Certificate #6613.01

FCC TEST REPORT

(PART 27)

Applicant:	Power Idea Technology (Shenzhen) Co., Ltd.
Address:	4th Floor, A Section, Languang Science&technology Building, No.7 Xinxi RD, Hi-Tech Industrial Park North, Nanshan District, ShenZhen, P.R.C.

Manufacturer or Supplier:	Power Idea Technology (Shenzhen) Co., Ltd.
Address:	4th Floor, A Section, Languang Science&technology Building, No.7 Xinxi RD, Hi-Tech Industrial Park North, Nanshan District, ShenZhen, P.R.C.
Product:	Smart Phone
Brand Name:	RugGear
Model Name:	PSM05G
Marketing name:	RG880i
FCC ID	ZLE-PSM05G
Date of tests	Aug. 28, 2024 ~ Sep.27, 2024

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

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

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

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
Xu Hanwen Date: Sep.27, 2024	Sun Peibo Date: Sep.27, 2024

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-NQN2406210109RF05	Original release	Sep.27, 2024

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 27 & PART 2			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**TEST LAB***
§2.1046	Conducted Output Power	Compliance	A
§27.50(h)(2)	Equivalent Isotropically Radiated Power (Band 7C) (Band 41C)	Compliance	A
§2.1055 §27.54	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§2.1051 §27.53(m)(4)(6)	Conducted Band Edge Measurements (Band 7C) (Band 41C)	Compliance	A
§2.1051 §27.53(m)(4)(6)	Conducted Spurious Emissions (Band 7C) (Band 41C)	Compliance	A
§2.1051 §27.53(m)(4)(6)	Radiated Spurious Emissions (Band 7C) (Band 41C)	Compliance	A/B
NA	Peak to average ratio	Compliance	A

***Test Lab Information Reference**

Lab A:

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

Lab Address:

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

Accredited Test Lab Cert 6613.01

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

Lab B:

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

Lab Address:

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

Accredited Test Lab Cert 3939.01

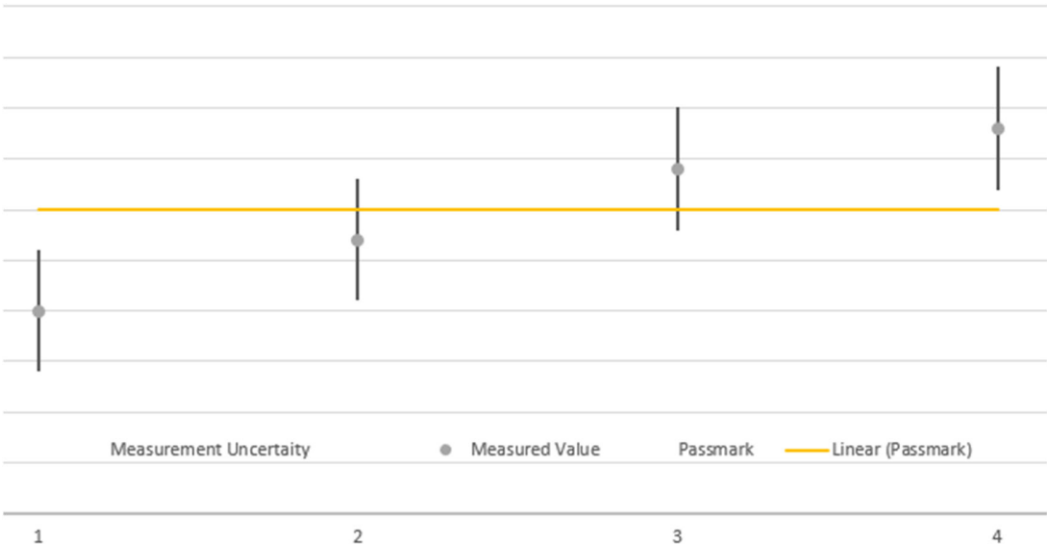
The FCC Site Registration No. is 525120; The Designation No. is CN1171.

1.1 MEASREMENT 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

Lab: A:

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,22	Aug.29,24
Pre-Amplifier	R&S	SCU18F1	100815	Aug.29,24	Aug.28,26
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
Pre-Amplifier	R&S	SCU08F1	101028	Sep.15,24	Sep.14,26
Vector Signal Generator	R&S	SMBV100B	102176	Mar.29,24	Mar.28,26
Signal Generator	R&S	SMB100A	182185	Mar.29,24	Mar.28,26
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	Mar.28,24	Mar.27,26
EMI TEST Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Dec.26,23	Dec.25,25
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.21,24	Aug.20,26
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Jul.15,24	Jul.14,26
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.19,24	Jun.18,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	Oct.01,22	Sep.30,24
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
DC Source	HYELEC	HY3010B	551016	Aug.30,24	Aug.29,26
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
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	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-0	Apr.27,24	Apr.26,25

			69		
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.27,24	Apr.26,25
Temperature Chamber	votsch	VT4002	58566078100050	May.30,24	May.29,26

NOTE: 1. The calibration interval of the above test instruments is 12/ 24 / 36 months and the calibrations are traceable to CEPREI/CHINA, 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.

Lab B：

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 27,24	Mar. 26,25
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.09,24	May.08,25
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.02,23	Sep.01,24
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.01,24	Aug.30,25
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Feb. 17,24	Feb. 16,25
Horn Antenna	ETS-LINDGREN	3117	00168692	Feb. 17,24	Feb. 16,25
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.03, 23	Sep.02, 24
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.02, 24	Sep.01, 25
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 13,24	Feb. 12,25
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 05,24	May. 04,25
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.09,24	May.08,25
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb.16,24	Feb.15,25
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	Nov. 14,23	Nov. 13,26
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 05,24	May. 04,26
Power Meter	Anritsu	ML2495A	1506002	Feb. 13,24	Feb. 12,25
Power Sensor	Anritsu	MA2411B	1339352	Feb. 13,24	Feb. 12,25
Temperature Chamber	ESPEC	SH-242	93000855	May. 05,24	May. 04,25
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 13,24	Feb. 12,25
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.09,24	May.08,25
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24

DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 10,24	Aug. 09,26

NOTE: 1. The calibration interval of the above test instruments is 12/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.

3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

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

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Smart Phone	
BRAND NAME*	RugGear	
MODEL NAME*	PSM05G	
MARKETING NAME*	RG880i	
NOMINAL VOLTAGE*	5.0Vdc/ 9.0Vdc/ 12.0Vdc(Adapter) 3.85Vdc (Battery)	
MODULATION TECHNOLOGY	**LTE**	QPSK, 16QAM, 64QAM
FREQUENCY RANGE	**LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz**	2505.5MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz	2507.5MHz ~ 2564.7MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz	2507.8MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz	2510MHz ~ 2564.5MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz	2510MHz ~ 2562.2MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	2510MHz ~ 2560MHz
	LTE Band CA_41C Channel Bandwidth: 5MHz+20MHz	2499.3MHz ~ 2680MHz
	LTE Band CA_41C Channel Bandwidth: 10MHz+15MHz	2501.3MHz ~ 2682.5MHz
	LTE Band CA_41C Channel Bandwidth: 10MHz+20MHz	2501.5MHz ~ 2680MHz
	LTE Band CA_41C Channel Bandwidth: 15MHz+10MHz	2503.5MHz ~ 2684.7MHz

	LTE Band CA_41C Channel Bandwidth: 15MHz+15MHz	2496MHz ~ 2682.5MHz
	LTE Band CA_41C Channel Bandwidth: 15MHz+20MHz	2503.8MHz ~ 2680MHz
	LTE Band CA_41C Channel Bandwidth: 20MHz+5MHz	2506MHz ~ 2686.7MHz
	LTE Band CA_41C Channel Bandwidth: 20MHz+10MHz	2506MHz ~ 2684.5MHz
	LTE Band CA_41C Channel Bandwidth: 20MHz+15MHz	2506MHz ~ 2682.2MHz
	LTE Band CA_41C Channel Bandwidth: 20MHz+20MHz	2506MHz ~ 2680MHz
MAX. EIRP POWER	**LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz**	135.21mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz	136.14mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz	139.64mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz	138.36mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz	139.00mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz	136.14mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	139.96mW
	LTE Band CA_41C Channel Bandwidth: 5MHz+20MHz	134.59mW
	LTE Band CA_41C Channel Bandwidth: 10MHz+15MHz	132.74mW
	LTE Band CA_41C Channel Bandwidth: 10MHz+20MHz	134.59mW
	LTE Band CA_41C Channel Bandwidth: 15MHz+10MHz	131.22mW

	LTE Band CA_41C Channel Bandwidth: 15MHz+15MHz	131.52mW
	LTE Band CA_41C Channel Bandwidth: 15MHz+20MHz	130.92mW
	LTE Band CA_41C Channel Bandwidth: 20MHz+5MHz	133.05mW
	LTE Band CA_41C Channel Bandwidth: 20MHz+10MHz	133.05mW
	LTE Band CA_41C Channel Bandwidth: 20MHz+15MHz	135.21mW
	LTE Band CA_41C Channel Bandwidth: 20MHz+20MHz	135.52mW
EMISSION DESIGNATOR	**LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz**	QPSK: 27M9G7D
		16QAM: 27M8W7D
		64QAM: 27M9W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +10MHz	QPSK: 23M4G7D
		16QAM: 23M3W7D
		64QAM: 23M3W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +15MHz	QPSK: 28M5G7D
		16QAM: 29M4W7D
		64QAM: 28M4W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +20MHz	QPSK: 32M8G7D
		16QAM: 32M6W7D
		64QAM: 32M7W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +10MHz	QPSK: 27M9G7D
		16QAM: 27M8W7D
		64QAM: 27M9W7D

EMISSION DESIGNATOR	LTE Band CA_7C Channel Bandwidth: 20MHz +15MHz	QPSK: 32M7G7D
		16QAM: 32M7W7D
		64QAM: 32M7W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +20MHz	QPSK: 37M8G7D
		16QAM: 37M6W7D
		64QAM: 37M6W7D
	LTE Band CA_41C Channel Bandwidth: 5MHz+20MHz	QPSK: 23M0G7D
		16QAM: 22M9W7D
		64QAM: 23M0W7D
	LTE Band CA_41C Channel Bandwidth: 20MHz+5MHz	QPSK: 23M0G7D
		16QAM: 22M9W7D
		64QAM: 22M9W7D
	LTE Band CA_41C Channel Bandwidth: 10MHz+15MHz	QPSK: 23M2G7D
		16QAM: 23M2W7D
		64QAM: 23M2W7D
	LTE Band CA_41C Channel Bandwidth: 15MHz+10MHz	QPSK: 23M2G7D
		16QAM: 23M2W7D
		64QAM: 23M2W7D
	LTE Band CA_41C Channel Bandwidth: 15MHz+15MHz	QPSK: 28M4G7D
		16QAM: 28M4W7D
		64QAM: 28M4W7D
	LTE Band CA_41C Channel Bandwidth: 10MHz+20MHz	QPSK: 27M8G7D
		16QAM: 27M7W7D
		64QAM: 27M8W7D
	LTE Band CA_41C Channel Bandwidth: 20MHz+10MHz	QPSK: 27M8G7D
		16QAM: 27M8W7D
		64QAM: 27M9W7D
	LTE Band CA_41C Channel Bandwidth: 15MHz+20MHz	QPSK: 32M6G7D
		16QAM: 32M6W7D
		64QAM: 32M6W7D

EMISSION DESIGNATOR	**LTE Band CA_41C Channel Bandwidth: 20MHz+15MHz**	QPSK: 32M6G7D
		16QAM: 32M6W7D
		64QAM: 32M6W7D
	LTE Band CA_41C Channel Bandwidth: 20MHz+20MHz	QPSK: 37M6G7D
		16QAM: 37M5W7D
		64QAM: 37M6W7D
ANTENNA TYPE*	PIFA Antenna with -1.2dBi gain for LTE CA 7C/ LTE CA 41C	
HW VERSION*	V02	
SW VERSION*	RG880i_EAA_00.00_1	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED*	USB cable: non-shielded cable, with w/o ferrite core, 1.0 meter	
EXTREME TEMPERATURE*	-10℃-55℃	
EXTREME VOLTAGE*	3.6V – 4.4V	

NOTE:

1. ***Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.

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

MODULATION MODE	TX FUNCTION
LTE	1TX

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

5. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.

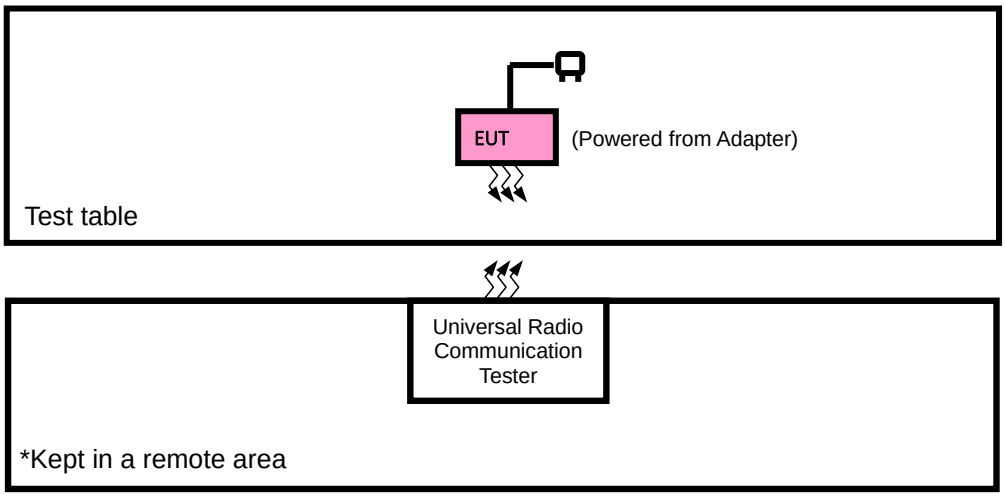
6. For Band Edge and Emission Mask: The all BW combinations were tested.Combination pairs of the same BW are considered generally equivalent. The RB combinations were selected such that the signal is active closest to the band limit, as this is the worst case.
7. For Out of Band Emissions: The all combination was tested. The highest power RB combination was selected as worst case.

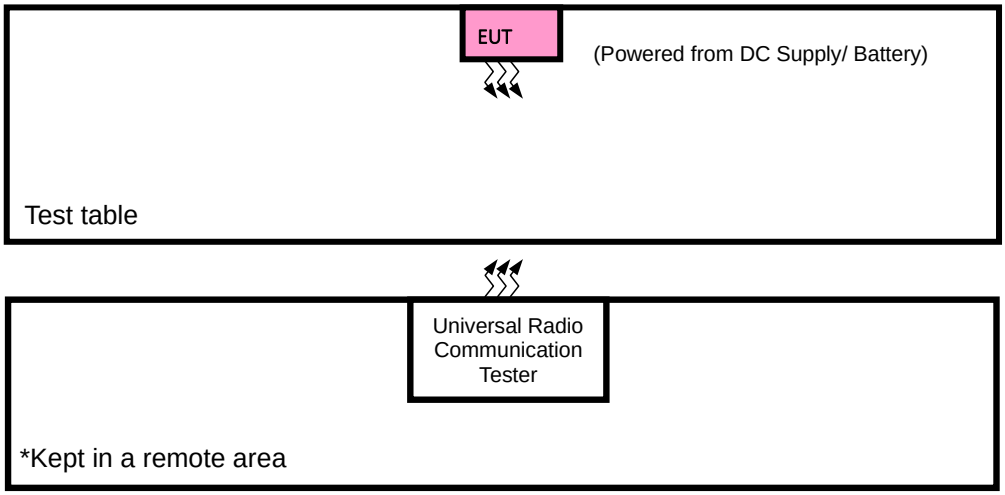
8. **List of Accessory:**

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
CPU	QUALCOMM	N/A	SM6225	N/A
eMMC 1 (=ROM 1)	SAMSUNG	N/A	KM2L9001CM-B518	N/A
eMMC 2 (=ROM 2)	Hynix	N/A	H9QT0GECN6X145R	N/A
RAM 1	N/A	N/A	N/A	N/A
RAM 2	N/A	N/A	N/A	N/A
BT/WLAN Module	N/A	N/A	N/A	N/A
NFC chipset	NXP	N/A	N/A	N/A
Battery	N/A	N/A	BL450AGP	Power Rating: 4.4V 4500mAh
Adapter	N/A	Huizhou Juwei Electronics Co.,Ltd	FG18AQC3.0UU	I/P: 100-240Vac, 50/60Hz, 0.5A, O/P:5.0V 3.0A or 9.0V 2.0A or 12.0V 1.5A
USB Cable	N/A	N/A	N/A	N/A

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	N/A	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 1.0m;

2.4 TEST ITEM AND TEST CONFIGURATION

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

EUT CONFIGURE MODE	DESCRIPTION
A	**EUT + Adapter + USB Cable with LTE link**
B	**EUT + Battery / DC Supply with LTE link**

LTE BAND CA_7C MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	AVAILABLE SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	20805 to 21206	20949 to 21350	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		20825 to 21277	20945 to 21397	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		20825 to 21225	20975 to 21375	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		20828 to 21179	20999 to 21350	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		20850 to 21251	20994 to 21395	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		20850 to 21201	21201 to 21372	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	20805 to 21206	20949 to 21350	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		20825 to 21277	20945 to 21397	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	50RB/ 0RB Offset
		20825 to 21225	20975 to 21375	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	75RB/ 0RB Offset
		20828 to 21179	20999 to 21350	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	100RB/ 0RB Offset
		20850 to 21251	20994 to 21395	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		20850 to 21201	21201 to 21372	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	75RB/ 0RB Offset
		20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	100RB/ 0RB Offset
A	BAND EDGE	20850 to 21152	21048 to 21350	Low	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
				High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
A	CONDUCTED EMISSION	20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK	1RB/ 99RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	20805 to 21206	20949 to 21350	Middle	10MHz+20MHz	QPSK	1RB/ 99RB Offset	1RB/ 0RB Offset
		20825 to 21277	20945 to 21397	Low, Middle, High	15MHz+10MHz	QPSK	1RB/ 99RB Offset	1RB/ 0RB Offset
		20825 to 21225	20975 to 21375	Middle	15MHz+15MHz	QPSK	1RB/ 99RB Offset	1RB/ 0RB Offset
		20828 to 21179	20999 to 21350	Middle	15MHz+20MHz	QPSK	1RB/ 99RB Offset	1RB/ 0RB Offset
		20850 to 21152	21048 to 21350	Middle	20MHz+20MHz	QPSK	1RB/ 99RB Offset	1RB/ 0RB Offset

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

LTE BAND CA_41C MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	AVAILABLE SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	39750 to 41341	39921 to 41512	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		39728 to 41319	39899 to 41490	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		39750 to 41391	39894 to 41535	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		39705 to 41346	39849 to 41490	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		39725 to 41365	39875 to 41515	Low, Middle, High	15MHz +15MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		39725 to 41417	39845 to 41537	Low, Middle, High	15MHz +10MHz	QPSK, 16QAM, 64QAM	1RB / 74RB Offset	1RB / 0RB Offset
		39703 to 41395	39823 to 41515	Low, Middle, High	10MHz +15MHz	QPSK, 16QAM, 64QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		39750 to 41440	39867 to 41557	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		39683 to 41373	39800 to 41490	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM, 64QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
		39750 to 41292	39948 to 41490	Low, Middle, High	20MHz +20MHz	QPSK, 16QAM, 64QAM	1RB / 99RB Offset 1RB / 0RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	39750 to 41341	39921 to 41512	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	75RB/ 0RB Offset
		39728 to 41319	39899 to 41490	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	100RB/ 0RB Offset
		39750 to 41391	39894 to 41535	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		39705 to 41346	39849 to 41490	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		39725 to 41365	39875 to 41515	Low, Middle, High	15MHz +15MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	75RB/ 0RB Offset
		39725 to 41417	39845 to 41537	Low, Middle, High	15MHz +10MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	50RB/ 0RB Offset
		39703 to 41395	39823 to 41515	Low, Middle, High	10MHz +15MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB Offset	75RB/ 0RB Offset
		39750 to 41440	39867 to 41557	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	25RB/ 0RB Offset
		39683 to 41373	39800 to 41490	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM, 64QAM	25RB/ 0RB Offset	100RB/ 0RB Offset

A	OCCUPIED BANDWIDTH	39750 to 41292	39948 to 41490	Low, Middle, High	20MHz +20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	100RB/ 0RB Offset
A	BAND EDGE	39750 to 41292	39948 to 41490	Low	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
				High	20MHz+20MHz		1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
A	CONDUCTED EMISSION	39750 to 41292	39948 to 41490	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	39750 to 41292	39948 to 41490	Low, Middle, High	20MHz+20MHz	QPSK	1RB / 99RB Offset	1RB/ 0RB Offset

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
EIRP	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.6V/ 3.85V/ 4.4V By Battery	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
CONDUCTED EMISSION	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V By Adapter	Hanwen Xu/Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 5.0V/ 9.0V/ 12.0V 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.”

