

---

# FCC Test Report

---

Report No.: AGC01284220402FE10B

**FCC ID** : BB019MINI2

**APPLICATION PURPOSE** : Class II Permissive Change

**PRODUCT DESIGNATION** : CB Radio

**BRAND NAME** : COBRA

**MODEL NAME** : 19MINIAMFM

**APPLICANT** : Cobra Electronics Corporation

**DATE OF ISSUE** : Apr, 10, 2024

**STANDARD(S)** : FCC Part 95 Rules

**REPORT VERSION** : V 1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



### REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Apr, 10, 2024	Valid	Initial Release

Note: The original test report Ref. No AGC01284220402FE10A (dated Nov. 11, 2022, tested Oct. 18, 2022 to Nov. 16, 2022), was modified on Apr, 10, 2024 to include the following changes and additions for:

-U3 change from QA8558 to QA8558P due to market shortage , the change are :

Pin-to-pin compatible

Having nearly same performance

Electrically identical

No PCB layout change

No other components change

-Change the address of the applicant;

-Change the address of the manufacture;

-Change the address of the factory;

For above described change(s), updated Ratiated Spurious Emission, Spurious Emission on Antenna Port and MAXIMUM TRANSMITTER POWER.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## TABLE OF CONTENTS

<b>1. GENERAL INFORMATION .....</b>	<b>5</b>
<b>2. PRODUCT INFORMATION .....</b>	<b>6</b>
2.1 PRODUCT TECHNICAL DESCRIPTION .....	6
2.2 TEST FREQUENCY LIST .....	7
2.3 RELATED SUBMITTAL(S) / GRANT (S) .....	8
2.4 TEST METHODOLOGY .....	8
2.5 CALCULATION OF EMISSION INDICATORS .....	8
2.6 STATEMENT - COMPLIANCE TO §95.977 .....	9
2.7 SPECIAL ACCESSORIES .....	9
2.8 EQUIPMENT MODIFICATIONS .....	9
<b>3. TEST ENVIRONMENT .....</b>	<b>10</b>
3.1 ADDRESS OF THE TEST LABORATORY .....	10
3.2 TEST FACILITY .....	10
3.3 ENVIRONMENTAL CONDITIONS .....	11
3.4 MEASUREMENT UNCERTAINTY .....	11
3.5 LIST OF EQUIPMENTS USED .....	12
<b>4. SYSTEM TEST CONFIGURATION .....</b>	<b>13</b>
4.1 EUT CONFIGURATION .....	13
4.2 EUT EXERCISE .....	13
4.3 CONFIGURATION OF TESTED SYSTEM .....	13
4.4 EQUIPMENT USED IN TESTED SYSTEM .....	13
4.5 SUMMARY OF TEST RESULTS .....	14
<b>5. DESCRIPTION OF TEST MODES .....</b>	<b>15</b>
<b>6. RADIATED SPURIOUS EMISSION .....</b>	<b>16</b>
6.1 PROVISIONS APPLICABLE .....	16
6.2 MEASUREMENT PROCEDURE .....	16
6.3 MEASUREMENT SETUP .....	17
6.4 MEASUREMENT RESULTS .....	18
<b>7. SPURIOUS EMISSION ON ANTENNA PORT .....</b>	<b>25</b>
7.1 PROVISIONS APPLICABLE .....	25
7.2 MEASUREMENT METHOD .....	25
7.3 MEASUREMENT SETUP .....	25
7.4 MEASUREMENT RESULTS .....	26
<b>8. MAXIMUM TRANSMITTER POWER .....</b>	<b>30</b>
<b>8.1 PROVISIONS APPLICABLE .....</b>	<b>30</b>

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

8.2 MEASUREMENT METHOD .....	30
8.3 MEASUREMENT SETUP .....	30
8.4 MEASUREMENT RESULTS.....	31
<b>APPENDIX I: PHOTOGRAPHS OF TEST SETUP .....</b>	<b>33</b>
<b>APPENDIX II: PHOTOGRAPHS OF TEST EUT.....</b>	<b>33</b>

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

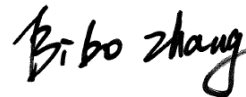
## 1. GENERAL INFORMATION

Applicant	Cobra Electronics Corporation
Address	1701 Golf Road, Suite 3-900 Rolling Meadows, IL 60008 United States
Manufacturer	Cobra Electronics Corporation
Address	1701 Golf Road, Suite 3-900 Rolling Meadows, IL 60008 United States
Factory	Cobra Electronics Corporation
Address	1701 Golf Road, Suite 3-900 Rolling Meadows, IL 60008 United States
Product Designation	CB Radio
Brand Name	COBRA
Test Model	19MINIAMFM
Deviation from Standard	No any deviation from the test method
Date of receipt of test item	Mar. 29, 2024
Date of Test	Mar. 29, 2024~Apr. 10, 2024
Test Result	Pass

### WE HEREBY CERTIFY THAT:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI/TIA-382-A-1998. The sample tested as described in this report is in compliance with the FCC Rules Part 95. The test results of this report relate only to the tested sample identified in this report.

Prepared By



Bibo Zhang  
(Project Engineer)

Apr. 10, 2024

Reviewed By



Calvin Liu  
(Reviewer)

Apr. 10, 2024

Approved By



Max Zhang  
Authorized Officer

Apr. 10, 2024

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

Attestation of Global Compliance(Shenzhen)Std &amp; Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

## 2. PRODUCT INFORMATION

### 2.1 PRODUCT TECHNICAL DESCRIPTION

Hardware Version	V1.0
Software Version	V1.02
Power Supply	DC 13.8V
Communication Type	Voice / Tone only
Operation Frequency Range	26.965MHz-27.405MHz
Modulation Type	AM/FM
Channel Separation	10 KHz
Emission Designator	AM: 8K00A3E FM: 8K00F3E
Number of Channels:	40 Channels
Rated Output Power	4W (It was fixed by the manufacturer, any individual can't arbitrarily change it.)
Maximum Transmitter Power	AM: 35.92dBm                      FM: 35.50dBm
Antenna Designation	Detachable
Antenna Type	External antenna
Antenna Gain	0dBi (Typical), 5dBi (Max)

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088    E-mail: agc@agccert.com    Web: <http://www.agccert.com/>

## 2.2 TEST FREQUENCY LIST

According to ANSI C63.26 section 5.1.2.1:

Measurements of transmitters shall be performed and, if required, reported for each frequency band in which the EUT can be operated with the device transmitting at the number of frequencies in each band specified in Table 2.

Frequency range Over which EUT operates	Number of Frequencies	Location in frequency range of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

Operation Frequency Each of Channel			
CBRS		CBRS	
Channel	Frequency	Channel	Frequency
1	26.965 MHz	21	27.215 MHz
2	26.975 MHz	22	27.225 MHz
3	26.985 MHz	23	27.255 MHz
4	27.005 MHz	24	27.235 MHz
5	27.015 MHz	25	27.245 MHz
6	27.025 MHz	26	27.265 MHz
7	27.035 MHz	27	27.275 MHz
8	27.055 MHz	28	27.285 MHz
9	27.065 MHz	29	27.295 MHz
10	27.075 MHz	30	27.305 MHz
11	27.085 MHz	31	27.315 MHz
12	27.105 MHz	32	27.325 MHz
13	27.115 MHz	33	27.335 MHz
14	27.125 MHz	34	27.345 MHz
15	27.135 MHz	35	27.355 MHz
16	27.155 MHz	36	27.365 MHz
17	27.165 MHz	37	27.375 MHz
18	27.175 MHz	38	27.385 MHz
19	27.185 MHz	39	27.395 MHz
20	27.205 MHz	40	27.405 MHz

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

## 2.3 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for FCC ID: **BB019MINI2**, filing to comply with Part 2, Part 95 of the Federal Communication Commission rules.

## 2.4 TEST METHODOLOGY

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 95	Personal Radio Services
2	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
3	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
4	ANSI EIA/TIA 382-A-1989	Minimum standards – Citizens band radio service amplitude modulated (AM) transceivers operating in the 27MHz band.

## 2.5 CALCULATION OF EMISSION INDICATORS

FCC Rules and Regulations Part 2.202: Necessary Bandwidth and Emission Bandwidth

### For AM Mode (ChannelSpacing: 10kHz)

Emission Designator 8K00A3E

Bn = 2M, M may vary between 4000 and 10000 depending on the quality desired.

Speech and music, M = 4000, Bandwidth: 8000 Hz= 8 kHz

A3E portion of the designator represents an AM voice transmission.

Therefore, the entire designator for 10 kHz channel spacing AM mode is 8K00A3E.

### For FM Mode (ChannelSpacing: 10kHz)

Emission Designator 8K00F3E

Bn = 2M, M may vary between 4000 and 10000 depending on the quality desired.

Speech and music, M = 4000, Bandwidth: 8000 Hz= 8 kHz

F3E portion of the designator represents an FM voice transmission.

Therefore, the entire designator for 10 kHz channel spacing FM mode is 8K00F3E.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



## **2.6 STATEMENT - COMPLIANCE TO §95.977**

§95.977 CBRS tone transmissions.

In addition to the tones permitted under §95.377, CBRS transmitter types may be designed to transmit brief tones to indicate the beginning or end of a transmission.

This device is capable of transmitting a brief (less than one second) audio tone, “Roger Beep”, when the PTT button is released on the microphone indicating end of transmission. This function is user selectable and complies with the requirements of §95.377. See User’s Manual .

## **2.7 SPECIAL ACCESSORIES**

Not available for this EUT intended for grant.

## **2.8 EQUIPMENT MODIFICATIONS**

Not available for this EUT intended for grant.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by [agc01@agccert.com](mailto:agc01@agccert.com).

Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: [agc@agccert.com](mailto:agc@agccert.com) Web: <http://www.agccert.com/>

### 3. TEST ENVIRONMENT

#### 3.1 ADDRESS OF THE TEST LABORATORY

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

#### 3.2 TEST FACILITY

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

##### **CNAS-Lab Code: L5488**

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

##### **A2LA-Lab Cert. No.: 5054.02**

Attestation of Global Compliance (Shenzhen) Co., Ltd. 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.

##### **FCC-Registration No.: 975832**

Attestation of Global Compliance (Shenzhen) Co., Ltd. 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 with Registration 975832.

##### **IC-Registration No.: 24842**

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

### 3.3 ENVIRONMENTAL CONDITIONS

	NORMAL CONDITIONS	EXTREME CONDITIONS
Temperature range (°C)	15 - 35	-20 - 50
Relative humidity range	20 % - 75 %	20 % - 75 %
Pressure range (kPa)	86 - 106	86 - 106
Power supply	DC13.8V	LV: DC 11.73V/HV:DC 15.87V
Note: The Extreme Temperature and Extreme Voltages declared by the manufacturer.		

### 3.4 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

Test Items	Measurement Uncertainty
Frequency stability	$\pm 0.5\%$
Transmitter power conducted	$\pm 0.8\text{dB}$
Transmitter power Radiated	$\pm 1.3\text{dB}$
Conducted spurious emission 9kHz-40 GHz	$\pm 2.7\text{dB}$
Conducted Emission	$\pm 3.2\text{ dB}$
Radiated Emission below 1GHz	$\pm 3.9\text{ dB}$
Radiated Emission above 1GHz	$\pm 4.8\text{ dB}$
Occupied Channel Bandwidth	$\pm 2\%$
FM deviation	$\pm 2\%$
Audio level	$\pm 0.98\text{dB}$
Low Pass Filter Response	$\pm 0.65\text{dB}$
Modulation Limiting	0.42 %
Transient Frequency Behavior	6.8 %

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by [agc01@agccert.com](mailto:agc01@agccert.com).

### 3.5 LIST OF EQUIPMENTS USED

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Feb. 01, 2024	Jan. 31, 2025
EXA Signal Analyzer	Aglient	N9020A	W1312-60196	Jun. 03, 2023	Jun. 02, 2024
EXA Signal Analyzer	Aglient	N9020A	MY52090123	Jun. 03, 2023	Jun. 02, 2024
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Nov. 13, 2023	Nov. 12, 2024
preamplifier	ChengYi	EMC184045SE	980508	Sep. 20, 2023	Sep. 19, 2024
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	Apr. 23, 2023	Apr. 22, 2024
Broadband Preamplifier	SCHWARZBECK	BBV 9718	9718-205	Jun. 03, 2023	Jun. 02, 2024
HORN ANTENNA	EM	EM-AH-10180	/	Feb. 01, 2024	Jan. 31, 2025
SIGNAL GENERATOR	AGILENT	E4421B	MY43351603	Feb. 01, 2024	Jan. 31, 2025
SIGNAL GENERATOR	R&S	SMT03	A0304261	Jun. 03, 2023	Jun. 02, 2024
ANTENNA	SCHWARZBECK	VULB9168	VULB9168-494	Jan. 05, 2023	Jan. 04, 2025
ANTENNA	SCHWARZBECK	VULB9168	D69250	May 11, 2023	May 10, 2025
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Mar. 05, 2024	Mar. 04, 2026
Modulation Domain Analyzer	HP	53310A	3121A02467	Jun. 08, 2022	Jun. 07, 2024
Small environmental tester	ESPEC	SH-242	--	Aug. 03, 2022	Aug. 02, 2024
RF Communication Test Set	HP	8920B	US35010161	Jun. 02, 2023	Jun. 01, 2024
Attenuator	Weinachel Corp	58-30-33	ML030	Jun. 01, 2023	May 31, 2024
RF Cable	R&S	1#	--	Each time	N/A
RF Cable	R&S	2#	--	Each time	N/A
Fliter(50MHz-1GHz)	SCH	N30687F9	--	May 11, 2023	May 10, 2025

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

## 4.SYSTEM TEST CONFIGURATION

### 4.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 4.2 EUT EXERCISE

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

### 4.3 CONFIGURATION OF TESTED SYSTEM

Fig. 2-1 Configuration of Tested System



Table 2-1 Equipment Used in Tested System

### 4.4 EQUIPMENT USED IN TESTED SYSTEM

The Following Peripheral Devices And Interface Cables Were Connected During The Measurement:

☒ Test Accessories Come From The Laboratory

Item	Equipment	Model No.	Identifier	Note
1	Load Antenna	HG-E10	Terminator DC -3G 50W	Accessories

☒ Test Accessories Come From The Manufacturer

Item	Equipment	Model No.	Identifier	Note
1	CB Radio	19MINIAMFM	FCC ID: BBO19MINI2	EUT
2	Hand microphone	N/A	N/A	Accessories
3	Car charger	N/A	N/A	Accessories

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

**4.5 SUMMARY OF TEST RESULTS**

Item	FCC Rules	Description of Test	Result
1	§ 95.967& 2.1046(a)	Maximum Transmitter Power	Pass
2	§95.979& 2.1051	Spurious Emission on Antenna Port	Pass
3	§95.979& 2.1053	Ratiated Spurious Emission	Pass

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## 5. DESCRIPTION OF TEST MODES

The EUT (**CB Radio**) has been tested under normal operating condition. (CBRS TX) are chosen for testing at each channel separation.

NO.	TEST MODE DESCRIPTION	CHANNEL SEPARATION
1	CBRS TX CHANNEL 1	10.0 kHz
2	CBRS TX CHANNEL 20	10.0 kHz
3	CBRS TX CHANNEL 40	10.0 kHz

Note:

1. Only the result of the worst case was recorded in the report, if no other cases.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
3. Manufacturers use computer PC programming software to switch and operate frequency points, refer to the instructions for details

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>



## 6. RATIATED SPURIOUS EMISSION

### 6.1 PROVISIONS APPLICABLE

FCC Part 95.979(a), FCC Part 2.1049

Each CBRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section. The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) as specified in the applicable paragraphs listed in the following table:

Emission type	Paragraph
A3E, F3E	(1), (3), (5), (6)
H3E, J3E, R3E	(2), (4), (5), (6)

- (1) 25 dB (decibels) in the frequency band 4 kHz to 8 kHz removed from the channel center frequency;
- (2) 25 dB in the frequency band 2 kHz to 6 kHz removed from the channel center frequency;
- (3) 35 dB in the frequency band 8 kHz to 20 kHz removed from the channel center frequency;
- (4) 35 dB in the frequency band 6 kHz to 10 kHz removed from the channel center frequency;
- (5)  $53 + 10 \log(P)$  dB in any frequency band removed from the channel center frequency by more than 250% of the authorized bandwidth.
- (6) 60 dB in any frequency band centered on a harmonic (i.e., an integer multiple of two or more times) of the carrier frequency.

### 6.2 MEASUREMENT PROCEDURE

1. EUT was placed on a 0.8 or 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made. The radiated emission measurements of all transmit frequencies in all channels were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz for above 1GHz and RBW=100kHz, VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15 days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance (Shenzhen) Co., Ltd

Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

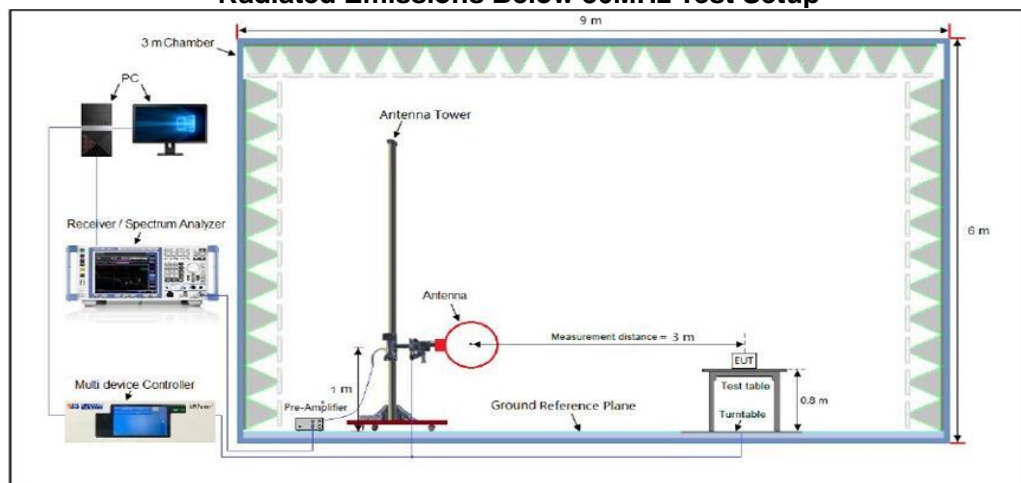


substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

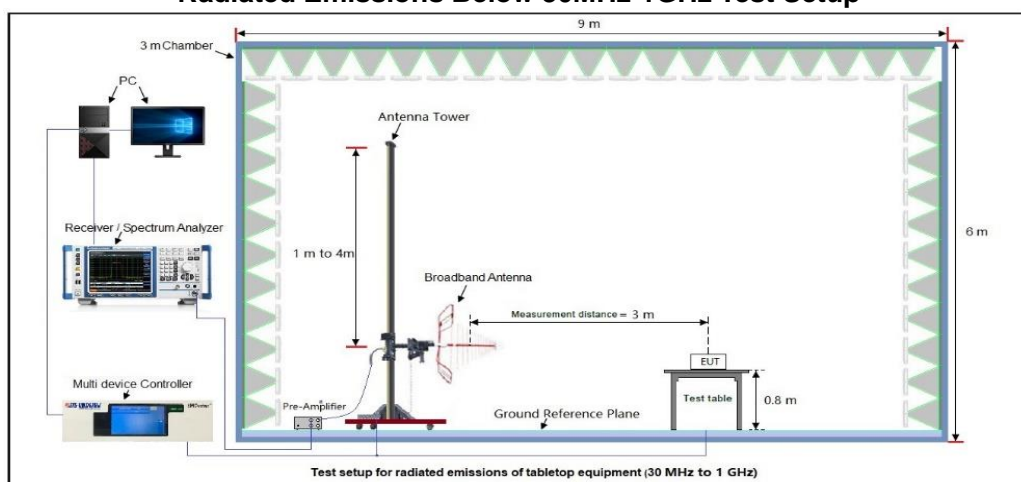
5. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test
6. The measurement results are obtained as described below:  $\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} - \text{Ga}$  The measurement results are amend as described below:  $\text{Power(EIRP)} = \text{PMea} - \text{Pcl} - \text{Ga}$
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
8. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$ .
9. Test the EUT in the lowest channel, the middle channel the Highest channel

