

BUREAU
VERITAS

Test Report No.: PSU-QSZ2503050113RF02



Certificate #6613.01

FCC TEST REPORT

(PART 24)

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

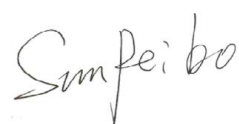
Manufacturer or Supplier:	Shenzhen Jimi IoT Co., Ltd.
Address:	3-4/F, Block A, Building #7, Shenzhen International Innovation Valley, Dashi 1st Road, Nanshan District, Shenzhen, Guangdong, China
Product:	Global container monitoring terminal
Brand Name:	JimiloT
Model Name:	LL306R LL306Pro
FCC ID	2AMLF-LL306R
Date of tests	Mar. 10, 2025 ~ Apr. 03, 2025

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

☒ **FCC PART 24, Subpart E**
☒ **FCC PART 2**
☒ **ANSI/TIA/EIA-603-D**

☒ **ANSI/TIA/EIA-603-E**
☒ **ANSI C63.26-2015**

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

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
	
Date: Apr. 03, 2025	Date: Apr. 03, 2025

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



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSZ2503050113RF02	Original release	Apr. 03, 2025



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 24 & Part 2			
STANDARD SECTION	TEST TYPE	RESULT	Test lab*
§2.1046	Conducted Output Power	Compliance	A
§24.232(c)	Equivalent Isotropic Radiated Power	Compliance	A
§2.1055 §24.235	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§24.232(d)	Peak to average ratio*	Compliance	A
§24.238(a)(b)	Band Edge Measurements	Compliance	A
§2.1051 §24.238(a)(b)	Conducted Spurious Emissions	Compliance	A
§2.1053 §24.238(a)(b)	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.

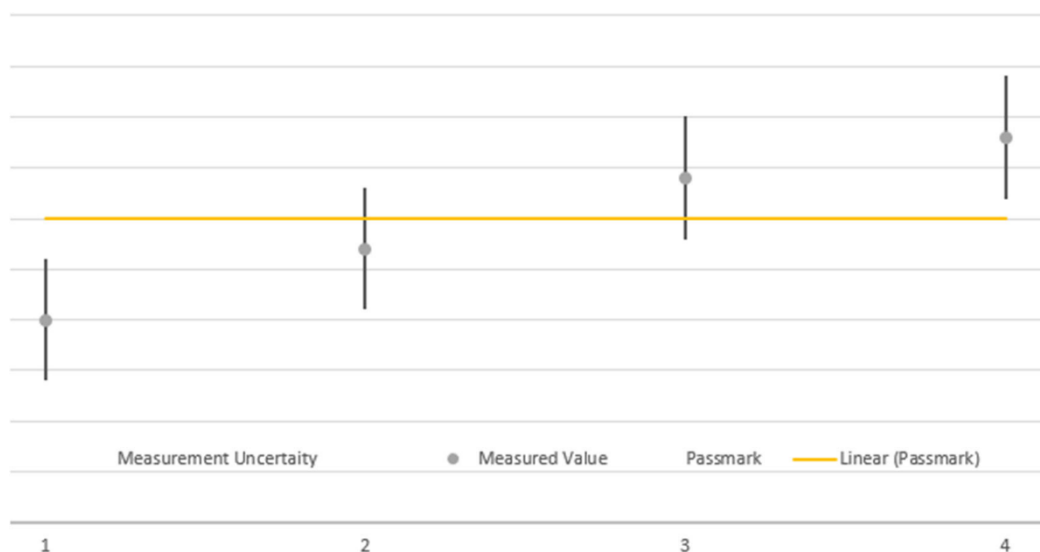


1.1 MEASUREMENT UNCERTAINTY

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
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions & Radiated Power (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Band Edge Measurements	$\pm 4.70\text{dB}$
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.29,24	Aug.28,26
Pre-Amplifier	R&S	SCU08F1	101028	Sep.15,24	Sep.14,26
Vector Signal Generator	R&S	SMBV100B	102176	Feb.15,24	Feb.14,26
Signal Generator	R&S	SMB100A	182185	Feb.15,24	Feb.14,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Feb.24,24	Feb.23,26
EMI TEST Receiver	R&S	ESW44	101973	Feb.24,24	Feb.23,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.27,24	Feb.26,26
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.21,24	Aug.20,26
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.22,24	Feb.21,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.21,24	Aug.20,26
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,24	Feb.21,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.26,24	Jun.25,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	Sep.30,24	Sep.29,26
DC Source	HYELEC	HY3010B	551016	Aug.30,24	Aug.29,26
Hygrothermograph	DELI	20210528	SZ014	Sep.05,24	Sep.04,26
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Oct.26,24	Apr.25,25
CABLE	R&S	W12.14	N/A	Oct.26,24	Apr.25,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Oct.26,24	Apr.25,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Oct.26,24	Apr.25,25
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.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Global container monitoring terminal	
BRAND NAME*	JimiloT	
MODEL NAME*	LL306R LL306Pro	
NOMINAL VOLTAGE*	3.7Vdc(Battery) 5Vdc(Adapter)	
MODULATION TYPE*	GSM/GPRS: GMSK LTE Band 2/25: QPSK, 16QAM	
FREQUENCY RANGE	GPRS	1850.2MHz ~ 1909.8MHz
	LTE Band 2 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1909.3MHz
	LTE Band 2 Channel Bandwidth: 3MHz	1851.5MHz ~ 1908.5MHz
	LTE Band 2 Channel Bandwidth: 5MHz	1852.5MHz ~ 1907.5MHz
	LTE Band 2 Channel Bandwidth: 10MHz	1855.0MHz ~ 1905.0MHz
	LTE Band 2 Channel Bandwidth: 15MHz	1857.5MHz ~ 1902.5MHz
	LTE Band 2 Channel Bandwidth: 20MHz	1860.0MHz ~ 1900.0MHz
	LTE Band 25 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1914.3MHz
	LTE Band 25 Channel Bandwidth: 3MHz	1851.5MHz ~ 1913.5MHz
	LTE Band 25 Channel Bandwidth: 5MHz	1852.5MHz ~ 1912.5MHz
	LTE Band 25 Channel Bandwidth: 10MHz	1855.0MHz ~ 1910.0MHz
	LTE Band 25 Channel Bandwidth: 15MHz	1857.5MHz ~ 1907.5MHz
	LTE Band 25 Channel Bandwidth: 20MHz	1860.0MHz ~ 1905.0MHz
MAX. EIRP POWER	GSM/GPRS	988.55mW
	LTE Band 2 Channel Bandwidth: 1.4MHz	246.04mW



	LTE Band 2 Channel Bandwidth: 3MHz	240.99mW
	LTE Band 2 Channel Bandwidth: 5MHz	244.34mW
	LTE Band 2 Channel Bandwidth: 10MHz	244.34mW
	LTE Band 2 Channel Bandwidth: 15MHz	237.68mW
	LTE Band 2 Channel Bandwidth: 20MHz	249.46mW
	LTE Band 25 Channel Bandwidth: 1.4MHz	247.74mW
	LTE Band 25 Channel Bandwidth: 3MHz	246.60mW
	LTE Band 25 Channel Bandwidth: 5MHz	255.27mW
	LTE Band 25 Channel Bandwidth: 10MHz	250.61mW
	LTE Band 25 Channel Bandwidth: 15MHz	251.19mW
	LTE Band 25 Channel Bandwidth: 20MHz	257.04mW
EMISSION DESIGNATOR	GPRS	239KGXW
	LTE Band 25 Channel Bandwidth: 1.4MHz	QPSK: 1M10G7D 16QAM: 1M11W7D
	LTE Band 25 Channel Bandwidth: 3MHz	QPSK: 2M69G7D 16QAM: 2M69W7D
	LTE Band 25 Channel Bandwidth: 5MHz	QPSK: 4M49G7D 16QAM: 4M49W7D
	LTE Band 25 Channel Bandwidth: 10MHz	QPSK: 8M93G7D 16QAM: 5M24W7D
	LTE Band 25 Channel Bandwidth: 15MHz	QPSK: 13M6G7D 16QAM: 5M42W7D
	LTE Band 25 Channel Bandwidth: 20MHz	QPSK: 18M0G7D 16QAM: 5M65W7D
ANTENNA GAIN*	GSM1900	1.31dBi
	LTE B2	1.31dBi


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	LTE B25	1.31dBi
ANTENNA TYPE*	PIFA	
HW VERSION*	CT10R_MB_V1.0	
SW VERSION*	LL306_LL306_WAAP_XQGL_V1.0_240517.1101	
I/O PORTS*	Refer to user's manual	
CABLE SUPPLIED*	N/A	
EXTREME TEMPERATURE*	High Temperature:60℃ Low Temperature :-30℃	
EXTREME VOLTAGE*	High Voltage: 4.2V Low Voltage: 3.4V	

NOTE:

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

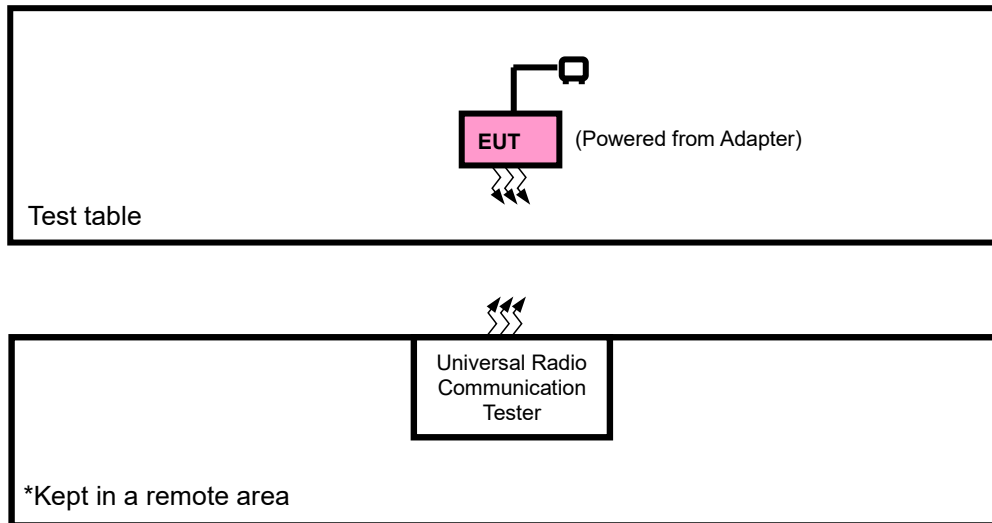
MODULATION MODE	TX FUNCTION
GSM/GPRS	1TX/1RX
LTE	1TX/1RX

- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- To meet different market demands, LL306R and LL306Pro differ only in model names, with all other aspects being identical.
- List of Accessory:**

ACCESSORIES	Brand	MODEL / SPECIFICATION
Internal battery	N/A	Modle Name : 122960L Power Rating: 5Vdc, 2Ah
External battery	N/A	KR301_S_GO01_F010 Power Rating: 5Vdc, 2Ah



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2.2 CONFIGURATION OF SYSTEM UNDER TEST
FOR RADIATION EMISSION TEST





2.3 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	ThinkPad E14	HRSW00024	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

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 EIRP and radiated emission was found when positioned on X-plane for GSM/EDGE/ LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter with GSM or LTE link
B	EUT + DC Supply with GSM or LTE link

GSM MODE				
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	EIRP	512 to 810	512, 661, 810	GSM
B	FREQUENCY STABILITY	512 to 810	512, 661, 810	GSM
A	OCCUPIED BANDWIDTH	512 to 810	512, 661, 810	GSM
A	PEAK TO AVERAGE RATIO	512 to 810	512, 661, 810	GSM
A	BAND EDGE	512 to 810	512, 810	GSM
A	CONDUCTED EMISSION	512 to 810	512, 661, 810	GSM
A	RADIATED EMISSION	512 to 810	512, 661, 810	GSM



LTE BAND 2 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,16QAM	1 RB / 0 RB offset
		18615 to 19185	18615, 18900, 19185	3MHz	QPSK,16QAM	1 RB / 0 RB offset
		18625 to 19175	18625, 18900, 19175	5MHz	QPSK,16QAM	1 RB / 0 RB offset
		18650 to 19150	18650, 18900, 19150	10MHz	QPSK,16QAM	1 RB / 0 RB offset
		18675 to 19125	18675, 18900, 19125	15MHz	QPSK,16QAM	1 RB / 0 RB offset
		18700 to 19100	18700, 18900, 19100	20MHz	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 2 are covered by LTE Band 25, Because it is a subset of LTE Band 25 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 25



LTE BAND 25 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM	1 RB / 0 RB offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM	1 RB / 0 RB offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM	1 RB / 0 RB offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM	1 RB / 0 RB offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM	1 RB / 0 RB offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	1 RB / 0 RB offset
B	FREQUENCY STABILITY	26140 to 26590	26140, 26365, 26590	10MHz	QPSK	100 RB / 0 RB offset
A	OCCUPIED BANDWIDTH	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM	6 RB / 0 RB offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM	15 RB / 0 RB offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM	25 RB / 0 RB offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM	50 RB / 0 RB offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM	75 RB / 0 RB offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	100 RB / 0 RB offset
A	PEAK TO AVERAGE RATIO	26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	1 RB / 0 RB offset 100 RB / 0 RB offset
A	BAND EDGE	26047 to 26683	26047	1.4MHz	QPSK,16QAM	1 RB / 0 RB offset
			26683	1.4MHz	QPSK,16QAM	6 RB / 0 RB offset
		26055 to 26675	26055	3MHz	QPSK,16QAM	1 RB / 5 RB offset
			26675	3MHz	QPSK,16QAM	6 RB / 0 RB offset
		26065 to 26665	26065	5MHz	QPSK,16QAM	1 RB / 0 RB offset
			26665	5MHz	QPSK,16QAM	15 RB / 0 RB offset
		26090 to 26640	26090	10MHz	QPSK,16QAM	1 RB / 14 RB offset
			26640	10MHz	QPSK,16QAM	15 RB / 0 RB offset
		26115 to 26615	26065	5MHz	QPSK,16QAM	1 RB / 0 RB offset
			26665	5MHz	QPSK,16QAM	25 RB / 0 RB offset
		26140 to 26590	26090	10MHz	QPSK,16QAM	1 RB / 24 RB offset
			26640	10MHz	QPSK,16QAM	25 RB / 0 RB offset
		26115 to 26615	26090	10MHz	QPSK,16QAM	1 RB / 0 RB offset
			26640	10MHz	QPSK,16QAM	50 RB / 0 RB offset
		26140 to 26590	26115	15MHz	QPSK,16QAM	1 RB / 49 RB offset
			26615	15MHz	QPSK,16QAM	50 RB / 0 RB offset
		26140 to 26590	26115	15MHz	QPSK,16QAM	1 RB / 0 RB offset
			26615	15MHz	QPSK,16QAM	75 RB / 0 RB offset
		26140 to 26590	26140	20MHz	QPSK,16QAM	1 RB / 74 RB offset
			26590	20MHz	QPSK,16QAM	75 RB / 0 RB offset
		26140 to 26590	26140	20MHz	QPSK,16QAM	1 RB / 0 RB offset
			26590	20MHz	QPSK,16QAM	100 RB / 0 RB offset
		26140 to 26590	26140	20MHz	QPSK,16QAM	1 RB / 99 RB offset
			26590	20MHz	QPSK,16QAM	1 RB / 99 RB offset



						100 RB / 0 RB offset
A	CONDCUDETED EMISSION	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK	1 RB / 0 RB offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK	1 RB / 0 RB offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK	1 RB / 0 RB offset
		26090 to 26640	26090, 26365, 26640	10MHz	QPSK	1 RB / 0 RB offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK	1 RB / 0 RB offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK	1 RB / 0 RB offset
A	RADIATED EMISSION	26047 to 26683	26365	1.4MHz	QPSK	1 RB / 0 RB offset
		26055 to 26675	26365	3MHz	QPSK	1 RB / 0 RB offset
		26065 to 26665	26365	5MHz	QPSK	1 RB / 0 RB offset
		26090 to 26640	26365	10MHz	QPSK	1 RB / 0 RB offset
		26115 to 26615	26365	15MHz	QPSK	1 RB / 0 RB offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK	1 RB / 0 RB offset

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

TEST CONDITION			
TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	DC 3.7V By Battery	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.4V/ 3.7V/ 4.2V By DC Source	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 3.7V By Battery	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 3.7V By Battery	Hanwen Xu
CONDCUDETED EMISSION	23deg. C, 70%RH	DC 3.7V By Battery	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	AC 120V/60MHz	Hanwen Xu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 3.7V By Battery	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 24

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 and portable stations are limited to 2 watts EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

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

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

Where:

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

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

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

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

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

CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with 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	GSM1900		
Channel	512	661	810
Frequency	1850.2	1880	1909.8
GPRS 1Tx Slot	28.63	28.64	28.46
GPRS 2Tx Slot	27.12	27.09	26.97
GPRS 3Tx Slot	25.12	24.86	24.81
GPRS 4Tx Slot	23.02	22.92	22.89



LTE BAND 2						
Band/BW	Modulation	RB Size	RB offset	Low CH 18607	Mid CH 18900	High CH 19193
				Frequency 1850.7 MHz	Frequency 1880 MHz	Frequency 1909.3 MHz
2/ 1.4	QPSK	1	0	21.78	22.14	22.14
		1	2	22.44	22.60	22.42
		1	5	21.22	20.61	20.18
		3	0	21.92	22.12	21.86
		3	1	22.31	22.46	22.37
		3	3	20.70	20.60	20.70
		6	0	20.94	21.15	21.04
	16QAM	1	0	21.01	20.97	20.98
		1	2	21.62	21.69	21.64
		1	5	19.77	19.65	19.44
		3	0	20.65	20.74	20.53
		3	1	21.50	21.50	21.39
		3	3	19.87	19.84	19.69
		6	0	20.12	20.48	20.45
	64QAM	1	0	21.78	22.14	22.14
		1	2	22.44	22.60	22.42
		1	5	21.22	20.61	20.18
		3	0	21.92	22.12	21.86
		3	1	22.31	22.46	22.37
		3	3	20.70	20.60	20.70
		6	0	20.94	21.15	21.04
Band/BW	Modulation	RB Size	RB offset	Low CH 18615	Mid CH 18900	High CH 19185
				Frequency 1851.5 MHz	Frequency 1880 MHz	Frequency 1908.5 MHz
2/ 3	QPSK	1	0	21.92	22.06	22.12
		1	7	22.41	22.51	22.37
		1	14	21.27	20.66	20.39
		8	0	21.40	21.50	21.26
		8	3	21.48	21.55	21.27
		8	7	20.67	20.71	20.71
		15	0	20.88	21.03	21.17
	16QAM	1	0	20.94	21.13	20.99
		1	7	21.51	21.85	21.84
		1	14	19.85	19.55	19.43
		8	0	20.41	20.56	20.27
		8	3	20.30	20.41	20.25
		8	7	19.69	19.70	19.48
		15	0	20.17	20.46	20.44
	64QAM	1	0	21.92	22.06	22.12
		1	7	22.41	22.51	22.37
		1	14	21.27	20.66	20.39
		8	0	21.40	21.50	21.26
		8	3	21.48	21.55	21.27
		8	7	20.67	20.71	20.71
		15	0	20.88	21.03	21.17



LTE BAND 2						
Band/BW	Modulation	RB Size	RB offset	Low CH18625	Mid CH18900	High CH19175
				Frequency 1852.5 MHz	Frequency 1880 MHz	Frequency 1907.5 MHz
2/ 5	QPSK	1	0	21.72	22.15	22.10
		1	12	22.27	22.57	22.43
		1	24	21.17	20.63	20.20
		12	0	21.21	21.57	21.44
		12	6	21.40	21.55	21.28
		12	13	20.63	20.76	20.60
		25	0	20.92	21.13	21.11
	16QAM	1	0	21.03	21.12	20.91
		1	12	21.66	21.80	21.77
		1	24	19.69	19.54	19.37
		12	0	20.38	20.41	20.36
		12	6	20.23	20.51	20.29
		12	13	19.86	19.79	19.68
		25	0	20.29	20.50	20.40
	64QAM	1	0	21.72	22.15	22.10
		1	12	22.27	22.57	22.43
		1	24	21.17	20.63	20.20
		12	0	21.21	21.57	21.44
		12	6	21.40	21.55	21.28
		12	13	20.63	20.76	20.60
		25	0	20.92	21.13	21.11
Band/BW	Modulation	RB Size	RB offset	Low CH 18650	Mid CH 18900	High CH 19150
				Frequency 1855 MHz	Frequency 1880 MHz	Frequency 1905 MHz
2/ 10	QPSK	1	0	21.87	22.05	22.03
		1	24	22.44	22.57	22.32
		1	49	21.18	20.57	20.32
		25	0	21.24	21.50	21.33
		25	12	21.42	21.56	21.28
		25	25	20.55	20.73	20.73
		50	0	21.00	21.18	21.13
	16QAM	1	0	20.88	20.95	20.94
		1	24	21.68	21.71	21.63
		1	49	19.72	19.48	19.40
		12	0	20.32	20.55	20.34
		12	18	20.18	20.48	20.40
		12	37	19.84	19.78	19.60
		27	0	20.18	20.47	20.30
	64QAM	1	0	21.87	22.05	22.03
		1	24	22.44	22.57	22.32
		1	49	21.18	20.57	20.32
		25	0	21.24	21.50	21.33
		25	12	21.42	21.56	21.28
		25	25	20.55	20.73	20.73
		50	0	21.00	21.18	21.13