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 determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP or EIRP = $P_{Meas} + G_T – L_C$

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);

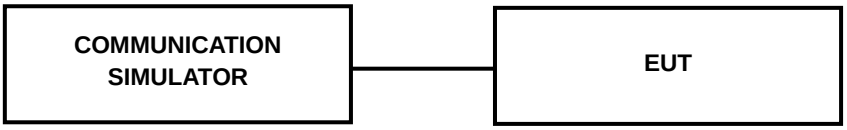
L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

CONDUCTED POWER MEASUREMENT:

a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
b. 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 CA_7C

CA_7C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
20850	2510	21048	2529.8	QPSK	1	99	1	0	22.45
				16QAM	1	99	1	0	21.58
				64QAM	1	99	1	0	19.39
21001	2525.1	21199	2544.9	QPSK	1	99	1	0	22.66
				16QAM	1	99	1	0	21.85
				64QAM	1	99	1	0	19.77
21152	2540.2	21350	2560	QPSK	1	99	1	0	22.20
				16QAM	1	99	1	0	21.66
				64QAM	1	99	1	0	19.69
Combination 20MHz+15MHz (100RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
20850	2510	21021	2527.1	QPSK	1	99	1	0	22.32
				16QAM	1	99	1	0	21.43
				64QAM	1	99	1	0	19.36
21026	2527.6	21197	2544.7	QPSK	1	99	1	0	22.54
				16QAM	1	99	1	0	21.70
				64QAM	1	99	1	0	19.72
21201	2545.1	21372	2562.2	QPSK	1	99	1	0	22.05
				16QAM	1	99	1	0	21.64
				64QAM	1	99	1	0	19.63
Combination 15MHz+20MHz (75RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
20828	2507.8	20999	2524.9	QPSK	1	74	1	0	22.40
				16QAM	1	74	1	0	21.54
				64QAM	1	74	1	0	19.30
21003	2525.3	21174	2542.4	QPSK	1	74	1	0	22.61
				16QAM	1	74	1	0	21.75
				64QAM	1	74	1	0	19.75
21179	2542.9	21350	2560	QPSK	1	74	1	0	22.05
				16QAM	1	74	1	0	21.63
				64QAM	1	74	1	0	19.63

CA_7C									
Combination 20MHz+10MHz (100RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
20850	2510	20994	2524.4	QPSK	1	99	1	0	22.36
				16QAM	1	99	1	0	21.52
				64QAM	1	99	1	0	19.29
21051	2530.1	21195	2544.5	QPSK	1	99	1	0	22.63
				16QAM	1	99	1	0	21.77
				64QAM	1	99	1	0	19.67
21251	2550.1	21395	2564.5	QPSK	1	99	1	0	22.10
				16QAM	1	99	1	0	21.51
				64QAM	1	99	1	0	19.54
Combination 10MHz+20MHz (50RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
20805	2505.5	20949	2519.9	QPSK	1	49	1	0	22.39
				16QAM	1	49	1	0	21.45
				64QAM	1	49	1	0	19.33
21006	2525.6	21150	2540	QPSK	1	49	1	0	22.51
				16QAM	1	49	1	0	21.84
				64QAM	1	49	1	0	19.76
21206	2545.6	21350	2560	QPSK	1	49	1	0	22.16
				16QAM	1	49	1	0	21.56
				64QAM	1	49	1	0	19.68
Combination 15MHz+15MHz (75RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
20825	2507.5	20975	2522.5	QPSK	1	74	1	0	22.35
				16QAM	1	74	1	0	21.53
				64QAM	1	74	1	0	19.33
21025	2527.5	21175	2542.5	QPSK	1	74	1	0	22.65
				16QAM	1	74	1	0	21.75
				64QAM	1	74	1	0	19.67
21225	2547.5	21375	2562.5	QPSK	1	74	1	0	22.17
				16QAM	1	74	1	0	21.51
				64QAM	1	74	1	0	19.56
Combination 15MHz+10MHz (75RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
20825	2507.5	20945	2519.5	QPSK	1	74	1	0	22.31
				16QAM	1	74	1	0	21.45
				64QAM	1	74	1	0	19.24
21051	2530.1	21171	2542.1	QPSK	1	74	1	0	22.54
				16QAM	1	74	1	0	21.80
				64QAM	1	74	1	0	19.72
21277	2552.7	21397	2564.7	QPSK	1	74	1	0	22.17
				16QAM	1	74	1	0	21.65
				64QAM	1	74	1	0	19.57

LTE Band CA_41C

CA_41C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39750	2506	39948	2525.8	QPSK	1	99	1	0	22.39
				16QAM	1	99	1	0	21.55
				64QAM	1	99	1	0	19.41
40521	2583.1	40719	2602.9	QPSK	1	99	1	0	22.52
				16QAM	1	99	1	0	21.59
				64QAM	1	99	1	0	19.45
41292	2660.2	41490	2680	QPSK	1	99	1	0	22.33
				16QAM	1	99	1	0	21.28
				64QAM	1	99	1	0	19.36
Combination 20MHz+15MHz (100RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39750	2506	39921	2523.1	QPSK	1	99	1	0	22.24
				16QAM	1	99	1	0	21.40
				64QAM	1	99	1	0	19.29
40546	2585.6	40717	2602.7	QPSK	1	99	1	0	22.51
				16QAM	1	99	1	0	21.46
				64QAM	1	99	1	0	19.40
41341	2665.1	41512	2682.2	QPSK	1	99	1	0	22.23
				16QAM	1	99	1	0	21.14
				64QAM	1	99	1	0	19.24
Combination 15MHz+20MHz (75RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39728	2503.8	39899	2520.9	QPSK	1	74	1	0	22.35
				16QAM	1	74	1	0	21.49
				64QAM	1	74	1	0	19.40
40523	2583.3	40694	2600.4	QPSK	1	74	1	0	22.37
				16QAM	1	74	1	0	21.58
				64QAM	1	74	1	0	19.40
41319	2662.9	41490	2680	QPSK	1	74	1	0	22.23
				16QAM	1	74	1	0	21.17
				64QAM	1	74	1	0	19.28

CA_41C									
Combination 15MHz+15MHz (75RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39725	2503.5	39875	2518.5	QPSK	1	74	1	0	22.31
				16QAM	1	74	1	0	21.44
				64QAM	1	74	1	0	19.40
40545	2585.5	40695	2600.5	QPSK	1	74	1	0	22.39
				16QAM	1	74	1	0	21.46
				64QAM	1	74	1	0	19.40
41365	2667.5	41515	2682.5	QPSK	1	74	1	0	22.24
				16QAM	1	74	1	0	21.27
				64QAM	1	74	1	0	19.22
Combination 20MHz+10MHz (100RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39750	2506	39894	2520.4	QPSK	1	99	1	0	22.36
				16QAM	1	99	1	0	21.42
				64QAM	1	99	1	0	19.26
40571	2588.1	40715	2602.5	QPSK	1	99	1	0	22.44
				16QAM	1	99	1	0	21.50
				64QAM	1	99	1	0	19.44
41391	2670.1	41535	2684.5	QPSK	1	99	1	0	22.25
				16QAM	1	99	1	0	21.25
				64QAM	1	99	1	0	19.23
Combination 10MHz+20MHz (50RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39705	2501.5	39849	2515.9	QPSK	1	49	1	0	22.25
				16QAM	1	49	1	0	21.54
				64QAM	1	49	1	0	19.37
40526	2583.6	40670	2598	QPSK	1	49	1	0	22.49
				16QAM	1	49	1	0	21.48
				64QAM	1	49	1	0	19.30
41346	2665.6	41490	2680	QPSK	1	49	1	0	22.28
				16QAM	1	49	1	0	21.15
				64QAM	1	49	1	0	19.27
Combination 15MHz+10MHz (75RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39725	2503.5	39845	2515.5	QPSK	1	74	1	0	22.36
				16QAM	1	74	1	0	21.42
				64QAM	1	74	1	0	19.34
40571	2588.1	40691	2600.1	QPSK	1	74	1	0	22.38
				16QAM	1	74	1	0	21.56
				64QAM	1	74	1	0	19.44
41417	2672.7	41537	2684.7	QPSK	1	74	1	0	22.23
				16QAM	1	74	1	0	21.13
				64QAM	1	74	1	0	19.25

CA_41C									
Combination 10MHz+15MHz (50RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39703	2501.3	39823	2513.3	QPSK	1	49	1	0	22.32
				16QAM	1	49	1	0	21.48
				64QAM	1	49	1	0	19.34
40549	2585.9	40669	2597.9	QPSK	1	49	1	0	22.43
				16QAM	1	49	1	0	21.51
				64QAM	1	49	1	0	19.41
41395	2670.5	41515	2682.5	QPSK	1	49	1	0	22.32
				16QAM	1	49	1	0	21.20
				64QAM	1	49	1	0	19.34
Combination 20MHz+5MHz (100RB+25RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
39750	2506	39867	2517.7	QPSK	1	99	1	0	22.28
				16QAM	1	99	1	0	21.40
				64QAM	1	99	1	0	19.31
40595	2590.5	40712	2602.2	QPSK	1	99	1	0	22.44
				16QAM	1	99	1	0	21.47
				64QAM	1	99	1	0	19.41
41440	2675	41557	2686.7	QPSK	1	99	1	0	22.28
				16QAM	1	99	1	0	21.22
				64QAM	1	99	1	0	19.31
Combination 5MHz+20MHz (25RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
2686.7	2499.3	39800	39800	QPSK	1	0	1	0	22.32
				16QAM	1	12	1	0	21.54
				64QAM	1	24	1	0	19.31
40528	2583.8	40645	2595.5	QPSK	1	0	1	0	22.49
				16QAM	1	12	1	0	21.50
				64QAM	1	24	1	0	19.40
41373	2668.3	41490	2680	QPSK	1	0	1	0	22.25
				16QAM	1	12	1	0	21.18
				64QAM	1	24	1	0	19.24

ERP/EIRP
LTE BAND CA_7C

CA_7C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
20850	2510	21048	2529.8	QPSK	22.45	-1.20	21.25	133.35	2
				16QAM	21.58	-1.20	20.38	109.14	2
				64QAM	19.39	-1.20	18.19	65.92	2
21001	2525.1	21199	2544.9	QPSK	22.66	-1.20	21.46	**139.96**	2
				16QAM	21.85	-1.20	20.65	116.14	2
				64QAM	19.77	-1.20	18.57	71.94	2
21152	2540.2	21350	2560	QPSK	22.20	-1.20	21.00	125.89	2
				16QAM	21.66	-1.20	20.46	111.17	2
				64QAM	19.69	-1.20	18.49	70.63	2
Combination 20MHz+15MHz (100RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
20850	2510	21021	2527.1	QPSK	22.32	-1.20	21.12	129.42	2
				16QAM	21.43	-1.20	20.23	105.44	2
				64QAM	19.36	-1.20	18.16	65.46	2
21026	2527.6	21197	2544.7	QPSK	22.54	-1.20	21.34	**136.14**	2
				16QAM	21.70	-1.20	20.50	112.20	2
				64QAM	19.72	-1.20	18.52	71.12	2
21201	2545.1	21372	2562.2	QPSK	22.05	-1.20	20.85	121.62	2
				16QAM	21.64	-1.20	20.44	110.66	2
				64QAM	19.63	-1.20	18.43	69.66	2

CA_7C									
Combination 15MHz+20MHz (75RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
20828	2507.8	20999	2524.9	QPSK	22.40	-1.20	21.20	131.83	2
				16QAM	21.54	-1.20	20.34	108.14	2
				64QAM	19.30	-1.20	18.10	64.57	2
21003	2525.3	21174	2542.4	QPSK	22.61	-1.20	21.41	**138.36**	2
				16QAM	21.75	-1.20	20.55	113.50	2
				64QAM	19.75	-1.20	18.55	71.61	2
21179	2542.9	21350	2560	QPSK	22.05	-1.20	20.85	121.62	2
				16QAM	21.63	-1.20	20.43	110.41	2
				64QAM	19.63	-1.20	18.43	69.66	2
Combination 20MHz+10MHz (100RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
20850	2510	20994	2524.4	QPSK	22.36	-1.20	21.16	130.62	2
				16QAM	21.52	-1.20	20.32	107.65	2
				64QAM	19.29	-1.20	18.09	64.42	2
21051	2530.1	21195	2544.5	QPSK	22.63	-1.20	21.43	**139.00**	2
				16QAM	21.77	-1.20	20.57	114.02	2
				64QAM	19.67	-1.20	18.47	70.31	2
21251	2550.1	21395	2564.5	QPSK	22.10	-1.20	20.90	123.03	2
				16QAM	21.51	-1.20	20.31	107.40	2
				64QAM	19.54	-1.20	18.34	68.23	2

CA_7C									
Combination 10MHz+20MHz (50RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
20805	2505.5	20949	2519.9	QPSK	22.39	-1.20	21.19	131.52	2
				16QAM	21.45	-1.20	20.25	105.93	2
				64QAM	19.33	-1.20	18.13	65.01	2
21006	2525.6	21150	2540	QPSK	22.51	-1.20	21.31	135.21	2
				16QAM	21.84	-1.20	20.64	115.88	2
				64QAM	19.76	-1.20	18.56	71.78	2
21206	21206	21350	21220.4	QPSK	22.16	-1.20	20.96	124.74	2
				16QAM	21.56	-1.20	20.36	108.64	2
				64QAM	19.68	-1.20	18.48	70.47	2
Combination 15MHz+15MHz (75RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
20825	2507.5	20975	2522.5	QPSK	22.35	-1.20	21.15	130.32	2
				16QAM	21.53	-1.20	20.33	107.89	2
				64QAM	19.33	-1.20	18.13	65.01	2
21025	2527.5	21175	2542.5	QPSK	22.65	-1.20	21.45	**139.64**	2
				16QAM	21.75	-1.20	20.55	113.50	2
				64QAM	19.67	-1.20	18.47	70.31	2
21225	2547.5	21375	2562.5	QPSK	22.17	-1.20	20.97	125.03	2
				16QAM	21.51	-1.20	20.31	107.40	2
				64QAM	19.56	-1.20	18.36	68.55	2

CA_7C									
Combination 15MHz+10MHz (75RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
20825	2507.5	20945	2519.5	QPSK	22.31	-1.20	21.11	129.12	2
				16QAM	21.45	-1.20	20.25	105.93	2
				64QAM	19.24	-1.20	18.04	63.68	2
21051	2530.1	21171	2542.1	QPSK	22.54	-1.20	21.34	**136.14**	2
				16QAM	21.80	-1.20	20.60	114.82	2
				64QAM	19.72	-1.20	18.52	71.12	2
21277	2552.7	21397	2564.7	QPSK	22.17	-1.20	20.97	125.03	2
				16QAM	21.65	-1.20	20.45	110.92	2
				64QAM	19.57	-1.20	18.37	68.71	2

LTE BAND CA_41C

CA_41C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39750	2506	39948	2525.8	QPSK	22.39	-1.20	21.19	131.52	2
				16QAM	21.55	-1.20	20.35	108.39	2
				64QAM	19.41	-1.20	18.21	66.22	2
40521	2583.1	40719	2602.9	QPSK	22.52	-1.20	21.32	**135.52**	2
				16QAM	21.59	-1.20	20.39	109.40	2
				64QAM	19.45	-1.20	18.25	66.83	2
41292	2660.2	41490	2680	QPSK	22.33	-1.20	21.13	129.72	2
				16QAM	21.28	-1.20	20.08	101.86	2
				64QAM	19.36	-1.20	18.16	65.46	2
Combination 20MHz+15MHz (100RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39750	2506	39921	2523.1	QPSK	22.24	-1.20	21.04	127.06	2
				16QAM	21.40	-1.20	20.20	104.71	2
				64QAM	19.29	-1.20	18.09	64.42	2
40546	2585.6	40717	2602.7	QPSK	22.51	-1.20	21.31	**135.21**	2
				16QAM	21.46	-1.20	20.26	106.17	2
				64QAM	19.40	-1.20	18.20	66.07	2
41341	2665.1	41512	2682.2	QPSK	22.23	-1.20	21.03	126.77	2
				16QAM	21.14	-1.20	19.94	98.63	2
				64QAM	19.24	-1.20	18.04	63.68	2

CA_41C									
Combination 15MHz+20MHz (75RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39728	2503.8	39899	2520.9	QPSK	22.35	-1.20	21.15	130.32	2
				16QAM	21.49	-1.20	20.29	106.91	2
				64QAM	19.40	-1.20	18.20	66.07	2
40523	2583.3	40694	2600.4	QPSK	22.37	-1.20	21.17	**130.92**	2
				16QAM	21.58	-1.20	20.38	109.14	2
				64QAM	19.40	-1.20	18.20	66.07	2
41319	2662.9	41490	2680	QPSK	22.23	-1.20	21.03	126.77	2
				16QAM	21.17	-1.20	19.97	99.31	2
				64QAM	19.28	-1.20	18.08	64.27	2
Combination 15MHz+15MHz (75RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39725	2503.5	39875	2518.5	QPSK	22.31	-1.20	21.11	129.12	2
				16QAM	21.44	-1.20	20.24	105.68	2
				64QAM	19.40	-1.20	18.20	66.07	2
40545	2585.5	40695	2600.5	QPSK	22.39	-1.20	21.19	**131.52**	2
				16QAM	21.46	-1.20	20.26	106.17	2
				64QAM	19.40	-1.20	18.20	66.07	2
41365	2667.5	41515	2682.5	QPSK	22.24	-1.20	21.04	127.06	2
				16QAM	21.27	-1.20	20.07	101.62	2
				64QAM	19.22	-1.20	18.02	63.39	2

CA_41C									
Combination 20MHz+10MHz (100RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39750	2506	39894	2520.4	QPSK	22.36	-1.20	21.16	130.62	2
				16QAM	21.42	-1.20	20.22	105.20	2
				64QAM	19.26	-1.20	18.06	63.97	2
40571	2588.1	40715	2602.5	QPSK	22.44	-1.20	21.24	**133.05**	2
				16QAM	21.50	-1.20	20.30	107.15	2
				64QAM	19.44	-1.20	18.24	66.68	2
41391	2670.1	41535	2684.5	QPSK	22.25	-1.20	21.05	127.35	2
				16QAM	21.25	-1.20	20.05	101.16	2
				64QAM	19.23	-1.20	18.03	63.53	2
Combination 10MHz+20MHz (50RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39705	2501.5	39849	2515.9	QPSK	22.25	-1.20	21.05	127.35	2
				16QAM	21.54	-1.20	20.34	108.14	2
				64QAM	19.37	-1.20	18.17	65.61	2
40526	2583.6	40670	2598	QPSK	22.49	-1.20	21.29	**134.59**	2
				16QAM	21.48	-1.20	20.28	106.66	2
				64QAM	19.30	-1.20	18.10	64.57	2
41346	2665.6	41490	2680	QPSK	22.28	-1.20	21.08	128.23	2
				16QAM	21.15	-1.20	19.95	98.86	2
				64QAM	19.27	-1.20	18.07	64.12	2

CA_41C									
Combination 15MHz+10MHz (75RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39725	2503.5	39845	2515.5	QPSK	22.36	-1.20	21.16	130.62	2
				16QAM	21.42	-1.20	20.22	105.20	2
				64QAM	19.34	-1.20	18.14	65.16	2
40571	2588.1	40691	2600.1	QPSK	22.38	-1.20	21.18	**131.22**	2
				16QAM	21.56	-1.20	20.36	108.64	2
				64QAM	19.44	-1.20	18.24	66.68	2
41417	2672.7	41537	2684.7	QPSK	22.23	-1.20	21.03	126.77	2
				16QAM	21.13	-1.20	19.93	98.40	2
				64QAM	19.25	-1.20	18.05	63.83	2
Combination 10MHz+15MHz (50RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39703	2501.3	39823	2513.3	QPSK	22.32	-1.20	21.12	129.42	2
				16QAM	21.48	-1.20	20.28	106.66	2
				64QAM	19.34	-1.20	18.14	65.16	2
40549	2585.9	40669	2597.9	QPSK	22.43	-1.20	21.23	**132.74**	2
				16QAM	21.51	-1.20	20.31	107.40	2
				64QAM	19.41	-1.20	18.21	66.22	2
41395	2670.5	41515	2682.5	QPSK	22.32	-1.20	21.12	129.42	2
				16QAM	21.20	-1.20	20.00	100.00	2
				64QAM	19.34	-1.20	18.14	65.16	2

CA_41C									
Combination 20MHz+5MHz (100RB+25RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
39750	2506	39867	2517.7	QPSK	22.28	-1.20	21.08	128.23	2
				16QAM	21.40	-1.20	20.20	104.71	2
				64QAM	19.31	-1.20	18.11	64.71	2
40595	2590.5	40712	2602.2	QPSK	22.44	-1.20	21.24	**133.05**	2
				16QAM	21.47	-1.20	20.27	106.41	2
				64QAM	19.41	-1.20	18.21	66.22	2
41440	2675	41557	2686.7	QPSK	22.28	-1.20	21.08	128.23	2
				16QAM	21.22	-1.20	20.02	100.46	2
				64QAM	19.31	-1.20	18.11	64.71	2
Combination 5MHz+20MHz (25RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	Measured Power (dBm)	Gain (dBi)	EIRP(dBm)	EIRP(mW)	Limit（W）
2686.7	2499.3	39800	39800	QPSK	22.32	-1.20	21.12	129.42	2
				16QAM	21.54	-1.20	20.34	108.14	2
				64QAM	19.31	-1.20	18.11	64.71	2
40528	2583.8	40645	2595.5	QPSK	22.49	-1.20	21.29	**134.59**	2
				16QAM	21.50	-1.20	20.30	107.15	2
				64QAM	19.40	-1.20	18.20	66.07	2
41373	2668.3	41490	2680	QPSK	22.25	-1.20	21.05	127.35	2
				16QAM	21.18	-1.20	19.98	99.54	2
				64QAM	19.24	-1.20	18.04	63.68	2

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

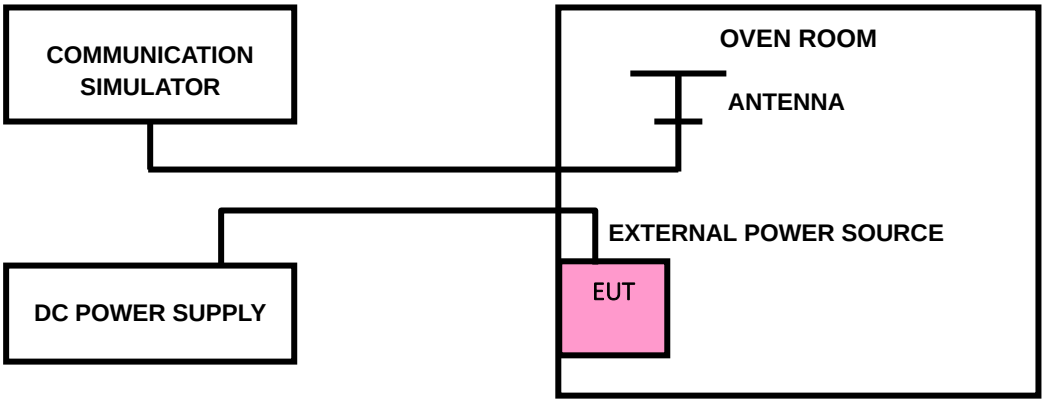
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

a. 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.
b. 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.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

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

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

Please Refer to Appendix Of this test report.

