



# RF TEST REPORT

**Applicant**      Nokia ShangHai Bell Co., Ltd.  
**FCC ID**          2ADZRXS2426GB  
**Product**        Nokia ONT  
**Brand**            Nokia  
**Model**           XS-2426G-B  
**Report No.**      R2109A0800-R3V1  
**Issue Date**     December 17, 2021

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2020)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Peng Tao

Approved by: Kai Xu

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| Version                                                                                                                                                                                                                       | Revision description     | Issue Date        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------|
| Rev.0                                                                                                                                                                                                                         | Initial issue of report. | December 9, 2021  |
| Rev.1                                                                                                                                                                                                                         | Update Applicant address | December 17, 2021 |
| Note: This revised report (Report No. R2109A0800-R3V1) supersedes and replaces the previously issued report (Report No. R2109A0800-R3). Please discard or destroy the previously issued report and dispose of it accordingly. |                          |                   |

## Summary of measurement results

| Number                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Test Case              | Clause in FCC rules | Verdict |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------|---------|
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Average output power   | 15.407(a)           | PASS    |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Occupied bandwidth     | 15.407(e)           | PASS    |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Frequency stability    | 15.407(g)           | PASS    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Power spectral density | 15.407(a)           | PASS    |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Unwanted Emissions     | 15.407(b)           | PASS    |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Conducted Emissions    | 15.207              | PASS    |
| Date of Testing: September 25, 2021 ~ December 8, 2021                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                     |         |
| Date of Sample Received: September 6, 2021                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |                     |         |
| <p>Note: PASS: The EUT complies with the essential requirements in the standard.</p> <p>FAIL: The EUT does not comply with the essential requirements in the standard.</p> <p>All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.</p> |                        |                     |         |

## 1. Test Laboratory

### 1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

### 1.2. Test facility

#### **FCC (Designation number: CN1179, Test Firm Registration Number: 446626)**

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

#### **A2LA (Certificate Number: 3857.01)**

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

### 1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.  
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## 2. General Description of Equipment under Test

### 2.1. Applicant and Manufacturer Information

|                             |                                                                   |
|-----------------------------|-------------------------------------------------------------------|
| <b>Applicant</b>            | Nokia ShangHai Bell Co., Ltd.                                     |
| <b>Applicant address</b>    | No. 388, Ningqiao Rd. Pilot Free Trade Zone Shanghai China 201206 |
| <b>Manufacturer</b>         | CIG SHANGHAI CO., LTD.                                            |
| <b>Manufacturer address</b> | 5F, BUILDING 8, 2388 CHENHANG ROAD, MINHANG DISTRICT, SHANGHAI    |

### 2.2. General information

| EUT Description                                                                                 |                                                                                                                       |         |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------|
| Model                                                                                           | XS-2426G-B                                                                                                            |         |
| Lab internal SN:                                                                                | R2109A0800/S01                                                                                                        |         |
| Hardware Version                                                                                | 3FE49546AB                                                                                                            |         |
| Software Version                                                                                | 3FE49544FJIL98                                                                                                        |         |
| Power Supply                                                                                    | AC adapter                                                                                                            |         |
| Antenna Type                                                                                    | Internal Antenna                                                                                                      |         |
| Directional Gain                                                                                | Without Beamforming Mode for Power                                                                                    | 3.4 dBi |
|                                                                                                 | Without Beamforming Mode for PSD                                                                                      | 4.7 dBi |
|                                                                                                 | With Beamforming Mode                                                                                                 | 4.7 dBi |
| Operating Frequency Range(s)                                                                    | U-NII-1: 5150MHz-5250MHz<br>U-NII-2A: 5250MHz -5350MHz<br>U-NII-2C: 5470MHz-5725MHz<br>U-NII-3: 5725MHz -5850MHz      |         |
| Modulation Type                                                                                 | 802.11a/n (HT20/HT40) : OFDM<br>802.11ac (VHT20/VHT40/VHT80/VHT160): OFDM<br>802.11ax (HE20/ HE40/ HE80/HE160): OFDMA |         |
| Max. Conducted Power                                                                            | 29.97dBm                                                                                                              |         |
| Testing temperature range:                                                                      | -20 ° C to 50° C                                                                                                      |         |
| Operating temperature range:                                                                    | -5 ° C to 45° C                                                                                                       |         |
| Operating voltage range:                                                                        | 10 V to 14V                                                                                                           |         |
| State DC voltage:                                                                               | 12V                                                                                                                   |         |
| EUT Accessory                                                                                   |                                                                                                                       |         |
| Adapter 1                                                                                       | Manufacturer: DONGGUAN SHILONG FUHUA ELECTRONIC CO.,LTD<br>Model: UES36WV-120300SPA                                   |         |
| Adapter 2                                                                                       | Manufacturer: SHENZHEN HONOR ELECTRONIC CO.,LTD<br>Model: ADS-40FKJ-12N 12036EPG                                      |         |
| Internal Antenna 1                                                                              | Manufacturer: HL                                                                                                      |         |
| Internal Antenna 2                                                                              | Manufacturer: DZZ                                                                                                     |         |
| Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by |                                                                                                                       |         |



the applicant.

2. This device support automatically discontinue transmission, while the device is not transmitting any information, the device can automatically discontinue transmission and become standby mode for power saving. The device can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3. There are more than one Adapter, each one should be applied throughout the compliance test respectively, however, only the worst case (Adapter 1) will be recorded in this report.

**Information of Configuration:**

| No. | Name           | Model/Code No.         | Edition | Serial No. or Quantity |
|-----|----------------|------------------------|---------|------------------------|
| 1   | EMA-XS-2426G-B | 3FE49546AB             | PEM2    | PEM 1                  |
| 2   | Power adapter  | UES36WU-120300SPA      | A/0     | UE191205GWZF2RI 1      |
| 3   | Power adapter  | ADS-40FKJ-12 12036EPCU | A/0     | 9040108111201202R 1    |

| ONT Mnemonic | Kit Code   | EMA Code   | Part Description                                                        | Power Adapter     |                        |
|--------------|------------|------------|-------------------------------------------------------------------------|-------------------|------------------------|
| XS-2426G-B   | 3FE49542AB | 3FE49546AB | XS-2426G-B,US Plug,XGS PON,2xPOTS, 3xGE+1x2,5GE,4x4 + 4x4 11ax,1xUSB3.0 | UES36WU-120300SPA | ADS-40FKJ-12 12036EPCU |

**Auxiliary equipment details**

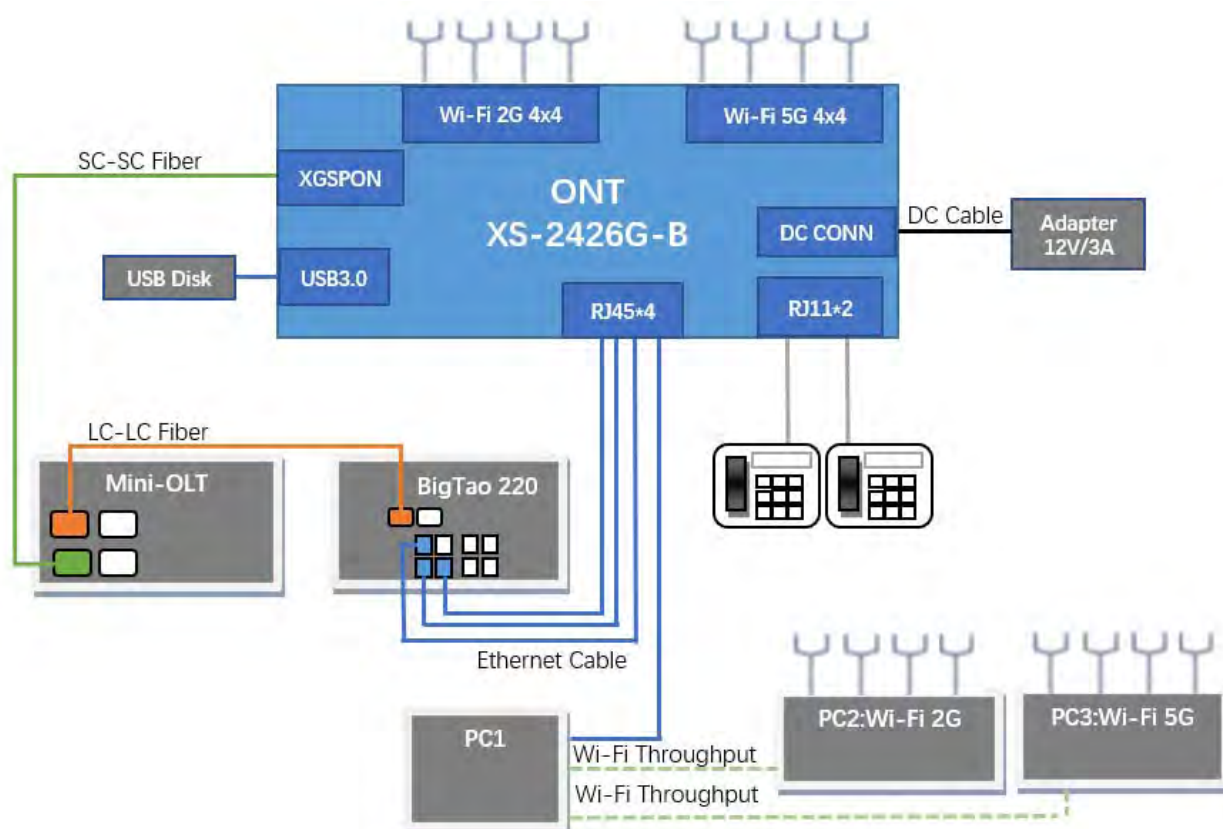
| No. | Name    | Brand name | Model | ASB code | Valid Until      |
|-----|---------|------------|-------|----------|------------------|
| 1   | BIGTAO  | Xinertel   | N.A   | -        | No Cal. Required |
| 2   | MiniOLT | Nokia      | N.A   | -        | No Cal. Required |
| 3   | PC      | HP         | N.A   | -        | No Cal. Required |
| 4   | PC      | Thinkpad   | N.A   | -        | No Cal. Required |
| 5   | PC      | Thinkpad   | N.A   | -        | No Cal. Required |

**Information of Ports**

| No. | Port name | Number | Shielded or unshielded | Cable type (optic, twisted pair, etc.) | Max. Cable length |
|-----|-----------|--------|------------------------|----------------------------------------|-------------------|
| 1   | AC port   | 1      | Unshielded             | /                                      | /                 |
| 2   | GE        | 3      | Unshielded             | /                                      | /                 |
| 3   | 2.5GE     | 1      | Unshielded             | /                                      | /                 |
| 4   | POTS      | 2      | Unshielded             | /                                      | /                 |
| 5   | USB       | 1      | shielded               | /                                      | /                 |

Description: The XS-2426G-B is a XGSPON ONT which has 3 GE LAN ports, 1 2.5GE LAN port, 1 USB port and 2POTS ports. It support 2.4G&5G wi-fi.

The basic functional test in normal room conditions consists of the traffic test and POTs connection test. XS-2426G-B runs 5 traffics on each line with BIGTAO, the each upstream of 3 GE is 900Mbps, and downstream is 900Mbps.the upstream of 2.5GE is 2G Mbps, and downstream is 2G Mbps. Frame loss ratio less than  $10e-7$ . The POTs keep connecting though OFLT program.The WIFI keep connecting.



### 3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**Test standards:**

**FCC CFR47 Part 15E (2020)** Unlicensed National Information Infrastructure Devices

**ANSI C63.10 (2013)**

**Reference standard:**

**KDB 789033 D02 General UNII Test Procedures New Rules v02r01**

**KDB 662911 D01 Multiple Transmitter Output v02r01**

## 4. Test Configuration

### Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

| Mode            | Data Rate          |                    |                    |                    |
|-----------------|--------------------|--------------------|--------------------|--------------------|
|                 | CDD/MIMO Antenna 1 | CDD/MIMO Antenna 2 | CDD/MIMO Antenna 3 | CDD/MIMO Antenna 4 |
| 802.11a         | 6 Mbps             | 6 Mbps             | 6 Mbps             | 6 Mbps             |
| 802.11n HT20    | MCS24              | MCS24              | MCS24              | MCS24              |
| 802.11n HT40    | MCS24              | MCS24              | MCS24              | MCS24              |
| 802.11ac VHT20  | MCS0               | MCS0               | MCS0               | MCS0               |
| 802.11ac VHT40  | MCS0               | MCS0               | MCS0               | MCS0               |
| 802.11ac VHT80  | MCS0               | MCS0               | MCS0               | MCS0               |
| 802.11ac VHT160 | MCS0               | MCS0               | MCS0               | MCS0               |
| 802.11ax HE20   | MCS0               | MCS0               | MCS0               | MCS0               |
| 802.11ax HE40   | MCS0               | MCS0               | MCS0               | MCS0               |
| 802.11ax HE80   | MCS0               | MCS0               | MCS0               | MCS0               |
| 802.11ax HE160  | MCS0               | MCS0               | MCS0               | MCS0               |

The worst case Antenna mode for each of the following tests for Wi-Fi:

| Test Cases                     | CDD/MIMO Antenna 1 | CDD/MIMO Antenna 2 | CDD/MIMO Antenna 3 | CDD/MIMO Antenna 4 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|
| Average conducted output power | O                  | O                  | O                  | O                  |
| Occupied bandwidth             | --                 | --                 | O                  | --                 |
| Frequency stability            | --                 | --                 | O                  | --                 |
| Power Spectral Density         | O                  | O                  | O                  | O                  |
| Unwanted Emissions             | --                 | --                 | O                  | --                 |
| Conducted Emissions            | --                 | --                 | O                  | --                 |
| Note: "O": test all bands      |                    |                    |                    |                    |

According to RF Output power results in chapter 5.2, CDD/MIMO Antenna 3 was selected as the worst antenna.



## Wireless Technology and Frequency Range

| Wireless Technology |          | Bandwidth | Channel | Frequency |
|---------------------|----------|-----------|---------|-----------|
| Wi-Fi               | U-NII-1  | 20 MHz    | 36      | 5180MHz   |
|                     |          |           | 40      | 5200MHz   |
|                     |          |           | 44      | 5220MHz   |
|                     |          |           | 48      | 5240MHz   |
|                     |          | 40 MHz    | 38      | 5190MHz   |
|                     |          |           | 46      | 5230MHz   |
|                     |          | 80 MHz    | 42      | 5210MHz   |
|                     | U-NII-2A | 20 MHz    | 52      | 5260MHz   |
|                     |          |           | 56      | 5280MHz   |
|                     |          |           | 60      | 5300MHz   |
|                     |          |           | 64      | 5320MHz   |
|                     |          | 40 MHz    | 54      | 5270MHz   |
|                     |          |           | 62      | 5310MHz   |
|                     |          | 80 MHz    | 58      | 5290MHz   |
|                     | U-NII-2C | 20 MHz    | 100     | 5500MHz   |
|                     |          |           | 104     | 5520MHz   |
|                     |          |           | 108     | 5540MHz   |
|                     |          |           | 112     | 5560MHz   |
|                     |          |           | 116     | 5580MHz   |
|                     |          |           | 120     | 5600MHz   |
|                     |          |           | 124     | 5620MHz   |
|                     |          |           | 128     | 5640MHz   |
|                     |          |           | 132     | 5660MHz   |
|                     |          |           | 136     | 5680MHz   |
|                     |          |           | 140     | 5700MHz   |
|                     |          | 40 MHz    | 102     | 5510MHz   |
|                     |          |           | 110     | 5550MHz   |
|                     |          |           | 118     | 5590MHz   |
|                     |          |           | 126     | 5630MHz   |
|                     |          |           | 134     | 5670MHz   |
|                     |          |           | 142     | 5710MHz   |
|                     |          | 80 MHz    | 106     | 5530MHz   |
|                     |          |           | 122     | 5610MHz   |
|                     |          |           | 138     | 5690MHz   |
|                     | U-NII-3  | 20 MHz    | 149     | 5745MHz   |
|                     |          |           | 153     | 5765MHz   |
|                     |          |           | 157     | 5785MHz   |
|                     |          |           | 161     | 5805MHz   |



|                                                                                                            |  |        |     |         |
|------------------------------------------------------------------------------------------------------------|--|--------|-----|---------|
|                                                                                                            |  |        | 165 | 5825MHz |
|                                                                                                            |  | 40 MHz | 151 | 5755MHz |
|                                                                                                            |  |        | 159 | 5795MHz |
|                                                                                                            |  | 80 MHz | 155 | 5775MHz |
| Does this device support TPC Function? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |  |        |     |         |
| Does this device support TDWR Band? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    |  |        |     |         |

## 5. Test Case Results

### 5.1. Occupied Bandwidth

#### Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C  | 45%~50%           | 101.5kPa |

#### Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

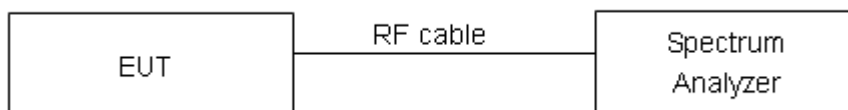
For U-NII-1/U-NII-2A/U-NII-2C, set RBW  $\approx$  1% OCB kHz, VBW  $\geq 3 \times$  RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

For U-NII-3, Set RBW = 100 kHz, VBW  $\geq 3 \times$  RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

Use the 99 % power bandwidth function of the instrument

#### Test Setup



#### Limits

Rule FCC Part §15.407(e)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

#### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 936$  Hz.

**Test Results:**
**U-NII-1**

| Mode           | Carrier frequency (MHz) | 99% bandwidth (MHz) | Minimum 26 dB bandwidth (MHz) | Conclusion |
|----------------|-------------------------|---------------------|-------------------------------|------------|
| 802.11a        | 5180                    | 16.512              | 19.767                        | PASS       |
|                | 5200                    | 16.531              | 20.041                        | PASS       |
|                | 5240                    | 16.529              | 20.019                        | PASS       |
| 802.11n HT20   | 5180                    | 17.720              | 20.825                        | PASS       |
|                | 5200                    | 17.726              | 20.962                        | PASS       |
|                | 5240                    | 17.713              | 20.956                        | PASS       |
| 802.11n HT40   | 5190                    | 37.642              | 39.799                        | PASS       |
|                | 5230                    | 37.610              | 39.992                        | PASS       |
| 802.11ac VHT20 | 5180                    | 17.721              | 20.868                        | PASS       |
|                | 5200                    | 17.725              | 20.407                        | PASS       |
|                | 5240                    | 17.724              | 20.870                        | PASS       |
| 802.11ac VHT40 | 5190                    | 35.966              | 39.224                        | PASS       |
|                | 5230                    | 35.923              | 39.384                        | PASS       |
| 802.11ac VHT80 | 5210                    | 75.343              | 81.087                        | PASS       |
| 802.11ax HE20  | 5180                    | 19.029              | 21.402                        | PASS       |
|                | 5200                    | 19.038              | 22.043                        | PASS       |
|                | 5240                    | 19.041              | 21.810                        | PASS       |
| 802.11ax HE40  | 5190                    | 37.599              | 40.241                        | PASS       |
|                | 5230                    | 37.624              | 40.167                        | PASS       |
| 802.11ax HE80  | 5210                    | 77.077              | 81.269                        | PASS       |

**U-NII-2A**

| Mode           | Carrier frequency (MHz) | 99% bandwidth (MHz) | Minimum 26 dB bandwidth (MHz) | Conclusion |
|----------------|-------------------------|---------------------|-------------------------------|------------|
| 802.11a        | 5260                    | 16.497              | 19.858                        | PASS       |
|                | 5300                    | 16.504              | 19.995                        | PASS       |
|                | 5320                    | 16.503              | 19.689                        | PASS       |
| 802.11n HT20   | 5260                    | 17.714              | 20.948                        | PASS       |
|                | 5300                    | 17.732              | 21.304                        | PASS       |
|                | 5320                    | 17.727              | 21.355                        | PASS       |
| 802.11n HT40   | 5270                    | 35.917              | 39.440                        | PASS       |
|                | 5310                    | 35.952              | 39.146                        | PASS       |
| 802.11ac VHT20 | 5260                    | 17.734              | 20.864                        | PASS       |
|                | 5300                    | 17.730              | 20.942                        | PASS       |
|                | 5320                    | 17.730              | 20.781                        | PASS       |



|                 |      |         |         |      |
|-----------------|------|---------|---------|------|
| 802.11ac VHT40  | 5270 | 35.925  | 39.498  | PASS |
|                 | 5310 | 35.939  | 39.431  | PASS |
| 802.11ac VHT80  | 5290 | 75.363  | 80.615  | PASS |
| 802.11ac VHT160 | 5250 | 153.401 | 164.310 | PASS |
| 802.11ax HE20   | 5260 | 19.028  | 21.649  | PASS |
|                 | 5300 | 19.051  | 20.955  | PASS |
|                 | 5320 | 19.039  | 20.971  | PASS |
| 802.11ax HE40   | 5270 | 37.591  | 40.010  | PASS |
|                 | 5310 | 37.579  | 39.776  | PASS |
| 802.11ax HE80   | 5290 | 77.096  | 81.080  | PASS |
| 802.11ax HE160  | 5250 | 154.992 | 162.803 | PASS |

## U-NII-2C

| Mode            | Carrier frequency (MHz) | 99% bandwidth (MHz) | Minimum 26 dB bandwidth (MHz) | Conclusion |
|-----------------|-------------------------|---------------------|-------------------------------|------------|
| 802.11a         | 5500                    | 16.512              | 19.902                        | PASS       |
|                 | 5580                    | 16.515              | 19.991                        | PASS       |
|                 | 5700                    | 16.519              | 19.651                        | PASS       |
|                 | 5720                    | 16.503              | 20.043                        | PASS       |
| 802.11n HT20    | 5500                    | 17.729              | 20.647                        | PASS       |
|                 | 5580                    | 17.725              | 21.289                        | PASS       |
|                 | 5700                    | 17.706              | 20.692                        | PASS       |
|                 | 5720                    | 17.735              | 21.404                        | PASS       |
| 802.11n HT40    | 5510                    | 35.957              | 39.200                        | PASS       |
|                 | 5550                    | 35.943              | 39.366                        | PASS       |
|                 | 5670                    | 35.926              | 38.886                        | PASS       |
|                 | 5710                    | 35.948              | 39.182                        | PASS       |
| 802.11ac VHT20  | 5500                    | 17.729              | 20.834                        | PASS       |
|                 | 5580                    | 17.752              | 20.559                        | PASS       |
|                 | 5700                    | 17.731              | 20.914                        | PASS       |
|                 | 5720                    | 17.709              | 20.928                        | PASS       |
| 802.11ac VHT40  | 5510                    | 35.949              | 39.286                        | PASS       |
|                 | 5550                    | 35.911              | 39.428                        | PASS       |
|                 | 5670                    | 35.914              | 39.020                        | PASS       |
|                 | 5710                    | 35.968              | 39.378                        | PASS       |
| 802.11ac VHT80  | 5530                    | 75.324              | 81.424                        | PASS       |
|                 | 5690                    | 75.387              | 81.438                        | PASS       |
| 802.11ac VHT160 | 5570                    | 152.998             | 163.398                       | PASS       |
| 802.11ax HE20   | 5500                    | 19.052              | 21.554                        | PASS       |



|                |      |         |         |      |
|----------------|------|---------|---------|------|
|                | 5580 | 19.055  | 21.203  | PASS |
|                | 5700 | 19.011  | 21.594  | PASS |
|                | 5720 | 19.020  | 21.452  | PASS |
| 802.11ax HE40  | 5510 | 37.654  | 40.427  | PASS |
|                | 5550 | 37.634  | 39.894  | PASS |
|                | 5670 | 37.568  | 40.340  | PASS |
|                | 5710 | 37.602  | 39.911  | PASS |
| 802.11ax HE80  | 5530 | 77.043  | 81.546  | PASS |
|                | 5690 | 77.157  | 81.025  | PASS |
| 802.11ax HE160 | 5570 | 154.477 | 162.926 | PASS |

## U-NII-3

| Mode           | Carrier frequency (MHz) | 99% bandwidth (MHz) | Minimum 6 dB bandwidth (MHz) | Limit (kHz) | Conclusion |
|----------------|-------------------------|---------------------|------------------------------|-------------|------------|
| 802.11a        | 5745                    | 16.510              | 16.346                       | 500         | PASS       |
|                | 5785                    | 16.508              | 16.340                       | 500         | PASS       |
|                | 5825                    | 16.515              | 16.461                       | 500         | PASS       |
| 802.11n HT20   | 5745                    | 16.509              | 16.341                       | 500         | PASS       |
|                | 5785                    | 16.504              | 16.330                       | 500         | PASS       |
|                | 5825                    | 16.493              | 16.355                       | 500         | PASS       |
| 802.11n HT40   | 5755                    | 35.955              | 36.019                       | 500         | PASS       |
|                | 5795                    | 35.931              | 35.416                       | 500         | PASS       |
| 802.11ac VHT20 | 5745                    | 16.512              | 16.346                       | 500         | PASS       |
|                | 5785                    | 16.533              | 16.340                       | 500         | PASS       |
|                | 5825                    | 16.475              | 16.349                       | 500         | PASS       |
| 802.11ac VHT40 | 5755                    | 35.947              | 36.332                       | 500         | PASS       |
|                | 5795                    | 35.958              | 36.325                       | 500         | PASS       |
| 802.11ac VHT80 | 5775                    | 75.325              | 73.767                       | 500         | PASS       |
| 802.11ax HE20  | 5745                    | 16.507              | 16.345                       | 500         | PASS       |
|                | 5785                    | 16.530              | 16.361                       | 500         | PASS       |
|                | 5825                    | 16.536              | 16.351                       | 500         | PASS       |
| 802.11ax HE40  | 5755                    | 37.630              | 37.634                       | 500         | PASS       |
|                | 5795                    | 37.655              | 37.234                       | 500         | PASS       |
| 802.11ax HE80  | 5775                    | 77.002              | 77.418                       | 500         | PASS       |

U-NII-1, 802.11a  
Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT20  
Carrier frequency (MHz): 5180



U-NII-1, 802.11a  
Carrier frequency (MHz): 5200



U-NII-1, 802.11n HT20  
Carrier frequency (MHz): 5200



U-NII-1, 802.11a  
Carrier frequency (MHz): 5240



U-NII-1, 802.11n HT20  
Carrier frequency (MHz): 5240



U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5180



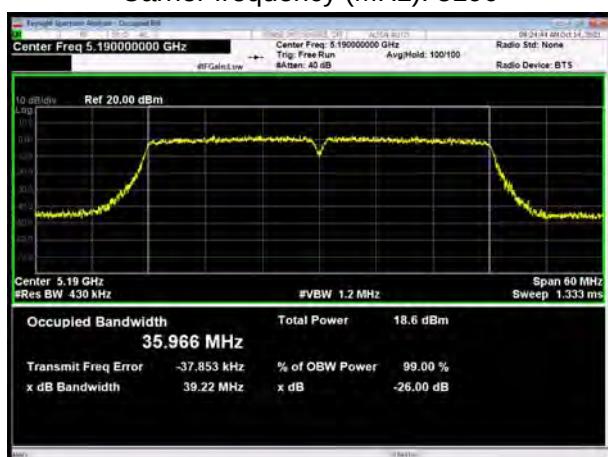
U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5230



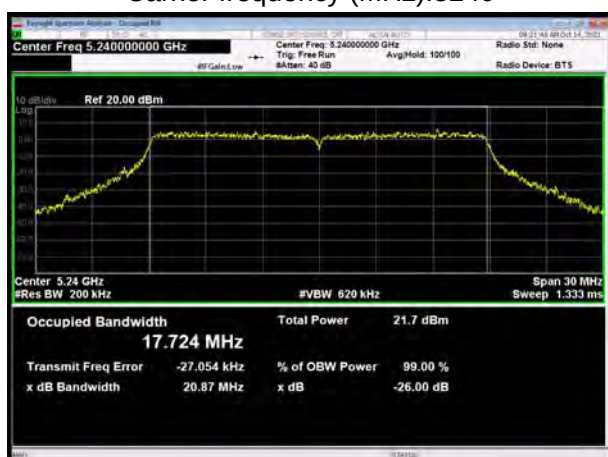
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5200



U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5240



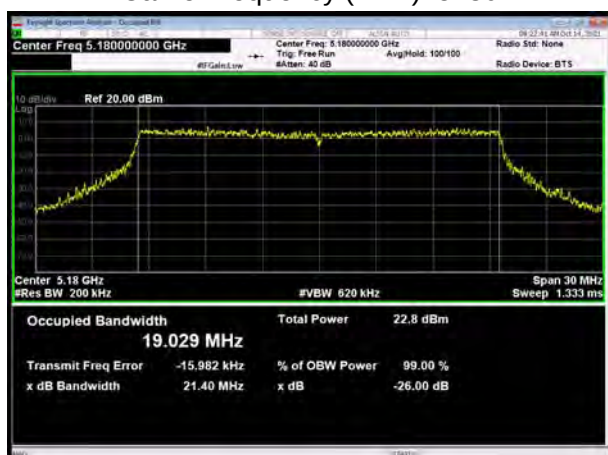
U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5230



U-NII-1, 802.11ac VHT80  
Carrier frequency (MHz): 5210



U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5180



U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5190



U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5200



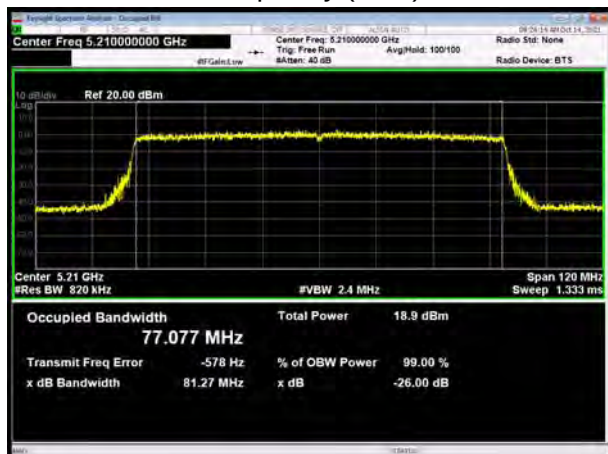
U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5230



U-NII-1, 802.11ax HE20  
Carrier frequency (MHz):5240



U-NII-1, 802.11ax HE80  
Carrier frequency (MHz): 5210



U-NII-2A, 802.11a  
Carrier frequency (MHz): 5260



U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5260



U-NII-2A, 802.11a  
Carrier frequency (MHz): 5300



U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5300



U-NII-2A, 802.11a  
Carrier frequency (MHz):5320



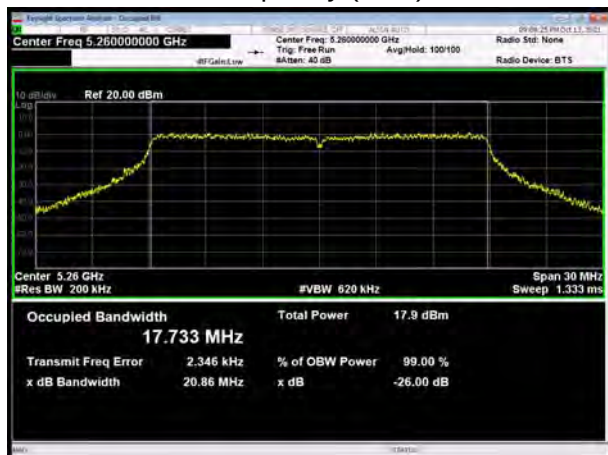
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz):5320



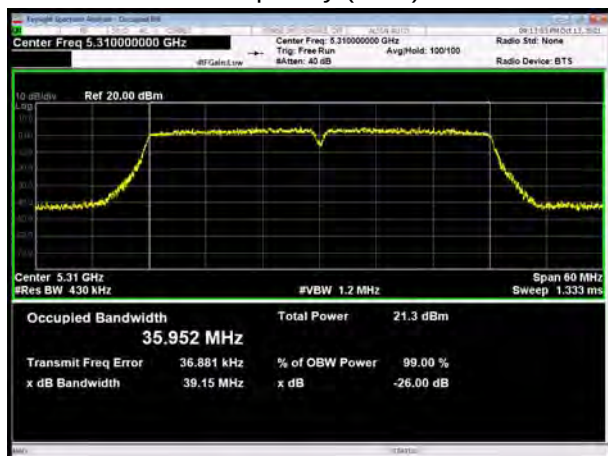
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5270



U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz):5260



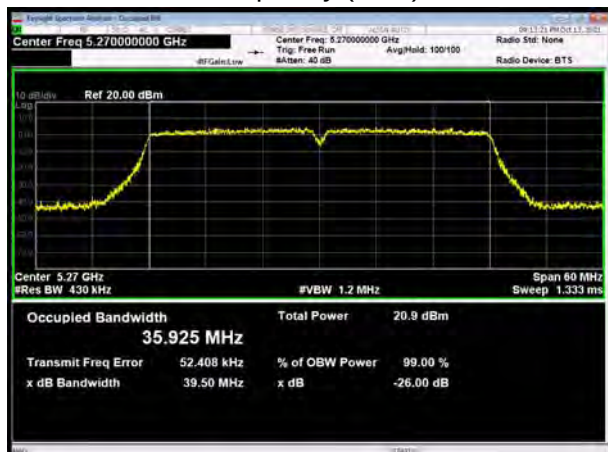
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5310



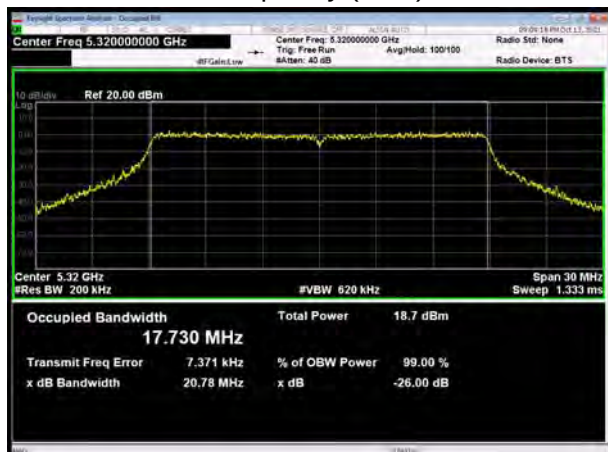
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5300



U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5270



U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5320



U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5310



U-NII-2A, 802.11ac VHT80  
Carrier frequency (MHz): 5290



U-NII-2A, 802.11ac VHT160  
Carrier frequency (MHz): 5250



U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5260



U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5270



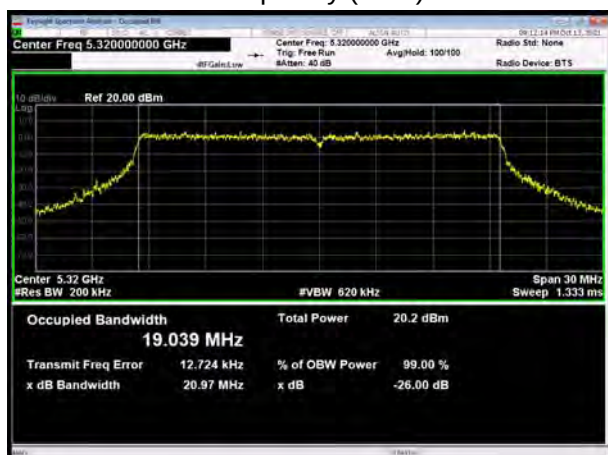
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz): 5300



U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5310



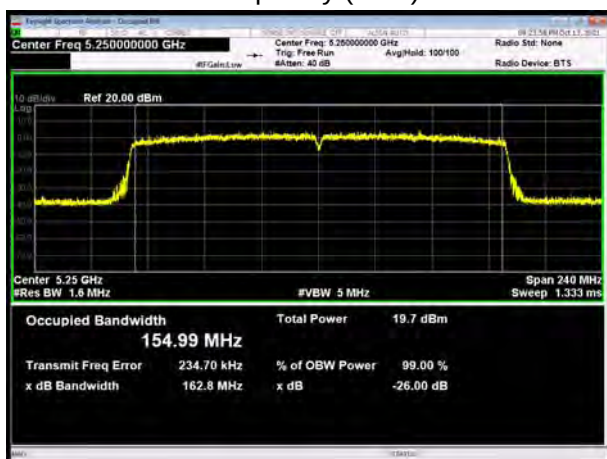
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5320



