

# FCC Test Report

Report No.: AGC01035180503FE03

**FCC ID** : SZR-NVR-2400  
**APPLICATION PURPOSE** : Original Equipment  
**PRODUCT DESIGNATION** : MDVR  
**BRAND NAME** : REI  
**MODEL NAME** : NVR-2400  
**CLIENT** : Radio Engineering industries, Inc  
**DATE OF ISSUE** : Jun. 05, 2018  
**STANDARD(S)** : FCC Part 15.407  
**TEST PROCEDURE(S)** : KDB 789033 D02 v02r01  
KDB 662911 D01 v02r01  
**REPORT VERSION** : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

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REPORT REVISE RECORD

| Report Version | Revise Time | Issued Date   | Valid Version | Notes           |
|----------------|-------------|---------------|---------------|-----------------|
| V1.0           | /           | Jun. 05, 2018 | Valid         | Initial Release |

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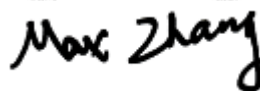
## 1. VERIFICATION OF CONFORMITY

|                                 |                                                         |
|---------------------------------|---------------------------------------------------------|
| <b>Applicant</b>                | Radio Engineering industries, Inc                       |
| <b>Address</b>                  | 6534 L Street Omaha, NE 68117, United States of America |
| <b>Manufacturer</b>             | Radio Engineering industries, Inc                       |
| <b>Address</b>                  | 6534 L Street Omaha, NE 68117, United States of America |
| <b>Product Designation</b>      | MDVR                                                    |
| <b>Brand Name</b>               | REI                                                     |
| <b>Test Model</b>               | NVR-2400                                                |
| <b>Date of test</b>             | May 28, 2018 to Jun. 04, 2018                           |
| <b>Deviation</b>                | None                                                    |
| <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 requirement of FCC Part 15 Rules requirement.

Tested by



Max Zhang(Zhang Yi)

Jun. 05, 2018

Reviewed by



Bart Xie(Xie Xiaobin)

Jun. 05, 2018

Approved By



Forrest Lei(Lei Yonggang)

Jun. 05, 2018

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## 2. GENERAL INFORMATION

### 2.1. PRODUCT DESCRIPTION

It is designed by way of utilizing the OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

|                                 |                                                                                                                                                                                                                |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operation Frequency</b>      | 5.725 GHz~5.825GHz                                                                                                                                                                                             |
| <b>Output Power</b>             | IEEE 802.11a20: <b>10.54</b> dBm IEEE 802.11n20: <b>12.84</b> dBm IEEE 802.11n(40): <b>10.15</b> dBm<br>IEEE 802.11ac20: <b>12.75</b> dBm IEEE 802.11ac40: <b>9.11</b> dBm<br>IEEE 802.11ac80: <b>6.92</b> dBm |
| <b>Modulation</b>               | BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM, OFDM                                                                                                                                                                 |
| <b>Number of channels</b>       | 8                                                                                                                                                                                                              |
| <b>Hardware Version</b>         | SVT7.820                                                                                                                                                                                                       |
| <b>Software Version</b>         | V1.0                                                                                                                                                                                                           |
| <b>Antenna Designation</b>      | External antenna(Use of reverse SMA connector)                                                                                                                                                                 |
| <b>Number of transmit chain</b> | 2(802.11a used chain 0, 802.11n20/n40/ac used two chains)                                                                                                                                                      |
| <b>Antenna Gain</b>             | 3dBi                                                                                                                                                                                                           |
| <b>Power Supply</b>             | DC 12V                                                                                                                                                                                                         |

### 2.2. TABLE OF CARRIER FREQUENCIES

| Frequency Band     | Channel Number | Frequency |
|--------------------|----------------|-----------|
| 5.725 GHz~5.850GHz | 149            | 5745 MHz  |
|                    | 151            | 5755 MHz  |
|                    | 153            | 5765 MHz  |
|                    | 155            | 5775 MHz  |
|                    | 157            | 5785 MHz  |
|                    | 159            | 5795 MHz  |
|                    | 161            | 5805 MHz  |
|                    | 165            | 5825MHz   |

Note: For 20MHZ bandwidth system use Channel149,153,157,161,165; For 40MHZ bandwidth system use Channel 151,159; For 80MHZ bandwidth system use Channel 155.

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

This submittal(s) (test report) is intended for **FCC ID:SZR-NVR-2400** filing to comply with the FCC Part 15 requirements.

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## 2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013).

Radiated testing was performed at an antenna to EUT distance 3 meters.

Others testing (listed at item 5.3) was performed according to the procedures in FCC Part 15.407 rules KDB 789033

## 2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

## 2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

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### 3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in measurement” (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission,  $U_c = \pm 3.2$  dB
- Uncertainty of Radiated Emission below 1GHz,  $U_c = \pm 3.9$  dB
- Uncertainty of Radiated Emission above 1GHz,  $U_c = \pm 4.8$  dB

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#### 4. DESCRIPTION OF TEST MODES

| Mode             | Available channel   | Tested channel | Modulation | Date rate(Mbps) |
|------------------|---------------------|----------------|------------|-----------------|
| 802.11a/n20/ac20 | 149,153,157,161,165 | 149,157, 165   | OFDM       | 6/6.5           |
| 802.11n40/ac40   | 151,159             | 151,159        | OFDM       | 13.5            |
| 802.11ac80       | 155                 | 155            | OFDM       | 27              |

#### Note:

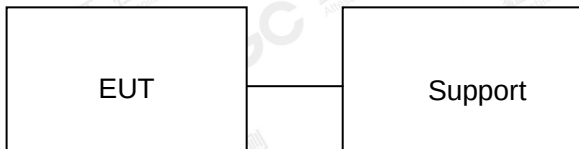
1. The EUT has been set to operate continuously on tested channel individually, and the EUT is operating at its maximum duty cycle>or equal 98%
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

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## 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    | MDVR        | NVR-2400  | SZR-NVR-2400        | EUT     |
| 2    | Camera      | NVR05     | N/A                 | Support |
| 3    | Car battery | N/A       | N/A                 | Support |

### 5.3. SUMMARY OF TEST RESULTS

| FCC RULES | DESCRIPTION OF TEST                                | RESULT    |
|-----------|----------------------------------------------------|-----------|
| §15.407   | 6dB Bandwidth                                      | Compliant |
| §15.407   | Maximum conducted output power                     | Compliant |
| §15.407   | Conducted Spurious Emission and Band edge Emission | Compliant |
| §15.407   | Maximum Conducted Output Power Density             | Compliant |
| §15.209   | Radiated Emission                                  | Compliant |
| §15.407   | Frequency Stability                                | Compliant |
| §15.207   | Line Conduction Emission                           | N/A       |

Note: The device is only used in the car, so the conducted emission is not applicable.

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## 6. TEST FACILITY

|                           |                                                                                                                                                                                                                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Site</b>          | Attestation of Global Compliance (Shenzhen) Co., Ltd                                                                                                                                                             |
| <b>Location</b>           | 1-2F., Bldg.2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District B112-B113, Bldg.12, Baoan Bldg Materials Center, No.1 of Xixiang Inner Ring Road, Baoan District, Shenzhen 518012 |
| <b>NVLAP LAB CODE</b>     | 600153-0                                                                                                                                                                                                         |
| <b>Designation Number</b> | CN5028                                                                                                                                                                                                           |
| <b>Description</b>        | Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by National Voluntary Laboratory Accreditation program, NVLAP Code 600153-0                                                                    |

## TEST EQUIPMENT OF RADIATED EMISSION TEST

| Equipment                      | Manufacturer | Model       | S/N        | Cal. Date    | Cal. Due     |
|--------------------------------|--------------|-------------|------------|--------------|--------------|
| TEST RECEIVER                  | R&S          | ESCI        | 10096      | Jun.20, 2017 | Jun.19, 2018 |
| EXA Signal Analyzer            | Aglient      | N9010A      | MY53470504 | Dec.08, 2017 | Dec.07, 2018 |
| Power sensor                   | Aglient      | U2021XA     | MY54110007 | Sep.21, 2017 | Sep.20, 2018 |
| Horn antenna                   | SCHWARZBECK  | BBHA 9170   | #768       | Sep.20, 2017 | Sep.19, 2018 |
| preamplifier                   | ChengYi      | EMC184045SE | 980508     | Sep.15, 2017 | Sep.14, 2018 |
| Active loop antenna (9K-30MHz) | A.H.         | SAS-562B    | N/A        | Mar.01, 2018 | Feb.28, 2019 |
| Double-Ridged Waveguide Horn   | ETS LINDGREN | 3117        | 00034609   | May.18, 2017 | May.17, 2019 |
| Broadband Preamplifier         | SCHWARZBECK  | BBV 9718    | 9718-205   | Jun.20, 2017 | Jun.19, 2018 |
| ANTENNA                        | SCHWARZBECK  | VULB9168    | D69250     | Sep.28, 2017 | Sep.27, 2018 |

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## 7. MAXIMUM CONDUCTED OUTPUT POWER

### 7.1. MEASUREMENT PROCEDURE

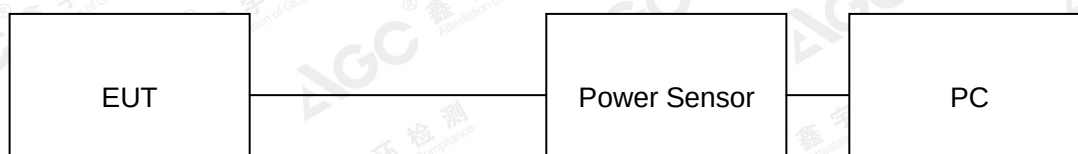
For average power test:

1. Connect EUT RF output port to power sensor through an RF attenuator.
2. Connect the power sensor to the PC.
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Record the maximum power from the software.

**Note :** The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

### 7.2. TEST SET-UP

#### AVERAGE POWER SETUP



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### 7.3. LIMITS AND MEASUREMENT RESULT

| LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION |                     |                         |              |
|--------------------------------------------------------|---------------------|-------------------------|--------------|
| Frequency (MHz)                                        | Average Power (dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5745                                                   | 10.54               | 30                      | Pass         |
| 5785                                                   | 10.38               | 30                      | Pass         |
| 5825                                                   | 10.42               | 30                      | Pass         |

| LIMITS AND MEASUREMENT RESULT FOR 802.11N20 MODULATION |                            |                            |                          |                         |              |
|--------------------------------------------------------|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz)                                        | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5745                                                   | 10.42                      | 9.14                       | 12.84                    | 30                      | Pass         |
| 5785                                                   | 10.25                      | 9.04                       | 12.70                    | 30                      | Pass         |
| 5825                                                   | 9.85                       | 8.53                       | 12.25                    | 30                      | Pass         |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC20 MODULATION |                            |                            |                          |                         |              |
|---------------------------------------------------------|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz)                                         | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5745                                                    | 10.21                      | 9.21                       | 12.75                    | 30                      | Pass         |
| 5785                                                    | 10.14                      | 9.05                       | 12.64                    | 30                      | Pass         |
| 5825                                                    | 9.77                       | 8.61                       | 12.24                    | 30                      | Pass         |

| LIMITS AND MEASUREMENT RESULT FOR 802.11N40 MODULATION |                            |                            |                          |                         |              |
|--------------------------------------------------------|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz)                                        | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5755                                                   | 7.64                       | 6.58                       | 10.15                    | 30                      | Pass         |
| 5795                                                   | 7.04                       | 6.02                       | 9.57                     | 30                      | Pass         |

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| LIMITS AND MEASUREMENT RESULT FOR 802.11AC40 MODULATION |                            |                            |                          |                         |              |
|---------------------------------------------------------|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz)                                         | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5755                                                    | 6.85                       | 5.18                       | 9.11                     | 30                      | Pass         |
| 5795                                                    | 6.14                       | 4.65                       | 8.47                     | 30                      | Pass         |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC80 MODULATION |                            |                            |                          |                         |              |
|---------------------------------------------------------|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz)                                         | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5775                                                    | 4.25                       | 3.54                       | 6.92                     | 30                      | Pass         |

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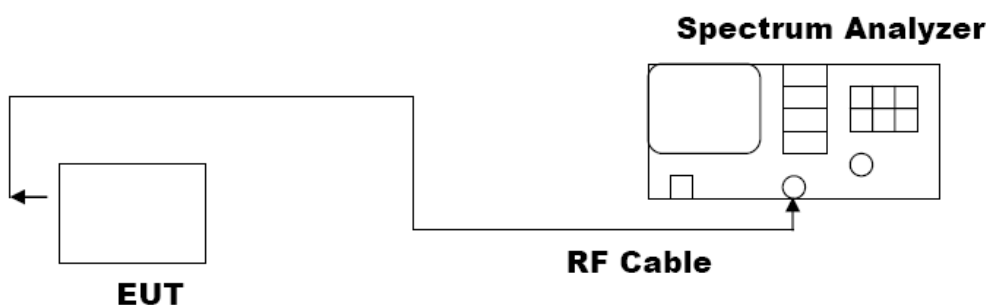
## 8. 6dB BANDWIDTH

### 8.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW  $\geq 3 \times$  RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

**Note:** The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

### 8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



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### 8.3. LIMITS AND MEASUREMENT RESULTS

| LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION |                   |       |          |
|--------------------------------------------------------|-------------------|-------|----------|
| Applicable Limits                                      | Applicable Limits |       |          |
|                                                        | Test Data (MHz)   |       | Criteria |
| >500KHZ                                                | 5745MHz           | 16.37 | PASS     |
|                                                        | 5785MHz           | 16.37 | PASS     |
|                                                        | 5825MHz           | 16.33 | PASS     |

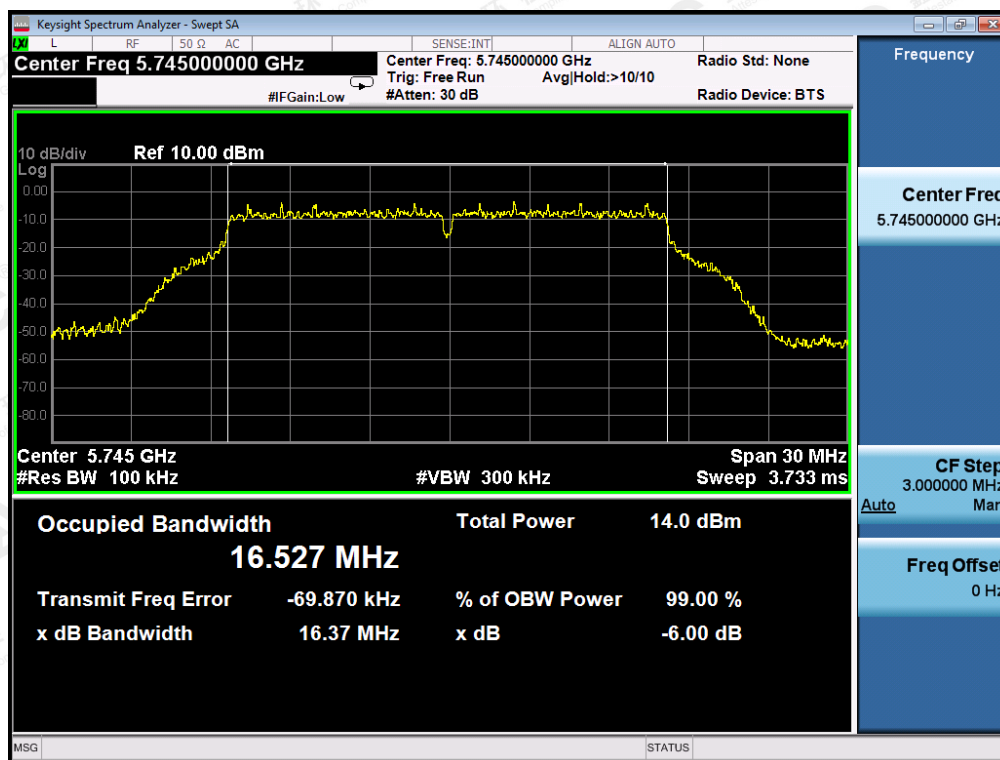
| LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION |                   |       |          |
|-----------------------------------------------------------|-------------------|-------|----------|
| Applicable Limits                                         | Applicable Limits |       |          |
|                                                           | Test Data (MHz)   |       | Criteria |
| >500KHZ                                                   | 5745MHz           | 17.55 | PASS     |
|                                                           | 5785MHz           | 17.60 | PASS     |
|                                                           | 5825MHz           | 17.58 | PASS     |
|                                                           | 5755MHz           | 36.33 | PASS     |
|                                                           | 5795MHz           | 36.36 | PASS     |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC20/40/80 MODULATION |                   |       |          |
|---------------------------------------------------------------|-------------------|-------|----------|
| Applicable Limits                                             | Applicable Limits |       |          |
|                                                               | Test Data (MHz)   |       | Criteria |
| >500KHZ                                                       | 5745MHz           | 17.62 | PASS     |
|                                                               | 5785MHz           | 17.67 | PASS     |
|                                                               | 5825MHz           | 17.64 | PASS     |
|                                                               | 5755MHz           | 36.34 | PASS     |
|                                                               | 5795MHz           | 36.39 | PASS     |
|                                                               | 5775MHz           | 76.38 | PASS     |

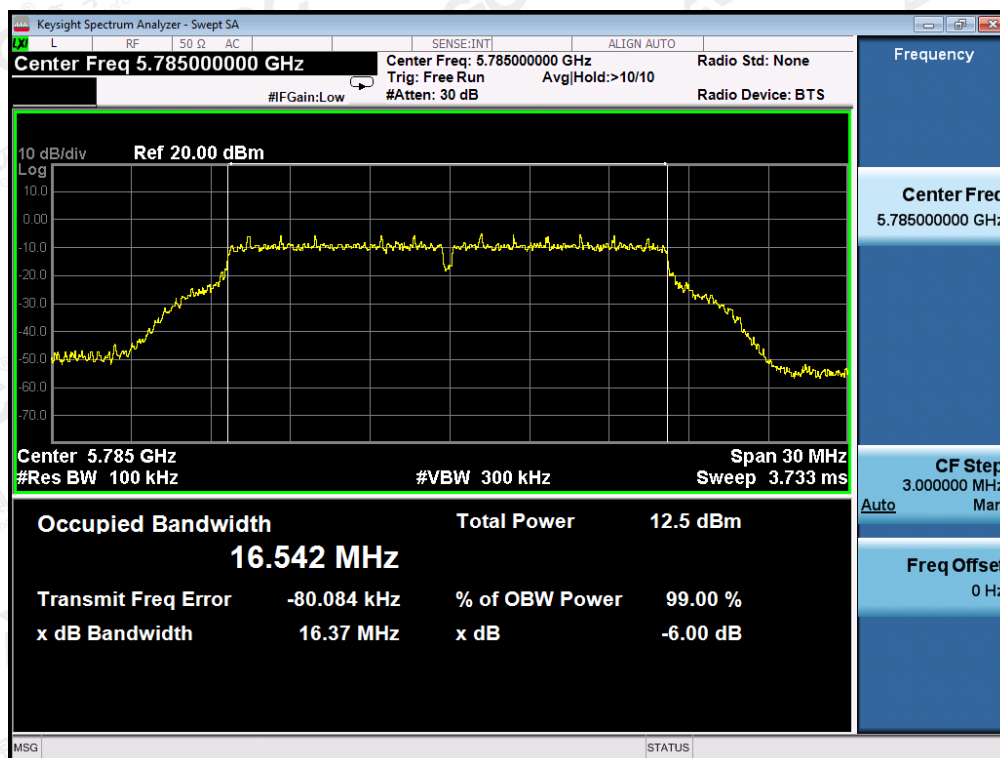
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## 802.11a20 TEST RESULT

### TEST PLOT OF BANDWIDTH FOR 5745MHz

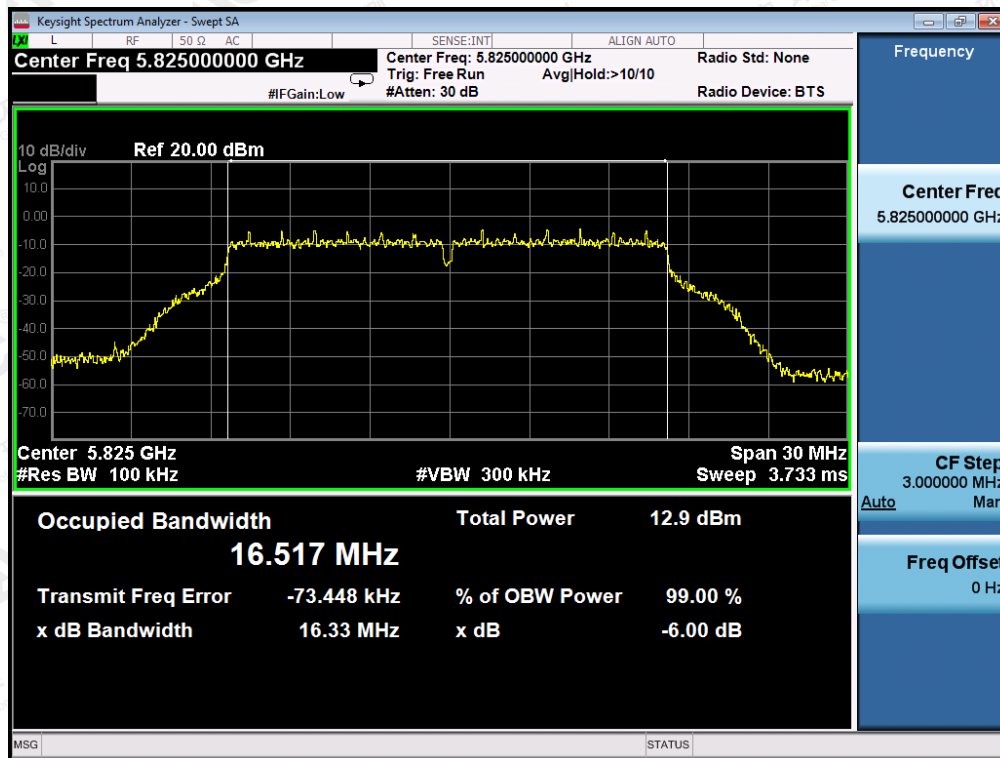


### TEST PLOT OF BANDWIDTH FOR 5785MHz



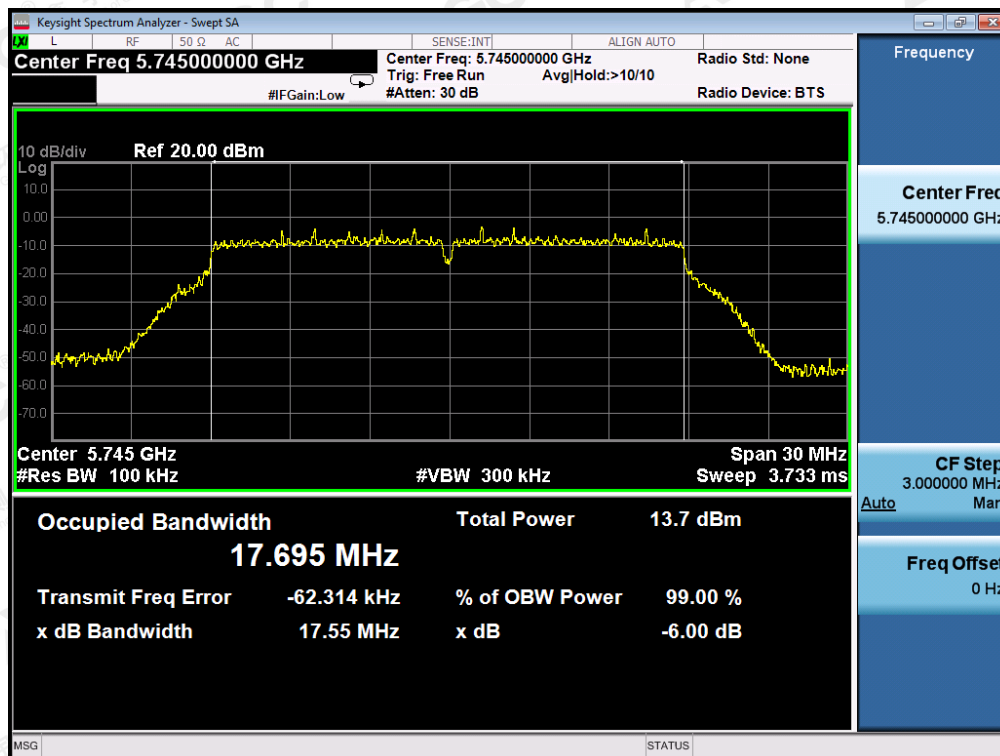
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### TEST PLOT OF BANDWIDTH FOR 5825MHz