LTE BAND CA_7C

LTE BAND CA_7C channel and Frequency List					
BW(MHz)	**Channel/Frequcncy(MHz)**		**Lowest**	**Middle**	**Highest**
10+20	PCC	channel	20805	21006	21206
		Frequcncy	2505.5	2525.6	2545.6
	SCC	channel	20949	21150	21350
		Frequcncy	2519.9	2540	2560
15+10	PCC	channel	20825	21051	21277
		Frequcncy	2507.5	2530.1	2552.7
	SCC	channel	20945	21171	21397
		Frequcncy	2519.5	2542.1	2564.7
15+15	PCC	channel	20825	21025	21225
		Frequcncy	2507.5	2527.5	2547.5
	SCC	channel	20975	21175	21375
		Frequcncy	2522.5	2542.5	2562.5
15+20	PCC	channel	20828	21003	21179
		Frequcncy	2507.8	2525.3	2542.9
	SCC	channel	20999	21174	21350
		Frequcncy	2524.9	2542.4	2560
20+10	PCC	channel	20850	21051	21251
		Frequcncy	2510	2530.1	2550.1
	SCC	channel	20994	21195	21395
		Frequcncy	2524.4	2544.5	2564.5
20+15	PCC	channel	20850	21026	21201
		Frequcncy	2510	2527.6	2545.1
	SCC	channel	21021	21197	21372
		Frequcncy	2527.1	2544.7	2562.2
20+20	PCC	channel	20850	21001	21152
		Frequcncy	2510	2525.1	2540.2
	SCC	channel	21048	21199	21350
		Frequcncy	2529.8	2544.9	2560

LTE BAND CA_41C

LTE BAND CA_41C channel and Frequency List					
BW(MHz)	Channel/Frequcncy(MHz)		Lowest	Middle	Highest
5+20	PCC	channel	39683	40528	41373
		Frequcncy	2499.3	2583.8	2668.3
	SCC	channel	39800	40645	41490
		Frequcncy	2511	2595.5	2680
10+15	PCC	channel	39703	40549	41395
		Frequcncy	2501.3	2585.9	2670.5
	SCC	channel	39823	40669	41515
		Frequcncy	2513.3	2597.9	2682.5
10+20	PCC	channel	39705	40526	41346
		Frequcncy	2501.5	2583.6	2665.6
	SCC	channel	39849	40670	41490
		Frequcncy	2515.9	2598.0	2680
15+10	PCC	channel	39725	40571	41417
		Frequcncy	2503.5	2588.1	2672.7
	SCC	channel	39845	40691	41537
		Frequcncy	2515.5	2600.1	2684.7
15+15	PCC	channel	39725	40545	41365
		Frequcncy	2503.5	2585.5	2667.5
	SCC	channel	39875	40695	41515
		Frequcncy	2518.5	2600.5	2682.5
15+20	PCC	channel	39728	40523	41319
		Frequcncy	2503.8	2583.3	2662.9
	SCC	channel	39899	40694	41490
		Frequcncy	2520.9	2600.4	2680
20+5	PCC	channel	39750	40595	41440
		Frequcncy	2506	2590.5	2675
	SCC	channel	39867	40712	41557
		Frequcncy	2517.7	2602.2	2686.7
20+10	PCC	channel	39750	40571	41391
		Frequcncy	2506	2588.1	2670.1

	SCC	channel	39894	40715	41535
		Frequcncy	2520.4	2602.5	2684.5
20+15	PCC	channel	39750	40546	41341
		Frequcncy	2506	2585.6	2665.1
	SCC	channel	39921	40717	41512
		Frequcncy	2523.1	2602.7	2682.2
20+20	PCC	channel	39750	40521	41292
		Frequcncy	2506	2583.1	2660.2
	SCC	channel	39948	40719	41490
		Frequcncy	2525.8	2602.9	2680

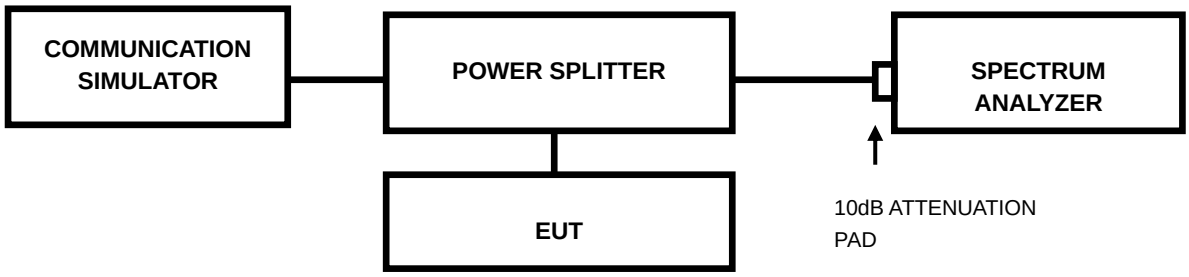
Note: VL = Low voltage(3.6V); VN/NV = Normal voltage(3.85V); VH = High voltage(4.4V);
NT = Normal temperature (25℃)

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

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

3.3.4 TEST RESULTS

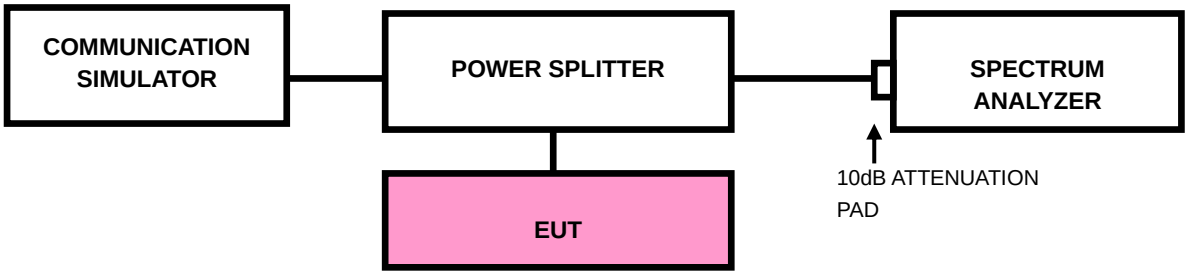
Please Refer to Appendix Of this test report.

3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(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.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

a) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.

b) Tune the analyzer to the nominal center frequency of the emission bandwidth

(EBW).

c) Set the resolution bandwidth (RBW) ≧ 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

d) Beyond the 1MHz band from the band edge, RBW=1MHz was used.

e) Set the video bandwidth (VBW) to ≧3 x RBW.

f) Select the average power (RMS) display detector.

g) Set the number of measurement points to ≧ 1001.

h) Use auto-coupled sweep time.

i) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.

j) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.

k) Record the max trace plot into the test report.

3.4.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

For: LTE Band7C/Band41C

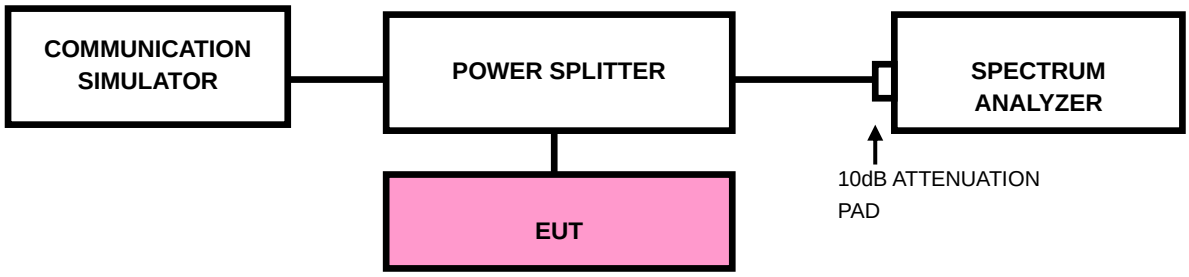
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 55 +10 log10(P) dB. The limit of emission is equal to -25dBm.

3.5.2 TEST PROCEDURE

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

b. Measuring frequency range is from 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

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

Please Refer to Appendix Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

For: LTE Band7/ Band41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 55 +10 log10(P) dB. The limit of emission is equal to -25dBm.

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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, E.R.P power = E.I.P.R power - 2.15dBi.

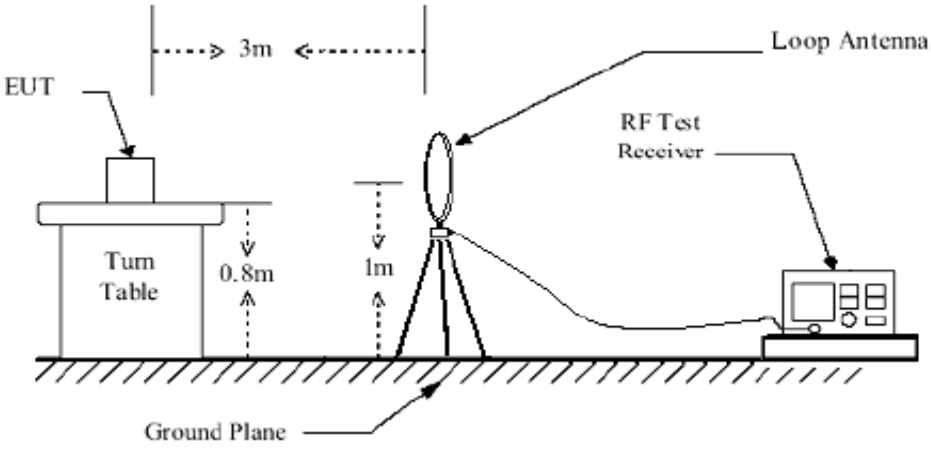
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

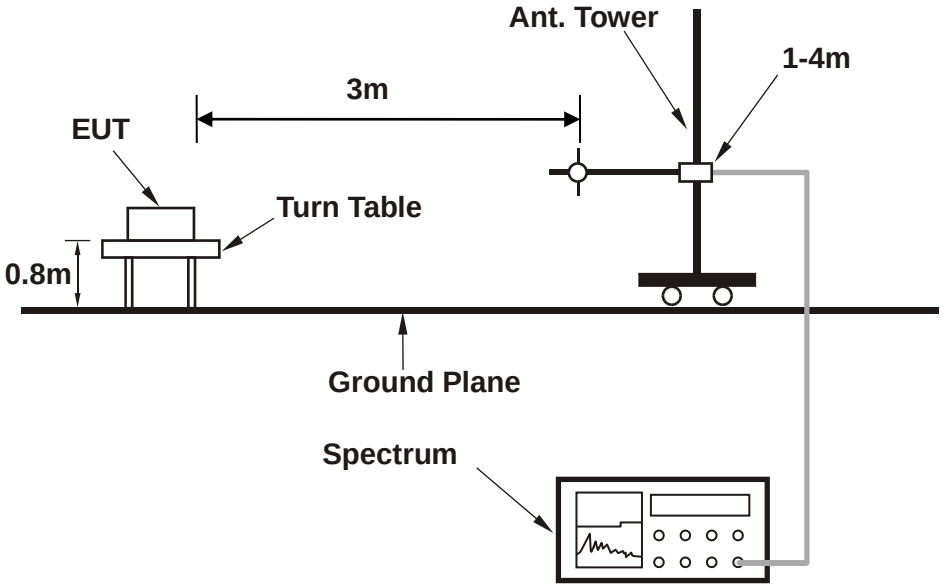
No deviation

3.6.4 TEST SETUP

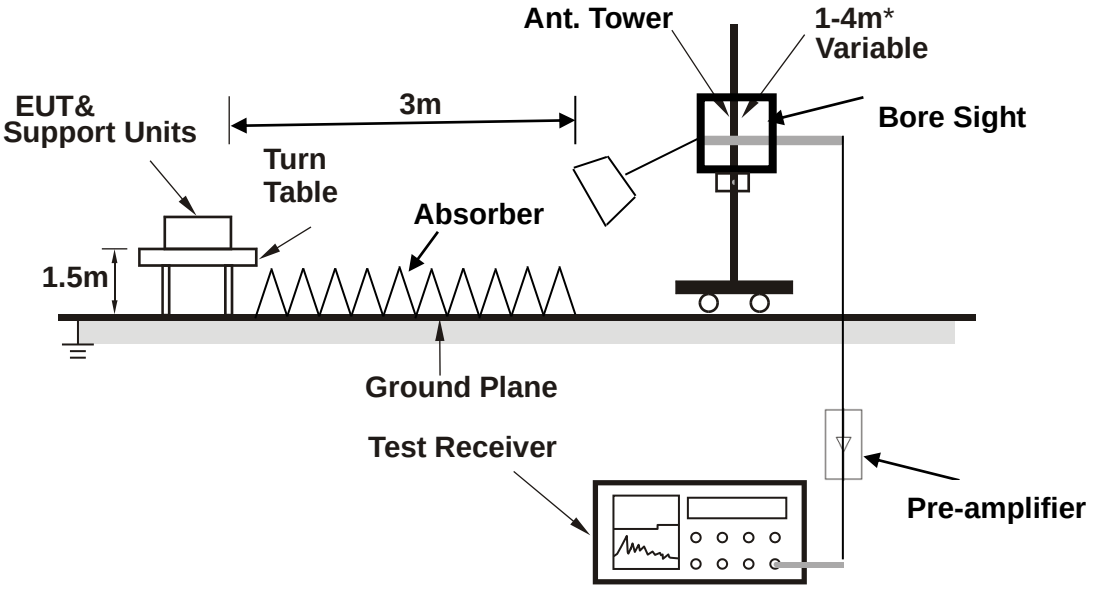
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



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

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

3.6.5 TEST RESULTS

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

BELOW 1GHz WORST-CASE DATA

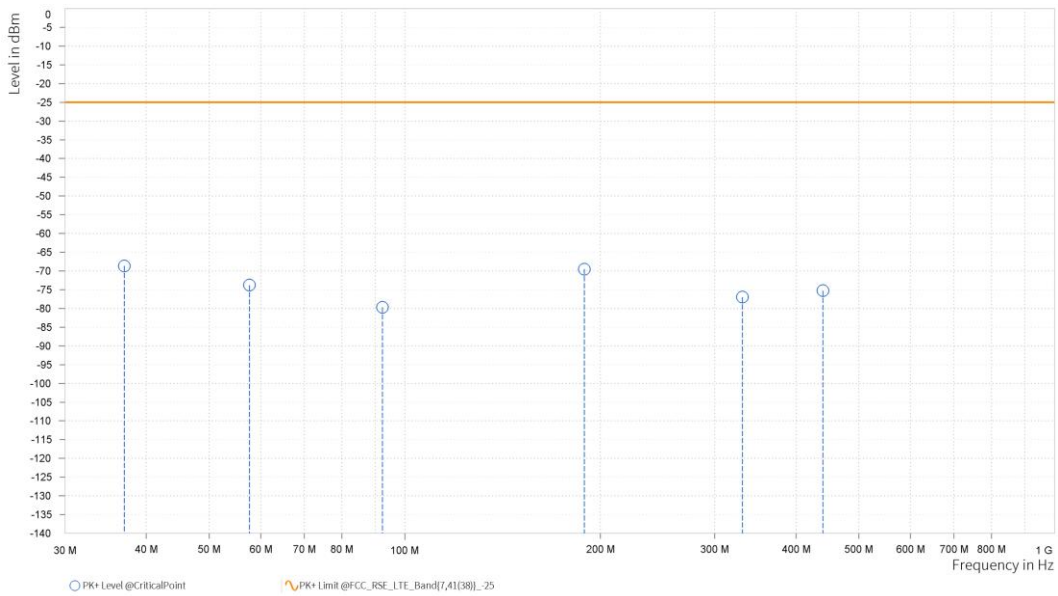
30 MHz – 1GHz data:

LTE Band CA_7C
CHANNEL BANDWIDTH: 15MHz + 10MHz / QPSK

MODE	TX channel PCC 21051 TX channel SCC 21171	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

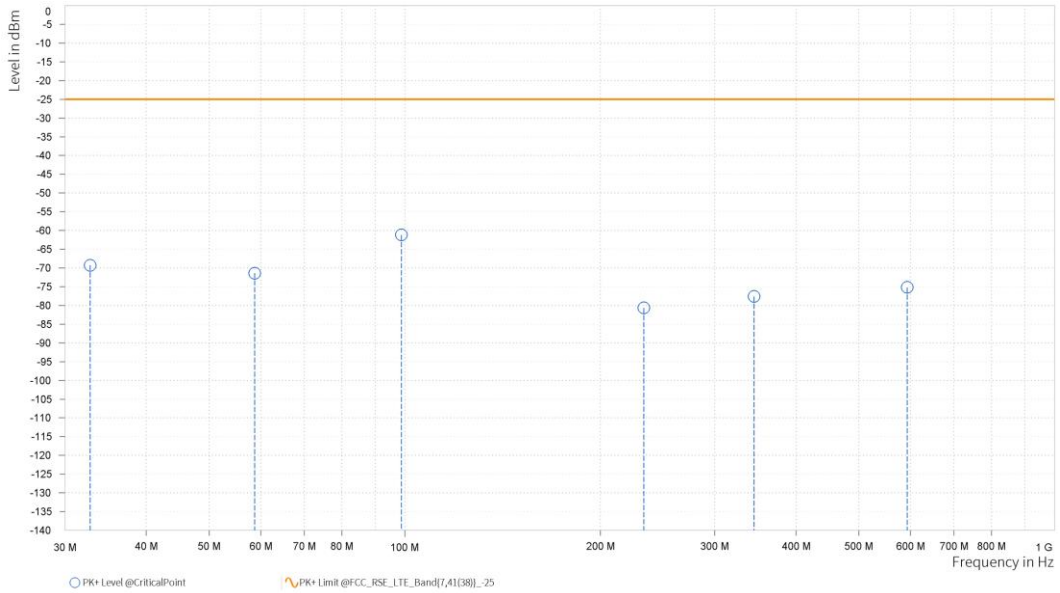
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	37.0	-68.64	-25.0	43.64	0.69	H	256.6	2.0
1	57.65	-73.79	-25.0	48.79	-3.55	H	1.0	1.0
1	92.35	-79.67	-25.0	54.67	-10.56	H	256.6	2.0
1	188.95	-69.53	-25.0	44.53	-4.55	H	171.4	1.0
1	330.9	-76.98	-25.0	51.98	-1.95	H	241.9	1.0
1	440.2	-75.28	-25.0	50.28	3.07	H	1.0	1.0



MODE	TX channel PCC 21051 TX channel SCC 21171	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	32.8	-69.29	-25.0	44.29	-6.32	V	178.6	1.0
1	58.75	-71.39	-25.0	46.39	-3.08	V	1.0	1.0
1	98.8	-61.19	-25.0	36.19	5.75	V	1.0	1.0
1	233.35	-80.66	-25.0	55.66	-5.32	V	1.2	2.0
1	344.65	-77.61	-25.0	52.61	0.61	V	178.6	1.0
2	593.046	-75.18	-25.0	50.18	1.87	V	116.4	1.0



ABOVE 1GHz

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

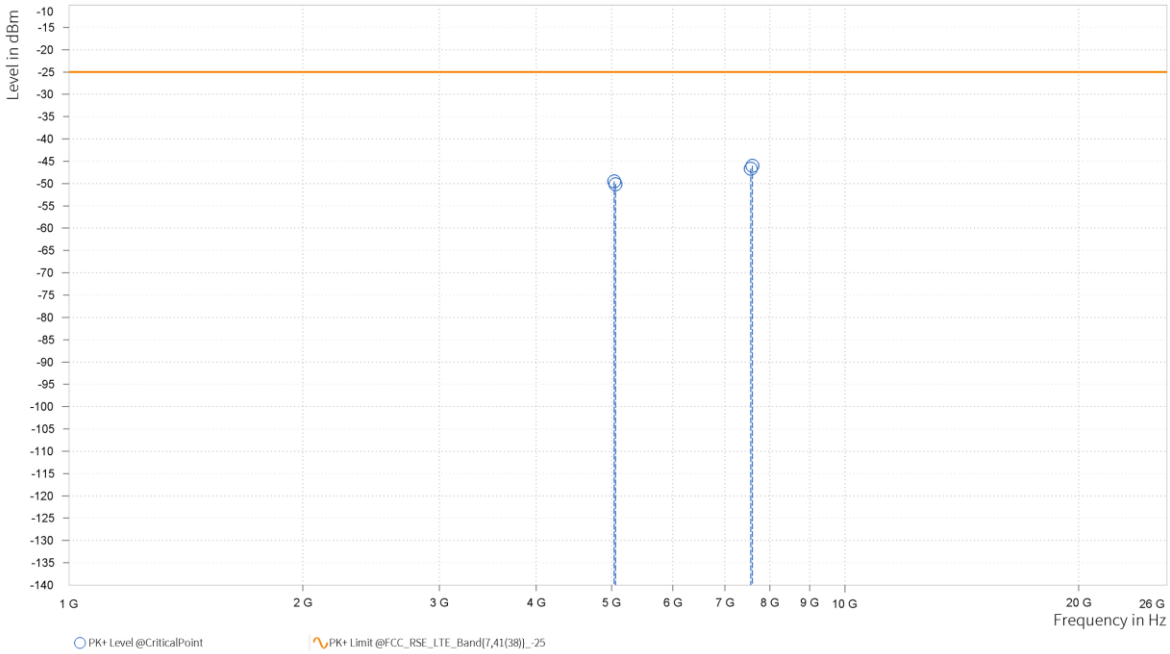
LTE Band CA _7C

CHANNEL BANDWIDTH: 10MHz + 20MHz

MODE	TX channel PCC 21006 TX channel SCC 21150	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