### 6.3 MEASUREMENT SETUP

**Radiated Emissions Below 30MHz Test Setup**

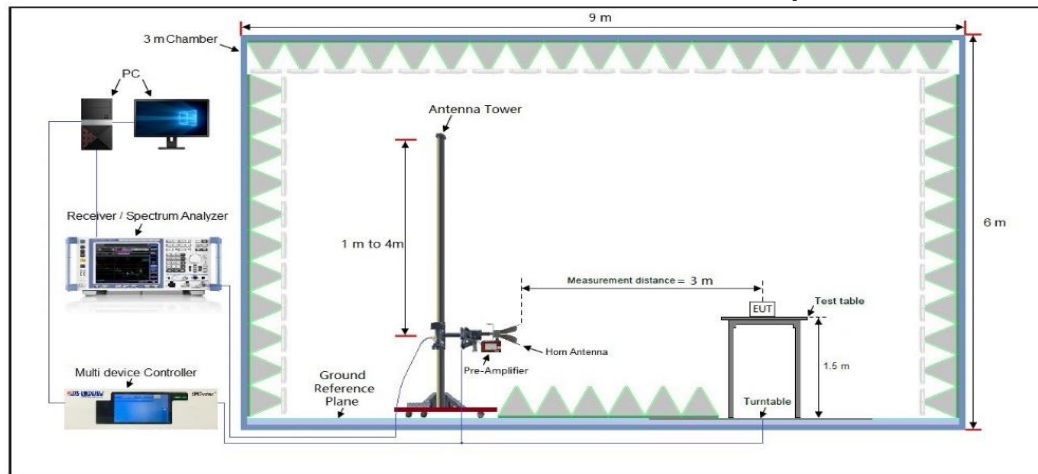


**Radiated Emissions Below 30MHz-1GHz Test Setup**



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15 days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by [agc01@agccert.com](mailto:agc01@agccert.com).

### Radiated Emissions Above 1GHz Test Setup



### 6.4 MEASUREMENT RESULTS

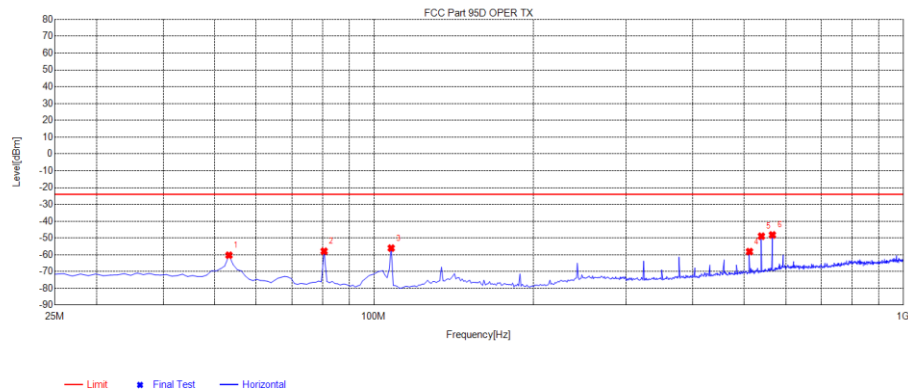
Preliminary calculation	Final Result
$P(\text{dBm}) = 30 + 10 \log [P(\text{W})] = 36.02 \text{ dBm}$	Limit = Preliminary calculation - 60 dB = -24 dBm

1. Factor = Antenna Factor + Cable loss. (Below 1GHz)
2. Factor = Antenna Factor + Cable loss - Pre-amplifier. (Above 1 GHz)
3. Margin = Limit - Level
4. the unwanted emission should be attenuated below TP by at least 60 dB.
5. In the frequency range of 9KHz-30MHz, in addition to displaying the Fundamental level, the radiated spurious emission level is much less than 60dB of the carrier power, so it is ignored.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

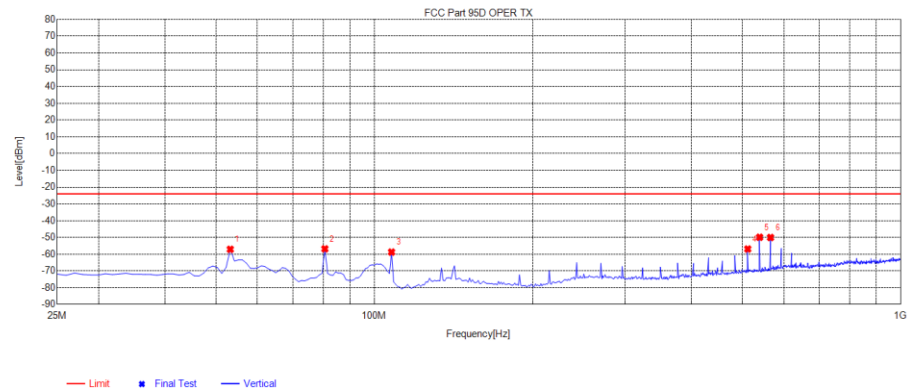
Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

Test Mode:	TX-CH1-FM	Polarity:	Horizontal
------------	-----------	-----------	------------



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	53.275	-88.18	-60.25	-24.00	36.25	27.93	350	Horizontal
2	80.575	-82.07	-57.88	-24.00	33.88	24.19	100	Horizontal
3	107.875	-76.60	-56.03	-24.00	32.03	20.57	144	Horizontal
4	512.5	-90.19	-58.10	-24.00	34.10	32.09	170	Horizontal
5	539.8	-81.54	-48.93	-24.00	24.93	32.61	178	Horizontal
6	566.125	-81.64	-48.17	-24.00	24.17	33.47	109	Horizontal

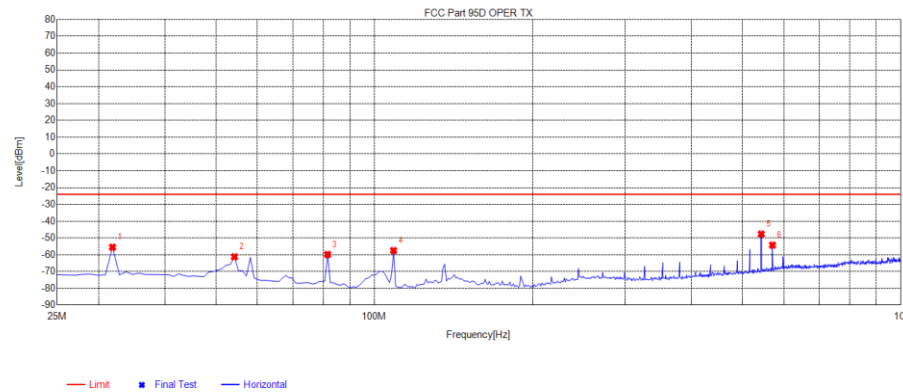
Test Mode:	TX-CH1-FM	Polarity:	Vertical
------------	-----------	-----------	----------



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	53.275	-85.01	-57.08	-24.00	33.08	27.93	122	Vertical
2	80.575	-80.99	-56.80	-24.00	32.80	24.19	36	Vertical
3	107.875	-79.31	-58.74	-24.00	34.74	20.57	260	Vertical
4	512.5	-88.98	-56.89	-24.00	32.89	32.09	88	Vertical
5	539.8	-82.50	-49.89	-24.00	25.89	32.61	62	Vertical
6	566.125	-83.50	-50.03	-24.00	26.03	33.47	243	Vertical

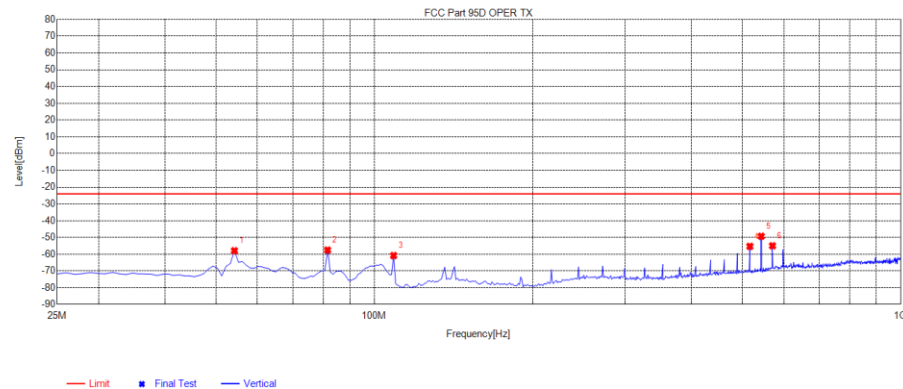
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Test Mode:	TX-CH20-FM	Polarity:	Horizontal
------------	------------	-----------	------------