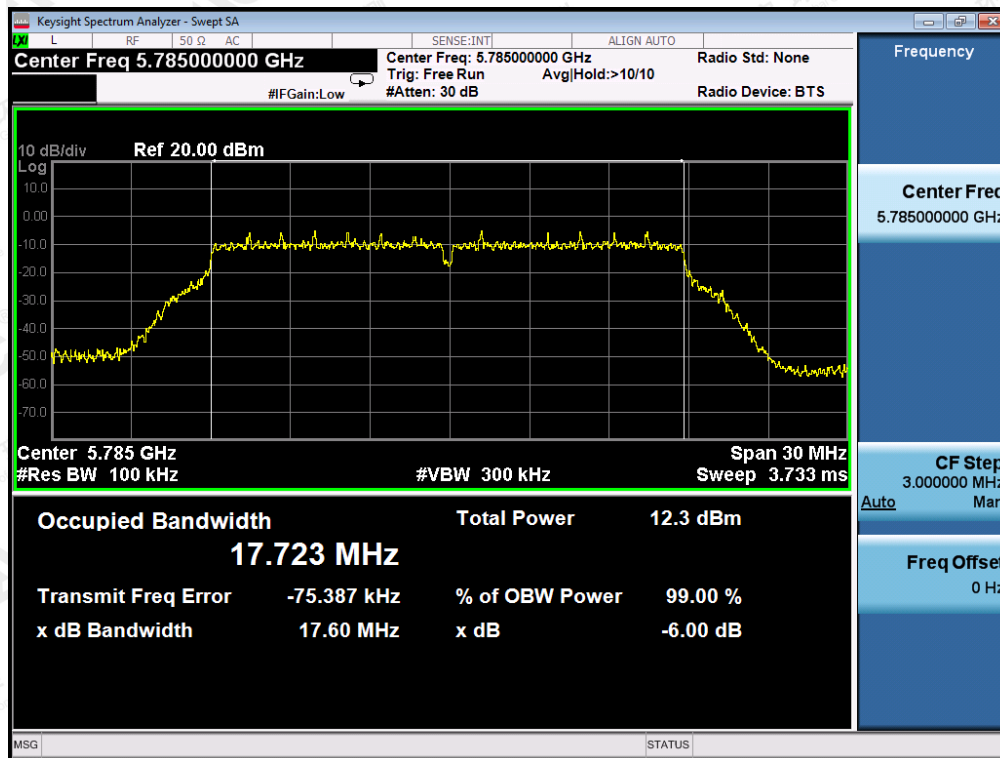
### 802.11n20 TEST RESULT

### TEST PLOT OF BANDWIDTH FOR 5745MHz

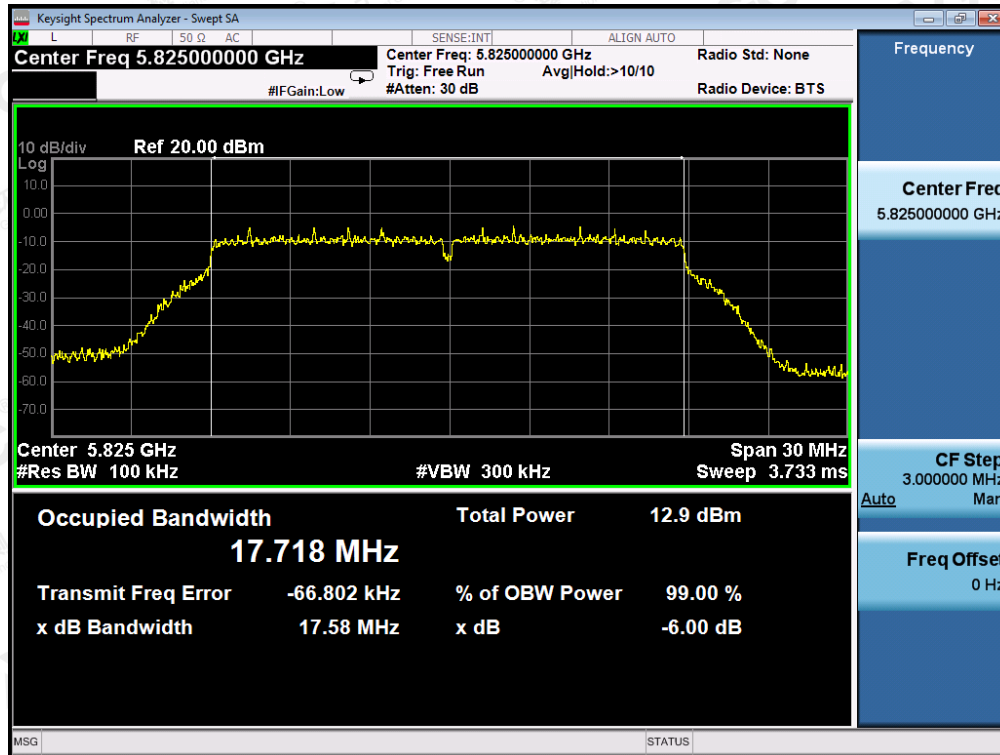


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### TEST PLOT OF BANDWIDTH FOR 5785MHz



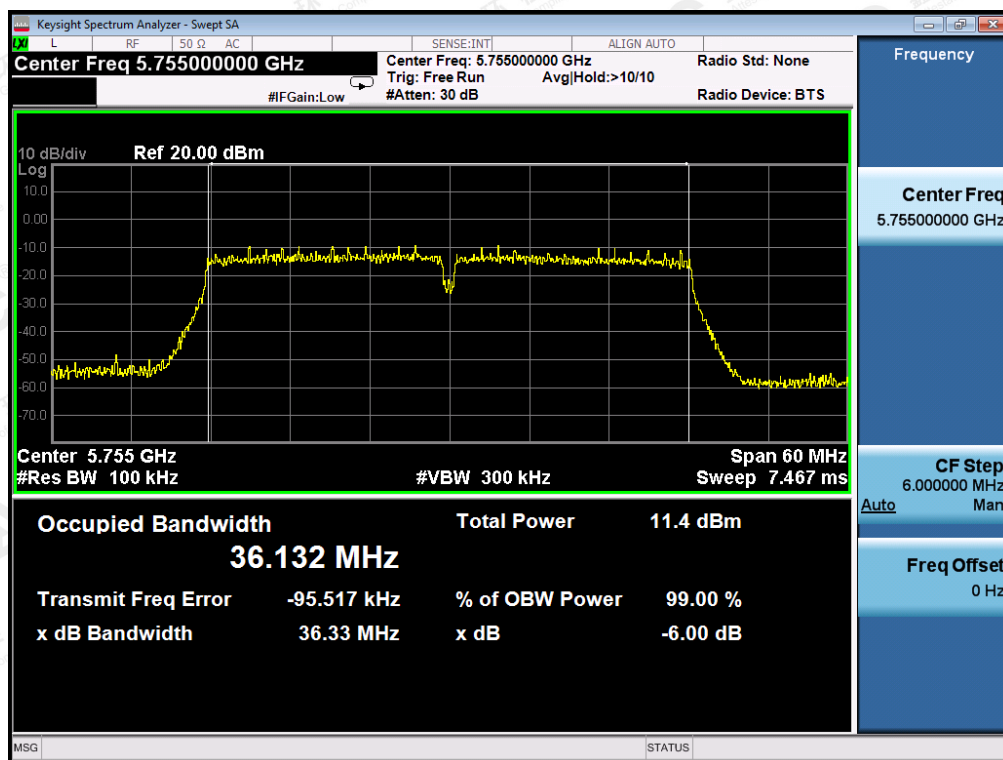
### TEST PLOT OF BANDWIDTH FOR 5825MHz



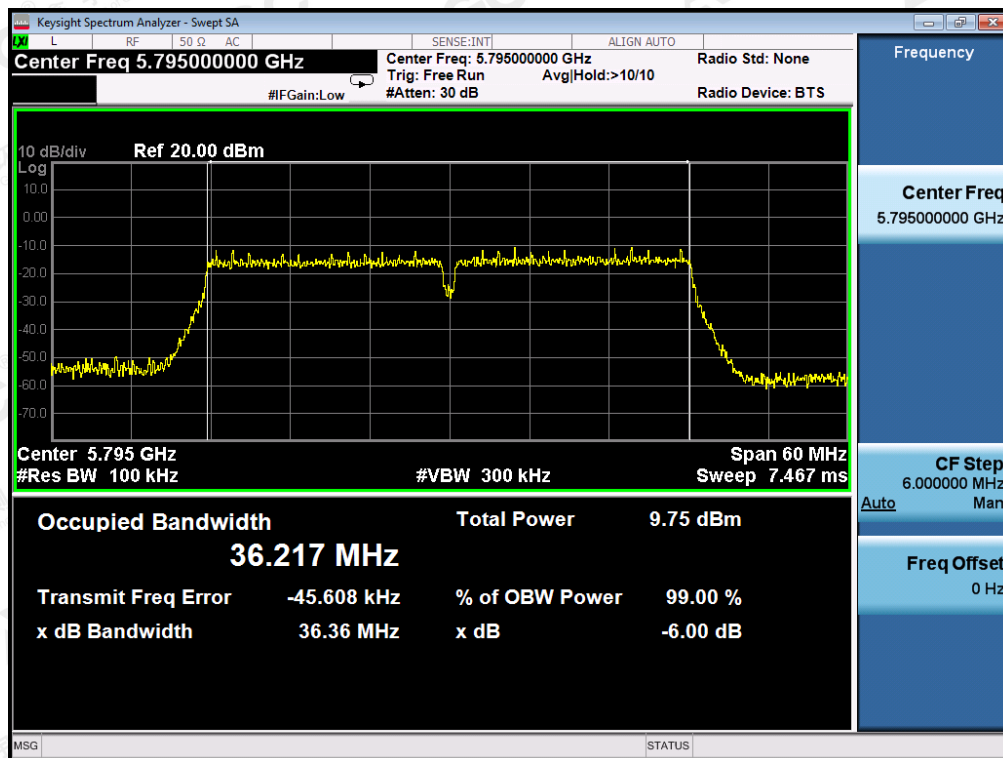
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

## 802.11n40 TEST RESULT

### TEST PLOT OF BANDWIDTH FOR 5755MHz



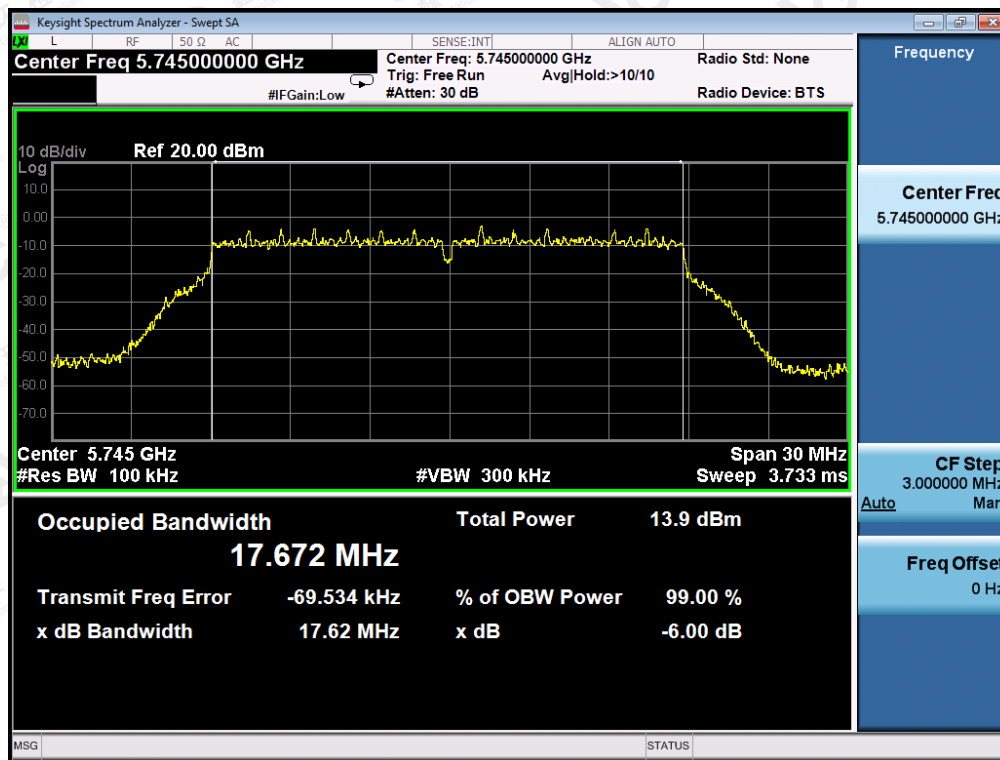
### TEST PLOT OF BANDWIDTH FOR 5795MHz



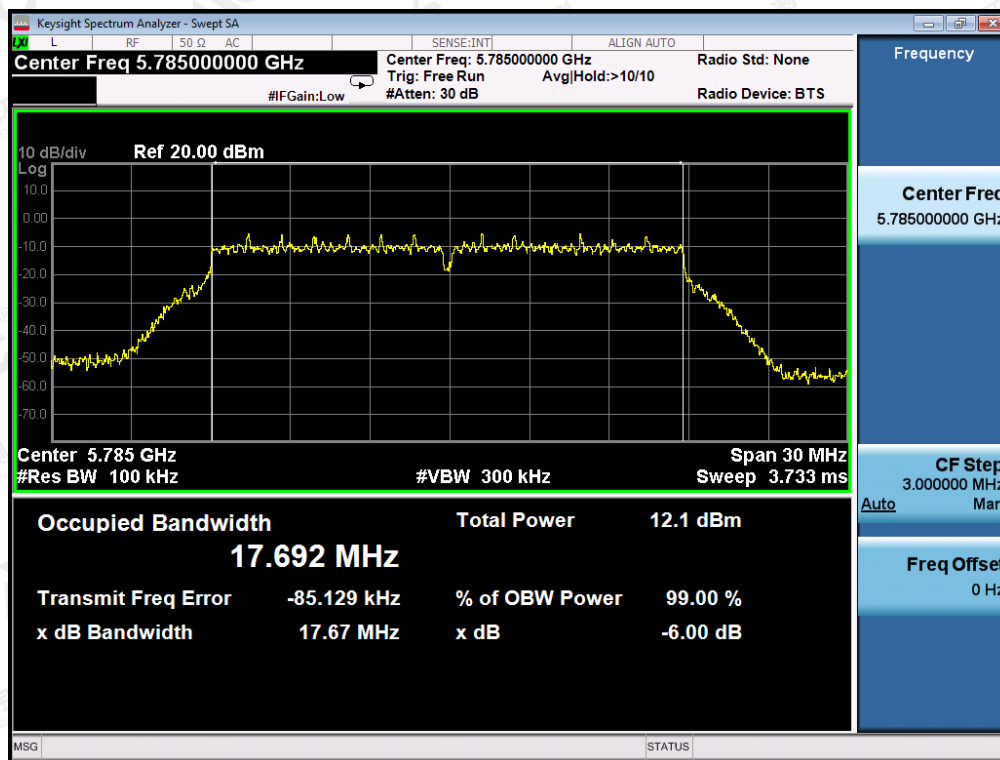
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### 802.11ac20 TEST RESULT

#### TEST PLOT OF BANDWIDTH FOR 5745MHz

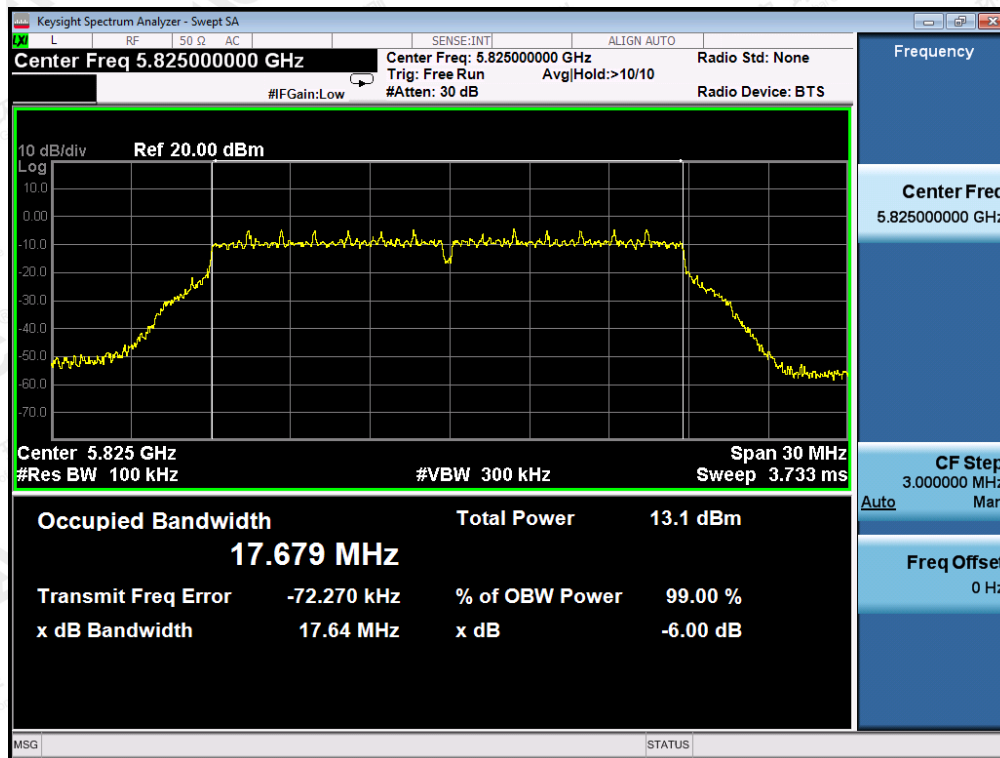


#### TEST PLOT OF BANDWIDTH FOR 5785MHz



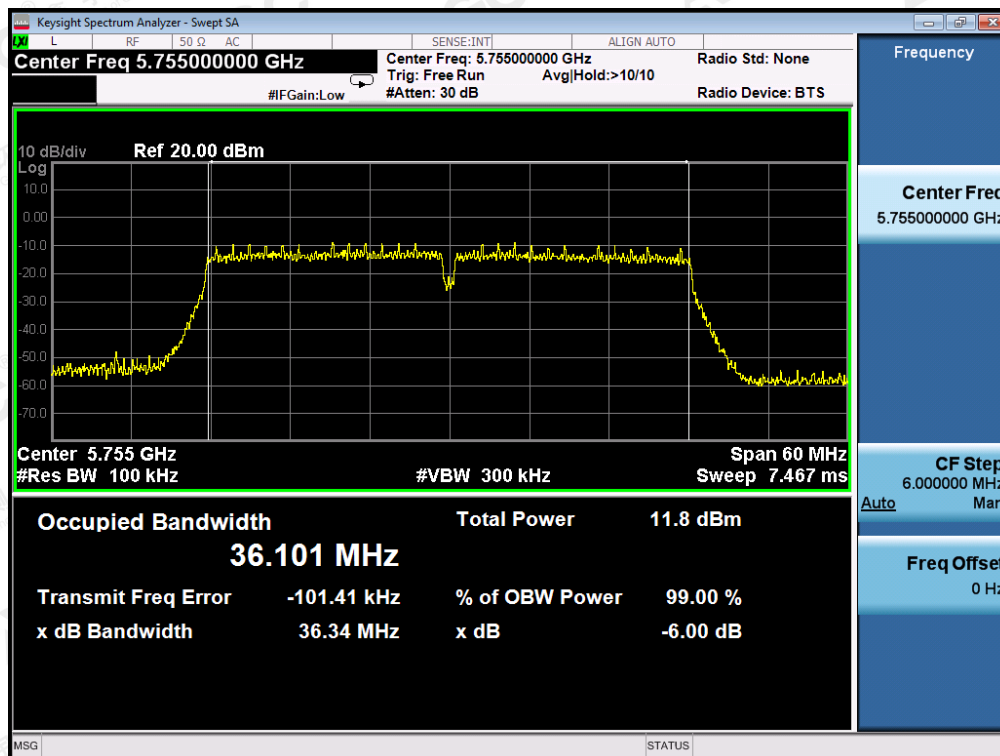
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT OF BANDWIDTH FOR 5825MHZ



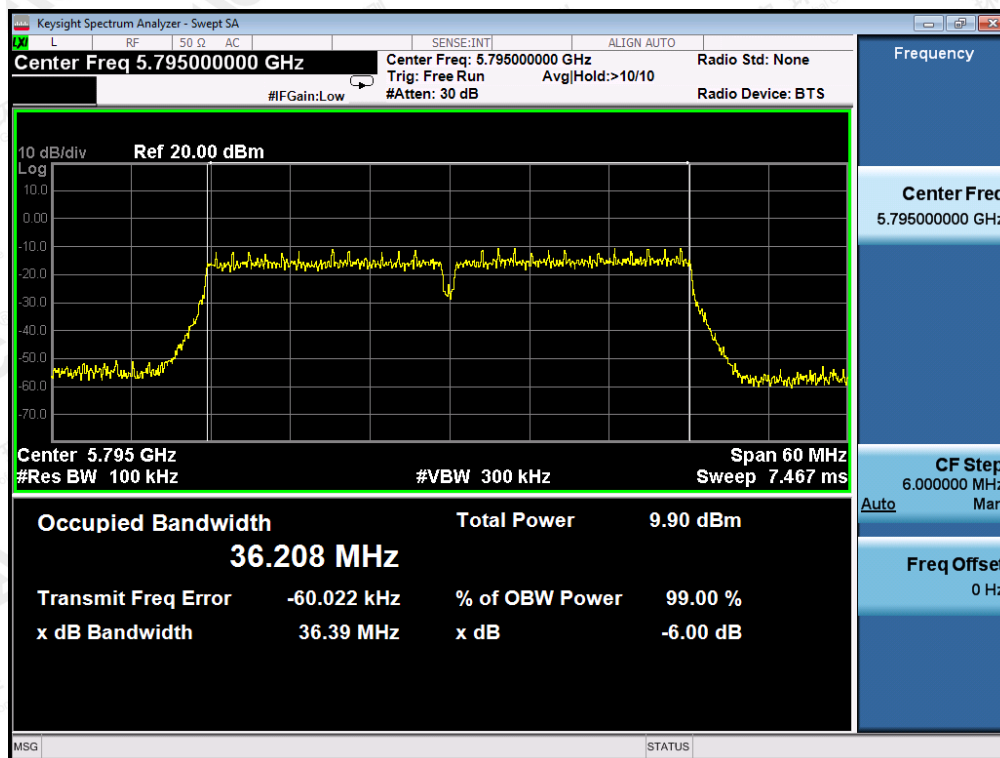
### 802.11ac40 TEST RESULT

### TEST PLOT OF BANDWIDTH FOR 5755MHZ



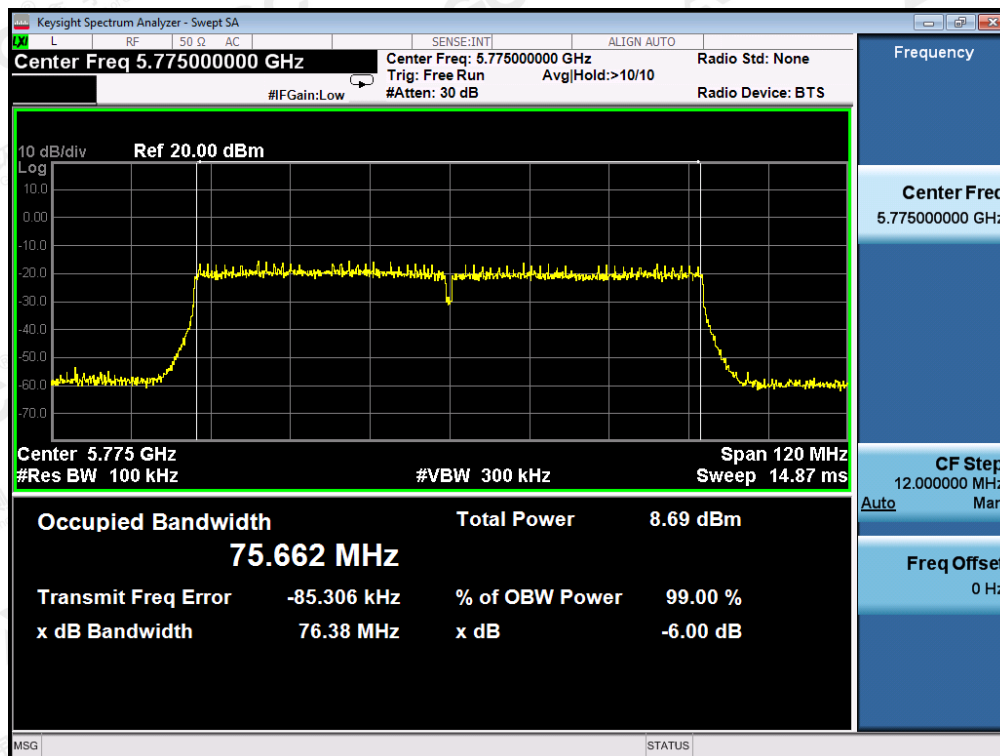
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT OF BANDWIDTH FOR 5795MHz



