

---

# FCC Test Report

---

Report No.: AGC10514230801FR02

**FCC ID** : 2BCRN-BREAKX1  
**APPLICATION PURPOSE** : Original Equipment  
**PRODUCT DESIGNATION** : Party speaker  
**BRAND NAME** : Ikarao  
**MODEL NAME** : BREAK X1, BREAK i300  
**APPLICANT** : Dongguan Aika Electronic Technology Co., Ltd.  
**DATE OF ISSUE** : Sep. 06, 2023  
**STANDARD(S)** : FCC Part 15 Subpart C §15.247  
**REPORT VERSION** : V1.0

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.

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/>



**REPORT REVISE RECORD**

| Report Version | Revise Time | Issued Date   | Valid Version | Notes           |
|----------------|-------------|---------------|---------------|-----------------|
| V1.0           | /           | Sep. 06, 2023 | Valid         | Initial Release |

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. VERIFICATION OF CONFORMITY</b>                   | <b>5</b>  |
| <b>2. GENERAL INFORMATION</b>                          | <b>6</b>  |
| 2.1. PRODUCT DESCRIPTION                               | 6         |
| 2.2. TABLE OF CARRIER FREQUENCIES                      | 7         |
| 2.3. IEEE 802.11N MODULATION SCHEME                    | 8         |
| 2.4. RELATED SUBMITTAL(S) / GRANT (S)                  | 9         |
| 2.5. TEST METHODOLOGY                                  | 9         |
| 2.6. SPECIAL ACCESSORIES                               | 9         |
| 2.7. EQUIPMENT MODIFICATIONS                           | 9         |
| 2.8. ANTENNA REQUIREMENT                               | 9         |
| 2.9. DUTY CYCLE                                        | 10        |
| <b>3. MEASUREMENT UNCERTAINTY</b>                      | <b>12</b> |
| <b>4. DESCRIPTION OF TEST MODES</b>                    | <b>13</b> |
| <b>5. SYSTEM TEST CONFIGURATION</b>                    | <b>14</b> |
| 5.1. CONFIGURATION OF EUT SYSTEM                       | 14        |
| 5.2. EQUIPMENT USED IN EUT SYSTEM                      | 14        |
| 5.3. SUMMARY OF TEST RESULTS                           | 14        |
| <b>6. TEST FACILITY</b>                                | <b>15</b> |
| <b>7. RF OUTPUT POWER MEASUREMENT</b>                  | <b>16</b> |
| 7.1 PROVISIONS APPLICABLE                              | 16        |
| 7.2 MEASUREMENT PROCEDURE                              | 16        |
| 7.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION) | 16        |
| 7.4. LIMITS AND MEASUREMENT RESULT                     | 17        |
| <b>8. 6DB BANDWIDTH MEASUREMENT</b>                    | <b>18</b> |
| 8.1 MEASUREMENT LIMITS                                 | 18        |
| 8.2 MEASUREMENT PROCEDURE                              | 18        |
| 8.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION) | 18        |
| 8.4. MEASUREMENT RESULTS                               | 19        |
| <b>9. CONDUCTED SPURIOUS EMISSION</b>                  | <b>32</b> |
| 9.1 MEASUREMENT LIMIT                                  | 32        |
| 9.2 MEASUREMENT PROCEDURE                              | 32        |
| 9.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION) | 32        |
| 9.4 MEASUREMENT RESULTS                                | 33        |

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.

|                                                                   |           |
|-------------------------------------------------------------------|-----------|
| <b>10. POWER SPECTRAL DENSITY MEASUREMENT .....</b>               | <b>47</b> |
| 10.1 MEASUREMENT LIMITS .....                                     | 47        |
| 10.2 MEASUREMENT PROCEDURE .....                                  | 47        |
| 10.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION).....      | 48        |
| 10.4 MEASUREMENT RESULT .....                                     | 48        |
| <b>11. RADIATED EMISSION .....</b>                                | <b>55</b> |
| 11.1. MEASUREMENT PROCEDURE .....                                 | 55        |
| 11.2. TEST SETUP .....                                            | 56        |
| 11.3. LIMITS AND MEASUREMENT RESULT .....                         | 57        |
| 11.4. TEST RESULT .....                                           | 57        |
| <b>12. LINE CONDUCTED EMISSION TEST .....</b>                     | <b>79</b> |
| 12.1. LIMITS OF LINE CONDUCTED EMISSION TEST .....                | 79        |
| 12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST .....         | 79        |
| 12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST ..... | 80        |
| 12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST .....       | 80        |
| 12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST .....           | 81        |
| <b>APPENDIX A: PHOTOGRAPHS OF TEST SETUP .....</b>                | <b>83</b> |
| <b>APPENDIX B: PHOTOGRAPHS OF EUT .....</b>                       | <b>83</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. VERIFICATION OF CONFORMITY**

|                                     |                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Applicant</b>                    | Dongguan Aika Electronic Technology Co., Ltd.                                                     |
| <b>Address</b>                      | Room 201, Building 2, No. 388, Bihu Road, Fenggang Town, Dongguan City, Guangdong Province, China |
| <b>manufacturer</b>                 | GUANGDONG TAIDE ZHILIAN TECHNOLOGY CO.,LTD                                                        |
| <b>Address</b>                      | No. 388 Bihu Road, Fenggang Town, Dongguan city, Guangdong Province, China                        |
| <b>Factory</b>                      | GUANGDONG TAIDE ZHILIAN TECHNOLOGY CO.,LTD                                                        |
| <b>Address</b>                      | No. 388 Bihu Road, Fenggang Town, Dongguan city, Guangdong Province, China                        |
| <b>Product Designation</b>          | Party speaker                                                                                     |
| <b>Brand Name</b>                   | Ikarao                                                                                            |
| <b>Test Model</b>                   | BREAK X1                                                                                          |
| <b>Series Model</b>                 | BREAK i300                                                                                        |
| <b>Difference description</b>       | All the series models are the same as the test model except for the model names.                  |
| <b>Date of receipt of test item</b> | Aug. 17, 2023                                                                                     |
| <b>Date of Test</b>                 | Aug. 17, 2023~ Sep. 06, 2023                                                                      |
| <b>Deviation</b>                    | No any deviation from the test method                                                             |
| <b>Condition of Test Sample</b>     | Normal                                                                                            |
| <b>Test Result</b>                  | Pass                                                                                              |
| <b>Report Template</b>              | AGCRT-US-BGN/RF                                                                                   |

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 15.247.

Prepared By

*Thea Huang*

Thea Huang  
(Project Engineer)

Sep. 06, 2023

Reviewed By

*Calvin Liu*

Calvin Liu  
(Reviewer)

Sep. 06, 2023

Approved By

*Max Zhang*

Max Zhang  
Authorized Officer

Sep. 06, 2023

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. GENERAL INFORMATION

### 2.1. PRODUCT DESCRIPTION

The EUT is designed as “Party speaker”. It is designed by way of utilizing the DSSS and OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

|                               |                                                                                                              |
|-------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Equipment Type</b>         | WLAN 2.4G                                                                                                    |
| <b>Frequency Band</b>         | 2400MHz ~ 2483.5MHz                                                                                          |
| <b>Operation Frequency</b>    | 2412MHz ~ 2462MHz                                                                                            |
| <b>Output Power (Average)</b> | IEEE 802.11b:11.56dBm; IEEE 802.11g:10.80dBm;<br>IEEE 802.11n(HT20):10.56dBm; IEEE 802.11n(HT40):10.23dBm    |
| <b>Output Power (Peak)</b>    | IEEE 802.11b:14.60dBm; IEEE 802.11g: 18.54dBm;<br>IEEE 802.11n(HT20): 18.41dBm; IEEE 802.11n(HT40): 17.58dBm |
| <b>Modulation</b>             | 802.11b:DSSS(DQPSK, DBPSK, CCK)<br>802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK)                               |
| <b>Data Rate</b>              | 802.11b: 1/2/5.5/11Mbps<br>802.11g: 6/9/12/18/24/36/48/54Mbps<br>802.11n: up to 300Mbps                      |
| <b>Number of channels</b>     | 11                                                                                                           |
| <b>Hardware Version</b>       | V1.1                                                                                                         |
| <b>Software Version</b>       | V1.0                                                                                                         |
| <b>Antenna Designation</b>    | FPC Antenna (Comply with requirements of the FCC part 15.203)                                                |
| <b>Antenna Gain</b>           | 4.9dBi                                                                                                       |
| <b>Power Supply</b>           | DC 18.5V by battery or AC110~240V/ 50-60HZ                                                                   |

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. TABLE OF CARRIER FREQUENCIES

| Frequency Band | Channel Number | Frequency |
|----------------|----------------|-----------|
| 2400~2483.5MHz | 1              | 2412 MHz  |
|                | 2              | 2417 MHz  |
|                | 3              | 2422 MHz  |
|                | 4              | 2427 MHz  |
|                | 5              | 2432 MHz  |
|                | 6              | 2437 MHz  |
|                | 7              | 2442 MHz  |
|                | 8              | 2447 MHz  |
|                | 9              | 2452 MHz  |
|                | 10             | 2457 MHz  |
|                | 11             | 2462 MHz  |

Note: For 20MHz bandwidth system use Channel 1 to Channel 11. For 40MHz bandwidth system use Channel 3 to Channel 9

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/>

### 2.3. IEEE 802.11N MODULATION SCHEME

| MCS Index | Nss | Modulation | R   | NBPSC | NCBPS |       | NDBPS |       | Data rate(Mbps) |       |
|-----------|-----|------------|-----|-------|-------|-------|-------|-------|-----------------|-------|
|           |     |            |     |       |       |       |       |       | 800nsGI         |       |
|           |     |            |     |       | 20MHz | 40MHz | 20MHz | 40MHz | 20MHz           | 40MHz |
| 0         | 1   | BPSK       | 1/2 | 1     | 52    | 108   | 26    | 54    | 6.5             | 13.5  |
| 1         | 1   | QPSK       | 1/2 | 2     | 104   | 216   | 52    | 108   | 13.0            | 27.0  |
| 2         | 1   | QPSK       | 3/4 | 2     | 104   | 216   | 78    | 162   | 19.5            | 40.5  |
| 3         | 1   | 16-QAM     | 1/2 | 4     | 208   | 432   | 104   | 216   | 26.0            | 54.0  |
| 4         | 1   | 16-QAM     | 3/4 | 4     | 208   | 432   | 156   | 324   | 39.0            | 81.0  |
| 5         | 1   | 64-QAM     | 2/3 | 6     | 312   | 648   | 208   | 432   | 52.0            | 108.0 |
| 6         | 1   | 64-QAM     | 3/4 | 6     | 312   | 648   | 234   | 489   | 58.5            | 121.5 |
| 7         | 1   | 64-QAM     | 5/6 | 6     | 312   | 648   | 260   | 540   | 65.0            | 135.0 |

| Symbol | Explanation                             |
|--------|-----------------------------------------|
| NSS    | Number of spatial streams               |
| R      | Code rate                               |
| NBPSC  | Number of coded bits per single carrier |
| NCBPS  | Number of coded bits per symbol         |
| NDBPS  | Number of data bits per symbol          |
| GI     | Guard interval                          |

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.

## 2.4. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2BCRN-BREAKX1** filing to comply with the FCC Part 15 requirements.

## 2.5. TEST METHODOLOGY

KDB 558074 D01 15.247 Meas Guidance v05: Guidance for compliance measurements on Digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules

ANSI C63.10:2013: American National Standard for Testing Unlicensed Wireless Devices

## 2.6. SPECIAL ACCESSORIES

Refer to section 5.2.

## 2.7. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

## 2.8. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.

## 2.9. DUTY CYCLE

2.4GHz WLAN (DTS) operation is possible in 20MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Peak. The RBW and VBW were both greater than  $50/T$ , where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

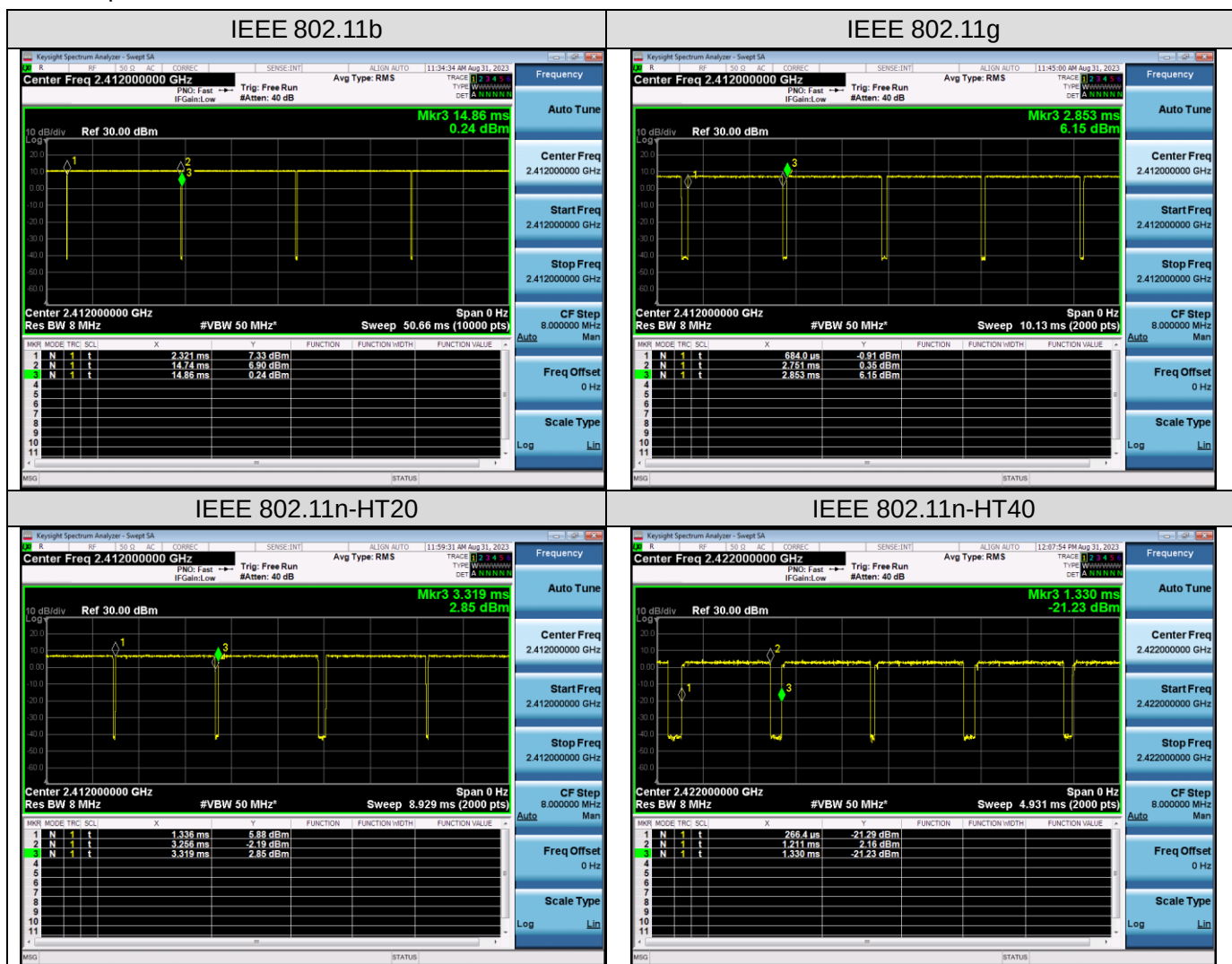
| Operating mode    | Data rates (Mbps) | Duty Cycle (%) | Duty Cycle Factor (dB) | 1/ T Minimum VBW (kHz) | Average Factor (dB) |
|-------------------|-------------------|----------------|------------------------|------------------------|---------------------|
| IEEE 802.11b      | 1                 | 99.04          | 0.04                   | 0.08                   | -0.08               |
| IEEE 802.11g      | 6                 | 95.30          | 0.21                   | 0.48                   | -0.42               |
| IEEE 802.11n-HT20 | MCS0              | 96.82          | 0.14                   | 0.52                   | -0.28               |
| IEEE 802.11n-HT40 | MCS0              | 88.81          | 0.52                   | 1.06                   | -1.03               |

Remark:

1. Duty Cycle factor =  $10 * \log (1/ \text{Duty cycle})$  2. Average factor =  $20 \log_{10} \text{Duty Cycle}$

The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value

The test plots 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.

### 3. MEASUREMENT UNCERTAINTY

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

| Item                                          | Measurement Uncertainty    |
|-----------------------------------------------|----------------------------|
| Uncertainty of Conducted Emission for AC Port | $U_c = \pm 2.9 \text{ dB}$ |
| Uncertainty of Radiated Emission below 1GHz   | $U_c = \pm 4.0 \text{ dB}$ |
| Uncertainty of Radiated Emission above 1GHz   | $U_c = \pm 4.8 \text{ dB}$ |
| Uncertainty of total RF power, conducted      | $U_c = \pm 0.8 \text{ dB}$ |
| Uncertainty of RF power density, conducted    | $U_c = \pm 2.6 \text{ dB}$ |
| Uncertainty of spurious emissions, conducted  | $U_c = \pm 2 \%$           |
| Uncertainty of Occupied Channel Bandwidth     | $U_c = \pm 2 \%$           |

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).

#### 4. DESCRIPTION OF TEST MODES

| NO. | TEST MODE DESCRIPTION            |
|-----|----------------------------------|
| 1   | Low channel transmitting (TX)    |
| 2   | Middle channel transmitting (TX) |
| 3   | High channel transmitting (TX)   |

Note:  
 Transmit by 802.11b with Data rate (1/2/5.5/11)  
 Transmit by 802.11g with Data rate (6/9/12/18/24/36/48/54)  
 Transmit by 802.11n (20MHz) with Data rate (6.5/13/19.5/26/39/52/58.5/65)  
 Transmit by 802.11n (40MHz) with Data rate (13.5/27/40.5/54/81/108/121.5/135)  
 The test channel for 20MHz bandwidth system is channel 1, 6 and 11.  
 The test channel for 40MHz bandwidth system is channel 3, 6 and 9.

#### Note:

1. The EUT has been set to operate continuously on the lowest, middle and highest operation frequency Individually, and the EUT is operating at its maximum duty cycle>or equal 98%
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

#### Software Setting

```

管理员: C:\Windows\System32\cmd.exe - adb shell

rtwpriv_arm64 wlan0 mp_ant_tx a
rtwpriv_arm64 wlan0 mp_bandwidth 40M=0,shortGI=0
rtwpriv_arm64 wlan0 mp_rate 128
rtwpriv_arm64 wlan0 mp_txpower patha=49,pathb=0

rtwpriv_arm64 wlan0 mp_ctx background,pktrtwpriv_arm64 wlan0 mp_start
rtwpriv_arm64 wlan0 mp_channel 36
rk3568_t:/ # rtwpriv_arm64 wlan0 mp_start
wlan0 mp_start:mp_start ok

rk3568_t:/ # rtwpriv_arm64 wlan0 mp_channel 36
wlan0 mp_channel:Change channel 149 to channel 36
rk3568_t:/ # rtwpriv_arm64 wlan0 mp_ant_tx a
wlan0 mp_ant_tx:switch Tx antenna to a
rk3568_t:/ # rtwpriv_arm64 wlan0 mp_bandwidth 40M=0,shortGI=0
wlan0 mp_bandwidth:No change current BW 0

rk3568_t:/ # rtwpriv_arm64 wlan0 mp_rate 128
wlan0 mp_rate:Set data rate to 128 index 12
rk3568_t:/ # rtwpriv_arm64 wlan0 mp_txpower patha=49,pathb=0
wlan0 mp_txpower:patha=49,pathb=0
rk3568_t:/ #
rtwpriv_arm64 wlan0 mp_ctx background,pkt
wlan0 mp_ctx:
Start continuous DA=ffffffff len=1500 count=0

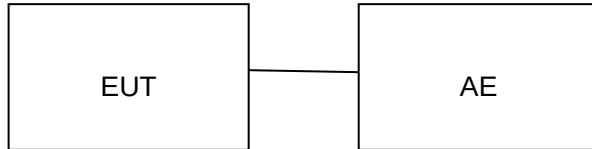
rk3568_t:/ # rtwpriv_arm64 wlan0 mp_ctx stop
rtwpriv_arm64 wlan0 mp_ctx stop
wlan0 mp_ctx:Stop continuous Tx
rk3568_t:/ #
  
```

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.

## 5. SYSTEM TEST CONFIGURATION

### 5.1. CONFIGURATION OF EUT SYSTEM

Configure:



### 5.2. EQUIPMENT USED IN EUT SYSTEM

| Item | Equipment     | Model No. | ID or Specification | Remark |
|------|---------------|-----------|---------------------|--------|
| 1    | Party speaker | BREAK X1  | 2BCRN-BREAKX1       | EUT    |
| 2    | Data Cable    | --        | 0.8m, unshielded    | AE     |

### 5.3. SUMMARY OF TEST RESULTS

| Item | FCC Rules            | Description Of Test              | Result |
|------|----------------------|----------------------------------|--------|
| 1    | §15.203&15.247(b)(4) | Antenna Equipment                | Pass   |
| 2    | §15.247 (b)(1)       | RF Output Power                  | Pass   |
| 3    | §15.247 (a)(1)       | 6 dB Bandwidth                   | Pass   |
| 4    | §15.247 (e)          | Power Spectral Density           | Pass   |
| 4    | §15.247 (d)          | Conducted Spurious Emission      | Pass   |
| 5    | §15.209              | Radiated Emission& Band Edge     | Pass   |
| 6    | §15.207              | AC Power Line Conducted 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.