LTE BAND 2

Band/BW	Modulation	RB Size	RB offset	Low CH 18675	Mid CH 18900	High CH 19125
				Frequency 1857.5 MHz	Frequency 1880 MHz	Frequency 1902.5 MHz
2/ 15	QPSK	1	0	21.75	22.03	22.16
		1	37	22.25	22.45	22.31
		1	74	21.24	20.71	20.31
		36	0	21.34	21.60	21.30
		36	19	21.49	21.54	21.40
		36	39	20.59	20.70	20.61
		75	0	21.00	21.01	21.01
	16QAM	1	0	21.00	21.08	20.98
		1	37	21.60	21.75	21.85
		1	74	19.85	19.62	19.41
		12	0	20.32	20.56	20.46
		12	31	20.30	20.48	20.19
		12	62	19.83	19.74	19.54
		27	0	20.30	20.33	20.46
	64QAM	1	0	21.75	22.03	22.16
		1	37	22.25	22.45	22.31
		1	74	21.24	20.71	20.31
		36	0	21.34	21.60	21.30
		36	19	21.49	21.54	21.40
		36	39	20.59	20.70	20.61
		75	0	21.00	21.01	21.01
Band/BW	Modulation	RB Size	RB offset	Low CH 18700	Mid CH 18900	High CH 19100
				Frequency 1860 MHz	Frequency 1880 MHz	Frequency 1900 MHz
2/ 20	QPSK	1	0	21.91	22.17	22.24
		1	50	22.46	22.66	22.50
		1	99	21.35	20.71	20.38
		50	0	21.41	21.59	21.46
		50	25	21.50	21.60	21.47
		50	50	20.75	20.76	20.74
		100	0	21.03	21.18	21.17
	16QAM	1	0	21.07	21.12	21.12
		1	50	21.69	21.84	21.84
		1	99	19.88	19.64	19.46
		12	0	20.50	20.62	20.45
		12	43	20.34	20.51	20.40
		12	87	19.86	19.86	19.68
		27	0	20.33	20.53	20.50
	64QAM	1	0	21.91	22.17	22.24
		1	50	22.46	22.66	22.50
		1	99	21.35	20.71	20.38
		50	0	21.41	21.59	21.46
		50	25	21.50	21.60	21.47
		50	50	20.75	20.76	20.74
		100	0	21.03	21.18	21.17



LTE BAND 25						
Band/BW	Modulation	RB Size	RB offset	Low CH 26047	Mid CH 26365	High CH 26683
				Frequency 1850.7 MHz	Frequency 1882.5 MHz	Frequency 1914.3 MHz
25/ 1.4	QPSK	1	0	21.92	21.75	22.12
		1	2	22.29	22.32	22.63
		1	5	19.99	19.99	20.36
		3	0	21.68	21.58	22.03
		3	1	22.09	22.15	22.51
		3	3	20.47	20.55	20.79
		6	0	20.96	20.84	21.25
	16QAM	1	0	20.94	20.87	21.35
		1	2	21.75	21.69	21.74
		1	5	19.51	19.56	19.84
		3	0	21.39	21.21	21.76
		3	1	21.54	21.51	21.91
		3	3	20.46	20.49	20.84
		6	0	20.92	20.90	21.07
	64QAM	1	0	21.92	21.75	22.12
		1	2	22.29	22.32	22.63
		1	5	19.99	19.99	20.36
		3	0	21.68	21.58	22.03
		3	1	22.09	22.15	22.51
		3	3	20.47	20.55	20.79
		6	0	20.96	20.84	21.25
Band/BW	Modulation	RB Size	RB offset	Low CH 26055	Mid CH 26365	High CH 26675
				Frequency 1851.5 MHz	Frequency 1882.5 MHz	Frequency 1913.5 MHz
25/ 3	QPSK	1	0	21.75	21.78	22.11
		1	7	22.26	22.20	22.61
		1	14	20.09	19.99	20.42
		8	0	21.29	21.34	21.73
		8	3	21.37	21.24	21.65
		8	7	20.53	20.52	20.79
		15	0	20.89	20.91	21.19
	16QAM	1	0	21.10	20.95	21.38
		1	7	21.59	21.61	21.78
		1	14	19.41	19.58	19.89
		8	0	21.43	21.43	21.80
		8	3	21.25	21.21	21.67
		8	7	20.54	20.48	20.76
		15	0	20.91	20.90	21.12
	64QAM	1	0	21.75	21.78	22.11
		1	7	22.26	22.20	22.61
		1	14	20.09	19.99	20.42
		8	0	21.29	21.34	21.73
		8	3	21.37	21.24	21.65
		8	7	20.53	20.52	20.79
		15	0	20.89	20.91	21.19



LTE BAND 25						
Band/BW	Modulation	RB Size	RB offset	Low CH 26065	Mid CH 26365	High CH 26665
				Frequency 1852.5 MHz	Frequency 1882.5 MHz	Frequency 1912.5 MHz
25/ 5	QPSK	1	0	21.86	21.79	21.94
		1	12	22.26	22.39	22.76
		1	24	20.09	20.07	20.33
		12	0	21.26	21.27	21.73
		12	6	21.24	21.23	21.72
		12	13	20.47	20.36	20.69
		25	0	20.96	20.83	21.17
	16QAM	1	0	21.07	20.93	21.35
		1	12	21.60	21.64	21.79
		1	24	19.45	19.55	19.78
		12	0	21.22	21.30	21.62
		12	6	21.21	21.12	21.68
		12	13	20.53	20.51	20.73
		25	0	20.85	20.86	21.20
	64QAM	1	0	21.86	21.79	21.94
		1	12	22.26	22.39	22.76
		1	24	20.09	20.07	20.33
		12	0	21.26	21.27	21.73
		12	6	21.24	21.23	21.72
		12	13	20.47	20.36	20.69
		25	0	20.96	20.83	21.17
Band/BW	Modulation	RB Size	RB offset	Low CH 26090	Mid CH 26365	High CH 26640
				Frequency 1855 MHz	Frequency 1882.5 MHz	Frequency 1910 MHz
25/ 10	QPSK	1	0	21.85	21.80	21.96
		1	24	22.44	22.17	22.68
		1	49	20.09	20.10	20.47
		25	0	21.34	21.21	21.64
		25	12	21.37	21.11	21.64
		25	25	20.59	20.38	20.74
		50	0	20.86	20.93	21.25
	16QAM	1	0	21.10	20.89	21.36
		1	24	21.60	21.57	21.93
		1	49	19.33	19.57	19.84
		12	0	21.21	21.31	21.64
		12	18	21.13	21.27	21.67
		12	37	20.53	20.57	20.92
		27	0	20.86	20.92	21.13
	64QAM	1	0	21.85	21.80	21.96
		1	24	22.44	22.17	22.68
		1	49	20.09	20.10	20.47
		25	0	21.34	21.21	21.64
		25	12	21.37	21.11	21.64
		25	25	20.59	20.38	20.74
		50	0	20.86	20.93	21.25



LTE BAND 25						
Band/BW	Modulation	RB Size	RB offset	Low CH 26115	Mid CH 26365	High CH 26615
				Frequency 1857.5 MHz	Frequency 1882.5 MHz	Frequency 1907.5 MHz
25/ 15	QPSK	1	0	21.94	21.82	22.10
		1	37	22.33	22.38	22.69
		1	74	20.13	20.01	20.31
		36	0	21.32	21.39	21.70
		36	19	21.31	21.25	21.53
		36	39	20.44	20.47	20.86
		75	0	21.03	20.92	21.24
	16QAM	1	0	21.11	21.04	21.40
		1	37	21.64	21.70	21.80
		1	74	19.51	19.55	19.80
		12	0	21.33	21.23	21.63
		12	31	21.22	21.30	21.53
		12	62	20.45	20.49	20.94
		27	0	20.89	20.84	21.08
	64QAM	1	0	21.94	21.82	22.10
		1	37	22.33	22.38	22.69
		1	74	20.13	20.01	20.31
		36	0	21.32	21.39	21.70
		36	19	21.31	21.25	21.53
		36	39	20.44	20.47	20.86
		75	0	21.03	20.92	21.24
Band/BW	Modulation	RB Size	RB offset	Low CH 26140	Mid CH 26365	High CH 26590
				Frequency 1860 MHz	Frequency 1882.5 MHz	Frequency 1905 MHz
25/ 20	QPSK	1	0	21.93	21.84	22.11
		1	50	22.44	22.38	22.79
		1	99	20.12	20.20	20.46
		50	0	21.47	21.39	21.79
		50	25	21.39	21.31	21.72
		50	50	20.62	20.57	20.86
		100	0	21.03	21.00	21.28
	16QAM	1	0	21.12	21.06	21.45
		1	50	21.78	21.74	21.95
		1	99	19.52	19.60	19.95
		12	0	21.42	21.42	21.81
		12	43	21.26	21.32	21.67
		12	87	20.53	20.57	20.94
		27	0	20.96	21.02	21.22
	64QAM	1	0	21.93	21.84	22.11
		1	50	22.44	22.38	22.79
		1	99	20.12	20.20	20.46
		50	0	21.47	21.39	21.79
		50	25	21.39	21.31	21.72
		50	50	20.62	20.57	20.86
		100	0	21.03	21.00	21.28



GSM 1900						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
512	1850.2	28.63	1.31	29.94	986.28	2
661	1880	28.64	1.31	29.95	988.55	2
810	1909.8	28.46	1.31	29.77	948.42	2

LTE BAND 2						
1.4MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	22.44	1.31	23.75	237.14	2
18900	1880.0	22.60	1.31	23.91	246.04	2
19193	1909.3	22.42	1.31	23.73	236.05	2

1.4MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	21.62	1.31	22.93	196.34	2
18900	1880.0	21.69	1.31	23.00	199.53	2
19193	1909.3	21.64	1.31	22.95	197.24	2

3MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	22.41	1.31	23.72	235.50	2
18900	1880	22.51	1.31	23.82	240.99	2
19185	1908.5	22.37	1.31	23.68	233.35	2

3MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	21.51	1.31	22.82	191.43	2
18900	1880	21.85	1.31	23.16	207.01	2
19185	1908.5	21.84	1.31	23.15	206.54	2

5MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	22.27	1.31	23.58	228.03	2
18900	1880	22.57	1.31	23.88	244.34	2



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19175	1907.5	22.43	1.31	23.74	236.59	2
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5MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	21.66	1.31	22.97	198.15	2
18900	1880	21.80	1.31	23.11	204.64	2
19175	1907.5	21.77	1.31	23.08	203.24	2

10MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	22.44	1.31	23.75	237.14	2
18900	1880	22.57	1.31	23.88	244.34	2
19150	1905	22.32	1.31	23.63	230.67	2

10MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	21.68	1.31	22.99	199.07	2
18900	1880	21.71	1.31	23.02	200.45	2
19150	1905	21.63	1.31	22.94	196.79	2

15MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	22.25	1.31	23.56	226.99	2
18900	1880	22.45	1.31	23.76	237.68	2
19125	1902.5	22.31	1.31	23.62	230.14	2

15MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	21.60	1.31	22.91	195.43	2
18900	1880	21.75	1.31	23.06	202.30	2
19125	1902.5	21.85	1.31	23.16	207.01	2

20MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)



18700	1860	22.46	1.31	23.77	238.23	2
18900	1880	22.66	1.31	23.97	249.46	2
19100	1900	22.50	1.31	23.81	240.44	2

20MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	21.69	1.31	23.00	199.53	2
18900	1880	21.84	1.31	23.15	206.54	2
19100	1900	21.84	1.31	23.15	206.54	2
LTE BAND 25						
1.4MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	22.29	1.31	23.60	229.09	2
26340	1880	22.32	1.31	23.63	230.67	2
26683	1914.3	22.63	1.31	23.94	247.74	2

1.4MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	21.75	1.31	23.06	202.30	2
26340	1880	21.69	1.31	23.00	199.53	2
26683	1914.3	21.91	1.31	23.22	209.89	2

3MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	22.26	1.31	23.57	227.51	2
26340	1880	22.20	1.31	23.51	224.39	2
26675	1913.5	22.61	1.31	23.92	246.60	2

3MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	21.59	1.31	22.90	194.98	2
26340	1880	21.61	1.31	22.92	195.88	2
26675	1913.5	21.80	1.31	23.11	204.64	2

5MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)



BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02

26065	1852.5	22.26	1.31	23.57	227.51	2
26340	1880	22.39	1.31	23.70	234.42	2
26665	1912.5	22.76	1.31	24.07	255.27	2

5MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	21.60	1.31	22.91	195.43	2
26340	1880	21.64	1.31	22.95	197.24	2
26665	1912.5	21.79	1.31	23.10	204.17	2
10MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	22.44	1.31	23.75	237.14	2
26340	1880	22.17	1.31	23.48	222.84	2
26640	1910	22.68	1.31	23.99	250.61	2

10MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	21.60	1.31	22.91	195.43	2
26340	1880	21.57	1.31	22.88	194.09	2
26640	1910	21.93	1.31	23.24	210.86	2

15MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	22.33	1.31	23.64	231.21	2
26340	1880	22.38	1.31	23.69	233.88	2
26615	1907.5	22.69	1.31	24.00	251.19	2

15MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	21.64	1.31	22.95	197.24	2
26340	1880	21.70	1.31	23.01	199.99	2
26615	1907.5	21.80	1.31	23.11	204.64	2

20MHz QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	22.44	1.31	23.75	237.14	2
26340	1880	22.38	1.31	23.69	233.88	2
26590	1905	22.79	1.31	24.10	257.04	2



20MHz 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	21.78	1.31	23.09	203.70	2
26340	1880	21.74	1.31	23.05	201.84	2
26590	1905	21.95	1.31	23.26	211.84	2

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



3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

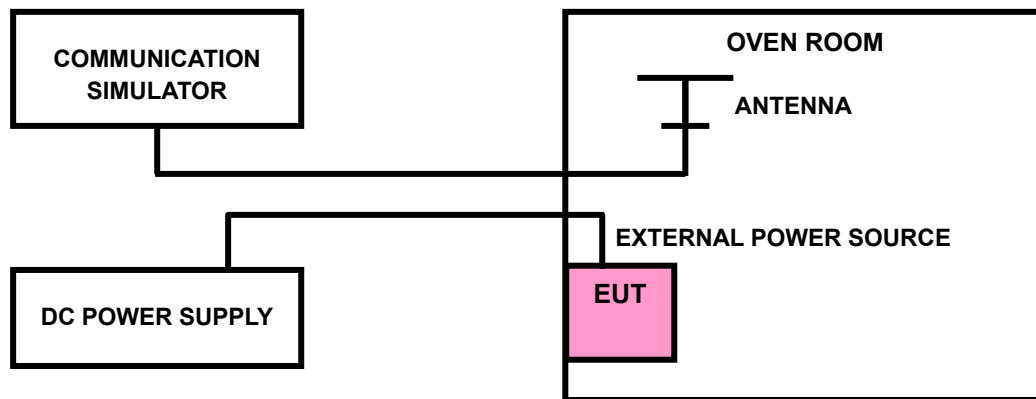
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

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.

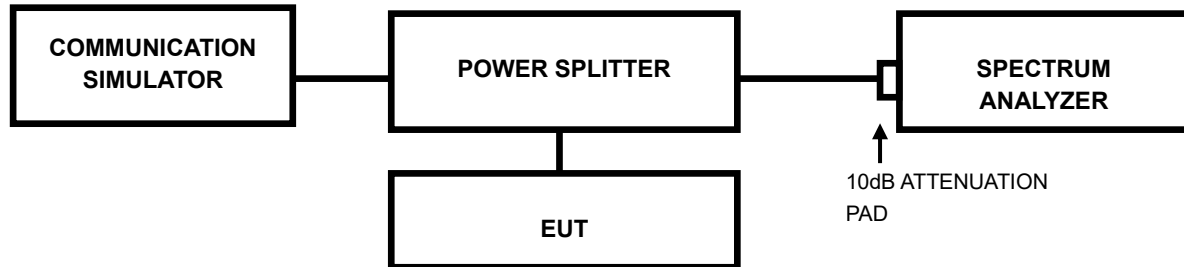


3.3 OCCUPIED BANDWIDTH MEASUREMENT

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.

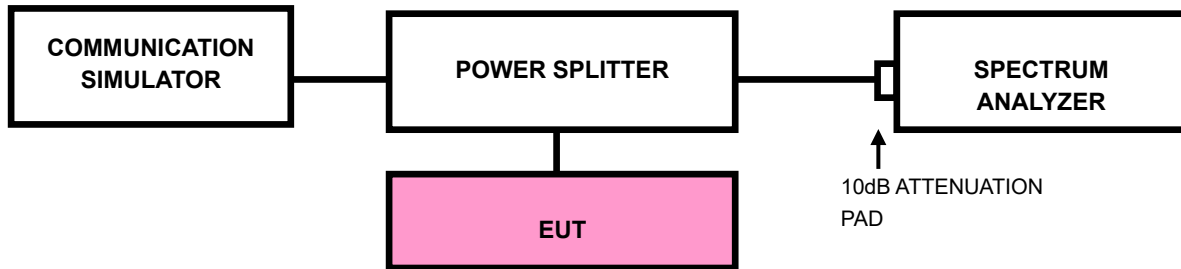


3.4 BAND EDGE MEASUREMENTC

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

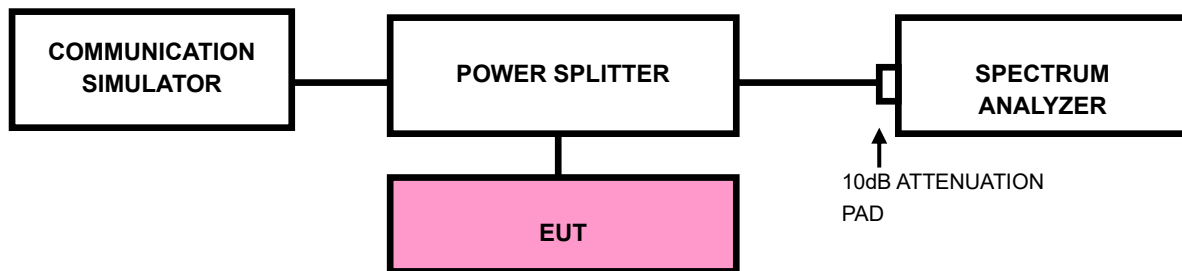
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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 30MHz 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. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$

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

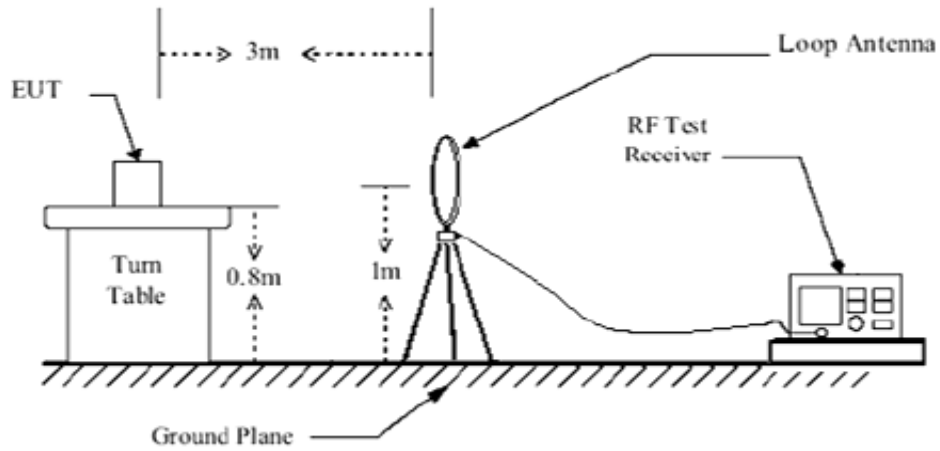
3.6.3 DEVIATION FROM TEST STANDARD

No deviation

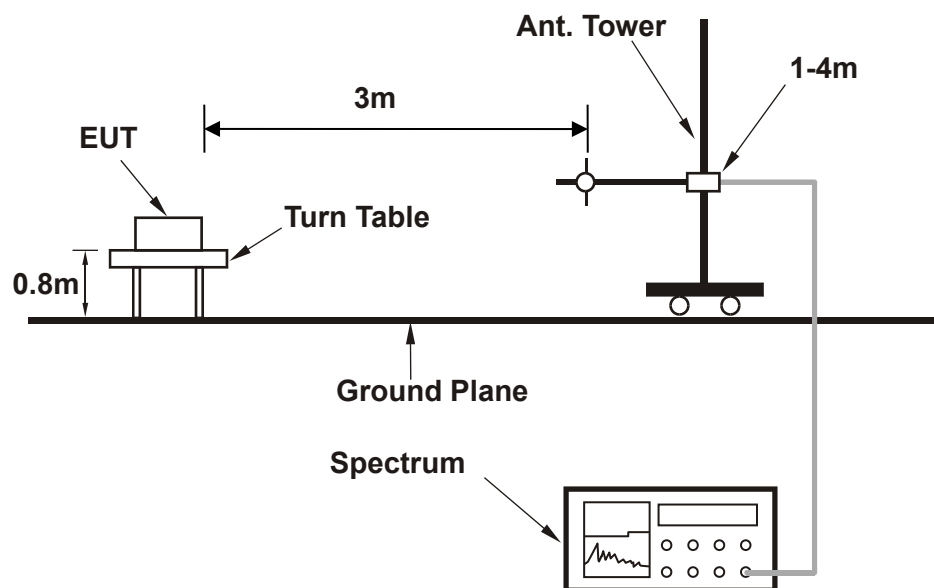


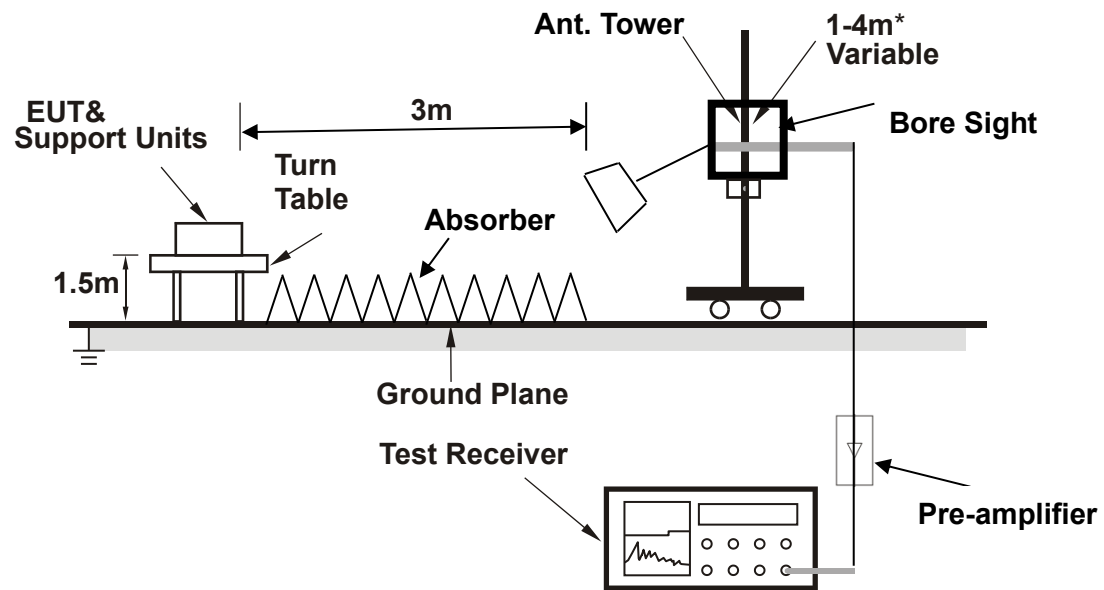
3.6.4 TEST SETUP

< 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

PCS 1900

CHANNEL BANDWIDTH

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	49.885	-48.02	-13.00	35.02	-3.37	H	177.8	2.00
1	72.680	-50.27	-13.00	37.27	-10.53	H	177.8	2.00
1	140.580	-54.62	-13.00	41.62	-13.74	H	177.8	2.00
1	229.820	-40.07	-13.00	27.07	1.71	H	231.2	1.00
1	458.740	-56.64	-13.00	43.64	1.86	H	177.8	2.00
1	864.200	-54.97	-13.00	41.97	7.12	H	5.6	1.00

