



BUREAU  
VERITAS

Test Report No.: PSU-QBJ2409140110RF02



Certificate #6613.01

# FCC TEST REPORT

## (PART 24)

Applicant:	KYOCERA Corporation
Address:	Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi, Kanagawa, Japan

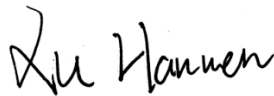

Manufacturer or Supplier:	KYOCERA Corporation
Address:	Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi, Kanagawa, Japan
Product:	Mobile Phone
Brand Name:	KYOCERA
Model Name:	EB1217
FCC ID	JOYEB1217
Date of tests	Oct. 21, 2024~Dec. 05, 2024

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: Dec. 05, 2024	Date: Dec. 05, 2024

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



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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QBJ2409140110RF02	Original release	Dec. 05, 2024



## 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	Coducted 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

**Accredited Test Lab Cert 6613.01**

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

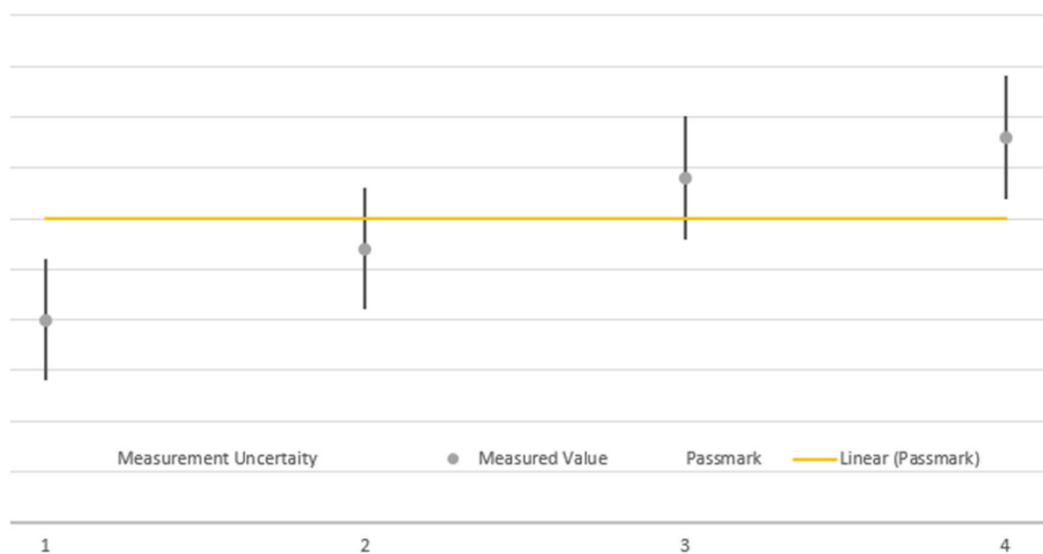


## 1.1 MEASUREMENT UNCERTAINTY

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	Mar.29,24	Mar.28,26
Signal Generator	R&S	SMB100A	182185	Mar.29,24	Mar.28,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Mar.28,24	Mar.27,26
EMI TEST Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Dec.26,23	Dec.25,25
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.21,24	Aug.20,26
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Jul.15,24	Jul.14,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.21,24	Aug.20,26
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,24	Feb.21,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	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	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.27,24	Apr.26,25
Temperature Chamber	votsch	VT4002	58566078100050	May.30,24	May.29,26

### NOTE:

- The calibration interval of the above test instruments is 12 /24/ 36 months and the calibrations are



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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

<b>PRODUCT*</b>	Mobile Phone	
<b>BRAND NAME*</b>	KYOCERA	
<b>MODEL NAME*</b>	EB1217	
<b>NOMINAL VOLTAGE*</b>	3.91Vdc (Battery)	
<b>MODULATION TYPE*</b>	<b>GSM/GPRS:</b> GMSK <b>EDGE:</b> 8PSK <b>WCDMA:</b> QPSK, 16QAM, 64QAM	
<b>FREQUENCY RANGE</b>	<b>GPRS, EDGE</b>	1850.2MHz ~ 1909.8MHz
	<b>WCDMA</b>	1852.4MHz ~ 1907.6MHz
<b>MAX. EIRP POWER</b>	<b>GSM/GPRS</b>	213.8mW
	<b>EDGE</b>	78.34mW
	<b>WCDMA</b>	81.47mW
<b>EMISSION DESIGNATOR</b>	<b>GSM/GPRS</b>	248KGXW
	<b>EDGE</b>	253KG7W
	<b>WCDMA</b>	4M14F9W
<b>ANTENNA GAIN*</b>	GSM1900	-1.8dBi
	WCDMA II	-1.8dBi
<b>ANTENNA TYPE*</b>	IFA Antenna	
<b>HW VERSION*</b>	DVT2	
<b>SW VERSION*</b>	0.330SR	
<b>I/O PORTS*</b>	Refer to user's manual	
<b>CABLE SUPPLIED*</b>	N/A	
<b>EXTREME TEMPERATURE*</b>	-20°C ~ 60°C	
<b>EXTREME VOLTAGE*</b>	3.4V~ 4.48V	

#### NOTE:

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



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

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

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

5. The detail differences from the Main manufacturer and Secondary manufacturer are as listed below:

Description	Main manufacturer	Secondary manufacturer
LCM	ShenZhen LIDE Communications Ltd.	Wannian Lianchuang Display Technology Co. , Ltd.
Audio jack FPC	Shenzhen Xinyu Tengyue Electronics Co.,Ltd.	Jiangxi Zhiboxin Technology Limited Company
MIC	AAC	Gettop
Memory	Samsung	Biwin
Radio frequency switch_DFN-6_0.4-4.2 GHz_SPDT_GPIO_patch	Innowave	Champhill

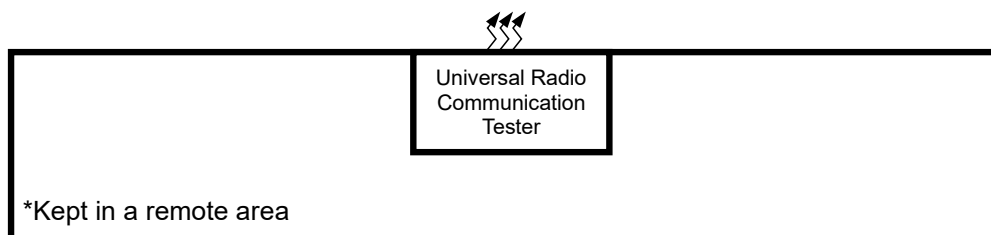
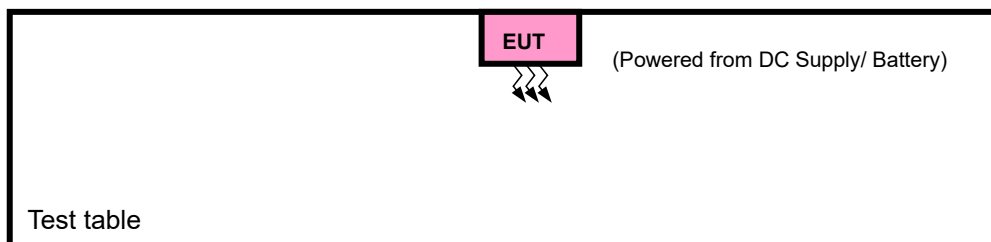
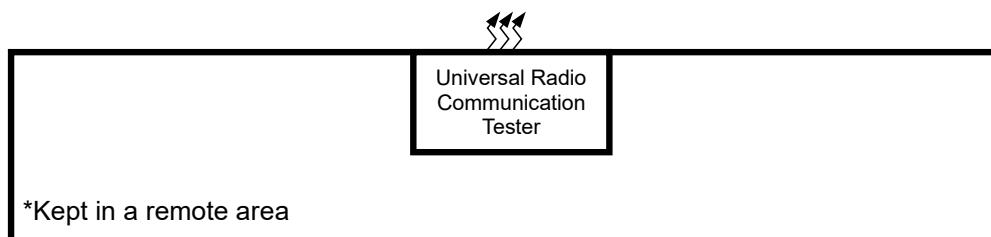
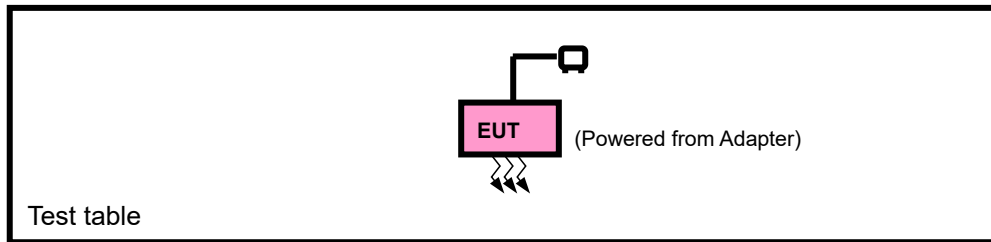
The above materials have only manufacturer differences, and the functions are the same. Other than these changes, other RF performance is the same and does not affect the RF results.

#### 6. List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
CPU	MTK	MT6835T	N/A
eMMC 1 (=ROM 1)	samsung	KM5P9001DM-B424	N/A
eMMC 2 (=ROM 2)	biwin	BW2A2KZC02-64G	N/A
RAM 1	samsun	KM5P9001DM-B424	N/A
RAM 2	biwin	BW2A2KZC02-64G	N/A
Battery	KYOCERA	5AAXB152	Capacity : 3.91Vdc, 4400mAh/17.3Wh



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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	Adapter	N/A	N/A	N/A	N/A
2	Earphone	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB 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 EIRP and radiated emission was found when positioned on Y-plane for GSM / LTE, Z-plane for EDGE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter with GSM or WCDMA link
B	EUT + DC Supply/Battery with GSM or WCDMA link

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



<b>WCDMA</b>				
<b>EUT CONFIGURE MODE</b>	<b>TEST ITEM</b>	<b>AVAILABLE CHANNEL</b>	<b>TESTED CHANNEL</b>	<b>MODE</b>
<b>A</b>	EIRP	9262 to 9538	9262, 9400, 9538	WCDMA
<b>B</b>	FREQUENCY STABILITY	9262 to 9538	9262, 9400, 9538	WCDMA
<b>A</b>	OCCUPIED BANDWIDTH	9262 to 9538	9262, 9400, 9538	WCDMA
<b>A</b>	PEAK TO AVERAGE RATIO	9262 to 9538	9262, 9400, 9538	WCDMA
<b>A</b>	BAND EDGE	9262 to 9538	9262, 9538	WCDMA
<b>A</b>	CONDCUDED EMISSION	9262 to 9538	9262, 9400, 9538	WCDMA
<b>A</b>	RADIATED EMISSION	9262 to 9538	9262, 9400, 9538	WCDMA

<b>TEST CONDITION</b>			
<b>TEST ITEM</b>	<b>ENVIRONMENTAL CONDITIONS</b>	<b>INPUT POWER</b>	<b>TESTED BY</b>
ERP	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.4V/ 3.91V/ 4.48V By Battery	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
CONDCUDED EMISSION	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 5V By Adapter	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  $P_{\text{Meas}}$ , typically dBW or dBm);

$P_{\text{Meas}}$  = 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:**

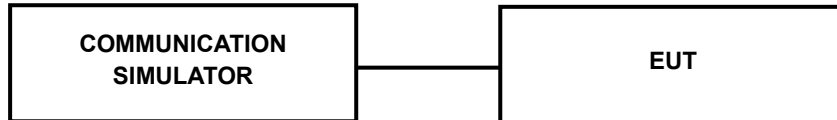
The EUT was set up for the maximum power with WCDMA link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



### 3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



### 3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm) :

Band	GSM1900(ANT1)		
Channel	512	661	810
Frequency	1850.2	1880	1909.8
GSM	24.96	25.08	25.03
GPRS 1Tx Slot	24.95	<b>25.10</b>	25.04
GPRS 2Tx Slot	23.92	24.07	24.01
GPRS 3Tx Slot	22.33	22.49	22.40
GPRS 4Tx Slot	20.90	21.04	20.94
EDGE 1Tx Slot	20.74	20.57	20.57
EDGE 2Tx Slot	19.67	19.56	19.58
EDGE 3Tx Slot	18.04	17.89	17.96
EDGE 4Tx Slot	16.29	16.50	16.24

Band	WCDMA II (Ant1)		
TX Channel	9262	9400	9538
Rx Channel	9662	9800	9938
Frequency	1852.4	1880	1907.6
RMC 12.2K	20.11	20.07	19.99
HSDPA Subtest-1	19.20	19.47	19.21
HSDPA Subtest-2	19.08	19.09	19.10
HSDPA Subtest-3	18.83	18.71	18.72
HSDPA Subtest-4	18.70	18.72	18.71
DC-HSDPA Subtest-1	19.18	19.41	19.11
DC-HSDPA Subtest-2	18.93	18.98	19.01
DC-HSDPA Subtest-3	18.72	18.64	18.69
DC-HSDPA Subtest-4	18.61	18.57	18.56
HSUPA Subtest-1	17.02	17.08	17.04
HSUPA Subtest-2	17.11	17.18	17.16
HSUPA Subtest-3	17.91	17.86	17.81
HSUPA Subtest-4	16.71	16.77	16.72
HSUPA Subtest-5	18.15	18.17	18.19
HSPA+ Subtest-1	18.63	18.65	18.64





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**EIRP POWER (dBm)**

GSM 1900						
Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>C</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
512	1850.2	24.96	-1.8	23.16	207.01	2
661	1880	25.1	-1.8	23.3	213.8	2
810	1909.8	25.04	-1.8	23.24	210.86	2

EDGE 1900						
Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>C</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
512	1850.2	20.74	-1.8	18.94	78.34	2
661	1880	20.57	-1.8	18.77	75.34	2
810	1909.8	20.57	-1.8	18.77	75.34	2

WCDMA						
Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>C</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
9262	1852.4	20.11	-1.8	18.31	67.76	2
9400	1880	20.07	-1.8	18.27	67.14	2
9538	1907.6	19.99	-1.8	18.19	65.92	2

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



## 3.2 FREQUENCY STABILITY MEASUREMENT

### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

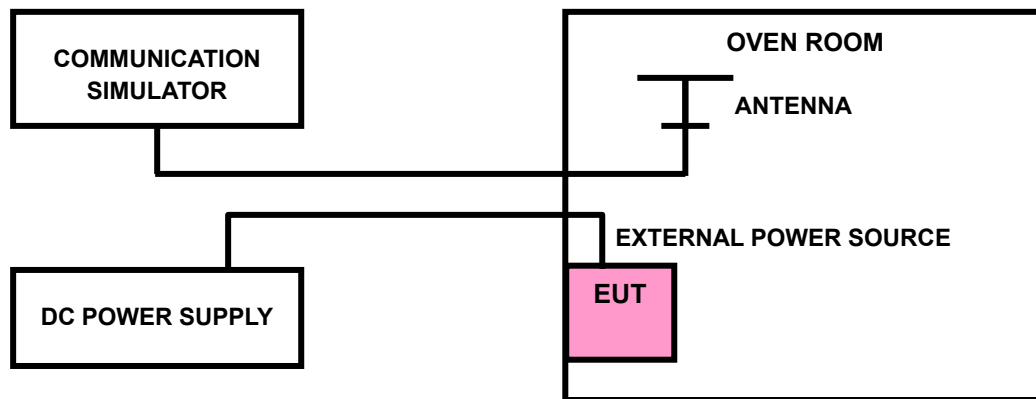
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

### 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.

Note: VL = Low voltage(3.4V); VN/NV = Normal voltage(3.91V); VH = High voltage(4.48V);  
NT = Normal temperature (25°C)

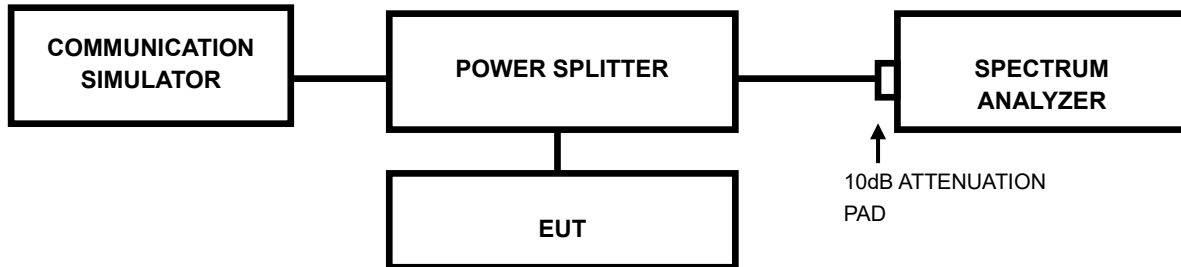


### 3.3 OCCUPIED BANDWIDTH MEASUREMENT

#### 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.

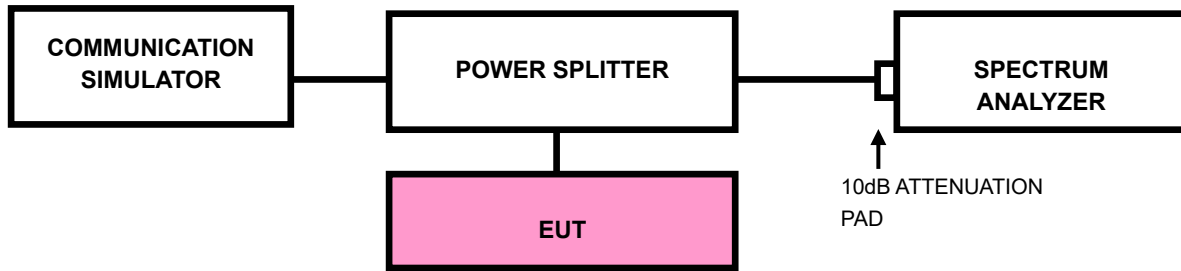


### 3.4 BAND EDGE MEASUREMENTC

#### 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  $\geq 1001$ .
- 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

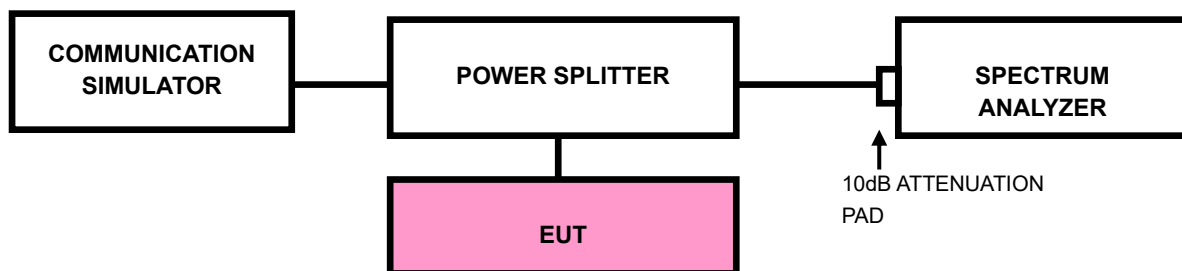
#### 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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  $-13\text{dBm}$ .

#### 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 10<sup>th</sup> 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  $-13\text{dBm}$ .

#### **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.

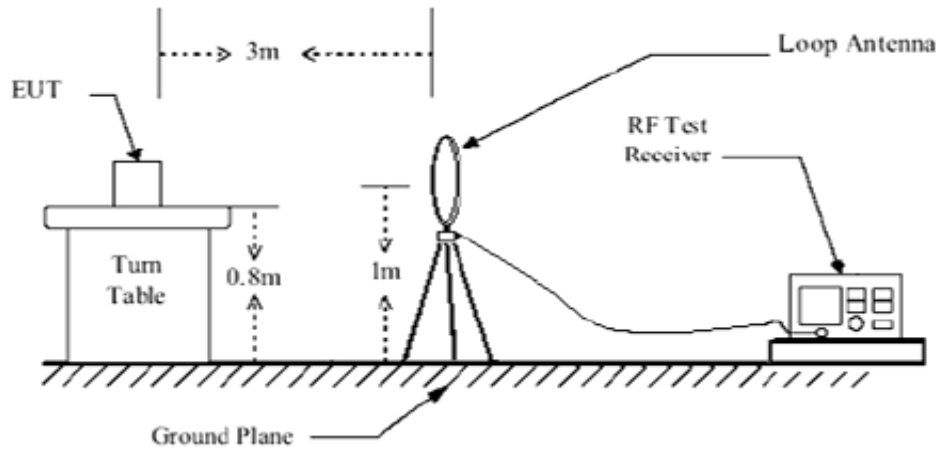
#### **3.6.3 DEVIATION FROM TEST STANDARD**

No deviation

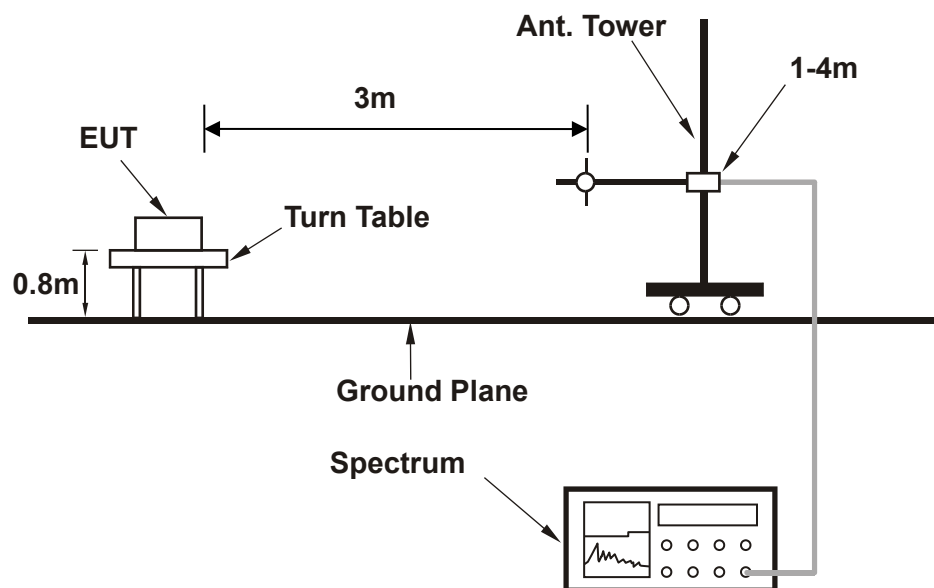


### 3.6.4 TEST SETUP

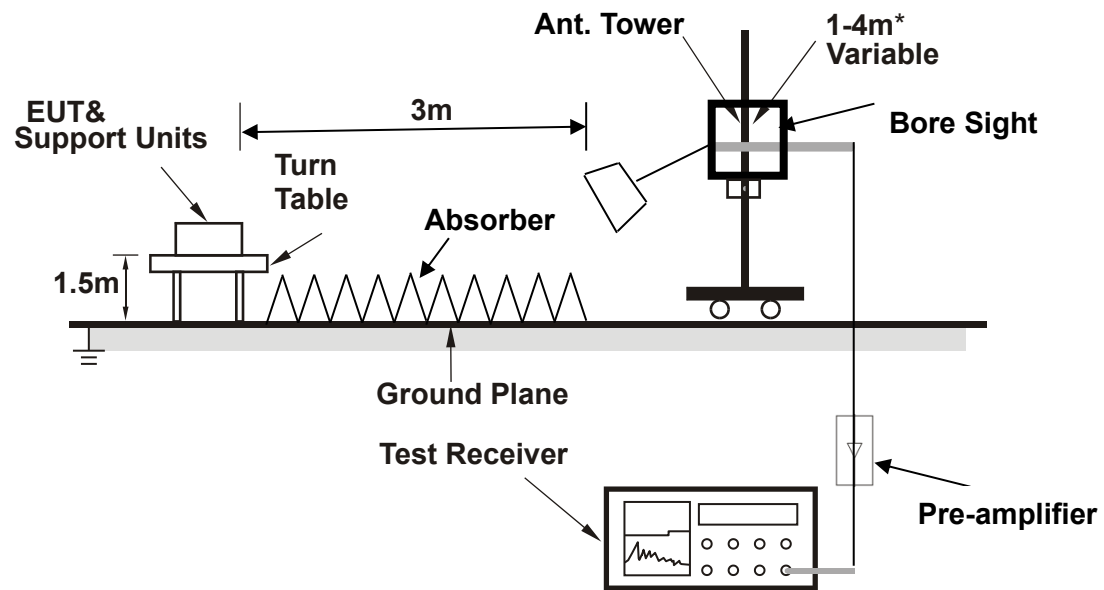
#### < Frequency Range below 30MHz >



#### < 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.

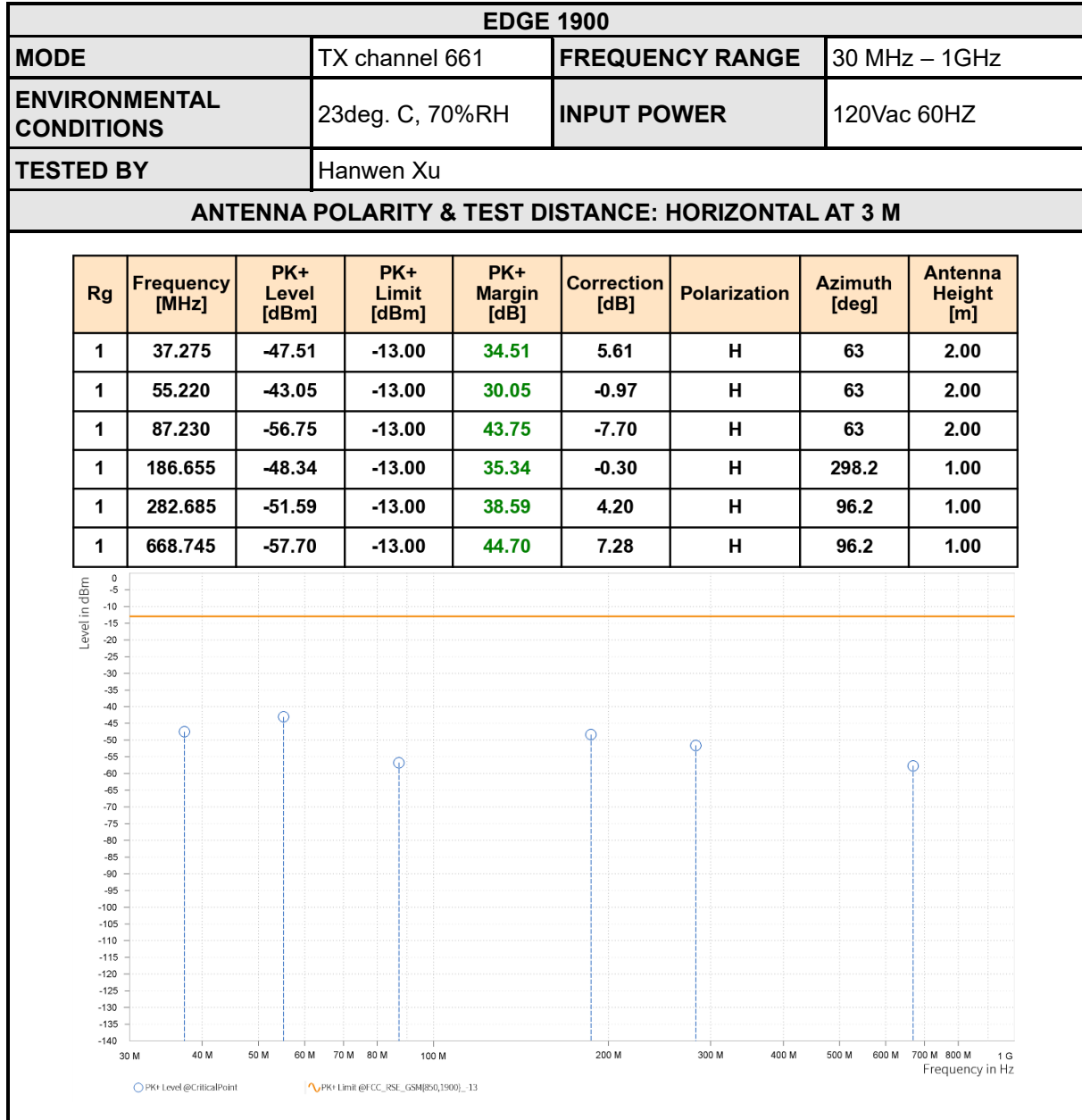
For the actual test configuration, please refer to the attached file (Test Setup Photo).