## 6. TEST FACILITY

|                                          |                                                                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Site</b>                         | Attestation of Global Compliance (Shenzhen) Co., Ltd                                                                                     |
| <b>Location</b>                          | 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China |
| <b>Designation Number</b>                | CN1259                                                                                                                                   |
| <b>FCC Test Firm Registration Number</b> | 975832                                                                                                                                   |
| <b>A2LA Cert. No.</b>                    | 5054.02                                                                                                                                  |
| <b>Description</b>                       | Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA                                                                |

### TEST EQUIPMENT OF CONDUCTED EMISSION TEST

| Equipment     | Manufacturer  | Model      | S/N    | Cal. Date     | Cal. Due      |
|---------------|---------------|------------|--------|---------------|---------------|
| TEST RECEIVER | R&S           | ESPI       | 101206 | Jun. 03, 2023 | Jun. 02, 2024 |
| LISN          | R&S           | ESH2-Z5    | 100086 | Jun. 03, 2023 | Jun. 02, 2024 |
| Attenuator    | Dongfang Xupu | LM-XX-6-5W | N/A    | Jun. 09, 2023 | Jun. 08, 2024 |
| Test software | R&S           | Ver.V1.71  | N/A    | N/A           | N/A           |

### TEST EQUIPMENT OF RADIATED EMISSION TEST

| Equipment                      | Manufacturer   | Model     | S/N          | Cal. Date     | Cal. Due      |
|--------------------------------|----------------|-----------|--------------|---------------|---------------|
| TEST RECEIVER                  | R&S            | ESCI      | 10096        | Feb. 18, 2023 | Feb. 17, 2024 |
| EXA Signal Analyzer            | Aglient        | N9010A    | MY53470504   | Jun. 01, 2023 | May 31, 2024  |
| 2.4GHz Filter                  | EM Electronics | N/A       | N/A          | Mar. 18, 2022 | Mar. 19, 2024 |
| Attenuator                     | ZHINAN         | E-002     | N/A          | Aug. 04, 2022 | Aug. 03, 2024 |
| Horn antenna                   | SCHWARZBECK    | BBHA 9170 | #768         | Oct. 31, 2021 | Oct. 30, 2023 |
| Active loop antenna (9K-30MHz) | ZHINAN         | ZN30900C  | 18051        | Mar. 12, 2022 | Mar. 11, 2024 |
| Double-Ridged Waveguide Horn   | ETS LINDGREN   | 3117      | 00034609     | Apr. 23, 2023 | Apr. 22, 2024 |
| Broadband Preamplifier         | ETS LINDGREN   | 3117PA    | 00225134     | Sep. 01, 2022 | Sep. 02, 2024 |
| ANTENNA                        | SCHWARZBECK    | VULB9168  | VULB9168-494 | Jan. 05, 2023 | Jan. 04, 2025 |
| Test software                  | Tonscend       | Ver.2.5   | N/A          | N/A           | N/A           |

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).

## 7. RF OUTPUT POWER MEASUREMENT

### 7.1 Provisions Applicable

For DTSSs employing digital modulation techniques operating in the bands 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W.

### 7.2 Measurement Procedure

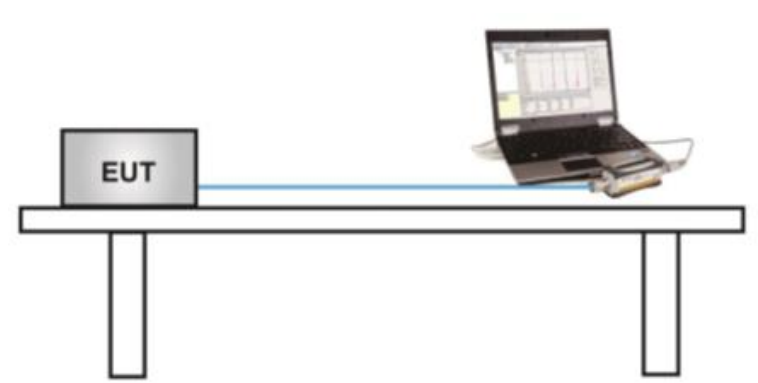
☒ Method PM is Measurement using an RF Peak power meter. The procedure for this method is as follows:

1. The testing follows the ANSI C63.10 Section 11.9.1.3
2. The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

☒ Method PM is Measurement using an RF average power meter. The procedure for this method is as follows:

1. The testing follows the ANSI C63.10 Section 11.9.2.3
2. Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
3. The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
4. At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
5. The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
6. Determine according to the duty cycle of the equipment: when it is less than 98%, follow the steps below.
7. Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
8. Adjust the measurement in dBm by adding  $[10 \log (1 / D)]$ , where D is the duty cycle {e.g.,  $[10 \log (1 / 0.25)]$ , if the duty cycle is 25%}.
9. Record the test results in the report.

### 7.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



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).

#### 7.4. LIMITS AND MEASUREMENT RESULT

| Test Data of Conducted Output Power |                    |                     |                  |              |              |
|-------------------------------------|--------------------|---------------------|------------------|--------------|--------------|
| Test Mode                           | Test Channel (MHz) | Average Power (dBm) | Peak Power (dBm) | Limits (dBm) | Pass or Fail |
| 802.11b                             | 2412               | 11.56               | 14.60            | ≤30          | Pass         |
|                                     | 2437               | 10.71               | 13.47            | ≤30          | Pass         |
|                                     | 2462               | 9.66                | 12.47            | ≤30          | Pass         |
| 802.11g                             | 2412               | 10.80               | 18.54            | ≤30          | Pass         |
|                                     | 2437               | 9.74                | 17.47            | ≤30          | Pass         |
|                                     | 2462               | 8.64                | 16.45            | ≤30          | Pass         |
| 802.11n20                           | 2412               | 10.56               | 18.41            | ≤30          | Pass         |
|                                     | 2437               | 10.02               | 17.40            | ≤30          | Pass         |
|                                     | 2462               | 8.91                | 16.28            | ≤30          | Pass         |
| 802.11n40                           | 2422               | 10.23               | 17.58            | ≤30          | Pass         |
|                                     | 2437               | 9.39                | 16.89            | ≤30          | Pass         |
|                                     | 2452               | 8.75                | 16.19            | ≤30          | 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.

## 8. 6DB BANDWIDTH MEASUREMENT

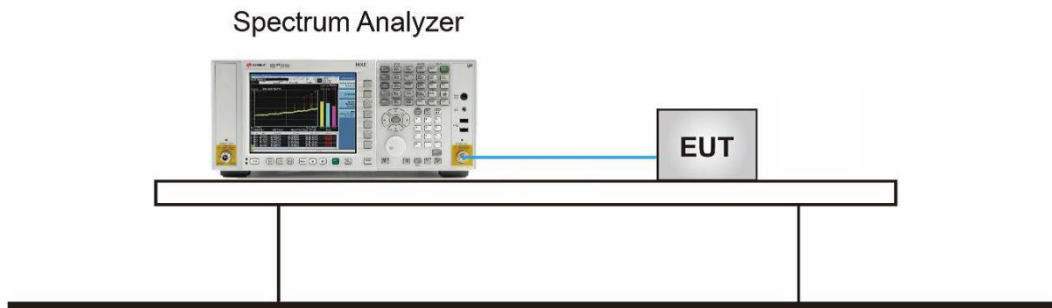
### 8.1 MEASUREMENT LIMITS

The minimum 6dB bandwidth shall be at least 500 kHz.

### 8.2 MEASUREMENT PROCEDURE

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. For 6dB Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW)  $\geq 3 * RBW$ .
6. Detector = peak
7. Trace mode = max hold.
8. Sweep = auto couple.
9. Allow the trace to stabilize.
10. Measure and record the results in the test report.

### 8.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



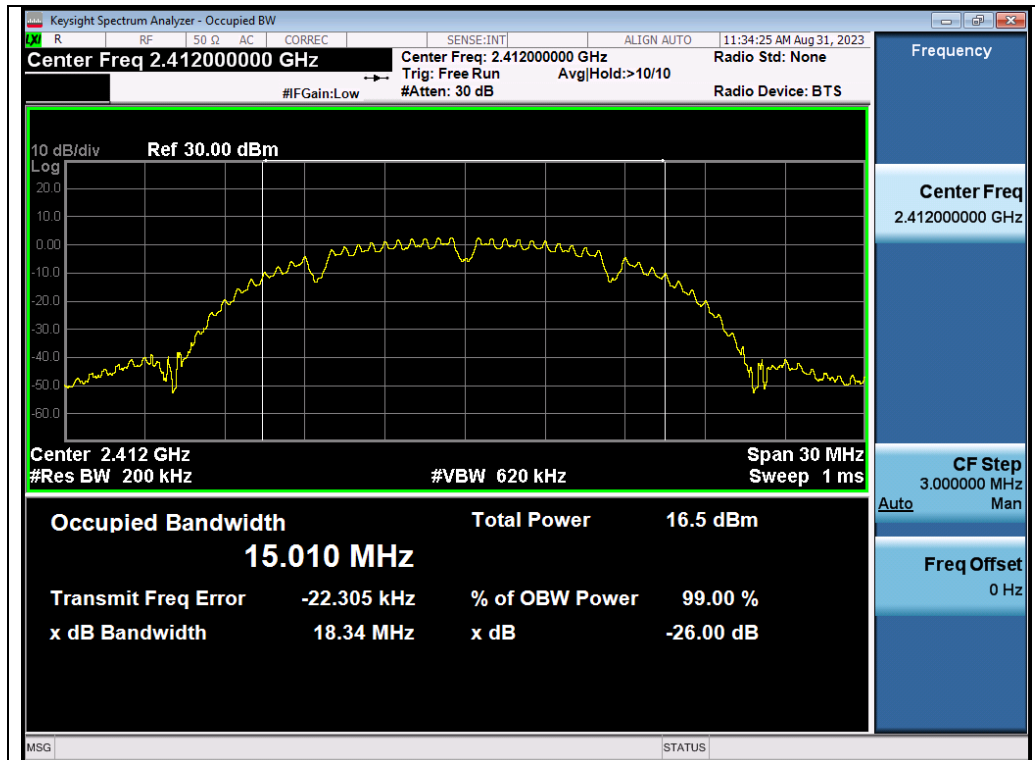
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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

| Test Data of Occupied Bandwidth and DTS Bandwidth |                    |                              |                     |                  |              |
|---------------------------------------------------|--------------------|------------------------------|---------------------|------------------|--------------|
| Test Mode                                         | Test Channel (MHz) | 99% Occupied Bandwidth (MHz) | DTS Bandwidth (MHz) | DTS Limits (MHz) | Pass or Fail |
| 802.11b                                           | 2412               | 15.010                       | 10.069              | ≥0.5             | Pass         |
|                                                   | 2437               | 15.016                       | 10.081              | ≥0.5             | Pass         |
|                                                   | 2462               | 15.021                       | 10.090              | ≥0.5             | Pass         |
| 802.11g                                           | 2412               | 16.702                       | 16.347              | ≥0.5             | Pass         |
|                                                   | 2437               | 16.585                       | 16.340              | ≥0.5             | Pass         |
|                                                   | 2462               | 16.709                       | 16.346              | ≥0.5             | Pass         |
| 802.11n20                                         | 2412               | 17.662                       | 17.542              | ≥0.5             | Pass         |
|                                                   | 2437               | 17.719                       | 17.251              | ≥0.5             | Pass         |
|                                                   | 2462               | 17.695                       | 17.309              | ≥0.5             | Pass         |
| 802.11n40                                         | 2422               | 36.179                       | 35.735              | ≥0.5             | Pass         |
|                                                   | 2437               | 36.287                       | 35.729              | ≥0.5             | Pass         |
|                                                   | 2452               | 36.224                       | 35.727              | ≥0.5             | 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.

### Test Graphs of Occupied Bandwidth

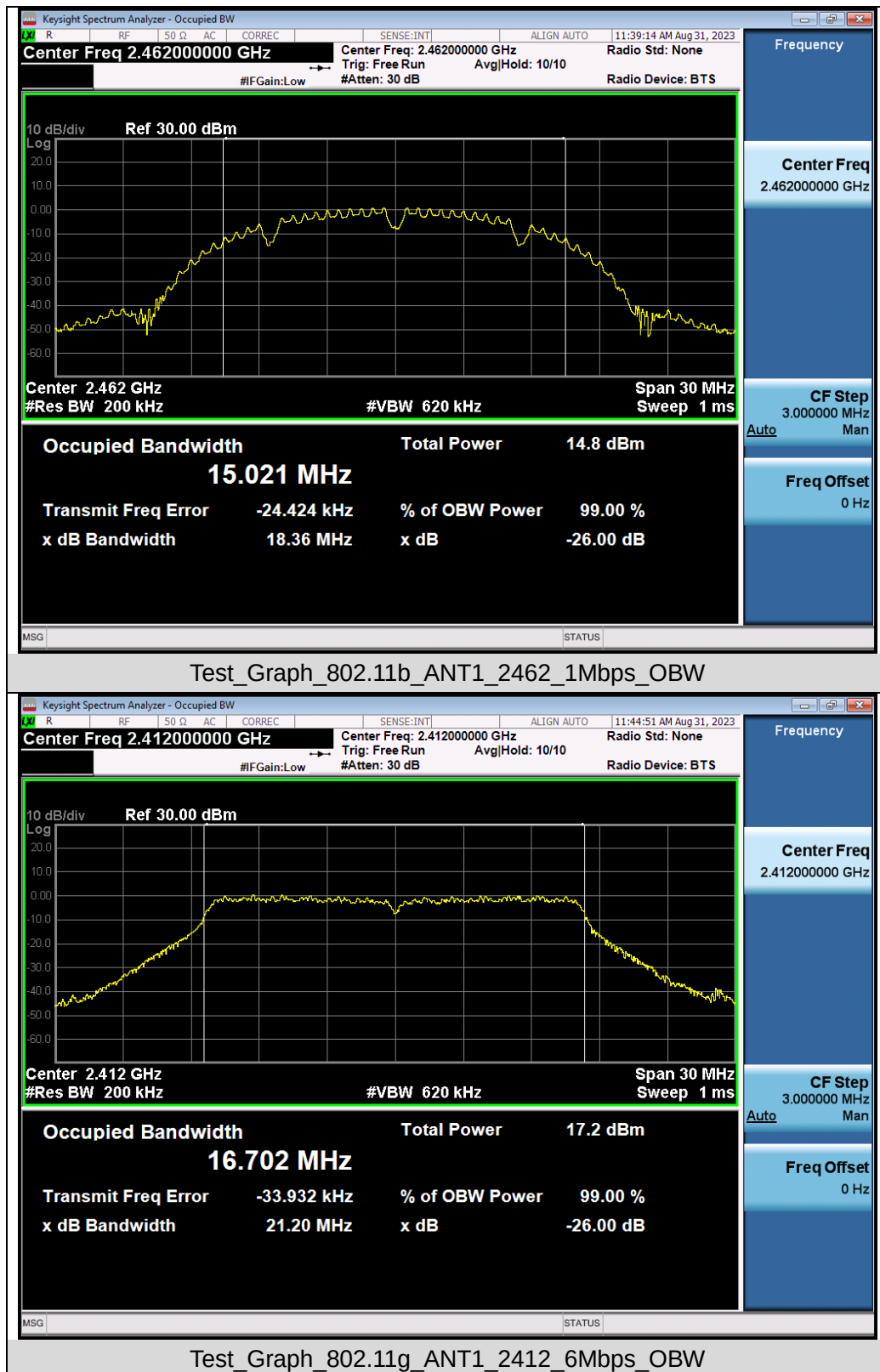


Test\_Graph\_802.11b\_ANT1\_2412\_1Mbps\_OBW

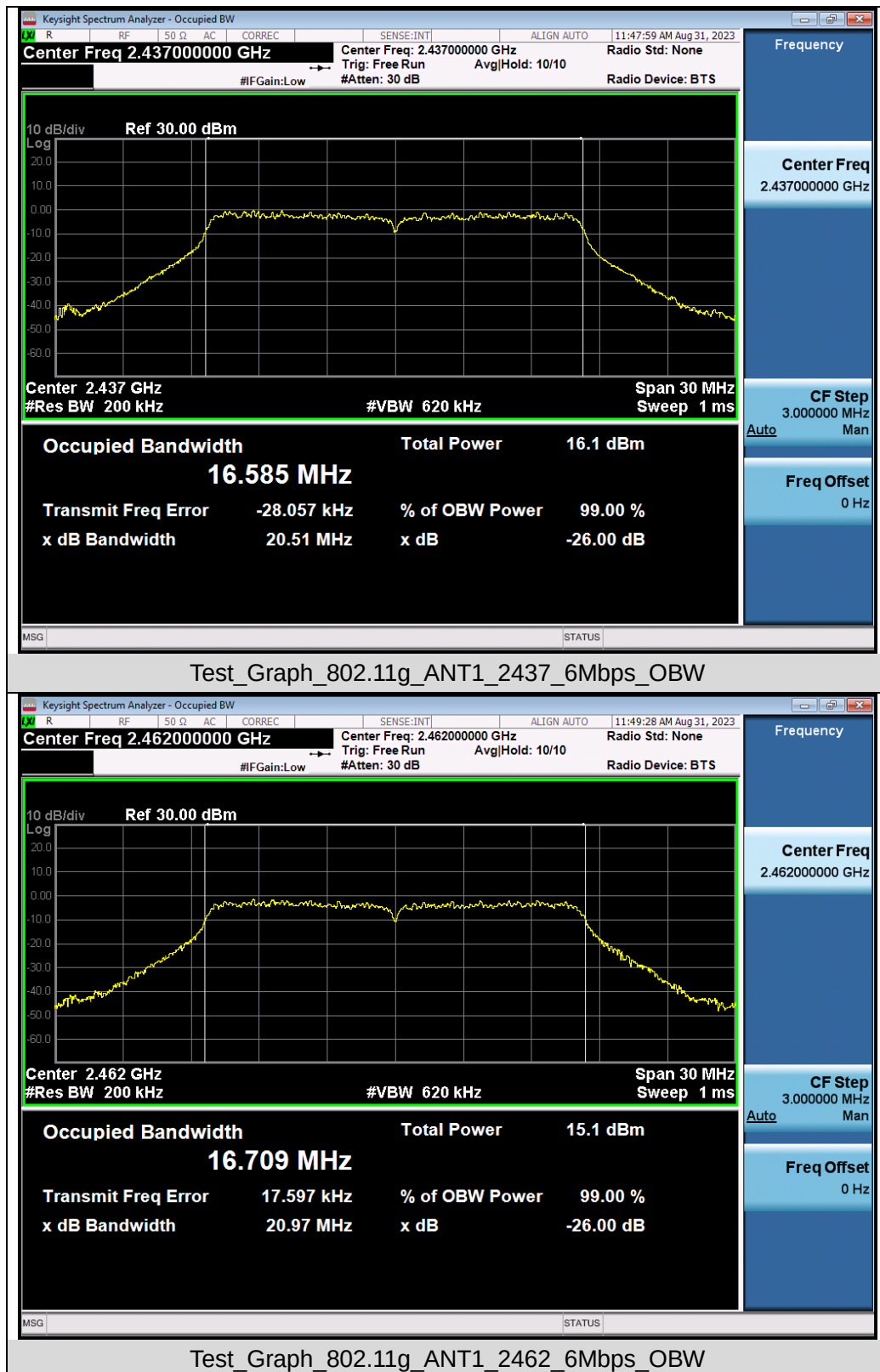


Test\_Graph\_802.11b\_ANT1\_2437\_1Mbps\_OBW

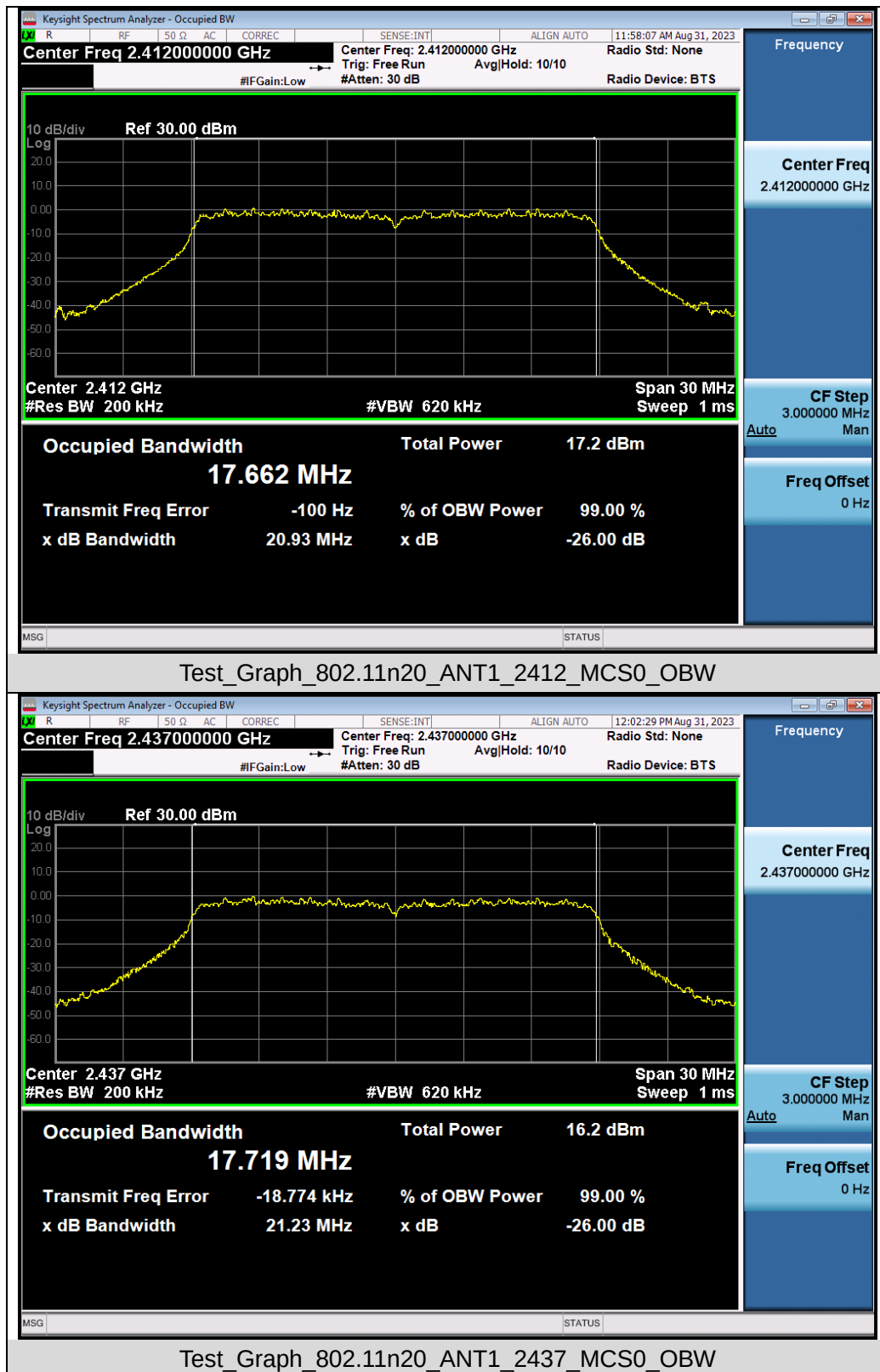
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



