



# CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel: +86-755- 27521059 Fax: +86-755- 27521011 Http://www.sz-ctc.org.cn

## TEST REPORT

**Report No.** .....: **CTC20240101E19**

**FCC ID**.....: **2AYD5-I23M03**


**Applicant**.....: **Imin Technology Pte Ltd**

**Address**.....: 11 Bishan Street 21, #03-05 Bosch Building, Singapore, 573943

**Manufacturer**.....: Imin Technology Pte Ltd

**Address**.....: 11 Bishan Street 21, #03-05 Bosch Building, Singapore, 573943

**Product Name**.....: **POS Device**

**Trade Mark**.....: 

**Model/Type reference**.....: I23M03

**Listed Model(s)** .....: /

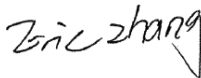

**Standard**.....: **FCC CFR47 PART 22H, 24E, 27L**

**Date of receipt of test sample.**: Jan. 18, 2024

**Date of testing**.....: Feb. 19, 2024 ~ Mar. 06, 2024

**Date of issue**.....: Mar. 07, 2024

**Result**.....: **PASS**

Compiled by:		
(Printed name+signature)	Terry Su	
Supervised by:		
(Printed name+signature)	Eric Zhang	
Approved by:		
(Printed name+signature)	Totti Zhao	

**Testing Laboratory Name...:** **CTC Laboratories, Inc.**

**Address**.....: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

This test report may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CTC. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to CTC within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit. The test report merely correspond to the test sample.



Table of Contents

Page

**1. SUMMARY ..... 3**

1.1. TEST STANDARDS .....3

1.2. REPORT VERSION .....3

1.3. TEST DESCRIPTION .....4

1.4. TEST FACILITY .....5

1.5. MEASUREMENT UNCERTAINTY .....6

1.6. ENVIRONMENTAL CONDITIONS .....6

**2. GENERAL INFORMATION..... 7**

2.1. CLIENT INFORMATION .....7

2.2. GENERAL DESCRIPTION OF EUT .....8

2.3. DESCRIPTION OF TEST MODES AND TEST FREQUENCY .....9

2.4. MEASUREMENT INSTRUMENTS LIST .....10

**3. TEST ITEM AND RESULTS .....12**

3.1. CONDUCTED OUTPUT POWER .....12

3.2. PEAK-TO-AVERAGE RATIO .....15

3.3. OCCUPY BANDWIDTH .....28

3.4. OUT OF BAND EMISSIONS .....36

3.5. RECEIVER SPURIOUS EMISSIONS AT ANTENNA TERMINAL .....78

3.6. BAND EDGE COMPLIANCE .....79

3.7. RADIATED POWER MEASUREMENT .....85

3.8. RADIATED SPURIOUS EMISSION .....89

3.9. FREQUENCY STABILITY .....95

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



# 1. SUMMARY

## 1.1. Test Standards

- [FCC Rules Part 2](#): FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
- [FCC Rules Part 22](#): PRIVATE LAND MOBILE RADIO SERVICES.
- [FCC Rules Part 24](#): PUBLIC MOBILE SERVICES
- [FCC Rules Part 27](#): MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES
- [TIA/EIA 603 E March 2016](#): Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.
- [ANSI C63.26: 2015](#): American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
- [KDB 971168 D01 Power Meas License Digital Systems v03](#): MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS
- [RSS-Gen Issue 5](#): General Requirements for Compliance of Radio Apparatus.
- [RSS-132 Issue 4](#): Cellular Telephone Systems Operating in the Bands 824-849MHz and 869-894MHz.
- [RSS-133 Issue 6](#): 2 GHz Personal Communications Services.
- [RSS-139 Issue 4](#): Advanced Wireless Services Equipment Operating in the Bands 1710-1780 MHz and 2110-2200 MHz

## 1.2. Report version

Revised No.	Date of issue	Description
01	Mar. 07, 2024	Original



### 1.3. Test Description

Test Item	Section in CFR 47	RSS Rule	Result	Test Engineer
Conducted Output Power	Part 2.1046 Part 22.913(a) Part 24.232(c) Part 27.50	RSS-132(5.4) RSS-133(6.4) RSS-139(6.5)	Pass	Alicia Liu
Peak-to-Average Ratio	Part 24.232 Part 27.50	RSS-132(5.4) RSS-133(6.4)	Pass	Alicia Liu
99% Occupied Bandwidth & 26 dB Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b) Part 27.53	RSS-GEN(6.6) RSS-133(6.5)	Pass	Alicia Liu
Band Edge	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	RSS-132(5.5) RSS-133(6.5)	Pass	Alicia Liu
Conducted Spurious Emissions	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	RSS-132(5.5) RSS-133(6.5) RSS-139(6.6)	Pass	Alicia Liu
Frequency stability vs temperature	Part 2.1055(a)(1)(b) Part 22.355 Part 24.235 Part 27.54	RSS-GEN(6.11) RSS-132(5.3) RSS-139(6.4)	Pass	Alicia Liu
Frequency stability vs voltage	Part 2.1055(d)(1)(2) Part 22.355 Part 24.235 Part 27.54	RSS-GEN(6.11) RSS-132(5.3) RSS-139(6.4)	Pass	Alicia Liu
ERP and EIRP	Part 22.913(a) Part 24.232(b) Part 27.50	RSS-132(5.4) RSS-133(6.4) RSS-139(6.5)	Pass	Alicia Liu
Radiated Spurious Emissions	Part 2.1053 Part 22.917 Part 24.238 Part 27.53	RSS-132(5.5) RSS-133(6.5) RSS-139(6.6)	Pass	Alicia Liu
Receiver Spurious Emissions	/	RSS-GEN(7.1.3)	N/A	N/A

Note: The measurement uncertainty is not included in the test result.

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, Part 22, Part 24, Part 27, FCC KDB 971168 D01 v03r01/ D02 v02r01, KDB 412172 D01 v01r01, ANSI C63.26:2015, IC RSS-132, RSS-133 and RSS-139.



## 1.4. Test Facility

### Address of the report laboratory

#### CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

### Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

#### **A2LA-Lab Cert. No.: 4340.01**

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

#### **Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)**

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

#### **FCC (Registration No.: 951311, Designation Number CN1208)**

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC)Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



## 1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CTC Laboratories, Inc. is reported:

Test Items	Measurement Uncertainty	Notes
Frequency stability	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-12.75 GHz	1.60 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emission 1~18GHz	5.16 dB	(1)
Radiated Emission 18-40GHz	5.54 dB	(1)
Occupied Bandwidth	-----	(1)
Emission Mask	-----	(1)
Modulation Characteristic	-----	(1)
Transmitter Frequency Behavior	-----	(1)

Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	20°C-25°C
Relative Humidity:	50 %-55 %
Air Pressure:	101kPa

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



## 2. GENERAL INFORMATION

### 2.1. Client Information

Applicant:	Imin Technology Pte Ltd
Address:	11 Bishan Street 21, #03-05 Bosch Building, Singapore, 573943
Manufacturer:	Imin Technology Pte Ltd
Address:	11 Bishan Street 21, #03-05 Bosch Building, Singapore, 573943
Factory 1:	Jiangxi Neostra Electronic Co. Ltd
Address:	279 Shenzhen Road, Jinggangshan economic and Technological Development Zone, Ji'an, Jiangxi, China
Factory 2:	Neosta Technology Sdn. Bhd.
Address:	No. 78, Jln I-Park SAC 5, Taman Perindustrian i-Park SAC, 81400 Senai, Johor, Malaysia

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059


Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

中国国家认证认可监督管理委员会  
Certification and Accreditation Administration of the People's Republic of ChinaFor anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



## 2.2. General Description of EUT

Product Name:	POS Device
Trade Mark:	
Model/Type reference:	I23M03
Listed Model(s):	/
Power supply:	5Vdc/2A from AC/DC Adapter 7.6Vdc from 2500mAh Li-ion Battery
Adapter 1 Model:	ADS-10LA-06 05010EPCU Input: 100-240V~ 50/60Hz 0.3A Max Output: 5Vdc/2A
Adapter 2 Model:	TPA-67050200UU Input: 100-240V~ 50/60Hz 0.3A Output: 5Vdc/2A
Hardware version:	/
Software version:	/
<b>GSM</b>	
Operation Band:	GSM 850: UL: 824MHz~849MHz, DL: 869MHz~894MHz PCS 1900: UL: 1850MHz~1910, DL: 1930MHz~1990MHz
Supported Type:	GPRS/EGPRS
Modulation Type:	GMSK for GPRS, 8PSK for EGPRS
Antenna Type:	FPC Antenna
Antenna Gain:	Main Antenna: GSM 850: -6.07dBi Max PCS 1900: 0.60dBi Max
<b>WCDMA</b>	
Operation Band:	Band II: UL: 1852.4MHz~1907.6MHz, DL: 1932.6MHz~1987.4MHz Band V: UL: 826.4MHz~846.6MHz, DL: 871.6MHz~1891.4MHz
Modulation Type:	QPSK for WCDMA/HSUPA/HSDPA
Antenna Type:	FPC Antenna
Antenna Gain:	Main Antenna: WCDMA II: 0.60dBi Max WCDMA V: -6.07dBi Max





## 2.3. Description of Test Modes and Test Frequency

The EUT has been tested under typical operating condition. The CMW500 used to control the EUT staying in continuous transmitting and receiving mode for testing.

### Test Frequency:

GSM 850		PCS 1900	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
128	824.20	512	1850.20
190	836.60	661	1880.00
251	848.80	810	1909.80

WCDMA Band II		WCDMA Band V	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
9262	1852.40	4132	826.40
9400	1880.00	4183	836.60
9538	1907.60	4233	846.60



## 2.4. Measurement Instruments List

RF Test System					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until
1	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 14, 2024
2	Spectrum Analyzer	R&S	FSV40-N	101654	Aug. 07, 2024
3	Spectrum Analyzer	R&S	FSU26	100105	Dec. 12, 2024
4	MXA Signal Analyzer	Keysight	N9020A	MY46471737	Dec. 12, 2024
5	MXA Signal Analyzer	Keysight	N9020A	MY52091402	Aug. 22, 2024
6	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Dec. 12, 2024
7	PSG Analog Signal Generator	Agilent	E8257D	MY46521908	Dec. 12, 2024
8	EXG Analog Signal Generator	Keysight	N5173B	MY59100842	Dec. 12, 2024
9	MXG Vector Signal Generator	Keysight	N5182B	MY59100212	Dec. 12, 2024
10	Wideband Radio Communication Tester	R&S	CMW500	102257	May. 25, 2024
11	Wideband Radio Communication Tester	R&S	CMW500	102414	Dec. 12, 2024
12	High and low temperature test chamber	ESPEC	MT3035	/	Mar. 24, 2024
13	RF Control Unit	Tonscend	JS0806-2	/	Aug. 22, 2024
14	Test Software	Tonscend	JS1120-3	V3.3.38	/

Radiated Emission (3m chamber 2)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-1013	Dec. 07, 2024
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-648	Dec. 07, 2024
3	Spectrum Analyzer	R&S	FSU26	100105	Dec. 12, 2024
4	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 14, 2024
5	Pre-Amplifier	SONOMA	310	186194	Dec. 12, 2024
6	Low Noise Pre-Amplifier	EMCI	EMC051835	980075	Dec. 12, 2024
7	Test Receiver	R&S	ESC17	100967	Dec. 12, 2024
8	3m chamber 2	Frankonia	EE025	/	Oct. 23, 2024
9	Test Software	FARA	EZ-EMC	FA-03A2	/

Radiated Emission (3m chamber 3)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9163	01026	Dec. 18, 2024
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 01, 2024
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 12, 2024
4	Broadband Amplifier	SCHWARZBECK	BBV9743B	259	Dec. 12, 2024
5	Mirowave Broadband Amplifier	SCHWARZBECK	BBV9718C	111	Dec. 12, 2024

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China: [yz.cnca.cn](http://yz.cnca.cn)



6	3m chamber 3	YIHENG	EE106	/	Aug. 28, 2026
7	Test Software	FARA	EZ-EMC	FA-03A2	/

Note: 1. The Cal. Interval was one year.

2. The cable loss has calculated in test result which connection between each test instruments.

### 3. TEST ITEM AND RESULTS

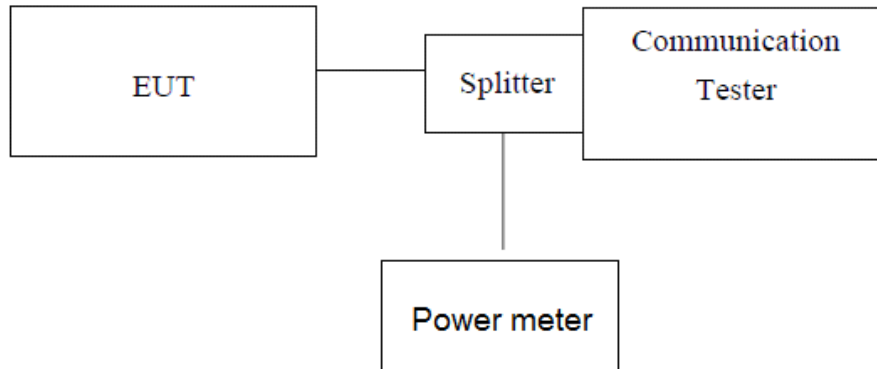
#### 3.1. Conducted Output Power

##### LIMIT

FCC: §2.1046, §22.913, §24.232, §27.50 and §90.635

IC: RSS132§5.4; RSS133§6.4 and RSS139§6.5.

##### TEST CONFIGURATION



*Note: Measurement setup for testing on Antenna connector*

##### TEST PROCEDURE

1. The transmitter output port was connected to base station.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
3. Set EUT at maximum power through base station.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure the maximum PK burst power and maximum Avg. burst power.

##### TEST RESULTS



GSM850		Conducted Power (dBm)		
		CH128	CH190	CH251
		824.20MHz	836.60MHz	848.80MHz
GPRS (GMSK)	1TXslot	33.54	33.51	33.56
	2TXslots	32.86	32.84	32.89
	3TXslots	31.17	31.14	31.17
	4TXslots	30.14	30.09	30.12
EGPRS (8PSK)	1TXslot	28.68	28.37	28.43
	2TXslots	27.56	27.35	27.41
	3TXslots	25.46	25.26	25.30
	4TXslots	24.39	24.24	24.23

GSM1900		Conducted Power (dBm)		
		CH512	CH661	CH810
		1850.2MHz	1880.0MHz	1909.8MHz
GPRS (GMSK)	1TXslot	30.65	30.90	31.03
	2TXslots	29.97	30.26	30.45
	3TXslots	28.30	28.58	28.89
	4TXslots	27.22	27.52	27.83
EGPRS (8PSK)	1TXslot	26.58	26.49	26.91
	2TXslots	25.45	25.51	25.94
	3TXslots	23.23	23.46	23.93
	4TXslots	21.99	22.10	22.69

WCDMA Band II		Conducted Power (dBm)		
		CH9262	CH9400	CH9538
		1852.40	1880.00	1907.60
RMC 12.2K		24.16	24.05	23.79
HSDPA	Subtest-1	23.20	23.08	22.86
	Subtest-2	22.72	22.72	22.57
	Subtest-3	22.69	22.63	22.39
	Subtest-4	22.73	22.60	22.36
HSUPA	Subtest-1	21.23	21.17	20.94
	Subtest-2	21.26	21.20	20.95
	Subtest-3	22.27	22.22	21.95
	Subtest-4	20.76	20.71	20.48
	Subtest-5	22.21	22.16	21.87

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

中国国家认证认可监督管理委员会  
Certification and Accreditation Administration of the People's Republic of ChinaFor anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



WCDMA Band V		Conducted Power (dBm)		
		CH4132	CH4182	CH4233
		826.40	836.40	846.60
RMC 12.2K		24.50	24.46	24.42
HSDPA	Subtest-1	23.54	23.45	23.44
	Subtest-2	23.00	22.93	22.95
	Subtest-3	23.01	22.99	22.91
	Subtest-4	23.00	22.93	22.90
HSUPA	Subtest-1	21.96	21.89	21.47
	Subtest-2	21.62	21.52	21.51
	Subtest-3	22.58	22.56	22.51
	Subtest-4	21.14	21.07	21.04
	Subtest-5	22.61	22.51	22.43

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

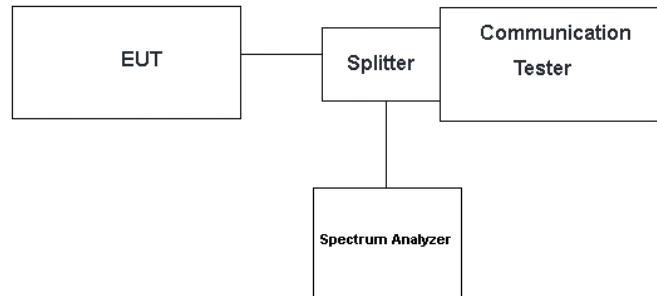
## 3.2. Peak-to-Average Ratio

### LIMIT

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

### TEST CONFIGURATION

- For Peak-to-Average Ratio



### TEST PROCEDURE

- For Peak-to-Average Ratio
  1. The testing follows FCC KDB 971168 v02r02 Section 5.7.1.
  2. The EUT was connected to spectrum and communication tester via a splitter
  3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyser.
  4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
  6. Record the deviation as Peak to Average Ratio.

### TEST RESULTS



EUT Mode	Channel	Frequency (MHz)	Peak-to-Average Ratio(dB)	Limit (dB)	Result
GSM 850 GPRS	128	824.20	9.30	13	PASS
	190	836.60	9.89	13	
	251	848.80	9.37	13	
GSM 850 EGPRS	128	824.20	12.76	13	
	190	836.60	12.36	13	
	251	848.80	12.58	13	
PCS 1900 GPRS	512	1850.20	9.83	13	
	661	1880.00	9.70	13	
	810	1909.80	9.71	13	
PCS 1900 EGPRS	512	1850.20	12.33	13	
	661	1880.00	12.07	13	
	810	1909.80	12.25	13	

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

中国国家认证认可监督管理委员会  
Certification and Accreditation Administration of the People's Republic of ChinaFor anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)





EUT Mode	Channel	Frequency (MHz)	Peak-to-Average Ratio(dB)	Limit (dB)	Result
WCDMA Band II WCDMA	9262	1852.40	2.55	13	PASS
	9400	1880.00	2.67	13	
	9538	1907.60	2.94	13	
WCDMA Band II HSDPA	9262	1852.40	2.95	13	
	9400	1880.00	3.04	13	
	9538	1907.60	3.17	13	
WCDMA Band II HSUPA	9262	1852.40	4.52	13	
	9400	1880.00	4.60	13	
	9538	1907.60	4.57	13	
WCDMA Band V WCDMA	4132	826.40	2.80	13	
	4183	836.60	2.54	13	
	4233	846.60	2.52	13	
WCDMA Band V HSDPA	4132	826.40	2.98	13	
	4183	836.60	2.81	13	
	4233	846.60	2.81	13	
WCDMA Band V HSUPA	4132	826.40	4.30	13	
	4183	836.60	4.17	13	
	4233	846.60	4.21	13	

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

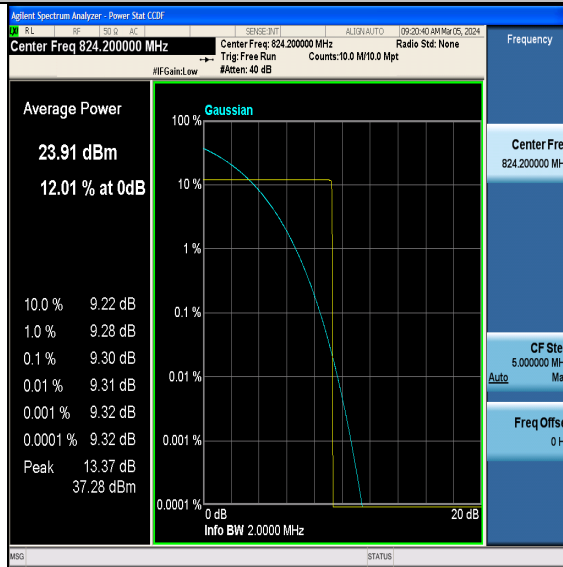
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

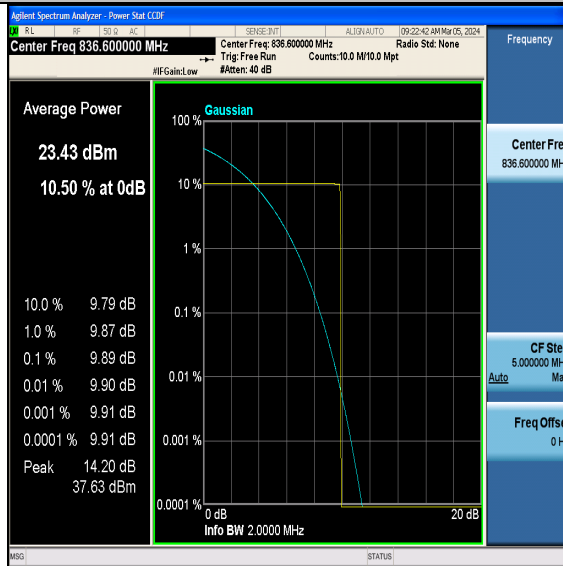
中国国家认证认可监督管理委员会  
Certification and Accreditation Administration of the People's Republic of ChinaFor anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



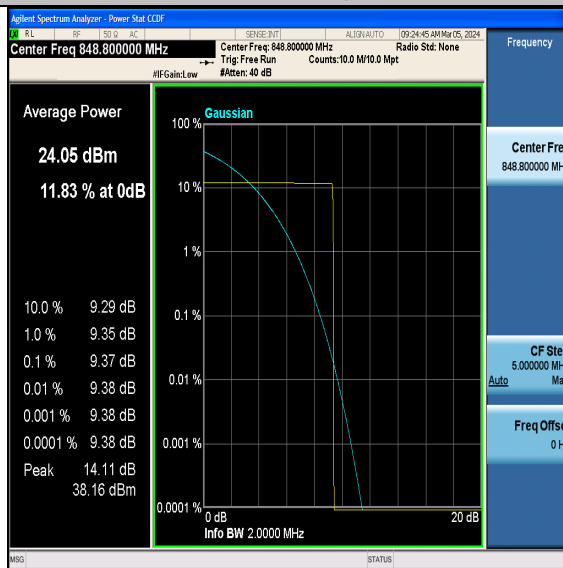
### GSM 850\_ GPRS\_ Lowest channel



### GSM 850\_ GPRS\_ Middle channel



### GSM 850\_ GPRS\_ Highest channel



CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

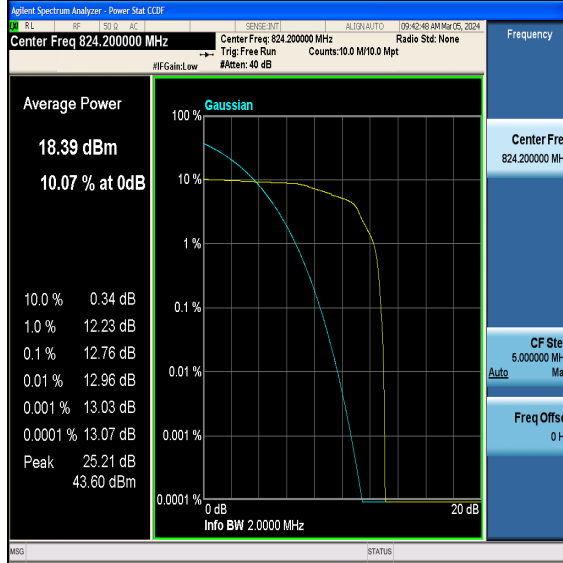
Http://www.sz-ctc.org.cn



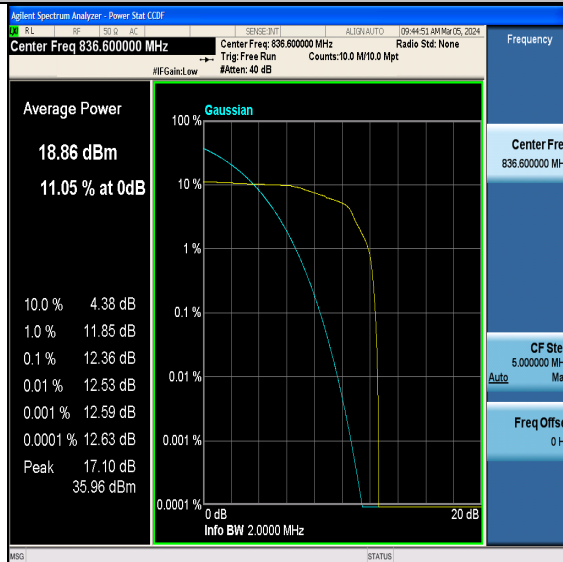
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



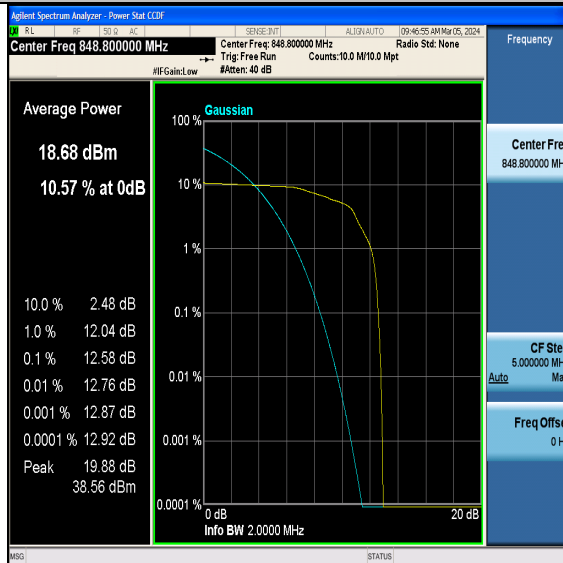
### GSM 850\_EGPRS\_Lowest channel



### GSM 850\_EGPRS\_Middle channel



### GSM 850\_EGPRS\_Highest channel



CTC Laboratories, Inc.