### 802.11ac80 TEST RESULT

### TEST PLOT OF BANDWIDTH FOR 5775MHz



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## 9. MAXIMUM CONDUCTED OUTPUT PEAK POWER SPECTRAL DENSITY

### 9.1 MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

### 9.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 8.2.

### 9.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

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#### 9.4 LIMITS AND MEASUREMENT RESULT

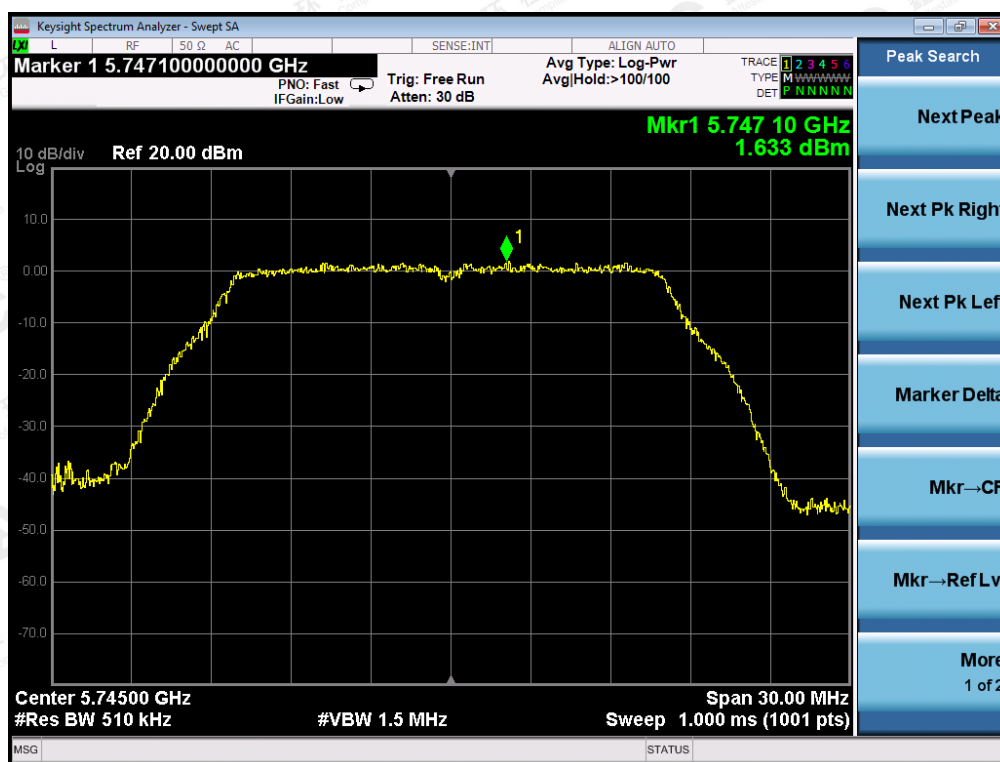
| LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION |                            |                         |              |
|--------------------------------------------------------|----------------------------|-------------------------|--------------|
| Frequency (MHz)                                        | Power density (dBm/500kHz) | Applicable Limits (dBm) | Pass or Fail |
| 5745                                                   | 1.633                      | 30                      | Pass         |
| 5785                                                   | -0.018                     | 30                      | Pass         |
| 5825                                                   | 1.068                      | 30                      | Pass         |

| LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION |                                    |                                    |                                  |                         |              |
|-----------------------------------------------------------|------------------------------------|------------------------------------|----------------------------------|-------------------------|--------------|
| Frequency (MHz)                                           | Power density Chain 0 (dBm/500kHz) | Power density Chain 1 (dBm/500kHz) | Power density Total (dBm/500kHz) | Applicable Limits (dBm) | Pass or Fail |
| 5745                                                      | 1.866                              | -0.982                             | 3.682                            | 30                      | Pass         |
| 5785                                                      | 0.495                              | -3.772                             | 1.876                            | 30                      | Pass         |
| 5825                                                      | 0.792                              | -3.964                             | 2.045                            | 30                      | Pass         |
| 5755                                                      | -2.866                             | -5.383                             | -0.934                           | 30                      | Pass         |
| 5795                                                      | -4.554                             | -8.477                             | -3.077                           | 30                      | Pass         |

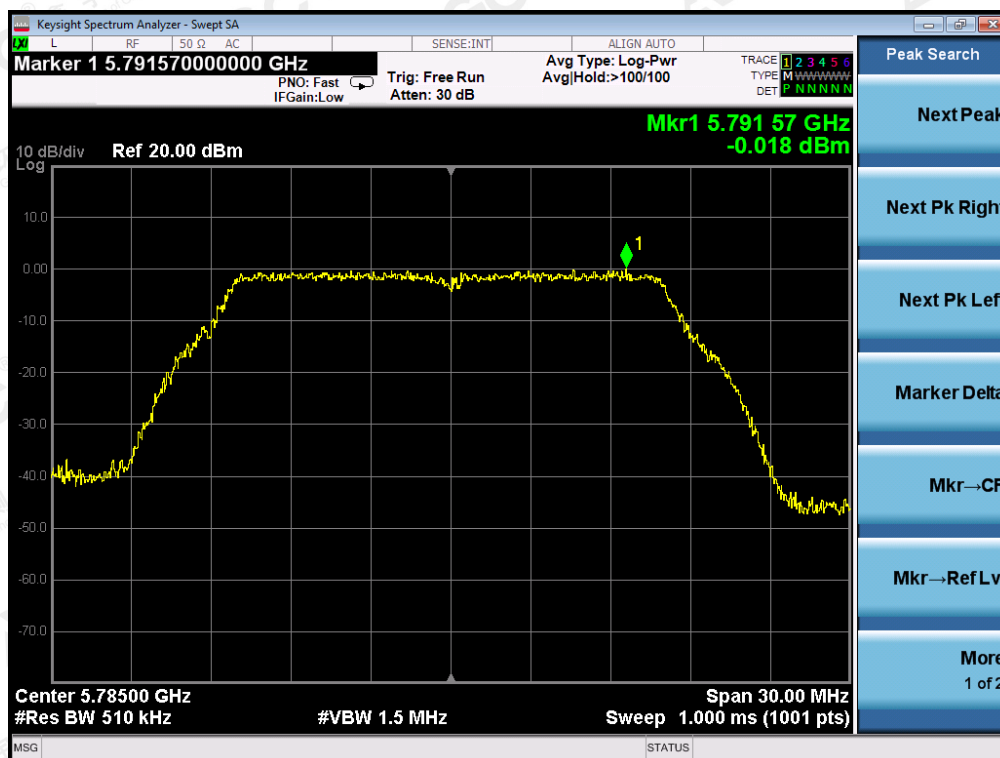
| LIMITS AND MEASUREMENT RESULT FOR 802.11AC20/40/80 MODULATION |                                    |                                    |                                  |                         |              |
|---------------------------------------------------------------|------------------------------------|------------------------------------|----------------------------------|-------------------------|--------------|
| Frequency (MHz)                                               | Power density Chain 0 (dBm/500kHz) | Power density Chain 1 (dBm/500kHz) | Power density Total (dBm/500kHz) | Applicable Limits (dBm) | Pass or Fail |
| 5745                                                          | 1.943                              | -0.446                             | 3.921                            | 30                      | Pass         |
| 5785                                                          | 1.039                              | -2.340                             | 2.680                            | 30                      | Pass         |
| 5825                                                          | 0.825                              | -2.457                             | 2.497                            | 30                      | Pass         |
| 5755                                                          | -1.651                             | -5.249                             | -0.077                           | 30                      | Pass         |
| 5795                                                          | -3.494                             | -7.578                             | -2.062                           | 30                      | Pass         |
| 5775                                                          | -8.330                             | -10.471                            | -6.260                           | 30                      | Pass         |

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**802.11a20 TEST RESULT:**  
**TEST PLOT FOR 5745MHz**

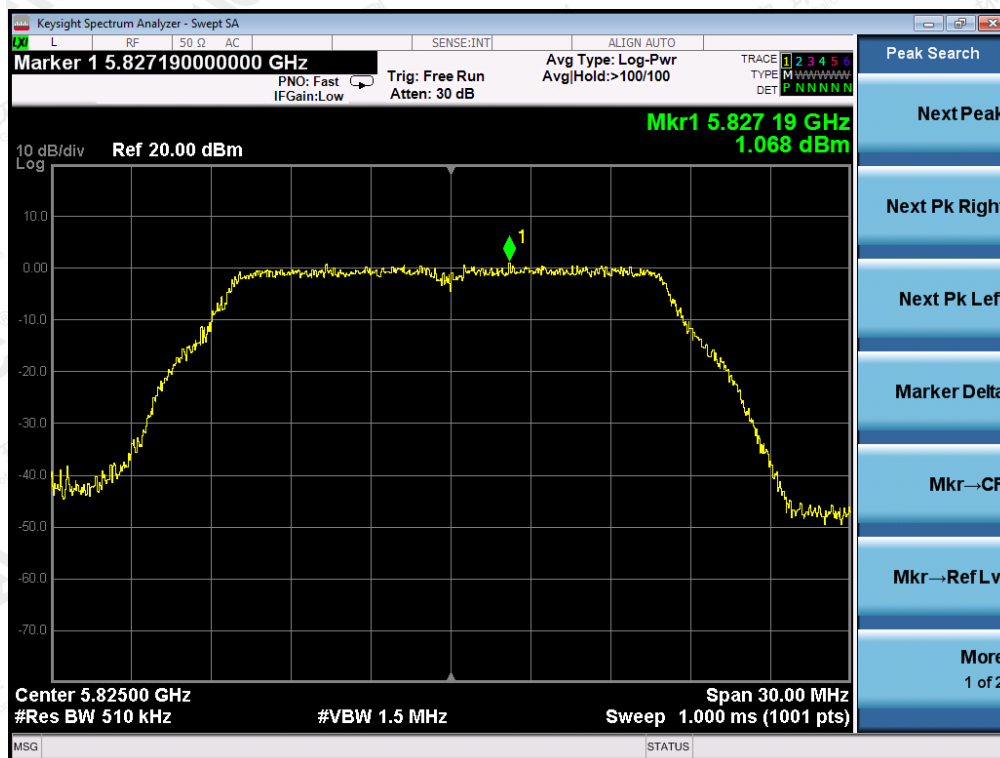


**TEST PLOT FOR 5785MHz**



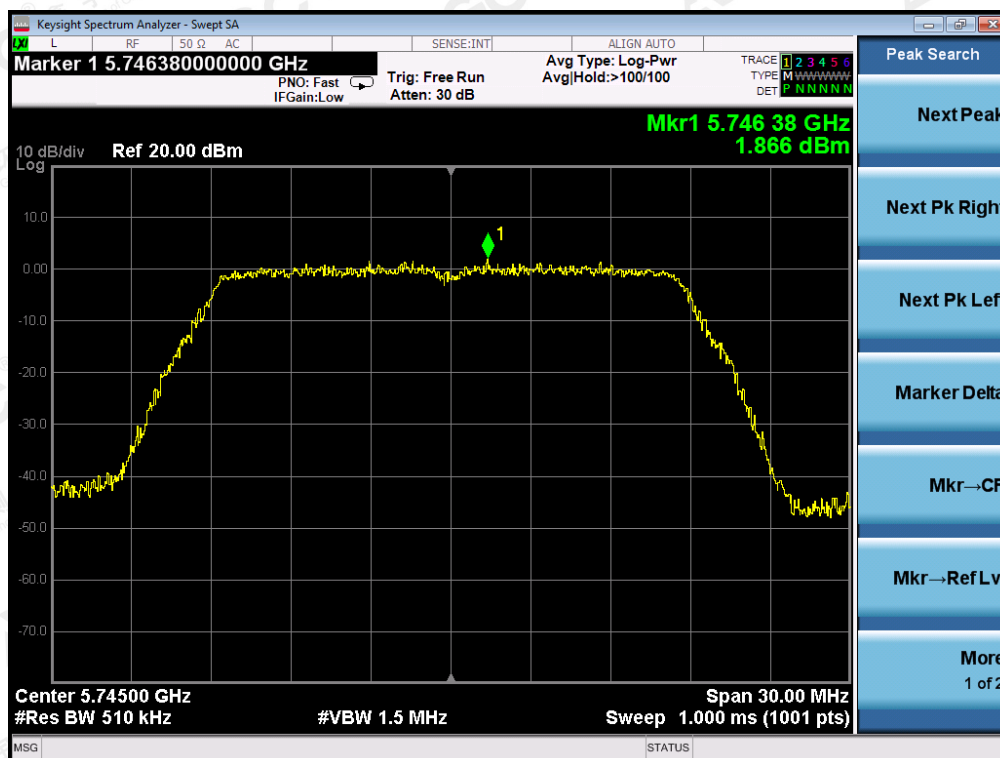
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5825MHz



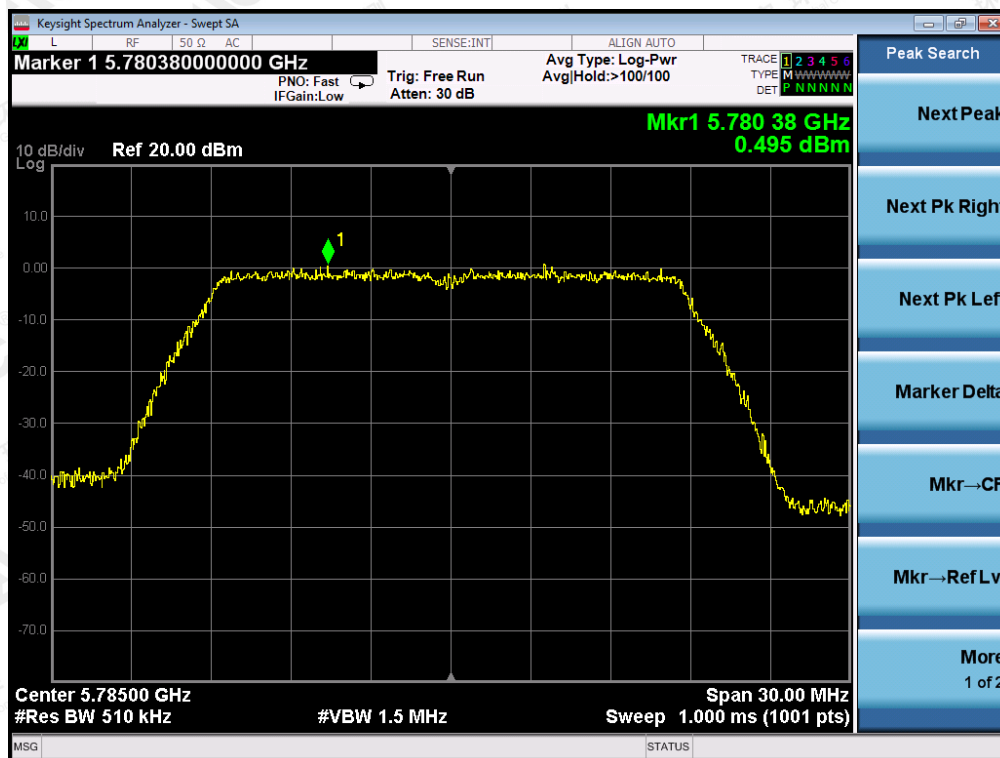
### 802.11n20 TEST RESULT-ant0

### TEST PLOT FOR 5745MHz

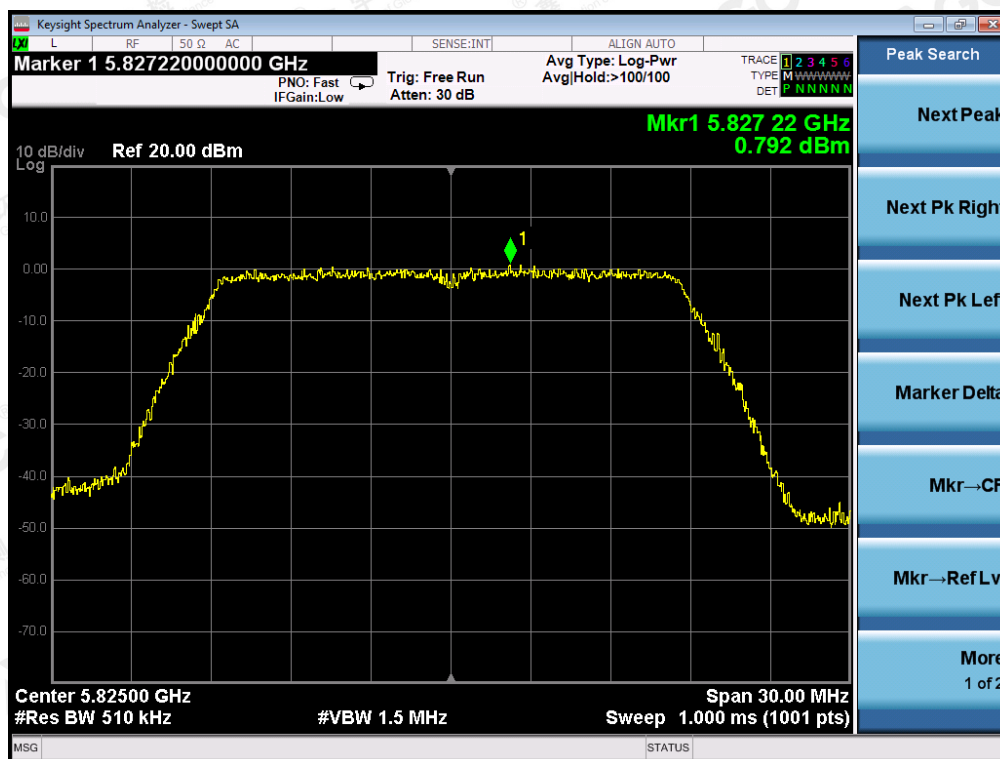


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### TEST PLOT FOR 5785MHz



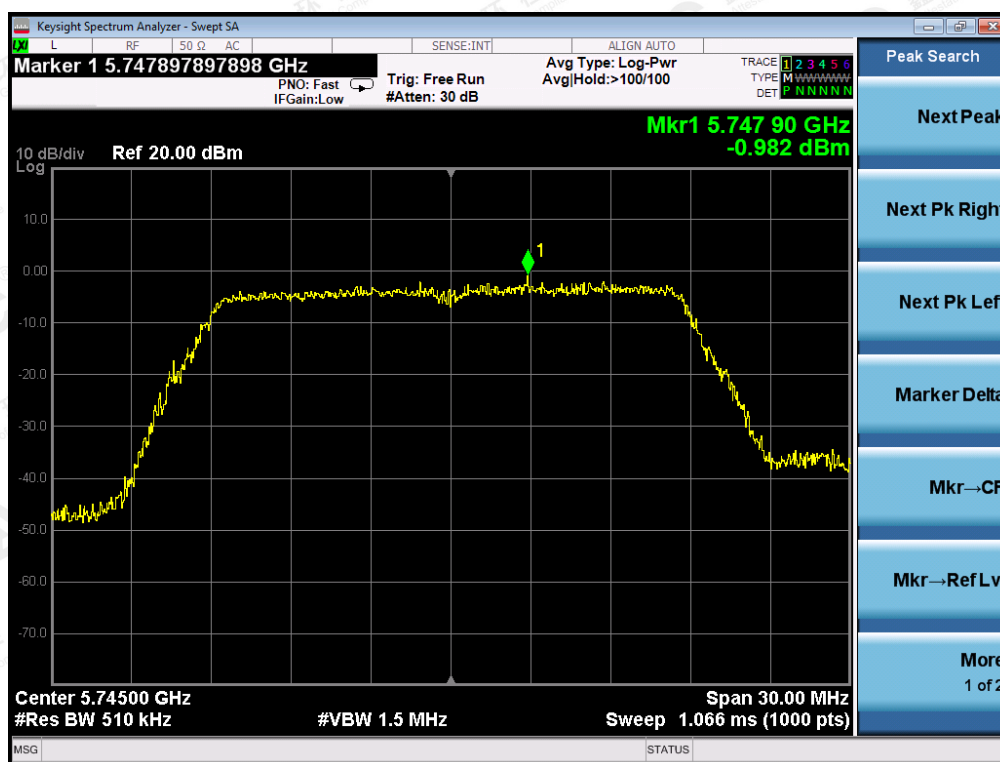
### TEST PLOT FOR 5825MHz



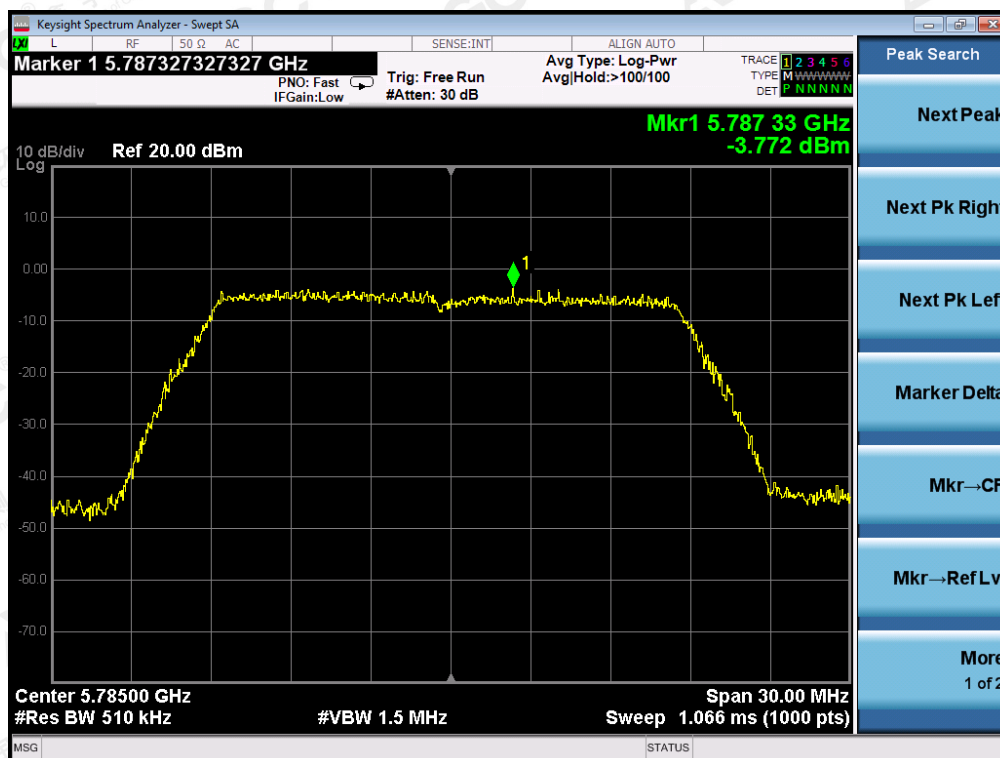
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