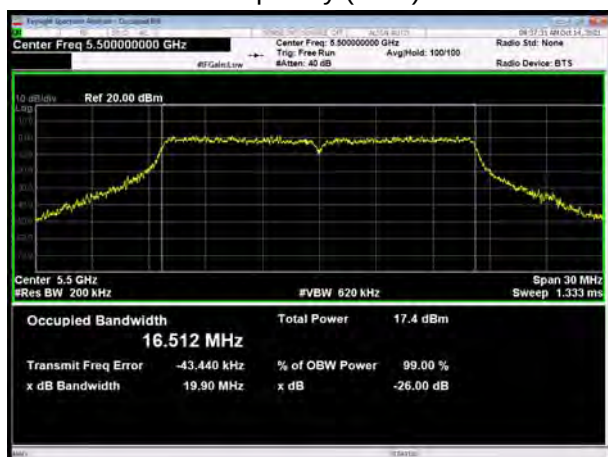
U-NII-2A, 802.11ax HE80  
Carrier frequency (MHz): 5290



U-NII-2A, 802.11ax HE160  
Carrier frequency (MHz): 5250



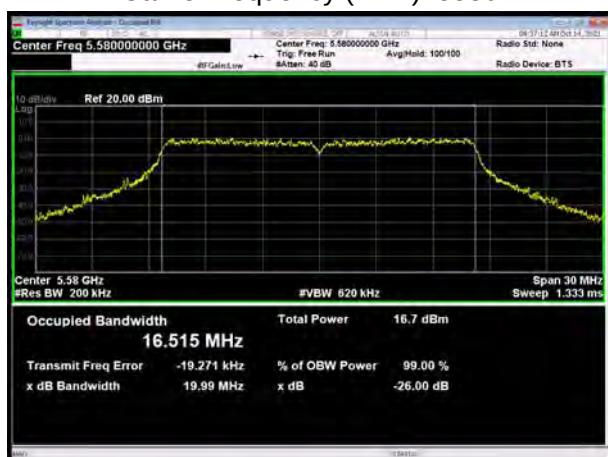
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5500



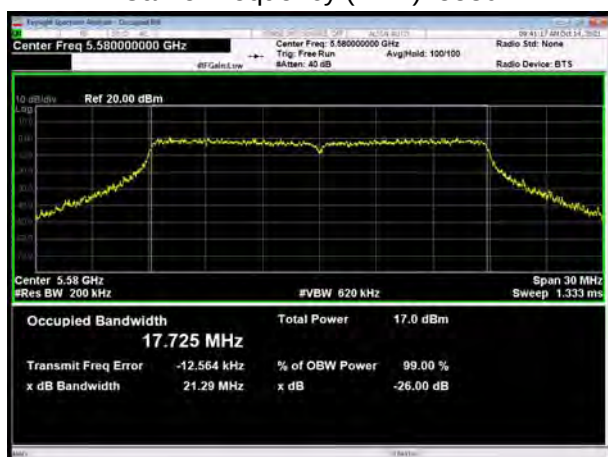
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5500



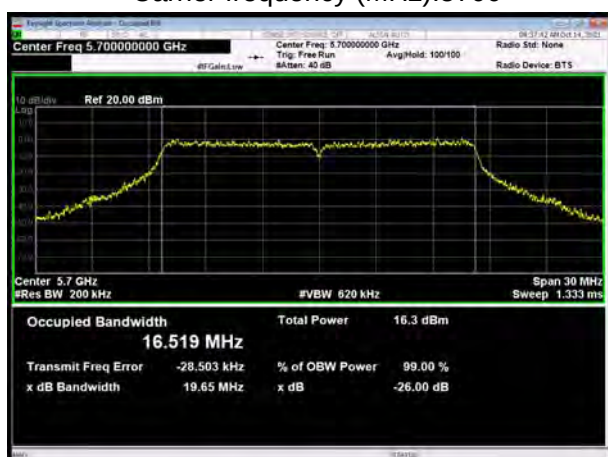
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5580



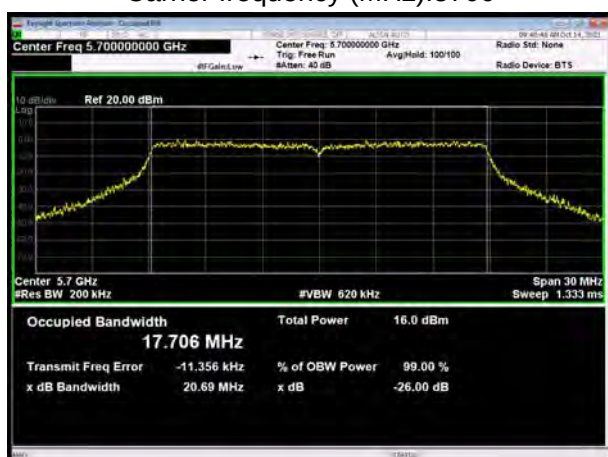
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5580



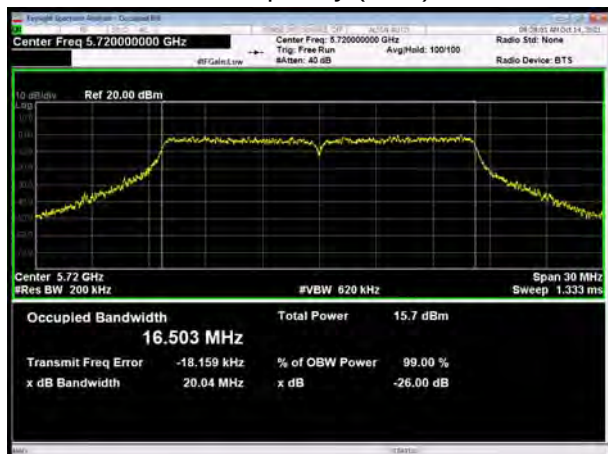
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5700



U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5700



U-NII-2C, 802.11a  
Carrier frequency (MHz):5720



U-NII-2C, 802.11n HT20  
Carrier frequency (MHz):5720



U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5510



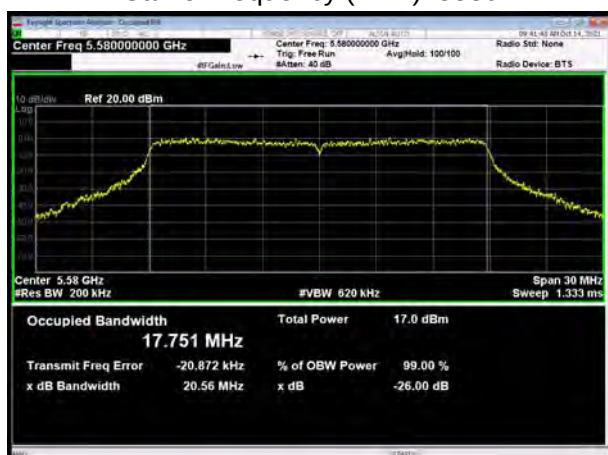
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5500



U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5550



U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5580



U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5670



U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5700



U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5710



U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5720



U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5510



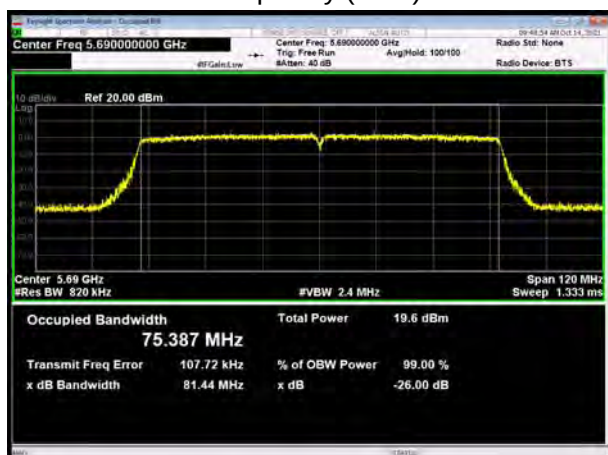
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5530



U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5550



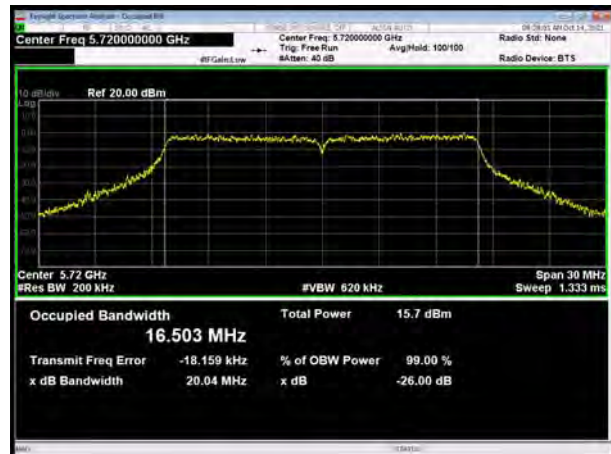
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5690



U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5670



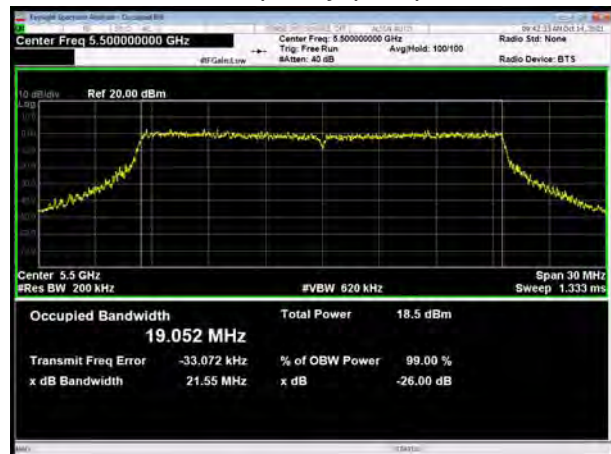
U-NII-2C, 802.11ac VHT160  
Carrier frequency (MHz): 5570



U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5710



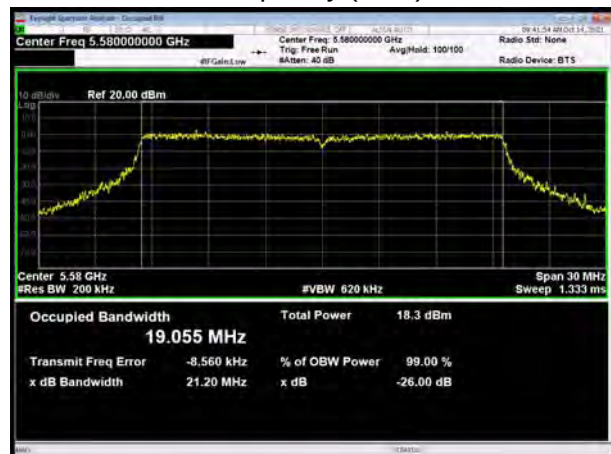
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5500



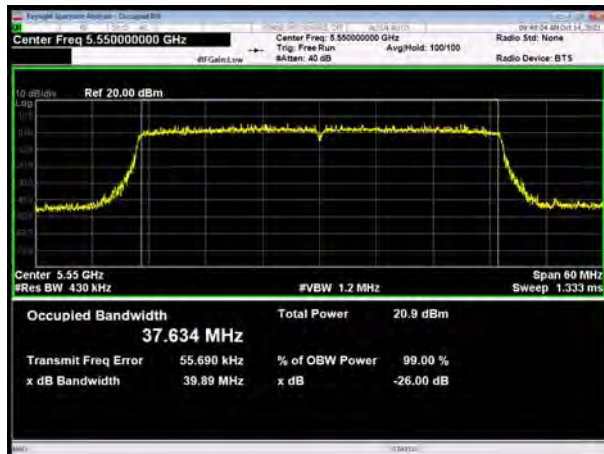
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5510



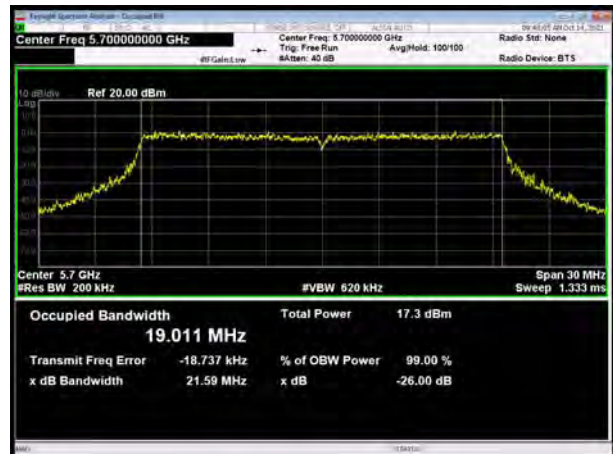
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5580



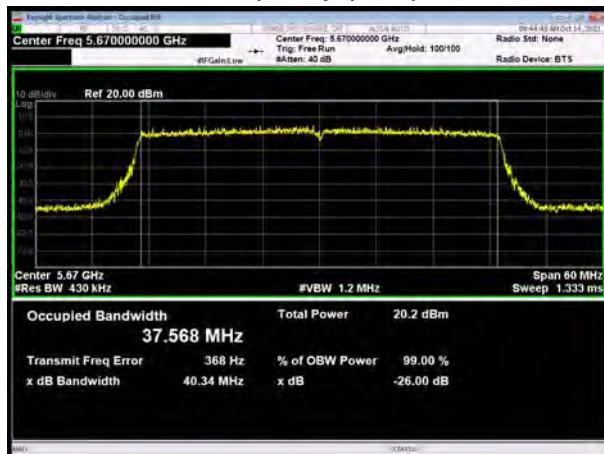
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5550



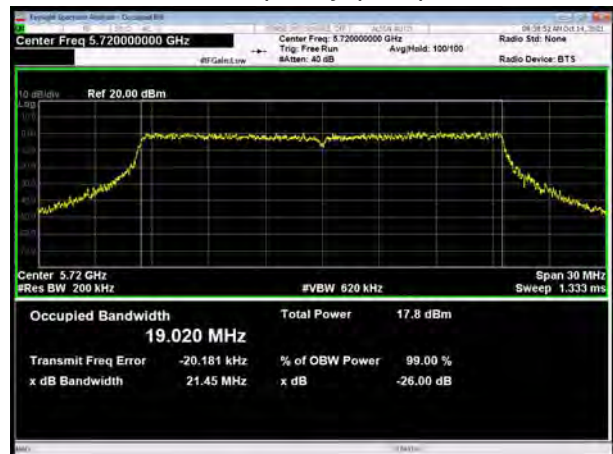
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5700



U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5670



U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5720



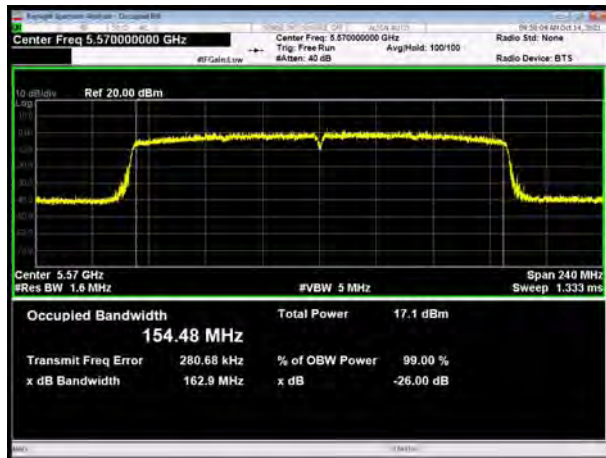
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5710



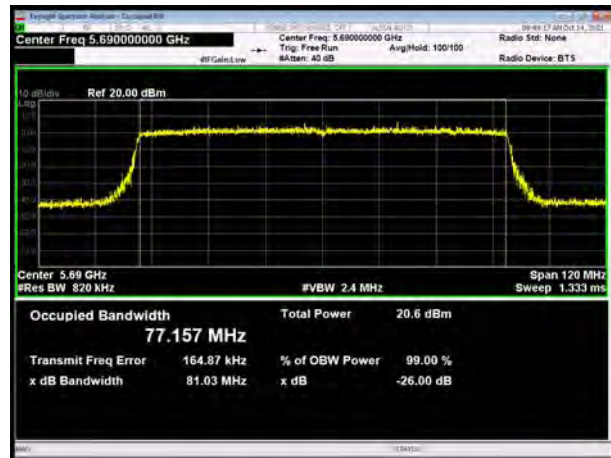
U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5530



U-NII-2C, 802.11ax HE160  
Carrier frequency (MHz): 5570

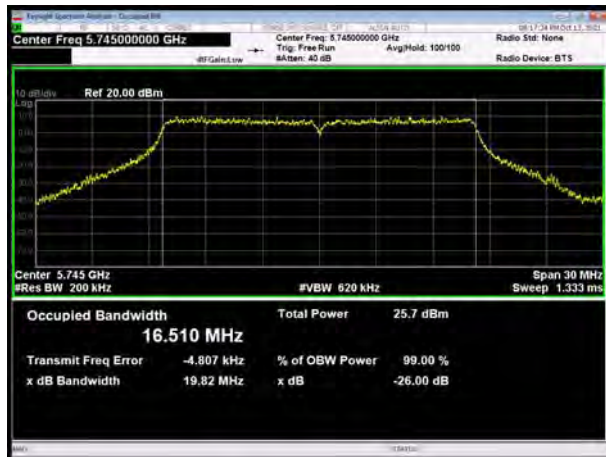


U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5690

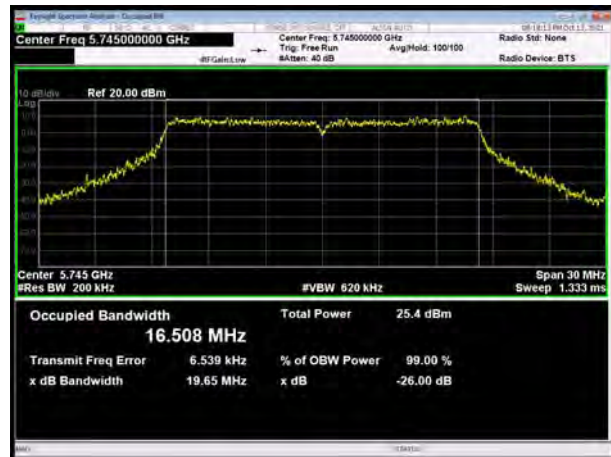


### 99% bandwidth

U-NII-3, 802.11a  
Carrier frequency (MHz): 5745



U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5745



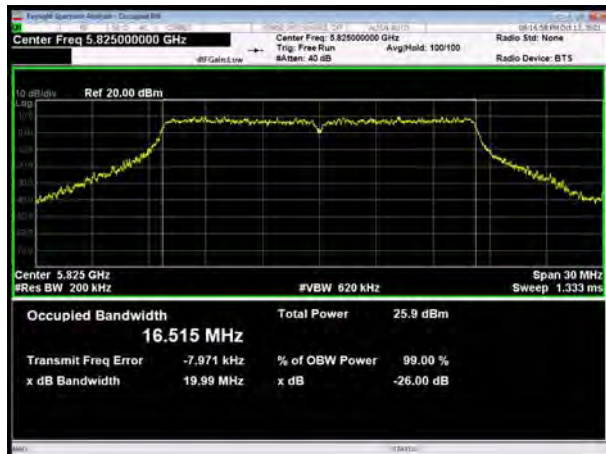
U-NII-3, 802.11a  
Carrier frequency (MHz): 5785



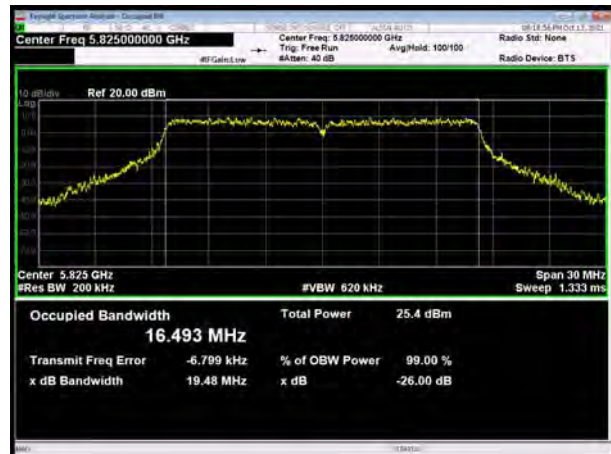
U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5785



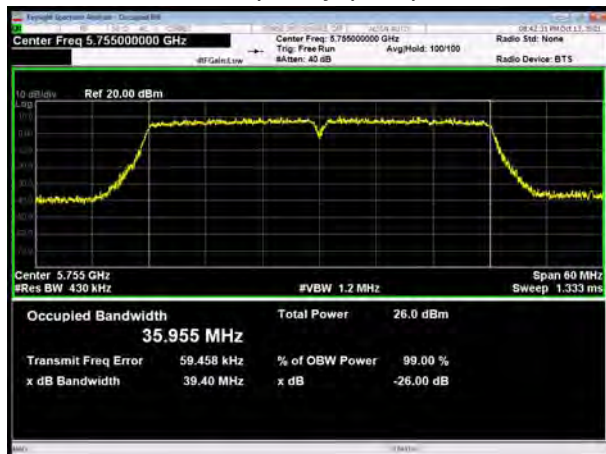
U-NII-3, 802.11a  
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5755



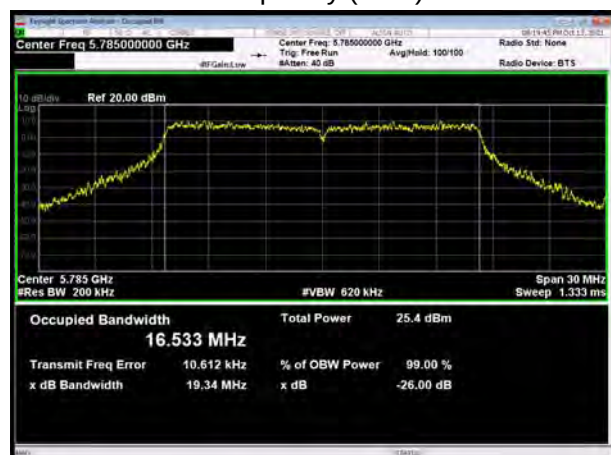
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5745



U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5785



U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5755



U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5825



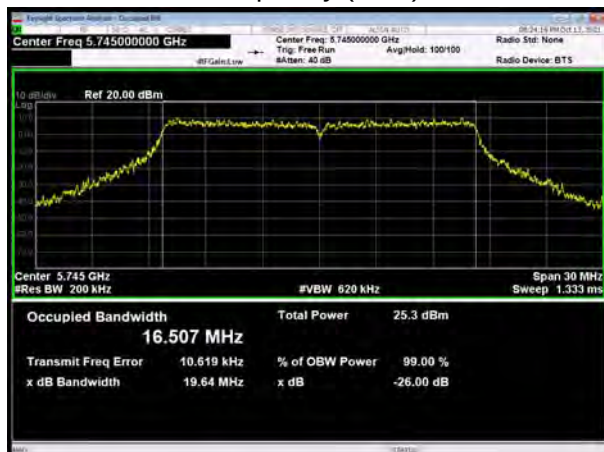
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT80  
Carrier frequency (MHz): 5775



U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5745



U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5755



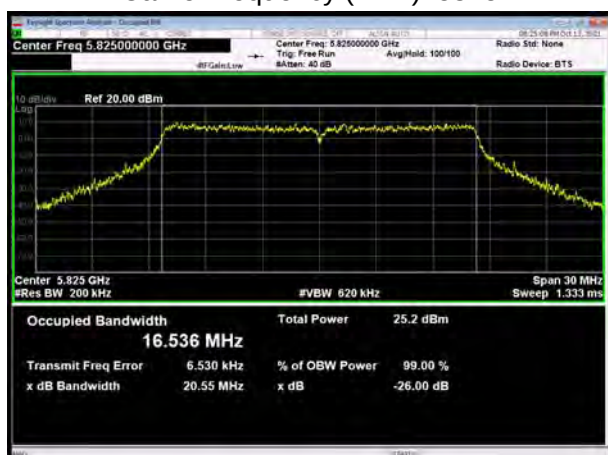
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5785



U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5825



U-NII-3, 802.11ax HE80  
Carrier frequency (MHz): 5775



# Minimum 6 dB bandwidth

U-NII-3, 802.11a

Carrier frequency (MHz): 5745



U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5745



U-NII-3, 802.11a

Carrier frequency (MHz): 5785



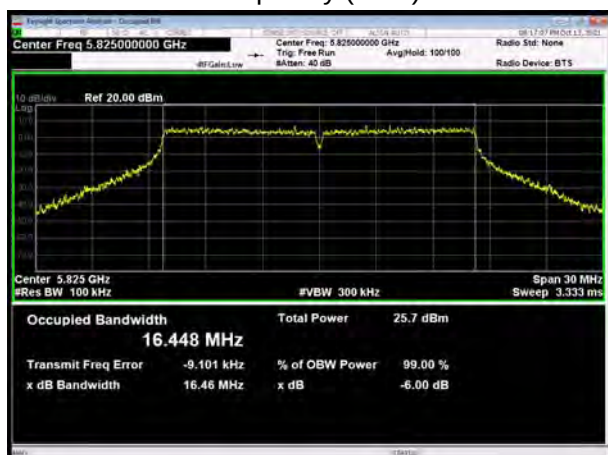
U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5785



U-NII-3, 802.11a

Carrier frequency (MHz): 5825

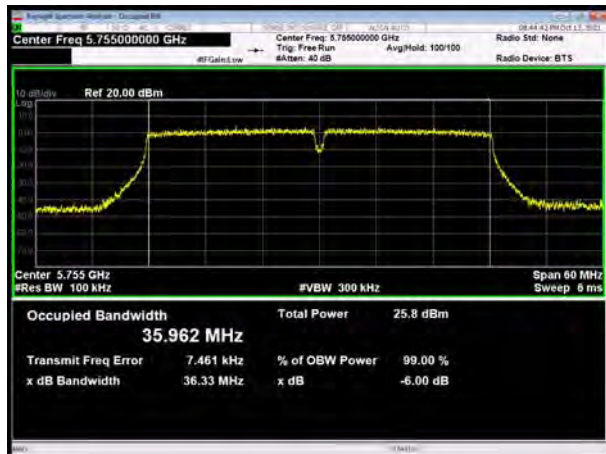


U-NII-3, 802.11n HT20

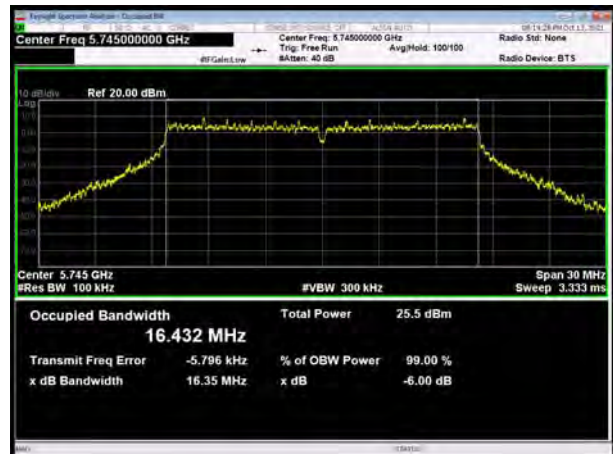
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5755



U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5745



U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5785



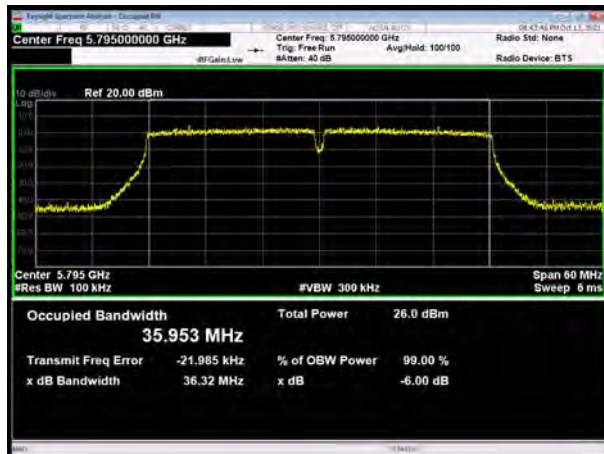
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5755



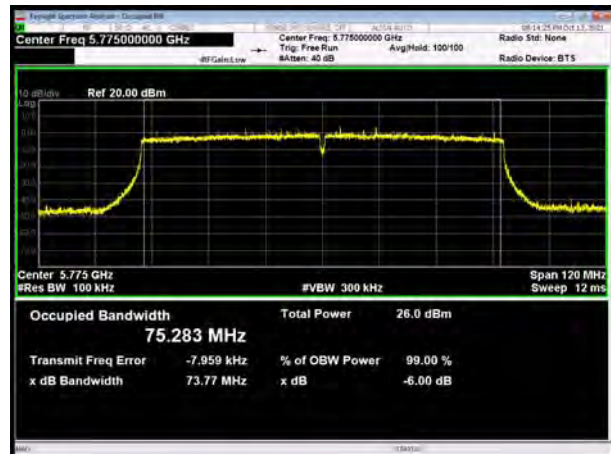
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5825



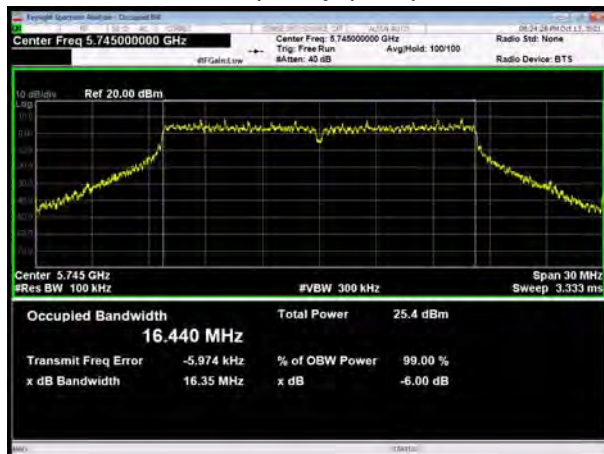
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5795



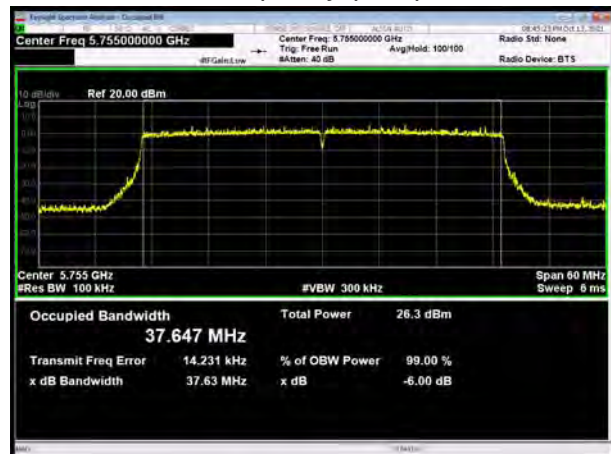
U-NII-3, 802.11ac VHT80  
Carrier frequency (MHz): 5775



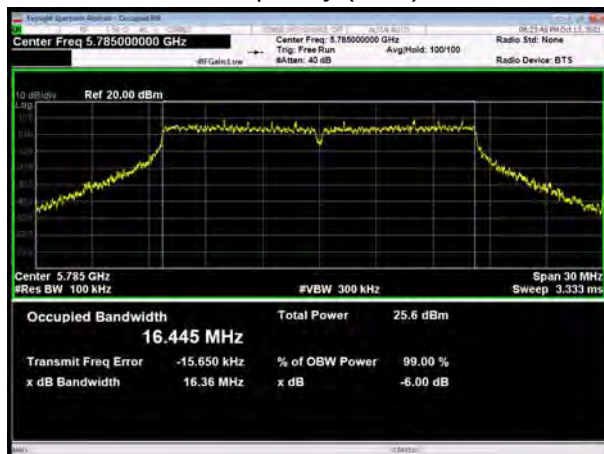
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5745



U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5755



U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5785



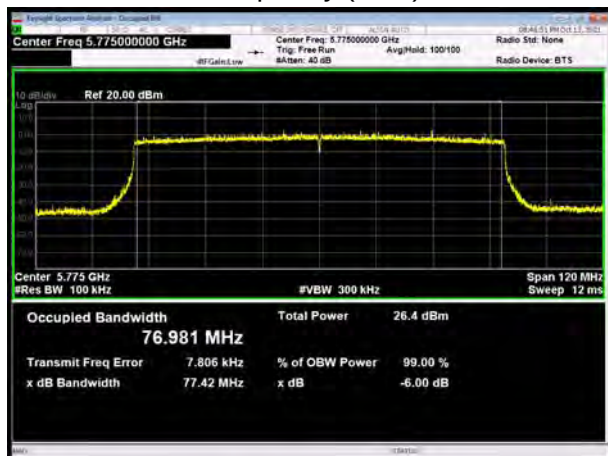
U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5825



U-NII-3, 802.11ax HE80  
Carrier frequency (MHz): 5775



## 5.2. Average Power Output

### Ambient condition

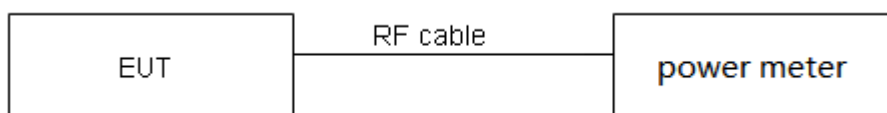
| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C  | 45%~50%           | 101.5kPa |

### Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

### Test Setup



### Limits

Rule FCC Part 15.407(a)(1)(2)(3)

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral

density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where  $B$  is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **Measurement Uncertainty**

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 0.44 \text{ dB}$ .