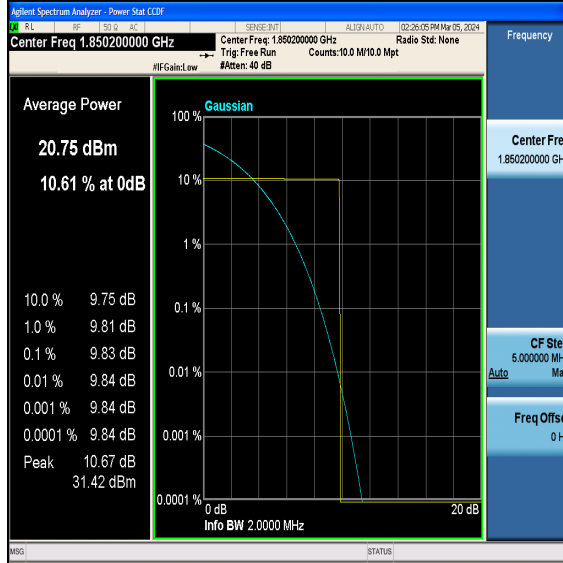
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
 Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn  
 For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

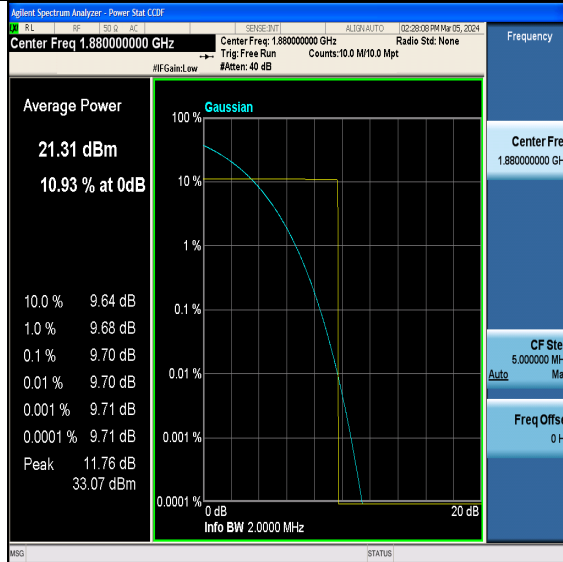




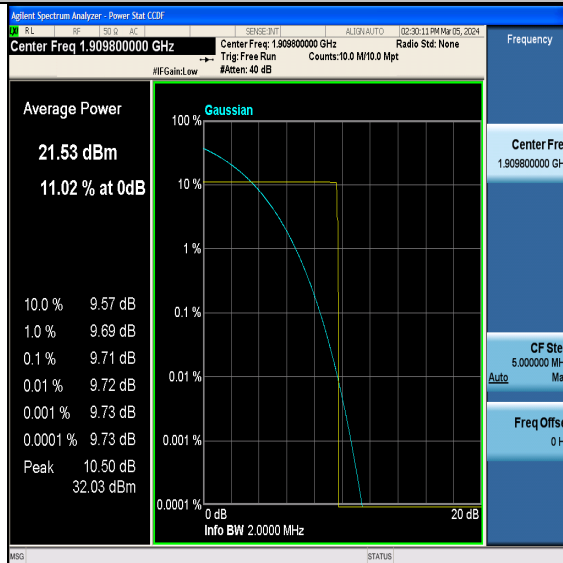
PCS 1900\_ GPRS\_ Lowest channel



PCS 1900\_ GPRS\_ Middle channel



PCS 1900\_ GPRS\_ Highest channel



CTC Laboratories, Inc.

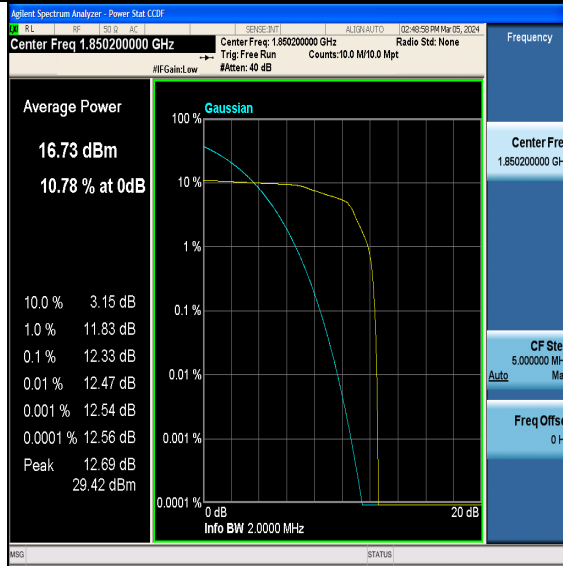
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn  
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

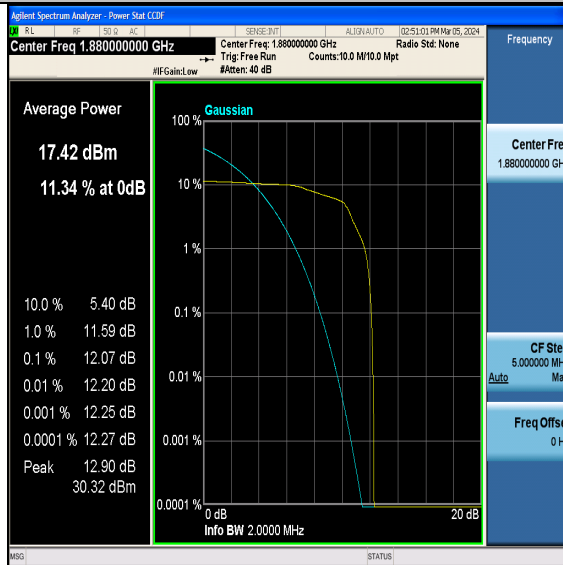




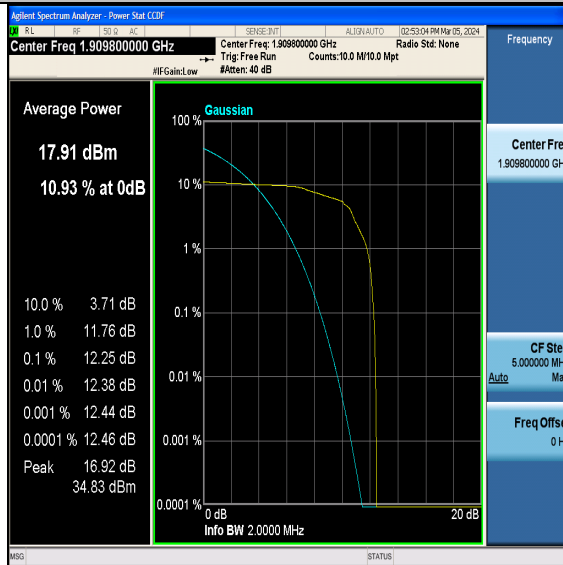
PCS 1900\_EGPRS\_Lowest channel



PCS 1900\_EGPRS\_Middle channel



PCS 1900\_EGPRS\_Highest channel



CTC Laboratories, Inc.

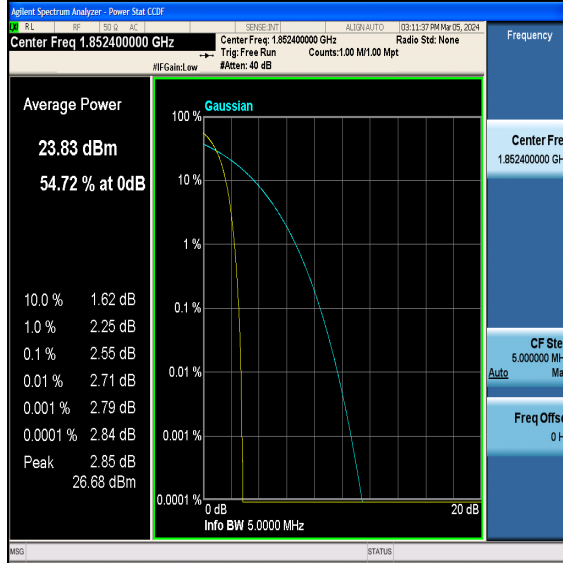
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
 Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn  
 For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

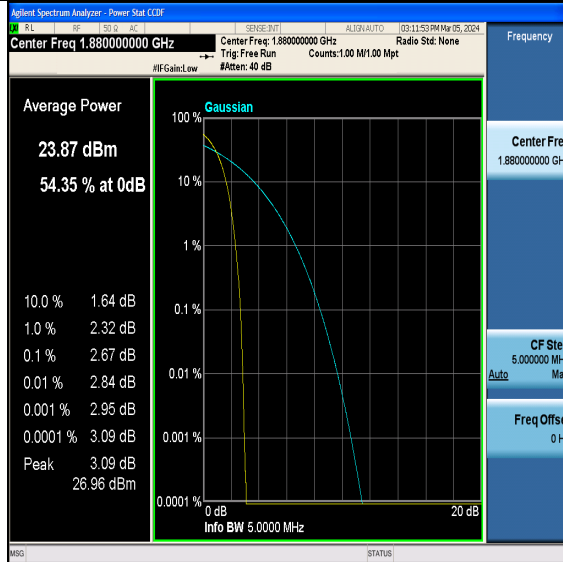




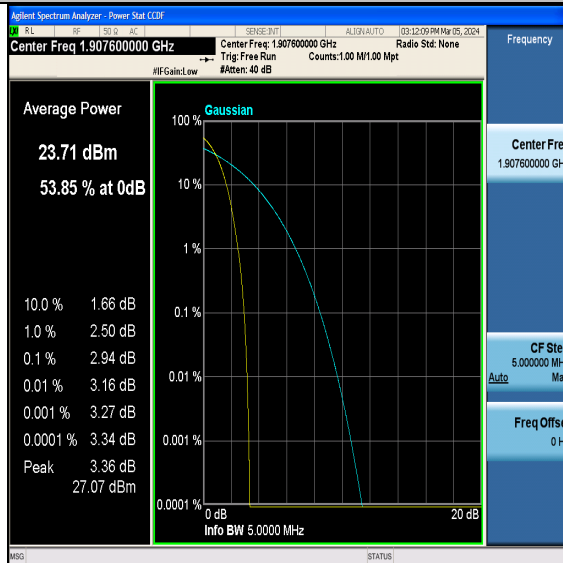
WCDMA Band II\_ WCDMA\_ Lowest channel



WCDMA Band II\_ WCDMA\_ Middle channel

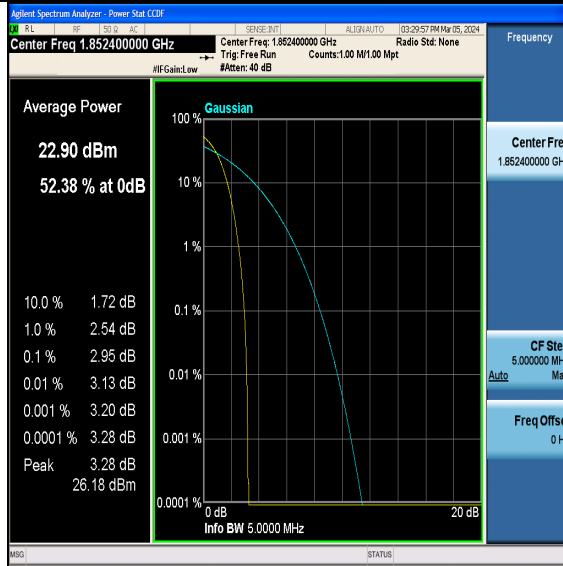


WCDMA Band II\_ WCDMA\_ Highest channel

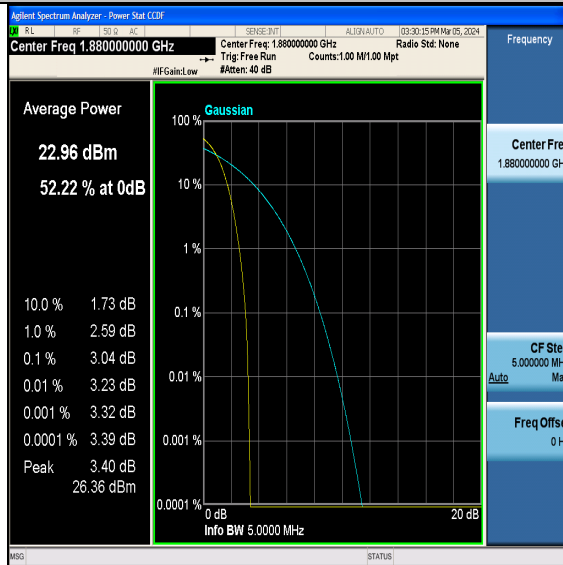




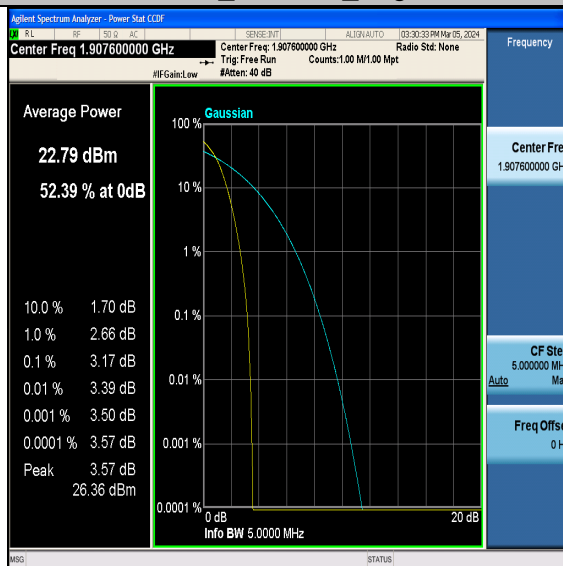
### WCDMA Band II\_HSDPA\_Lowest channel



### WCDMA Band II\_HSDPA\_Middle channel



### WCDMA Band II\_HSDPA\_Highest channel



CTC Laboratories, Inc.

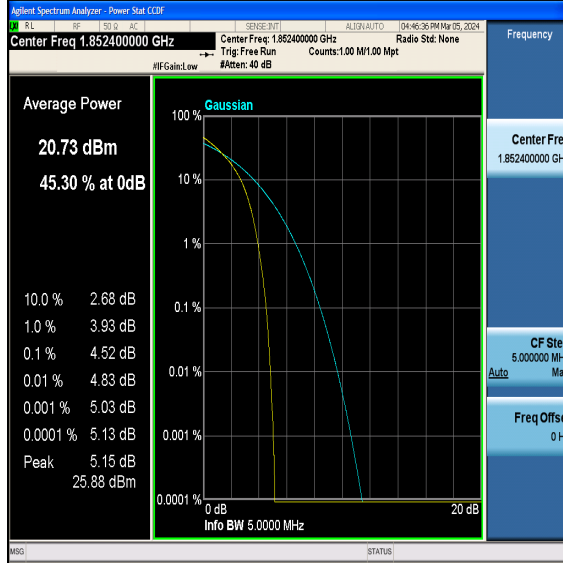
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
 Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn  
 For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

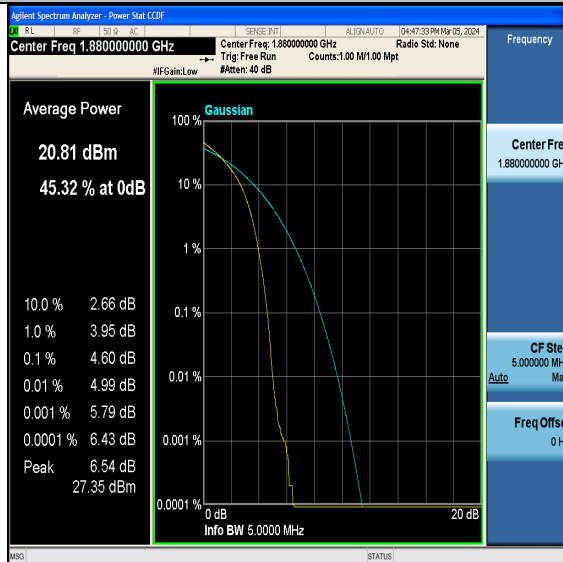




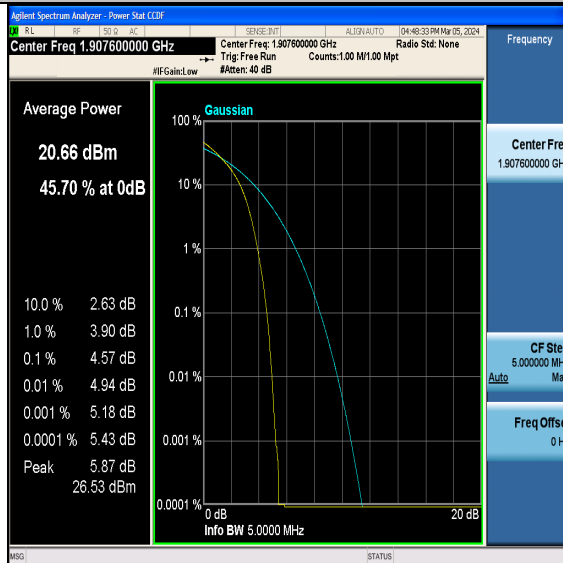
WCDMA Band II\_ HSUPA\_ Lowest channel



WCDMA Band II\_ HSUPA\_ Middle channel



WCDMA Band II\_ HSUPA\_ Highest channel



CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059    Fax: (86)755-27521011    Http://www.sz-ctc.org.cn

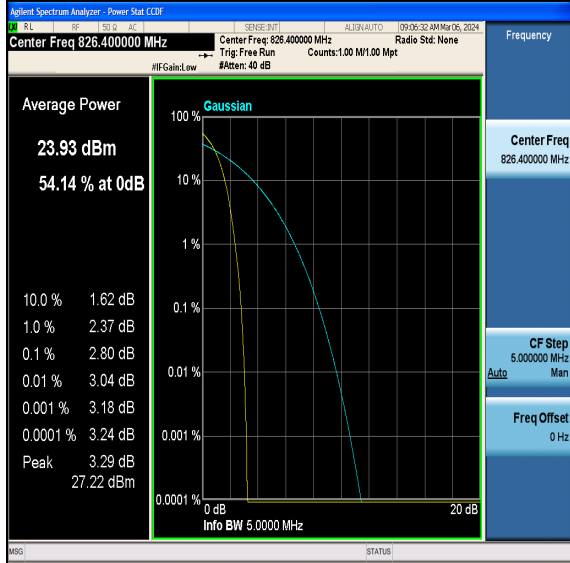


For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

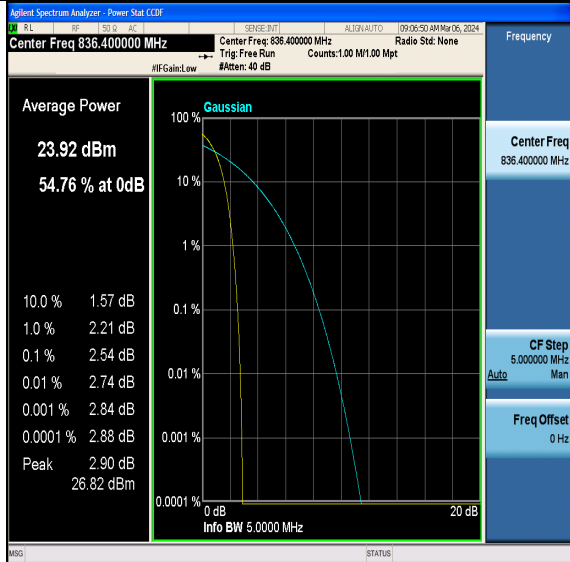




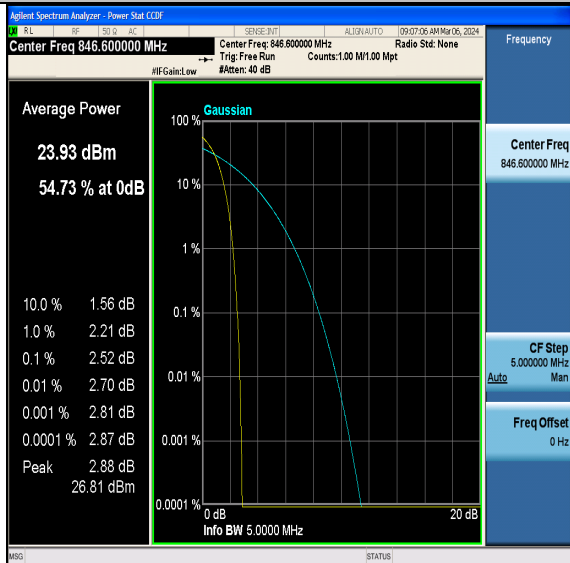
WCDMA Band V\_ WCDMA\_ Lowest channel



WCDMA Band V\_ WCDMA\_ Middle channel

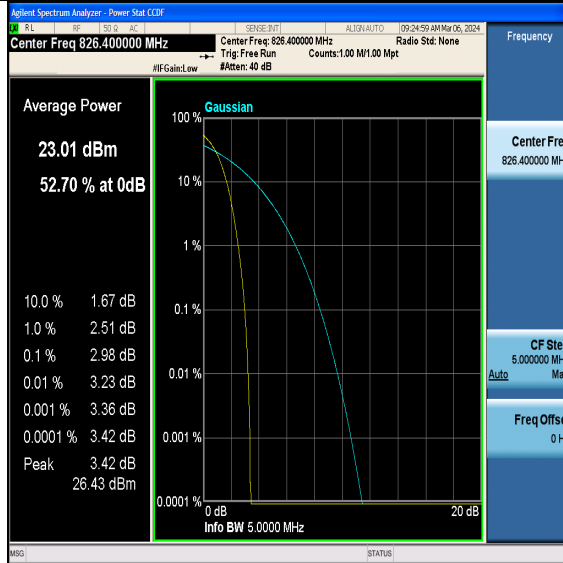


WCDMA Band V\_ WCDMA\_ Highest channel

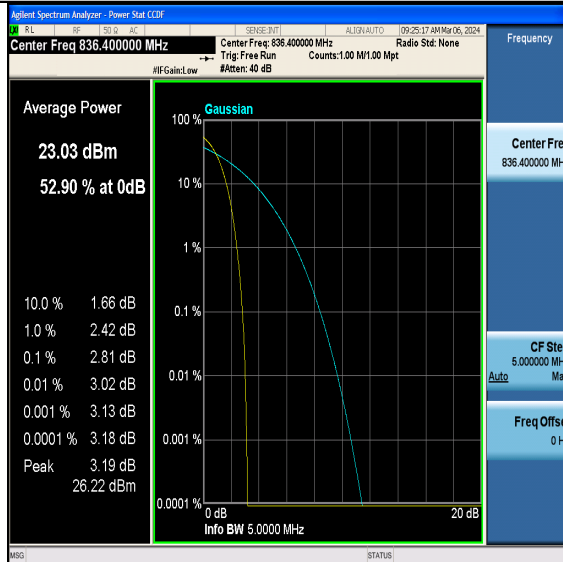




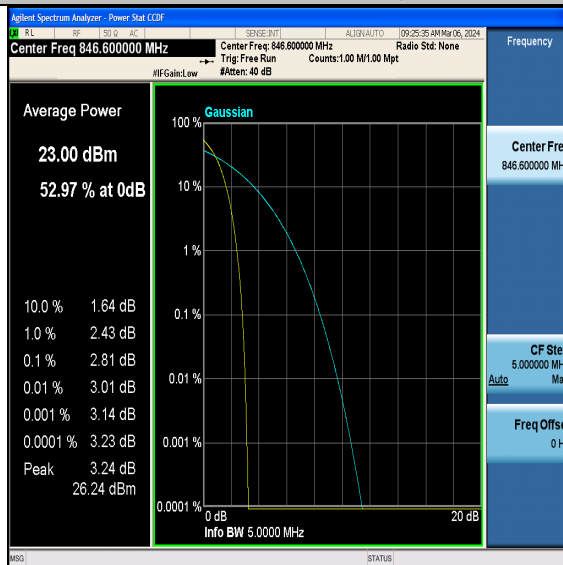
WCDMA Band V\_ HSDPA \_ Lowest channel



WCDMA Band V\_ HSDPA \_ Middle channel



WCDMA Band V\_ HSDPA \_ Highest channel



CTC Laboratories, Inc.

