at the following:

Suzhou EMC/RF Lab:

Tel: +86 (0557) 368 1008



5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.



6 Appendix

LTE BAND 7

PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band7	5MHz	QPSK	20775	1RB#0	5.12	13	PASS
Band7	5MHz	QPSK	20775	25RB#0	5.72	13	PASS
Band7	5MHz	QPSK	21100	1RB#0	5.39	13	PASS
Band7	5MHz	QPSK	21100	25RB#0	5.74	13	PASS
Band7	5MHz	QPSK	21425	1RB#0	5.48	13	PASS
Band7	5MHz	QPSK	21425	25RB#0	5.95	13	PASS
Band7	5MHz	64QAM	20775	1RB#0	6.50	13	PASS
Band7	5MHz	64QAM	20775	25RB#0	6.69	13	PASS
Band7	5MHz	64QAM	21100	1RB#0	6.74	13	PASS
Band7	5MHz	64QAM	21100	25RB#0	6.75	13	PASS
Band7	5MHz	64QAM	21425	1RB#0	6.37	13	PASS
Band7	5MHz	64QAM	21425	25RB#0	6.72	13	PASS
Band7	5MHz	256QAM	20775	1RB#0	7.03	13	PASS
Band7	5MHz	256QAM	20775	25RB#0	6.97	13	PASS
Band7	5MHz	256QAM	21100	1RB#0	7.06	13	PASS
Band7	5MHz	256QAM	21100	25RB#0	6.96	13	PASS
Band7	5MHz	256QAM	21425	1RB#0	6.99	13	PASS
Band7	5MHz	256QAM	21425	25RB#0	6.92	13	PASS
Band7	5MHz	16QAM	20775	1RB#0	6.07	13	PASS
Band7	5MHz	16QAM	20775	25RB#0	6.52	13	PASS
Band7	5MHz	16QAM	21100	1RB#0	6.32	13	PASS
Band7	5MHz	16QAM	21100	25RB#0	6.54	13	PASS
Band7	5MHz	16QAM	21425	1RB#0	6.37	13	PASS
Band7	5MHz	16QAM	21425	25RB#0	6.70	13	PASS
Band7	10MHz	QPSK	20800	1RB#0	5.17	13	PASS
Band7	10MHz	QPSK	20800	50RB#0	5.70	13	PASS
Band7	10MHz	QPSK	21100	1RB#0	5.43	13	PASS
Band7	10MHz	QPSK	21100	50RB#0	5.78	13	PASS
Band7	10MHz	QPSK	21400	1RB#0	5.55	13	PASS
Band7	10MHz	QPSK	21400	50RB#0	5.95	13	PASS
Band7	10MHz	64QAM	20800	1RB#0	6.44	13	PASS
Band7	10MHz	64QAM	20800	50RB#0	6.67	13	PASS
Band7	10MHz	64QAM	21100	1RB#0	6.60	13	PASS
Band7	10MHz	64QAM	21100	50RB#0	6.74	13	PASS
Band7	10MHz	64QAM	21400	1RB#0	6.63	13	PASS
Band7	10MHz	64QAM	21400	50RB#0	6.73	13	PASS
Band7	10MHz	256QAM	20800	1RB#0	6.98	13	PASS
Band7	10MHz	256QAM	20800	50RB#0	6.95	13	PASS
Band7	10MHz	256QAM	21100	1RB#0	7.01	13	PASS
Band7	10MHz	256QAM	21100	50RB#0	6.98	13	PASS