### 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

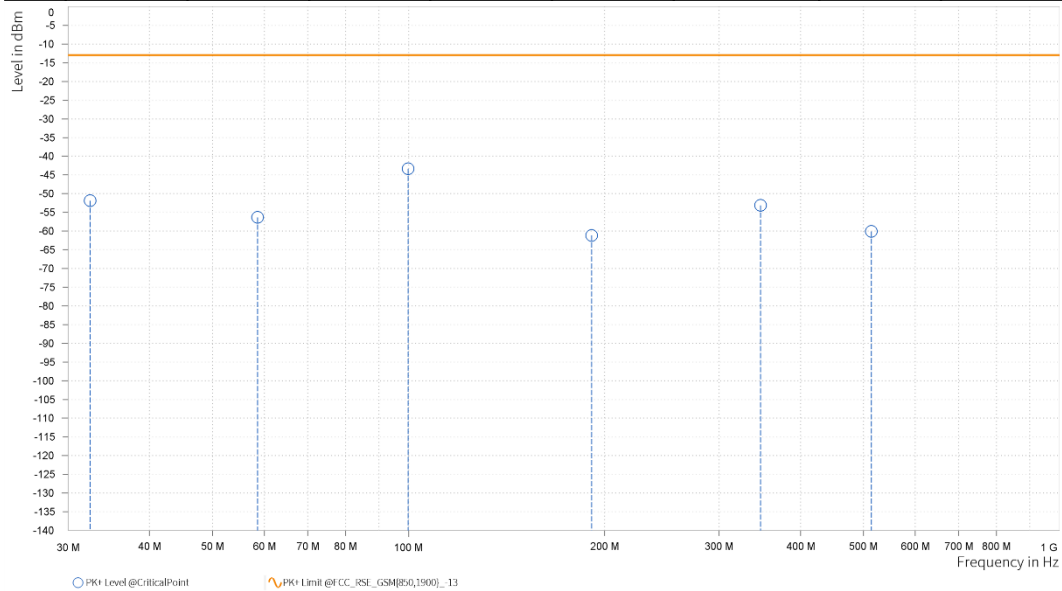




<b>MODE</b>	TX channel 661	<b>FREQUENCY RANGE</b>	30 MHz – 1GHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	120Vac 60HZ
<b>TESTED BY</b>	Hanwen Xu		

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	32.425	-51.89	-13.00	38.89	-3.19	V	299.3	1.00
1	58.615	-56.32	-13.00	43.32	1.98	V	63.1	2.00
1	99.840	-43.33	-13.00	30.33	10.30	V	299.3	1.00
1	191.020	-61.14	-13.00	48.14	-2.66	V	97.3	1.00
1	347.190	-53.14	-13.00	40.14	5.29	V	97.3	1.00
1	514.030	-60.09	-13.00	47.09	5.43	V	359.1	1.00





ABOVE 1GHz DATA

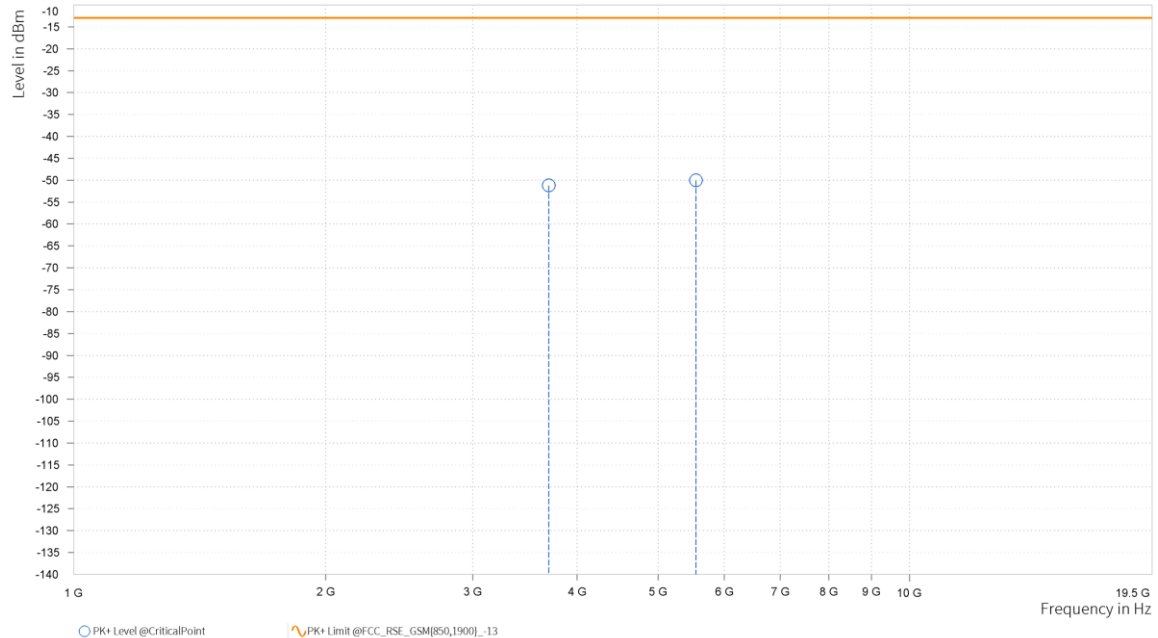
**Note:** For higher frequency, the emission is too low to be detected.

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

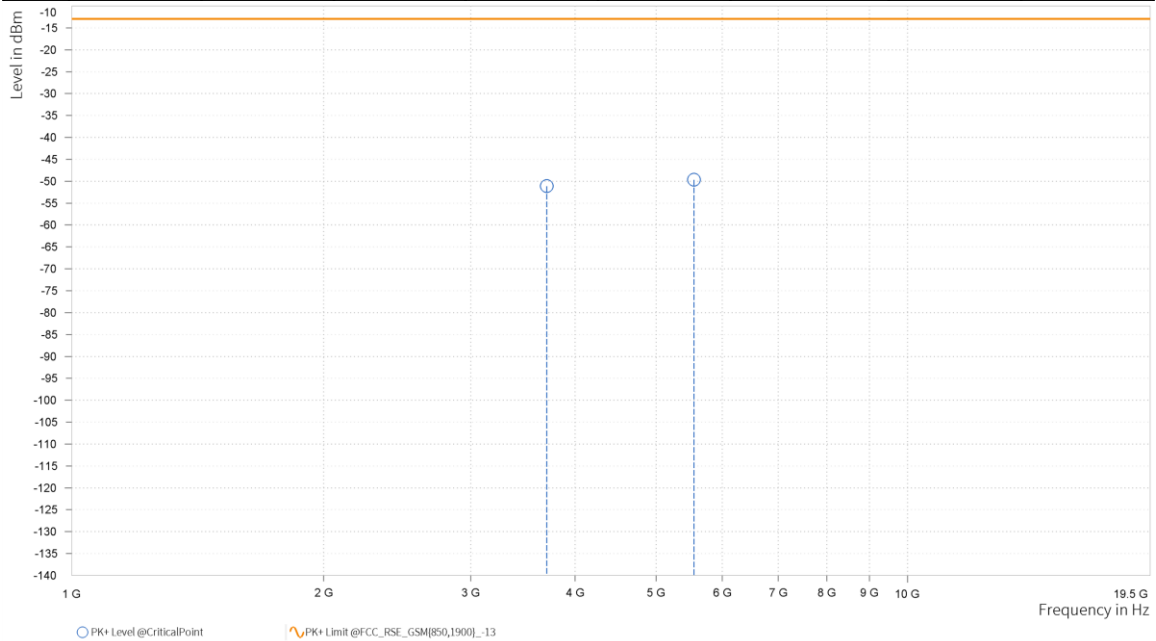
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.400	-51.19	-13.00	38.19	20.98	H	125.2	2.00
4	5,550.600	-50.04	-13.00	37.04	23.76	H	1	2.00





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	-51.12	-13.00	38.12	21.57	V	359.1	1.00
4	5,550.600	-49.67	-13.00	36.67	24.45	V	359	2.00

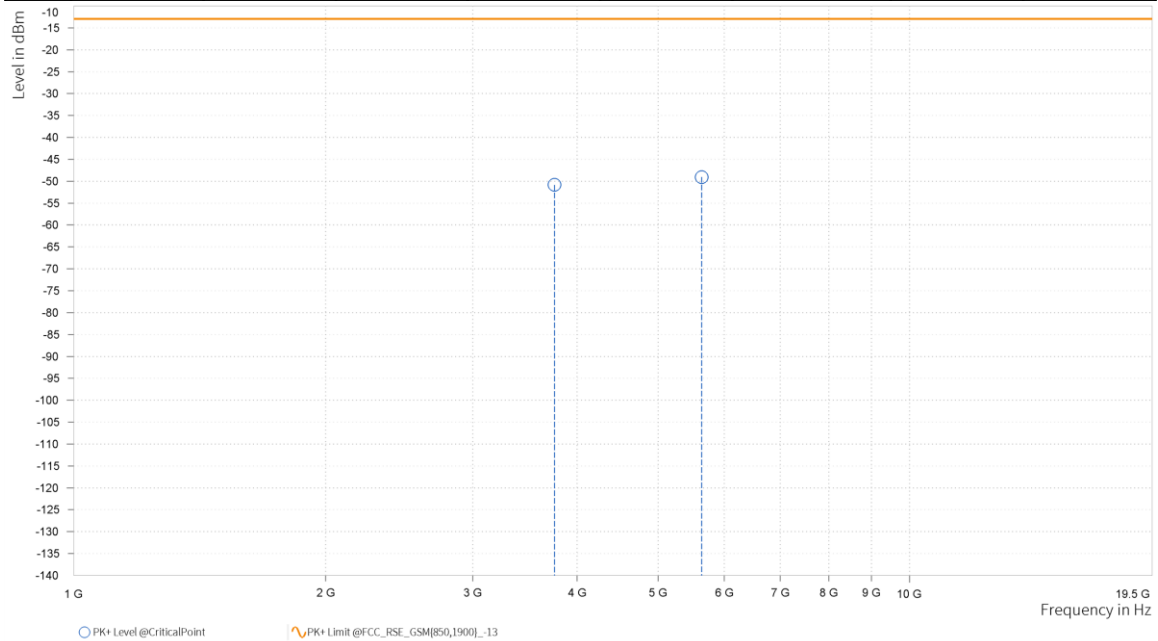




MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: 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	-50.84	-13.00	37.84	21.19	H	359	1.00
4	5,640.000	-49.07	-13.00	36.07	24.12	H	359	2.00

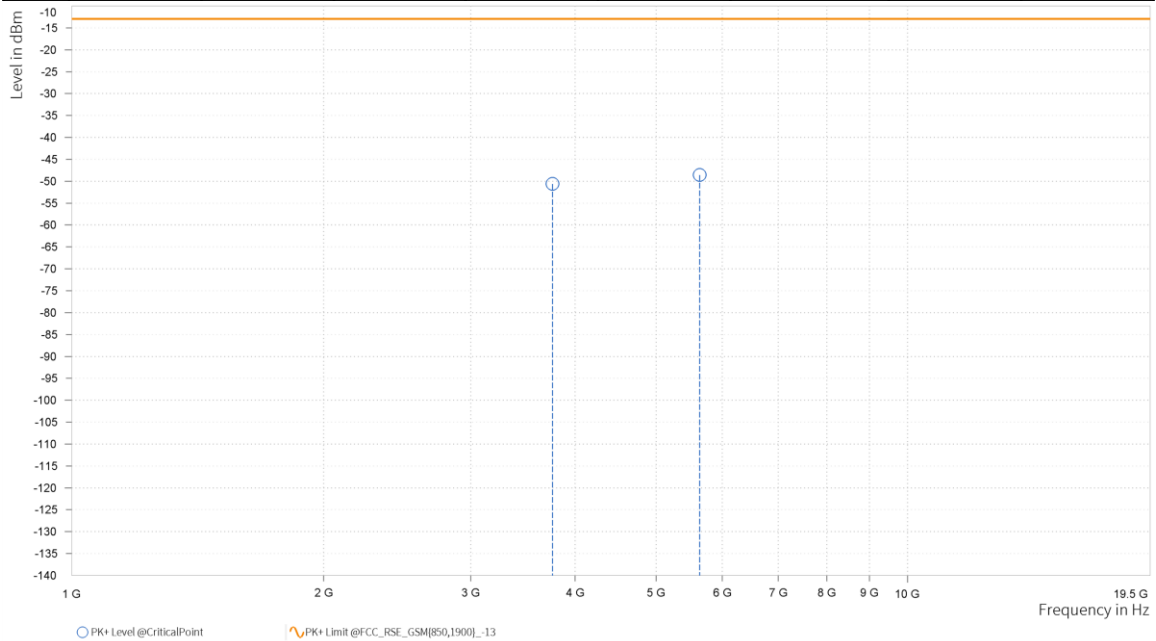




MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

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	-50.61	-13.00	37.61	21.68	V	359	1.00
4	5,640.000	-48.58	-13.00	35.58	24.46	V	359	2.00

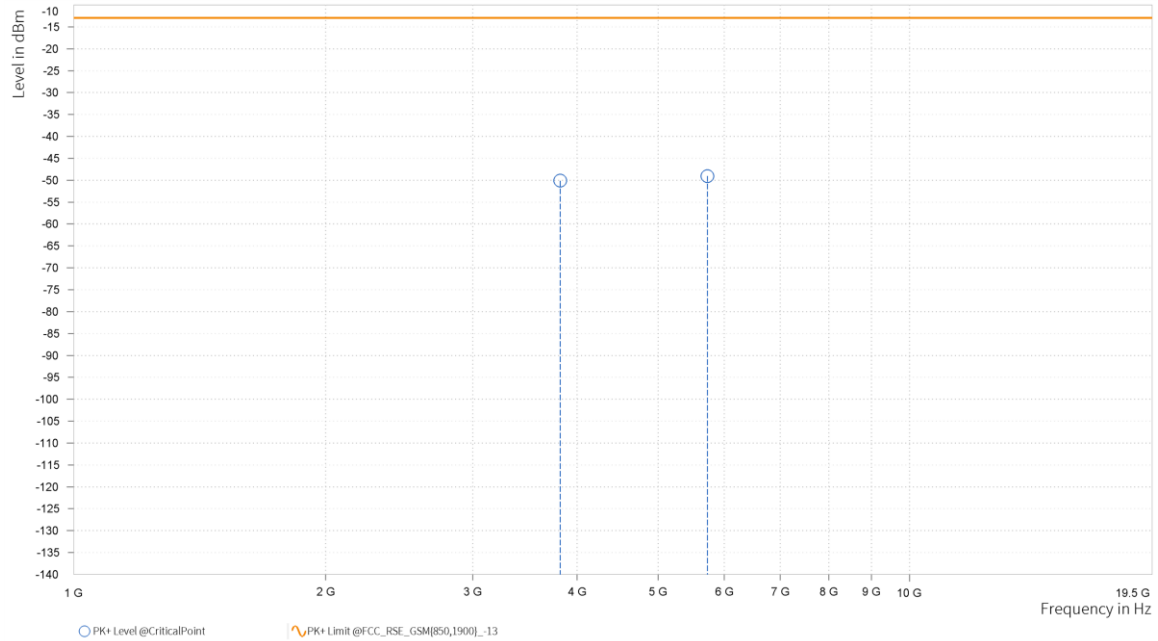




MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: 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	-50.12	-13.00	37.12	21.85	H	359	1.00
4	5,729.400	-49.07	-13.00	36.07	24.45	H	127.6	2.00

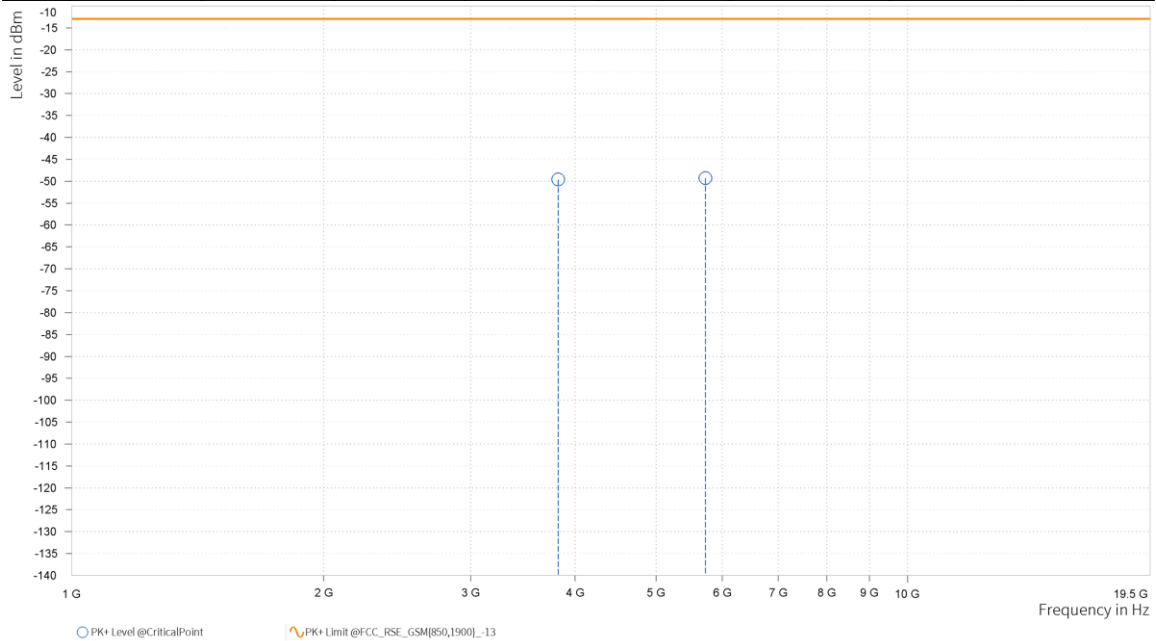


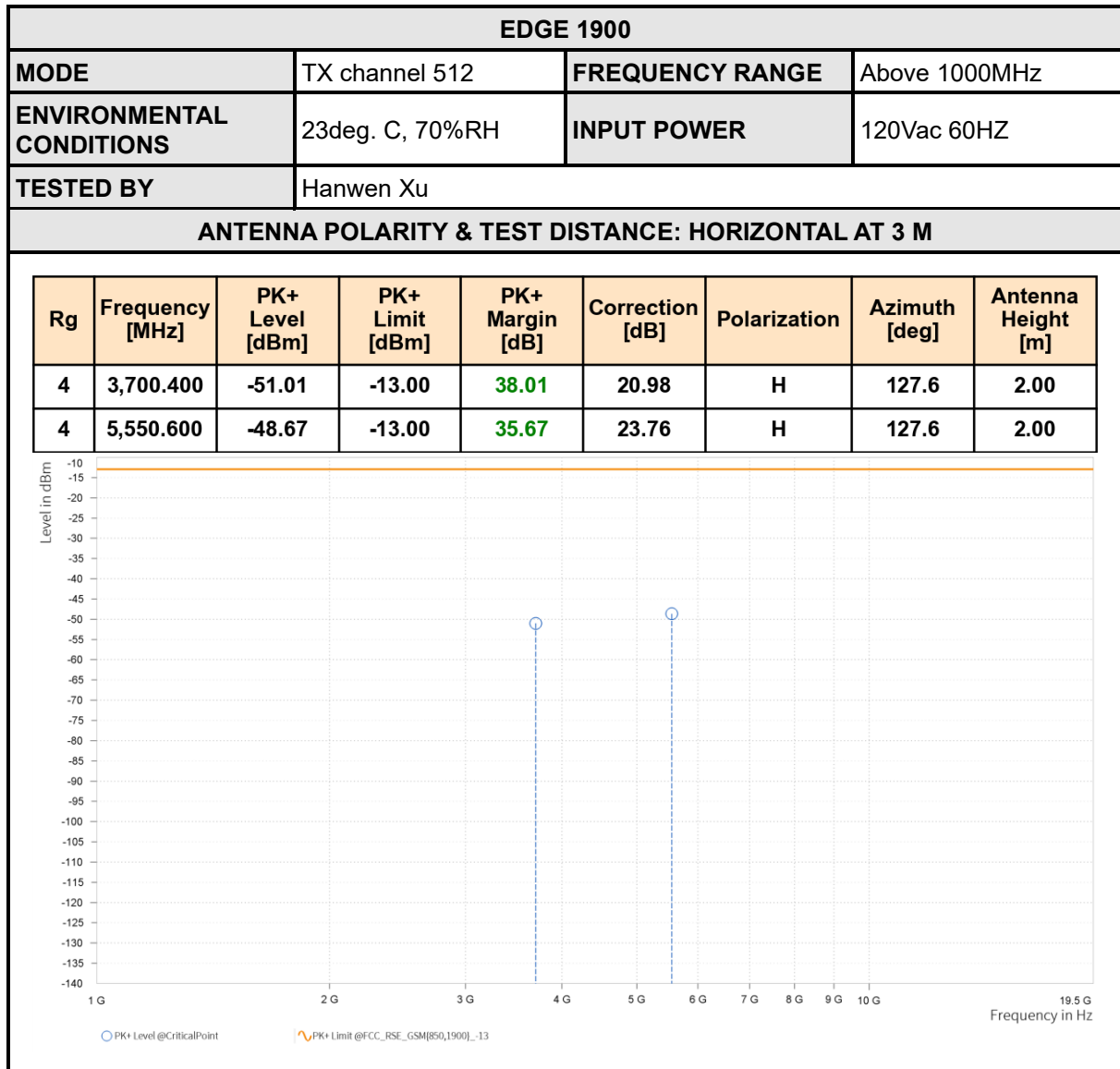




MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.600	-49.61	-13.00	36.61	22.20	V	1	1.00
4	5,729.400	-49.30	-13.00	36.30	24.92	V	126.5	2.00

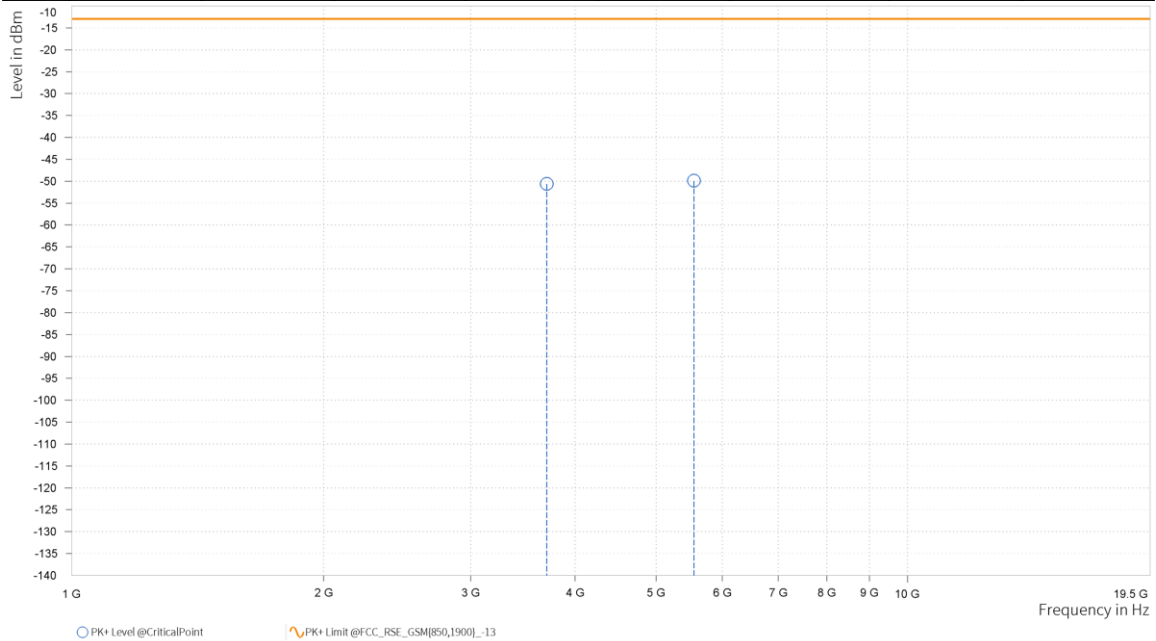






MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.400	-50.60	-13.00	37.60	21.57	V	127.7	2.00
4	5,550.600	-49.88	-13.00	36.88	24.45	V	233.5	1.00

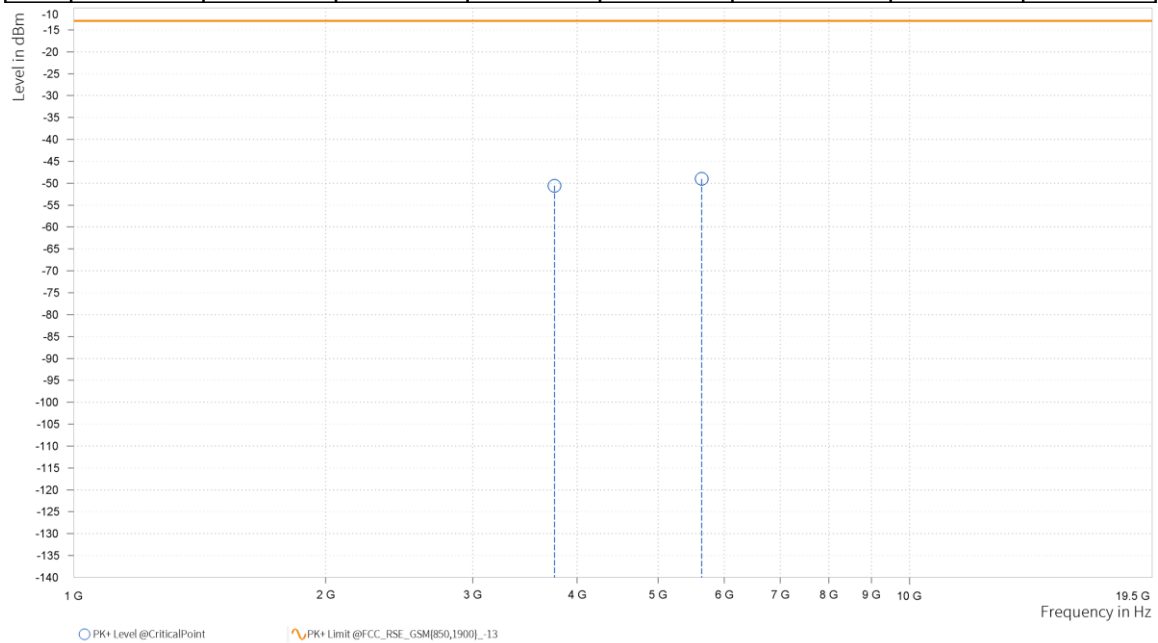




MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

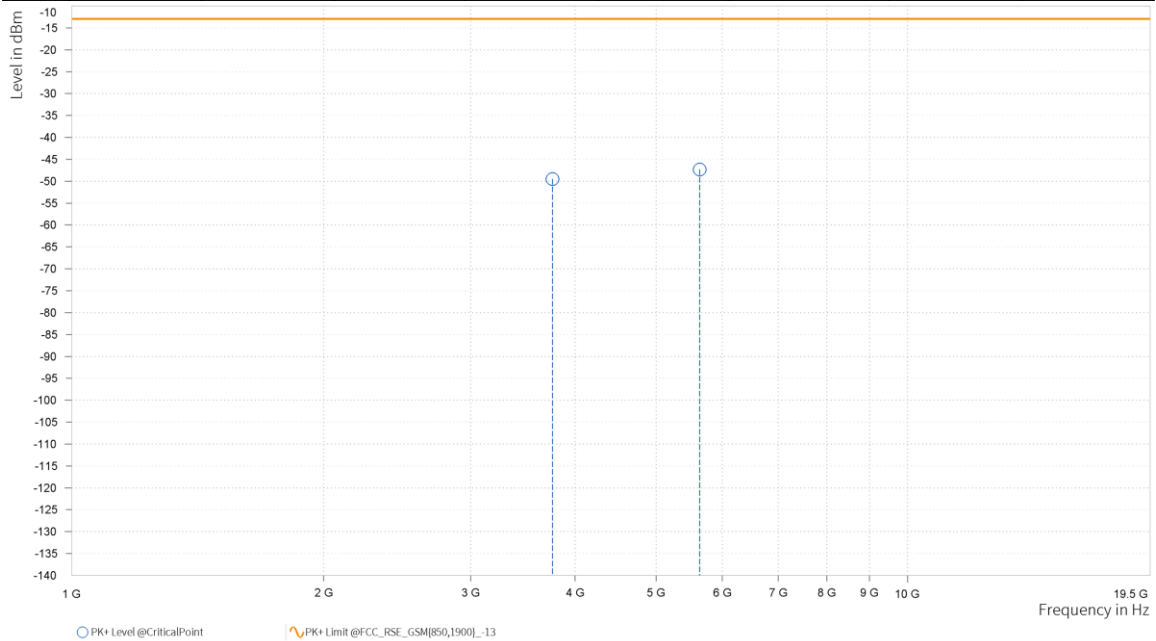
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-50.57	-13.00	37.57	21.19	H	359.1	1.00
4	5,640.000	-49.02	-13.00	36.02	24.12	H	233.5	1.00





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: 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	-49.50	-13.00	36.50	21.68	V	359.1	1.00
4	5,640.000	-47.30	-13.00	34.30	24.46	V	0.9	2.00