Level in dBm

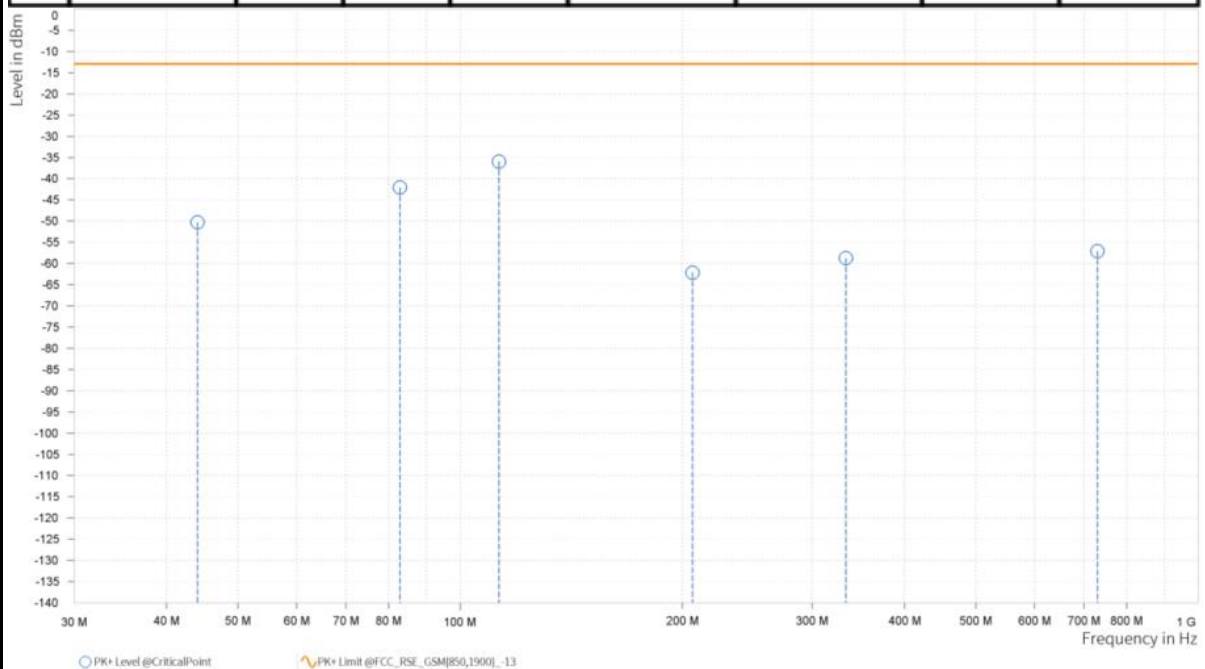
</



MODE	TX channel 810	FREQUENCY RANGE	30 MHz – 1GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	44.065	-50.31	-13.00	37.31	-6.61	V	177.8	2.00
1	82.865	-42.10	-13.00	29.10	-8.72	V	271	2.00
1	112.935	-35.96	-13.00	22.96	0.89	V	177.8	2.00
1	206.540	-62.15	-13.00	49.15	-6.54	V	177.8	2.00
1	333.125	-58.77	-13.00	45.77	0.39	V	91.3	1.00
1	730.340	-57.06	-13.00	44.06	1.40	V	177.8	2.00





ABOVE 1GHz DATA

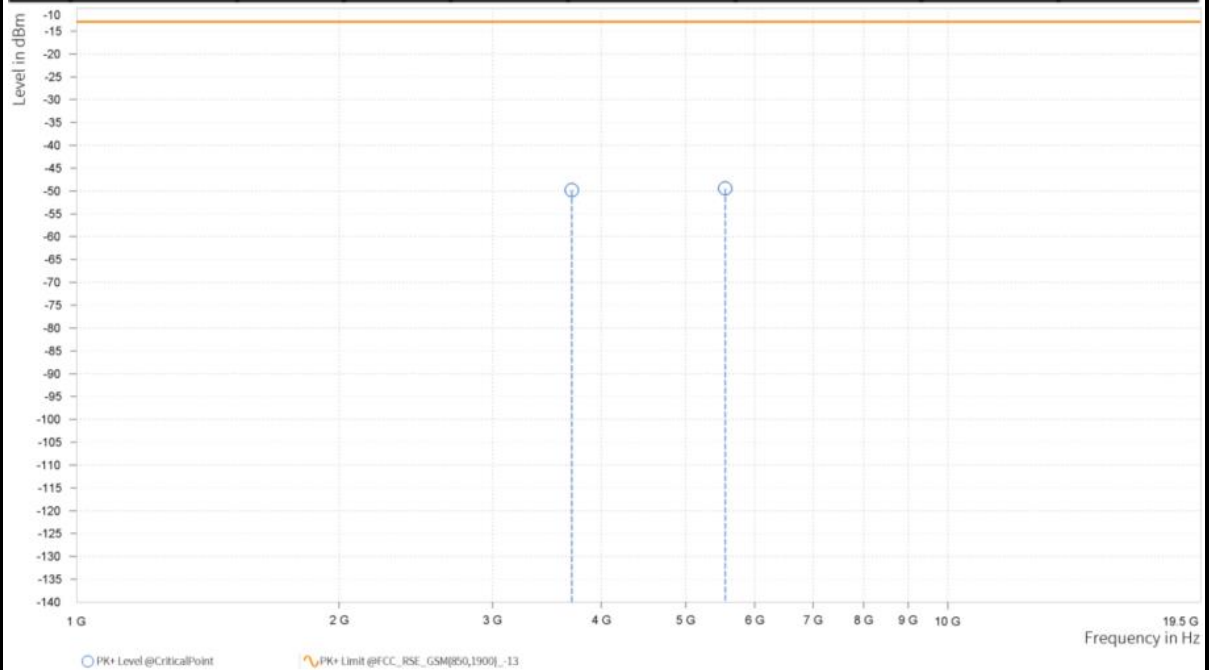
Note: For higher frequency, the emission is too low to be detected.

PCS 1900

MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.400	-49.79	-13.00	36.79	21.11	H	118	2.00
4	5,550.600	-49.45	-13.00	36.45	24.26	H	1	1.00

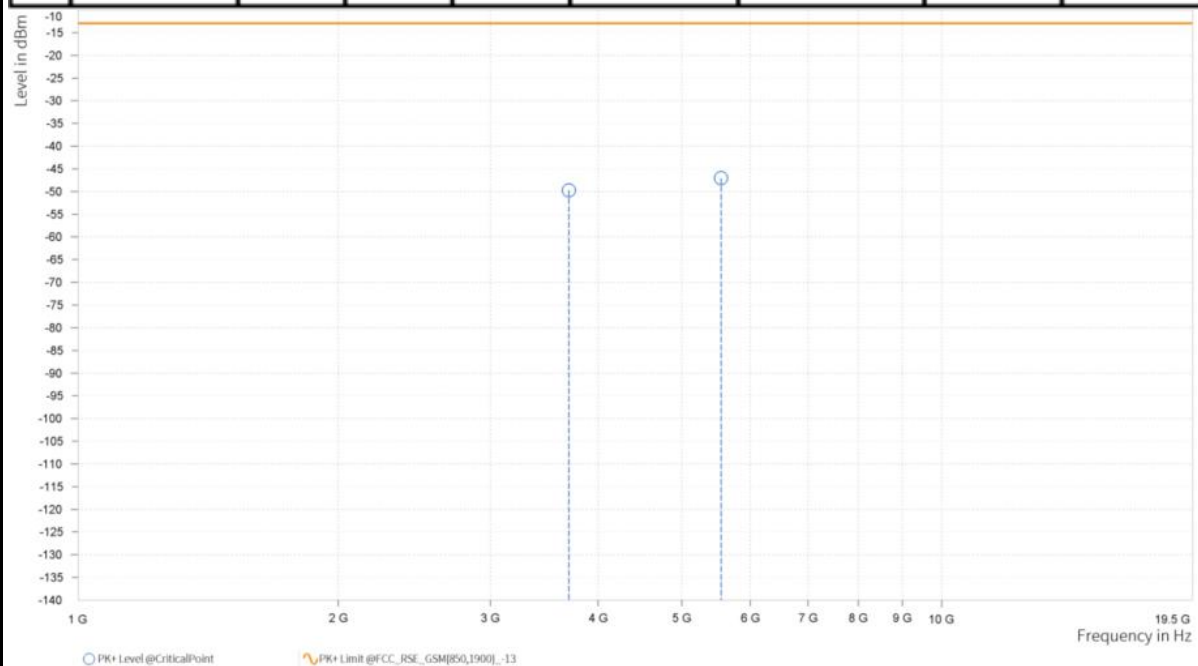




MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.400	-49.73	-13.00	36.73	21.71	V	243.1	1.00
4	5,550.600	-47.05	-13.00	34.05	24.96	V	359	1.00

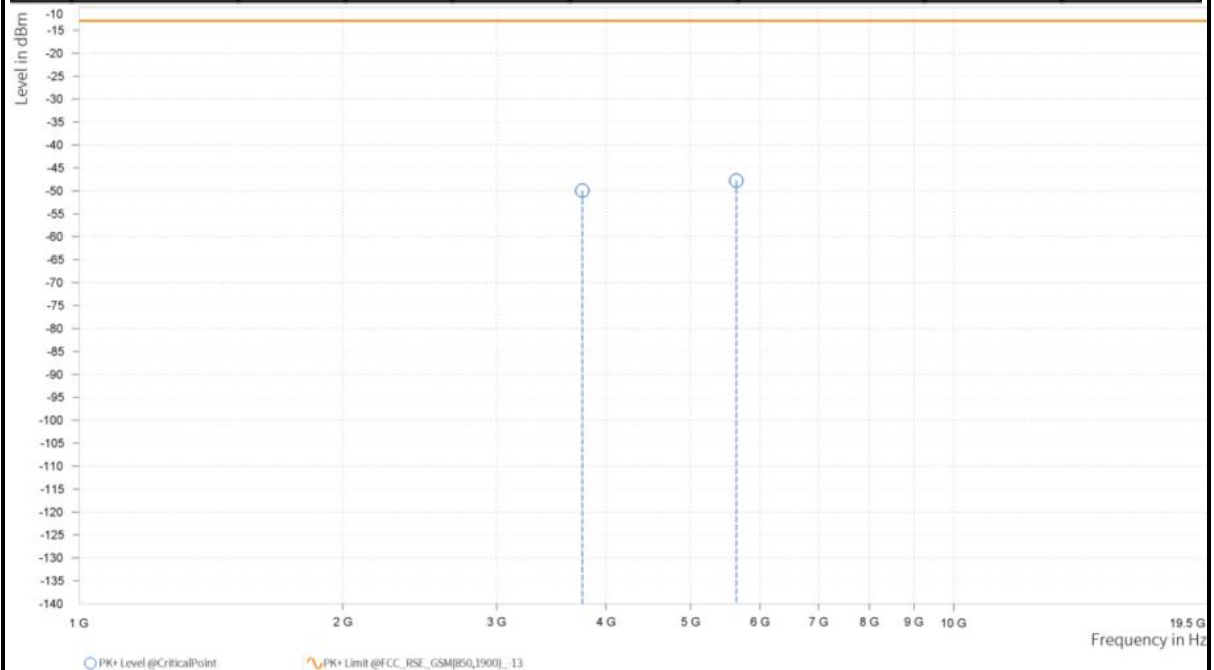




MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-49.97	-13.00	36.97	21.64	H	243	1.00
4	5,640.000	-47.76	-13.00	34.76	24.79	H	1	2.00

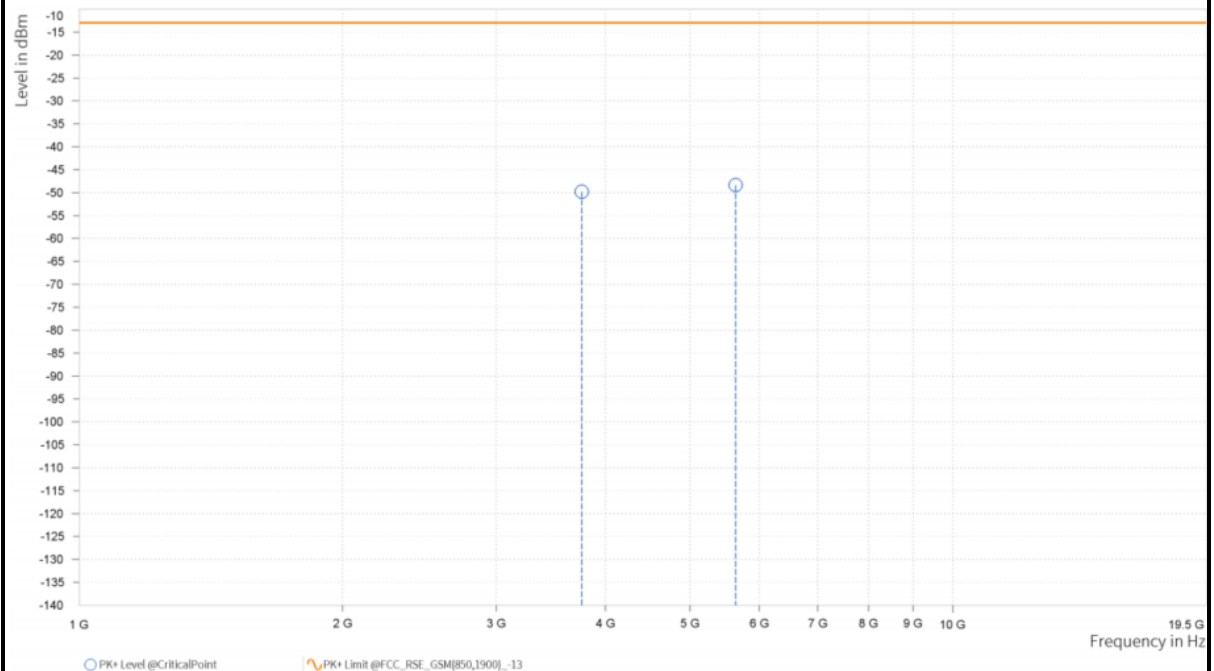




MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-49.79	-13.00	36.79	22.13	V	1	1.00
4	5,640.000	-48.36	-13.00	35.36	25.13	V	1	1.00

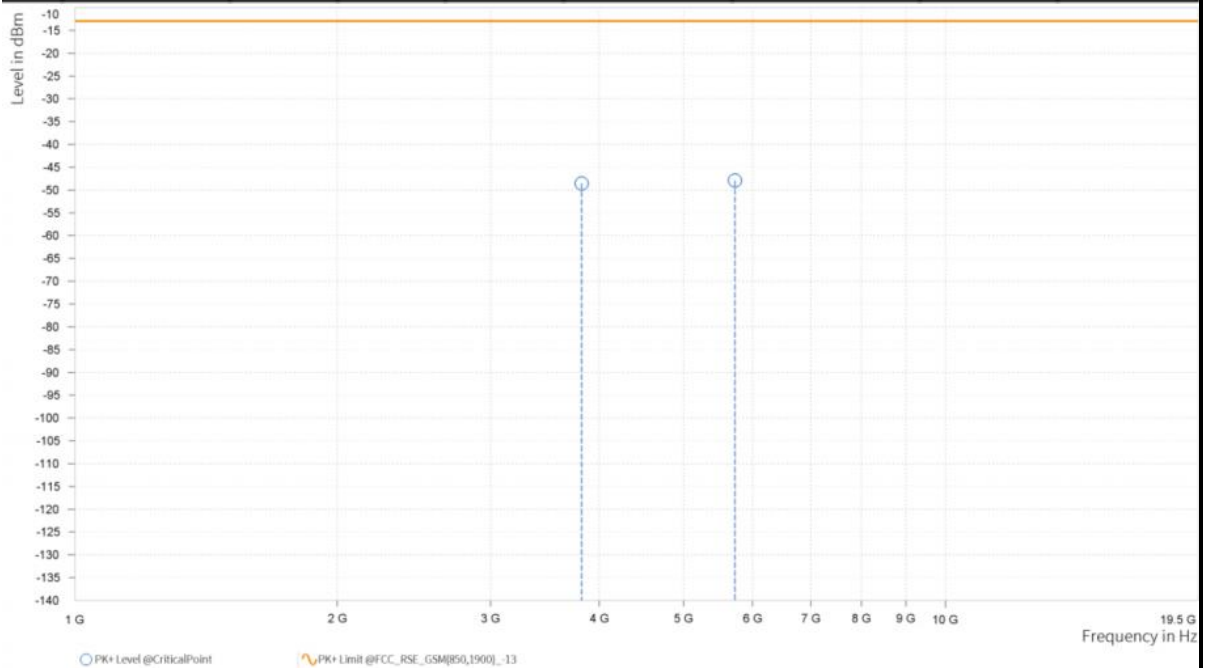




MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.600	-48.54	-13.00	35.54	22.23	H	113.2	2.00
4	5,729.400	-47.92	-13.00	34.92	25.33	H	359	2.00

