

FCC TEST REPORT

(PART 22)

Applicant:	Shenzhen Jimi IoT Co., Ltd.
Address:	3-4/F, Block A, Building #7, Shenzhen International Innovation Valley, Dashi 1st Road, Nanshan District, Shenzhen, Guangdong, China

Manufacturer or Supplier:	Shenzhen Jimi IoT Co., Ltd.
Address:	3-4/F, Block A, Building #7, Shenzhen International Innovation Valley, Dashi 1st Road, Nanshan District, Shenzhen, Guangdong, China
Product:	M2M wireless communication module
Brand Name:	jimiiot
Model Name:	XQ200A/ XQ200A-NA
FCC ID	2AMLF-XQ200A
Date of tests	Jul. 11, 2025~ Aug. 11, 2025

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

☒ **FCC PART 22, Subpart H**
☒ **ANSI/TIA/EIA-603-D**
☒ **ANSI/TIA/EIA-603-E**

☒ **FCC Part 2**
☒ **ANSI C63.26-2015**

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

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
	
Date: Aug. 11, 2025	Date: Aug. 11, 2025

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Test Report No.: PSU-QSZ2507090114RF01

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSZ2507090114RF01	Original release	Aug. 11, 2025



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 22 & Part 2			
STANDARD SECTION	TEST TYPE	RESULT	Test lab*
§2.1046	Conducted Output Power	Compliance	A
§22.913 (a)(5)	Equivalent Isotropic Radiated Power	Compliance	A
§2.1055 §22.355	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§22.913 (d)	Peak to average ratio*	Compliance	A
§2.1051 §22.917(a)	Band Edge Measurements	Compliance	A
§2.1051 §22.917(a)	Conducted Spurious Emissions	Compliance	A
§2.1053 §22.917(a)	Radiated Spurious Emissions	Compliance	A

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

*Test Lab Information Reference

Lab A:

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

Lab Address:

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

Accredited Test Lab Cert 6613.01

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

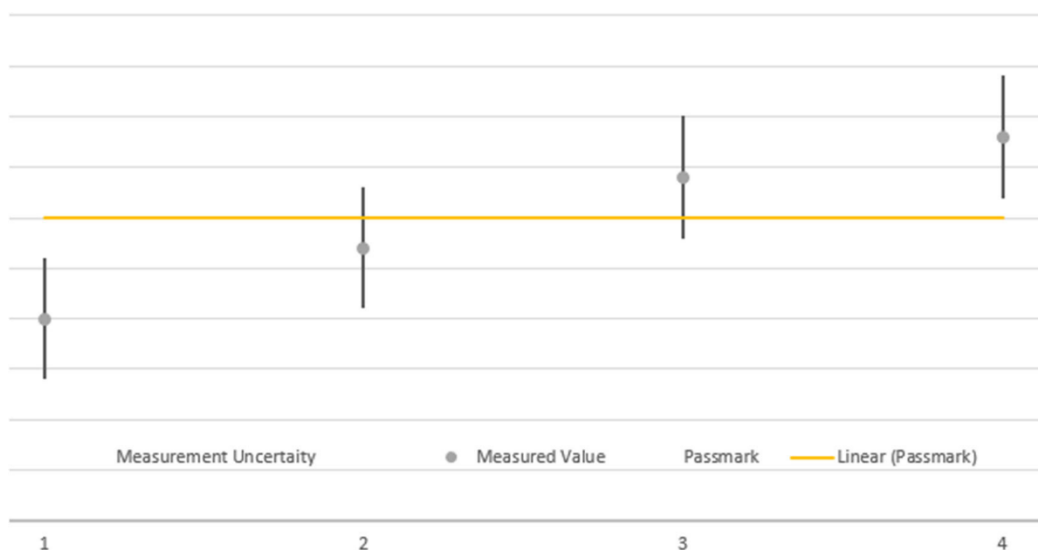


1.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	UNCERTAINTY
Maximum Peak Output Power	$\pm 2.06\text{dB}$
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Band Edge Measurements	$\pm 4.70\text{dB}$
Peak to average ratio	$\pm 0.76\text{dB}$

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



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

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

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



1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,23	Aug.29,25
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
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	Jul.04,25	Jul.03,27
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,23	Aug.21,25
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	Mar.22,25	Mar.21,27
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,25	Feb.21,27
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	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Aug.31,23	Aug.30,25
Hygrothermograph	DELI	20210528	SZ014	Mar.18,25	Mar.17,27
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.26,25	Apr.25,26
CABLE	R&S	W12.14	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.26,25	Apr.25,26
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.26,25	Apr.25,26
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.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	M2M wireless communication module	
BRAND NAME*	jimiiot	
MODEL NAME*	XQ200A/ XQ200A-NA	
NOMINAL VOLTAGE*	DC 3.7V	
MODULATION TYPE	GPRS/EDGE	GMSK, 8PSK
	WCDMA	QPSK/16QAM
	LTE	QPSK/16QAM
FREQUENCY RANGE	GPRS/EDGE	824.2MHz ~ 848.8MHz
	WCDMA	826.4MHz ~ 846.6MHz
	LTE Band 5 (Channel Bandwidth: 1.4MHz)	824.7MHz ~ 848.3MHz
	LTE Band 5 (Channel Bandwidth: 3MHz)	825.5MHz ~ 847.5MHz
	LTE Band 5 (Channel Bandwidth: 5MHz)	826.5MHz ~ 846.5MHz
	LTE Band 5 (Channel Bandwidth: 10MHz)	829MHz ~ 844MHz
	LTE Band 26 (Channel Bandwidth: 1.4MHz)	824.7MHz ~ 848.3MHz
	LTE Band 26 (Channel Bandwidth: 3MHz)	825.5MHz ~ 847.5MHz
	LTE Band 26 (Channel Bandwidth: 5MHz)	826.5MHz ~ 846.5MHz
	LTE Band 26 (Channel Bandwidth: 10MHz)	829MHz ~ 844MHz
	LTE Band 26 (Channel Bandwidth: 15MHz)	831.5MHz ~ 841.5MHz
MAX. ERP POWER	GPRS850	3681.29mW
	EDGE850	1016.25mW
	WCDMA B5	699.84mW
	LTE Band 5 (Channel Bandwidth: 1.4MHz)	325.84mW
	LTE Band 5 (Channel Bandwidth: 3MHz)	328.10mW
	LTE Band 5 (Channel Bandwidth: 5MHz)	326.59mW
	LTE Band 5 (Channel Bandwidth: 10MHz)	331.13mW
	LTE Band 26 (Channel Bandwidth: 1.4MHz)	348.34mW
	LTE Band 26 (Channel Bandwidth: 3MHz)	342.77mW



	LTE Band 26 (Channel Bandwidth: 5MHz)	349.14mW
	LTE Band 26 (Channel Bandwidth: 10MHz)	350.75mW
	LTE Band 26 (Channel Bandwidth: 15MHz)	359.75mW
EMISSION DESIGNATOR GGN	GPRS850	244KGXW
	EDGE850	247KG7W
	WCDMA B5	4M15F9W
	LTE Band 26 (Channel Bandwidth: 1.4MHz)	QPSK: 1M10G7D 16QAM: 1M10W7D
	LTE Band 26 (Channel Bandwidth: 3MHz)	QPSK: 2M70G7D 16QAM: 2M69W7D
	LTE Band 26 (Channel Bandwidth: 5MHz)	QPSK: 4M49G7D 16QAM: 4M50W7D
	LTE Band 26 (Channel Bandwidth: 10MHz)	QPSK: 8M97G7D 16QAM: 8M96W7D
	LTE Band 26 (Channel Bandwidth: 15MHz)	QPSK: 13M5G7D 16QAM: 13M5W7D
ANTENNA GAIN*	GPRS /EDGE850	4.86dBi
	WCDMA V	4.86dBi
	LTE B5	4.86dBi
	LTE B26	4.86dBi
ANTENNA TYPE*	Dipole Antenna, PIFA Antenna	
HW VERSION*	XQ200A_MB_V1.1	
SW VERSION*	XQ200A_XQ200A_WFBW_V1.2_250701.1631	
I/O PORTS*	Refer to user's manual	
CABLE SUPPLIED*	N/A	
EXTREME TEMPERATURE*	-10°C ~ 55°C	
EXTREME VOLTAGE*	3.2V ~ 4.2V	

NOTE:

- *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.



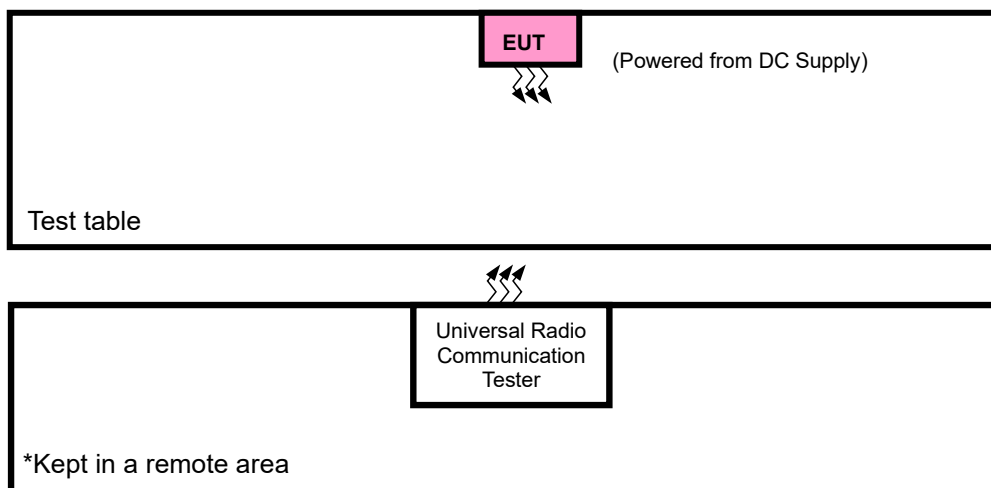
3. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
GPRS /EDGE	1TX/1RX
WCDMA	1TX/1RX
LTE	1TX/1RX

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in the test report.
5. The product XQ200A/XQ200A-NA differences is: XQ200A is a customer variant based on XQ200A-NA. It only has the model name difference. The Specifications, hardware and RF parameters are the same.

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION





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	DC Source	HYELEC	HY3010B	551016	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, 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 in ERP and radiated emission was found when positioned on X-plane for GPRS /EDGE /WCDMA /LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + DC Supply with GPRS /EDGE or WCDMA or LTE link

GPRS /EDGE MODE

EUT CONFIGURE MODE	TEST ITEM	Available Channel	Tested Channel	MODE
A	ERP	128 to 251	128, 189, 251	GPRS,EDGE
A	FREQUENCY STABILITY	128 to 251	128, 189, 251	GPRS,EDGE
A	OCCUPIED BANDWIDTH	128 to 251	128, 189, 251	GPRS,EDGE
A	BAND EDGE	128 to 251	128, 251	GPRS,EDGE
A	CONDUCTED EMISSION	128 to 251	128, 189, 251	GPRS,EDGE
A	RADIATED EMISSION	128 to 251	128, 189, 251	GPRS,EDGE
A	PEAK TO AVERAGE RATIO	128 to 251	128, 189, 251	GPRS,EDGE

WCDMA MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	ERP	4132 to 4233	4132, 4182, 4233	WCDMA
A	FREQUENCY STABILITY	4132 to 4233	4132, 4182, 4233	WCDMA
A	OCCUPIED BANDWIDTH	4132 to 4233	4132, 4182, 4233	WCDMA
A	BAND EDGE	4132 to 4233	4132, 4233	WCDMA
A	CONDCUDED EMISSION	4132 to 4233	4132, 4182, 4233	WCDMA
A	RADIATED EMISSION	4132 to 4233	4132, 4182, 4233	WCDMA
A	PEAK TO AVERAGE RATIO	4132 to 4233	4132, 4182, 4233	WCDMA



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LTE BAND 5 MODE

EUT CONFIGURE MODE	TEST ITEM	Available Channel	Tested Channel	Channel bandwidth	modulation	mode
A	ERP	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	1 RB / 0 RB offset
		20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	1 RB / 0 RB offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	1 RB / 0 RB offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	1 RB / 0 RB offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. LTE Band 5 are covered by LTE Band 26, Because it is a subset of LTE Band 26 with the same output power and supported bandwidths, So the test data please refer to LTE Band 26

LTE BAND 26 MODE

EUT CONFIGURE MODE	TEST ITEM	Available Channel	Tested Channel	Channel bandwidth	modulation	mode
A	ERP	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM	1 RB / 0 RB offset
		26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM	1 RB / 0 RB offset
		26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM	1 RB / 0 RB offset
		26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM	1 RB / 0 RB offset
		26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM	1 RB / 0 RB offset
A	FREQUENCY STABILITY	26865 to 26965	26865, 26915, 26965	15MHz	QPSK	75 RB / 0 RB offset
A	OCCUPIED BANDWIDTH	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM	6 RB / 0 RB offset
		26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM	15 RB / 0 RB offset
		26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM	25 RB / 0 RB offset
		26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM	50 RB / 0 RB offset
		26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM	75 RB / 0 RB offset
A	PEAK TO AVERAGE RATIO	26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
		26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset Full RB / 0 RB



						Offset
		26865 to 26965	26865, 26915, 26965	15MHz	QPSK,16QAM	1 RB / 0 RB Offset Full RB / 0 RB Offset
A	BAND EDGE	26797 to 27033	26797	1.4 MHz	QPSK,16QAM	1 RB / 0 RB offset
						6 RB / 0 RB offset
		26797 to 27033	27033	1.4 MHz	QPSK,16QAM	1 RB / 5 RB offset
						6 RB / 0 RB offset
		26805 to 27025	26805	3 MHz	QPSK,16QAM	1 RB / 0 RB offset
						15 RB / 0 RB offset
		26805 to 27025	27025	3 MHz	QPSK,16QAM	1 RB / 14 RB offset
						15 RB / 0 RB offset
		26815 to 27015	26815	5MHz	QPSK,16QAM	1 RB / 0 RB offset
						25 RB / 0 RB offset
		26815 to 27015	27015	5MHz	QPSK,16QAM	1 RB / 24 RB offset
						25 RB / 0 RB offset
		26840 to 26990	26840	10MHz	QPSK,16QAM	1 RB / 0 RB offset
						50 RB / 0 RB offset
		26840 to 26990	26990	10MHz	QPSK,16QAM	1 RB / 49 RB offset
						50 RB / 0 RB offset
A	CONDCUDED EMISSION	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK,16QAM	1 RB / 0 RB offset
		26805 to 27025	26805, 26915, 27025	3MHz	QPSK,16QAM	1 RB / 0 RB offset
		26815 to 27015	26815, 26915, 27015	5MHz	QPSK,16QAM	1 RB / 0 RB offset
		26840 to 26990	26840, 26915, 26990	10MHz	QPSK,16QAM	1 RB / 0 RB offset
		26865 to 26965	26865, 26915, 26965	15MHz	QPSK,16QAM	1 RB / 0 RB offset
A	RADIATED EMISSION	26797 to 27033	26915	1.4MHz	QPSK	1 RB / 0 RB offset
		26805 to 27025	26805, 26915, 27025	3MHz	QPSK	1 RB / 0 RB offset
		26815 to 27015	26915	5MHz	QPSK	1 RB / 0 RB offset
		26840 to 26990	26915	10MHz	QPSK	1 RB / 0 RB offset
		26865 to 26965	26915	15MHz	QPSK	1 RB / 0 RB offset

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



TEST CONDITION			
TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	DC 3.7V By DC Source	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.2V/ 3.7V/ 4.2V By DC Source	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 3.7V By DC Source	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 3.7V By DC Source	Hanwen Xu
CONDCUDED EMISSION	23deg. C, 70%RH	DC 3.7V By DC Source	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	DC 3.7V By DC Source	Hanwen Xu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 3.7V By DC Source	Hanwen Xu

2.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

2.6 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 22

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

Mobile / Portable station are limited to 7 watts e.r.p.

3.1.2 TEST PROCEDURES

EIRP / ERP MEASUREMENT:

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

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

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as P_{Meas} , typically dBW or dBm);

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

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

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

CONDUCTED POWER MEASUREMENT:

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



3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm):

Band	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GPRS 1Tx Slot	32.47	32.68	32.95
GPRS 2Tx Slot	32.16	32.40	32.70
GPRS 3Tx Slot	30.60	30.75	30.96
GPRS 4Tx Slot	28.82	28.99	29.23
EDGE 1Tx Slot	27.26	27.36	27.21
EDGE 2Tx Slot	25.02	25.08	25.22
EDGE 3Tx Slot	22.42	22.58	22.69
EDGE 4Tx Slot	20.41	20.58	20.72

Band	WCDMA V		
TX Channel	4132	4182	4233
Rx Channel	4357	4407	4458
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	23.58	23.59	23.54
HSDPA Subtest-1	23.47	23.56	23.52
HSDPA Subtest-2	23.47	23.56	23.52
HSDPA Subtest-3	23.05	23.07	23.06
HSDPA Subtest-4	22.97	23.01	22.93
DC-HSDPA Subtest-1	23.54	23.44	23.40
DC-HSDPA Subtest-2	23.57	23.53	23.39
DC-HSDPA Subtest-3	22.99	22.92	22.99
DC-HSDPA Subtest-4	22.99	23.03	22.92
HSUPA Subtest-1	23.54	23.52	23.44
HSUPA Subtest-2	21.55	21.61	21.53
HSUPA Subtest-3	22.59	22.61	22.56
HSUPA Subtest-4	21.47	21.57	21.45
HSUPA Subtest-5	23.45	23.54	23.50
HSPA+ Subtest-1	21.03	21.06	21.01



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Low	Mid	High
		Channel		20450	20525	20600
		Frequency (MHz)		829	836.5	844
10	QPSK	1	0	22.43	22.18	22.03
		1	24	22.31	22.47	22.49
		1	49	22.25	22.22	22.22
		25	0	21.14	21.33	21.30
		25	12	21.02	21.58	21.40
		25	25	21.38	21.12	21.49
		50	0	21.54	21.47	21.17
	16QAM	1	0	21.79	21.13	21.43
		1	24	21.32	21.33	21.76
		1	49	21.02	21.61	21.47
		25	0	20.22	20.40	20.43
		25	12	20.03	20.03	20.49
		25	25	20.37	20.16	20.08
		50	0	20.57	20.53	20.27
BW [MHz]	Modulation	Channel		20425	20525	20625
		Frequency (MHz)		826.5	836.5	846.5
5	QPSK	1	0	22.33	22.05	22.29
		1	12	22.41	22.02	22.43
		1	24	22.10	22.14	22.12
		12	0	21.06	21.22	21.16
		12	6	21.01	21.43	21.37
		12	13	21.26	21.08	21.35
		25	0	21.49	21.41	21.06
	16QAM	1	0	21.73	21.51	21.31
		1	12	21.17	21.31	21.75
		1	24	21.48	21.49	21.40
		12	0	20.21	20.25	20.42
		12	6	20.52	20.58	20.41
		12	13	20.27	20.04	20.58
		25	0	20.42	20.45	20.26



LTE Band 5						
BW [MHz]	Modulation	Channel		20415	20525	20635
		Frequency (MHz)		825.5	836.5	847.5
3	QPSK	1	0	22.19	22.04	22.45
		1	7	22.37	22.01	22.41
		1	14	22.01	22.04	22.02
		8	0	21.53	21.09	21.01
		8	3	21.50	21.41	21.27
		8	7	21.22	21.07	21.26
		15	0	21.36	21.30	21.57
	16QAM	1	0	21.70	21.48	21.30
		1	7	21.13	21.24	21.62
		1	14	21.40	21.41	21.28
		8	0	20.10	20.22	20.40
		8	3	20.43	20.57	20.28
		8	7	20.18	20.02	20.54
		15	0	20.36	20.41	20.15
BW [MHz]	Modulation	Channel		20407	20525	20643
		Frequency (MHz)		824.7	836.5	848.3
1.4	QPSK	1	0	22.09	22.20	22.42
		1	2	22.24	22.16	22.30
		1	5	22.28	22.25	22.20
		3	0	22.21	22.15	22.42
		3	1	22.20	22.11	22.24
		3	3	22.29	22.38	22.03
		6	0	21.22	21.22	21.46
	16QAM	1	0	21.66	21.34	21.27
		1	2	21.10	21.13	21.50
		1	5	21.36	21.30	21.22
		3	0	21.50	21.26	21.21
		3	1	21.22	21.32	21.03
		3	3	21.17	21.35	21.31
		6	0	20.34	20.31	20.12