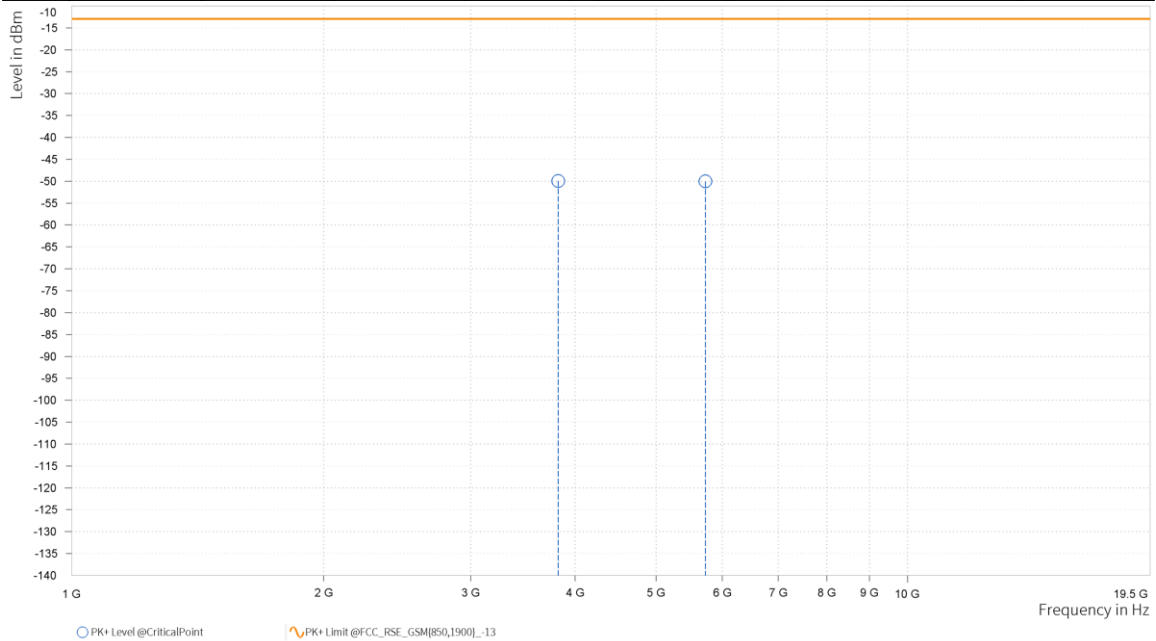




MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

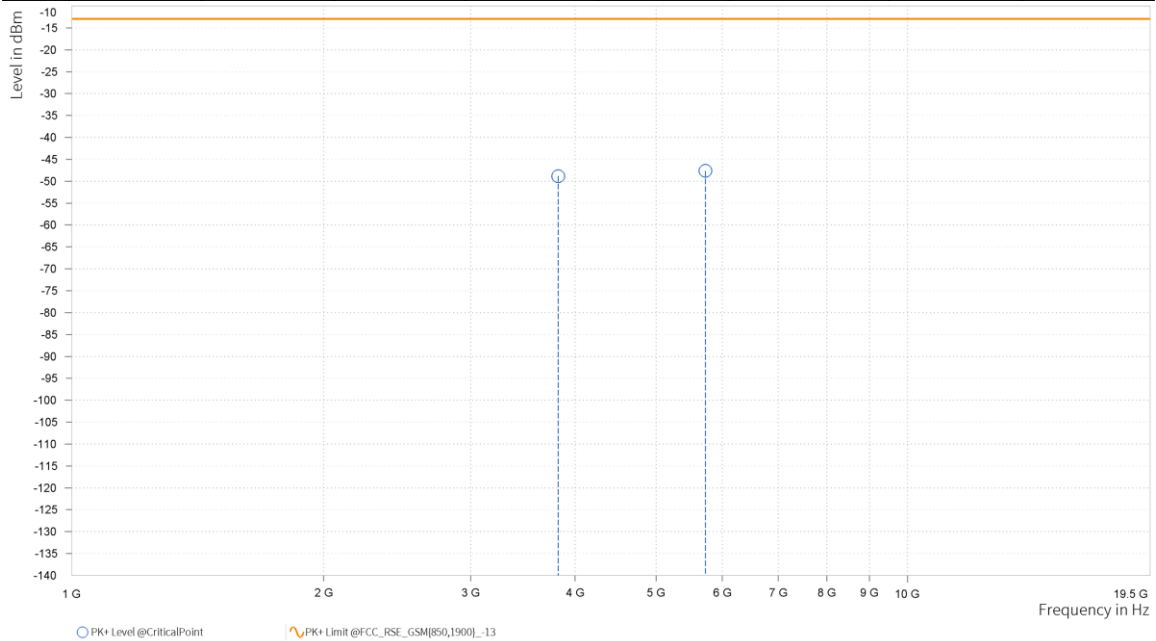
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.600	-49.94	-13.00	36.94	21.85	H	359.1	1.00
4	5,729.400	-50.04	-13.00	37.04	24.45	H	359	2.00

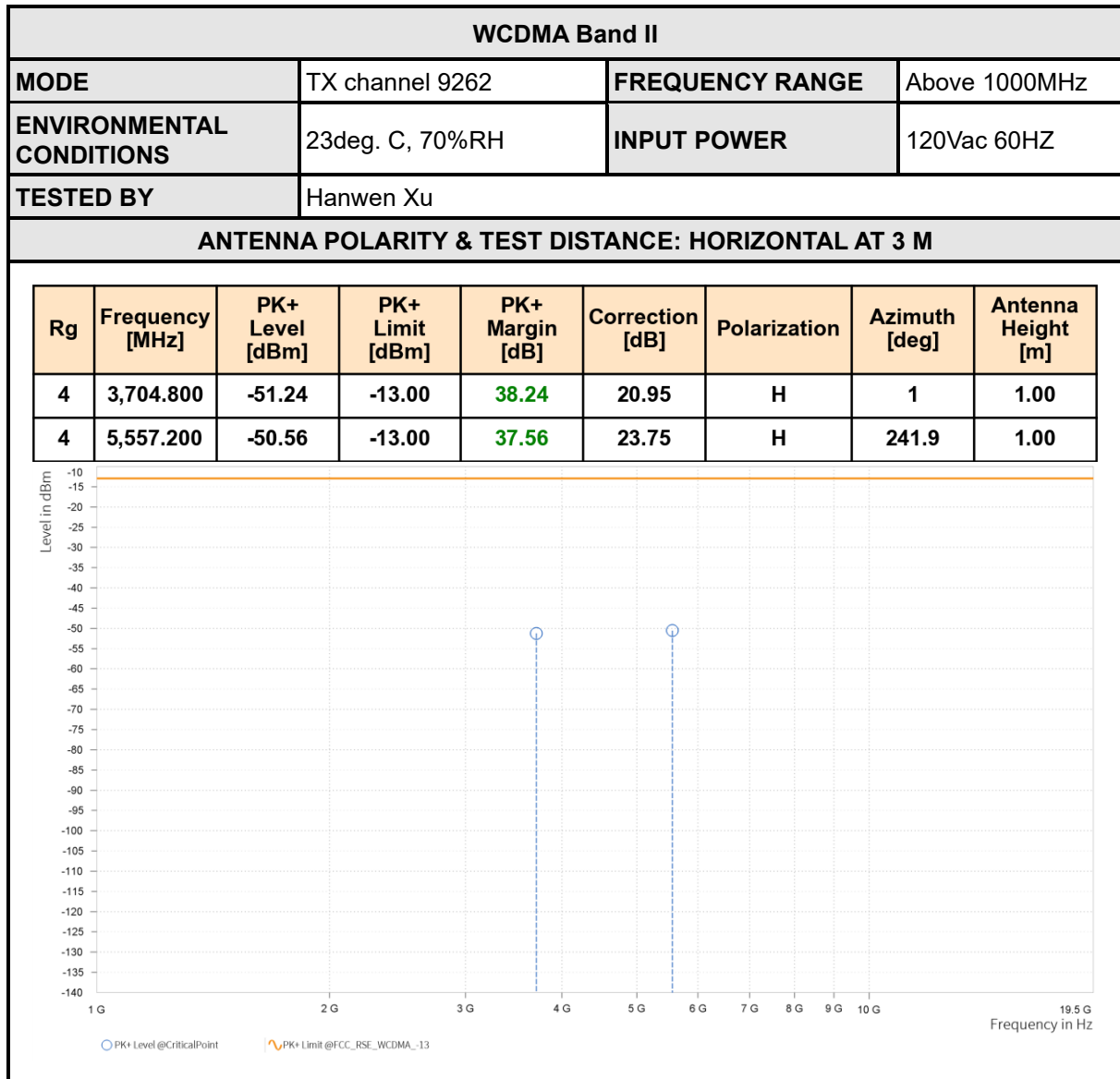




MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.600	-48.84	-13.00	35.84	22.20	V	0.9	2.00
4	5,729.400	-47.63	-13.00	34.63	24.92	V	359	1.00



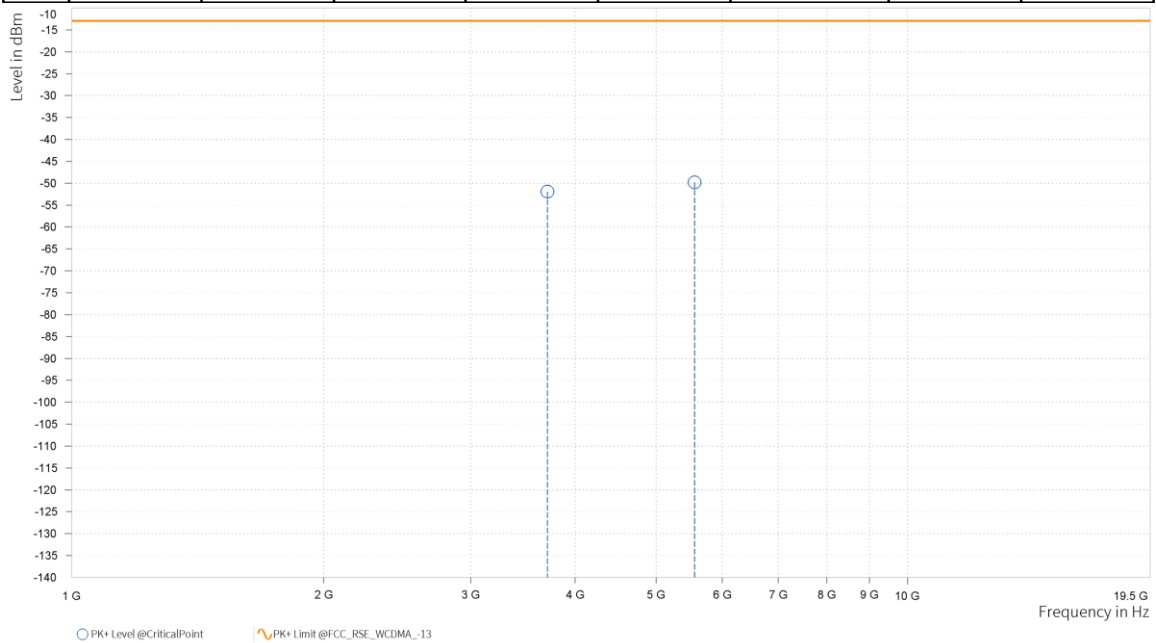






MODE	TX channel 9262	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	120Vac 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

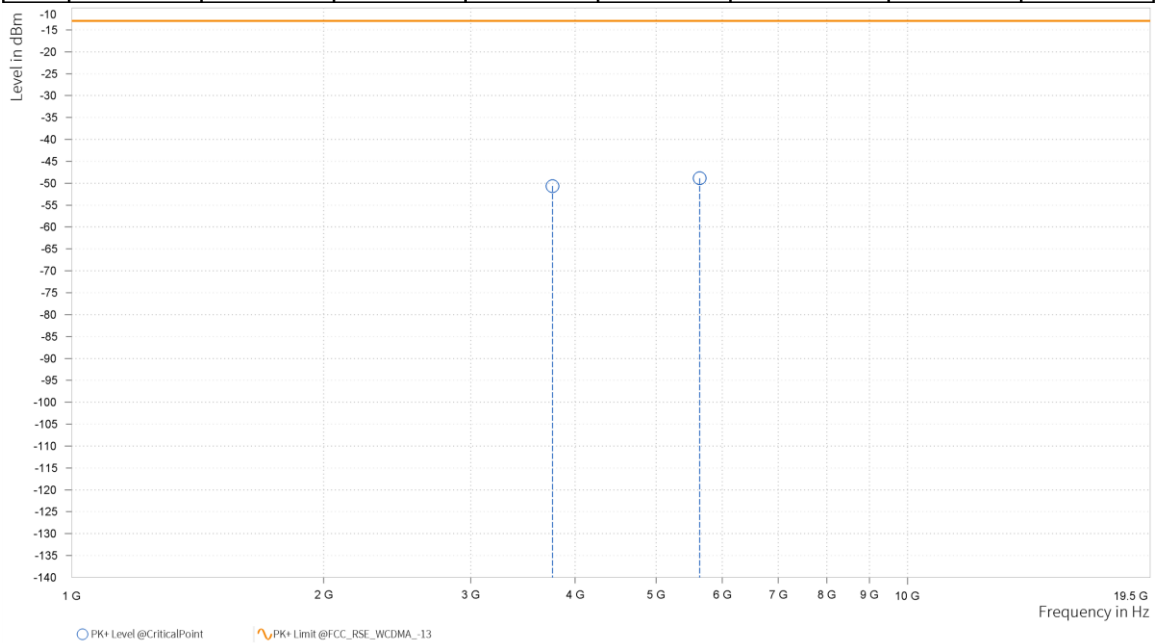
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,704.800	-51.94	-13.00	38.94	21.55	V	359	2.00
4	5,557.200	-49.78	-13.00	36.78	24.45	V	290.1	1.00





MODE	TX channel 9400	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			

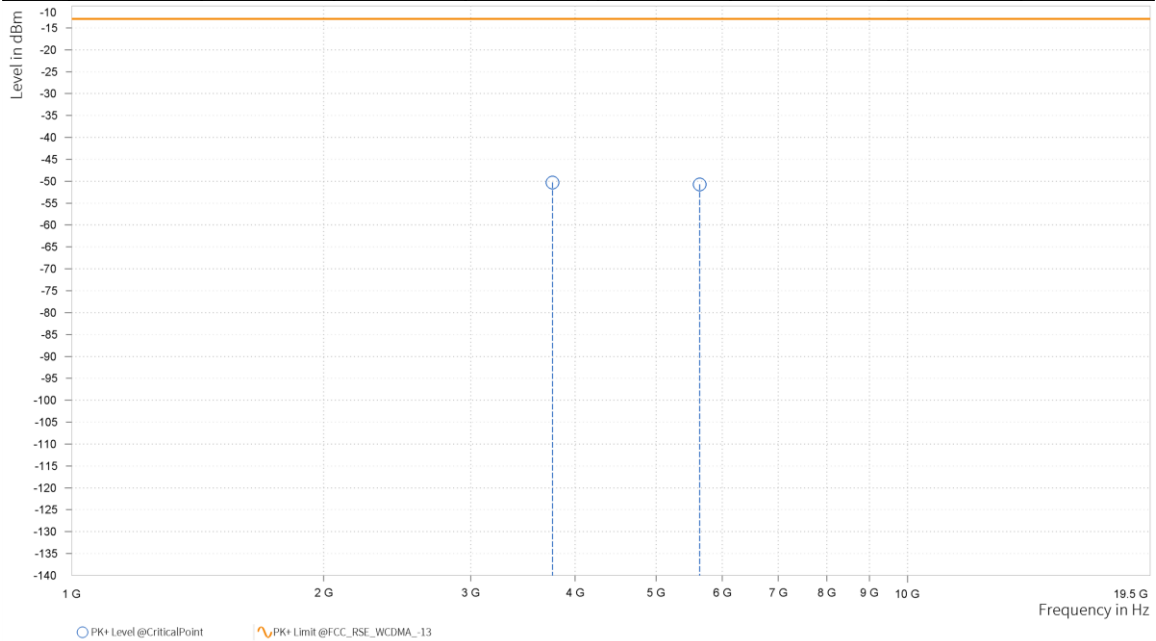
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-50.66	-13.00	37.66	21.19	H	1	1.00
4	5,640.000	-48.88	-13.00	35.88	24.12	H	359	2.00





MODE	TX channel 9400	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			

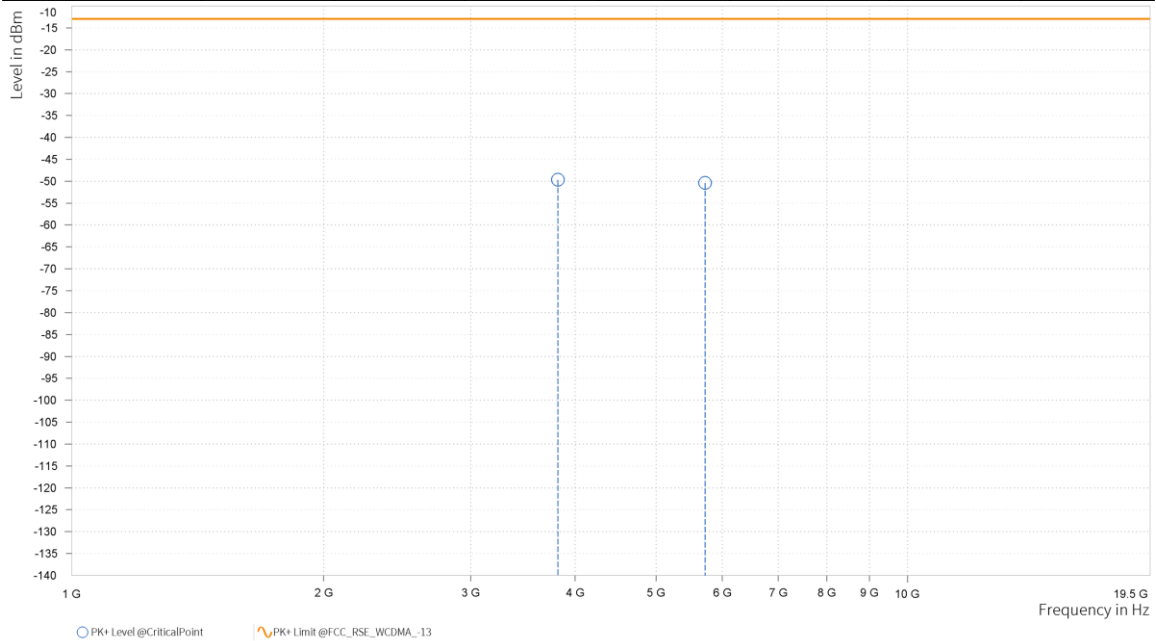
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-50.30	-13.00	37.30	21.68	V	314.1	1.00
4	5,640.000	-50.72	-13.00	37.72	24.46	V	176	2.00





MODE	TX channel 9538	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			

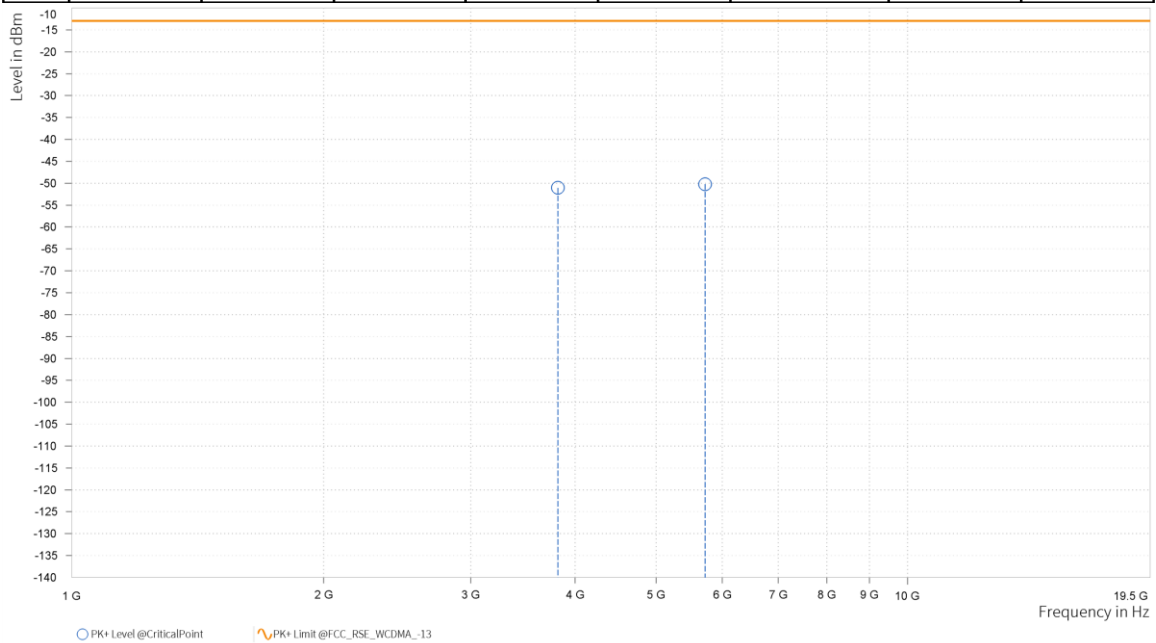
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,815.200	-49.67	-13.00	36.67	21.82	H	313.4	1.00
4	5,722.800	-50.39	-13.00	37.39	24.42	H	50.9	2.00





MODE	TX channel 9538	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	3,815.200	-51.05	-13.00	38.05	22.15	V	345.9	1.00
4	5,722.800	-50.20	-13.00	37.20	24.88	V	8.6	2.00



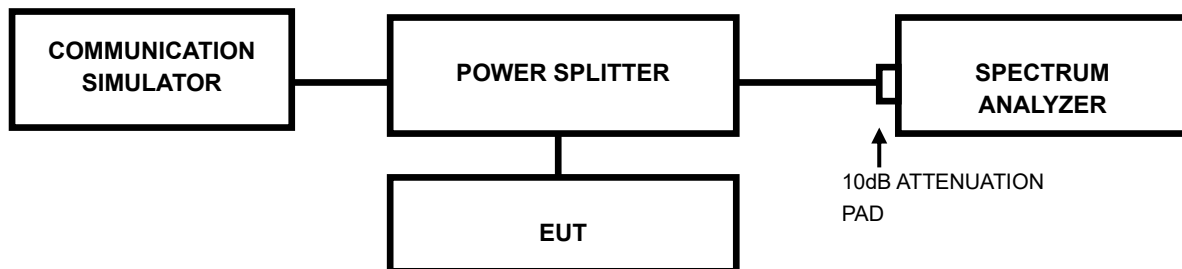


### 3.7 PEAK TO AVERAGE RATIO

#### 3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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

#### 3.7.2 TEST SETUP



#### 3.7.3 TEST PROCEDURES

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

#### 3.7.4 TEST RESULTS

Please Refer to Appendix of this test report.



## 4 INFORMATION ON THE TESTING LABORATORIES

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

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

Lab Address:

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

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

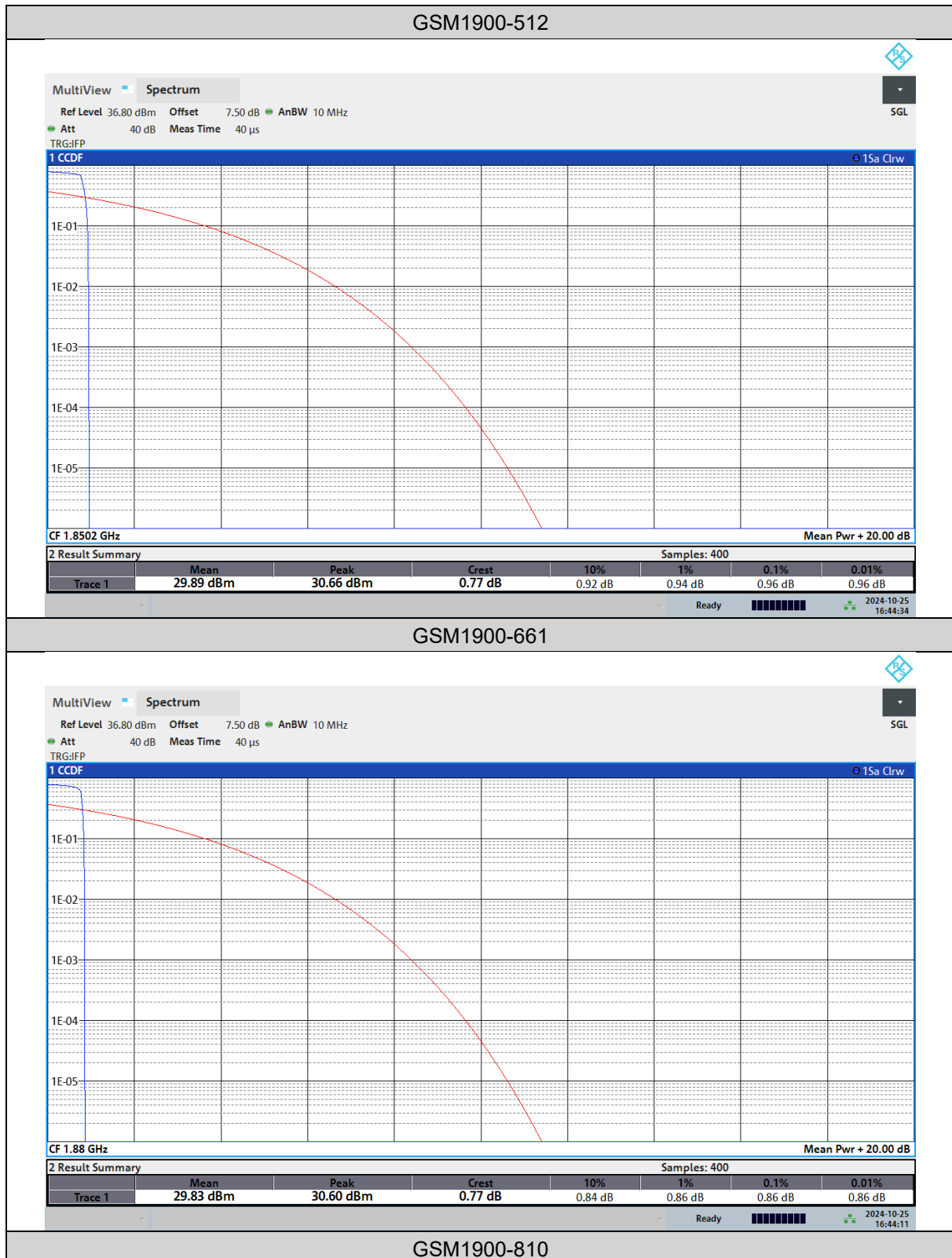
#### PEAK-TO-AVERAGE RATIO(CCDF)

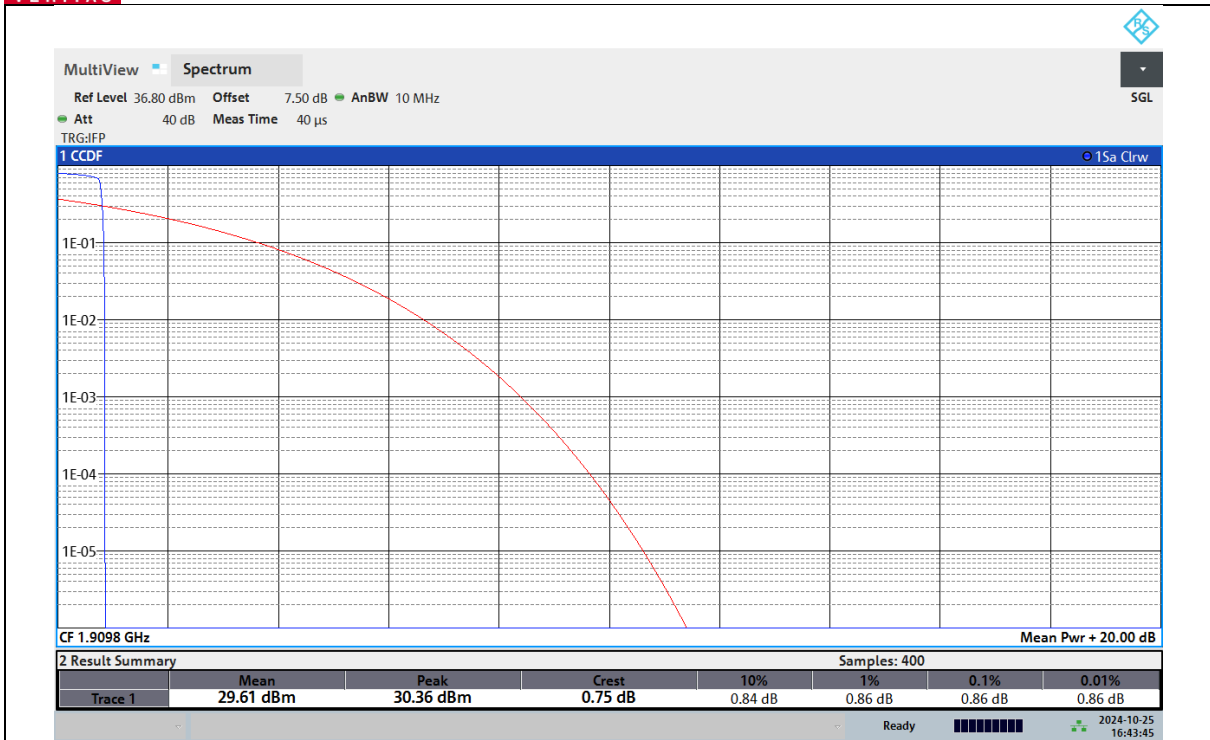
##### Test Result

Band	Channel	Result(dB)	Limit(dB)	Verdict
GSM1900	512	0.96	13	PASS
GSM1900	661	0.86	13	PASS
GSM1900	810	0.86	13	PASS
GPRS1900	512	0.96	13	PASS
GPRS1900	661	0.86	13	PASS
GPRS1900	810	0.86	13	PASS
EGPRS1900	512	2.92	13	PASS
EGPRS1900	661	3.10	13	PASS
EGPRS1900	810	2.84	13	PASS