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	31.825	-84.63	-55.51	-24.00	31.51	29.12	96	Horizontal
2	54.25	-88.90	-61.20	-24.00	37.20	27.70	341	Horizontal
3	81.55	-83.80	-59.81	-24.00	35.81	23.99	88	Horizontal
4	108.85	-78.08	-57.48	-24.00	33.48	20.60	132	Horizontal
5	543.7	-80.35	-47.66	-24.00	23.66	32.69	175	Horizontal
6	571	-87.92	-54.25	-24.00	30.25	33.67	105	Horizontal

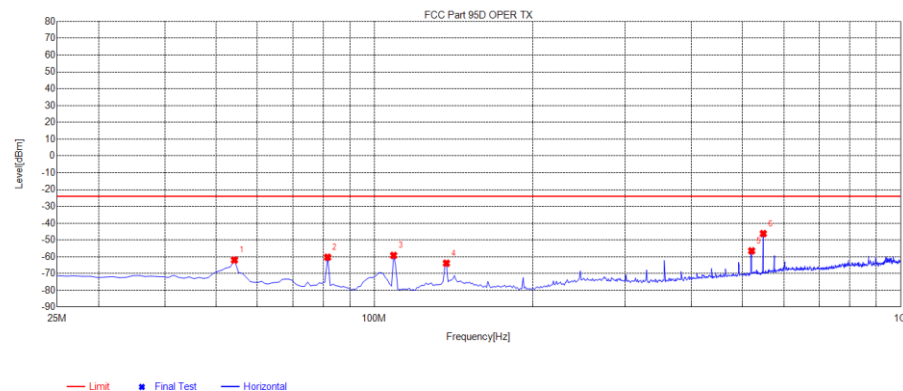
Test Mode:	TX-CH20-FM	Polarity:	Vertical
------------	------------	-----------	----------



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	54.25	-85.63	-57.93	-24.00	33.93	27.70	185	Vertical
2	81.55	-81.53	-57.54	-24.00	33.54	23.99	80	Vertical
3	108.85	-81.40	-60.80	-24.00	36.80	20.60	273	Vertical
4	517.375	-87.49	-55.31	-24.00	31.31	32.18	80	Vertical
5	543.7	-82.00	-49.31	-24.00	25.31	32.69	62	Vertical
6	571	-88.64	-54.97	-24.00	30.97	33.67	246	Vertical

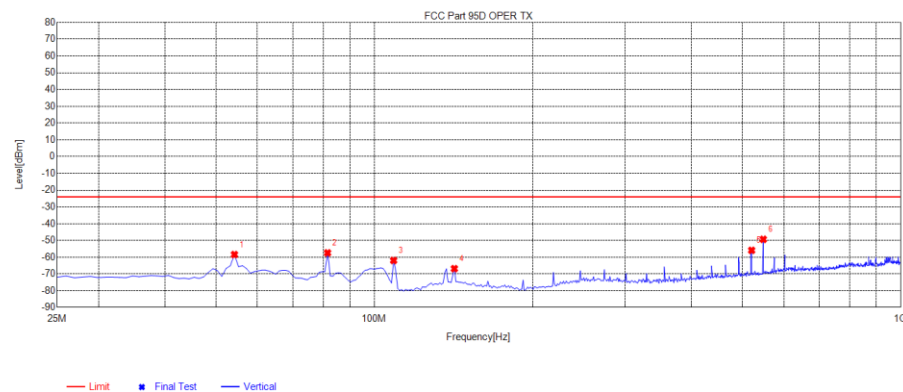
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Test Mode:	TX-CH40-FM	Polarity:	Horizontal
------------	------------	-----------	------------



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	54.25	-89.62	-61.92	-24.00	37.92	27.70	191	Horizontal
2	81.55	-84.26	-60.27	-24.00	36.27	23.99	113	Horizontal
3	108.85	-79.79	-59.19	-24.00	35.19	20.60	312	Horizontal
4	137.125	-90.49	-63.82	-24.00	39.82	26.67	156	Horizontal
5	521.275	-88.72	-56.46	-24.00	32.46	32.26	174	Horizontal
6	548.575	-78.97	-46.19	-24.00	22.19	32.78	191	Horizontal

Test Mode:	TX-CH40-FM	Polarity:	Vertical
------------	------------	-----------	----------

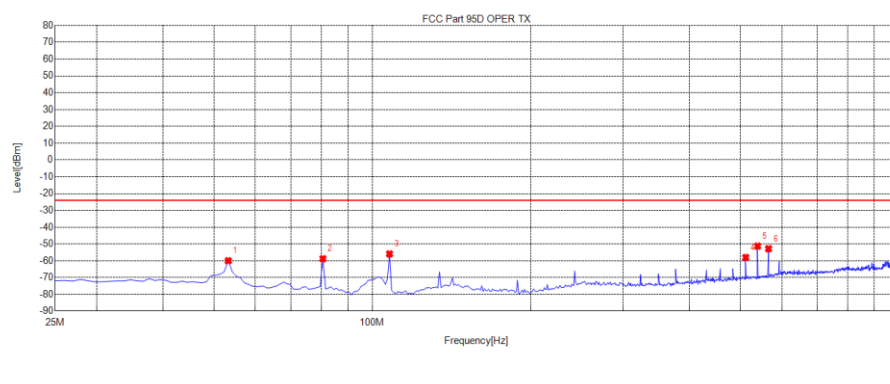


NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	54.25	-86.11	-58.41	-24.00	34.41	27.70	187	Vertical
2	81.55	-81.41	-57.42	-24.00	33.42	23.99	40	Vertical
3	108.85	-82.55	-61.95	-24.00	37.95	20.60	273	Vertical
4	142	-93.96	-66.82	-24.00	42.82	27.14	342	Vertical
5	521.275	-88.15	-55.89	-24.00	31.89	32.26	75	Vertical
6	548.575	-82.12	-49.34	-24.00	25.34	32.78	49	Vertical

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



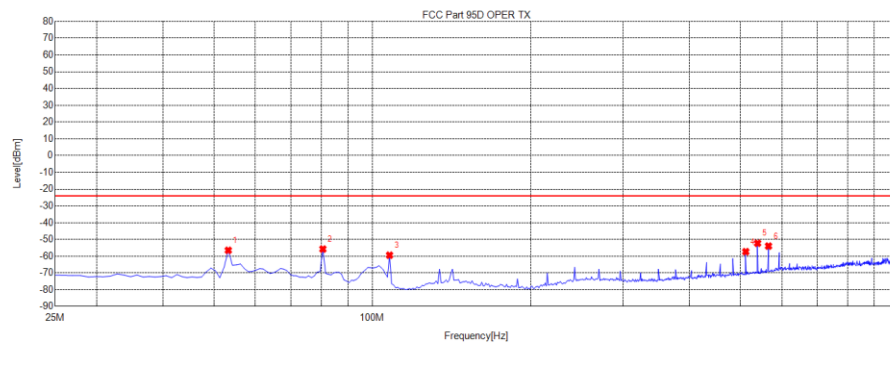
Test Mode:	TX-CH1-AM	Polarity:	Horizontal
------------	-----------	-----------	------------



— Limit    ■ Final Test    — Horizontal

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	53.275	-87.91	-59.98	-24.00	35.98	27.93	0	Horizontal
2	80.575	-82.96	-58.77	-24.00	34.77	24.19	66	Horizontal
3	107.875	-76.48	-55.91	-24.00	31.91	20.57	126	Horizontal
4	512.5	-90.12	-58.03	-24.00	34.03	32.09	230	Horizontal
5	539.8	-83.86	-51.25	-24.00	27.25	32.61	178	Horizontal
6	566.125	-86.27	-52.80	-24.00	28.80	33.47	109	Horizontal

Test Mode:	TX-CH1-AM	Polarity:	Vertical
------------	-----------	-----------	----------

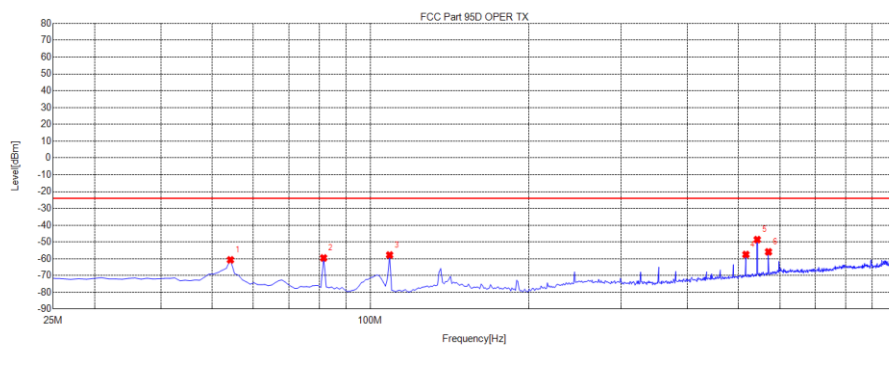


— Limit    ■ Final Test    — Vertical

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	53.275	-84.40	-56.47	-24.00	32.47	27.93	132	Vertical
2	80.575	-79.92	-55.73	-24.00	31.73	24.19	54	Vertical
3	107.875	-79.96	-59.39	-24.00	35.39	20.57	308	Vertical
4	512.5	-89.39	-57.30	-24.00	33.30	32.09	89	Vertical
5	539.8	-84.87	-52.26	-24.00	28.26	32.61	54	Vertical
6	566.125	-87.41	-53.94	-24.00	29.94	33.47	239	Vertical