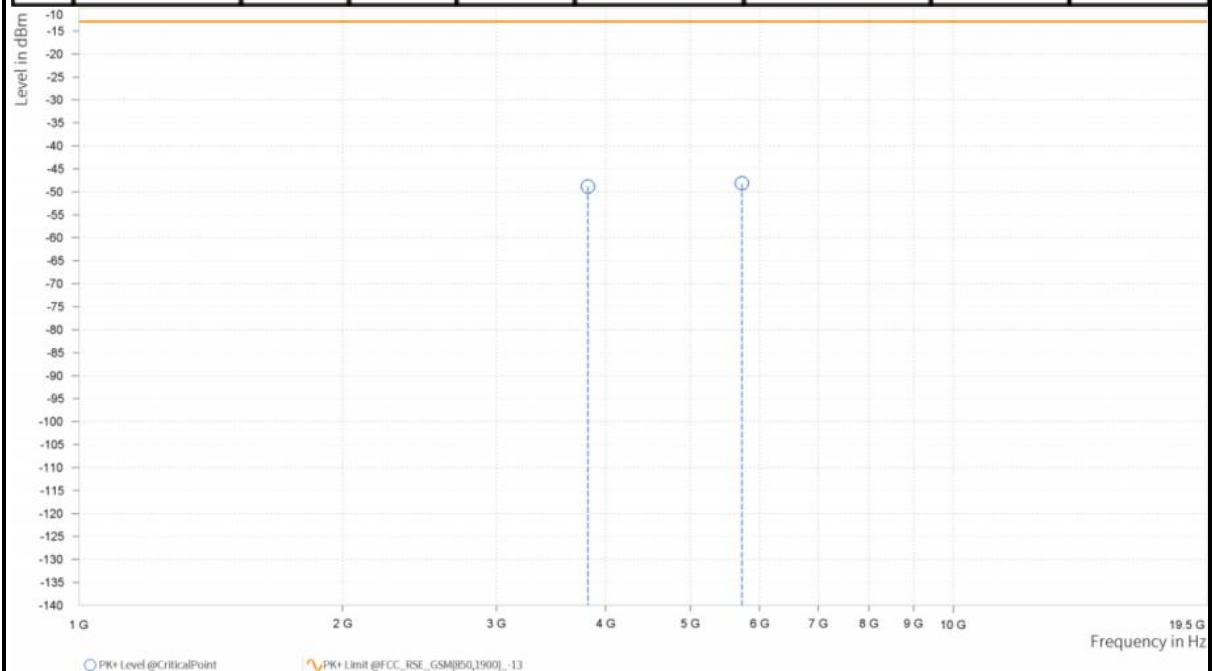


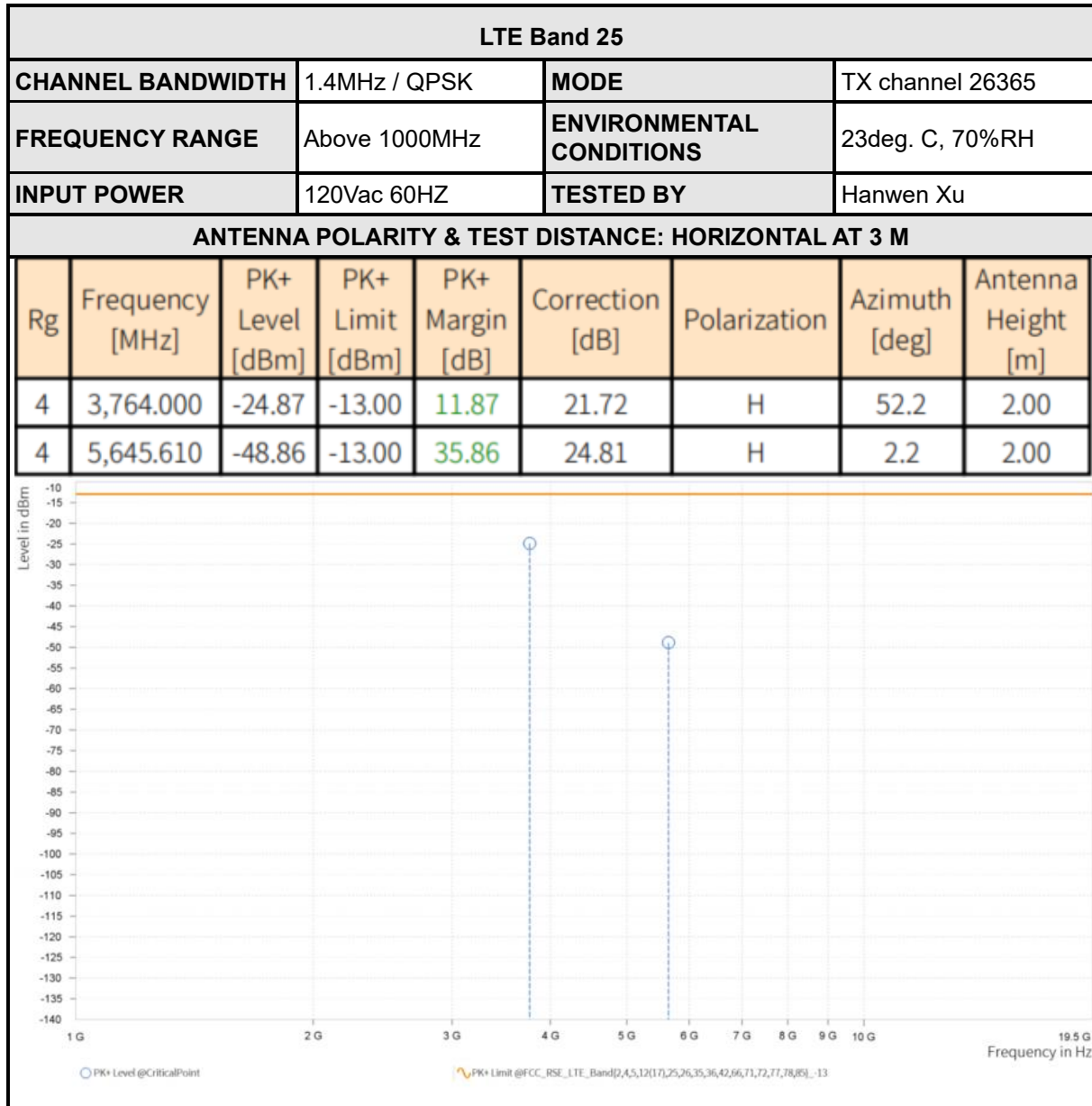


MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.600	-48.82	-13.00	35.82	22.58	V	1	2.00
4	5,729.400	-48.15	-13.00	35.15	25.79	V	1	1.00



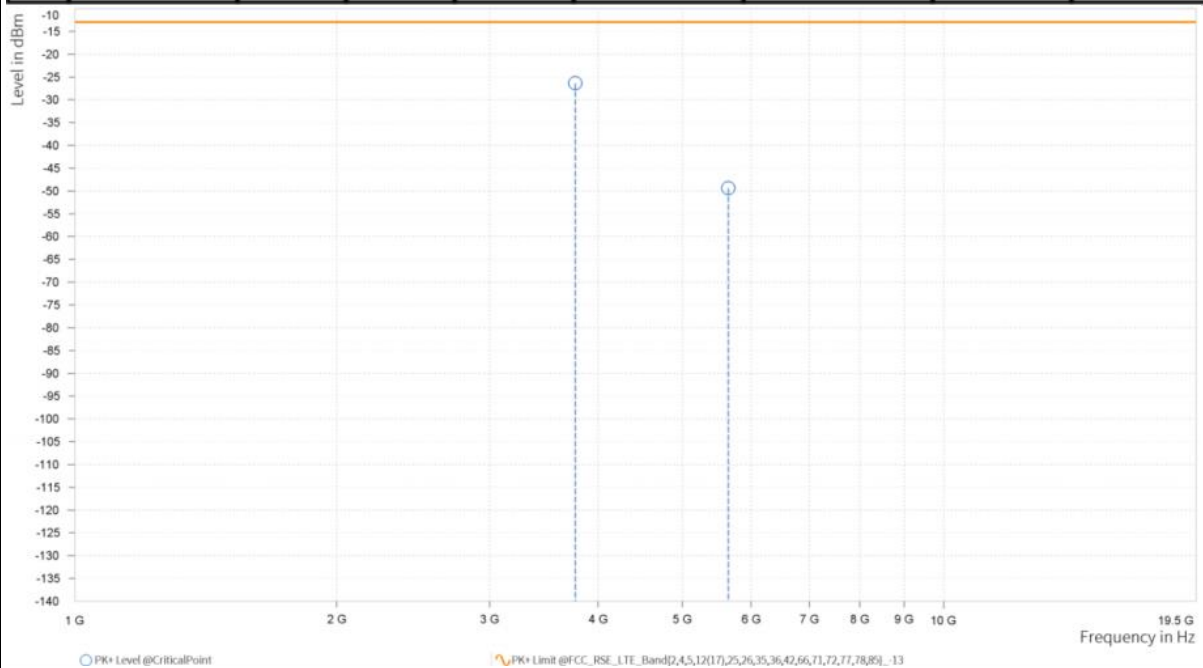




CHANNEL BANDWIDTH	1.4MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,764.000	-26.34	-13.00	13.34	22.16	V	113	2.00
4	5,645.610	-49.38	-13.00	36.38	25.17	V	357.1	1.00

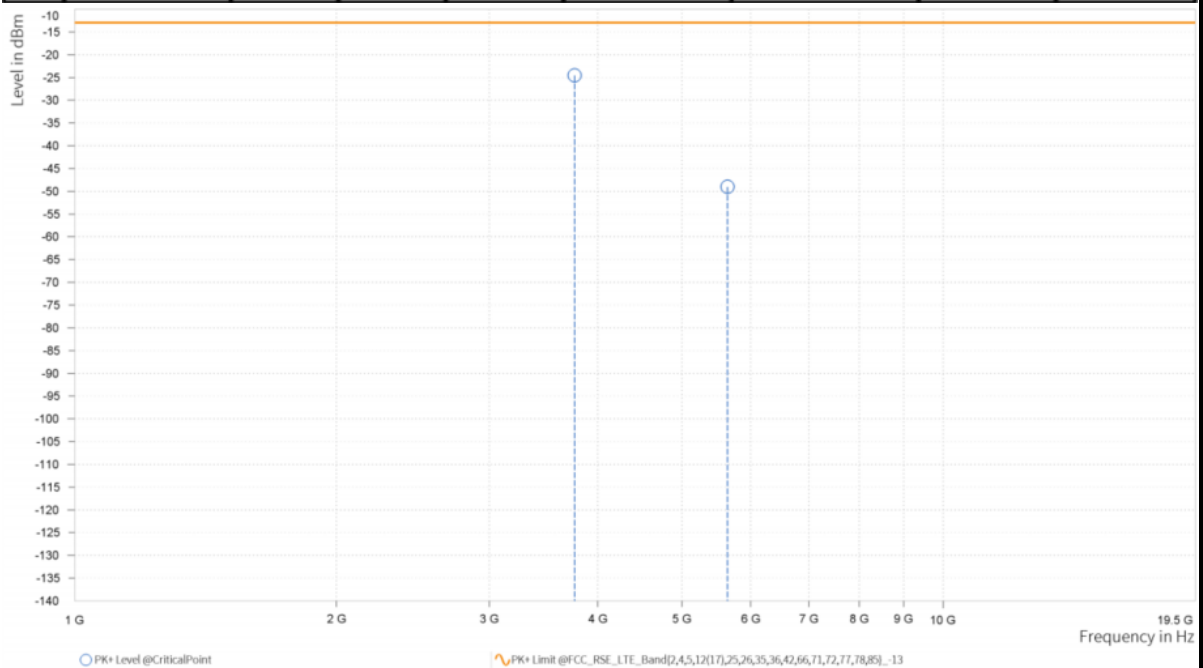




CHANNEL BANDWIDTH	3MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,762.500	-24.55	-13.00	11.55	21.69	H	96.2	1.00
4	5,643.450	-49.01	-13.00	36.01	24.80	H	0.9	2.00

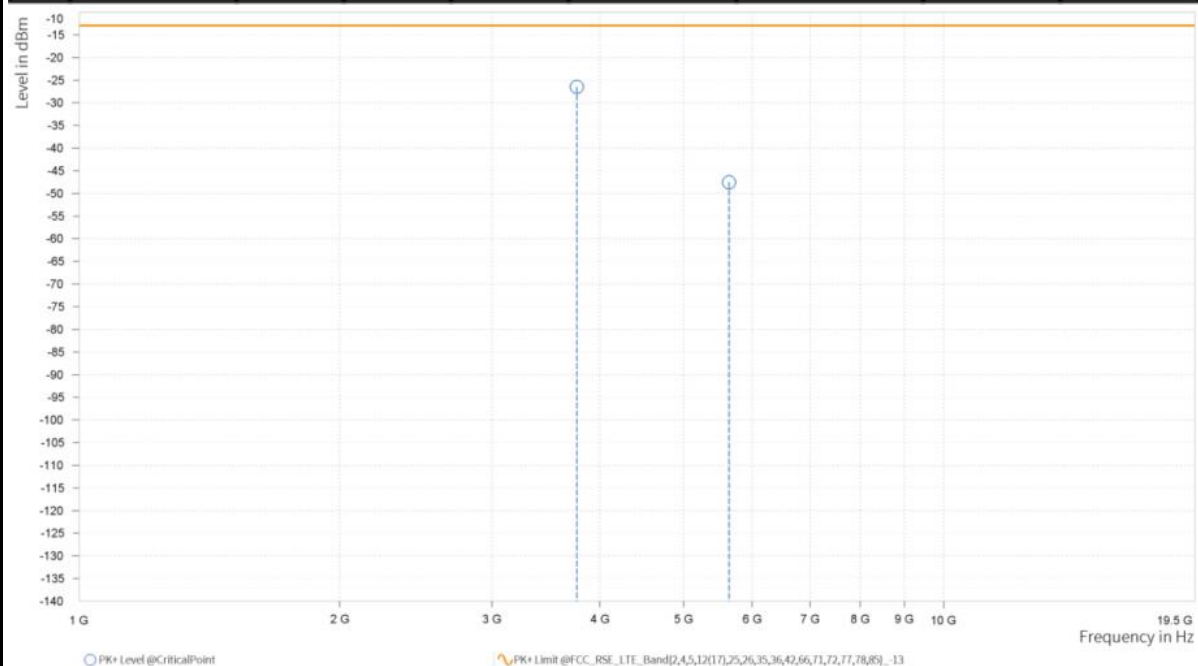




CHANNEL BANDWIDTH	3MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,762.500	-26.49	-13.00	13.49	22.15	V	55.8	2.00
4	5,643.450	-47.52	-13.00	34.52	25.15	V	194.5	1.00

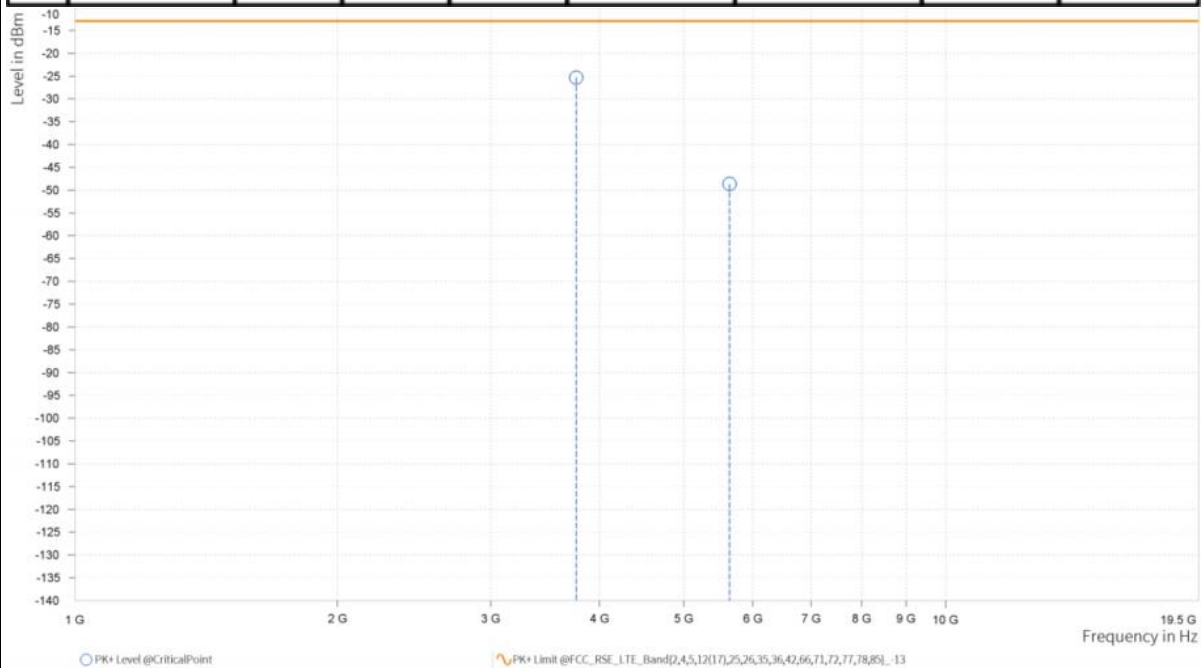




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.500	-25.32	-13.00	12.32	21.65	H	103.1	2.00
4	5,640.750	-48.66	-13.00	35.66	24.79	H	1	1.00

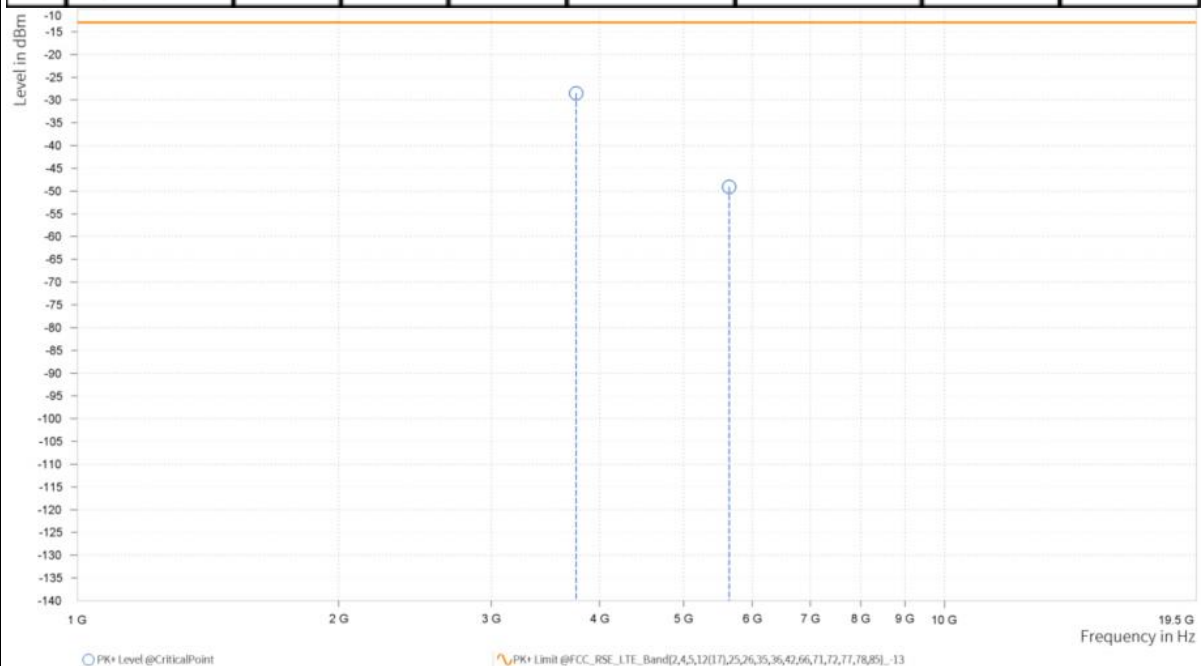




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-28.50	-13.00	15.50	22.13	V	55.8	2.00
4	5,640.750	-49.07	-13.00	36.07	25.14	V	211.5	1.00

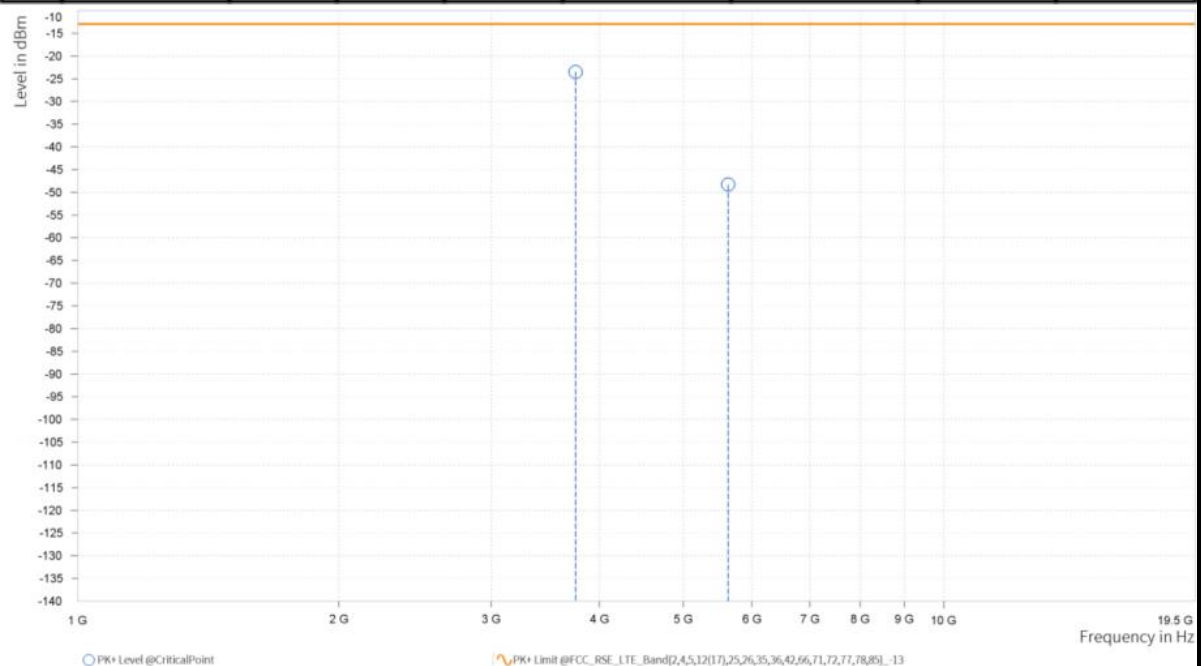




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,756.000	-23.48	-13.00	10.48	21.56	H	359.1	1.00
4	5,634.000	-48.31	-13.00	35.31	24.76	H	115.2	2.00