Band7	10MHz	256QAM	21400	1RB#0	6.93	13	PASS
Band7	10MHz	256QAM	21400	50RB#0	6.92	13	PASS
Band7	10MHz	16QAM	20800	1RB#0	6.12	13	PASS
Band7	10MHz	16QAM	20800	50RB#0	6.49	13	PASS
Band7	10MHz	16QAM	21100	1RB#0	6.30	13	PASS
Band7	10MHz	16QAM	21100	50RB#0	6.54	13	PASS
Band7	10MHz	16QAM	21400	1RB#0	6.36	13	PASS
Band7	10MHz	16QAM	21400	50RB#0	6.71	13	PASS
Band7	15MHz	QPSK	20825	1RB#0	5.38	13	PASS
Band7	15MHz	QPSK	20825	75RB#0	6.06	13	PASS
Band7	15MHz	QPSK	21100	1RB#0	5.63	13	PASS
Band7	15MHz	QPSK	21100	75RB#0	6.10	13	PASS
Band7	15MHz	QPSK	21375	1RB#0	5.67	13	PASS
Band7	15MHz	QPSK	21375	75RB#0	6.21	13	PASS
Band7	15MHz	64QAM	20825	1RB#0	6.44	13	PASS
Band7	15MHz	64QAM	20825	75RB#0	6.73	13	PASS
Band7	15MHz	64QAM	21100	1RB#0	6.74	13	PASS
Band7	15MHz	64QAM	21100	75RB#0	6.75	13	PASS
Band7	15MHz	64QAM	21375	1RB#0	6.65	13	PASS
Band7	15MHz	64QAM	21375	75RB#0	6.72	13	PASS
Band7	15MHz	256QAM	20825	1RB#0	6.93	13	PASS
Band7	15MHz	256QAM	20825	75RB#0	6.96	13	PASS
Band7	15MHz	256QAM	21100	1RB#0	6.93	13	PASS
Band7	15MHz	256QAM	21100	75RB#0	6.95	13	PASS
Band7	15MHz	256QAM	21375	1RB#0	6.98	13	PASS
Band7	15MHz	256QAM	21375	75RB#0	6.89	13	PASS
Band7	15MHz	16QAM	20825	1RB#0	6.30	13	PASS
Band7	15MHz	16QAM	20825	75RB#0	6.59	13	PASS
Band7	15MHz	16QAM	21100	1RB#0	6.38	13	PASS
Band7	15MHz	16QAM	21100	75RB#0	6.61	13	PASS
Band7	15MHz	16QAM	21375	1RB#0	6.47	13	PASS
Band7	15MHz	16QAM	21375	75RB#0	6.69	13	PASS
Band7	20MHz	QPSK	20850	1RB#0	5.38	13	PASS
Band7	20MHz	QPSK	20850	100RB#0	5.81	13	PASS
Band7	20MHz	QPSK	21100	1RB#0	5.60	13	PASS
Band7	20MHz	QPSK	21100	100RB#0	5.81	13	PASS
Band7	20MHz	QPSK	21350	1RB#0	5.48	13	PASS
Band7	20MHz	QPSK	21350	100RB#0	5.82	13	PASS
Band7	20MHz	64QAM	20850	1RB#0	6.61	13	PASS
Band7	20MHz	64QAM	20850	100RB#0	6.71	13	PASS
Band7	20MHz	64QAM	21100	1RB#0	6.71	13	PASS
Band7	20MHz	64QAM	21100	100RB#0	6.74	13	PASS
Band7	20MHz	64QAM	21350	1RB#0	6.50	13	PASS
Band7	20MHz	64QAM	21350	100RB#0	6.68	13	PASS
Band7	20MHz	256QAM	20850	1RB#0	7.03	13	PASS
Band7	20MHz	256QAM	20850	100RB#0	6.91	13	PASS
Band7	20MHz	256QAM	21100	1RB#0	6.98	13	PASS
Band7	20MHz	256QAM	21100	100RB#0	6.90	13	PASS
Band7	20MHz	256QAM	21350	1RB#0	6.94	13	PASS
Band7	20MHz	256QAM	21350	100RB#0	6.86	13	PASS
Band7	20MHz	16QAM	20850	1RB#0	6.22	13	PASS
Band7	20MHz	16QAM	20850	100RB#0	6.59	13	PASS
Band7	20MHz	16QAM	21100	1RB#0	6.44	13	PASS
Band7	20MHz	16QAM	21100	100RB#0	6.57	13	PASS