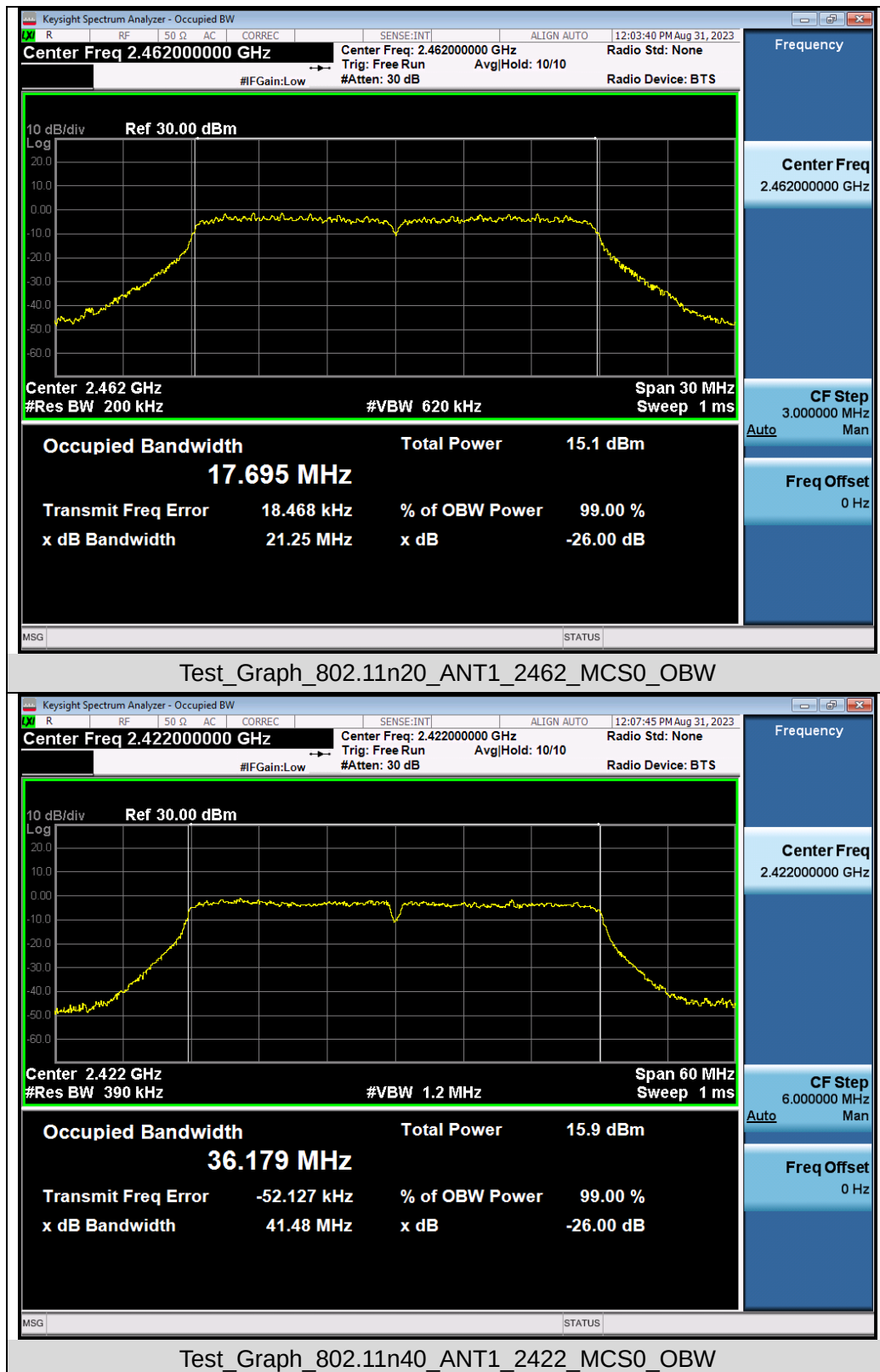
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



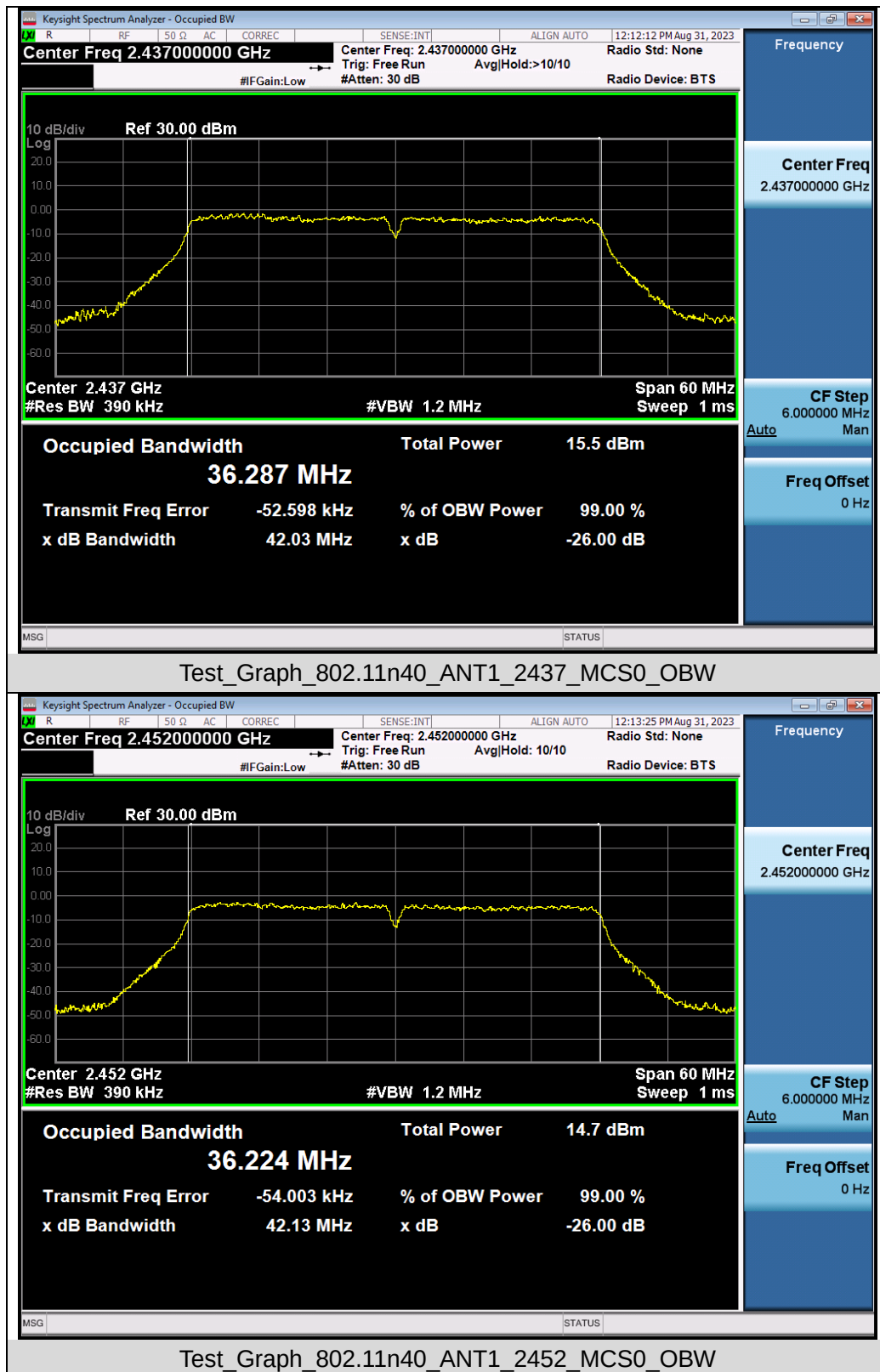
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.

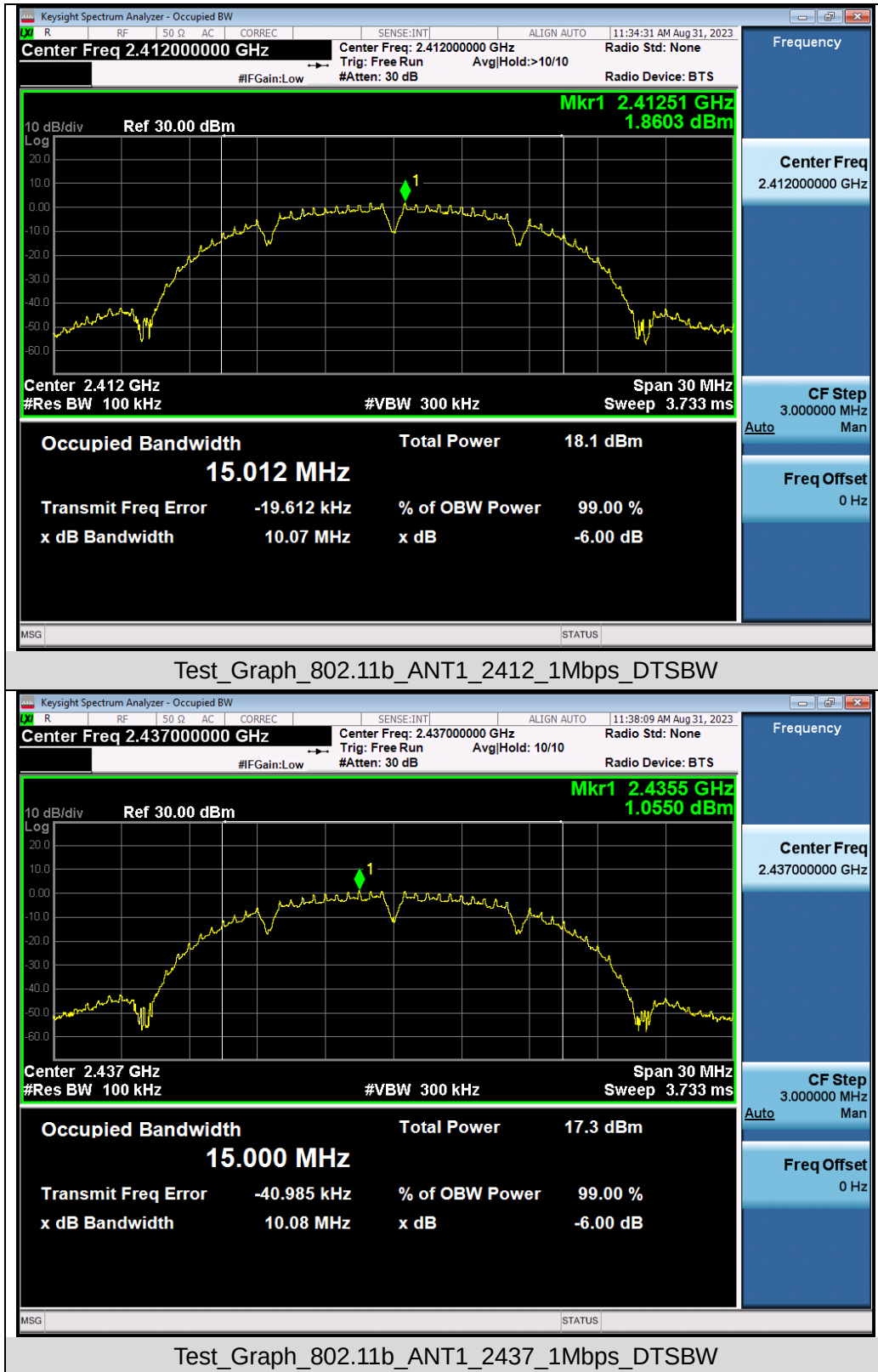


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.

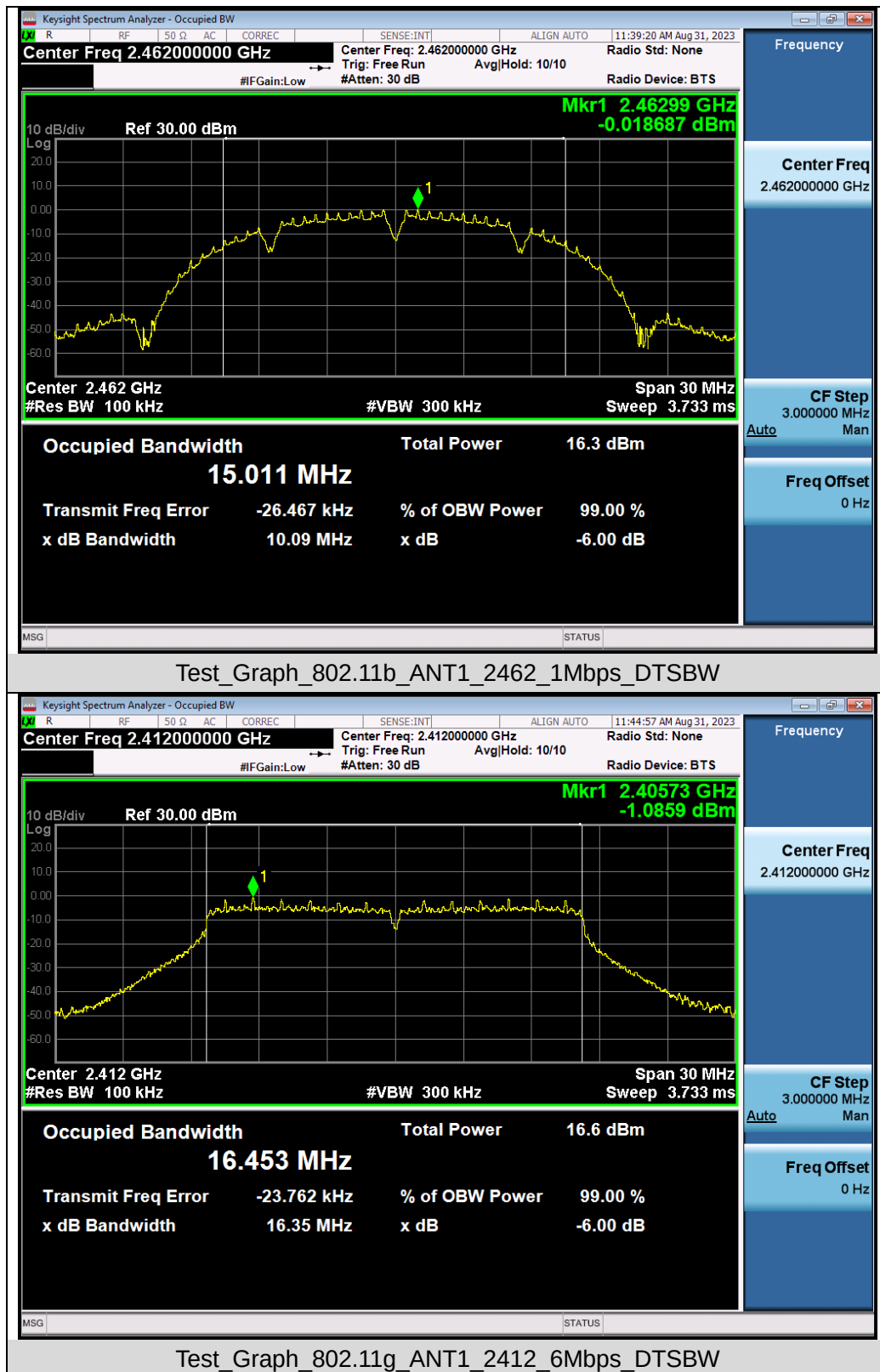


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.

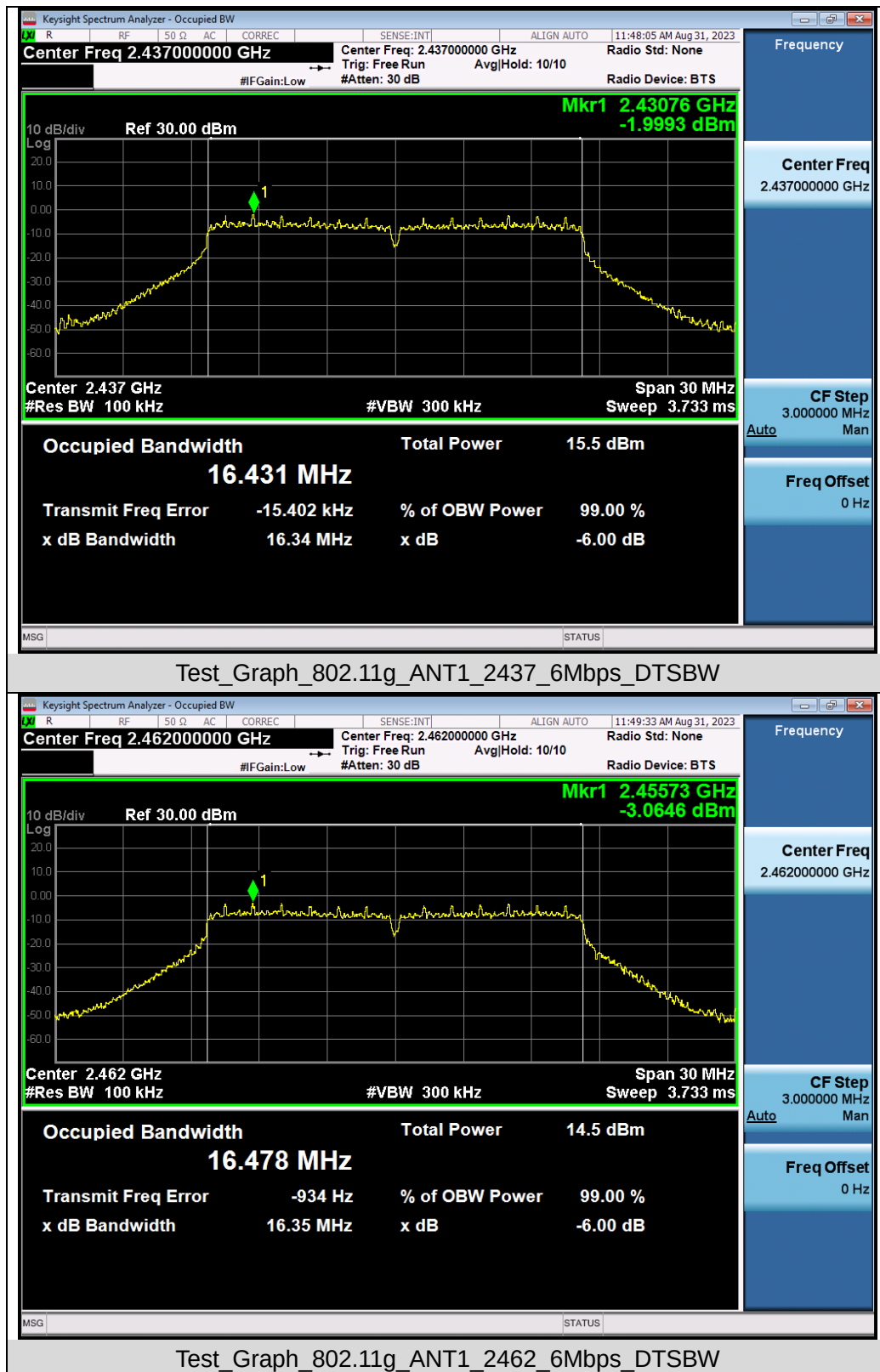
### Test Graphs of DTS Bandwidth



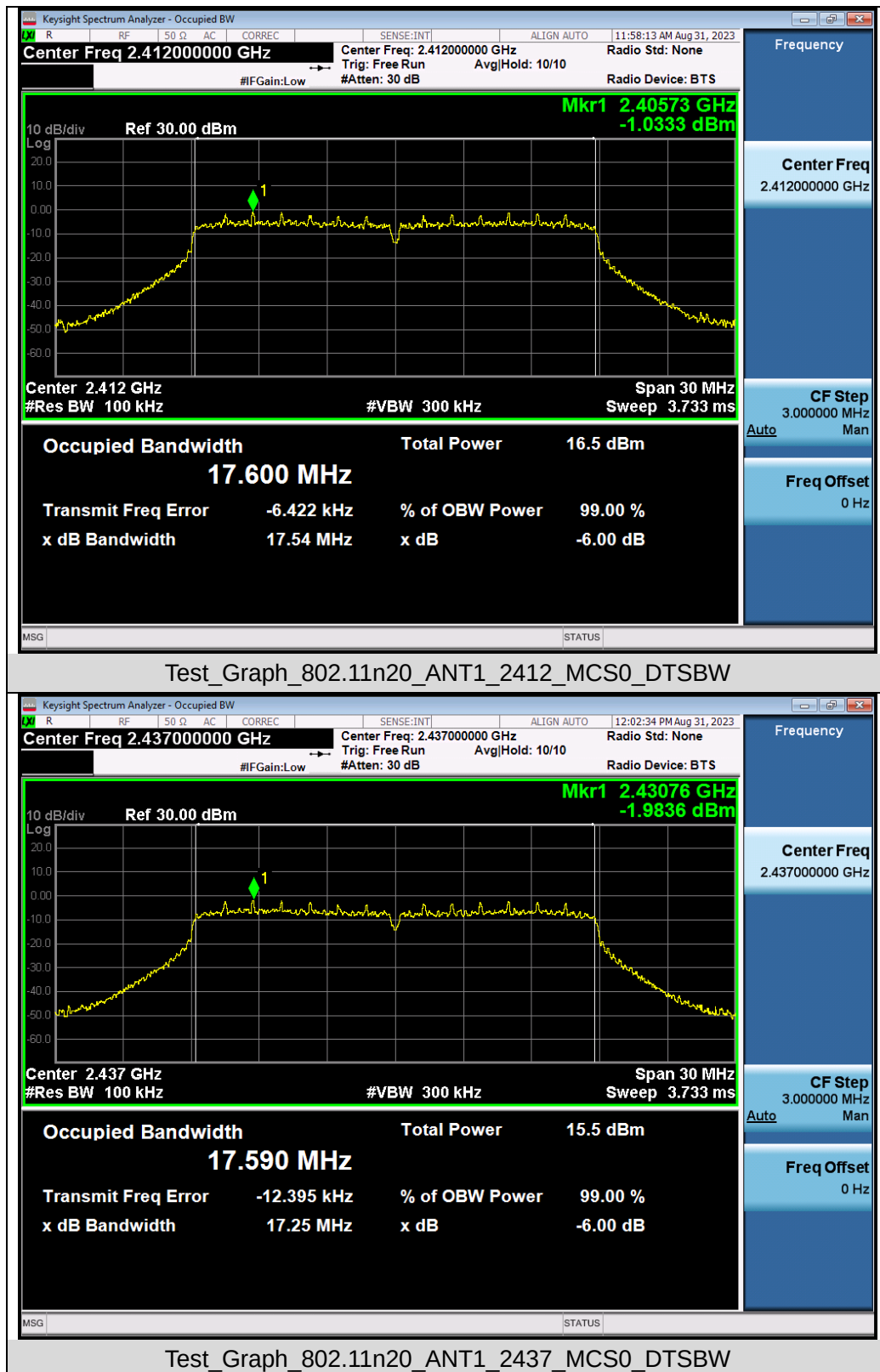
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