LTE Band 26						
BW [MHz]	Modulation	RB Size	RB Offset	Low	Mid	High
		Channel		26865	26915	26965
		Frequency (MHz)		831.5	836.5	841.5
15	QPSK	1	0	22.80	22.13	22.03
		1	37	22.07	22.33	22.85
		1	74	22.21	22.56	22.35
		36	0	21.42	21.17	21.52
		36	19	21.15	21.45	21.81
		36	39	21.20	21.69	21.63
		75	0	21.20	21.43	21.53
	16QAM	1	0	22.05	21.58	21.42
		1	37	21.45	21.69	22.25
		1	74	21.59	21.96	21.75
		36	0	20.40	20.18	20.52
		36	19	20.18	20.49	20.87
		36	39	20.25	20.68	20.65
		75	0	20.26	20.39	20.50
BW [MHz]	Modulation	Channel		26840	26915	26990
		Frequency (MHz)		829	836.5	844
10	QPSK	1	0	22.73	22.08	22.38
		1	24	22.49	22.30	22.74
		1	49	22.16	22.50	22.21
		25	0	21.31	21.03	21.48
		25	12	21.06	21.31	21.69
		25	25	21.14	21.68	21.52
		50	0	21.06	21.34	21.39
	16QAM	1	0	21.96	21.43	21.39
		1	24	21.36	21.65	22.13
		1	49	21.44	21.81	21.70
		25	0	20.37	20.11	20.39
		25	12	20.15	20.40	20.80
		25	25	20.13	20.53	20.51
		50	0	20.18	20.37	20.49



LTE Band 26						
BW [MHz]	Modulation	Channel		26815	26915	27015
		Frequency (MHz)		826.5	836.5	846.5
5	QPSK	1	0	22.72	22.44	22.27
		1	12	22.36	22.17	22.72
		1	24	22.02	22.41	22.19
		12	0	21.30	21.42	21.38
		12	6	21.04	21.30	21.65
		12	13	21.50	21.65	21.51
		25	0	21.44	21.22	21.25
	16QAM	1	0	21.95	21.38	21.33
		1	12	21.32	21.57	22.01
		1	24	21.36	21.68	21.55
		12	0	20.27	20.07	20.35
		12	6	20.13	20.30	20.65
		12	13	20.10	20.47	20.40
		25	0	20.08	20.31	20.45
BW [MHz]	Modulation	Channel		26805	26915	27025
		Frequency (MHz)		825.5	836.5	847.5
3	QPSK	1	0	22.58	22.46	22.28
		1	7	22.48	22.29	22.64
		1	14	22.06	22.38	22.13
		8	0	21.17	21.40	21.39
		8	3	21.01	21.26	21.59
		8	7	21.08	21.66	21.49
		15	0	21.41	21.24	21.24
	16QAM	1	0	21.81	21.32	21.34
		1	7	21.30	21.62	22.08
		1	14	21.29	21.75	21.57
		8	0	20.25	20.03	20.27
		8	3	20.13	20.37	20.77
		8	7	20.05	20.41	20.47
		15	0	20.12	20.24	20.41



LTE Band 26						
BW [MHz]	Modulation	Channel		26797	26915	27033
		Frequency (MHz)		824.7	836.5	848.3
1.4	QPSK	1	0	22.68	22.04	22.36
		1	2	22.35	22.28	22.71
		1	5	22.08	22.44	22.14
		3	0	22.08	22.19	22.19
		3	1	22.29	22.02	22.36
		3	3	22.37	22.33	22.27
		6	0	21.44	21.19	21.25
	16QAM	1	0	21.83	21.30	21.33
		1	2	21.25	21.58	22.04
		1	5	21.39	21.71	21.58
		3	0	21.11	21.36	21.15
		3	1	21.40	21.10	21.55
		3	3	21.42	21.23	21.27
		6	0	20.04	20.30	20.42

**ERP POWER (dBm)**

GPRS 850						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
128	824.2	32.47	4.86	35.18	3296.10	7
189	836.4	32.68	4.86	35.39	3459.39	7
251	848.8	32.95	4.86	35.66	3681.29	7

EDGE 850						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
128	824.2	27.26	4.86	29.97	993.12	7
189	836.4	27.36	4.86	30.07	1016.25	7
251	848.8	27.21	4.86	29.92	981.75	7

WCDMA B5						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
4132	826.4	23.58	4.86	28.44	698.23	7
4182	836.4	23.59	4.86	28.45	699.84	7
4233	846.6	23.54	4.86	28.40	691.83	7



LTE Band 5							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
10M-QPSK	20450	829	22.43	4.86	25.14	326.59	7
	20525	836.5	22.47	4.86	25.18	329.61	7
	20600	844	22.49	4.86	25.20	331.13	7
10M- 16QAM	20450	829	21.79	4.86	24.50	281.84	7
	20525	836.5	21.61	4.86	24.32	270.40	7
	20600	844	21.76	4.86	24.47	279.90	7
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
5M-QPSK	20425	826.5	22.41	4.86	25.12	325.09	7
	20525	836.5	22.14	4.86	24.85	305.49	7
	20625	846.5	22.43	4.86	25.14	326.59	7
5M-16QAM	20425	826.5	21.73	4.86	24.44	277.97	7
	20525	836.5	21.51	4.86	24.22	264.24	7
	20625	846.5	21.75	4.86	24.46	279.25	7
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
3M-QPSK	20415	825.5	22.37	4.86	25.08	322.11	7
	20525	836.5	22.04	4.86	24.75	298.54	7
	20635	847.5	22.45	4.86	25.16	328.10	7
3M-16QAM	20415	825.5	21.70	4.86	24.41	276.06	7
	20525	836.5	21.48	4.86	24.19	262.42	7
	20635	847.5	21.62	4.86	24.33	271.02	7
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
1.4M-QPSK	20407	824.7	22.29	4.86	25.00	316.23	7
	20525	836.5	22.38	4.86	25.09	322.85	7
	20643	848.3	22.42	4.86	25.13	325.84	7
1.4M- 16QAM	20407	824.7	21.66	4.86	24.37	273.53	7
	20525	836.5	21.35	4.86	24.06	254.68	7
	20643	848.3	21.50	4.86	24.21	263.63	7



LTE Band 26							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
15M-QPSK	26865	831.5	22.80	4.86	25.51	355.63	7
	26915	836.5	22.56	4.86	25.27	336.51	7
	26965	841.5	22.85	4.86	25.56	359.75	7
15M- 16QAM	26865	831.5	22.05	4.86	24.76	299.23	7
	26915	836.5	21.96	4.86	24.67	293.09	7
	26965	841.5	22.25	4.86	24.96	313.33	7
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
10M-QPSK	26840	829	22.73	4.86	25.44	349.95	7
	26915	836.5	22.50	4.86	25.21	331.89	7
	26990	844	22.74	4.86	25.45	350.75	7
10M- 16QAM	26840	829	21.96	4.86	24.67	293.09	7
	26915	836.5	21.81	4.86	24.52	283.14	7
	26990	844	22.13	4.86	24.84	304.79	7
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
5M-QPSK	26815	826.5	22.72	4.86	25.43	349.14	7
	26915	836.5	22.44	4.86	25.15	327.34	7
	27015	846.5	22.72	4.86	25.43	349.14	7
5M-16QAM	26815	826.5	21.95	4.86	24.66	292.42	7
	26915	836.5	21.68	4.86	24.39	274.79	7
	27015	846.5	22.01	4.86	24.72	296.48	7
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
3M-QPSK	26805	825.5	22.58	4.86	25.29	338.06	7
	26915	836.5	22.46	4.86	25.17	328.85	7
	27025	847.5	22.64	4.86	25.35	342.77	7
3M-16QAM	26805	825.5	21.81	4.86	24.52	283.14	7
	26915	836.5	21.75	4.86	24.46	279.25	7
	27025	847.5	22.08	4.86	24.79	301.30	7



LTE Band 26							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	FCC Limit (W)
1.4M-QPSK	26797	824.7	22.68	4.86	25.39	345.94	7
	26915	836.5	22.44	4.86	25.15	327.34	7
	27033	848.3	22.71	4.86	25.42	348.34	7
1.4M- 16QAM	26797	824.7	21.83	4.86	24.54	284.45	7
	26915	836.5	21.71	4.86	24.42	276.69	7
	27033	848.3	22.04	4.86	24.75	298.54	7

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



3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

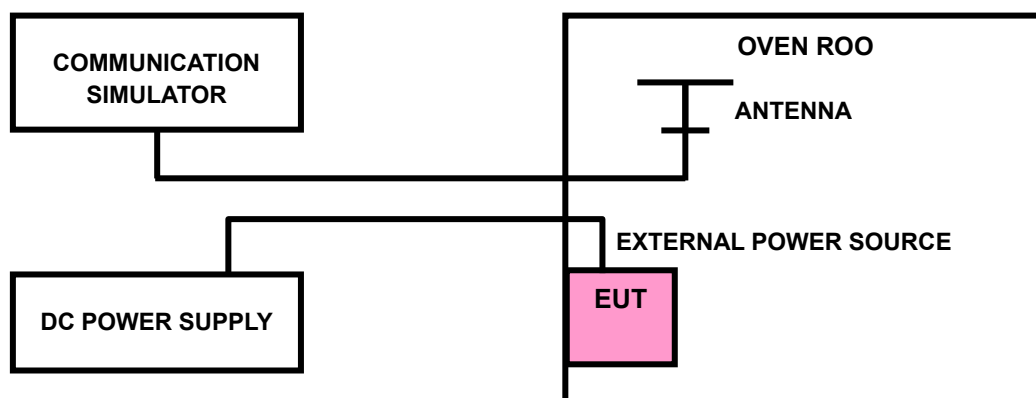
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

3.2.2 TEST PROCEDURE

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

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

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

Please Refer to Appendix of this test report.

Note: VL = Low voltage(3.2V); VN/NV = Normal voltage(3.7V); VH = High voltage(4.2V); NT = Normal temperature (25°C)

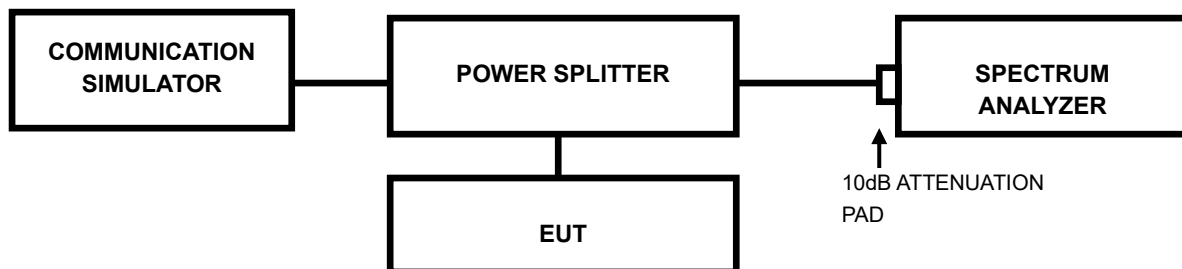


3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

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

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

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

3.3.4 TEST RESULTS

Please Refer to Appendix of this test report.

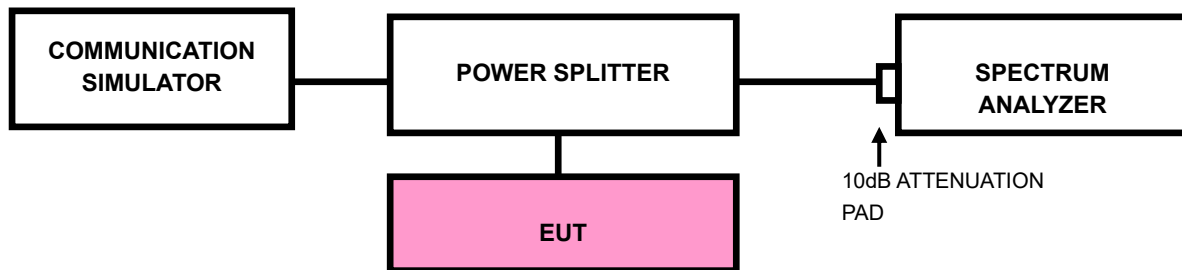


3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.4.2 TEST SETUP





3.4.3 TEST PROCEDURES

- a) All measurements were done at low and high operational frequency range
- b) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- c) Tune the analyzer to the nominal center frequency of the emission bandwidth

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

3.4.4 TEST RESULTS

Please Refer to Appendix of this test report.



3.5 CONDUCTED SPURIOUS EMISSIONS

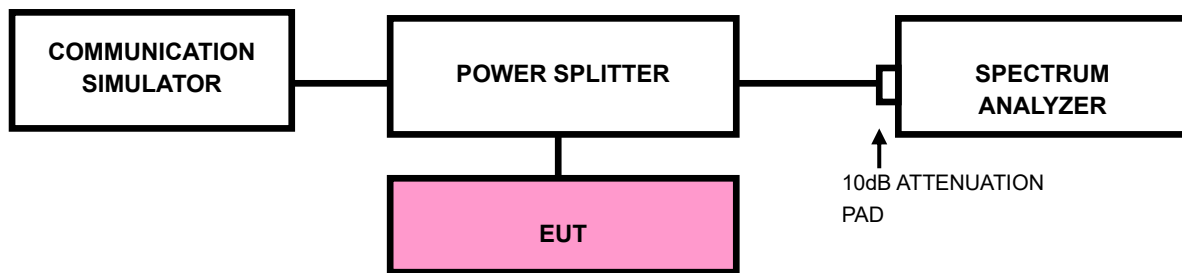
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm .

3.5.2 TEST PROCEDURE

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

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

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

Please Refer to Appendix of this test report.



3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm .

3.6.2 TEST PROCEDURES

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

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

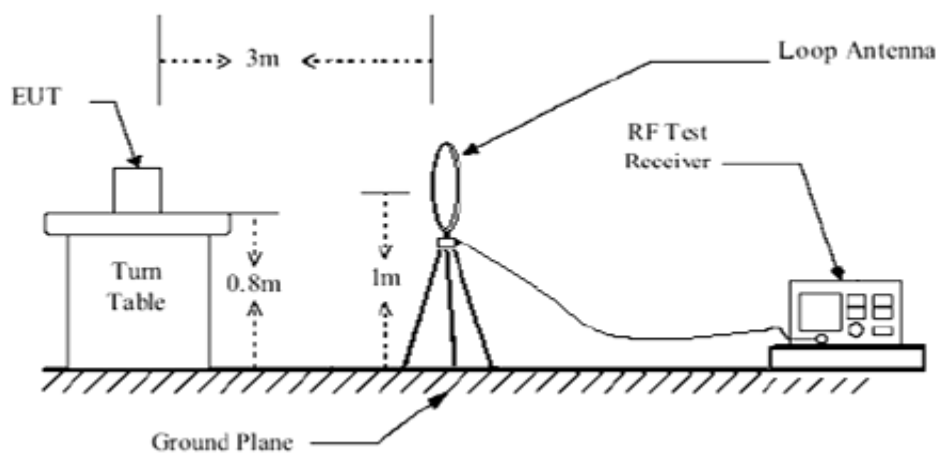
3.6.3 DEVIATION FROM TEST STANDARD

No deviation

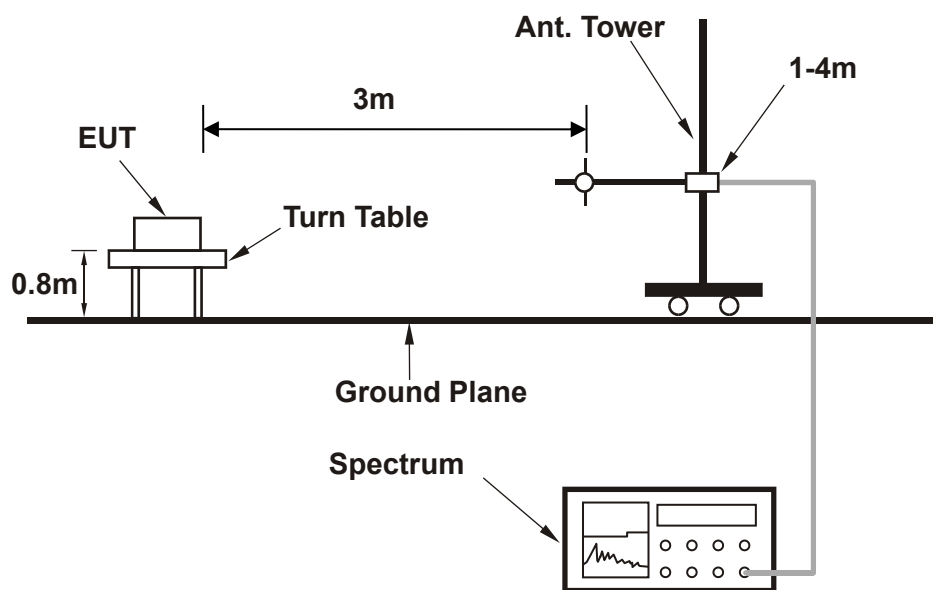


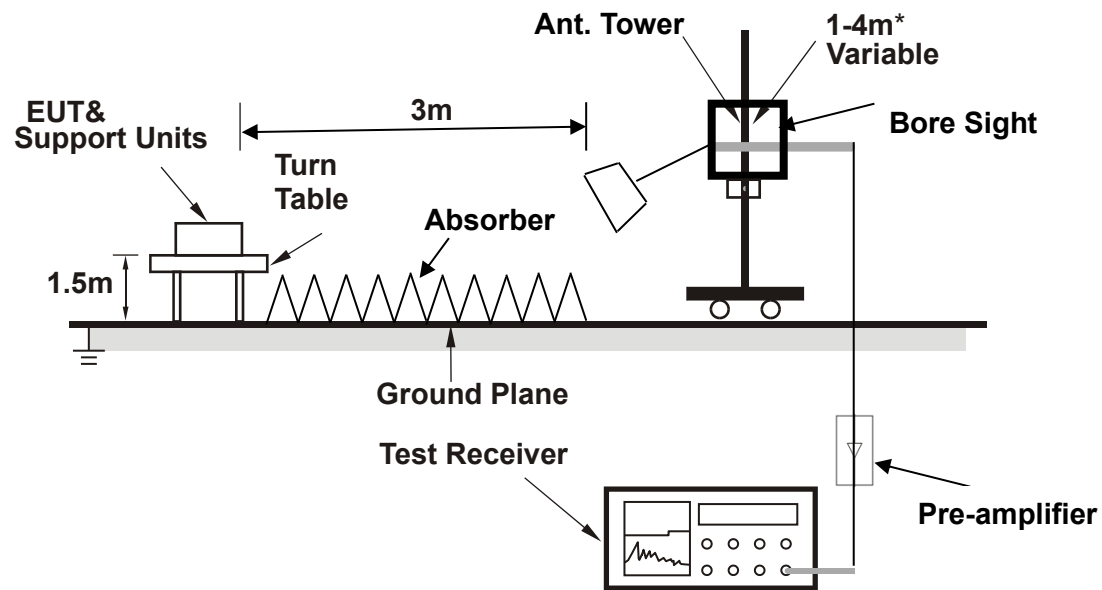
3.6.4 TEST SETUP

< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >





Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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