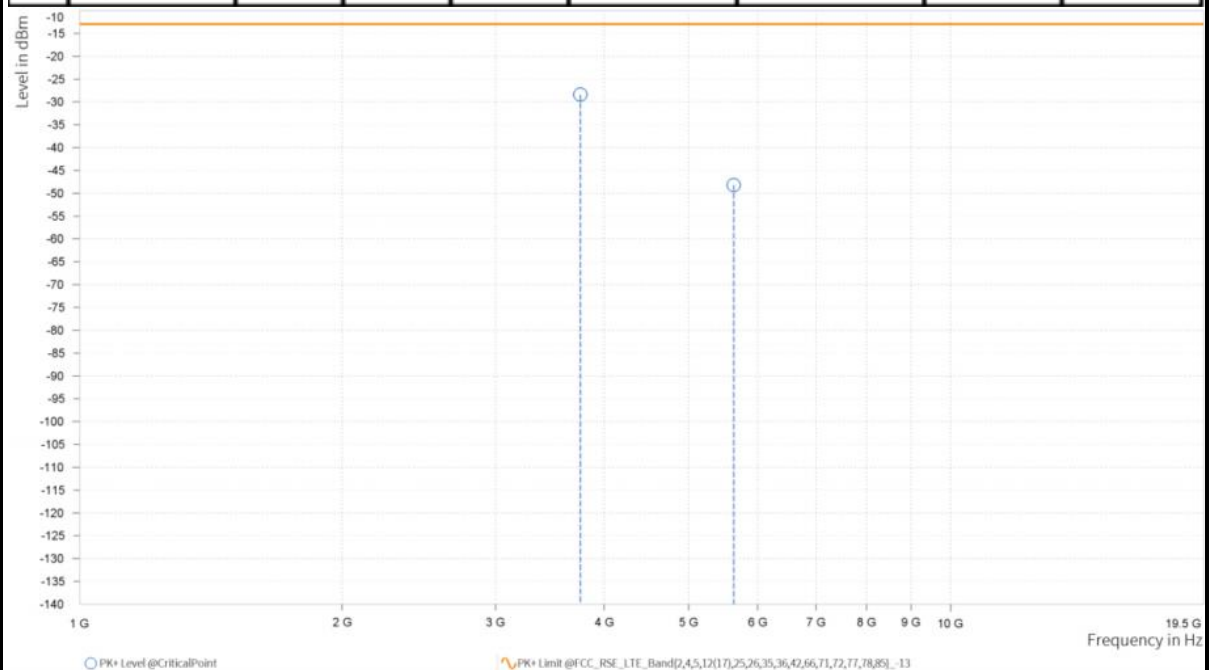




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,756.500	-28.39	-13.00	15.39	22.10	V	351.9	1.00
4	5,634.000	-48.17	-13.00	35.17	25.09	V	359	2.00

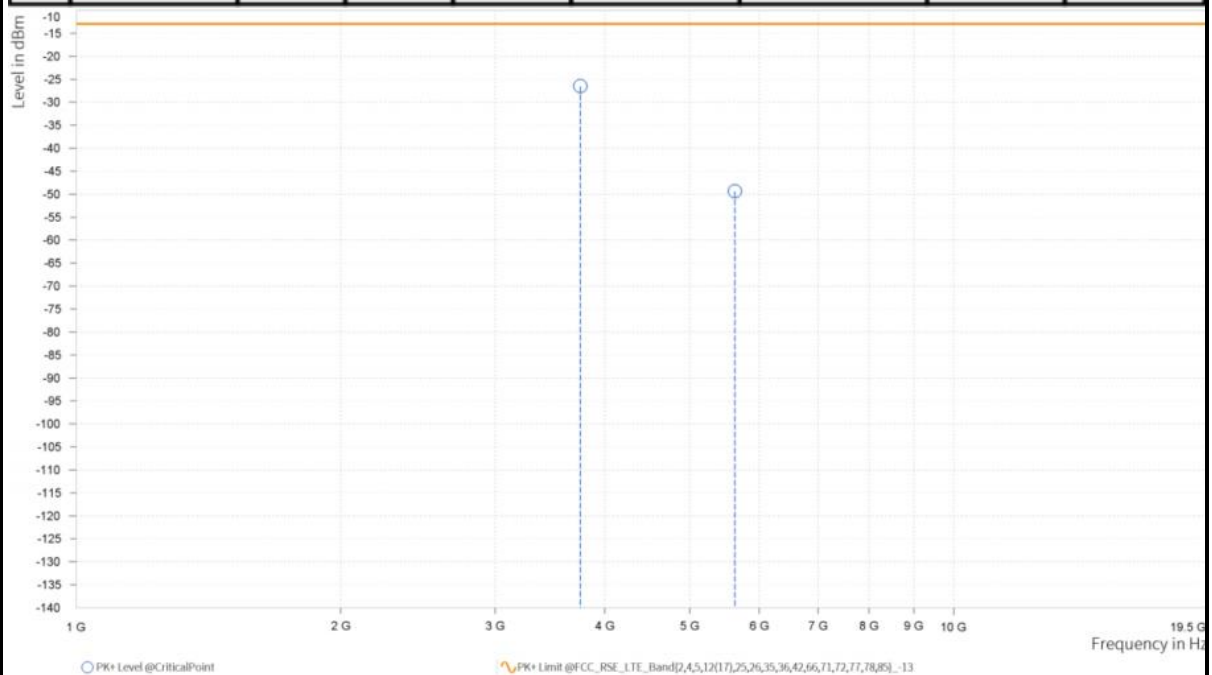




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,751.500	-26.49	-13.00	13.49	21.47	H	88.3	2.00
4	5,627.250	-49.38	-13.00	36.38	24.71	H	128	1.00

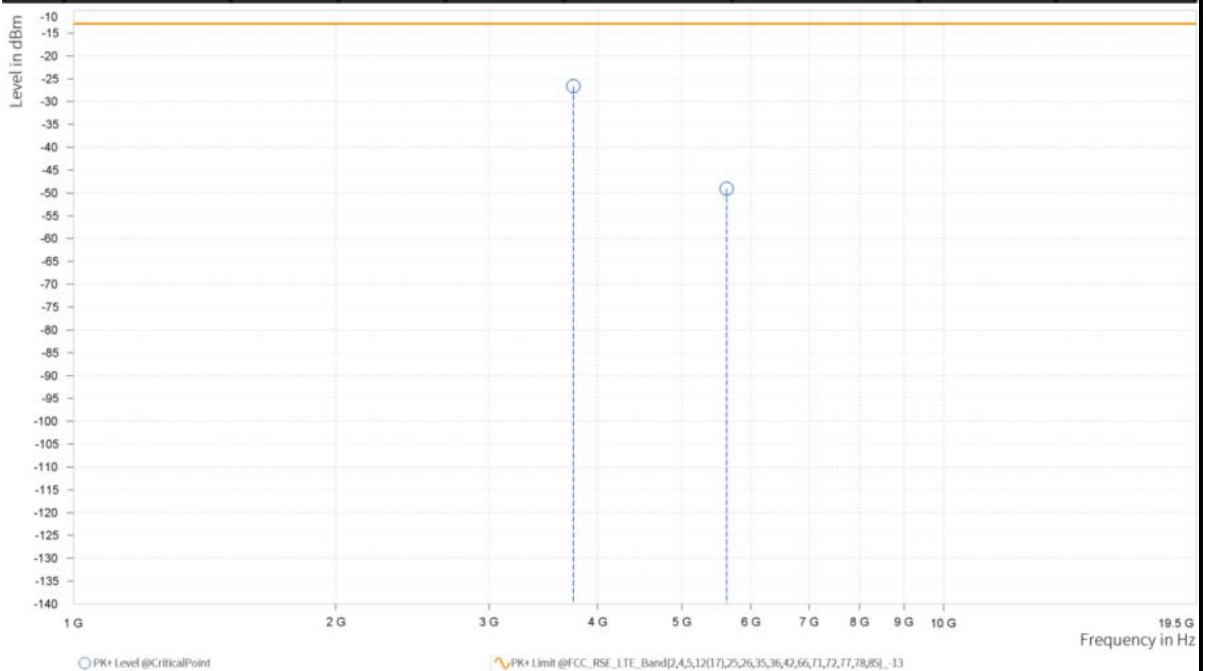




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,751.500	-26.65	-13.00	13.65	22.07	V	359	1.00
4	5,627.250	-49.10	-13.00	36.10	25.07	V	359	2.00

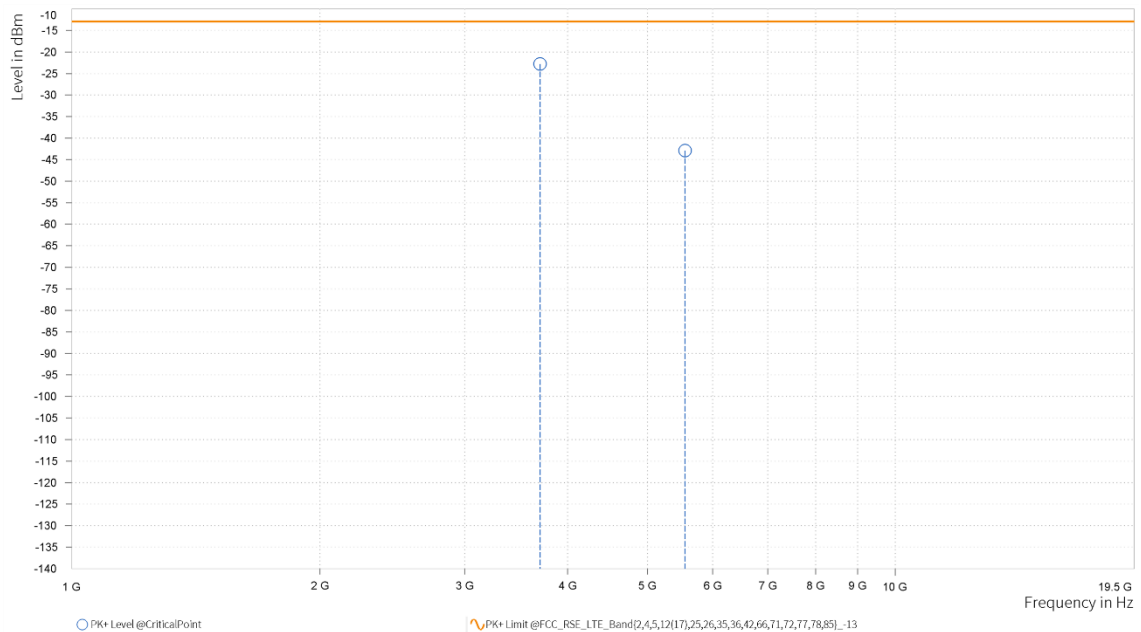




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 26140
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,702.000	-22.80	-13.00	9.80	21.12	H	108.1	2.00
4	5,553.500	-42.93	-13.00	29.93	24.27	H	359	1.00

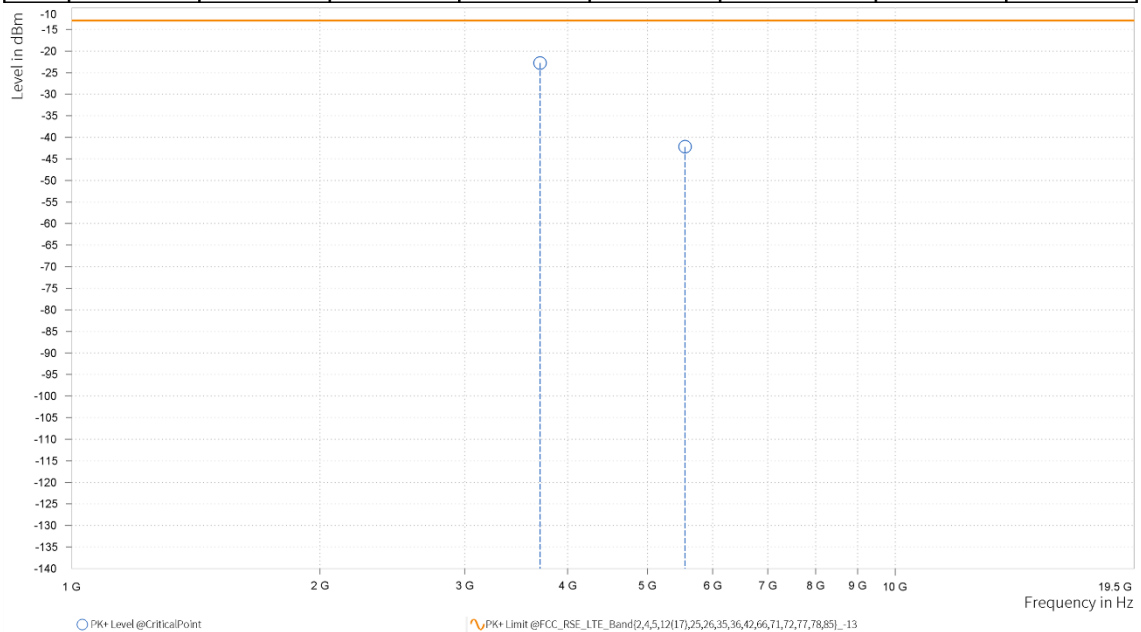




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 26140
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,702.000	-22.77	-13.00	9.77	21.72	V	50.8	2.00
4	5,553.500	-42.17	-13.00	29.17	24.96	V	167.5	2.00



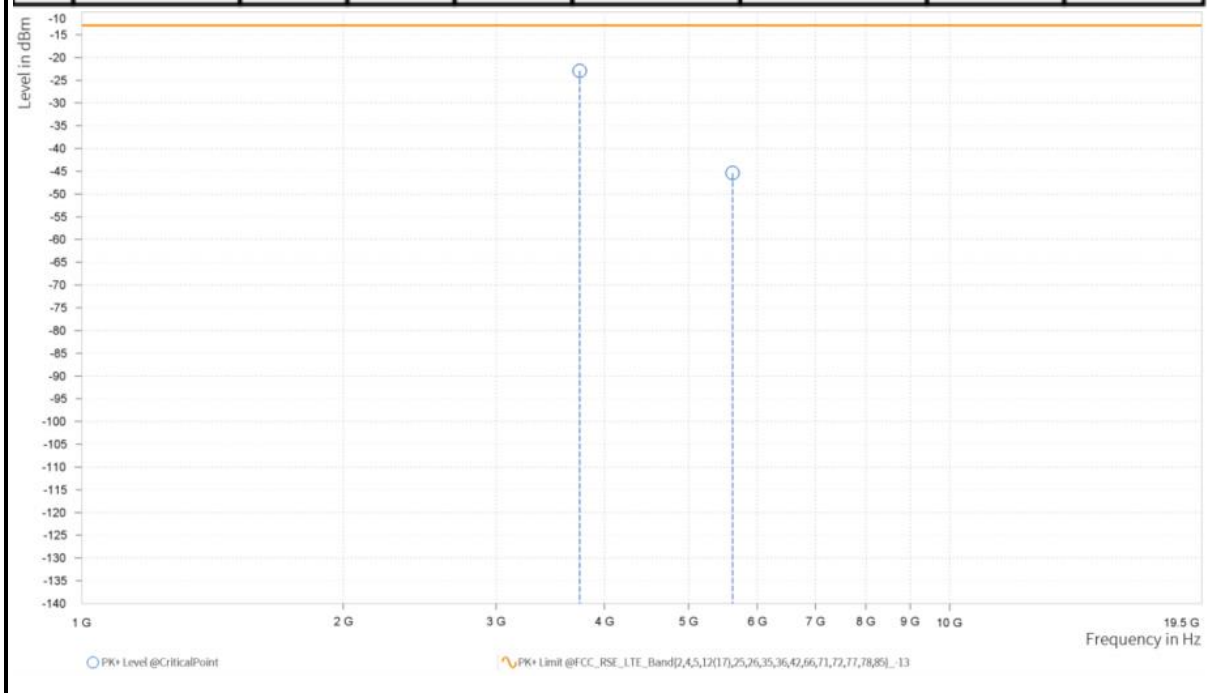


BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02

CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,746.500	-22.91	-13.00	9.91	21.38	H	97.6	1.00
4	5,620.500	-45.38	-13.00	32.38	24.66	H	359.1	1.00

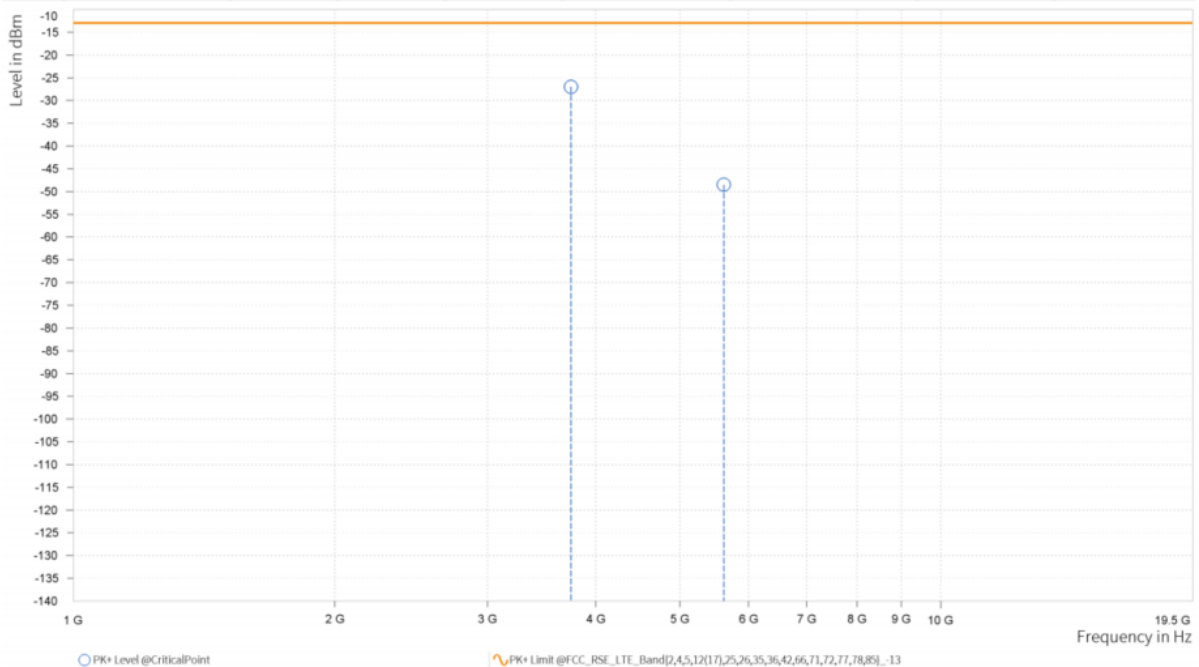




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 26365
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,747.000	-26.99	-13.00	13.99	22.04	V	252.4	2.00
4	5,620.500	-48.50	-13.00	35.50	25.06	V	93.3	1.00

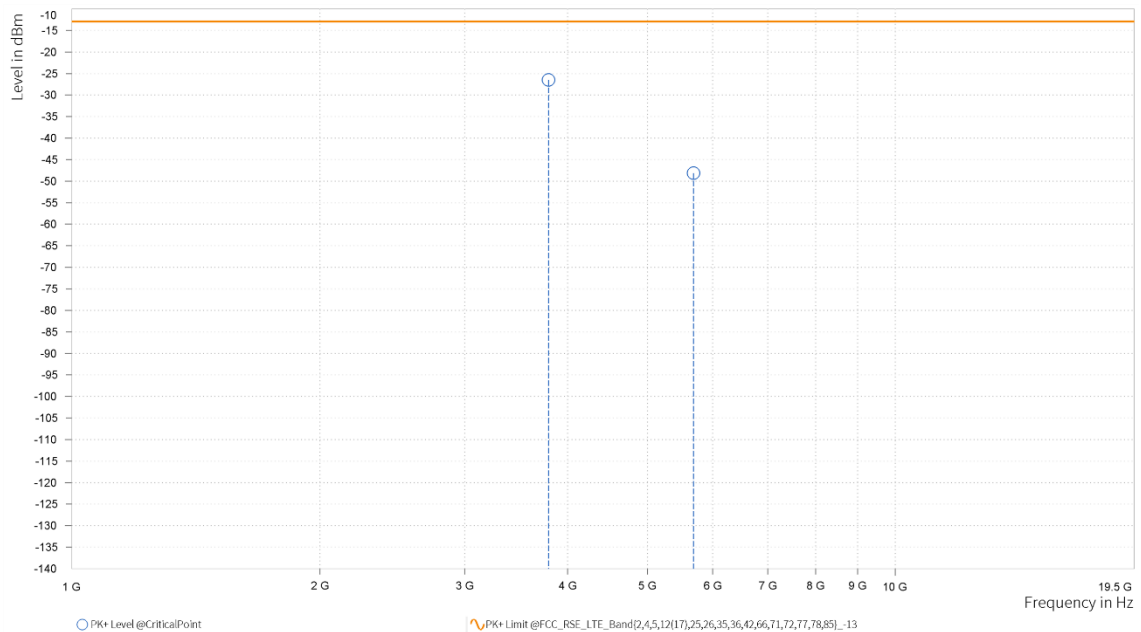




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 26590
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,791.500	-26.50	-13.00	13.50	22.17	H	103.9	2.00
4	5,688.000	-48.15	-13.00	35.15	25.02	H	1	2.00

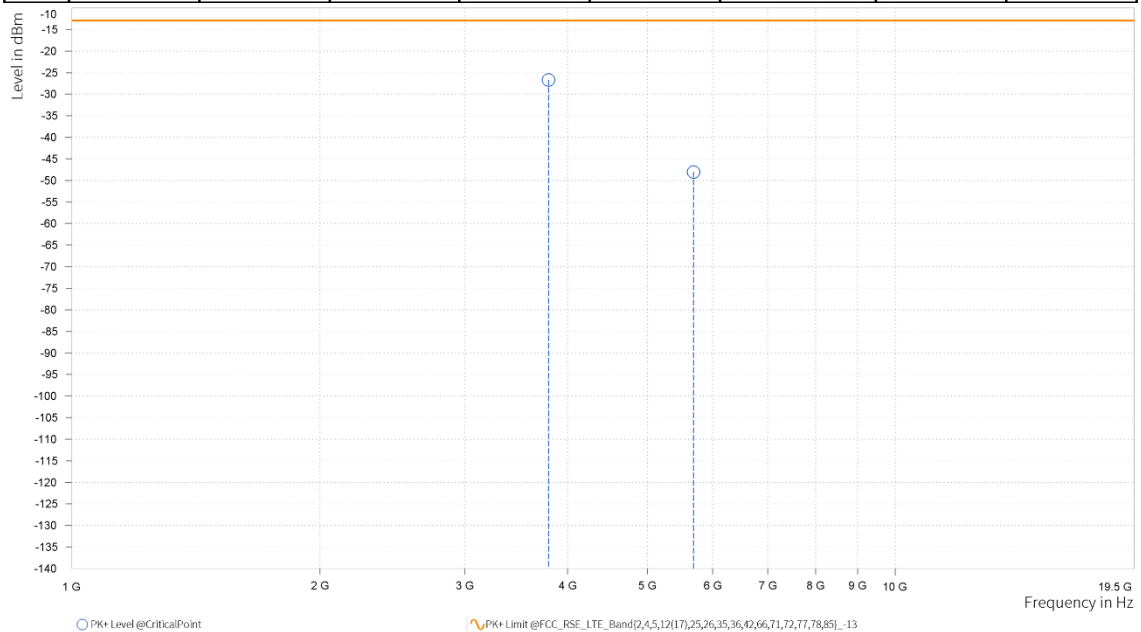




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 26590
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,792.500	-26.67	-13.00	13.67	22.39	V	48	2.00
4	5,688.000	-48.03	-13.00	35.03	25.44	V	341.8	1.00

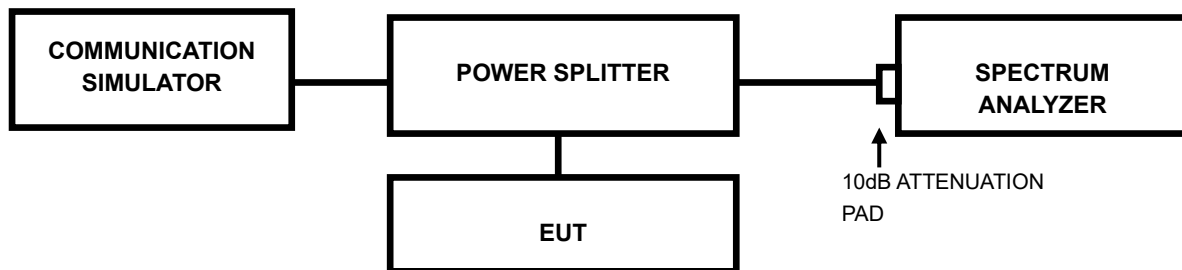


3.7 PEAK TO AVERAGE RATIO

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%.