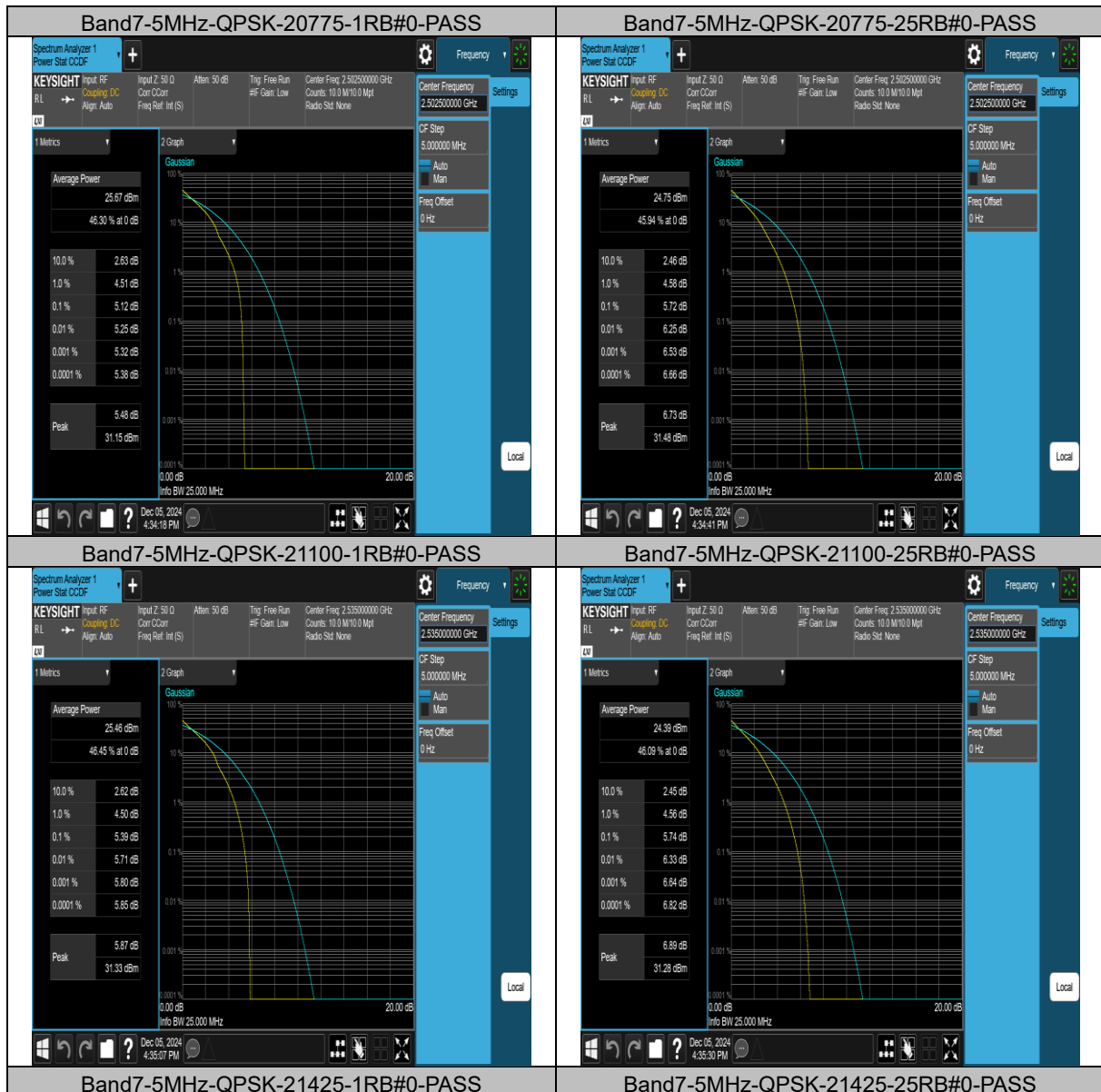


BUREAU VERITAS Test Report No.: PSU-QSU2411180418RF04

Band7	20MHz	16QAM	21350	1RB#0	6.33	13	PASS
Band7	20MHz	16QAM	21350	100RB#0	6.61	13	PASS