3.6.5 TEST RESULTS

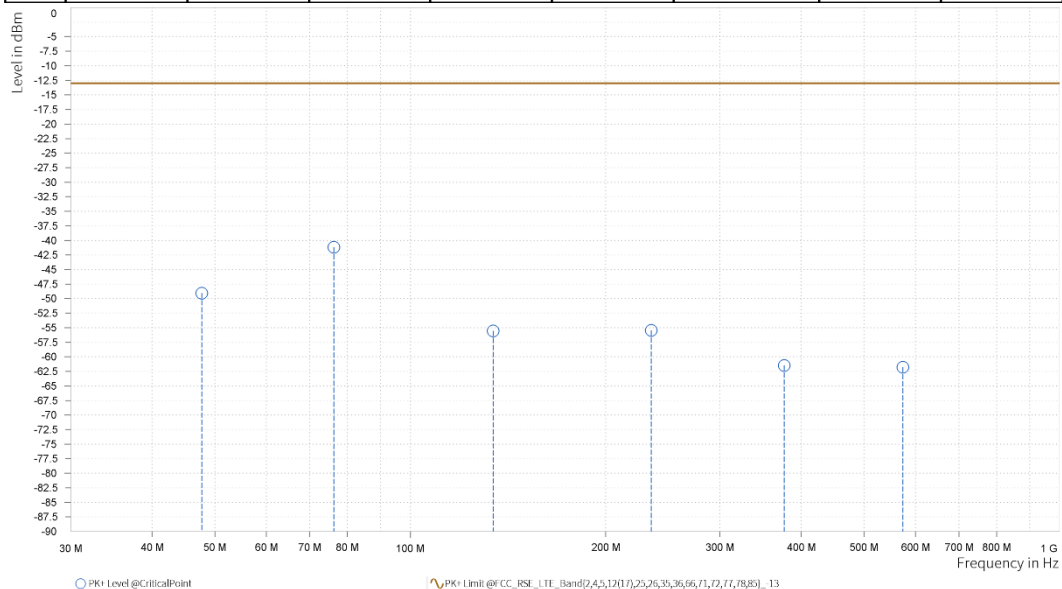
NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA

LTE Band 26 CHANNEL BANDWIDTH: 3MHz / QPSK			
MODE	TX channel 26915	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
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	47.751	-49.06	-13.00	36.06	8.73	H	312.8	2.00
1	76.269	-41.16	-13.00	28.16	2.39	H	151.4	2.00
1	134.130	-55.54	-13.00	42.54	1.30	H	205.1	2.00
1	235.107	-55.45	-13.00	42.45	8.10	H	48.5	1.00
1	376.581	-61.47	-13.00	48.47	10.41	H	48.5	1.00
1	573.637	-61.79	-13.00	48.79	12.54	H	205.1	2.00

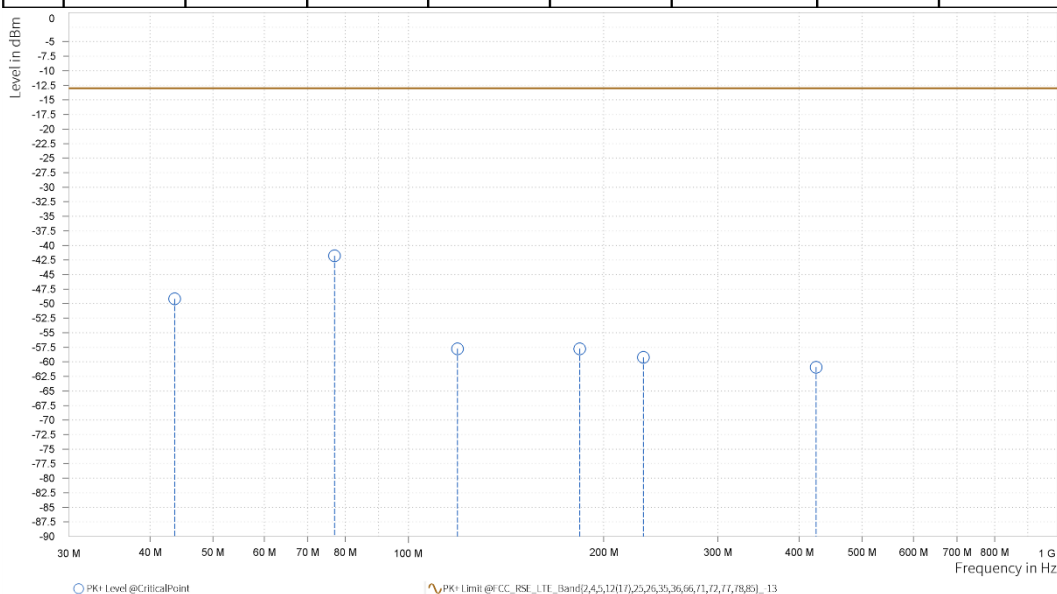




MODE	TX channel 26915	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

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	43.677	-49.19	-13.00	36.19	11.03	V	256.6	2.00
1	76.948	-41.81	-13.00	28.81	3.83	V	204	2.00
1	119.095	-57.77	-13.00	44.77	5.32	V	204	2.00
1	183.600	-57.76	-13.00	44.76	5.13	V	151.4	2.00
1	230.305	-59.24	-13.00	46.24	8.29	V	151.4	2.00
1	424.984	-60.93	-13.00	47.93	12.44	V	151.4	2.00

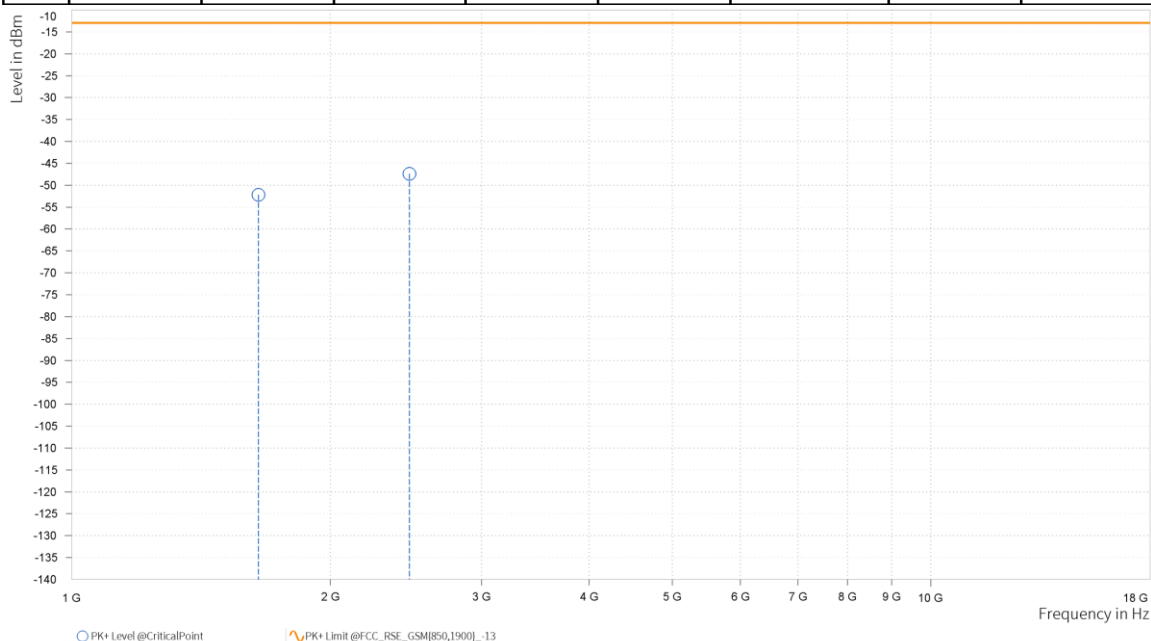


**ABOVE 1GHz DATA****Note:** For higher frequency, the emission is too low to be detected.**GPRS 850**

MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,648.400	-52.18	-13.00	39.18	16.68	H	88.9	1.00
3	2,472.600	-47.38	-13.00	34.38	21.67	H	1	1.00

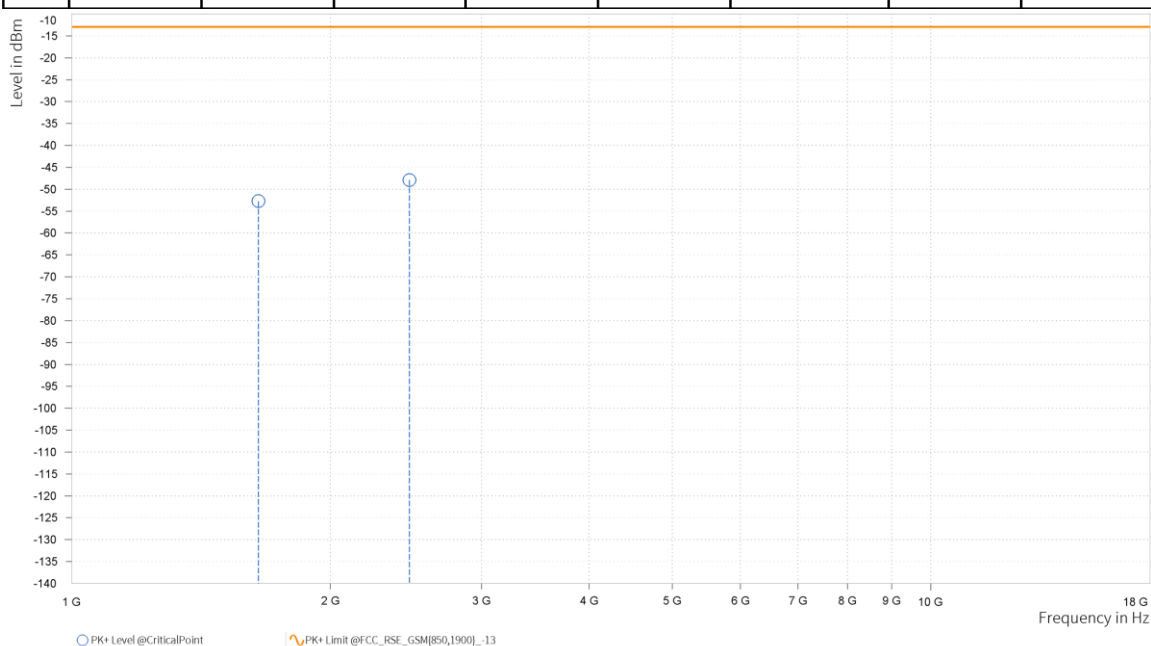




MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,648.400	-52.73	-13.00	39.73	16.26	V	359	2.00
3	2,472.600	-47.91	-13.00	34.91	21.92	V	1	1.00

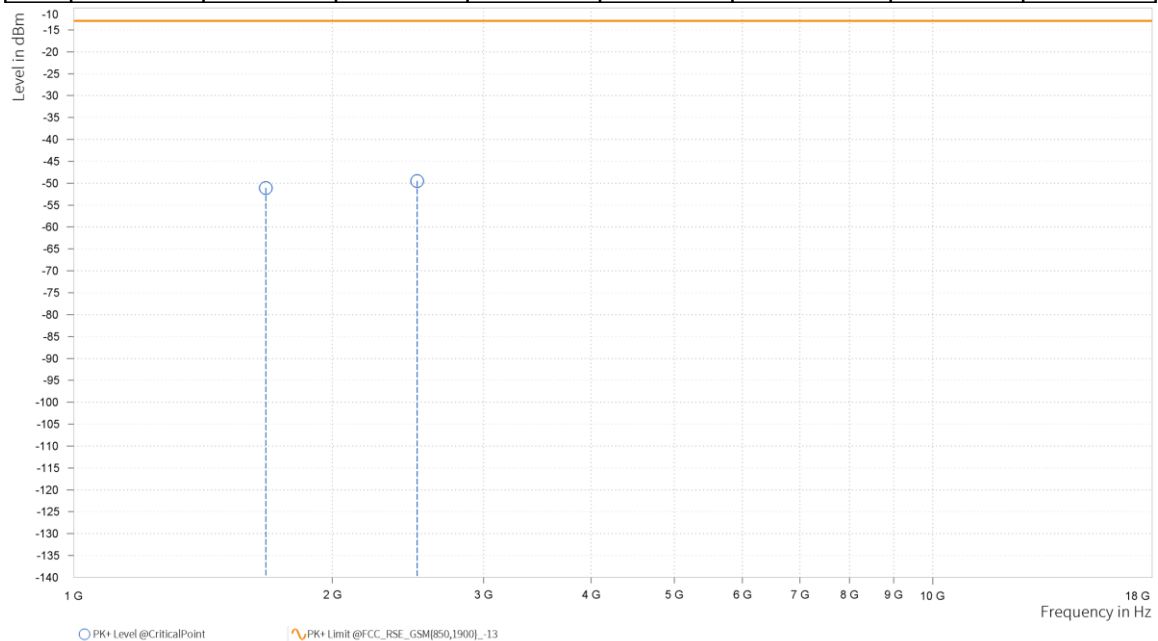




MODE	TX channel 189	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,672.800	-51.09	-13.00	38.09	17.47	H	1	1.00
3	2,509.200	-49.49	-13.00	36.49	21.81	H	359.1	1.00

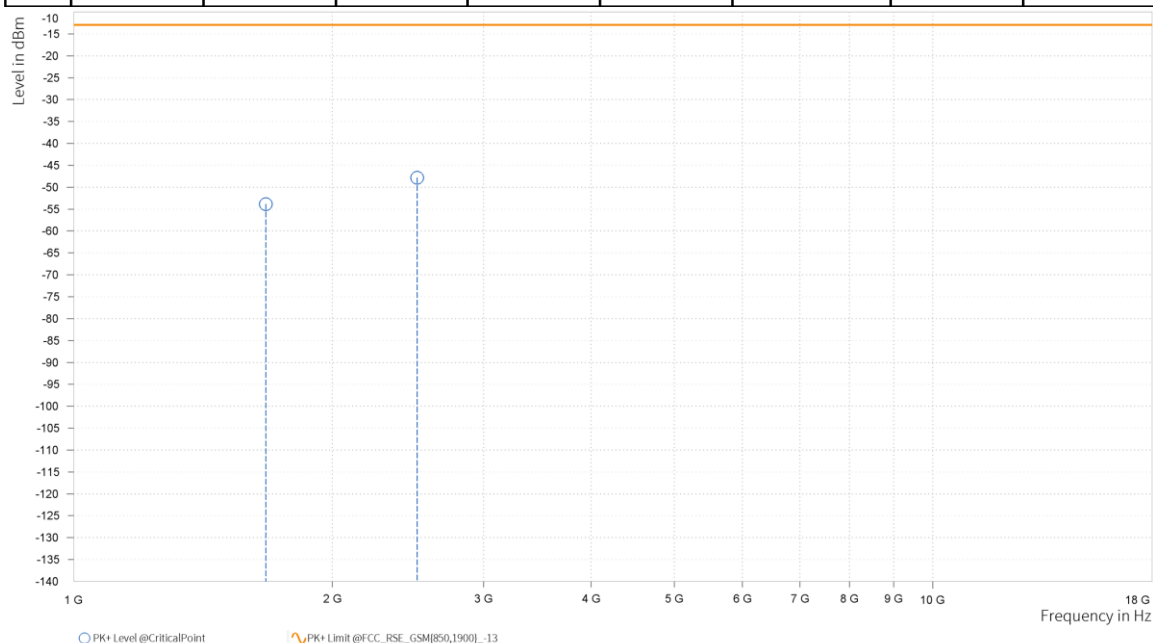




MODE	TX channel 189	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,672.800	-53.84	-13.00	40.84	16.36	V	87.7	1.00
3	2,509.200	-47.81	-13.00	34.81	22.42	V	160.6	2.00

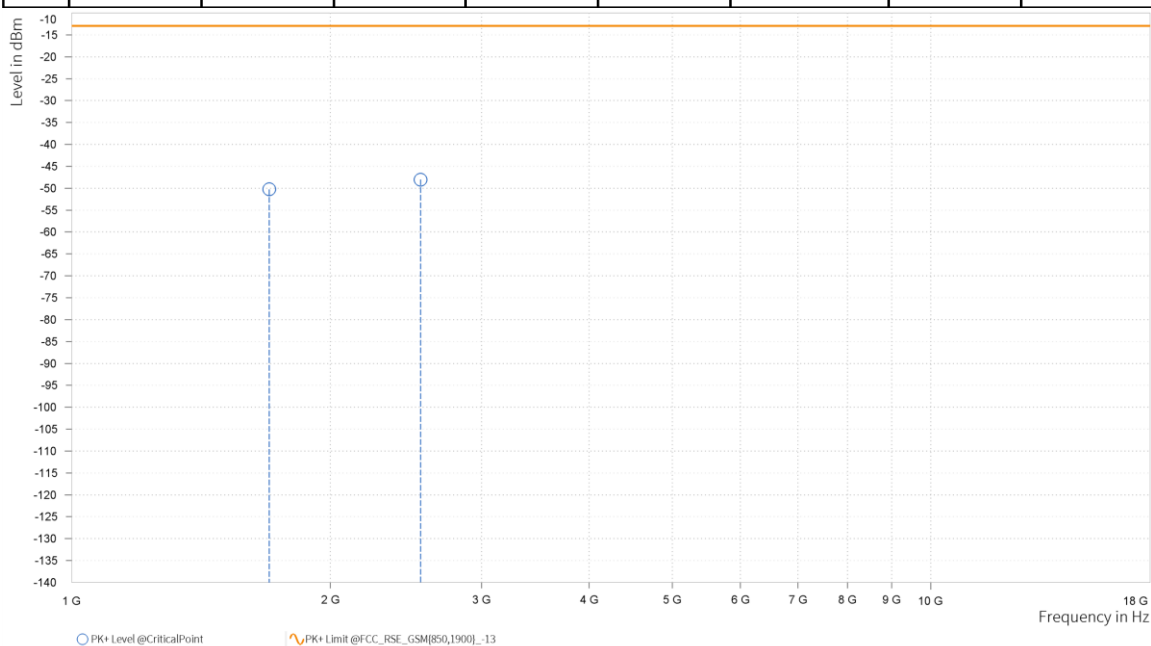




MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,697.600	-50.25	-13.00	37.25	17.92	H	88.8	1.00
3	2,546.400	-48.02	-13.00	35.02	21.95	H	197	2.00