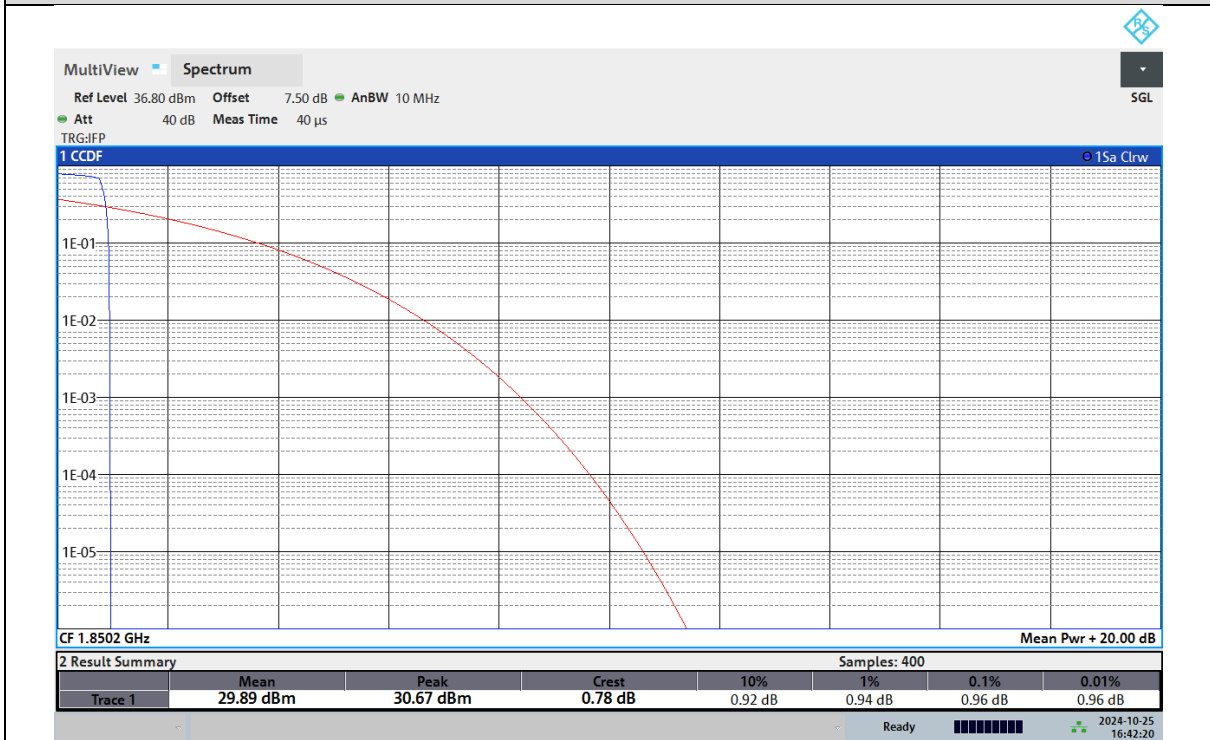


## Test Graphs

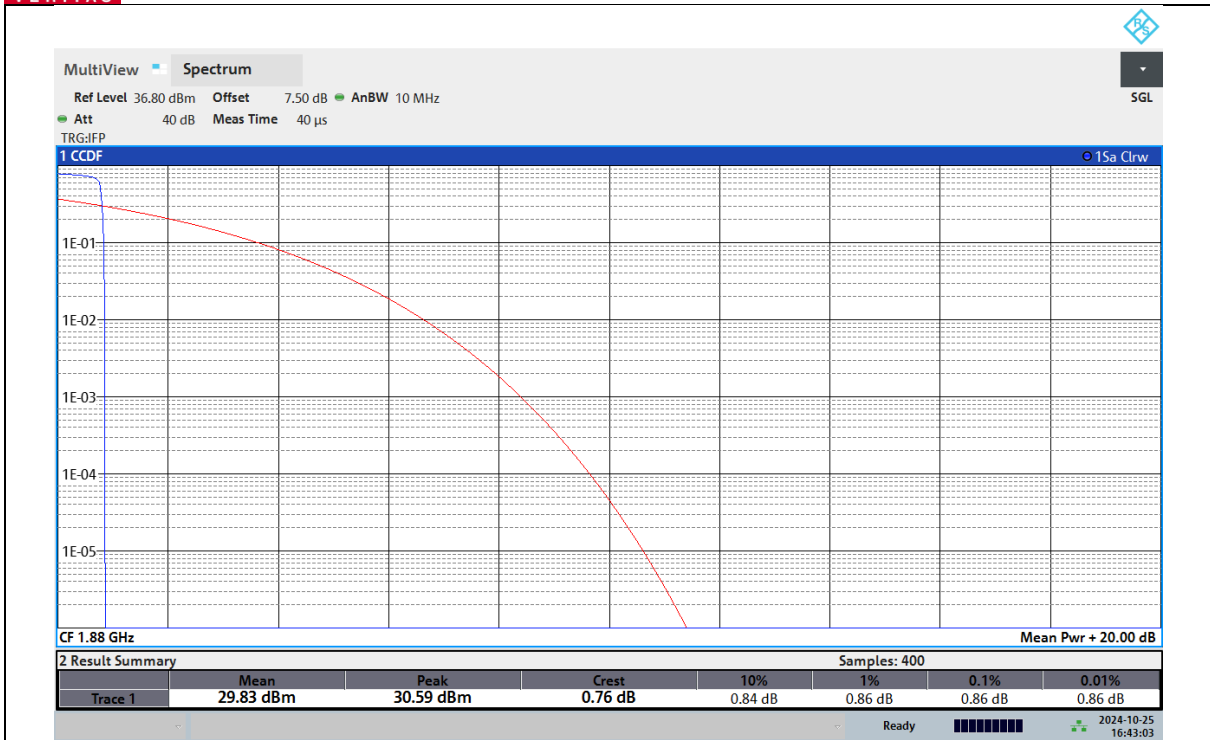




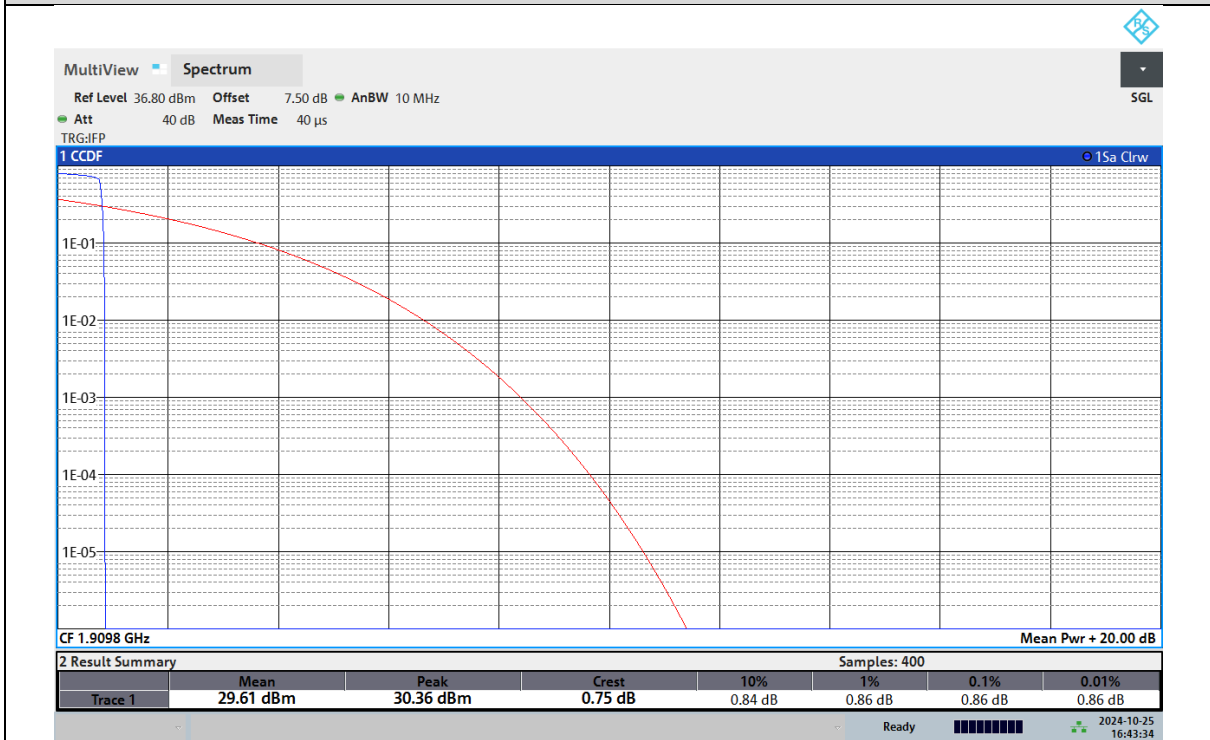
GPRS1900-512



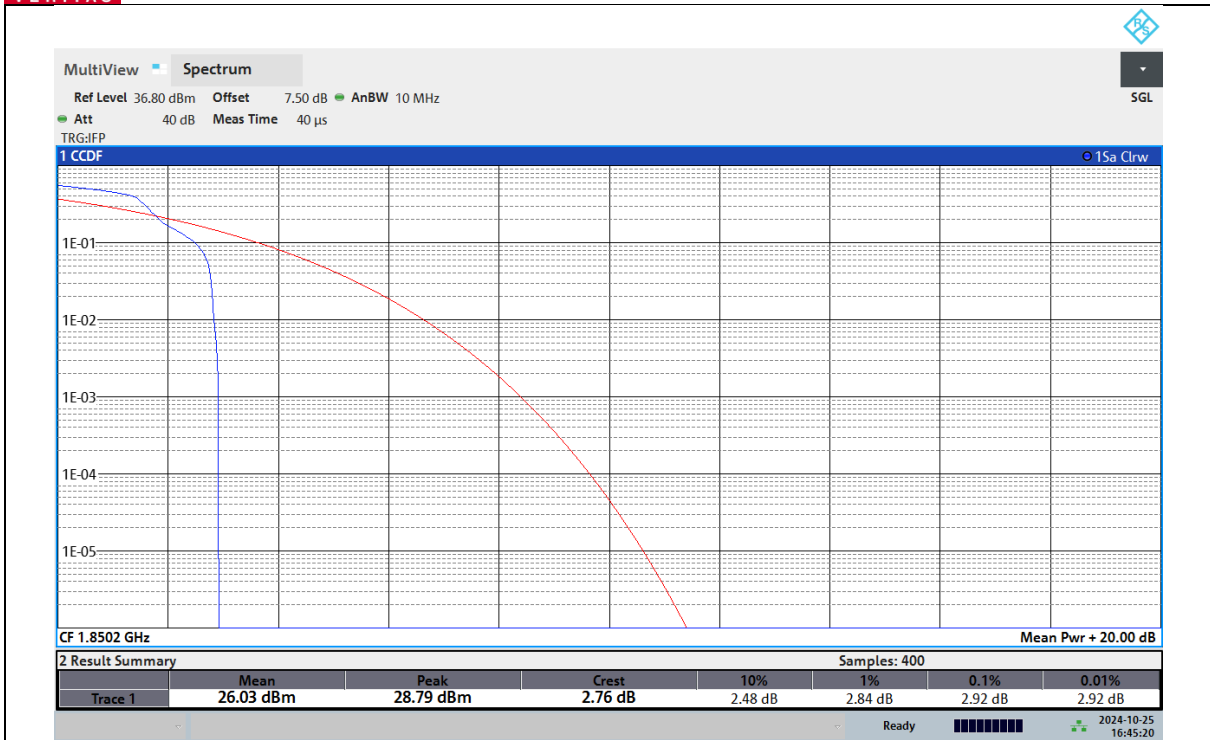
GPRS1900-661



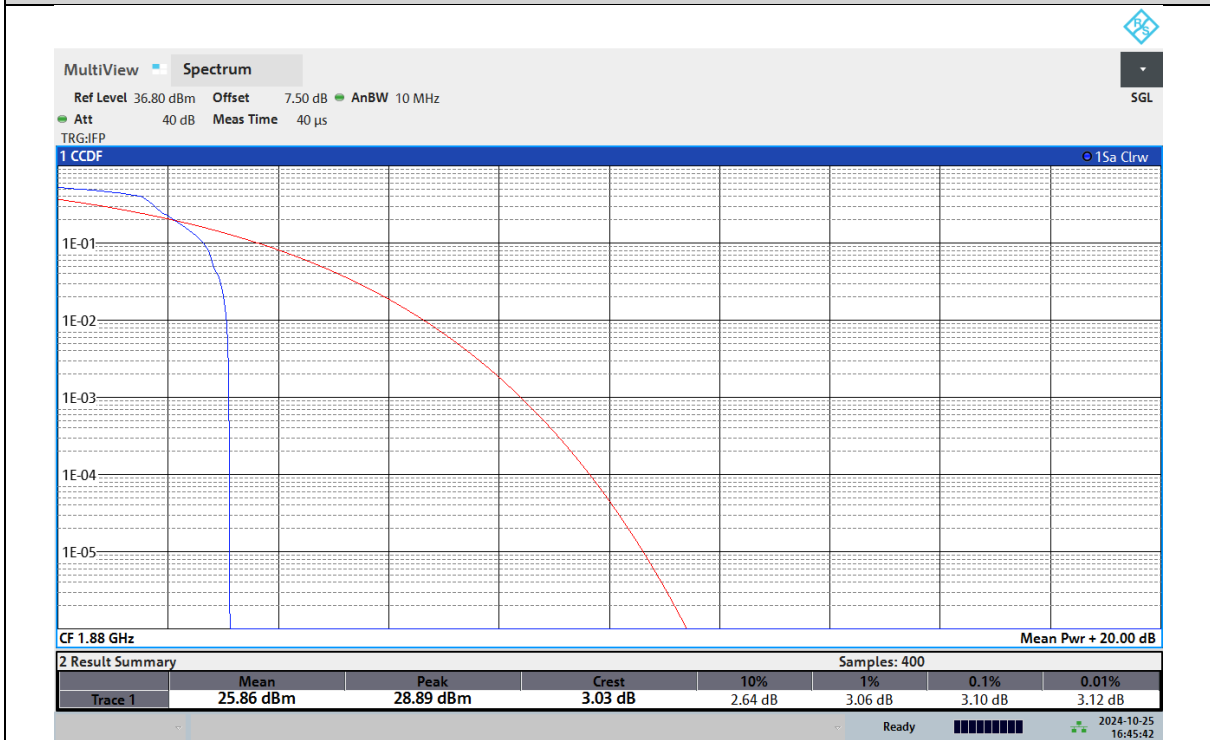
GPRS1900-810



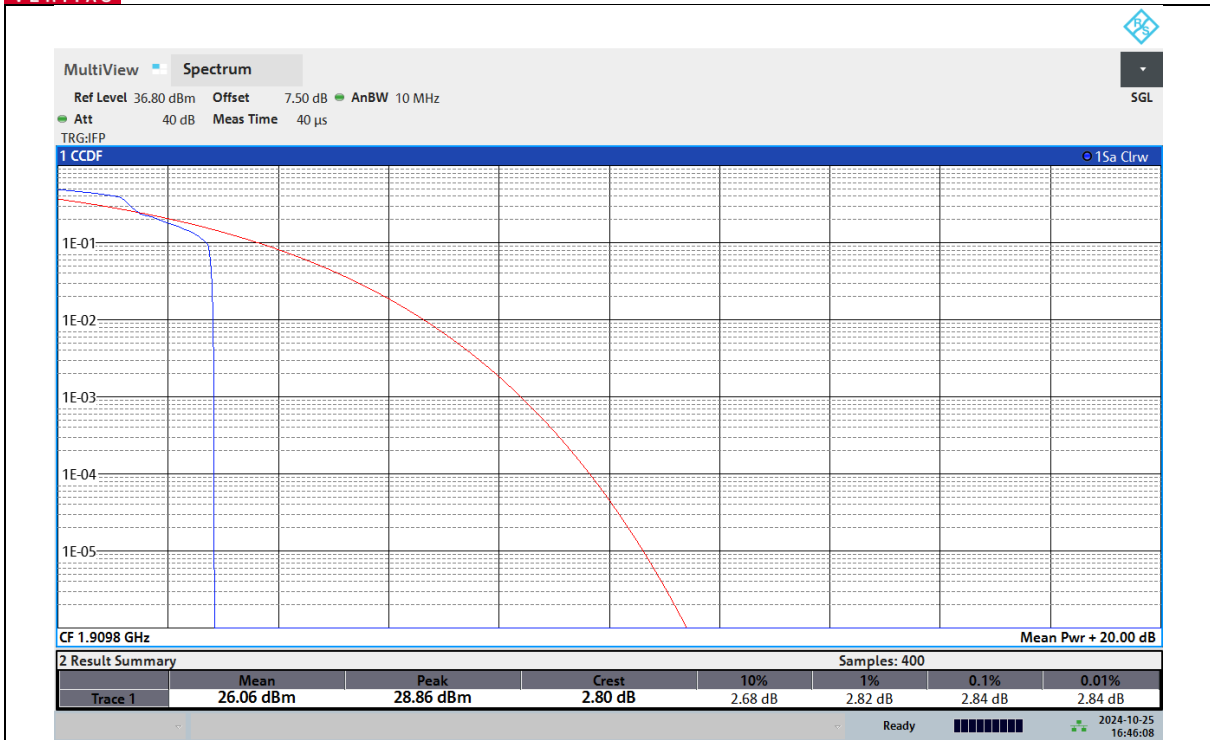
EGPRS1900-512



EGPRS1900-661



EGPRS1900-810





## 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

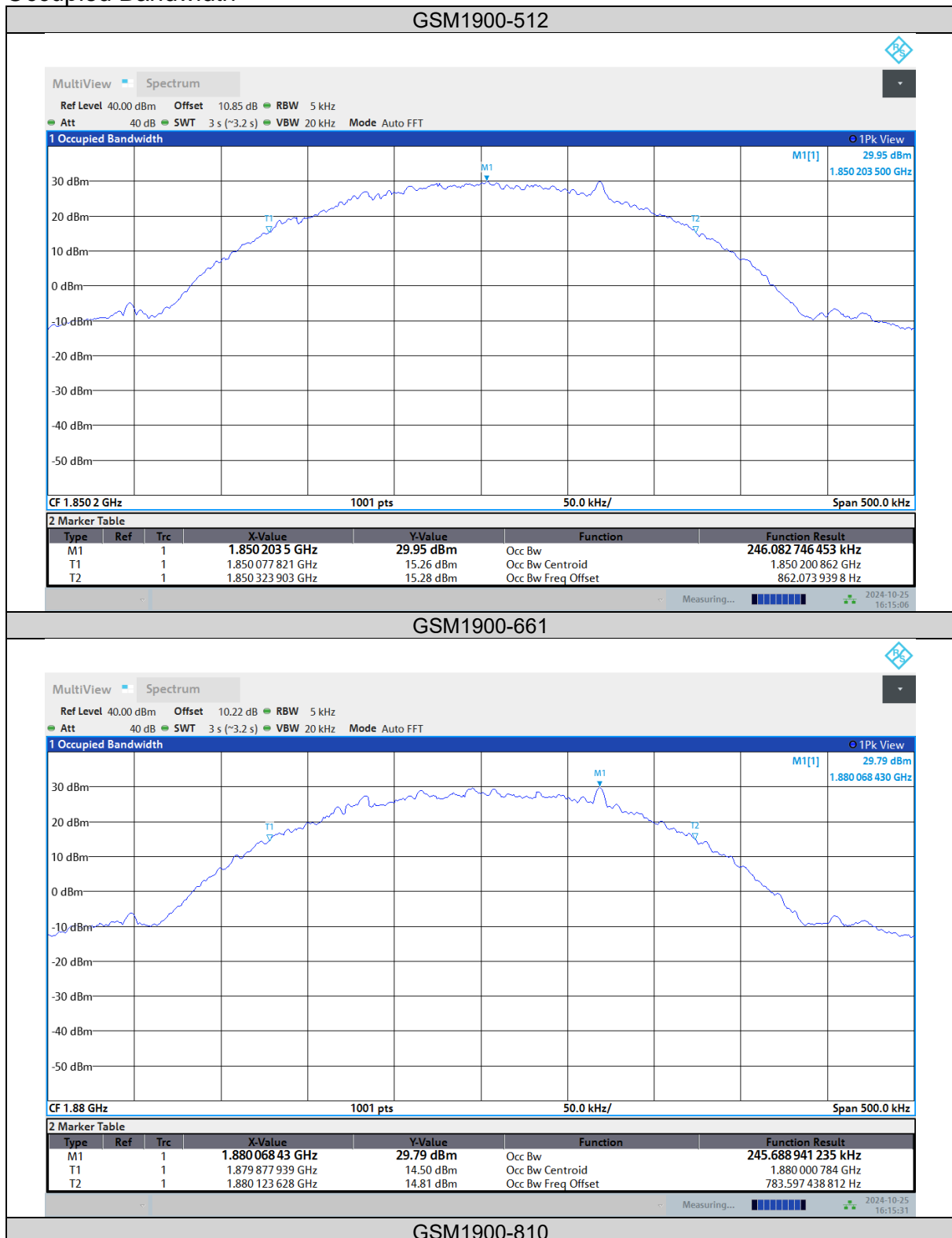
### Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Verdict
GSM1900	512	246.083	319.18	PASS
GSM1900	661	245.689	320.68	PASS
GSM1900	810	247.756	315.68	PASS
GPRS1900	512	245.416	314.69	PASS
GPRS1900	661	245.584	315.18	PASS
GPRS1900	810	246.098	317.18	PASS
EGPRS1900	512	249.253	319.18	PASS
EGPRS1900	661	250.852	320.68	PASS
EGPRS1900	810	252.628	321.68	PASS