# 802.11n20 TEST RESULT-ant1:

## TEST PLOT FOR 5745MHz

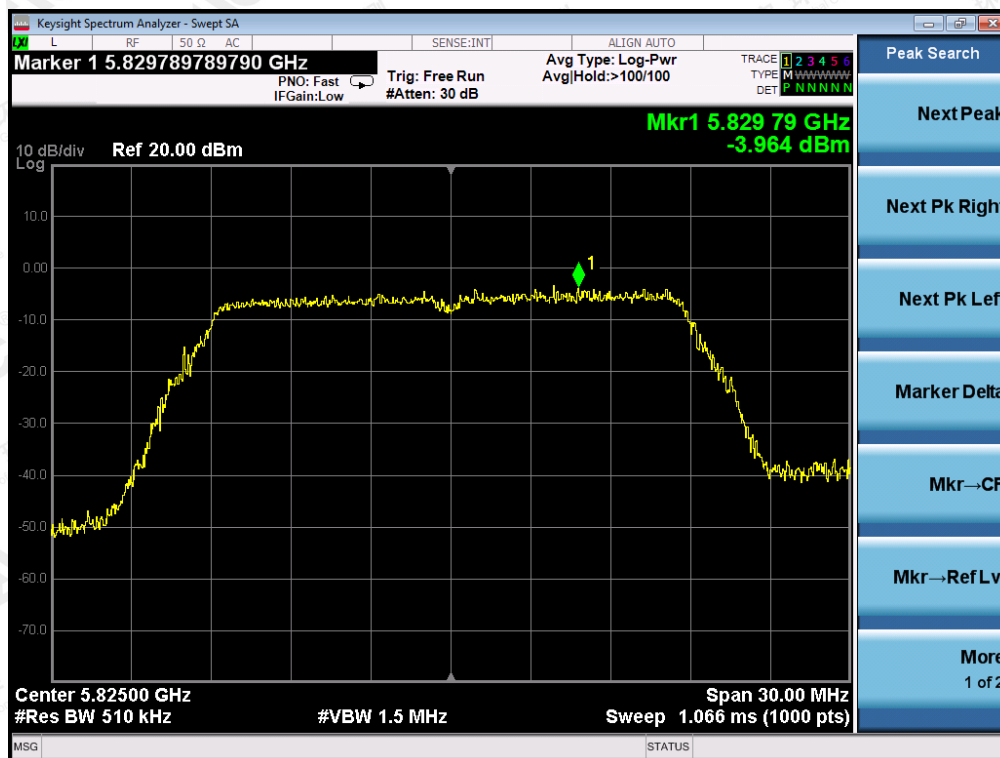


## TEST PLOT FOR 5785MHz



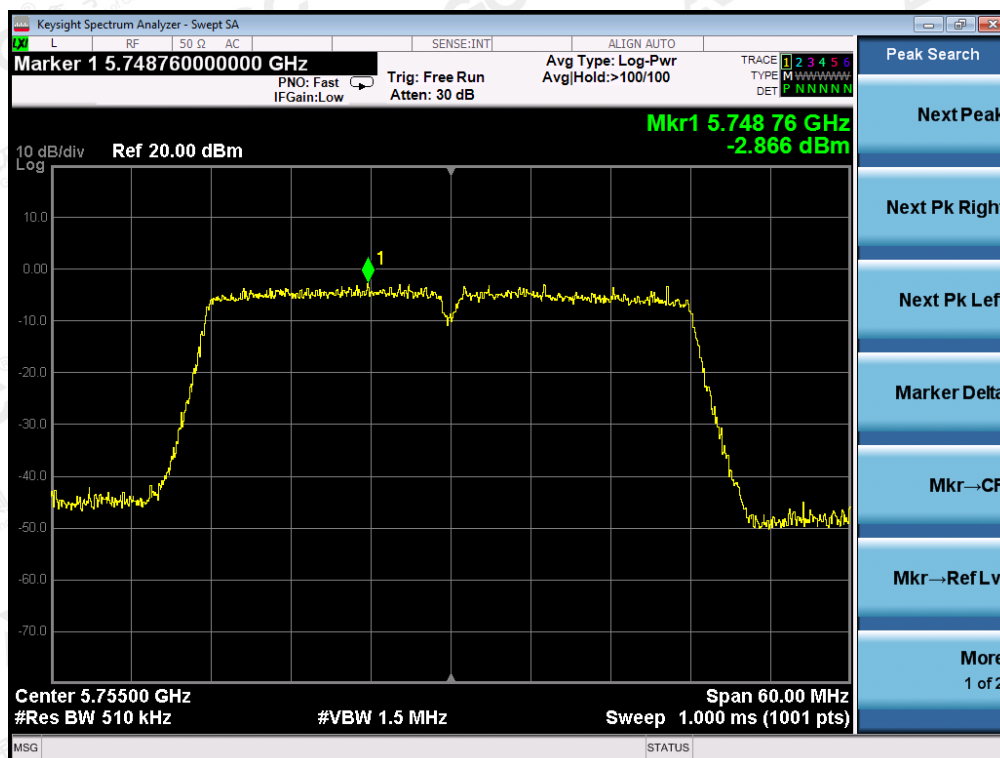
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5825MHz



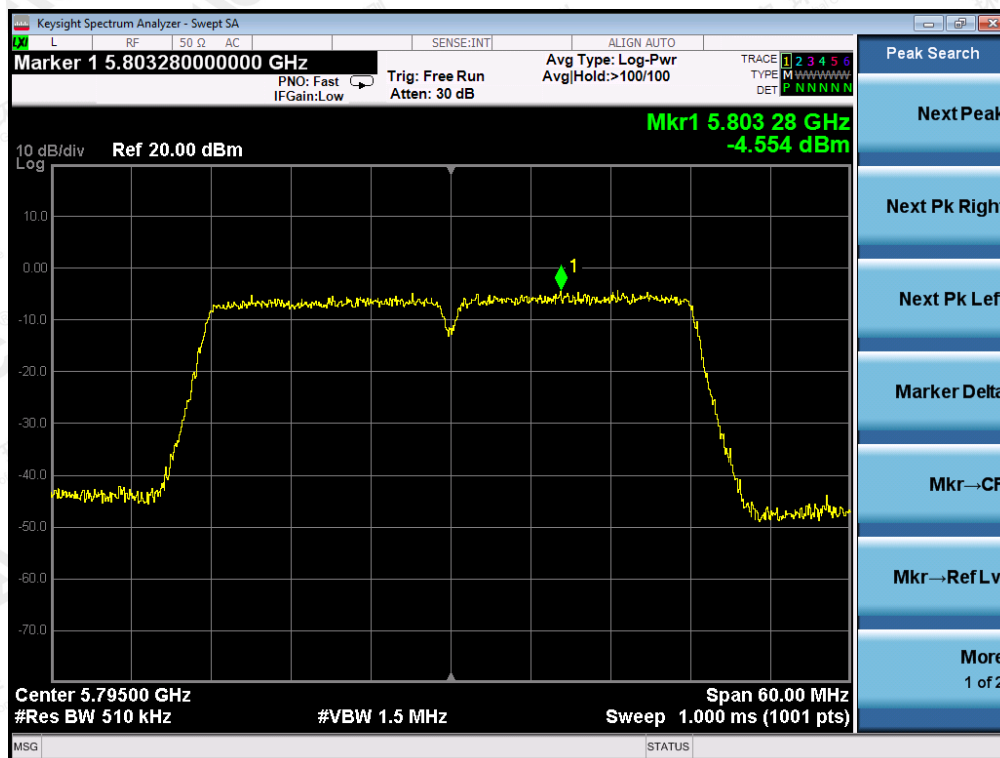
### 802.11n40 TEST RESULT-ant0:

### TEST PLOT FOR 5755MHz



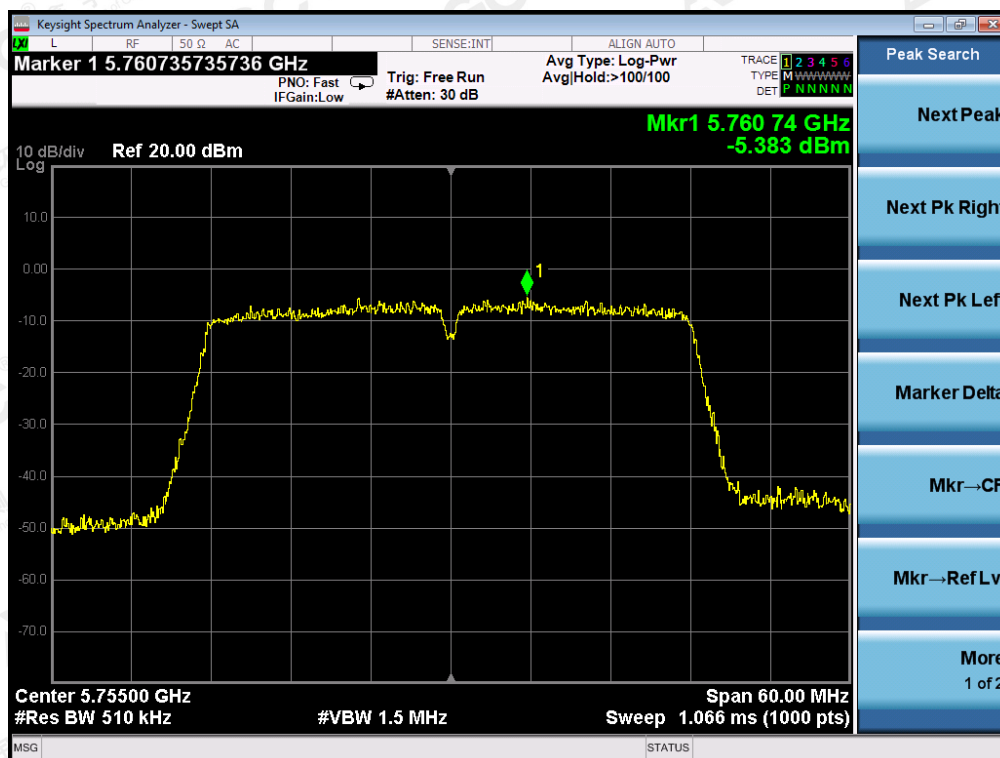
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5795MHz



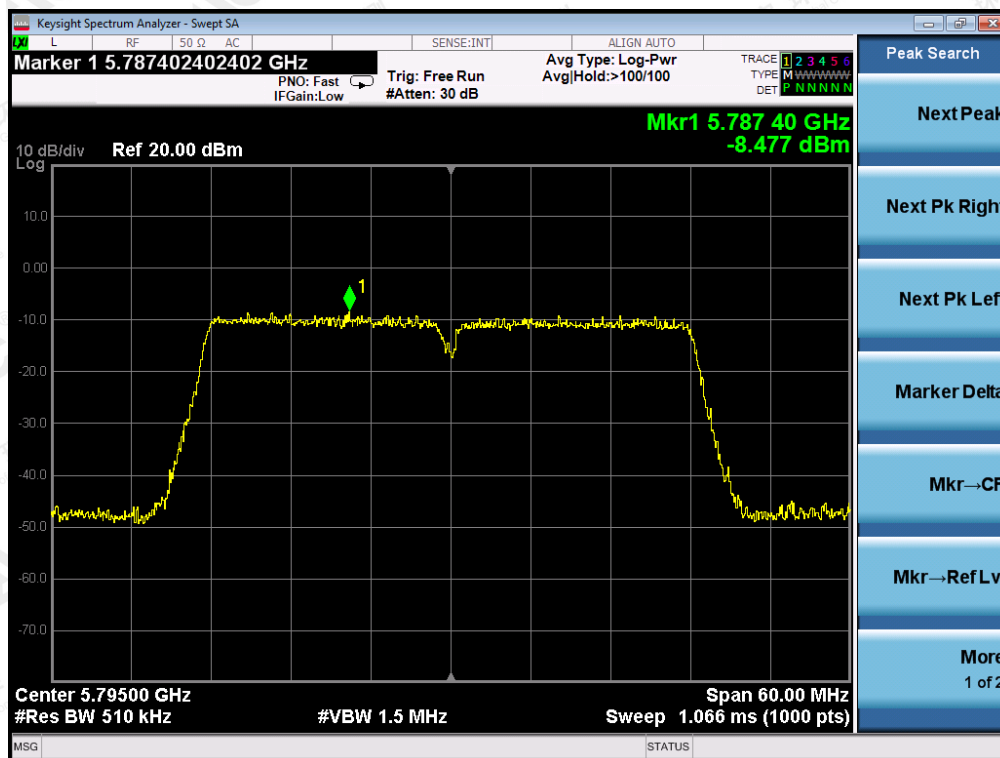
### 802.11n40 TEST RESULT-ant1:

### TEST PLOT FOR 5755MHz



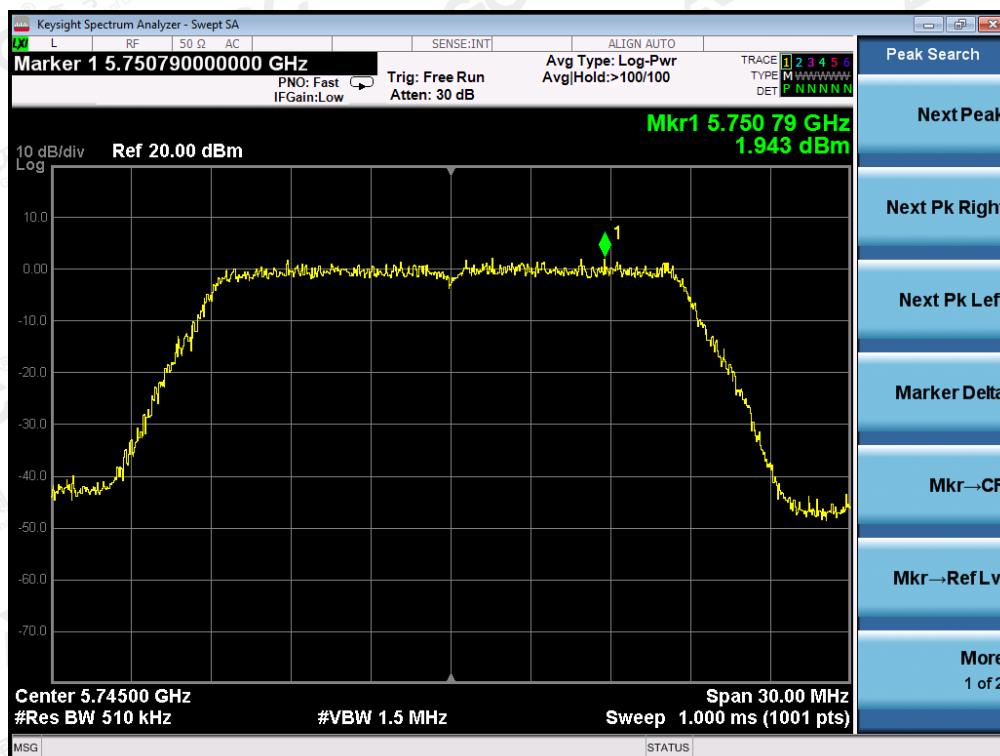
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5795MHz



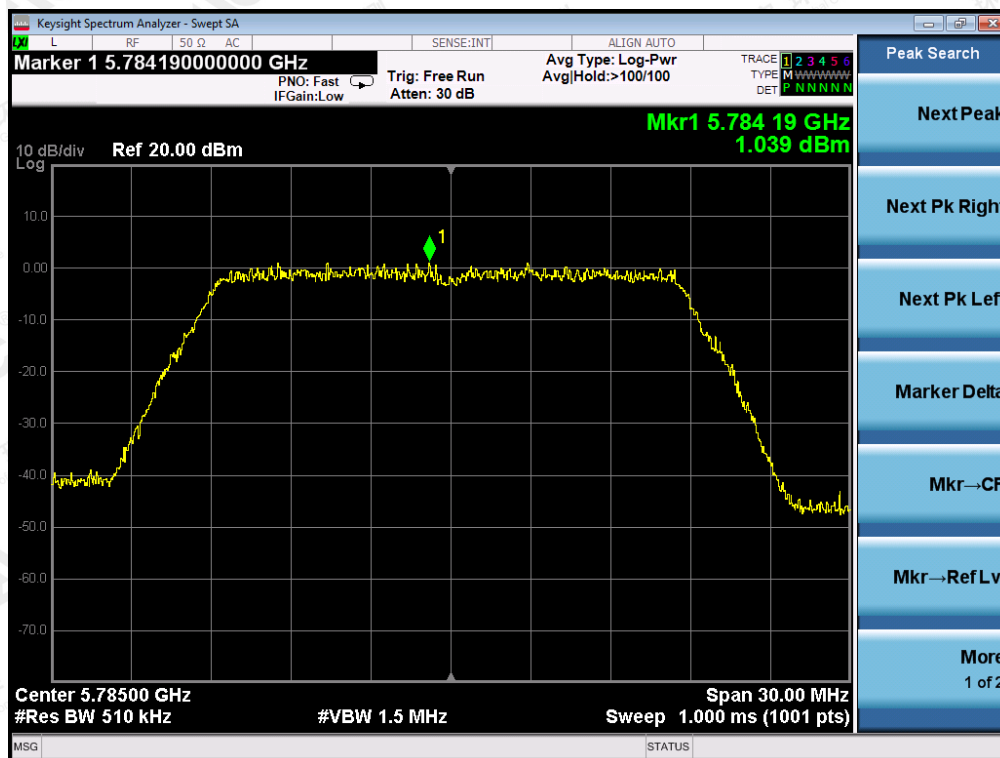
### 802.11ac20 TEST RESULT-ant0

### TEST PLOT FOR 5745MHz

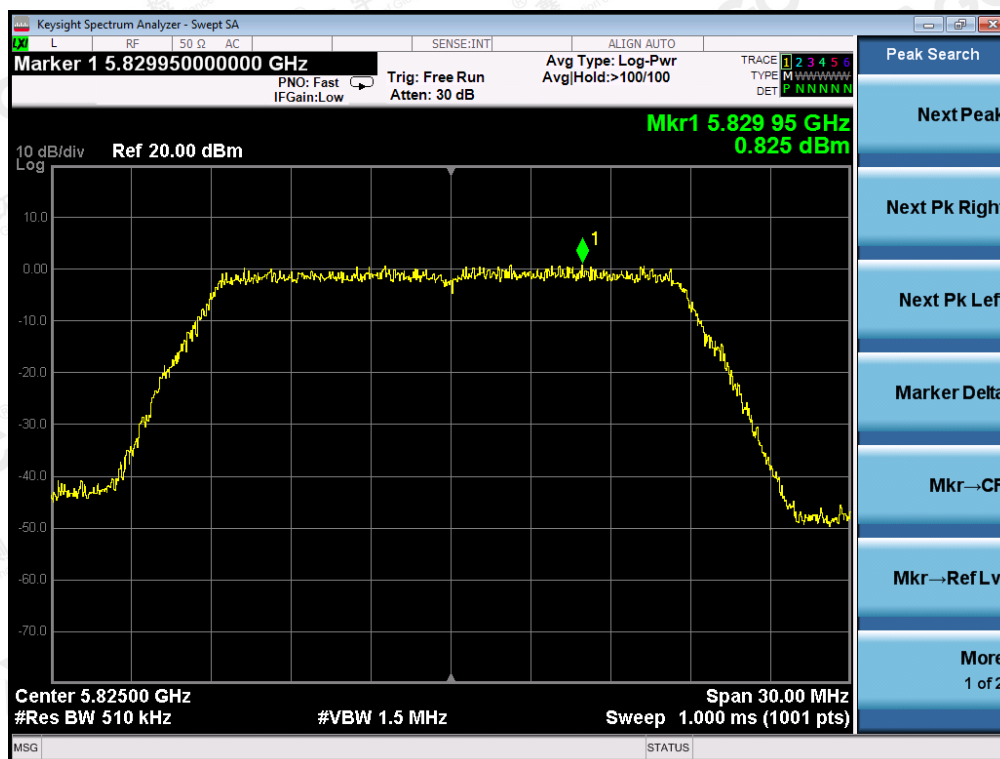


The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5785MHz



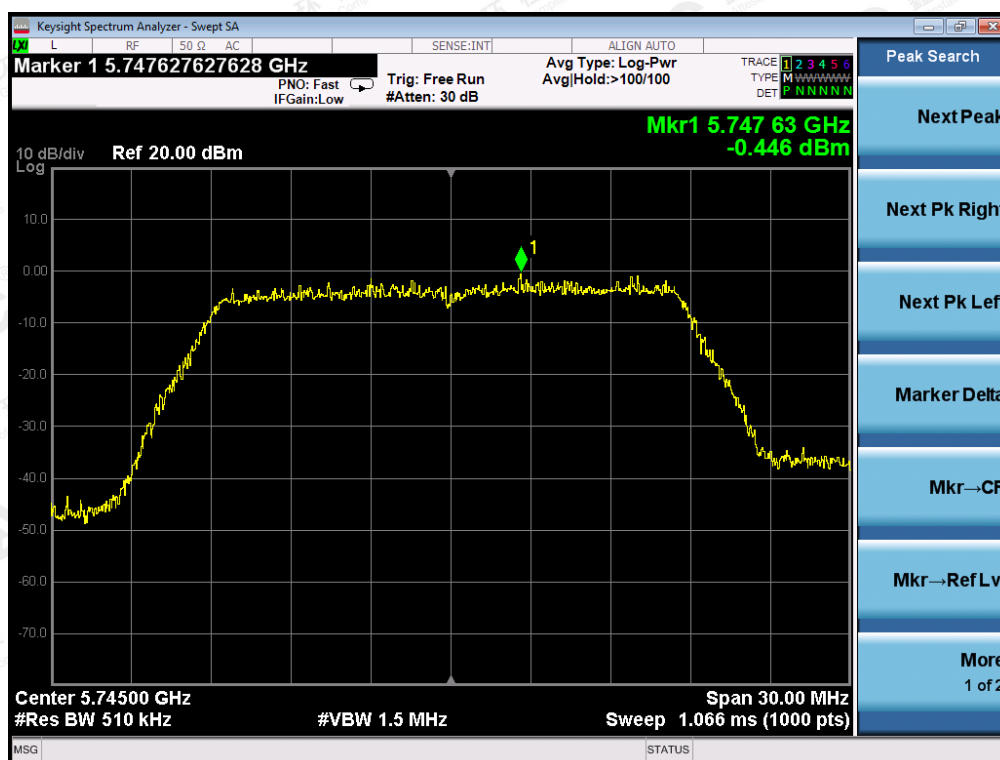
### TEST PLOT FOR 5825MHz



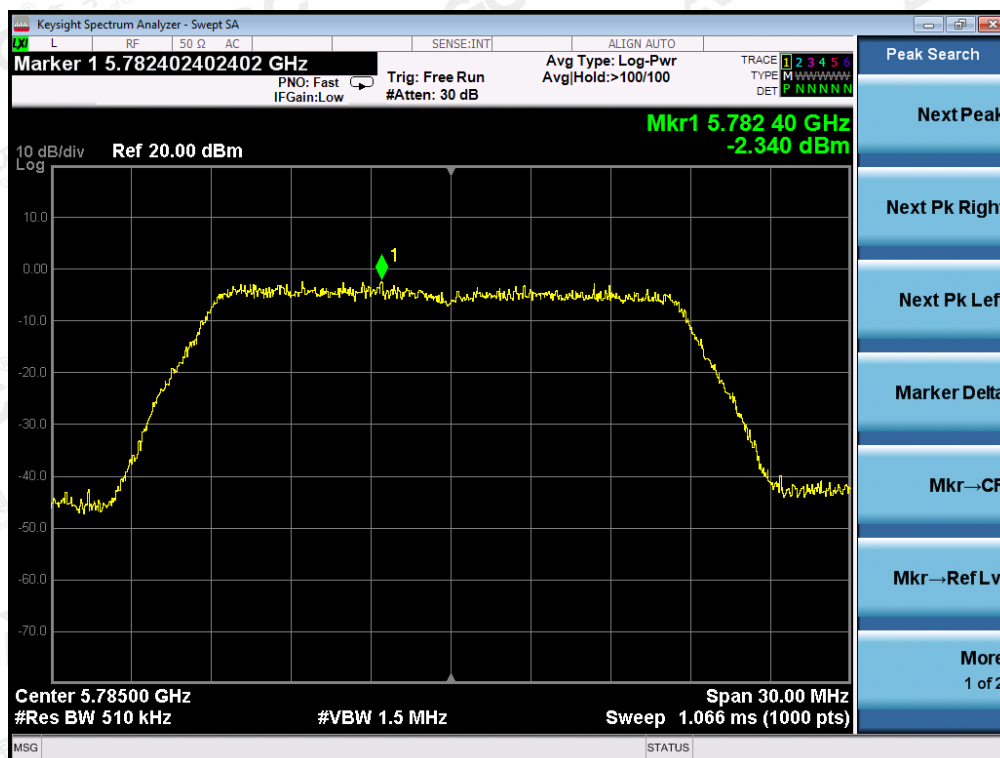
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### 802.11ac20 TEST RESULT-ant1:

#### TEST PLOT FOR 5745MHz

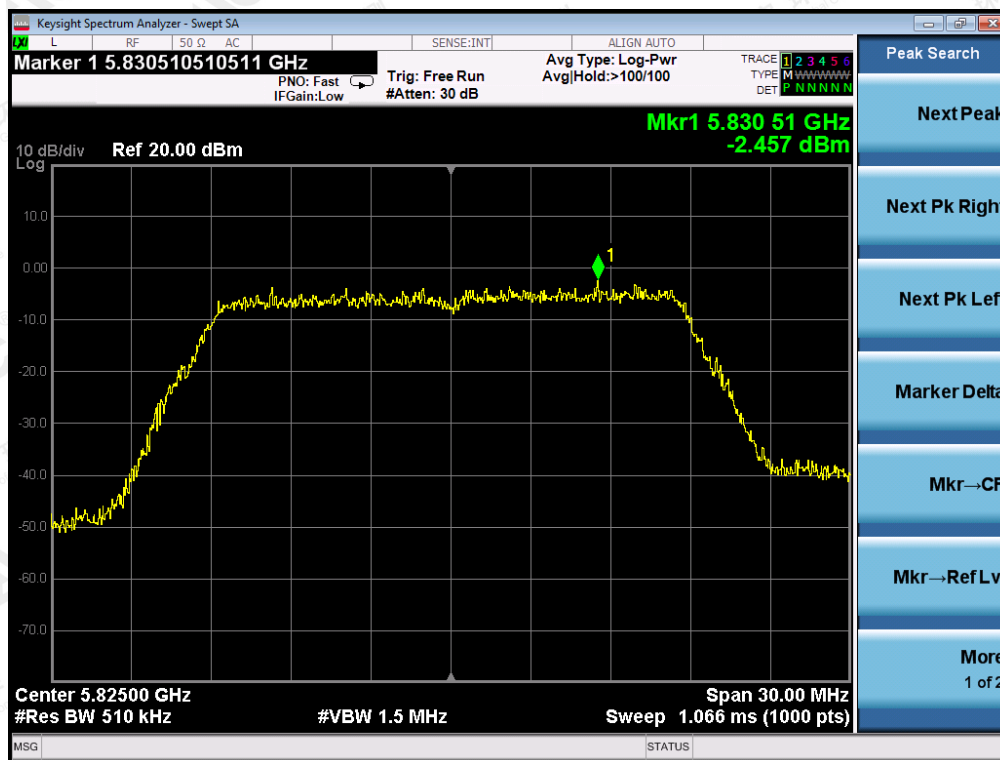


#### TEST PLOT FOR 5785MHz



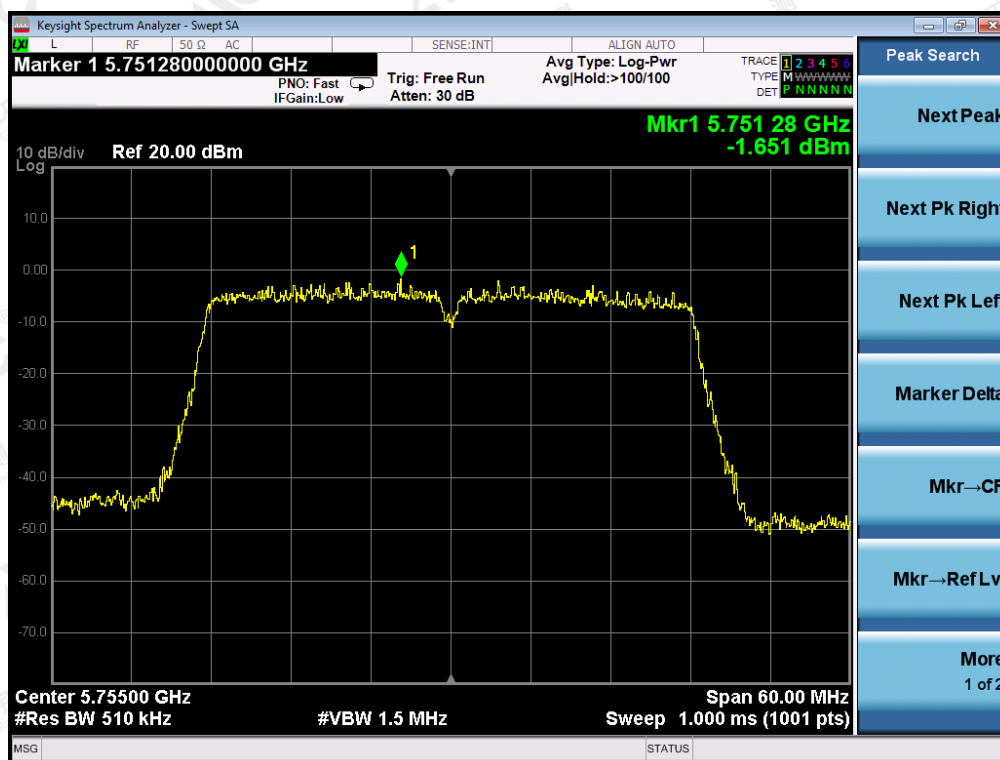
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5825MHz



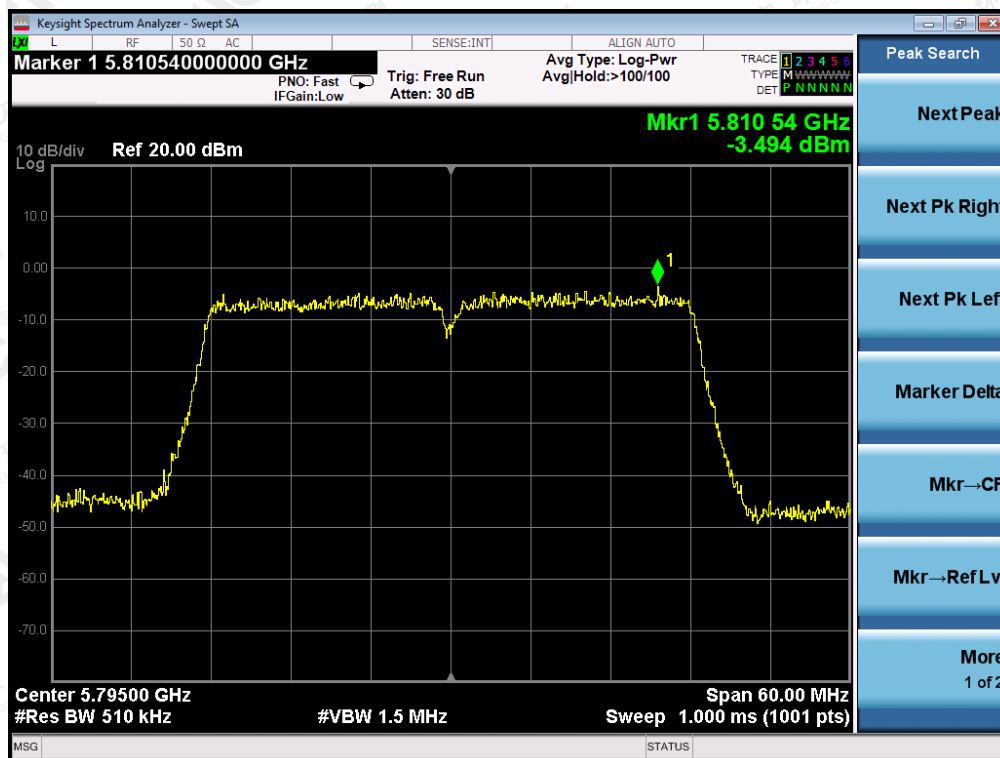
### 802.11ac40 TEST RESULT-ant0

### TEST PLOT FOR 5755MHz



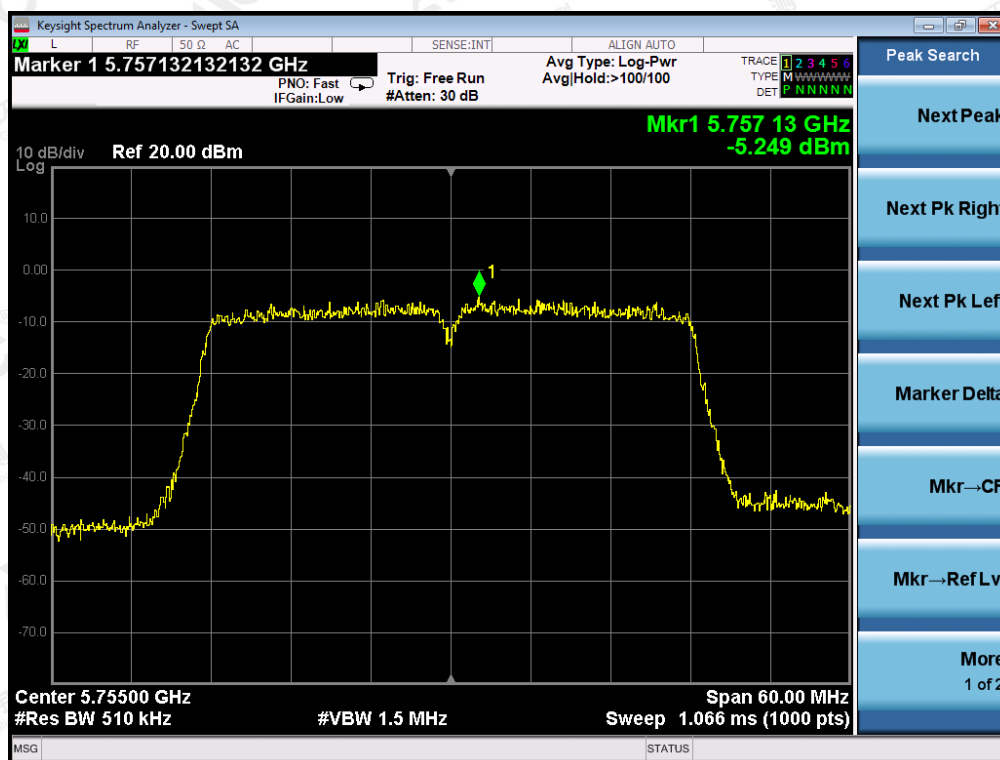
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5795MHz



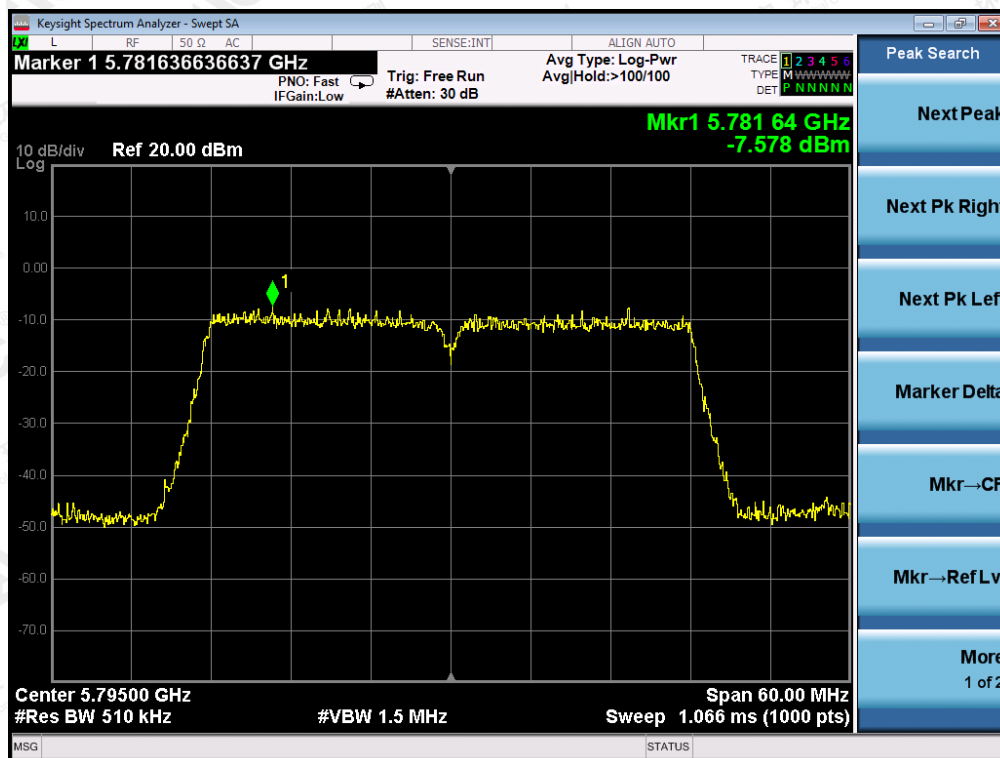
### 802.11ac40 TEST RESULT-ant1:

### TEST PLOT FOR 5755MHz



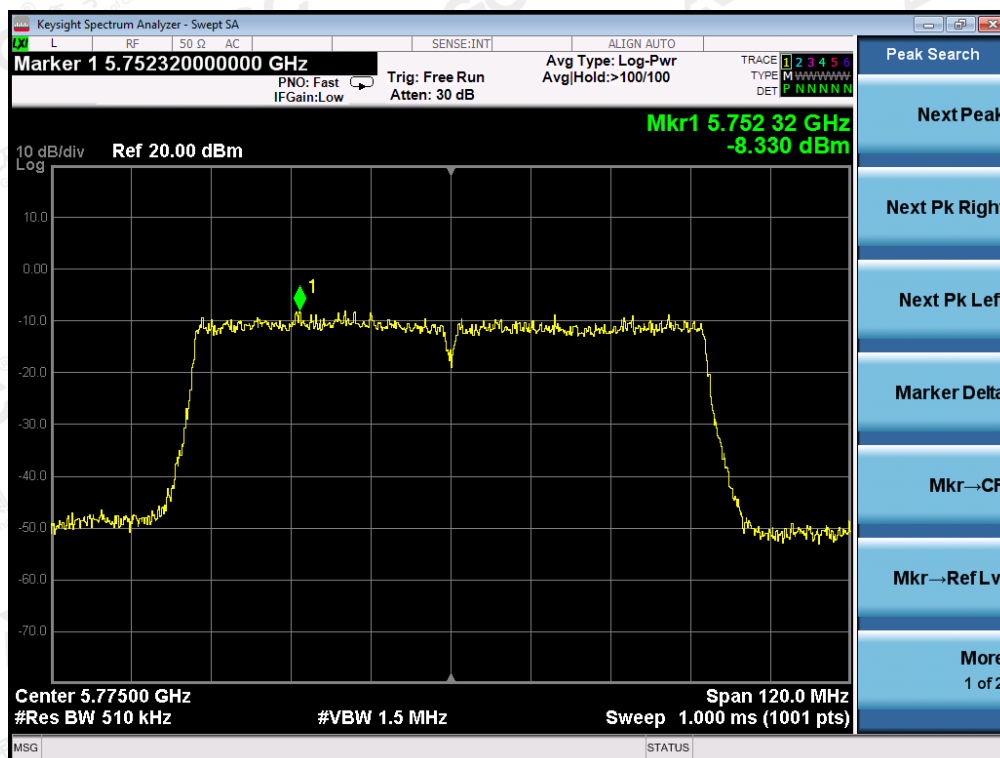
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

### TEST PLOT FOR 5795MHz



### 802.11ac80 TEST RESULT-ant0:

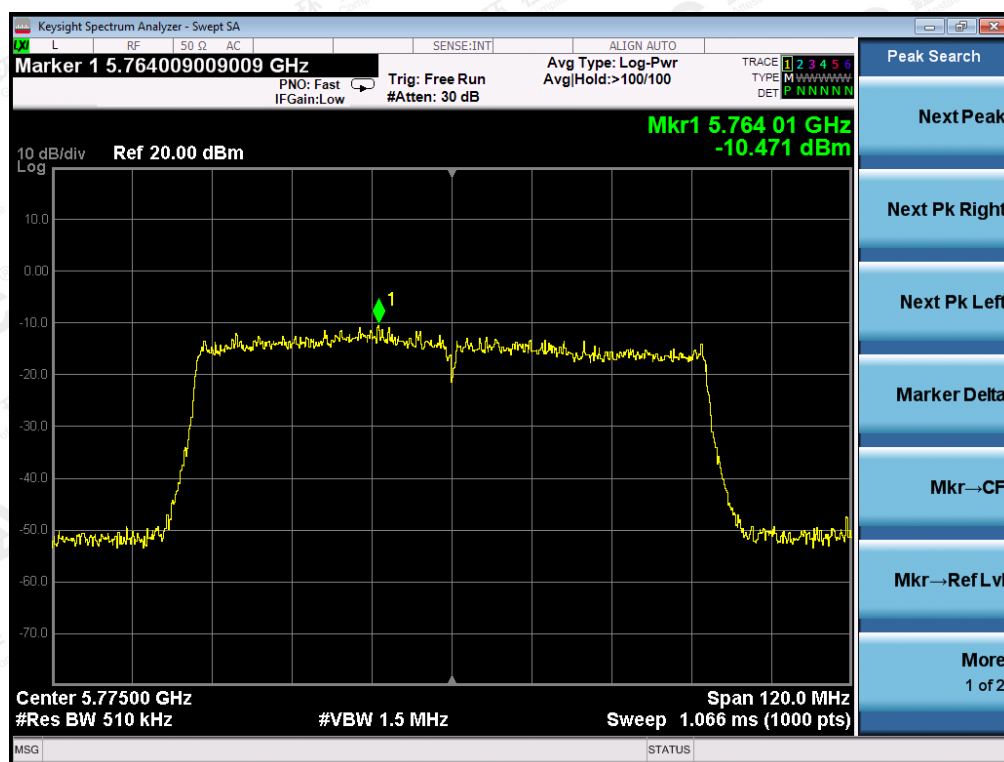
### TEST PLOT FOR 5775MHz



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# 802.11ac80 TEST RESULT-ant1:

## TEST PLOT FOR 5775MHz



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## 10. CONDUCTED SPURIOUS EMISSION AND BAND EDGE EMISSION

### 10.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

**Note:** The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

### 10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 8.2.

### 10.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

### 10.4. LIMITS AND MEASUREMENT RESULT

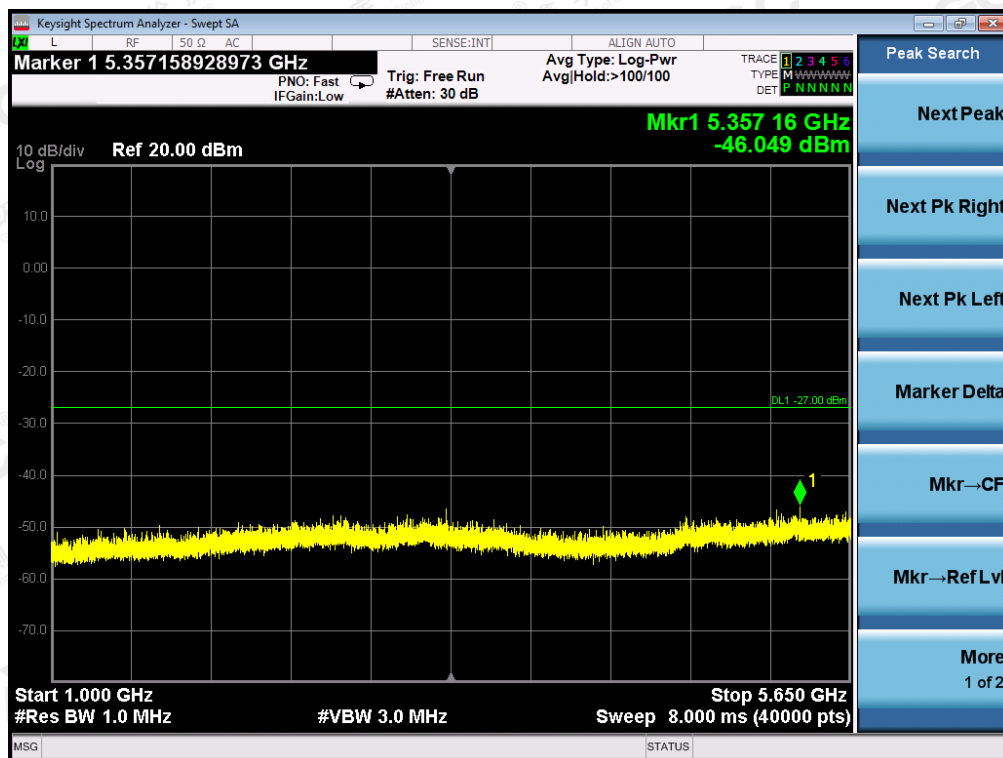
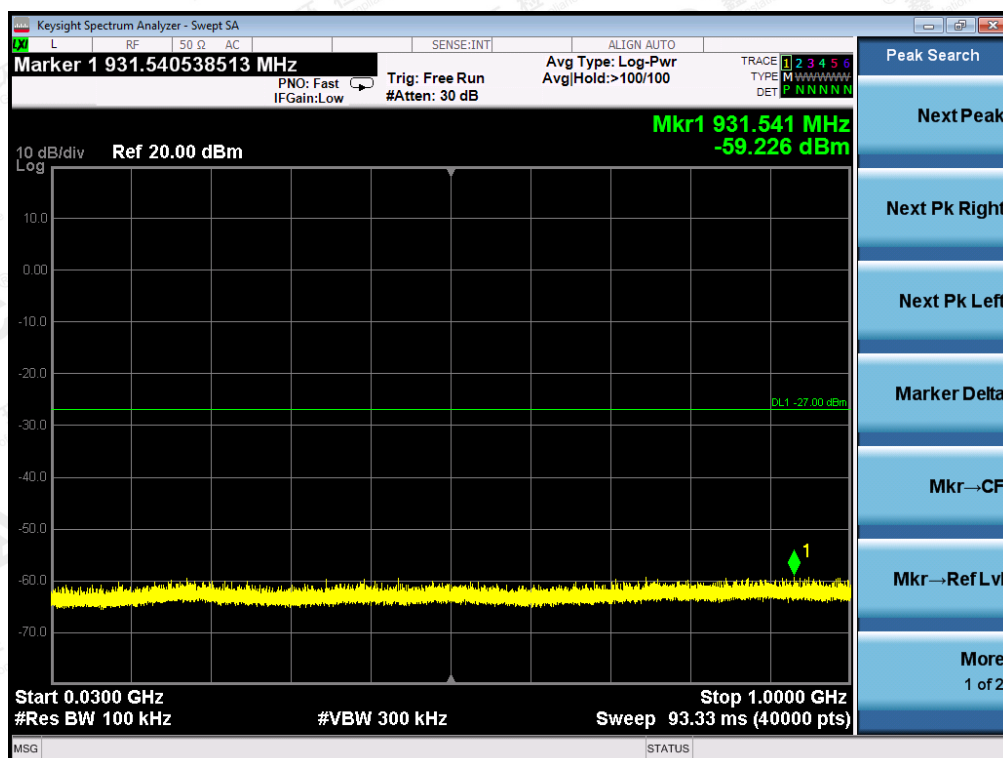
| LIMITS AND MEASUREMENT RESULT                                                                                                                                                                                                                                                                                                                                                                                                   |                    |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| Applicable Limits                                                                                                                                                                                                                                                                                                                                                                                                               | Measurement Result |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                 | Test channel       | Criteria |
| All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. | 5725MHz-5850MHz    | PASS     |

**Note:**

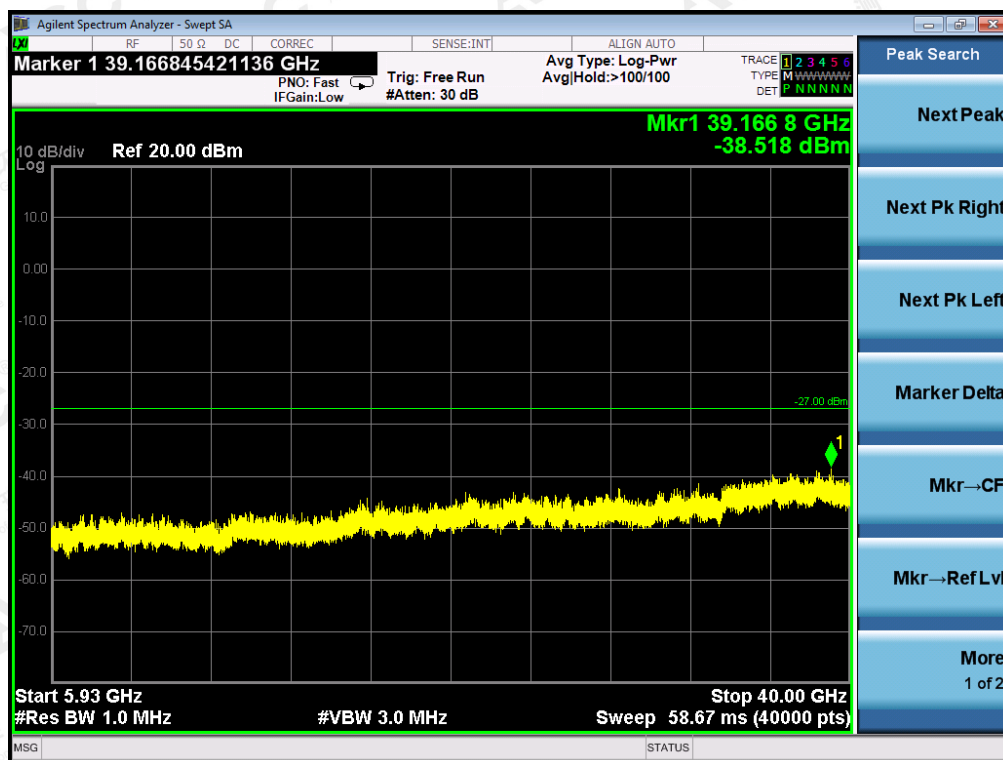
Two transmit chains had been tested, the chain 0 was the worst case and record in the test report. The spurious emission at chain 0 is more than 3dB below the limits, so the MIMO results for the spurious emissions are comply with the requirement.