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

GSM1900

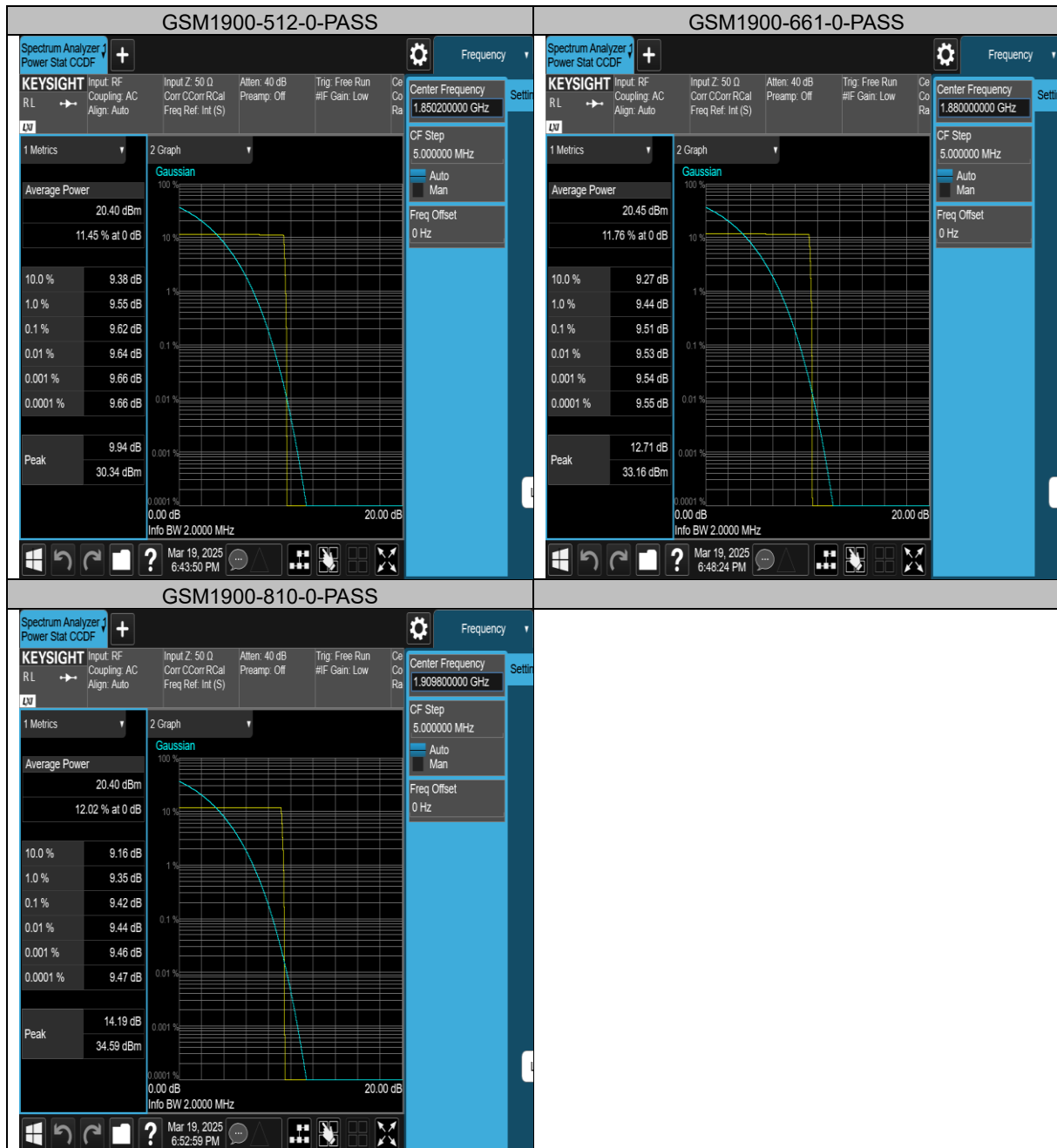
APPENDIX:PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Channel	Result(dB)	Limit(dB)	Verdict
GSM1900	512	9.62	13	PASS
GSM1900	661	9.51	13	PASS
GSM1900	810	9.42	13	PASS



Test Graphs





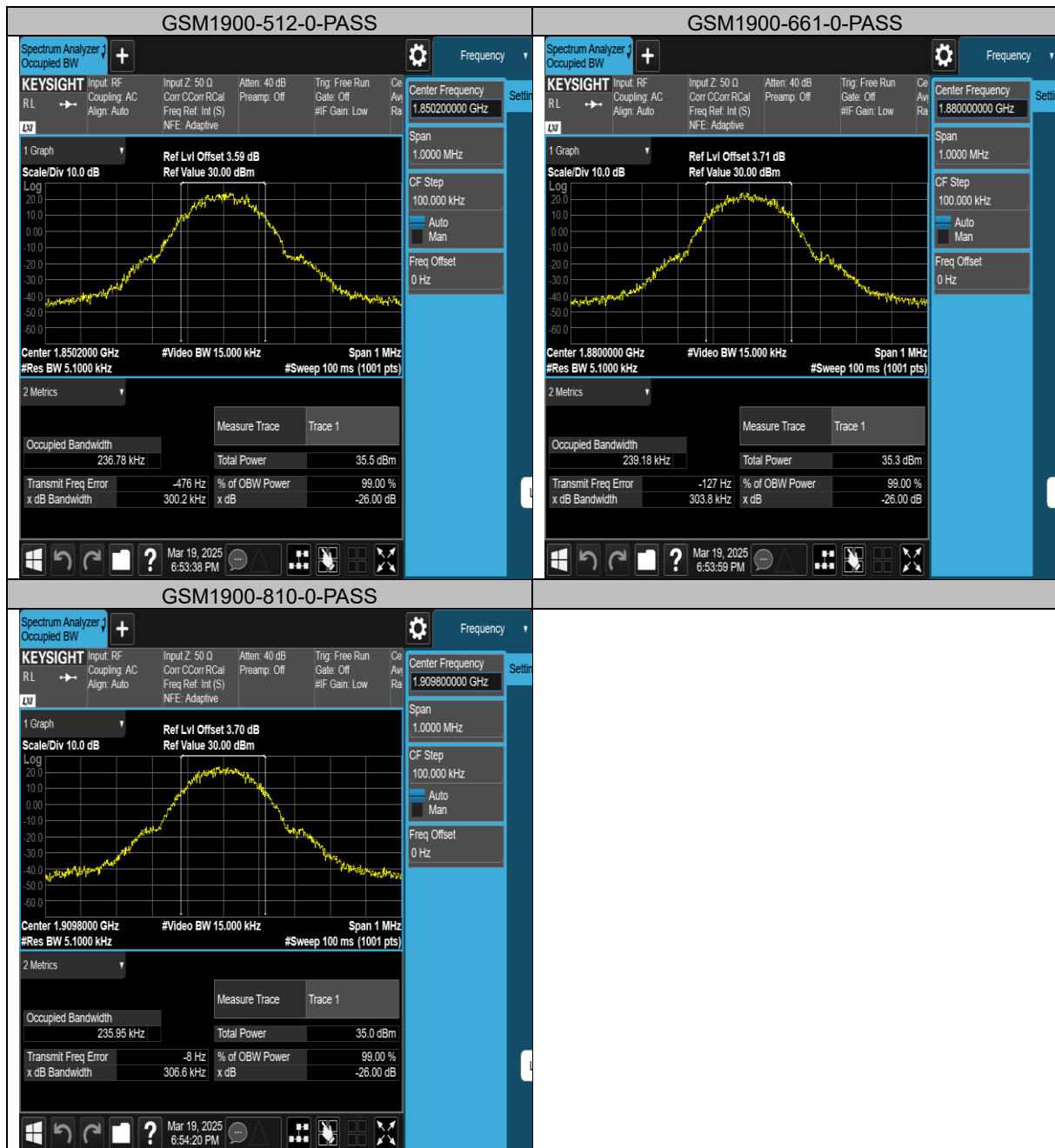
APPENDIX : 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM1900	512	0.23678	0.3002	---	PASS
GSM1900	661	0.23918	0.3038	---	PASS
GSM1900	810	0.23595	0.3066	---	PASS



Test Graphs





BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02

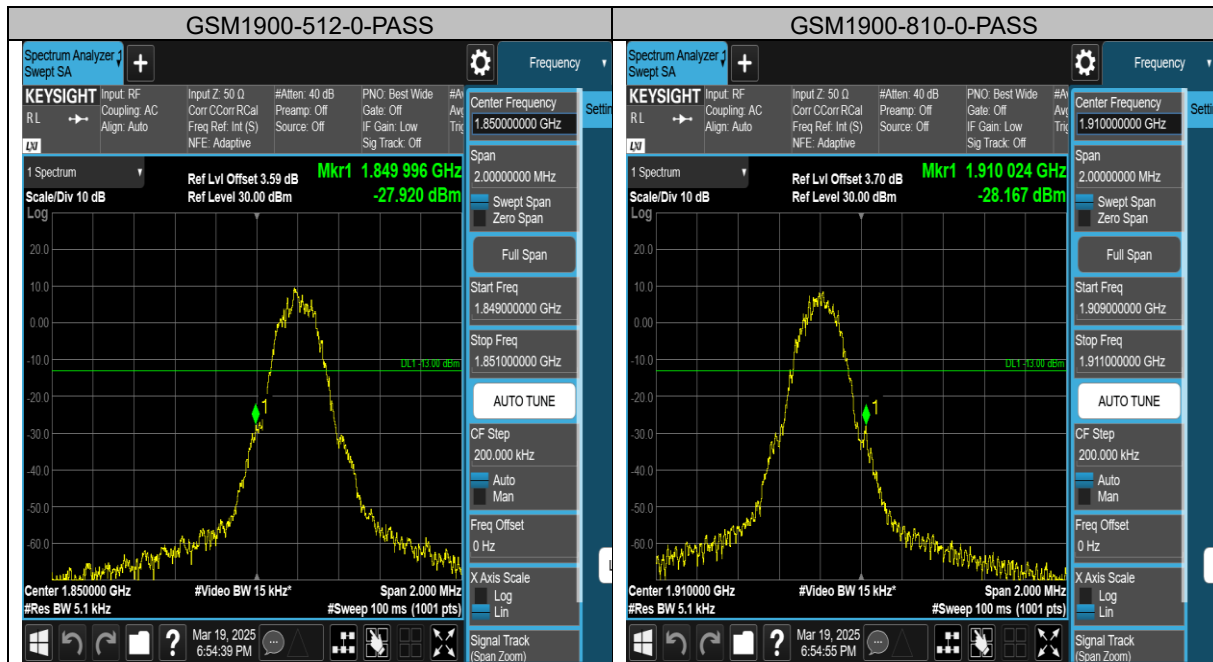
APPENDIX : BAND EDGE

Test Result

Band	Channel	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM1900	512	1850.00	-27.92	-13	PASS
GSM1900	810	1910.02	-28.17	-13	PASS



Test Graphs





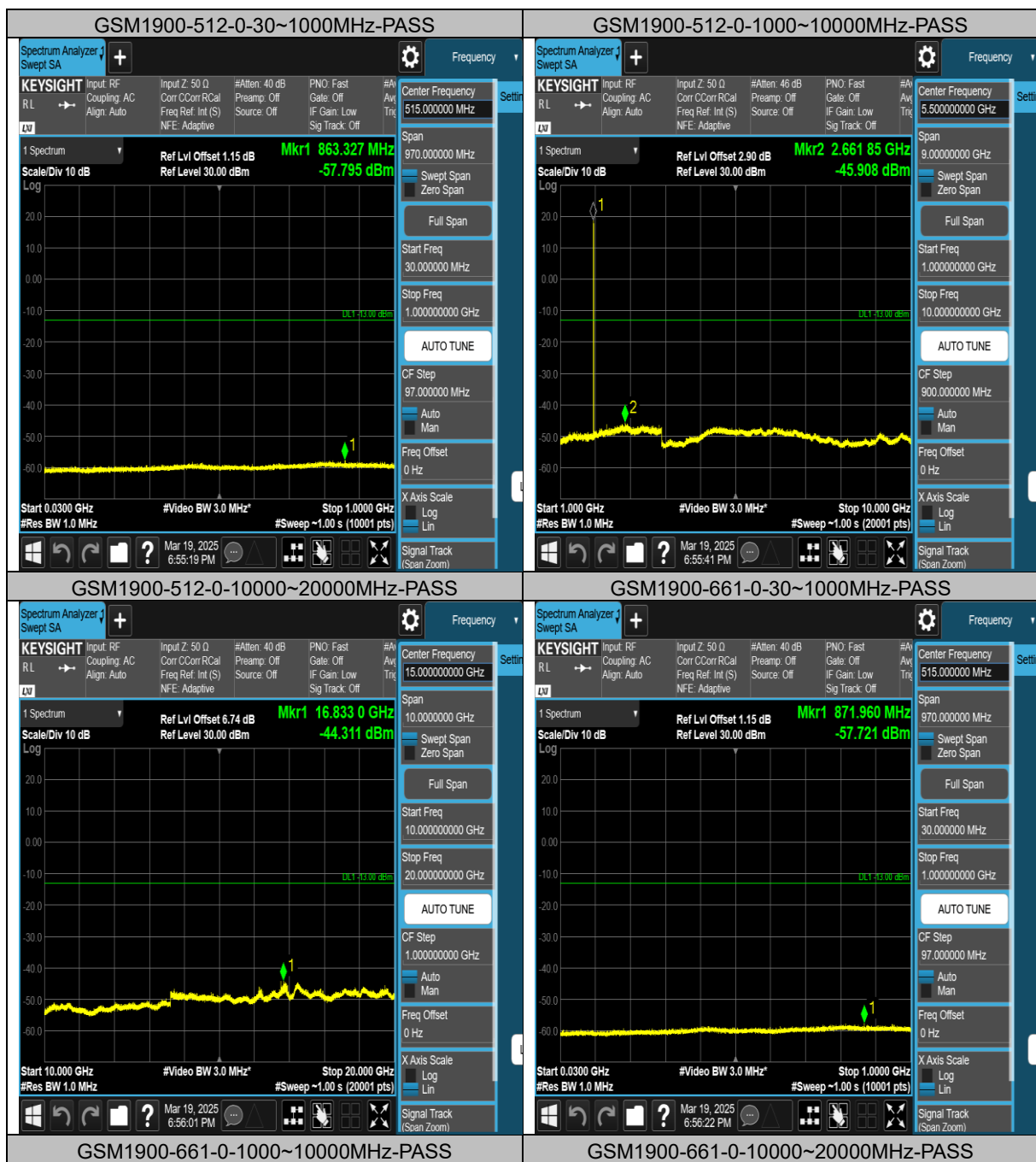
BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02
APPENDIX : CONDUCTED SPURIOUS EMISSION

Test Result

Band	Channel	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM1900	512	30~1000MHz	863.33	-57.8	-13	PASS
GSM1900	512	1000~10000MHz	2661.85	-45.91	-13	PASS
GSM1900	512	10000~20000MHz	16833	-44.31	-13	PASS
GSM1900	661	30~1000MHz	871.96	-57.72	-13	PASS
GSM1900	661	1000~10000MHz	2597.5	-45.43	-13	PASS
GSM1900	661	10000~20000MHz	17248.5	-44.41	-13	PASS
GSM1900	810	30~1000MHz	882.15	-57.91	-13	PASS
GSM1900	810	1000~10000MHz	3125.35	-45.68	-13	PASS
GSM1900	810	10000~20000MHz	16877.5	-44.27	-13	PASS