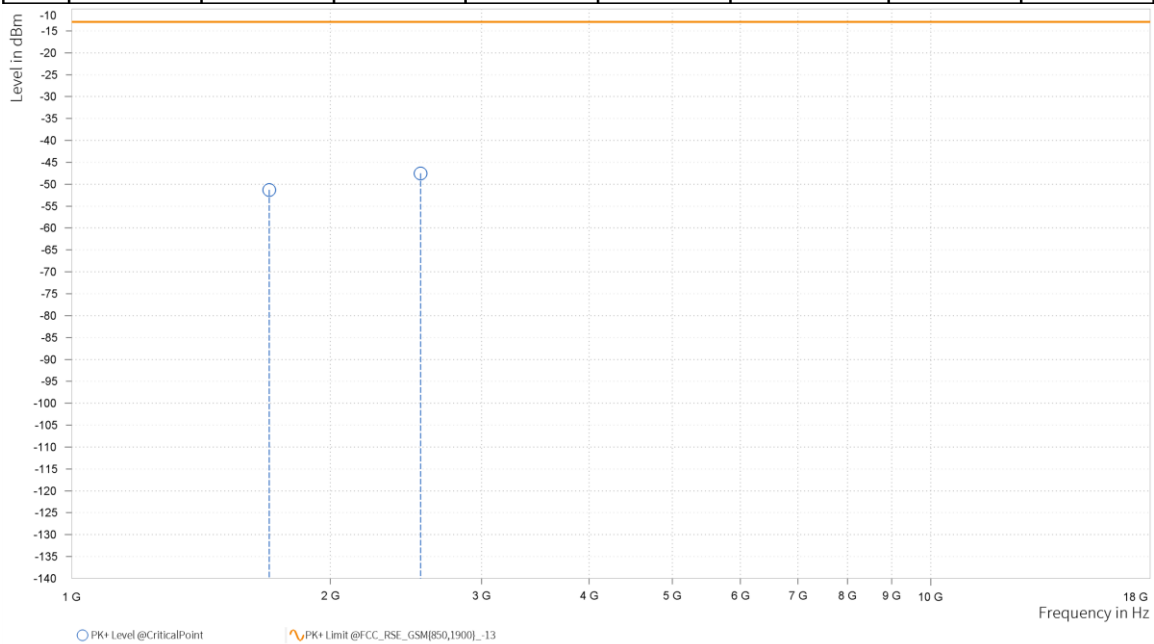


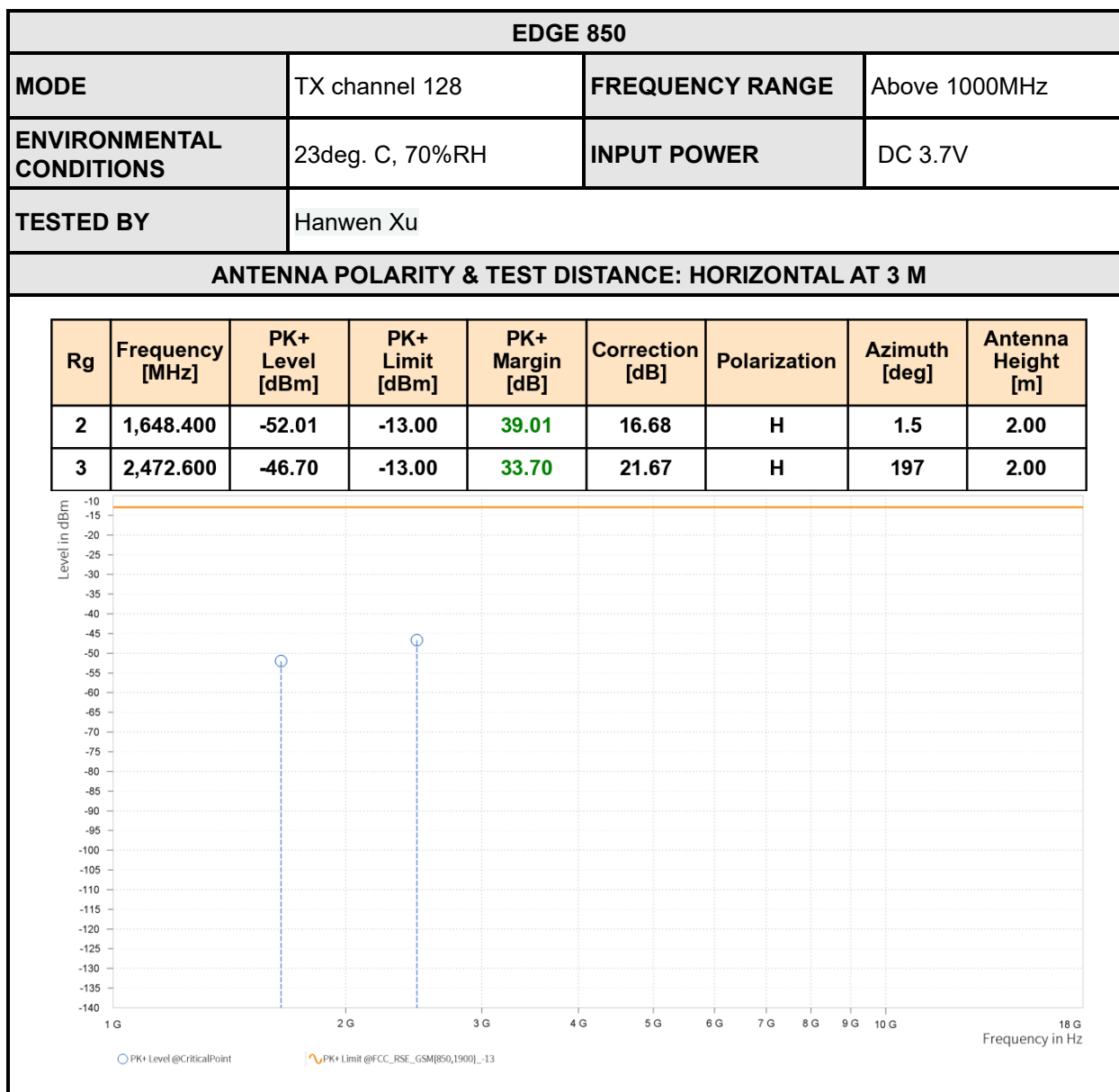


MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,697.600	-51.30	-13.00	38.30	17.14	V	359	1.00
3	2,546.400	-47.53	-13.00	34.53	22.57	V	1	2.00



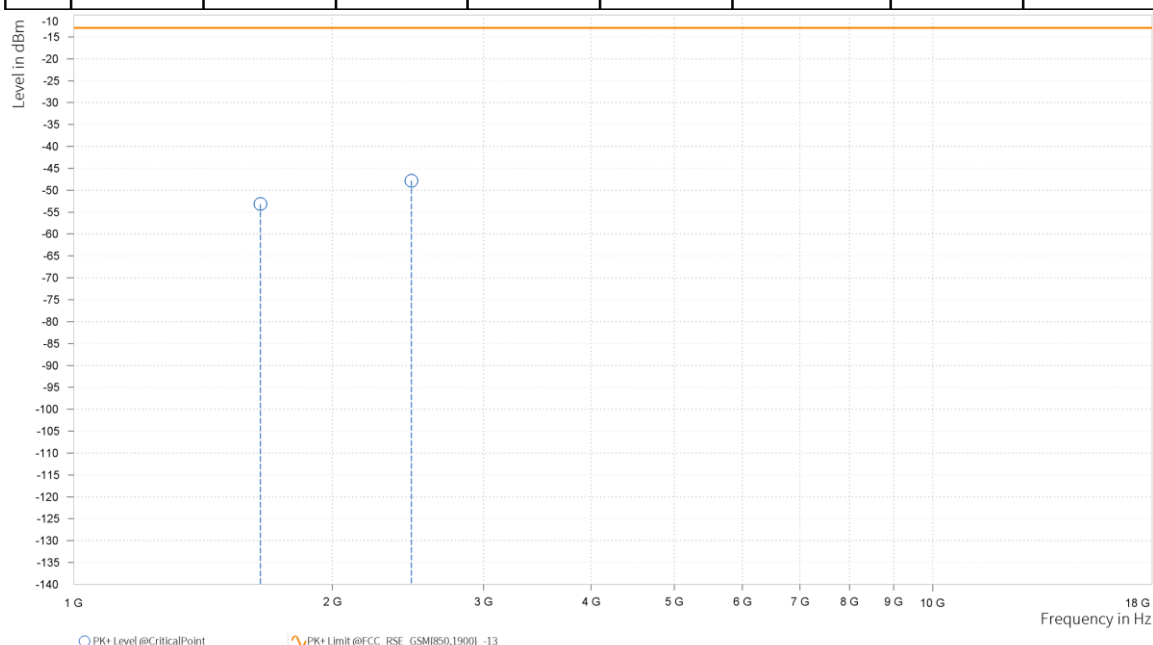




MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,648.400	-53.14	-13.00	40.14	16.26	V	1	1.00
3	2,472.600	-47.83	-13.00	34.83	21.92	V	359	1.00

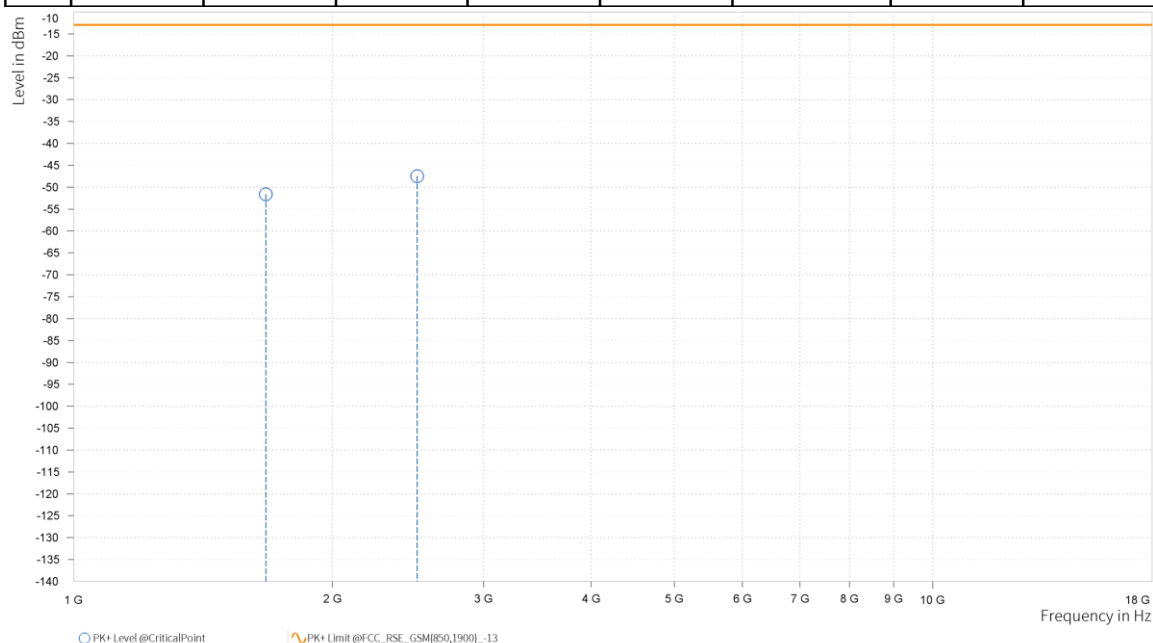




MODE	TX channel 189	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,672.800	-51.61	-13.00	38.61	17.47	H	1.5	2.00
3	2,509.200	-47.44	-13.00	34.44	21.81	H	198.2	2.00

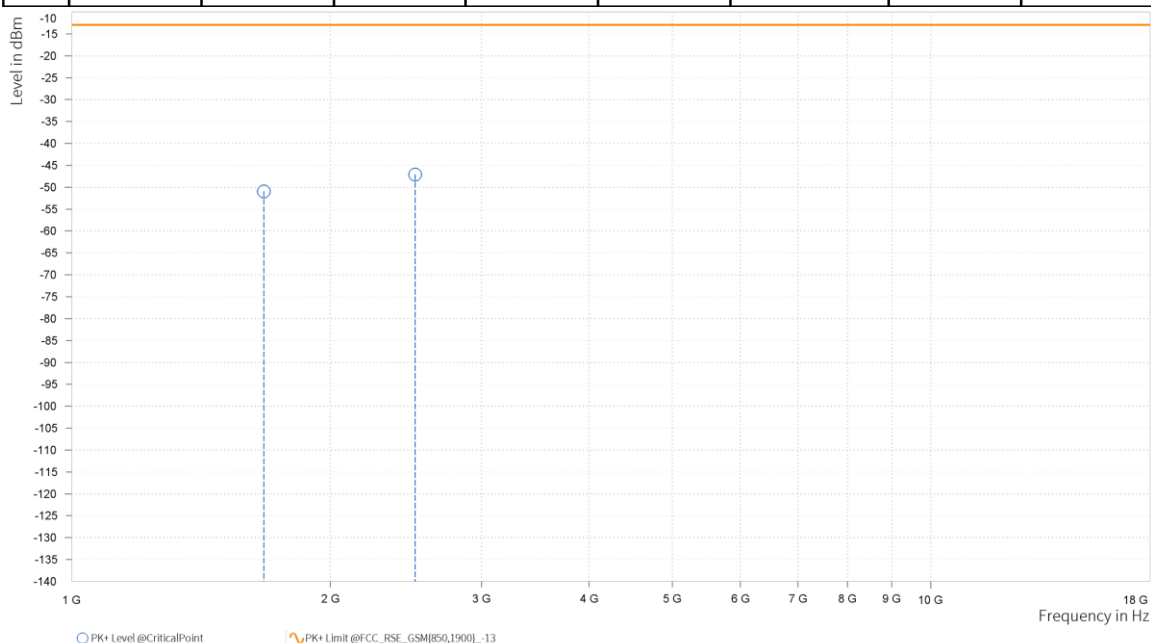




MODE	TX channel 189	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,672.800	-50.94	-13.00	37.94	16.36	V	359	2.00
3	2,509.200	-47.08	-13.00	34.08	22.42	V	359	2.00

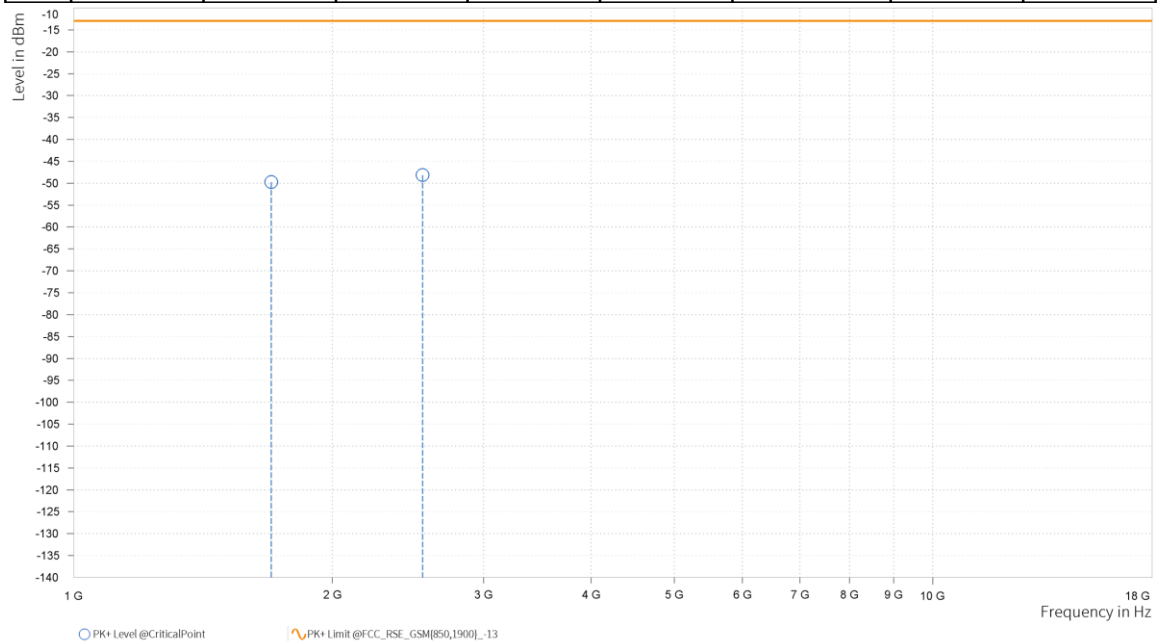




MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,697.600	-49.73	-13.00	36.73	17.92	H	359	2.00
3	2,546.400	-48.16	-13.00	35.16	21.95	H	197	2.00

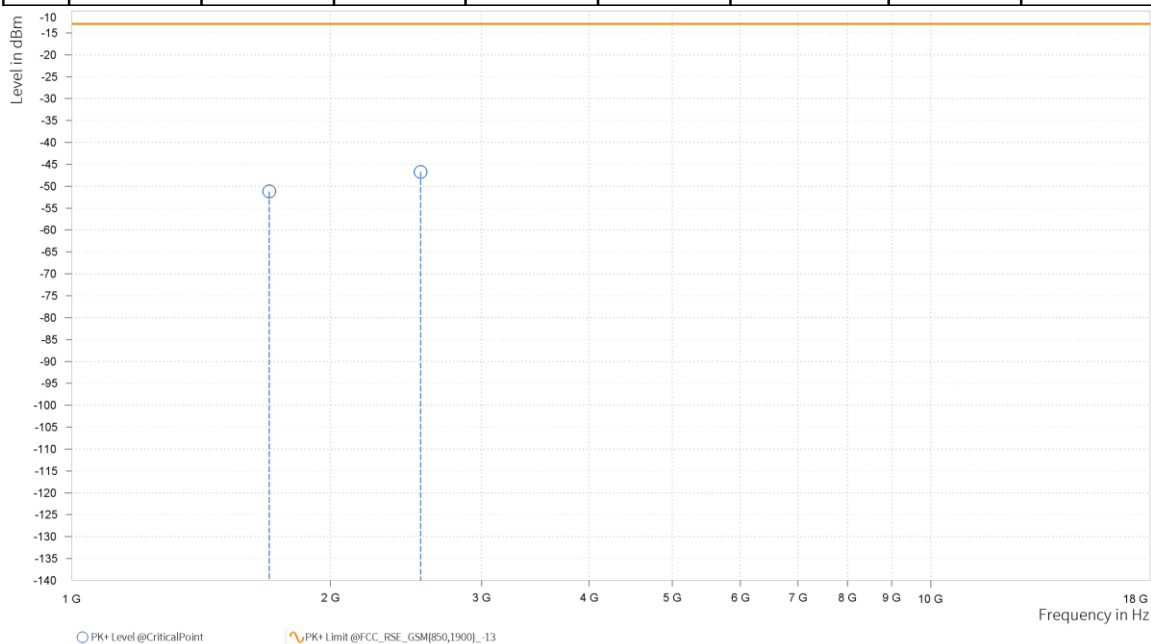




MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,697.600	-51.20	-13.00	38.20	17.14	V	222.1	2.00
3	2,546.400	-46.71	-13.00	33.71	22.57	V	359	1.00

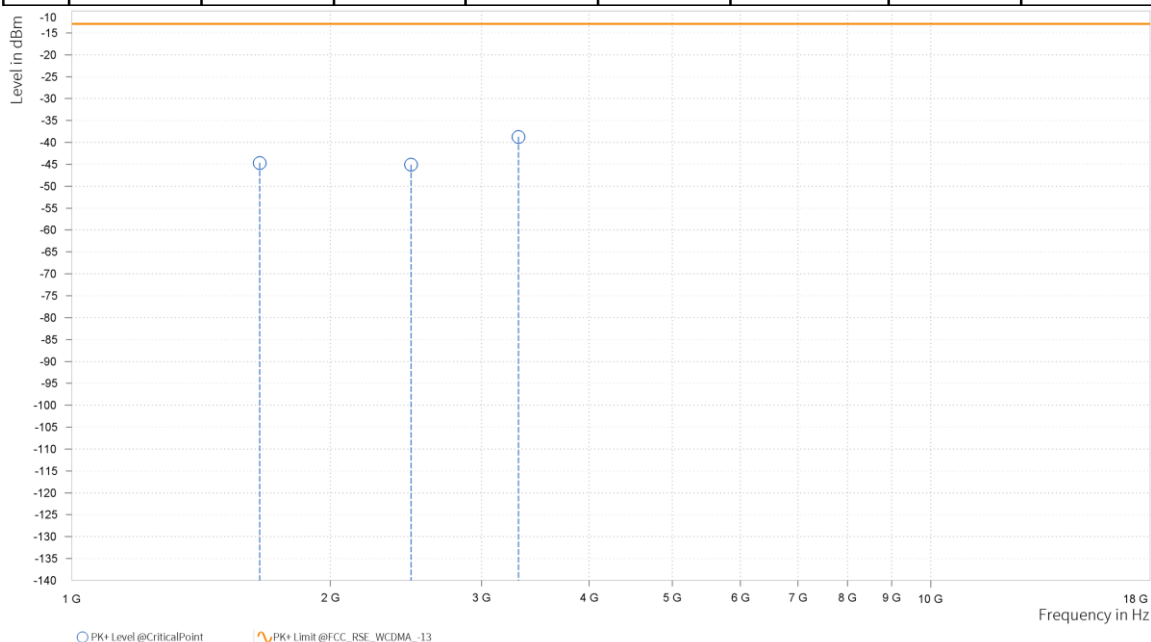




WCDMA Band V			
MODE	TX channel 4132	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,654.000	-44.69	-13.00	31.69	15.02	H	324.7	2.00
3	2,483.000	-45.08	-13.00	32.08	20.54	H	193.1	1.00
4	3,310.500	-38.74	-13.00	25.74	20.36	H	200.9	1.00