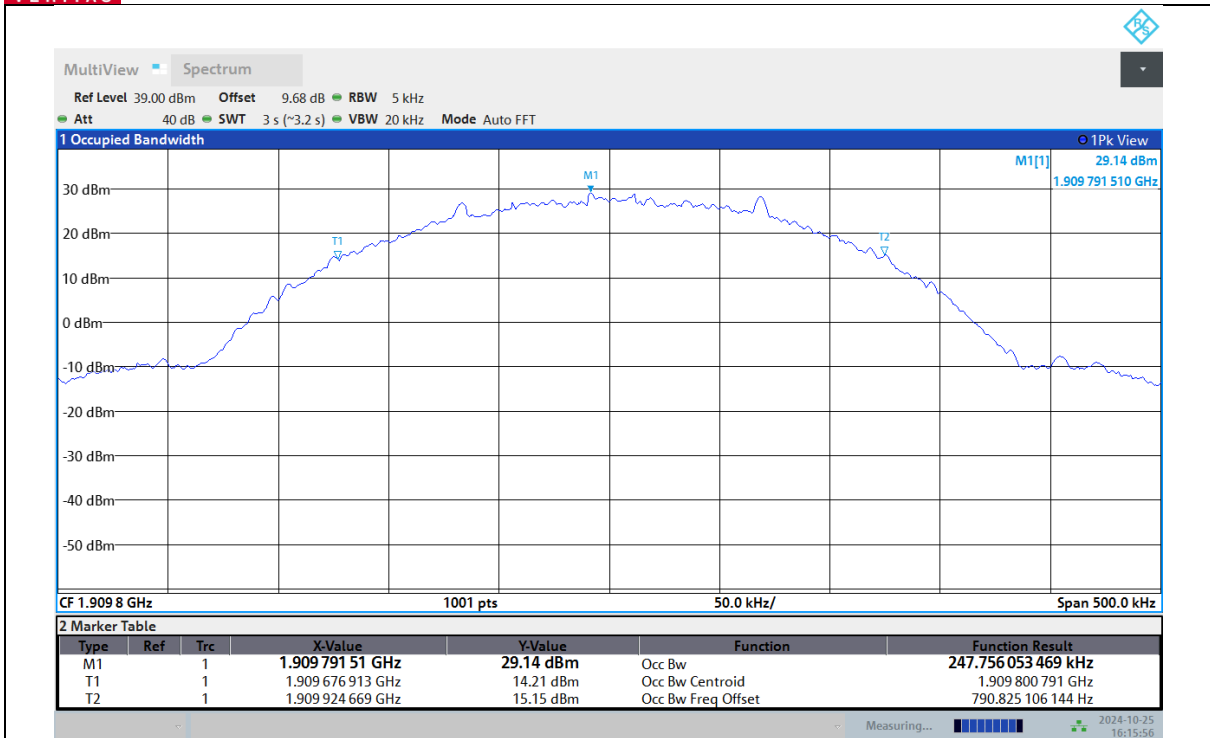


## Test Graphs

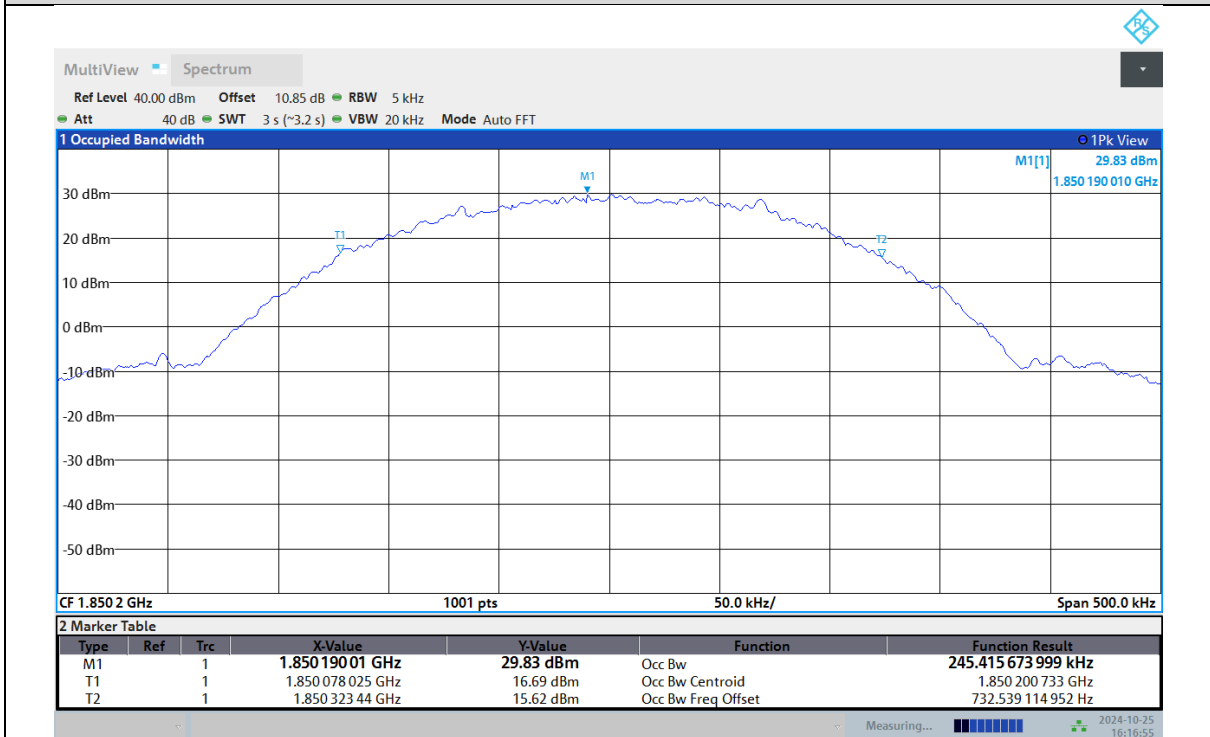
### Occupied Bandwidth



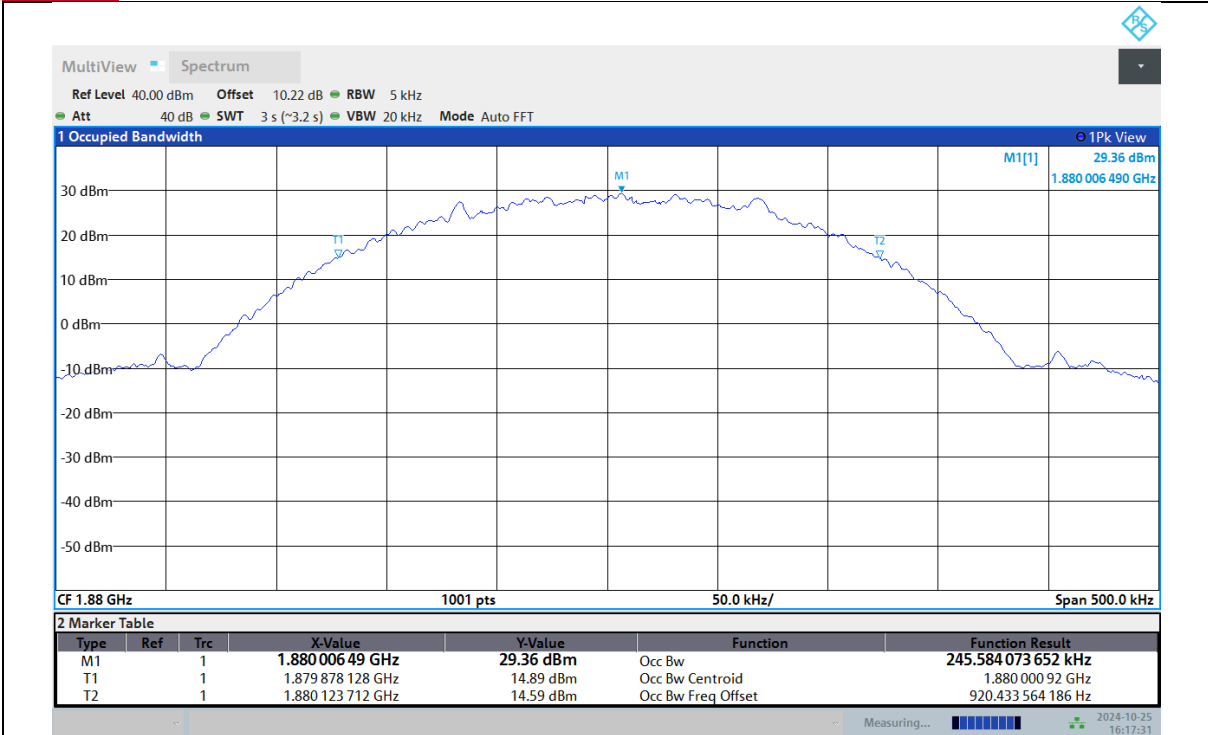




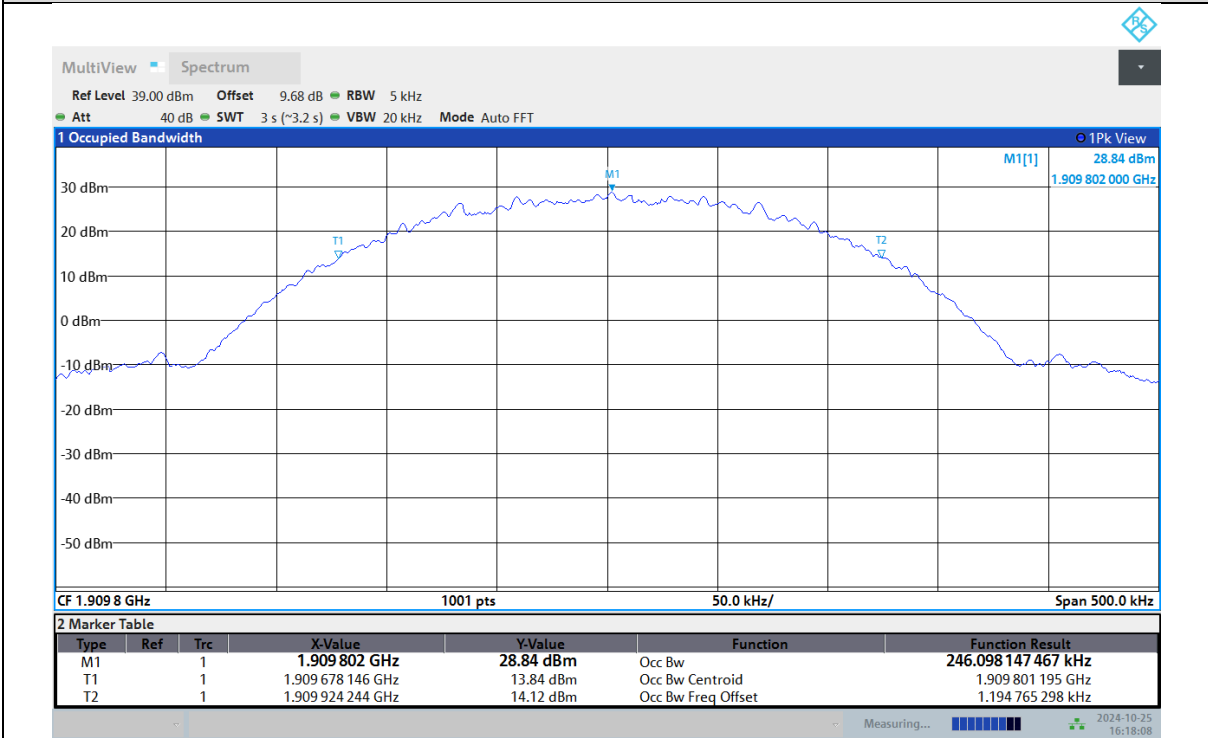
GPRS1900-512



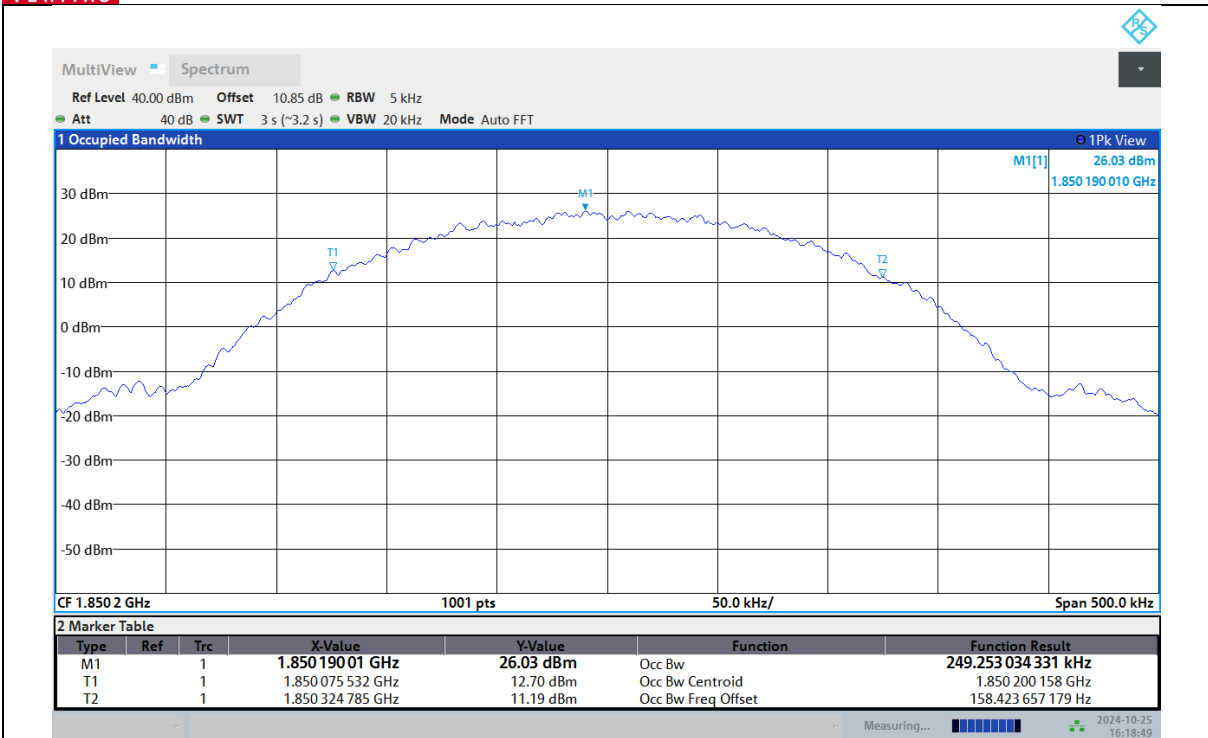
GPRS1900-661



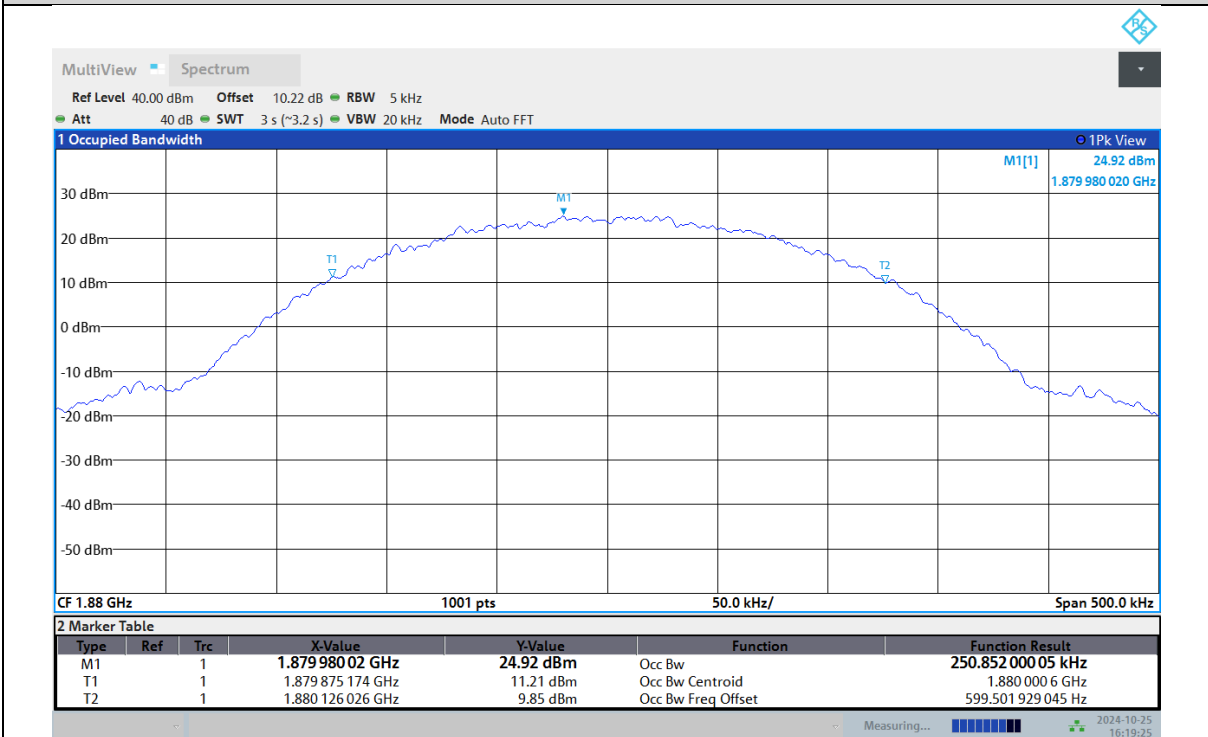
GPRS1900-810



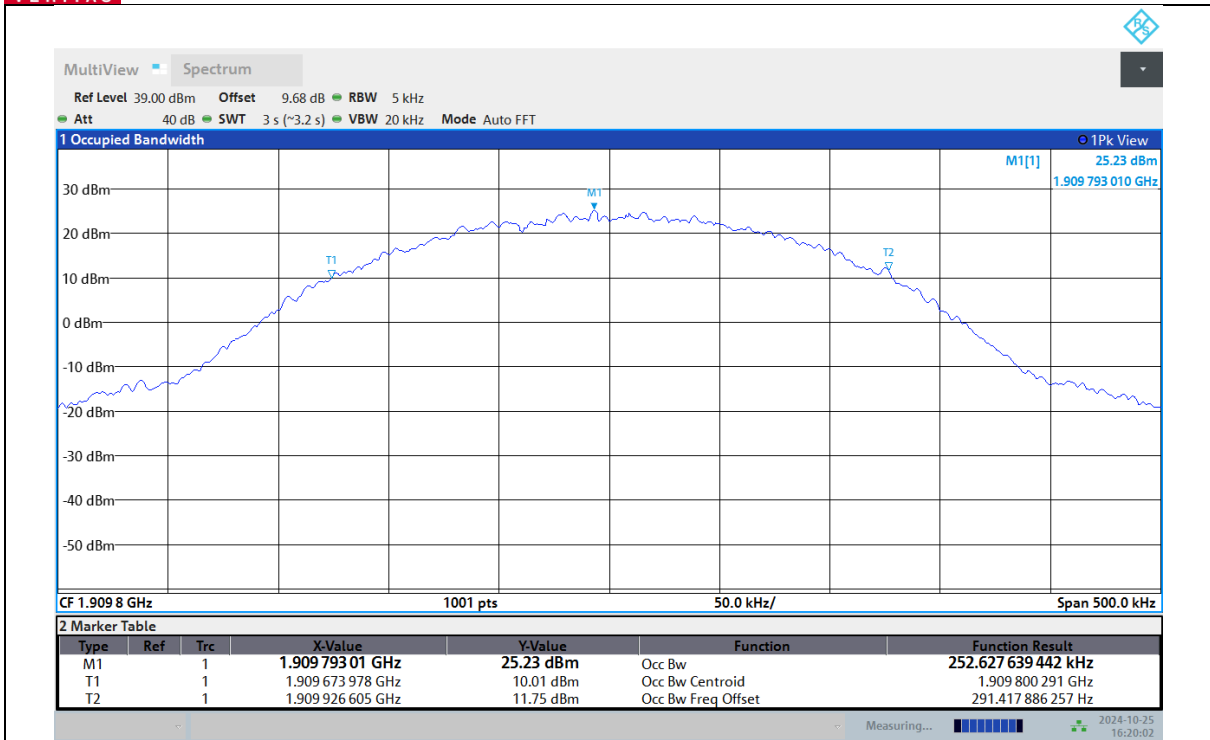
EGPRS1900-512



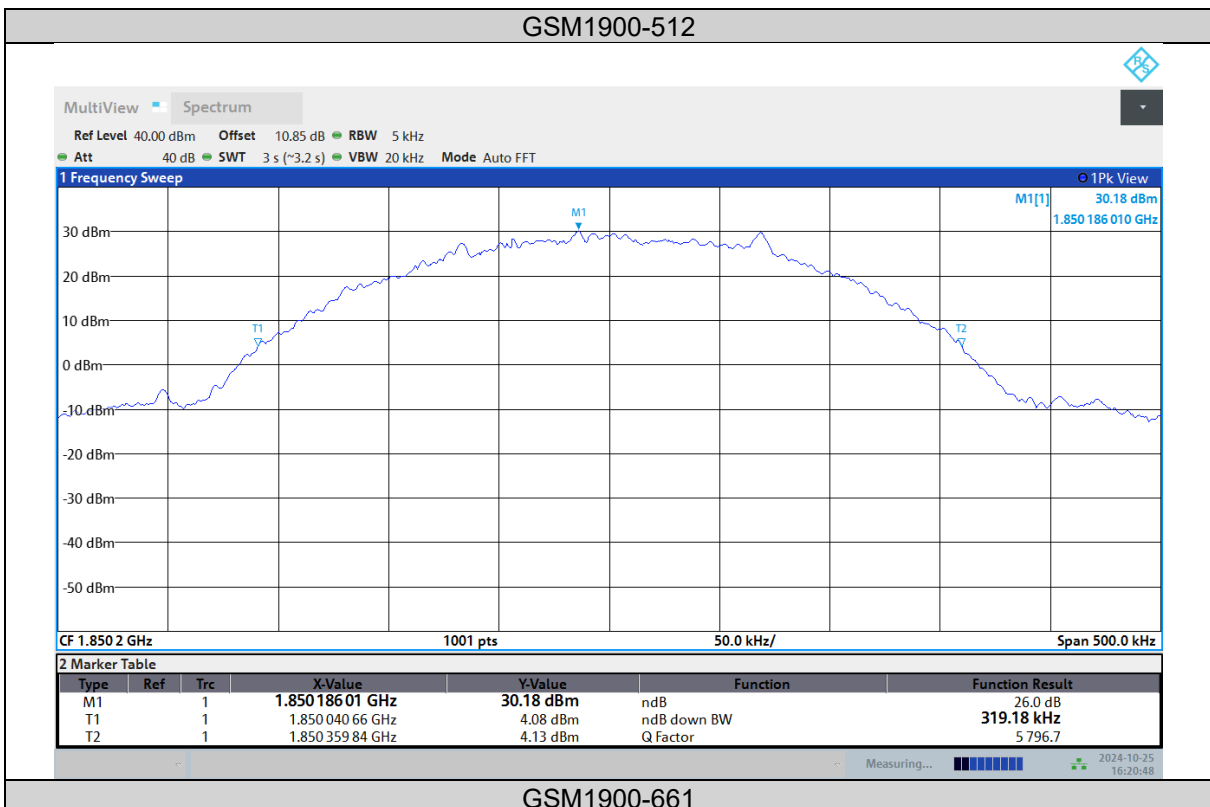
EGPRS1900-661

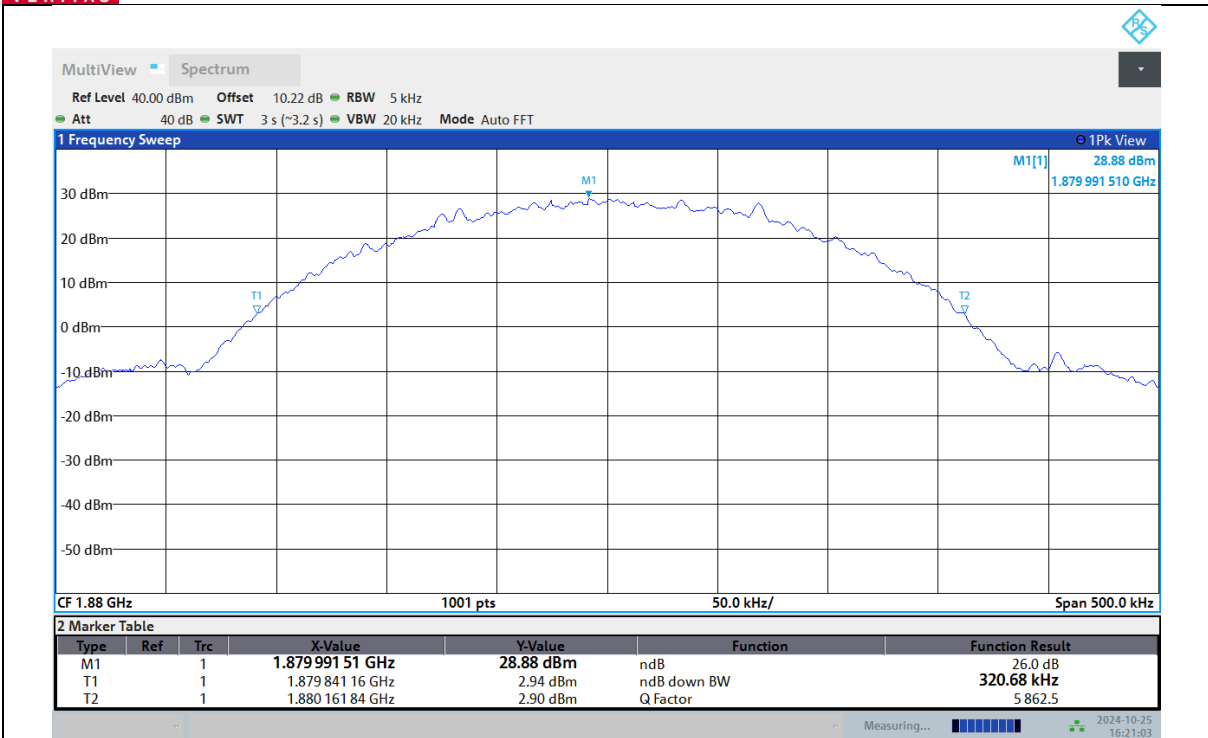


EGPRS1900-810

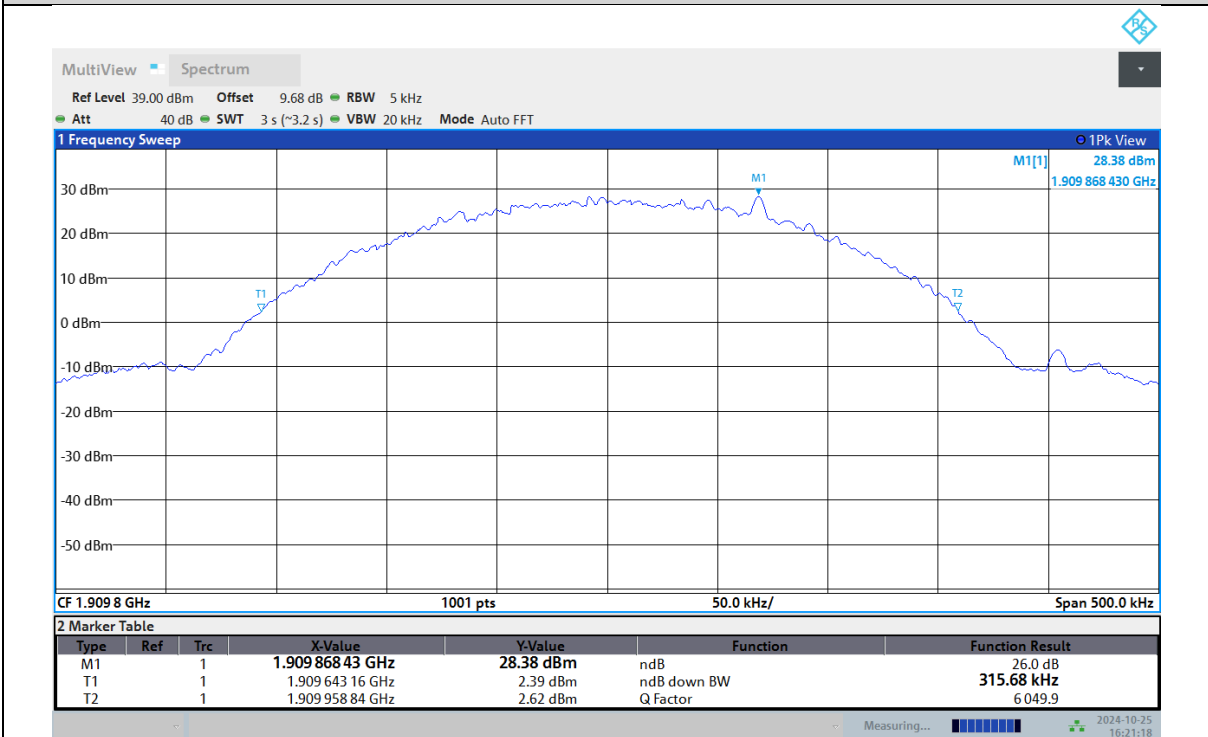


## 26dB Bandwidth

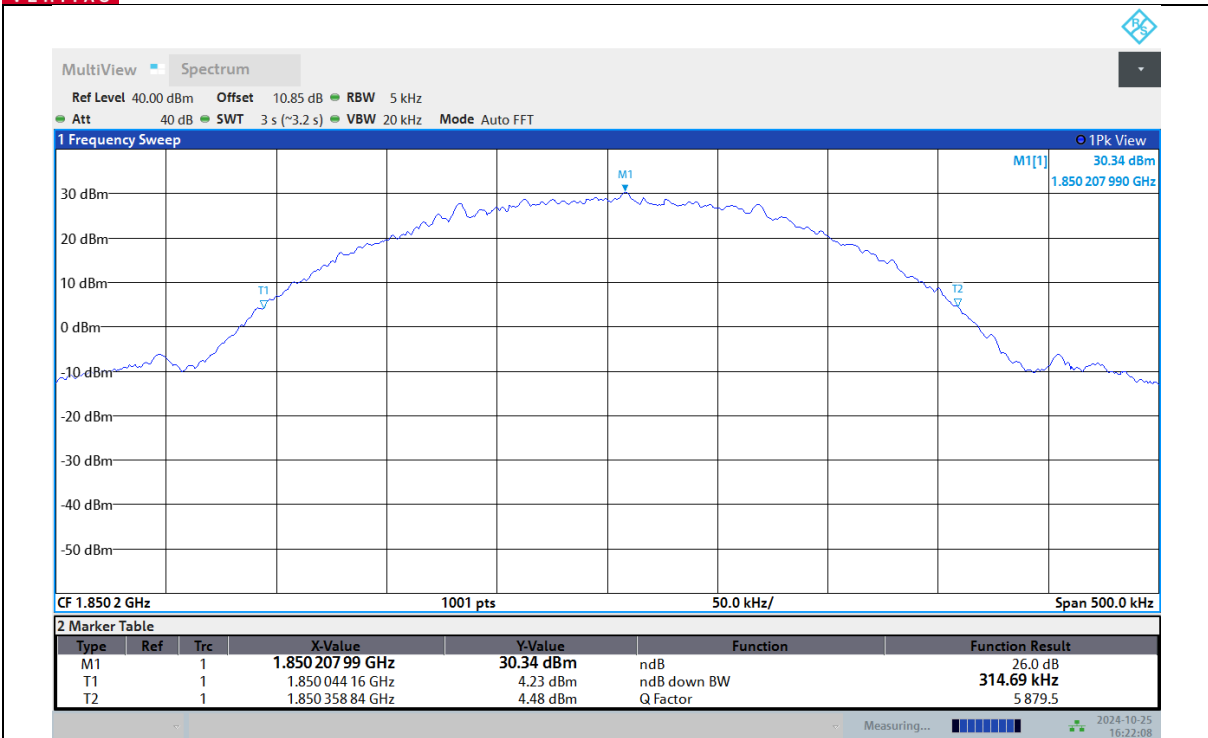




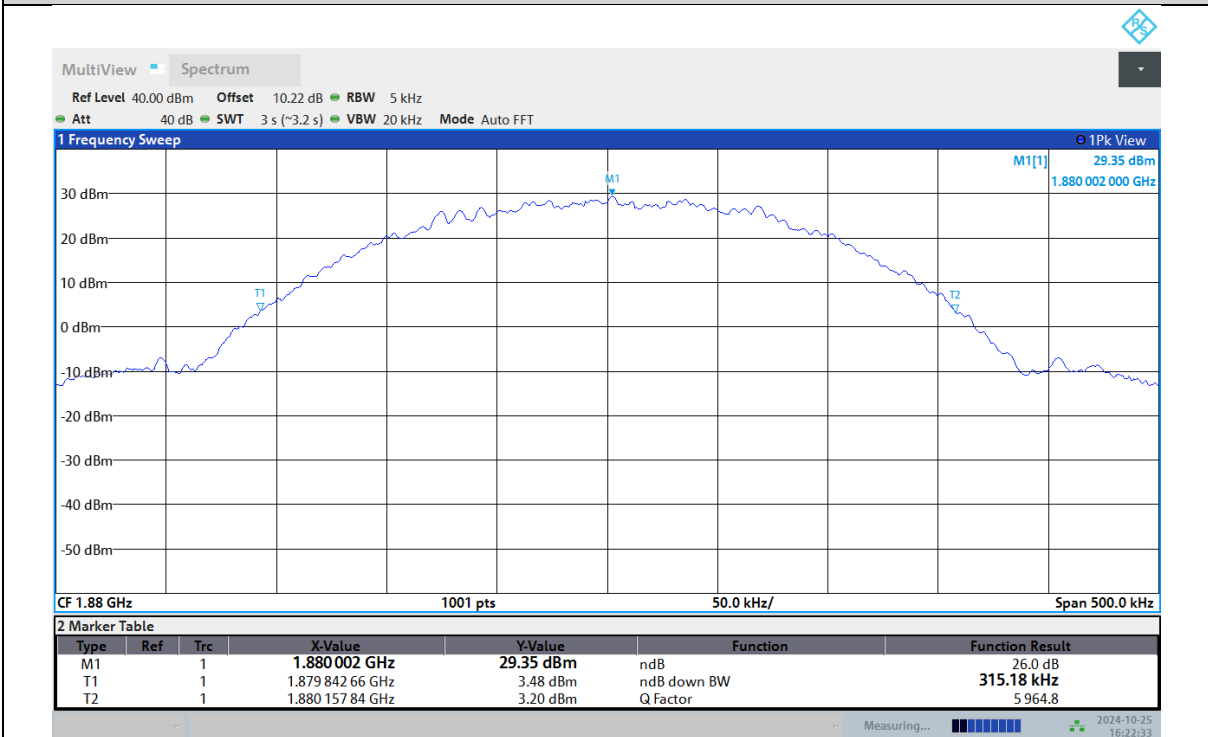
GSM1900-810



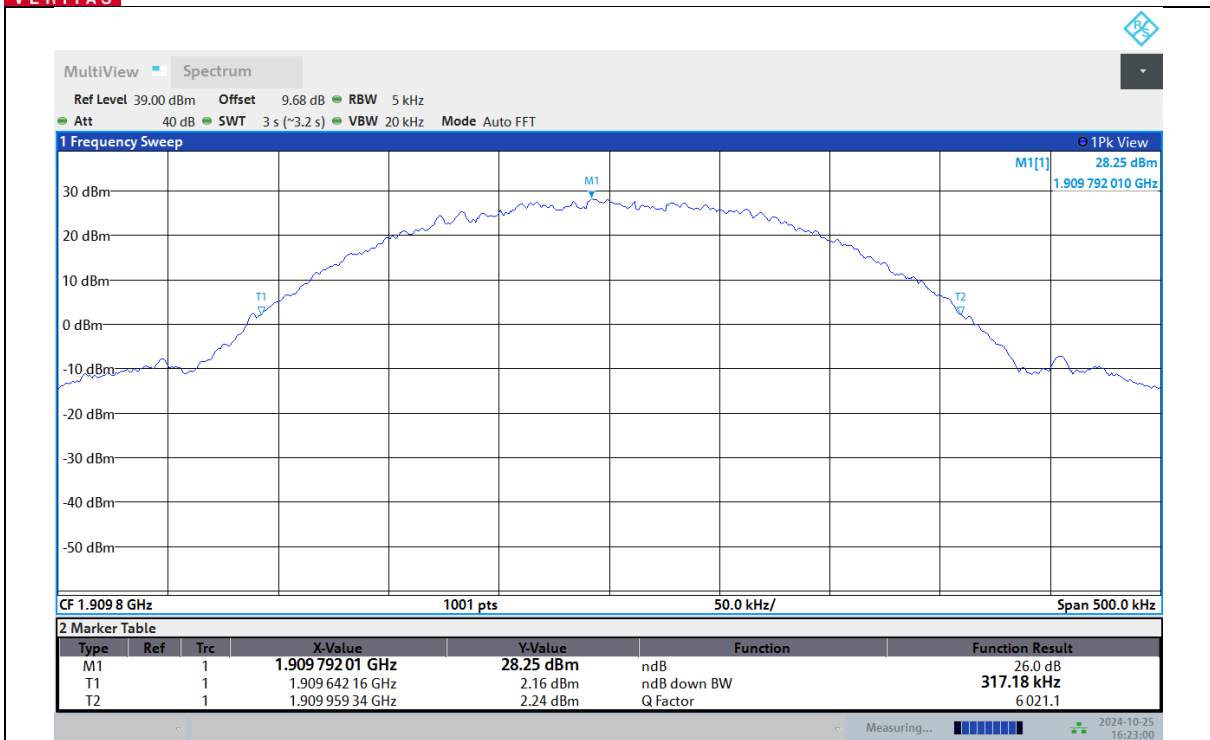
GPRS1900-512



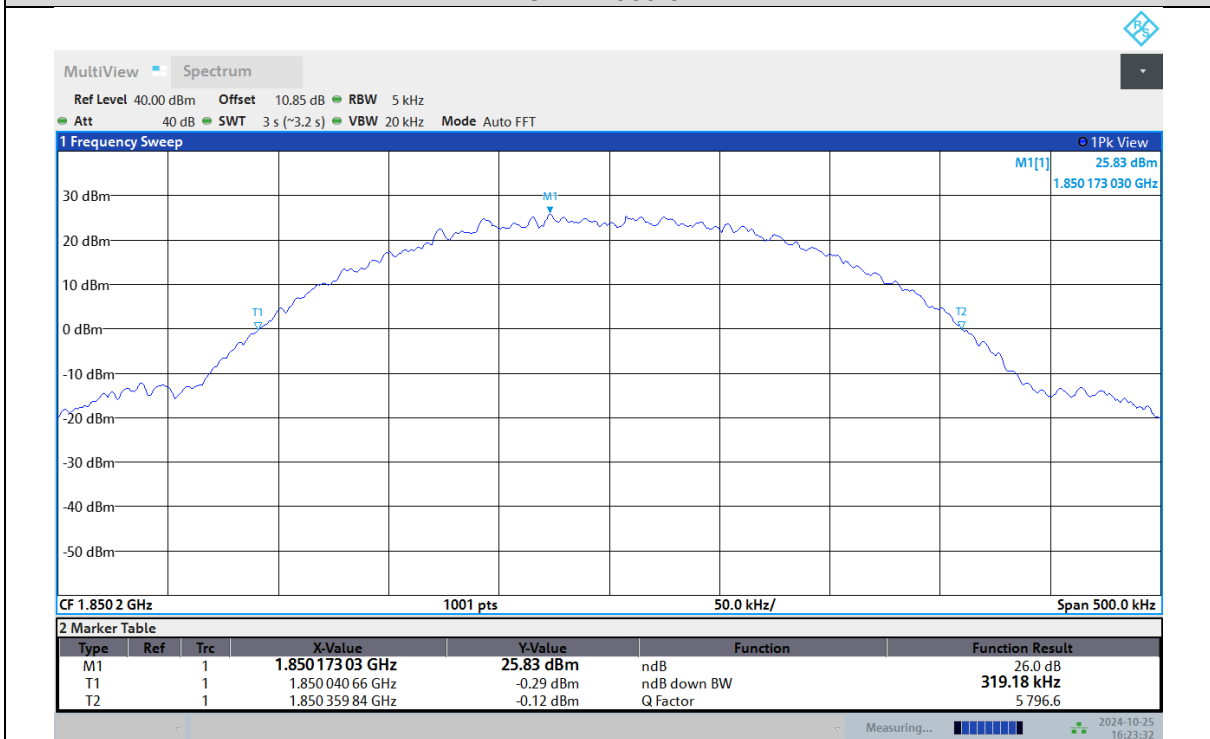
GPRS1900-661



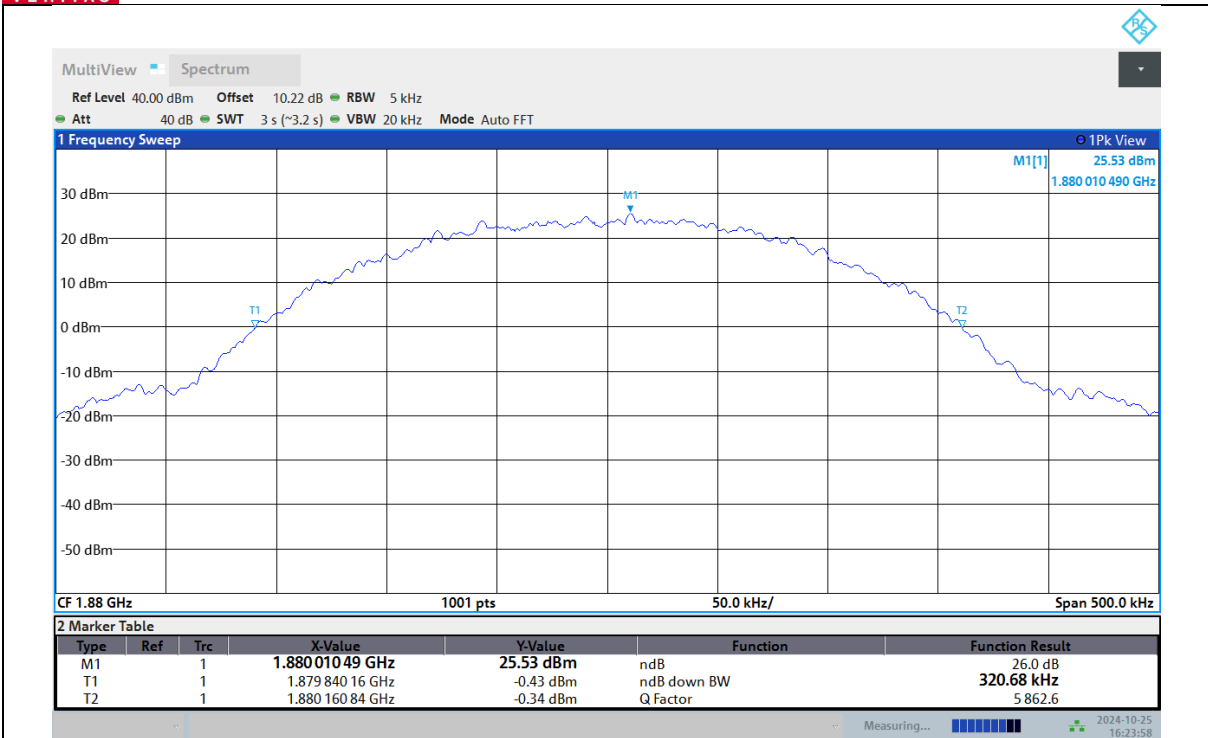
GPRS1900-810