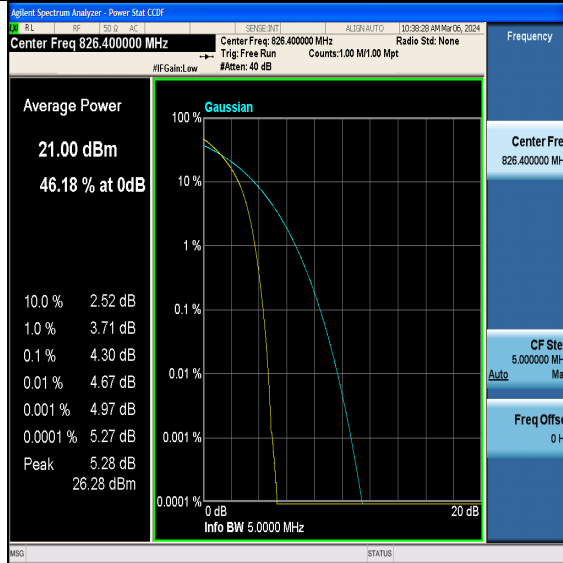
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
 Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



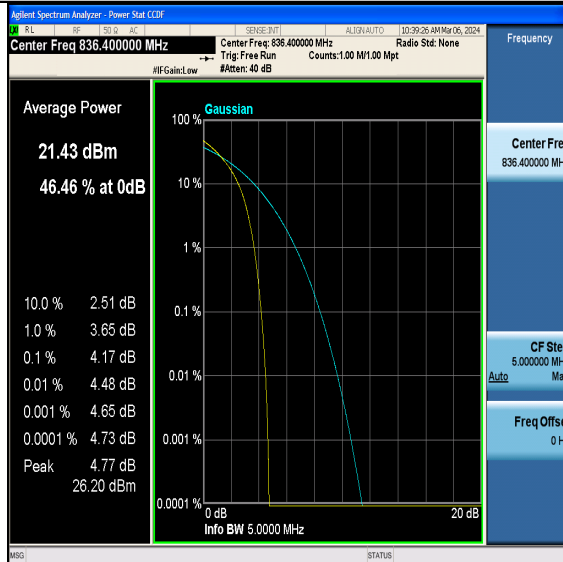
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



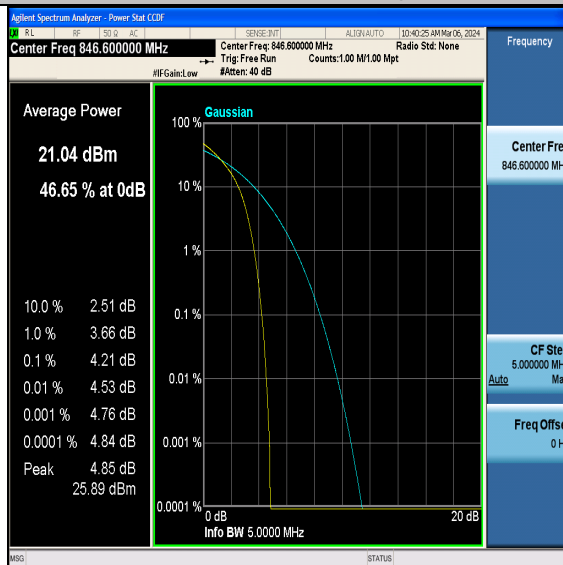
WCDMA Band V\_ HSUPA \_ Lowest channel



WCDMA Band V\_ HSUPA \_ Middle channel



WCDMA Band V\_ HSUPA \_ Highest channel



CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
 Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



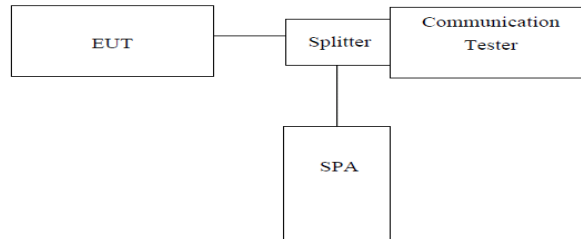
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

### 3.3. Occupancy Bandwidth

#### LIMIT

For reporting purposes only.

#### TEST CONFIGURATION



*Note: Measurement setup for testing on Antenna connector*

#### TEST PROCEDURE

1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer
2. RBW was set to about 1% of emission BW,  $VBW \geq 3$  times RBW.
3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

#### TEST RESULTS



EUT Mode	Channel	Frequency (MHz)	99% Occupy bandwidth (MHz)	-26dB bandwidth (MHz)
GSM 850 (GPRS)	128	824.20	0.24548	0.3177
	190	836.60	0.24705	0.3086
	251	848.80	0.24521	0.3111
EGPRS850 (8PSK,1Slot)	128	824.20	0.25125	0.3103
	190	836.60	0.24975	0.3037
	251	848.80	0.24809	0.3114
PCS1900 (GPRS)	512	1850.20	0.24457	0.3186
	661	1880.00	0.24602	0.3145
	810	1909.80	0.24834	0.3063
EGPRS1900 (8PSK,1Slot)	512	1850.20	0.24871	0.3154
	661	1880.00	0.25135	0.3053
	810	1909.80	0.25084	0.3137
WCDMA Band II (QPSK)	9262	1852.40	4.1641	4.722
	9400	1880.00	4.1681	4.709
	9538	1907.60	4.1485	4.694
WCDMA Band V (QPSK)	4132	826.40	4.1724	4.721
	4183	836.60	4.1715	4.721
	4233	846.60	4.1588	4.726

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

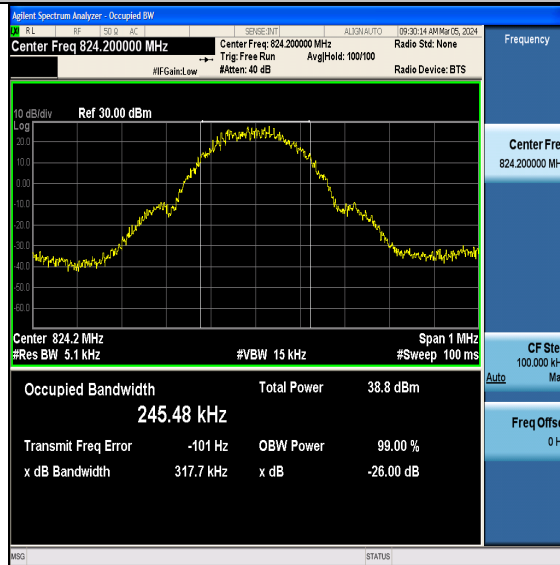
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

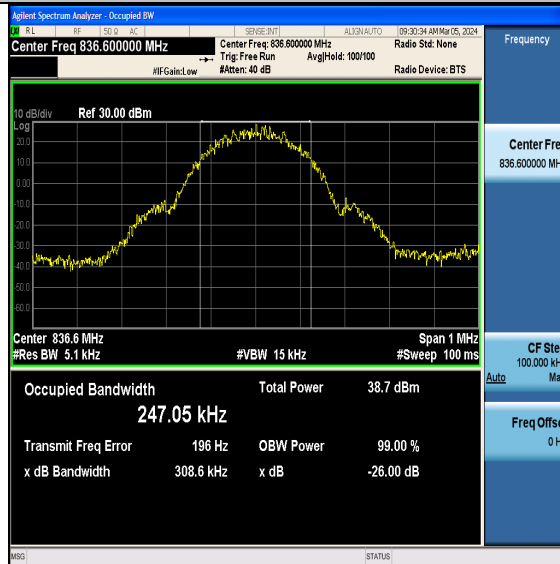
中国国家认证认可监督管理委员会  
Certification and Accreditation Administration of the People's Republic of ChinaFor anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



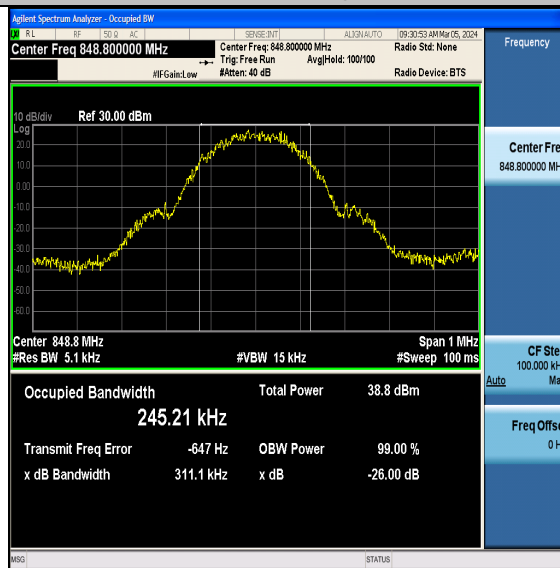
### GSM 850\_ GPRS\_ Lowest channel



### GSM 850\_ GPRS\_ Middle channel



### GSM 850\_ GPRS\_ Highest channel



CTC Laboratories, Inc.

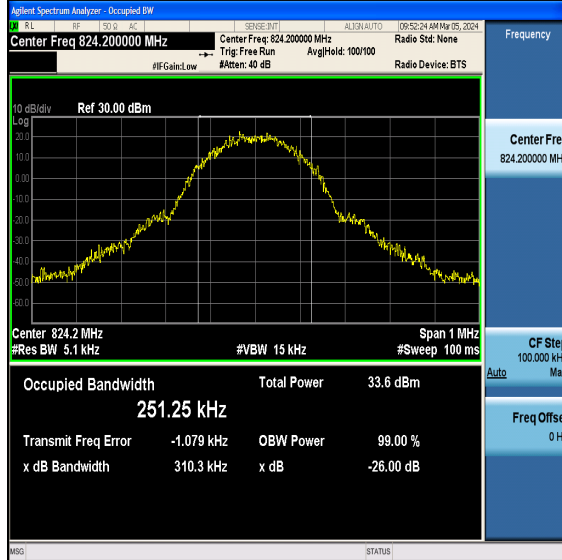
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

Fax: (86)755-27521011    Http://www.sz-ctc.org.cn  
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

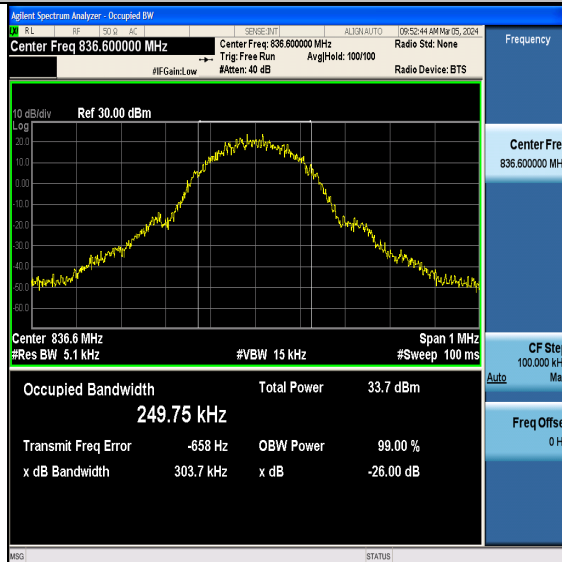




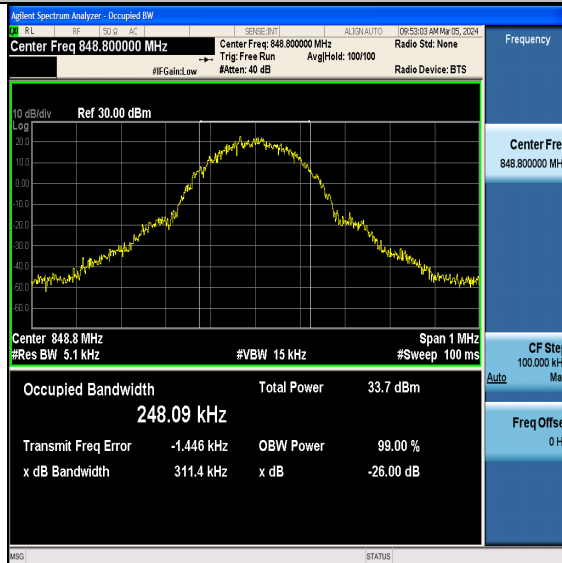
### GSM 850\_EGPRS\_Lowest channel



### GSM 850\_EGPRS\_Middle channel

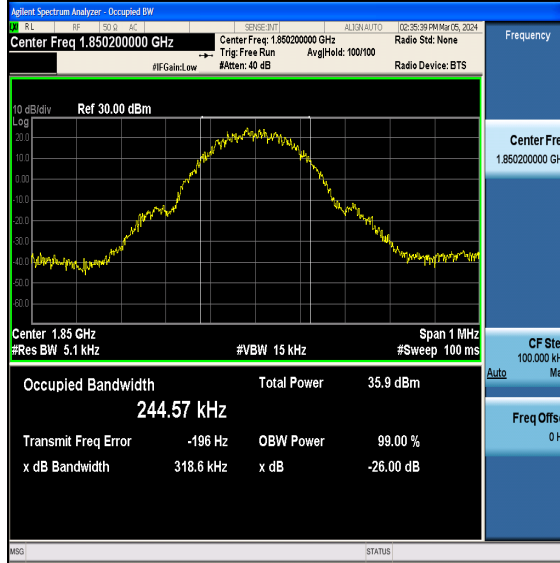


### GSM 850\_EGPRS\_Highest channel

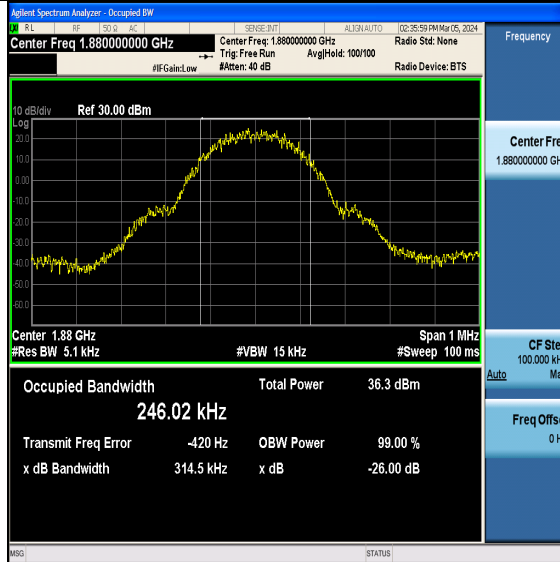




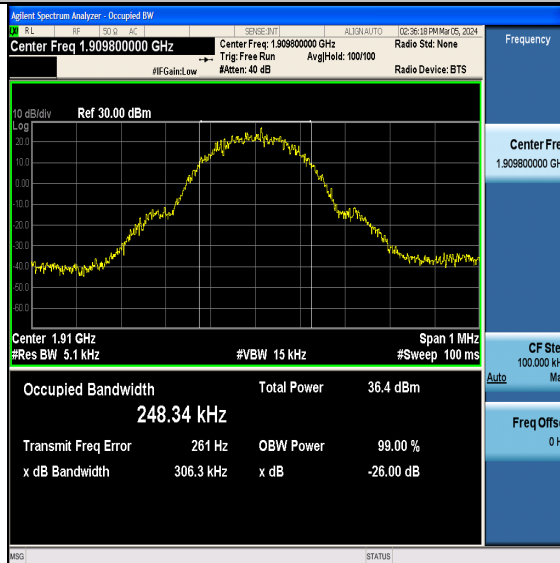
PCS 1900\_ GPRS\_ Lowest channel



PCS 1900\_ GPRS\_ Middle channel



PCS 1900\_ GPRS\_ Highest channel



CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

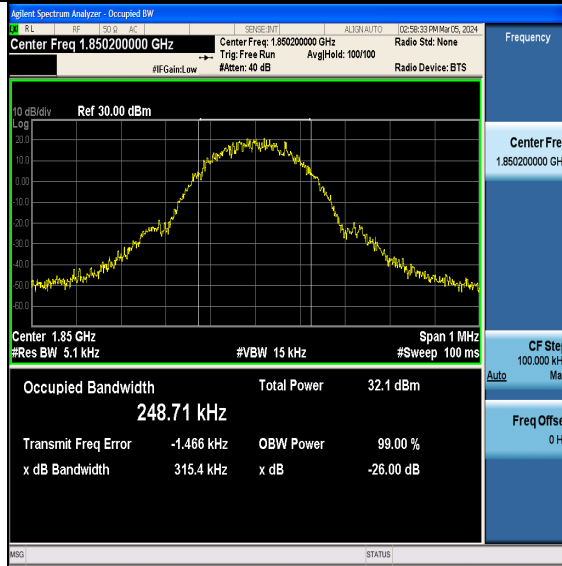
Fax: (86)755-27521011 Http://www.sz-ctc.org.cn  
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



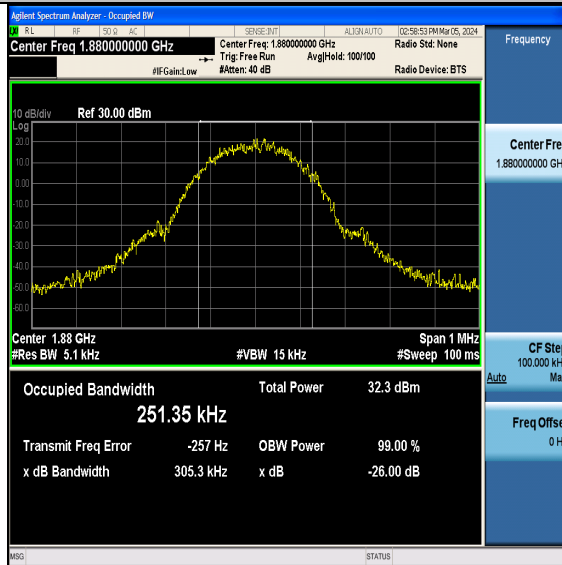




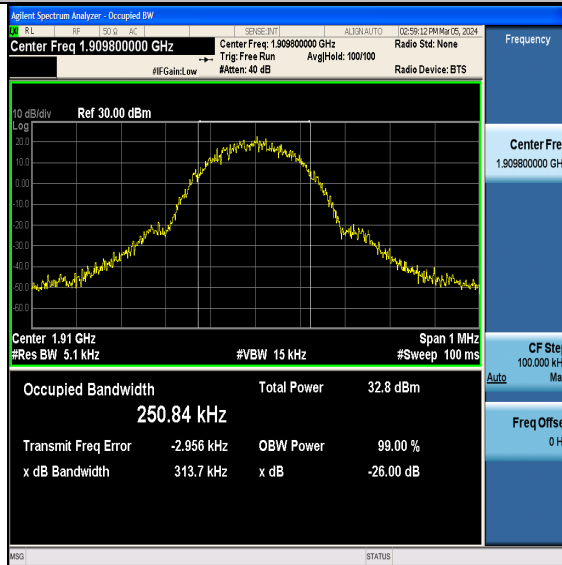
PCS 1900\_EGPRS\_Lowest channel



PCS 1900\_EGPRS\_Middle channel

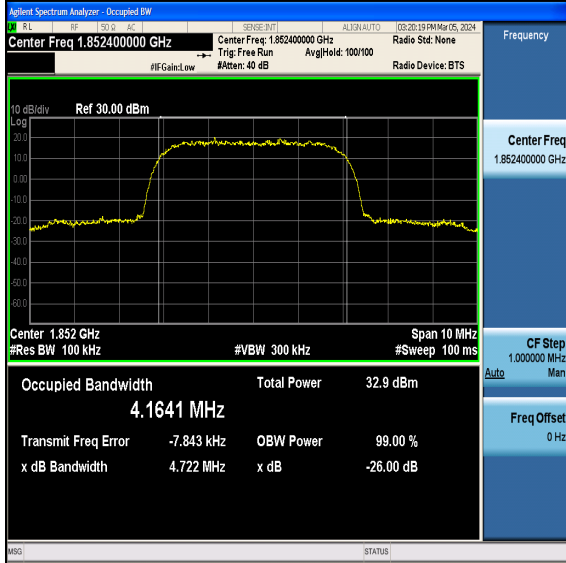


PCS 1900\_EGPRS\_Highest channel

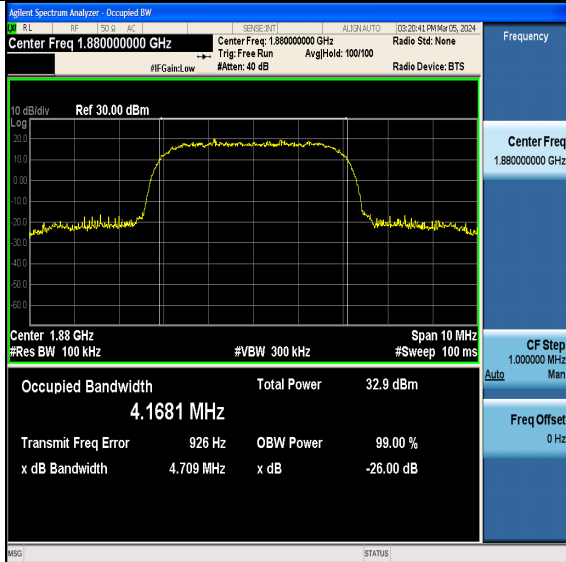




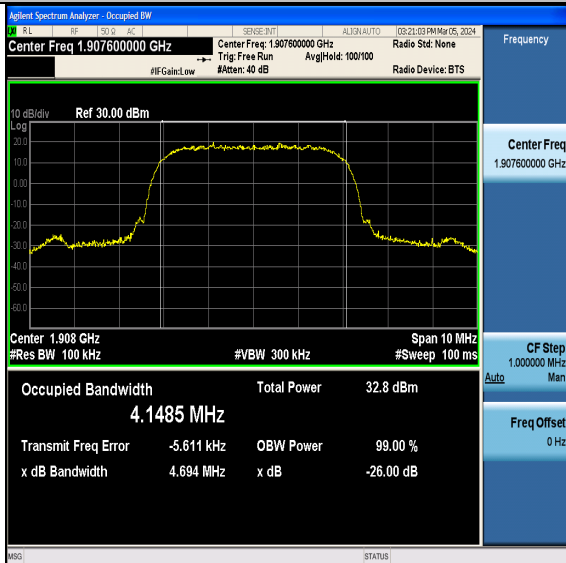
WCDMA Band II\_ WCDMA\_ Lowest channel



WCDMA Band II\_ WCDMA\_ Middle channel



WCDMA Band II\_ WCDMA\_ Highest channel



CTC Laboratories, Inc.