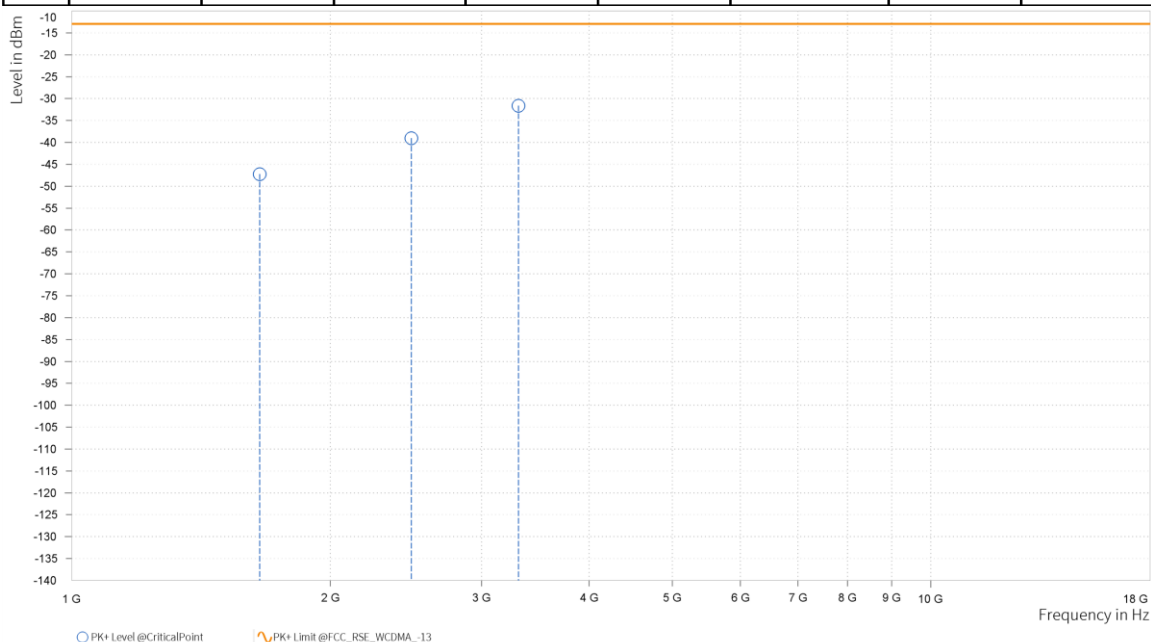




MODE	TX channel 4132	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,655.000	-47.24	-13.00	34.24	14.23	V	1.4	2.00
3	2,483.500	-39.02	-13.00	26.02	20.78	V	65.7	1.00
4	3,310.500	-31.61	-13.00	18.61	20.97	V	199.4	1.00

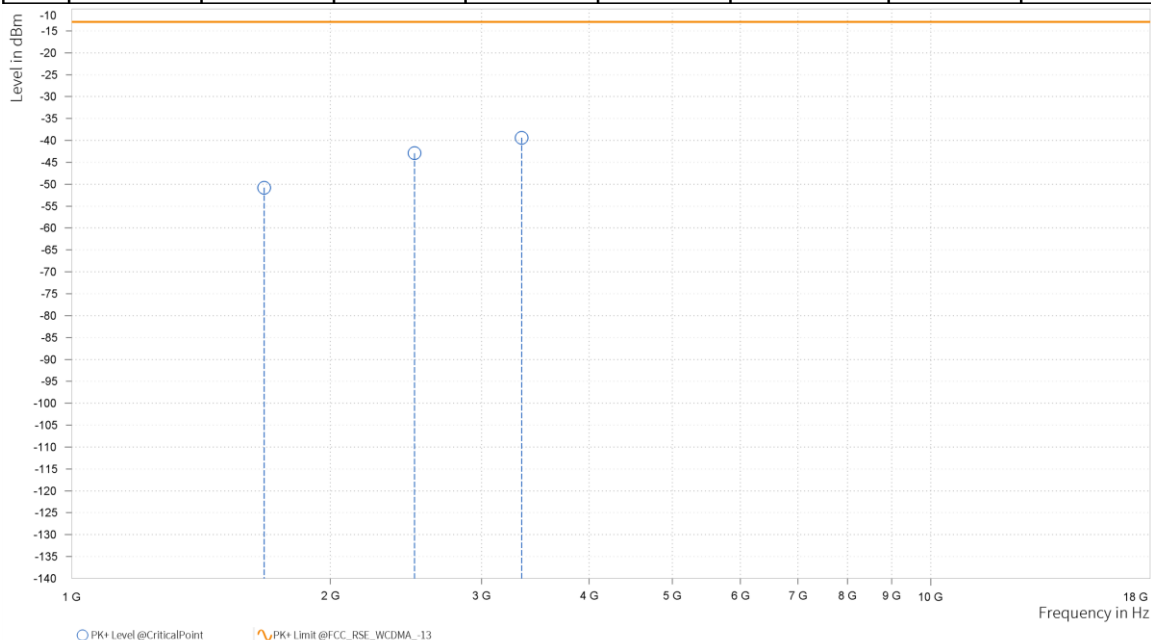




MODE	TX channel 4182	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,674.500	-50.79	-13.00	37.79	15.53	H	1	1.00
3	2,506.500	-42.92	-13.00	29.92	20.57	H	192.3	1.00
4	3,340.500	-39.39	-13.00	26.39	20.64	H	93.3	2.00

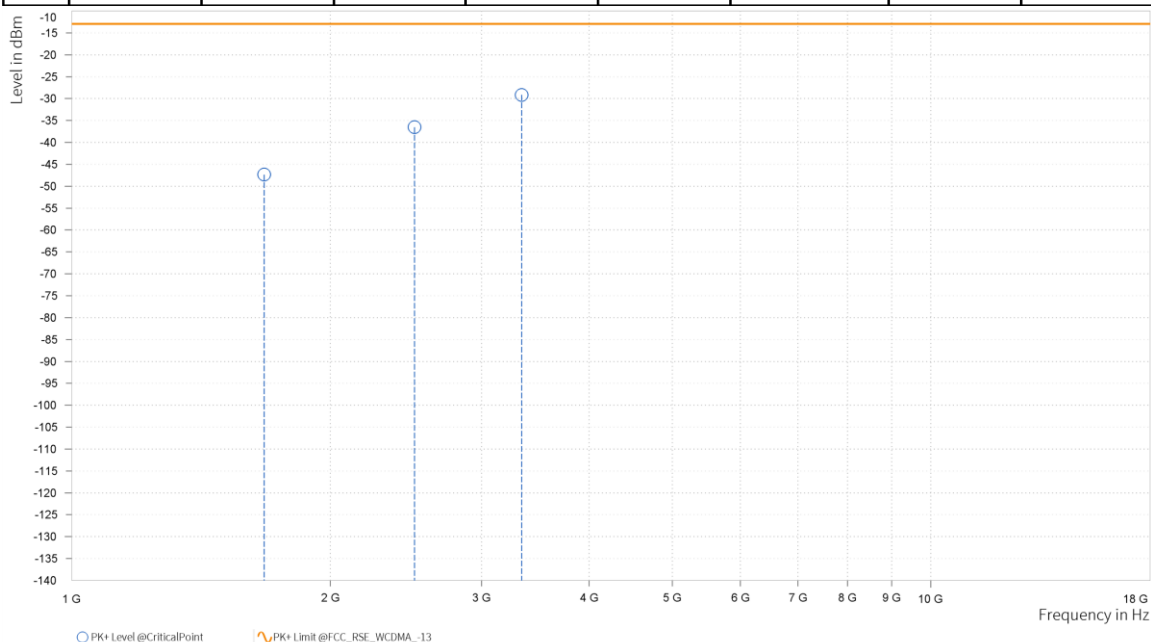




MODE	TX channel 4182	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,675.000	-47.34	-13.00	34.34	14.44	V	324.7	2.00
3	2,506.500	-36.54	-13.00	23.54	21.11	V	71.3	1.00
4	3,340.500	-29.14	-13.00	16.14	21.00	V	95.4	2.00

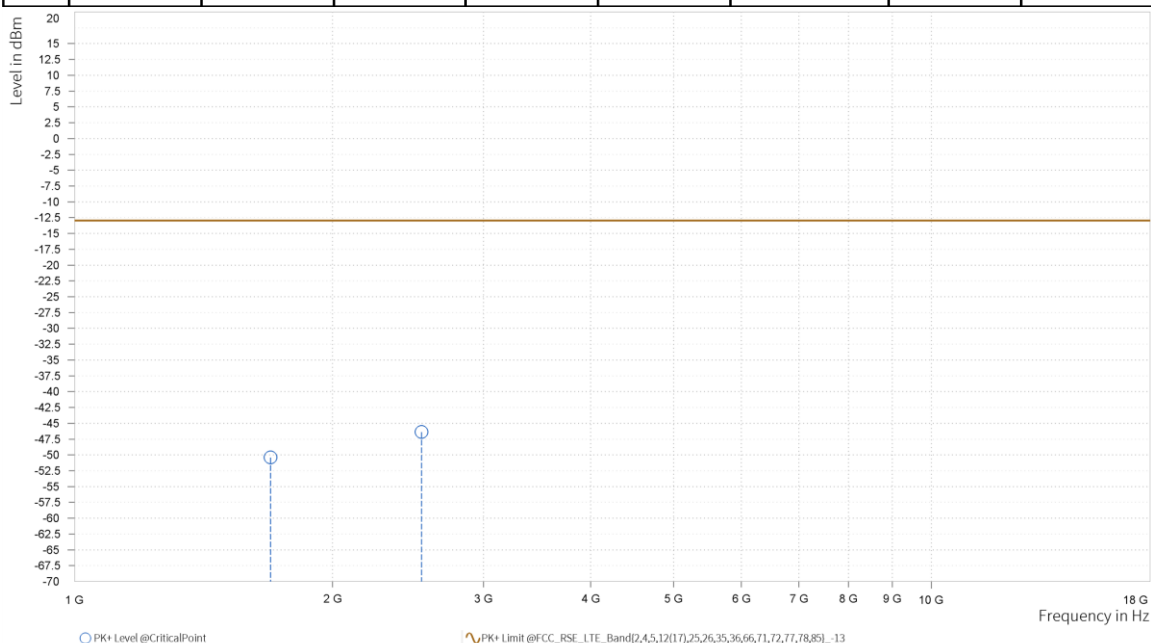




MODE	TX channel 4233	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,693.200	-50.40	-13.00	37.40	20.47	H	359.1	1.00
3	2,539.800	-46.38	-13.00	33.38	23.38	H	224.3	2.00

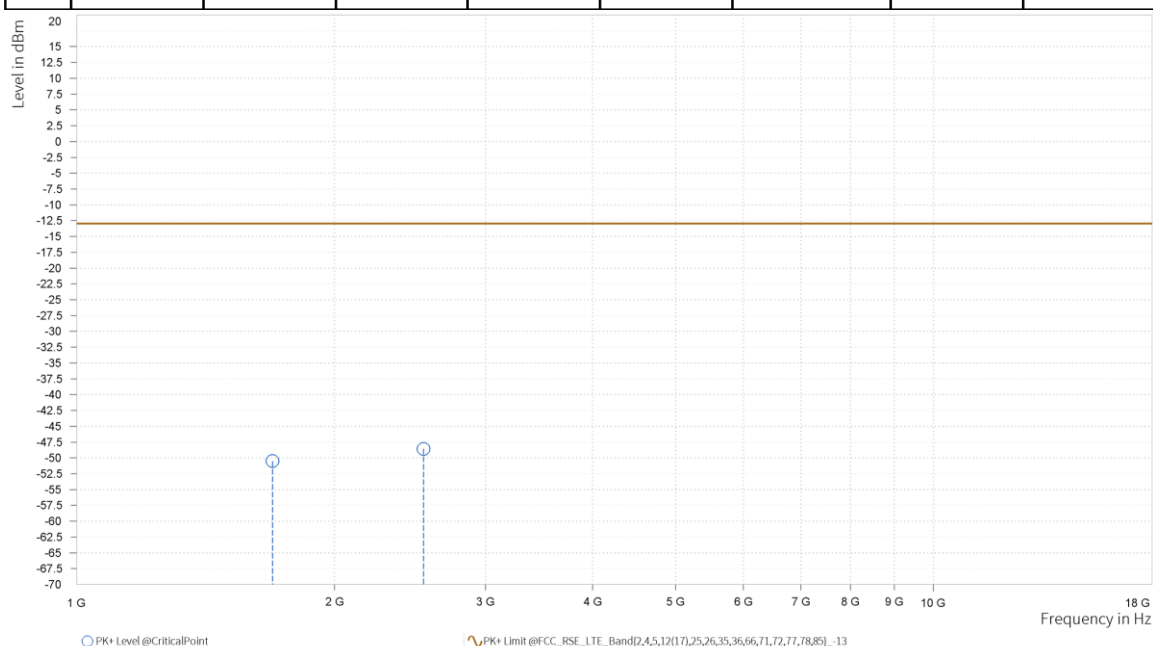


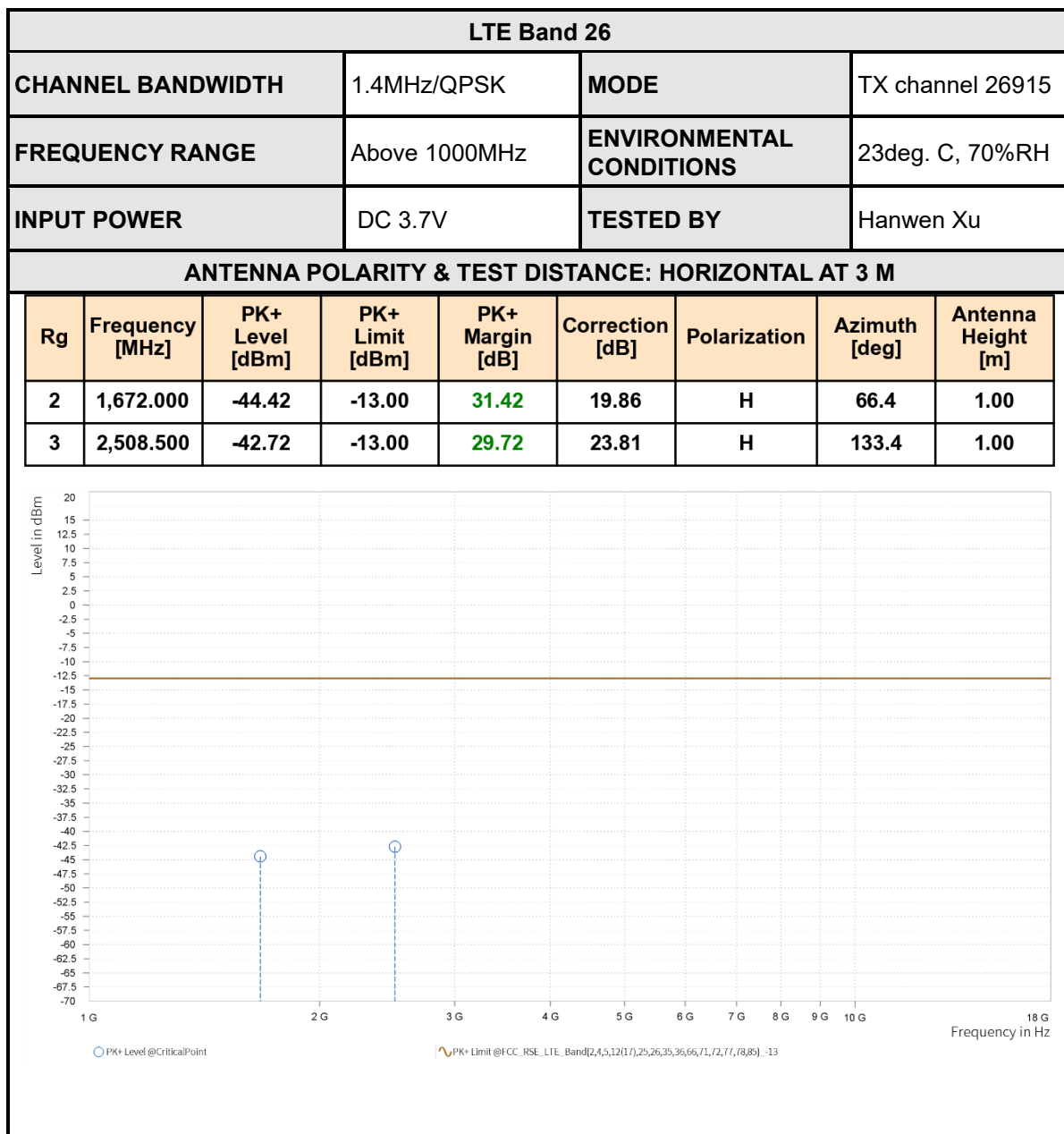


MODE	TX channel 4233	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 3.7V
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,693.200	-50.50	-13.00	37.50	20.61	V	358.6	1.00
3	2,539.800	-48.58	-13.00	35.58	23.15	V	138.2	1.00



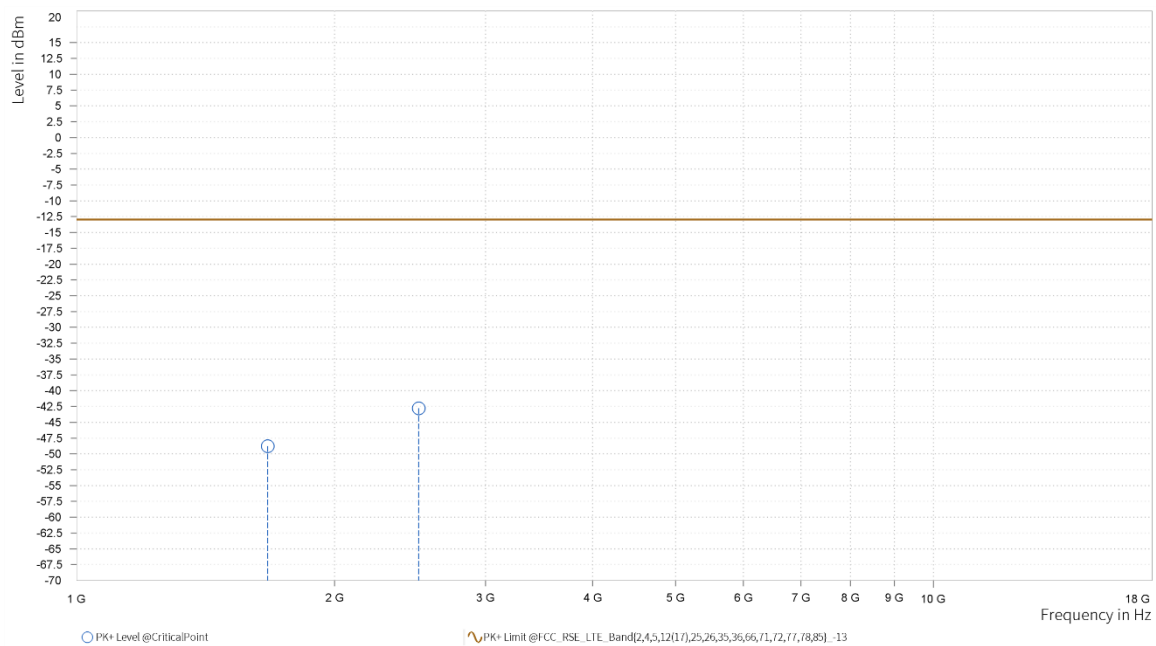




CHANNEL BANDWIDTH	1.4MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,671.500	-48.78	-13.00	35.78	19.62	V	358.2	1.00
3	2,508.000	-42.80	-13.00	29.80	23.47	V	1	2.00