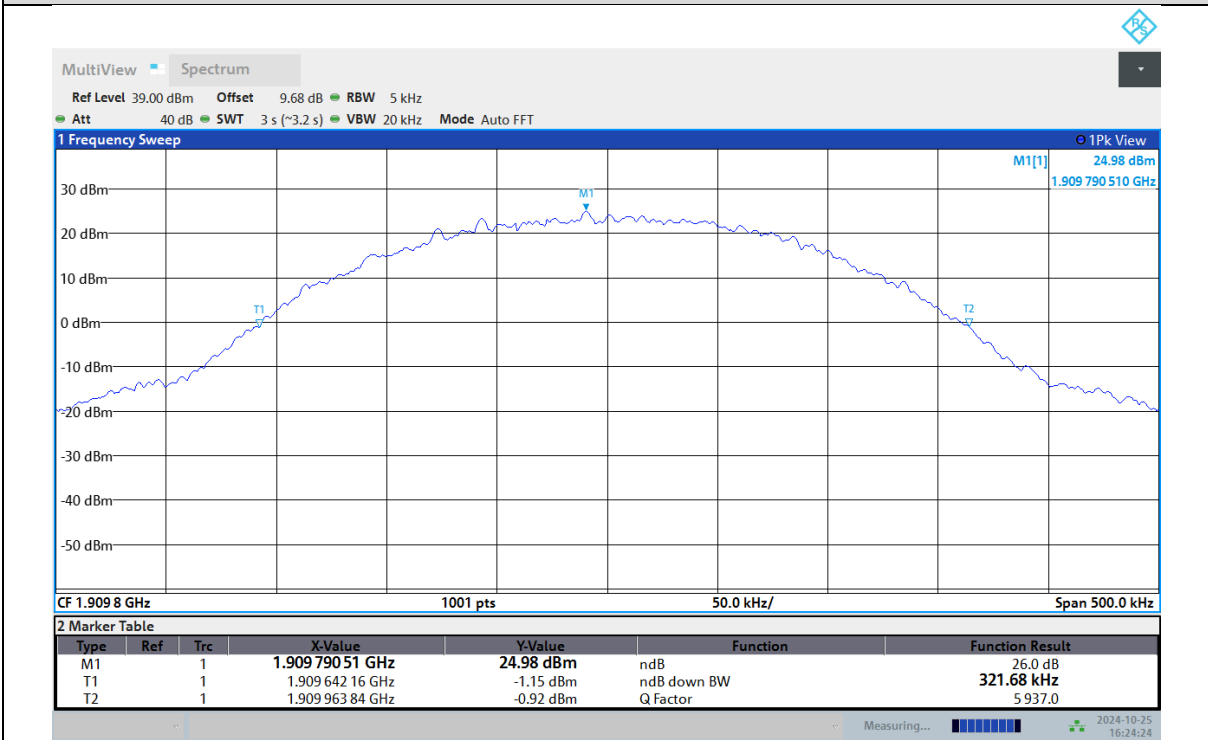
EGPRS1900-512



EGPRS1900-661



EGPRS1900-810







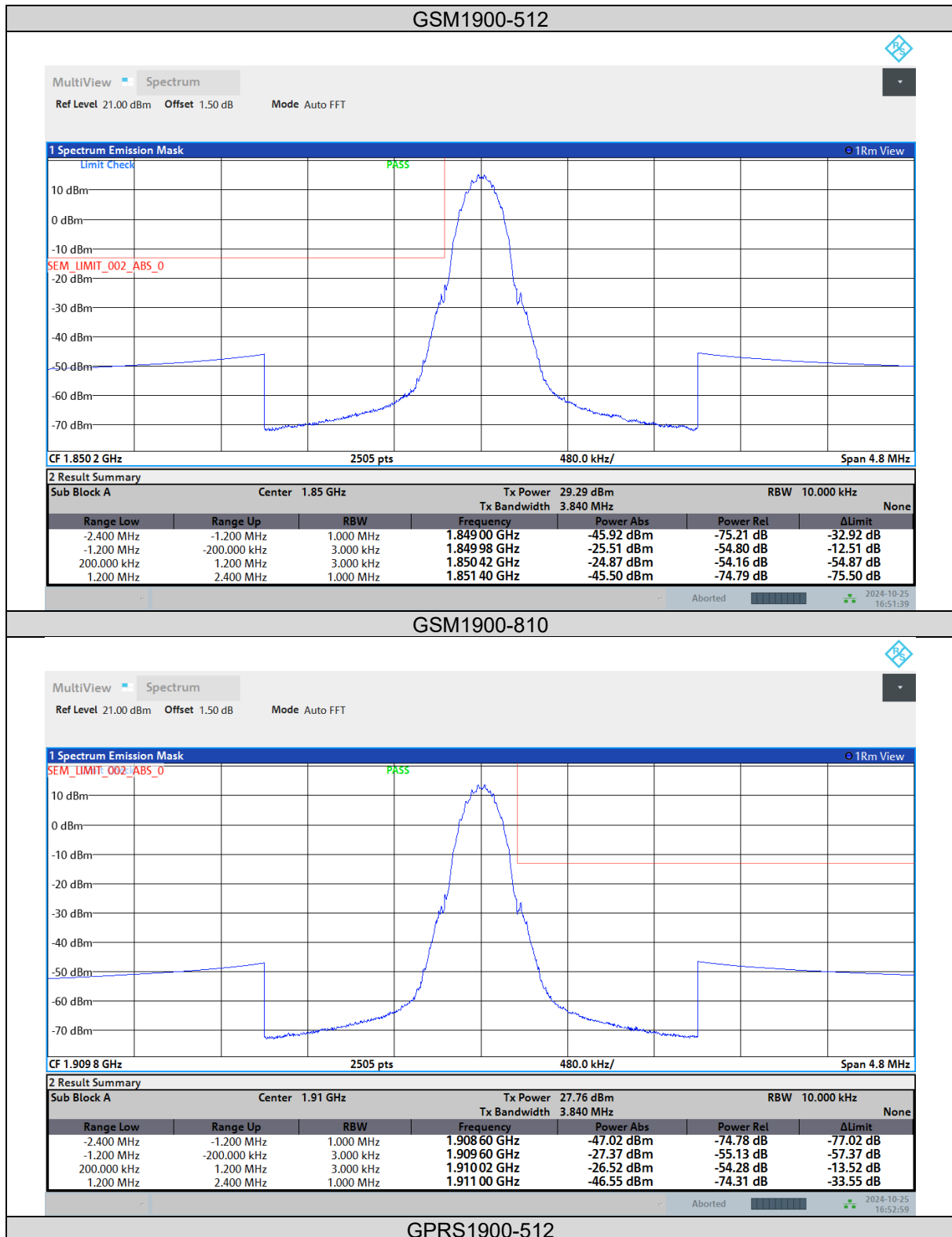
## BAND EDGE

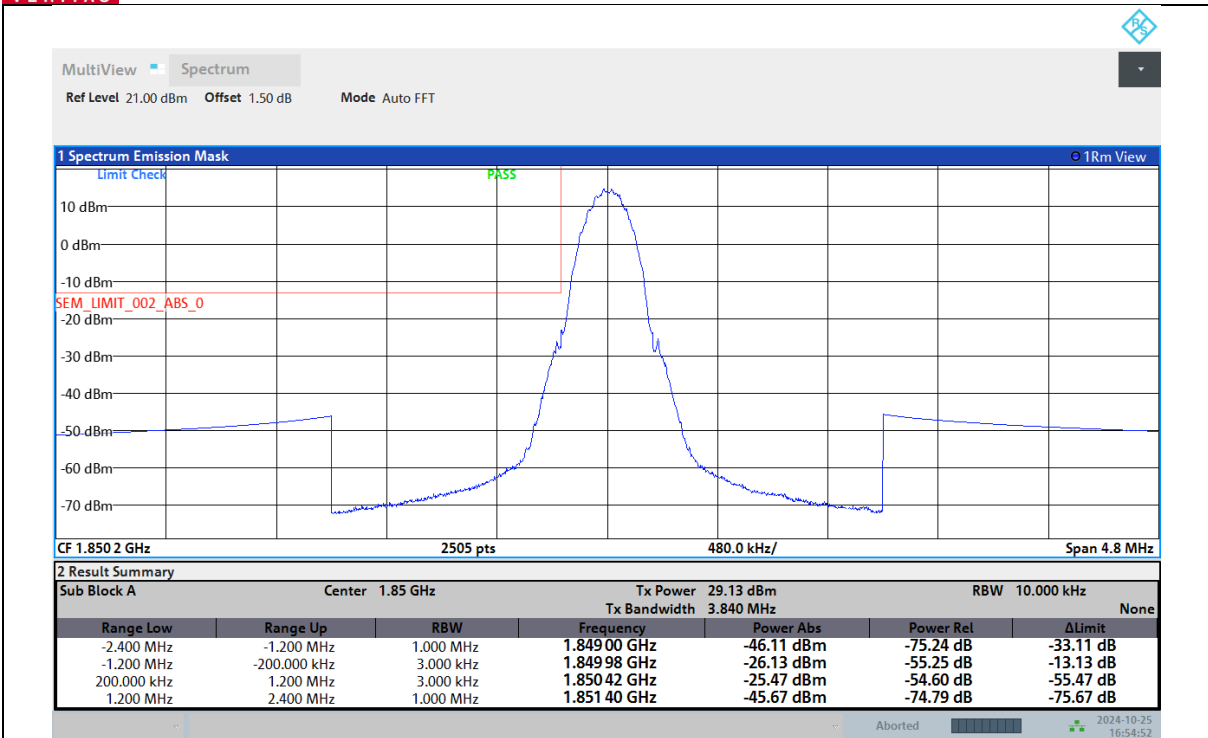
### Test Result

Band	Channel	Result (dBm)	Limit(dBm)	Verdict
GSM1900	512	See Graph	-13	PASS
GSM1900	810	See Graph	-13	PASS
GPRS1900	512	See Graph	-13	PASS
GPRS1900	810	See Graph	-13	PASS
EGPRS1900	512	See Graph	-13	PASS
EGPRS1900	810	See Graph	-13	PASS

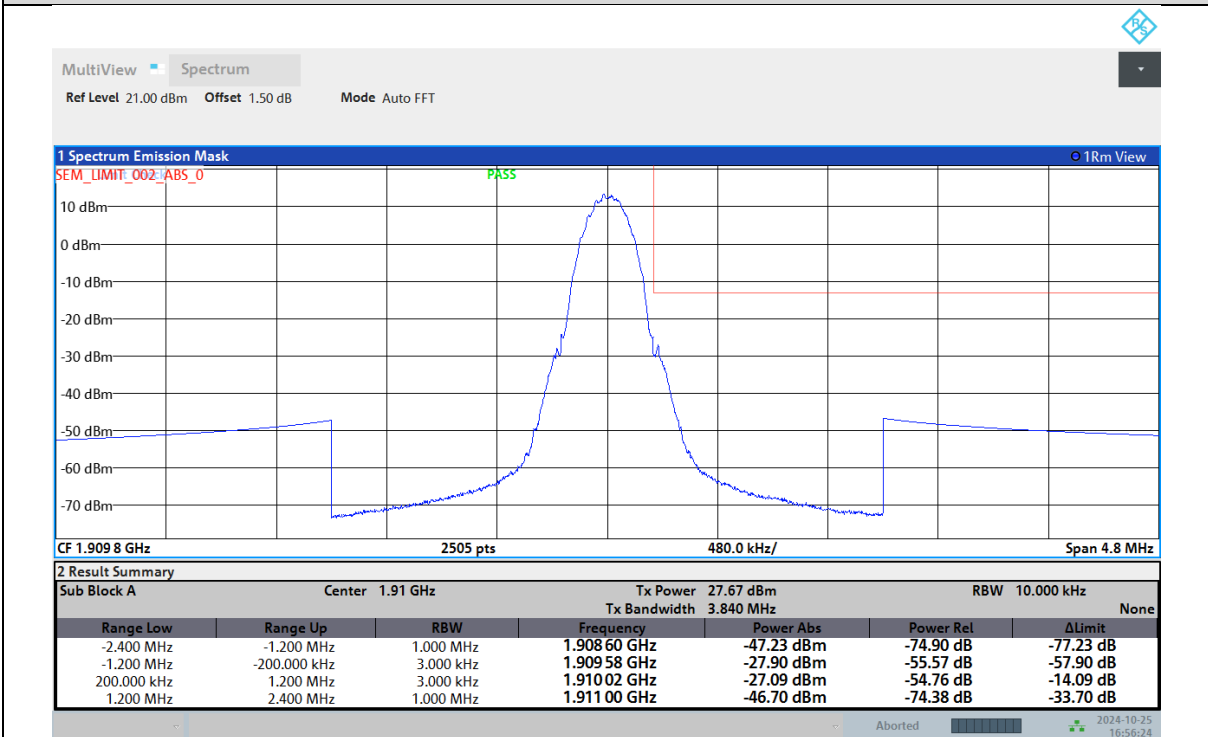


## Test Graphs





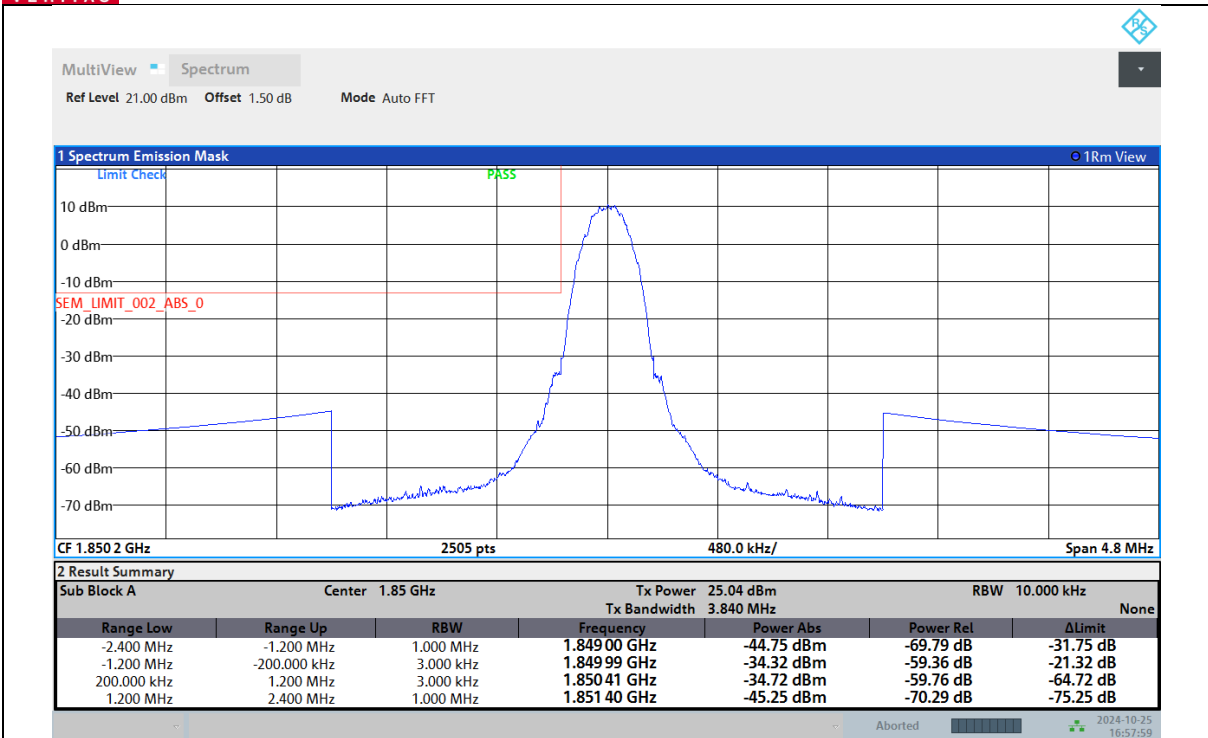
GPRS1900-810



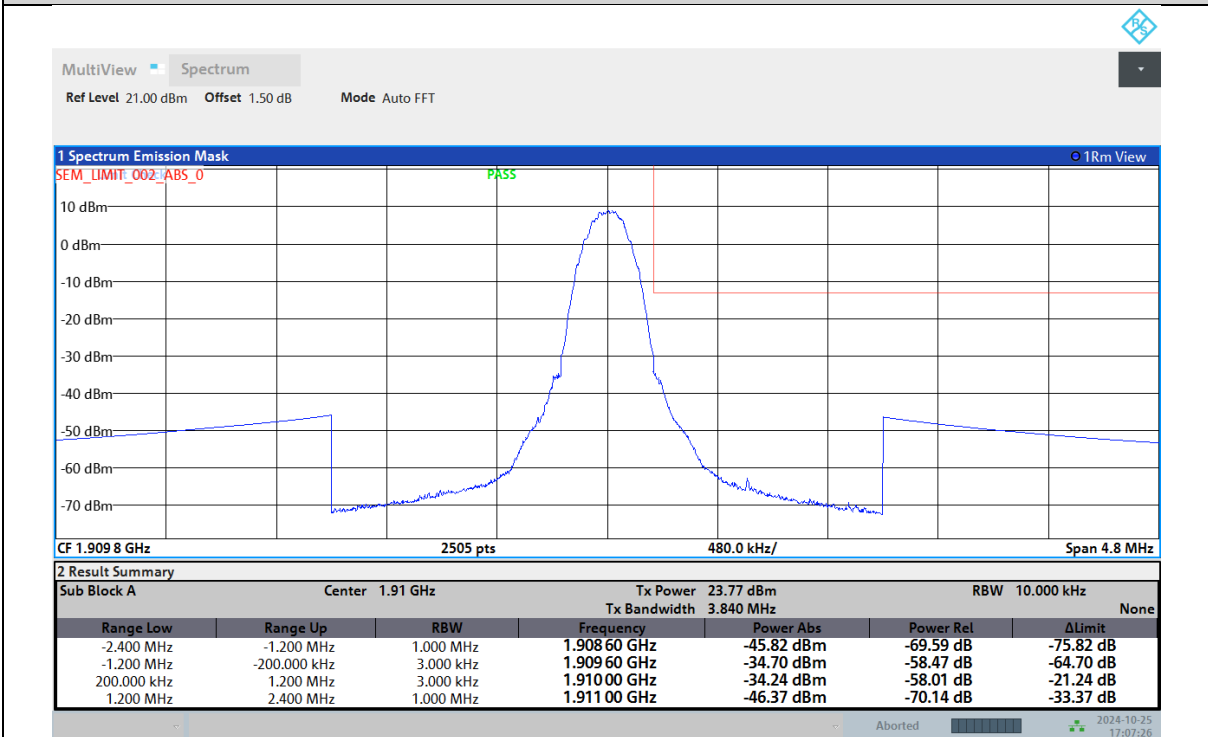
EGPRS1900-512



**BUREAU VERITAS** Test Report No.: PSU-QBJ2409140110RF02



**EGPRS1900-810**





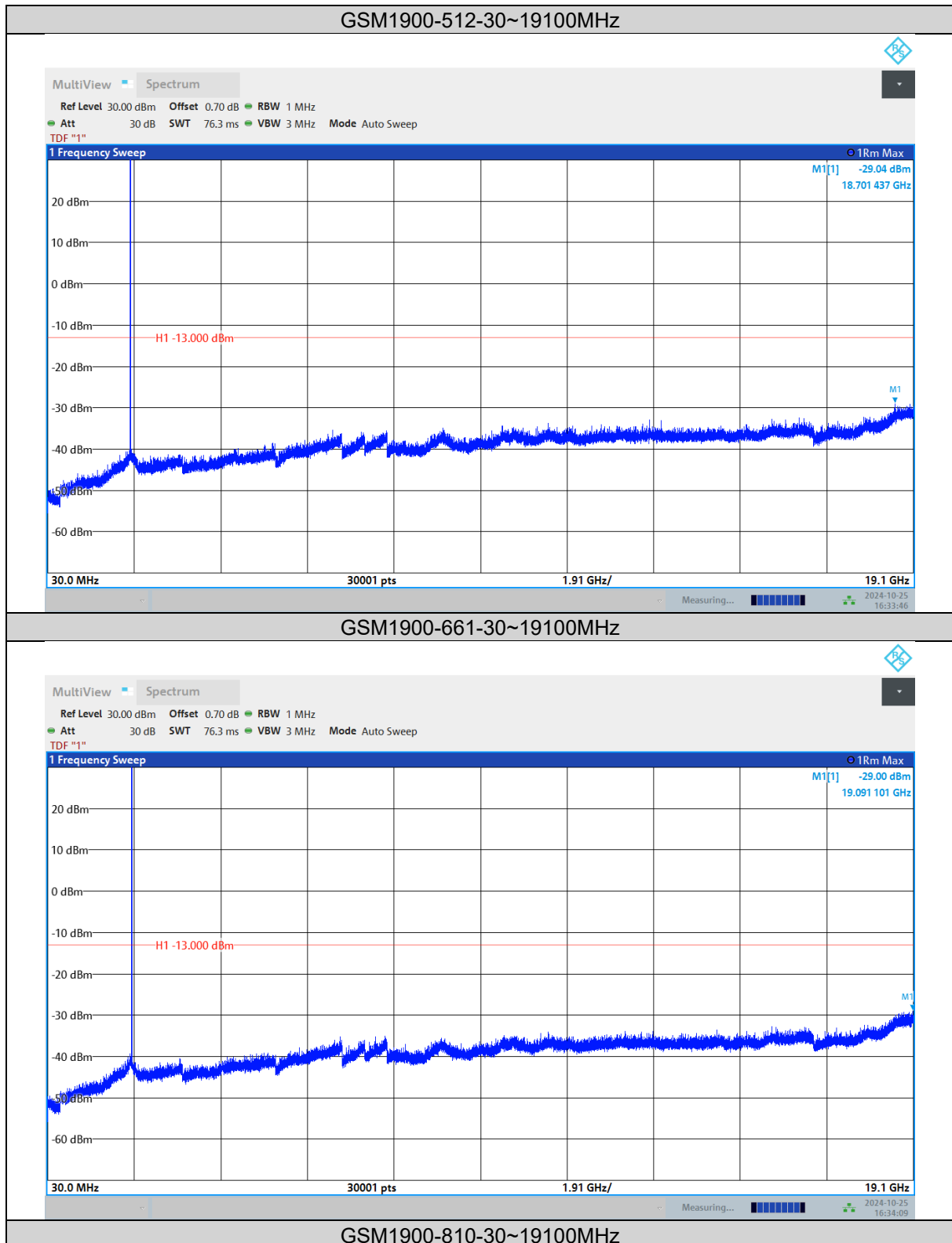
**BUREAU VERITAS** Test Report No.: PSU-QBJ2409140110RF02  
**CONDUCTED SPURIOUS EMISSION**