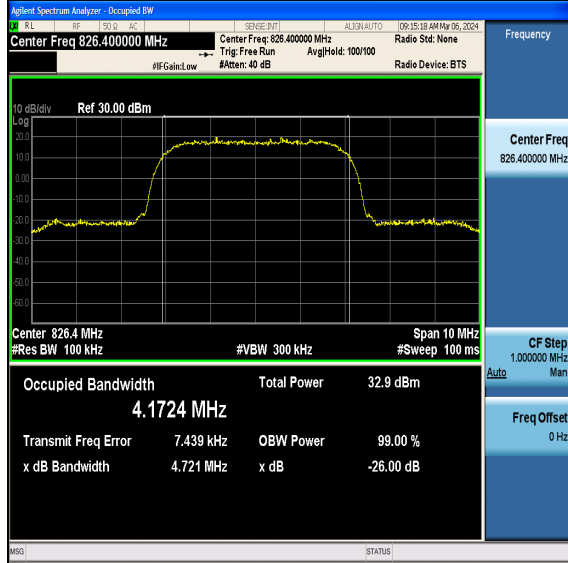
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn  
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

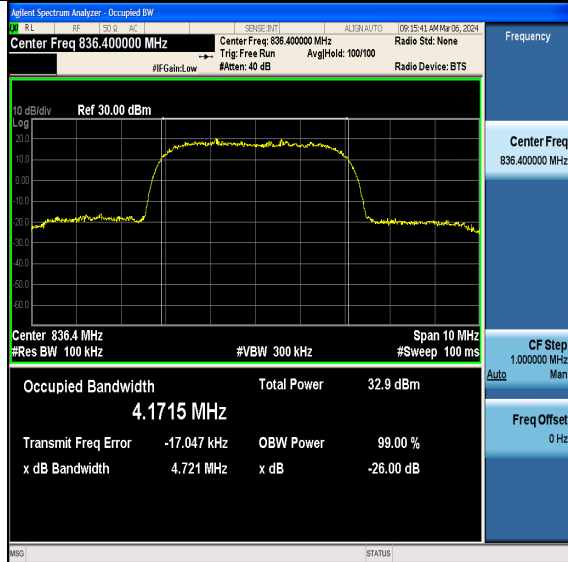




### WCDMA Band V\_ WCDMA\_ Lowest channel



### WCDMA Band V\_ WCDMA\_ Middle channel



### WCDMA Band V\_ WCDMA\_ Highest channel





### 3.4. Out Of Band Emissions

#### LIMIT

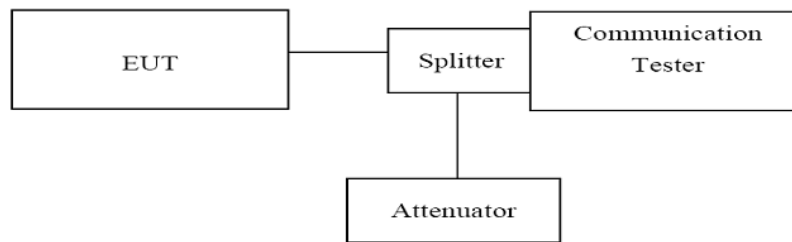
FCC: §22.917, §24.238, §27.53 (h), §90.691

The minimum permissible attenuation level of any spurious emissions is  $43 + 10 \log (P)$  dB where transmitting power (P) in Watts.

RSS132§5.5, RSS133§6.5, RSS139§6.6

The minimum permissible attenuation level of any spurious emissions is  $43 + 10 \log (P)$  dB where transmitting power (P) in Watts.

#### TEST CONFIGURATION



#### TEST PROCEDURE

1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. Sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

#### TEST RESULTS

Remark: we test all modulation type and record worst case at Voice mode for WCDMA, GPRS for GSM.



Band	Channel	Frequency Range(MHz)	Max. Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GPRS850	128	0.009~0.15MHz	0.01	-49.98	-33	PASS
GPRS850	128	0.15~30MHz	0.15	-43.05	-23	PASS
GPRS850	128	30~1000MHz	399.54	-48.79	-13	PASS
GPRS850	128	1000~10000MHz	1648.9	-36.67	-13	PASS
GPRS850	190	0.009~0.15MHz	0.01	-49.68	-33	PASS
GPRS850	190	0.15~30MHz	0.16	-44.56	-23	PASS
GPRS850	190	30~1000MHz	418.87	-48.33	-13	PASS
GPRS850	190	1000~10000MHz	1673.5	-31.36	-13	PASS
GPRS850	251	0.009~0.15MHz	0.01	-49.11	-33	PASS
GPRS850	251	0.15~30MHz	0.16	-45.05	-23	PASS
GPRS850	251	30~1000MHz	397.21	-48.54	-13	PASS
GPRS850	251	1000~10000MHz	2546.5	-36.69	-13	PASS
EGPRS850	128	0.009~0.15MHz	0.01	-49.6	-33	PASS
EGPRS850	128	0.15~30MHz	0.15	-44.42	-23	PASS
EGPRS850	128	30~1000MHz	428.22	-48.17	-13	PASS
EGPRS850	128	1000~10000MHz	1648.3	-39.29	-13	PASS
EGPRS850	190	0.009~0.15MHz	0.01	-49.35	-33	PASS
EGPRS850	190	0.15~30MHz	0.15	-43.33	-23	PASS
EGPRS850	190	30~1000MHz	988.85	-48.14	-13	PASS
EGPRS850	190	1000~10000MHz	1672.9	-43.94	-13	PASS
EGPRS850	251	0.009~0.15MHz	0.01	-49.93	-33	PASS
EGPRS850	251	0.15~30MHz	0.15	-43.65	-23	PASS
EGPRS850	251	30~1000MHz	420.23	-47.97	-13	PASS
EGPRS850	251	1000~10000MHz	1697.5	-42.62	-13	PASS
GPRS1900	512	0.009~0.15MHz	0.01	-49.79	-43	PASS
GPRS1900	512	0.15~30MHz	0.15	-43.97	-33	PASS
GPRS1900	512	30~1000MHz	799.11	-45.5	-13	PASS
GPRS1900	512	1000~3000MHz	2643.8	-37.83	-13	PASS
GPRS1900	512	3000~18000MHz	16791	-46.82	-13	PASS
GPRS1900	661	0.009~0.15MHz	0.01	-49.93	-43	PASS
GPRS1900	661	0.15~30MHz	0.16	-45.13	-33	PASS
GPRS1900	661	30~1000MHz	412.15	-45.53	-13	PASS
GPRS1900	661	1000~3000MHz	2639.33	-37.92	-13	PASS
GPRS1900	661	3000~18000MHz	3760	-46.63	-13	PASS
GPRS1900	810	0.009~0.15MHz	0.01	-50.03	-43	PASS
GPRS1900	810	0.15~30MHz	0.15	-42	-33	PASS
GPRS1900	810	30~1000MHz	421.75	-45.43	-13	PASS
GPRS1900	810	1000~3000MHz	2641.67	-37.81	-13	PASS
GPRS1900	810	3000~18000MHz	16784.5	-46.73	-13	PASS
EGPRS1900	512	0.009~0.15MHz	0.01	-49.05	-43	PASS
EGPRS1900	512	0.15~30MHz	0.15	-44.04	-33	PASS
EGPRS1900	512	30~1000MHz	402.64	-45.58	-13	PASS

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China: [yz.cnca.cn](http://yz.cnca.cn)



EGPRS1900	512	1000~3000MHz	2703.6	-37.79	-13	PASS
EGPRS1900	512	3000~18000MHz	16764	-46.93	-13	PASS
EGPRS1900	661	0.009~0.15MHz	0.01	-50.06	-43	PASS
EGPRS1900	661	0.15~30MHz	0.16	-44.78	-33	PASS
EGPRS1900	661	30~1000MHz	401.38	-45.48	-13	PASS
EGPRS1900	661	1000~3000MHz	2683.33	-37.83	-13	PASS
EGPRS1900	661	3000~18000MHz	16777	-46.65	-13	PASS
EGPRS1900	810	0.009~0.15MHz	0.01	-49.69	-43	PASS
EGPRS1900	810	0.15~30MHz	0.15	-43.27	-33	PASS
EGPRS1900	810	30~1000MHz	404.26	-45.55	-13	PASS
EGPRS1900	810	1000~3000MHz	2644.53	-37.87	-13	PASS
EGPRS1900	810	3000~18000MHz	16776.5	-46.63	-13	PASS
Band2	9262	0.15~30MHz	0.15	-47.46	-33	PASS
Band2	9262	30~1000MHz	885.54	-49.69	-13	PASS
Band2	9262	1000~20000MHz	16788.05	-39.59	-13	PASS
Band2	9400	0.15~30MHz	0.18	-50.52	-33	PASS
Band2	9400	30~1000MHz	876.33	-49.72	-13	PASS
Band2	9400	1000~20000MHz	16796.6	-39.8	-13	PASS
Band2	9538	0.15~30MHz	0.15	-47.46	-33	PASS
Band2	9262	0.009~0.15MHz	0.01	-53.34	-43	PASS
Band2	9400	0.009~0.15MHz	0.01	-50.78	-43	PASS
Band2	9538	0.009~0.15MHz	0.01	-53.99	-43	PASS
Band2	9538	30~1000MHz	395.69	-49.67	-13	PASS
Band2	9538	1000~20000MHz	16784.73	-39.61	-13	PASS
Band5	4132	0.009~0.15MHz	0.01	-53.8	-33	PASS
Band5	4132	0.15~30MHz	0.15	-50.56	-23	PASS
Band5	4132	30~1000MHz	390.36	-59.02	-13	PASS
Band5	4132	1000~10000MHz	6121.45	-45.29	-13	PASS
Band5	4182	0.009~0.15MHz	0.01	-54.23	-33	PASS
Band5	4182	0.15~30MHz	0.15	-48.71	-23	PASS
Band5	4182	30~1000MHz	408.79	-58.83	-13	PASS
Band5	4182	1000~10000MHz	5583.7	-45.13	-13	PASS
Band5	4233	0.009~0.15MHz	0.01	-50.94	-33	PASS
Band5	4233	0.15~30MHz	0.15	-46.49	-23	PASS
Band5	4233	30~1000MHz	411.7	-58.48	-13	PASS
Band5	4233	1000~10000MHz	9451.9	-45.21	-13	PASS

CTC Laboratories, Inc.

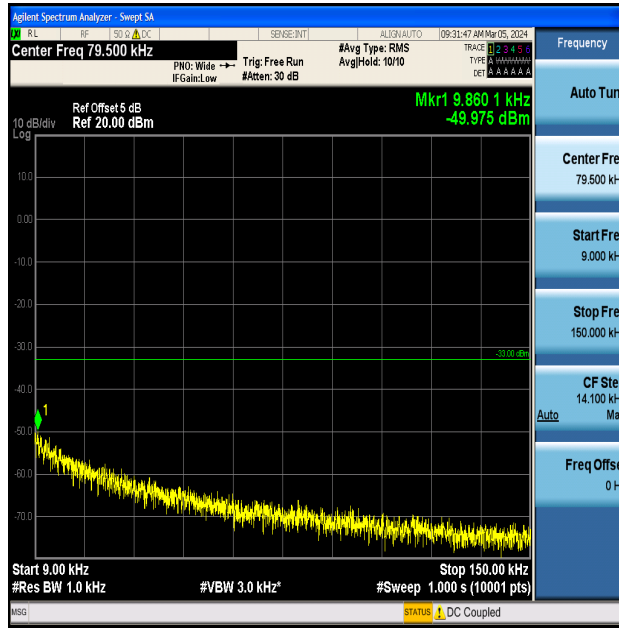
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

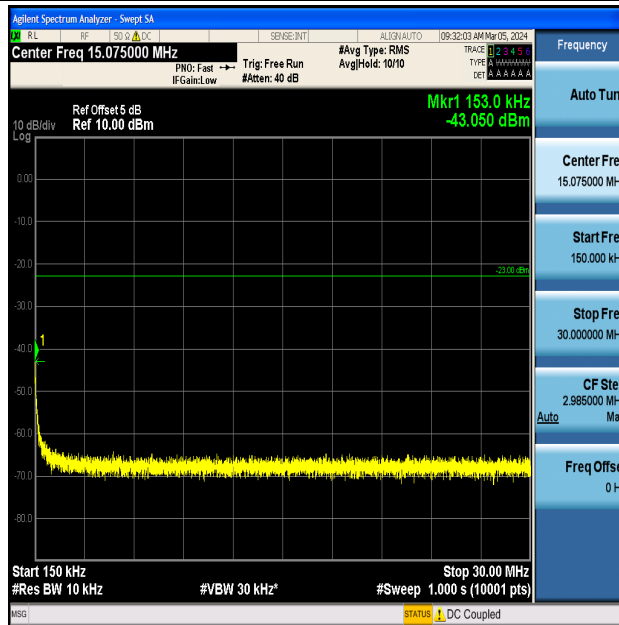
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

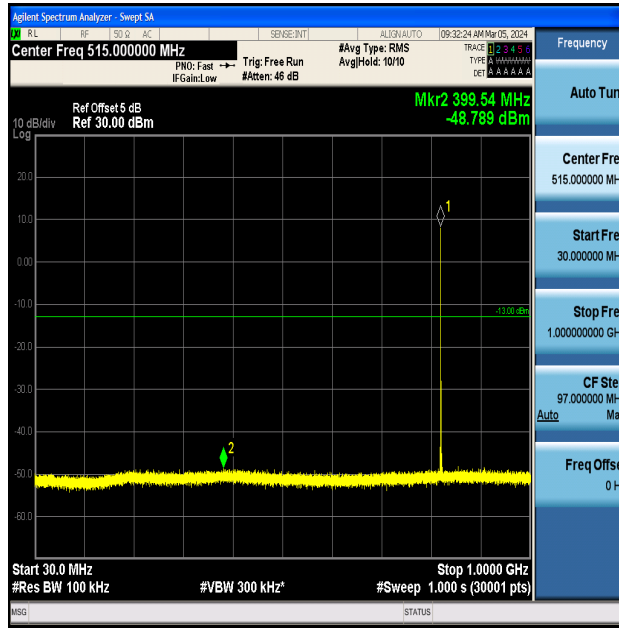
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