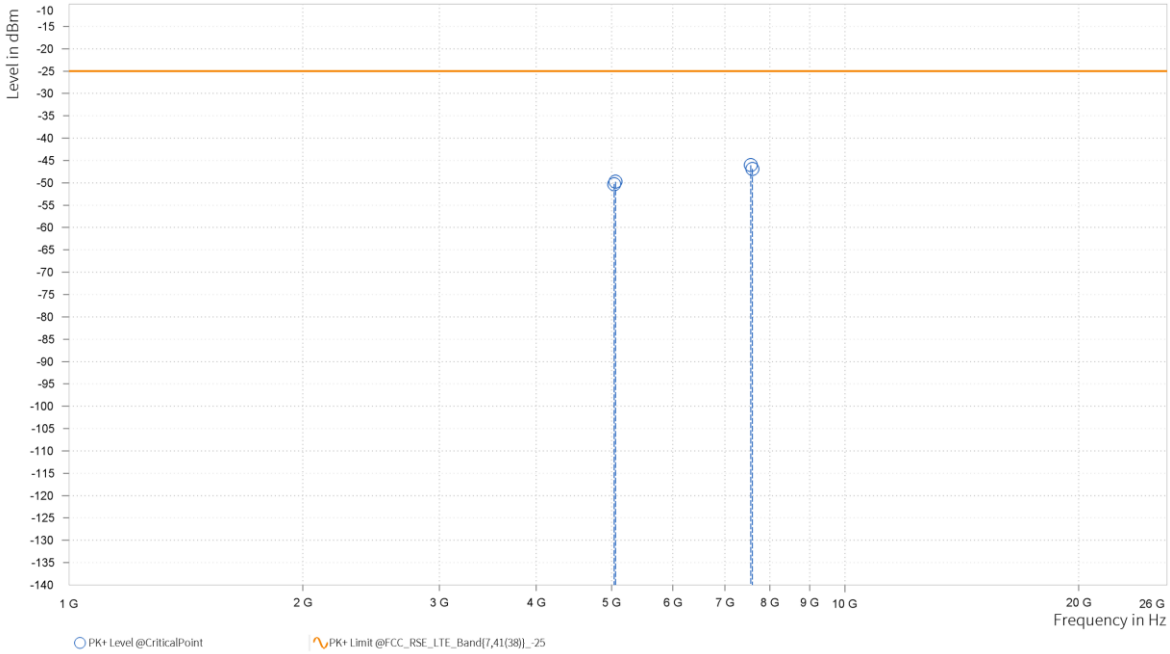
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,042.200	-49.54	-25.0	24.54	23.6	H	277.9	1.0
4	5,062.000	-50.14	-25.0	25.14	23.42	H	79.8	2.0
5	7,563.300	-46.65	-25.0	21.65	27.01	H	285.0	1.0
5	7,593.000	-46.01	-25.0	21.01	26.93	H	359.0	2.0



MODE	TX channel PCC 21006 TX channel SCC 21150	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,042.200	-50.29	-25.0	25.29	23.97	V	152.7	2.0
4	5,062.000	-49.75	-25.0	24.75	23.86	V	1.0	1.0
5	7,563.300	-46.03	-25.0	21.03	26.84	V	123.8	1.0
5	7,593.000	-46.88	-25.0	21.88	26.71	V	359.0	2.0

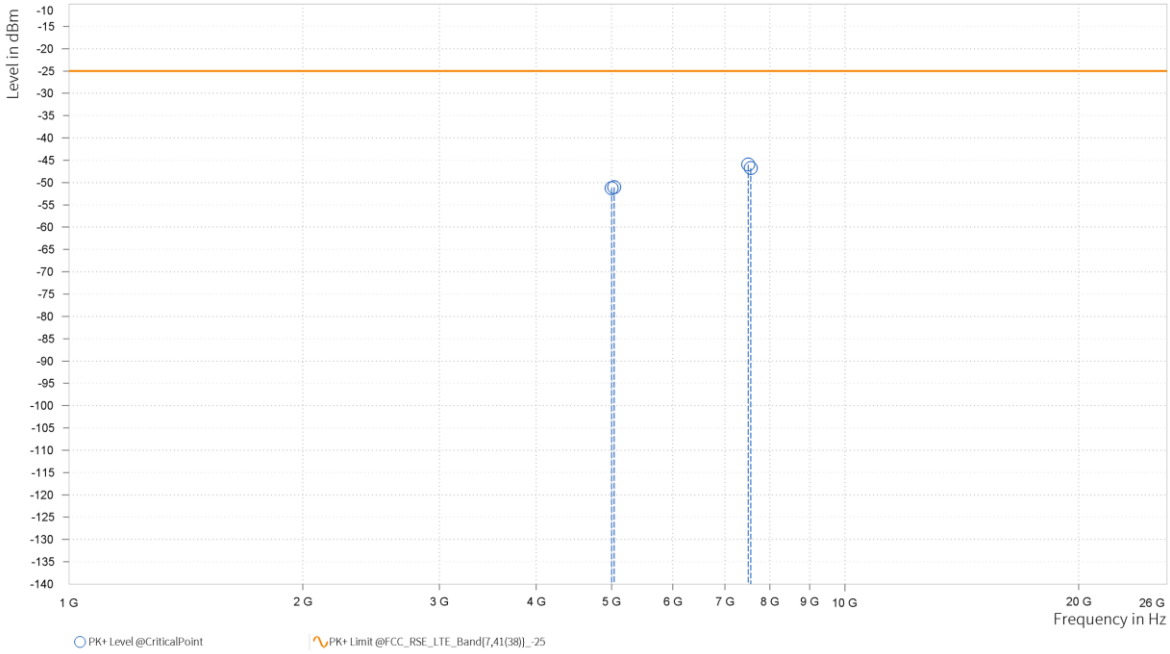


CHANNEL BANDWIDTH: 15MHz + 10MHz

MODE	TX channel PCC 21277 TX channel SCC 21397	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

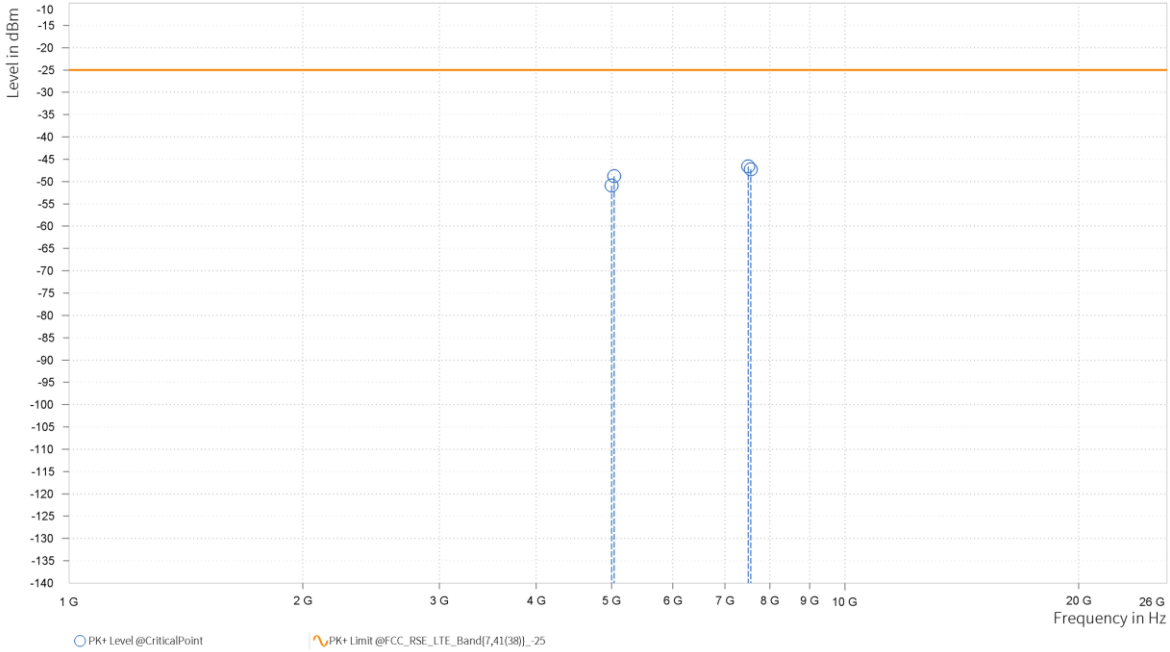
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,002.000	-51.23	-25.0	26.23	23.41	H	67.8	2.0
4	5,041.600	-51.04	-25.0	26.04	23.6	H	323.3	1.0
5	7,503.000	-45.98	-25.0	20.98	27.03	H	331.8	1.0
5	7,562.400	-46.76	-25.0	21.76	27.02	H	219.3	1.0



MODE	TX channel PCC 21277 TX channel SCC 21397	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

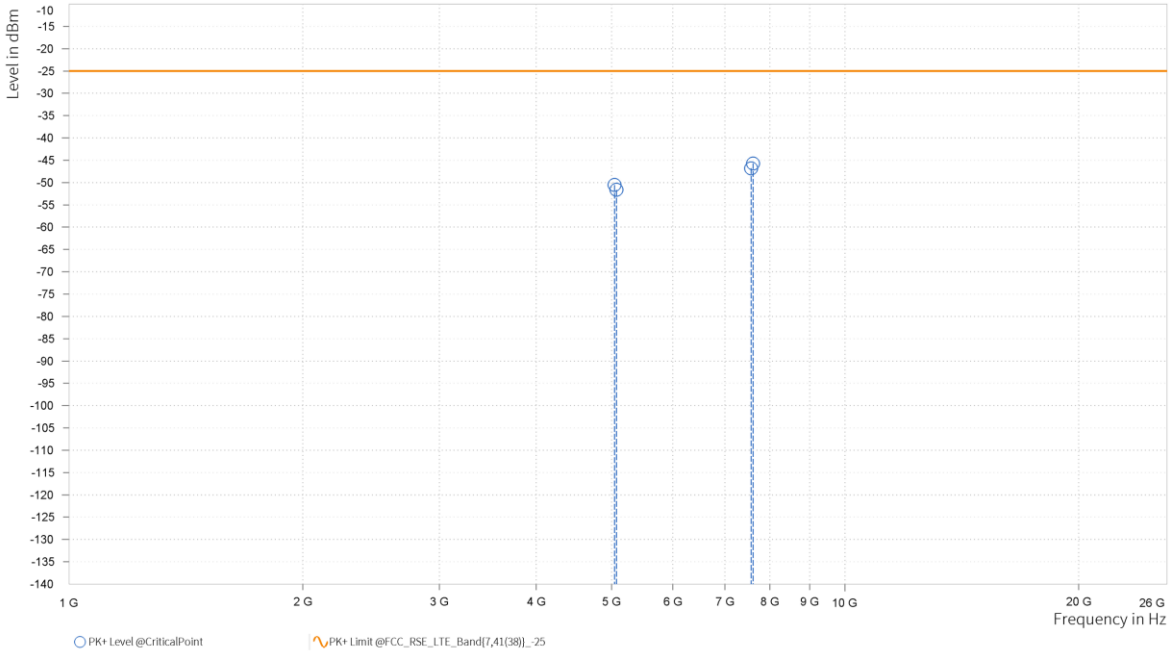
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,002.000	-50.89	-25.0	25.89	23.62	V	264.6	2.0
4	5,041.600	-48.81	-25.0	23.81	23.97	V	1.0	1.0
5	7,503.000	-46.61	-25.0	21.61	27.0	V	234.8	2.0
5	7,562.400	-47.25	-25.0	22.25	26.85	V	1.8	2.0



MODE	TX channel PCC 21051 TX channel SCC 21171	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

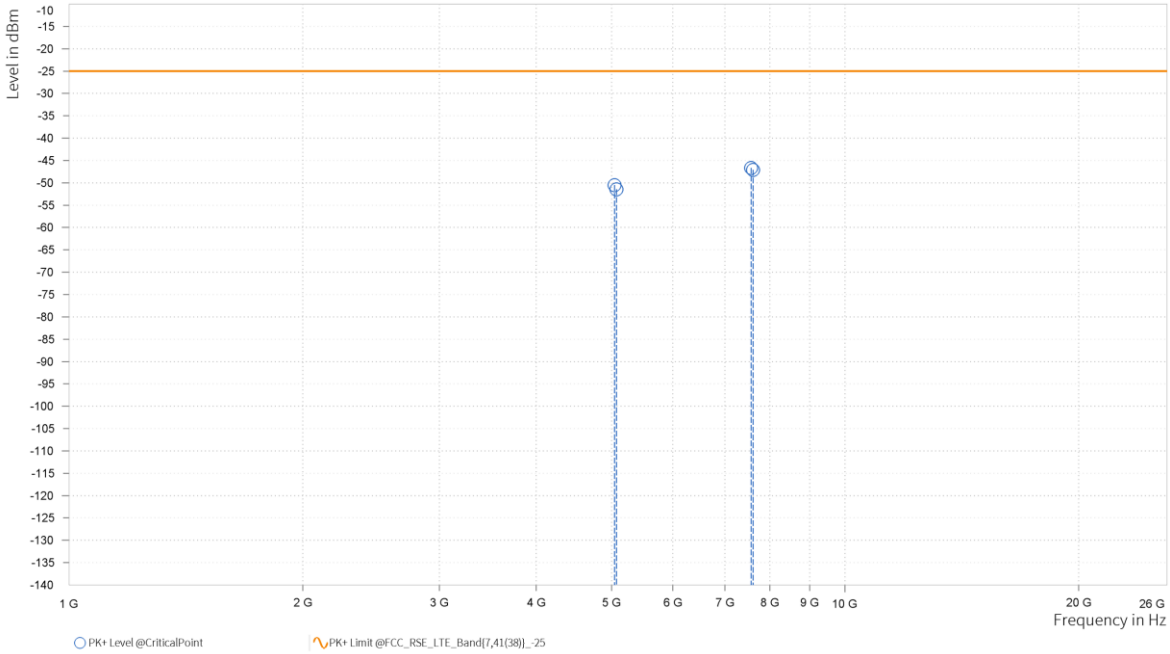
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,046.700	-50.56	-25.0	25.56	23.62	H	1.0	1.0
4	5,075.200	-51.65	-25.0	26.65	23.22	H	206.6	1.0
5	7,570.050	-46.79	-25.0	21.79	26.98	H	145.0	2.0
5	7,612.800	-45.71	-25.0	20.71	26.95	H	70.7	2.0



MODE	TX channel PCC 21051 TX channel SCC 21171	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

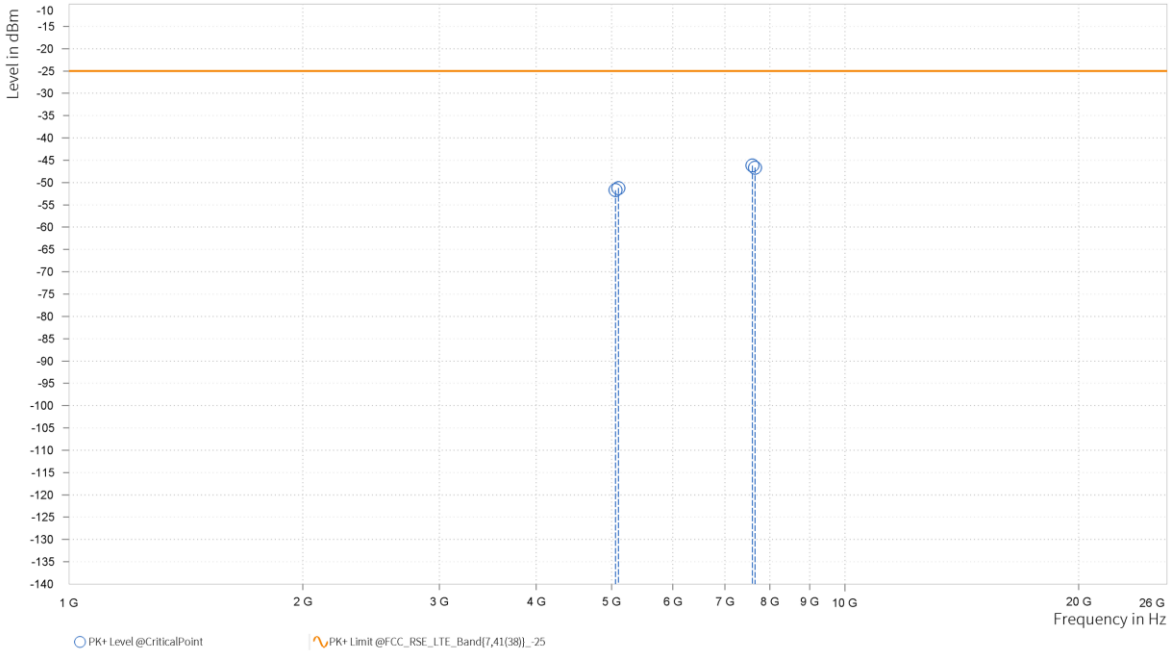
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,046.700	-50.51	-25.0	25.51	24.01	V	358.6	1.0
4	5,075.200	-51.45	-25.0	26.45	23.7	V	359.1	1.0
5	7,570.050	-46.65	-25.0	21.65	26.8	V	187.4	2.0
5	7,612.800	-47.1	-25.0	22.1	26.75	V	303.4	1.0



MODE	TX channel PCC 21277 TX channel SCC 21397	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

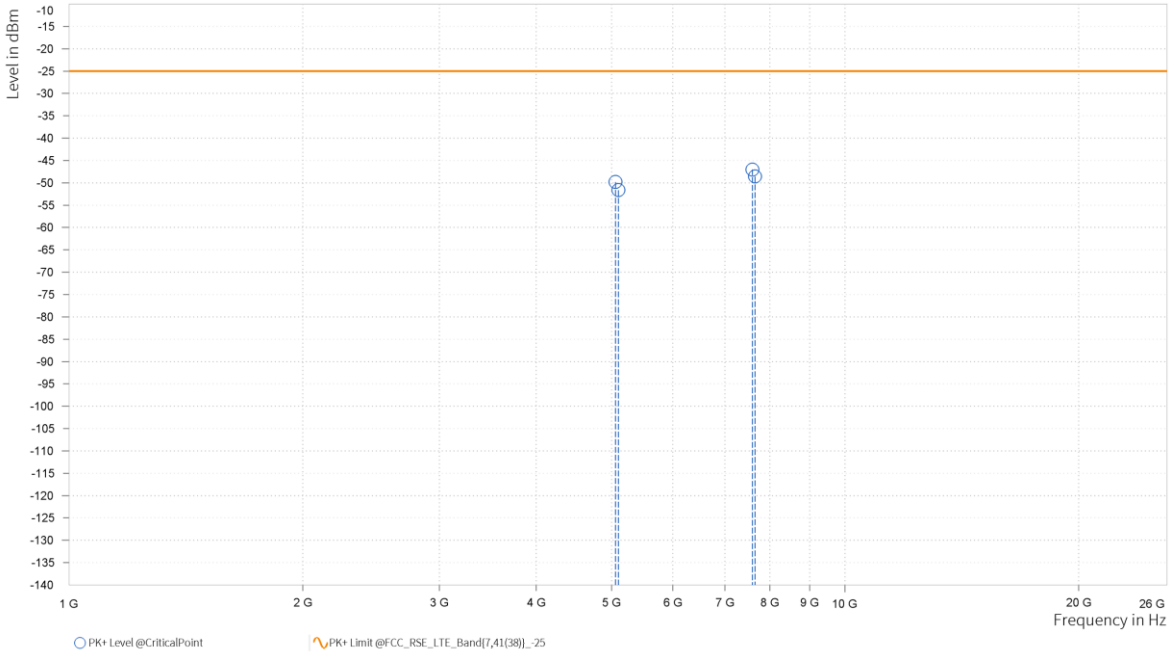
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,062.400	-51.72	-25.0	26.72	23.41	H	283.6	1.0
4	5,102.000	-51.25	-25.0	26.25	22.91	H	359.0	1.0
5	7,593.600	-46.18	-25.0	21.18	26.93	H	359.0	2.0
5	7,653.000	-46.66	-25.0	21.66	26.99	H	217.1	1.0