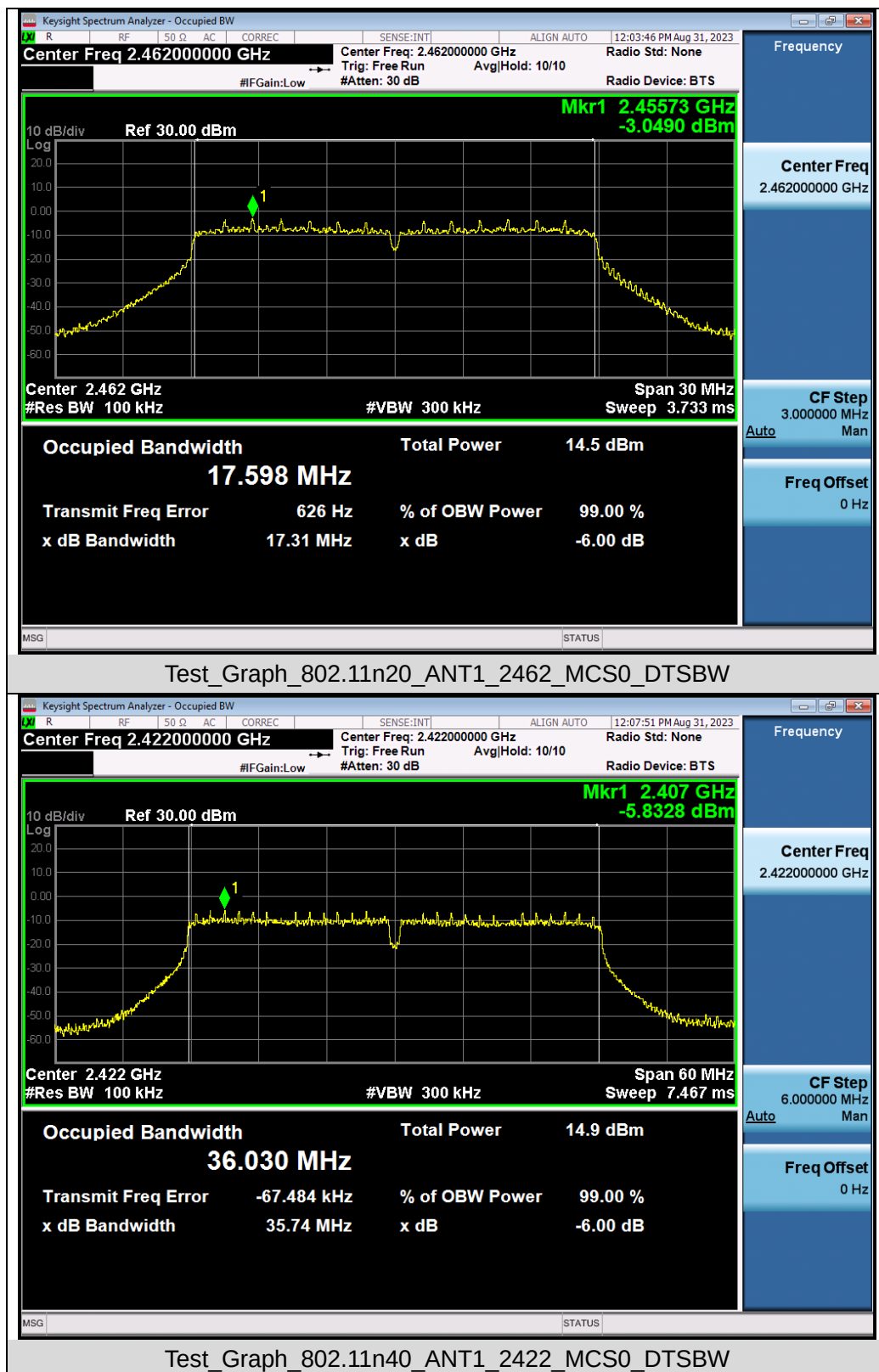
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



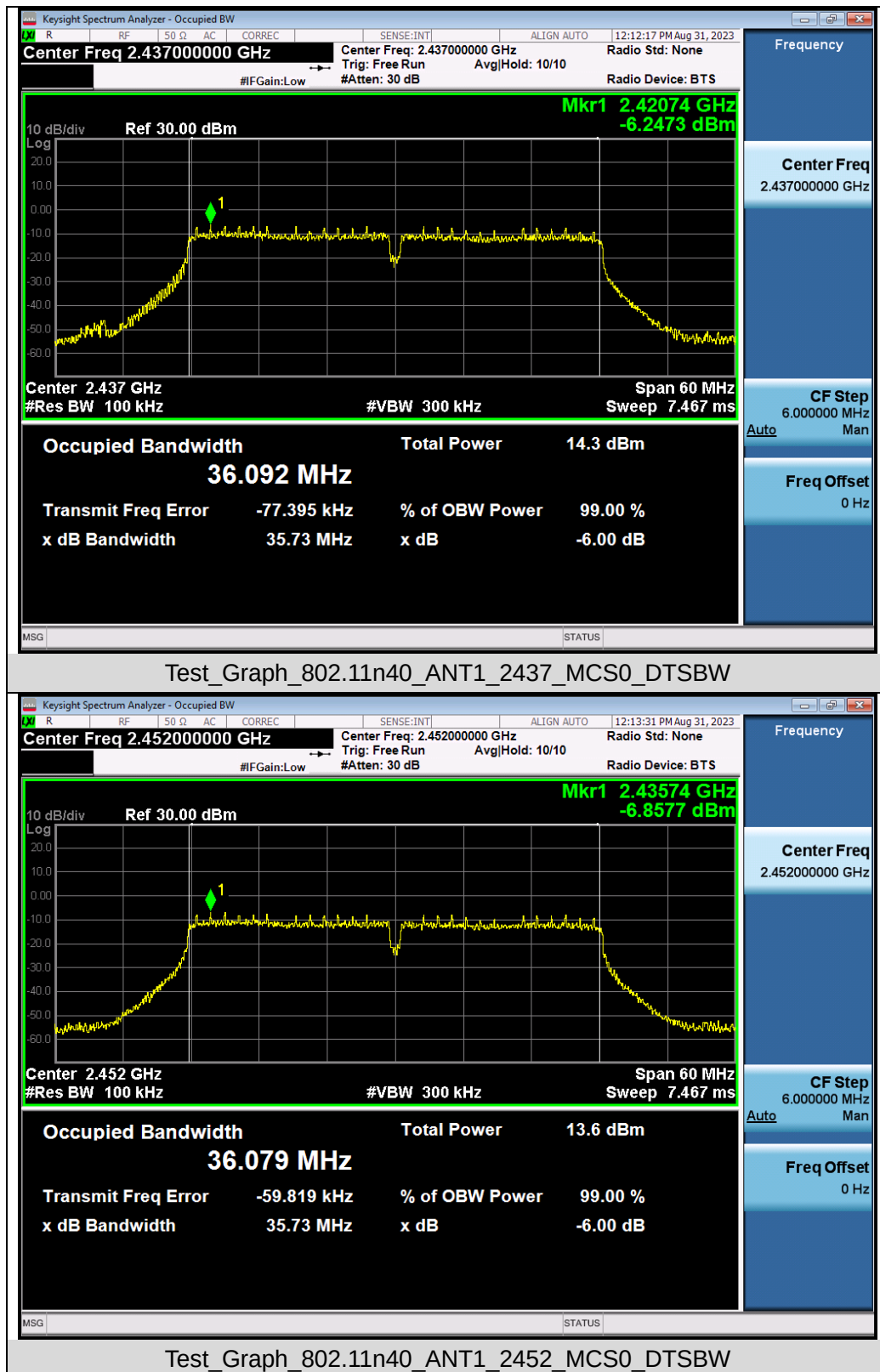
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



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.

## 9. CONDUCTED SPURIOUS EMISSION

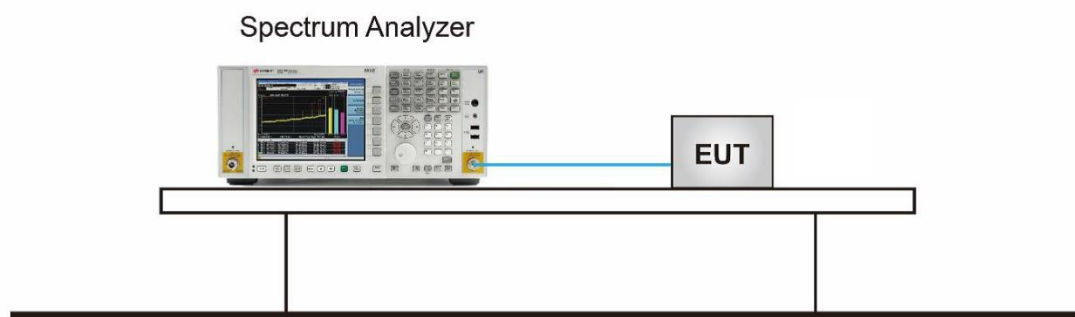
### 9.1 MEASUREMENT LIMIT

| LIMITS AND MEASUREMENT RESULT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------|
| Applicable Limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Measurement Result                                             |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Test Data                                                      | Criteria |
| <p>In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.</p> <p>In addition, radiation emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in§15.209(a))</p> | At least -20dBc than the limit Specified on the BOTTOM Channel | PASS     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | At least -20dBc than the limit Specified on the TOP Channel    | PASS     |

### 9.2 MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer
2. Set the EUT Work on the top, the Middle and the bottom operation frequency individually.
3. Set the Span = wide enough to capture the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the EUT up through the 10th harmonic.
4. RBW = 100 kHz; VBW= 300 kHz; Sweep = auto; Detector function = peak.(Test frequency below 1GHz)
5. RBW = 1 MHz; VBW= 3 MHz; Sweep = auto; Detector function = peak.(Test frequency Above 1GHz)
6. Set SPA Trace 1 Max hold, then View.
7. Mark the maximum useless stray point and compare it with the limit value to record the result.

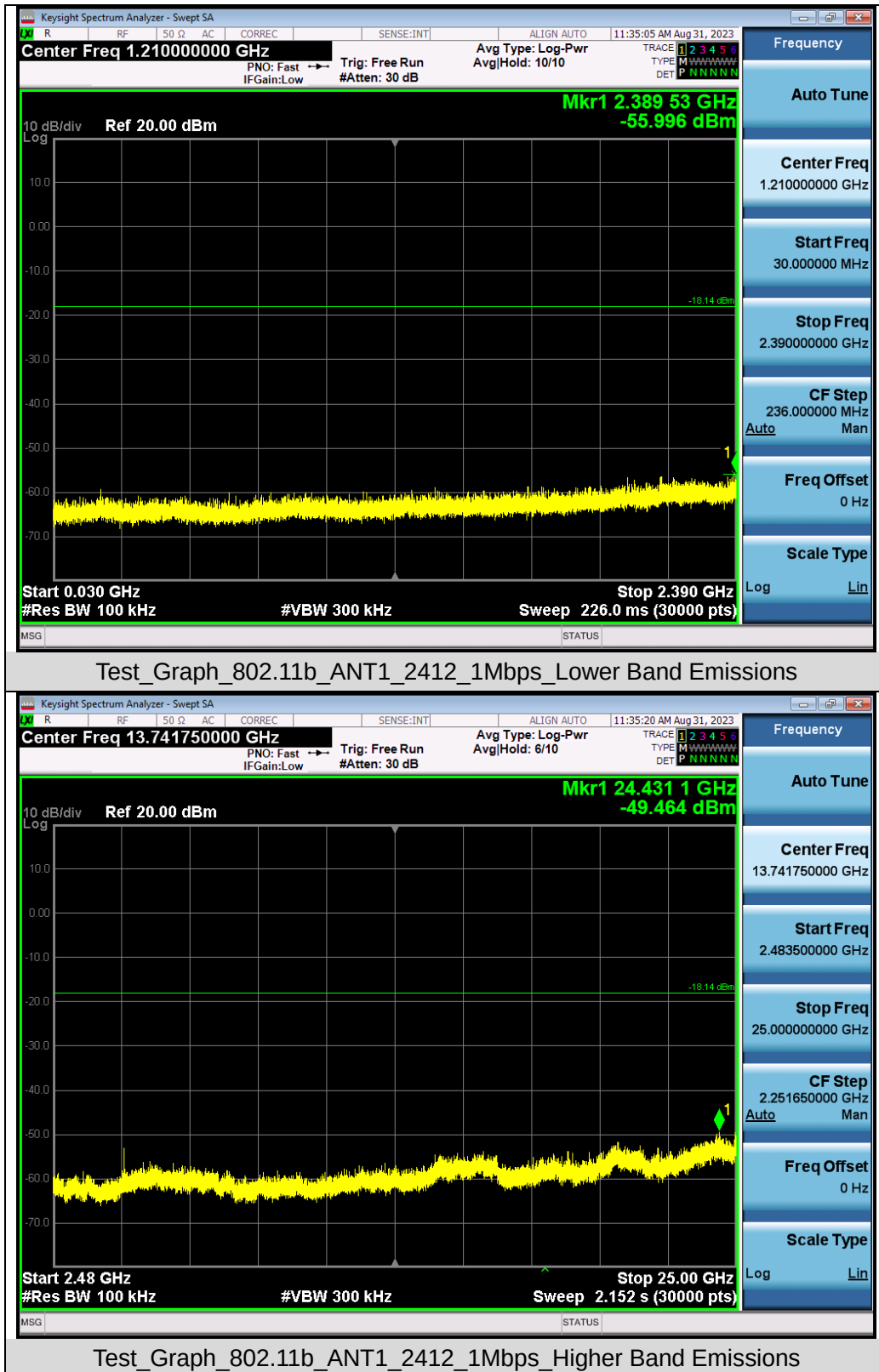
### 9.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



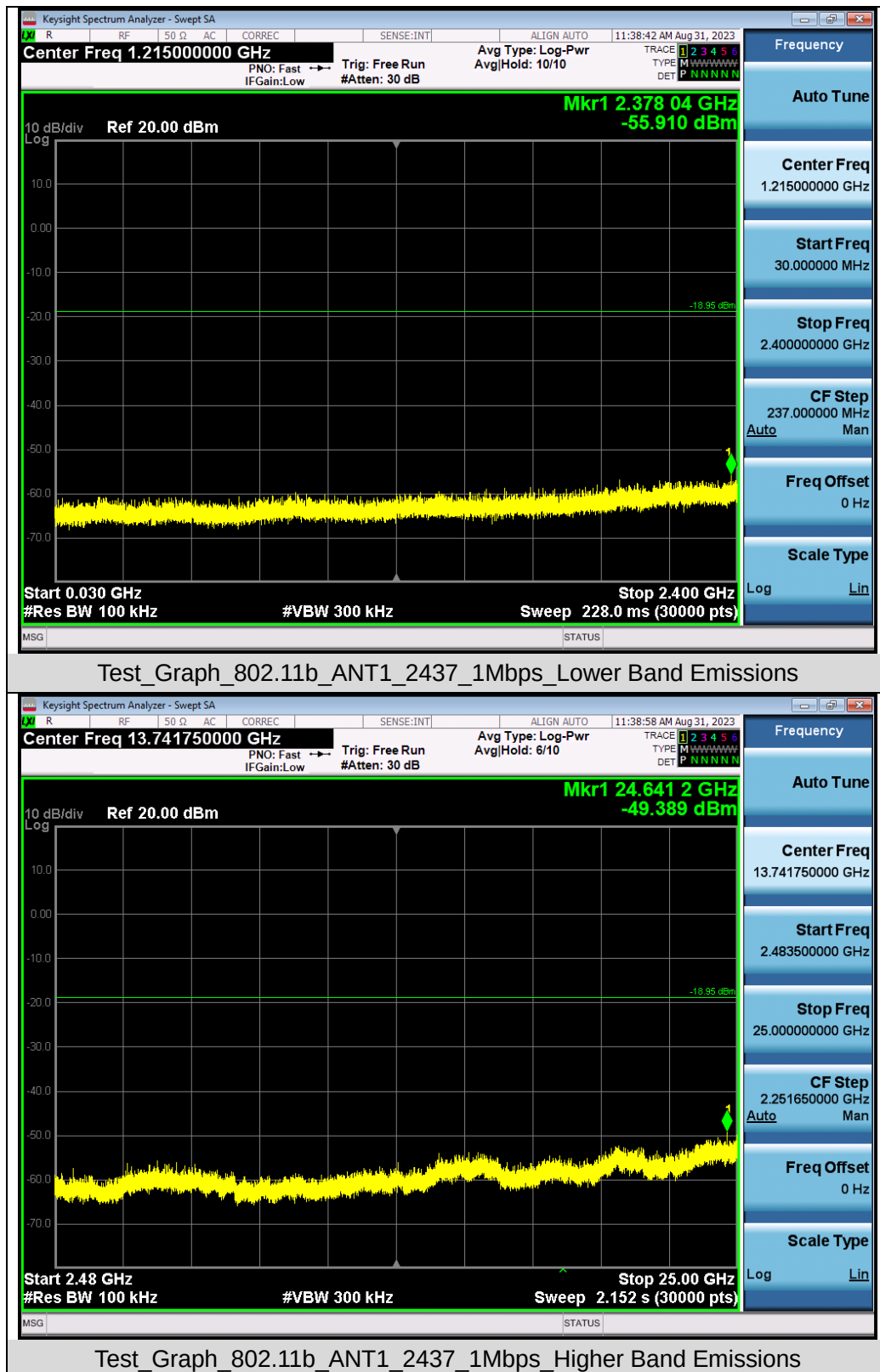
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.