# FOR 802.11A20 MODULATION,ant0

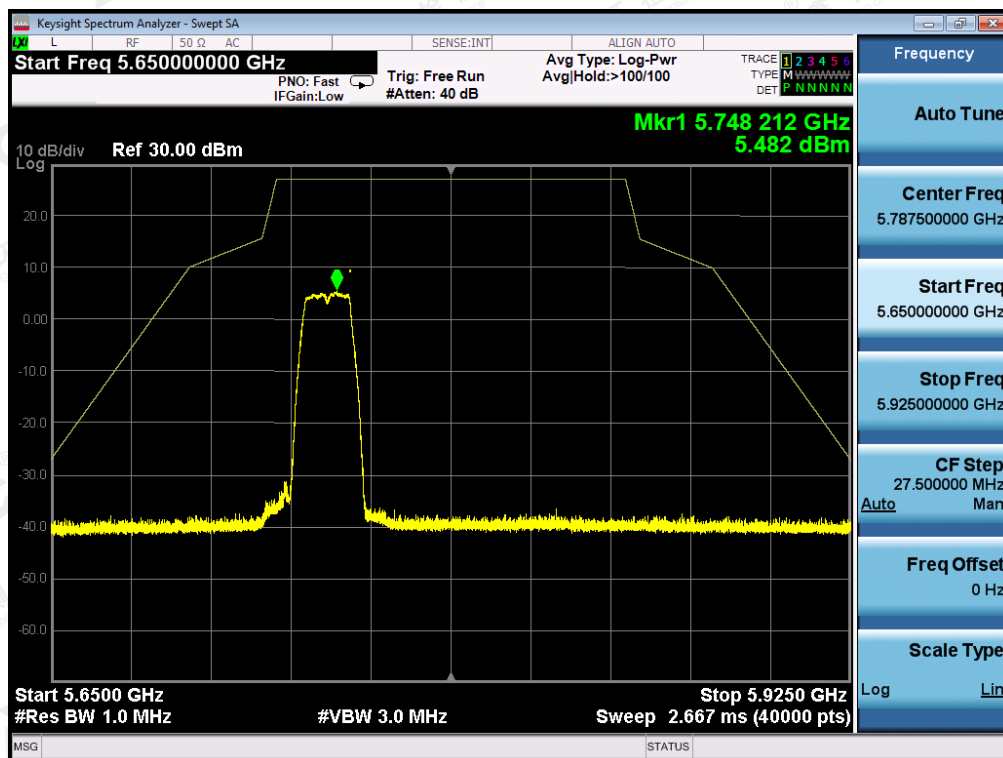
## TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5745MHz



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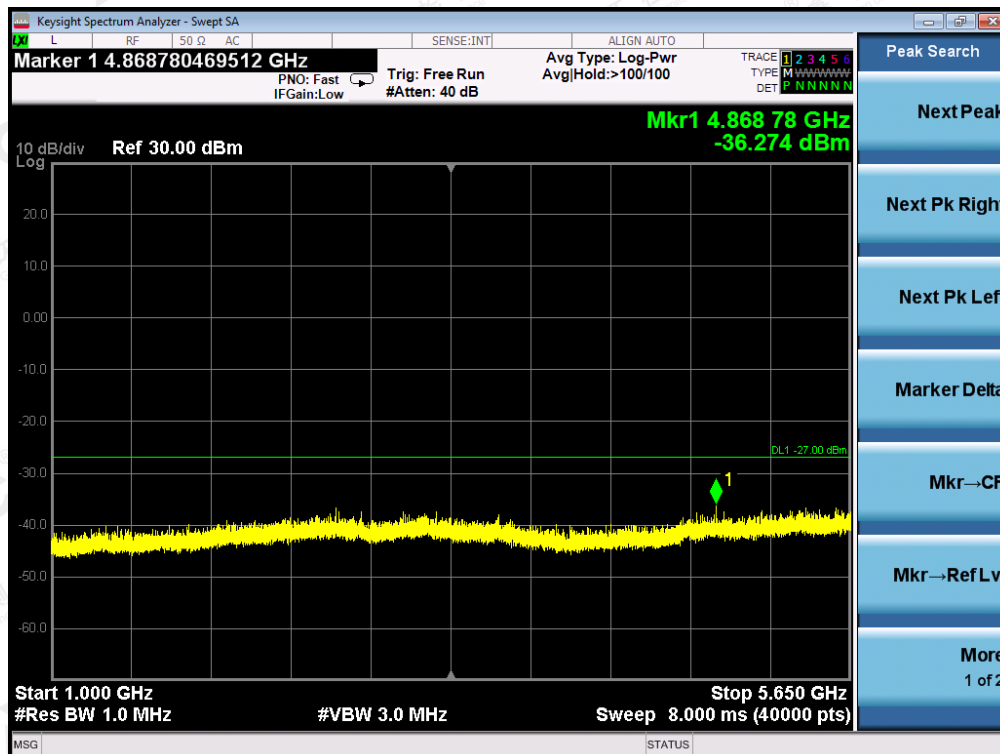
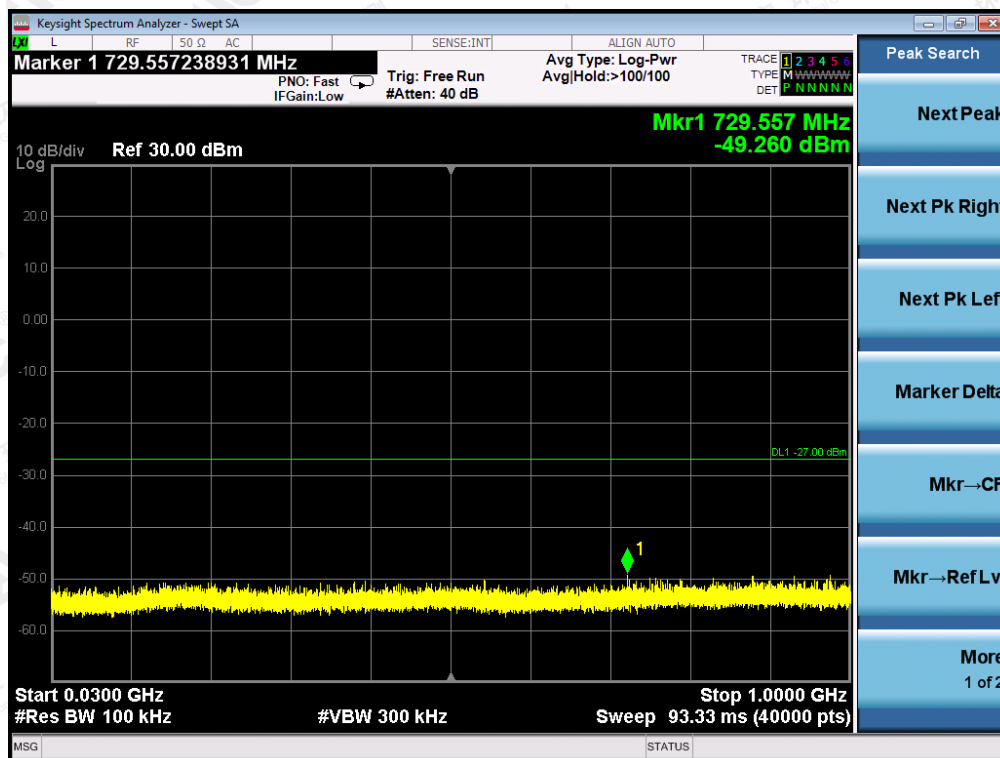


TEST PLOT OF BAND EDGE EMISSION

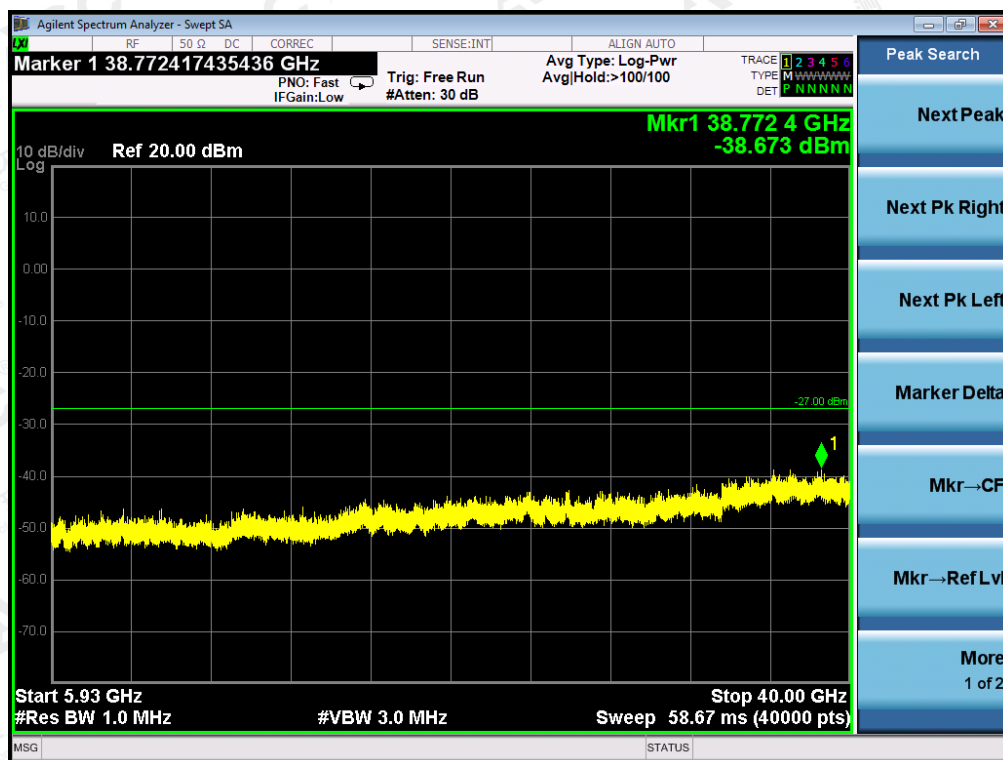


The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

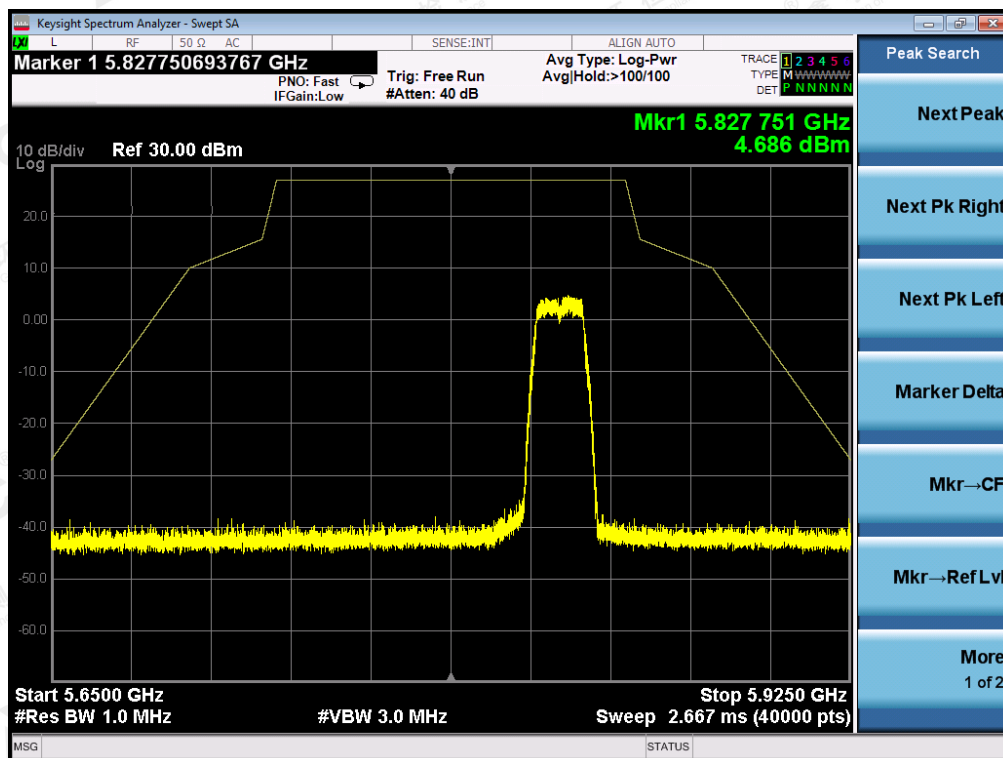
# TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5825MHz



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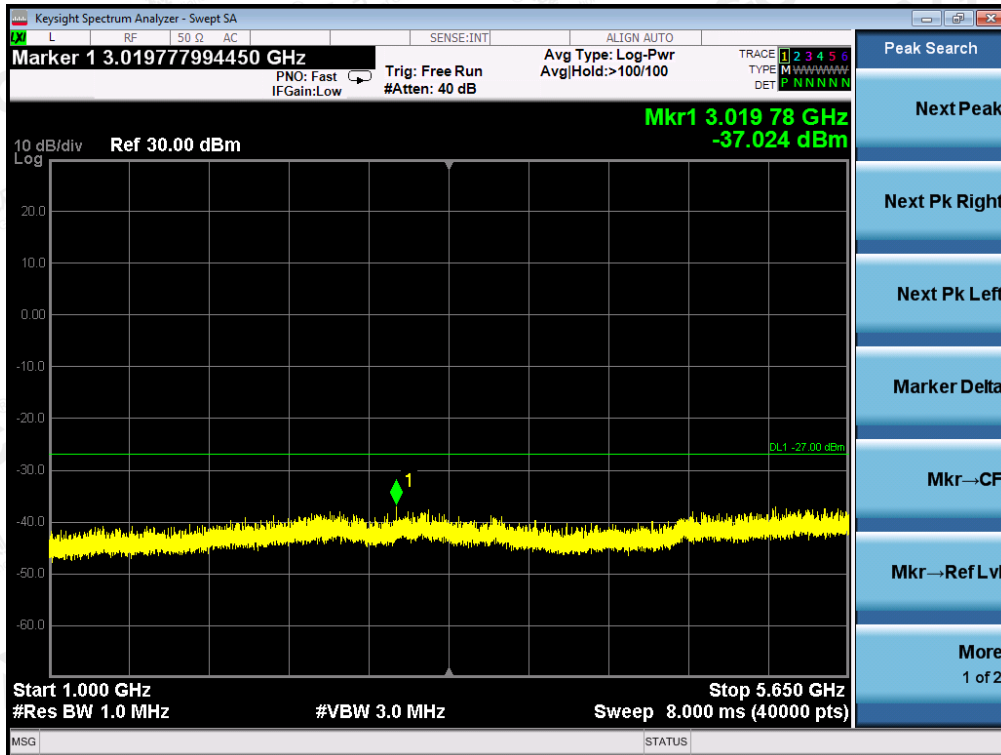
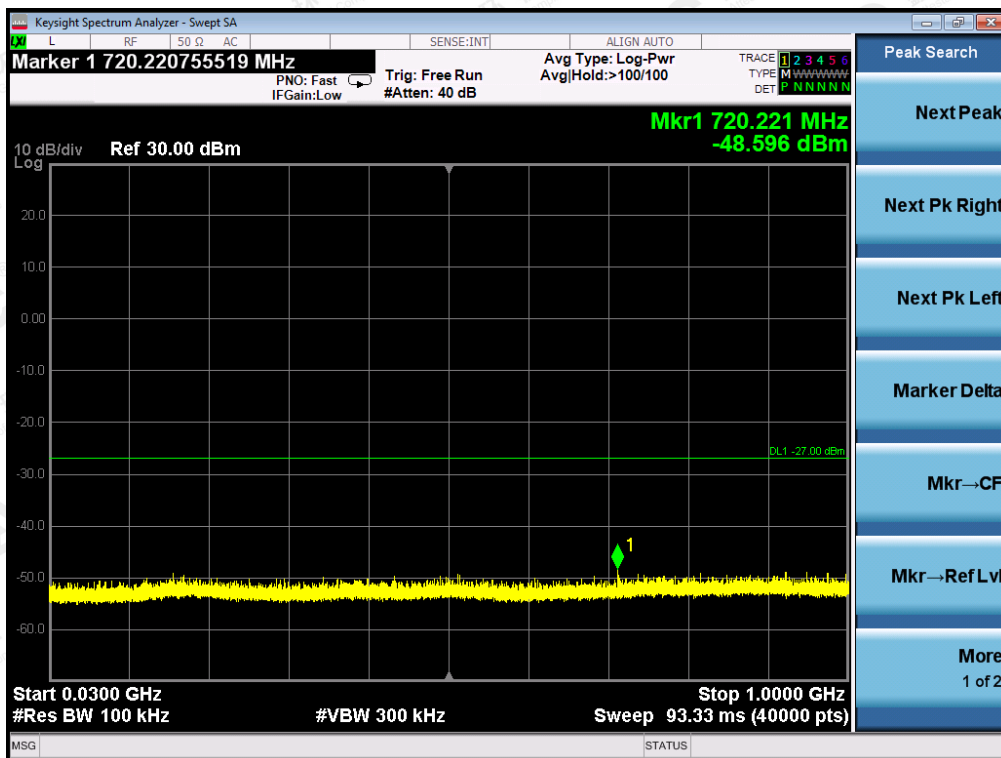
TEST PLOT OF BAND EDGE EMISSION



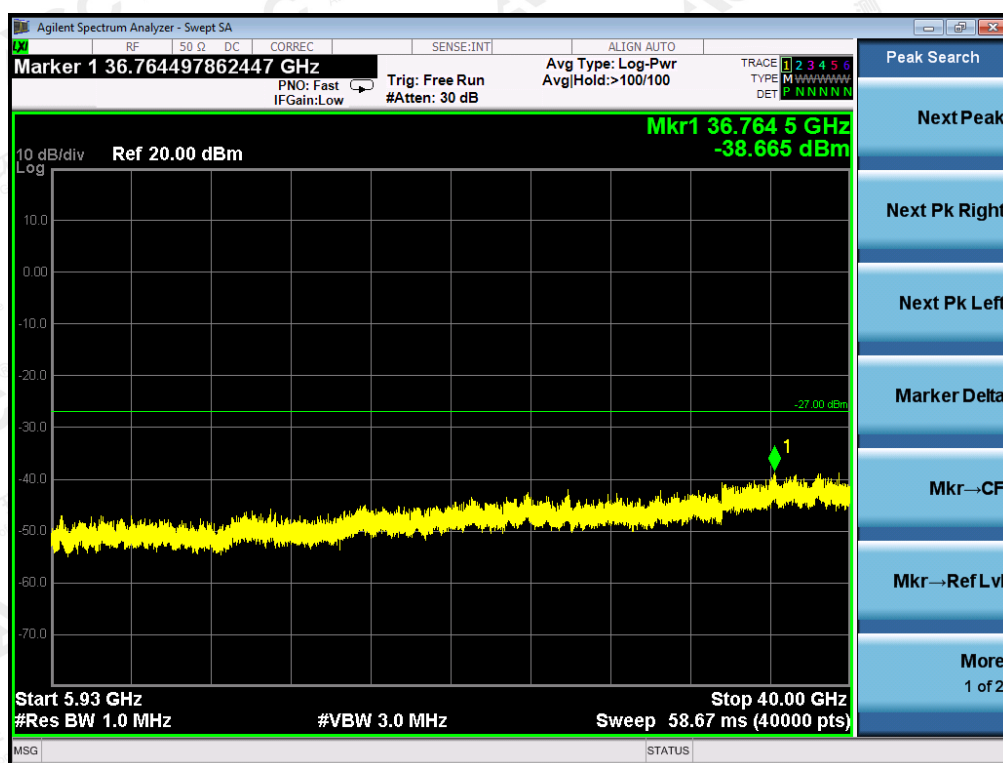
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.agc-cert.com>.