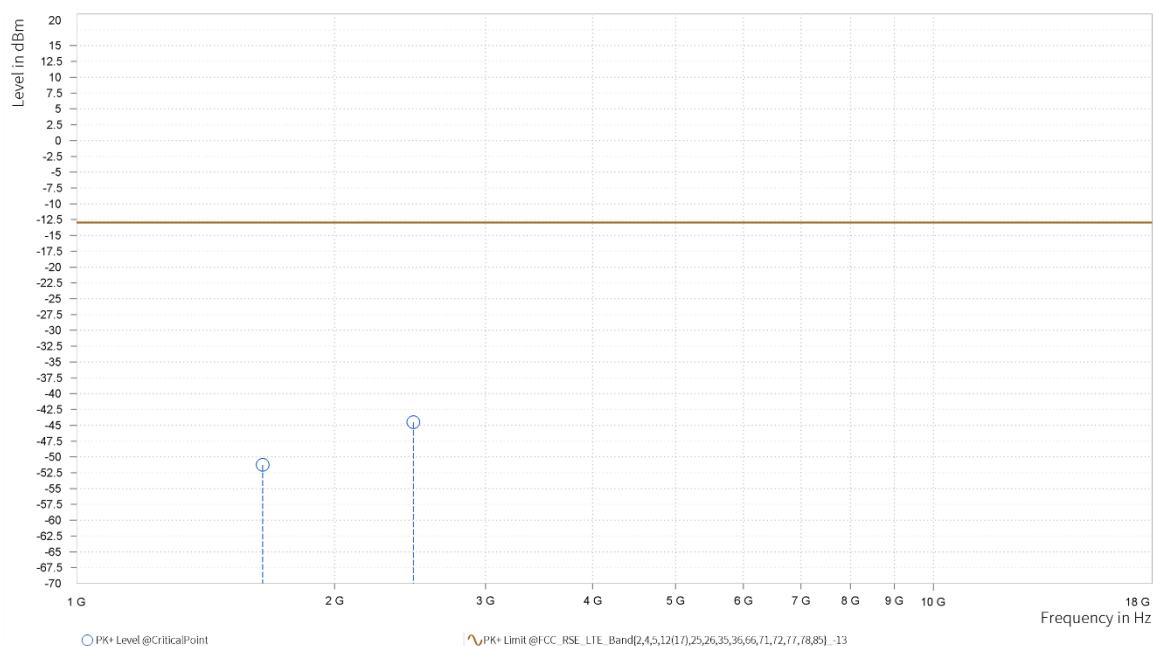


CH26805

CHANNEL BANDWIDTH	3MHz/QPSK	MODE	TX channel 26805
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,648.300	-51.25	-13.00	38.25	18.64	H	292.4	2.00
3	2,472.450	-44.53	-13.00	31.53	24.40	H	135.8	1.00

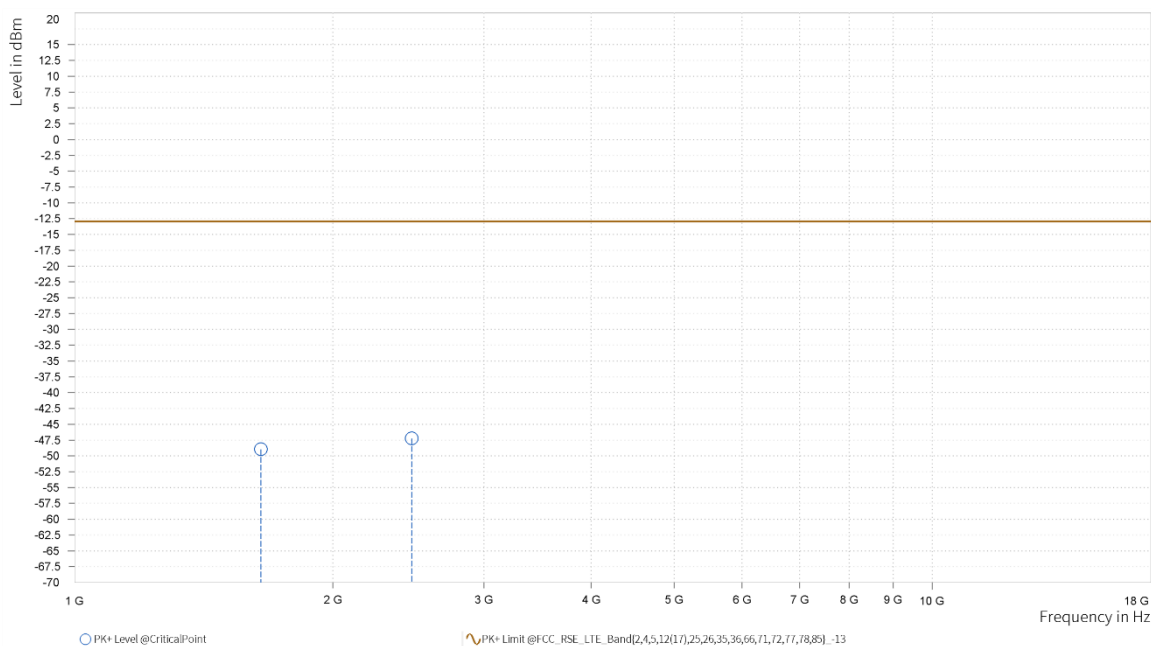




CHANNEL BANDWIDTH	3MHz/QPSK	MODE	TX channel 26805
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,648.300	-48.94	-13.00	35.94	18.11	V	358.1	1.00
3	2,472.450	-47.24	-13.00	34.24	24.10	V	134.5	1.00



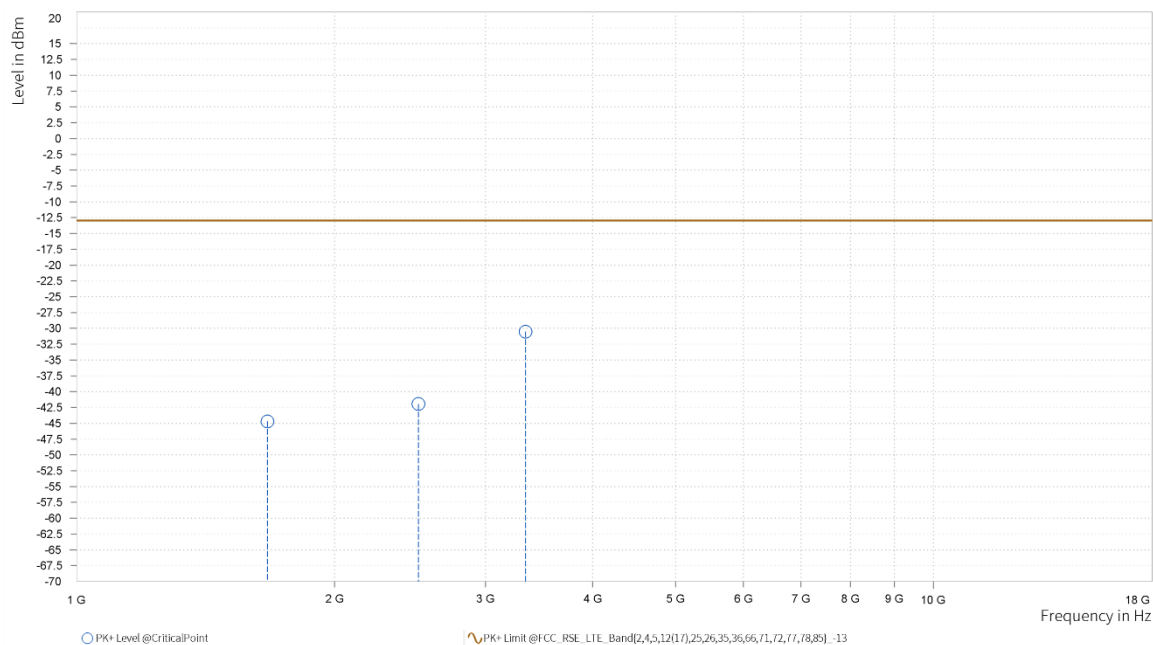


CH26915

CHANNEL BANDWIDTH	3MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,670.000	-44.69	-13.00	31.69	19.77	H	65.3	1.00
3	2,505.450	-41.95	-13.00	28.95	23.83	H	229.1	2.00
4	3,340.500	-30.52	-13.00	17.52	26.74	H	191.9	1.00

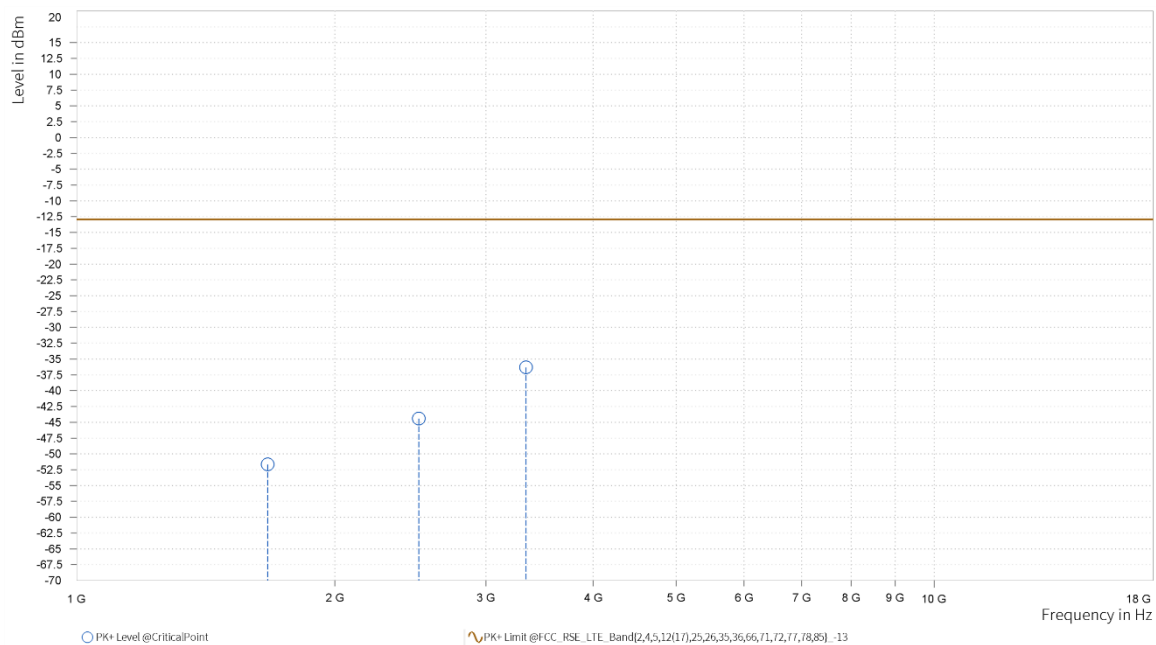




CHANNEL BANDWIDTH	3MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,670.300	-51.65	-13.00	38.65	19.56	V	1	1.00
3	2,506.000	-44.41	-13.00	31.41	23.47	V	1	1.00
4	3,340.500	-36.34	-13.00	23.34	26.78	V	167	2.00



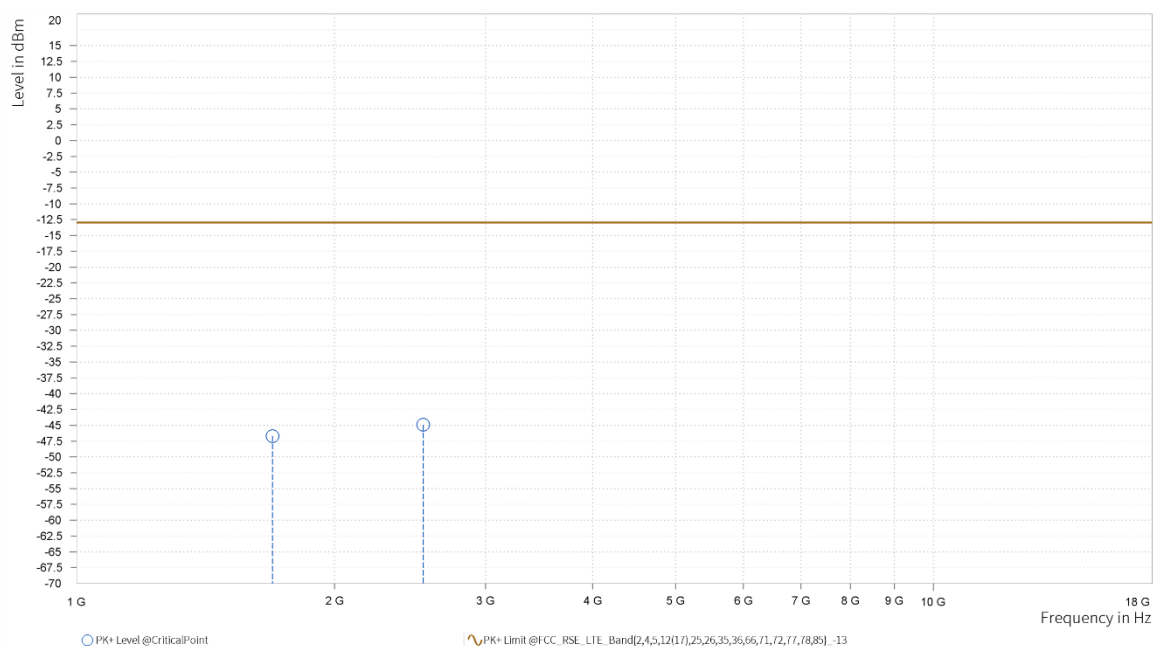


CH27025

CHANNEL BANDWIDTH	3MHz/QPSK	MODE	TX channel 27025
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,692.300	-46.70	-13.00	33.70	20.45	H	294.8	2.00
3	2,538.450	-44.93	-13.00	31.93	23.42	H	231.5	2.00

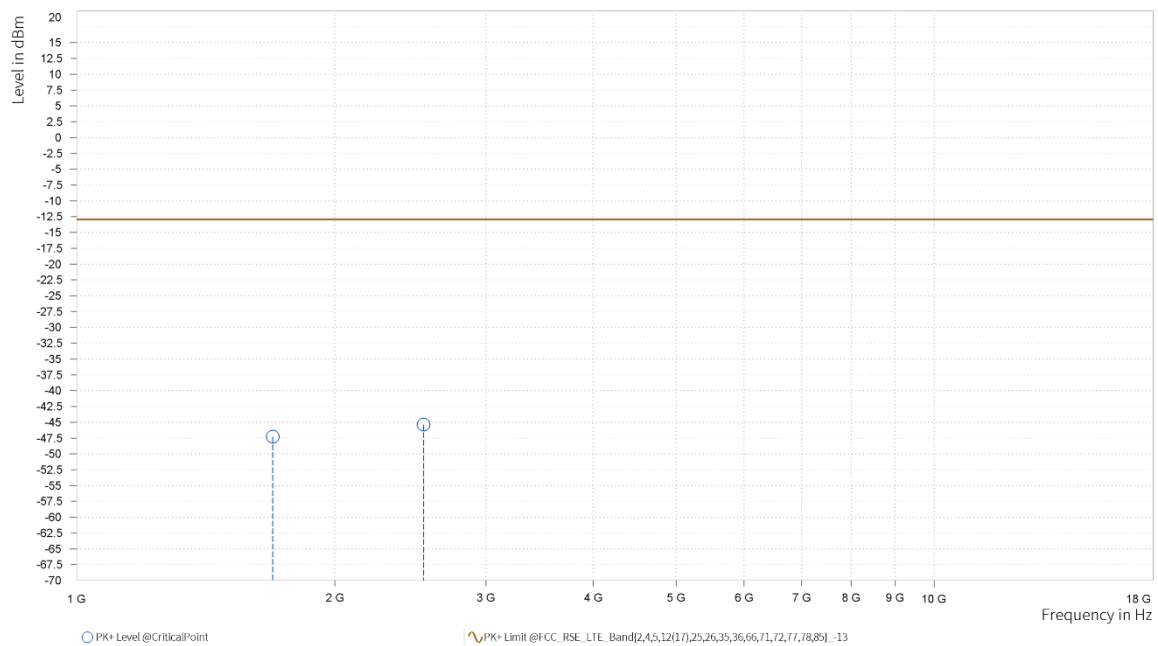




CHANNEL BANDWIDTH	3MHz/QPSK	MODE	TX channel 27025
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,692.300	-47.30	-13.00	34.30	20.57	V	1	1.00
3	2,538.450	-45.39	-13.00	32.39	23.19	V	0.9	2.00

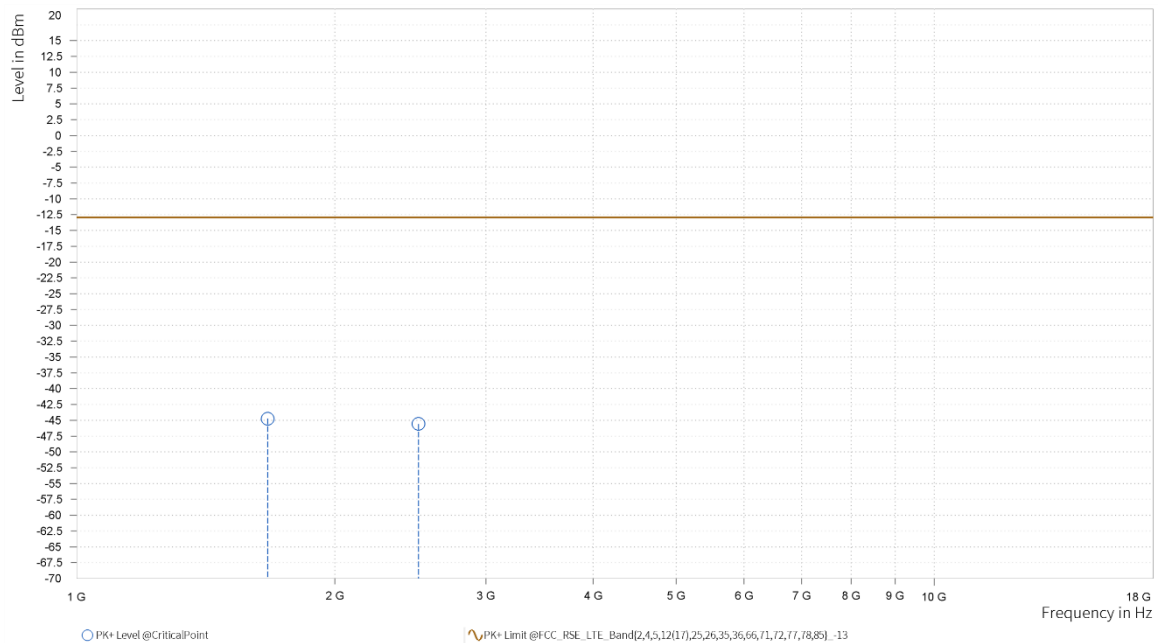




CHANNEL BANDWIDTH	5MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,669.000	-44.74	-13.00	31.74	19.73	H	65.3	1.00
3	2,502.750	-45.57	-13.00	32.57	23.84	H	231.4	2.00

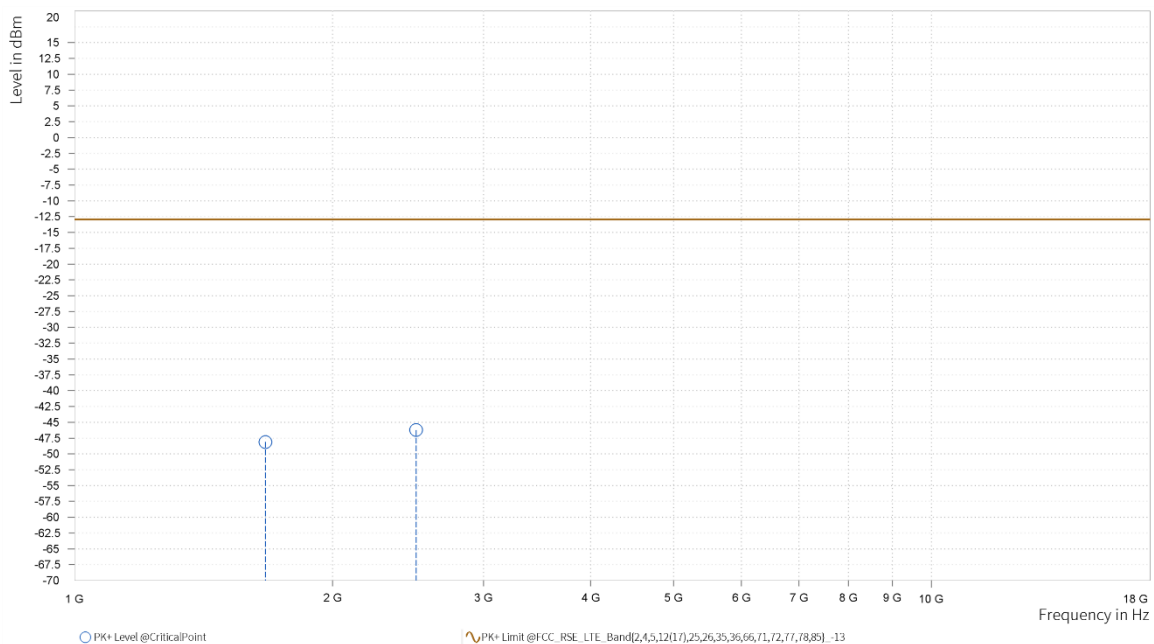




CHANNEL BANDWIDTH	5MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,669.000	-48.12	-13.00	35.12	19.47	V	359	1.00
3	2,502.750	-46.23	-13.00	33.23	23.48	V	1	2.00