MODE	TX channel PCC 21277 TX channel SCC 21397	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,062.400	-49.81	-25.0	24.81	23.85	V	1.0	1.0
4	5,102.000	-51.62	-25.0	26.62	23.43	V	208.6	2.0
5	7,593.600	-47.01	-25.0	22.01	26.71	V	72.8	2.0
5	7,653.000	-48.57	-25.0	23.57	26.84	V	72.8	2.0

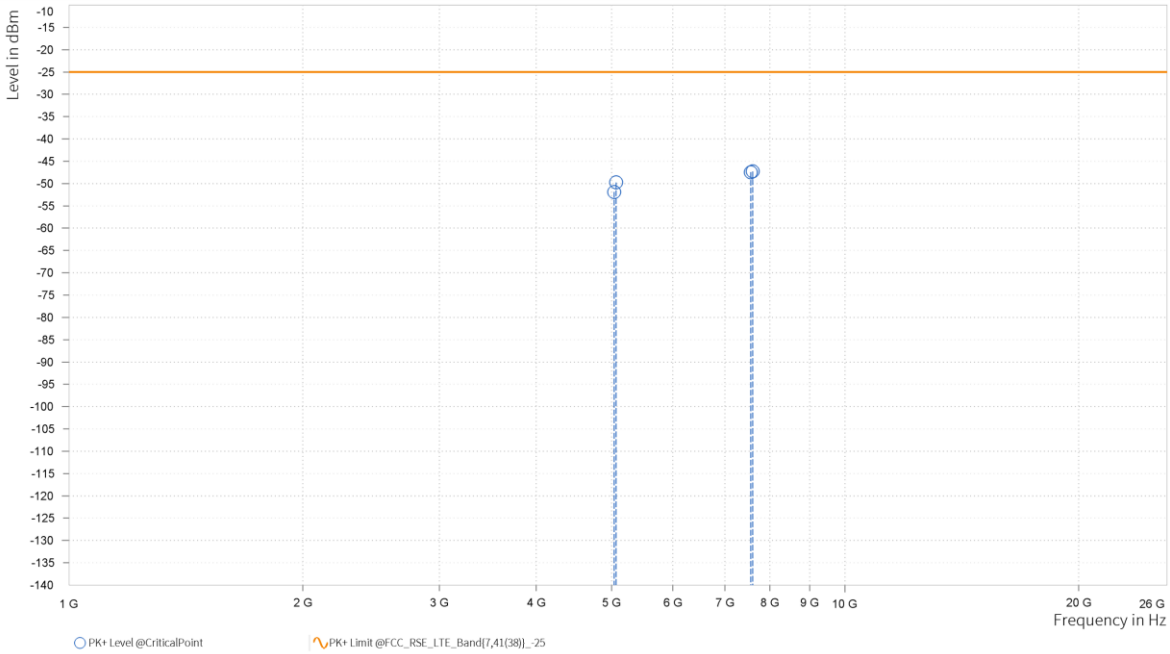


CHANNEL BANDWIDTH: 15MHz + 15MHz

MODE	TX channel PCC 21025 TX channel SCC 21175	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

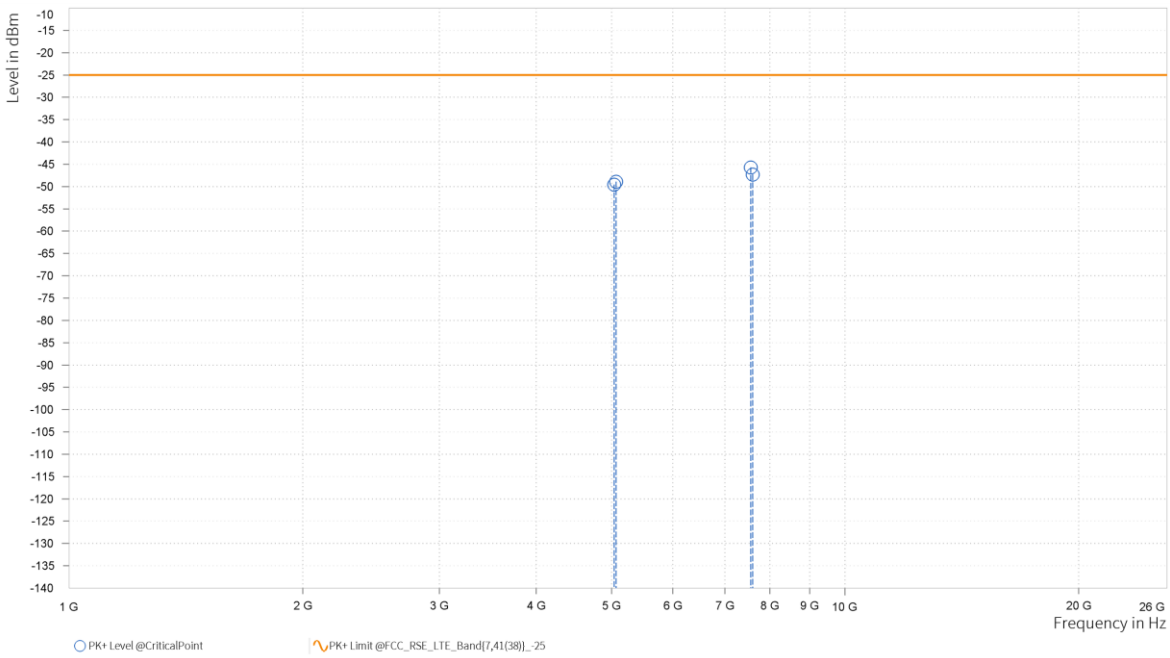
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,041.500	-51.89	-25.0	26.89	23.6	H	290.7	1.0
4	5,071.500	-49.74	-25.0	24.74	23.28	H	0.9	2.0
5	7,562.250	-47.46	-25.0	22.46	27.02	H	144.2	2.0
5	7,607.250	-47.26	-25.0	22.26	26.94	H	144.2	2.0



MODE	TX channel PCC 21025 TX channel SCC 21175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,041.500	-49.55	-25.0	24.55	23.97	V	263.1	2.0
4	5,071.500	-48.9	-25.0	23.9	23.74	V	359.0	2.0
5	7,562.250	-45.73	-25.0	20.73	26.85	V	359.0	1.0
5	7,607.250	-47.3	-25.0	22.3	26.74	V	122.3	2.0

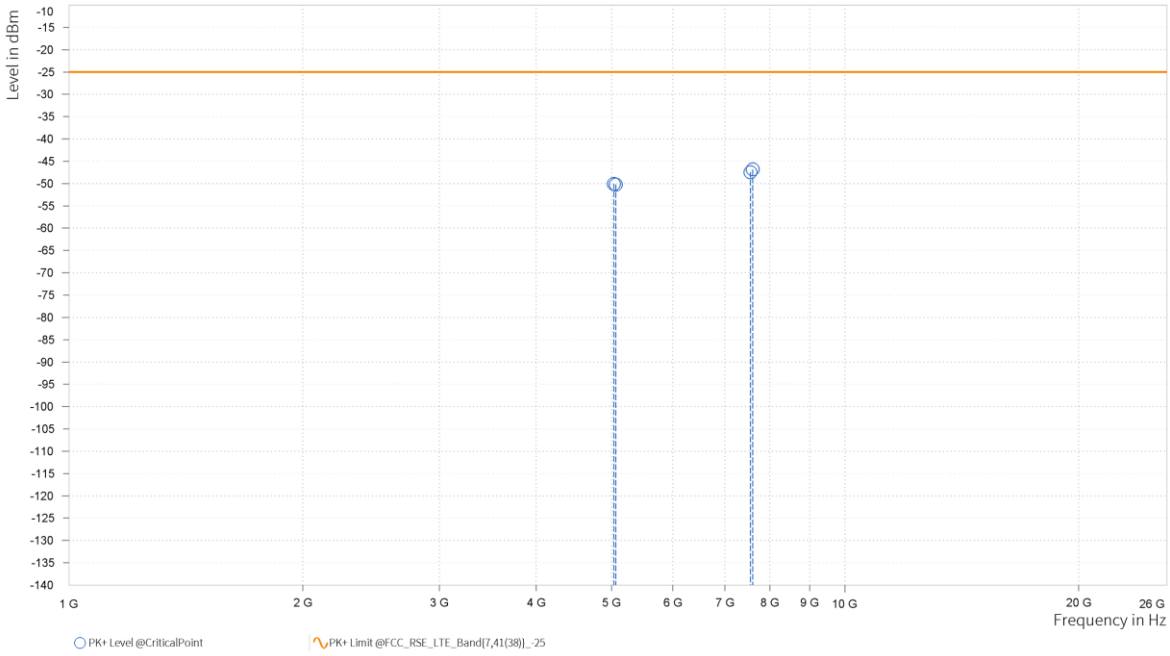


CHANNEL BANDWIDTH: 15MHz + 20MHz

MODE	TX channel PCC 21003 TX channel SCC 21174	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

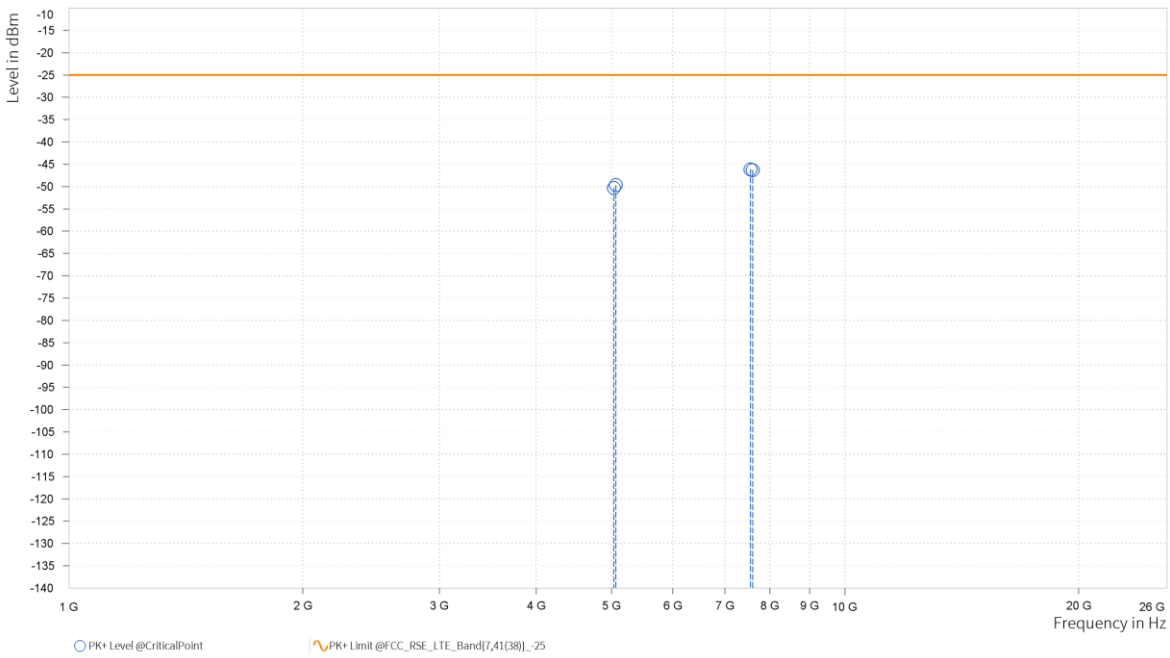
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,037.100	-50.08	-25.0	25.08	23.58	H	357.6	1.0
4	5,066.800	-50.2	-25.0	25.2	23.34	H	263.2	2.0
5	7,555.650	-47.44	-25.0	22.44	27.04	H	0.9	2.0
5	7,600.200	-46.84	-25.0	21.84	26.93	H	224.2	1.0



MODE	TX channel PCC 21003 TX channel SCC 21174	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,037.100	-50.29	-25.0	25.29	23.93	V	266.7	2.0
4	5,066.800	-49.66	-25.0	24.66	23.8	V	207.2	1.0
5	7,555.650	-46.14	-25.0	21.14	26.9	V	357.1	1.0
5	7,600.200	-46.3	-25.0	21.3	26.72	V	123.0	1.0

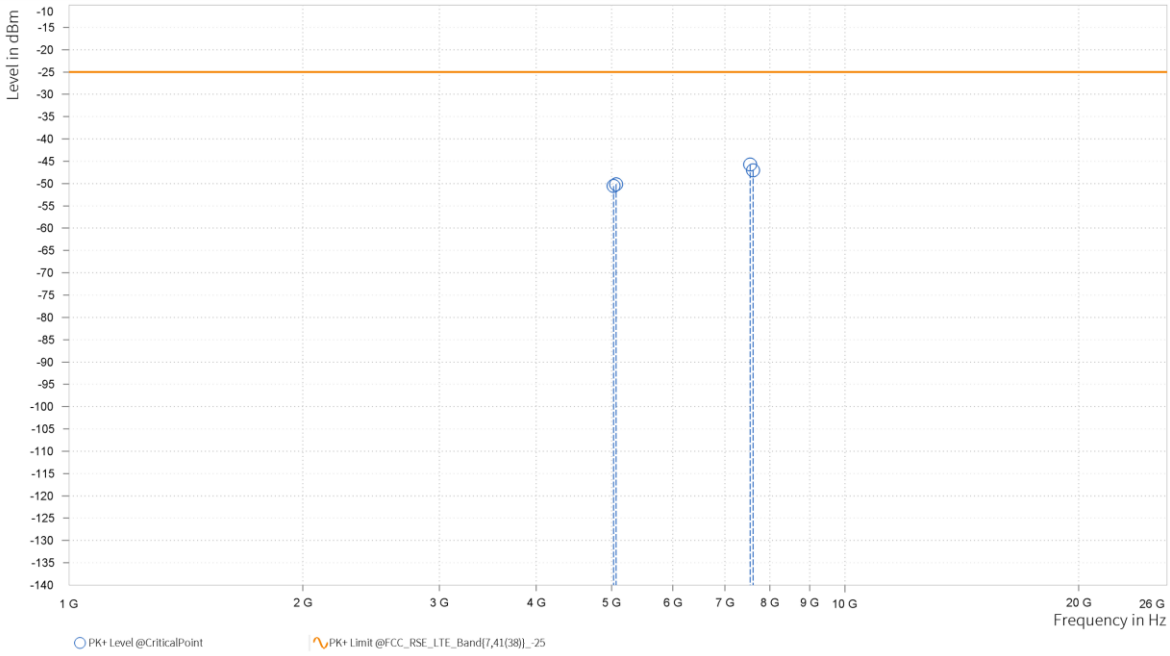


CHANNEL BANDWIDTH: 20MHz + 20MHz

MODE	TX channel PCC 21001 TX channel SCC 21199	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

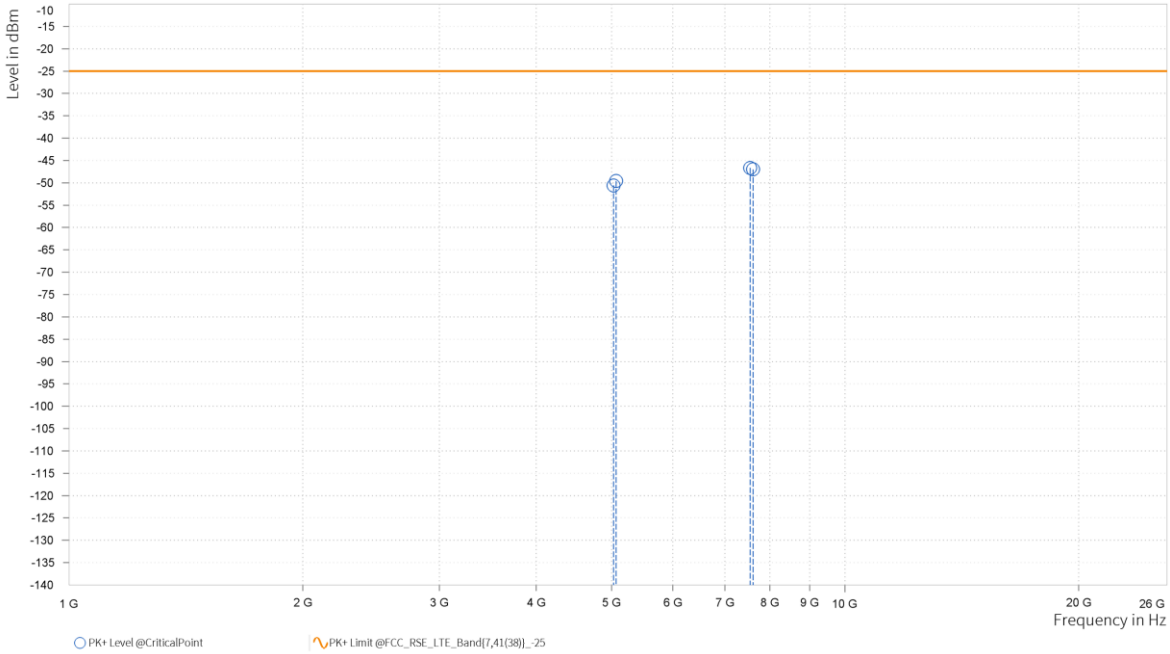
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,032.200	-50.55	-25.0	25.55	23.55	H	152.0	2.0
4	5,071.800	-50.16	-25.0	25.16	23.27	H	152.0	2.0
5	7,548.000	-45.74	-25.0	20.74	27.08	H	292.8	1.0
5	7,607.700	-47.04	-25.0	22.04	26.94	H	235.4	2.0



MODE	TX channel PCC 21001 TX channel SCC 21199	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,032.200	-50.57	-25.0	25.57	23.88	V	359.1	1.0
4	5,071.800	-49.6	-25.0	24.6	23.74	V	354.4	1.0
5	7,548.300	-46.67	-25.0	21.67	26.94	V	359.1	1.0
5	7,607.700	-46.99	-25.0	21.99	26.74	V	0.9	2.0

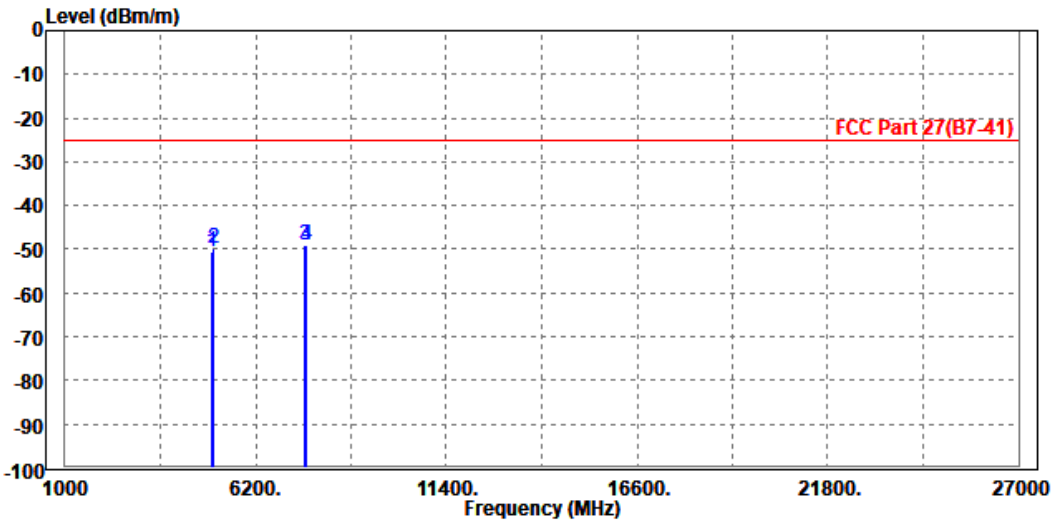


LTE Band CA _41C

CHANNEL BANDWIDTH: 20MHz + 20MHz

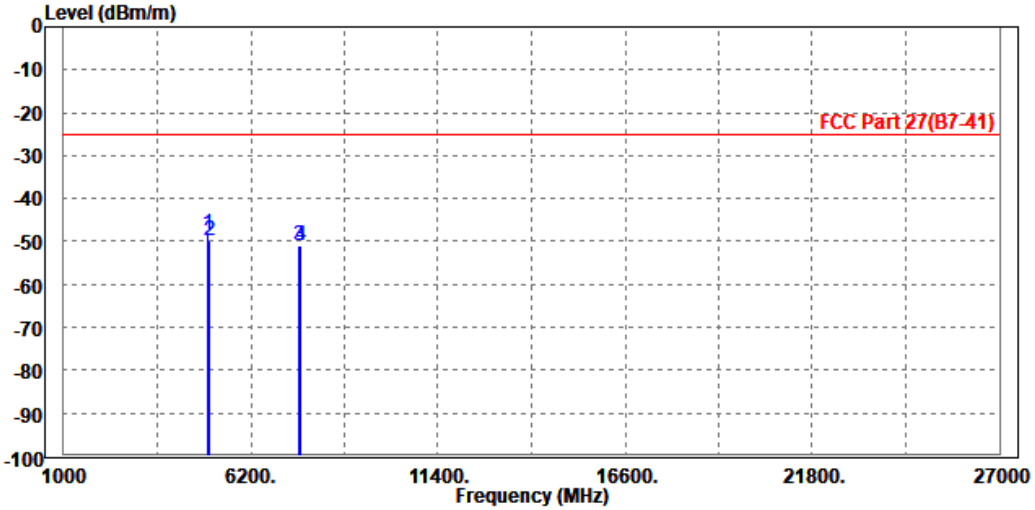
MODE	TX channel PCC 39750 TX channel SCC 39948	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5012.000	-50.70	-61.78	-25.00	-25.70	11.08	Peak	Horizontal
2		5051.600	-49.78	-60.92	-25.00	-24.78	11.14	Peak	Horizontal
3	PP	7518.000	-48.93	-63.30	-25.00	-23.93	14.37	Peak	Horizontal
4		7578.000	-49.01	-63.48	-25.00	-24.01	14.47	Peak	Horizontal