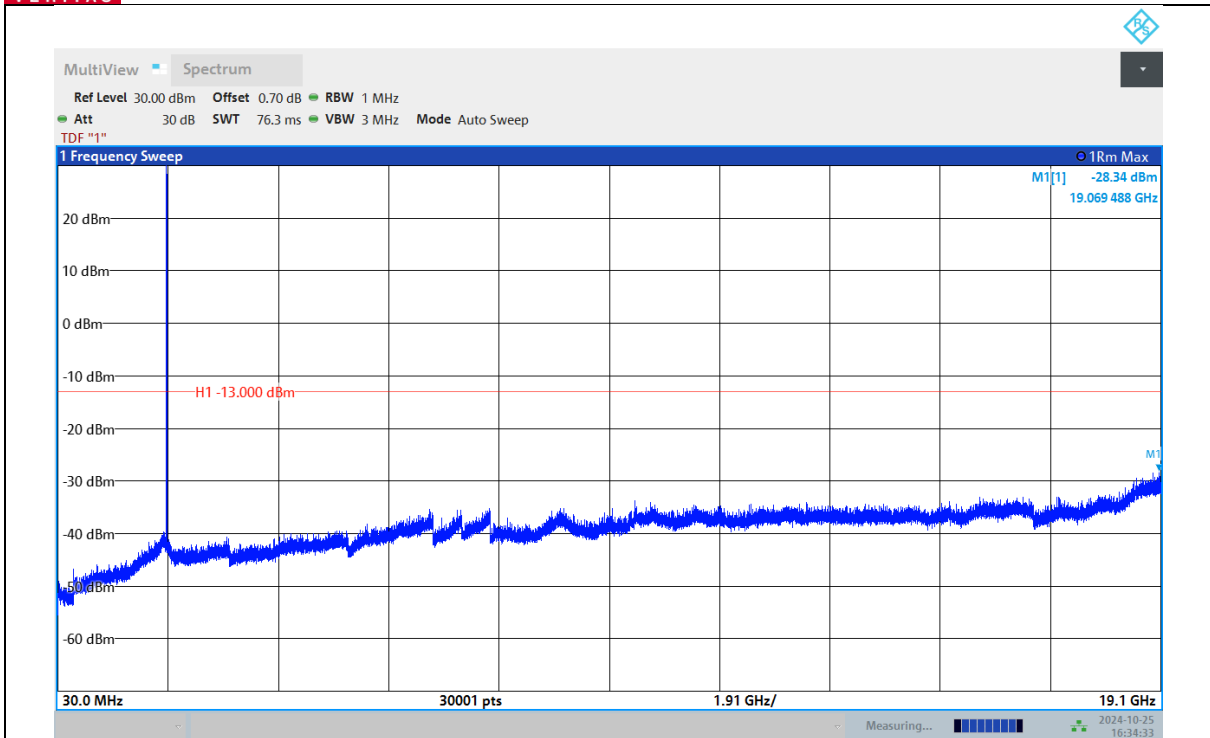
**Test Result**

Band	Channel	Frequency Range(MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM1900	512	30~19100MHz	See Graph	-13	PASS
GSM1900	661	30~19100MHz	See Graph	-13	PASS
GSM1900	810	30~19100MHz	See Graph	-13	PASS
GPRS1900	512	30~19100MHz	See Graph	-13	PASS
GPRS1900	661	30~19100MHz	See Graph	-13	PASS
GPRS1900	810	30~19100MHz	See Graph	-13	PASS
EGPRS1900	512	30~19100MHz	See Graph	-13	PASS
EGPRS1900	661	30~19100MHz	See Graph	-13	PASS
EGPRS1900	810	30~19100MHz	See Graph	-13	PASS

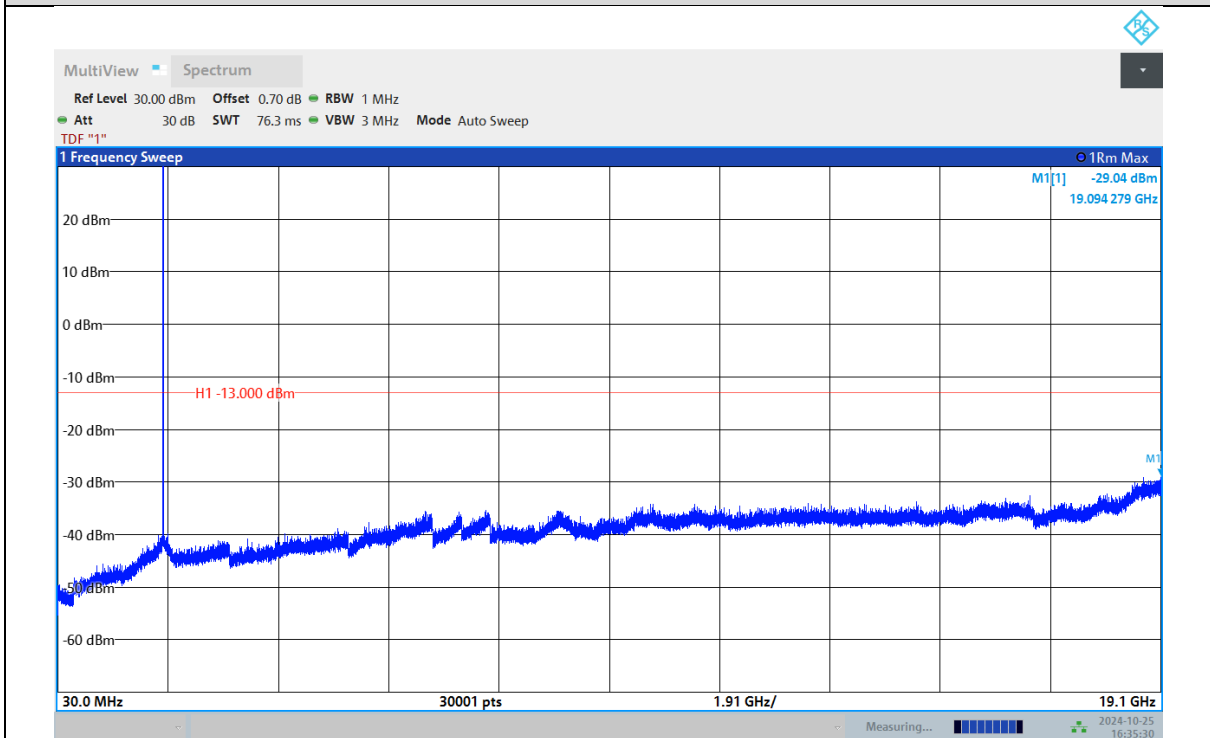


## Test Graphs

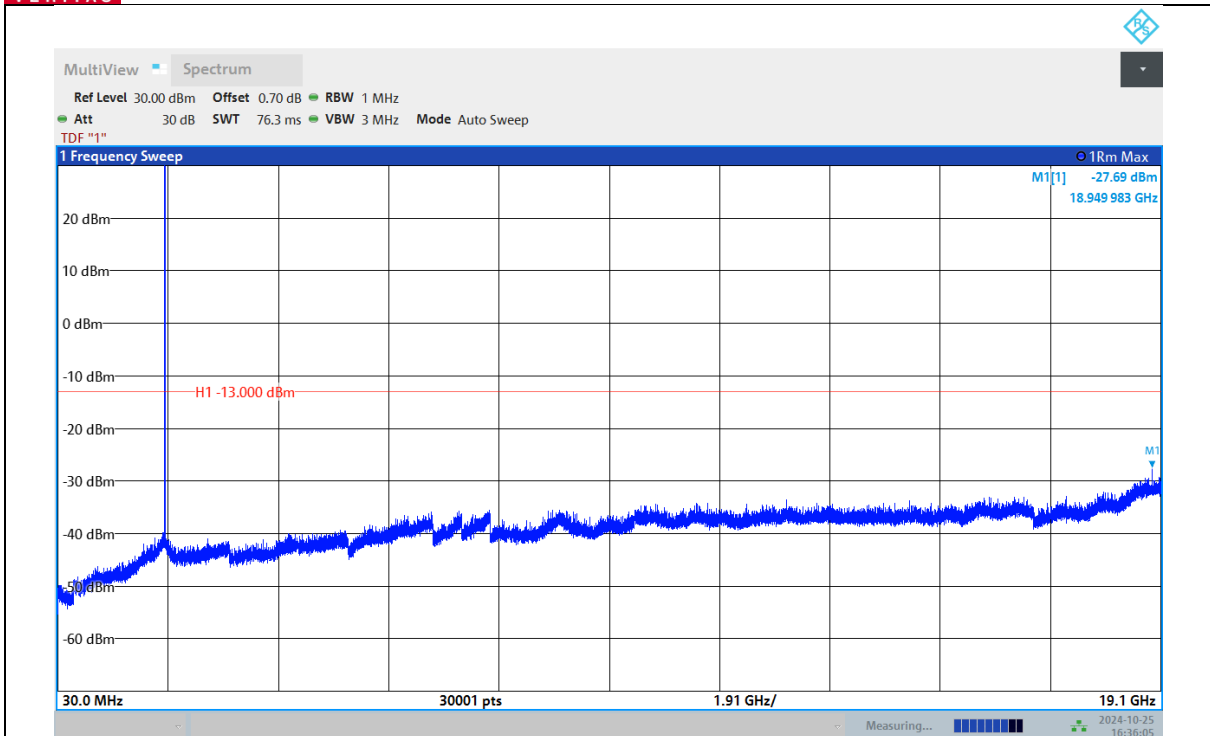




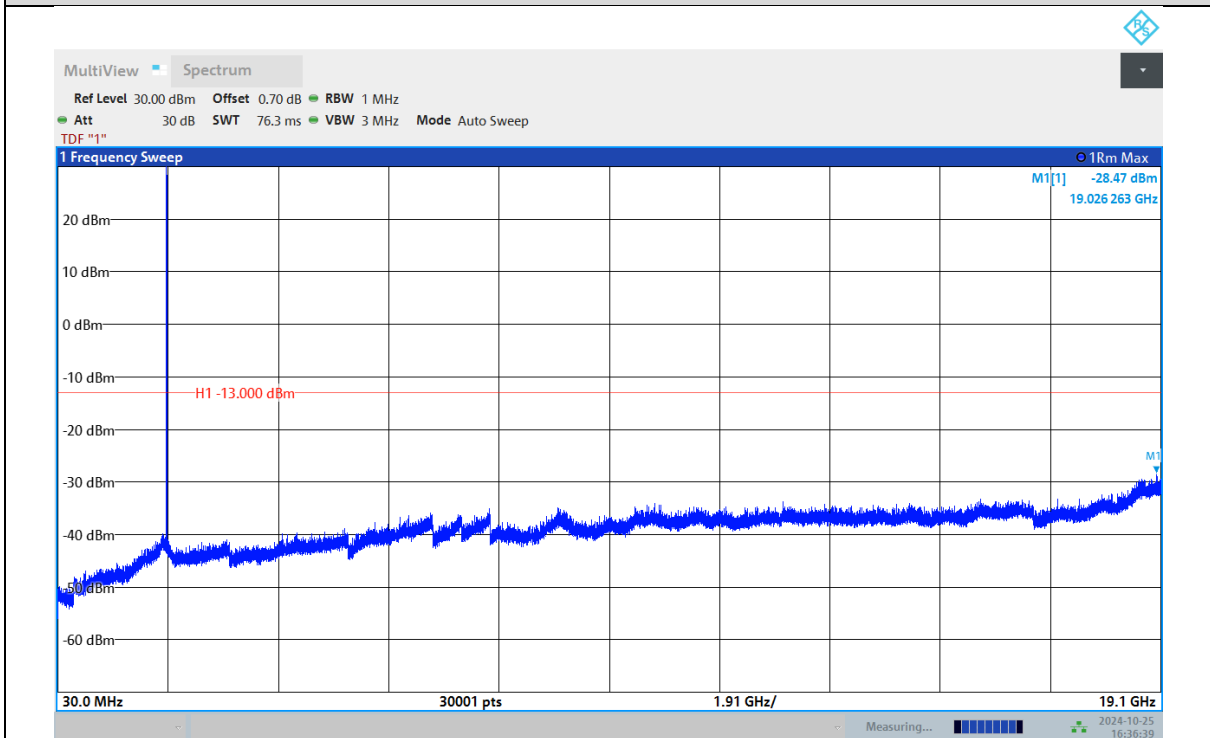
GPRS1900-512-30~19100MHz



GPRS1900-661-30~19100MHz

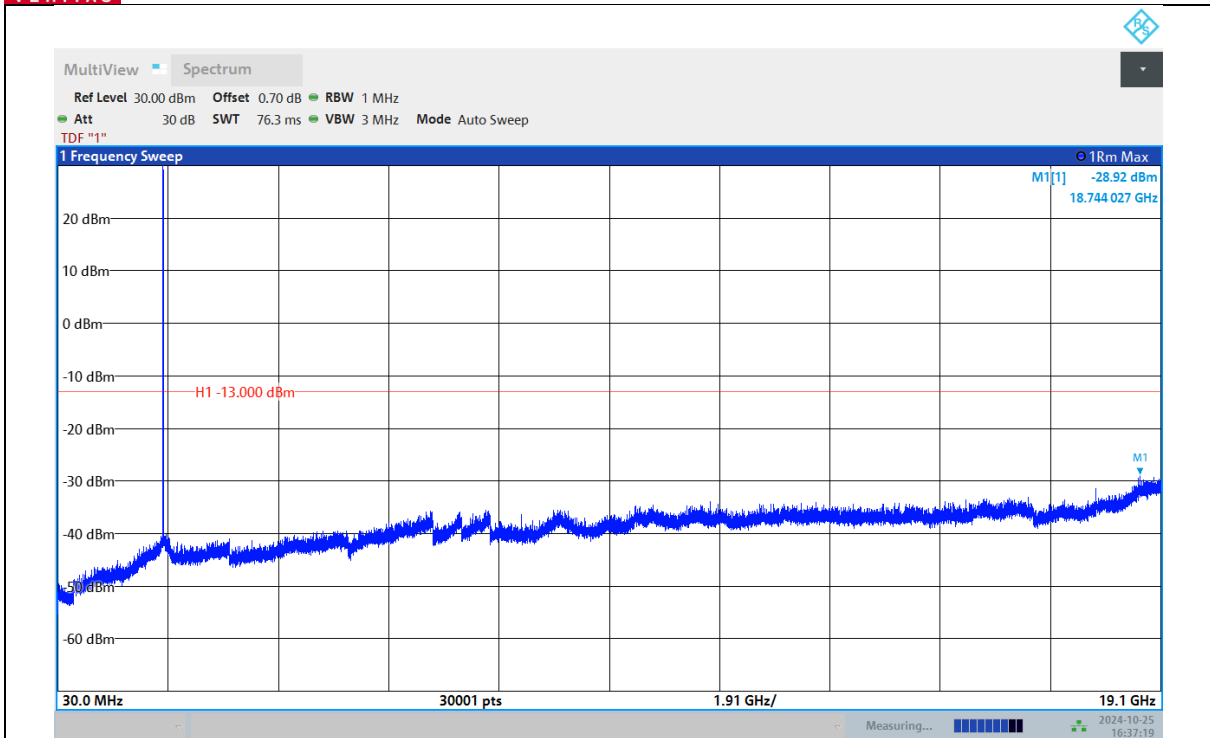


GPRS1900-810-30~19100MHz

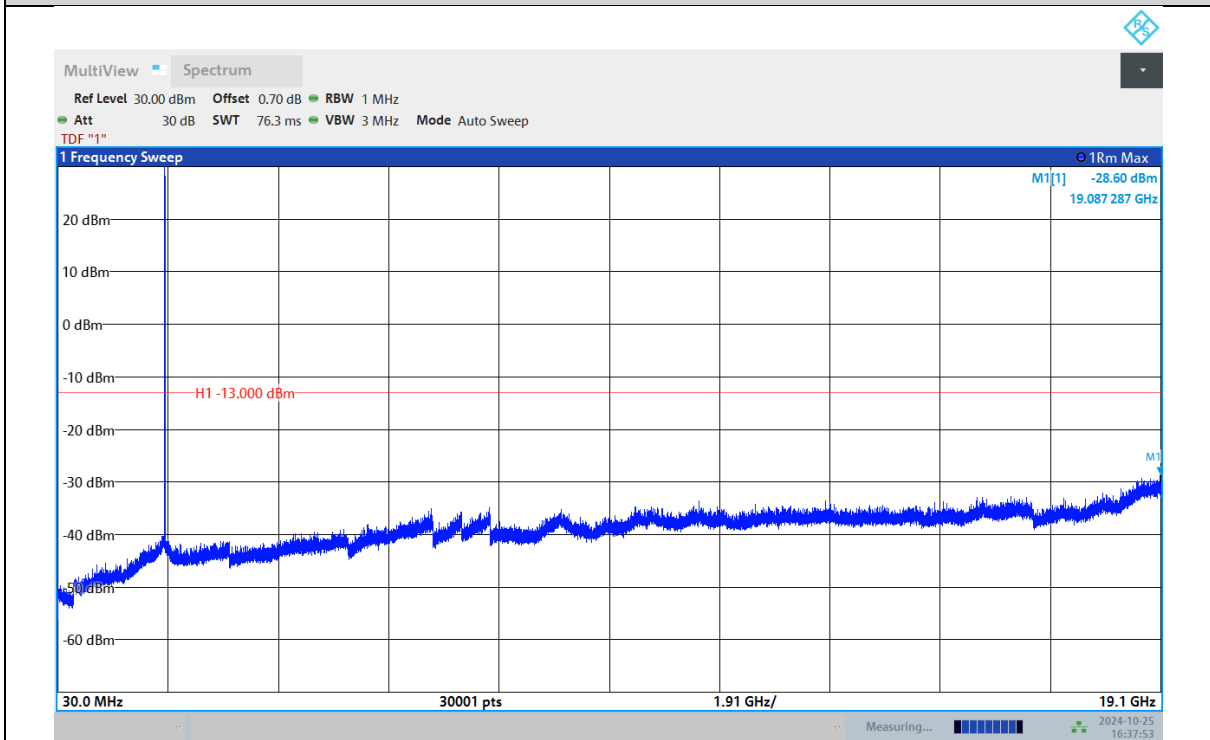


EGPRS1900-512-30~19100MHz

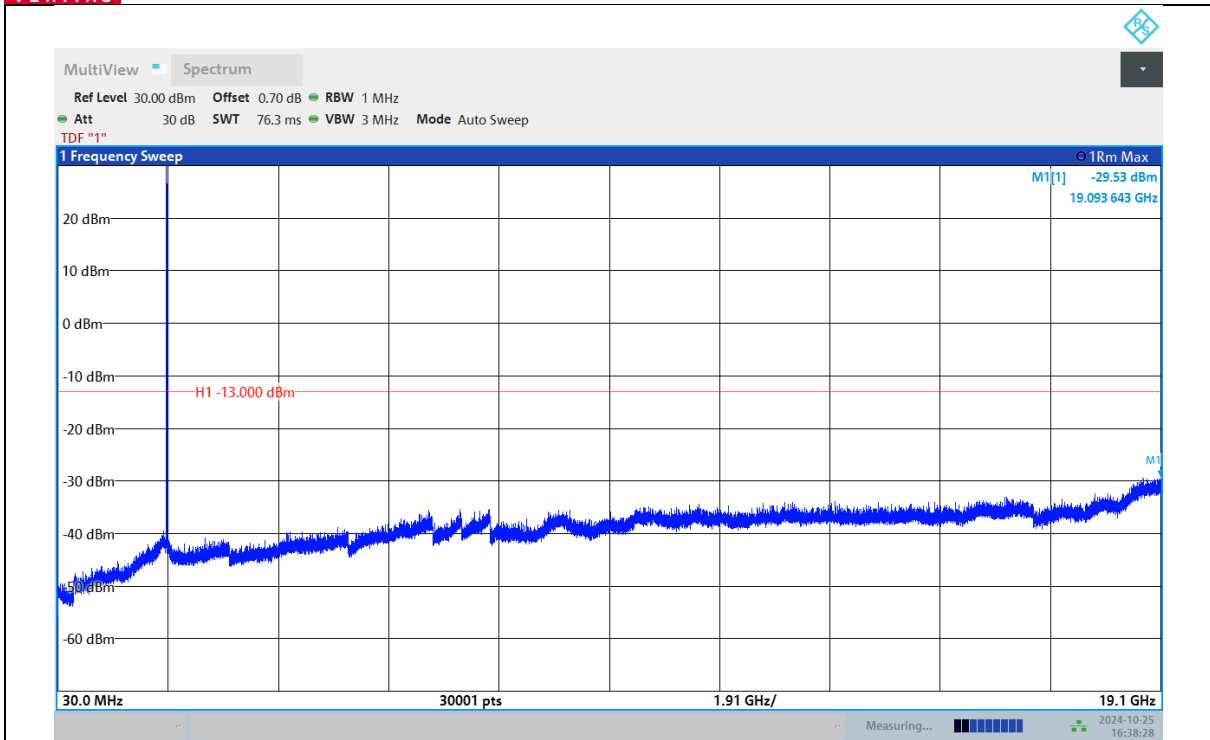




EGPRS1900-661-30~19100MHz



EGPRS1900-810-30~19100MHz





## FREQUENCY STABILITY

## Test Result

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM1900	512	LV	NT	6.44	0.0078	±2.5	PASS
GSM1900	512	NV	NT	8.90	0.0108	±2.5	PASS
GSM1900	512	HV	NT	-2.70	-0.0033	±2.5	PASS
GSM1900	661	LV	NT	-6.55	-0.0078	±2.5	PASS
GSM1900	661	NV	NT	-1.60	-0.0019	±2.5	PASS
GSM1900	661	HV	NT	-0.25	-0.0003	±2.5	PASS
GSM1900	810	LV	NT	-9.09	-0.0107	±2.5	PASS
GSM1900	810	NV	NT	-8.84	-0.0104	±2.5	PASS
GSM1900	810	HV	NT	-2.34	-0.0028	±2.5	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM1900	512	NV	-30	4.22	0.0051	±2.5	PASS
GSM1900	512	NV	-20	-4.42	-0.0054	±2.5	PASS
GSM1900	512	NV	-10	5.49	0.0067	±2.5	PASS
GSM1900	512	NV	0	-8.24	-0.0100	±2.5	PASS
GSM1900	512	NV	10	8.65	0.0105	±2.5	PASS
GSM1900	512	NV	20	-4.78	-0.0058	±2.5	PASS
GSM1900	512	NV	30	-8.89	-0.0108	±2.5	PASS
GSM1900	512	NV	40	0.65	0.0008	±2.5	PASS
GSM1900	512	NV	50	7.84	0.0095	±2.5	PASS
GSM1900	661	NV	-30	5.68	0.0068	±2.5	PASS
GSM1900	661	NV	-20	7.52	0.0090	±2.5	PASS
GSM1900	661	NV	-10	1.92	0.0023	±2.5	PASS
GSM1900	661	NV	0	-0.82	-0.0010	±2.5	PASS
GSM1900	661	NV	10	6.96	0.0083	±2.5	PASS
GSM1900	661	NV	20	-3.33	-0.0040	±2.5	PASS
GSM1900	661	NV	30	3.18	0.0038	±2.5	PASS
GSM1900	661	NV	40	2.50	0.0030	±2.5	PASS
GSM1900	661	NV	50	-7.60	-0.0091	±2.5	PASS
GSM1900	810	NV	-30	-7.72	-0.0094	±2.5	PASS
GSM1900	810	NV	-20	-3.42	-0.0041	±2.5	PASS
GSM1900	810	NV	-10	7.44	0.0090	±2.5	PASS
GSM1900	810	NV	0	-4.36	-0.0053	±2.5	PASS
GSM1900	810	NV	10	-8.34	-0.0101	±2.5	PASS
GSM1900	810	NV	20	2.43	0.0029	±2.5	PASS
GSM1900	810	NV	30	-0.23	-0.0003	±2.5	PASS
GSM1900	810	NV	40	0.28	0.0003	±2.5	PASS
GSM1900	810	NV	50	4.66	0.0057	±2.5	PASS



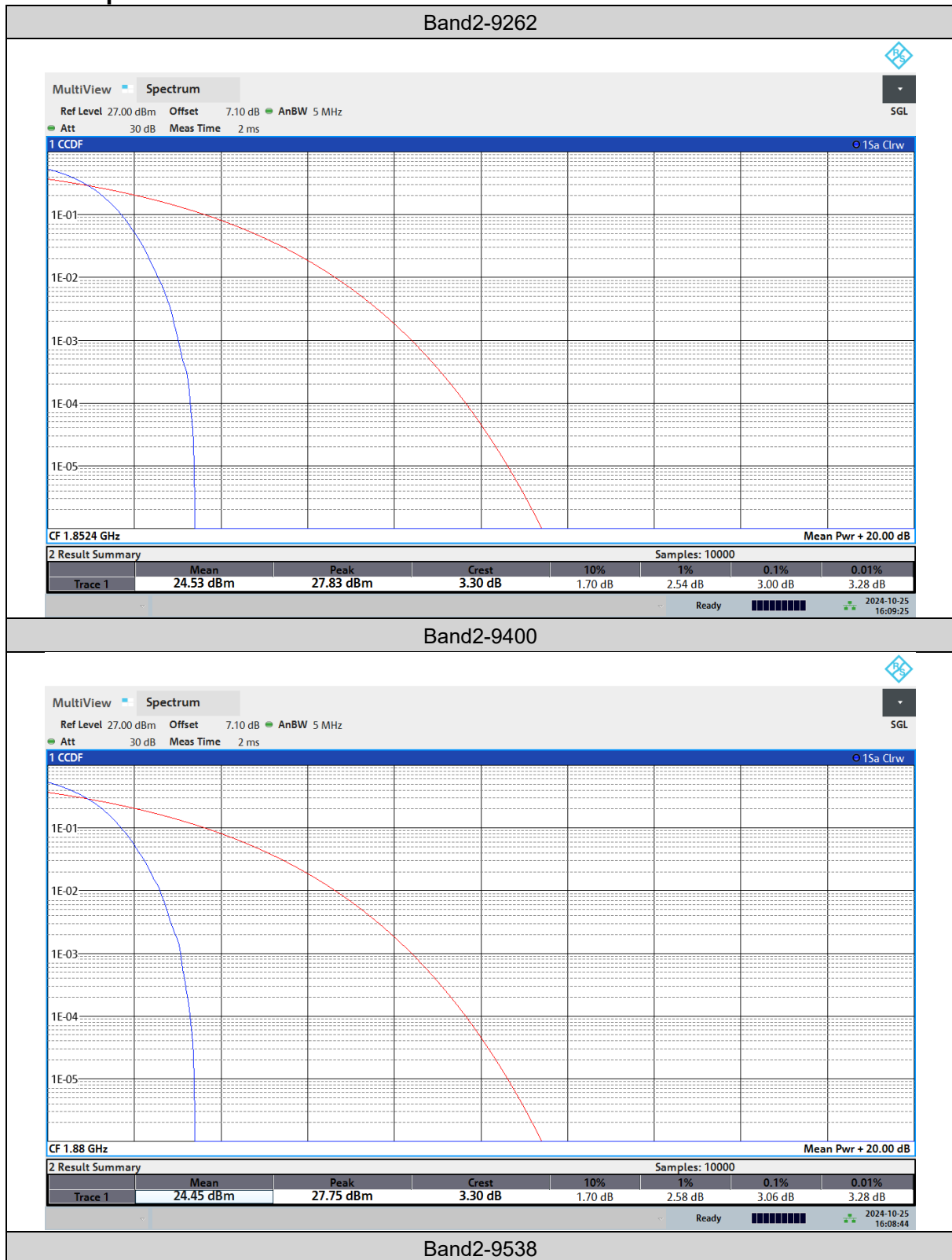
## PEAK-TO-AVERAGE RATIO

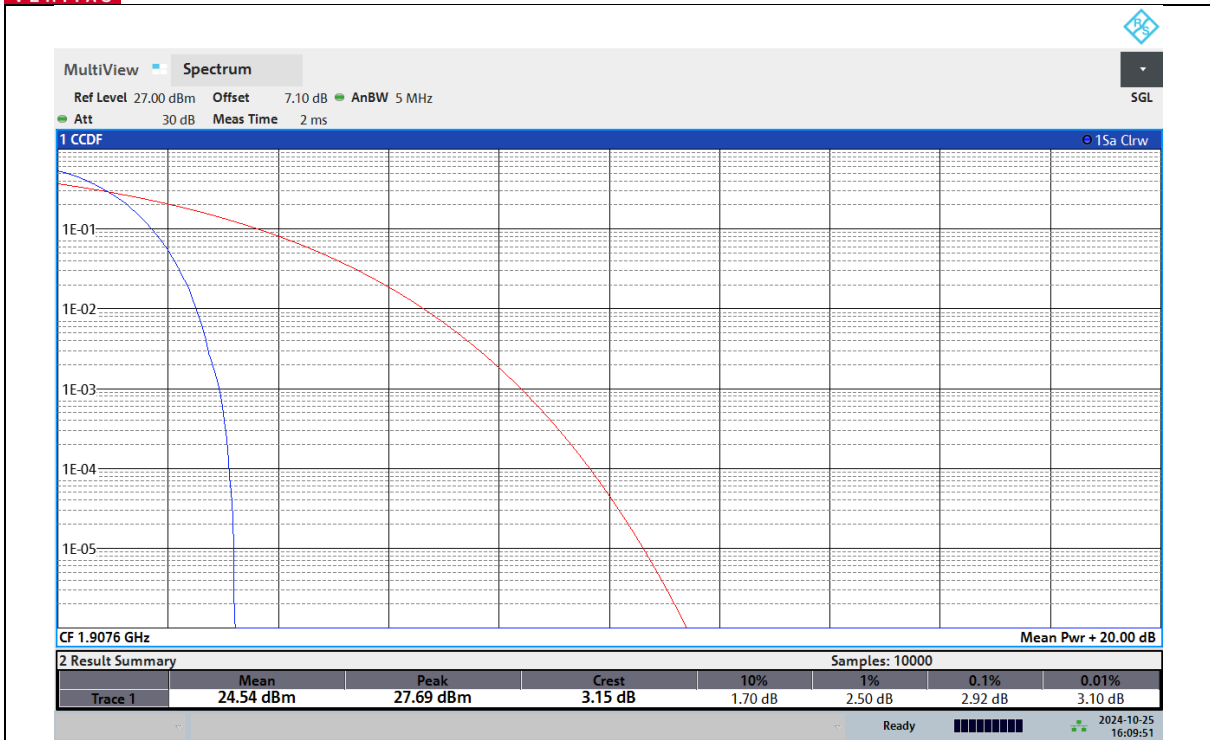
### Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
Band2	9262	3.00	13	PASS
Band2	9400	3.06	13	PASS
Band2	9538	2.92	13	PASS