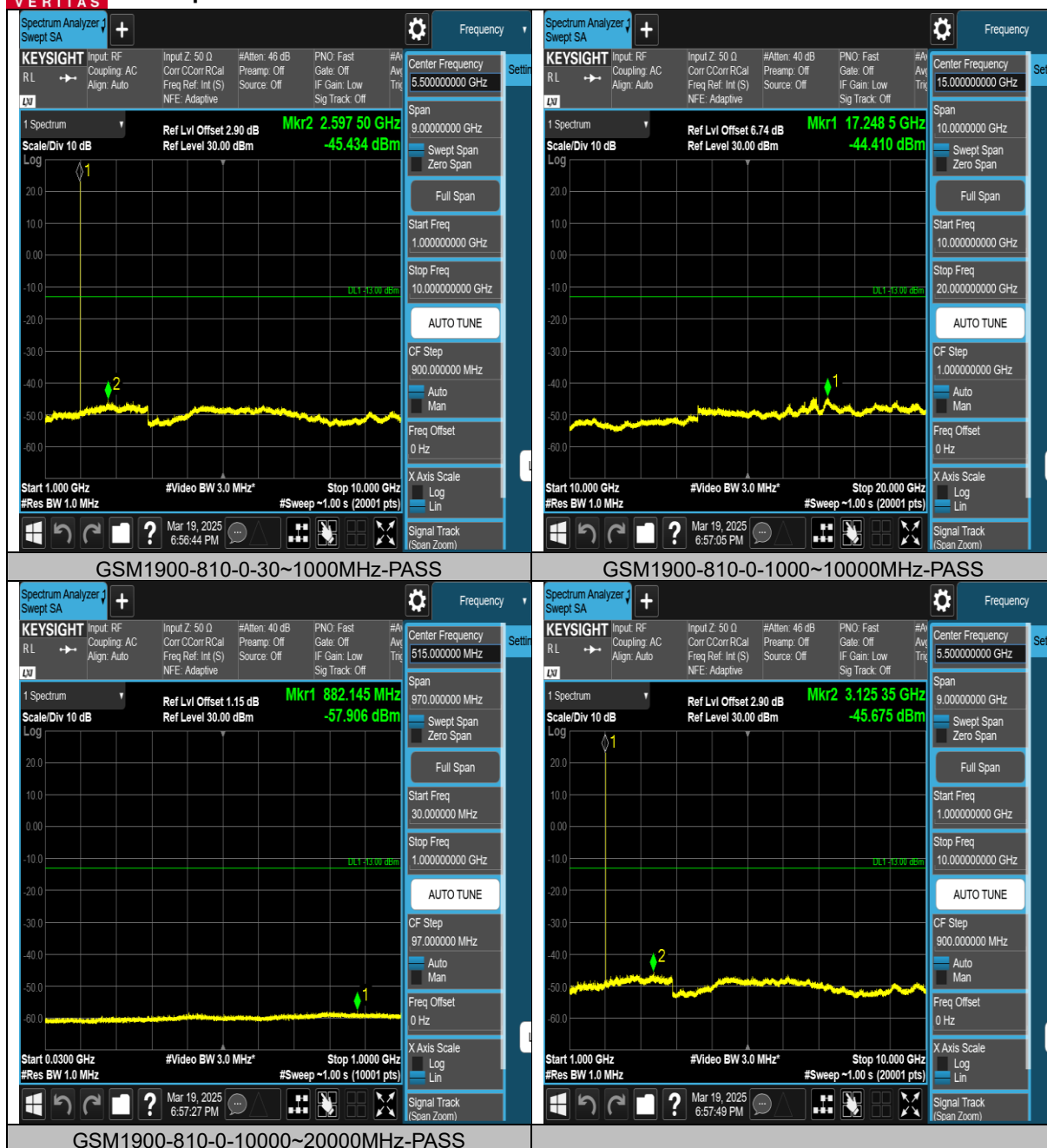


Test Graphs





BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02



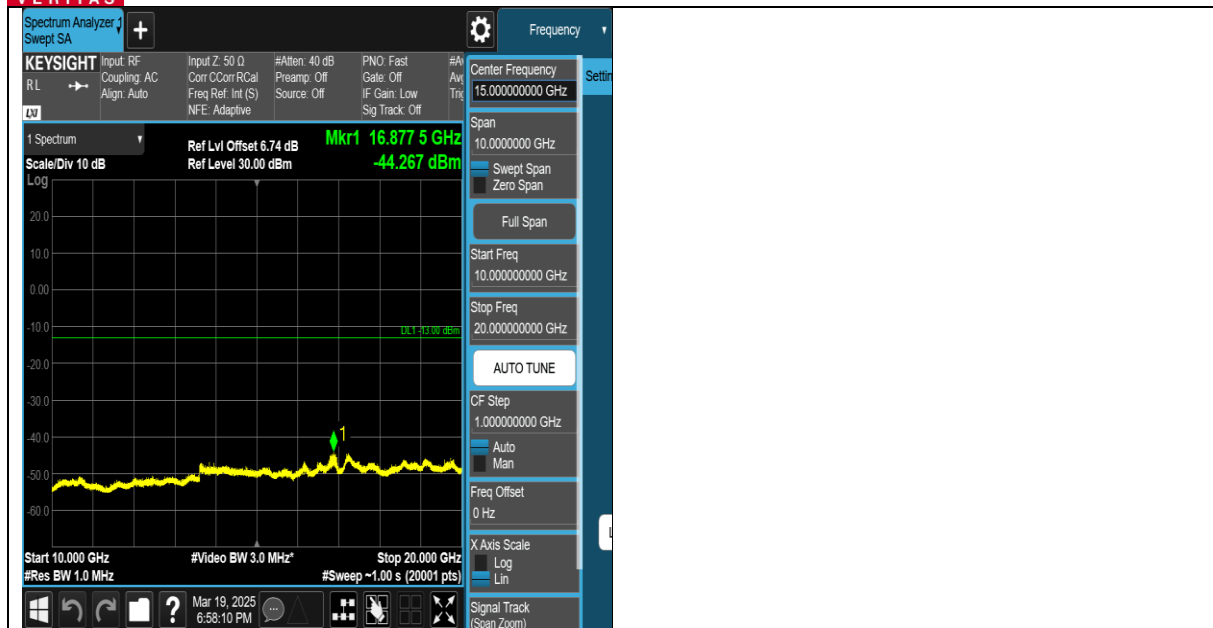
Huarui 7layers High Technology
(Suzhou) Co., Ltd.

Tower N, Innovation Center, 88 Zuyi Road, High-tech District,
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368 1008



BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02



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368 1008



APPENDIX : FREQUENCY STABILITY

Test Result

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM1900	512	VL	NT	-6.65	-0.003594	±2.5	PASS
GSM1900	512	VN	NT	-7.10	-0.003837	±2.5	PASS
GSM1900	512	VH	NT	-6.60	-0.003567	±2.5	PASS
GSM1900	661	VL	NT	-11.70	-0.006223	±2.5	PASS
GSM1900	661	VN	NT	-12.36	-0.006574	±2.5	PASS
GSM1900	661	VH	NT	-14.34	-0.007628	±2.5	PASS
GSM1900	810	VL	NT	-13.10	-0.006859	±2.5	PASS
GSM1900	810	VN	NT	-14.40	-0.007540	±2.5	PASS
GSM1900	810	VH	NT	-13.95	-0.007304	±2.5	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM1900	512	NV	-30	-7.57	-0.004091	±2.5	PASS
GSM1900	512	NV	-20	-7.43	-0.004016	±2.5	PASS
GSM1900	512	NV	-10	-9.03	-0.004881	±2.5	PASS
GSM1900	512	NV	0	-5.85	-0.003162	±2.5	PASS
GSM1900	512	NV	10	-6.13	-0.003313	±2.5	PASS
GSM1900	512	NV	20	-10.72	-0.005794	±2.5	PASS
GSM1900	512	NV	30	-7.51	-0.004059	±2.5	PASS
GSM1900	512	NV	40	-6.17	-0.003335	±2.5	PASS
GSM1900	512	NV	50	-9.14	-0.004940	±2.5	PASS
GSM1900	661	NV	-30	-11.39	-0.006059	±2.5	PASS
GSM1900	661	NV	-20	-12.31	-0.006548	±2.5	PASS
GSM1900	661	NV	-10	-11.39	-0.006059	±2.5	PASS
GSM1900	661	NV	0	-13.10	-0.006968	±2.5	PASS
GSM1900	661	NV	10	-13.34	-0.007096	±2.5	PASS
GSM1900	661	NV	20	-12.77	-0.006793	±2.5	PASS
GSM1900	661	NV	30	-14.02	-0.007457	±2.5	PASS
GSM1900	661	NV	40	-13.08	-0.006957	±2.5	PASS
GSM1900	661	NV	50	-14.14	-0.007521	±2.5	PASS
GSM1900	810	NV	-30	-14.36	-0.007519	±2.5	PASS
GSM1900	810	NV	-20	-14.67	-0.007681	±2.5	PASS
GSM1900	810	NV	-10	-13.90	-0.007278	±2.5	PASS
GSM1900	810	NV	0	-15.19	-0.007954	±2.5	PASS
GSM1900	810	NV	10	-15.31	-0.008017	±2.5	PASS
GSM1900	810	NV	20	-13.59	-0.007116	±2.5	PASS
GSM1900	810	NV	30	-15.01	-0.007859	±2.5	PASS
GSM1900	810	NV	40	-13.92	-0.007289	±2.5	PASS



BUREAU
VERITAS Test Report No.: PSU-QSZ2503050113RF02

GSM1900	810	NV	50	-13.43	-0.007032	±2.5	PASS
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B25(INCLUDING B2)

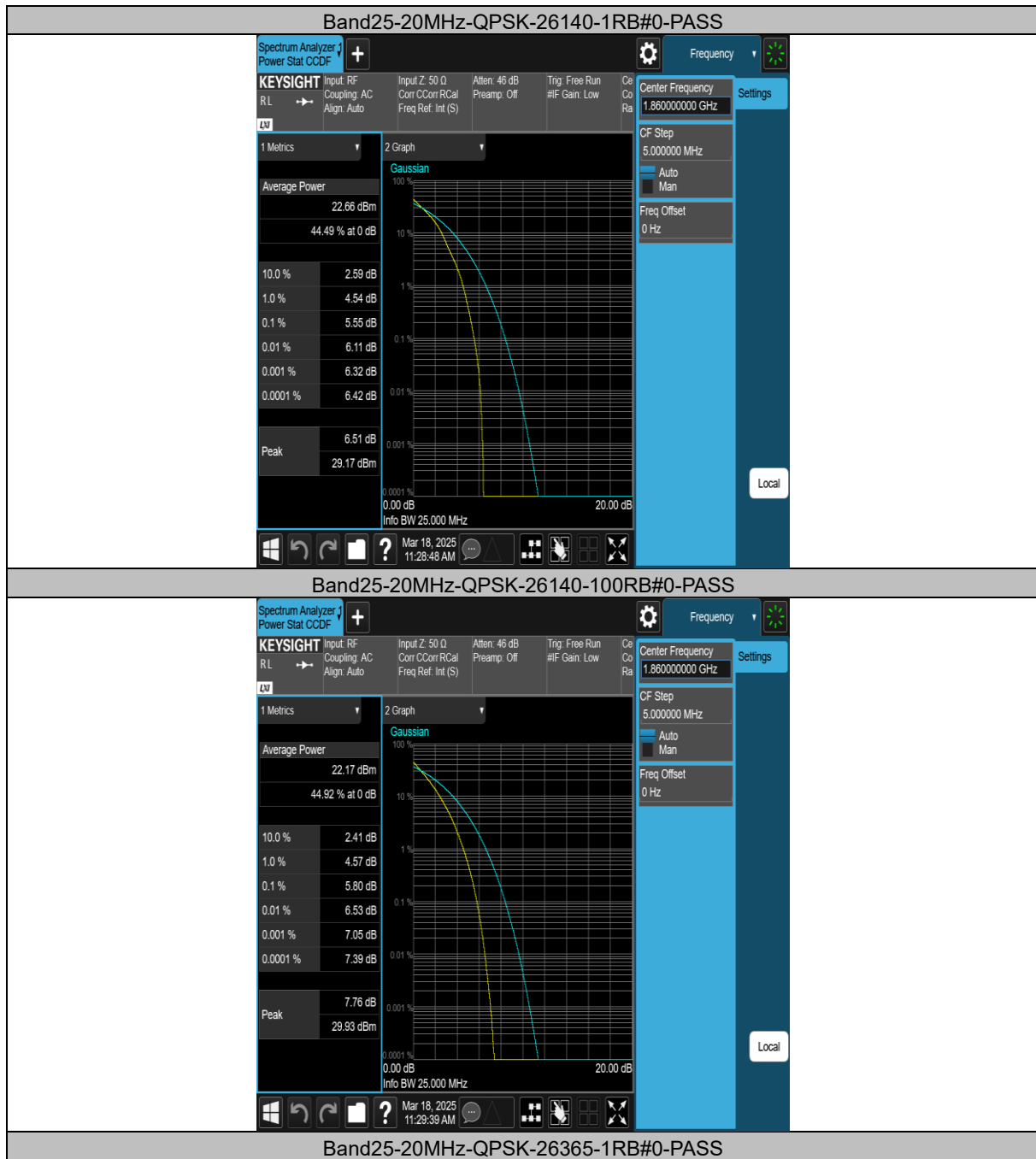
APPENDIX : PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band25	20MHz	QPSK	26140	1RB#0	5.55	13	PASS
Band25	20MHz	QPSK	26140	100RB#0	5.80	13	PASS
Band25	20MHz	QPSK	26365	1RB#0	5.32	13	PASS
Band25	20MHz	QPSK	26365	100RB#0	5.75	13	PASS
Band25	20MHz	QPSK	26590	1RB#0	5.55	13	PASS
Band25	20MHz	QPSK	26590	100RB#0	5.77	13	PASS
Band25	20MHz	16QAM	26140	1RB#0	6.37	13	PASS
Band25	20MHz	16QAM	26140	27RB#0	6.61	13	PASS
Band25	20MHz	16QAM	26365	1RB#0	6.32	13	PASS
Band25	20MHz	16QAM	26365	27RB#0	6.38	13	PASS
Band25	20MHz	16QAM	26590	1RB#0	6.37	13	PASS
Band25	20MHz	16QAM	26590	27RB#0	6.53	13	PASS