## 9.4 MEASUREMENT RESULTS

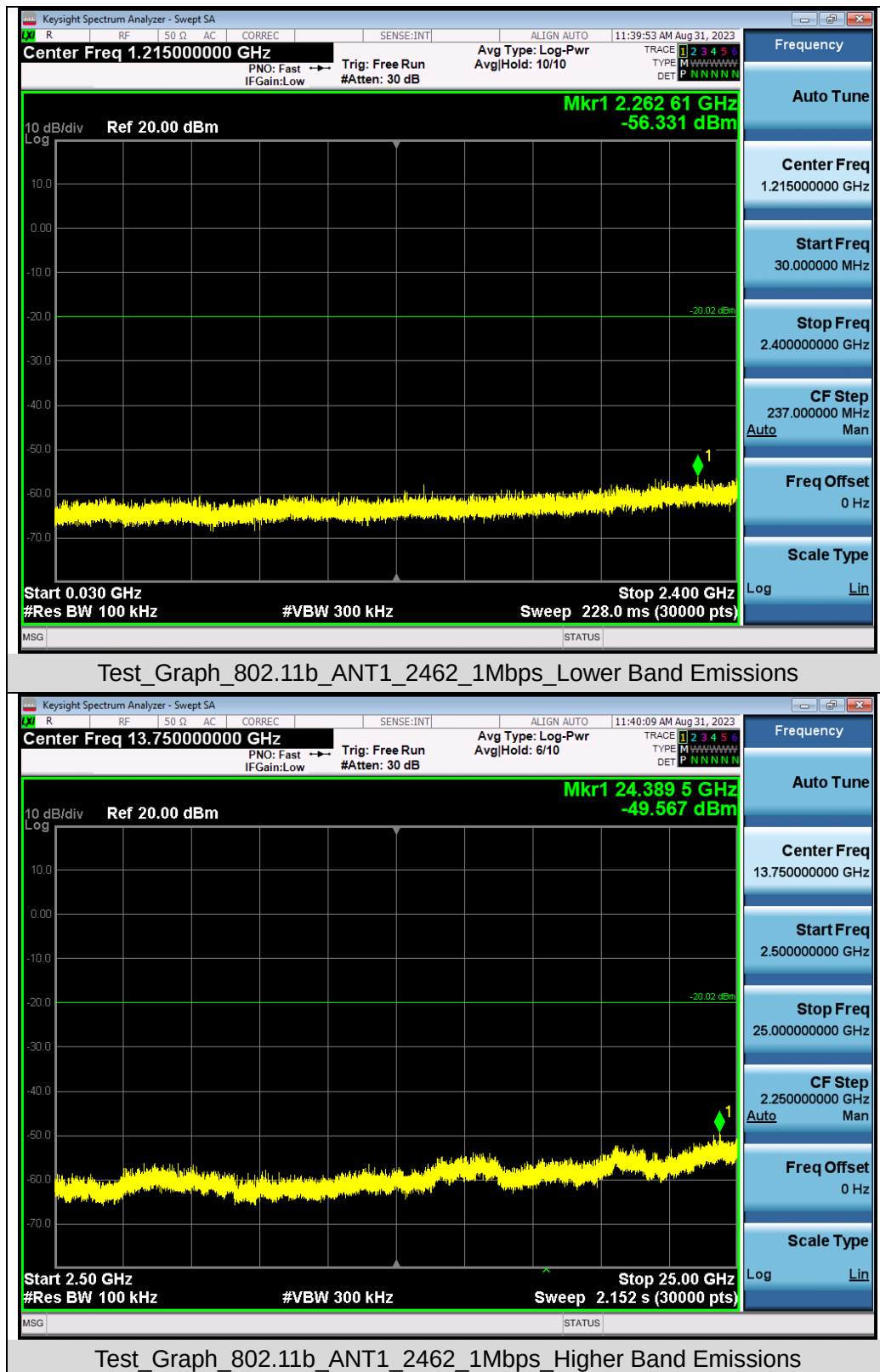
### Test Graphs of Spurious Emissions in Non-Restricted Frequency Bands



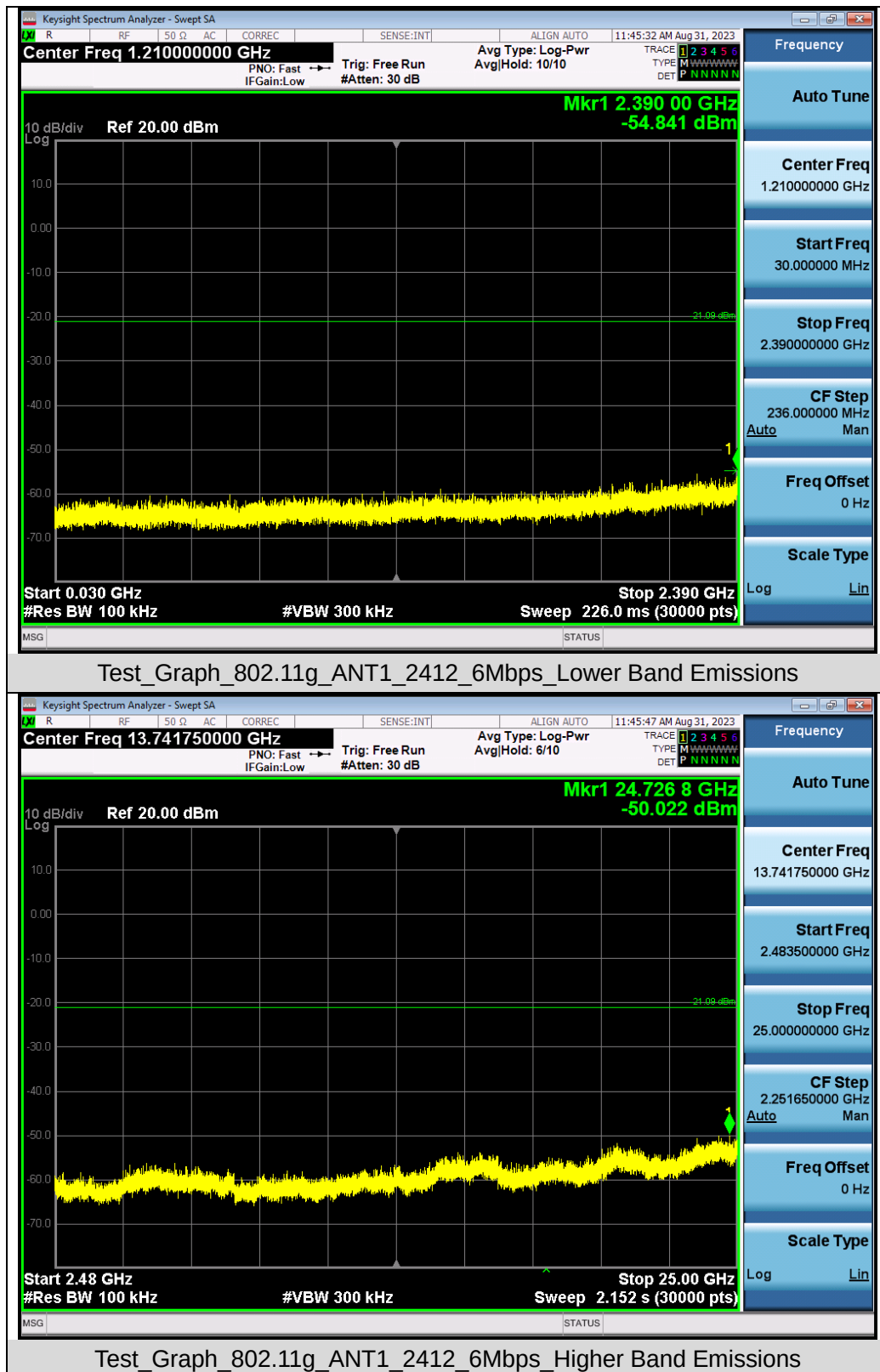
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



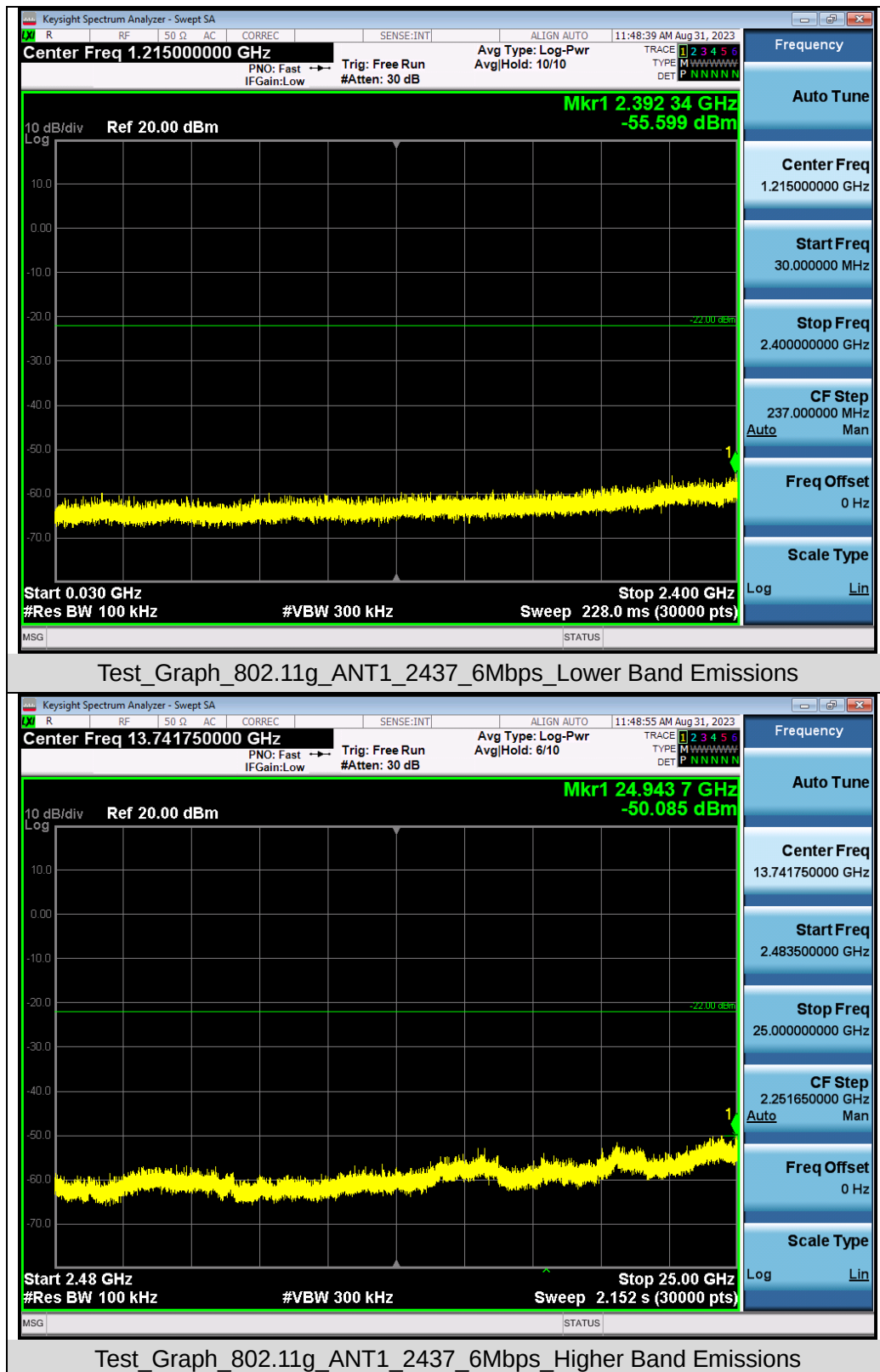
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



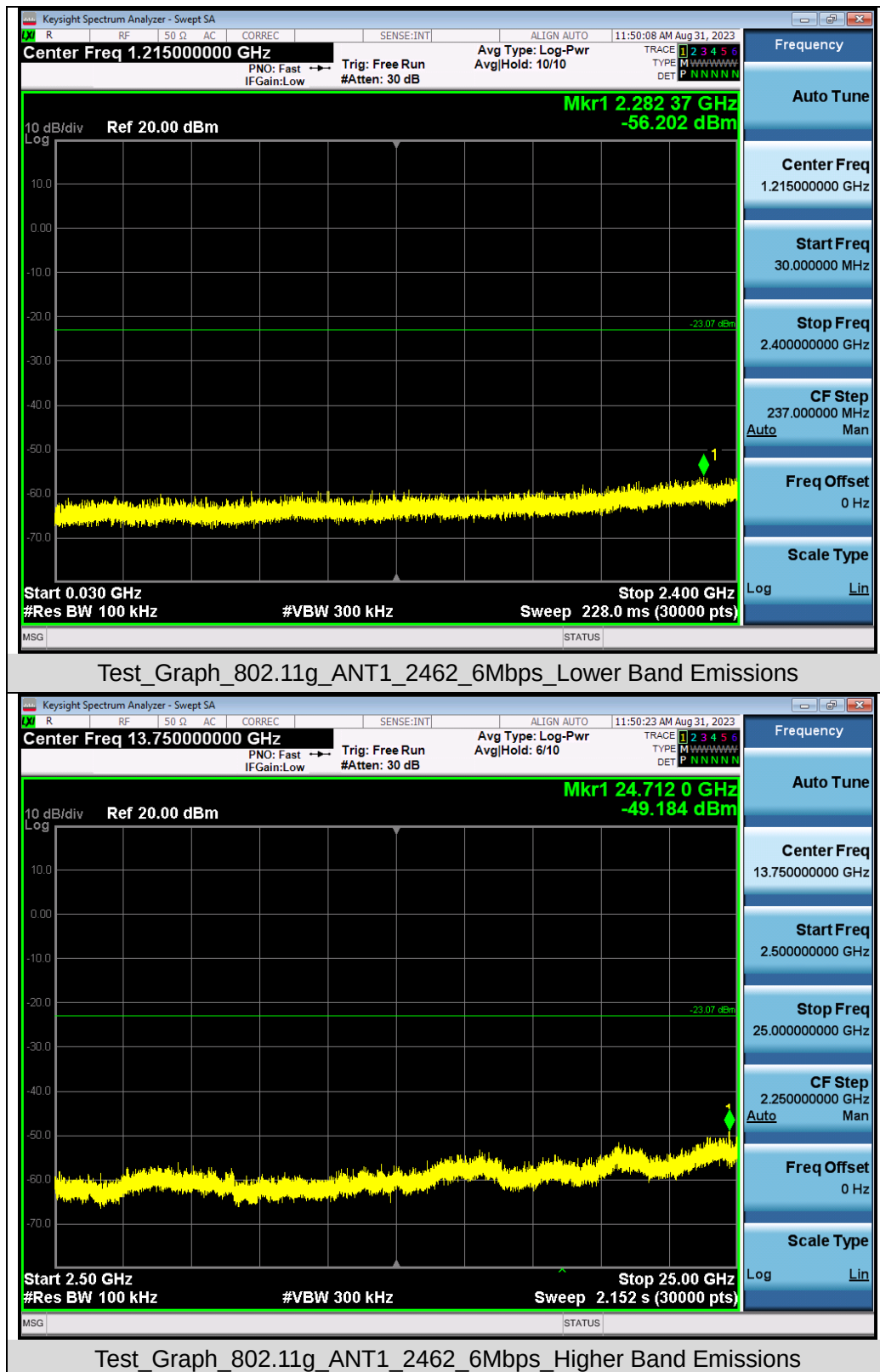
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



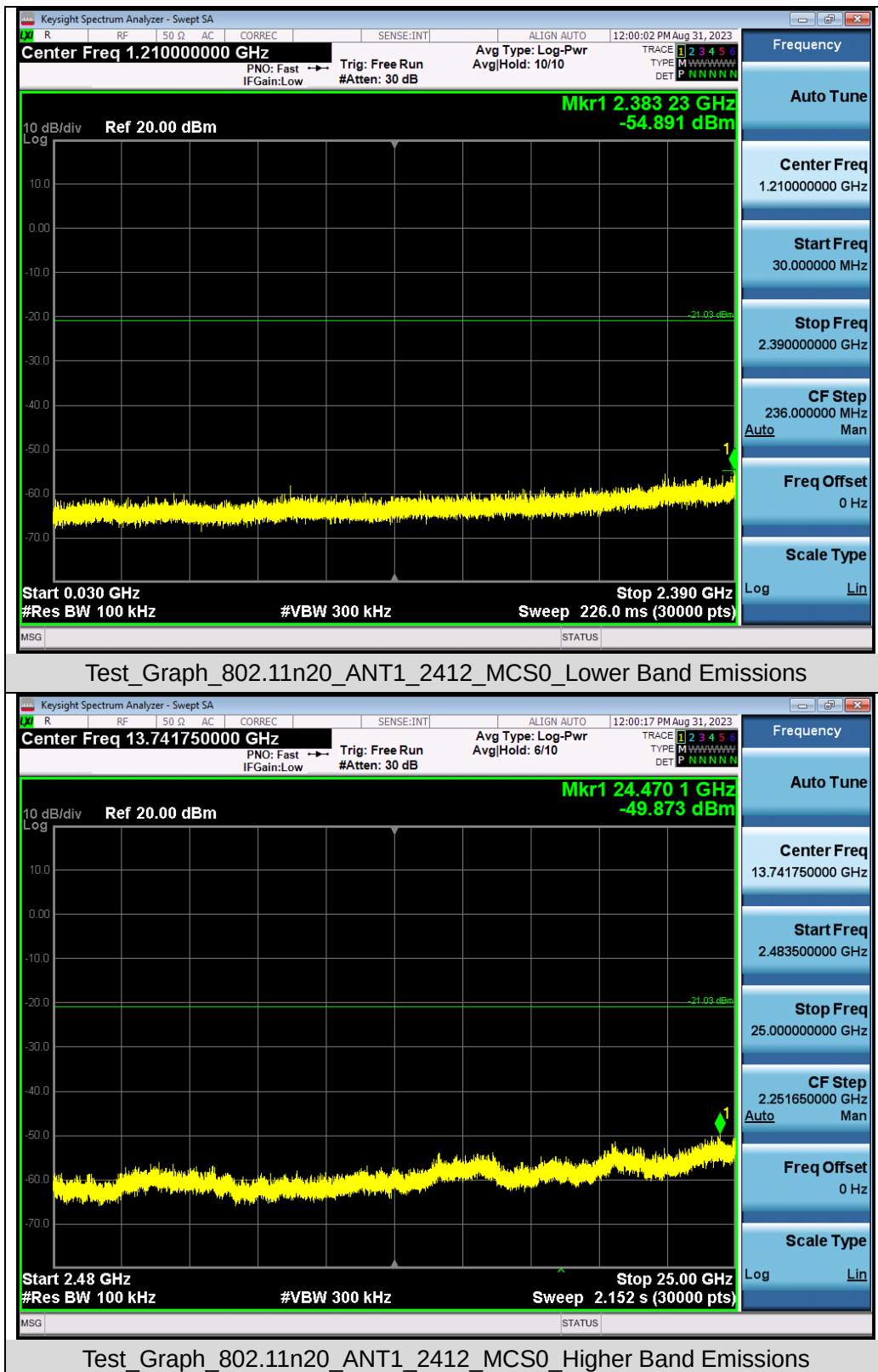
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



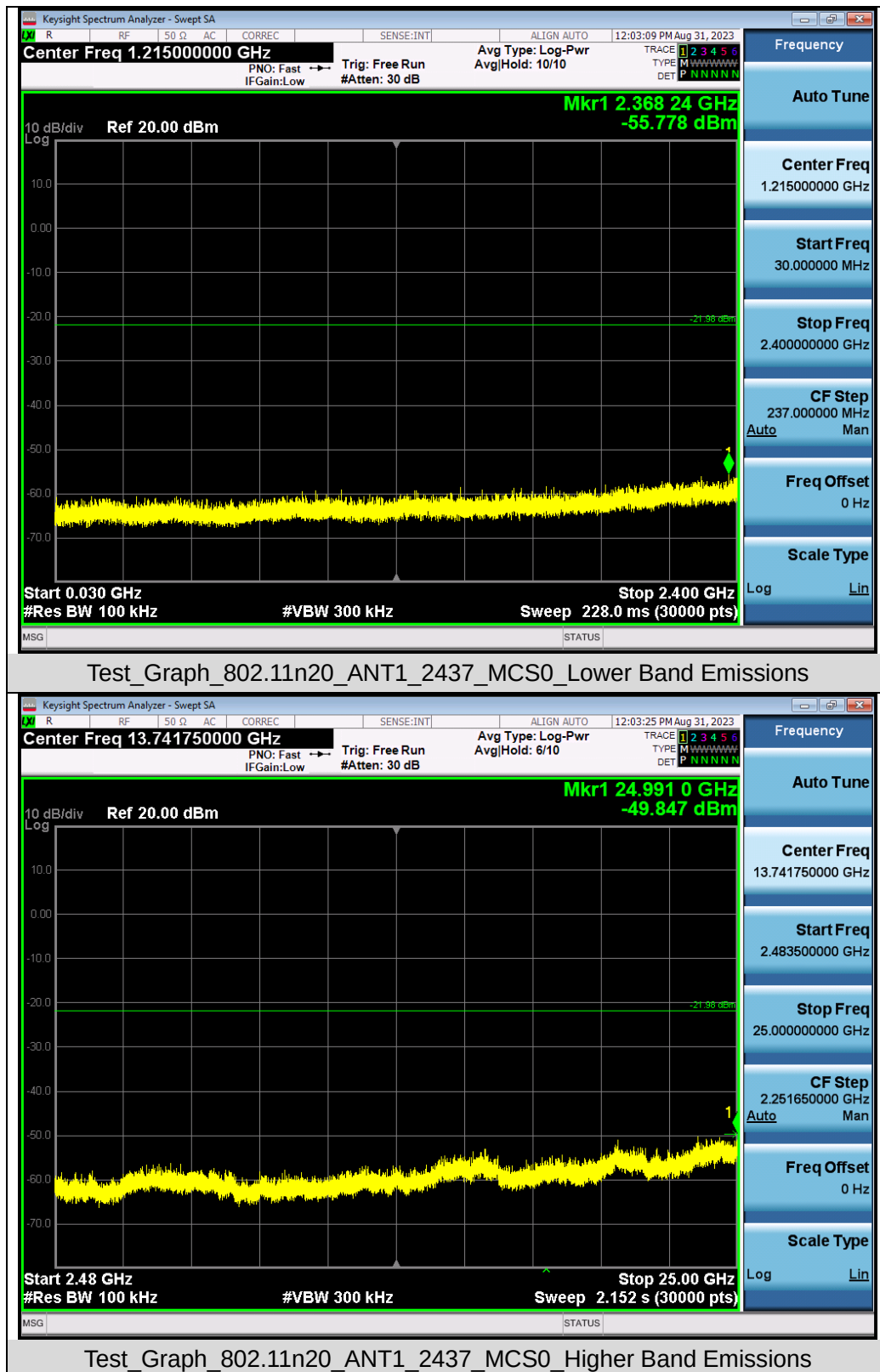
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