**Test Results**

| Mode                                                                           | T <sub>on</sub> (ms) | T <sub>(on+off)</sub> (ms) | Duty cycle | Duty cycle correction Factor(dB) |
|--------------------------------------------------------------------------------|----------------------|----------------------------|------------|----------------------------------|
| 802.11a                                                                        | 1.98                 | 2.24                       | 0.88       | 0.54                             |
| 802.11n HT20                                                                   | 5.43                 | 6.33                       | 0.86       | 0.66                             |
| 802.11n HT40                                                                   | 5.43                 | 6.33                       | 0.86       | 0.66                             |
| 802.11ac VHT20                                                                 | 5.40                 | 6.33                       | 0.85       | 0.69                             |
| 802.11ac VHT40                                                                 | 5.43                 | 6.36                       | 0.85       | 0.68                             |
| 802.11ac VHT80                                                                 | 5.40                 | 6.33                       | 0.85       | 0.69                             |
| 802.11ac VHT160                                                                | 5.43                 | 5.94                       | 0.92       | 0.39                             |
| 802.11ax HE20                                                                  | 5.43                 | 6.36                       | 0.85       | 0.68                             |
| 802.11ax HE40                                                                  | 5.43                 | 6.41                       | 0.85       | 0.72                             |
| 802.11ax HE80                                                                  | 5.43                 | 6.47                       | 0.84       | 0.76                             |
| 802.11ax HE160                                                                 | 5.46                 | 5.82                       | 0.94       | 0.28                             |
| Note: when Duty cycle $\geq 0.98$ , Duty cycle correction Factor not required. |                      |                            |            |                                  |

| Network Standards |                 | Channel/Frequency (MHz) | B=26 dB bandwidth (MHz) | Limit 11 dBm + 10 log B (dBm) | Final Limit(dBm) |
|-------------------|-----------------|-------------------------|-------------------------|-------------------------------|------------------|
| U-NII-2A          | 802.11a         | 52/5260                 | 19.86                   | 23.98<24                      | 23.98            |
|                   |                 | 60/5300                 | 20.00                   | 24.01>24                      | 24.00            |
|                   |                 | 64/5320                 | 19.69                   | 23.94<24                      | 23.94            |
|                   | 802.11n HT20    | 52/5260                 | 20.95                   | 24.21>24                      | 24.00            |
|                   |                 | 60/5300                 | 21.30                   | 24.28>24                      | 24.00            |
|                   |                 | 64/5320                 | 21.35                   | 24.29>24                      | 24.00            |
|                   | 802.11n HT40    | 54/5270                 | 39.44                   | 26.96>24                      | 24.00            |
|                   |                 | 62/5310                 | 39.15                   | 26.93>24                      | 24.00            |
|                   | 802.11ac VHT20  | 52/5260                 | 21.65                   | 24.35>24                      | 24.00            |
|                   |                 | 60/5300                 | 20.95                   | 24.21>24                      | 24.00            |
|                   |                 | 64/5320                 | 20.97                   | 24.22>24                      | 24.00            |
|                   | 802.11ac VHT40  | 54/5270                 | 40.01                   | 27.02>24                      | 24.00            |
|                   |                 | 62/5310                 | 39.78                   | 27.00>24                      | 24.00            |
|                   | 802.11ac VHT80  | 58/5290                 | 80.62                   | 30.06>24                      | 24.00            |
|                   | 802.11ac VHT160 | 50/5250                 | 164.31                  | 33.16>24                      | 24.00            |
|                   | 802.11ax HE20   | 52/5260                 | 21.65                   | 24.35 >24                     | 24.00            |
|                   |                 | 60/5300                 | 20.95                   | 24.21>24                      | 24.00            |
|                   |                 | 64/5320                 | 20.97                   | 24.22>24                      | 24.00            |
|                   | 802.11ax HE40   | 54/5270                 | 40.01                   | 27.02>24                      | 24.00            |



|          |                 |          |        |          |       |
|----------|-----------------|----------|--------|----------|-------|
|          |                 | 62/5310  | 81.08  | 30.09>24 | 24.00 |
|          | 802.11ax HE80   | 58/5290  | 81.08  | 30.09>24 | 24.00 |
|          | 802.11ax HE160  | 50/5250  | 162.80 | 33.12>24 | 24.00 |
| U-NII-2C | 802.11a         | 100/5500 | 19.90  | 23.99<24 | 23.99 |
|          |                 | 116/5580 | 19.99  | 24.01>24 | 24.00 |
|          |                 | 140/5700 | 19.65  | 23.93<24 | 23.93 |
|          |                 | 144/5720 | 20.04  | 24.02>24 | 24.00 |
|          | 802.11n HT20    | 100/5500 | 20.65  | 24.15>24 | 24.00 |
|          |                 | 116/5580 | 21.29  | 24.28>24 | 24.00 |
|          |                 | 140/5700 | 20.69  | 24.16>24 | 24.00 |
|          |                 | 144/5720 | 21.40  | 24.31>24 | 24.00 |
|          | 802.11n HT40    | 102/5510 | 39.20  | 26.93>24 | 24.00 |
|          |                 | 110/5550 | 39.37  | 26.95>24 | 24.00 |
|          |                 | 134/5670 | 38.89  | 26.90>24 | 24.00 |
|          |                 | 142/5710 | 39.18  | 26.93>24 | 24.00 |
|          | 802.11ac VHT20  | 100/5500 | 20.83  | 24.19>24 | 24.00 |
|          |                 | 116/5580 | 20.56  | 24.13>24 | 24.00 |
|          |                 | 140/5700 | 20.91  | 24.20>24 | 24.00 |
|          |                 | 144/5720 | 20.93  | 24.21>24 | 24.00 |
|          | 802.11ac VHT40  | 102/5510 | 39.29  | 26.94>24 | 24.00 |
|          |                 | 110/5550 | 39.43  | 26.96>24 | 24.00 |
|          |                 | 134/5670 | 39.02  | 26.91>24 | 24.00 |
|          |                 | 142/5710 | 39.38  | 26.95>24 | 24.00 |
|          | 802.11ac VHT80  | 106/5530 | 81.42  | 30.11>24 | 24.00 |
|          |                 | 138/5690 | 81.44  | 30.11>24 | 24.00 |
|          | 802.11ac VHT160 | 114/5570 | 163.40 | 33.13>24 | 24.00 |
|          | 802.11ax HE20   | 100/5500 | 21.55  | 24.34>24 | 24.00 |
|          |                 | 116/5580 | 21.20  | 24.26>24 | 24.00 |
|          |                 | 140/5700 | 21.59  | 24.34>24 | 24.00 |
|          |                 | 144/5720 | 21.45  | 24.31>24 | 24.00 |
|          | 802.11ax HE40   | 102/5510 | 40.43  | 27.07>24 | 24.00 |
|          |                 | 110/5550 | 39.89  | 27.01>24 | 24.00 |
|          |                 | 134/5670 | 40.34  | 27.06>24 | 24.00 |
|          |                 | 142/5710 | 39.91  | 27.01>24 | 24.00 |
|          | 802.11ax HE80   | 106/5530 | 81.55  | 30.11>24 | 24.00 |
|          |                 | 138/5690 | 81.03  | 30.09>24 | 24.00 |
|          | 802.11ax HE160  | 114/5570 | 162.93 | 33.12>24 | 24.00 |

Note: 250mW=24dBm

Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor

**Internal Antenna 1: HL**
**MIMO without Beamforming**
**U-NII-1**

| Network Standards | Channel/ Frequency (MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                          | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 36/5180                  | 20.61                        | 21.15                                | 20.34                        | 20.88                                | 20.19                        | 20.74                                | 20.36                        | 20.91                                | 26.94             | 30.00       | PASS       |
|                   | 40/5200                  | 20.49                        | 21.03                                | 20.48                        | 21.02                                | 20.12                        | 20.67                                | 20.42                        | 20.97                                | 26.94             | 30.00       | PASS       |
|                   | 48/5240                  | 20.18                        | 20.72                                | 20.67                        | 21.22                                | 20.07                        | 20.61                                | 20.57                        | 21.11                                | 26.94             | 30.00       | PASS       |
| 802.11n HT20      | 36/5180                  | 20.52                        | 21.18                                | 20.48                        | 21.14                                | 20.08                        | 20.74                                | 20.40                        | 21.06                                | 27.05             | 30.00       | PASS       |
|                   | 40/5200                  | 20.31                        | 20.97                                | 20.32                        | 20.98                                | 19.94                        | 20.61                                | 20.18                        | 20.84                                | 26.88             | 30.00       | PASS       |
|                   | 48/5240                  | 20.00                        | 20.66                                | 20.72                        | 21.38                                | 20.10                        | 20.76                                | 20.46                        | 21.12                                | 27.01             | 30.00       | PASS       |
| 802.11n HT40      | 38/5190                  | 16.89                        | 17.98                                | 16.84                        | 18.05                                | 16.42                        | 17.47                                | 16.28                        | 16.97                                | 23.66             | 30.00       | PASS       |
|                   | 46/5230                  | 22.14                        | 21.81                                | 22.39                        | 22.03                                | 22.18                        | 21.33                                | 22.25                        | 20.99                                | 27.58             | 30.00       | PASS       |
| 802.11ac VHT20    | 36/5180                  | 20.36                        | 21.04                                | 20.27                        | 20.95                                | 20.11                        | 20.80                                | 20.28                        | 20.96                                | 26.96             | 30.00       | PASS       |
|                   | 40/5200                  | 20.43                        | 21.12                                | 20.37                        | 21.05                                | 20.23                        | 20.92                                | 20.17                        | 20.86                                | 27.01             | 30.00       | PASS       |
|                   | 48/5240                  | 20.07                        | 20.76                                | 20.41                        | 21.10                                | 20.11                        | 20.79                                | 20.20                        | 20.88                                | 26.90             | 30.00       | PASS       |
| 802.11ac VHT40    | 38/5190                  | 17.05                        | 17.94                                | 16.68                        | 18.22                                | 16.30                        | 17.46                                | 16.80                        | 17.20                                | 23.75             | 30.00       | PASS       |
|                   | 46/5230                  | 21.61                        | 21.85                                | 21.96                        | 21.89                                | 21.68                        | 21.32                                | 21.39                        | 20.97                                | 27.55             | 30.00       | PASS       |
| 802.11ac VHT80    | 42/5210                  | 15.65                        | 16.67                                | 15.52                        | 16.70                                | 15.52                        | 16.13                                | 15.42                        | 15.91                                | 22.38             | 30.00       | PASS       |
| 802.11ax HE20     | 36/5180                  | 20.61                        | 21.29                                | 20.36                        | 21.04                                | 20.15                        | 20.83                                | 20.22                        | 20.90                                | 27.04             | 30.00       | PASS       |
|                   | 40/5200                  | 20.36                        | 21.04                                | 20.43                        | 21.11                                | 20.32                        | 21.00                                | 20.19                        | 20.87                                | 27.03             | 30.00       | PASS       |
|                   | 48/5240                  | 20.15                        | 20.84                                | 20.68                        | 21.37                                | 20.37                        | 21.05                                | 20.27                        | 20.95                                | 27.08             | 30.00       | PASS       |
| 802.11ax HE40     | 38/5190                  | 16.14                        | 15.81                                | 15.72                        | 17.48                                | 15.87                        | 15.00                                | 15.63                        | 16.14                                | 22.22             | 30.00       | PASS       |
|                   | 46/5230                  | 22.18                        | 21.84                                | 22.54                        | 21.97                                | 21.98                        | 21.00                                | 22.34                        | 21.08                                | 27.52             | 30.00       | PASS       |
| 802.11ax HE80     | 42/5210                  | 15.72                        | 16.63                                | 15.93                        | 17.19                                | 15.94                        | 15.00                                | 15.70                        | 16.28                                | 22.37             | 30.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),  
The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. The manufacturer declared that the directional gain = 3.40Bi<6dBi. So the power limit is 30dBm.

**U-NII-2A**

| Network Standards | Channel/<br>Frequency (MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|-----------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                             | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 52/5260                     | 13.61                        | 14.15                                | 14.82                        | 15.36                                | 13.68                        | 14.22                                | 13.83                        | 14.37                                | 20.58             | 23.98       | PASS       |
|                   | 60/5300                     | 13.24                        | 13.78                                | 14.25                        | 14.79                                | 13.34                        | 13.88                                | 13.11                        | 13.65                                | 20.07             | 24.00       | PASS       |
|                   | 64/5320                     | 12.89                        | 13.43                                | 13.88                        | 14.42                                | 12.82                        | 13.36                                | 13.09                        | 13.63                                | 19.76             | 23.94       | PASS       |
| 802.11n HT20      | 52/5260                     | 13.03                        | 13.69                                | 13.87                        | 13.99                                | 13.21                        | 13.87                                | 14.03                        | 14.69                                | 20.10             | 24.00       | PASS       |
|                   | 60/5300                     | 13.60                        | 14.26                                | 14.72                        | 15.38                                | 13.75                        | 14.41                                | 13.67                        | 14.33                                | 20.64             | 24.00       | PASS       |
|                   | 64/5320                     | 14.02                        | 14.68                                | 14.85                        | 15.52                                | 13.90                        | 14.56                                | 13.86                        | 14.52                                | 20.86             | 24.00       | PASS       |
| 802.11n HT40      | 54/5270                     | 17.12                        | 17.78                                | 17.74                        | 18.41                                | 16.93                        | 17.59                                | 16.85                        | 17.52                                | 23.86             | 24.00       | PASS       |
|                   | 62/5310                     | 16.76                        | 17.42                                | 17.59                        | 18.26                                | 16.73                        | 17.40                                | 16.63                        | 17.29                                | 23.63             | 24.00       | PASS       |
| 802.11ac VHT20    | 52/5260                     | 13.22                        | 13.91                                | 14.27                        | 14.96                                | 13.33                        | 14.02                                | 13.69                        | 14.37                                | 20.35             | 24.00       | PASS       |
|                   | 60/5300                     | 13.79                        | 14.47                                | 14.69                        | 15.37                                | 13.72                        | 14.41                                | 13.41                        | 14.09                                | 20.63             | 24.00       | PASS       |
|                   | 64/5320                     | 13.96                        | 14.64                                | 14.79                        | 15.47                                | 13.84                        | 14.53                                | 13.69                        | 14.37                                | 20.80             | 24.00       | PASS       |
| 802.11ac VHT40    | 54/5270                     | 17.11                        | 17.79                                | 17.84                        | 18.52                                | 16.96                        | 17.64                                | 16.80                        | 17.48                                | 23.90             | 24.00       | PASS       |
|                   | 62/5310                     | 15.73                        | 16.41                                | 17.09                        | 17.77                                | 15.98                        | 16.66                                | 17.16                        | 17.84                                | 23.24             | 24.00       | PASS       |
| 802.11ac VHT80    | 58/5290                     | 13.99                        | 14.68                                | 14.29                        | 14.98                                | 13.82                        | 16.00                                | 13.55                        | 14.23                                | 21.04             | 24.00       | PASS       |
| 802.11ac VHT160   | 50/5250                     | 12.12                        | 12.51                                | 12.81                        | 13.19                                | 11.59                        | 11.98                                | 11.66                        | 12.05                                | 18.48             | 24.00       | PASS       |
| 802.11ax HE20     | 52/5260                     | 12.14                        | 12.82                                | 13.56                        | 14.25                                | 12.14                        | 12.82                                | 13.17                        | 13.85                                | 19.50             | 24.00       | PASS       |
|                   | 60/5300                     | 14.19                        | 14.88                                | 15.20                        | 15.88                                | 14.52                        | 15.20                                | 13.94                        | 14.62                                | 21.19             | 24.00       | PASS       |
|                   | 64/5320                     | 14.46                        | 15.14                                | 15.35                        | 16.03                                | 14.56                        | 15.25                                | 14.01                        | 14.70                                | 21.33             | 24.00       | PASS       |
| 802.11ax HE40     | 54/5270                     | 17.32                        | 18.04                                | 17.14                        | 17.86                                | 17.04                        | 17.76                                | 17.03                        | 17.75                                | 23.88             | 24.00       | PASS       |
|                   | 62/5310                     | 16.71                        | 17.43                                | 17.49                        | 18.21                                | 16.51                        | 17.23                                | 16.28                        | 17.00                                | 23.51             | 24.00       | PASS       |
| 802.11ax HE80     | 58/5290                     | 14.03                        | 14.79                                | 14.25                        | 15.01                                | 13.99                        | 14.75                                | 13.89                        | 14.65                                | 20.82             | 24.00       | PASS       |
| 802.11ax HE160    | 50/5250                     | 12.09                        | 12.37                                | 13.01                        | 13.29                                | 12.18                        | 12.46                                | 13.15                        | 13.43                                | 18.93             | 24.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

**U-NII-2C**

| Network Standards  | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|--------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                    |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a            | 100/5500                       | 15.01                                 | 15.55                                               | 14.78                                 | 15.32                                               | 13.98                                 | 14.53                                               | 13.83                                 | 14.38                                               | 20.99                   | 23.99          | PASS       |
|                    | 116/5580                       | 14.44                                 | 14.99                                               | 14.77                                 | 15.31                                               | 13.63                                 | 14.17                                               | 13.84                                 | 14.38                                               | 20.76                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.73                                 | 14.27                                               | 14.12                                 | 14.66                                               | 14.82                                 | 15.36                                               | 14.99                                 | 15.53                                               | 21.01                   | 23.93          | PASS       |
|                    | 144/5720                       | 13.32                                 | 13.86                                               | 13.72                                 | 14.26                                               | 14.85                                 | 15.39                                               | 14.82                                 | 15.36                                               | 20.79                   | 24.00          | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 14.38                                 | 15.05                                               | 14.33                                 | 14.99                                               | 13.34                                 | 14.00                                               | 13.42                                 | 14.09                                               | 20.58                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.53                                 | 15.19                                               | 14.61                                 | 15.27                                               | 13.61                                 | 14.28                                               | 13.92                                 | 14.58                                               | 20.87                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.39                                 | 14.05                                               | 15.21                                 | 15.87                                               | 13.27                                 | 13.93                                               | 15.34                                 | 16.00                                               | 21.09                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.86                                 | 14.53                                               | 14.12                                 | 14.79                                               | 15.18                                 | 15.84                                               | 15.15                                 | 15.82                                               | 21.30                   | 24.00          | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 16.61                                 | 17.27                                               | 16.73                                 | 17.40                                               | 16.23                                 | 16.90                                               | 15.93                                 | 16.60                                               | 23.07                   | 24.00          | PASS       |
|                    | 110/5550                       | 16.97                                 | 17.63                                               | 17.07                                 | 17.73                                               | 15.80                                 | 16.47                                               | 16.07                                 | 16.73                                               | 23.19                   | 24.00          | PASS       |
|                    | 134/5670                       | 16.48                                 | 17.14                                               | 16.45                                 | 17.11                                               | 16.89                                 | 17.55                                               | 17.00                                 | 17.66                                               | 23.39                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.14                                 | 16.80                                               | 16.36                                 | 17.02                                               | 17.34                                 | 18.00                                               | 17.52                                 | 18.18                                               | 23.56                   | 24.00          | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 14.33                                 | 15.02                                               | 14.42                                 | 15.10                                               | 13.31                                 | 14.00                                               | 13.39                                 | 14.07                                               | 20.60                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.29                                 | 14.97                                               | 14.77                                 | 15.45                                               | 13.33                                 | 14.01                                               | 13.87                                 | 14.56                                               | 20.80                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.12                                 | 13.81                                               | 15.06                                 | 15.75                                               | 13.57                                 | 14.26                                               | 15.00                                 | 15.69                                               | 20.98                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.99                                 | 14.68                                               | 14.05                                 | 14.74                                               | 15.01                                 | 15.69                                               | 15.42                                 | 16.11                                               | 21.37                   | 24.00          | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 16.68                                 | 17.36                                               | 16.84                                 | 17.52                                               | 16.38                                 | 17.07                                               | 16.02                                 | 16.71                                               | 23.19                   | 24.00          | PASS       |
|                    | 110/5550                       | 17.17                                 | 17.85                                               | 17.24                                 | 17.92                                               | 16.12                                 | 16.80                                               | 16.07                                 | 16.75                                               | 23.39                   | 24.00          | PASS       |
|                    | 134/5670                       | 16.50                                 | 17.18                                               | 16.36                                 | 17.05                                               | 17.00                                 | 17.68                                               | 16.93                                 | 17.61                                               | 23.41                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.28                                 | 16.96                                               | 16.40                                 | 17.08                                               | 17.39                                 | 18.07                                               | 17.58                                 | 18.26                                               | 23.65                   | 24.00          | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 16.58                                 | 17.26                                               | 16.82                                 | 17.51                                               | 15.64                                 | 16.32                                               | 15.66                                 | 16.35                                               | 22.91                   | 24.00          | PASS       |
|                    | 138/5690                       | 16.19                                 | 16.87                                               | 16.37                                 | 17.06                                               | 16.93                                 | 17.61                                               | 17.09                                 | 17.78                                               | 23.37                   | 24.00          | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | 12.72                                 | 13.10                                               | 12.74                                 | 13.13                                               | 11.34                                 | 11.72                                               | 11.61                                 | 11.99                                               | 18.55                   | 24.00          | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 15.04                                 | 15.73                                               | 14.78                                 | 15.47                                               | 14.18                                 | 14.86                                               | 13.75                                 | 14.43                                               | 21.17                   | 24.00          | PASS       |
|                    | 116/5580                       | 15.13                                 | 15.81                                               | 15.24                                 | 15.92                                               | 14.15                                 | 14.84                                               | 14.30                                 | 14.99                                               | 21.44                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.83                                 | 14.51                                               | 14.10                                 | 14.78                                               | 14.99                                 | 15.67                                               | 15.15                                 | 15.83                                               | 21.26                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.26                                 | 13.94                                               | 13.78                                 | 14.46                                               | 15.01                                 | 15.69                                               | 14.84                                 | 15.52                                               | 20.98                   | 24.00          | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 16.92                                 | 17.64                                               | 16.95                                 | 17.67                                               | 16.29                                 | 17.01                                               | 16.11                                 | 16.83                                               | 23.32                   | 24.00          | PASS       |
|                    | 110/5550                       | 17.15                                 | 17.87                                               | 17.36                                 | 18.08                                               | 16.34                                 | 17.06                                               | 16.02                                 | 16.74                                               | 23.50                   | 24.00          | PASS       |
|                    | 134/5670                       | 16.53                                 | 17.25                                               | 16.74                                 | 17.46                                               | 17.33                                 | 18.05                                               | 17.17                                 | 17.89                                               | 23.69                   | 24.00          | PASS       |



|                   |          |       |       |       |       |       |       |       |       |       |       |      |
|-------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
|                   | 142/5710 | 16.24 | 16.96 | 16.57 | 17.29 | 17.70 | 18.42 | 17.73 | 18.45 | 23.85 | 24.00 | PASS |
| 802.11ax<br>HE80  | 106/5530 | 16.98 | 17.73 | 17.36 | 18.12 | 16.01 | 16.77 | 15.97 | 16.73 | 23.40 | 24.00 | PASS |
|                   | 138/5690 | 16.54 | 17.30 | 16.65 | 17.41 | 17.25 | 18.01 | 17.45 | 18.21 | 23.77 | 24.00 | PASS |
| 802.11ax<br>HE160 | 114/5570 | 12.94 | 13.22 | 13.04 | 13.32 | 11.99 | 12.27 | 12.01 | 12.29 | 18.82 | 24.00 | PASS |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

## U-NII-3

| Network Standards | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a           | 149/5745                       | 22.45                                 | 22.99                                               | 22.13                                 | 22.67                                               | 23.71                                 | 24.26                                               | 23.54                                 | 24.08                                               | 29.57                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.64                                 | 23.18                                               | 22.48                                 | 23.03                                               | 24.18                                 | 24.73                                               | 23.70                                 | 24.25                                               | 29.88                   | 30.00          | PASS       |
|                   | 165/5825                       | 22.09                                 | 22.63                                               | 22.75                                 | 23.29                                               | 24.11                                 | 24.65                                               | 23.68                                 | 24.22                                               | 29.79                   | 30.00          | PASS       |
| 802.11n<br>HT20   | 149/5745                       | 21.99                                 | 22.65                                               | 21.58                                 | 22.24                                               | 23.28                                 | 23.94                                               | 22.80                                 | 23.46                                               | 29.15                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.10                                 | 22.76                                               | 21.70                                 | 22.36                                               | 23.81                                 | 24.47                                               | 23.11                                 | 23.77                                               | 29.44                   | 30.00          | PASS       |
|                   | 165/5825                       | 21.38                                 | 22.04                                               | 22.10                                 | 22.76                                               | 23.58                                 | 24.24                                               | 22.85                                 | 23.51                                               | 29.24                   | 30.00          | PASS       |
| 802.11n<br>HT40   | 151/5755                       | 22.23                                 | 22.89                                               | 22.44                                 | 23.11                                               | 23.67                                 | 24.33                                               | 23.22                                 | 23.89                                               | 29.61                   | 30.00          | PASS       |
|                   | 159/5795                       | 21.96                                 | 22.62                                               | 22.08                                 | 22.74                                               | 23.94                                 | 24.60                                               | 23.08                                 | 23.74                                               | 29.52                   | 30.00          | PASS       |
| 802.11ac<br>VHT20 | 149/5745                       | 22.57                                 | 23.26                                               | 21.93                                 | 22.62                                               | 23.18                                 | 23.87                                               | 22.75                                 | 23.44                                               | 29.34                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.20                                 | 22.89                                               | 21.77                                 | 22.46                                               | 23.74                                 | 24.43                                               | 23.13                                 | 23.81                                               | 29.48                   | 30.00          | PASS       |
|                   | 165/5825                       | 21.52                                 | 22.21                                               | 22.12                                 | 22.81                                               | 23.64                                 | 24.33                                               | 23.00                                 | 23.69                                               | 29.35                   | 30.00          | PASS       |
| 802.11ac<br>VHT40 | 151/5755                       | 22.23                                 | 22.91                                               | 21.86                                 | 22.54                                               | 23.72                                 | 24.40                                               | 23.46                                 | 24.14                                               | 29.59                   | 30.00          | PASS       |
|                   | 159/5795                       | 22.11                                 | 22.79                                               | 22.19                                 | 22.87                                               | 24.41                                 | 25.09                                               | 23.23                                 | 23.92                                               | 29.79                   | 30.00          | PASS       |
| 802.11ac<br>VHT80 | 155/5775                       | 21.67                                 | 22.36                                               | 22.09                                 | 22.78                                               | 20.97                                 | 21.66                                               | 21.03                                 | 21.72                                               | 28.17                   | 30.00          | PASS       |
| 802.11ax<br>HE20  | 149/5745                       | 22.64                                 | 23.32                                               | 22.02                                 | 22.70                                               | 23.85                                 | 24.53                                               | 23.26                                 | 23.94                                               | 29.70                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.55                                 | 23.23                                               | 22.43                                 | 23.11                                               | 24.31                                 | 24.99                                               | 23.44                                 | 24.12                                               | 29.95                   | 30.00          | PASS       |
|                   | 165/5825                       | 22.01                                 | 22.69                                               | 22.75                                 | 23.43                                               | 24.21                                 | 24.89                                               | 23.51                                 | 24.19                                               | 29.90                   | 30.00          | PASS       |
| 802.11ax<br>HE40  | 151/5755                       | 22.24                                 | 22.96                                               | 22.38                                 | 23.10                                               | 23.83                                 | 24.55                                               | 23.34                                 | 24.06                                               | 29.74                   | 30.00          | PASS       |
|                   | 159/5795                       | 22.18                                 | 22.90                                               | 22.57                                 | 23.29                                               | 24.34                                 | 25.06                                               | 23.50                                 | 24.22                                               | 29.97                   | 30.00          | PASS       |
| 802.11ax<br>HE80  | 155/5775                       | 20.73                                 | 21.49                                               | 21.63                                 | 22.39                                               | 20.71                                 | 21.47                                               | 21.86                                 | 22.62                                               | 28.04                   | 30.00          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. The manufacturer declared that the directional gain = 3.40dBi<6dBi. So the power limit is 30dBm.

**MIMO with Beamforming****U-NII-1**

| Network Standards | Channel/ Frequency (MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                          | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 36/5180                  | 20.53                        | 21.07                                | 19.97                        | 20.52                                | 20.01                        | 20.55                                | 20.16                        | 20.71                                | 26.74             | 30.00       | PASS       |
|                   | 40/5200                  | 20.25                        | 20.79                                | 19.96                        | 20.50                                | 19.83                        | 20.37                                | 20.25                        | 20.79                                | 26.64             | 30.00       | PASS       |
|                   | 48/5240                  | 20.06                        | 20.60                                | 20.36                        | 20.91                                | 19.91                        | 20.46                                | 20.30                        | 20.84                                | 26.73             | 30.00       | PASS       |
| 802.11n HT20      | 36/5180                  | 19.65                        | 20.31                                | 19.54                        | 20.20                                | 19.49                        | 20.15                                | 19.47                        | 20.13                                | 26.22             | 30.00       | PASS       |
|                   | 40/5200                  | 20.06                        | 20.72                                | 20.01                        | 20.67                                | 19.87                        | 20.53                                | 20.02                        | 20.68                                | 26.67             | 30.00       | PASS       |
|                   | 48/5240                  | 20.81                        | 21.47                                | 20.74                        | 21.40                                | 20.55                        | 21.21                                | 20.61                        | 21.27                                | 27.36             | 30.00       | PASS       |
| 802.11n HT40      | 38/5190                  | 17.16                        | 17.98                                | 17.42                        | 18.05                                | 16.75                        | 17.47                                | 16.72                        | 16.97                                | 23.66             | 30.00       | PASS       |
|                   | 46/5230                  | 21.47                        | 21.81                                | 21.58                        | 22.03                                | 21.26                        | 21.33                                | 21.56                        | 20.99                                | 27.58             | 30.00       | PASS       |
| 802.11ac VHT20    | 36/5180                  | 19.49                        | 20.18                                | 19.38                        | 20.07                                | 19.42                        | 20.11                                | 19.61                        | 20.30                                | 26.18             | 30.00       | PASS       |
|                   | 40/5200                  | 20.15                        | 20.84                                | 20.18                        | 20.87                                | 20.21                        | 20.90                                | 20.27                        | 20.96                                | 26.91             | 30.00       | PASS       |
|                   | 48/5240                  | 20.67                        | 21.36                                | 20.60                        | 21.29                                | 20.53                        | 21.22                                | 20.55                        | 21.24                                | 27.29             | 30.00       | PASS       |
| 802.11ac VHT40    | 38/5190                  | 17.09                        | 17.94                                | 17.36                        | 18.22                                | 16.54                        | 17.46                                | 16.51                        | 17.20                                | 23.75             | 30.00       | PASS       |
|                   | 46/5230                  | 21.29                        | 21.85                                | 21.54                        | 21.89                                | 21.29                        | 21.32                                | 21.55                        | 20.97                                | 27.55             | 30.00       | PASS       |
| 802.11ac VHT80    | 42/5210                  | 15.95                        | 16.67                                | 16.38                        | 16.70                                | 15.49                        | 16.13                                | 15.25                        | 15.91                                | 22.38             | 30.00       | PASS       |
| 802.11ax HE20     | 36/5180                  | 20.51                        | 21.19                                | 20.02                        | 20.70                                | 19.98                        | 20.66                                | 20.19                        | 20.88                                | 26.88             | 30.00       | PASS       |
|                   | 40/5200                  | 20.04                        | 20.72                                | 20.14                        | 20.82                                | 19.95                        | 20.63                                | 20.15                        | 20.83                                | 26.77             | 30.00       | PASS       |
|                   | 48/5240                  | 19.95                        | 20.63                                | 20.28                        | 20.96                                | 19.87                        | 20.56                                | 20.08                        | 20.76                                | 26.75             | 30.00       | PASS       |
| 802.11ax HE40     | 38/5190                  | 16.34                        | 15.81                                | 16.77                        | 17.48                                | 15.81                        | 15.00                                | 15.27                        | 16.14                                | 22.22             | 30.00       | PASS       |
|                   | 46/5230                  | 22.16                        | 21.84                                | 22.38                        | 21.97                                | 21.99                        | 21.00                                | 22.05                        | 21.08                                | 27.52             | 30.00       | PASS       |
| 802.11ax HE80     | 42/5210                  | 16.12                        | 16.63                                | 16.37                        | 17.19                                | 16.02                        | 15.00                                | 15.73                        | 16.28                                | 22.37             | 30.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the power limit is 30dBm.



## U-NII-2A

| Network Standards  | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|--------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                    |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a            | 52/5260                        | 14.52                                 | 15.06                                               | 14.57                                 | 15.11                                               | 12.64                                 | 13.18                                               | 12.59                                 | 13.13                                               | 20.25                   | 24.00          | PASS       |
|                    | 60/5300                        | 14.63                                 | 15.17                                               | 14.61                                 | 15.15                                               | 12.59                                 | 13.13                                               | 12.51                                 | 13.05                                               | 20.27                   | 24.00          | PASS       |
|                    | 64/5320                        | 12.92                                 | 12.00                                               | 13.06                                 | 13.60                                               | 12.96                                 | 13.50                                               | 13.11                                 | 13.65                                               | 19.26                   | 24.00          | PASS       |
| 802.11n<br>HT20    | 52/5260                        | 13.01                                 | 13.00                                               | 13.77                                 | 14.43                                               | 13.27                                 | 13.93                                               | 14.13                                 | 14.79                                               | 20.11                   | 24.00          | PASS       |
|                    | 60/5300                        | 13.60                                 | 14.26                                               | 14.37                                 | 15.03                                               | 13.61                                 | 14.27                                               | 13.26                                 | 13.92                                               | 20.41                   | 24.00          | PASS       |
|                    | 64/5320                        | 13.73                                 | 14.39                                               | 14.51                                 | 15.18                                               | 13.59                                 | 14.25                                               | 13.34                                 | 14.00                                               | 20.50                   | 24.00          | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 17.76                                 | 18.42                                               | 17.72                                 | 18.38                                               | 15.81                                 | 16.47                                               | 15.70                                 | 16.36                                               | 23.54                   | 24.00          | PASS       |
|                    | 62/5310                        | 15.92                                 | 16.58                                               | 17.26                                 | 17.92                                               | 16.07                                 | 16.73                                               | 15.75                                 | 16.41                                               | 22.97                   | 24.00          | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 13.26                                 | 13.95                                               | 14.59                                 | 15.27                                               | 13.32                                 | 14.01                                               | 13.35                                 | 14.04                                               | 20.37                   | 24.00          | PASS       |
|                    | 60/5300                        | 14.65                                 | 15.34                                               | 14.72                                 | 15.41                                               | 12.75                                 | 13.44                                               | 12.69                                 | 13.38                                               | 20.52                   | 24.00          | PASS       |
|                    | 64/5320                        | 14.81                                 | 15.50                                               | 14.84                                 | 15.53                                               | 12.93                                 | 13.62                                               | 12.92                                 | 13.61                                               | 20.68                   | 24.00          | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 17.77                                 | 18.45                                               | 17.85                                 | 18.53                                               | 15.82                                 | 16.50                                               | 15.74                                 | 16.42                                               | 23.62                   | 24.00          | PASS       |
|                    | 62/5310                        | 15.81                                 | 16.49                                               | 17.26                                 | 17.94                                               | 16.52                                 | 17.20                                               | 16.10                                 | 16.79                                               | 23.16                   | 24.00          | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | 13.86                                 | 14.55                                               | 14.11                                 | 14.80                                               | 13.81                                 | 16.00                                               | 13.97                                 | 14.66                                               | 21.06                   | 24.00          | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | 12.12                                 | 12.51                                               | 12.42                                 | 12.81                                               | 11.97                                 | 12.36                                               | 11.47                                 | 11.86                                               | 18.41                   | 24.00          | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 12.15                                 | 12.83                                               | 13.46                                 | 14.14                                               | 12.16                                 | 12.84                                               | 12.96                                 | 13.64                                               | 19.42                   | 24.00          | PASS       |
|                    | 60/5300                        | 14.61                                 | 15.29                                               | 14.63                                 | 15.31                                               | 12.84                                 | 13.52                                               | 12.61                                 | 13.29                                               | 20.48                   | 24.00          | PASS       |
|                    | 64/5320                        | 14.77                                 | 15.45                                               | 14.75                                 | 15.43                                               | 12.85                                 | 13.53                                               | 12.84                                 | 13.52                                               | 20.61                   | 24.00          | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 17.73                                 | 18.45                                               | 17.76                                 | 18.48                                               | 15.89                                 | 16.61                                               | 15.68                                 | 16.40                                               | 23.62                   | 24.00          | PASS       |
|                    | 62/5310                        | 16.22                                 | 16.94                                               | 16.90                                 | 17.62                                               | 16.23                                 | 16.95                                               | 15.82                                 | 16.54                                               | 23.05                   | 24.00          | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | 14.08                                 | 14.84                                               | 14.05                                 | 14.81                                               | 13.89                                 | 14.65                                               | 14.11                                 | 14.87                                               | 20.81                   | 24.00          | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | 12.34                                 | 12.62                                               | 12.46                                 | 12.74                                               | 12.27                                 | 12.55                                               | 12.68                                 | 12.96                                               | 18.74                   | 24.00          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .