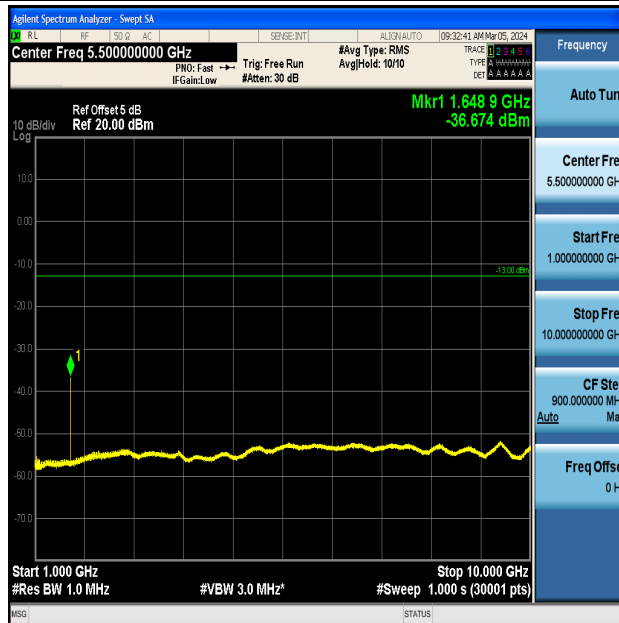
GPRS850-128-5-0.009~0.15MHz-PASS



GPRS850-128-5-0.15~30MHz-PASS

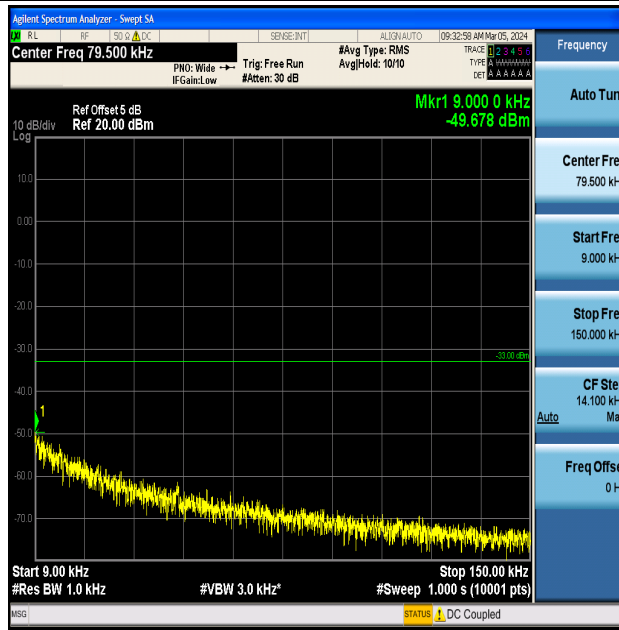


GPRS850-128-5-30~1000MHz-PASS

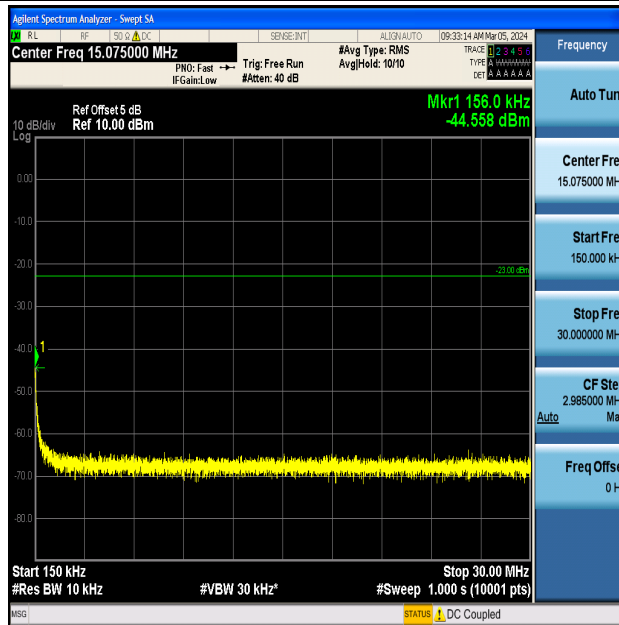


GPRS850-128-5-1000~10000MHz-PASS

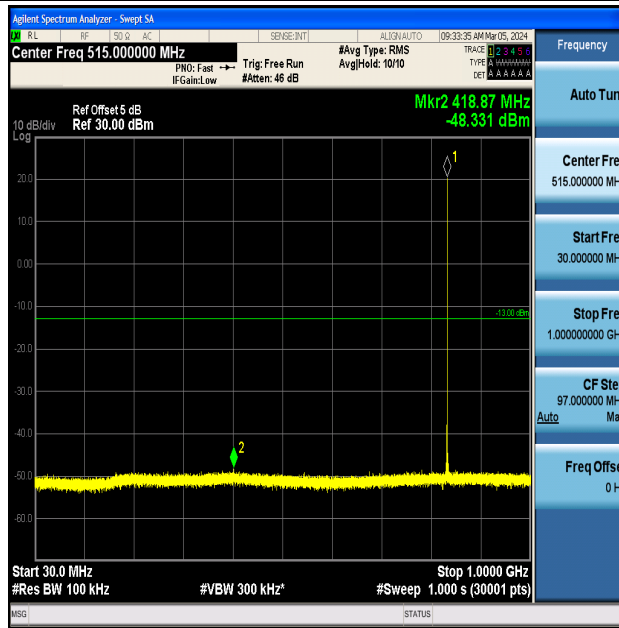




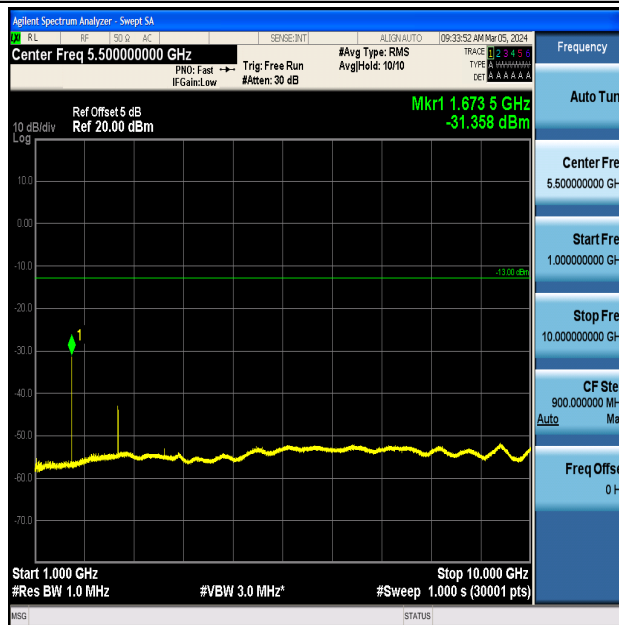
GPRS850-190-5-0.009~0.15MHz-PASS



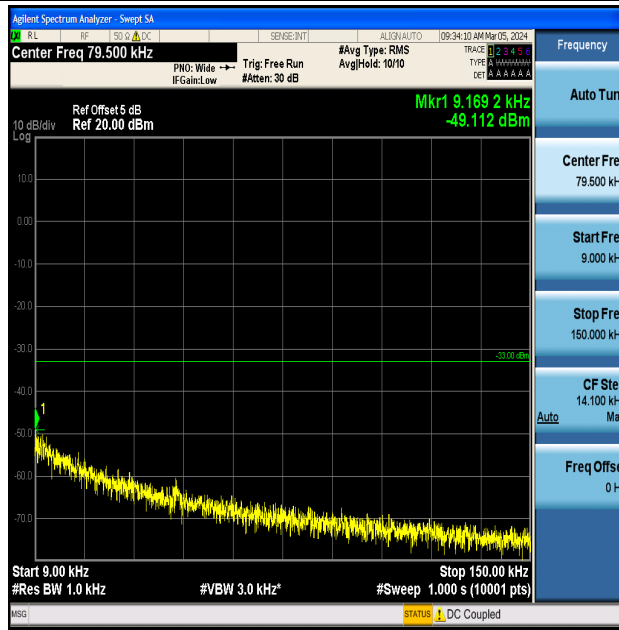
GPRS850-190-5-0.15~30MHz-PASS



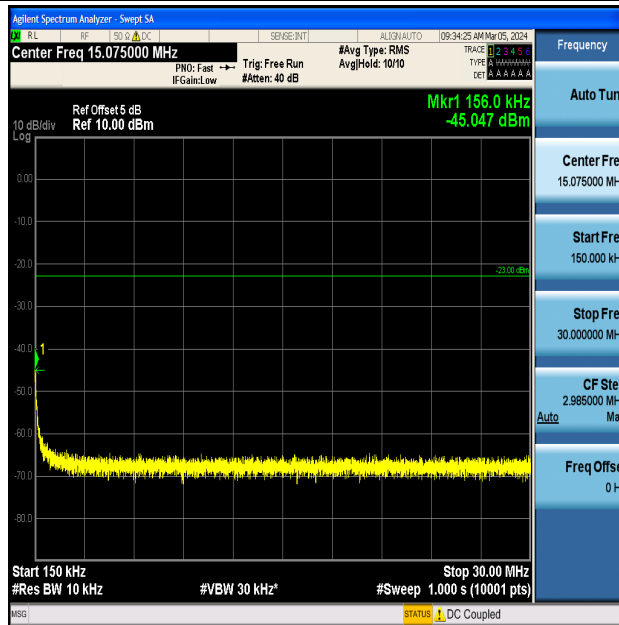
GPRS850-190-5-30~1000MHz-PASS



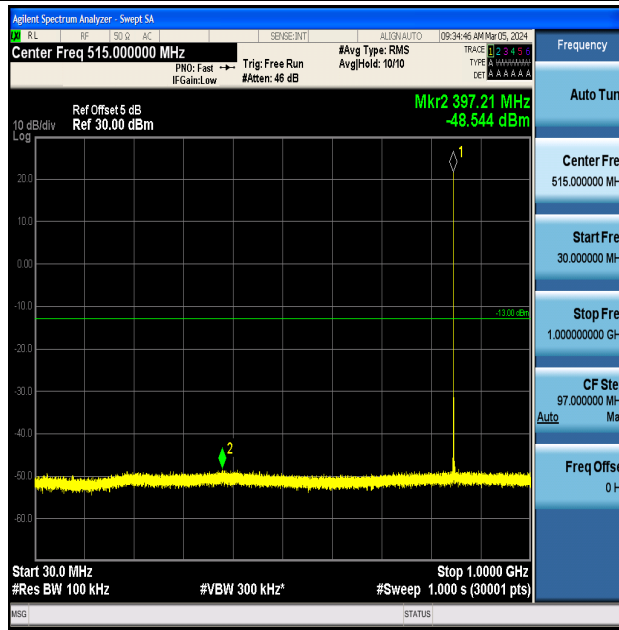
GPRS850-190-5-1000~10000MHz-PASS



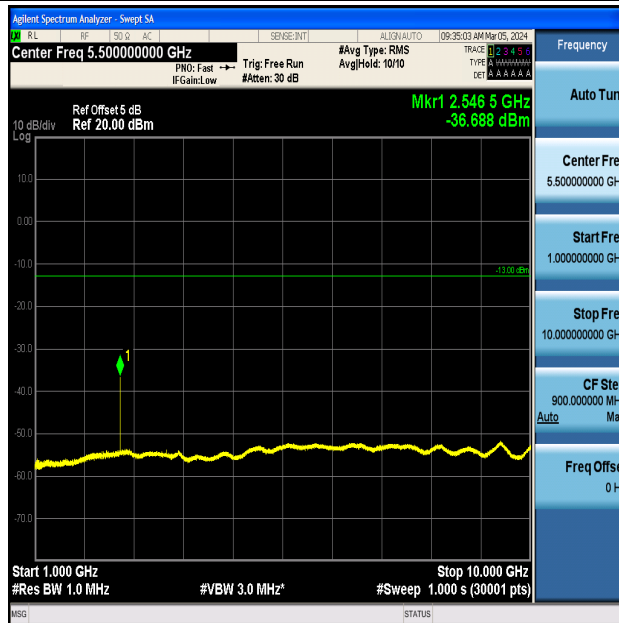
GPRS850-251-5-0.009~0.15MHz-PASS



GPRS850-251-5-0.15~30MHz-PASS



GPRS850-251-5-30~1000MHz-PASS



GPRS850-251-5-1000~10000MHz-PASS

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

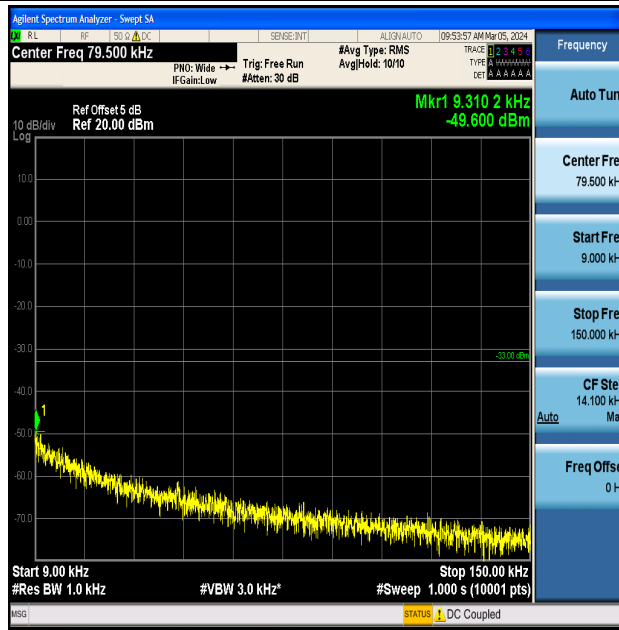
Tel.: (86)755-27521059

Fax: (86)755-27521011

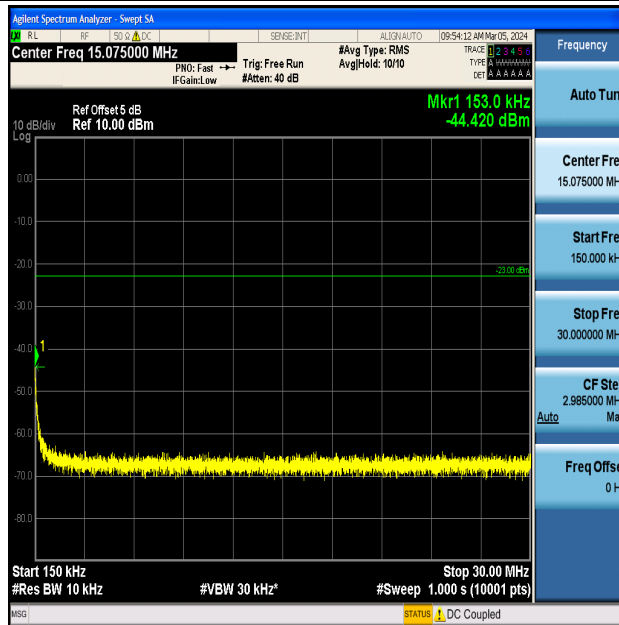
Http://www.sz-ctc.org.cn



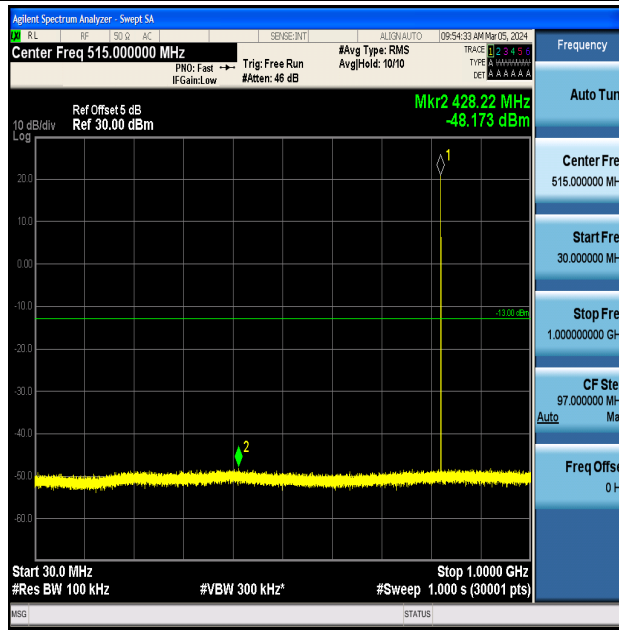
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



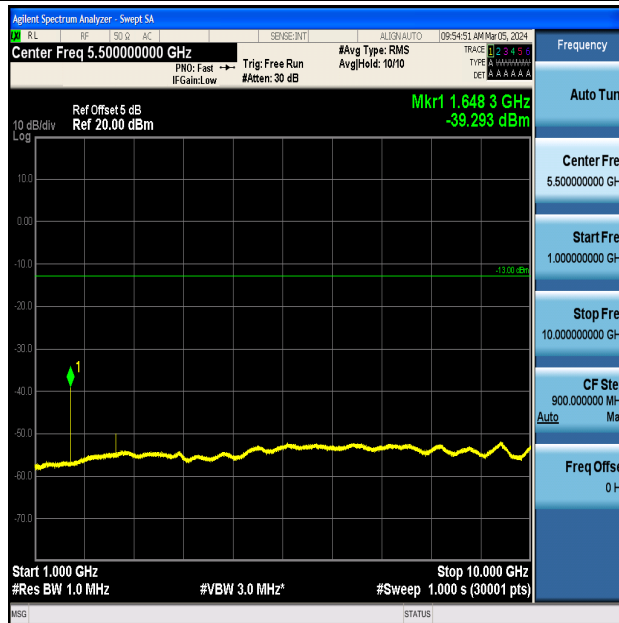
EGPRS850-128-8-0.009~0.15MHz-PASS



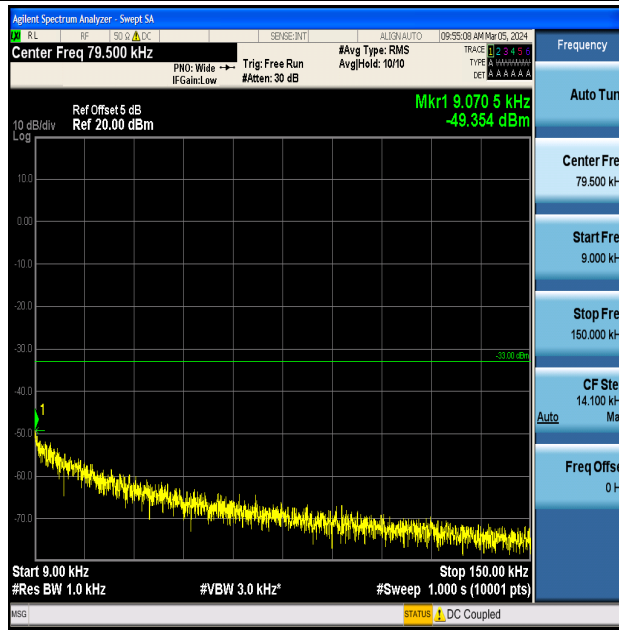
EGPRS850-128-8-0.15~30MHz-PASS



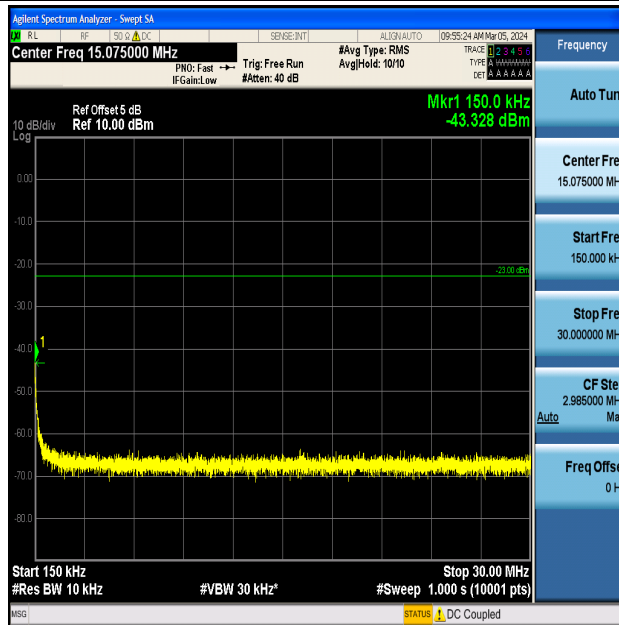
EGPRS850-128-8-30~1000MHz-PASS



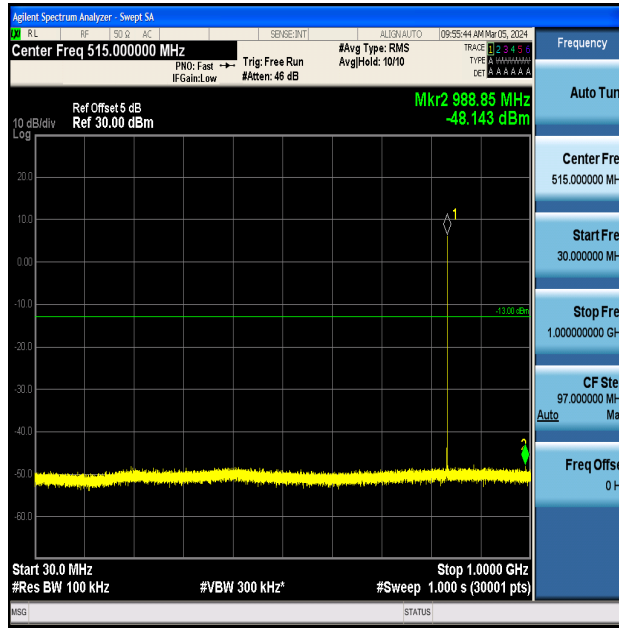
EGPRS850-128-8-1000~10000MHz-PASS



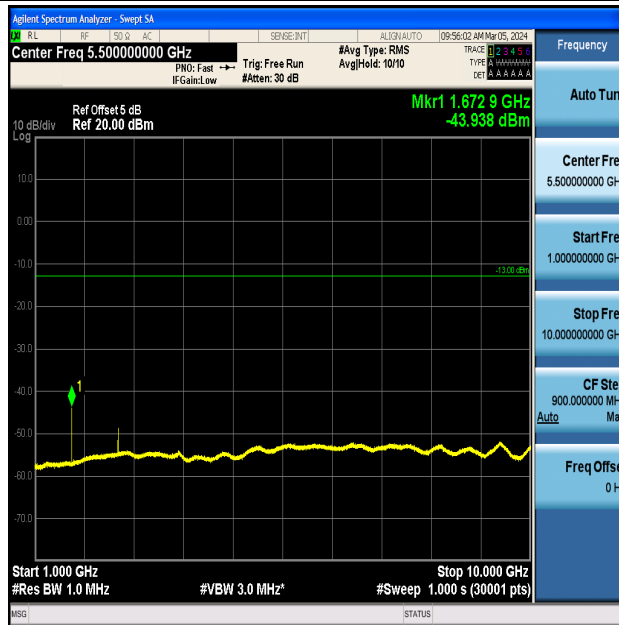
EGPRS850-190-8-0.009~0.15MHz-PASS



EGPRS850-190-8-0.15~30MHz-PASS



EGPRS850-190-8-30~1000MHz-PASS



EGPRS850-190-8-1000~10000MHz-PASS

CTC Laboratories, Inc.

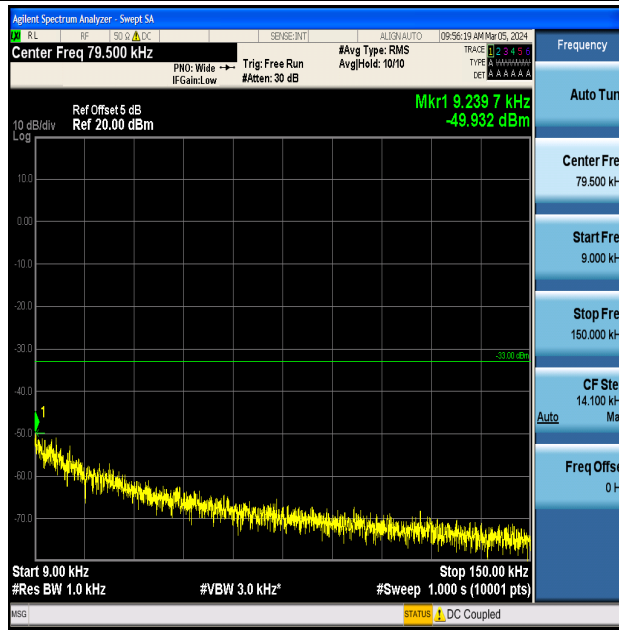
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