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

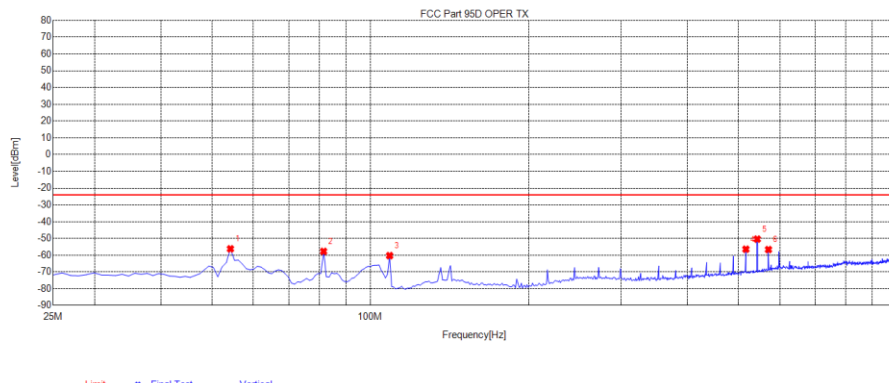
Test Mode:	TX-CH20-AM	Polarity:	Horizontal
------------	------------	-----------	------------



— Limit    ■ Final Test    — Horizontal

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	54.25	-88.34	-60.64	-24.00	36.64	27.70	360	Horizontal
2	81.55	-83.48	-59.49	-24.00	35.49	23.99	124	Horizontal
3	108.85	-78.35	-57.75	-24.00	33.75	20.60	309	Horizontal
4	517.375	-89.65	-57.47	-24.00	33.47	32.18	178	Horizontal
5	543.7	-81.28	-48.59	-24.00	24.59	32.69	187	Horizontal
6	571	-89.55	-55.88	-24.00	31.88	33.67	115	Horizontal

Test Mode:	TX-CH20-AM	Polarity:	Vertical
------------	------------	-----------	----------

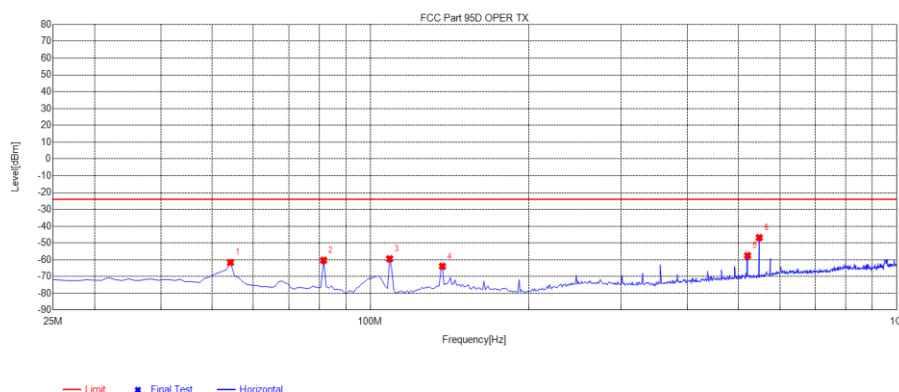


— Limit    ■ Final Test    — Vertical

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	54.25	-83.89	-56.19	-24.00	32.19	27.70	205	Vertical
2	81.55	-81.70	-57.71	-24.00	33.71	23.99	37	Vertical
3	108.85	-80.84	-60.24	-24.00	36.24	20.60	274	Vertical
4	517.375	-88.60	-56.42	-24.00	32.42	32.18	82	Vertical
5	543.7	-83.10	-50.41	-24.00	26.41	32.69	55	Vertical
6	571	-90.29	-56.62	-24.00	32.62	33.67	240	Vertical

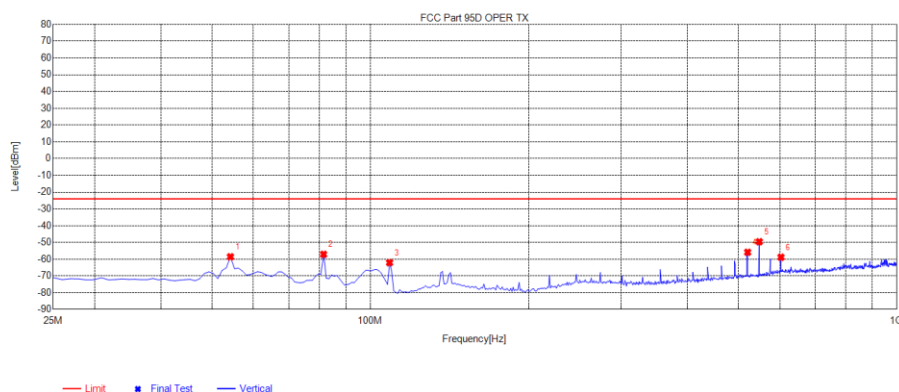
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Test Mode:	TX-CH40-AM	Polarity:	Horizontal
------------	------------	-----------	------------



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	54.25	-89.29	-61.59	-24.00	37.59	27.70	10	Horizontal
2	81.55	-84.29	-60.30	-24.00	36.30	23.99	131	Horizontal
3	108.85	-80.00	-59.40	-24.00	35.40	20.60	139	Horizontal
4	137.125	-90.53	-63.86	-24.00	39.86	26.67	156	Horizontal
5	521.275	-89.77	-57.51	-24.00	33.51	32.26	182	Horizontal
6	548.575	-79.60	-46.82	-24.00	22.82	32.78	191	Horizontal

Test Mode:	TX-CH40-AM	Polarity:	Vertical
------------	------------	-----------	----------



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	54.25	-86.26	-58.56	-24.00	34.56	27.70	299	Vertical
2	81.55	-81.08	-57.09	-24.00	33.09	23.99	40	Vertical
3	108.85	-82.66	-62.06	-24.00	38.06	20.60	256	Vertical
4	521.275	-88.11	-55.85	-24.00	31.85	32.26	66	Vertical
5	548.575	-82.37	-49.59	-24.00	25.59	32.78	238	Vertical
6	603.175	-93.66	-58.82	-24.00	34.82	34.84	238	Vertical

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



## 7. SPURIOUS EMISSION ON ANTENNA PORT

### 7.1 PROVISIONS APPLICABLE

Please refer to FCC 47 CFR 2.1051, 2.1057 & 95.979 for specification details.

Emissions shall be attenuated below the mean output power of the transmitter as follows:

FCC Rules	Attenuation Limit (dBc)
§ 95.979	At least $53 + 10 \log (P)$ dB
§ 95.979	60 dB in any frequency band centered on a harmonic (i.e., an integer multiple of two or more times) of the carrier frequency.

$53 + 10 \log (P_{\text{watts}})$

Calculation: Limit (dBm) = EL - 53 - 10 log<sub>10</sub> (TP)

Notes: EL is the emission level of the Output Power expressed in dBm,

In this application, the EL is P (dBm).

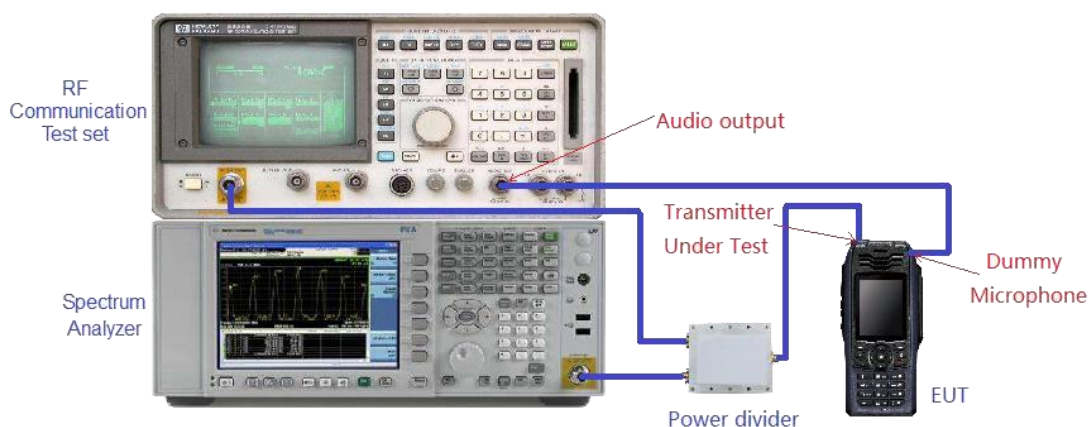
Limit (dBm) = P (dBm) - 53 - 10 log (Pwatts) = -23 dBm

Note: Unwanted spurious limit is -23dBm, and the main wave frequency multiplication limit is -24dBm. After evaluation, a stricter limit of -24dBm is used to evaluate unwanted spurious and main wave frequency multiplication.

### 7.2 MEASUREMENT METHOD

1. The RF output of the EUT was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of the spectrum analyzer was set to 100 kHz. Sufficient scans were taken to
3. show any out of band emission up to 10th . Harmonic for the lower and the highest frequency range.
4. Set RBW 1 kHz, VBW 3 kHz in the frequency band 9KHz to 150KHz;  
Set RBW 10 kHz, VBW 30 kHz in the frequency band 150KHz to 20MHz;  
Set RBW 100 kHz, VBW 300 kHz in the frequency band 20MHz to 1GHz;  
While set RBW=1MHz.VBW=3MHz from the 1GHz to 10th Harmonic.
5. The audio input was set the unmodulated carrier, the resulting picture is print out for each channel separation.