## U-NII-2C

| Network Standards  | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|--------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                    |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a            | 100/5500                       | 14.13                                 | 14.67                                               | 14.46                                 | 15.00                                               | 13.27                                 | 13.81                                               | 13.72                                 | 14.26                                               | 20.48                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.11                                 | 14.65                                               | 14.63                                 | 15.17                                               | 13.33                                 | 13.87                                               | 13.61                                 | 14.15                                               | 20.51                   | 24.00          | PASS       |
|                    | 140/5700                       | 14.57                                 | 15.11                                               | 14.39                                 | 14.93                                               | 16.02                                 | 16.56                                               | 15.45                                 | 15.99                                               | 21.72                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.20                                 | 13.74                                               | 13.64                                 | 14.18                                               | 14.72                                 | 15.26                                               | 14.68                                 | 15.23                                               | 20.67                   | 24.00          | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 14.03                                 | 14.69                                               | 14.13                                 | 14.79                                               | 13.22                                 | 13.88                                               | 13.52                                 | 14.18                                               | 20.42                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.05                                 | 14.71                                               | 14.48                                 | 15.14                                               | 13.39                                 | 14.05                                               | 13.72                                 | 14.38                                               | 20.61                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.15                                 | 13.81                                               | 15.01                                 | 15.67                                               | 13.81                                 | 14.47                                               | 14.43                                 | 15.09                                               | 20.84                   | 24.00          | PASS       |
|                    | 144/5720                       | 14.09                                 | 14.75                                               | 13.39                                 | 14.05                                               | 14.75                                 | 15.41                                               | 13.49                                 | 14.15                                               | 20.65                   | 24.00          | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 15.51                                 | 16.17                                               | 14.28                                 | 14.94                                               | 13.68                                 | 14.34                                               | 13.66                                 | 14.32                                               | 21.03                   | 24.00          | PASS       |
|                    | 110/5550                       | 15.71                                 | 16.37                                               | 14.10                                 | 14.76                                               | 14.76                                 | 15.42                                               | 14.21                                 | 14.87                                               | 21.43                   | 24.00          | PASS       |
|                    | 134/5670                       | 15.47                                 | 16.13                                               | 13.33                                 | 13.99                                               | 14.38                                 | 15.04                                               | 14.04                                 | 14.70                                               | 21.06                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.32                                 | 16.98                                               | 14.59                                 | 15.25                                               | 14.54                                 | 15.20                                               | 13.85                                 | 14.51                                               | 21.61                   | 24.00          | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 14.08                                 | 14.77                                               | 14.13                                 | 14.82                                               | 14.05                                 | 14.74                                               | 13.08                                 | 13.77                                               | 20.56                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.11                                 | 14.80                                               | 14.51                                 | 15.19                                               | 13.39                                 | 14.07                                               | 13.66                                 | 14.34                                               | 20.64                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.20                                 | 13.88                                               | 14.04                                 | 14.72                                               | 14.73                                 | 15.41                                               | 14.66                                 | 15.34                                               | 20.90                   | 24.00          | PASS       |
|                    | 144/5720                       | 14.09                                 | 14.78                                               | 13.77                                 | 14.46                                               | 14.45                                 | 15.14                                               | 13.82                                 | 14.51                                               | 20.75                   | 24.00          | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 15.46                                 | 16.14                                               | 14.26                                 | 14.94                                               | 13.58                                 | 14.26                                               | 13.59                                 | 14.27                                               | 21.00                   | 24.00          | PASS       |
|                    | 110/5550                       | 15.87                                 | 16.55                                               | 14.18                                 | 14.86                                               | 14.38                                 | 15.06                                               | 14.61                                 | 15.29                                               | 21.52                   | 24.00          | PASS       |
|                    | 134/5670                       | 15.45                                 | 16.13                                               | 13.98                                 | 14.66                                               | 14.41                                 | 15.09                                               | 14.14                                 | 14.82                                               | 21.24                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.19                                 | 16.87                                               | 13.97                                 | 14.65                                               | 14.71                                 | 15.39                                               | 13.84                                 | 14.52                                               | 21.49                   | 24.00          | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 16.15                                 | 16.83                                               | 16.41                                 | 17.10                                               | 15.37                                 | 16.05                                               | 14.95                                 | 15.64                                               | 22.46                   | 24.00          | PASS       |
|                    | 138/5690                       | 15.69                                 | 16.38                                               | 15.92                                 | 16.61                                               | 16.47                                 | 17.16                                               | 16.42                                 | 17.11                                               | 22.85                   | 24.00          | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | 12.52                                 | 12.91                                               | 12.71                                 | 13.10                                               | 11.12                                 | 11.51                                               | 11.24                                 | 11.63                                               | 18.36                   | 24.00          | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 14.04                                 | 14.72                                               | 14.07                                 | 14.75                                               | 14.01                                 | 14.69                                               | 13.14                                 | 13.82                                               | 20.53                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.69                                 | 15.37                                               | 15.04                                 | 15.72                                               | 13.99                                 | 14.67                                               | 13.94                                 | 14.62                                               | 21.14                   | 24.00          | PASS       |
|                    | 140/5700                       | 14.13                                 | 14.81                                               | 13.92                                 | 14.60                                               | 14.44                                 | 15.12                                               | 13.82                                 | 14.50                                               | 20.79                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.13                                 | 13.81                                               | 13.53                                 | 14.21                                               | 14.85                                 | 15.53                                               | 14.40                                 | 15.08                                               | 20.73                   | 24.00          | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 15.37                                 | 16.09                                               | 14.20                                 | 14.92                                               | 13.54                                 | 14.26                                               | 13.65                                 | 14.37                                               | 20.99                   | 24.00          | PASS       |
|                    | 110/5550                       | 15.78                                 | 16.50                                               | 14.12                                 | 14.84                                               | 14.34                                 | 15.06                                               | 14.67                                 | 15.39                                               | 21.52                   | 24.00          | PASS       |
|                    | 134/5670                       | 15.36                                 | 16.08                                               | 13.92                                 | 14.64                                               | 14.37                                 | 15.09                                               | 14.28                                 | 15.00                                               | 21.26                   | 24.00          | PASS       |



|                   |          |       |       |       |       |       |       |       |       |       |       |      |
|-------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
|                   | 142/5710 | 16.14 | 16.86 | 13.91 | 14.63 | 14.67 | 15.39 | 13.90 | 14.62 | 21.50 | 24.00 | PASS |
| 802.11ax<br>HE80  | 106/5530 | 16.33 | 17.09 | 16.82 | 17.58 | 15.63 | 16.39 | 15.44 | 16.20 | 22.87 | 24.00 | PASS |
|                   | 138/5690 | 16.02 | 16.78 | 16.20 | 16.96 | 16.81 | 17.56 | 16.31 | 17.07 | 23.12 | 24.00 | PASS |
| 802.11ax<br>HE160 | 114/5570 | 13.73 | 14.01 | 13.98 | 14.26 | 12.54 | 12.82 | 12.69 | 12.97 | 19.58 | 24.00 | PASS |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .



## U-NII-3

| Network Standards | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a           | 149/5745                       | 22.54                                 | 23.09                                               | 22.17                                 | 22.72                                               | 23.72                                 | 24.26                                               | 23.38                                 | 23.92                                               | 29.56                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.58                                 | 23.13                                               | 22.42                                 | 22.96                                               | 24.29                                 | 24.83                                               | 23.70                                 | 24.24                                               | 29.88                   | 30.00          | PASS       |
|                   | 165/5825                       | 22.04                                 | 22.58                                               | 22.53                                 | 23.08                                               | 24.07                                 | 24.61                                               | 23.58                                 | 24.13                                               | 29.69                   | 30.00          | PASS       |
| 802.11n<br>HT20   | 149/5745                       | 21.76                                 | 22.42                                               | 21.29                                 | 21.95                                               | 22.94                                 | 23.60                                               | 22.95                                 | 23.61                                               | 28.98                   | 30.00          | PASS       |
|                   | 157/5785                       | 21.67                                 | 22.33                                               | 21.66                                 | 22.33                                               | 23.69                                 | 24.36                                               | 23.19                                 | 23.85                                               | 29.33                   | 30.00          | PASS       |
|                   | 165/5825                       | 21.55                                 | 22.22                                               | 22.20                                 | 22.86                                               | 23.55                                 | 24.21                                               | 22.95                                 | 23.61                                               | 29.31                   | 30.00          | PASS       |
| 802.11n<br>HT40   | 151/5755                       | 22.14                                 | 22.81                                               | 22.30                                 | 22.96                                               | 23.70                                 | 24.37                                               | 22.97                                 | 23.63                                               | 29.51                   | 30.00          | PASS       |
|                   | 159/5795                       | 22.08                                 | 22.74                                               | 22.19                                 | 22.85                                               | 23.92                                 | 24.58                                               | 23.17                                 | 23.84                                               | 29.59                   | 30.00          | PASS       |
| 802.11ac<br>VHT20 | 149/5745                       | 21.94                                 | 22.62                                               | 21.57                                 | 22.26                                               | 22.99                                 | 23.67                                               | 22.79                                 | 23.48                                               | 29.07                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.20                                 | 22.89                                               | 21.77                                 | 22.46                                               | 23.73                                 | 24.42                                               | 23.13                                 | 23.81                                               | 29.48                   | 30.00          | PASS       |
|                   | 165/5825                       | 21.29                                 | 21.98                                               | 22.14                                 | 22.82                                               | 23.44                                 | 24.12                                               | 22.77                                 | 23.46                                               | 29.19                   | 30.00          | PASS       |
| 802.11ac<br>VHT40 | 151/5755                       | 21.94                                 | 22.62                                               | 22.12                                 | 22.80                                               | 23.89                                 | 24.57                                               | 23.38                                 | 24.06                                               | 29.61                   | 30.00          | PASS       |
|                   | 159/5795                       | 21.99                                 | 22.68                                               | 22.16                                 | 22.85                                               | 24.14                                 | 24.82                                               | 23.20                                 | 23.89                                               | 29.66                   | 30.00          | PASS       |
| 802.11ac<br>VHT80 | 155/5775                       | 20.78                                 | 21.47                                               | 21.12                                 | 21.81                                               | 22.74                                 | 23.43                                               | 22.71                                 | 23.40                                               | 28.64                   | 30.00          | PASS       |
| 802.11ax<br>HE20  | 149/5745                       | 22.30                                 | 22.99                                               | 22.14                                 | 22.83                                               | 23.69                                 | 24.37                                               | 23.34                                 | 24.02                                               | 29.62                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.43                                 | 23.11                                               | 22.16                                 | 22.84                                               | 24.02                                 | 24.70                                               | 23.37                                 | 24.05                                               | 29.76                   | 30.00          | PASS       |
|                   | 165/5825                       | 21.85                                 | 22.53                                               | 22.46                                 | 23.14                                               | 23.84                                 | 24.52                                               | 23.29                                 | 23.97                                               | 29.63                   | 30.00          | PASS       |
| 802.11ax<br>HE40  | 151/5755                       | 22.52                                 | 23.24                                               | 22.59                                 | 23.31                                               | 24.08                                 | 24.80                                               | 23.34                                 | 24.06                                               | 29.92                   | 30.00          | PASS       |
|                   | 159/5795                       | 21.87                                 | 22.59                                               | 22.23                                 | 22.95                                               | 24.24                                 | 24.96                                               | 23.42                                 | 24.14                                               | 29.78                   | 30.00          | PASS       |
| 802.11ax<br>HE80  | 155/5775                       | 20.18                                 | 20.94                                               | 20.34                                 | 21.10                                               | 21.62                                 | 22.38                                               | 21.59                                 | 22.35                                               | 27.76                   | 30.00          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),  
The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .  
2. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the power limit is 30dBm.

**Internal Antenna 1: DZZ**

Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor

**MIMO without Beamforming**
**U-NII-1**

| Network Standards | Channel/<br>Frequency<br>(MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 36/5180                        | 20.61                        | 21.15                                | 20.34                        | 20.88                                | 20.19                        | 20.74                                | 20.36                        | 20.91                                | 26.94             | 30.00       | PASS       |
|                   | 40/5200                        | 20.49                        | 21.03                                | 20.48                        | 21.02                                | 20.12                        | 20.67                                | 20.42                        | 20.97                                | 26.94             | 30.00       | PASS       |
|                   | 48/5240                        | 20.18                        | 20.72                                | 20.67                        | 21.22                                | 20.07                        | 20.61                                | 20.57                        | 21.11                                | 26.94             | 30.00       | PASS       |
| 802.11n HT20      | 36/5180                        | 20.52                        | 21.18                                | 20.48                        | 21.14                                | 20.08                        | 20.74                                | 20.40                        | 21.06                                | 27.05             | 30.00       | PASS       |
|                   | 40/5200                        | 20.31                        | 20.97                                | 20.32                        | 20.98                                | 19.94                        | 20.61                                | 20.18                        | 20.84                                | 26.88             | 30.00       | PASS       |
|                   | 48/5240                        | 20.00                        | 20.66                                | 20.72                        | 21.38                                | 20.10                        | 20.76                                | 20.46                        | 21.12                                | 27.01             | 30.00       | PASS       |
| 802.11n HT40      | 38/5190                        | 16.89                        | 17.98                                | 16.84                        | 18.05                                | 16.42                        | 17.47                                | 16.28                        | 16.97                                | 23.66             | 30.00       | PASS       |
|                   | 46/5230                        | 22.14                        | 21.81                                | 22.39                        | 22.03                                | 22.18                        | 21.33                                | 22.25                        | 20.99                                | 27.58             | 30.00       | PASS       |
| 802.11ac VHT20    | 36/5180                        | 20.36                        | 21.04                                | 20.27                        | 20.95                                | 20.11                        | 20.80                                | 20.28                        | 20.96                                | 26.96             | 30.00       | PASS       |
|                   | 40/5200                        | 20.43                        | 21.12                                | 20.37                        | 21.05                                | 20.23                        | 20.92                                | 20.17                        | 20.86                                | 27.01             | 30.00       | PASS       |
|                   | 48/5240                        | 20.07                        | 20.76                                | 20.41                        | 21.10                                | 20.11                        | 20.79                                | 20.20                        | 20.88                                | 26.90             | 30.00       | PASS       |
| 802.11ac VHT40    | 38/5190                        | 17.05                        | 17.94                                | 16.68                        | 18.22                                | 16.30                        | 17.46                                | 16.80                        | 17.20                                | 23.75             | 30.00       | PASS       |
|                   | 46/5230                        | 21.61                        | 21.85                                | 21.96                        | 21.89                                | 21.68                        | 21.32                                | 21.39                        | 20.97                                | 27.55             | 30.00       | PASS       |
| 802.11ac VHT80    | 42/5210                        | 15.65                        | 16.67                                | 15.52                        | 16.70                                | 15.52                        | 16.13                                | 15.42                        | 15.91                                | 22.38             | 30.00       | PASS       |
| 802.11ax HE20     | 36/5180                        | 20.61                        | 21.29                                | 20.36                        | 21.04                                | 20.15                        | 20.83                                | 20.22                        | 20.90                                | 27.04             | 30.00       | PASS       |
|                   | 40/5200                        | 20.36                        | 21.04                                | 20.43                        | 21.11                                | 20.32                        | 21.00                                | 20.19                        | 20.87                                | 27.03             | 30.00       | PASS       |
|                   | 48/5240                        | 20.15                        | 20.84                                | 20.68                        | 21.37                                | 20.37                        | 21.05                                | 20.27                        | 20.95                                | 27.08             | 30.00       | PASS       |
| 802.11ax HE40     | 38/5190                        | 16.14                        | 15.81                                | 15.72                        | 17.48                                | 15.87                        | 15.00                                | 15.63                        | 16.14                                | 22.22             | 30.00       | PASS       |
|                   | 46/5230                        | 22.18                        | 21.84                                | 22.54                        | 21.97                                | 21.98                        | 21.00                                | 22.34                        | 21.08                                | 27.52             | 30.00       | PASS       |
| 802.11ax HE80     | 42/5210                        | 15.72                        | 16.63                                | 15.93                        | 17.19                                | 15.94                        | 15.00                                | 15.70                        | 16.28                                | 22.37             | 30.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),  
The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .  
2. The manufacturer declared that the directional gain = 3.40dBi<6dBi. So the power limit is 30dBm.

**U-NII-2A**

| Network Standards | Channel/<br>Frequency (MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|-----------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                             | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 52/5260                     | 13.61                        | 14.15                                | 14.82                        | 15.36                                | 13.68                        | 14.22                                | 13.83                        | 14.37                                | 20.58             | 23.98       | PASS       |
|                   | 60/5300                     | 14.24                        | 14.79                                | 15.25                        | 15.80                                | 14.24                        | 14.79                                | 14.09                        | 14.63                                | 21.05             | 24.00       | PASS       |
|                   | 64/5320                     | 14.67                        | 15.21                                | 15.42                        | 15.96                                | 14.34                        | 14.88                                | 14.22                        | 14.76                                | 21.25             | 23.94       | PASS       |
| 802.11n HT20      | 52/5260                     | 13.65                        | 14.31                                | 14.66                        | 15.32                                | 13.75                        | 14.41                                | 13.89                        | 14.55                                | 20.69             | 24.00       | PASS       |
|                   | 60/5300                     | 13.60                        | 14.26                                | 14.72                        | 15.38                                | 13.75                        | 14.41                                | 13.67                        | 14.33                                | 20.64             | 24.00       | PASS       |
|                   | 64/5320                     | 14.02                        | 14.68                                | 14.85                        | 15.52                                | 13.90                        | 14.56                                | 13.86                        | 14.52                                | 20.86             | 24.00       | PASS       |
| 802.11n HT40      | 54/5270                     | 17.12                        | 17.78                                | 17.74                        | 18.41                                | 16.93                        | 17.59                                | 16.85                        | 17.52                                | 23.86             | 24.00       | PASS       |
|                   | 62/5310                     | 16.76                        | 17.42                                | 17.59                        | 18.26                                | 16.73                        | 17.40                                | 16.63                        | 17.29                                | 23.63             | 24.00       | PASS       |
| 802.11ac VHT20    | 52/5260                     | 13.72                        | 14.40                                | 14.82                        | 15.51                                | 13.78                        | 14.46                                | 13.69                        | 14.37                                | 20.73             | 24.00       | PASS       |
|                   | 60/5300                     | 13.79                        | 14.47                                | 14.69                        | 15.37                                | 13.72                        | 14.41                                | 13.41                        | 14.09                                | 20.63             | 24.00       | PASS       |
|                   | 64/5320                     | 13.96                        | 14.64                                | 14.79                        | 15.47                                | 13.84                        | 14.53                                | 13.69                        | 14.37                                | 20.80             | 24.00       | PASS       |
| 802.11ac VHT40    | 54/5270                     | 17.11                        | 17.79                                | 17.84                        | 18.52                                | 16.96                        | 17.64                                | 16.80                        | 17.48                                | 23.90             | 24.00       | PASS       |
|                   | 62/5310                     | 16.26                        | 16.95                                | 17.09                        | 17.77                                | 16.32                        | 17.00                                | 16.10                        | 16.78                                | 23.16             | 24.00       | PASS       |
| 802.11ac VHT80    | 58/5290                     | 16.56                        | 17.25                                | 17.36                        | 18.05                                | 16.57                        | 17.26                                | 16.50                        | 17.19                                | 23.47             | 24.00       | PASS       |
| 802.11ac VHT160   | 50/5250                     | 12.12                        | 12.51                                | 12.81                        | 13.19                                | 11.59                        | 11.98                                | 11.66                        | 12.05                                | 18.48             | 24.00       | PASS       |
| 802.11ax HE20     | 52/5260                     | 13.53                        | 14.21                                | 14.89                        | 15.57                                | 13.79                        | 14.47                                | 13.71                        | 14.40                                | 20.72             | 24.00       | PASS       |
|                   | 60/5300                     | 14.19                        | 14.88                                | 15.20                        | 15.88                                | 14.52                        | 15.20                                | 13.94                        | 14.62                                | 21.19             | 24.00       | PASS       |
|                   | 64/5320                     | 14.46                        | 15.14                                | 15.35                        | 16.03                                | 14.56                        | 15.25                                | 14.01                        | 14.70                                | 21.33             | 24.00       | PASS       |
| 802.11ax HE40     | 54/5270                     | 17.32                        | 18.04                                | 17.14                        | 17.86                                | 17.04                        | 17.76                                | 17.03                        | 17.75                                | 23.88             | 24.00       | PASS       |
|                   | 62/5310                     | 16.71                        | 17.43                                | 17.49                        | 18.21                                | 16.51                        | 17.23                                | 16.28                        | 17.00                                | 23.51             | 24.00       | PASS       |
| 802.11ax HE80     | 58/5290                     | 16.25                        | 17.01                                | 16.89                        | 17.65                                | 16.07                        | 16.83                                | 16.28                        | 17.04                                | 23.16             | 24.00       | PASS       |
| 802.11ax HE160    | 50/5250                     | 12.11                        | 12.39                                | 12.78                        | 13.06                                | 11.07                        | 11.35                                | 11.87                        | 12.15                                | 18.30             | 24.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .



## U-NII-2C

| Network Standards  | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|--------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                    |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a            | 100/5500                       | 15.01                                 | 15.55                                               | 14.78                                 | 15.32                                               | 13.98                                 | 14.53                                               | 13.83                                 | 14.38                                               | 20.99                   | 23.99          | PASS       |
|                    | 116/5580                       | 14.44                                 | 14.99                                               | 14.77                                 | 15.31                                               | 13.63                                 | 14.17                                               | 13.84                                 | 14.38                                               | 20.76                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.73                                 | 14.27                                               | 14.12                                 | 14.66                                               | 14.82                                 | 15.36                                               | 14.99                                 | 15.53                                               | 21.01                   | 23.93          | PASS       |
|                    | 144/5720                       | 13.32                                 | 13.86                                               | 13.72                                 | 14.26                                               | 14.85                                 | 15.39                                               | 14.82                                 | 15.36                                               | 20.79                   | 24.00          | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 14.38                                 | 15.05                                               | 14.33                                 | 14.99                                               | 13.34                                 | 14.00                                               | 13.42                                 | 14.09                                               | 20.58                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.53                                 | 15.19                                               | 14.61                                 | 15.27                                               | 13.61                                 | 14.28                                               | 13.92                                 | 14.58                                               | 20.87                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.81                                 | 14.47                                               | 14.09                                 | 14.75                                               | 14.86                                 | 15.53                                               | 15.03                                 | 15.69                                               | 21.16                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.86                                 | 14.53                                               | 14.12                                 | 14.79                                               | 15.18                                 | 15.84                                               | 15.15                                 | 15.82                                               | 21.30                   | 24.00          | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 16.61                                 | 17.27                                               | 16.73                                 | 17.40                                               | 16.23                                 | 16.90                                               | 15.93                                 | 16.60                                               | 23.07                   | 24.00          | PASS       |
|                    | 110/5550                       | 16.97                                 | 17.63                                               | 17.07                                 | 17.73                                               | 15.80                                 | 16.47                                               | 16.07                                 | 16.73                                               | 23.19                   | 24.00          | PASS       |
|                    | 134/5670                       | 16.48                                 | 17.14                                               | 16.45                                 | 17.11                                               | 16.89                                 | 17.55                                               | 17.00                                 | 17.66                                               | 23.39                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.14                                 | 16.80                                               | 16.36                                 | 17.02                                               | 17.34                                 | 18.00                                               | 17.52                                 | 18.18                                               | 23.56                   | 24.00          | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 14.33                                 | 15.02                                               | 14.42                                 | 15.10                                               | 13.31                                 | 14.00                                               | 13.39                                 | 14.07                                               | 20.60                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.29                                 | 14.97                                               | 14.77                                 | 15.45                                               | 13.33                                 | 14.01                                               | 13.87                                 | 14.56                                               | 20.80                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.62                                 | 14.30                                               | 14.06                                 | 14.75                                               | 14.57                                 | 15.25                                               | 15.00                                 | 15.69                                               | 21.05                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.99                                 | 14.68                                               | 14.05                                 | 14.74                                               | 15.01                                 | 15.69                                               | 15.42                                 | 16.11                                               | 21.37                   | 24.00          | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 16.68                                 | 17.36                                               | 16.84                                 | 17.52                                               | 16.38                                 | 17.07                                               | 16.02                                 | 16.71                                               | 23.19                   | 24.00          | PASS       |
|                    | 110/5550                       | 17.17                                 | 17.85                                               | 17.24                                 | 17.92                                               | 16.12                                 | 16.80                                               | 16.07                                 | 16.75                                               | 23.39                   | 24.00          | PASS       |
|                    | 134/5670                       | 16.50                                 | 17.18                                               | 16.36                                 | 17.05                                               | 17.00                                 | 17.68                                               | 16.93                                 | 17.61                                               | 23.41                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.28                                 | 16.96                                               | 16.40                                 | 17.08                                               | 17.39                                 | 18.07                                               | 17.58                                 | 18.26                                               | 23.65                   | 24.00          | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 16.58                                 | 17.26                                               | 16.82                                 | 17.51                                               | 15.64                                 | 16.32                                               | 15.66                                 | 16.35                                               | 22.91                   | 24.00          | PASS       |
|                    | 138/5690                       | 16.19                                 | 16.87                                               | 16.37                                 | 17.06                                               | 16.93                                 | 17.61                                               | 17.09                                 | 17.78                                               | 23.37                   | 24.00          | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | 12.72                                 | 13.10                                               | 12.74                                 | 13.13                                               | 11.34                                 | 11.72                                               | 11.61                                 | 11.99                                               | 18.55                   | 24.00          | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 15.04                                 | 15.73                                               | 14.78                                 | 15.47                                               | 14.18                                 | 14.86                                               | 13.75                                 | 14.43                                               | 21.17                   | 24.00          | PASS       |
|                    | 116/5580                       | 15.13                                 | 15.81                                               | 15.24                                 | 15.92                                               | 14.15                                 | 14.84                                               | 14.30                                 | 14.99                                               | 21.44                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.83                                 | 14.51                                               | 14.10                                 | 14.78                                               | 14.99                                 | 15.67                                               | 15.15                                 | 15.83                                               | 21.26                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.26                                 | 13.94                                               | 13.78                                 | 14.46                                               | 15.01                                 | 15.69                                               | 14.84                                 | 15.52                                               | 20.98                   | 24.00          | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 16.92                                 | 17.64                                               | 16.95                                 | 17.67                                               | 16.29                                 | 17.01                                               | 16.11                                 | 16.83                                               | 23.32                   | 24.00          | PASS       |
|                    | 110/5550                       | 17.15                                 | 17.87                                               | 17.36                                 | 18.08                                               | 16.34                                 | 17.06                                               | 16.02                                 | 16.74                                               | 23.50                   | 24.00          | PASS       |
|                    | 134/5670                       | 16.53                                 | 17.25                                               | 16.74                                 | 17.46                                               | 17.33                                 | 18.05                                               | 17.17                                 | 17.89                                               | 23.69                   | 24.00          | PASS       |



|                   |          |       |       |       |       |       |       |       |       |       |       |      |
|-------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
|                   | 142/5710 | 16.24 | 16.96 | 16.57 | 17.29 | 17.70 | 18.42 | 17.73 | 18.45 | 23.85 | 24.00 | PASS |
| 802.11ax<br>HE80  | 106/5530 | 16.98 | 17.73 | 17.36 | 18.12 | 16.01 | 16.77 | 15.97 | 16.73 | 23.40 | 24.00 | PASS |
|                   | 138/5690 | 16.54 | 17.30 | 16.65 | 17.41 | 17.25 | 18.01 | 17.45 | 18.21 | 23.77 | 24.00 | PASS |
| 802.11ax<br>HE160 | 114/5570 | 12.94 | 13.22 | 13.04 | 13.32 | 11.99 | 12.27 | 12.01 | 12.29 | 18.82 | 24.00 | PASS |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

**U-NII-3**

| Network Standards | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a           | 149/5745                       | 22.45                                 | 22.99                                               | 22.13                                 | 22.67                                               | 23.71                                 | 24.26                                               | 23.54                                 | 24.08                                               | 29.57                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.64                                 | 23.18                                               | 22.48                                 | 23.03                                               | 24.18                                 | 24.73                                               | 23.70                                 | 24.25                                               | 29.88                   | 30.00          | PASS       |
|                   | 165/5825                       | 22.09                                 | 22.63                                               | 22.75                                 | 23.29                                               | 24.11                                 | 24.65                                               | 23.68                                 | 24.22                                               | 29.79                   | 30.00          | PASS       |
| 802.11n<br>HT20   | 149/5745                       | 21.99                                 | 22.65                                               | 21.58                                 | 22.24                                               | 23.28                                 | 23.94                                               | 22.80                                 | 23.46                                               | 29.15                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.10                                 | 22.76                                               | 21.70                                 | 22.36                                               | 23.81                                 | 24.47                                               | 23.11                                 | 23.77                                               | 29.44                   | 30.00          | PASS       |
|                   | 165/5825                       | 21.38                                 | 22.04                                               | 22.10                                 | 22.76                                               | 23.58                                 | 24.24                                               | 22.85                                 | 23.51                                               | 29.24                   | 30.00          | PASS       |
| 802.11n<br>HT40   | 151/5755                       | 22.23                                 | 22.89                                               | 22.44                                 | 23.11                                               | 23.67                                 | 24.33                                               | 23.22                                 | 23.89                                               | 29.61                   | 30.00          | PASS       |
|                   | 159/5795                       | 21.96                                 | 22.62                                               | 22.08                                 | 22.74                                               | 23.94                                 | 24.60                                               | 23.08                                 | 23.74                                               | 29.52                   | 30.00          | PASS       |
| 802.11ac<br>VHT20 | 149/5745                       | 22.57                                 | 23.26                                               | 21.93                                 | 22.62                                               | 23.18                                 | 23.87                                               | 22.75                                 | 23.44                                               | 29.34                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.20                                 | 22.89                                               | 21.77                                 | 22.46                                               | 23.74                                 | 24.43                                               | 23.13                                 | 23.81                                               | 29.48                   | 30.00          | PASS       |
|                   | 165/5825                       | 21.52                                 | 22.21                                               | 22.12                                 | 22.81                                               | 23.64                                 | 24.33                                               | 23.00                                 | 23.69                                               | 29.35                   | 30.00          | PASS       |
| 802.11ac<br>VHT40 | 151/5755                       | 22.23                                 | 22.91                                               | 21.86                                 | 22.54                                               | 23.72                                 | 24.40                                               | 23.46                                 | 24.14                                               | 29.59                   | 30.00          | PASS       |
|                   | 159/5795                       | 22.11                                 | 22.79                                               | 22.19                                 | 22.87                                               | 24.41                                 | 25.09                                               | 23.23                                 | 23.92                                               | 29.79                   | 30.00          | PASS       |
| 802.11ac<br>VHT80 | 155/5775                       | 21.41                                 | 22.10                                               | 21.54                                 | 22.23                                               | 21.45                                 | 22.14                                               | 21.78                                 | 22.47                                               | 28.25                   | 30.00          | PASS       |
| 802.11ax<br>HE20  | 149/5745                       | 22.64                                 | 23.32                                               | 22.02                                 | 22.70                                               | 23.85                                 | 24.53                                               | 23.26                                 | 23.94                                               | 29.70                   | 30.00          | PASS       |
|                   | 157/5785                       | 22.55                                 | 23.23                                               | 22.43                                 | 23.11                                               | 24.31                                 | 24.99                                               | 23.44                                 | 24.12                                               | 29.95                   | 30.00          | PASS       |
|                   | 165/5825                       | 22.01                                 | 22.69                                               | 22.75                                 | 23.43                                               | 24.21                                 | 24.89                                               | 23.51                                 | 24.19                                               | 29.90                   | 30.00          | PASS       |
| 802.11ax<br>HE40  | 151/5755                       | 22.24                                 | 22.96                                               | 22.38                                 | 23.10                                               | 23.83                                 | 24.55                                               | 23.34                                 | 24.06                                               | 29.74                   | 30.00          | PASS       |
|                   | 159/5795                       | 22.18                                 | 22.90                                               | 22.57                                 | 23.29                                               | 24.34                                 | 25.06                                               | 23.50                                 | 24.22                                               | 29.97                   | 30.00          | PASS       |
| 802.11ax<br>HE80  | 155/5775                       | 20.73                                 | 21.49                                               | 21.63                                 | 22.39                                               | 20.71                                 | 21.47                                               | 21.86                                 | 22.62                                               | 28.04                   | 30.00          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),  
The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. The manufacturer declared that the directional gain = 3.40dBi<6dBi. So the power limit is 30dBm.

**MIMO with Beamforming**
**U-NII-1**

| Network Standards | Channel/ Frequency (MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                          | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 36/5180                  | 20.53                        | 21.07                                | 19.97                        | 20.52                                | 20.01                        | 20.55                                | 20.16                        | 20.71                                | 26.74             | 30.00       | PASS       |
|                   | 40/5200                  | 20.25                        | 20.79                                | 19.96                        | 20.50                                | 19.83                        | 20.37                                | 20.25                        | 20.79                                | 26.64             | 30.00       | PASS       |
|                   | 48/5240                  | 20.06                        | 20.60                                | 20.36                        | 20.91                                | 19.91                        | 20.46                                | 20.30                        | 20.84                                | 26.73             | 30.00       | PASS       |
| 802.11n HT20      | 36/5180                  | 19.65                        | 20.31                                | 19.54                        | 20.20                                | 19.49                        | 20.15                                | 19.47                        | 20.13                                | 26.22             | 30.00       | PASS       |
|                   | 40/5200                  | 20.06                        | 20.72                                | 20.01                        | 20.67                                | 19.87                        | 20.53                                | 20.02                        | 20.68                                | 26.67             | 30.00       | PASS       |
|                   | 48/5240                  | 20.81                        | 21.47                                | 20.74                        | 21.40                                | 20.55                        | 21.21                                | 20.61                        | 21.27                                | 27.36             | 30.00       | PASS       |
| 802.11n HT40      | 38/5190                  | 17.16                        | 17.98                                | 17.42                        | 18.05                                | 16.75                        | 17.47                                | 16.72                        | 16.97                                | 23.66             | 30.00       | PASS       |
|                   | 46/5230                  | 21.47                        | 21.81                                | 21.58                        | 22.03                                | 21.26                        | 21.33                                | 21.56                        | 20.99                                | 27.58             | 30.00       | PASS       |
| 802.11ac VHT20    | 36/5180                  | 19.49                        | 20.18                                | 19.38                        | 20.07                                | 19.42                        | 20.11                                | 19.61                        | 20.30                                | 26.18             | 30.00       | PASS       |
|                   | 40/5200                  | 20.15                        | 20.84                                | 20.18                        | 20.87                                | 20.21                        | 20.90                                | 20.27                        | 20.96                                | 26.91             | 30.00       | PASS       |
|                   | 48/5240                  | 20.67                        | 21.36                                | 20.60                        | 21.29                                | 20.53                        | 21.22                                | 20.55                        | 21.24                                | 27.29             | 30.00       | PASS       |
| 802.11ac VHT40    | 38/5190                  | 17.09                        | 17.94                                | 17.36                        | 18.22                                | 16.54                        | 17.46                                | 16.51                        | 17.20                                | 23.75             | 30.00       | PASS       |
|                   | 46/5230                  | 21.29                        | 21.85                                | 21.54                        | 21.89                                | 21.29                        | 21.32                                | 21.55                        | 20.97                                | 27.55             | 30.00       | PASS       |
| 802.11ac VHT80    | 42/5210                  | 15.95                        | 16.67                                | 16.38                        | 16.70                                | 15.49                        | 16.13                                | 15.25                        | 15.91                                | 22.38             | 30.00       | PASS       |
| 802.11ax HE20     | 36/5180                  | 20.51                        | 21.19                                | 20.02                        | 20.70                                | 19.98                        | 20.66                                | 20.19                        | 20.88                                | 26.88             | 30.00       | PASS       |
|                   | 40/5200                  | 20.04                        | 20.72                                | 20.14                        | 20.82                                | 19.95                        | 20.63                                | 20.15                        | 20.83                                | 26.77             | 30.00       | PASS       |
|                   | 48/5240                  | 19.95                        | 20.63                                | 20.28                        | 20.96                                | 19.87                        | 20.56                                | 20.08                        | 20.76                                | 26.75             | 30.00       | PASS       |
| 802.11ax HE40     | 38/5190                  | 16.34                        | 15.81                                | 16.77                        | 17.48                                | 15.81                        | 15.00                                | 15.27                        | 16.14                                | 22.22             | 30.00       | PASS       |
|                   | 46/5230                  | 22.16                        | 21.84                                | 22.38                        | 21.97                                | 21.99                        | 21.00                                | 22.05                        | 21.08                                | 27.52             | 30.00       | PASS       |
| 802.11ax HE80     | 42/5210                  | 16.12                        | 16.63                                | 16.37                        | 17.19                                | 16.02                        | 15.00                                | 15.73                        | 16.28                                | 22.37             | 30.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),  
The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .  
2. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the power limit is 30dBm.