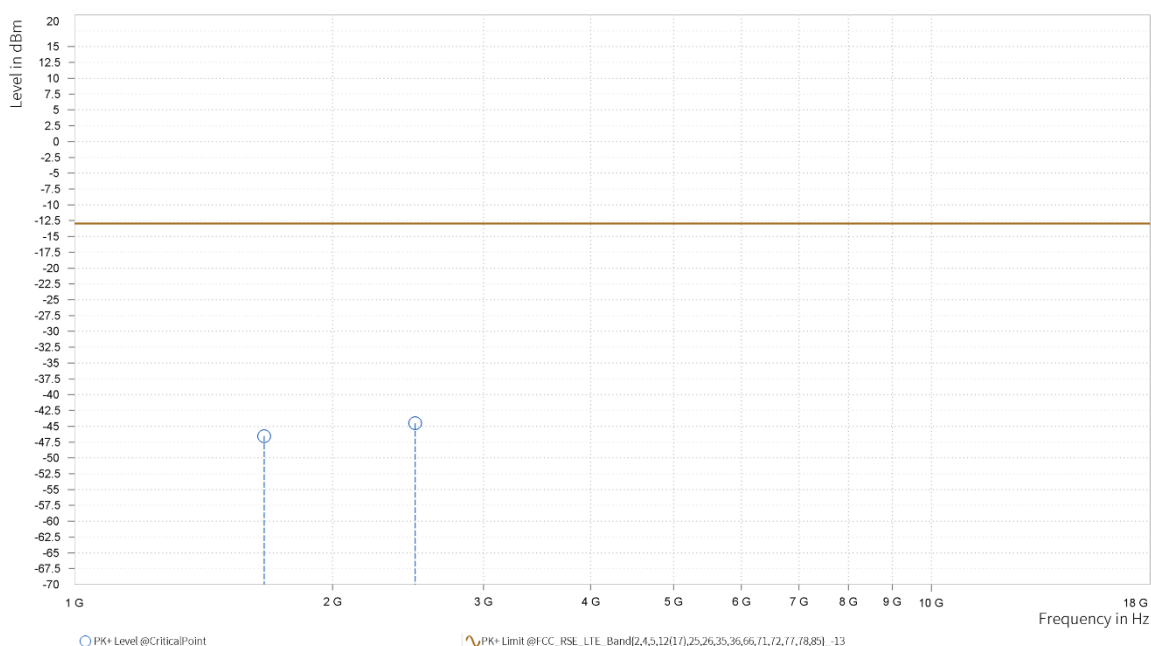




CHANNEL BANDWIDTH	10MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,664.000	-46.55	-13.00	33.55	19.52	H	67.6	1.00
3	2,496.000	-44.51	-13.00	31.51	23.86	H	359	2.00

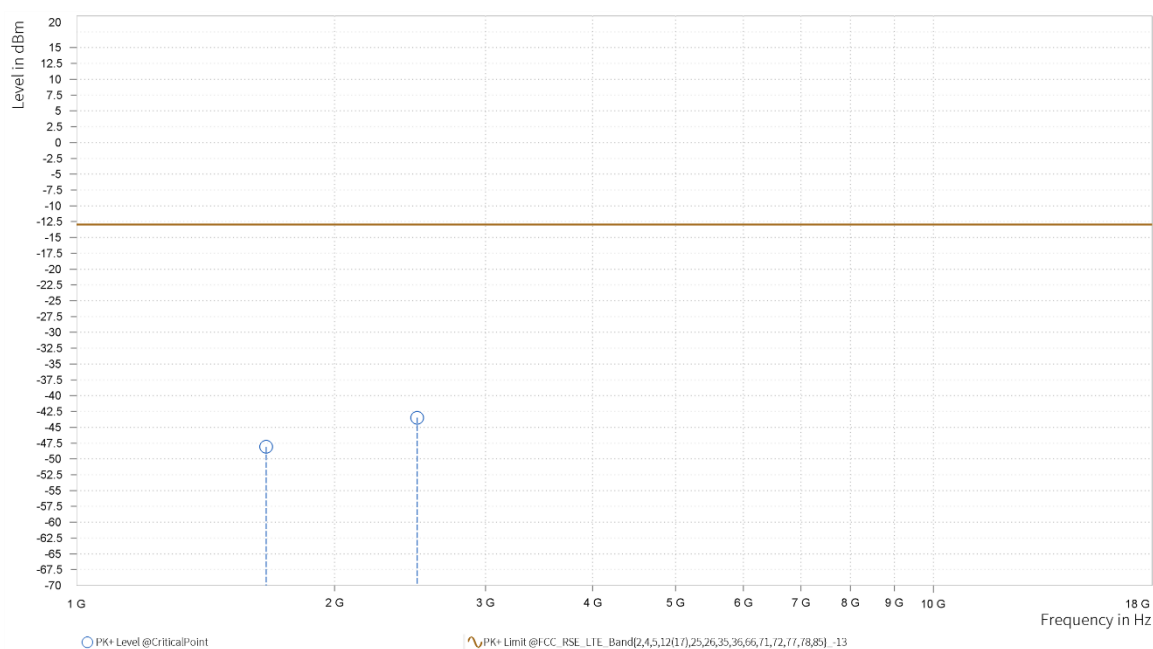




CHANNEL BANDWIDTH	10MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,664.000	-48.09	-13.00	35.09	19.21	V	359	2.00
3	2,496.000	-43.49	-13.00	30.49	23.47	V	139.3	1.00

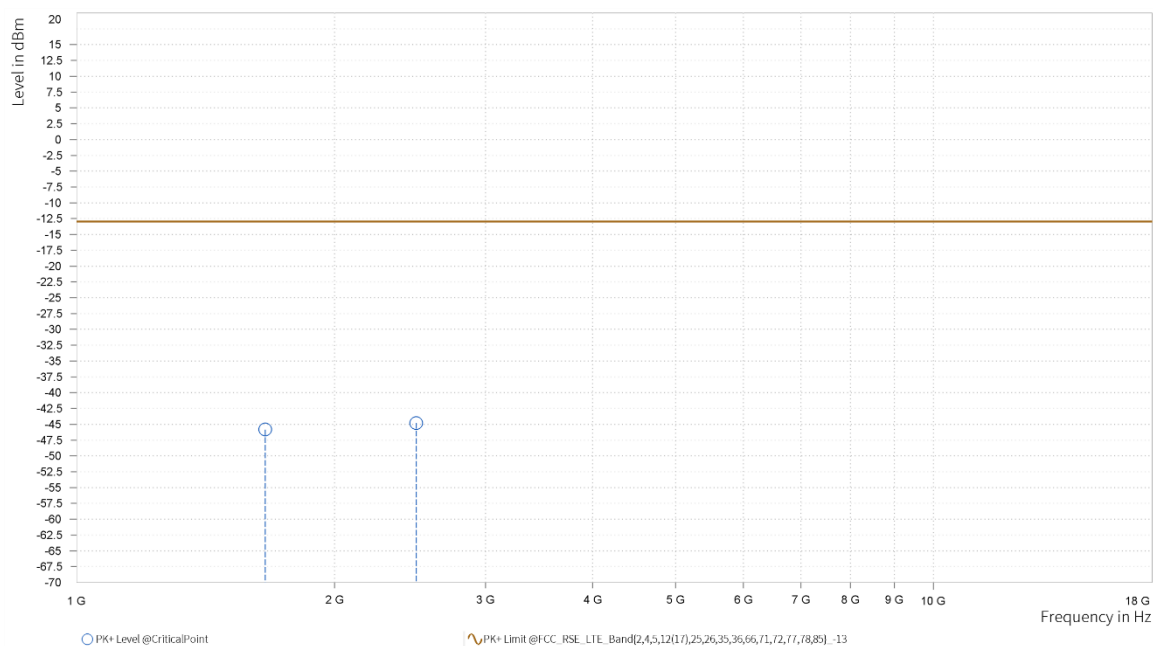




CHANNEL BANDWIDTH	15MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,659.500	-45.82	-13.00	32.82	19.33	H	2.2	2.00
3	2,489.500	-44.80	-13.00	31.80	23.90	H	1	1.00

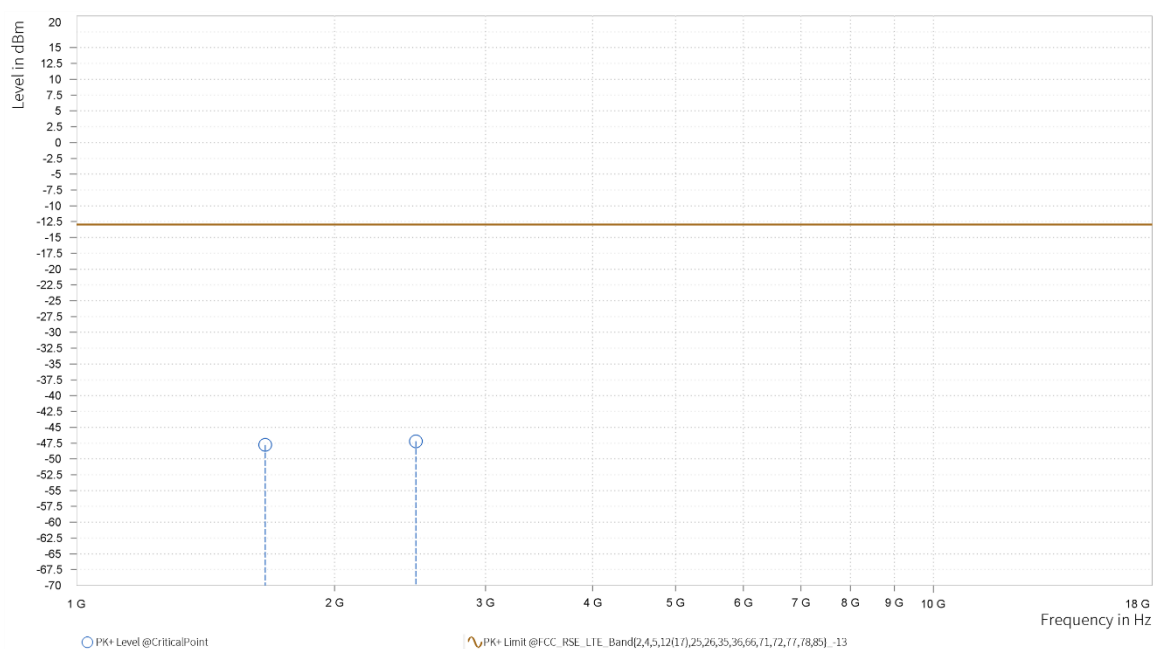




CHANNEL BANDWIDTH	15MHz/QPSK	MODE	TX channel 26915
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	DC 3.7V	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,659.500	-47.78	-13.00	34.78	18.91	V	65.3	1.00
3	2,489.250	-47.20	-13.00	34.20	23.55	V	129.8	1.00

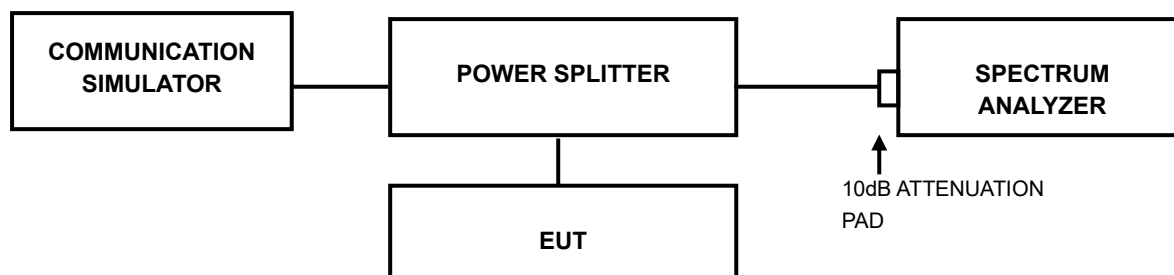


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

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



BUREAU VERITAS Test Report No.: PSU-QSZ2507090114RF01

3.7.4 TEST RESULTS

Please Refer to Appendix of this test report.



4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



5 INFORMATION ON THE TESTING LABORATORIES

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

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

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province, China
Accredited Test Lab Cert 6613.01

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

Suzhou EMC/RF Lab:

Tel: +86 (0557) 368 1008



6 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.



7 APPENDIX:

GPRS 850/ EDGE 850

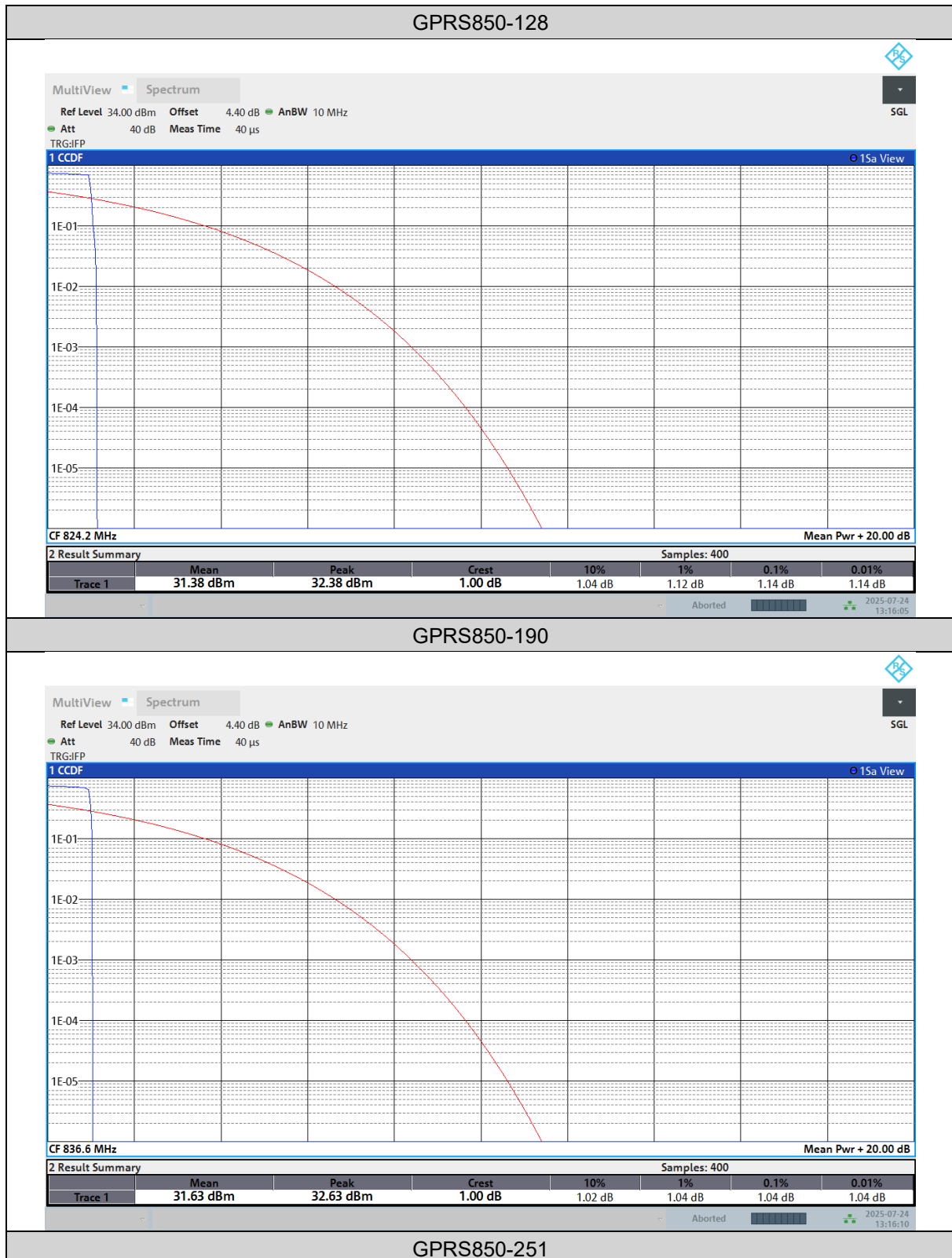
PEAK-TO-AVERAGE RATIO(CCDF)

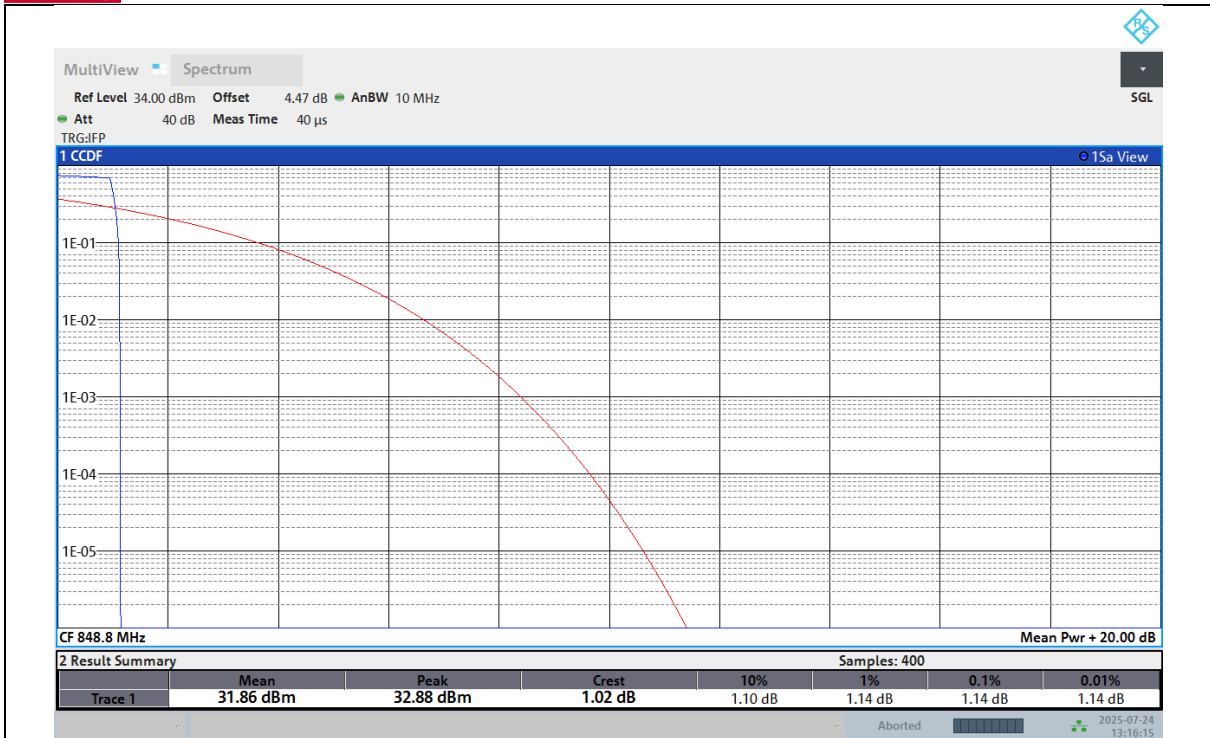
Test Result

Band	Channel	Result(dB)	Limit(dB)	Verdict
GPRS850	128	1.14	13	PASS
GPRS850	190	1.04	13	PASS
GPRS850	251	1.14	13	PASS
EGPRS850	128	2.08	13	PASS
EGPRS850	190	2.46	13	PASS
EGPRS850	251	3.94	13	PASS