## Test Graphs







## 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

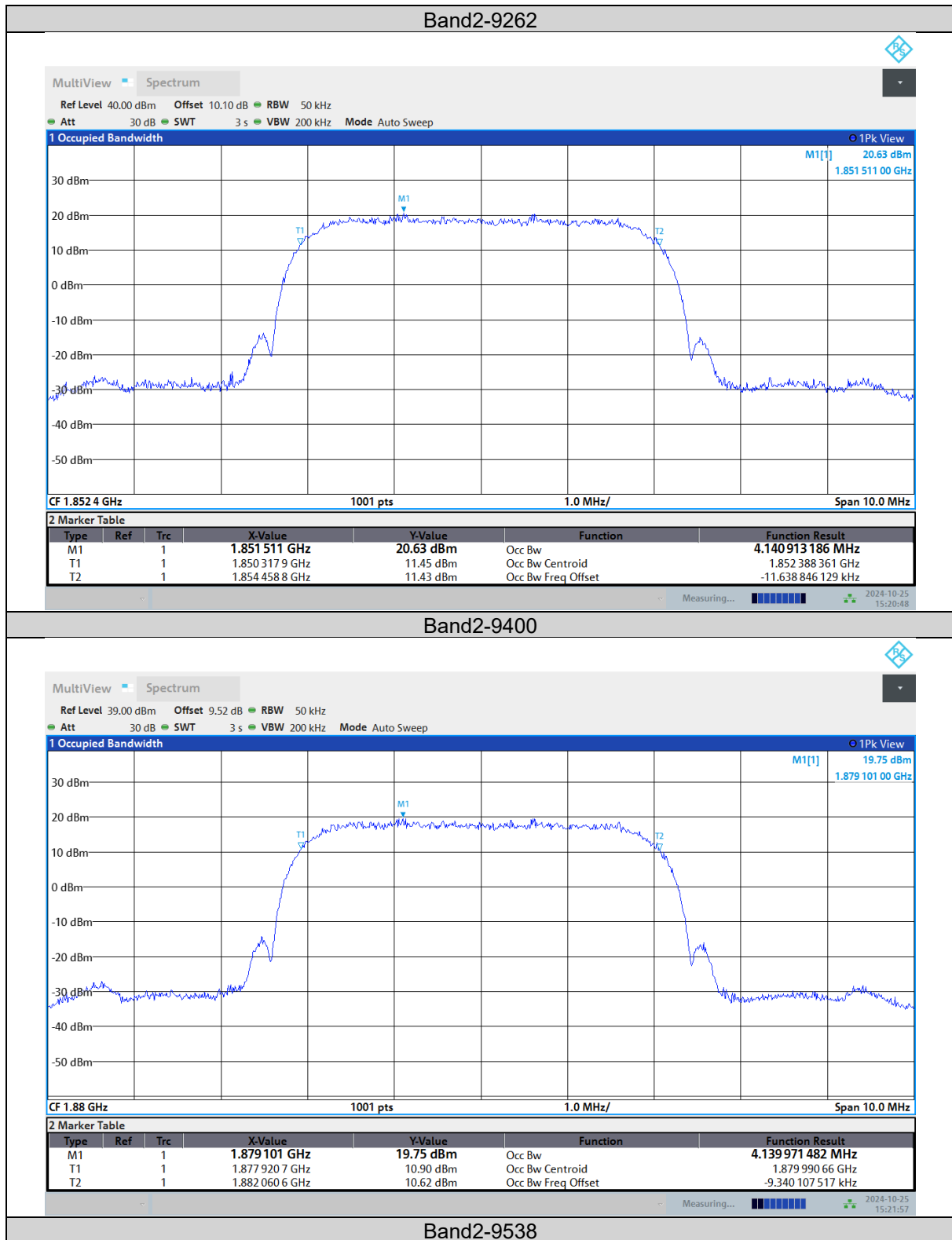
### Test Result

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band2	9262	4.141	4.67	PASS
Band2	9400	4.140	4.67	PASS
Band2	9538	4.138	4.67	PASS

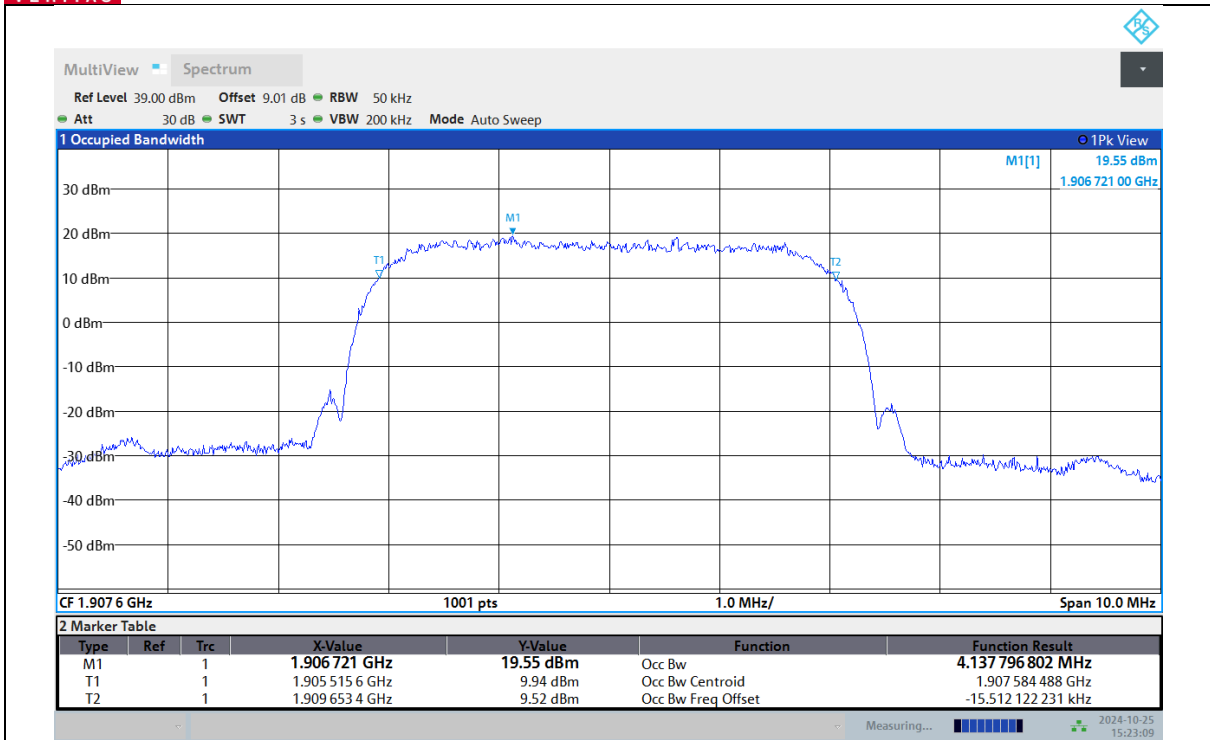


## Test Graphs

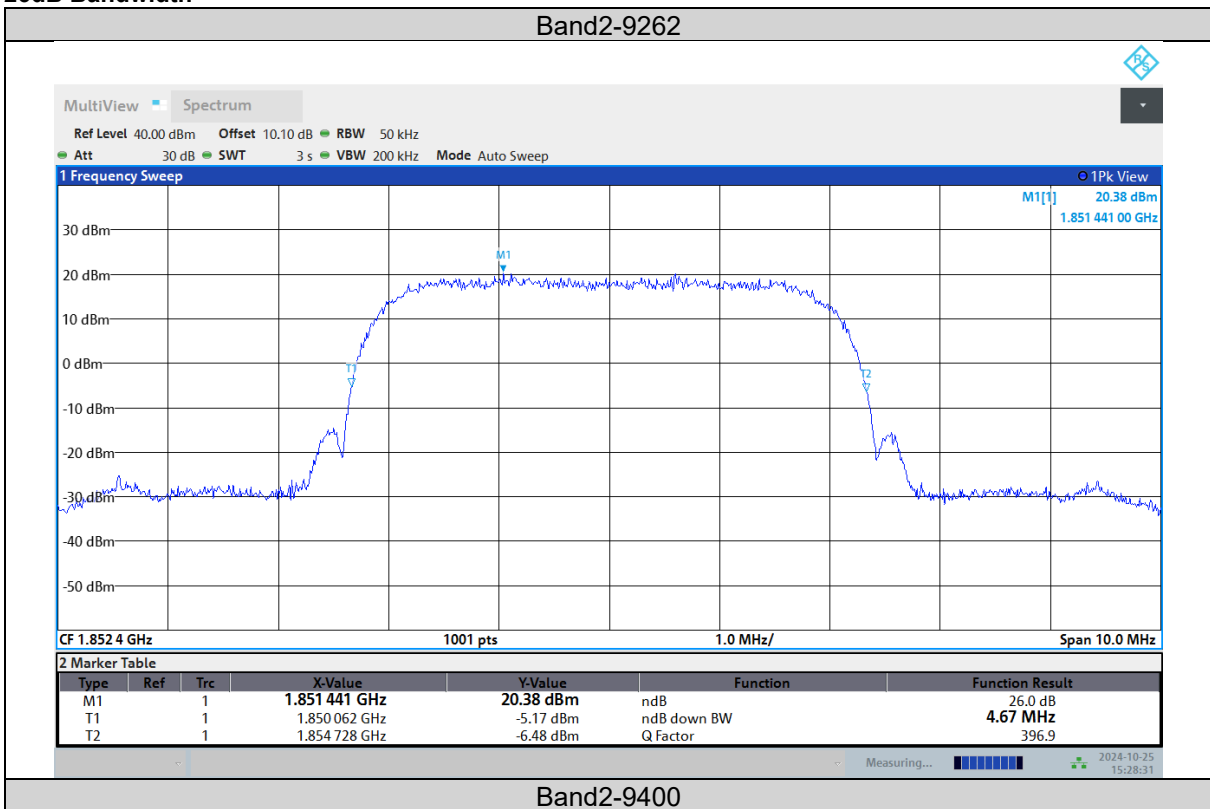
### Occupied Bandwidth

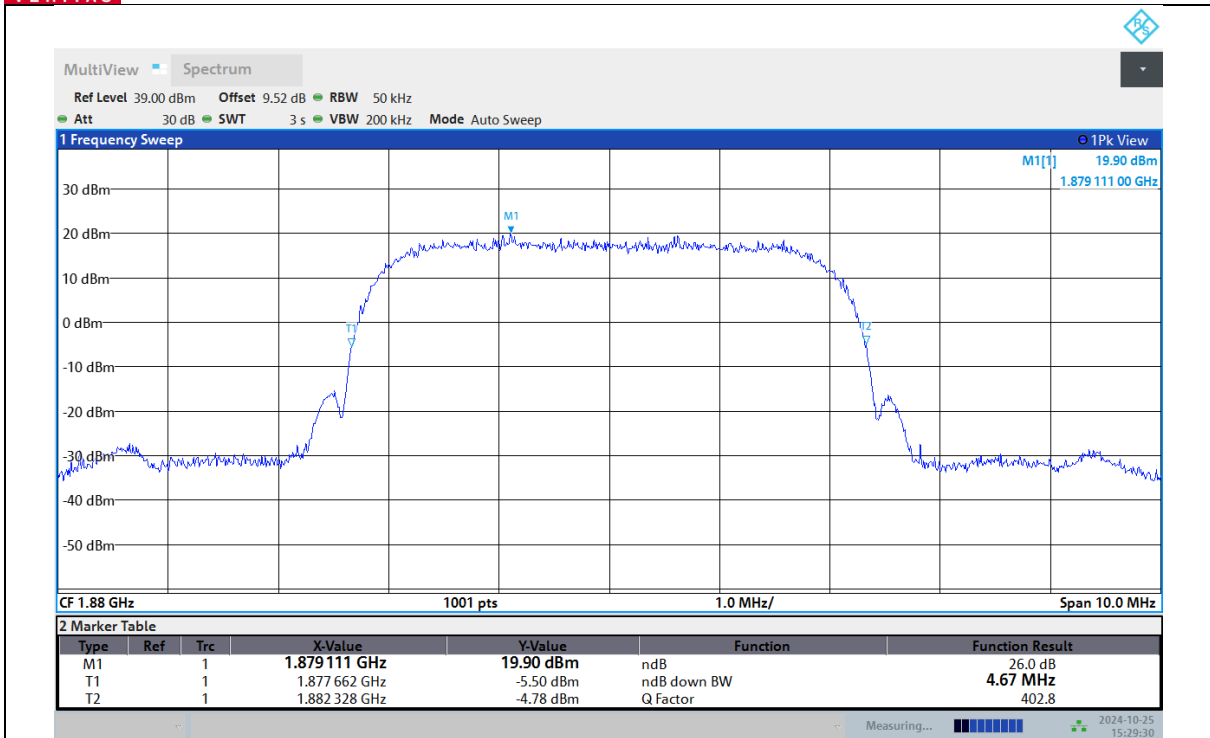




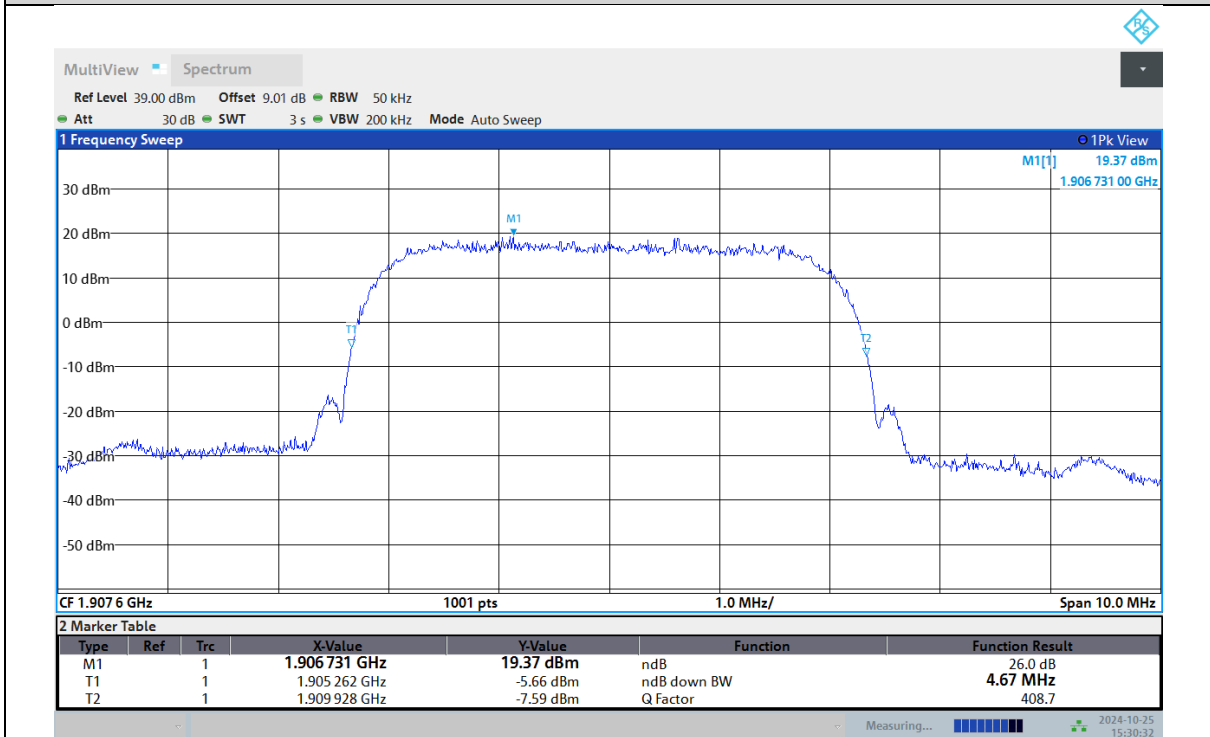


## 26dB Bandwidth





Band2-9538





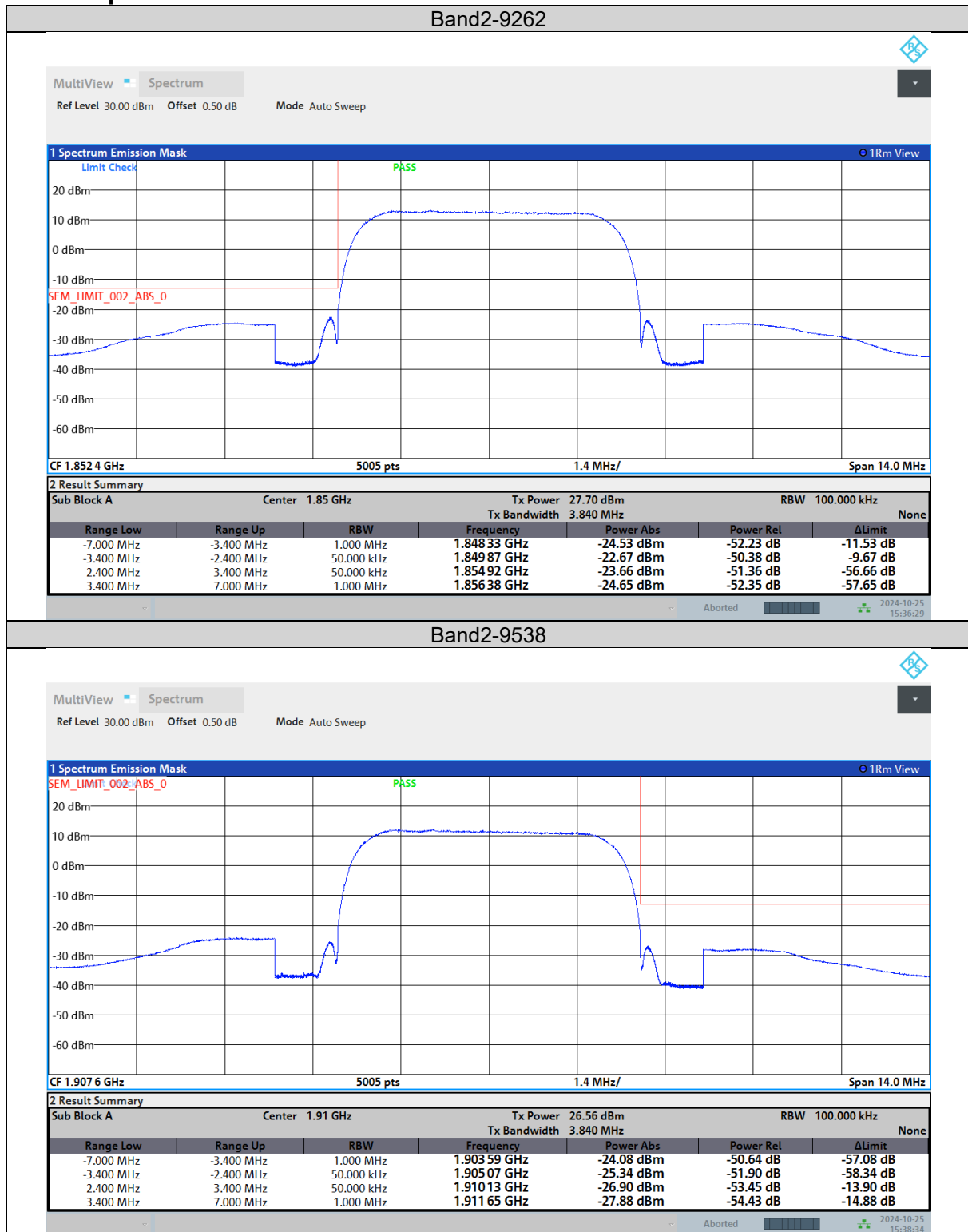
## BAND EDGE

### Test Result

Band	Channel	Result (dBm)	Limit(dBm)	Verdict
Band2	9262	See Graph	-13	PASS
Band2	9538	See Graph	-13	PASS



## Test Graphs





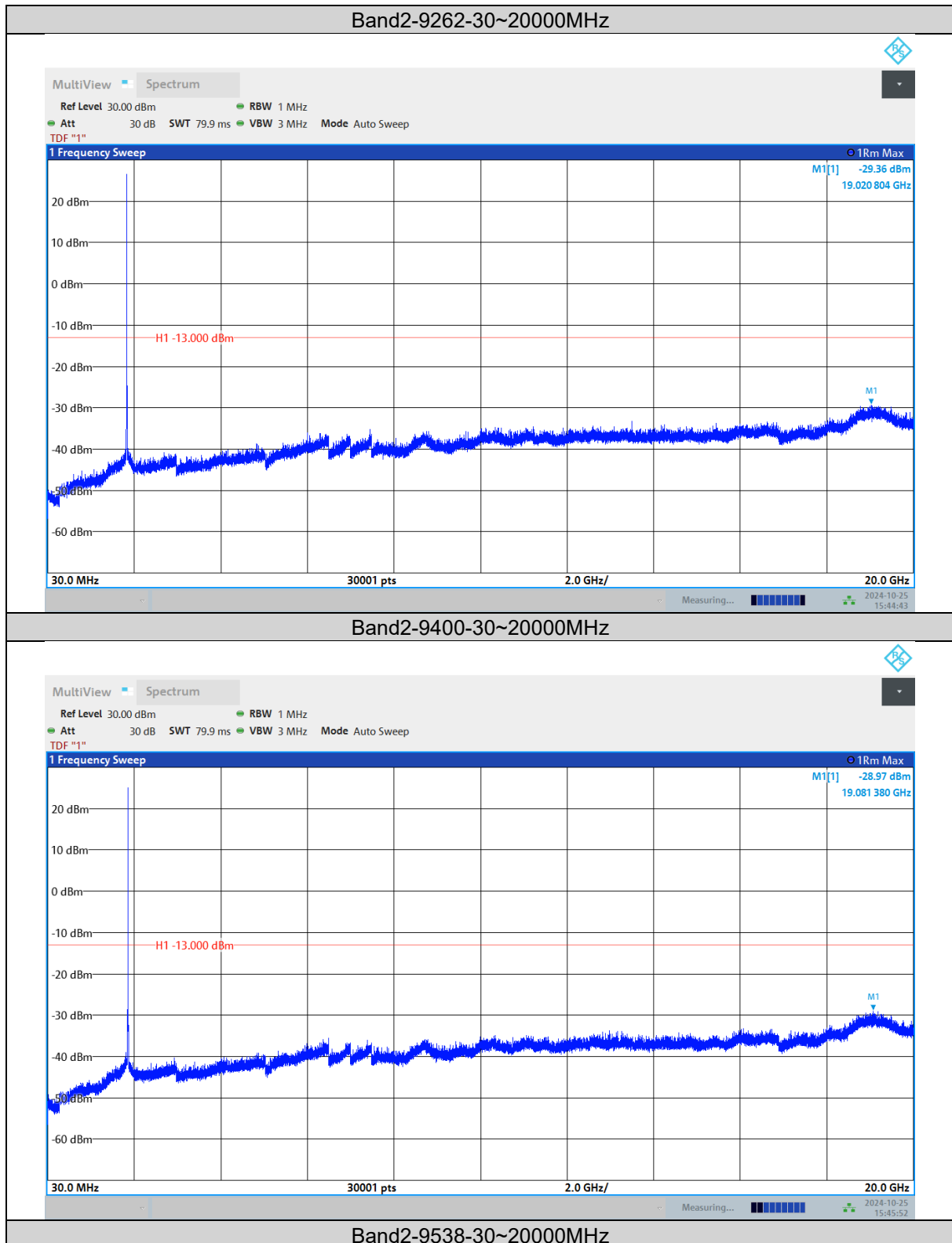
**BUREAU VERITAS** Test Report No.: PSU-QBJ2409140110RF02  
**CONDUCTED SPURIOUS EMISSION**

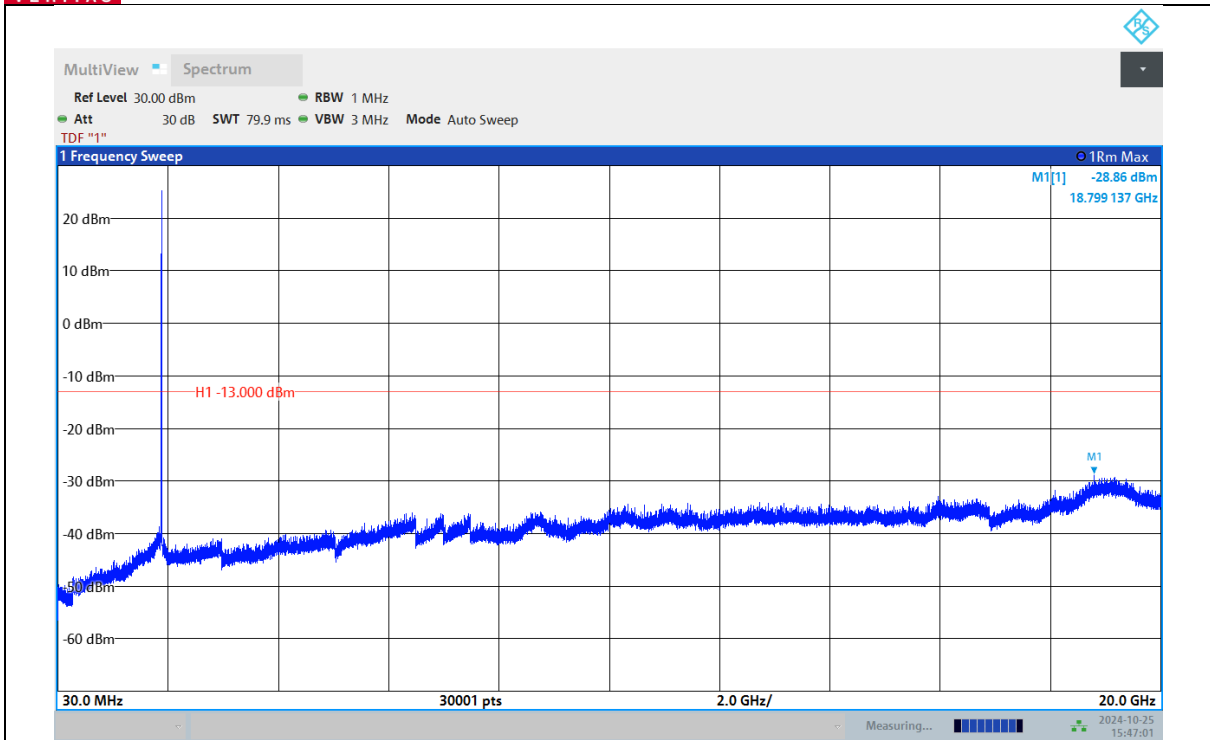
**Test Result**

Band	Channel	Frequency Range (Mhz)	Result (dBm)	Limit (dBm)	Verdict
Band2	9262	30~20000MHz	See Graph	-13	PASS
Band2	9400	30~20000MHz	See Graph	-13	PASS
Band2	9538	30~20000MHz	See Graph	-13	PASS



## Test Graphs







## FREQUENCY STABILITY

### Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band2	9262	VL	NT	-8.28	-0.0045	±2.5	PASS
Band2	9262	VN	NT	-5.80	-0.0031	±2.5	PASS
Band2	9262	VH	NT	3.59	0.0019	±2.5	PASS
Band2	9400	VL	NT	5.19	0.0028	±2.5	PASS
Band2	9400	VN	NT	9.16	0.0049	±2.5	PASS
Band2	9400	VH	NT	1.64	0.0009	±2.5	PASS
Band2	9538	VL	NT	-8.20	-0.0041	±2.5	PASS
Band2	9538	VN	NT	6.78	0.0034	±2.5	PASS
Band2	9538	VH	NT	0.83	0.0004	±2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band2	9262	NV	-30	-1.28	-0.0007	±2.5	PASS
Band2	9262	NV	-20	-0.11	0.0001	±2.5	PASS
Band2	9262	NV	-10	4.12	0.0022	±2.5	PASS
Band2	9262	NV	0	-3.01	-0.0016	±2.5	PASS
Band2	9262	NV	10	1.24	0.0007	±2.5	PASS
Band2	9262	NV	20	-6.48	-0.0035	±2.5	PASS
Band2	9262	NV	30	-4.12	-0.0022	±2.5	PASS
Band2	9262	NV	40	-8.71	-0.0047	±2.5	PASS
Band2	9262	NV	50	4.74	0.0026	±2.5	PASS
Band2	9400	NV	-30	-0.38	-0.0002	±2.5	PASS
Band2	9400	NV	-20	-7.09	-0.0038	±2.5	PASS
Band2	9400	NV	-10	1.43	0.0008	±2.5	PASS
Band2	9400	NV	0	9.08	0.0048	±2.5	PASS
Band2	9400	NV	10	7.87	0.0042	±2.5	PASS
Band2	9400	NV	20	-2.18	-0.0012	±2.5	PASS
Band2	9400	NV	30	-7.60	-0.0040	±2.5	PASS
Band2	9400	NV	40	5.96	0.0032	±2.5	PASS
Band2	9400	NV	50	3.55	0.0019	±2.5	PASS
Band2	9538	NV	-30	-0.65	-0.0003	±2.5	PASS
Band2	9538	NV	-20	9.89	0.0050	±2.5	PASS
Band2	9538	NV	-10	2.91	0.0015	±2.5	PASS
Band2	9538	NV	0	-7.49	-0.0038	±2.5	PASS
Band2	9538	NV	10	8.55	0.0043	±2.5	PASS
Band2	9538	NV	20	0.93	0.0005	±2.5	PASS
Band2	9538	NV	30	8.91	0.0045	±2.5	PASS
Band2	9538	NV	40	9.95	0.0050	±2.5	PASS
Band2	9538	NV	50	1.67	0.0008	±2.5	PASS

--END--