**U-NII-2A**

| Network Standards | Channel/<br>Frequency<br>(MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 52/5260                        | 14.52                        | 15.06                                | 14.57                        | 15.11                                | 12.64                        | 13.18                                | 12.59                        | 13.13                                | 20.25             | 23.98       | PASS       |
|                   | 60/5300                        | 14.63                        | 15.17                                | 14.61                        | 15.15                                | 12.59                        | 13.13                                | 12.51                        | 13.05                                | 20.27             | 24.00       | PASS       |
|                   | 64/5320                        | 13.81                        | 14.36                                | 14.39                        | 14.94                                | 13.52                        | 14.06                                | 13.36                        | 13.90                                | 20.35             | 23.94       | PASS       |
| 802.11n HT20      | 52/5260                        | 13.71                        | 14.37                                | 14.48                        | 15.14                                | 13.19                        | 13.85                                | 13.59                        | 14.25                                | 20.45             | 24.00       | PASS       |
|                   | 60/5300                        | 13.60                        | 14.26                                | 14.37                        | 15.03                                | 13.61                        | 14.27                                | 13.26                        | 13.92                                | 20.41             | 24.00       | PASS       |
|                   | 64/5320                        | 13.73                        | 14.39                                | 14.51                        | 15.18                                | 13.59                        | 14.25                                | 13.34                        | 14.00                                | 20.50             | 24.00       | PASS       |
| 802.11n HT40      | 54/5270                        | 17.76                        | 18.42                                | 17.72                        | 18.38                                | 15.81                        | 16.47                                | 15.70                        | 16.36                                | 23.54             | 24.00       | PASS       |
|                   | 62/5310                        | 15.92                        | 16.58                                | 17.26                        | 17.92                                | 16.07                        | 16.73                                | 15.75                        | 16.41                                | 22.97             | 24.00       | PASS       |
| 802.11ac VHT20    | 52/5260                        | 13.61                        | 14.29                                | 14.59                        | 15.27                                | 13.32                        | 14.01                                | 13.35                        | 14.04                                | 20.45             | 24.00       | PASS       |
|                   | 60/5300                        | 14.65                        | 15.34                                | 14.72                        | 15.41                                | 12.75                        | 13.44                                | 12.69                        | 13.38                                | 20.52             | 24.00       | PASS       |
|                   | 64/5320                        | 14.81                        | 15.50                                | 14.84                        | 15.53                                | 12.93                        | 13.62                                | 12.92                        | 13.61                                | 20.68             | 24.00       | PASS       |
| 802.11ac VHT40    | 54/5270                        | 17.77                        | 18.45                                | 17.85                        | 18.53                                | 15.82                        | 16.50                                | 15.74                        | 16.42                                | 23.62             | 24.00       | PASS       |
|                   | 62/5310                        | 16.69                        | 17.37                                | 17.26                        | 17.94                                | 16.52                        | 17.20                                | 16.10                        | 16.79                                | 23.36             | 24.00       | PASS       |
| 802.11ac VHT80    | 58/5290                        | 16.52                        | 17.21                                | 17.11                        | 17.80                                | 16.23                        | 16.92                                | 15.91                        | 16.60                                | 23.17             | 24.00       | PASS       |
| 802.11ac VHT160   | 50/5250                        | 12.12                        | 12.51                                | 12.42                        | 12.81                                | 11.97                        | 12.36                                | 11.47                        | 11.86                                | 18.41             | 24.00       | PASS       |
| 802.11ax HE20     | 52/5260                        | 13.97                        | 14.65                                | 14.97                        | 15.65                                | 13.87                        | 14.55                                | 13.80                        | 14.49                                | 20.88             | 24.00       | PASS       |
|                   | 60/5300                        | 14.61                        | 15.29                                | 14.63                        | 15.31                                | 12.84                        | 13.52                                | 12.61                        | 13.29                                | 20.48             | 24.00       | PASS       |
|                   | 64/5320                        | 14.77                        | 15.45                                | 14.75                        | 15.43                                | 12.85                        | 13.53                                | 12.84                        | 13.52                                | 20.61             | 24.00       | PASS       |
| 802.11ax HE40     | 54/5270                        | 17.73                        | 18.45                                | 17.76                        | 18.48                                | 15.89                        | 16.61                                | 15.68                        | 16.40                                | 23.62             | 24.00       | PASS       |
|                   | 62/5310                        | 16.22                        | 16.94                                | 16.90                        | 17.62                                | 16.23                        | 16.95                                | 15.82                        | 16.54                                | 23.05             | 24.00       | PASS       |
| 802.11ax HE80     | 58/5290                        | 16.18                        | 16.94                                | 16.37                        | 17.13                                | 16.76                        | 17.52                                | 15.87                        | 16.63                                | 23.09             | 24.00       | PASS       |
| 802.11ax HE160    | 50/5250                        | 12.09                        | 12.37                                | 12.12                        | 12.40                                | 11.87                        | 12.15                                | 11.68                        | 11.96                                | 18.24             | 24.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

**U-NII-2C**

| Network Standards  | Channel/<br>Frequency<br>(MHz) | MIMO<br>Antenna 1                     |                                                     | MIMO<br>Antenna 2                     |                                                     | MIMO<br>Antenna3                      |                                                     | MIMO<br>Antenna4                      |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|--------------------|--------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                    |                                | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11a            | 100/5500                       | 14.13                                 | 14.67                                               | 14.46                                 | 15.00                                               | 13.27                                 | 13.81                                               | 13.72                                 | 14.26                                               | 20.48                   | 23.99          | PASS       |
|                    | 116/5580                       | 14.11                                 | 14.65                                               | 14.63                                 | 15.17                                               | 13.33                                 | 13.87                                               | 13.61                                 | 14.15                                               | 20.51                   | 24.00          | PASS       |
|                    | 140/5700                       | 14.57                                 | 15.11                                               | 14.39                                 | 14.93                                               | 16.02                                 | 16.56                                               | 15.45                                 | 15.99                                               | 21.72                   | 23.93          | PASS       |
|                    | 144/5720                       | 13.20                                 | 13.74                                               | 13.64                                 | 14.18                                               | 14.72                                 | 15.26                                               | 14.68                                 | 15.23                                               | 20.67                   | 24.00          | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 14.03                                 | 14.69                                               | 14.13                                 | 14.79                                               | 13.22                                 | 13.88                                               | 13.52                                 | 14.18                                               | 20.42                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.05                                 | 14.71                                               | 14.48                                 | 15.14                                               | 13.39                                 | 14.05                                               | 13.72                                 | 14.38                                               | 20.61                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.72                                 | 14.38                                               | 14.10                                 | 14.76                                               | 14.77                                 | 15.43                                               | 14.93                                 | 15.59                                               | 21.09                   | 24.00          | PASS       |
|                    | 144/5720                       | 14.09                                 | 14.75                                               | 13.39                                 | 14.05                                               | 14.75                                 | 15.41                                               | 13.49                                 | 14.15                                               | 20.65                   | 24.00          | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 15.51                                 | 16.17                                               | 14.28                                 | 14.94                                               | 13.68                                 | 14.34                                               | 13.66                                 | 14.32                                               | 21.03                   | 24.00          | PASS       |
|                    | 110/5550                       | 15.71                                 | 16.37                                               | 14.10                                 | 14.76                                               | 14.76                                 | 15.42                                               | 14.21                                 | 14.87                                               | 21.43                   | 24.00          | PASS       |
|                    | 134/5670                       | 15.47                                 | 16.13                                               | 13.33                                 | 13.99                                               | 14.38                                 | 15.04                                               | 14.04                                 | 14.70                                               | 21.06                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.32                                 | 16.98                                               | 14.59                                 | 15.25                                               | 14.54                                 | 15.20                                               | 13.85                                 | 14.51                                               | 21.61                   | 24.00          | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 14.08                                 | 14.77                                               | 14.13                                 | 14.82                                               | 14.05                                 | 14.74                                               | 13.08                                 | 13.77                                               | 20.56                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.11                                 | 14.80                                               | 14.51                                 | 15.19                                               | 13.39                                 | 14.07                                               | 13.66                                 | 14.34                                               | 20.64                   | 24.00          | PASS       |
|                    | 140/5700                       | 13.20                                 | 13.88                                               | 14.04                                 | 14.72                                               | 14.73                                 | 15.41                                               | 14.66                                 | 15.34                                               | 20.90                   | 24.00          | PASS       |
|                    | 144/5720                       | 14.09                                 | 14.78                                               | 13.77                                 | 14.46                                               | 14.45                                 | 15.14                                               | 13.82                                 | 14.51                                               | 20.75                   | 24.00          | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 15.46                                 | 16.14                                               | 14.26                                 | 14.94                                               | 13.58                                 | 14.26                                               | 13.59                                 | 14.27                                               | 21.00                   | 24.00          | PASS       |
|                    | 110/5550                       | 15.87                                 | 16.55                                               | 14.18                                 | 14.86                                               | 14.38                                 | 15.06                                               | 14.61                                 | 15.29                                               | 21.52                   | 24.00          | PASS       |
|                    | 134/5670                       | 15.45                                 | 16.13                                               | 13.98                                 | 14.66                                               | 14.41                                 | 15.09                                               | 14.14                                 | 14.82                                               | 21.24                   | 24.00          | PASS       |
|                    | 142/5710                       | 16.19                                 | 16.87                                               | 13.97                                 | 14.65                                               | 14.71                                 | 15.39                                               | 13.84                                 | 14.52                                               | 21.49                   | 24.00          | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 16.15                                 | 16.83                                               | 16.41                                 | 17.10                                               | 15.37                                 | 16.05                                               | 14.95                                 | 15.64                                               | 22.46                   | 24.00          | PASS       |
|                    | 138/5690                       | 15.69                                 | 16.38                                               | 15.92                                 | 16.61                                               | 16.47                                 | 17.16                                               | 16.42                                 | 17.11                                               | 22.85                   | 24.00          | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | 12.52                                 | 12.91                                               | 12.71                                 | 13.10                                               | 11.12                                 | 11.51                                               | 11.24                                 | 11.63                                               | 18.36                   | 24.00          | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 14.04                                 | 14.72                                               | 14.07                                 | 14.75                                               | 14.01                                 | 14.69                                               | 13.14                                 | 13.82                                               | 20.53                   | 24.00          | PASS       |
|                    | 116/5580                       | 14.69                                 | 15.37                                               | 15.04                                 | 15.72                                               | 13.99                                 | 14.67                                               | 13.94                                 | 14.62                                               | 21.14                   | 24.00          | PASS       |
|                    | 140/5700                       | 14.13                                 | 14.81                                               | 13.92                                 | 14.60                                               | 14.44                                 | 15.12                                               | 13.82                                 | 14.50                                               | 20.79                   | 24.00          | PASS       |
|                    | 144/5720                       | 13.13                                 | 13.81                                               | 13.53                                 | 14.21                                               | 14.85                                 | 15.53                                               | 14.40                                 | 15.08                                               | 20.73                   | 24.00          | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 15.37                                 | 16.09                                               | 14.20                                 | 14.92                                               | 13.54                                 | 14.26                                               | 13.65                                 | 14.37                                               | 20.99                   | 24.00          | PASS       |
|                    | 110/5550                       | 15.78                                 | 16.50                                               | 14.12                                 | 14.84                                               | 14.34                                 | 15.06                                               | 14.67                                 | 15.39                                               | 21.52                   | 24.00          | PASS       |
|                    | 134/5670                       | 15.36                                 | 16.08                                               | 13.92                                 | 14.64                                               | 14.37                                 | 15.09                                               | 14.28                                 | 15.00                                               | 21.26                   | 24.00          | PASS       |



|          |          |       |       |       |       |       |       |       |       |       |       |      |
|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
|          | 142/5710 | 16.14 | 16.86 | 13.91 | 14.63 | 14.67 | 15.39 | 13.90 | 14.62 | 21.50 | 24.00 | PASS |
| 802.11ax | 106/5530 | 16.33 | 17.09 | 16.82 | 17.58 | 15.63 | 16.39 | 15.44 | 16.20 | 22.87 | 24.00 | PASS |
| HE80     | 138/5690 | 16.02 | 16.78 | 16.20 | 16.96 | 16.81 | 17.56 | 16.31 | 17.07 | 23.12 | 24.00 | PASS |
| 802.11ax | 114/5570 | 13.73 | 14.01 | 13.98 | 14.26 | 12.54 | 12.82 | 12.69 | 12.97 | 19.58 | 24.00 | PASS |
| HE160    |          |       |       |       |       |       |       |       |       |       |       |      |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

**U-NII-3**

| Network Standards | Channel/<br>Frequency (MHz) | MIMO Antenna 1               |                                      | MIMO Antenna 2               |                                      | MIMO Antenna3                |                                      | MIMO Antenna4                |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|-----------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                             | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11a           | 149/5745                    | 22.54                        | 23.09                                | 22.17                        | 22.72                                | 23.72                        | 24.26                                | 23.38                        | 23.92                                | 29.56             | 30.00       | PASS       |
|                   | 157/5785                    | 22.58                        | 23.13                                | 22.42                        | 22.96                                | 24.29                        | 24.83                                | 23.70                        | 24.24                                | 29.88             | 30.00       | PASS       |
|                   | 165/5825                    | 22.04                        | 22.58                                | 22.53                        | 23.08                                | 24.07                        | 24.61                                | 23.58                        | 24.13                                | 29.69             | 30.00       | PASS       |
| 802.11n HT20      | 149/5745                    | 21.76                        | 22.42                                | 21.29                        | 21.95                                | 22.94                        | 23.60                                | 22.95                        | 23.61                                | 28.98             | 30.00       | PASS       |
|                   | 157/5785                    | 21.67                        | 22.33                                | 21.66                        | 22.33                                | 23.69                        | 24.36                                | 23.19                        | 23.85                                | 29.33             | 30.00       | PASS       |
|                   | 165/5825                    | 21.55                        | 22.22                                | 22.20                        | 22.86                                | 23.55                        | 24.21                                | 22.95                        | 23.61                                | 29.31             | 30.00       | PASS       |
| 802.11n HT40      | 151/5755                    | 22.14                        | 22.81                                | 22.30                        | 22.96                                | 23.70                        | 24.37                                | 22.97                        | 23.63                                | 29.51             | 30.00       | PASS       |
|                   | 159/5795                    | 22.08                        | 22.74                                | 22.19                        | 22.85                                | 23.92                        | 24.58                                | 23.17                        | 23.84                                | 29.59             | 30.00       | PASS       |
| 802.11ac VHT20    | 149/5745                    | 21.94                        | 22.62                                | 21.57                        | 22.26                                | 22.99                        | 23.67                                | 22.79                        | 23.48                                | 29.07             | 30.00       | PASS       |
|                   | 157/5785                    | 22.20                        | 22.89                                | 21.77                        | 22.46                                | 23.73                        | 24.42                                | 23.13                        | 23.81                                | 29.48             | 30.00       | PASS       |
|                   | 165/5825                    | 21.29                        | 21.98                                | 22.14                        | 22.82                                | 23.44                        | 24.12                                | 22.77                        | 23.46                                | 29.19             | 30.00       | PASS       |
| 802.11ac VHT40    | 151/5755                    | 21.94                        | 22.62                                | 22.12                        | 22.80                                | 23.89                        | 24.57                                | 23.38                        | 24.06                                | 29.61             | 30.00       | PASS       |
|                   | 159/5795                    | 21.99                        | 22.68                                | 22.16                        | 22.85                                | 24.14                        | 24.82                                | 23.20                        | 23.89                                | 29.66             | 30.00       | PASS       |
| 802.11ac VHT80    | 155/5775                    | 20.96                        | 21.65                                | 21.06                        | 21.75                                | 22.34                        | 23.03                                | 21.87                        | 22.56                                | 28.30             | 30.00       | PASS       |
| 802.11ax HE20     | 149/5745                    | 22.30                        | 22.99                                | 22.14                        | 22.83                                | 23.69                        | 24.37                                | 23.34                        | 24.02                                | 29.62             | 30.00       | PASS       |
|                   | 157/5785                    | 22.43                        | 23.11                                | 22.16                        | 22.84                                | 24.02                        | 24.70                                | 23.37                        | 24.05                                | 29.76             | 30.00       | PASS       |
|                   | 165/5825                    | 21.85                        | 22.53                                | 22.46                        | 23.14                                | 23.84                        | 24.52                                | 23.29                        | 23.97                                | 29.63             | 30.00       | PASS       |
| 802.11ax HE40     | 151/5755                    | 22.52                        | 23.24                                | 22.59                        | 23.31                                | 24.08                        | 24.80                                | 23.34                        | 24.06                                | 29.92             | 30.00       | PASS       |
|                   | 159/5795                    | 21.87                        | 22.59                                | 22.23                        | 22.95                                | 24.24                        | 24.96                                | 23.42                        | 24.14                                | 29.78             | 30.00       | PASS       |
| 802.11ax HE80     | 155/5775                    | 20.18                        | 20.94                                | 20.34                        | 21.10                                | 21.62                        | 22.38                                | 21.59                        | 22.35                                | 27.76             | 30.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the power limit is 30dBm.

### 5.3. Frequency Stability

#### Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C  | 45%~50%           | 101.5kPa |

#### Method of Measurement

##### 1. Frequency stability with respect to ambient temperature

- a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.
- b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.
- c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
- e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
- f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.
- g) Measure the frequency at each of frequencies specified in 5.6.
- h) Switch OFF the EUT but do not switch OFF the oscillator heater.
- i) Lower the chamber temperature by not more than 10°C, and allow the temperature inside the chamber to stabilize.
- j) Repeat step f) through step i) down to the lowest specified temperature.

##### 2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

- a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.



- b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- c) Measure the frequency at each of the frequencies specified in 5.6.
- d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

### Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 936\text{Hz}$

**Test Results****Internal Antenna 1: HL**

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-1 Test Results |              |              |              |
|----------------|---------------------|----------------------|--------------|--------------|--------------|
|                |                     | 5200MHz              |              |              |              |
|                |                     | 1min                 | 2min         | 5min         | 10min        |
| 25             | -20                 | 5199.998181          | 5199.997340  | 5199.991260  | 5199.987411  |
| 25             | -10                 | 5199.996690          | 5199.994538  | 5199.986112  | 5199.983276  |
| 25             | 0                   | 5199.986696          | 5199.993064  | 5199.985503  | 5199.982670  |
| 25             | 10                  | 5199.980015          | 5199.992631  | 5199.983773  | 5199.980874  |
| 25             | 20                  | 5199.972466          | 5199.991789  | 5199.979725  | 5199.976933  |
| 25             | 30                  | 5199.964038          | 5199.983549  | 5199.970111  | 5199.971410  |
| 25             | 40                  | 5199.963791          | 5199.977393  | 5199.966199  | 5199.965555  |
| 25             | 50                  | 5199.954195          | 5199.967776  | 5199.963978  | 5199.961616  |
| -5             | 20                  | 5199.952640          | 5199.960223  | 5199.960599  | 5199.955408  |
| 45             | 20                  | 5199.950820          | 5199.953288  | 5199.959824  | 5199.947700  |
| MHz            |                     | -0.049180048         | -0.046712426 | -0.040175512 | -0.052299799 |
| PPM            |                     | -9.457701629         | -8.983158821 | -7.726060033 | -10.05765366 |

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-2A Test Results |              |              |              |
|----------------|---------------------|-----------------------|--------------|--------------|--------------|
|                |                     | 5300MHz               |              |              |              |
|                |                     | 1min                  | 2min         | 5min         | 10min        |
| 25             | -20                 | 5299.992122           | 5299.991881  | 5299.986160  | 5299.979543  |
| 25             | -10                 | 5299.983684           | 5299.990415  | 5299.978659  | 5299.970854  |
| 25             | 0                   | 5299.978713           | 5299.982706  | 5299.970626  | 5299.967923  |
| 25             | 10                  | 5299.974507           | 5299.975980  | 5299.964826  | 5299.966885  |
| 25             | 20                  | 5299.971503           | 5299.971708  | 5299.955928  | 5299.960489  |
| 25             | 30                  | 5299.961512           | 5299.963242  | 5299.955366  | 5299.954413  |
| 25             | 40                  | 5299.955996           | 5299.956723  | 5299.953250  | 5299.945878  |
| 25             | 50                  | 5299.950207           | 5299.952467  | 5299.947416  | 5299.945225  |
| -5             | 20                  | 5299.943170           | 5299.943074  | 5299.947064  | 5299.941881  |
| 45             | 20                  | 5299.935530           | 5299.939631  | 5299.939691  | 5299.933442  |
| MHz            |                     | -0.064470323          | -0.0603691   | -0.060308914 | -0.066558257 |
| PPM            |                     | -12.16421186          | -11.39039632 | -11.37904034 | -12.55816165 |



| Voltage<br>(V) | Temperature<br>(°C) | U-NII-2C Test Results |              |              |              |
|----------------|---------------------|-----------------------|--------------|--------------|--------------|
|                |                     | 5580MHz               |              |              |              |
|                |                     | 1min                  | 2min         | 5min         | 10min        |
| 25             | -20                 | 5580.005672           | 5579.998566  | 5579.992495  | 5579.984045  |
| 25             | -10                 | 5579.999860           | 5579.996328  | 5579.990825  | 5579.979435  |
| 25             | 0                   | 5579.997731           | 5579.993806  | 5579.987848  | 5579.971682  |
| 25             | 10                  | 5579.997024           | 5579.986826  | 5579.978653  | 5579.970764  |
| 25             | 20                  | 5579.989425           | 5579.986205  | 5579.977114  | 5579.961360  |
| 25             | 30                  | 5579.981887           | 5579.983380  | 5579.968198  | 5579.957938  |
| 25             | 40                  | 5579.976373           | 5579.976413  | 5579.962709  | 5579.957891  |
| 25             | 50                  | 5579.973651           | 5579.969651  | 5579.952860  | 5579.952570  |
| -5             | 20                  | 5579.965769           | 5579.967136  | 5579.952840  | 5579.946045  |
| 45             | 20                  | 5579.955980           | 5579.964964  | 5579.943546  | 5579.945167  |
| MHz            |                     | -0.044019662          | -0.035036085 | -0.056454311 | -0.054832851 |
| PPM            |                     | -7.888828334          | -6.278868366 | -10.11725996 | -9.826675836 |

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-3 Test Results |              |              |              |
|----------------|---------------------|----------------------|--------------|--------------|--------------|
|                |                     | 5785MHz              |              |              |              |
|                |                     | 1min                 | 2min         | 5min         | 10min        |
| 25             | -20                 | 5785.008954          | 5784.999130  | 5784.993036  | 5784.985932  |
| 25             | -10                 | 5784.999387          | 5784.998563  | 5784.985546  | 5784.978761  |
| 25             | 0                   | 5784.996687          | 5784.995293  | 5784.981534  | 5784.971122  |
| 25             | 10                  | 5784.996214          | 5784.988230  | 5784.974906  | 5784.963429  |
| 25             | 20                  | 5784.989410          | 5784.984935  | 5784.969326  | 5784.953435  |
| 25             | 30                  | 5784.980923          | 5784.981737  | 5784.968808  | 5784.944219  |
| 25             | 40                  | 5784.979409          | 5784.976539  | 5784.962193  | 5784.941428  |
| 25             | 50                  | 5784.978913          | 5784.973777  | 5784.957432  | 5784.940203  |
| -5             | 20                  | 5784.970247          | 5784.967563  | 5784.956678  | 5784.939297  |
| 45             | 20                  | 5784.960507          | 5784.961282  | 5784.954709  | 5784.930507  |
| MHz            |                     | -0.039492693         | -0.038717673 | -0.045290762 | -0.069492802 |
| PPM            |                     | -6.826740388         | -6.69276973  | -7.828999525 | -12.01258462 |

**Internal Antenna 1: DZZ**

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-1 Test Results |              |              |              |
|----------------|---------------------|----------------------|--------------|--------------|--------------|
|                |                     | 5200MHz              |              |              |              |
|                |                     | 1min                 | 2min         | 5min         | 10min        |
| 25             | -20                 | 5199.997789          | 5199.990563  | 5199.990009  | 5199.985233  |
| 25             | -10                 | 5199.999541          | 5199.983351  | 5199.983173  | 5199.977043  |
| 25             | 0                   | 5199.999182          | 5199.981736  | 5199.976570  | 5199.969042  |
| 25             | 10                  | 5199.997292          | 5199.973870  | 5199.974021  | 5199.966690  |
| 25             | 20                  | 5199.988179          | 5199.972613  | 5199.971033  | 5199.966608  |
| 25             | 30                  | 5199.985661          | 5199.968791  | 5199.969308  | 5199.965820  |
| 25             | 40                  | 5199.980660          | 5199.959803  | 5199.962362  | 5199.957800  |
| 25             | 50                  | 5199.980075          | 5199.957157  | 5199.959665  | 5199.950357  |
| -5             | 20                  | 5199.975066          | 5199.952238  | 5199.954778  | 5199.940403  |
| 45             | 20                  | 5199.969950          | 5199.951104  | 5199.947307  | 5199.931412  |
| MHz            |                     | -0.030050237         | -0.048896473 | -0.052693176 | -0.068587752 |
| PPM            |                     | -5.778891658         | -9.403167968 | -10.13330303 | -13.18995226 |

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-2A Test Results |              |              |              |
|----------------|---------------------|-----------------------|--------------|--------------|--------------|
|                |                     | 5300MHz               |              |              |              |
|                |                     | 1min                  | 2min         | 5min         | 10min        |
| 25             | -20                 | 5299.999053           | 5299.992918  | 5299.992005  | 5299.990461  |
| 25             | -10                 | 5299.994384           | 5299.990727  | 5299.990437  | 5299.982251  |
| 25             | 0                   | 5299.991947           | 5299.989832  | 5299.988585  | 5299.979537  |
| 25             | 10                  | 5299.989185           | 5299.986929  | 5299.988403  | 5299.972560  |
| 25             | 20                  | 5299.987014           | 5299.985628  | 5299.978724  | 5299.966985  |
| 25             | 30                  | 5299.980797           | 5299.983758  | 5299.973566  | 5299.958435  |
| 25             | 40                  | 5299.978645           | 5299.979714  | 5299.967740  | 5299.957257  |
| 25             | 50                  | 5299.970385           | 5299.975408  | 5299.962263  | 5299.952018  |
| -5             | 20                  | 5299.962713           | 5299.969464  | 5299.954642  | 5299.945048  |
| 45             | 20                  | 5299.953707           | 5299.965847  | 5299.951916  | 5299.935246  |
| MHz            |                     | -0.046293247          | -0.034152899 | -0.048083607 | -0.064754145 |
| PPM            |                     | -8.734574957          | -6.443943155 | -9.072378759 | -12.21776315 |



| Voltage<br>(V) | Temperature<br>(°C) | U-NII-2C Test Results |              |              |              |
|----------------|---------------------|-----------------------|--------------|--------------|--------------|
|                |                     | 5580MHz               |              |              |              |
|                |                     | 1min                  | 2min         | 5min         | 10min        |
| 25             | -20                 | 5580.00903            | 5580.005595  | 5580.003405  | 5579.998275  |
| 25             | -10                 | 5580.006141           | 5579.998017  | 5579.997122  | 5579.994306  |
| 25             | 0                   | 5580.004855           | 5579.993878  | 5579.989173  | 5579.987728  |
| 25             | 10                  | 5579.996444           | 5579.990939  | 5579.983213  | 5579.979241  |
| 25             | 20                  | 5579.989027           | 5579.985717  | 5579.978628  | 5579.971982  |
| 25             | 30                  | 5579.986051           | 5579.984685  | 5579.976968  | 5579.967627  |
| 25             | 40                  | 5579.978852           | 5579.979798  | 5579.967414  | 5579.959427  |
| 25             | 50                  | 5579.977322           | 5579.977536  | 5579.96473   | 5579.958147  |
| -5             | 20                  | 5579.969777           | 5579.972287  | 5579.960018  | 5579.950879  |
| 45             | 20                  | 5579.966817           | 5579.967359  | 5579.952569  | 5579.947167  |
| MHz            |                     | -0.033183365          | -0.032641437 | -0.04743133  | -0.052832811 |
| PPM            |                     | -5.946839625          | -5.849719863 | -8.500238319 | -9.46824574  |

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-3 Test Results |              |              |              |
|----------------|---------------------|----------------------|--------------|--------------|--------------|
|                |                     | 5785MHz              |              |              |              |
|                |                     | 1min                 | 2min         | 5min         | 10min        |
| 25             | -20                 | 5784.997329          | 5784.992274  | 5784.984654  | 5784.983342  |
| 25             | -10                 | 5784.987959          | 5784.990369  | 5784.976575  | 5784.977459  |
| 25             | 0                   | 5784.982006          | 5784.984261  | 5784.971698  | 5784.970250  |
| 25             | 10                  | 5784.980414          | 5784.979986  | 5784.968611  | 5784.961352  |
| 25             | 20                  | 5784.975761          | 5784.970981  | 5784.964835  | 5784.953295  |
| 25             | 30                  | 5784.966383          | 5784.967964  | 5784.957215  | 5784.948896  |
| 25             | 40                  | 5784.957457          | 5784.960756  | 5784.951587  | 5784.945029  |
| 25             | 50                  | 5784.953741          | 5784.951334  | 5784.943507  | 5784.938957  |
| -5             | 20                  | 5784.953489          | 5784.946621  | 5784.936236  | 5784.934313  |
| 45             | 20                  | 5784.952485          | 5784.942302  | 5784.935380  | 5784.925012  |
| MHz            |                     | -0.047515208         | -0.057698157 | -0.064620369 | -0.074988225 |
| PPM            |                     | -8.213519083         | -9.973752319 | -11.17033171 | -12.96252804 |

## 5.4. Power Spectral Density

### Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C  | 45%~50%           | 101.5kPa |

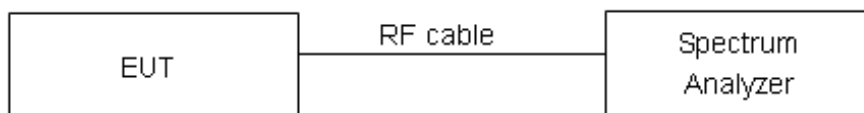
### Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 1MHz, VBW =3MHz for the band 5.150-5.250GHz, 5.250-5.350GHz, 5.470-5.725GHz.  
Set RBW = 470kHz, VBW =1.5MHz for the band 5.725-5.850GHz

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

### Test setup



### Limits

Rule FCC Part 15.407(a)(1)/ Part 15.407(a)(2) / Part 15.407(a)(3)

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the

amount in dB that the directional gain of the antenna exceeds 6 dBi.

| Frequency Bands/MHz              | Limits       |
|----------------------------------|--------------|
| 5150-5250                        | 17/11dBm/MHz |
| 5.25-5.35 GHz and 5.47-5.725 GHz | 11dBm/MHz    |
| 5725-5850                        | 30dBm/500kHz |

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 0.75\text{dB}$ .

**Test Results:**

Note: Power Spectral Density =Read Value+Duty cycle correction factor

**Internal Antenna 1: HL**
**MIMO without Beamforming**
**U-NII-1**

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|-------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                   |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                   |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a           | 36/5180                        | 10.24                          | 10.78                | 10.30                          | 10.84                | 10.23                          | 10.77                | 10.28                          | 10.82                | 16.82                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.97                           | 10.52                | 10.17                          | 10.71                | 9.88                           | 10.43                | 10.29                          | 10.83                | 16.65                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.91                           | 10.45                | 10.52                          | 11.06                | 9.84                           | 10.38                | 10.52                          | 11.06                | 16.77                           | 17.00                  | PASS       |
| 802.11n<br>HT20   | 36/5180                        | 10.22                          | 10.88                | 9.93                           | 10.59                | 10.04                          | 10.70                | 10.04                          | 10.70                | 16.74                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.77                           | 10.43                | 10.29                          | 10.95                | 10.04                          | 10.70                | 9.98                           | 10.64                | 16.71                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.40                           | 10.06                | 10.36                          | 11.03                | 9.46                           | 10.12                | 10.02                          | 10.68                | 16.51                           | 17.00                  | PASS       |
| 802.11n<br>HT40   | 38/5190                        | 4.13                           | 4.79                 | 3.30                           | 3.96                 | 3.26                           | 3.92                 | 3.42                           | 4.08                 | 10.22                           | 17.00                  | PASS       |
|                   | 46/5230                        | 8.80                           | 9.46                 | 8.88                           | 9.54                 | 9.01                           | 9.67                 | 8.61                           | 9.27                 | 15.51                           | 17.00                  | PASS       |
| 802.11ac<br>VHT20 | 36/5180                        | 10.01                          | 10.69                | 10.15                          | 10.83                | 9.64                           | 10.33                | 9.84                           | 10.53                | 16.62                           | 17.00                  | PASS       |
|                   | 40/5200                        | 10.08                          | 10.77                | 10.05                          | 10.74                | 9.62                           | 10.31                | 9.97                           | 10.66                | 16.64                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.76                           | 10.45                | 10.52                          | 11.20                | 9.33                           | 10.01                | 9.97                           | 10.66                | 16.62                           | 17.00                  | PASS       |
| 802.11ac<br>VHT40 | 38/5190                        | 3.66                           | 4.34                 | 3.25                           | 3.93                 | 3.05                           | 3.74                 | 3.37                           | 4.05                 | 10.04                           | 17.00                  | PASS       |
|                   | 46/5230                        | 8.10                           | 8.78                 | 8.25                           | 8.93                 | 8.31                           | 8.99                 | 8.32                           | 9.01                 | 14.95                           | 17.00                  | PASS       |
| 802.11ac<br>VHT80 | 42/5210                        | -1.25                          | -0.56                | -0.97                          | -0.28                | -1.26                          | -0.57                | -1.11                          | -0.42                | 5.56                            | 17.00                  | PASS       |
| 802.11ax<br>HE20  | 36/5180                        | 10.06                          | 10.74                | 10.58                          | 11.26                | 10.18                          | 10.87                | 10.08                          | 10.77                | 16.93                           | 17.00                  | PASS       |
|                   | 44/5200                        | 10.00                          | 10.69                | 9.86                           | 10.54                | 9.55                           | 10.24                | 9.76                           | 10.45                | 16.50                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.65                           | 10.33                | 10.52                          | 11.21                | 9.47                           | 10.15                | 9.63                           | 10.31                | 16.54                           | 17.00                  | PASS       |
| 802.11ax<br>HE40  | 38/5190                        | 2.41                           | 3.13                 | 1.99                           | 2.71                 | 2.74                           | 3.46                 | 2.54                           | 3.26                 | 9.17                            | 17.00                  | PASS       |
|                   | 46/5230                        | 8.79                           | 9.51                 | 9.20                           | 9.92                 | 8.96                           | 9.68                 | 8.84                           | 9.56                 | 15.69                           | 17.00                  | PASS       |
| 802.11ax<br>HE80  | 42/5210                        | -0.88                          | -0.12                | -0.54                          | 0.22                 | -0.60                          | 0.16                 | -0.98                          | -0.22                | 6.03                            | 17.00                  | PASS       |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

3. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the PSD limit is 17dBm.



## U-NII-2A

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 52/5260                        | 3.40                           | 3.95                 | 4.45                           | 4.99                 | 3.26                           | 3.80                 | 3.72                           | 4.27                 | 10.30                           | 11.00                  | PASS       |
|                    | 60/5300                        | 4.49                           | 5.03                 | 4.80                           | 5.34                 | 4.13                           | 4.67                 | 3.95                           | 4.49                 | 10.92                           | 11.00                  | PASS       |
|                    | 64/5320                        | 2.47                           | 3.01                 | 1.48                           | 2.02                 | 2.00                           | 2.54                 | 1.55                           | 2.09                 | 8.46                            | 11.00                  | PASS       |
| 802.11n<br>HT20    | 52/5260                        | 2.00                           | 2.66                 | 1.42                           | 2.08                 | 1.50                           | 2.16                 | 1.58                           | 2.24                 | 8.31                            | 11.00                  | PASS       |
|                    | 60/5300                        | 3.37                           | 4.03                 | 4.63                           | 5.29                 | 3.62                           | 4.29                 | 3.03                           | 3.69                 | 10.39                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.48                           | 4.14                 | 4.47                           | 5.13                 | 3.36                           | 4.03                 | 3.28                           | 3.94                 | 10.36                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 3.58                           | 4.25                 | 4.58                           | 5.24                 | 3.09                           | 3.75                 | 3.13                           | 3.80                 | 10.32                           | 11.00                  | PASS       |
|                    | 62/5310                        | 3.60                           | 4.27                 | 3.97                           | 4.64                 | 3.45                           | 4.12                 | 3.16                           | 3.82                 | 10.24                           | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 3.38                           | 4.07                 | 4.37                           | 5.05                 | 2.81                           | 3.50                 | 3.85                           | 4.53                 | 10.35                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.12                           | 3.81                 | 4.59                           | 5.27                 | 3.47                           | 4.16                 | 3.83                           | 4.51                 | 10.49                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.51                           | 4.19                 | 4.64                           | 5.33                 | 3.33                           | 4.01                 | 3.34                           | 4.02                 | 10.44                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 3.73                           | 4.41                 | 4.98                           | 5.67                 | 3.48                           | 4.16                 | 3.14                           | 3.82                 | 10.59                           | 11.00                  | PASS       |
|                    | 62/5310                        | 3.05                           | 3.73                 | 4.02                           | 4.70                 | 3.06                           | 3.74                 | 2.71                           | 3.39                 | 9.94                            | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | -2.84                          | -2.15                | -2.82                          | -2.13                | -2.72                          | -2.03                | -2.82                          | -2.13                | 3.91                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | -7.56                          | -7.18                | -6.90                          | -6.51                | -7.62                          | -7.24                | -7.55                          | -7.17                | -0.99                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 1.69                           | 2.37                 | 2.77                           | 3.45                 | 1.90                           | 2.58                 | 2.53                           | 3.21                 | 8.95                            | 11.00                  | PASS       |
|                    | 60/5300                        | 3.97                           | 4.65                 | 4.76                           | 5.45                 | 3.85                           | 4.53                 | 3.55                           | 4.23                 | 10.76                           | 11.00                  | PASS       |
|                    | 64/5320                        | 4.01                           | 4.69                 | 5.15                           | 5.83                 | 3.92                           | 4.61                 | 3.77                           | 4.45                 | 10.95                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 3.93                           | 4.65                 | 4.68                           | 5.40                 | 3.79                           | 4.51                 | 3.37                           | 4.09                 | 10.71                           | 11.00                  | PASS       |
|                    | 62/5310                        | 2.88                           | 3.60                 | 3.65                           | 4.37                 | 2.85                           | 3.57                 | 3.05                           | 3.77                 | 9.86                            | 11.00                  | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | -3.30                          | -2.54                | -3.08                          | -2.32                | -3.65                          | -2.89                | -3.64                          | -2.88                | 3.37                            | 11.00                  | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | -6.14                          | -5.86                | -5.50                          | -5.22                | -6.28                          | -6.00                | -6.05                          | -5.77                | 0.32                            | 11.00                  | PASS       |

Note: 1. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10 \log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

2. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 11dBm.