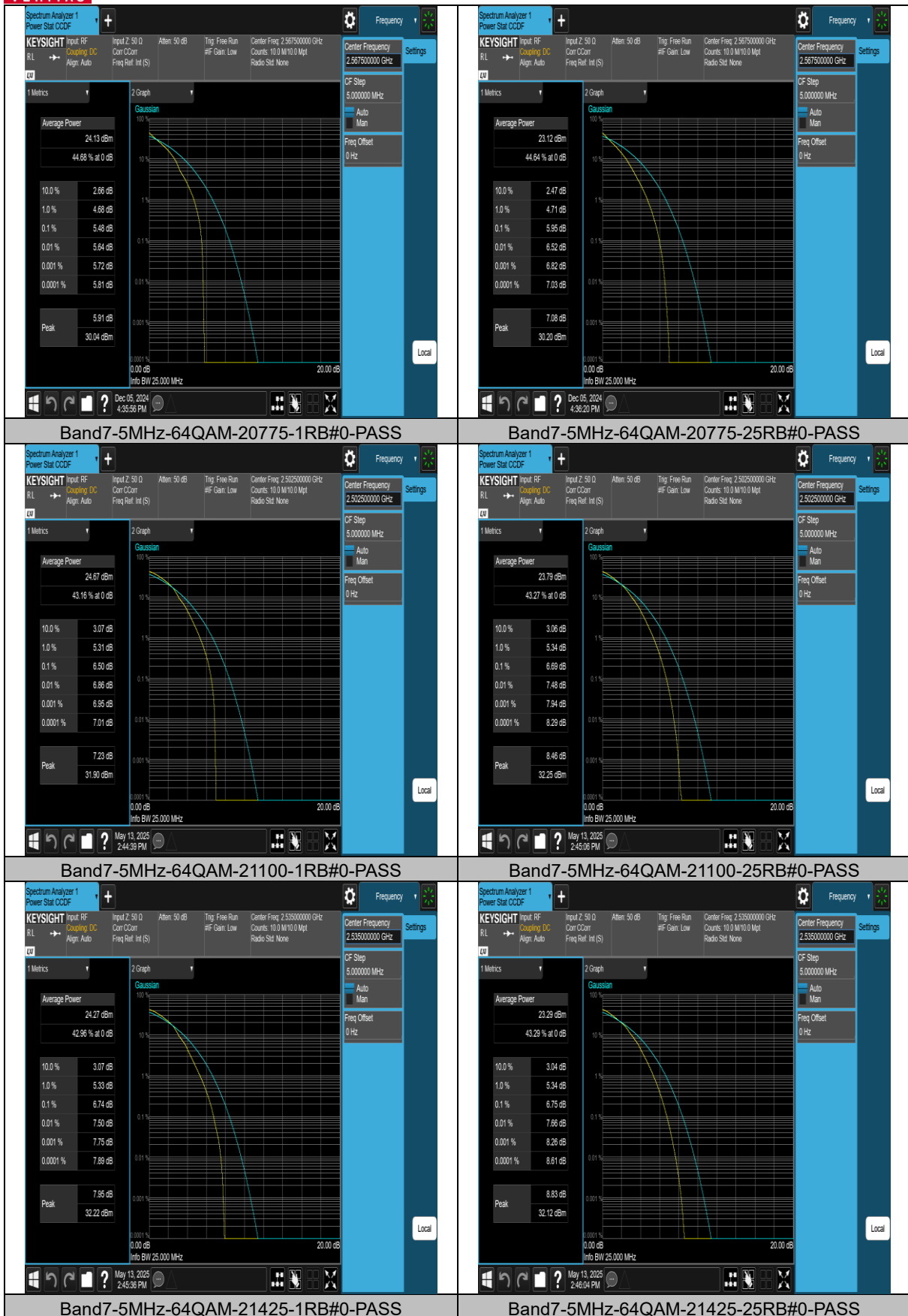


Test Graphs



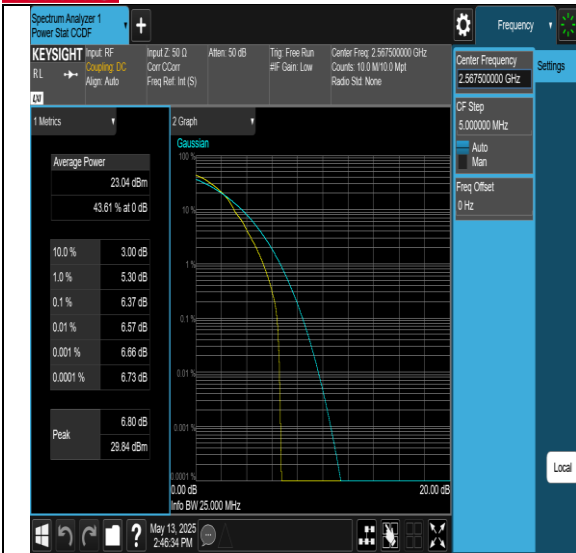


BUREAU VERITAS Test Report No.: PSU-QSU2411180418RF04

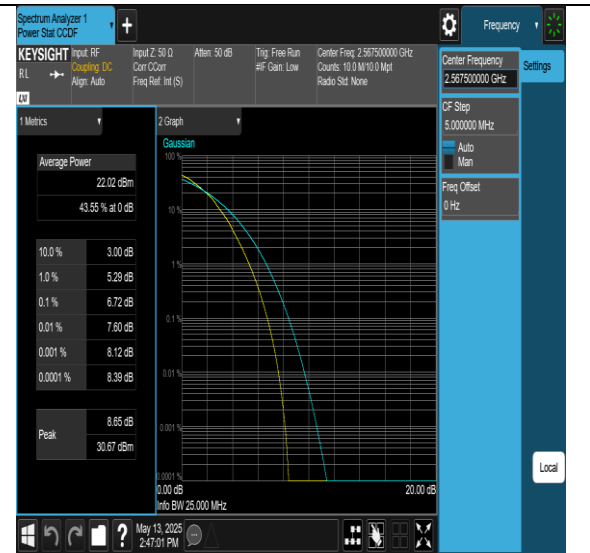




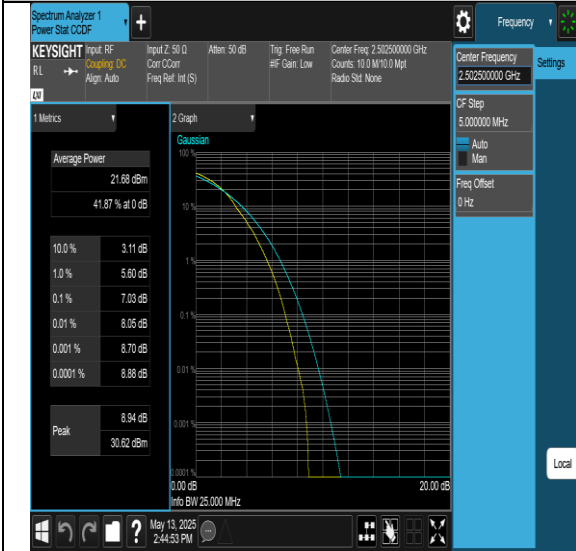
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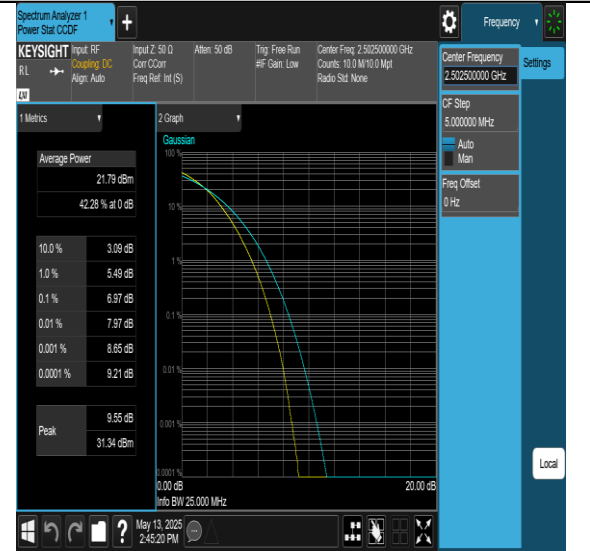