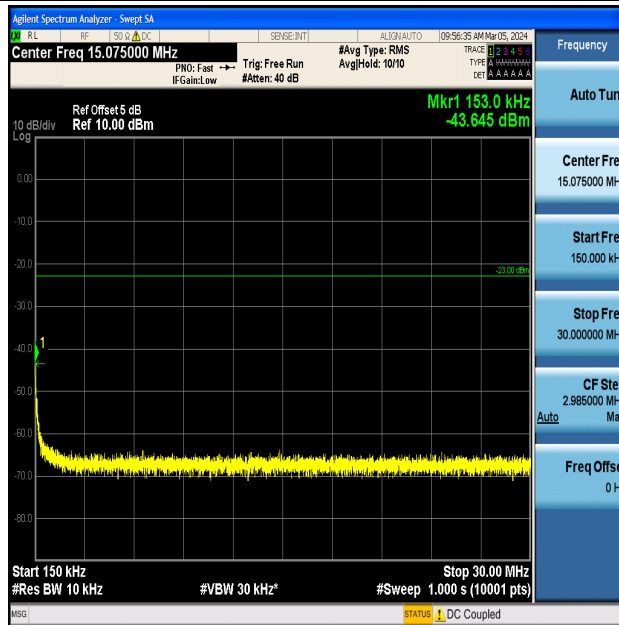


For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

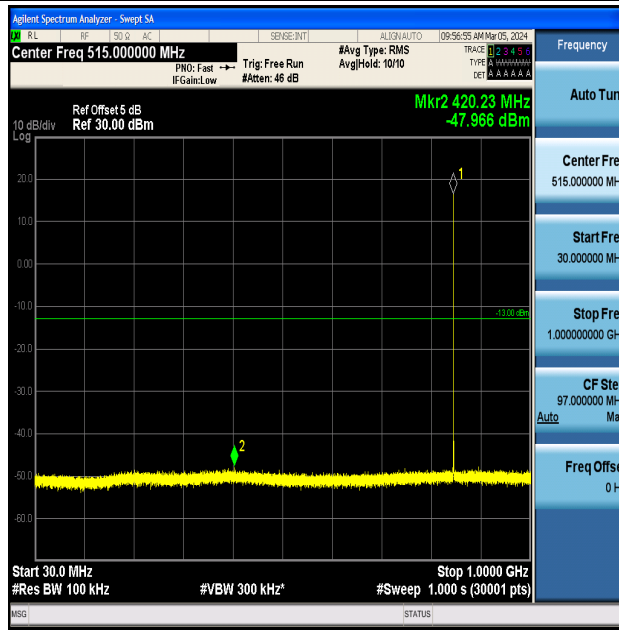




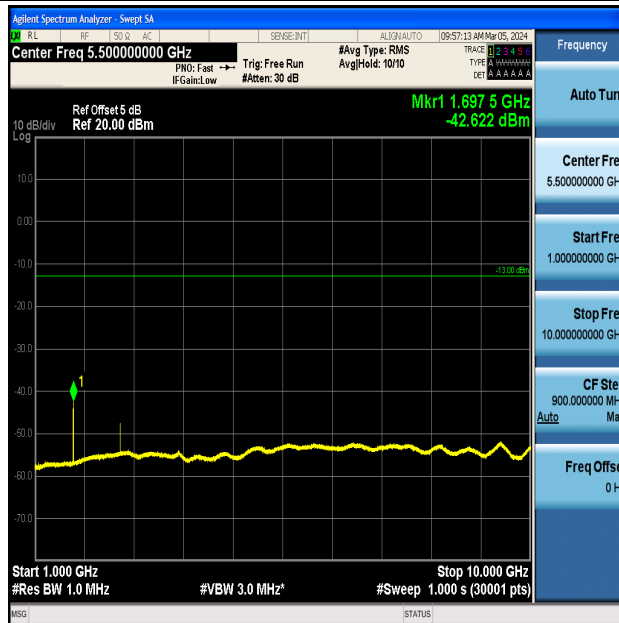
EGPRS850-251-8-0.009~0.15MHz-PASS



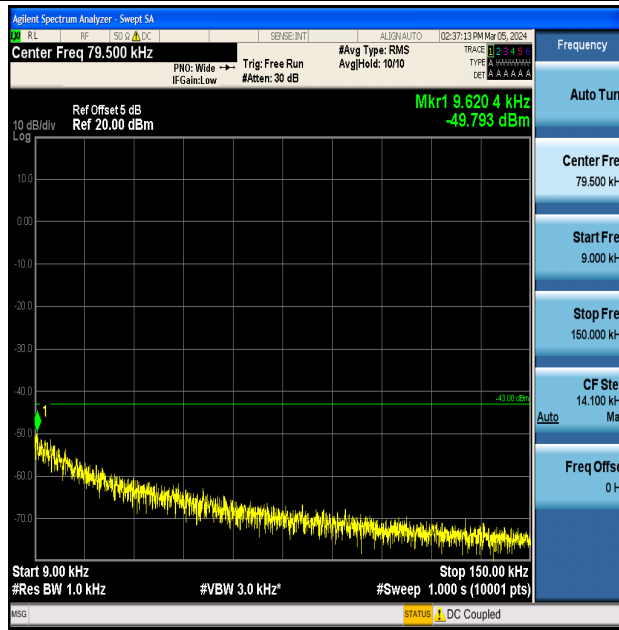
EGPRS850-251-8-0.15~30MHz-PASS



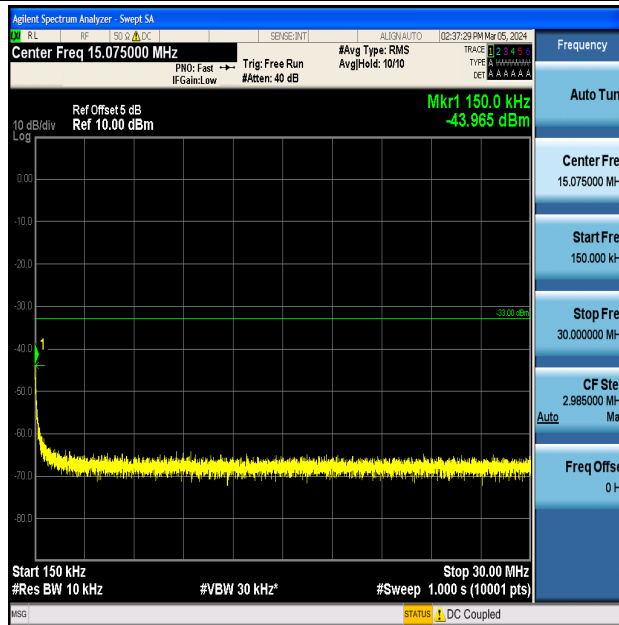
EGPRS850-251-8-30~1000MHz-PASS



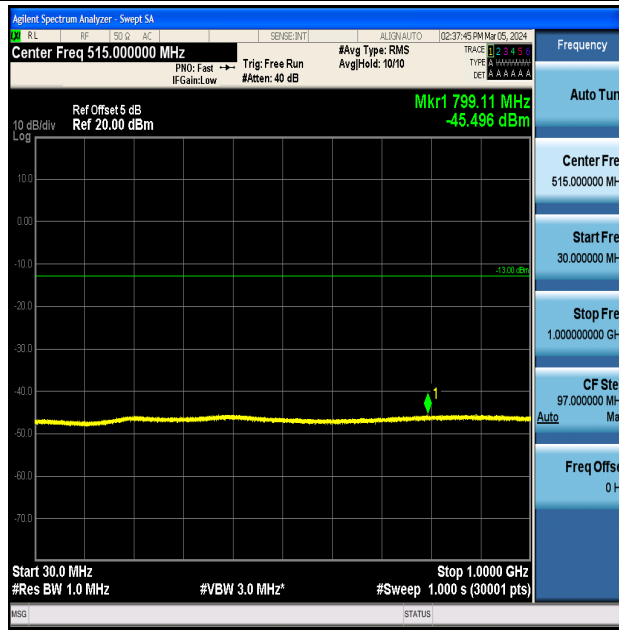
EGPRS850-251-8-1000~10000MHz-PASS



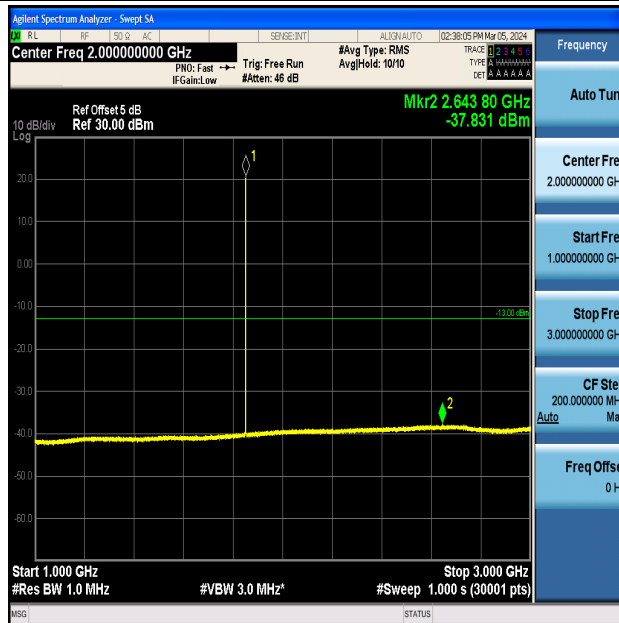
GPRS1900-512-0-0.009~0.15MHz-PASS



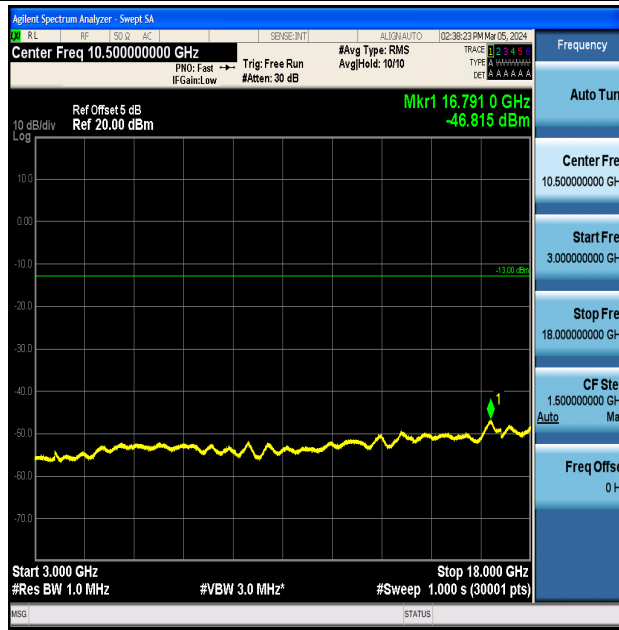
GPRS1900-512-0-0.15~30MHz-PASS



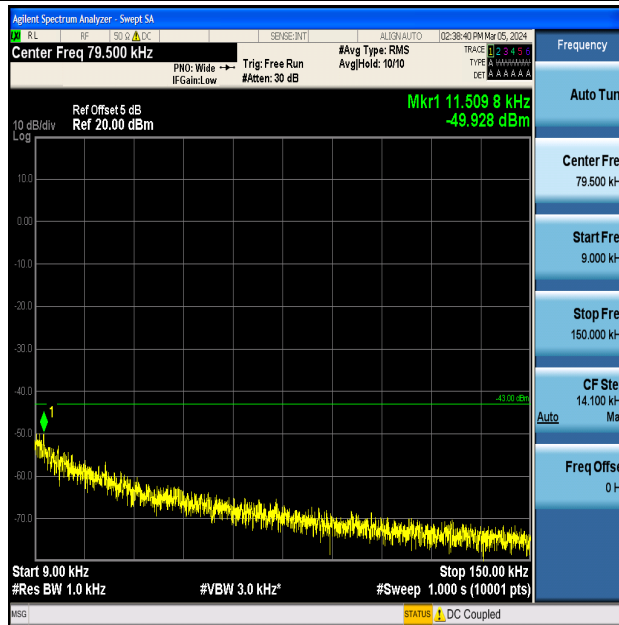
GPRS1900-512-0-30~1000MHz-PASS



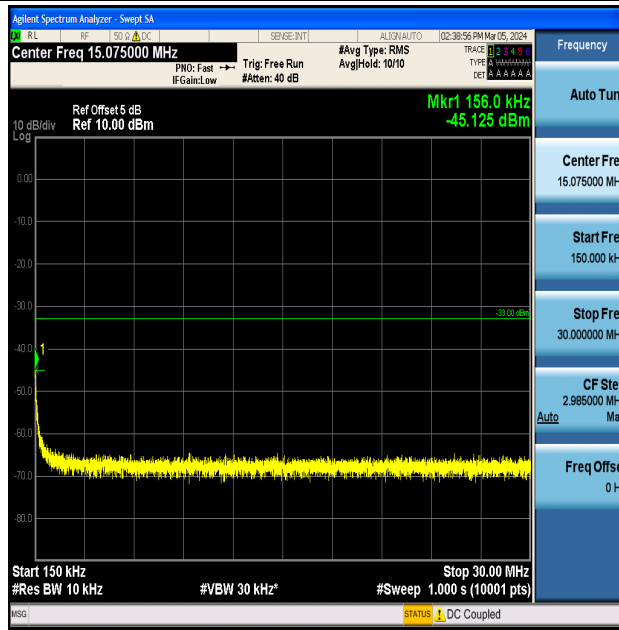
GPRS1900-512-0-1000~3000MHz-PASS



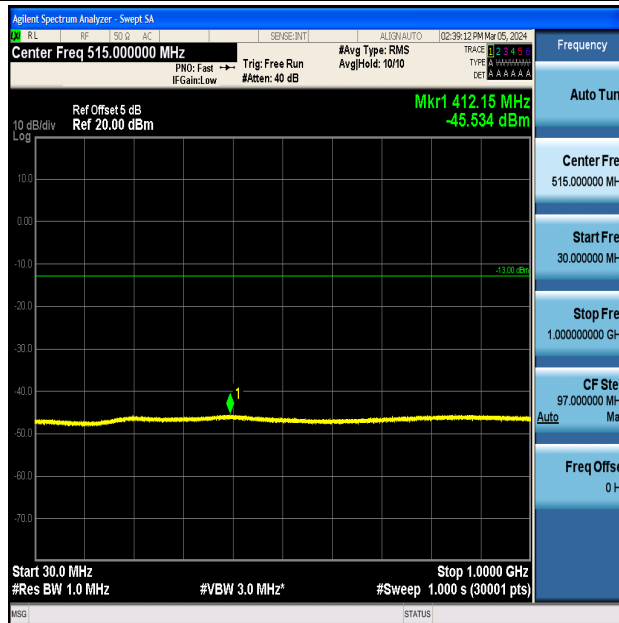
GPRS1900-512-0-3000~18000MHz-PASS



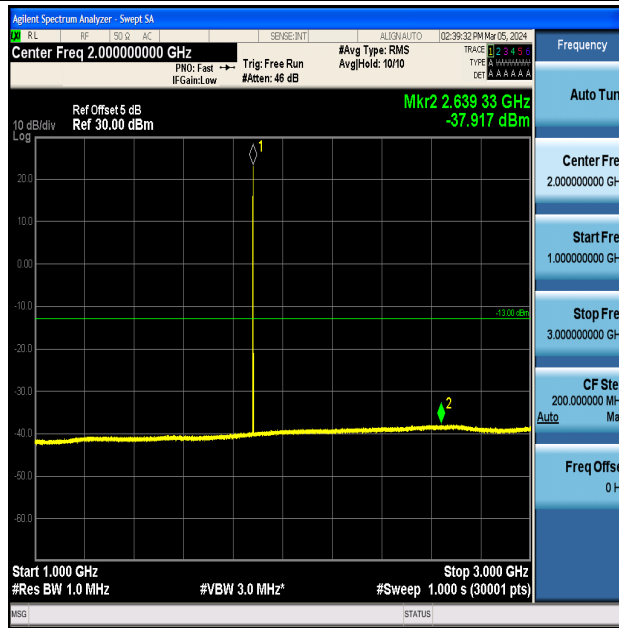
GPRS1900-661-0-0.009~0.15MHz-PASS



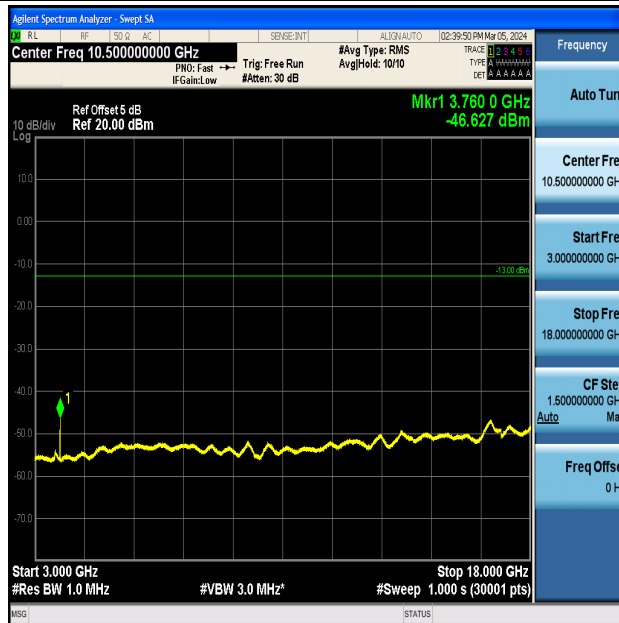
GPRS1900-661-0-0.15~30MHz-PASS



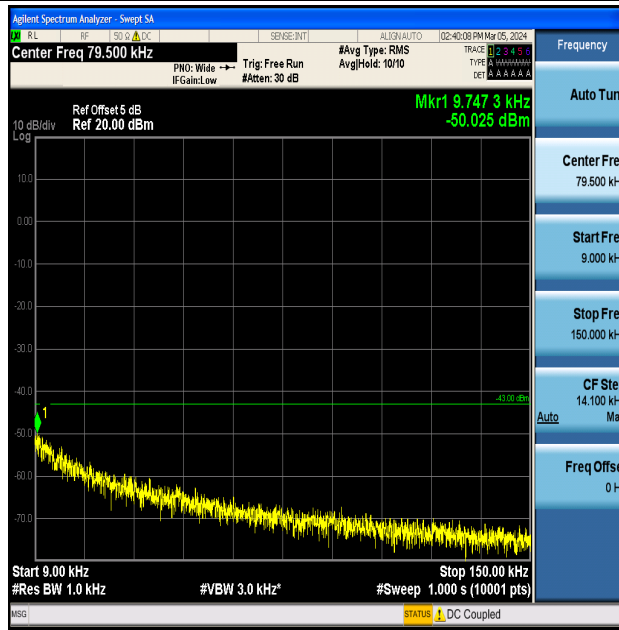
GPRS1900-661-0-30~1000MHz-PASS



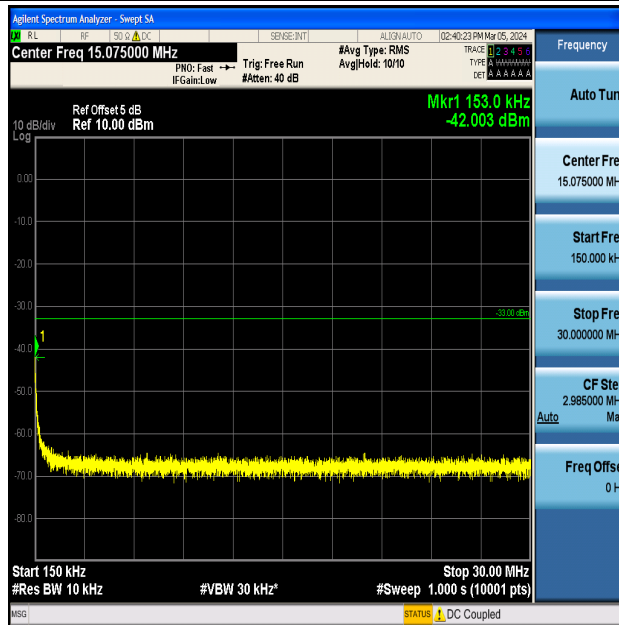
GPRS1900-661-0-1000~3000MHz-PASS



GPRS1900-661-0-3000~18000MHz-PASS

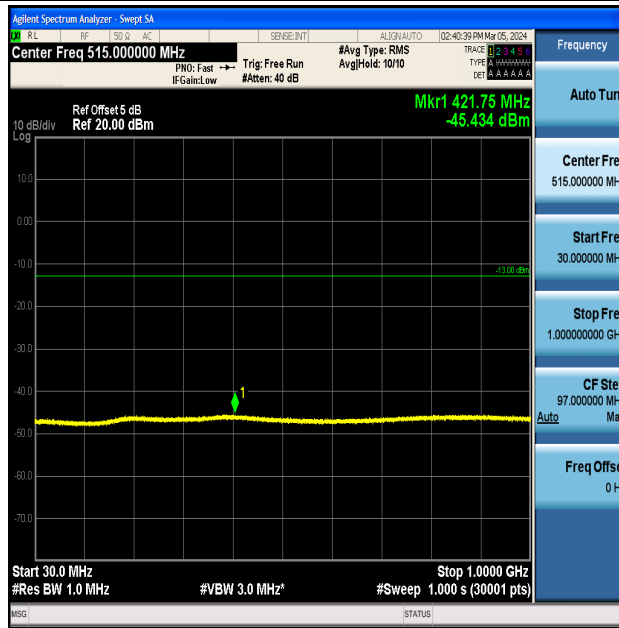


GPRS1900-810-0-0.009~0.15MHz-PASS

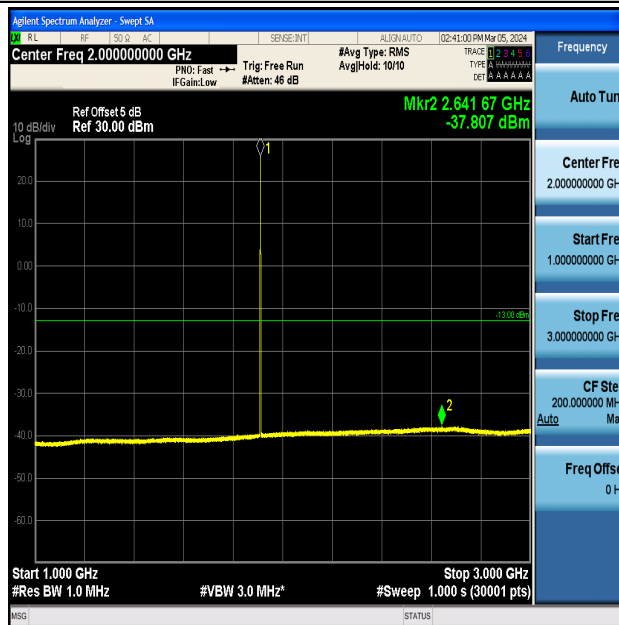


GPRS1900-810-0-0.15~30MHz-PASS

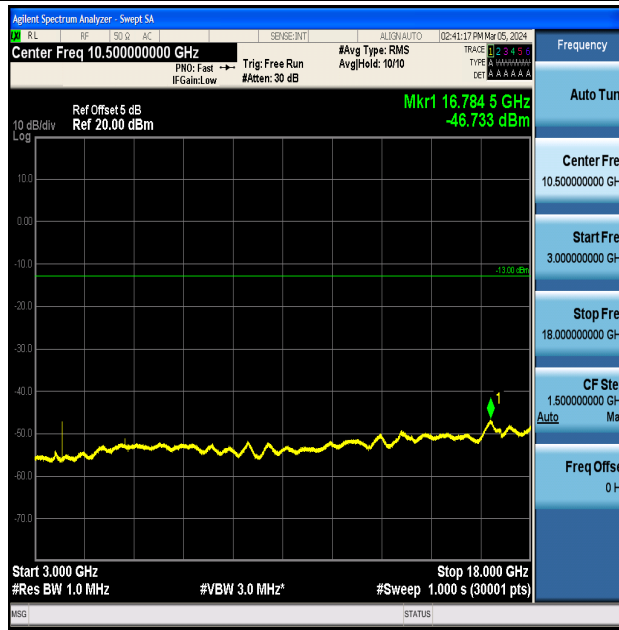




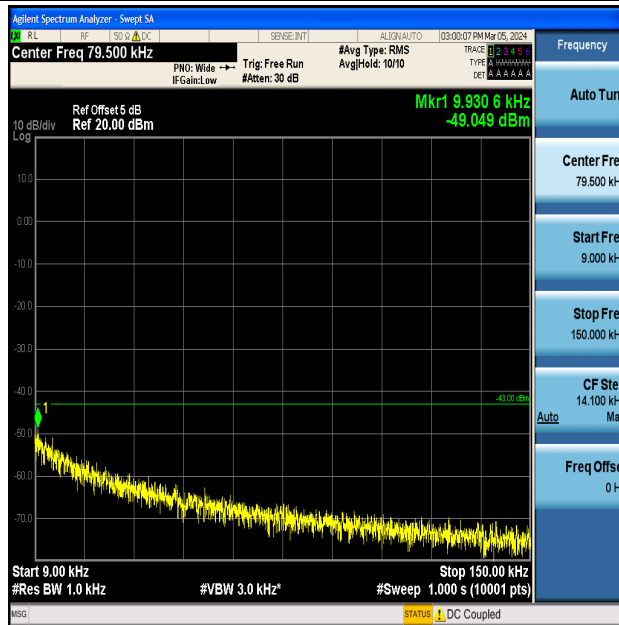
GPRS1900-810-0-30~1000MHz-PASS



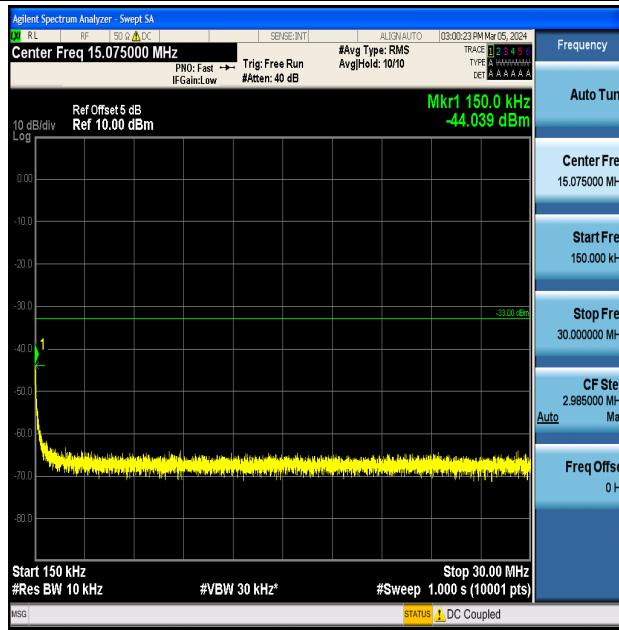
GPRS1900-810-0-1000~3000MHz-PASS



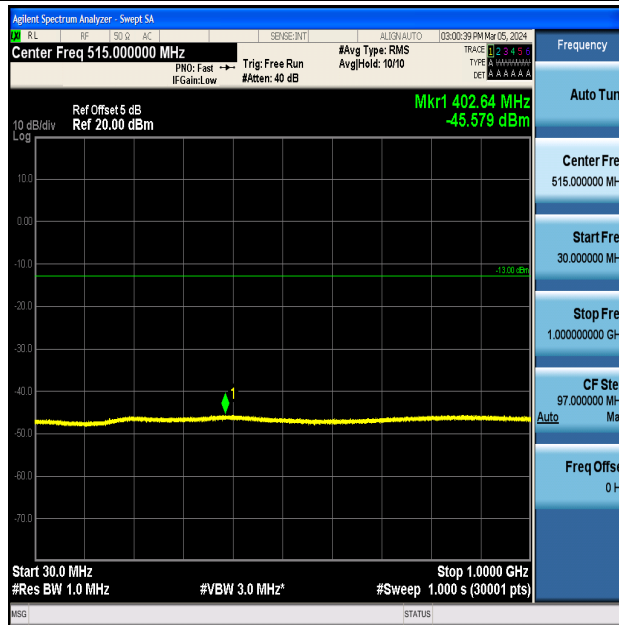
GPRS1900-810-0-3000~18000MHz-PASS



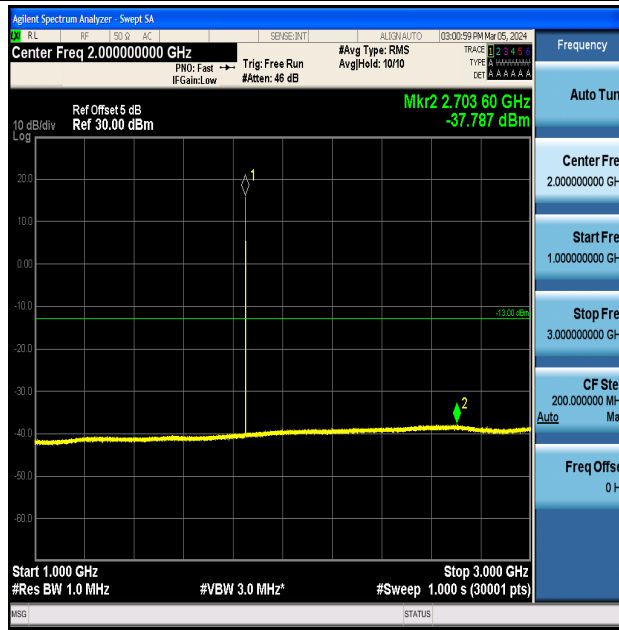
EGPRS1900-512-2-0.009~0.15MHz-PASS



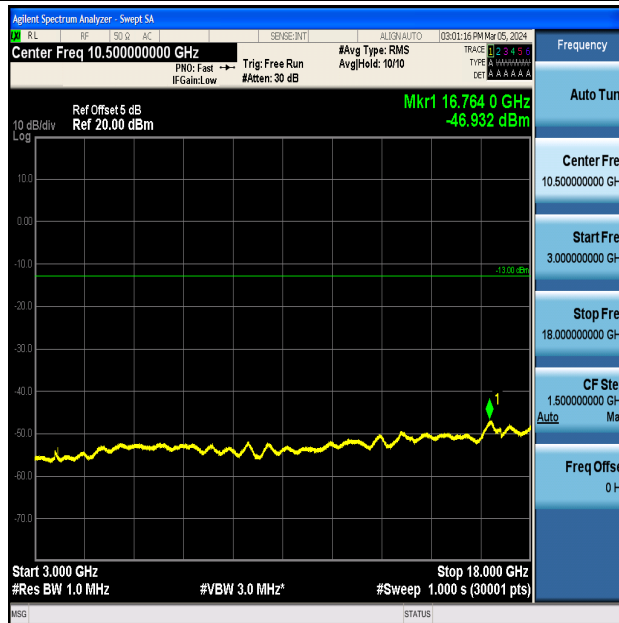