**U-NII-2C**

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 100/5500                       | 4.64                           | 5.18                 | 4.36                           | 4.90                 | 4.00                           | 4.54                 | 3.77                           | 4.31                 | 10.77                           | 11.00                  | PASS       |
|                    | 116/5580                       | 4.23                           | 4.77                 | 4.43                           | 4.97                 | 3.51                           | 4.05                 | 3.48                           | 4.02                 | 10.49                           | 11.00                  | PASS       |
|                    | 140/5700                       | 4.01                           | 4.55                 | 4.05                           | 4.59                 | 4.41                           | 4.95                 | 4.62                           | 5.16                 | 10.84                           | 11.00                  | PASS       |
|                    | 144/5720                       | 3.36                           | 3.91                 | 3.60                           | 4.15                 | 4.77                           | 5.31                 | 4.65                           | 5.20                 | 10.70                           | 11.00                  | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 4.46                           | 5.12                 | 3.74                           | 4.40                 | 2.77                           | 3.43                 | 2.56                           | 3.23                 | 10.13                           | 11.00                  | PASS       |
|                    | 116/5580                       | 3.92                           | 4.59                 | 4.00                           | 4.67                 | 3.03                           | 3.69                 | 3.30                           | 3.97                 | 10.27                           | 11.00                  | PASS       |
|                    | 140/5700                       | 2.10                           | 2.76                 | 3.19                           | 3.85                 | 2.42                           | 3.08                 | 3.66                           | 4.32                 | 9.57                            | 11.00                  | PASS       |
|                    | 144/5720                       | 3.25                           | 3.91                 | 3.69                           | 4.35                 | 4.89                           | 5.55                 | 4.84                           | 5.50                 | 10.91                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 3.25                           | 3.91                 | 3.19                           | 3.85                 | 2.49                           | 3.15                 | 2.70                           | 3.36                 | 9.60                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.72                           | 4.38                 | 3.59                           | 4.25                 | 2.58                           | 3.24                 | 2.52                           | 3.18                 | 9.82                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.96                           | 3.62                 | 2.98                           | 3.65                 | 3.21                           | 3.88                 | 3.28                           | 3.94                 | 9.79                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.35                           | 3.02                 | 3.17                           | 3.83                 | 3.74                           | 4.40                 | 4.13                           | 4.79                 | 10.08                           | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 3.83                           | 4.51                 | 3.74                           | 4.42                 | 2.82                           | 3.50                 | 3.01                           | 3.70                 | 10.08                           | 11.00                  | PASS       |
|                    | 116/5580                       | 3.90                           | 4.59                 | 4.34                           | 5.03                 | 3.14                           | 3.83                 | 3.38                           | 4.07                 | 10.42                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.12                           | 3.81                 | 4.18                           | 4.86                 | 4.43                           | 5.12                 | 4.43                           | 5.12                 | 10.78                           | 11.00                  | PASS       |
|                    | 144/5720                       | 3.23                           | 3.92                 | 3.58                           | 4.27                 | 4.44                           | 5.13                 | 4.71                           | 5.39                 | 10.74                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 3.37                           | 4.06                 | 3.37                           | 4.05                 | 2.64                           | 3.32                 | 2.65                           | 3.33                 | 9.73                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.57                           | 4.25                 | 3.58                           | 4.26                 | 2.66                           | 3.34                 | 2.43                           | 3.11                 | 9.79                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.70                           | 3.38                 | 3.14                           | 3.82                 | 3.47                           | 4.15                 | 3.49                           | 4.17                 | 9.91                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.69                           | 3.38                 | 2.89                           | 3.57                 | 4.04                           | 4.72                 | 4.38                           | 5.06                 | 10.26                           | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 0.06                           | 0.74                 | 0.01                           | 0.69                 | -0.48                          | 0.20                 | -1.17                          | -0.49                | 6.34                            | 11.00                  | PASS       |
|                    | 138/5690                       | -0.63                          | 0.05                 | -0.62                          | 0.07                 | 0.06                           | 0.75                 | 0.53                           | 1.22                 | 6.57                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | -6.59                          | -6.21                | -6.54                          | -6.15                | -7.75                          | -7.36                | -7.80                          | -7.41                | -0.72                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 4.61                           | 5.29                 | 4.63                           | 5.31                 | 3.68                           | 4.36                 | 3.05                           | 3.73                 | 10.74                           | 11.00                  | PASS       |
|                    | 116/5580                       | 4.56                           | 5.25                 | 4.56                           | 5.24                 | 3.99                           | 4.67                 | 3.72                           | 4.41                 | 10.93                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.39                           | 4.07                 | 3.44                           | 4.12                 | 4.71                           | 5.39                 | 4.37                           | 5.05                 | 10.72                           | 11.00                  | PASS       |
|                    | 144/5720                       | 2.67                           | 3.36                 | 2.91                           | 3.60                 | 4.35                           | 5.03                 | 4.12                           | 4.80                 | 10.28                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 3.35                           | 4.07                 | 3.14                           | 3.86                 | 2.76                           | 3.48                 | 2.54                           | 3.26                 | 9.70                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.96                           | 4.68                 | 3.71                           | 4.43                 | 2.82                           | 3.54                 | 3.08                           | 3.80                 | 10.16                           | 11.00                  | PASS       |
|                    | 134/5670                       | 3.26                           | 3.98                 | 3.14                           | 3.86                 | 3.78                           | 4.50                 | 3.51                           | 4.23                 | 10.17                           | 11.00                  | PASS       |
|                    | 142/5710                       | 2.85                           | 3.57                 | 2.73                           | 3.45                 | 4.07                           | 4.79                 | 4.21                           | 4.93                 | 10.26                           | 11.00                  | PASS       |
| 802.11ax           | 106/5530                       | 0.30                           | 1.06                 | 0.60                           | 1.36                 | -0.49                          | 0.27                 | -0.54                          | 0.22                 | 6.77                            | 11.00                  | PASS       |



|                   |          |       |       |       |       |       |       |       |       |       |       |      |
|-------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| HE80              | 138/5690 | -0.02 | 0.74  | -0.06 | 0.70  | 0.72  | 1.48  | 0.74  | 1.50  | 7.14  | 11.00 | PASS |
| 802.11ax<br>HE160 | 114/5570 | -5.93 | -5.64 | -6.49 | -6.21 | -7.29 | -7.01 | -7.67 | -7.39 | -0.49 | 11.00 | PASS |

Note: 1.For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm}/10)}+10^{(\text{PSD antenna2 in dBm}/10)}+10^{(\text{PSD antenna3 in dBm}/10)}+10^{(\text{PSD antenna4 in dBm}/10)})$

2. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the PSD limit is 11dBm.



## U-NII-3

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------|--------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                   |                                | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                   |                                | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11a           | 149/5745                       | 6.98                              | 7.79                    | 6.46                              | 7.27                    | 8.24                              | 9.05                    | 8.18                              | 8.99                    | 14.37                              | 30.00                     | PASS       |
|                   | 157/5785                       | 7.49                              | 8.30                    | 6.81                              | 7.62                    | 8.08                              | 8.89                    | 8.80                              | 9.61                    | 14.69                              | 30.00                     | PASS       |
|                   | 165/5825                       | 6.37                              | 7.18                    | 6.41                              | 7.22                    | 7.45                              | 8.26                    | 8.89                              | 9.70                    | 14.24                              | 30.00                     | PASS       |
| 802.11n<br>HT20   | 149/5745                       | 6.52                              | 7.45                    | 5.62                              | 6.55                    | 7.47                              | 8.40                    | 7.90                              | 8.83                    | 13.92                              | 30.00                     | PASS       |
|                   | 157/5785                       | 6.33                              | 7.26                    | 5.79                              | 6.72                    | 7.14                              | 8.07                    | 8.16                              | 9.09                    | 13.90                              | 30.00                     | PASS       |
|                   | 165/5825                       | 5.93                              | 6.86                    | 5.65                              | 6.58                    | 6.82                              | 7.75                    | 8.31                              | 9.24                    | 13.76                              | 30.00                     | PASS       |
| 802.11n<br>HT40   | 151/5755                       | 5.10                              | 6.03                    | 5.41                              | 6.34                    | 7.07                              | 8.01                    | 6.41                              | 7.35                    | 13.02                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.93                              | 5.86                    | 5.22                              | 6.16                    | 7.21                              | 8.14                    | 6.32                              | 7.25                    | 12.97                              | 30.00                     | PASS       |
| 802.11ac<br>VHT20 | 149/5745                       | 8.53                              | 9.49                    | 7.62                              | 8.58                    | 9.54                              | 10.49                   | 9.03                              | 9.98                    | 15.71                              | 30.00                     | PASS       |
|                   | 157/5785                       | 8.51                              | 9.47                    | 8.19                              | 9.15                    | 9.88                              | 10.83                   | 9.13                              | 10.09                   | 15.95                              | 30.00                     | PASS       |
|                   | 165/5825                       | 7.79                              | 8.75                    | 8.17                              | 9.12                    | 10.34                             | 11.30                   | 9.77                              | 10.73                   | 16.12                              | 30.00                     | PASS       |
| 802.11ac<br>VHT40 | 151/5755                       | 5.25                              | 6.20                    | 5.05                              | 6.00                    | 6.89                              | 7.85                    | 6.62                              | 7.57                    | 13.00                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.97                              | 5.93                    | 5.39                              | 6.34                    | 7.00                              | 7.95                    | 6.33                              | 7.28                    | 12.97                              | 30.00                     | PASS       |
| 802.11ac<br>VHT80 | 155/5775                       | -0.14                             | 0.82                    | -0.50                             | 0.46                    | 1.21                              | 2.17                    | 1.85                              | 2.81                    | 7.69                               | 30.00                     | PASS       |
| 802.11ax<br>HE20  | 149/5745                       | 7.16                              | 8.11                    | 5.89                              | 6.84                    | 7.65                              | 8.60                    | 8.26                              | 9.21                    | 14.30                              | 30.00                     | PASS       |
|                   | 157/5785                       | 6.78                              | 7.73                    | 5.78                              | 6.73                    | 7.64                              | 8.59                    | 8.52                              | 9.47                    | 14.27                              | 30.00                     | PASS       |
|                   | 165/5825                       | 5.86                              | 6.81                    | 5.95                              | 6.90                    | 7.50                              | 8.45                    | 8.95                              | 9.90                    | 14.23                              | 30.00                     | PASS       |
| 802.11ax<br>HE40  | 151/5755                       | 5.66                              | 6.65                    | 5.45                              | 6.44                    | 6.86                              | 7.85                    | 6.78                              | 7.77                    | 13.24                              | 30.00                     | PASS       |
|                   | 159/5795                       | 5.21                              | 6.20                    | 5.39                              | 6.38                    | 7.36                              | 8.35                    | 6.28                              | 7.27                    | 13.16                              | 30.00                     | PASS       |
| 802.11ax<br>HE80  | 155/5775                       | 3.86                              | 4.88                    | 4.10                              | 5.13                    | 6.24                              | 7.27                    | 5.58                              | 6.61                    | 12.11                              | 30.00                     | PASS       |

Note: 1. PSD=Read Value+Duty cycle+10\*LOG(500/470) correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)} + 10^{(\text{PSD antenna3 in dBm}/10)} + 10^{(\text{PSD antenna4 in dBm}/10)})$ .

3. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the PSD limit is 30dBm.

**MIMO with Beamforming**
**U-NII-1**

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|-------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                   |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                   |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a           | 36/5180                        | 10.43                          | 10.98                | 10.06                          | 10.60                | 9.90                           | 10.44                | 9.79                           | 10.34                | 16.62                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.98                           | 10.53                | 9.75                           | 10.29                | 9.53                           | 10.07                | 10.00                          | 10.54                | 16.38                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.67                           | 10.22                | 10.18                          | 10.72                | 9.65                           | 10.19                | 10.25                          | 10.79                | 16.51                           | 17.00                  | PASS       |
| 802.11n<br>HT20   | 36/5180                        | 10.31                          | 10.97                | 9.49                           | 10.16                | 9.51                           | 10.18                | 9.99                           | 10.65                | 16.52                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.71                           | 10.37                | 9.92                           | 10.58                | 9.39                           | 10.06                | 9.72                           | 10.38                | 16.37                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.24                           | 9.90                 | 9.94                           | 10.60                | 9.46                           | 10.12                | 9.75                           | 10.42                | 16.29                           | 17.00                  | PASS       |
| 802.11n<br>HT40   | 38/5190                        | 3.33                           | 3.99                 | 2.69                           | 3.35                 | 3.21                           | 3.88                 | 3.09                           | 3.75                 | 9.77                            | 17.00                  | PASS       |
|                   | 46/5230                        | 7.86                           | 8.52                 | 8.10                           | 8.76                 | 7.92                           | 8.59                 | 8.29                           | 8.95                 | 14.73                           | 17.00                  | PASS       |
| 802.11ac<br>VHT20 | 36/5180                        | 9.95                           | 10.64                | 9.53                           | 10.21                | 9.52                           | 10.21                | 9.96                           | 10.65                | 16.45                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.64                           | 10.33                | 9.59                           | 10.28                | 9.54                           | 10.22                | 9.78                           | 10.47                | 16.35                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.64                           | 10.33                | 10.38                          | 11.06                | 9.17                           | 9.86                 | 9.68                           | 10.37                | 16.45                           | 17.00                  | PASS       |
| 802.11ac<br>VHT40 | 38/5190                        | 3.12                           | 3.80                 | 2.81                           | 3.49                 | 3.25                           | 3.94                 | 3.06                           | 3.75                 | 9.77                            | 17.00                  | PASS       |
|                   | 46/5230                        | 8.18                           | 8.87                 | 8.09                           | 8.77                 | 7.98                           | 8.66                 | 7.79                           | 8.48                 | 14.72                           | 17.00                  | PASS       |
| 802.11ac<br>VHT80 | 42/5210                        | -1.28                          | -0.59                | -1.21                          | -0.52                | -1.34                          | -0.65                | -1.52                          | -0.84                | 5.37                            | 17.00                  | PASS       |
| 802.11ax<br>HE20  | 36/5180                        | 9.53                           | 10.21                | 9.39                           | 10.07                | 9.57                           | 10.25                | 9.63                           | 10.31                | 16.23                           | 17.00                  | PASS       |
|                   | 44/5200                        | 9.56                           | 10.24                | 9.66                           | 10.34                | 9.27                           | 9.95                 | 9.76                           | 10.44                | 16.27                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.12                           | 9.80                 | 9.76                           | 10.44                | 9.66                           | 10.34                | 9.51                           | 10.19                | 16.22                           | 17.00                  | PASS       |
| 802.11ax<br>HE40  | 38/5190                        | 3.35                           | 4.07                 | 2.77                           | 3.49                 | 2.98                           | 3.70                 | 3.06                           | 3.78                 | 9.79                            | 17.00                  | PASS       |
|                   | 46/5230                        | 8.82                           | 9.54                 | 8.94                           | 9.66                 | 8.59                           | 9.31                 | 8.89                           | 9.61                 | 15.55                           | 17.00                  | PASS       |
| 802.11ax<br>HE80  | 42/5210                        | -0.73                          | 0.02                 | -0.84                          | -0.08                | -1.45                          | -0.69                | -0.53                          | 0.23                 | 5.90                            | 17.00                  | PASS       |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10 \log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

3. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 17dBm.



## U-NII-2A

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 52/5260                        | 3.23                           | 3.77                 | 4.21                           | 4.76                 | 3.12                           | 3.66                 | 3.52                           | 4.06                 | 10.11                           | 11.00                  | PASS       |
|                    | 60/5300                        | 2.98                           | 3.52                 | 3.55                           | 4.09                 | 3.02                           | 3.56                 | 2.67                           | 3.21                 | 9.63                            | 11.00                  | PASS       |
|                    | 64/5320                        | 2.81                           | 3.35                 | 1.96                           | 2.50                 | 2.13                           | 2.67                 | 1.85                           | 2.39                 | 8.77                            | 11.00                  | PASS       |
| 802.11n<br>HT20    | 52/5260                        | 2.10                           | 2.76                 | 1.09                           | 1.75                 | 1.94                           | 2.60                 | 2.16                           | 2.82                 | 8.53                            | 11.00                  | PASS       |
|                    | 60/5300                        | 3.20                           | 3.86                 | 4.21                           | 4.88                 | 2.97                           | 3.64                 | 2.90                           | 3.56                 | 10.04                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.36                           | 4.03                 | 4.29                           | 4.95                 | 3.39                           | 4.05                 | 3.27                           | 3.93                 | 10.28                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 3.15                           | 3.81                 | 3.89                           | 4.55                 | 3.05                           | 3.71                 | 2.77                           | 3.43                 | 9.92                            | 11.00                  | PASS       |
|                    | 62/5310                        | 2.87                           | 3.54                 | 3.29                           | 3.95                 | 2.46                           | 3.12                 | 2.29                           | 2.95                 | 9.43                            | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 3.04                           | 3.73                 | 4.46                           | 5.15                 | 3.14                           | 3.82                 | 3.15                           | 3.83                 | 10.19                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.28                           | 3.97                 | 3.93                           | 4.62                 | 3.33                           | 4.01                 | 2.97                           | 3.65                 | 10.10                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.40                           | 4.09                 | 4.34                           | 5.02                 | 2.99                           | 3.67                 | 3.12                           | 3.80                 | 10.20                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 3.36                           | 4.05                 | 3.86                           | 4.54                 | 3.14                           | 3.82                 | 2.74                           | 3.42                 | 10.00                           | 11.00                  | PASS       |
|                    | 62/5310                        | 3.25                           | 3.93                 | 3.71                           | 4.40                 | 3.13                           | 3.82                 | 2.68                           | 3.36                 | 9.91                            | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | -2.39                          | -1.70                | -2.97                          | -2.28                | -2.72                          | -2.03                | -2.59                          | -1.90                | 4.04                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | -7.60                          | -7.22                | -6.97                          | -6.59                | -8.19                          | -7.80                | -8.04                          | -7.66                | -1.27                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 2.57                           | 3.25                 | 1.52                           | 2.20                 | 1.64                           | 2.32                 | 2.66                           | 3.34                 | 8.83                            | 11.00                  | PASS       |
|                    | 60/5300                        | 3.21                           | 3.89                 | 4.56                           | 5.24                 | 3.66                           | 4.35                 | 3.41                           | 4.09                 | 10.44                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.93                           | 4.61                 | 4.66                           | 5.34                 | 4.01                           | 4.69                 | 3.16                           | 3.84                 | 10.67                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 3.29                           | 4.01                 | 4.32                           | 5.04                 | 3.02                           | 3.74                 | 3.22                           | 3.94                 | 10.23                           | 11.00                  | PASS       |
|                    | 62/5310                        | 2.73                           | 3.45                 | 3.43                           | 4.15                 | 2.76                           | 3.48                 | 2.34                           | 3.06                 | 9.57                            | 11.00                  | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | -2.94                          | -2.18                | -3.48                          | -2.72                | -3.78                          | -3.02                | -3.07                          | -2.31                | 3.47                            | 11.00                  | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | -7.28                          | -7.00                | -6.57                          | -6.29                | -7.54                          | -7.26                | -7.98                          | -7.70                | -1.01                           | 11.00                  | PASS       |

Note: 1. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10\log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

2. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 11dBm.

**U-NII-2C**

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 100/5500                       | 4.45                           | 4.99                 | 4.39                           | 4.93                 | 3.52                           | 4.06                 | 3.37                           | 3.92                 | 10.52                           | 11.00                  | PASS       |
|                    | 116/5580                       | 4.05                           | 4.60                 | 4.39                           | 4.93                 | 2.98                           | 3.52                 | 3.28                           | 3.83                 | 10.28                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.71                           | 4.25                 | 3.91                           | 4.45                 | 4.82                           | 5.37                 | 4.49                           | 5.03                 | 10.82                           | 11.00                  | PASS       |
|                    | 144/5720                       | 2.98                           | 3.53                 | 3.36                           | 3.90                 | 4.56                           | 5.11                 | 4.60                           | 5.14                 | 10.50                           | 11.00                  | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 3.46                           | 4.12                 | 3.68                           | 4.34                 | 2.85                           | 3.51                 | 2.47                           | 3.13                 | 9.82                            | 11.00                  | PASS       |
|                    | 116/5580                       | 3.96                           | 4.63                 | 4.36                           | 5.02                 | 2.89                           | 3.55                 | 3.01                           | 3.67                 | 10.28                           | 11.00                  | PASS       |
|                    | 140/5700                       | 2.07                           | 2.73                 | 1.85                           | 2.51                 | 2.68                           | 3.34                 | 3.02                           | 3.68                 | 9.11                            | 11.00                  | PASS       |
|                    | 144/5720                       | 3.23                           | 3.89                 | 3.53                           | 4.19                 | 4.57                           | 5.24                 | 4.69                           | 5.35                 | 10.74                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 2.54                           | 3.21                 | 3.18                           | 3.84                 | 2.32                           | 2.98                 | 1.93                           | 2.60                 | 9.20                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.27                           | 3.93                 | 3.21                           | 3.87                 | 2.24                           | 2.90                 | 2.19                           | 2.86                 | 9.44                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.71                           | 3.37                 | 2.66                           | 3.33                 | 3.30                           | 3.97                 | 3.40                           | 4.07                 | 9.72                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.54                           | 3.20                 | 2.62                           | 3.29                 | 4.03                           | 4.69                 | 3.47                           | 4.14                 | 9.89                            | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 3.59                           | 4.27                 | 3.66                           | 4.35                 | 2.84                           | 3.53                 | 2.51                           | 3.20                 | 9.89                            | 11.00                  | PASS       |
|                    | 116/5580                       | 3.48                           | 4.16                 | 4.21                           | 4.89                 | 2.76                           | 3.45                 | 2.83                           | 3.52                 | 10.07                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.07                           | 3.76                 | 3.99                           | 4.68                 | 4.27                           | 4.96                 | 4.45                           | 5.14                 | 10.68                           | 11.00                  | PASS       |
|                    | 144/5720                       | 3.34                           | 4.03                 | 4.02                           | 4.70                 | 4.47                           | 5.15                 | 4.39                           | 5.08                 | 10.78                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 2.64                           | 3.32                 | 3.30                           | 3.98                 | 2.26                           | 2.94                 | 2.06                           | 2.74                 | 9.29                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.05                           | 3.73                 | 3.41                           | 4.09                 | 2.27                           | 2.95                 | 1.84                           | 2.52                 | 9.39                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.45                           | 3.13                 | 2.72                           | 3.40                 | 2.93                           | 3.61                 | 2.70                           | 3.38                 | 9.40                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.38                           | 3.06                 | 2.70                           | 3.38                 | 3.33                           | 4.01                 | 3.63                           | 4.32                 | 9.74                            | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | -0.71                          | -0.02                | -0.17                          | 0.52                 | -1.15                          | -0.46                | -1.54                          | -0.85                | 5.85                            | 11.00                  | PASS       |
|                    | 138/5690                       | -0.87                          | -0.18                | -1.04                          | -0.35                | -0.10                          | 0.58                 | -0.34                          | 0.34                 | 6.14                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | -7.36                          | -6.98                | -7.02                          | -6.64                | -8.68                          | -8.29                | -8.29                          | -7.90                | -1.38                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 4.01                           | 4.69                 | 3.68                           | 4.36                 | 3.61                           | 4.29                 | 2.78                           | 3.47                 | 10.25                           | 11.00                  | PASS       |
|                    | 116/5580                       | 3.97                           | 4.65                 | 4.38                           | 5.06                 | 3.19                           | 3.87                 | 3.09                           | 3.78                 | 10.39                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.10                           | 3.78                 | 3.59                           | 4.27                 | 4.37                           | 5.05                 | 4.32                           | 5.01                 | 10.58                           | 11.00                  | PASS       |
|                    | 144/5720                       | 2.75                           | 3.43                 | 3.16                           | 3.84                 | 4.23                           | 4.91                 | 3.82                           | 4.50                 | 10.23                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 3.08                           | 3.80                 | 2.83                           | 3.55                 | 2.10                           | 2.82                 | 2.14                           | 2.86                 | 9.30                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.06                           | 3.78                 | 3.40                           | 4.12                 | 2.33                           | 3.05                 | 1.61                           | 2.33                 | 9.40                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.27                           | 2.99                 | 2.46                           | 3.18                 | 3.29                           | 4.01                 | 2.77                           | 3.49                 | 9.46                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.57                           | 3.29                 | 2.69                           | 3.41                 | 3.66                           | 4.38                 | 3.43                           | 4.15                 | 9.85                            | 11.00                  | PASS       |
| 802.11ax           | 106/5530                       | 0.05                           | 0.81                 | -0.03                          | 0.73                 | -1.50                          | -0.74                | -1.31                          | -0.55                | 6.14                            | 11.00                  | PASS       |



|                   |          |       |       |       |       |       |       |       |       |      |       |      |
|-------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| HE80              | 138/5690 | -0.59 | 0.17  | -0.33 | 0.43  | 0.05  | 0.81  | 0.53  | 1.29  | 6.72 | 11.00 | PASS |
| 802.11ax<br>HE160 | 114/5570 | -5.61 | -5.33 | -5.65 | -5.36 | -6.62 | -6.33 | -6.82 | -6.53 | 0.16 | 11.00 | PASS |

Note: 1.For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm}/10)}+10^{(\text{PSD antenna2 in dBm}/10)}+10^{(\text{PSD antenna3 in dBm}/10)}+10^{(\text{PSD antenna4 in dBm}/10)})$

2. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the PSD limit is 11dBm.



## U-NII-3

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------|--------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                   |                                | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                   |                                | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11a           | 149/5745                       | 7.00                              | 7.81                    | 6.32                              | 7.13                    | 8.27                              | 9.08                    | 8.41                              | 9.22                    | 14.42                              | 30.00                     | PASS       |
|                   | 157/5785                       | 7.35                              | 8.16                    | 6.32                              | 7.13                    | 8.29                              | 9.10                    | 8.68                              | 9.49                    | 14.59                              | 30.00                     | PASS       |
|                   | 165/5825                       | 6.83                              | 7.64                    | 6.57                              | 7.38                    | 7.62                              | 8.43                    | 8.58                              | 9.39                    | 14.31                              | 30.00                     | PASS       |
| 802.11n<br>HT20   | 149/5745                       | 6.40                              | 7.33                    | 5.46                              | 6.39                    | 7.33                              | 8.26                    | 7.41                              | 8.34                    | 13.67                              | 30.00                     | PASS       |
|                   | 157/5785                       | 6.07                              | 7.00                    | 5.47                              | 6.40                    | 7.43                              | 8.36                    | 7.99                              | 8.92                    | 13.81                              | 30.00                     | PASS       |
|                   | 165/5825                       | 6.52                              | 7.45                    | 6.25                              | 7.18                    | 7.07                              | 8.00                    | 8.79                              | 9.72                    | 14.23                              | 30.00                     | PASS       |
| 802.11n<br>HT40   | 151/5755                       | 4.00                              | 4.93                    | 4.33                              | 5.26                    | 5.74                              | 6.67                    | 5.84                              | 6.77                    | 12.01                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.18                              | 5.12                    | 4.27                              | 5.20                    | 6.02                              | 6.96                    | 6.11                              | 7.05                    | 12.20                              | 30.00                     | PASS       |
| 802.11ac<br>VHT20 | 149/5745                       | 6.33                              | 7.28                    | 6.76                              | 7.72                    | 7.951                             | 8.91                    | 8.25                              | 9.21                    | 14.37                              | 30.00                     | PASS       |
|                   | 157/5785                       | 6.30                              | 7.25                    | 7.01                              | 7.97                    | 8.737                             | 9.69                    | 9.04                              | 9.99                    | 14.90                              | 30.00                     | PASS       |
|                   | 165/5825                       | 6.46                              | 7.42                    | 6.84                              | 7.79                    | 8.86                              | 9.82                    | 8.68                              | 9.64                    | 14.82                              | 30.00                     | PASS       |
| 802.11ac<br>VHT40 | 151/5755                       | 3.69                              | 4.64                    | 4.63                              | 5.58                    | 5.90                              | 6.86                    | 5.82                              | 6.77                    | 12.08                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.05                              | 5.00                    | 4.34                              | 5.29                    | 5.83                              | 6.78                    | 5.60                              | 6.55                    | 11.99                              | 30.00                     | PASS       |
| 802.11ac<br>VHT80 | 155/5775                       | 0.29                              | 1.25                    | -0.16                             | 0.80                    | 1.39                              | 2.35                    | 2.10                              | 3.06                    | 7.97                               | 30.00                     | PASS       |
| 802.11ax<br>HE20  | 149/5745                       | 6.98                              | 7.93                    | 6.17                              | 7.12                    | 7.88                              | 8.83                    | 7.90                              | 8.85                    | 14.26                              | 30.00                     | PASS       |
|                   | 157/5785                       | 7.05                              | 8.00                    | 5.80                              | 6.75                    | 7.78                              | 8.73                    | 9.02                              | 9.97                    | 14.54                              | 30.00                     | PASS       |
|                   | 165/5825                       | 6.53                              | 7.48                    | 6.39                              | 7.34                    | 7.16                              | 8.11                    | 8.86                              | 9.81                    | 14.33                              | 30.00                     | PASS       |
| 802.11ax<br>HE40  | 151/5755                       | 4.26                              | 5.25                    | 4.56                              | 5.55                    | 6.14                              | 7.13                    | 6.08                              | 7.07                    | 12.35                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.04                              | 5.03                    | 4.34                              | 5.33                    | 6.08                              | 7.07                    | 6.16                              | 7.15                    | 12.27                              | 30.00                     | PASS       |
| 802.11ax<br>HE80  | 155/5775                       | 0.28                              | 1.31                    | 0.48                              | 1.51                    | 2.31                              | 3.34                    | 2.11                              | 3.14                    | 8.44                               | 30.00                     | PASS       |

Note: 1. PSD=Read Value+Duty cycle+10\*LOG(500/470) correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)} + 10^{(\text{PSD antenna3 in dBm}/10)} + 10^{(\text{PSD antenna4 in dBm}/10)})$ .

3. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the PSD limit is 30dBm.

**Internal Antenna 2: DZZ**
**MIMO without Beamforming**
**U-NII-1**

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|-------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                   |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                   |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a           | 36/5180                        | 10.24                          | 10.78                | 10.30                          | 10.84                | 10.23                          | 10.77                | 10.28                          | 10.82                | 16.82                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.97                           | 10.52                | 10.17                          | 10.71                | 9.88                           | 10.43                | 10.29                          | 10.83                | 16.65                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.91                           | 10.45                | 10.52                          | 11.06                | 9.84                           | 10.38                | 10.52                          | 11.06                | 16.77                           | 17.00                  | PASS       |
| 802.11n<br>HT20   | 36/5180                        | 10.22                          | 10.88                | 9.93                           | 10.59                | 10.04                          | 10.70                | 10.04                          | 10.70                | 16.74                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.77                           | 10.43                | 10.29                          | 10.95                | 10.04                          | 10.70                | 9.98                           | 10.64                | 16.71                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.40                           | 10.06                | 10.36                          | 11.03                | 9.46                           | 10.12                | 10.02                          | 10.68                | 16.51                           | 17.00                  | PASS       |
| 802.11n<br>HT40   | 38/5190                        | 4.13                           | 4.79                 | 3.30                           | 3.96                 | 3.26                           | 3.92                 | 3.42                           | 4.08                 | 10.22                           | 17.00                  | PASS       |
|                   | 46/5230                        | 8.80                           | 9.46                 | 8.88                           | 9.54                 | 9.01                           | 9.67                 | 8.61                           | 9.27                 | 15.51                           | 17.00                  | PASS       |
| 802.11ac<br>VHT20 | 36/5180                        | 10.01                          | 10.69                | 10.15                          | 10.83                | 9.64                           | 10.33                | 9.84                           | 10.53                | 16.62                           | 17.00                  | PASS       |
|                   | 40/5200                        | 10.08                          | 10.77                | 10.05                          | 10.74                | 9.62                           | 10.31                | 9.97                           | 10.66                | 16.64                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.76                           | 10.45                | 10.52                          | 11.20                | 9.33                           | 10.01                | 9.97                           | 10.66                | 16.62                           | 17.00                  | PASS       |
| 802.11ac<br>VHT40 | 38/5190                        | 3.66                           | 4.34                 | 3.25                           | 3.93                 | 3.05                           | 3.74                 | 3.37                           | 4.05                 | 10.04                           | 17.00                  | PASS       |
|                   | 46/5230                        | 8.10                           | 8.78                 | 8.25                           | 8.93                 | 8.31                           | 8.99                 | 8.32                           | 9.01                 | 14.95                           | 17.00                  | PASS       |
| 802.11ac<br>VHT80 | 42/5210                        | -1.25                          | -0.56                | -0.97                          | -0.28                | -1.26                          | -0.57                | -1.11                          | -0.42                | 5.56                            | 17.00                  | PASS       |
| 802.11ax<br>HE20  | 36/5180                        | 10.06                          | 10.74                | 10.58                          | 11.26                | 10.18                          | 10.87                | 10.08                          | 10.77                | 16.93                           | 17.00                  | PASS       |
|                   | 44/5200                        | 10.00                          | 10.69                | 9.86                           | 10.54                | 9.55                           | 10.24                | 9.76                           | 10.45                | 16.50                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.65                           | 10.33                | 10.52                          | 11.21                | 9.47                           | 10.15                | 9.63                           | 10.31                | 16.54                           | 17.00                  | PASS       |
| 802.11ax<br>HE40  | 38/5190                        | 2.41                           | 3.13                 | 1.99                           | 2.71                 | 2.74                           | 3.46                 | 2.54                           | 3.26                 | 9.17                            | 17.00                  | PASS       |
|                   | 46/5230                        | 8.79                           | 9.51                 | 9.20                           | 9.92                 | 8.96                           | 9.68                 | 8.84                           | 9.56                 | 15.69                           | 17.00                  | PASS       |
| 802.11ax<br>HE80  | 42/5210                        | -0.88                          | -0.12                | -0.54                          | 0.22                 | -0.60                          | 0.16                 | -0.98                          | -0.22                | 6.03                            | 17.00                  | PASS       |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10\log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

3. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 17dBm.



## U-NII-2A

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 52/5260                        | 3.40                           | 3.95                 | 4.45                           | 4.99                 | 3.26                           | 3.80                 | 3.72                           | 4.27                 | 10.30                           | 11.00                  | PASS       |
|                    | 60/5300                        | 4.49                           | 5.03                 | 4.80                           | 5.34                 | 4.13                           | 4.67                 | 3.95                           | 4.49                 | 10.92                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.84                           | 4.38                 | 4.22                           | 4.76                 | 3.70                           | 4.25                 | 3.62                           | 4.16                 | 10.41                           | 11.00                  | PASS       |
| 802.11n<br>HT20    | 52/5260                        | 3.09                           | 3.76                 | 4.71                           | 5.37                 | 3.36                           | 4.03                 | 3.60                           | 4.27                 | 10.42                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.37                           | 4.03                 | 4.63                           | 5.29                 | 3.62                           | 4.29                 | 3.03                           | 3.69                 | 10.39                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.48                           | 4.14                 | 4.47                           | 5.13                 | 3.36                           | 4.03                 | 3.28                           | 3.94                 | 10.36                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 3.58                           | 4.25                 | 4.58                           | 5.24                 | 3.09                           | 3.75                 | 3.13                           | 3.80                 | 10.32                           | 11.00                  | PASS       |
|                    | 62/5310                        | 3.60                           | 4.27                 | 3.97                           | 4.64                 | 3.45                           | 4.12                 | 3.16                           | 3.82                 | 10.24                           | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 3.38                           | 4.07                 | 4.37                           | 5.05                 | 2.81                           | 3.50                 | 3.85                           | 4.53                 | 10.35                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.12                           | 3.81                 | 4.59                           | 5.27                 | 3.47                           | 4.16                 | 3.83                           | 4.51                 | 10.49                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.51                           | 4.19                 | 4.64                           | 5.33                 | 3.33                           | 4.01                 | 3.34                           | 4.02                 | 10.44                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 3.73                           | 4.41                 | 4.98                           | 5.67                 | 3.48                           | 4.16                 | 3.14                           | 3.82                 | 10.59                           | 11.00                  | PASS       |
|                    | 62/5310                        | 3.05                           | 3.73                 | 4.02                           | 4.70                 | 3.06                           | 3.74                 | 2.71                           | 3.39                 | 9.94                            | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | 0.51                           | 1.19                 | 1.29                           | 1.98                 | 0.18                           | 0.86                 | -0.06                          | 0.63                 | 7.22                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | -7.56                          | -7.18                | -6.90                          | -6.51                | -7.62                          | -7.24                | -7.55                          | -7.17                | -0.99                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 3.78                           | 4.46                 | 5.12                           | 5.80                 | 3.77                           | 4.45                 | 3.96                           | 4.64                 | 10.90                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.97                           | 4.65                 | 4.76                           | 5.45                 | 3.85                           | 4.53                 | 3.55                           | 4.23                 | 10.76                           | 11.00                  | PASS       |
|                    | 64/5320                        | 4.01                           | 4.69                 | 5.15                           | 5.83                 | 3.92                           | 4.61                 | 3.77                           | 4.45                 | 10.95                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 3.93                           | 4.65                 | 4.68                           | 5.40                 | 3.79                           | 4.51                 | 3.37                           | 4.09                 | 10.71                           | 11.00                  | PASS       |
|                    | 62/5310                        | 2.88                           | 3.60                 | 3.65                           | 4.37                 | 2.85                           | 3.57                 | 3.05                           | 3.77                 | 9.86                            | 11.00                  | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | 1.03                           | 1.79                 | 1.11                           | 1.87                 | 0.59                           | 1.35                 | -0.93                          | -0.17                | 7.30                            | 11.00                  | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | -7.06                          | -6.78                | -6.48                          | -6.20                | -8.40                          | -8.12                | -6.89                          | -6.61                | -0.85                           | 11.00                  | PASS       |

Note: 1. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10 \log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

2. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 11dBm.