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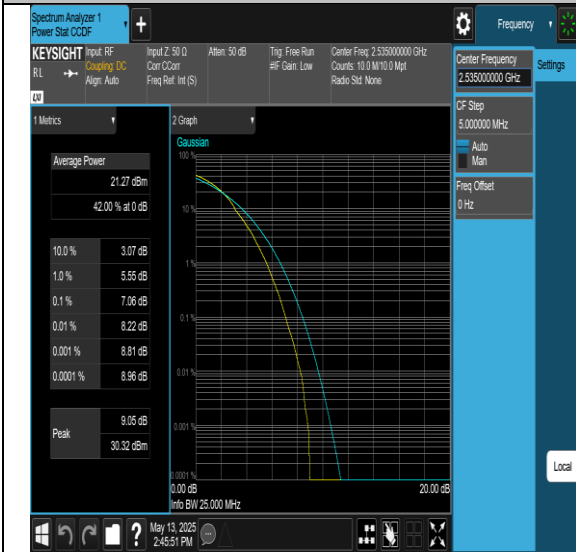
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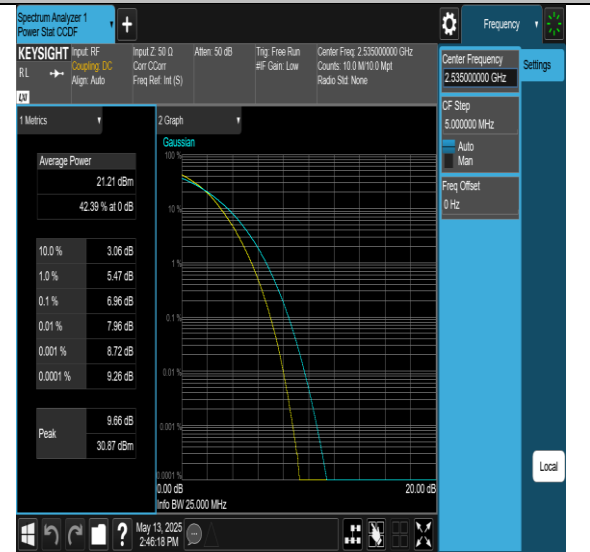
Band7-5MHz-256QAM-21100-1RB#0-PASS



Band7-5MHz-256QAM-21100-25RB#0-PASS



Band7-5MHz-256QAM-21425-1RB#0-PASS



Band7-5MHz-256QAM-21425-25RB#0-PASS