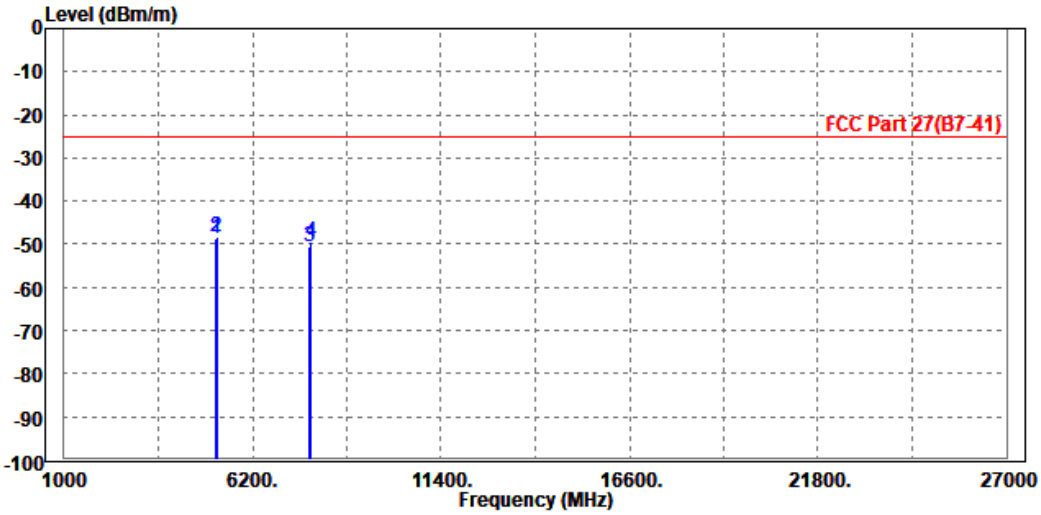
MODE	TX channel PCC 39750 TX channel SCC 39948	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5004.000	-48.40	-59.78	-25.00	-23.40	11.38	Peak	Vertical
2		5051.600	-49.79	-61.26	-25.00	-24.79	11.47	Peak	Vertical
3		7518.000	-50.77	-63.87	-25.00	-25.77	13.10	Peak	Vertical
4		7577.400	-51.10	-64.46	-25.00	-26.10	13.36	Peak	Vertical



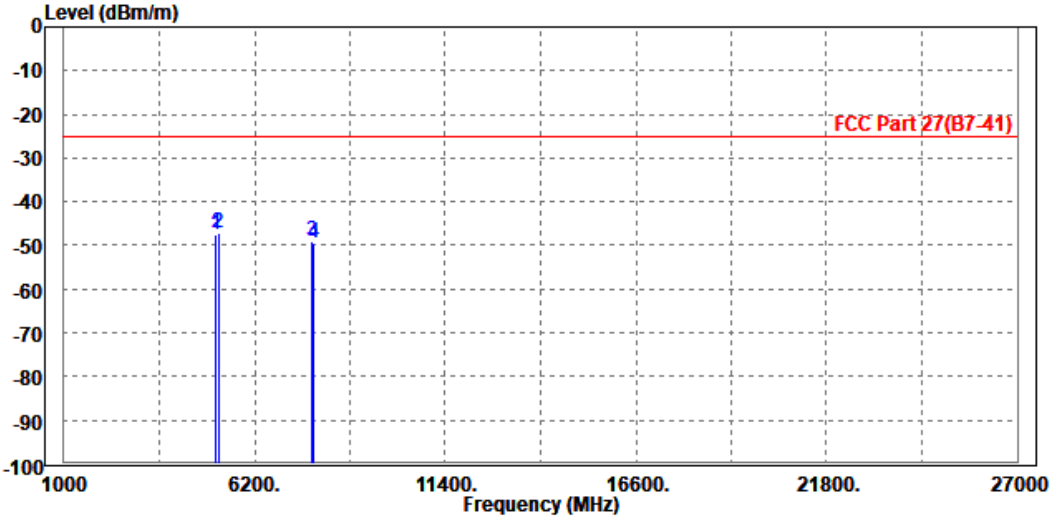
MODE	TX channel PCC 40521 TX channel SCC 40719	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5166.000	-48.73	-60.04	-25.00	-23.73	11.31	Peak	Horizontal
2 PP	5206.000	-48.20	-59.56	-25.00	-23.20	11.36	Peak	Horizontal
3	7749.000	-50.47	-65.24	-25.00	-25.47	14.77	Peak	Horizontal
4	7812.000	-49.44	-64.32	-25.00	-24.44	14.88	Peak	Horizontal



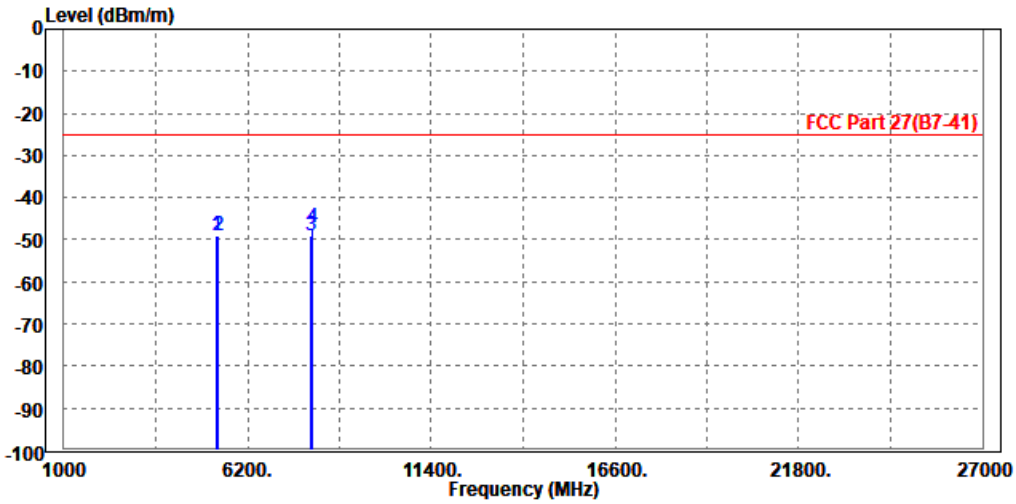
MODE	TX channel PCC 40521 TX channel SCC 40719	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5160.000	-47.52	-59.20	-25.00	-22.52	11.68	Peak	Vertical
2	PP	5206.000	-47.25	-59.02	-25.00	-22.25	11.77	Peak	Vertical
3		7749.000	-49.12	-63.22	-25.00	-24.12	14.10	Peak	Vertical
4		7809.000	-49.55	-63.91	-25.00	-24.55	14.36	Peak	Vertical



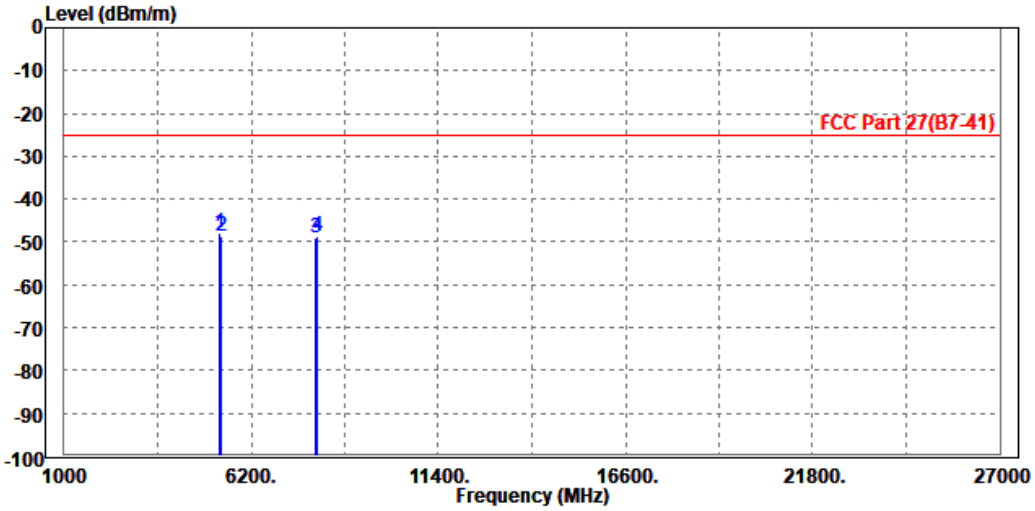
MODE	TX channel PCC 41292 TX channel SCC 41490	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5316.000	-48.92	-60.45	-25.00	-23.92	11.53	Peak	Horizontal
2		5360.000	-49.23	-60.82	-25.00	-24.23	11.59	Peak	Horizontal
3		7980.000	-49.04	-64.21	-25.00	-24.04	15.17	Peak	Horizontal
4	PP	8040.000	-47.08	-62.35	-25.00	-22.08	15.27	Peak	Horizontal



MODE	TX channel PCC 41292 TX channel SCC 41490	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
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	5316.000	-48.04	-60.02	-25.00	-23.04	11.98	Peak	Vertical
2		5360.000	-48.59	-60.66	-25.00	-23.59	12.07	Peak	Vertical
3		7980.000	-49.00	-64.10	-25.00	-24.00	15.10	Peak	Vertical
4		8040.000	-48.82	-64.15	-25.00	-23.82	15.33	Peak	Vertical

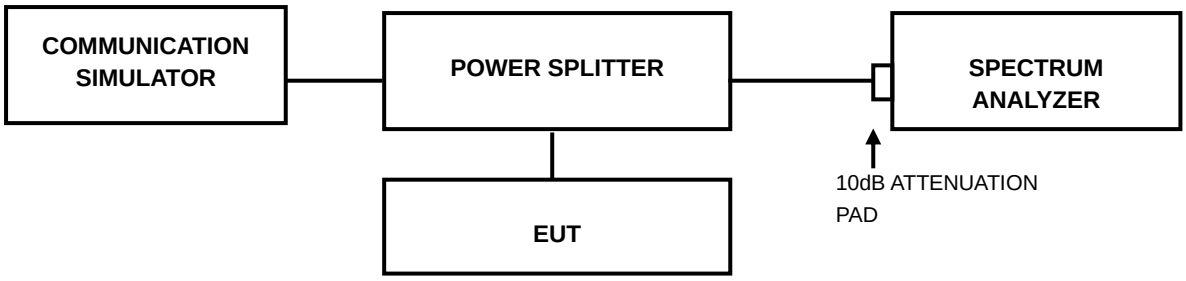


3.7 PEAK TO AVERAGE RATIO

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 ≥ 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
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 CA _7C

26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

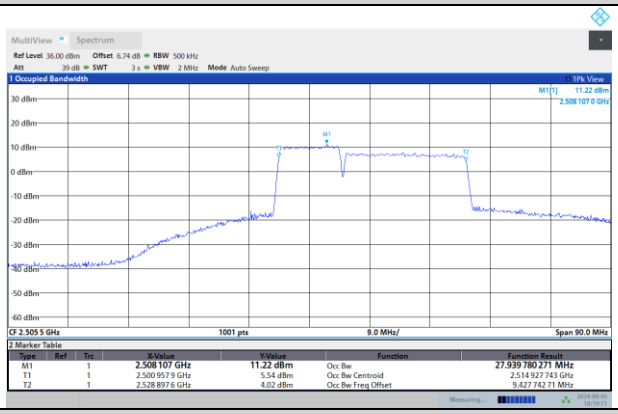
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
7-7	10MHz-20MHz	QPSK-QPSK	20850-20949	50RB#0-100RB#0	27.940	29.49	PASS
7-7	10MHz-20MHz	QPSK-QPSK	21006-21150	50RB#0-100RB#0	27.904	32.46	PASS
7-7	10MHz-20MHz	QPSK-QPSK	21206-21350	50RB#0-100RB#0	27.818	29.49	PASS
7-7	10MHz-20MHz	16QAM-16QAM	20850-20949	50RB#0-100RB#0	27.805	29.49	PASS
7-7	10MHz-20MHz	16QAM-16QAM	21006-21150	50RB#0-100RB#0	27.694	29.31	PASS
7-7	10MHz-20MHz	16QAM-16QAM	21206-21350	50RB#0-100RB#0	27.719	29.31	PASS
7-7	10MHz-20MHz	64QAM-64QAM	20850-20949	50RB#0-100RB#0	27.854	29.40	PASS
7-7	10MHz-20MHz	64QAM-64QAM	21006-21150	50RB#0-100RB#0	27.765	29.31	PASS
7-7	10MHz-20MHz	64QAM-64QAM	21206-21350	50RB#0-100RB#0	27.770	29.49	PASS
7-7	15MHz-10MHz	QPSK-QPSK	20825-20945	75RB#0-50RB#0	23.352	25.40	PASS
7-7	15MHz-10MHz	QPSK-QPSK	21051-21171	75RB#0-50RB#0	23.340	26.15	PASS
7-7	15MHz-10MHz	QPSK-QPSK	21277-21397	75RB#0-50RB#0	23.265	24.88	PASS
7-7	15MHz-10MHz	16QAM-16QAM	20825-20945	75RB#0-50RB#0	23.317	24.80	PASS
7-7	15MHz-10MHz	16QAM-16QAM	21051-21171	75RB#0-50RB#0	23.242	24.73	PASS
7-7	15MHz-10MHz	16QAM-16QAM	21277-21397	75RB#0-50RB#0	23.254	24.73	PASS
7-7	15MHz-10MHz	64QAM-64QAM	20825-20945	75RB#0-50RB#0	23.262	24.88	PASS
7-7	15MHz-10MHz	64QAM-64QAM	21051-21171	75RB#0-50RB#0	23.207	24.80	PASS
7-7	15MHz-10MHz	64QAM-64QAM	21277-21397	75RB#0-50RB#0	23.189	24.65	PASS
7-7	15MHz-15MHz	QPSK-QPSK	20825-20975	75RB#0-75RB#0	28.498	30.21	PASS
7-7	15MHz-15MHz	QPSK-QPSK	21025-21175	5RB#0-75RB#0	28.422	31.65	PASS
7-7	15MHz-15MHz	QPSK-QPSK	21225-21375	5RB#0-75RB#0	28.402	30.21	PASS
7-7	15MHz-15MHz	16QAM-16QAM	20825-20975	5RB#0-75RB#0	28.468	30.21	PASS
7-7	15MHz-15MHz	16QAM-16QAM	21025-21175	5RB#0-75RB#0	28.364	30.03	PASS
7-7	15MHz-15MHz	16QAM-16QAM	21225-21375	5RB#0-75RB#0	28.393	30.12	PASS
7-7	15MHz-15MHz	64QAM-64QAM	20825-20975	5RB#0-75RB#0	28.406	30.12	PASS
7-7	15MHz-15MHz	64QAM-64QAM	21025-21175	5RB#0-75RB#0	28.300	30.03	PASS
7-7	15MHz-15MHz	64QAM-64QAM	21225-21375	5RB#0-75RB#0	28.301	30.03	PASS
7-7	15MHz-20MHz	QPSK-QPSK	20825-20945	75RB#0-100RB#0	32.752	34.83	PASS
7-7	15MHz-20MHz	QPSK-QPSK	21051-21171	75RB#0-100RB#0	32.644	34.51	PASS
7-7	15MHz-20MHz	QPSK-QPSK	21277-21397	75RB#0-100RB#0	32.650	34.62	PASS
7-7	15MHz-20MHz	16QAM-16QAM	20825-20945	75RB#0-100RB#0	32.625	34.51	PASS
7-7	15MHz-20MHz	16QAM-16QAM	21051-21171	75RB#0-100RB#0	32.509	34.20	PASS
7-7	15MHz-20MHz	16QAM-16QAM	21277-21397	75RB#0-100RB#0	32.562	34.51	PASS
7-7	15MHz-20MHz	64QAM-64QAM	20825-20945	75RB#0-100RB#0	32.667	34.41	PASS
7-7	15MHz-20MHz	64QAM-64QAM	21051-21171	75RB#0-100RB#0	32.566	34.30	PASS
7-7	15MHz-20MHz	64QAM-64QAM	21277-21397	75RB#0-100RB#0	32.619	34.51	PASS
7-7	20MHz-10MHz	QPSK-QPSK	20850-20994	100RB#0-50RB#0	27.927	30.30	PASS
7-7	20MHz-10MHz	QPSK-QPSK	21051-21395	100RB#0-50RB#0	27.820	29.49	PASS
7-7	20MHz-10MHz	QPSK-QPSK	21251-21395	100RB#0-50RB#0	27.818	29.40	PASS

7-7	20MHz-10MHz	16QAM-16QAM	20850-20994	100RB#0-50RB#0	27.841	29.49	PASS
7-7	20MHz-10MHz	16QAM-16QAM	21051-21395	100RB#0-50RB#0	27.731	29.40	PASS
7-7	20MHz-10MHz	16QAM-16QAM	21251-21395	100RB#0-50RB#0	27.756	29.31	PASS
7-7	20MHz-10MHz	64QAM-64QAM	20850-20994	100RB#0-50RB#0	27.900	29.67	PASS
7-7	20MHz-10MHz	64QAM-64QAM	21051-21395	100RB#0-50RB#0	27.776	29.40	PASS
7-7	20MHz-10MHz	64QAM-64QAM	21251-21395	100RB#0-50RB#0	27.799	29.40	PASS
7-7	20MHz-15MHz	QPSK-QPSK	20850-21021	100RB#0-75RB#0	32.734	35.24	PASS
7-7	20MHz-15MHz	QPSK-QPSK	21026-21197	100RB#0-75RB#0	32.621	34.62	PASS
7-7	20MHz-15MHz	QPSK-QPSK	21201-21372	100RB#0-75RB#0	32.624	34.51	PASS
7-7	20MHz-15MHz	16QAM-16QAM	20850-21021	100RB#0-75RB#0	32.739	34.62	PASS
7-7	20MHz-15MHz	16QAM-16QAM	21026-21197	100RB#0-75RB#0	32.562	34.41	PASS
7-7	20MHz-15MHz	16QAM-16QAM	21201-21372	100RB#0-75RB#0	32.625	34.51	PASS
7-7	20MHz-15MHz	64QAM-64QAM	20850-21021	100RB#0-75RB#0	32.676	34.51	PASS
7-7	20MHz-15MHz	64QAM-64QAM	21026-21197	100RB#0-75RB#0	32.576	34.41	PASS
7-7	20MHz-15MHz	64QAM-64QAM	21201-21372	100RB#0-75RB#0	32.670	34.41	PASS
7-7	20MHz-20MHz	QPSK-QPSK	20850-21048	100RB#0-100RB#0	37.796	39.56	PASS
7-7	20MHz-20MHz	QPSK-QPSK	21001-21199	100RB#0-100RB#0	37.707	39.44	PASS
7-7	20MHz-20MHz	QPSK-QPSK	21152-21350	100RB#0-100RB#0	37.740	39.56	PASS
7-7	20MHz-20MHz	16QAM-16QAM	20850-21048	100RB#0-100RB#0	37.647	39.44	PASS
7-7	20MHz-20MHz	16QAM-16QAM	21001-21199	100RB#0-100RB#0	37.548	39.20	PASS
7-7	20MHz-20MHz	16QAM-16QAM	21152-21350	100RB#0-100RB#0	37.617	39.32	PASS
7-7	20MHz-20MHz	64QAM-64QAM	20850-21048	100RB#0-100RB#0	37.634	39.44	PASS
7-7	20MHz-20MHz	64QAM-64QAM	21001-21199	100RB#0-100RB#0	37.539	39.44	PASS
7-7	20MHz-20MHz	64QAM-64QAM	21152-21350	100RB#0-100RB#0	37.616	39.44	PASS

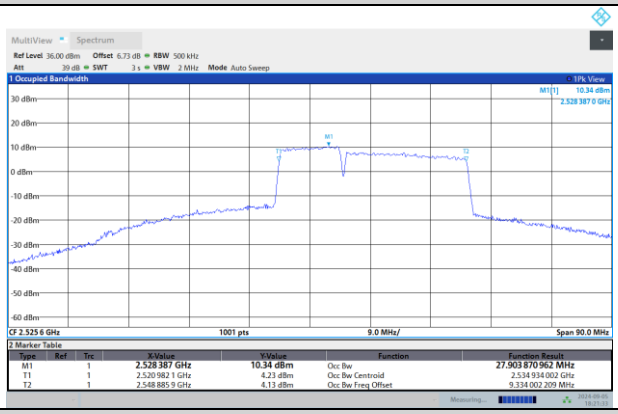
Test Graphs

Occupied Bandwidth

7-7-10MHz-20MHz-QPSK-QPSK-20850-20949-50RB#0-100RB#0



7-7-10MHz-20MHz-QPSK-QPSK-21006-21150-50RB#0-100RB#0



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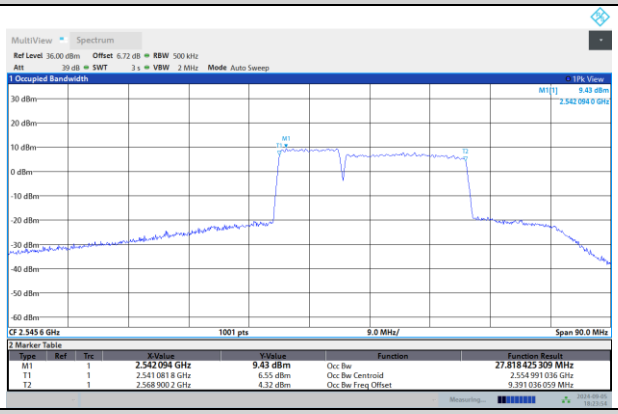