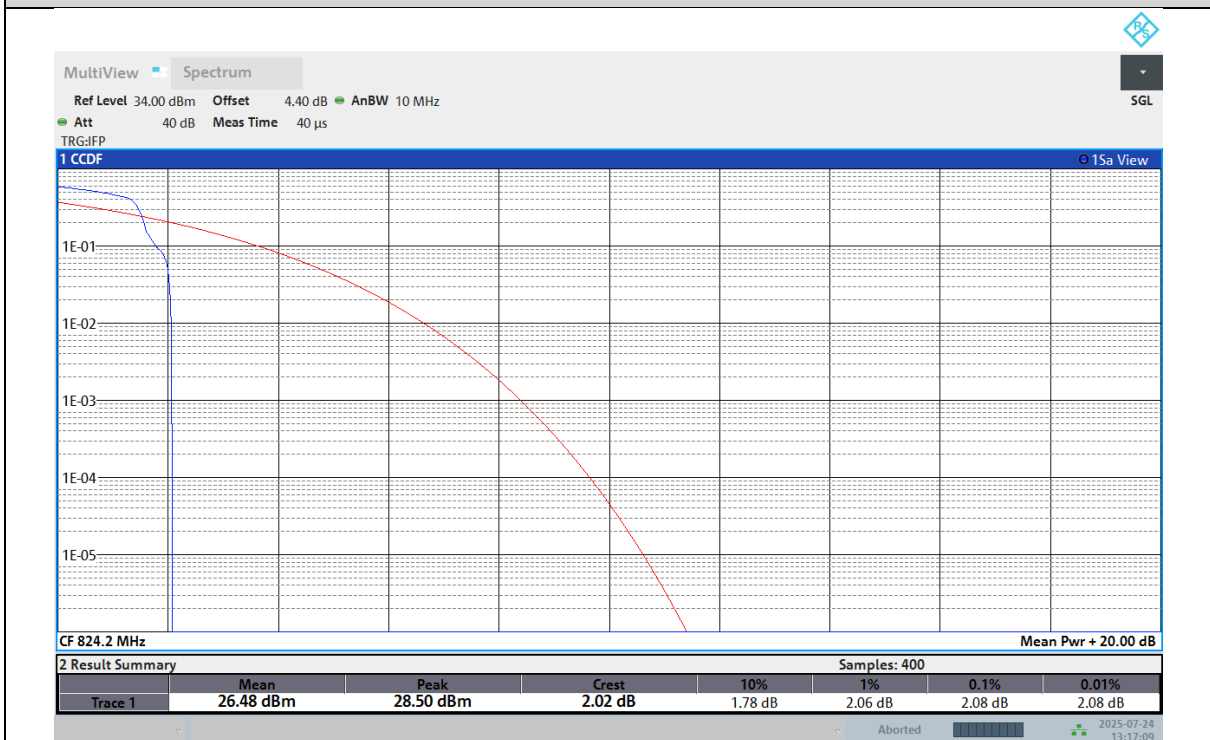


Test Graphs

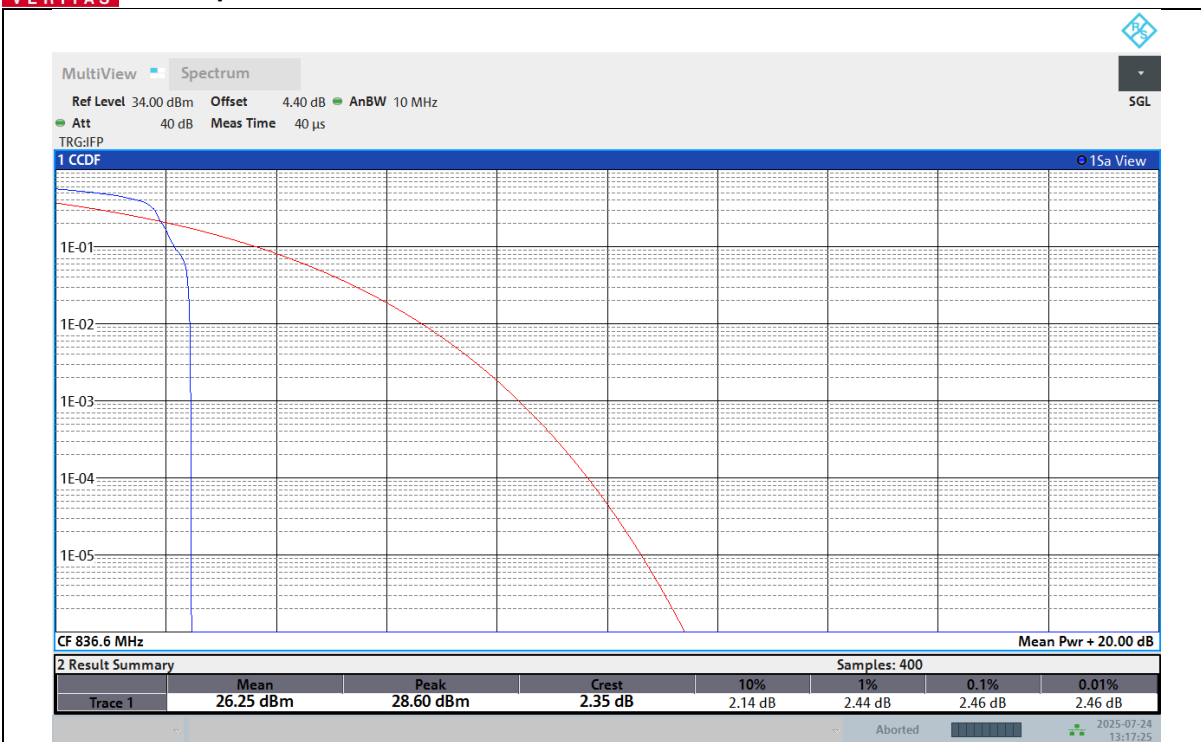




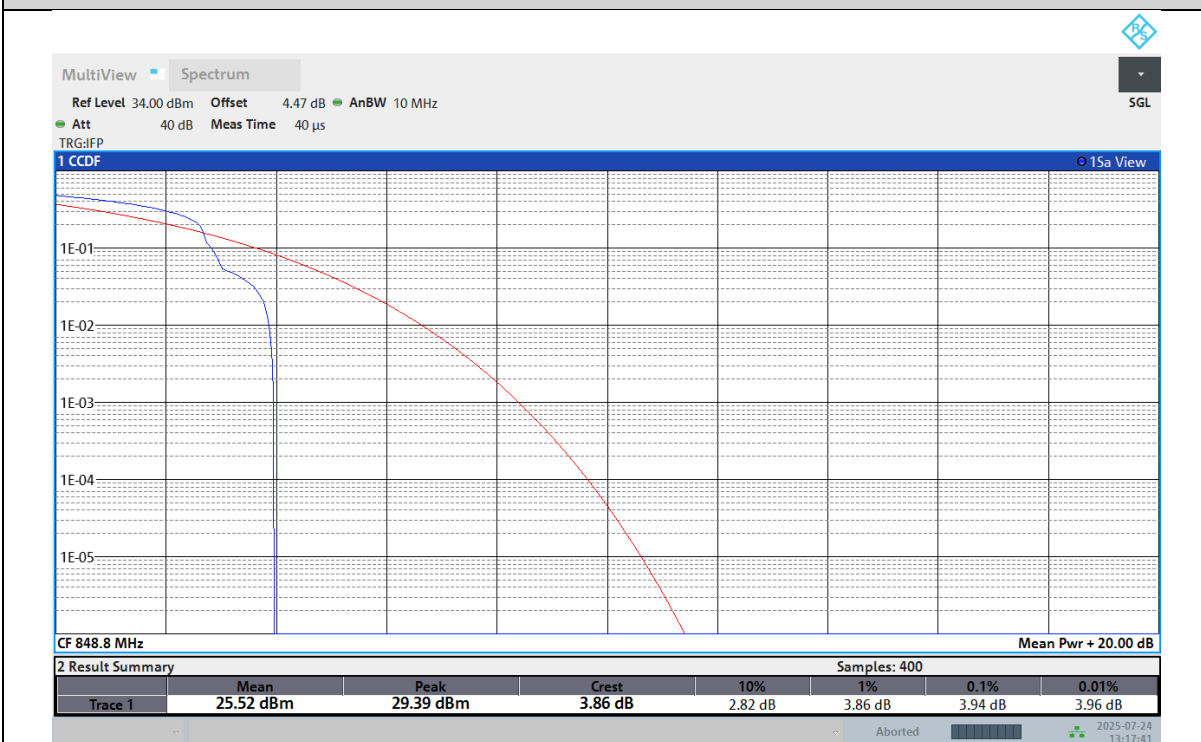
EGPRS850-128



EGPRS850-190



EGPRS850-251





26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

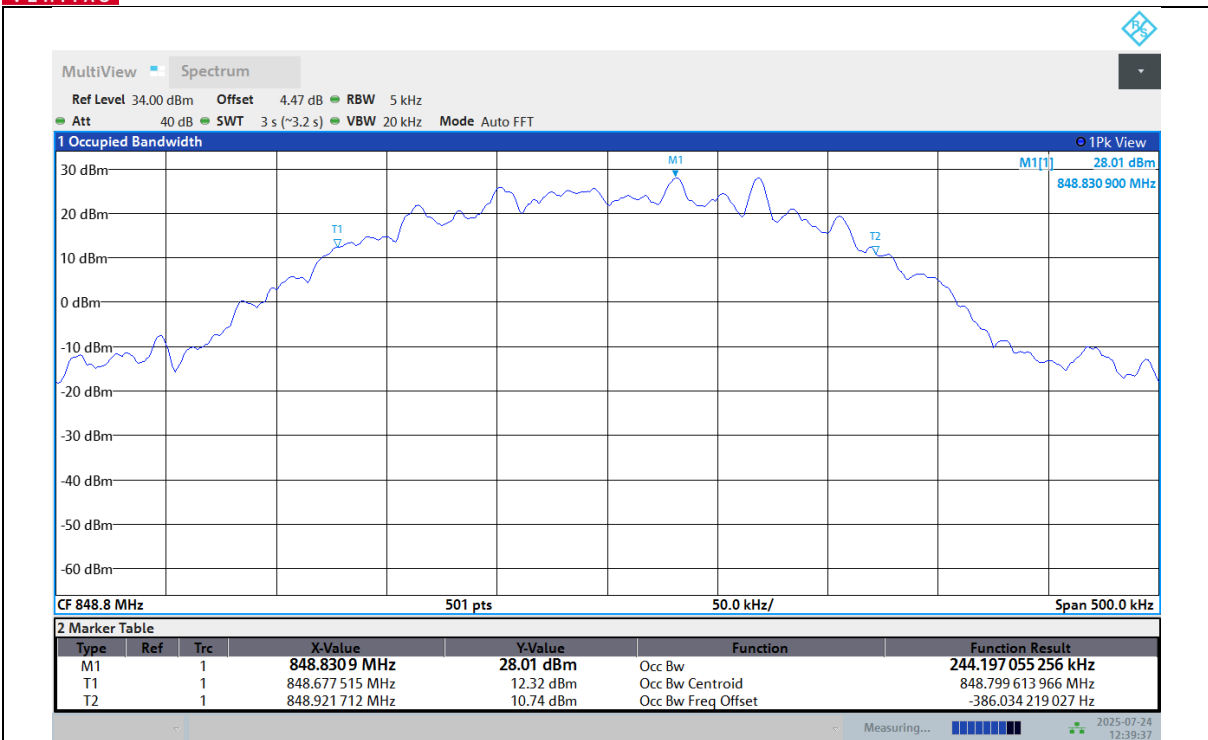
Band	Channel	Occupied Bandwidth (KHz)	26dB Bandwidth (KHz)	Verdict
GPRS850	128	243.733	309.19	PASS
GPRS850	190	242.541	304.70	PASS
GPRS850	251	244.197	309.19	PASS
EGPRS850	128	246.831	319.18	PASS
EGPRS850	190	244.644	317.68	PASS
EGPRS850	251	246.344	315.68	PASS



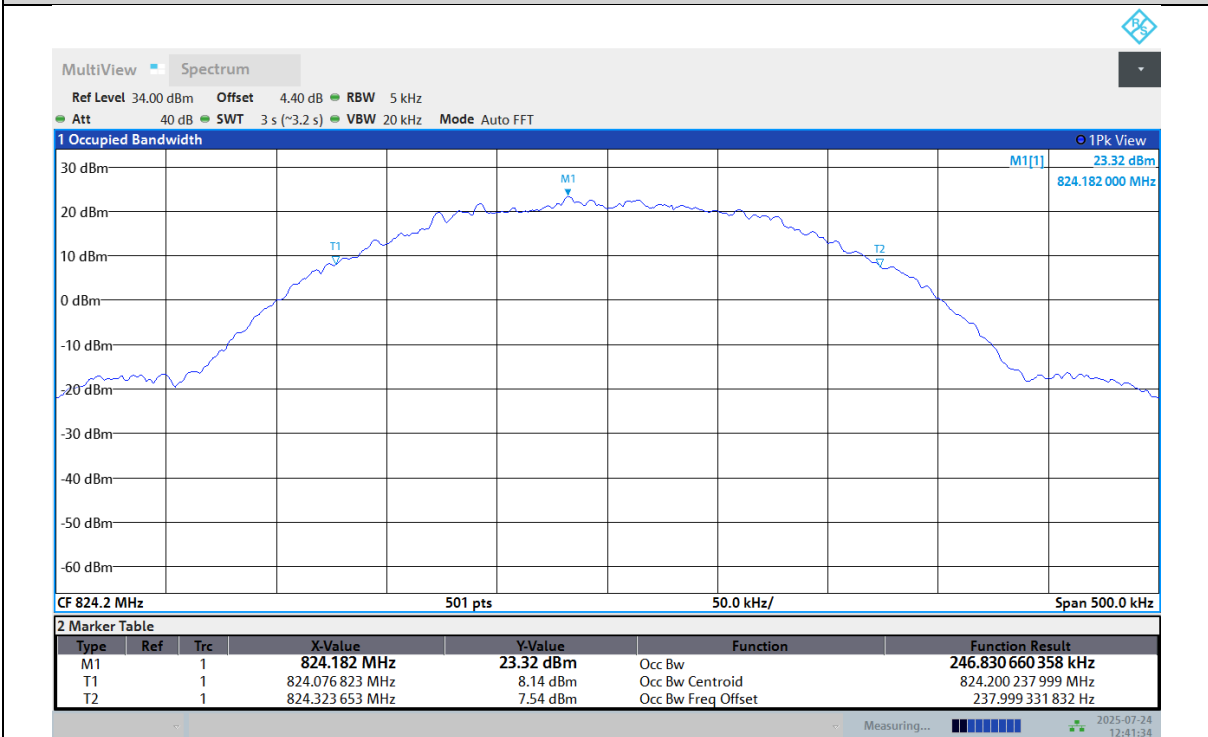
Test Graphs

Occupied Bandwidth

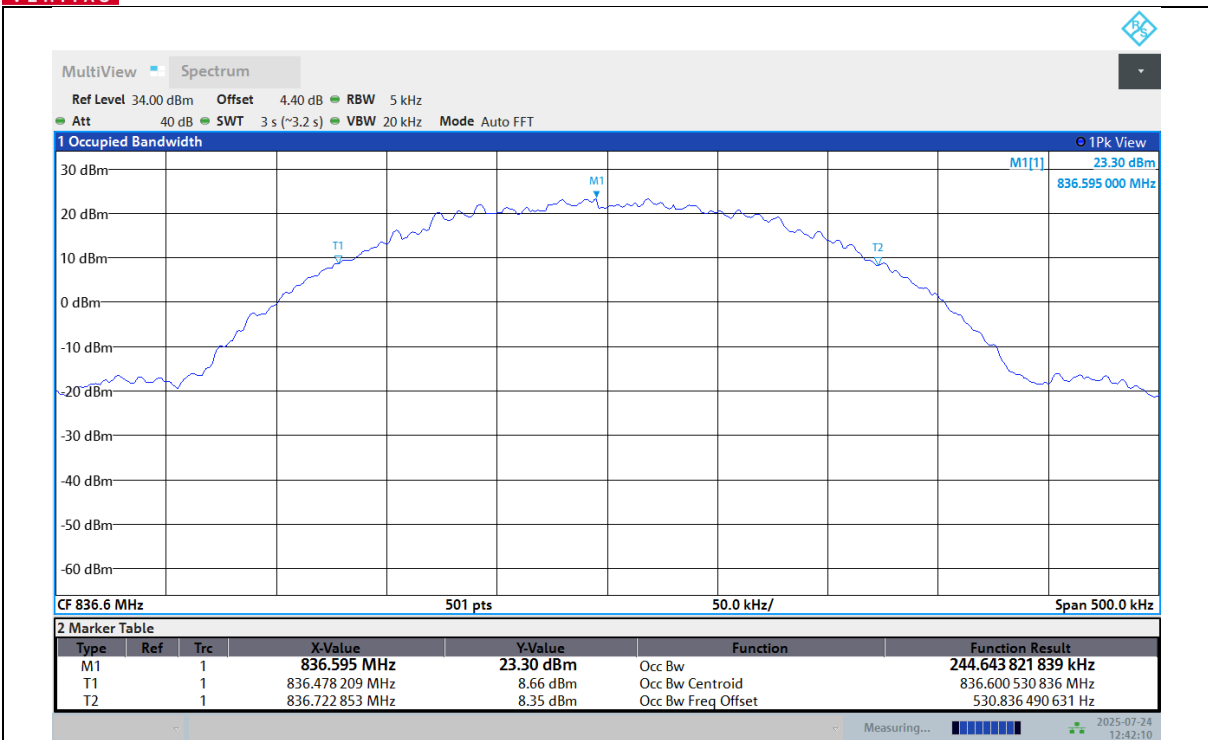




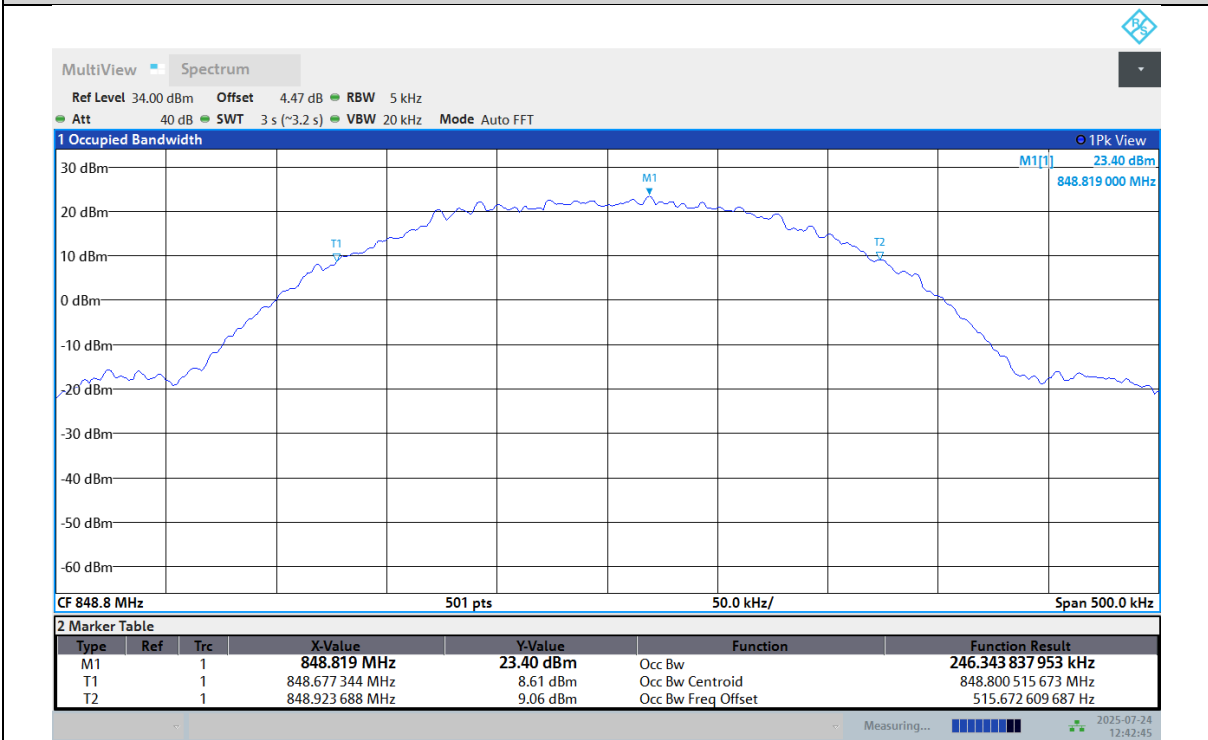
EGPRS850-128



EGPRS850-190



EGPRS850-251





26dB Bandwidth