### 7.3 MEASUREMENT SETUP



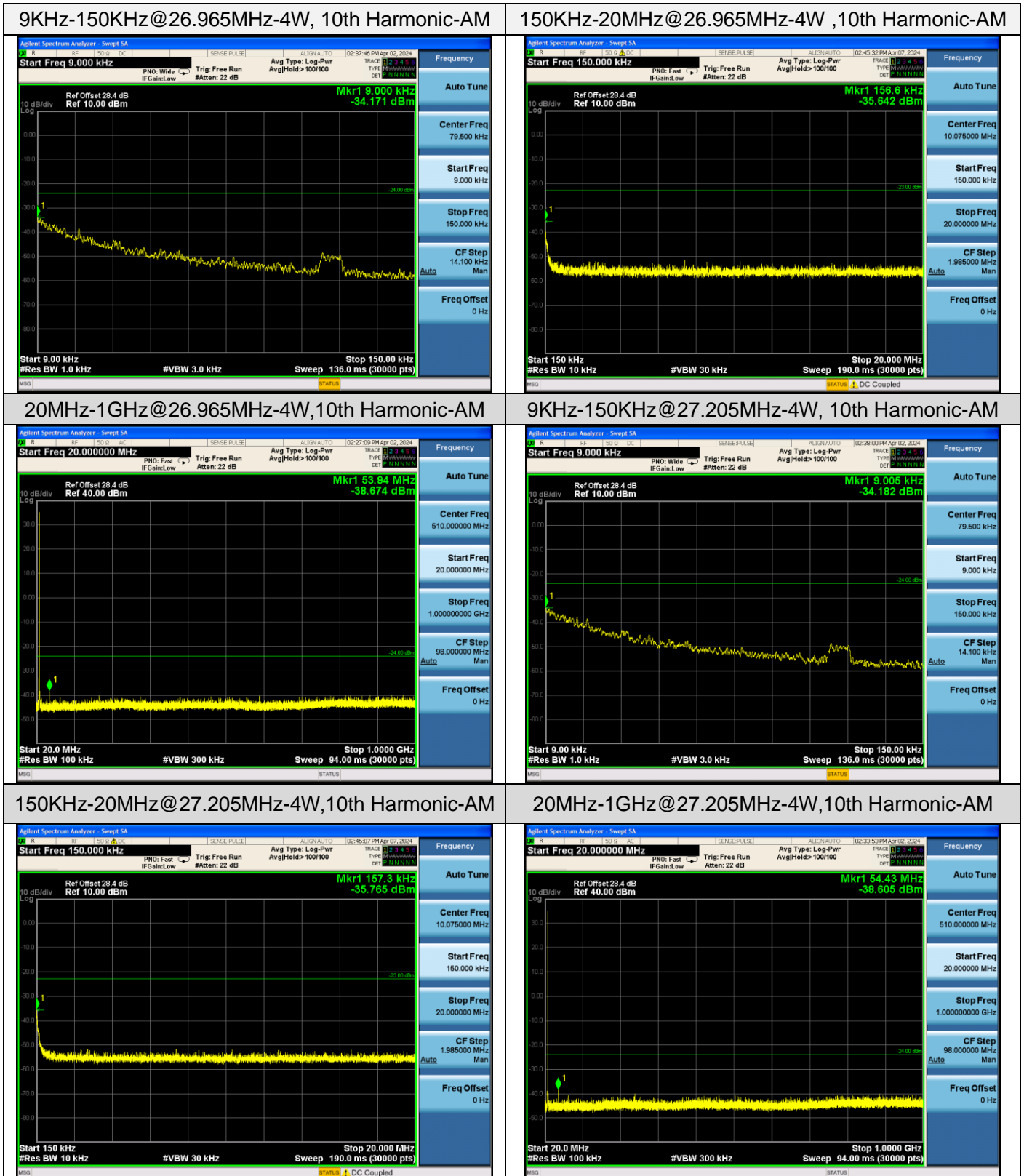
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

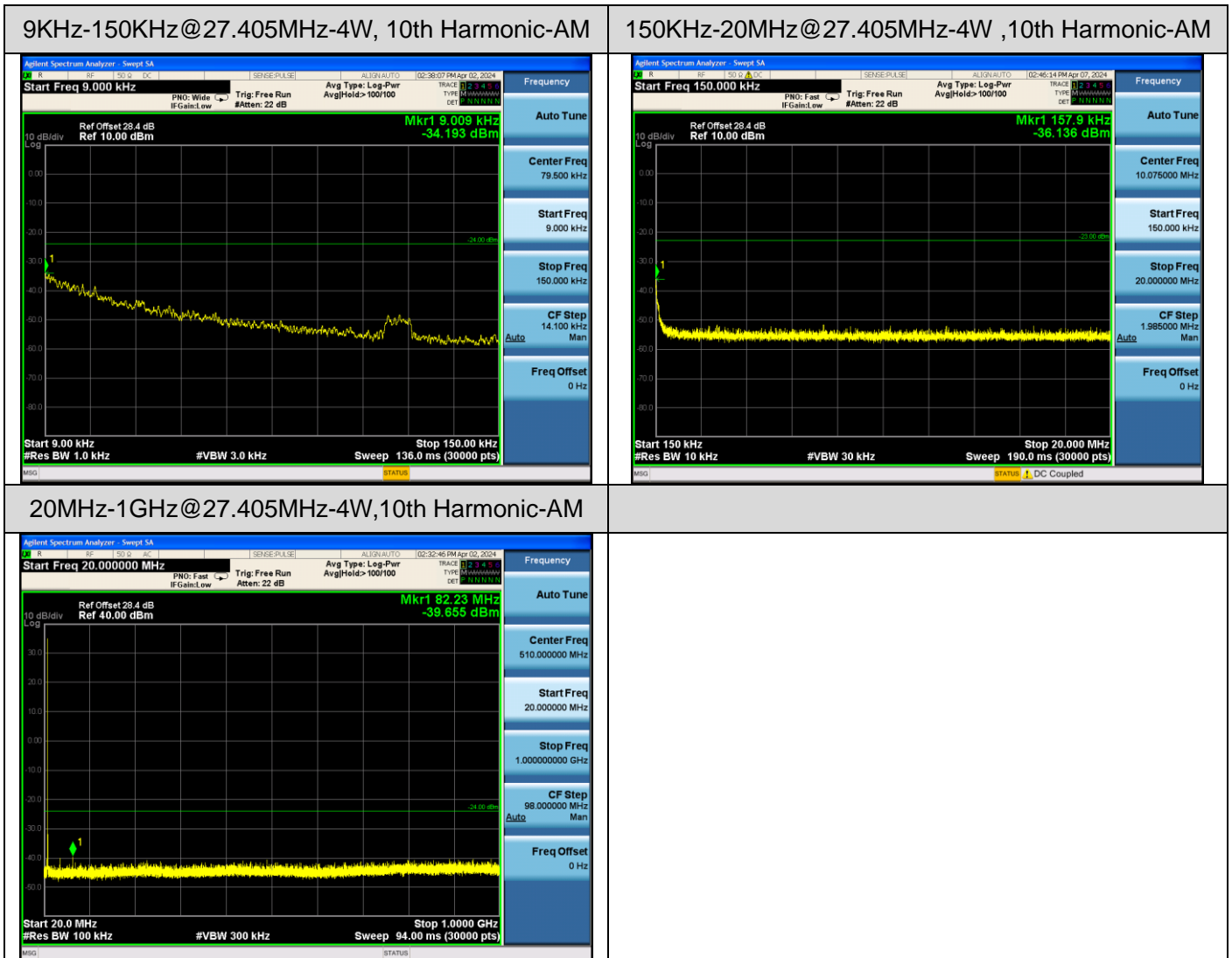
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

## 7.4 MEASUREMENT RESULTS

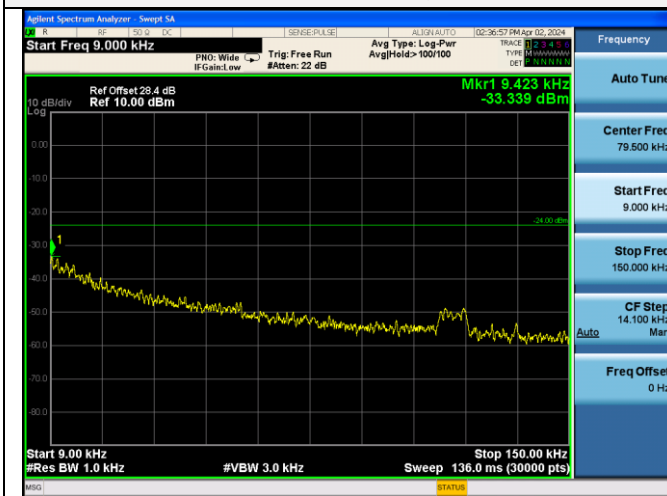


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

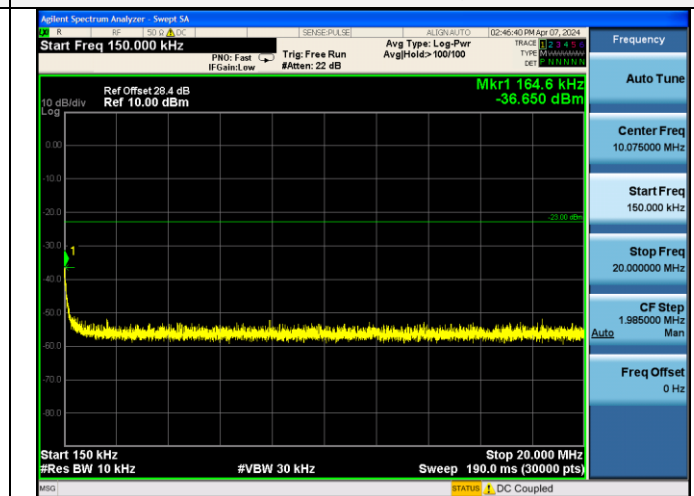


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

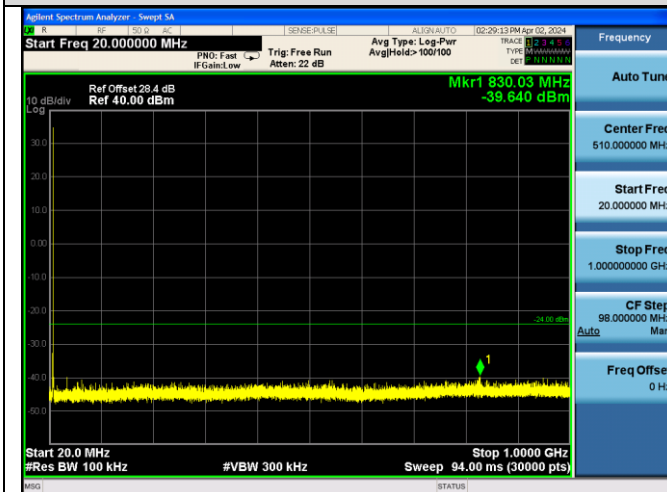
9KHz-150KHz@26.965MHz-4W, 10th Harmonic-FM