**U-NII-2C**

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 100/5500                       | 4.64                           | 5.18                 | 4.36                           | 4.90                 | 4.00                           | 4.54                 | 3.77                           | 4.31                 | 10.77                           | 11.00                  | PASS       |
|                    | 116/5580                       | 4.23                           | 4.77                 | 4.43                           | 4.97                 | 3.51                           | 4.05                 | 3.48                           | 4.02                 | 10.49                           | 11.00                  | PASS       |
|                    | 140/5700                       | 4.01                           | 4.55                 | 4.05                           | 4.59                 | 4.41                           | 4.95                 | 4.62                           | 5.16                 | 10.84                           | 11.00                  | PASS       |
|                    | 144/5720                       | 3.36                           | 3.91                 | 3.60                           | 4.15                 | 4.77                           | 5.31                 | 4.65                           | 5.20                 | 10.70                           | 11.00                  | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 4.46                           | 5.12                 | 3.74                           | 4.40                 | 2.77                           | 3.43                 | 2.56                           | 3.23                 | 10.13                           | 11.00                  | PASS       |
|                    | 116/5580                       | 3.92                           | 4.59                 | 4.00                           | 4.67                 | 3.03                           | 3.69                 | 3.30                           | 3.97                 | 10.27                           | 11.00                  | PASS       |
|                    | 140/5700                       | 2.10                           | 2.76                 | 3.19                           | 3.85                 | 2.42                           | 3.08                 | 3.66                           | 4.32                 | 9.57                            | 11.00                  | PASS       |
|                    | 144/5720                       | 3.25                           | 3.91                 | 3.69                           | 4.35                 | 4.89                           | 5.55                 | 4.84                           | 5.50                 | 10.91                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 3.25                           | 3.91                 | 3.19                           | 3.85                 | 2.49                           | 3.15                 | 2.70                           | 3.36                 | 9.60                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.72                           | 4.38                 | 3.59                           | 4.25                 | 2.58                           | 3.24                 | 2.52                           | 3.18                 | 9.82                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.96                           | 3.62                 | 2.98                           | 3.65                 | 3.21                           | 3.88                 | 3.28                           | 3.94                 | 9.79                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.35                           | 3.02                 | 3.17                           | 3.83                 | 3.74                           | 4.40                 | 4.13                           | 4.79                 | 10.08                           | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 3.83                           | 4.51                 | 3.74                           | 4.42                 | 2.82                           | 3.50                 | 3.01                           | 3.70                 | 10.08                           | 11.00                  | PASS       |
|                    | 116/5580                       | 3.90                           | 4.59                 | 4.34                           | 5.03                 | 3.14                           | 3.83                 | 3.38                           | 4.07                 | 10.42                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.12                           | 3.81                 | 4.18                           | 4.86                 | 4.43                           | 5.12                 | 4.43                           | 5.12                 | 10.78                           | 11.00                  | PASS       |
|                    | 144/5720                       | 3.23                           | 3.92                 | 3.58                           | 4.27                 | 4.44                           | 5.13                 | 4.71                           | 5.39                 | 10.74                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 3.37                           | 4.06                 | 3.37                           | 4.05                 | 2.64                           | 3.32                 | 2.65                           | 3.33                 | 9.73                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.57                           | 4.25                 | 3.58                           | 4.26                 | 2.66                           | 3.34                 | 2.43                           | 3.11                 | 9.79                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.70                           | 3.38                 | 3.14                           | 3.82                 | 3.47                           | 4.15                 | 3.49                           | 4.17                 | 9.91                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.69                           | 3.38                 | 2.89                           | 3.57                 | 4.04                           | 4.72                 | 4.38                           | 5.06                 | 10.26                           | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 0.06                           | 0.74                 | 0.01                           | 0.69                 | -0.48                          | 0.20                 | -1.17                          | -0.49                | 6.34                            | 11.00                  | PASS       |
|                    | 138/5690                       | -0.63                          | 0.05                 | -0.62                          | 0.07                 | 0.06                           | 0.75                 | 0.53                           | 1.22                 | 6.57                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | -6.59                          | -6.21                | -6.54                          | -6.15                | -7.75                          | -7.36                | -7.80                          | -7.41                | -0.72                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 4.61                           | 5.29                 | 4.63                           | 5.31                 | 3.68                           | 4.36                 | 3.05                           | 3.73                 | 10.74                           | 11.00                  | PASS       |
|                    | 116/5580                       | 4.56                           | 5.25                 | 4.56                           | 5.24                 | 3.99                           | 4.67                 | 3.72                           | 4.41                 | 10.93                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.39                           | 4.07                 | 3.44                           | 4.12                 | 4.71                           | 5.39                 | 4.37                           | 5.05                 | 10.72                           | 11.00                  | PASS       |
|                    | 144/5720                       | 2.67                           | 3.36                 | 2.91                           | 3.60                 | 4.35                           | 5.03                 | 4.12                           | 4.80                 | 10.28                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 3.35                           | 4.07                 | 3.14                           | 3.86                 | 2.76                           | 3.48                 | 2.54                           | 3.26                 | 9.70                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.96                           | 4.68                 | 3.71                           | 4.43                 | 2.82                           | 3.54                 | 3.08                           | 3.80                 | 10.16                           | 11.00                  | PASS       |
|                    | 134/5670                       | 3.26                           | 3.98                 | 3.14                           | 3.86                 | 3.78                           | 4.50                 | 3.51                           | 4.23                 | 10.17                           | 11.00                  | PASS       |
|                    | 142/5710                       | 2.85                           | 3.57                 | 2.73                           | 3.45                 | 4.07                           | 4.79                 | 4.21                           | 4.93                 | 10.26                           | 11.00                  | PASS       |
| 802.11ax           | 106/5530                       | 0.30                           | 1.06                 | 0.60                           | 1.36                 | -0.49                          | 0.27                 | -0.54                          | 0.22                 | 6.77                            | 11.00                  | PASS       |



|                   |          |       |       |       |       |       |       |       |       |       |       |      |
|-------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| HE80              | 138/5690 | -0.02 | 0.74  | -0.06 | 0.70  | 0.72  | 1.48  | 0.74  | 1.50  | 7.14  | 11.00 | PASS |
| 802.11ax<br>HE160 | 114/5570 | -5.93 | -5.64 | -6.49 | -6.21 | -7.29 | -7.01 | -7.67 | -7.39 | -0.49 | 11.00 | PASS |

Note: 1.For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)} + 10^{(\text{PSD antenna3 in dBm}/10)} + 10^{(\text{PSD antenna4 in dBm}/10)})$

2. The manufacturer declared that the directional gain =4.70dBi<6dBi. So the PSD limit is 11dBm.



## U-NII-3

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------|--------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                   |                                | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                   |                                | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11a           | 149/5745                       | 6.90                              | 7.71                    | 6.38                              | 7.20                    | 8.37                              | 9.19                    | 7.96                              | 8.77                    | 14.31                              | 30.00                     | PASS       |
|                   | 157/5785                       | 9.63                              | 10.45                   | 8.95                              | 9.77                    | 10.76                             | 11.58                   | 10.20                             | 11.02                   | 16.77                              | 30.00                     | PASS       |
|                   | 165/5825                       | 8.55                              | 9.36                    | 9.28                              | 10.09                   | 10.60                             | 11.41                   | 10.51                             | 11.32                   | 16.65                              | 30.00                     | PASS       |
| 802.11n<br>HT20   | 149/5745                       | 8.19                              | 9.12                    | 7.78                              | 8.72                    | 9.46                              | 10.39                   | 9.10                              | 10.04                   | 15.64                              | 30.00                     | PASS       |
|                   | 157/5785                       | 8.40                              | 9.33                    | 7.99                              | 8.92                    | 10.04                             | 10.98                   | 9.45                              | 10.38                   | 16.00                              | 30.00                     | PASS       |
|                   | 165/5825                       | 7.81                              | 8.74                    | 8.11                              | 9.04                    | 9.66                              | 10.59                   | 9.19                              | 10.12                   | 15.71                              | 30.00                     | PASS       |
| 802.11n<br>HT40   | 151/5755                       | 5.10                              | 6.03                    | 5.41                              | 6.34                    | 7.07                              | 8.01                    | 6.41                              | 7.35                    | 13.02                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.93                              | 5.86                    | 5.22                              | 6.16                    | 7.21                              | 8.14                    | 6.32                              | 7.25                    | 12.97                              | 30.00                     | PASS       |
| 802.11ac<br>VHT20 | 149/5745                       | 8.53                              | 9.49                    | 7.62                              | 8.58                    | 9.54                              | 10.49                   | 9.03                              | 9.98                    | 15.71                              | 30.00                     | PASS       |
|                   | 157/5785                       | 8.51                              | 9.47                    | 8.19                              | 9.15                    | 9.88                              | 10.83                   | 9.13                              | 10.09                   | 15.95                              | 30.00                     | PASS       |
|                   | 165/5825                       | 7.79                              | 8.75                    | 8.17                              | 9.12                    | 10.34                             | 11.30                   | 9.77                              | 10.73                   | 16.12                              | 30.00                     | PASS       |
| 802.11ac<br>VHT40 | 151/5755                       | 5.25                              | 6.20                    | 5.05                              | 6.00                    | 6.89                              | 7.85                    | 6.62                              | 7.57                    | 13.00                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.97                              | 5.93                    | 5.39                              | 6.34                    | 7.00                              | 7.95                    | 6.33                              | 7.28                    | 12.97                              | 30.00                     | PASS       |
| 802.11ac<br>VHT80 | 155/5775                       | 2.10                              | 3.05                    | 2.18                              | 3.14                    | 3.66                              | 4.62                    | 2.94                              | 3.89                    | 9.74                               | 30.00                     | PASS       |
| 802.11ax<br>HE20  | 149/5745                       | 8.70                              | 9.65                    | 8.03                              | 8.98                    | 9.95                              | 10.90                   | 9.46                              | 10.42                   | 16.07                              | 30.00                     | PASS       |
|                   | 157/5785                       | 8.41                              | 9.36                    | 8.27                              | 9.22                    | 10.13                             | 11.08                   | 9.69                              | 10.65                   | 16.17                              | 30.00                     | PASS       |
|                   | 165/5825                       | 8.34                              | 9.29                    | 8.37                              | 9.33                    | 10.32                             | 11.27                   | 9.86                              | 10.81                   | 16.28                              | 30.00                     | PASS       |
| 802.11ax<br>HE40  | 151/5755                       | 5.66                              | 6.65                    | 5.45                              | 6.44                    | 6.86                              | 7.85                    | 6.78                              | 7.77                    | 13.24                              | 30.00                     | PASS       |
|                   | 159/5795                       | 5.21                              | 6.20                    | 5.39                              | 6.38                    | 7.36                              | 8.35                    | 6.28                              | 7.27                    | 13.16                              | 30.00                     | PASS       |
| 802.11ax<br>HE80  | 155/5775                       | 3.45                              | 4.48                    | 3.74                              | 4.77                    | 4.00                              | 5.03                    | 5.91                              | 6.94                    | 11.44                              | 30.00                     | PASS       |

Note: 1.  $PSD = \text{Read Value} + \text{Duty cycle} + 10 \cdot \text{LOG}(500/470)$  correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10 \log(10^{(PSD_{\text{antenna1}} \text{ in dBm/10})} + 10^{(PSD_{\text{antenna2}} \text{ in dBm/10})} + 10^{(PSD_{\text{antenna3}} \text{ in dBm/10})} + 10^{(PSD_{\text{antenna4}} \text{ in dBm/10})})$ .

3. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 30dBm.

**MIMO with Beamforming**
**U-NII-1**

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|-------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                   |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                   |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a           | 36/5180                        | 10.43                          | 10.98                | 10.06                          | 10.60                | 9.90                           | 10.44                | 9.79                           | 10.34                | 16.62                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.98                           | 10.53                | 9.75                           | 10.29                | 9.53                           | 10.07                | 10.00                          | 10.54                | 16.38                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.67                           | 10.22                | 10.18                          | 10.72                | 9.65                           | 10.19                | 10.25                          | 10.79                | 16.51                           | 17.00                  | PASS       |
| 802.11n<br>HT20   | 36/5180                        | 10.31                          | 10.97                | 9.49                           | 10.16                | 9.51                           | 10.18                | 9.99                           | 10.65                | 16.52                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.71                           | 10.37                | 9.92                           | 10.58                | 9.39                           | 10.06                | 9.72                           | 10.38                | 16.37                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.24                           | 9.90                 | 9.94                           | 10.60                | 9.46                           | 10.12                | 9.75                           | 10.42                | 16.29                           | 17.00                  | PASS       |
| 802.11n<br>HT40   | 38/5190                        | 3.33                           | 3.99                 | 2.69                           | 3.35                 | 3.21                           | 3.88                 | 3.09                           | 3.75                 | 9.77                            | 17.00                  | PASS       |
|                   | 46/5230                        | 7.86                           | 8.52                 | 8.10                           | 8.76                 | 7.92                           | 8.59                 | 8.29                           | 8.95                 | 14.73                           | 17.00                  | PASS       |
| 802.11ac<br>VHT20 | 36/5180                        | 9.95                           | 10.64                | 9.53                           | 10.21                | 9.52                           | 10.21                | 9.96                           | 10.65                | 16.45                           | 17.00                  | PASS       |
|                   | 40/5200                        | 9.64                           | 10.33                | 9.59                           | 10.28                | 9.54                           | 10.22                | 9.78                           | 10.47                | 16.35                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.64                           | 10.33                | 10.38                          | 11.06                | 9.17                           | 9.86                 | 9.68                           | 10.37                | 16.45                           | 17.00                  | PASS       |
| 802.11ac<br>VHT40 | 38/5190                        | 3.12                           | 3.80                 | 2.81                           | 3.49                 | 3.25                           | 3.94                 | 3.06                           | 3.75                 | 9.77                            | 17.00                  | PASS       |
|                   | 46/5230                        | 8.18                           | 8.87                 | 8.09                           | 8.77                 | 7.98                           | 8.66                 | 7.79                           | 8.48                 | 14.72                           | 17.00                  | PASS       |
| 802.11ac<br>VHT80 | 42/5210                        | -1.28                          | -0.59                | -1.21                          | -0.52                | -1.34                          | -0.65                | -1.52                          | -0.84                | 5.37                            | 17.00                  | PASS       |
| 802.11ax<br>HE20  | 36/5180                        | 9.53                           | 10.21                | 9.39                           | 10.07                | 9.57                           | 10.25                | 9.63                           | 10.31                | 16.23                           | 17.00                  | PASS       |
|                   | 44/5200                        | 9.56                           | 10.24                | 9.66                           | 10.34                | 9.27                           | 9.95                 | 9.76                           | 10.44                | 16.27                           | 17.00                  | PASS       |
|                   | 48/5240                        | 9.12                           | 9.80                 | 9.76                           | 10.44                | 9.66                           | 10.34                | 9.51                           | 10.19                | 16.22                           | 17.00                  | PASS       |
| 802.11ax<br>HE40  | 38/5190                        | 3.35                           | 4.07                 | 2.77                           | 3.49                 | 2.98                           | 3.70                 | 3.06                           | 3.78                 | 9.79                            | 17.00                  | PASS       |
|                   | 46/5230                        | 8.82                           | 9.54                 | 8.94                           | 9.66                 | 8.59                           | 9.31                 | 8.89                           | 9.61                 | 15.55                           | 17.00                  | PASS       |
| 802.11ax<br>HE80  | 42/5210                        | -0.73                          | 0.02                 | -0.84                          | -0.08                | -1.45                          | -0.69                | -0.53                          | 0.23                 | 5.90                            | 17.00                  | PASS       |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10 \log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

3. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 17dBm.



## U-NII-2A

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 52/5260                        | 3.23                           | 3.77                 | 4.21                           | 4.76                 | 3.12                           | 3.66                 | 3.52                           | 4.06                 | 10.11                           | 11.00                  | PASS       |
|                    | 60/5300                        | 2.98                           | 3.52                 | 3.55                           | 4.09                 | 3.02                           | 3.56                 | 2.67                           | 3.21                 | 9.63                            | 11.00                  | PASS       |
|                    | 64/5320                        | 3.37                           | 3.91                 | 4.22                           | 4.76                 | 3.63                           | 4.18                 | 3.06                           | 3.60                 | 10.16                           | 11.00                  | PASS       |
| 802.11n<br>HT20    | 52/5260                        | 2.87                           | 3.53                 | 4.55                           | 5.21                 | 2.98                           | 3.64                 | 3.08                           | 3.75                 | 10.11                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.20                           | 3.86                 | 4.21                           | 4.88                 | 2.97                           | 3.64                 | 2.90                           | 3.56                 | 10.04                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.36                           | 4.03                 | 4.29                           | 4.95                 | 3.39                           | 4.05                 | 3.27                           | 3.93                 | 10.28                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 3.15                           | 3.81                 | 3.89                           | 4.55                 | 3.05                           | 3.71                 | 2.77                           | 3.43                 | 9.92                            | 11.00                  | PASS       |
|                    | 62/5310                        | 2.87                           | 3.54                 | 3.29                           | 3.95                 | 2.46                           | 3.12                 | 2.29                           | 2.95                 | 9.43                            | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 3.04                           | 3.73                 | 4.46                           | 5.15                 | 3.14                           | 3.82                 | 3.15                           | 3.83                 | 10.19                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.28                           | 3.97                 | 3.93                           | 4.62                 | 3.33                           | 4.01                 | 2.97                           | 3.65                 | 10.10                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.40                           | 4.09                 | 4.34                           | 5.02                 | 2.99                           | 3.67                 | 3.12                           | 3.80                 | 10.20                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 3.36                           | 4.05                 | 3.86                           | 4.54                 | 3.14                           | 3.82                 | 2.74                           | 3.42                 | 10.00                           | 11.00                  | PASS       |
|                    | 62/5310                        | 3.25                           | 3.93                 | 3.71                           | 4.40                 | 3.13                           | 3.82                 | 2.68                           | 3.36                 | 9.91                            | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | -0.74                          | -0.06                | -0.36                          | 0.32                 | -0.78                          | -0.10                | -1.98                          | -1.30                | 5.78                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | -7.60                          | -7.22                | -6.97                          | -6.59                | -8.19                          | -7.80                | -8.04                          | -7.66                | -1.27                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 3.46                           | 4.14                 | 4.97                           | 5.65                 | 3.74                           | 4.42                 | 3.34                           | 4.02                 | 10.63                           | 11.00                  | PASS       |
|                    | 60/5300                        | 3.21                           | 3.89                 | 4.56                           | 5.24                 | 3.66                           | 4.35                 | 3.41                           | 4.09                 | 10.44                           | 11.00                  | PASS       |
|                    | 64/5320                        | 3.93                           | 4.61                 | 4.66                           | 5.34                 | 4.01                           | 4.69                 | 3.16                           | 3.84                 | 10.67                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 3.29                           | 4.01                 | 4.32                           | 5.04                 | 3.02                           | 3.74                 | 3.22                           | 3.94                 | 10.23                           | 11.00                  | PASS       |
|                    | 62/5310                        | 2.73                           | 3.45                 | 3.43                           | 4.15                 | 2.76                           | 3.48                 | 2.34                           | 3.06                 | 9.57                            | 11.00                  | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | -0.86                          | -0.10                | 0.11                           | 0.87                 | -1.01                          | -0.25                | -1.82                          | -1.06                | 5.94                            | 11.00                  | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | -7.28                          | -7.00                | -6.57                          | -6.29                | -7.54                          | -7.26                | -7.98                          | -7.70                | -1.01                           | 11.00                  | PASS       |

Note: 1. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10\log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

2. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 11dBm.

**U-NII-2C**

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11a            | 100/5500                       | 4.45                           | 4.99                 | 4.39                           | 4.93                 | 3.52                           | 4.06                 | 3.37                           | 3.92                 | 10.52                           | 11.00                  | PASS       |
|                    | 116/5580                       | 4.05                           | 4.60                 | 4.39                           | 4.93                 | 2.98                           | 3.52                 | 3.28                           | 3.83                 | 10.28                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.71                           | 4.25                 | 3.91                           | 4.45                 | 4.82                           | 5.37                 | 4.49                           | 5.03                 | 10.82                           | 11.00                  | PASS       |
|                    | 144/5720                       | 2.98                           | 3.53                 | 3.36                           | 3.90                 | 4.56                           | 5.11                 | 4.60                           | 5.14                 | 10.50                           | 11.00                  | PASS       |
| 802.11n<br>HT20    | 100/5500                       | 3.46                           | 4.12                 | 3.68                           | 4.34                 | 2.85                           | 3.51                 | 2.47                           | 3.13                 | 9.82                            | 11.00                  | PASS       |
|                    | 116/5580                       | 3.96                           | 4.63                 | 4.36                           | 5.02                 | 2.89                           | 3.55                 | 3.01                           | 3.67                 | 10.28                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.01                           | 3.67                 | 3.75                           | 4.42                 | 4.30                           | 4.96                 | 4.57                           | 5.23                 | 10.63                           | 11.00                  | PASS       |
|                    | 144/5720                       | 3.23                           | 3.89                 | 3.53                           | 4.19                 | 4.57                           | 5.24                 | 4.69                           | 5.35                 | 10.74                           | 11.00                  | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 2.54                           | 3.21                 | 3.18                           | 3.84                 | 2.32                           | 2.98                 | 1.93                           | 2.60                 | 9.20                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.27                           | 3.93                 | 3.21                           | 3.87                 | 2.24                           | 2.90                 | 2.19                           | 2.86                 | 9.44                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.71                           | 3.37                 | 2.66                           | 3.33                 | 3.30                           | 3.97                 | 3.40                           | 4.07                 | 9.72                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.54                           | 3.20                 | 2.62                           | 3.29                 | 4.03                           | 4.69                 | 3.47                           | 4.14                 | 9.89                            | 11.00                  | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 3.59                           | 4.27                 | 3.66                           | 4.35                 | 2.84                           | 3.53                 | 2.51                           | 3.20                 | 9.89                            | 11.00                  | PASS       |
|                    | 116/5580                       | 3.48                           | 4.16                 | 4.21                           | 4.89                 | 2.76                           | 3.45                 | 2.83                           | 3.52                 | 10.07                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.07                           | 3.76                 | 3.99                           | 4.68                 | 4.27                           | 4.96                 | 4.45                           | 5.14                 | 10.68                           | 11.00                  | PASS       |
|                    | 144/5720                       | 3.34                           | 4.03                 | 4.02                           | 4.70                 | 4.47                           | 5.15                 | 4.39                           | 5.08                 | 10.78                           | 11.00                  | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 2.64                           | 3.32                 | 3.30                           | 3.98                 | 2.26                           | 2.94                 | 2.06                           | 2.74                 | 9.29                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.05                           | 3.73                 | 3.41                           | 4.09                 | 2.27                           | 2.95                 | 1.84                           | 2.52                 | 9.39                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.45                           | 3.13                 | 2.72                           | 3.40                 | 2.93                           | 3.61                 | 2.70                           | 3.38                 | 9.40                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.38                           | 3.06                 | 2.70                           | 3.38                 | 3.33                           | 4.01                 | 3.63                           | 4.32                 | 9.74                            | 11.00                  | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | -0.71                          | -0.02                | -0.17                          | 0.52                 | -1.15                          | -0.46                | -1.54                          | -0.85                | 5.85                            | 11.00                  | PASS       |
|                    | 138/5690                       | -0.87                          | -0.18                | -1.04                          | -0.35                | -0.10                          | 0.58                 | -0.34                          | 0.34                 | 6.14                            | 11.00                  | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | -7.36                          | -6.98                | -7.02                          | -6.64                | -8.68                          | -8.29                | -8.29                          | -7.90                | -1.38                           | 11.00                  | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 4.01                           | 4.69                 | 3.68                           | 4.36                 | 3.61                           | 4.29                 | 2.78                           | 3.47                 | 10.25                           | 11.00                  | PASS       |
|                    | 116/5580                       | 3.97                           | 4.65                 | 4.38                           | 5.06                 | 3.19                           | 3.87                 | 3.09                           | 3.78                 | 10.39                           | 11.00                  | PASS       |
|                    | 140/5700                       | 3.10                           | 3.78                 | 3.59                           | 4.27                 | 4.37                           | 5.05                 | 4.32                           | 5.01                 | 10.58                           | 11.00                  | PASS       |
|                    | 144/5720                       | 2.75                           | 3.43                 | 3.16                           | 3.84                 | 4.23                           | 4.91                 | 3.82                           | 4.50                 | 10.23                           | 11.00                  | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 3.08                           | 3.80                 | 2.83                           | 3.55                 | 2.10                           | 2.82                 | 2.14                           | 2.86                 | 9.30                            | 11.00                  | PASS       |
|                    | 110/5550                       | 3.06                           | 3.78                 | 3.40                           | 4.12                 | 2.33                           | 3.05                 | 1.61                           | 2.33                 | 9.40                            | 11.00                  | PASS       |
|                    | 134/5670                       | 2.27                           | 2.99                 | 2.46                           | 3.18                 | 3.29                           | 4.01                 | 2.77                           | 3.49                 | 9.46                            | 11.00                  | PASS       |
|                    | 142/5710                       | 2.57                           | 3.29                 | 2.69                           | 3.41                 | 3.66                           | 4.38                 | 3.43                           | 4.15                 | 9.85                            | 11.00                  | PASS       |
| 802.11ax           | 106/5530                       | 0.05                           | 0.81                 | -0.03                          | 0.73                 | -1.50                          | -0.74                | -1.31                          | -0.55                | 6.14                            | 11.00                  | PASS       |



|                   |          |       |       |       |       |       |       |       |       |      |       |      |
|-------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| HE80              | 138/5690 | -0.59 | 0.17  | -0.33 | 0.43  | 0.05  | 0.81  | 0.53  | 1.29  | 6.72 | 11.00 | PASS |
| 802.11ax<br>HE160 | 114/5570 | -5.61 | -5.33 | -5.65 | -5.36 | -6.62 | -6.33 | -6.82 | -6.53 | 0.16 | 11.00 | PASS |

Note: 1. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density =  $10 \log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})} + 10^{(\text{PSD antenna3 in dBm/10})} + 10^{(\text{PSD antenna4 in dBm/10})})$

2. The manufacturer declared that the directional gain = 4.70dBi < 6dBi. So the PSD limit is 11dBm.



## U-NII-3

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------|--------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                   |                                | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                   |                                | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11a           | 149/5745                       | 8.74                              | 9.55                    | 8.74                              | 9.56                    | 10.13                             | 10.94                   | 9.68                              | 10.49                   | 16.20                              | 30.00                     | PASS       |
|                   | 157/5785                       | 9.12                              | 9.94                    | 9.06                              | 9.88                    | 10.75                             | 11.56                   | 10.24                             | 11.05                   | 16.69                              | 30.00                     | PASS       |
|                   | 165/5825                       | 8.19                              | 9.00                    | 9.34                              | 10.15                   | 10.33                             | 11.15                   | 9.97                              | 10.78                   | 16.37                              | 30.00                     | PASS       |
| 802.11n<br>HT20   | 149/5745                       | 8.15                              | 9.08                    | 7.62                              | 8.55                    | 8.93                              | 9.86                    | 8.94                              | 9.87                    | 15.40                              | 30.00                     | PASS       |
|                   | 157/5785                       | 8.41                              | 9.34                    | 8.37                              | 9.31                    | 9.86                              | 10.79                   | 9.46                              | 10.39                   | 16.03                              | 30.00                     | PASS       |
|                   | 165/5825                       | 7.53                              | 8.46                    | 8.30                              | 9.23                    | 10.02                             | 10.95                   | 9.37                              | 10.31                   | 15.86                              | 30.00                     | PASS       |
| 802.11n<br>HT40   | 151/5755                       | 5.15                              | 6.09                    | 5.39                              | 6.32                    | 6.65                              | 7.58                    | 6.59                              | 7.52                    | 12.95                              | 30.00                     | PASS       |
|                   | 159/5795                       | 5.06                              | 5.99                    | 5.25                              | 6.18                    | 7.39                              | 8.32                    | 6.05                              | 6.98                    | 12.99                              | 30.00                     | PASS       |
| 802.11ac<br>VHT20 | 149/5745                       | 8.49                              | 9.44                    | 7.73                              | 8.68                    | 9.03                              | 9.98                    | 9.41                              | 10.36                   | 15.68                              | 30.00                     | PASS       |
|                   | 157/5785                       | 8.70                              | 9.65                    | 7.97                              | 8.92                    | 9.61                              | 10.56                   | 9.33                              | 10.29                   | 15.92                              | 30.00                     | PASS       |
|                   | 165/5825                       | 7.53                              | 8.48                    | 8.21                              | 9.16                    | 10.09                             | 11.05                   | 9.16                              | 10.11                   | 15.83                              | 30.00                     | PASS       |
| 802.11ac<br>VHT40 | 151/5755                       | 5.54                              | 6.49                    | 5.03                              | 5.98                    | 6.99                              | 7.94                    | 6.49                              | 7.44                    | 13.05                              | 30.00                     | PASS       |
|                   | 159/5795                       | 4.90                              | 5.85                    | 5.50                              | 6.46                    | 7.81                              | 8.76                    | 6.24                              | 7.19                    | 13.23                              | 30.00                     | PASS       |
| 802.11ac<br>VHT80 | 155/5775                       | 2.05                              | 3.00                    | 2.02                              | 2.97                    | 3.64                              | 4.60                    | 3.03                              | 3.98                    | 9.72                               | 30.00                     | PASS       |
| 802.11ax<br>HE20  | 149/5745                       | 8.41                              | 9.36                    | 8.26                              | 9.21                    | 10.03                             | 10.98                   | 9.41                              | 10.37                   | 16.06                              | 30.00                     | PASS       |
|                   | 157/5785                       | 8.73                              | 9.69                    | 8.38                              | 9.34                    | 10.29                             | 11.24                   | 9.83                              | 10.78                   | 16.35                              | 30.00                     | PASS       |
|                   | 165/5825                       | 7.93                              | 8.88                    | 8.33                              | 9.29                    | 10.19                             | 11.14                   | 9.75                              | 10.70                   | 16.12                              | 30.00                     | PASS       |
| 802.11ax<br>HE40  | 151/5755                       | 5.24                              | 6.23                    | 5.51                              | 6.50                    | 7.11                              | 8.10                    | 6.32                              | 7.31                    | 13.12                              | 30.00                     | PASS       |
|                   | 159/5795                       | 5.52                              | 6.51                    | 5.27                              | 6.26                    | 7.30                              | 8.29                    | 6.68                              | 7.67                    | 13.28                              | 30.00                     | PASS       |
| 802.11ax<br>HE80  | 155/5775                       | 0.28                              | 1.31                    | 0.48                              | 1.51                    | 2.31                              | 3.34                    | 2.11                              | 3.14                    | 8.44                               | 30.00                     | PASS       |

Note: 1. PSD=Read Value+Duty cycle+10\*LOG(500/470) correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a), the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)} + 10^{(\text{PSD antenna3 in dBm}/10)} + 10^{(\text{PSD antenna4 in dBm}/10)})$ .