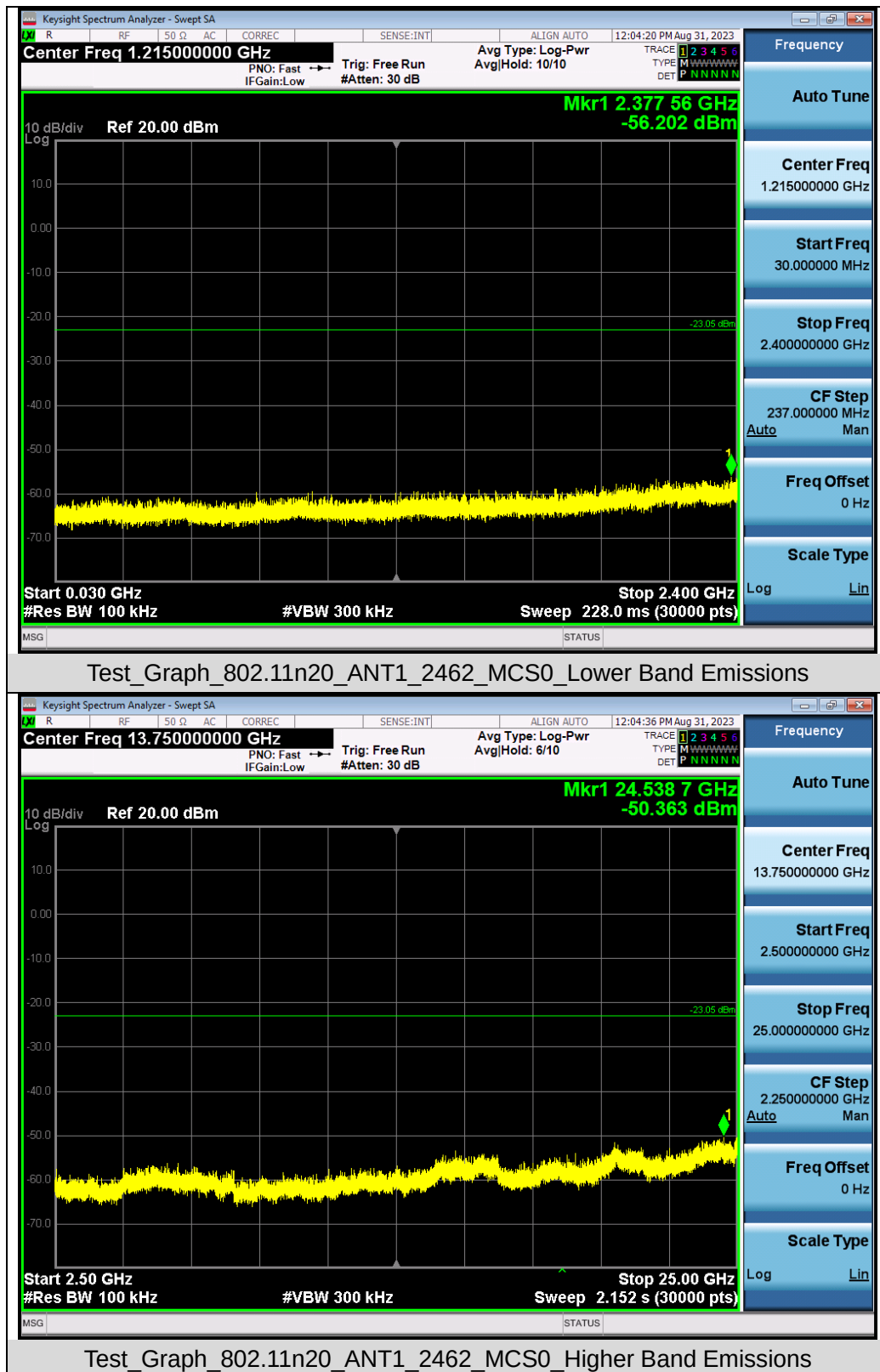
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



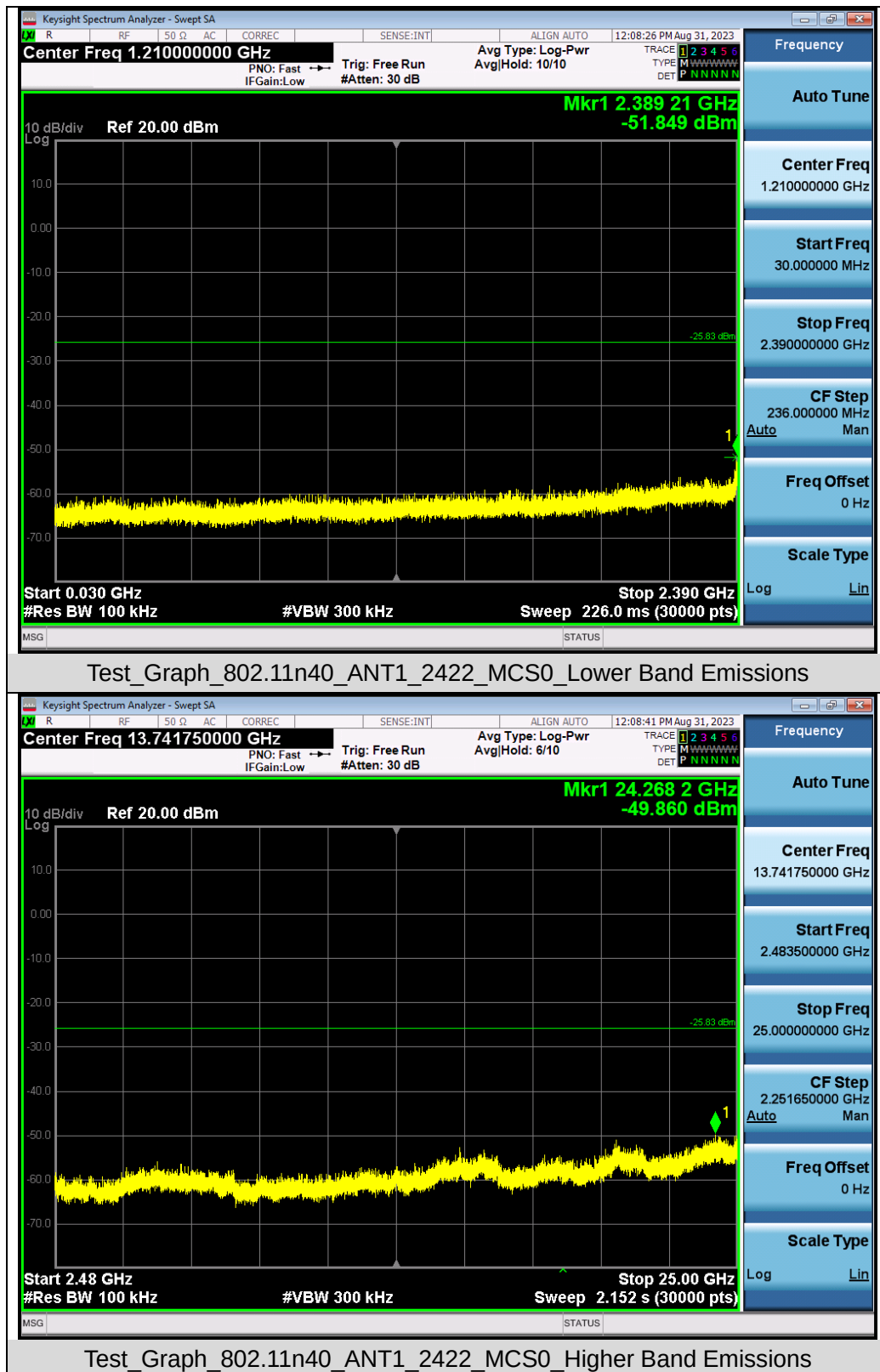
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



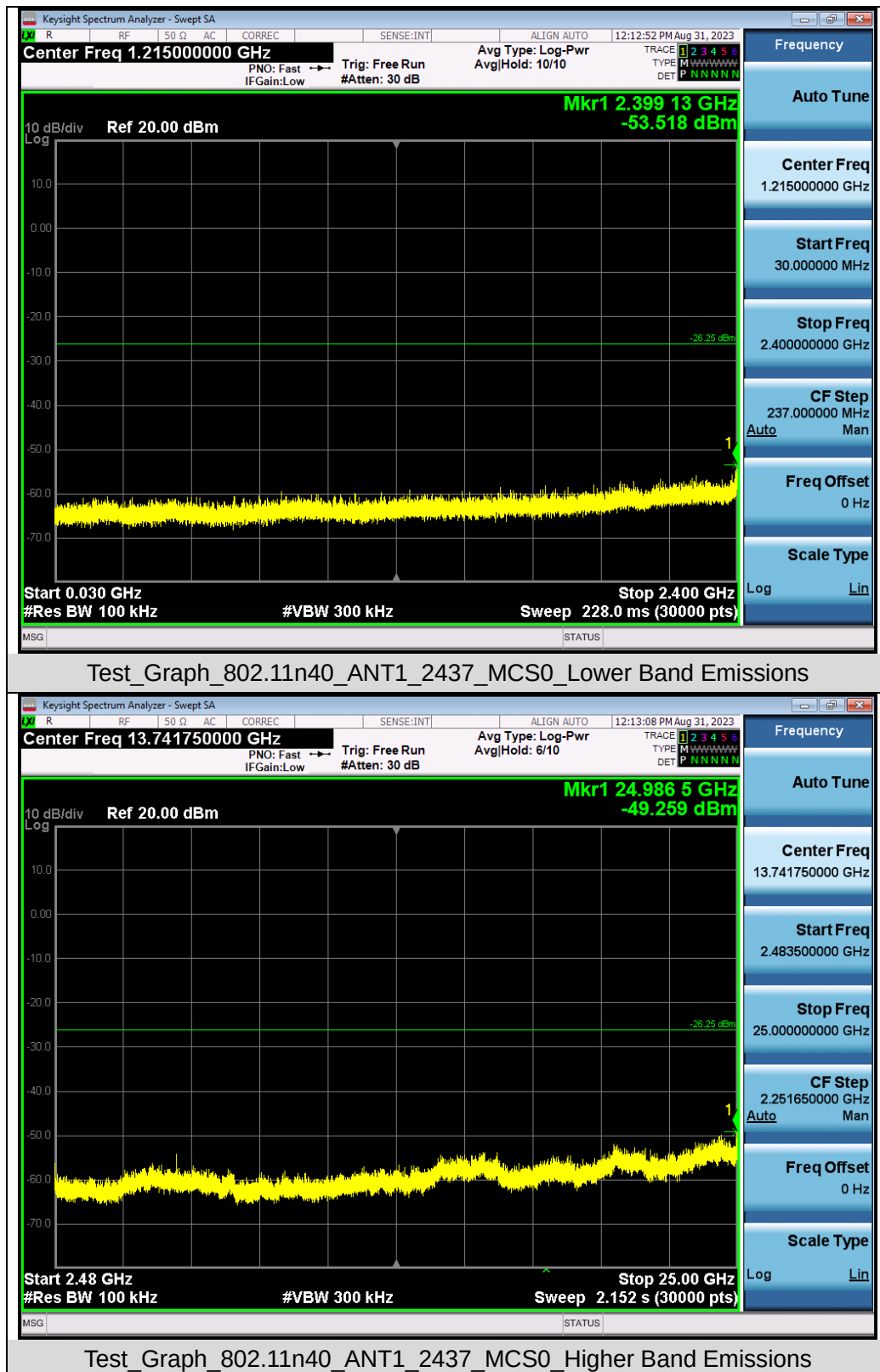
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



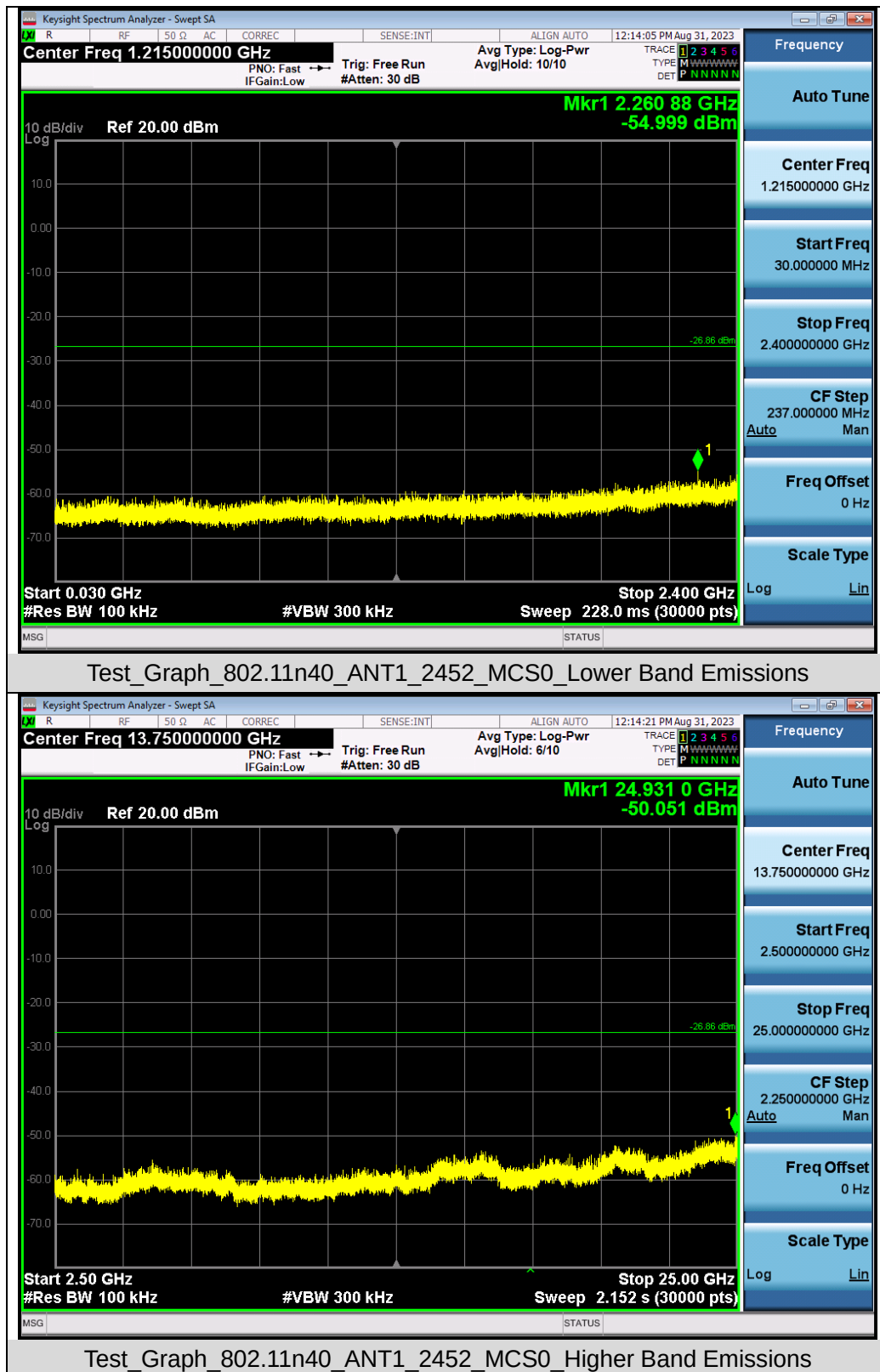
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



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.

### Test Graphs of Band Edge Emissions in Non-Restricted Frequency Bands



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.



Note: Emissions from 2483.5-2500MHz which fall in the restricted bands had been considered with the radiated emission limits specified.

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.

## 10. POWER SPECTRAL DENSITY MEASUREMENT

### 10.1 MEASUREMENT LIMITS

According to Section 5.2(b) of the RSS-247 standard:

The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 10.2 MEASUREMENT PROCEDURE

☒ For Peak power spectral density test:

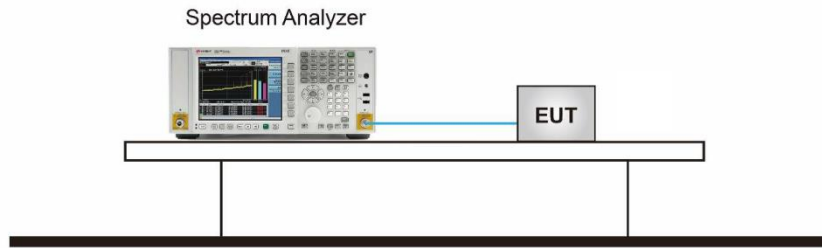
1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. Connect EUT RF output port to the Spectrum Analyzer.
3. Set the RBW = 20 kHz.
4. Set the VBW  $\geq [3 \times \text{RBW}]$ .
5. Set the Span  $\geq [1.5 \times \text{DTS bandwidth}]$ .
6. Sweep time=Auto couple.
7. Detector function=Peak.
8. Trace Mode=Max hold.
9. When the measurement bandwidth of Maximum PSD is specified in 3 kHz, add a constant factor  $10 \cdot \log(3\text{kHz}/20\text{kHz}) = -8.23 \text{ dB}$  to the measured result.
10. Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission.
11. The indicated level is the peak output power, after any corrections for cables.

☐ For Average power spectral density test:

1. The testing follows the ANSI C63.10 Section 11.10.5 Method AVPSD.
2. Connect EUT RF output port to the Spectrum Analyzer.
3. Set Span to at least 1.5 times the OBW.
4. Set RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
5. Set  $\text{VBW} \geq [3 \times \text{RBW}]$ .
6. Sweep Time=Auto couple.
7. Detector function=RMS (i.e., power averaging).
8. Trace average at least 100 traces in power averaging (rms) mode.
9. When the measurement bandwidth of Maximum PSD is specified in 3 kHz, add a constant factor  $10 \cdot \log(3\text{kHz}/20\text{kHz}) = -8.23 \text{ dB}$  to the measured result.
10. Determine according to the duty cycle of the equipment: when it is less than 98%, follow the steps below.
11. Add  $[10 \log (1 / D)]$ , where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add  $[10 \log (1/0.25)] = 6 \text{ dB}$  if the duty cycle is 25%.
12. Record the test results in the 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 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).

### 10.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



### 10.4 MEASUREMENT RESULT

| Test Data of Conducted Output Power Spectral Density |                    |                           |                          |                  |              |
|------------------------------------------------------|--------------------|---------------------------|--------------------------|------------------|--------------|
| Test Mode                                            | Test Channel (MHz) | Power density (dBm/20kHz) | Power density (dBm/3kHz) | Limit (dBm/3kHz) | Pass or Fail |
| 802.11b                                              | 2412               | -2.319                    | -10.558                  | ≤8               | Pass         |
|                                                      | 2437               | -2.147                    | -10.386                  | ≤8               | Pass         |
|                                                      | 2462               | -5.232                    | -13.471                  | ≤8               | Pass         |
| 802.11g                                              | 2412               | -6.681                    | -14.92                   | ≤8               | Pass         |
|                                                      | 2437               | -6.834                    | -15.073                  | ≤8               | Pass         |
|                                                      | 2462               | -8.436                    | -16.675                  | ≤8               | Pass         |
| 802.11n20                                            | 2412               | -6.887                    | -15.126                  | ≤8               | Pass         |
|                                                      | 2437               | -7.667                    | -15.906                  | ≤8               | Pass         |
|                                                      | 2462               | -9.209                    | -17.448                  | ≤8               | Pass         |
| 802.11n40                                            | 2422               | -10.422                   | -18.661                  | ≤8               | Pass         |
|                                                      | 2437               | -10.616                   | -18.855                  | ≤8               | Pass         |
|                                                      | 2452               | -12.098                   | -20.337                  | ≤8               | Pass         |

Note: Power density(dBm/3kHz) = Power density(dBm/20kHz) – 10\*log(20/3).