**FOR 802.11N40 MODULATION, ant0**

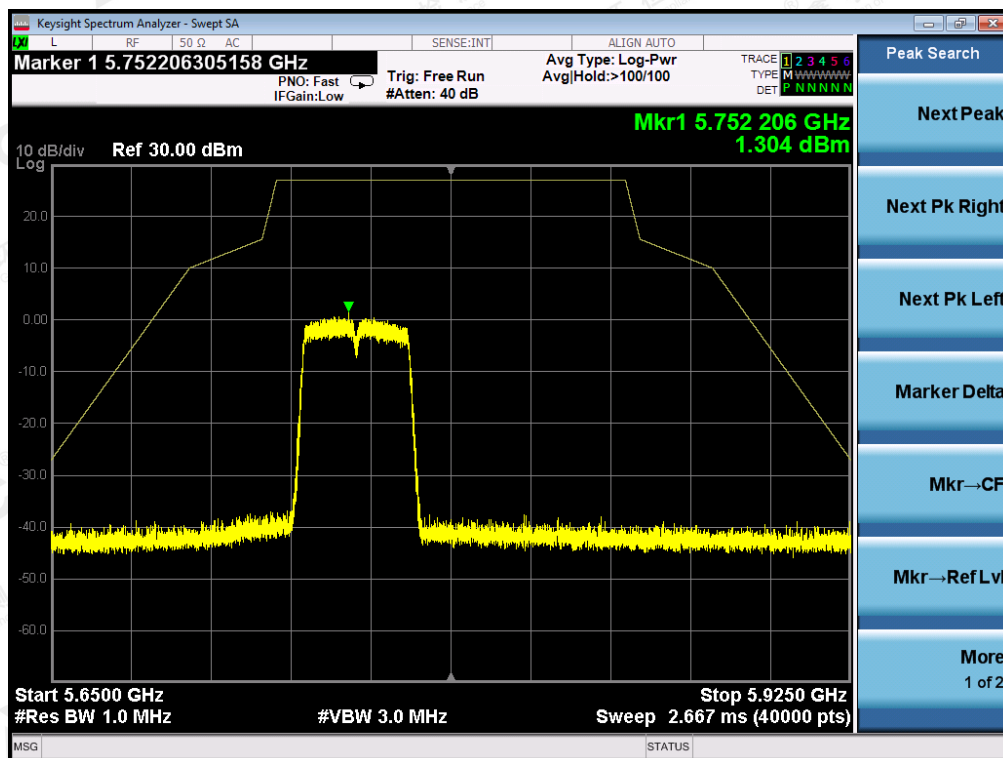
**TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5755MHZ**



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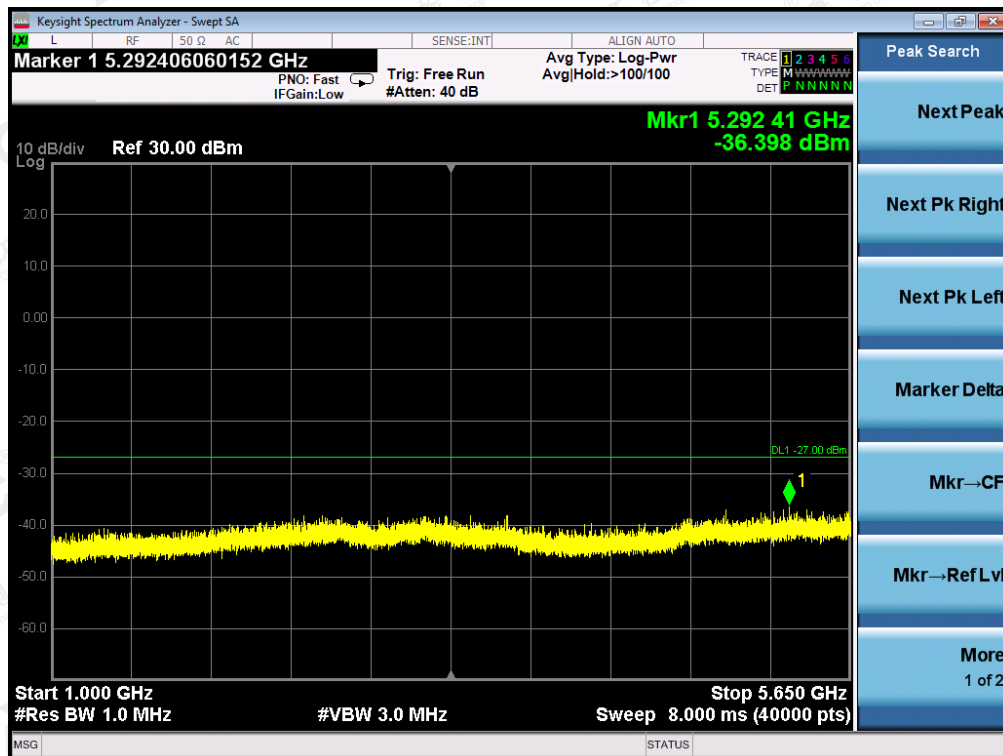
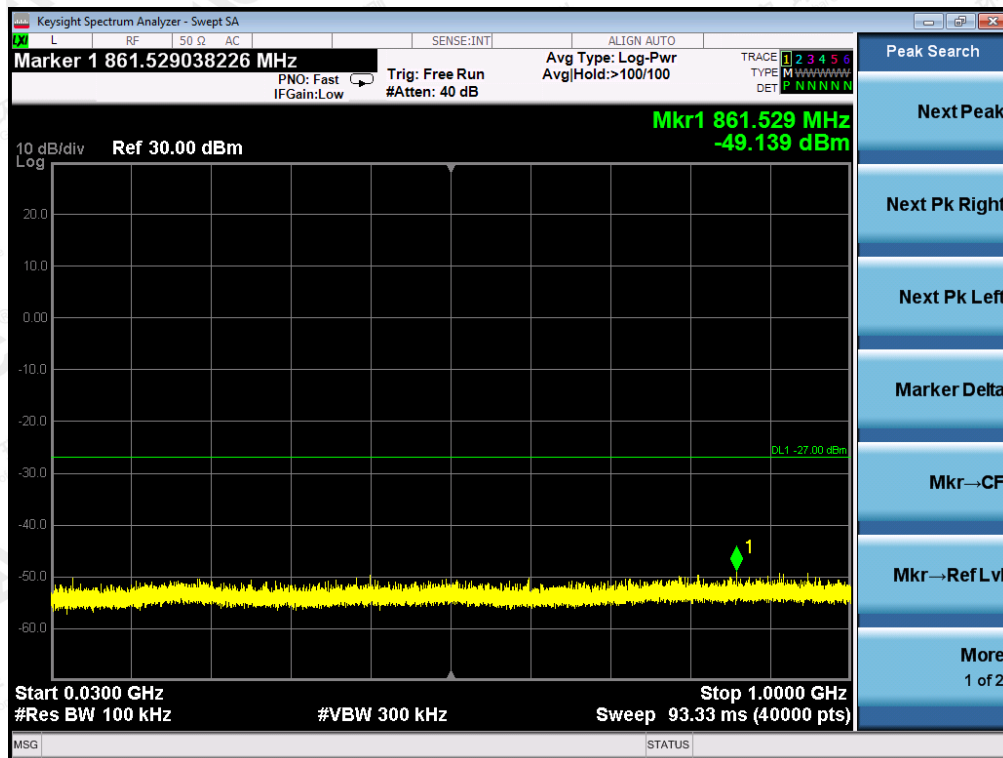


TEST PLOT OF BAND EDGE EMISSION

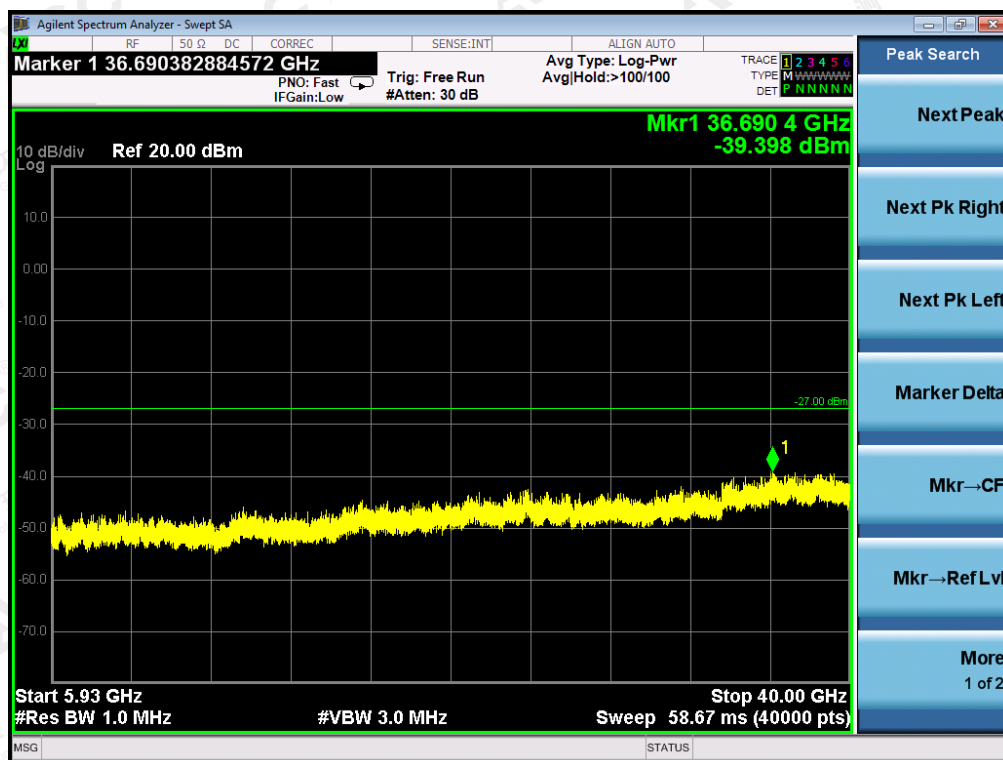


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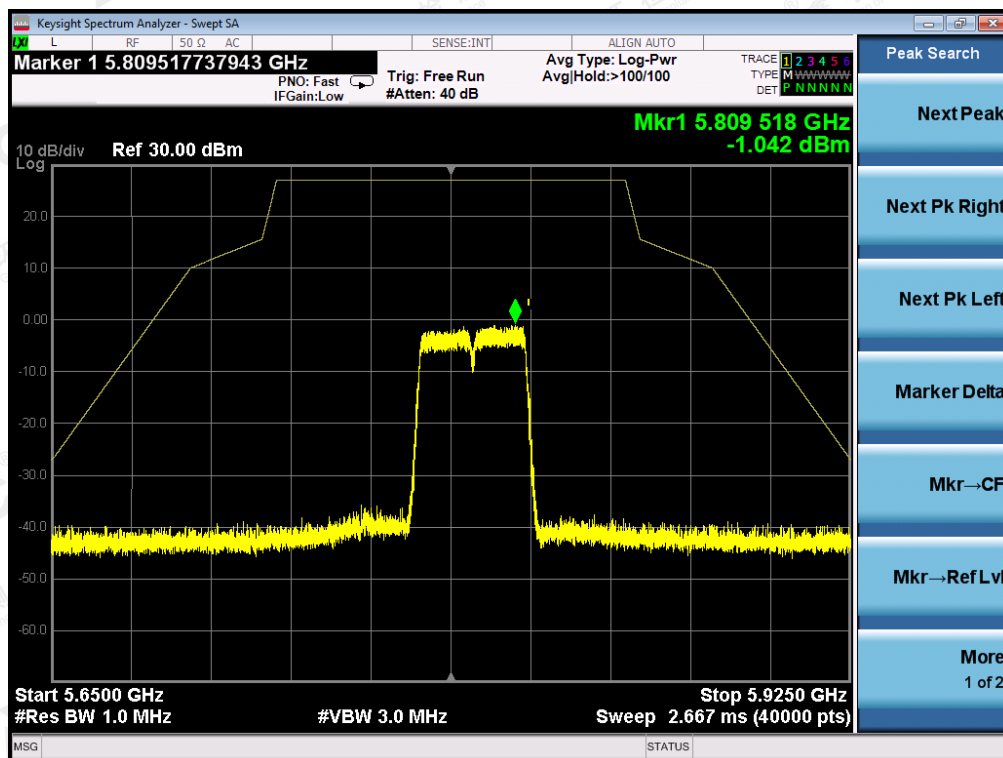
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5795MHz



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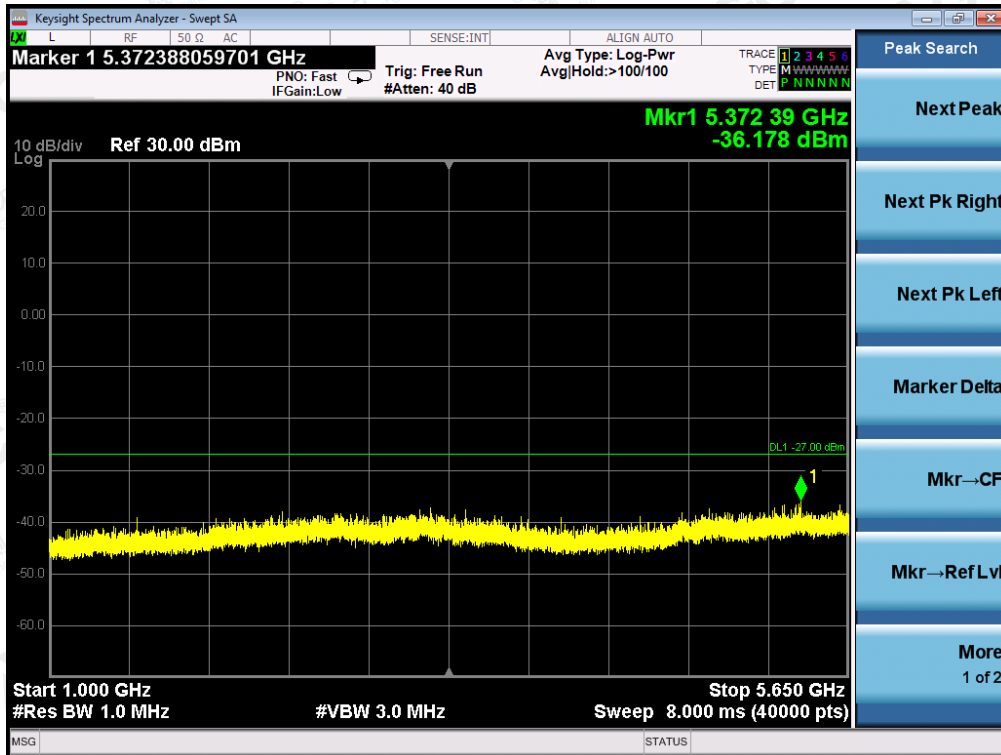
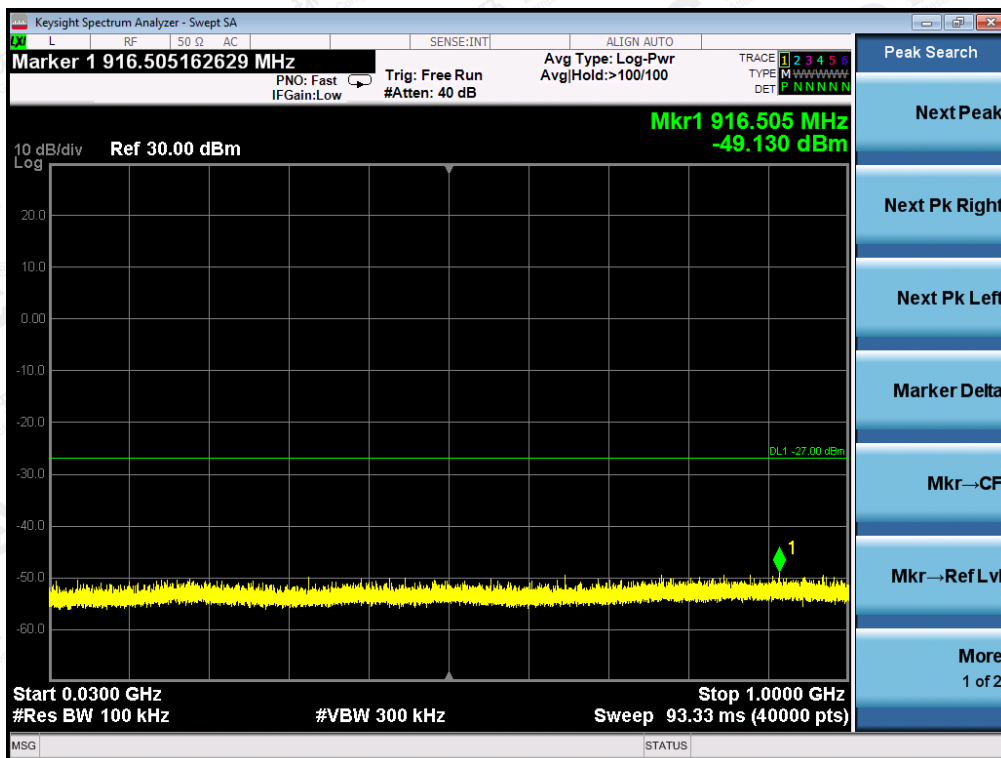
TEST PLOT OF BAND EDGE EMISSION



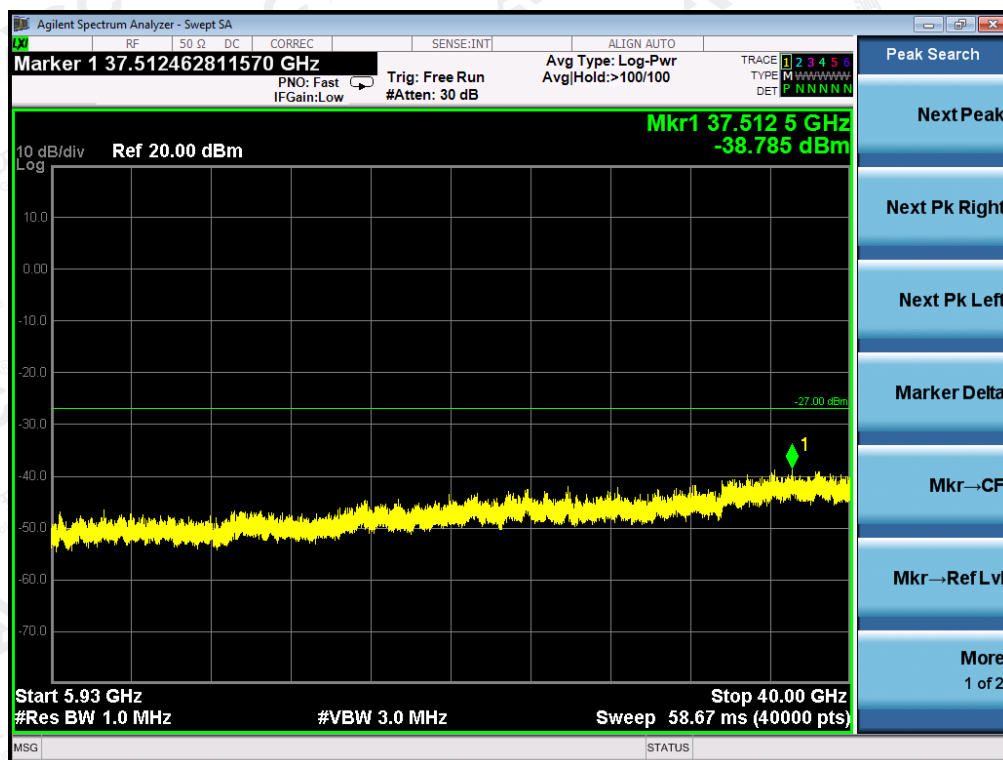
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**FOR 802.11AC80 MODULATION, ant0**

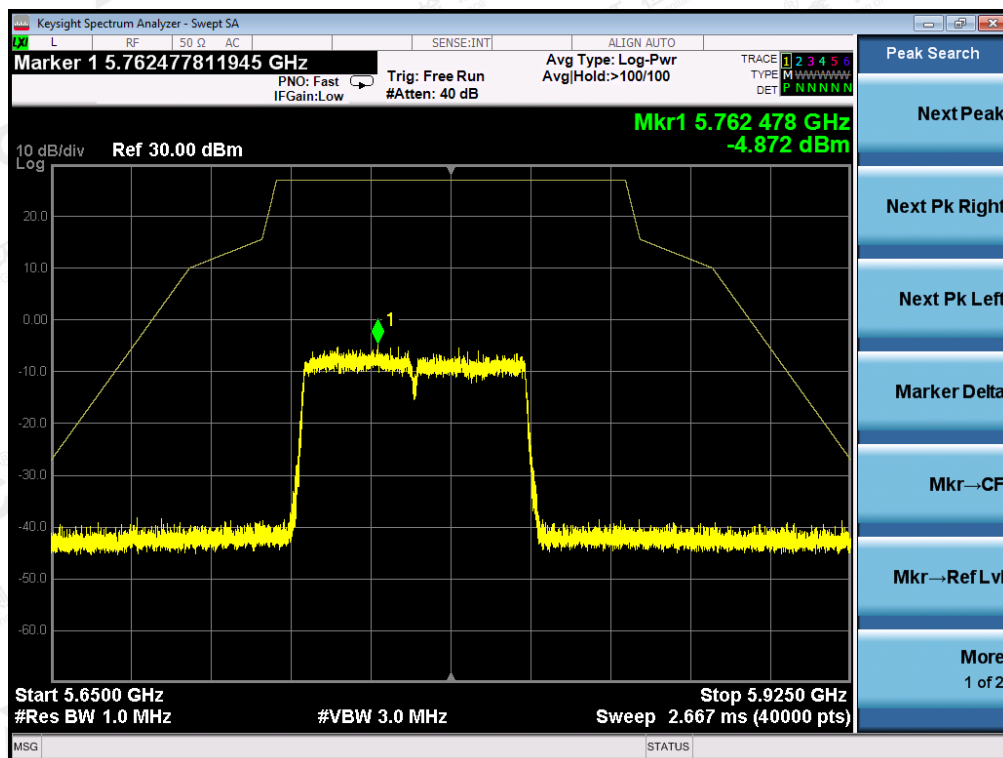
**TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5775MHz**



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TEST PLOT OF BAND EDGE EMISSION



Note: All the 20MHz, 40MHz and 80MHz bandwidth modulation had been tested, the 802.11a20/n40/ac80 ant0 was the worst case and record in his test report.

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## 11. RADIATED EMISSION

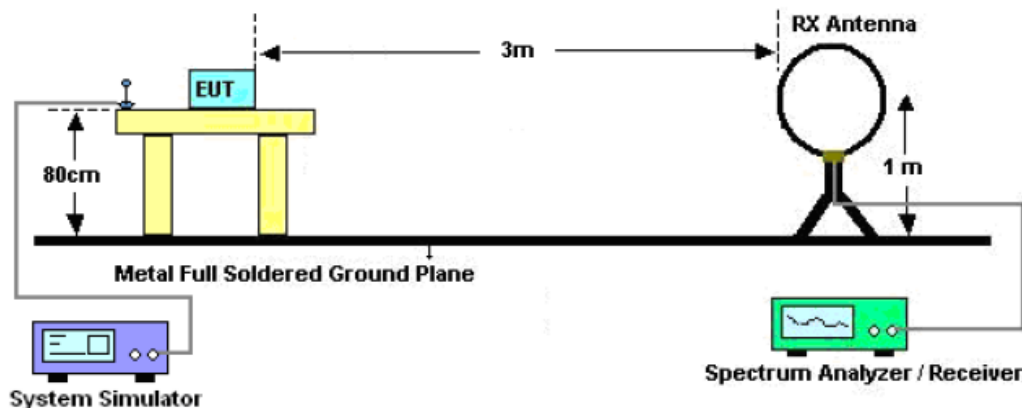
### 11.1. MEASUREMENT PROCEDURE

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 emissions, 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 3M 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.