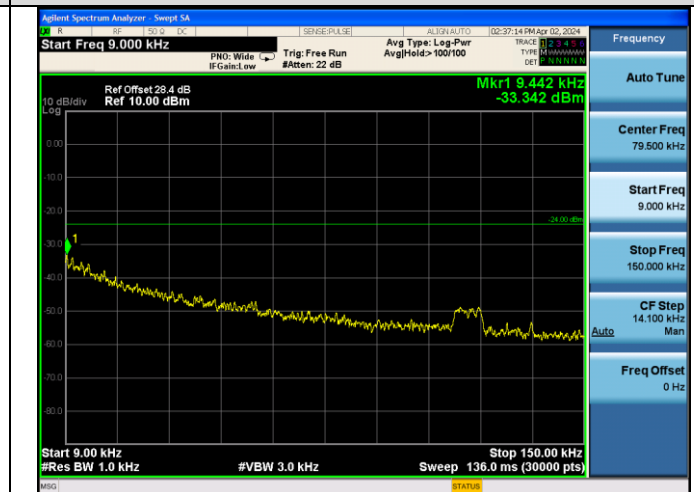
150KHz-20MHz@26.965MHz-4W, 10th Harmonic-FM



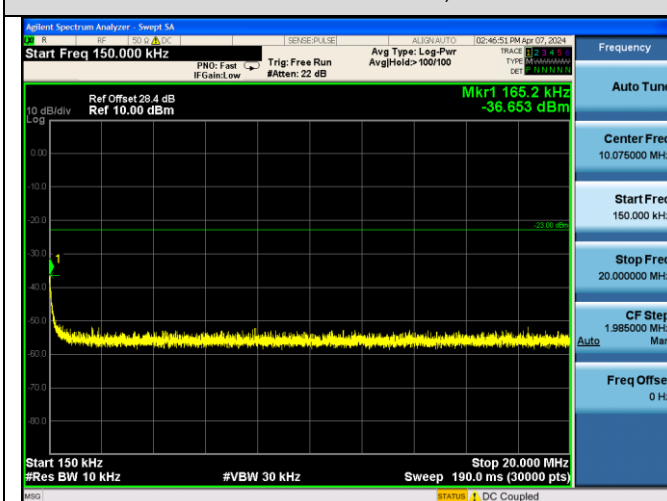
20MHz-1GHz@26.965MHz-4W, 10th Harmonic-FM



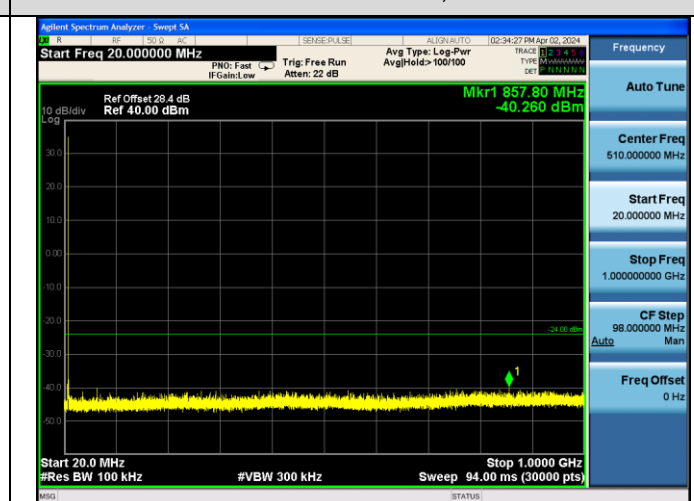
9KHz-150KHz@27.205MHz-4W, 10th Harmonic-FM



150KHz-20MHz@27.205MHz-4W, 10th Harmonic-FM



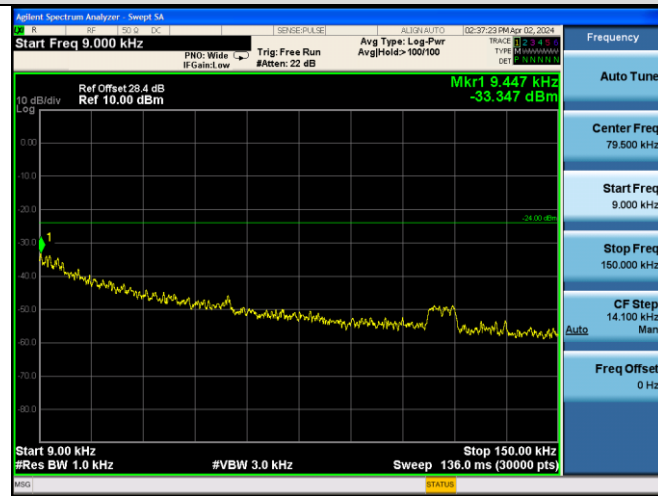
20MHz-1GHz@27.205MHz-4W, 10th Harmonic-FM



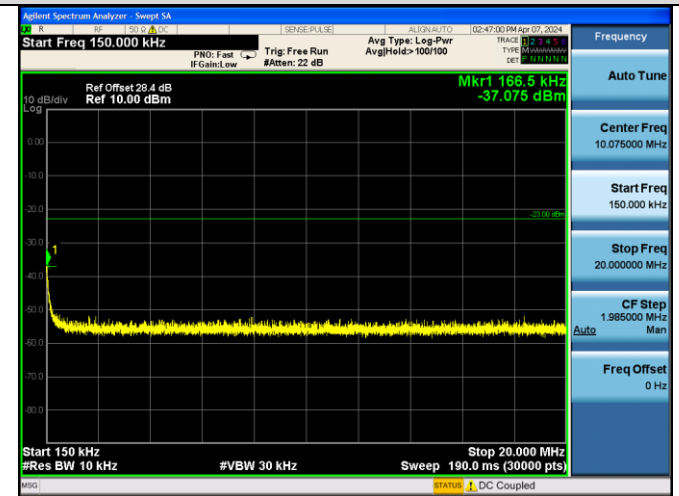
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



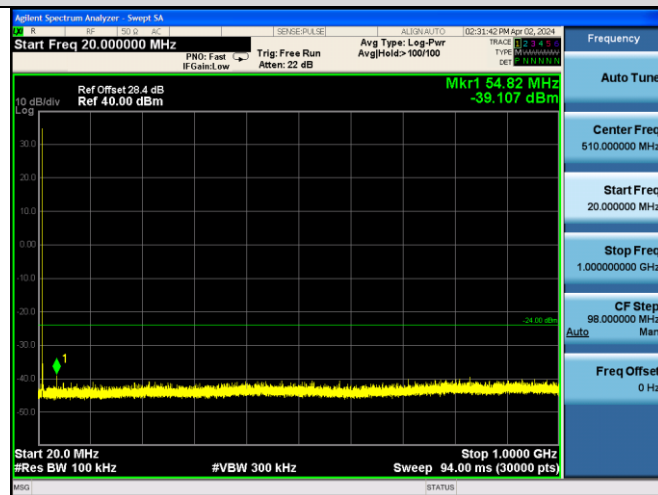
### 9KHz-150KHz@27.405MHz-4W, 10th Harmonic-FM



### 150KHz-20MHz@27.405MHz-4W ,10th Harmonic-FM



### 20MHz-1GHz@27.405MHz-4W,10th Harmonic-FM



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>

## 8. MAXIMUM TRANSMITTER POWER

### 8.1 PROVISIONS APPLICABLE

FCC Part 95.967, FCC Part 2.1046(a)

Each CBRS transmitter type must be designed such that the transmitter power can not exceed the following limits:

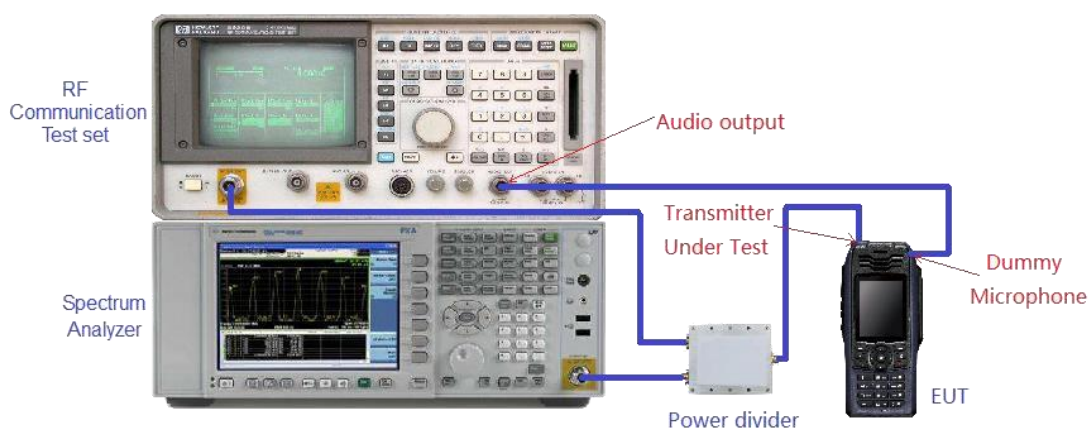
- (a) When transmitting amplitude modulated (AM) voice signals or frequency modulated (FM) voice signals, the mean carrier power must not exceed 4 Watts
- (b) When transmitting single sideband (SSB) voice signals, the peak envelope power must not exceed 12 Watts.