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 Graphs of Conducted Output Power Spectral Density

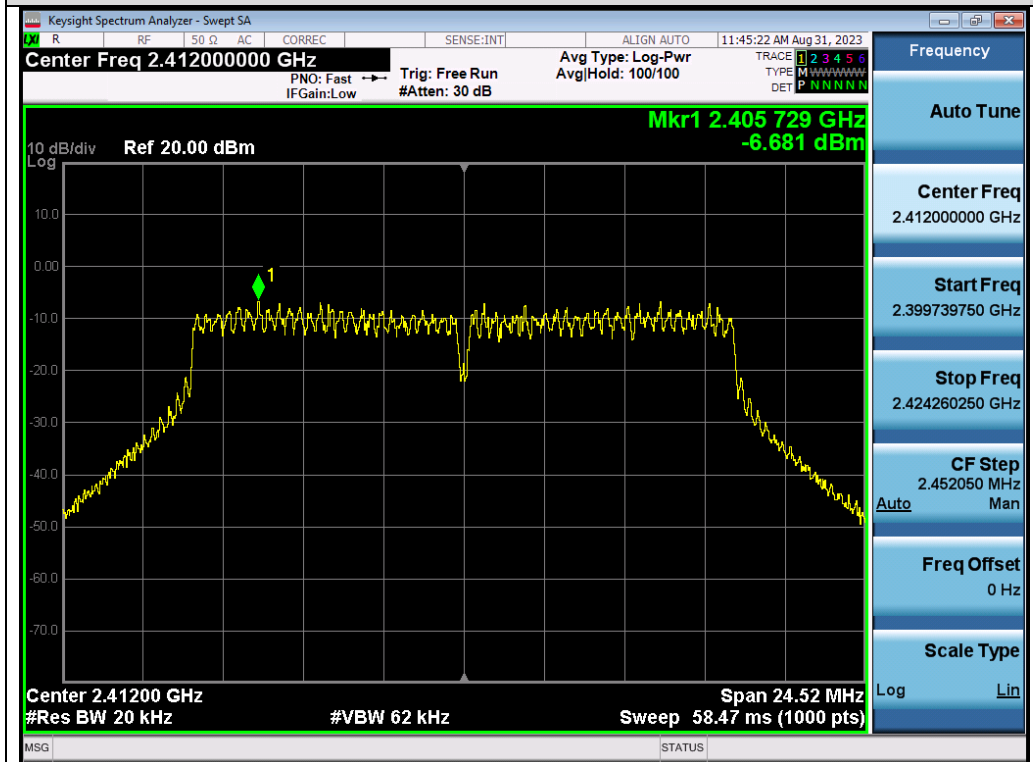


Test\_Graph\_802.11b\_ANT1\_2412\_1Mbps\_PSD

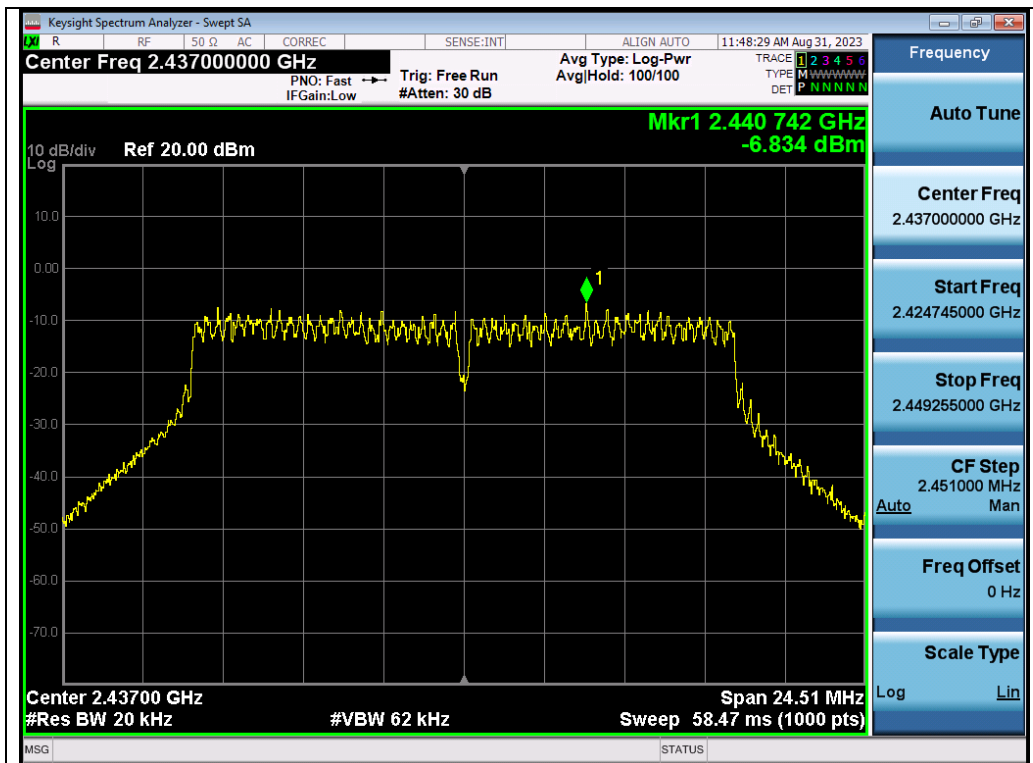


Test\_Graph\_802.11b\_ANT1\_2437\_1Mbps\_PSD

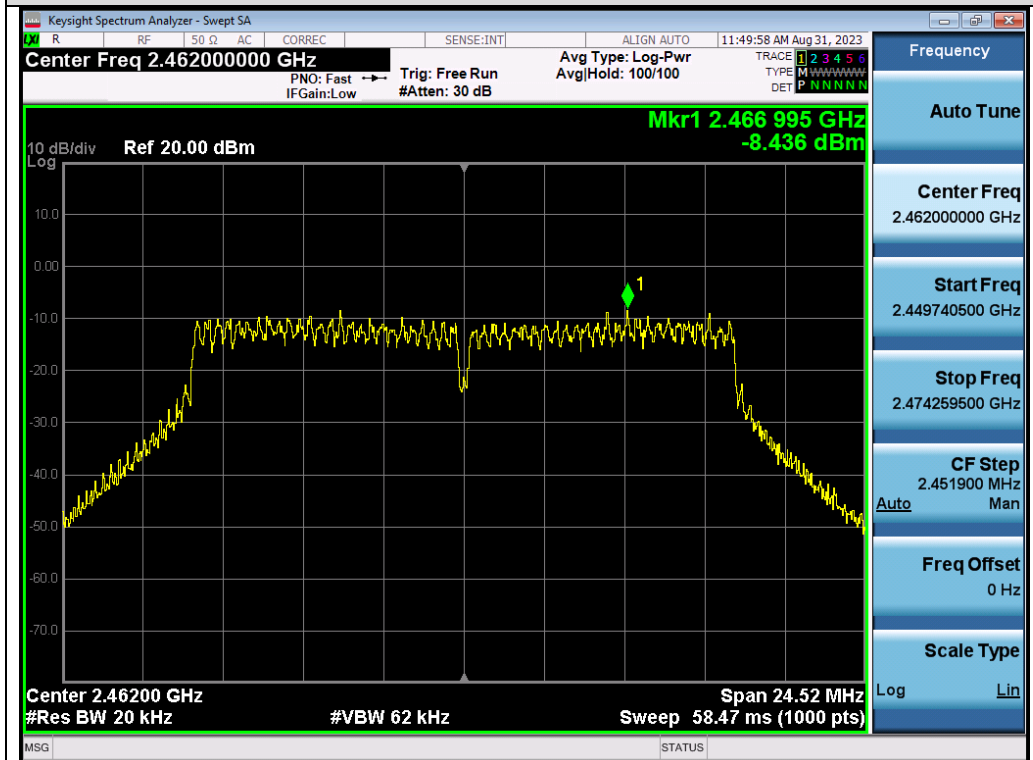
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.



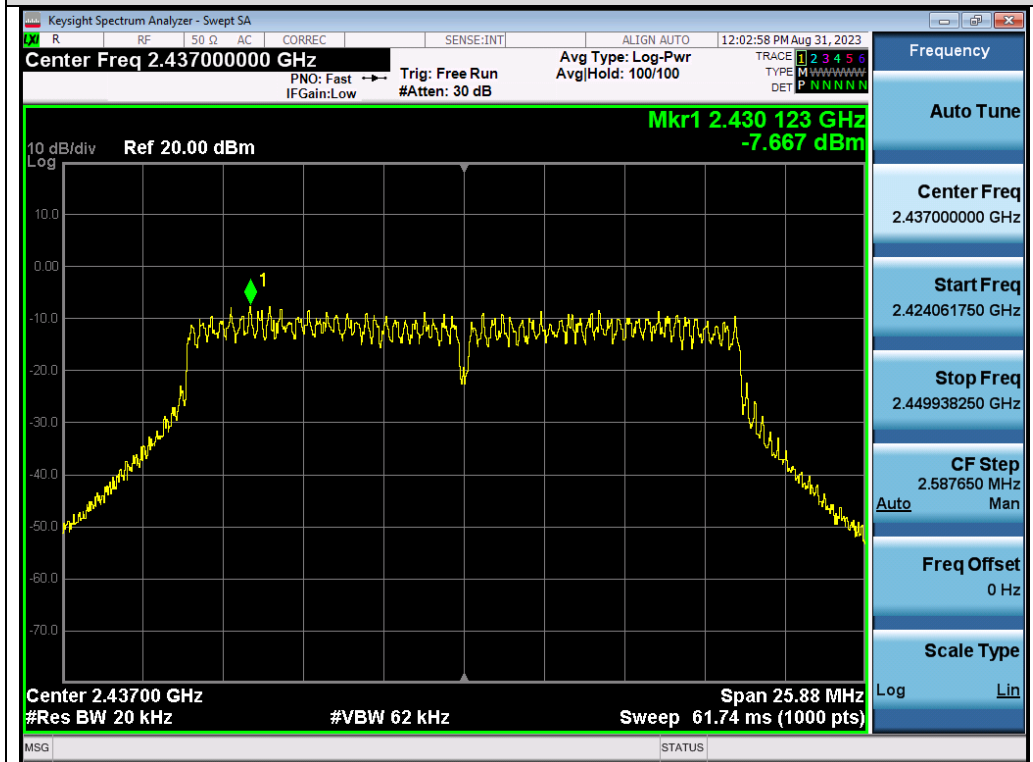
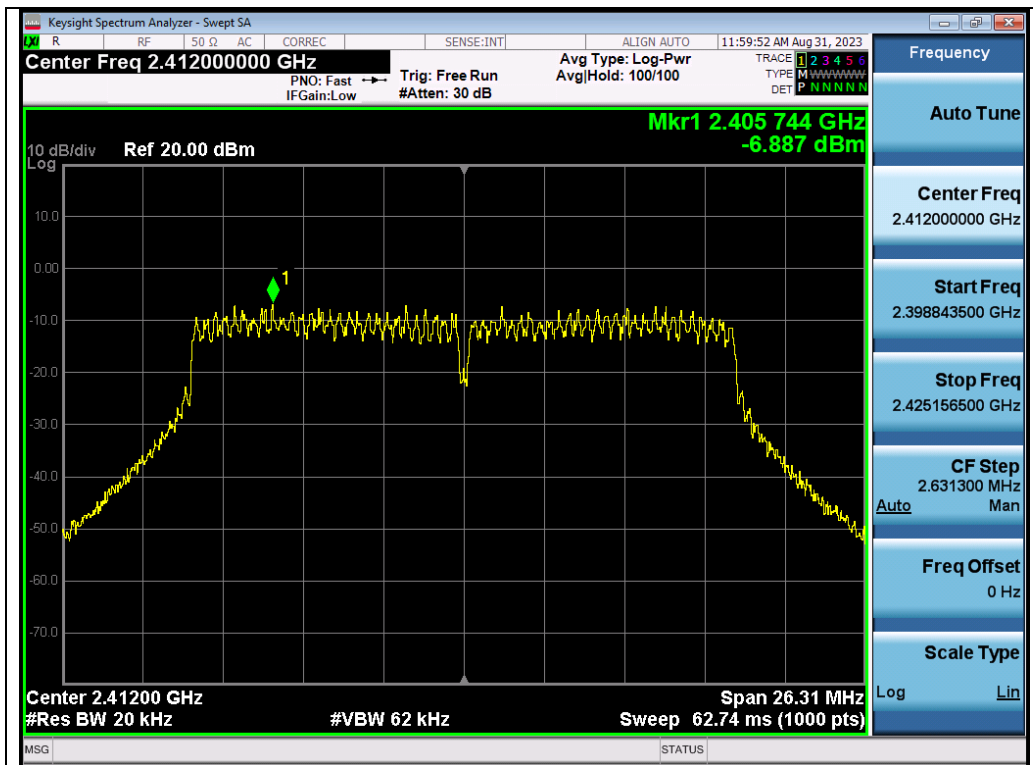
Test\_Graph\_802.11g\_ANT1\_2437\_6Mbps\_PSD



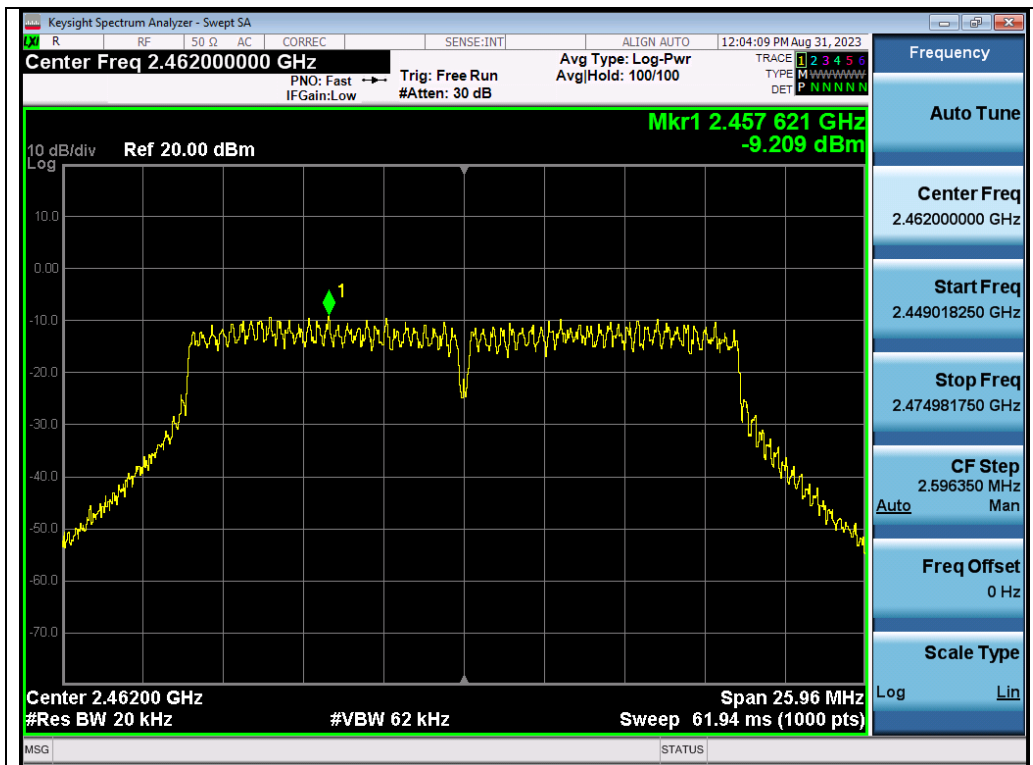
Test\_Graph\_802.11g\_ANT1\_2462\_6Mbps\_PSD

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.

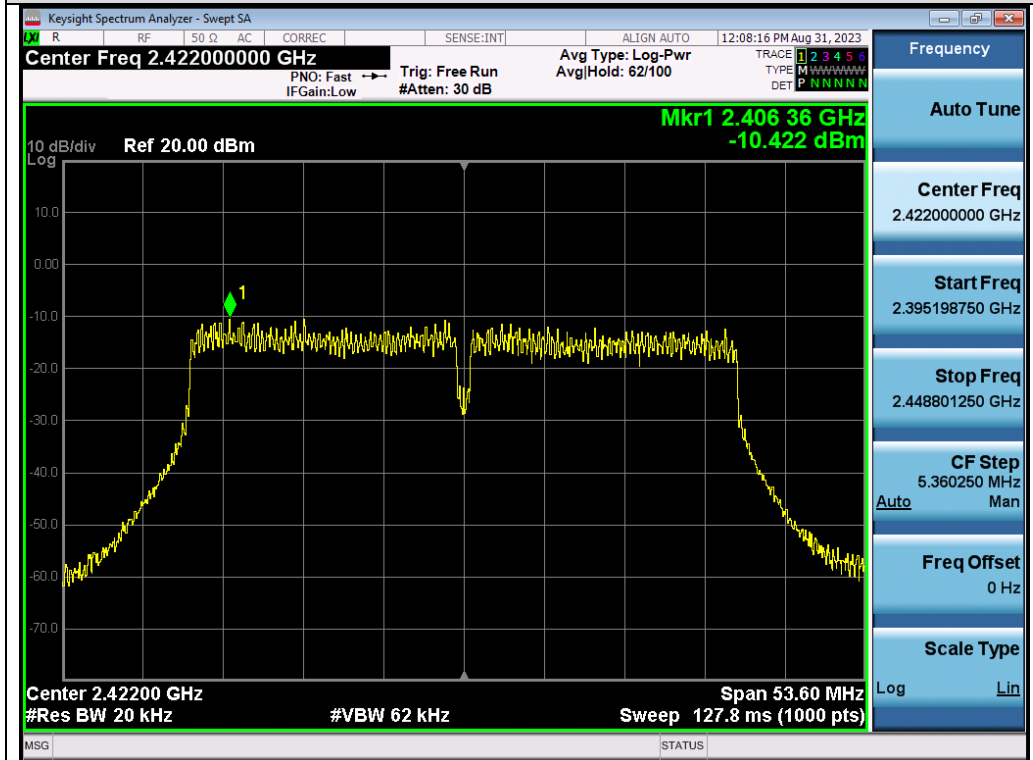
Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



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.

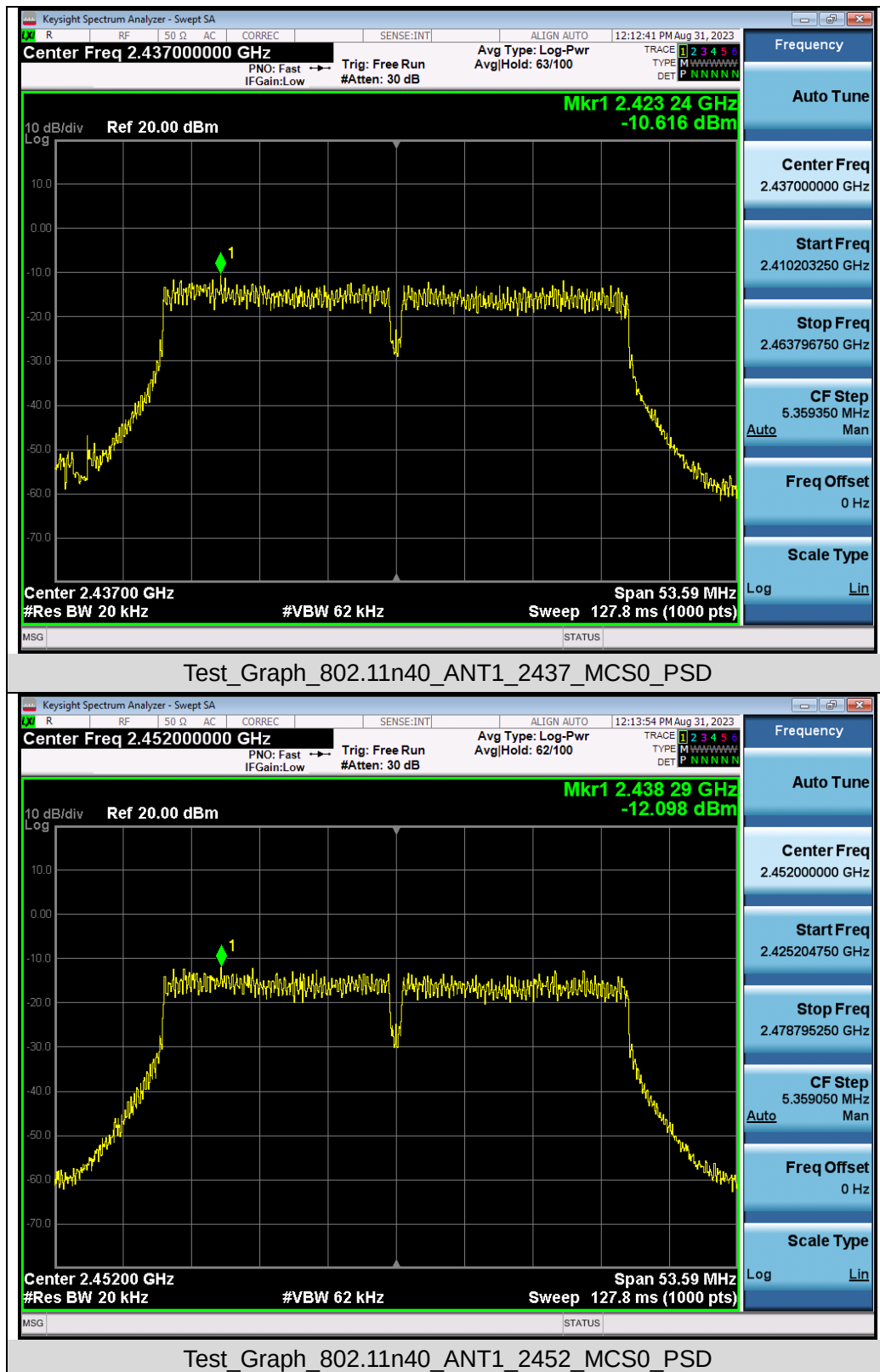


Test\_Graph\_802.11n20\_ANT1\_2462\_MCS0\_PSD



Test\_Graph\_802.11n40\_ANT1\_2422\_MCS0\_PSD

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.

## 11. RADIATED EMISSION

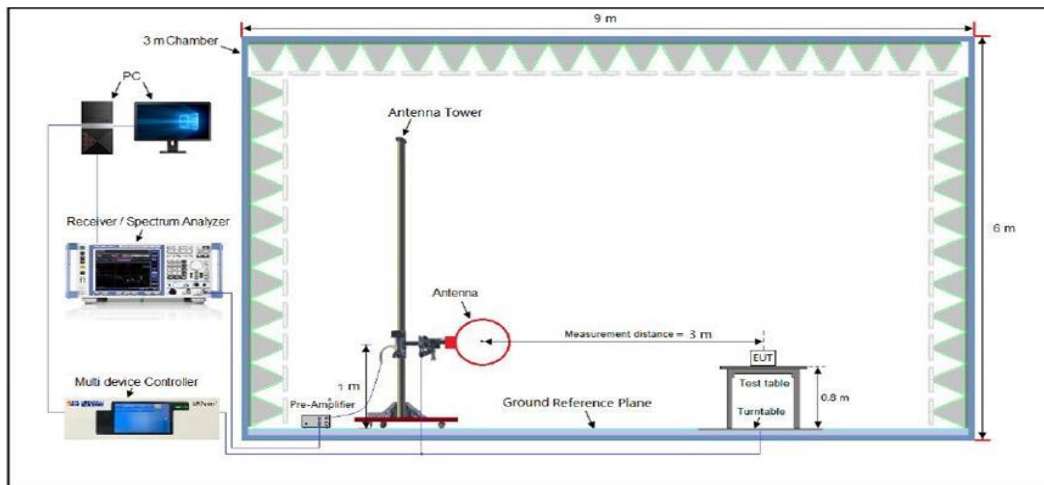
### 11.1. MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

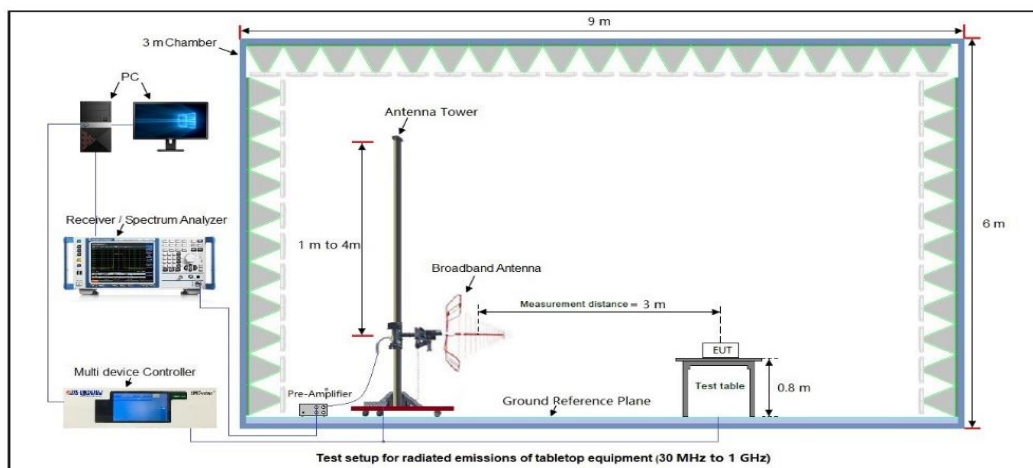
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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).