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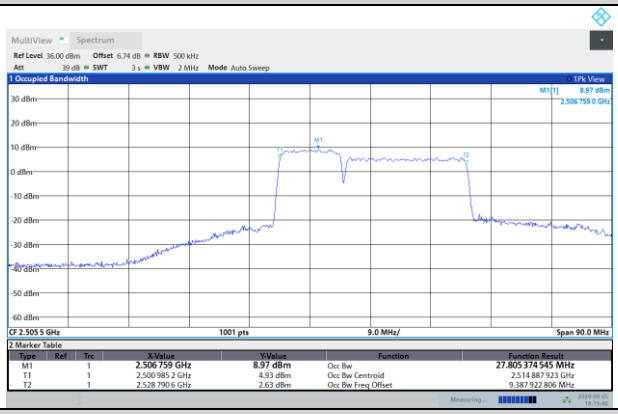

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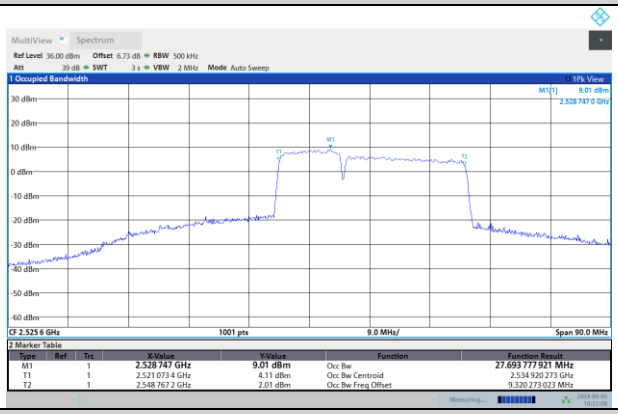

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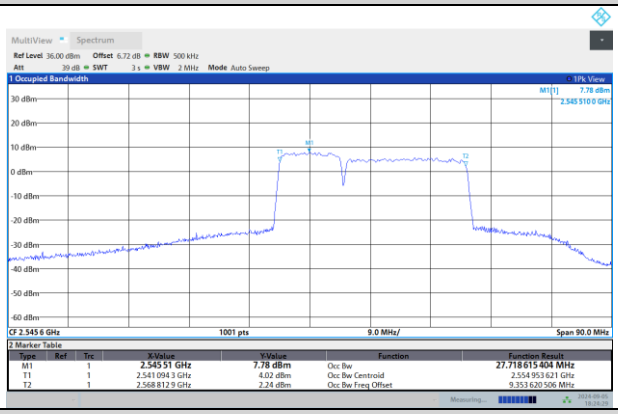

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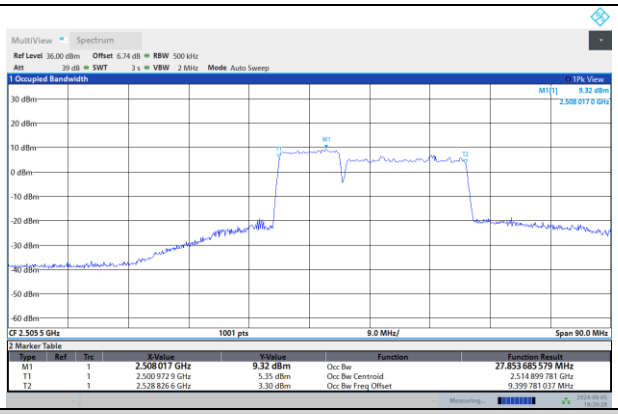
7-7-10MHz-20MHz-64QAM-QPSK-21006-21150-50RB#0-100RB#0



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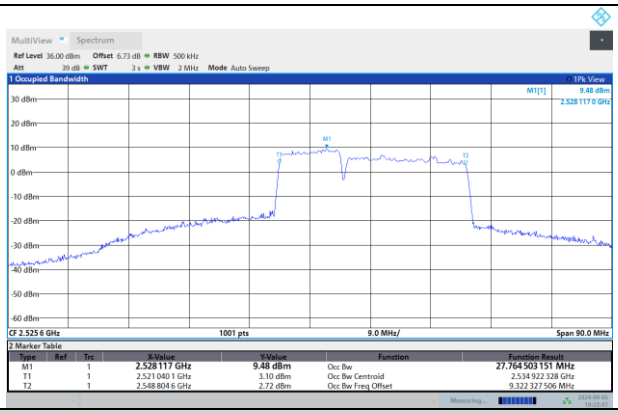
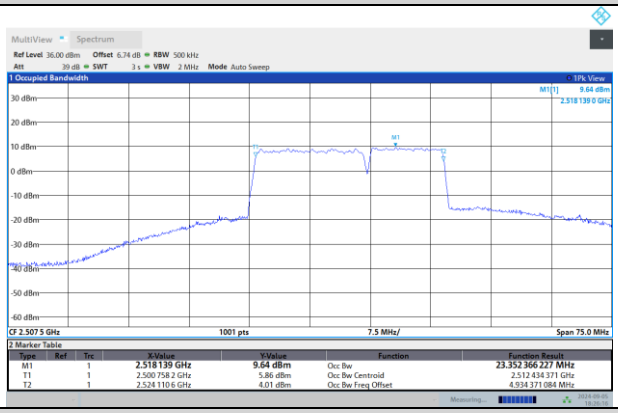


7-7-15MHz-10MHz-QPSK-QPSK-20825-20945-75RB#0-50RB#0

7-7-15MHz-10MHz-QPSK-QPSK-21051-21171-75RB#0-50RB#0



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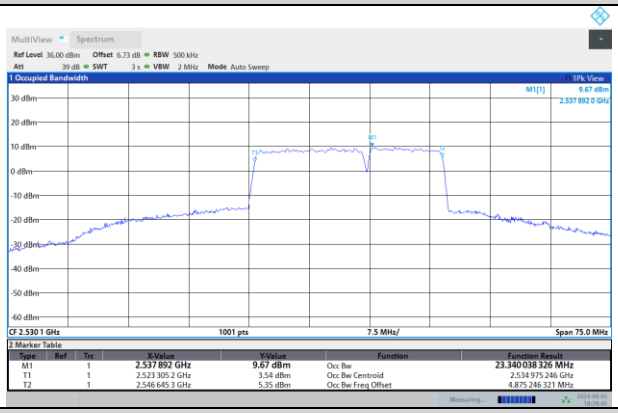

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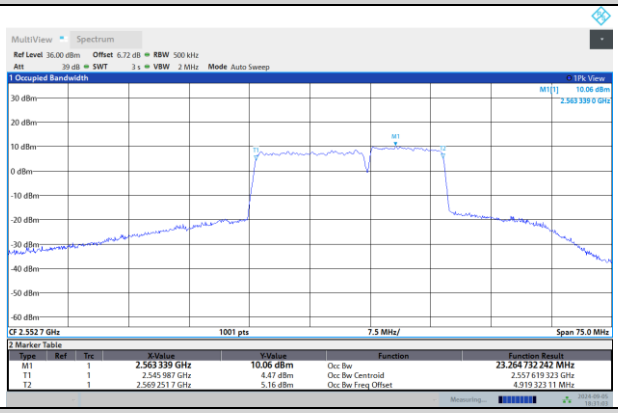

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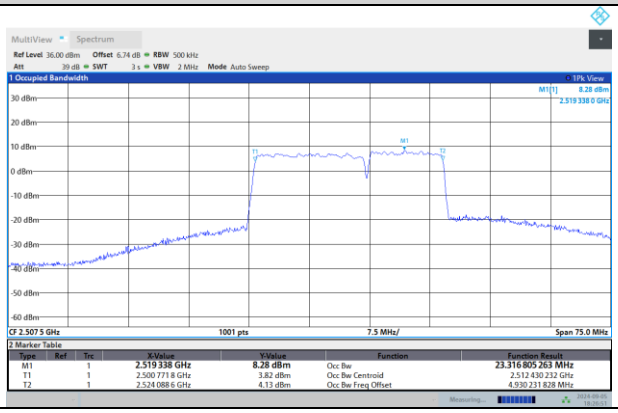

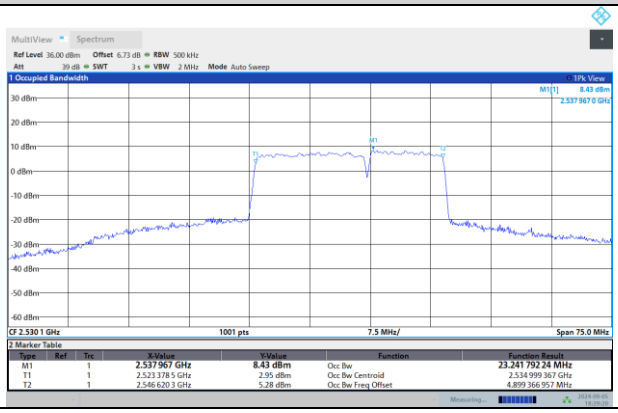

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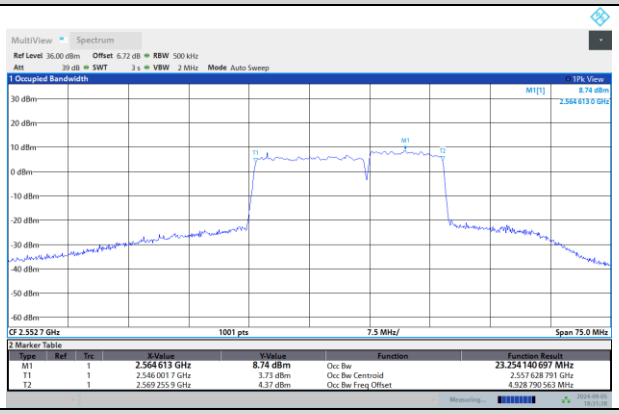

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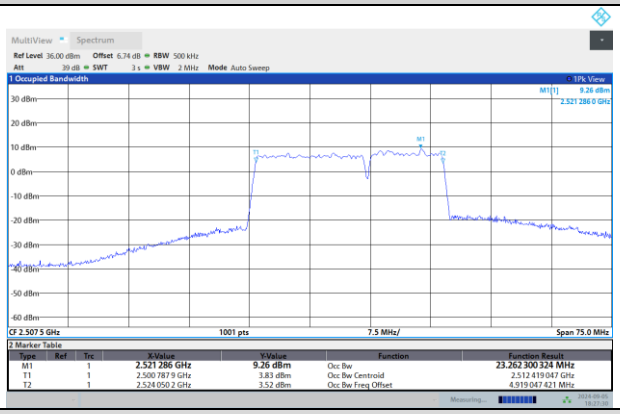

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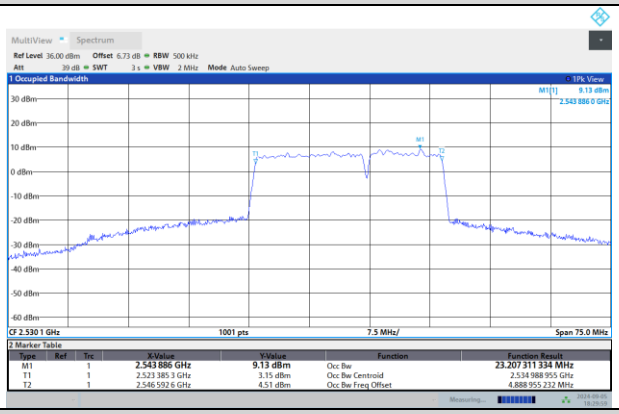

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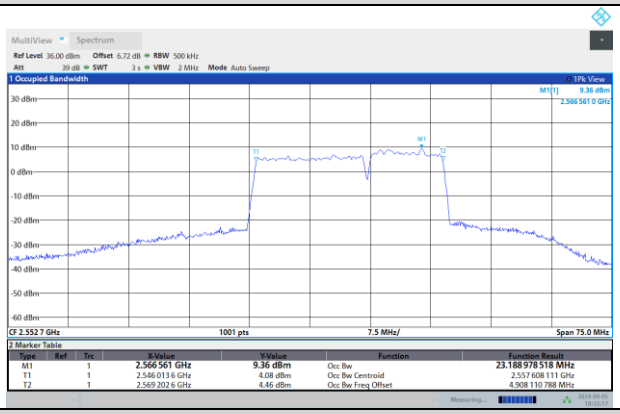

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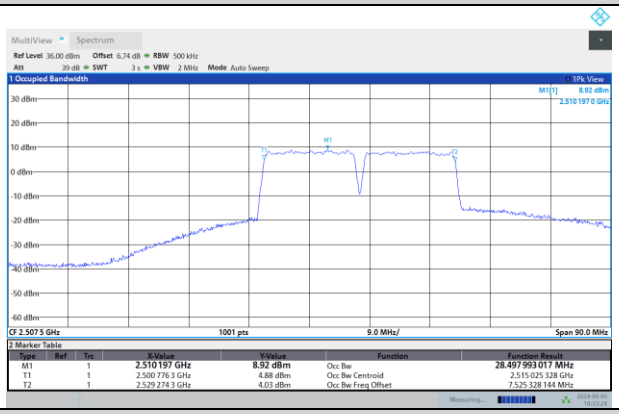

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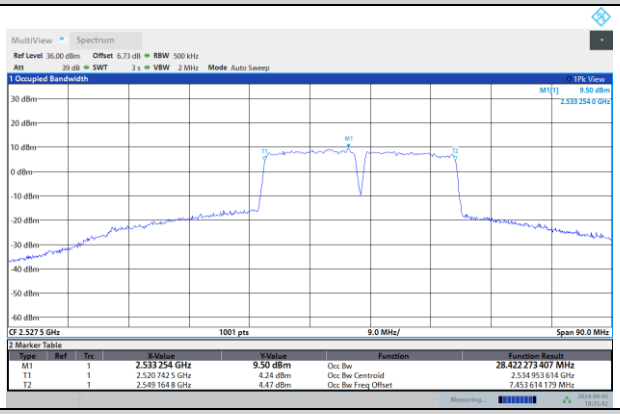

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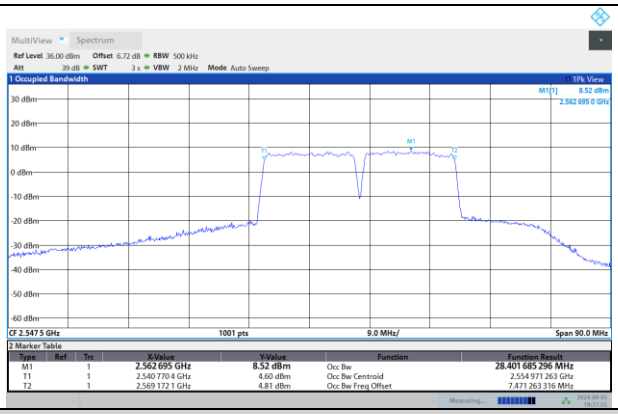

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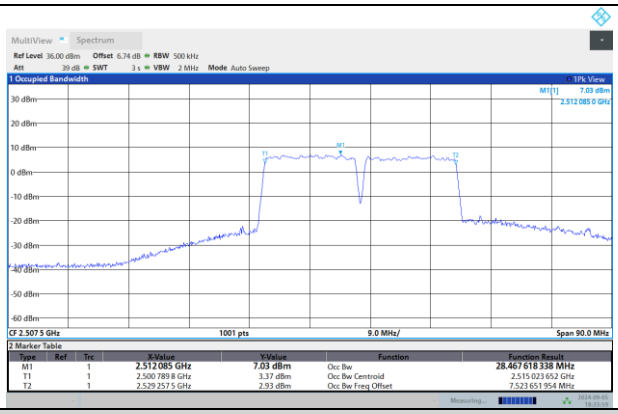

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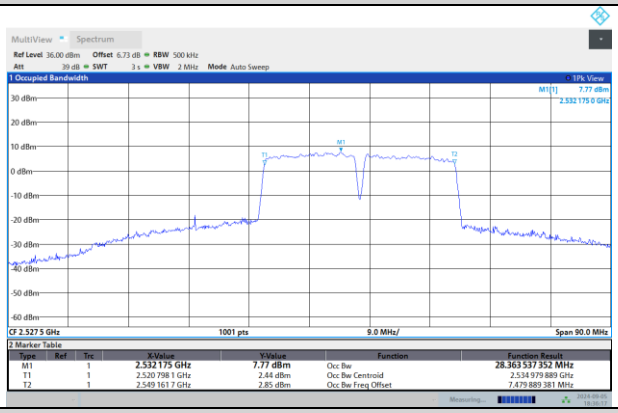

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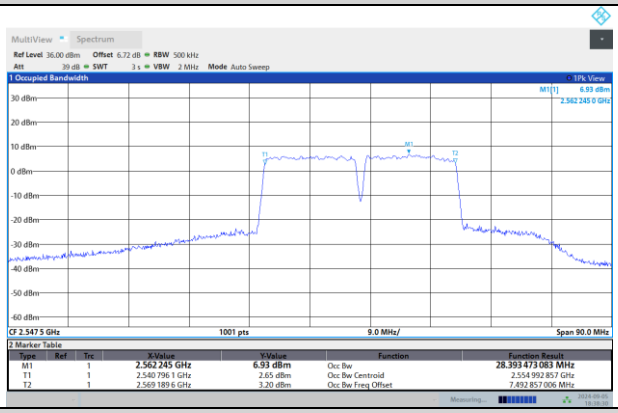

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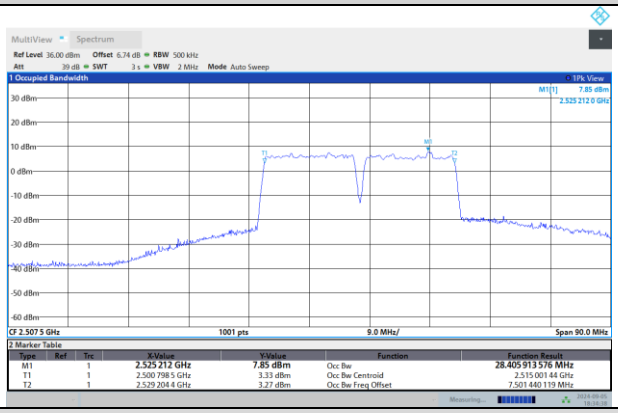

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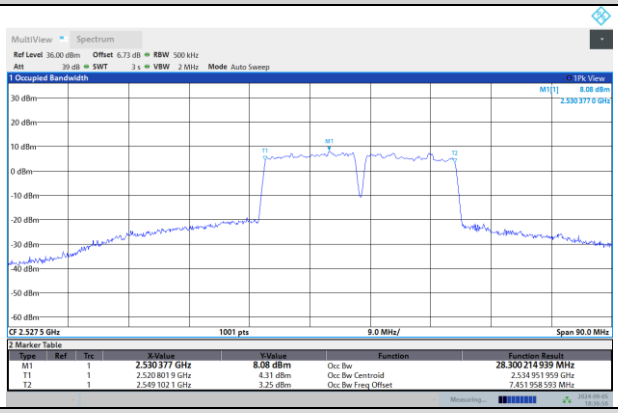

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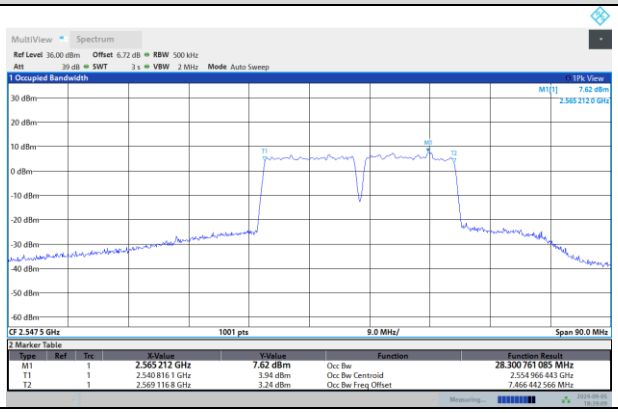

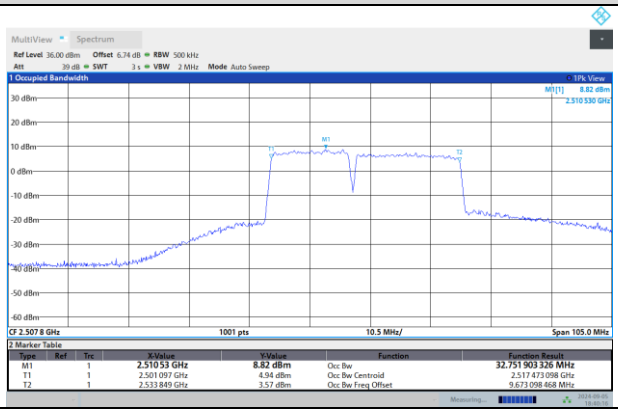

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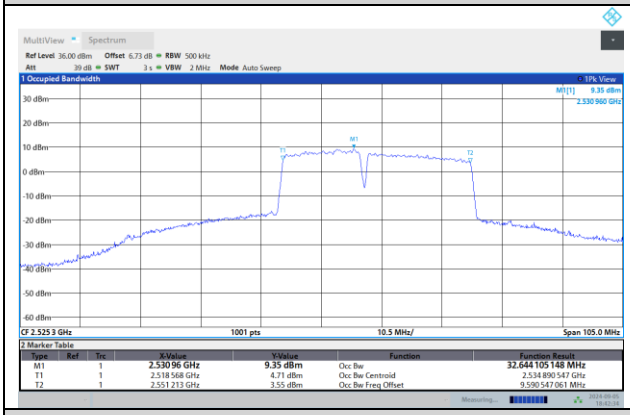