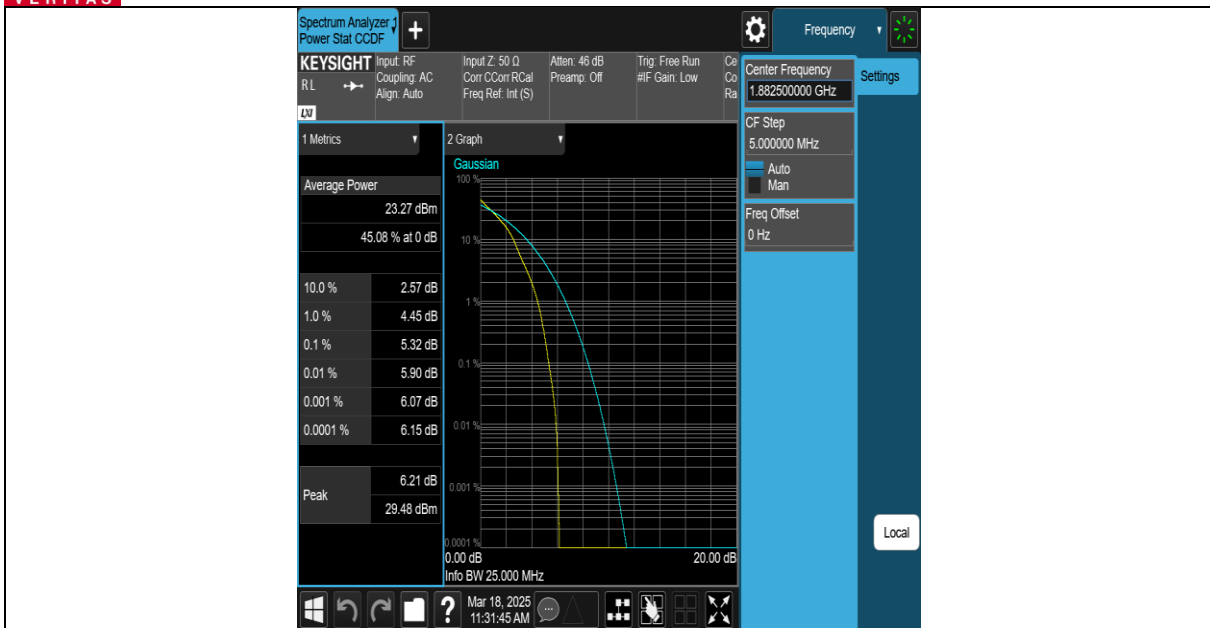


Test Graphs

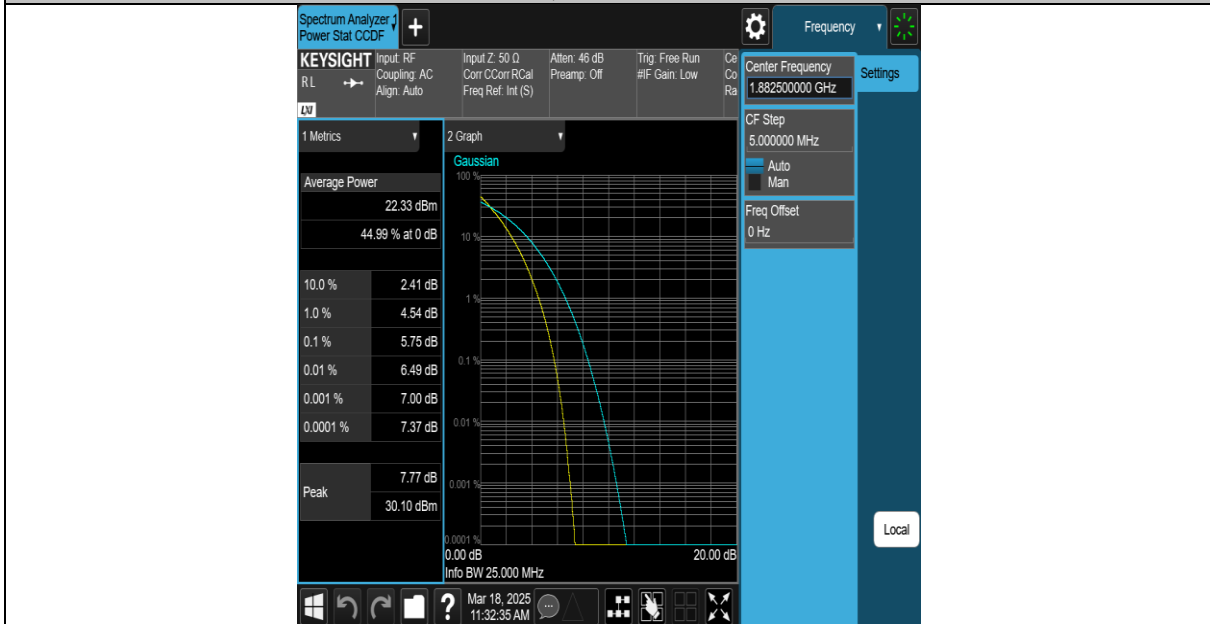




BUREAU VERITAS Test Report No.: PSU-QS22503050113RF02



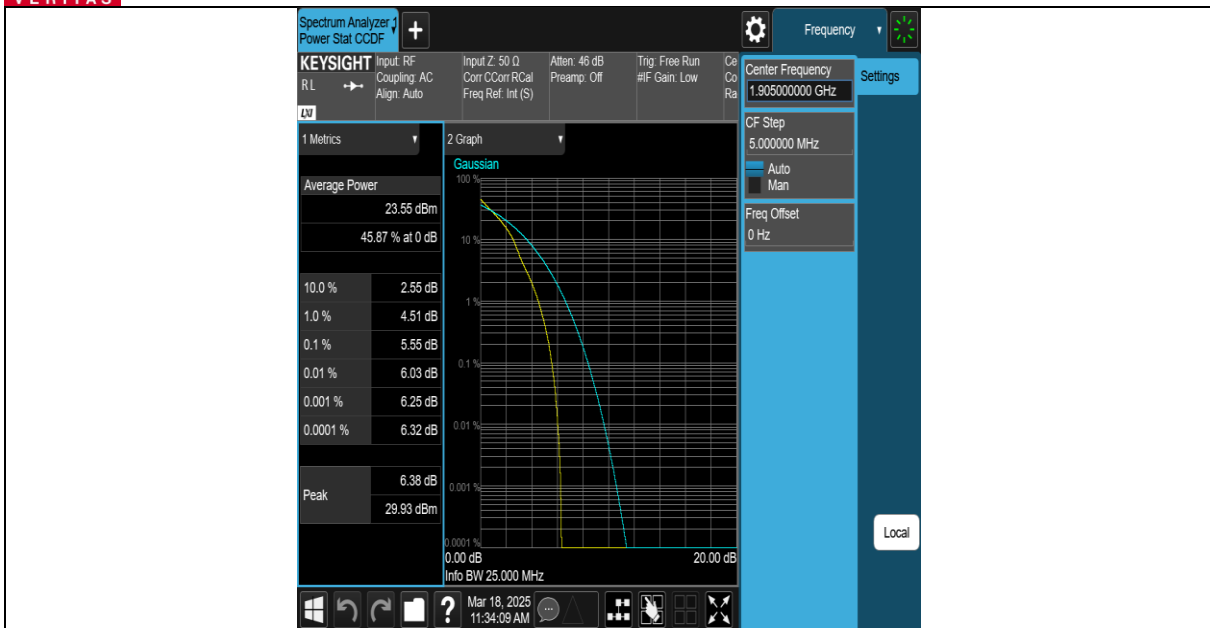
Band25-20MHz-QPSK-26365-100RB#0-PASS



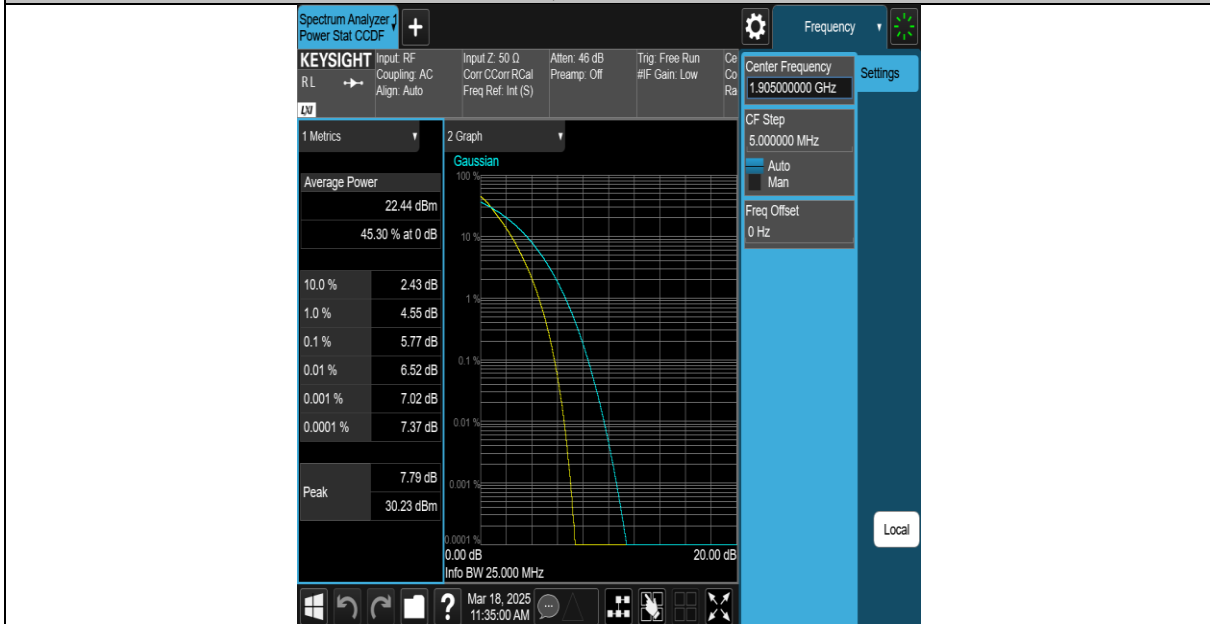
Band25-20MHz-QPSK-26590-1RB#0-PASS



BUREAU VERITAS Test Report No.: PSU-QS22503050113RF02



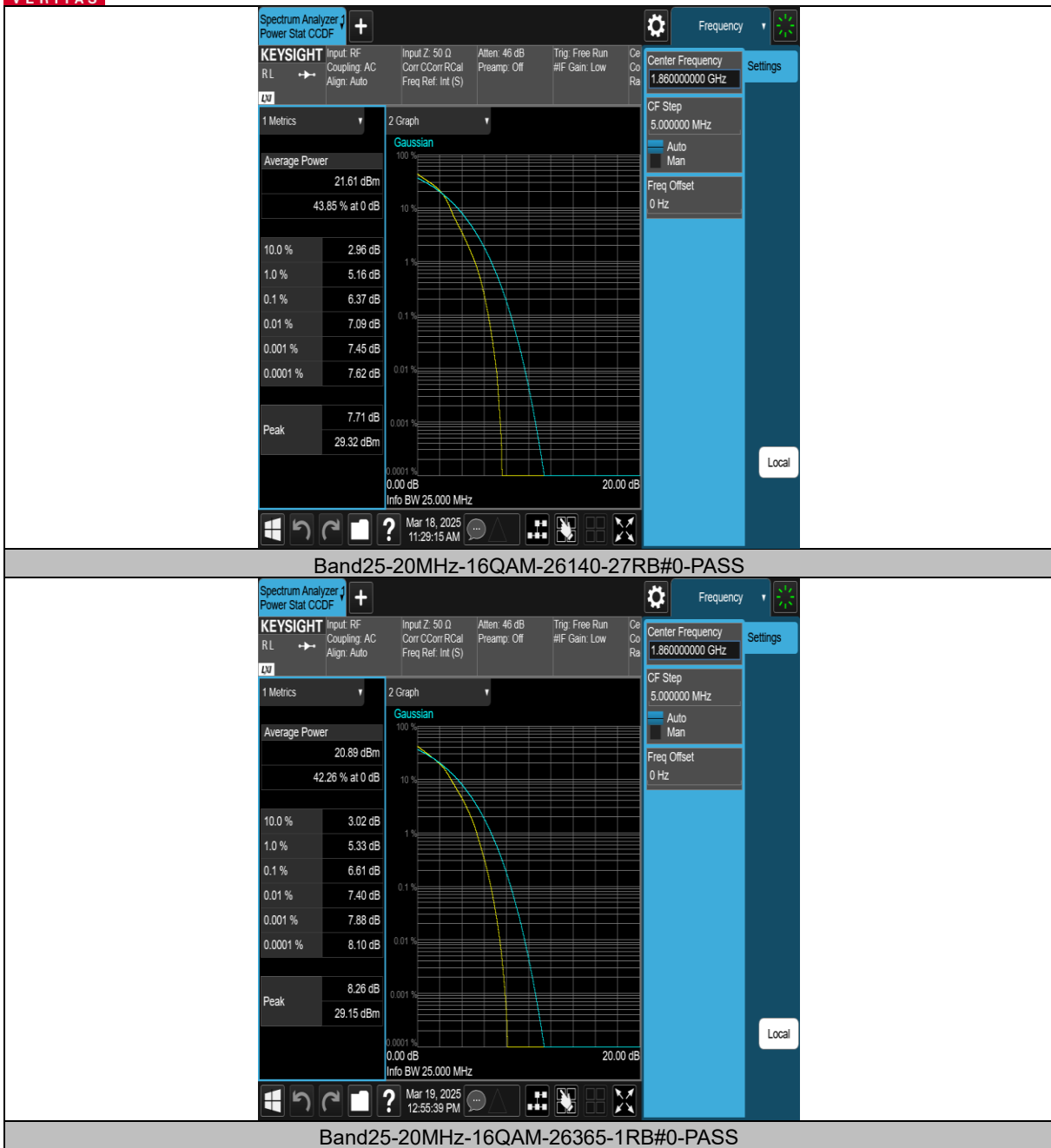
Band25-20MHz-QPSK-26590-100RB#0-PASS



Band25-20MHz-16QAM-26140-1RB#0-PASS

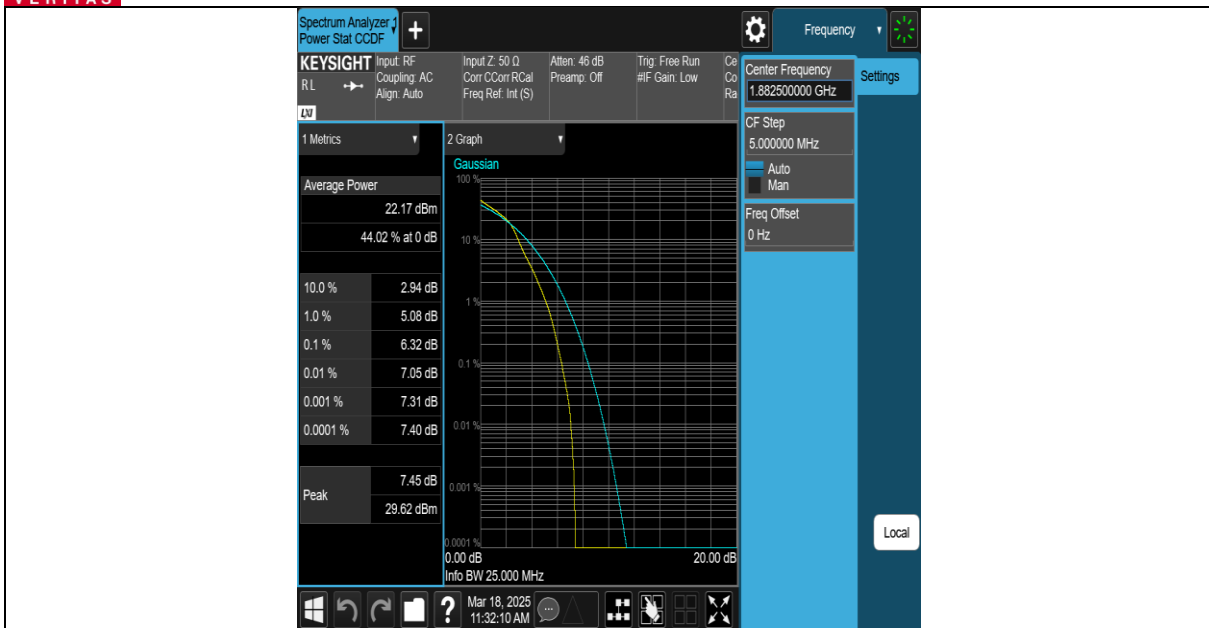


BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02

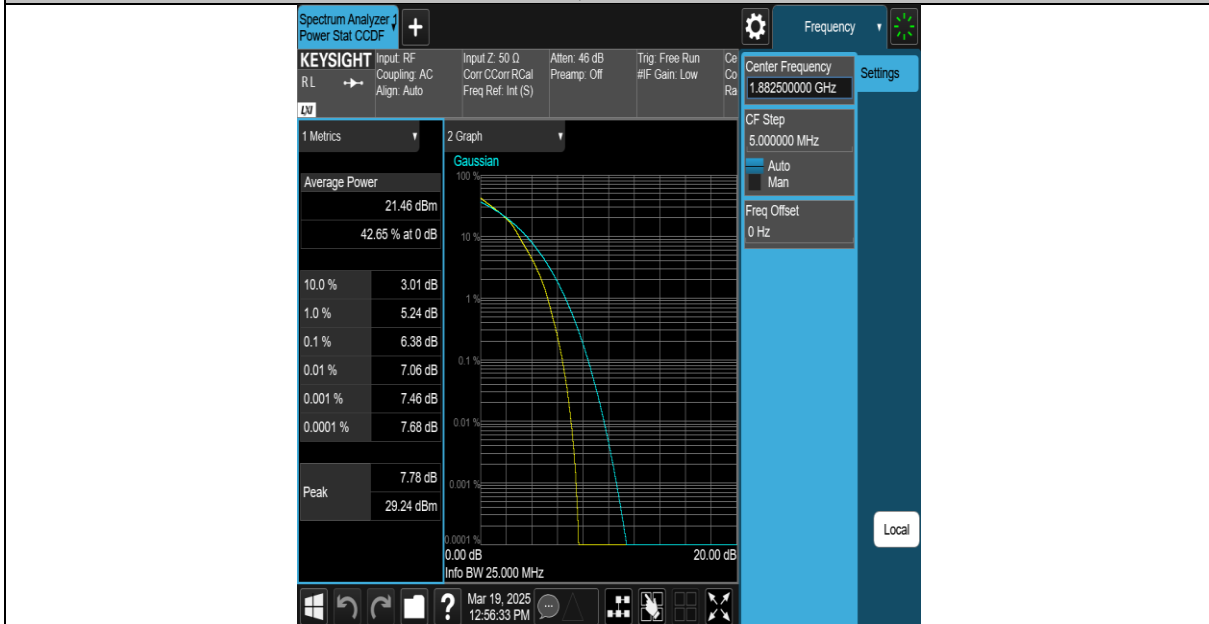




BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02



Band25-20MHz-16QAM-26365-27RB#0-PASS



Band25-20MHz-16QAM-26590-1RB#0-PASS



BUREAU VERITAS Test Report No.: PSU-QS22503050113RF02





APPENDIX : 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

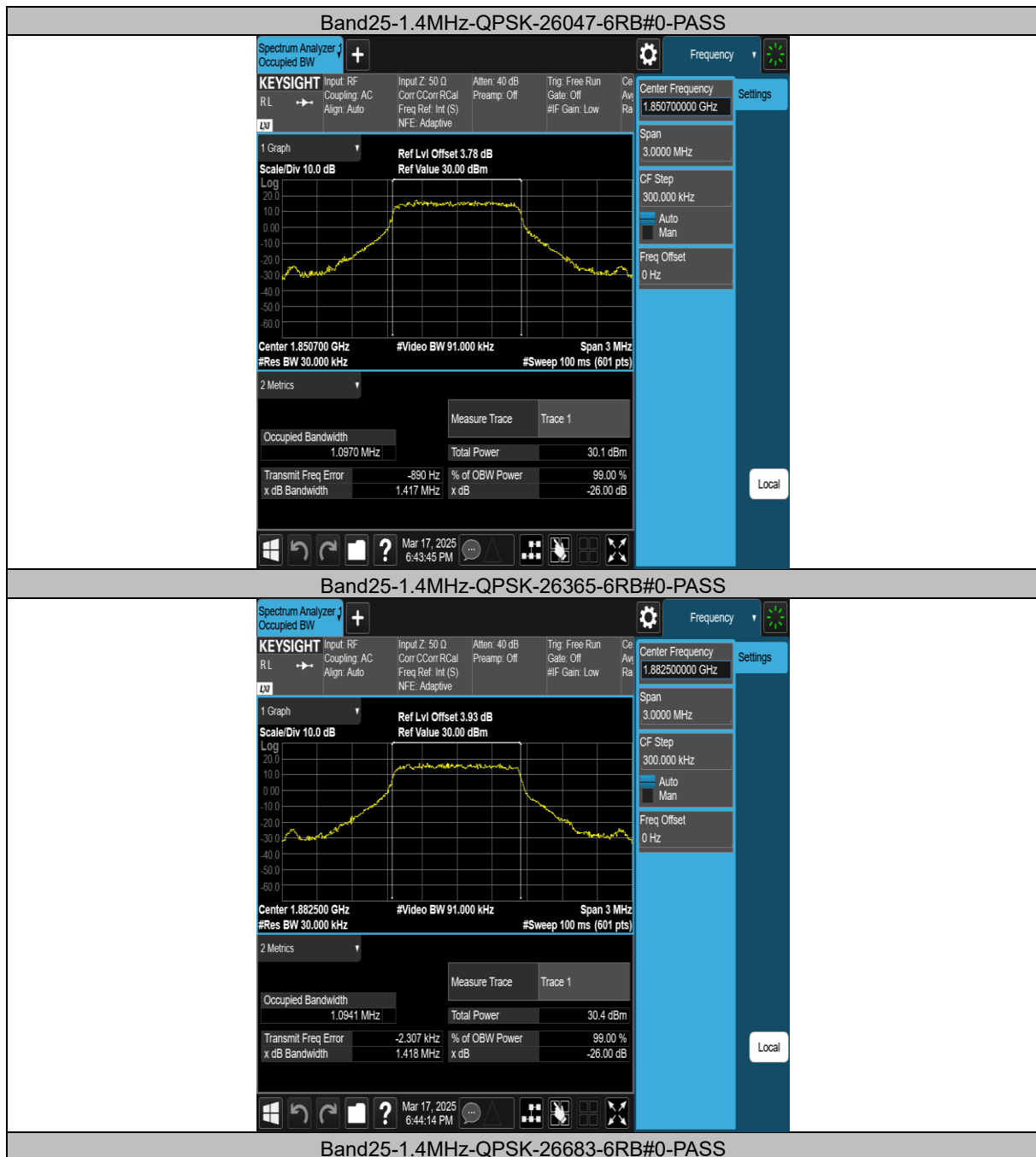
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band25	1.4MHz	QPSK	26047	6RB#0	1.0970	1.417	PASS
Band25	1.4MHz	QPSK	26365	6RB#0	1.0941	1.418	PASS
Band25	1.4MHz	QPSK	26683	6RB#0	1.0901	1.413	PASS
Band25	1.4MHz	16QAM	26047	6RB#0	1.1000	1.476	PASS
Band25	1.4MHz	16QAM	26365	6RB#0	1.1074	1.458	PASS
Band25	1.4MHz	16QAM	26683	6RB#0	1.1023	1.450	PASS
Band25	3MHz	QPSK	26055	15RB#0	2.6906	3.123	PASS
Band25	3MHz	QPSK	26365	15RB#0	2.6875	3.092	PASS
Band25	3MHz	QPSK	26675	15RB#0	2.6897	3.094	PASS
Band25	3MHz	16QAM	26055	15RB#0	2.6872	3.191	PASS
Band25	3MHz	16QAM	26365	15RB#0	2.6895	3.174	PASS
Band25	3MHz	16QAM	26675	15RB#0	2.6815	3.148	PASS
Band25	5MHz	QPSK	26065	25RB#0	4.4774	5.065	PASS
Band25	5MHz	QPSK	26365	25RB#0	4.4851	5.075	PASS
Band25	5MHz	QPSK	26665	25RB#0	4.4782	5.057	PASS
Band25	5MHz	16QAM	26065	25RB#0	4.4818	5.109	PASS
Band25	5MHz	16QAM	26365	25RB#0	4.4873	5.100	PASS
Band25	5MHz	16QAM	26665	25RB#0	4.4818	5.080	PASS
Band25	10MHz	QPSK	26090	50RB#0	8.9311	9.699	PASS
Band25	10MHz	QPSK	26365	50RB#0	8.9133	9.689	PASS
Band25	10MHz	QPSK	26640	50RB#0	8.9320	9.630	PASS
Band25	10MHz	16QAM	26090	27RB#0	5.2409	8.380	PASS
Band25	10MHz	16QAM	26365	27RB#0	5.1940	8.236	PASS
Band25	10MHz	16QAM	26640	27RB#0	5.2055	8.346	PASS
Band25	15MHz	QPSK	26115	75RB#0	13.516	16.24	PASS
Band25	15MHz	QPSK	26365	75RB#0	13.504	16.60	PASS
Band25	15MHz	QPSK	26615	75RB#0	13.568	16.42	PASS
Band25	15MHz	16QAM	26115	27RB#0	5.4242	10.13	PASS
Band25	15MHz	16QAM	26365	27RB#0	5.3298	7.965	PASS
Band25	15MHz	16QAM	26615	27RB#0	5.2896	7.570	PASS

**Test Report No.: PSU-QSZ2503050113RF02**

Band25	20MHz	QPSK	26140	100RB#0	18.017	21.26	PASS
Band25	20MHz	QPSK	26365	100RB#0	18.018	21.00	PASS
Band25	20MHz	QPSK	26590	100RB#0	18.005	21.11	PASS
Band25	20MHz	16QAM	26140	27RB#0	5.6468	8.429	PASS
Band25	20MHz	16QAM	26365	27RB#0	5.5249	8.522	PASS
Band25	20MHz	16QAM	26590	27RB#0	5.4603	8.316	PASS

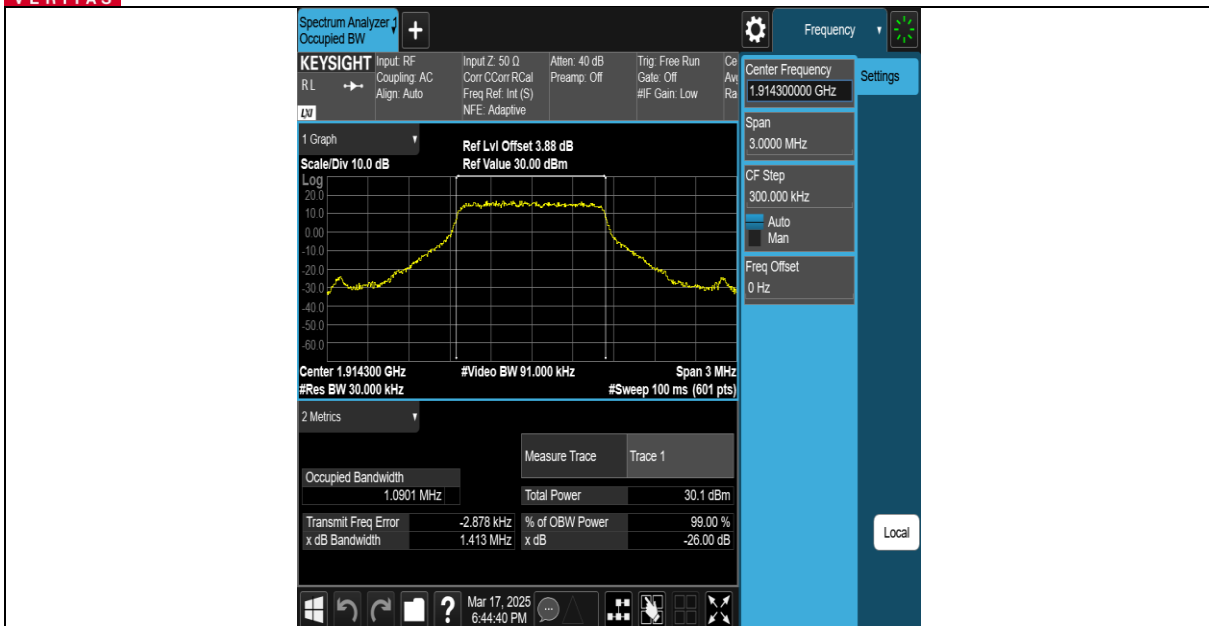


Test Graphs

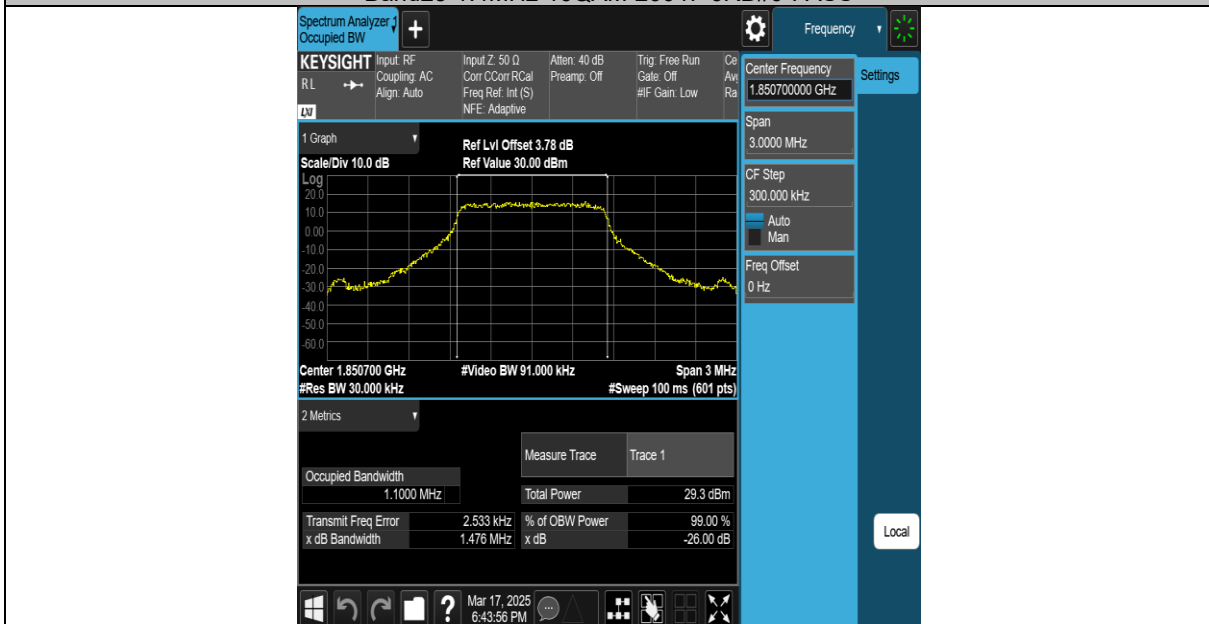




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Band25-1.4MHz-16QAM-26047-6RB#0-PASS



Band25-1.4MHz-16QAM-26365-6RB#0-PASS



BUREAU VERITAS Test Report No.: PSU-QSZ2503050113RF02