## 11.2. TEST SETUP

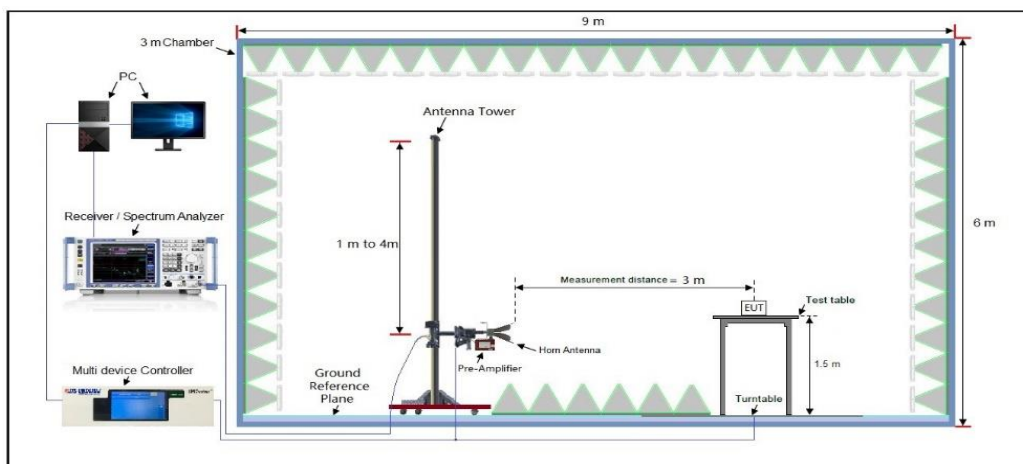
### RADIATED EMISSION TEST SETUP 9KHz-30MHz



### RADIATED EMISSION TEST SETUP 30MHz-1000MHz



### RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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).

### 11.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table has to be followed

| Frequencies<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|----------------------|--------------------------------------|----------------------------------|
| 0.009~0.490          | 2400/F(kHz)                          | 300                              |
| 0.490~1.705          | 24000/F(kHz)                         | 30                               |
| 1.705~30.0           | 30                                   | 30                               |
| 30~88                | 100                                  | 3                                |
| 88~216               | 150                                  | 3                                |
| 216~960              | 200                                  | 3                                |
| Above 960            | 500                                  | 3                                |

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

### 11.4. TEST RESULT

#### Radiated emission below 30MHz

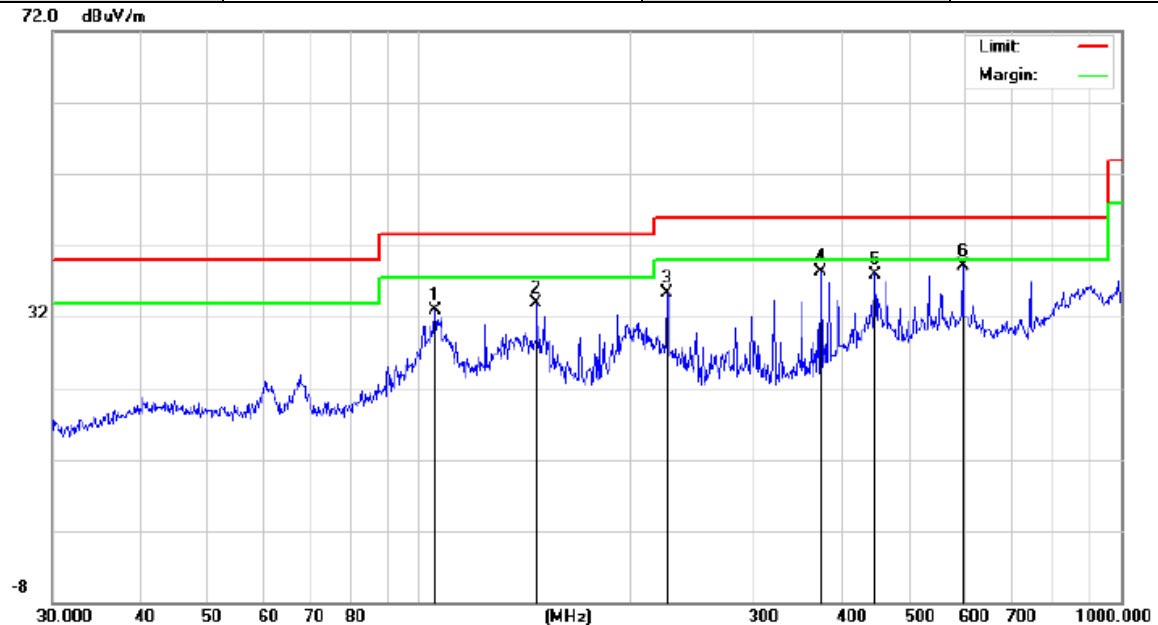
The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

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/>

### Radiated emission from 30MHz to 1000MHz

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Party speaker                       | Model Name        | BREAK X1       |
| Temperature | 25°C                                | Relative Humidity | 58%            |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2412MHz | Antenna           | Horizontal     |



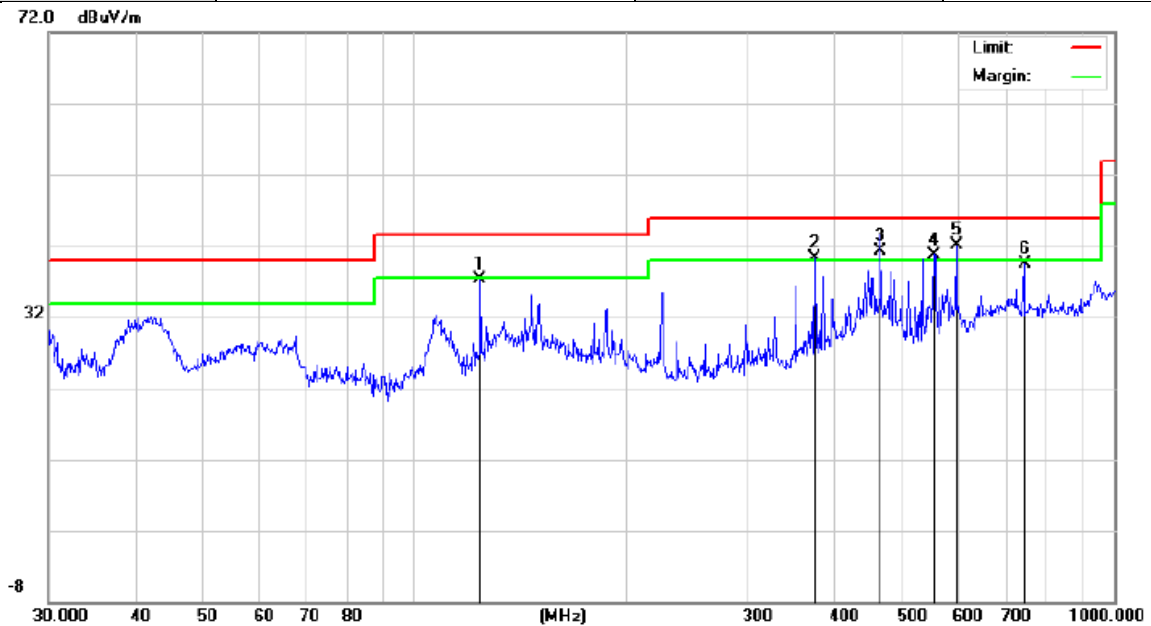
| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dB/m | Over<br>dB | Detector |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|---------------|------------|----------|
| 1   |     | 105.2718     | 16.72                    | 16.25                   | 32.97                      | 43.50         | -10.53     | peak     |
| 2   |     | 146.8877     | 19.82                    | 14.17                   | 33.99                      | 43.50         | -9.51      | peak     |
| 3   |     | 225.3080     | 20.69                    | 14.67                   | 35.36                      | 46.00         | -10.64     | peak     |
| 4   |     | 373.3112     | 20.23                    | 18.00                   | 38.23                      | 46.00         | -7.77      | peak     |
| 5   |     | 446.4141     | 13.12                    | 24.88                   | 38.00                      | 46.00         | -8.00      | peak     |
| 6   | *   | 595.1329     | 14.29                    | 24.91                   | 39.20                      | 46.00         | -6.80      | peak     |

**RESULT: 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/

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Party speaker                       | Model Name        | BREAK X1       |
| Temperature | 25°C                                | Relative Humidity | 58%            |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2412MHz | Antenna           | Vertical       |



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dB/m | Over<br>dB | Detector |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|---------------|------------|----------|
| 1   |     | 124.1329     | 19.44                    | 17.80                   | 37.24                      | 43.50         | -6.26      | peak     |
| 2   | !   | 373.3110     | 18.97                    | 21.33                   | 40.30                      | 46.00         | -5.70      | peak     |
| 3   | !   | 463.9696     | 16.30                    | 24.92                   | 41.22                      | 46.00         | -4.78      | QP       |
| 4   | !   | 552.8832     | 16.16                    | 24.64                   | 40.80                      | 46.00         | -5.20      | peak     |
| 5   | *   | 595.1327     | 16.13                    | 25.98                   | 42.11                      | 46.00         | -3.89      | peak     |
| 6   |     | 744.8660     | 12.25                    | 27.22                   | 39.47                      | 46.00         | -6.53      | peak     |

## RESULT: PASS

**Note:** 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

3. All test modes had been pre-tested. The 802.11b at low channel is the worst case and recorded in the 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.

### Radiated emission above 1GHz

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Party speaker                       | <b>Model Name</b>        | BREAK X1       |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 58%            |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with date rate 1<br>2412MHz | <b>Antenna</b>           | Horizontal     |

| Frequency<br>(MHz) | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4824.000           | 54.26                   | 0.08           | 54.34                      | 74.00              | -19.66         | peak       |
| 4824.000           | 44.69                   | 0.08           | 44.77                      | 54.00              | -9.23          | AVG        |
| 7236.000           | 50.49                   | 2.21           | 52.70                      | 74.00              | -21.30         | peak       |
| 7236.000           | 41.34                   | 2.21           | 43.55                      | 54.00              | -10.45         | AVG        |
|                    |                         |                |                            |                    |                |            |
|                    |                         |                |                            |                    |                |            |

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Party speaker                       | <b>Model Name</b>        | BREAK X1       |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 58%            |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with date rate 1<br>2412MHz | <b>Antenna</b>           | Vertical       |

| Frequency<br>(MHz) | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4824.000           | 55.61                   | 0.08           | 55.69                      | 74.00              | -18.31         | peak       |
| 4824.000           | 43.25                   | 0.08           | 43.33                      | 54.00              | -10.67         | AVG        |
| 7236.000           | 50.49                   | 2.21           | 52.70                      | 74.00              | -21.30         | peak       |
| 7236.000           | 41.38                   | 2.21           | 43.59                      | 54.00              | -10.41         | AVG        |
|                    |                         |                |                            |                    |                |            |
|                    |                         |                |                            |                    |                |            |

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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.

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Party speaker                       | <b>Model Name</b>        | BREAK X1       |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 58%            |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with data rate 1<br>2437MHz | <b>Antenna</b>           | Horizontal     |

| Frequency<br>(MHz)                                    | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4874.000                                              | 53.46                   | 0.14           | 53.60                      | 74.00              | -20.40         | peak       |
| 4874.000                                              | 44.95                   | 0.14           | 45.09                      | 54.00              | -8.91          | AVG        |
| 7311.000                                              | 42.31                   | 2.36           | 44.67                      | 74.00              | -29.33         | peak       |
| 7311.000                                              | 38.57                   | 2.36           | 40.93                      | 54.00              | -13.07         | AVG        |
|                                                       |                         |                |                            |                    |                |            |
|                                                       |                         |                |                            |                    |                |            |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Party speaker                       | <b>Model Name</b>        | BREAK X1       |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 58%            |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with data rate 1<br>2437MHz | <b>Antenna</b>           | Vertical       |

| Frequency<br>(MHz)                                    | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4874.000                                              | 54.26                   | 0.14           | 54.40                      | 74.00              | -19.60         | peak       |
| 4874.000                                              | 42.15                   | 0.14           | 42.29                      | 54.00              | -11.71         | AVG        |
| 7311.000                                              | 46.38                   | 2.36           | 48.74                      | 74.00              | -25.26         | peak       |
| 7311.000                                              | 38.46                   | 2.36           | 40.82                      | 54.00              | -13.18         | AVG        |
|                                                       |                         |                |                            |                    |                |            |
|                                                       |                         |                |                            |                    |                |            |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

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.

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Party speaker                       | <b>Model Name</b>        | BREAK X1       |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 58%            |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with data rate 1<br>2462MHz | <b>Antenna</b>           | Horizontal     |

| Frequency<br>(MHz)                                    | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4924.000                                              | 55.49                   | 0.22           | 55.71                      | 74.00              | -18.29         | peak       |
| 4924.000                                              | 46.34                   | 0.22           | 46.56                      | 54.00              | -7.44          | AVG        |
| 7386.000                                              | 50.81                   | 2.64           | 53.45                      | 74.00              | -20.55         | peak       |
| 7386.000                                              | 37.54                   | 2.64           | 40.18                      | 54.00              | -13.82         | AVG        |
|                                                       |                         |                |                            |                    |                |            |
|                                                       |                         |                |                            |                    |                |            |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Party speaker                       | <b>Model Name</b>        | BREAK X1       |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 58%            |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with data rate 1<br>2462MHz | <b>Antenna</b>           | Vertical       |

| Frequency<br>(MHz)                                    | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4924.000                                              | 54.36                   | 0.22           | 54.58                      | 74.00              | -19.42         | peak       |
| 4924.000                                              | 42.35                   | 0.22           | 42.57                      | 54.00              | -11.43         | AVG        |
| 7386.000                                              | 46.35                   | 2.64           | 48.99                      | 74.00              | -25.01         | peak       |
| 7386.000                                              | 37.54                   | 2.64           | 40.18                      | 54.00              | -13.82         | AVG        |
|                                                       |                         |                |                            |                    |                |            |
|                                                       |                         |                |                            |                    |                |            |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

## RESULT: PASS

### Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The “Factor” value can be calculated automatically by software of measurement system.

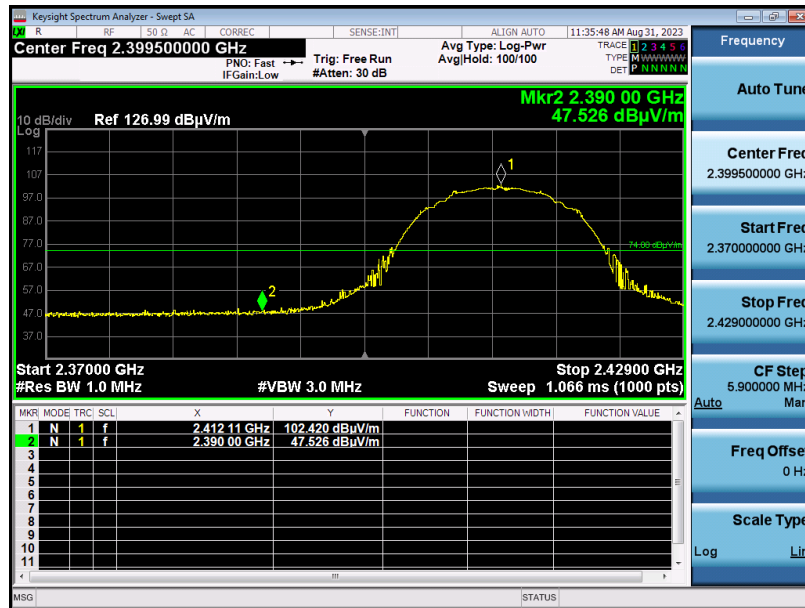
All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report.

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.

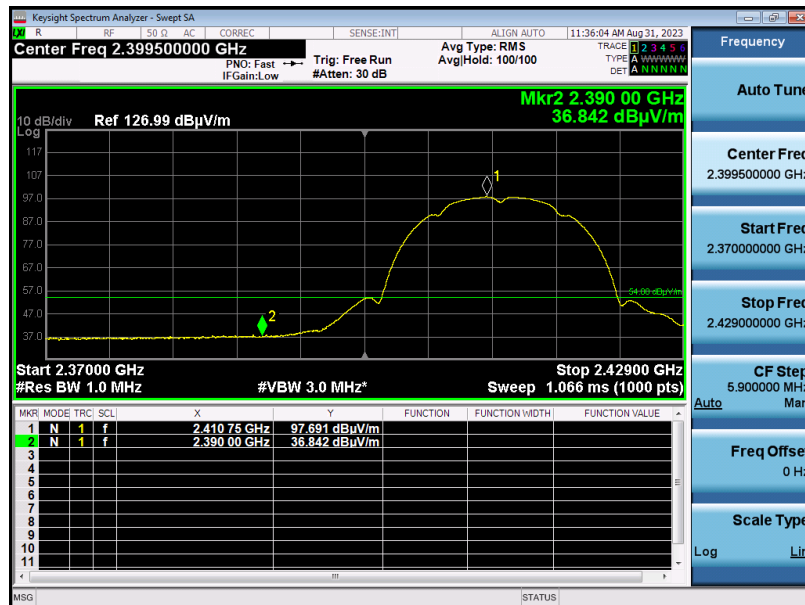
### Test result for band edge emission at restricted bands

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Party speaker                       | Model Name        | BREAK X1       |
| Temperature | 25°C                                | Relative Humidity | 60%            |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2412MHz | Antenna           | Horizontal     |

### Test Graph for Peak Measurement



### Test Graph for Average Measurement



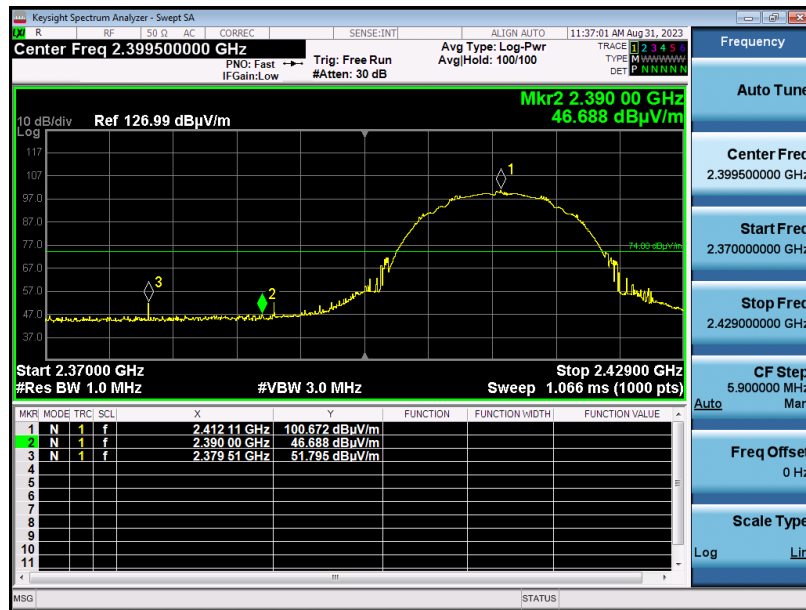
**RESULT: PASS**

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.

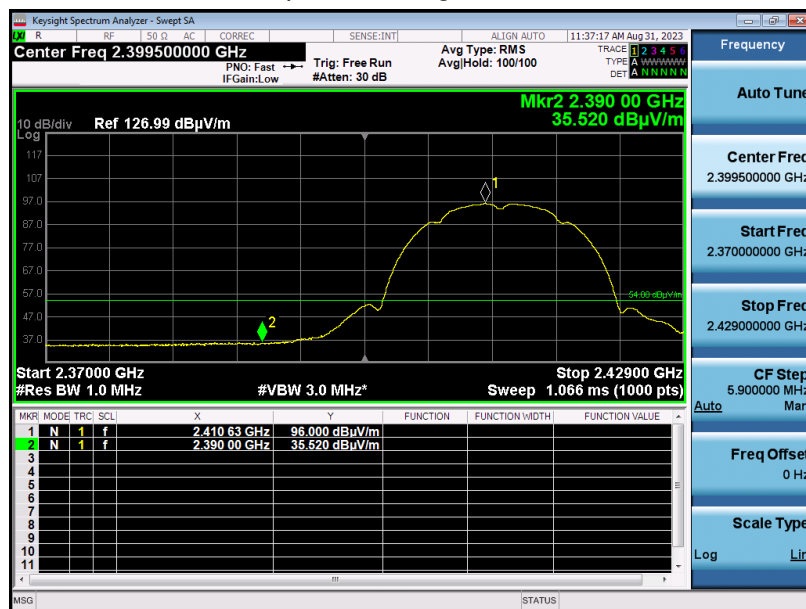
Attestation of Global Compliance(Shenzhen)Co., Ltd  
Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Party speaker                       | Model Name        | BREAK X1       |
| Temperature | 25°C                                | Relative Humidity | 60%            |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2412MHz | Antenna           | Vertical       |

Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: 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/