### 8.2 MEASUREMENT METHOD

Conducted RF Output Power:

1. The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.
2. The DUT was connected to a Spectrum Analyzer (SA) via a 30dB attenuator connected to the DUT's antenna port. The SA was configured as above using the Automatic 6dB Cursor Bandwidth measurement. The output power of the DUT was set to the manufacturer's highest output power setting at the Low, Mid and High frequency channels as permitted by the device. The DUT was set to transmit at its maximum Duty Cycle.
3. Spectrum set as follow:  
Centre frequency = fundamental frequency, Span=50kHz , RBW=300Hz, VBW=3KHz ;  
Sweep = auto, Detector function = peak, Trace = max hold

### 8.3 MEASUREMENT SETUP

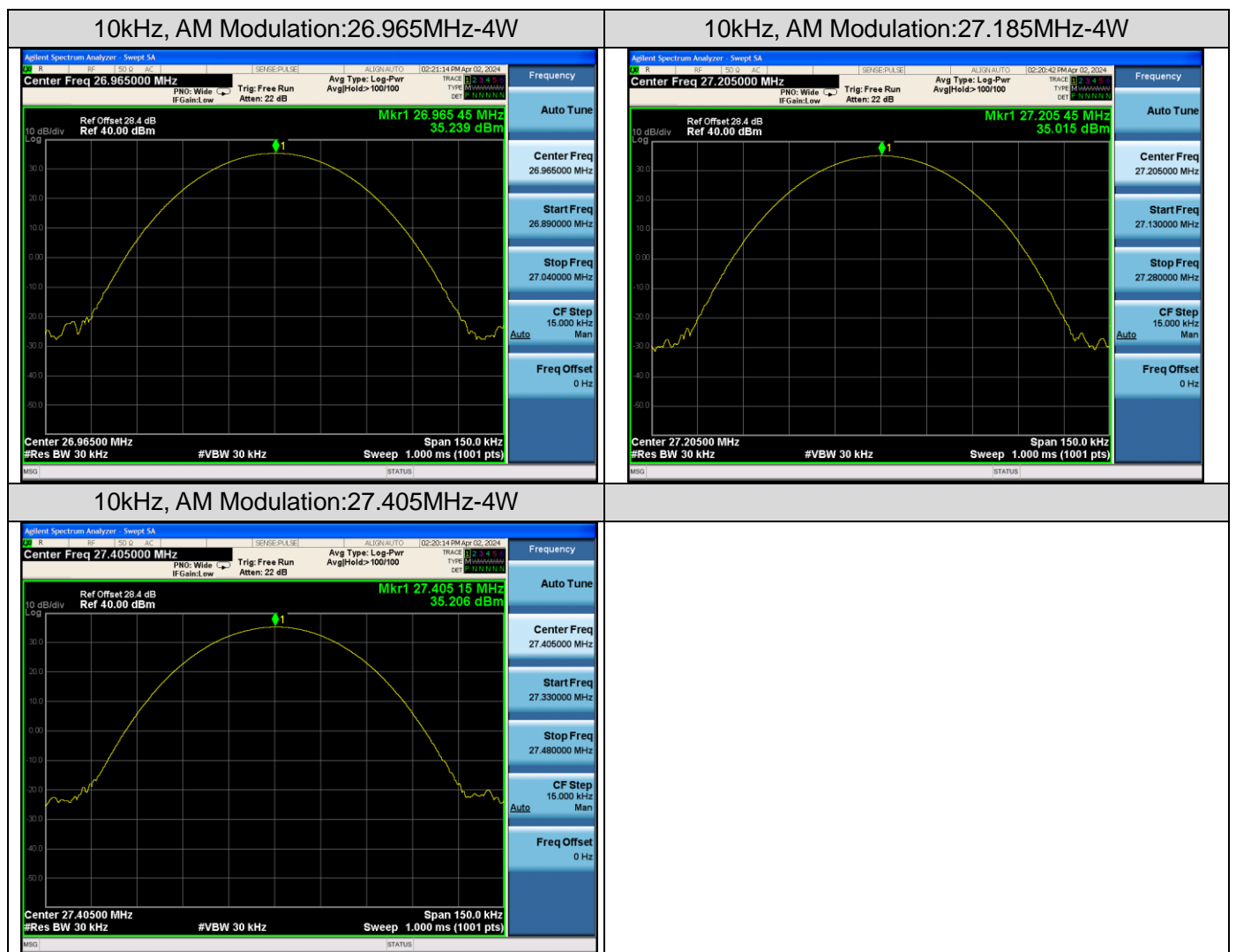


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by [agc01@agccert.com](mailto:agc01@agccert.com).

## 8.4 MEASUREMENT RESULTS

Conducted Power Measurement Results			
Mode	Channel Separation	Test Channel	Measurement Result (dBm)
CBRS TX	10 kHz	26.965 MHz	35.24
		27.205 MHz	35.02
		27.405 MHz	35.21

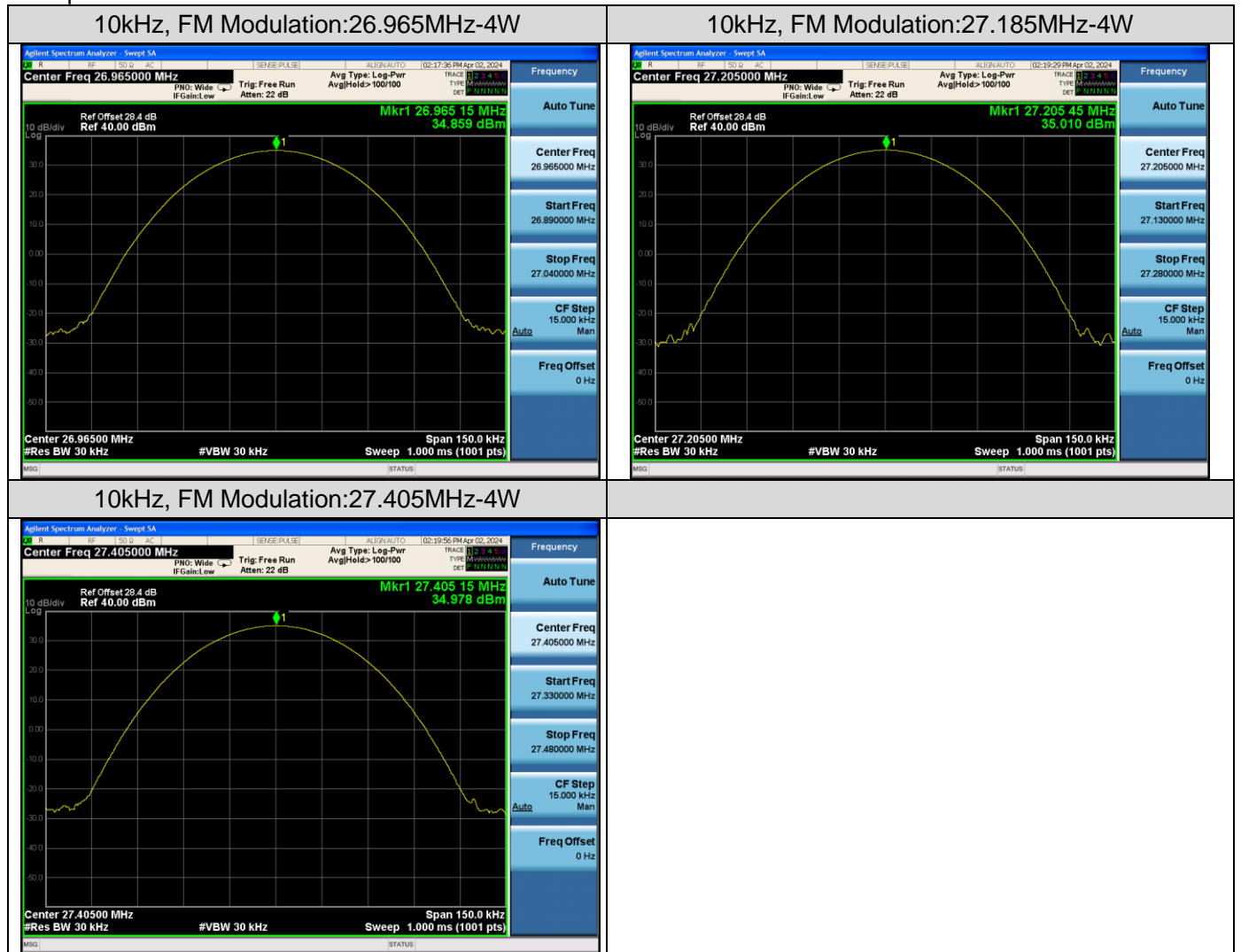
Test plot as follows:



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Conducted Power Measurement Results			
Mode	Channel Separation	Test Channel	Measurement Result (dBm)
CBRS TX	10 kHz	26.965 MHz	34.86
		27.205 MHz	<b>35.01</b>
		27.405 MHz	34.98

Test plot as follows:



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



## **APPENDIX I: PHOTOGRAPHS OF TEST SETUP**

Refer to the Report No.: AGC01284220402AP01B

## **APPENDIX II: PHOTOGRAPHS OF TEST EUT**

Refer to the Report No.: AGC01284220402AP02B

**----END OF REPORT----**

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: <http://www.agccert.com/>



## Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by Company as a result of this application for testing services (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15 days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by [agc01@agccert.com](mailto:agc01@agccert.com).

Attestation of Global Compliance(Shenzhen)Co., Ltd

Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: [agc@agccert.com](mailto:agc@agccert.com) Web: <http://www.agccert.com/>