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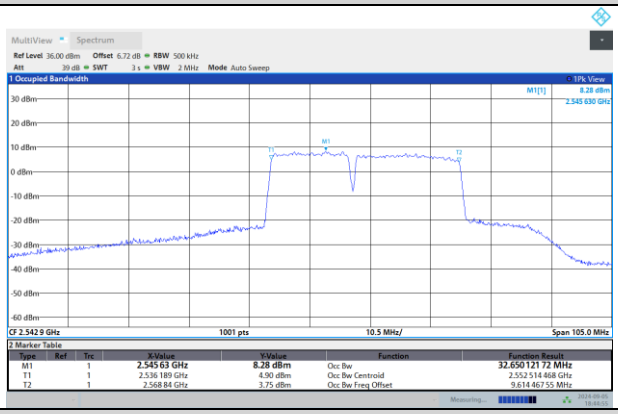

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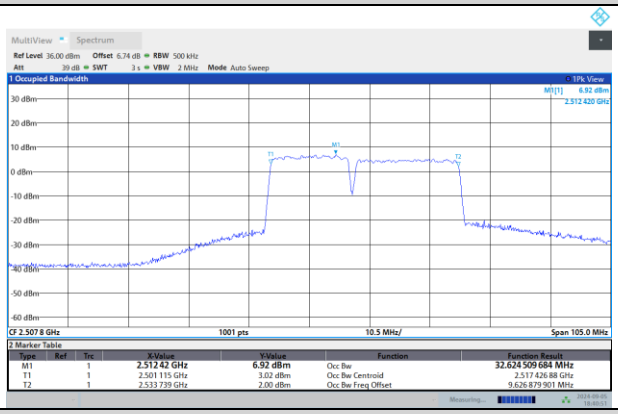

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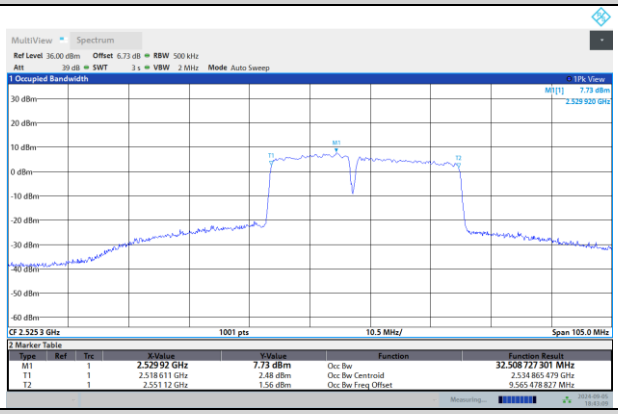

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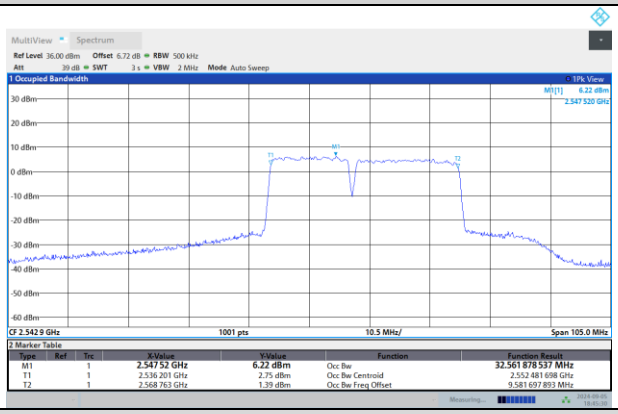

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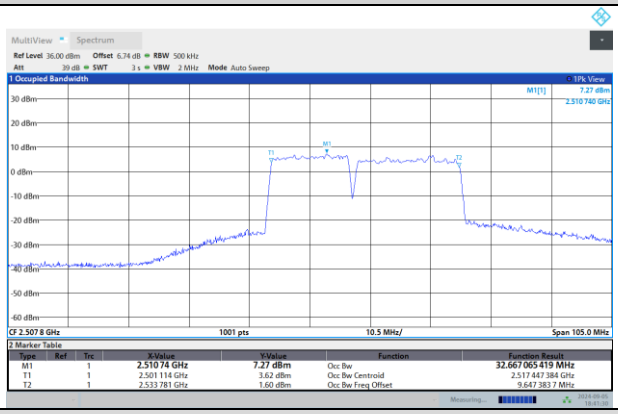
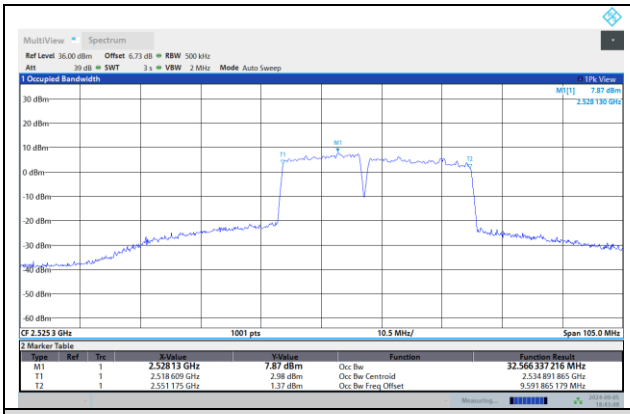


7-7-15MHz-20MHz-64QAM-64QAM-21051-21171-75RB#0-100RB#0

7-7-15MHz-20MHz-64QAM-64QAM-21277-21397-75RB#0-100RB#0



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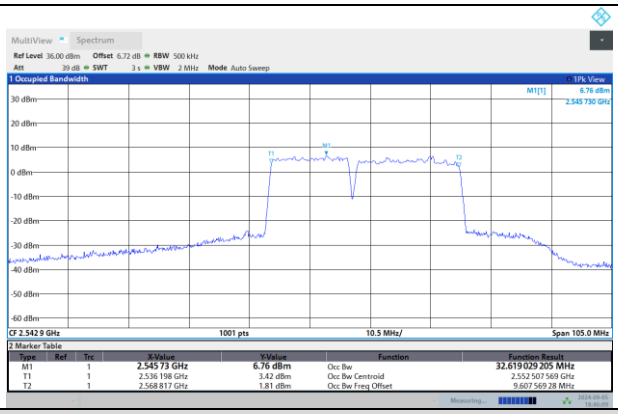

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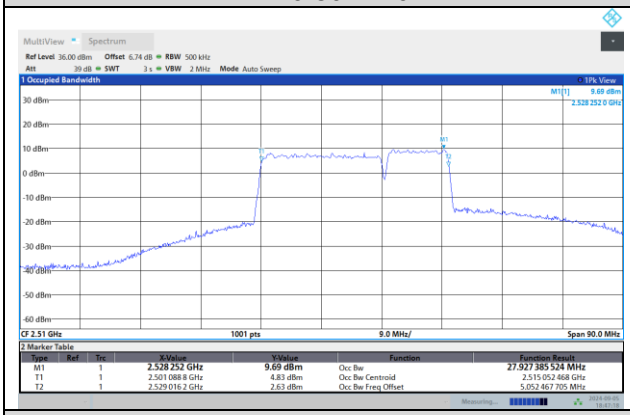

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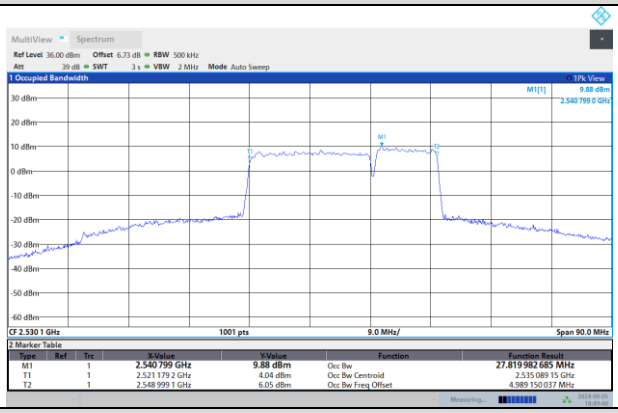

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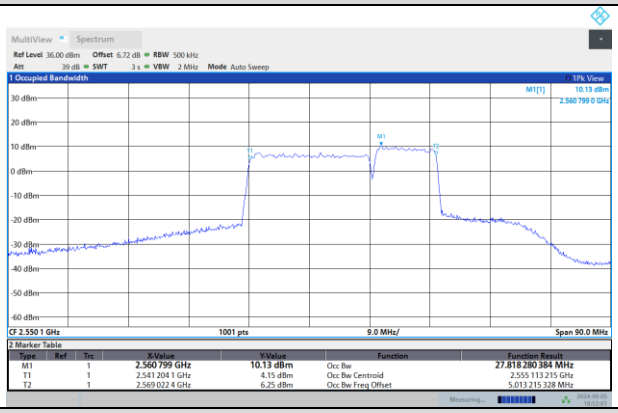

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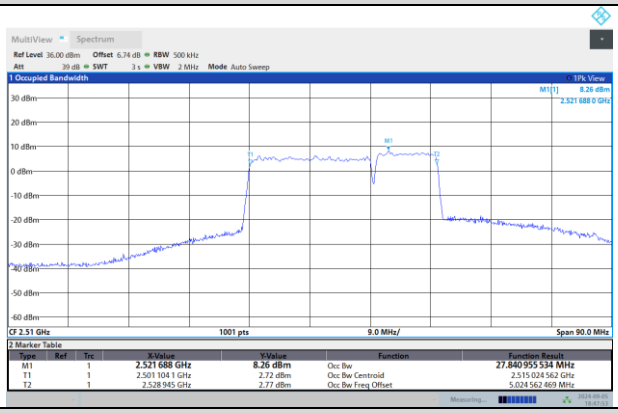

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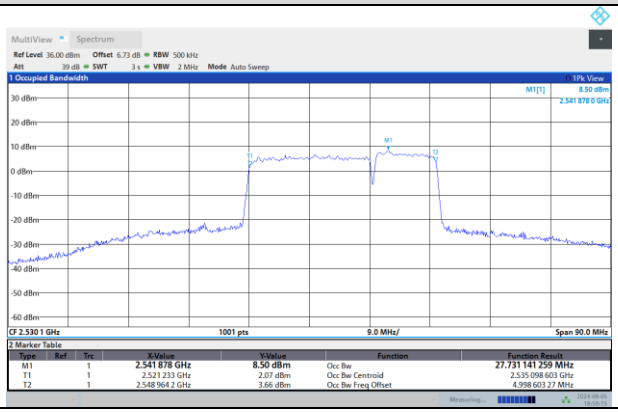

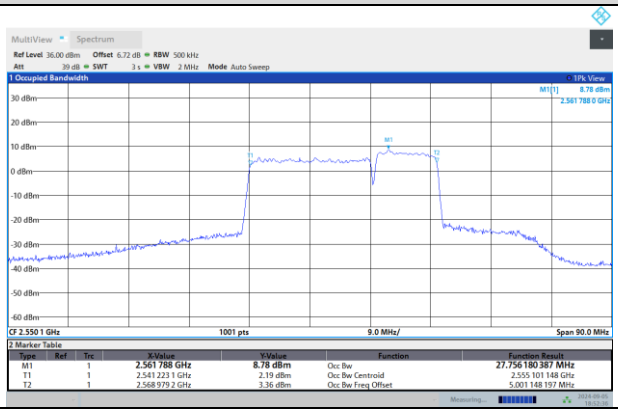

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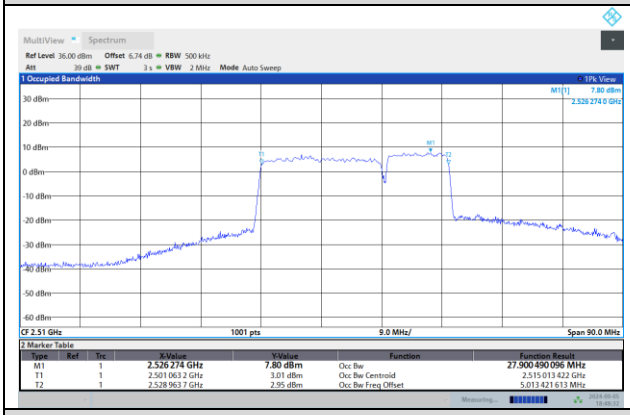

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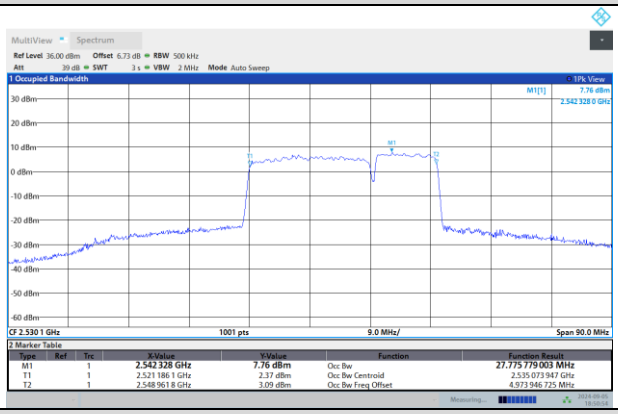

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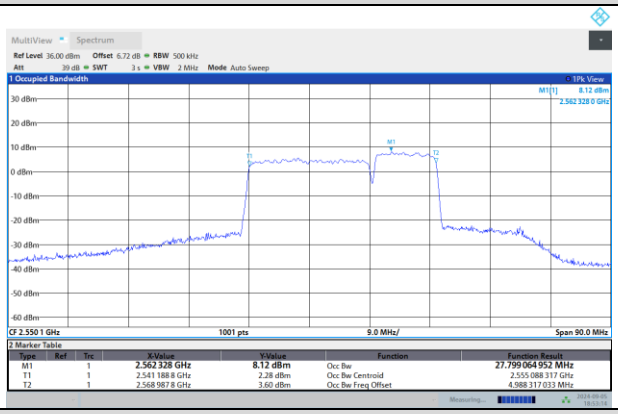

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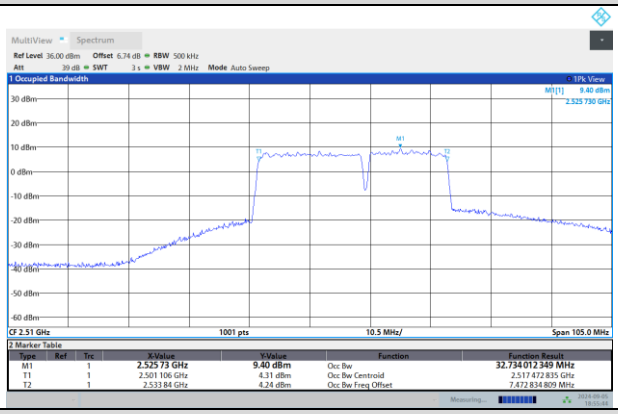
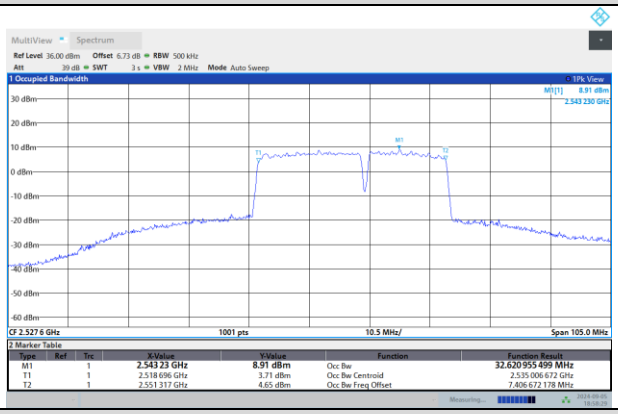


7-7-20MHz-15MHz-QPSK-QPSK-21026-21197-100RB#0-75RB#0



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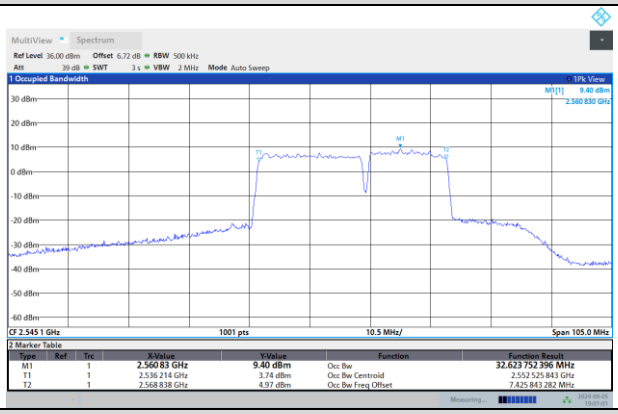

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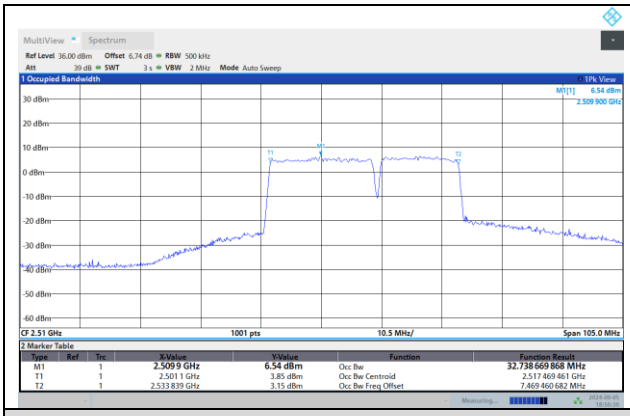

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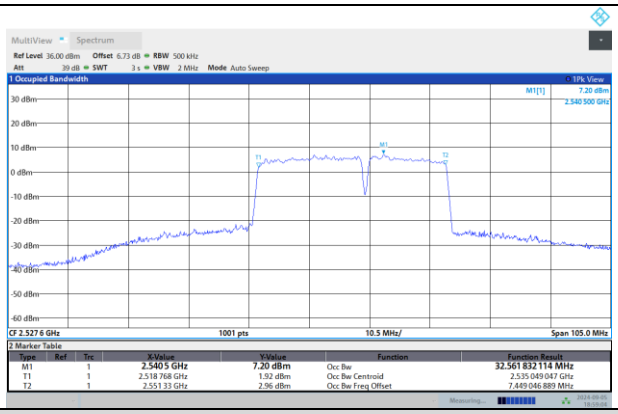

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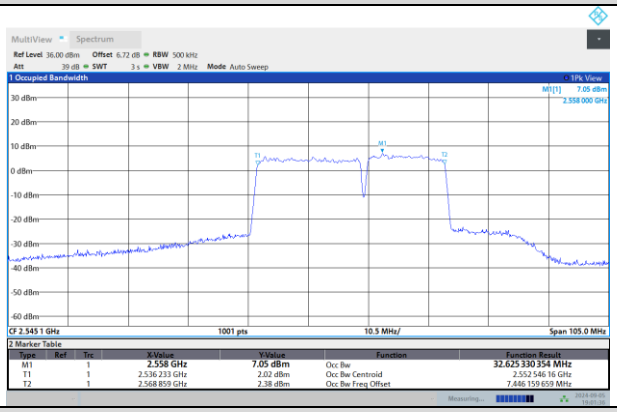

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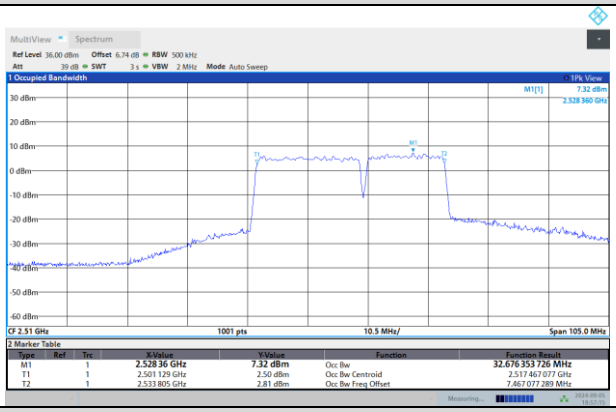

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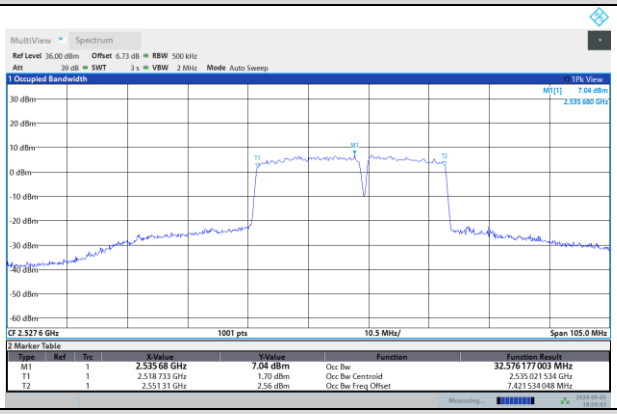

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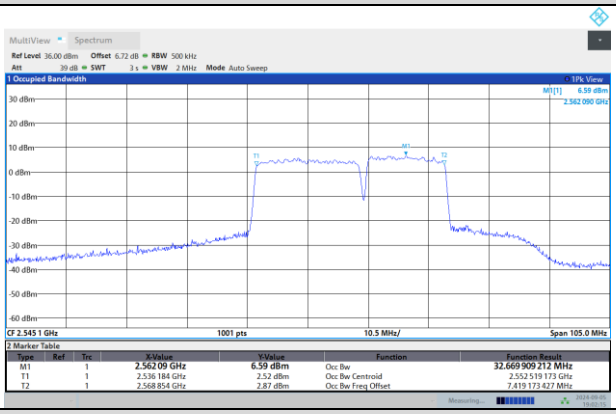

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