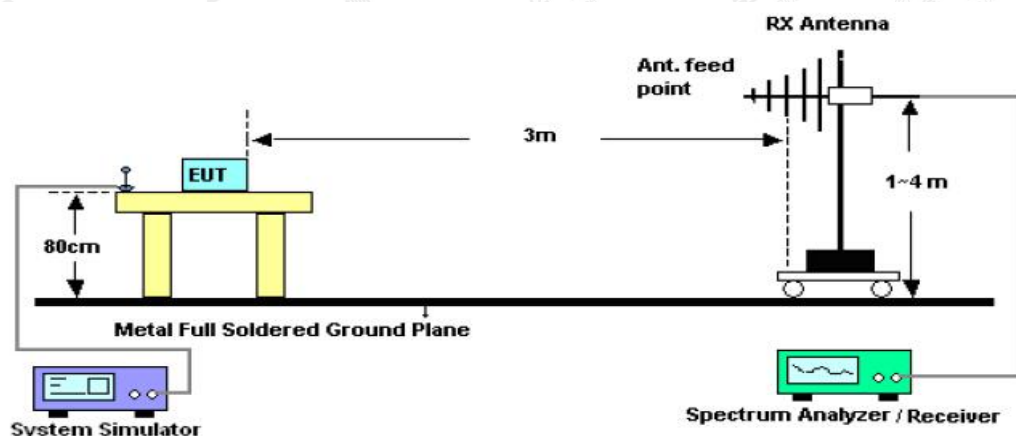
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## 11.2. TEST SETUP

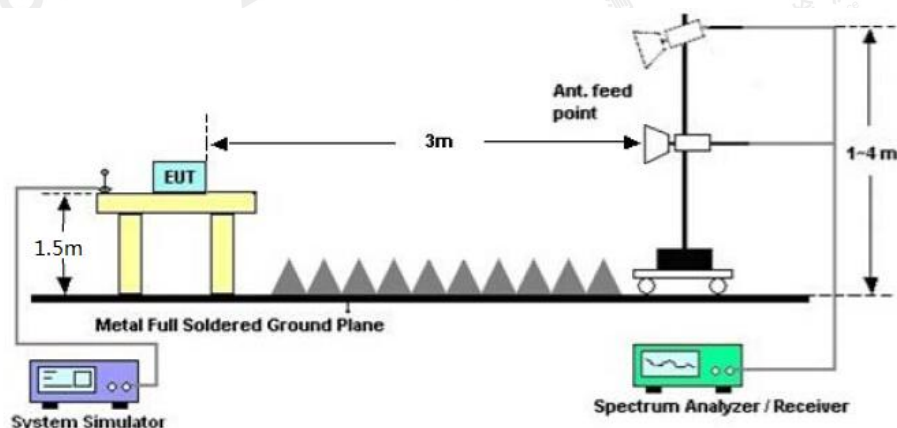
### Radiated Emission Test-Setup Frequency Below 30MHz



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



### RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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### 11.3. LIMITS AND MEASUREMENT RESULT

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

| Frequencies<br>(MHz) | Field Strength<br>(micorvolts/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

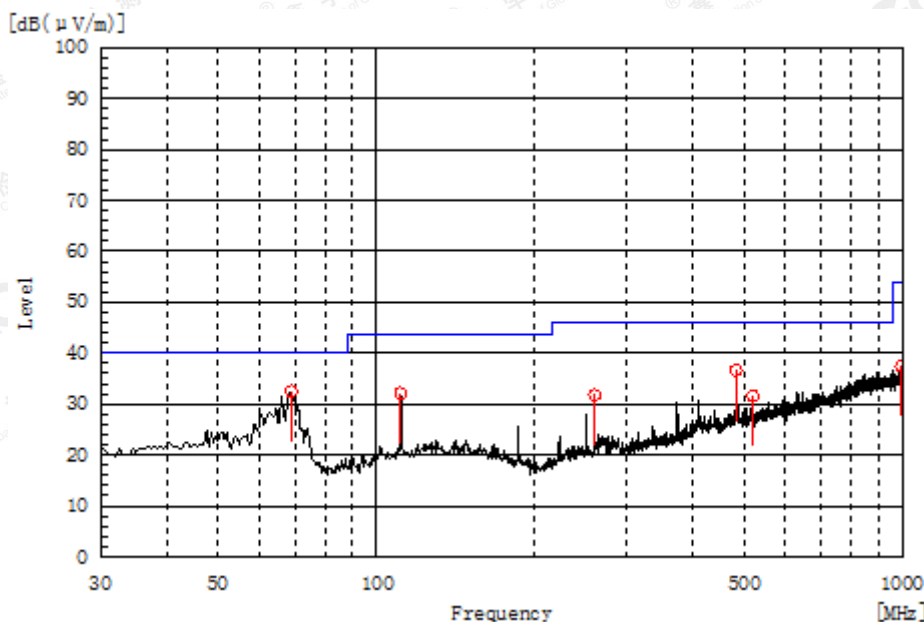
#### RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

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# RADIATED EMISSION BELOW 1GHZ

|             |                        |                   |                |
|-------------|------------------------|-------------------|----------------|
| EUT         | MDVR                   | Model Name        | NVR-2400       |
| Temperature | 25°C                   | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                 | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11n20 5745MHz,MIMO | Antenna           | Horizontal     |

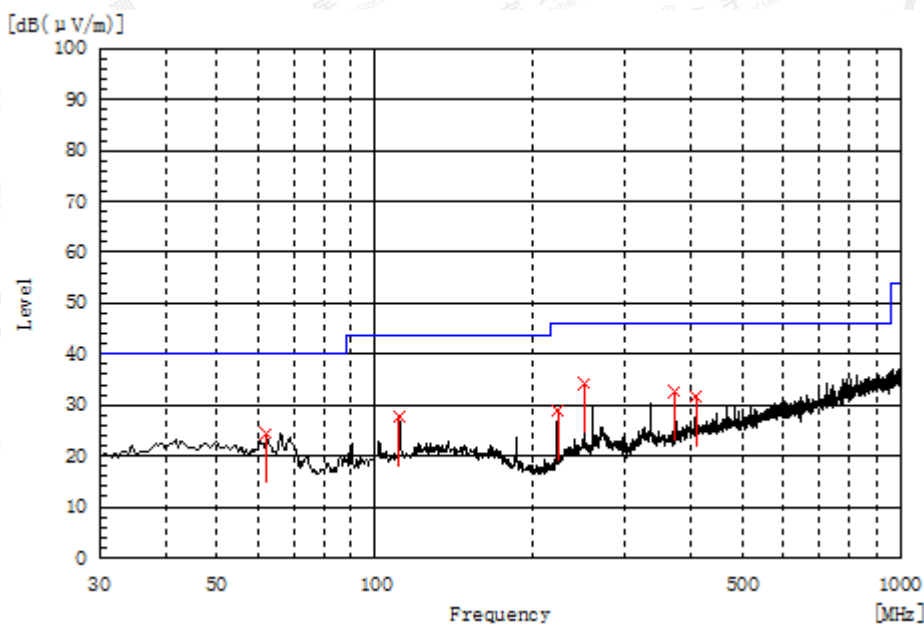


| Frequency MHz | Polarization | Reading dB(μV) | Factor dB (1/m) | Level dB(μV/m) PK | Limit dB(μV/m) QP | Margin dB | Pass/Fail | Height cm | Angle deg |
|---------------|--------------|----------------|-----------------|-------------------|-------------------|-----------|-----------|-----------|-----------|
| 68.800        | H            | 17.7           | 14.8            | 32.5              | 40.0              | 7.5       | Pass      | 100.0     | 289.2     |
| 110.995       | H            | 17.5           | 14.6            | 32.1              | 43.5              | 11.4      | Pass      | 200.0     | 139.7     |
| 259.890       | H            | 15.9           | 15.9            | 31.8              | 46.0              | 14.2      | Pass      | 150.0     | 288.2     |
| 482.505       | H            | 14.0           | 22.6            | 36.6              | 46.0              | 9.4       | Pass      | 200.0     | 104.7     |
| 519.850       | H            | 8.4            | 23.2            | 31.6              | 46.0              | 14.4      | Pass      | 200.0     | 33.3      |
| 997.090       | H            | 6.4            | 31.1            | 37.5              | 54.0              | 16.5      | Pass      | 150.0     | 71.9      |

**RESULT: PASS**

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|             |                        |                   |                |
|-------------|------------------------|-------------------|----------------|
| EUT         | MDVR                   | Model Name        | NVR-2400       |
| Temperature | 25°C                   | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                 | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11n20 5745MHz,MIMO | Antenna           | Vertical       |



| Frequency MHz | Polarization | Reading dB(uV) | Factor dB (1/m) | Level dB(uV/m) PK | Limit dB(uV/m) QP | Margin dB | Pass/Fail | Height cm | Angle deg |
|---------------|--------------|----------------|-----------------|-------------------|-------------------|-----------|-----------|-----------|-----------|
| 62.010        | V            | 8.5            | 16.0            | 24.5              | 40.0              | 15.5      | Pass      | 100.0     | 252.6     |
| 110.995       | V            | 13.2           | 14.6            | 27.8              | 43.5              | 15.7      | Pass      | 150.0     | 178.3     |
| 222.545       | V            | 14.1           | 15.0            | 29.1              | 46.0              | 16.9      | Pass      | 200.0     | 237.5     |
| 250.190       | V            | 18.3           | 16.1            | 34.4              | 46.0              | 11.6      | Pass      | 150.0     | 358.3     |
| 371.440       | V            | 13.1           | 19.7            | 32.8              | 46.0              | 13.2      | Pass      | 150.0     | 71.9      |
| 408.300       | V            | 10.6           | 21.1            | 31.7              | 46.0              | 14.3      | Pass      | 200.0     | 93.4      |

## RESULT: PASS

**Note:** All test channels had been tested. The 802.11n20 at 5745MHz is the worst case and recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

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

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### RADIATED EMISSION ABOVE 1GHZ

|                    |                        |                          |                     |
|--------------------|------------------------|--------------------------|---------------------|
| <b>EUT</b>         | MDVR                   | <b>Model Name</b>        | NVR-2400            |
| <b>Temperature</b> | 25°C                   | <b>Relative Humidity</b> | 55.4%               |
| <b>Pressure</b>    | 960hPa                 | <b>Test Voltage</b>      | Normal Voltage      |
| <b>Test Mode</b>   | 802.11n20 5745MHz,MIMO | <b>Antenna</b>           | Horizontal/Vertical |

### RADIATED EMISSION ABOVE 1GHZ–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 |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 11490.120          | 42.72                   | 9.42           | 52.14                      | 74                 | -22.18         | peak       |
| 11490.120          | 36.84                   | 9.42           | 46.26                      | 54                 | -7.9           | AVG        |
| 17235.180          | 39.72                   | 10.51          | 50.23                      | 74                 | -24.65         | peak       |
| 17235.180          | 34.54                   | 10.51          | 45.05                      | 54                 | -9.36          | AVG        |

Remark:

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

### RADIATED EMISSION ABOVE 1GHZ–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 |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 11490.120          | 41.77                   | 9.42           | 51.19                      | 74                 | -22.88         | peak       |
| 11490.120          | 35.45                   | 9.42           | 44.87                      | 54                 | -9.09          | AVG        |
| 17235.180          | 38.51                   | 10.51          | 49.02                      | 74                 | -24.93         | peak       |
| 17235.180          | 33.83                   | 10.51          | 44.34                      | 54                 | -9.64          | AVG        |

Remark:

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

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|                    |                        |                          |                     |
|--------------------|------------------------|--------------------------|---------------------|
| <b>EUT</b>         | MDVR                   | <b>Model Name</b>        | NVR-2400            |
| <b>Temperature</b> | 25°C                   | <b>Relative Humidity</b> | 55.4%               |
| <b>Pressure</b>    | 960hPa                 | <b>Test Voltage</b>      | Normal Voltage      |
| <b>Test Mode</b>   | 802.11n20 5785MHz,MIMO | <b>Antenna</b>           | Horizontal/Vertical |

**RADIATED EMISSION ABOVE 1GHZ–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 |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 17570.120                                             | 42.75                   | 9.42           | 52.17                      | 74                 | -21.75         | peak       |
| 17570.120                                             | 37.18                   | 9.42           | 46.6                       | 54                 | -7.47          | AVG        |
| 26355.180                                             | 39.22                   | 10.51          | 49.73                      | 74                 | -24.22         | peak       |
| 26355.180                                             | 34.51                   | 10.51          | 45.02                      | 54                 | -8.93          | AVG        |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

**RADIATED EMISSION ABOVE 1GHZ–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 |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 17570.120                                             | 42.21                   | 9.42           | 51.63                      | 74                 | -22.45         | peak       |
| 17570.120                                             | 35.84                   | 9.42           | 45.26                      | 54                 | -8.66          | AVG        |
| 26355.180                                             | 38.91                   | 10.51          | 49.42                      | 74                 | -24.5          | peak       |
| 26355.180                                             | 34.22                   | 10.51          | 44.73                      | 54                 | -9.21          | AVG        |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

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|             |                        |                   |                     |
|-------------|------------------------|-------------------|---------------------|
| EUT         | MDVR                   | Model Name        | NVR-2400            |
| Temperature | 25°C                   | Relative Humidity | 55.4%               |
| Pressure    | 960hPa                 | Test Voltage      | Normal Voltage      |
| Test Mode   | 802.11n20 5825MHz,MIMO | Antenna           | Horizontal/Vertical |

#### RADIATED EMISSION ABOVE 1GHZ–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 |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 11650.120                                             | 40.81                   | 9.62           | 50.43                      | 74                 | -24.03         | peak       |
| 11650.120                                             | 35.34                   | 9.62           | 44.96                      | 54                 | -9.37          | AVG        |
| 17475.180                                             | 38.74                   | 10.75          | 49.49                      | 74                 | -24.36         | peak       |
| 17475.180                                             | 34.52                   | 10.75          | 45.27                      | 54                 | -9.13          | AVG        |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

#### RADIATED EMISSION ABOVE 1GHZ–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 |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 11650.120                                             | 40.34                   | 9.62           | 49.96                      | 74                 | -24.11         | peak       |
| 11650.120                                             | 34.67                   | 9.62           | 44.29                      | 54                 | -9.63          | AVG        |
| 17475.180                                             | 38.42                   | 10.75          | 49.17                      | 74                 | -25.24         | peak       |
| 17475.180                                             | 33.39                   | 10.75          | 44.14                      | 54                 | -9.71          | AVG        |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

**Note:** All the case had been tested. The 802.11n modulation is the worst case and recorded in the test report. Other frequencies radiation emission from 1GHz to 40GHz at least have 20dB margin and not recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

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

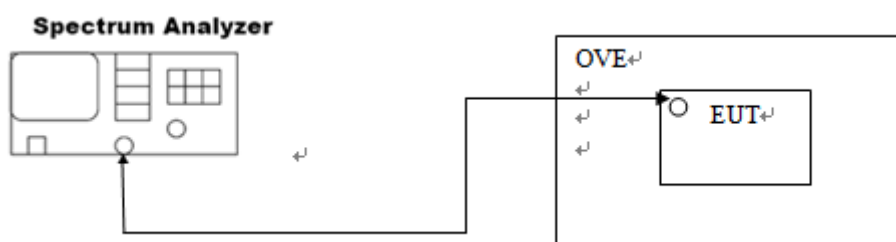
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## 12. FREQUENCY STABILITY

### 12.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the operation frequency.
3. Set SPA Centre Frequency = Operation Frequency. SPAN=enough to measure the emission is maintained within the band
4. Set SPA Trace 1 Max hold, then View.
5. Extreme temperature rule is -20°C~60°C.

### 12.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



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### 12.3. MEASUREMENT RESULTS

| Test Mode | Temperature | Measurement Frequency (MHz) | Result          | Conclusion |
|-----------|-------------|-----------------------------|-----------------|------------|
| 802.11a   | - 10℃       | 5745                        | within the band | PASS       |
|           | 0℃          | 5745                        | within the band | PASS       |
|           | 10℃         | 5745                        | within the band | PASS       |
|           | 20℃         | 5745                        | within the band | PASS       |
|           | 30℃         | 5745                        | within the band | PASS       |
|           | 40℃         | 5745                        | within the band | PASS       |
|           | 50℃         | 5745                        | within the band | PASS       |
|           | - 10℃       | 5785                        | within the band | PASS       |
|           | 0℃          | 5785                        | within the band | PASS       |
|           | 10℃         | 5785                        | within the band | PASS       |
|           | 20℃         | 5785                        | within the band | PASS       |
|           | 30℃         | 5785                        | within the band | PASS       |
|           | 40℃         | 5785                        | within the band | PASS       |
|           | 50℃         | 5785                        | within the band | PASS       |
|           | - 10℃       | 5825                        | within the band | PASS       |
|           | 0℃          | 5825                        | within the band | PASS       |
|           | 10℃         | 5825                        | within the band | PASS       |
|           | 20℃         | 5825                        | within the band | PASS       |
|           | 30℃         | 5825                        | within the band | PASS       |
|           | 40℃         | 5825                        | within the band | PASS       |
|           | 50℃         | 5825                        | within the band | PASS       |

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| Test Mode | Temperature | Measurement Frequency (MHz) | Result          | Conclusion |
|-----------|-------------|-----------------------------|-----------------|------------|
| 802.11n20 | - 10℃       | 5745                        | within the band | PASS       |
|           | 0℃          | 5745                        | within the band | PASS       |
|           | 10℃         | 5745                        | within the band | PASS       |
|           | 20℃         | 5745                        | within the band | PASS       |
|           | 30℃         | 5745                        | within the band | PASS       |
|           | 40℃         | 5745                        | within the band | PASS       |
|           | 50℃         | 5745                        | within the band | PASS       |
|           | - 10℃       | 5785                        | within the band | PASS       |
|           | 0℃          | 5785                        | within the band | PASS       |
|           | 10℃         | 5785                        | within the band | PASS       |
|           | 20℃         | 5785                        | within the band | PASS       |
|           | 30℃         | 5785                        | within the band | PASS       |
|           | 40℃         | 5785                        | within the band | PASS       |
|           | 50℃         | 5785                        | within the band | PASS       |
|           | - 10℃       | 5825                        | within the band | PASS       |
|           | 0℃          | 5825                        | within the band | PASS       |
|           | 10℃         | 5825                        | within the band | PASS       |
|           | 20℃         | 5825                        | within the band | PASS       |
|           | 30℃         | 5825                        | within the band | PASS       |
|           | 40℃         | 5825                        | within the band | PASS       |
|           | 50℃         | 5825                        | within the band | PASS       |

| Test Mode | Temperature | Measurement Frequency (MHz) | Result          | Conclusion |
|-----------|-------------|-----------------------------|-----------------|------------|
| 802.11n40 | - 10℃       | 5755                        | within the band | PASS       |
|           | 0℃          | 5755                        | within the band | PASS       |
|           | 10℃         | 5755                        | within the band | PASS       |
|           | 20℃         | 5755                        | within the band | PASS       |
|           | 30℃         | 5755                        | within the band | PASS       |
|           | 40℃         | 5755                        | within the band | PASS       |
|           | 50℃         | 5755                        | within the band | PASS       |
|           | - 10℃       | 5795                        | within the band | PASS       |
|           | 0℃          | 5795                        | within the band | PASS       |
|           | 10℃         | 5795                        | within the band | PASS       |
|           | 20℃         | 5795                        | within the band | PASS       |
|           | 30℃         | 5795                        | within the band | PASS       |
|           | 40℃         | 5795                        | within the band | PASS       |
|           | 50℃         | 5795                        | within the band | PASS       |

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| Test Mode  | Temperature | Measurement Frequency (MHz) | Result          | Conclusion |
|------------|-------------|-----------------------------|-----------------|------------|
| 802.11ac20 | - 10℃       | 5745                        | within the band | PASS       |
|            | 0℃          | 5745                        | within the band | PASS       |
|            | 10℃         | 5745                        | within the band | PASS       |
|            | 20℃         | 5745                        | within the band | PASS       |
|            | 30℃         | 5745                        | within the band | PASS       |
|            | 40℃         | 5745                        | within the band | PASS       |
|            | 50℃         | 5745                        | within the band | PASS       |
|            | - 10℃       | 5785                        | within the band | PASS       |
|            | 0℃          | 5785                        | within the band | PASS       |
|            | 10℃         | 5785                        | within the band | PASS       |
|            | 20℃         | 5785                        | within the band | PASS       |
|            | 30℃         | 5785                        | within the band | PASS       |
|            | 40℃         | 5785                        | within the band | PASS       |
|            | 50℃         | 5785                        | within the band | PASS       |
|            | - 10℃       | 5825                        | within the band | PASS       |
|            | 0℃          | 5825                        | within the band | PASS       |
|            | 10℃         | 5825                        | within the band | PASS       |
|            | 20℃         | 5825                        | within the band | PASS       |
|            | 30℃         | 5825                        | within the band | PASS       |
|            | 40℃         | 5825                        | within the band | PASS       |
|            | 50℃         | 5825                        | within the band | PASS       |

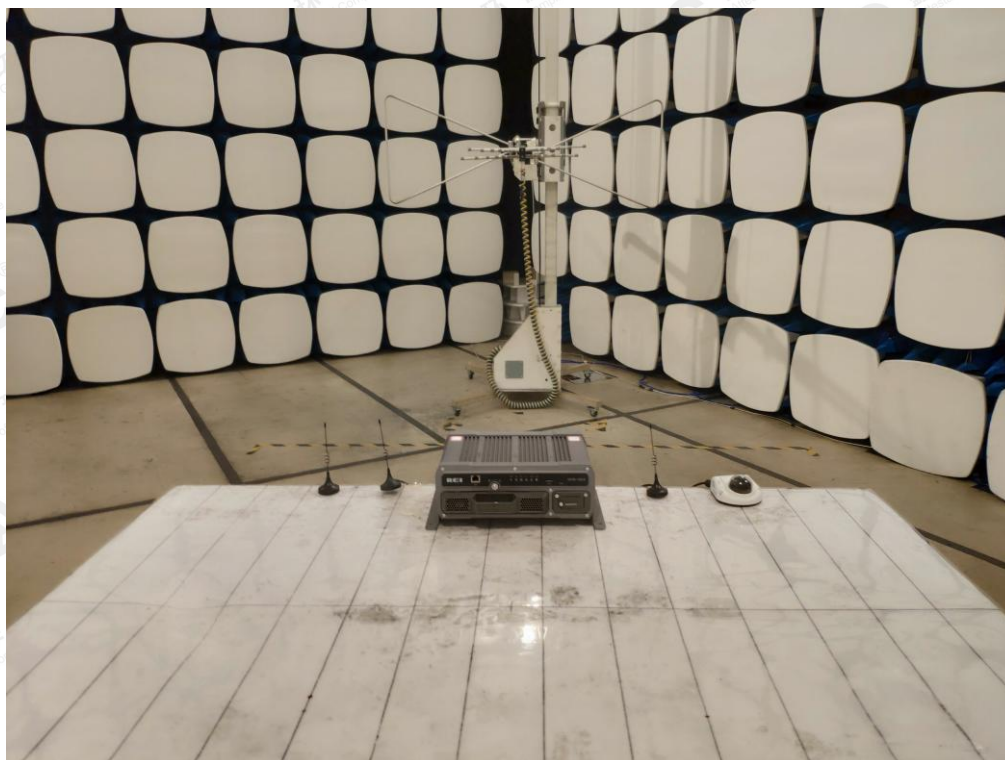
| Test Mode  | Temperature | Measurement Frequency (MHz) | Result          | Conclusion |
|------------|-------------|-----------------------------|-----------------|------------|
| 802.11ac40 | - 10℃       | 5755                        | within the band | PASS       |
|            | 0℃          | 5755                        | within the band | PASS       |
|            | 10℃         | 5755                        | within the band | PASS       |
|            | 20℃         | 5755                        | within the band | PASS       |
|            | 30℃         | 5755                        | within the band | PASS       |
|            | 40℃         | 5755                        | within the band | PASS       |
|            | 50℃         | 5755                        | within the band | PASS       |
|            | - 10℃       | 5795                        | within the band | PASS       |
|            | 0℃          | 5795                        | within the band | PASS       |
|            | 10℃         | 5795                        | within the band | PASS       |
|            | 20℃         | 5795                        | within the band | PASS       |
|            | 30℃         | 5795                        | within the band | PASS       |
|            | 40℃         | 5795                        | within the band | PASS       |
|            | 50℃         | 5795                        | within the band | PASS       |

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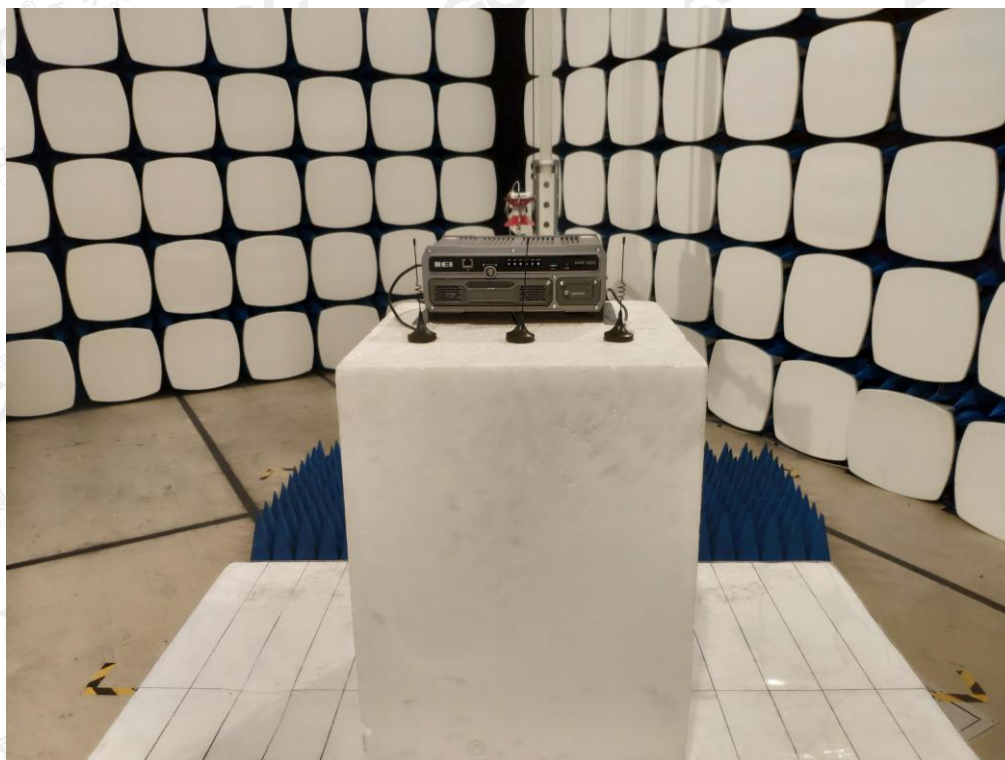
| Test Mode  | Temperature | Measurement Frequency (MHz) | Result          | Conclusion |
|------------|-------------|-----------------------------|-----------------|------------|
| 802.11ac80 | - 10℃       | 5775                        | within the band | PASS       |
|            | 0℃          | 5775                        | within the band | PASS       |
|            | 10℃         | 5775                        | within the band | PASS       |
|            | 20℃         | 5775                        | within the band | PASS       |
|            | 30℃         | 5775                        | within the band | PASS       |
|            | 40℃         | 5775                        | within the band | PASS       |
|            | 50℃         | 5775                        | within the band | PASS       |

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**APPENDIX A: PHOTOGRAPHS OF TEST SETUP**  
**FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ**



**FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ**



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

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