EGPRS1900-512-2-0.15~30MHz-PASS



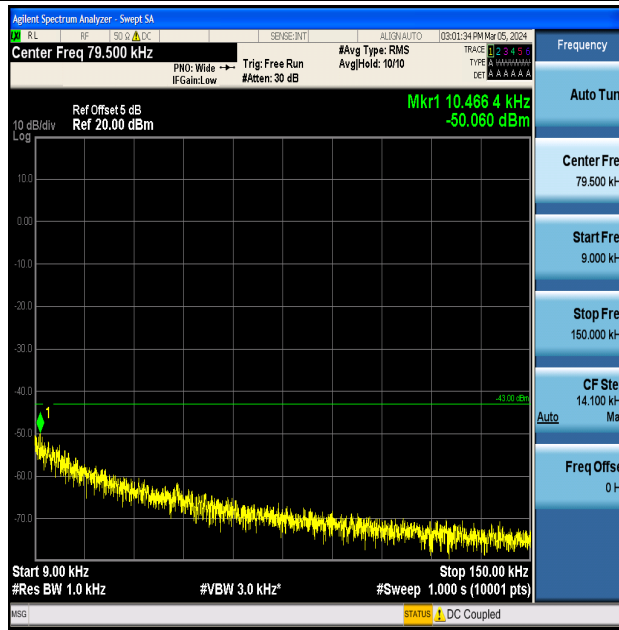
EGPRS1900-512-2-30~1000MHz-PASS



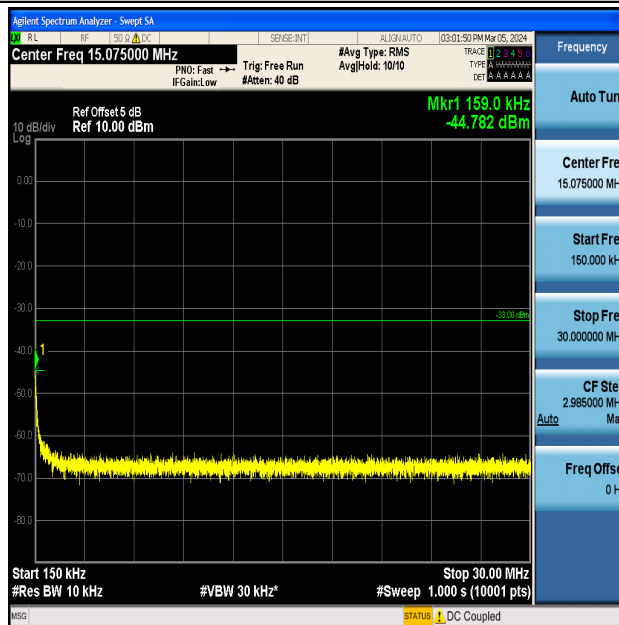
EGPRS1900-512-2-1000~3000MHz-PASS



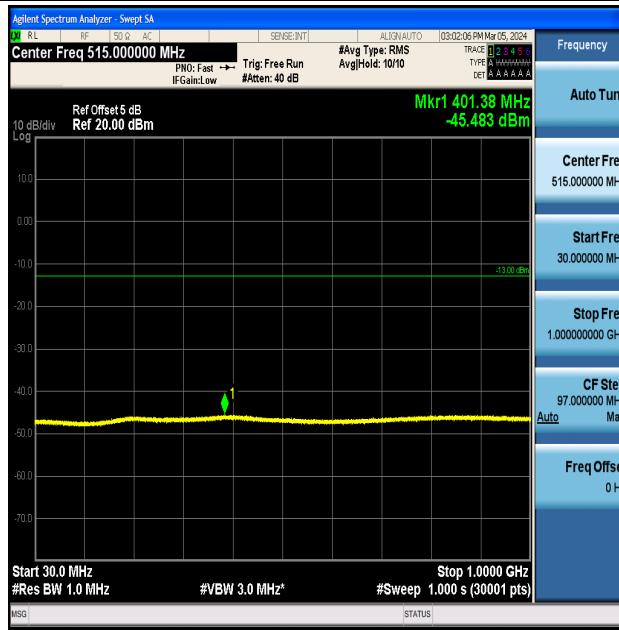
EGPRS1900-512-2-3000~18000MHz-PASS



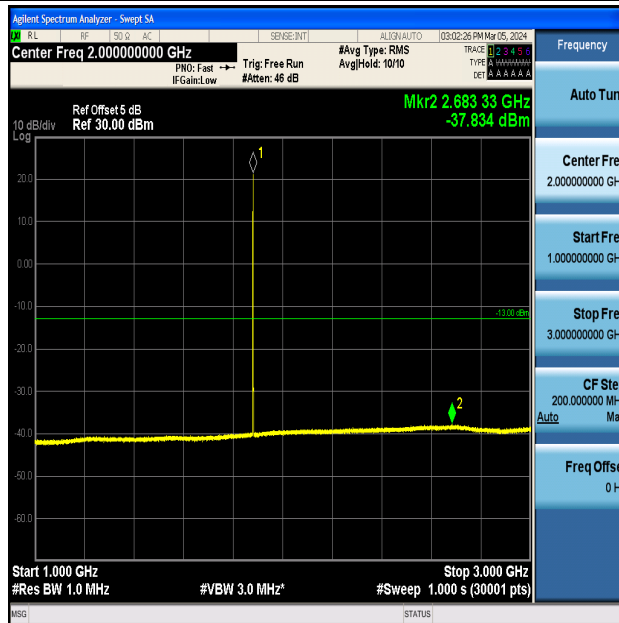
EGPRS1900-661-2-0.009~0.15MHz-PASS



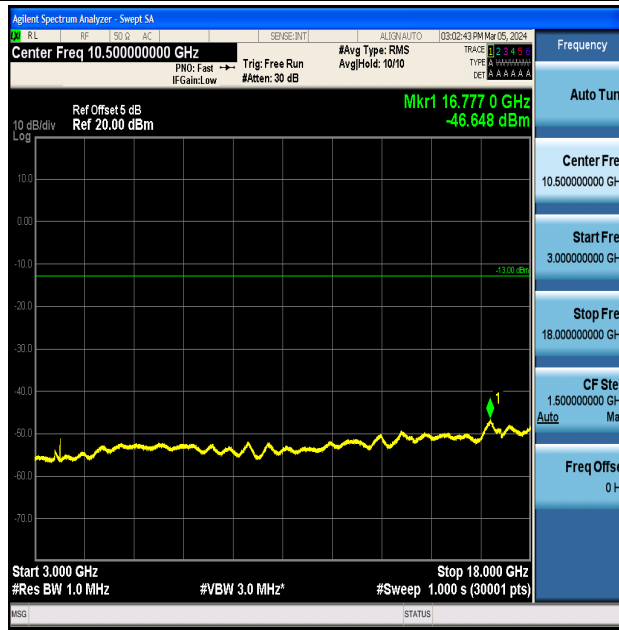
EGPRS1900-661-2-0.15~30MHz-PASS



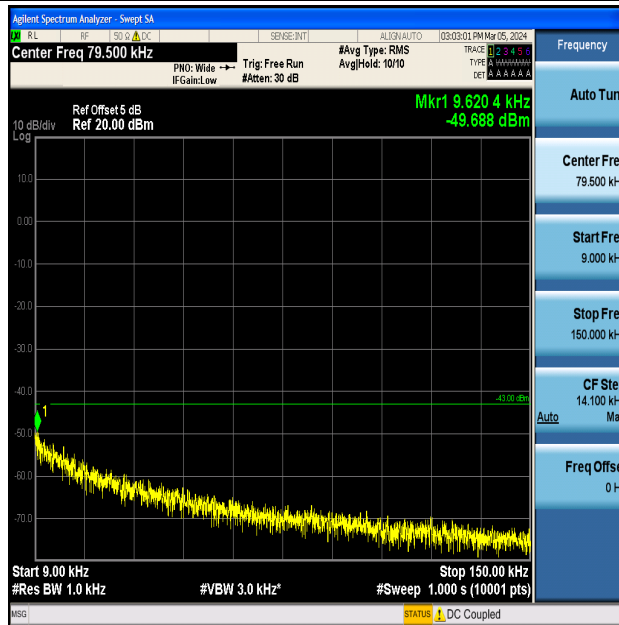
EGPRS1900-661-2-30~1000MHz-PASS



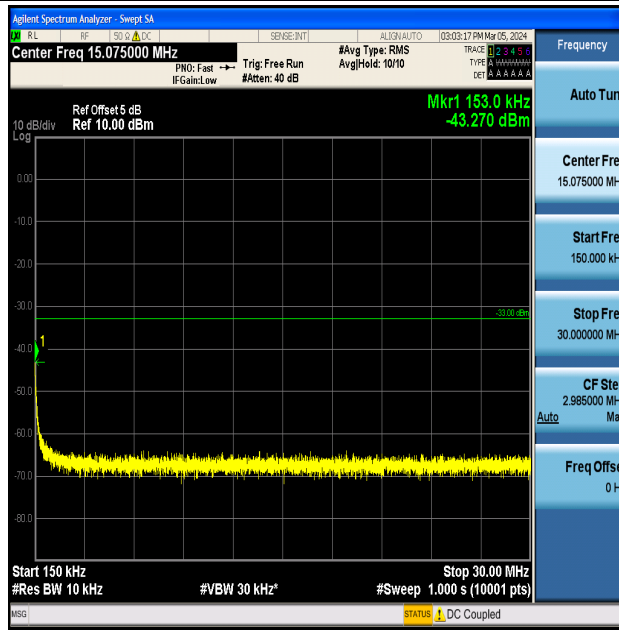
EGPRS1900-661-2-1000~3000MHz-PASS



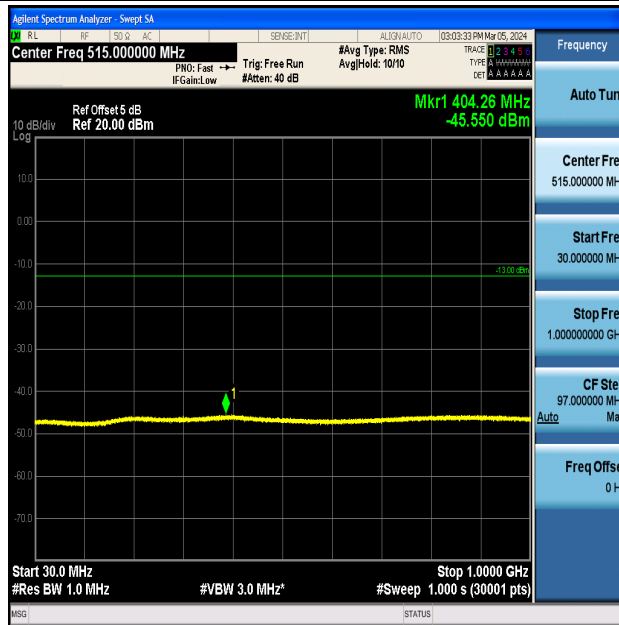
EGPRS1900-661-2-3000~18000MHz-PASS



EGPRS1900-810-2-0.009~0.15MHz-PASS

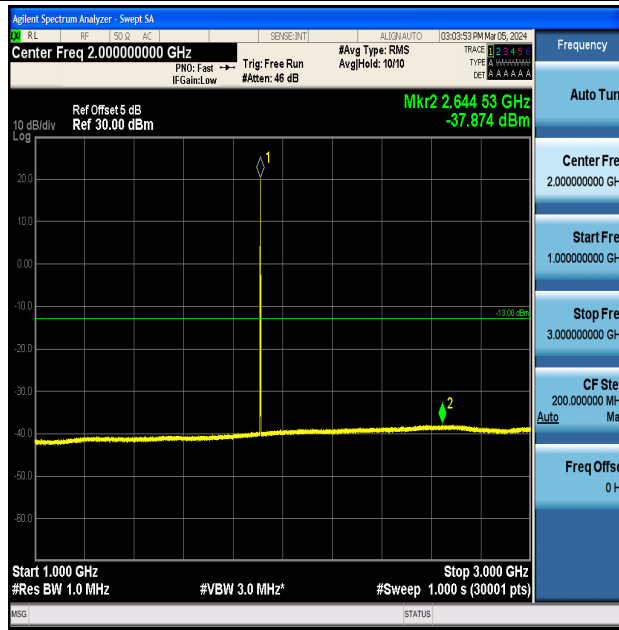


EGPRS1900-810-2-0.15~30MHz-PASS

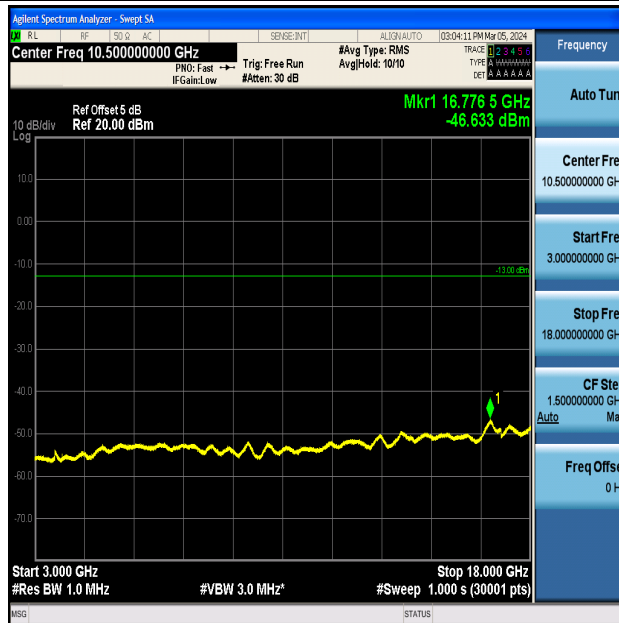


EGPRS1900-810-2-30~1000MHz-PASS

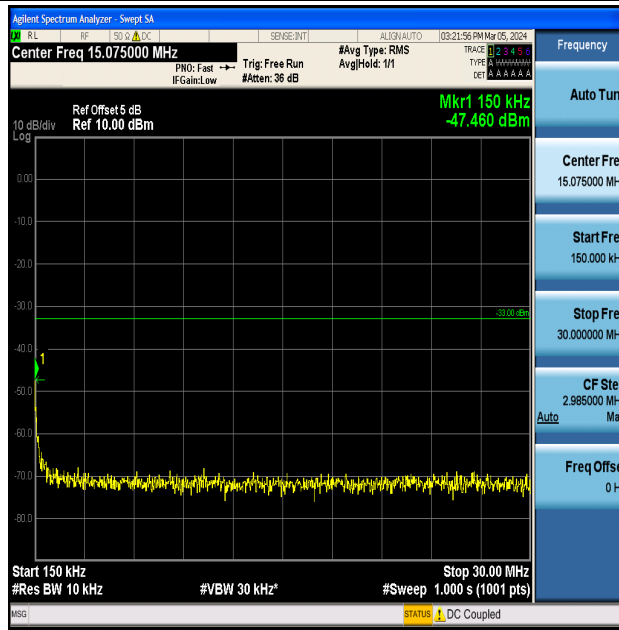




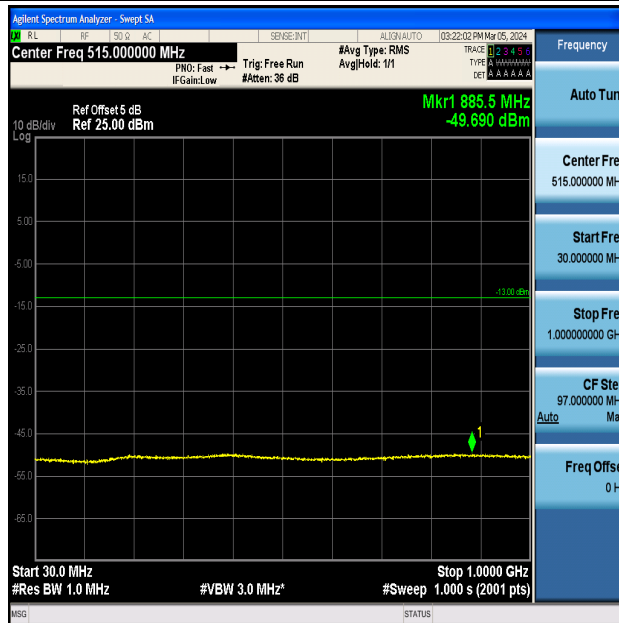
EGPRS1900-810-2-1000~3000MHz-PASS



EGPRS1900-810-2-3000~18000MHz-PASS



Band2-9262-0.15~30MHz-PASS



Band2-9262-30~1000MHz-PASS

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

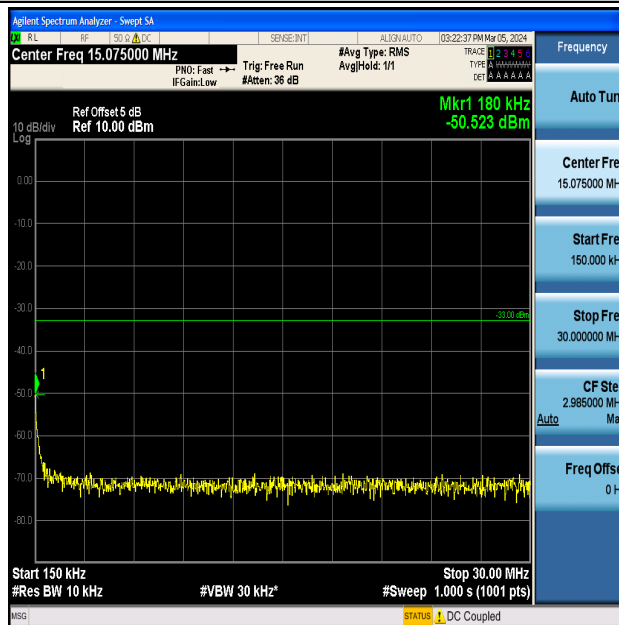
Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



Band2-9262-1000~20000MHz-PASS



Band2-9400-0.15~30MHz-PASS

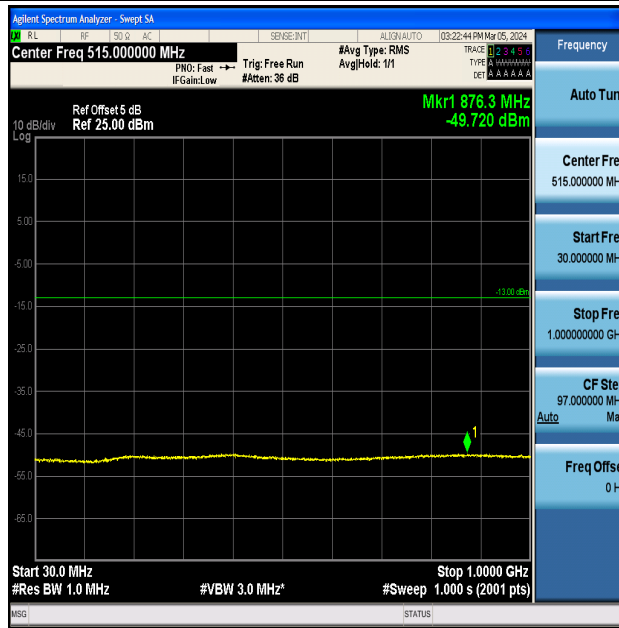
CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

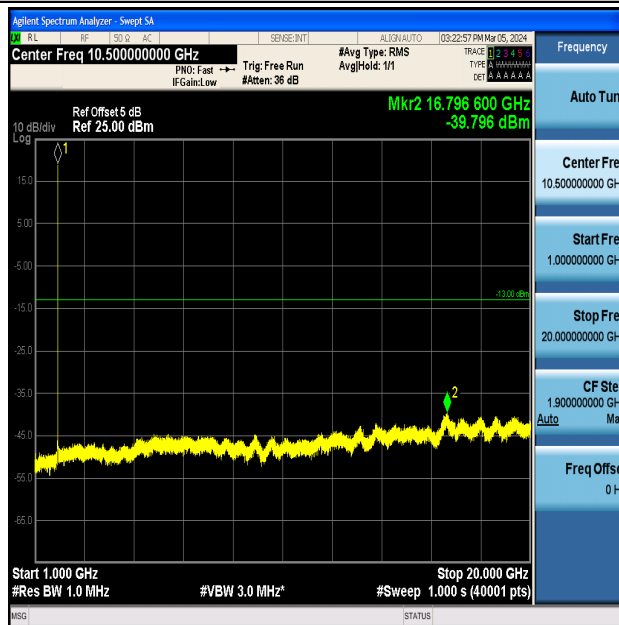
Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



Band2-9400-30~1000MHz-PASS



Band2-9400-1000~20000MHz-PASS

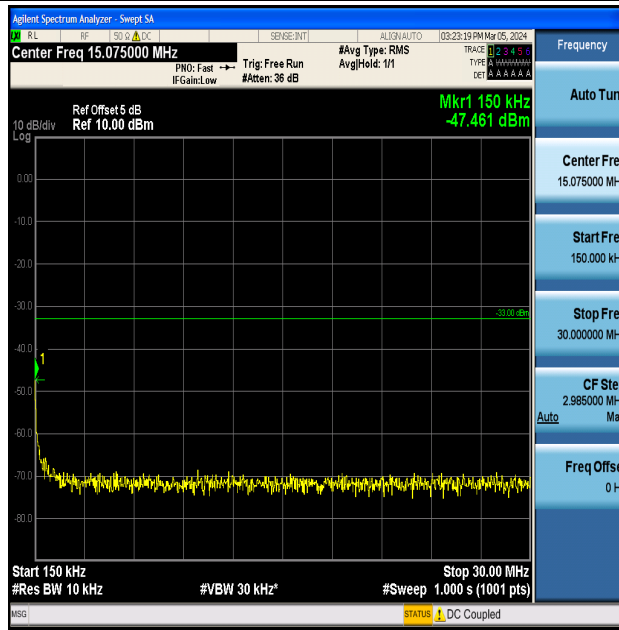
CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

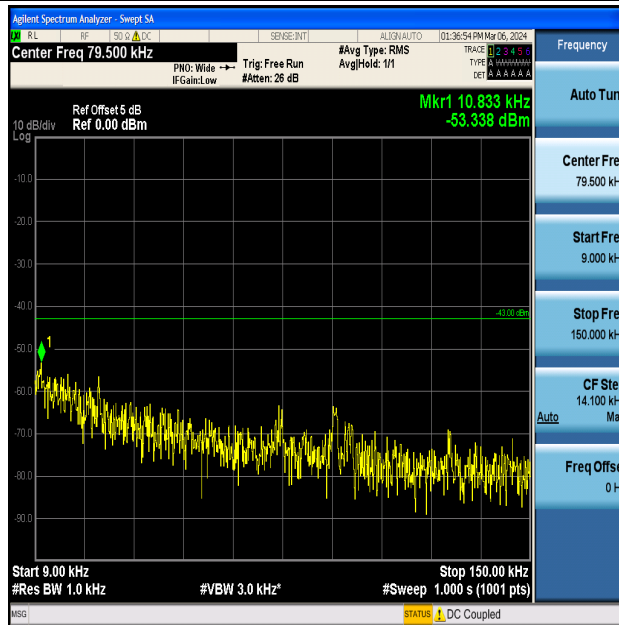
Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



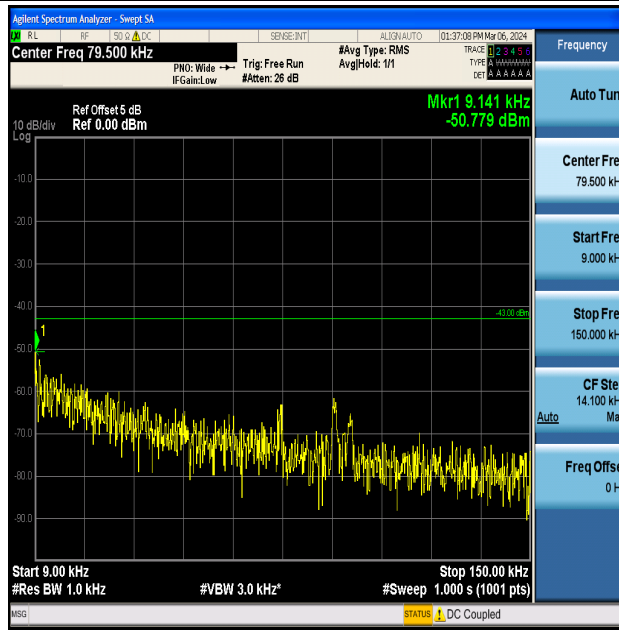
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



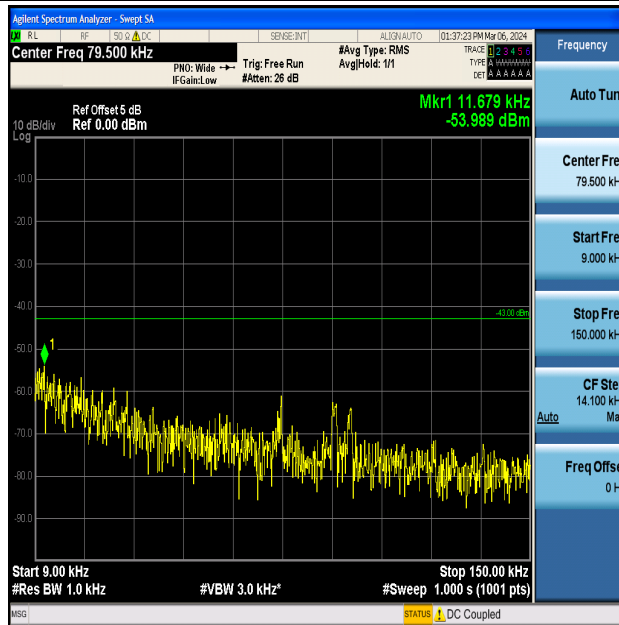
Band2-9538-0.15~30MHz-PASS



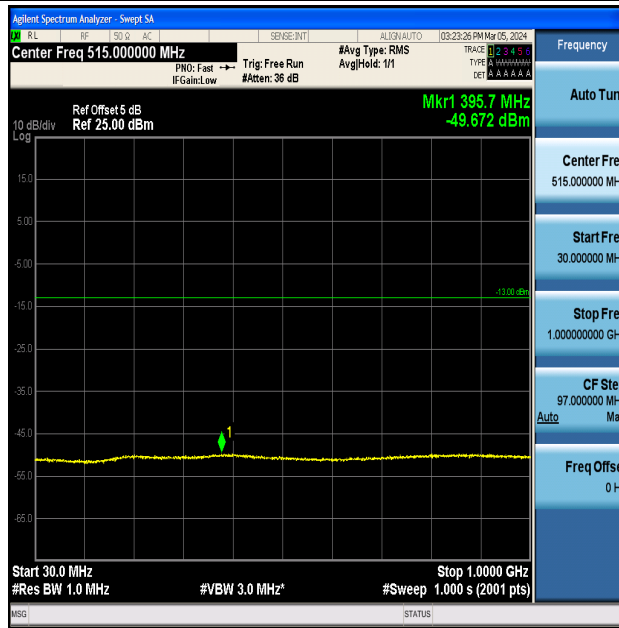
Band2-9262-0.009~0.15MHz-PASS



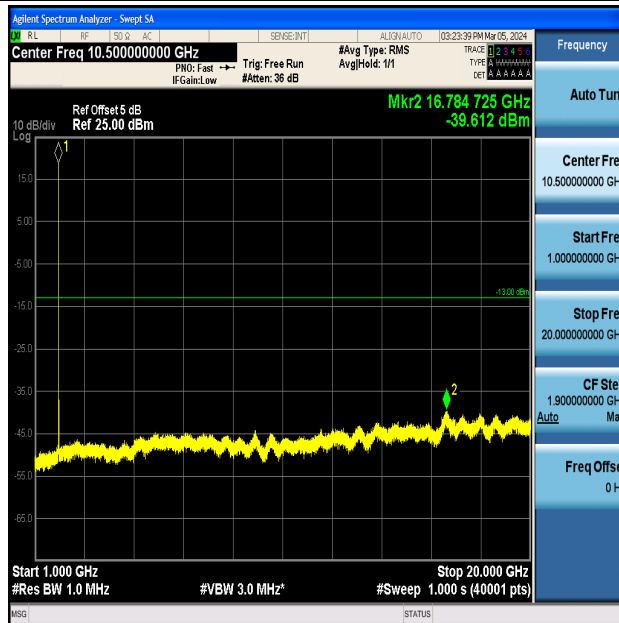
Band2-9400-0.009~0.15MHz-PASS



Band2-9538-0.009~0.15MHz-PASS



Band2-9538-30~1000MHz-PASS



Band2-9538-1000~20000MHz-PASS

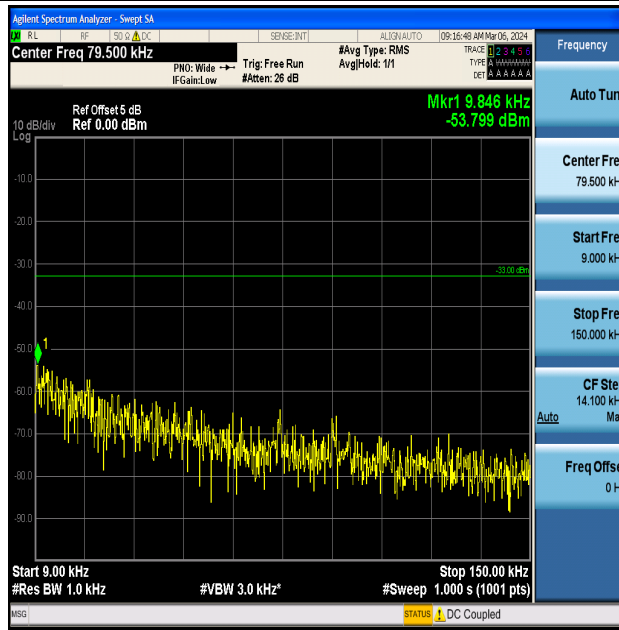
CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

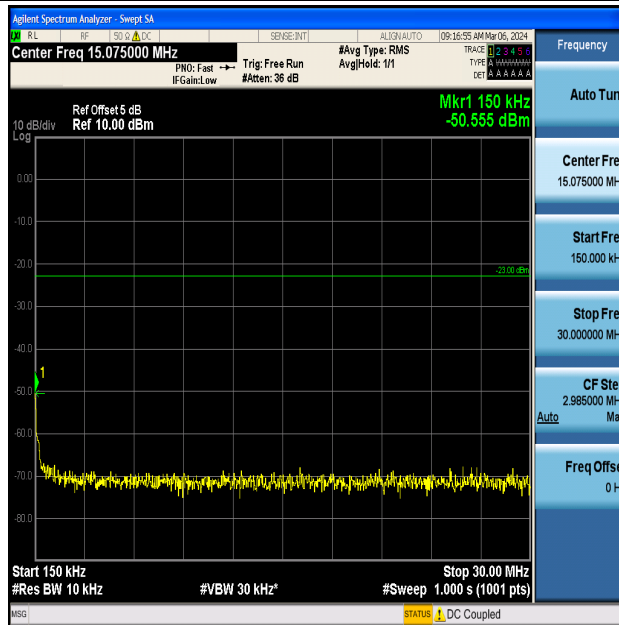
Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

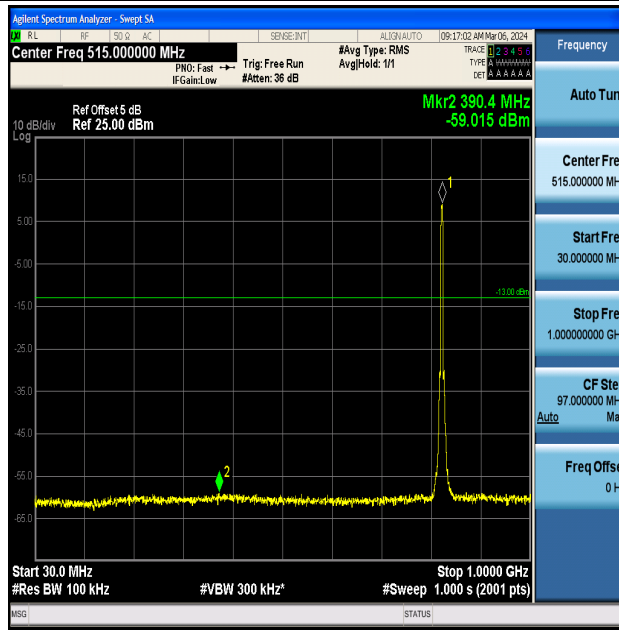


Band5-4132-0.009~0.15MHz-PASS

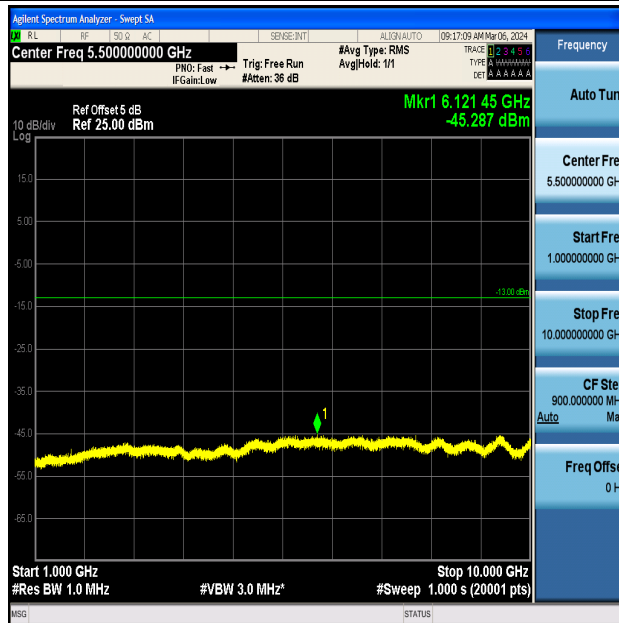


Band5-4132-0.15~30MHz-PASS





Band5-4132-30~1000MHz-PASS



Band5-4132-1000~10000MHz-PASS

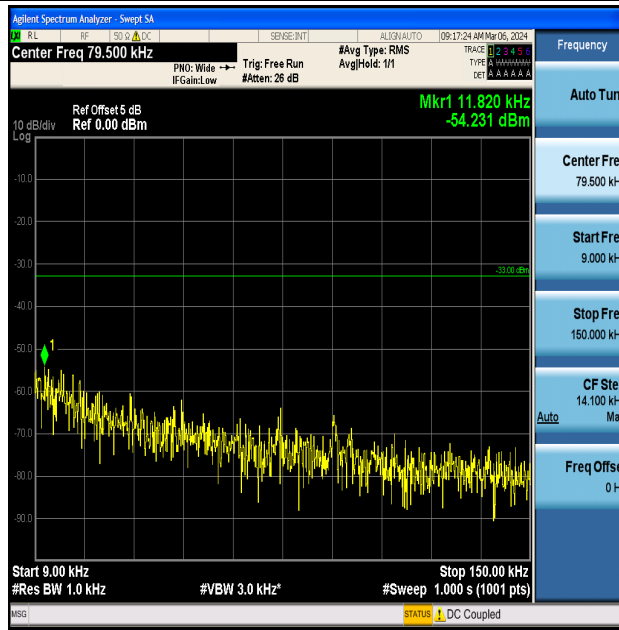
CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

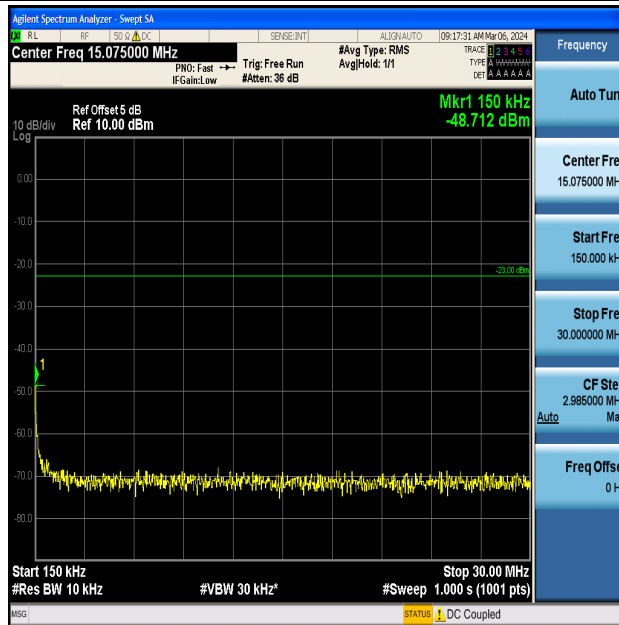
Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



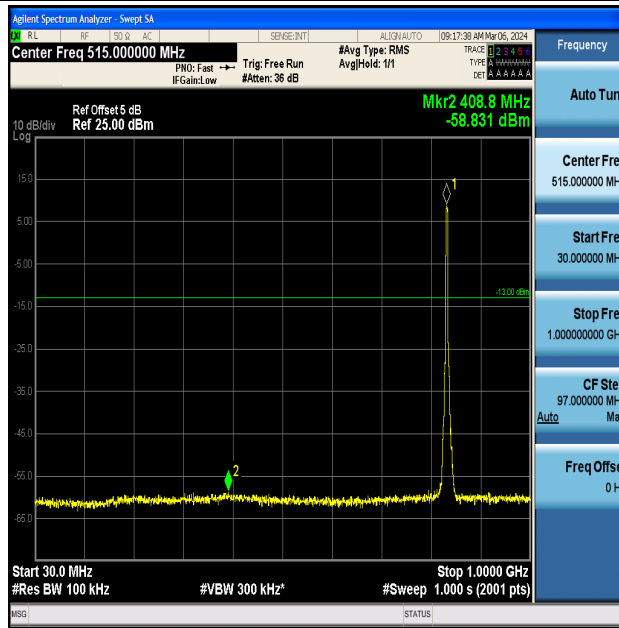
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



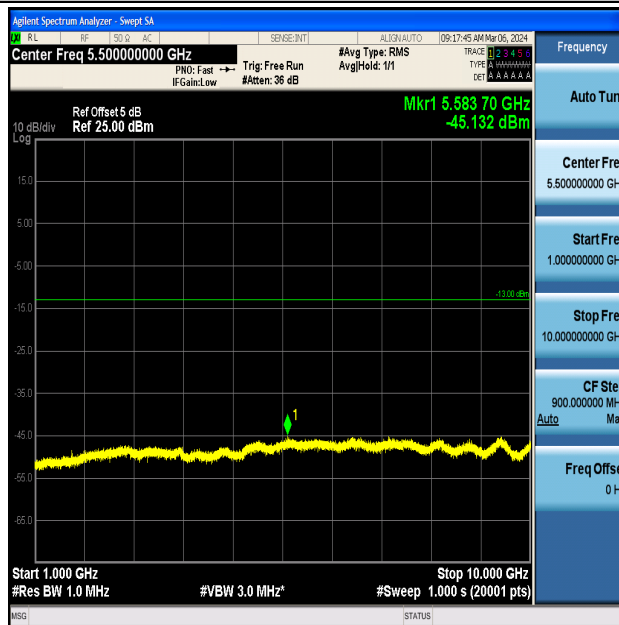
Band5-4182-0.009~0.15MHz-PASS



Band5-4182-0.15~30MHz-PASS



Band5-4182-30~1000MHz-PASS



Band5-4182-1000~10000MHz-PASS

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

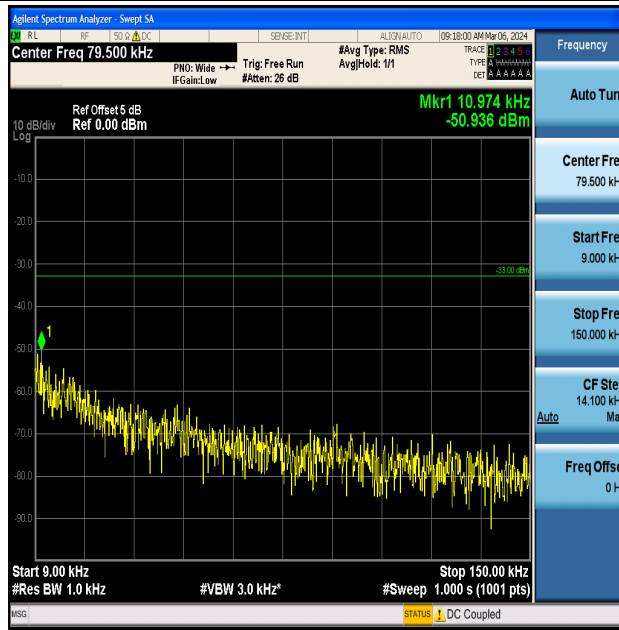
Tel.: (86)755-27521059

Fax: (86)755-27521011

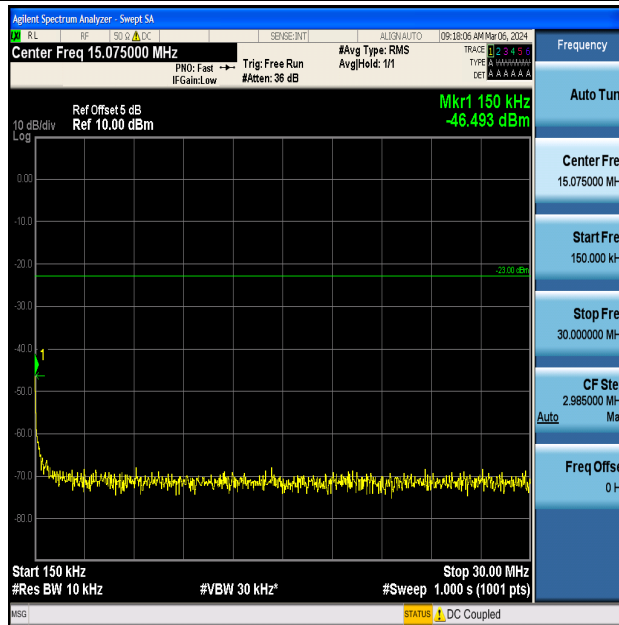
Http://www.sz-ctc.org.cn



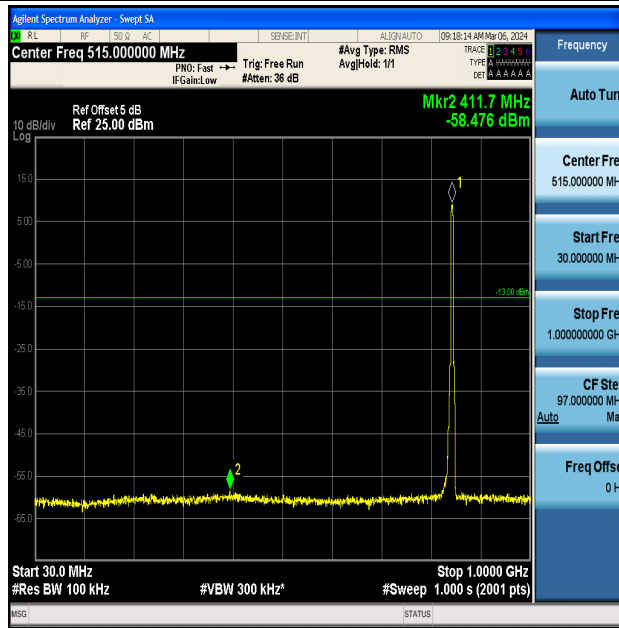
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)



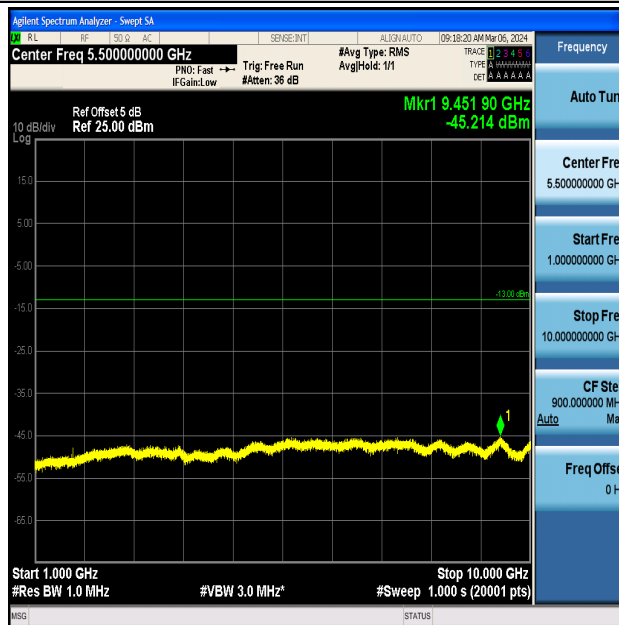
Band5-4233-0.009~0.15MHz-PASS



Band5-4233-0.15~30MHz-PASS



Band5-4233-30~1000MHz-PASS



Band5-4233-1000~10000MHz-PASS

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel.: (86)755-27521059

Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



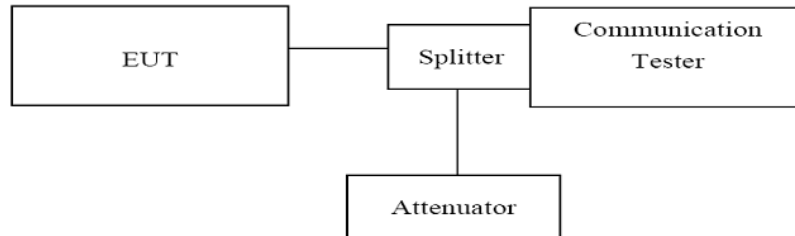
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)

### 3.5. Receiver Spurious Emissions at Antenna Terminal

#### LIMIT

RSS-GEN7.1.3, Receiver-spurious emissions at any discrete frequency shall not exceed 2 nW in the band 30-1000 MHz, nor 5 nW above 1000 MHz.

#### TEST CONFIGURATION



#### TEST PROCEDURE

1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.
3. Set the RBW= 100kHz, VBW =300kHz, Below 1GHz
4. Set the RBW= 1MHz, VBW = 3MHz, Above1GHz,
5. Start=30MHz, Stop= 10th harmonic.

#### TEST RESULTS

Note: This test item is not applicable.



### 3.6. Band Edge compliance

#### LIMIT

FCC: §22.917, §24.238, §27.53 (h)

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.

FCC: §90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $116 \log_{10}(f/6.1)$  decibels or  $50 + 10 \log_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

RSS132§5.5

Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

(i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10}p$  (watts).

(ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10} p$  (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

RSS133§6.5

Equipment shall comply with the limits in (i) and (ii) below.

(i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10}p$  (watts).

(ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10}p$  (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

RSS139§6.6

(i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, Footnote 2 which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least  $43 + 10 \log_{10} p$  (watts) dB.

(ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least  $43 + 10 \log_{10} p$  (watts) dB.

CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://yz.cnca.cn)