3. The manufacturer declared that the directional gain = 4.70dBi<6dBi. So the PSD limit is 30dBm.

Internal Antenna 1: HL  
MIMO without Beamforming  
Antenna 1

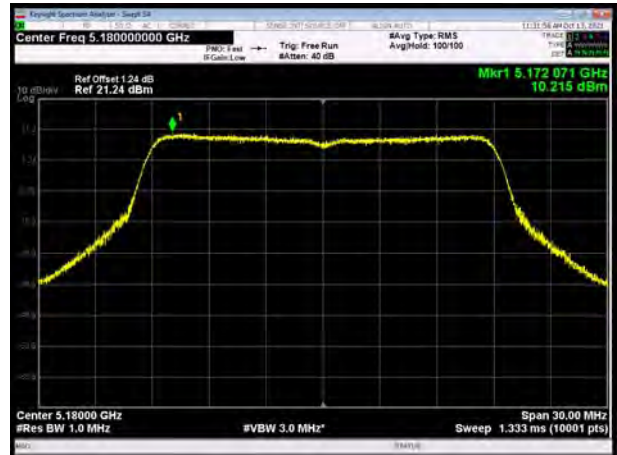
U-NII-1, 802.11a

Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5180



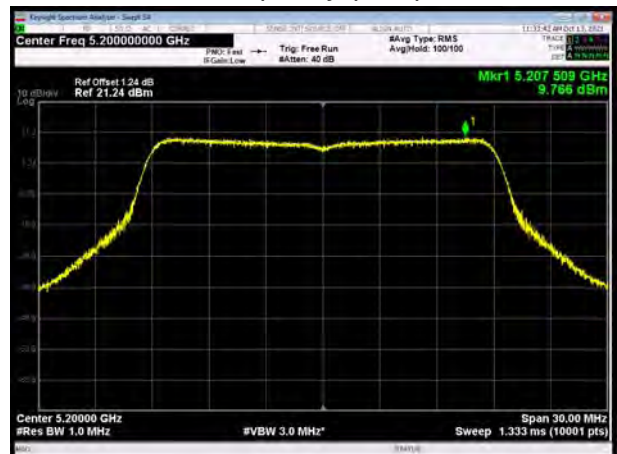
U-NII-1, 802.11a

Carrier frequency (MHz): 5200



U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5200



U-NII-1, 802.11a

Carrier frequency (MHz): 5240

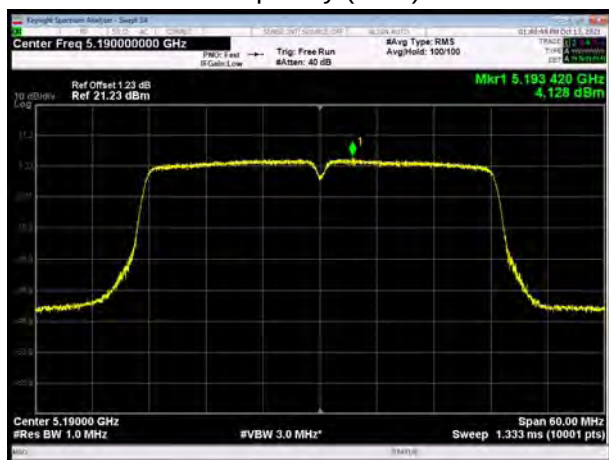


U-NII-1, 802.11n HT20

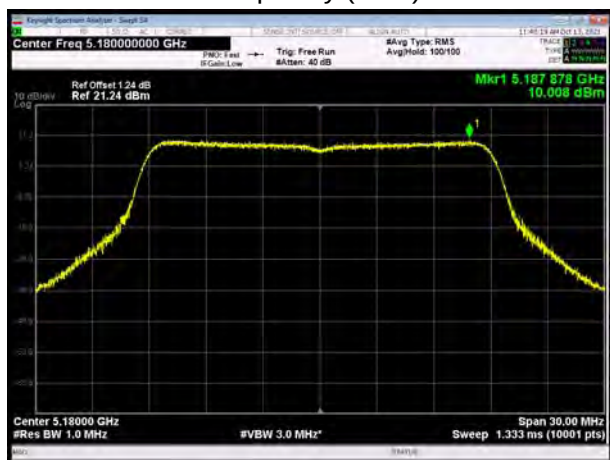
Carrier frequency (MHz): 5240



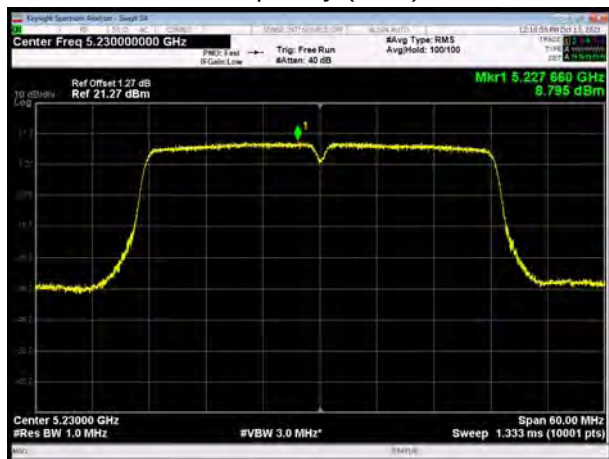
U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5190



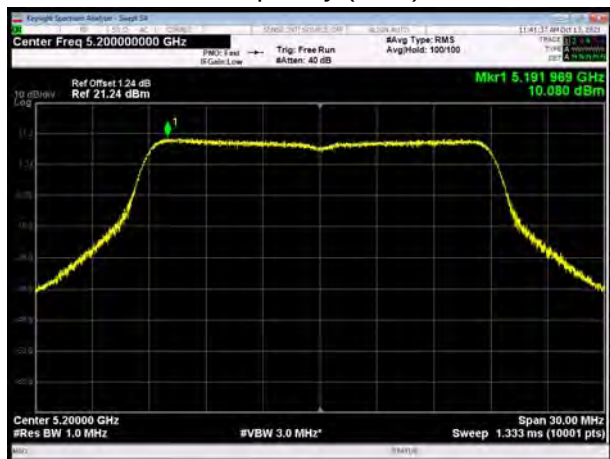
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5180



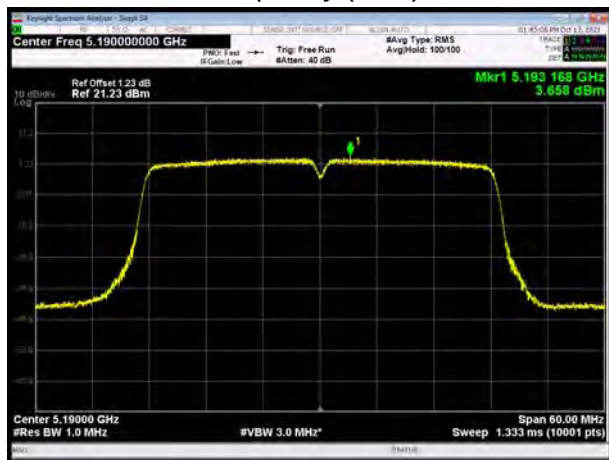
U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5230



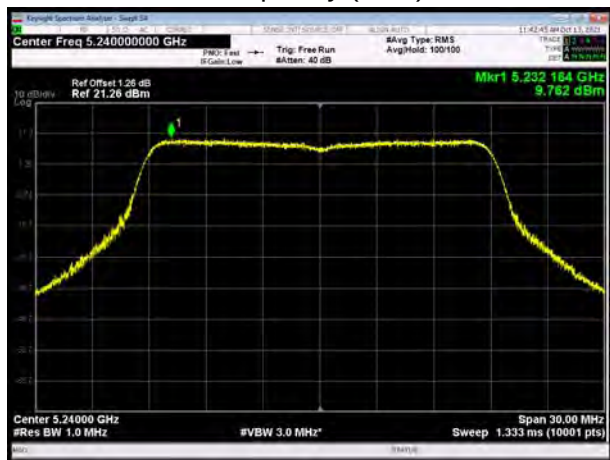
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5200



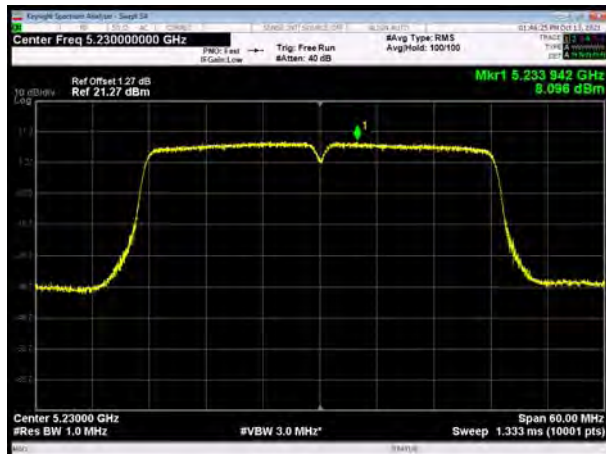
U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5190



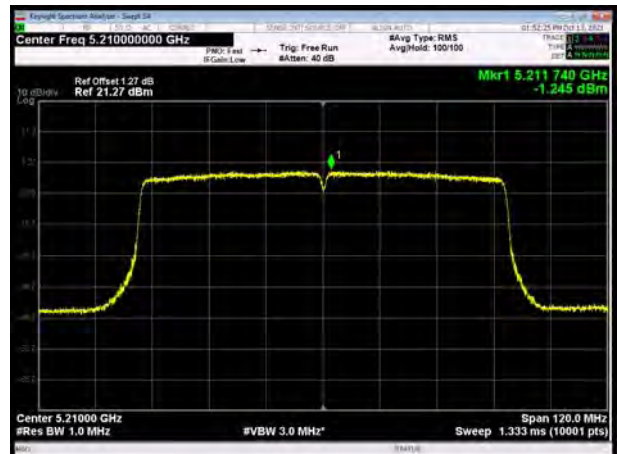
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5240



U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5230



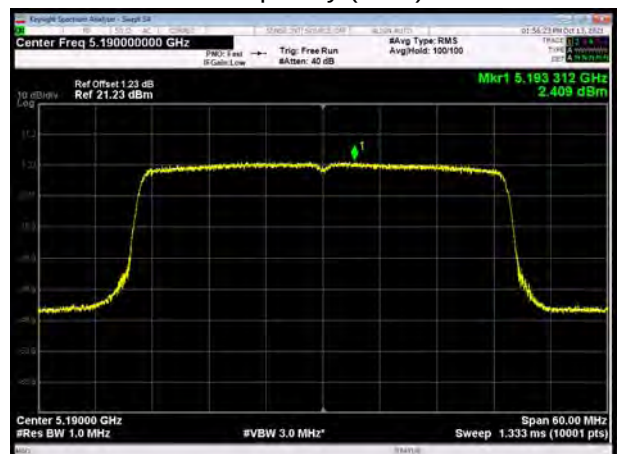
U-NII-1, 802.11ac VHT80  
Carrier frequency (MHz): 5210



U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5180



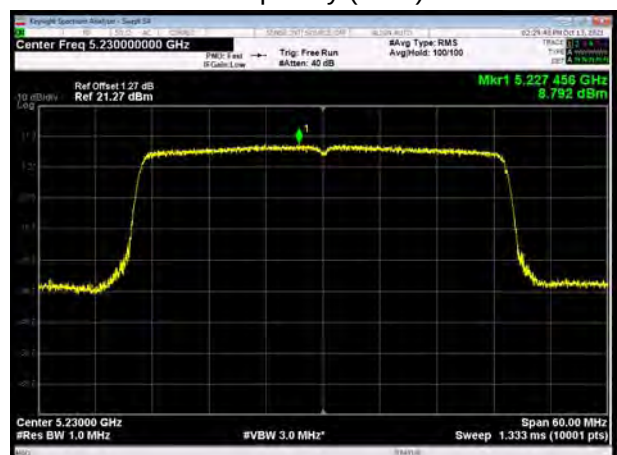
U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5190



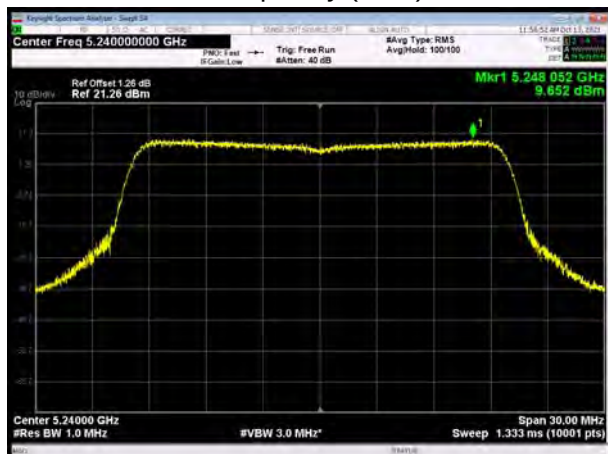
U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5200



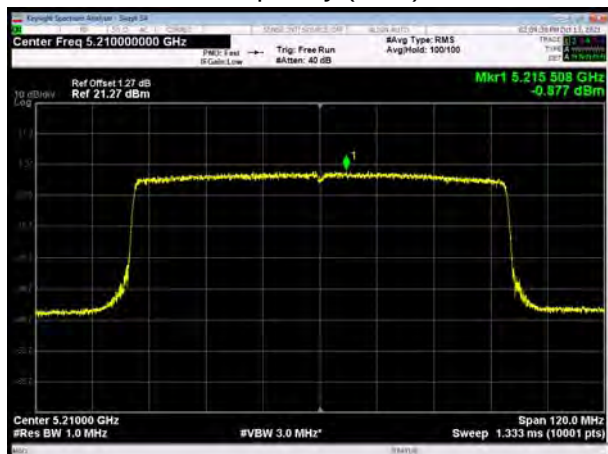
U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5230



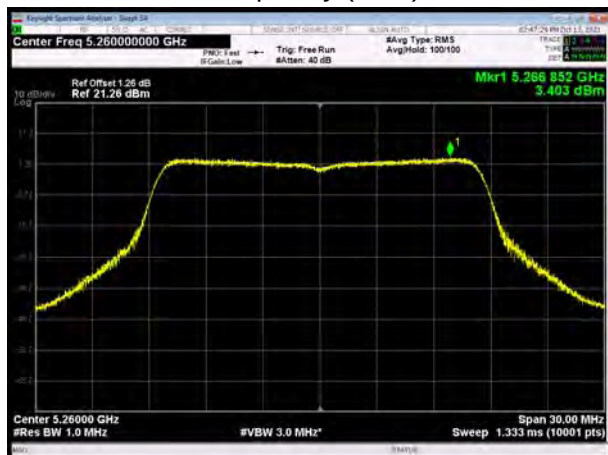
U-NII-1, 802.11ax HE20  
Carrier frequency (MHz):5240



U-NII-1, 802.11ax HE80  
Carrier frequency (MHz): 5210



U-NII-2A, 802.11a  
Carrier frequency (MHz): 5260



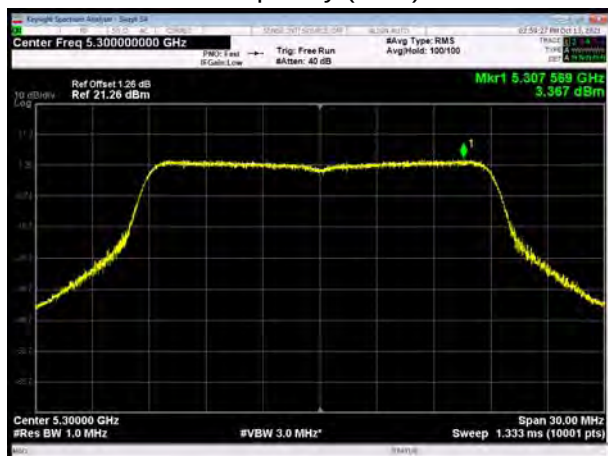
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5260



U-NII-2A, 802.11a  
Carrier frequency (MHz): 5300



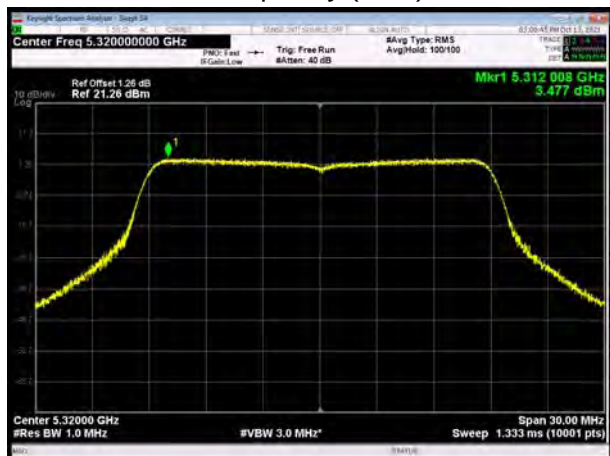
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5300



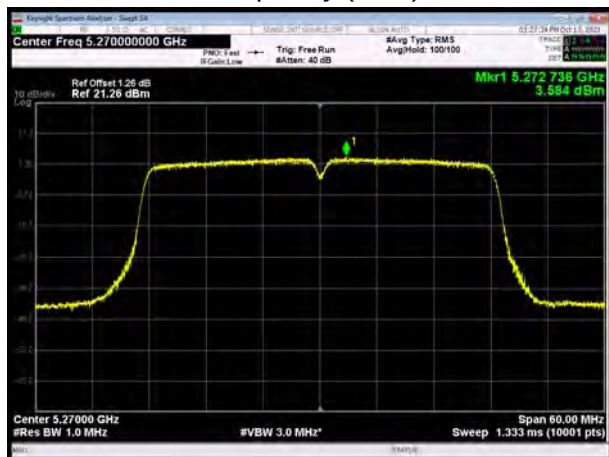
U-NII-2A, 802.11a  
Carrier frequency (MHz):5320



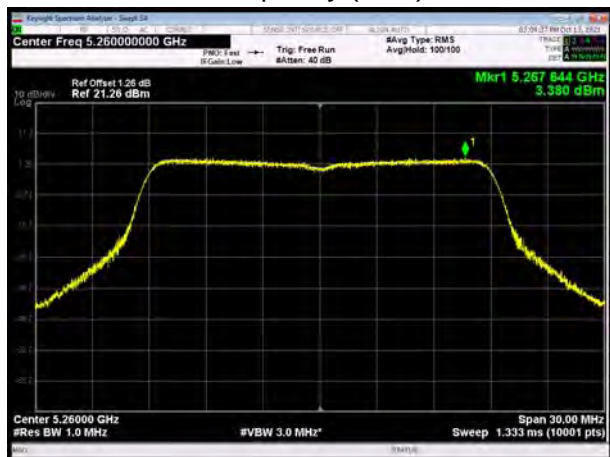
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz):5320



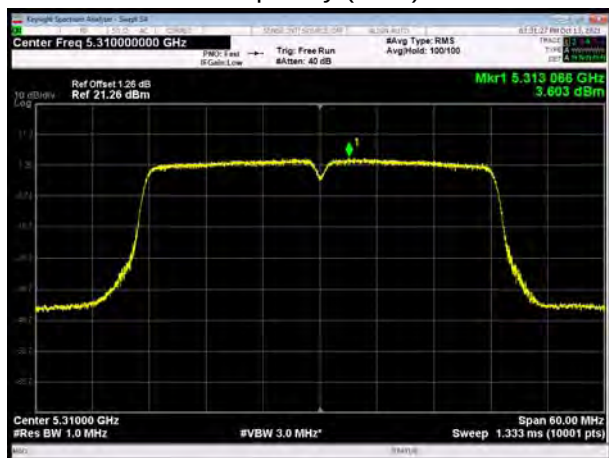
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5270



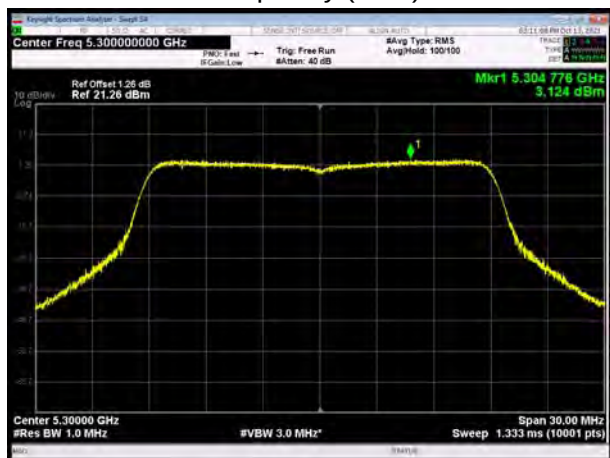
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz):5260



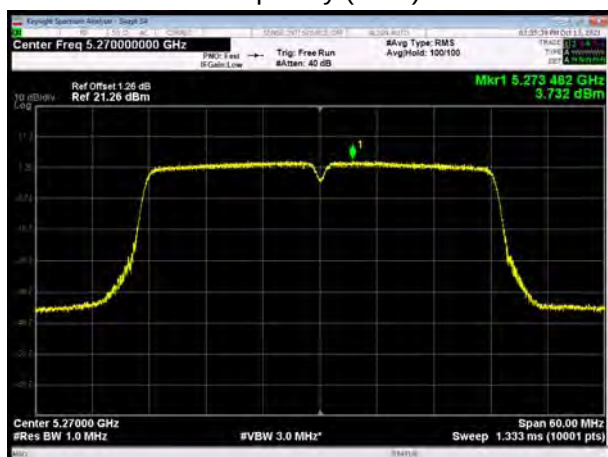
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5310



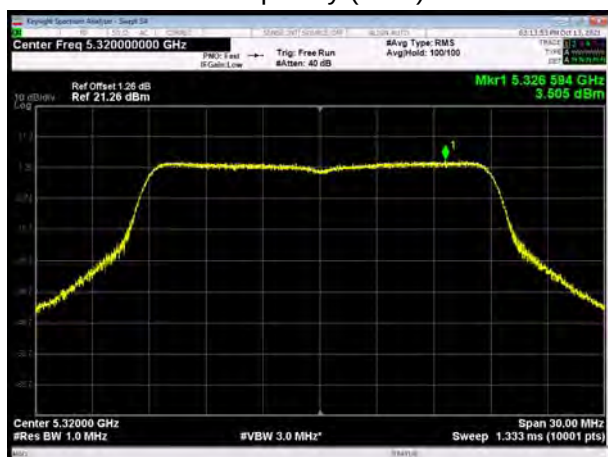
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5300



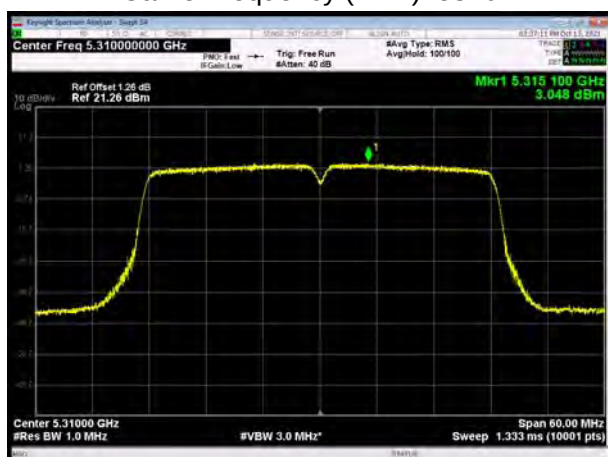
U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5270



U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5320



U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5310



U-NII-2A, 802.11ac VHT80  
Carrier frequency (MHz): 5290



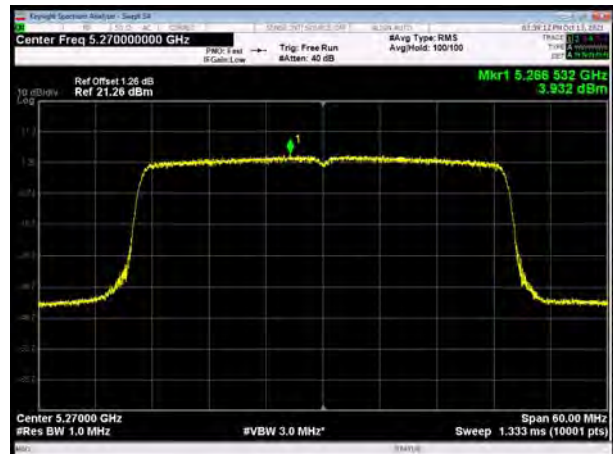
U-NII-2A, 802.11ac VHT160  
Carrier frequency (MHz): 5250



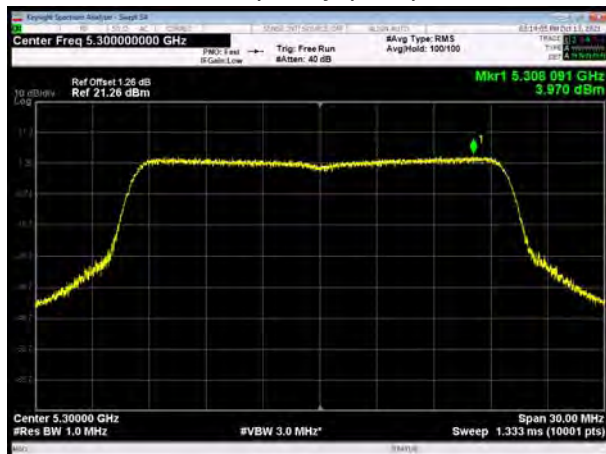
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5260



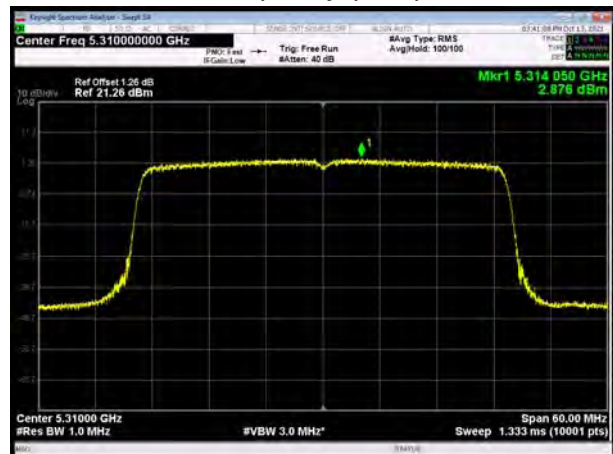
U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5270



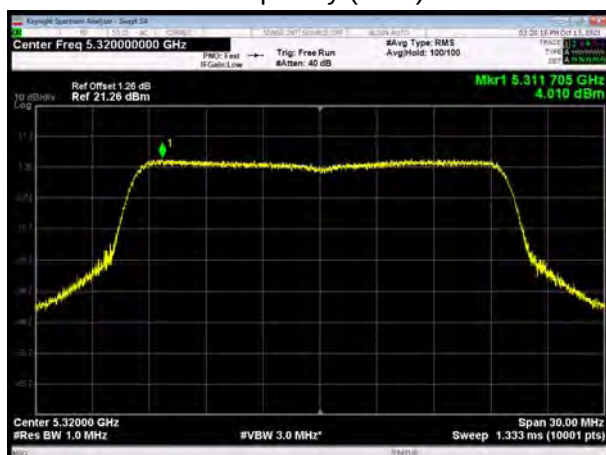
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz): 5300



U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5310



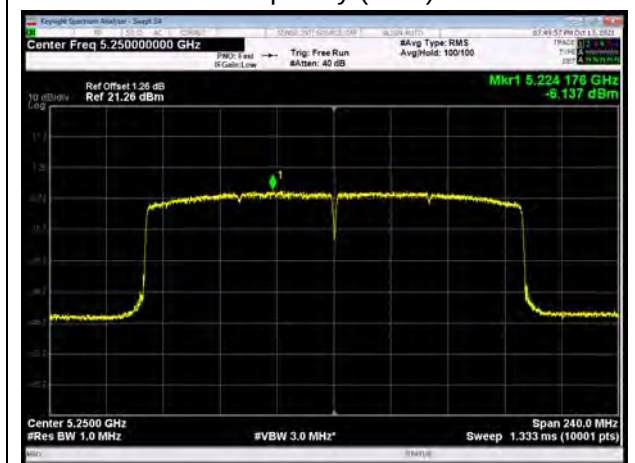
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5320



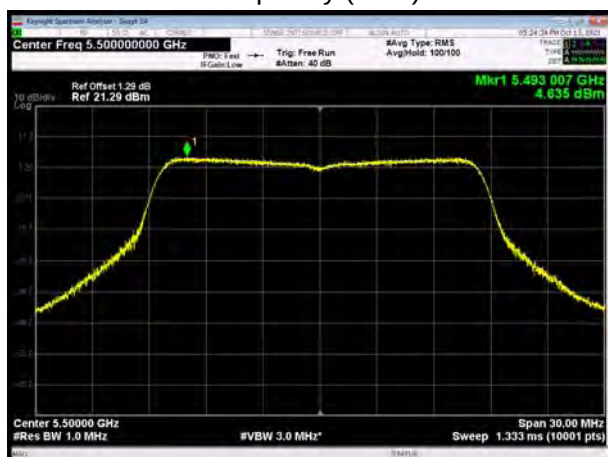
U-NII-2A, 802.11ax HE80  
Carrier frequency (MHz): 5290



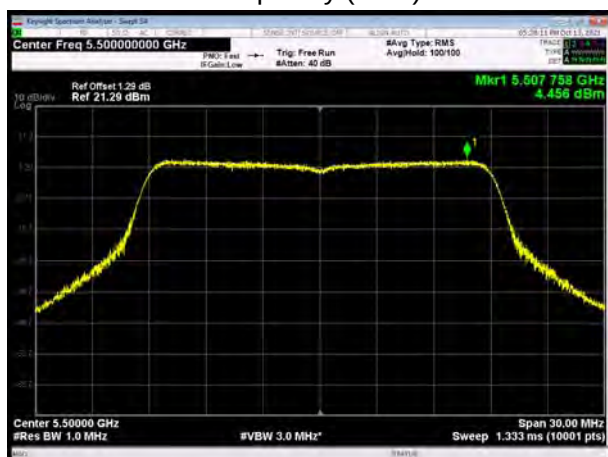
U-NII-2A, 802.11ax HE160  
Carrier frequency (MHz): 5250



U-NII-2C, 802.11a  
Carrier frequency (MHz): 5500



U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5500



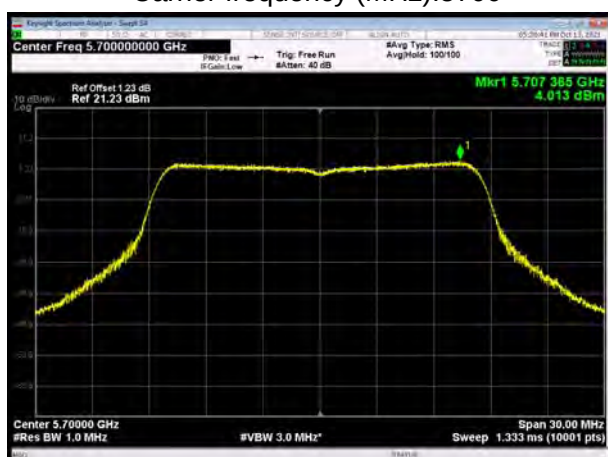
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5580



U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5580



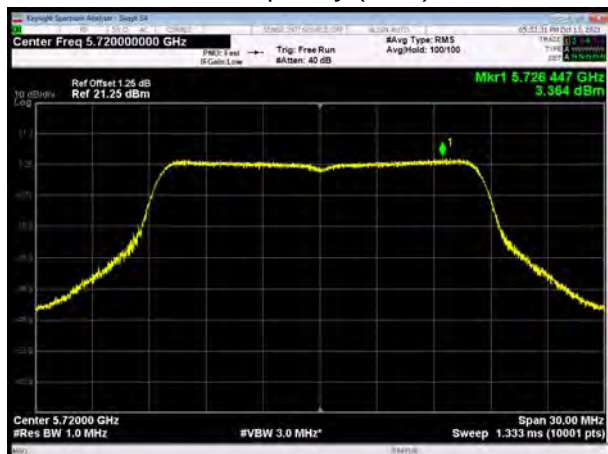
U-NII-2C, 802.11a  
Carrier frequency (MHz):5700



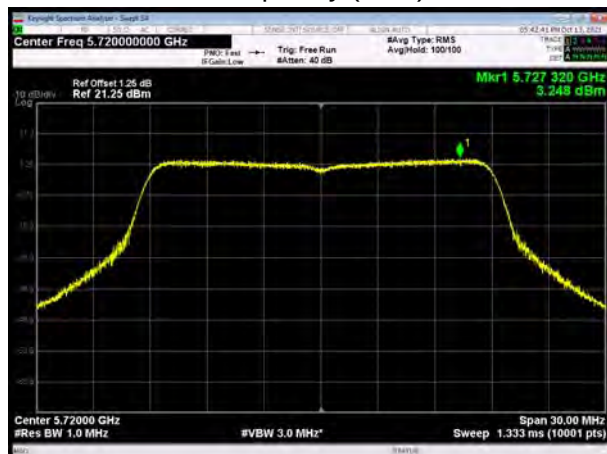
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz):5700



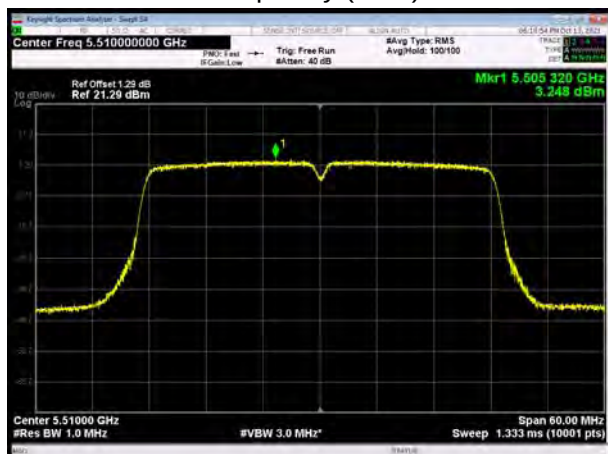
U-NII-2C, 802.11a  
Carrier frequency (MHz):5720



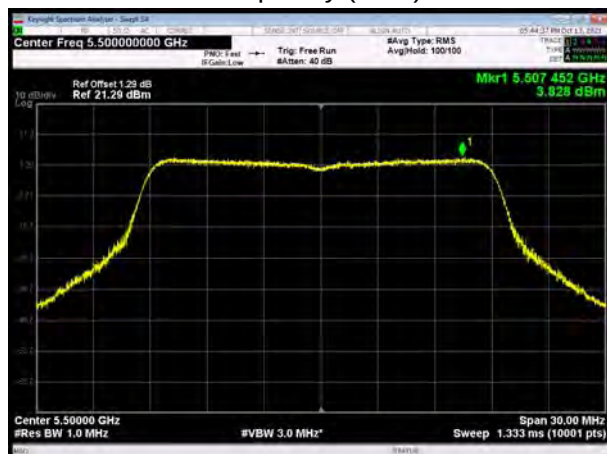
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz):5720



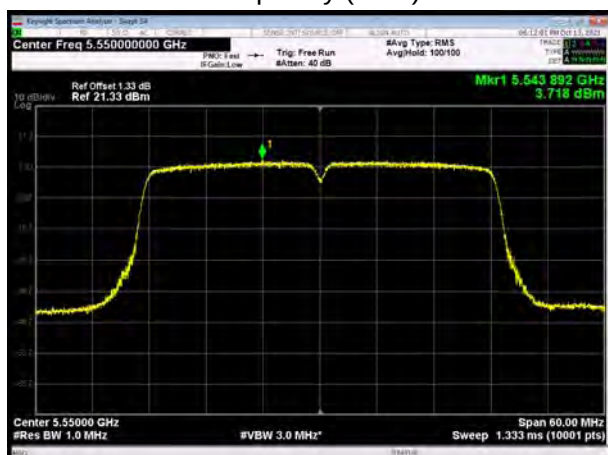
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5510



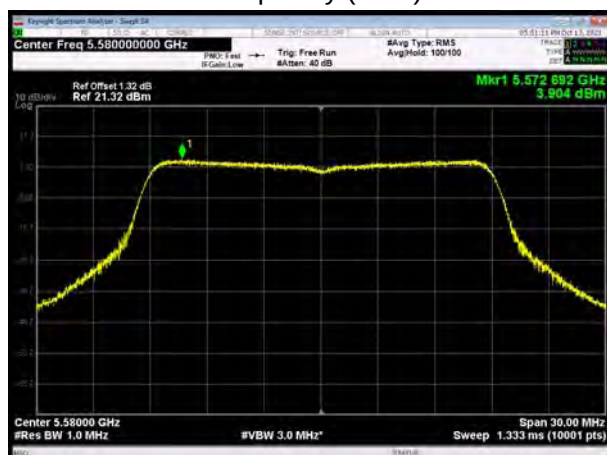
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5500



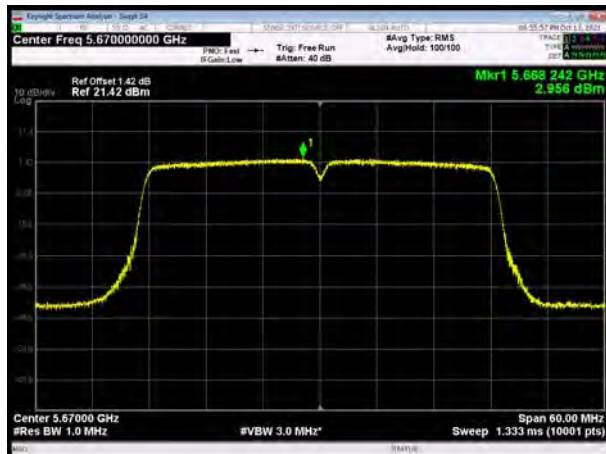
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5550



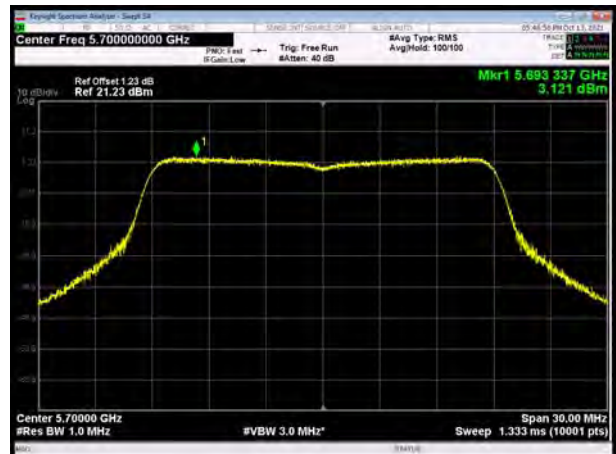
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5580



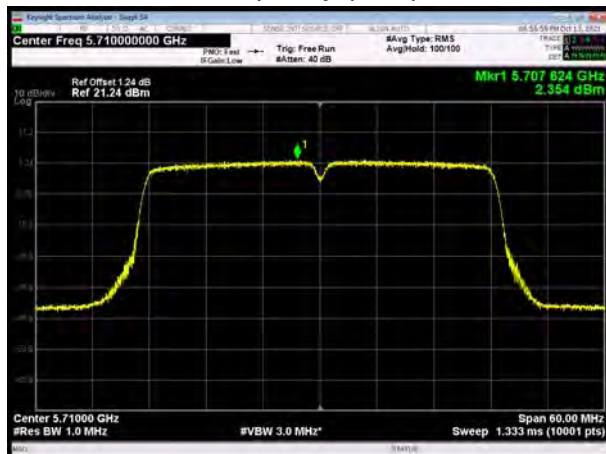
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5670



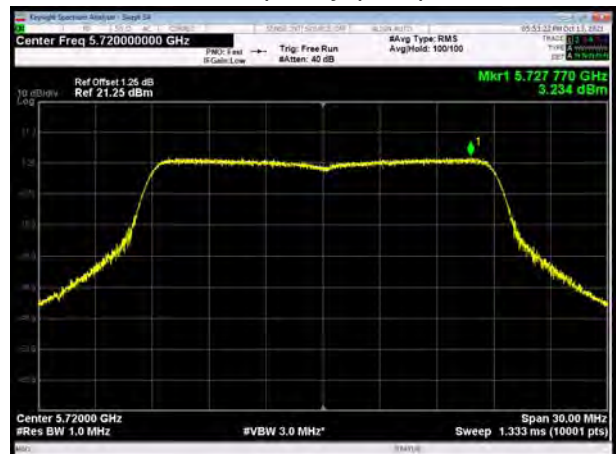
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5700



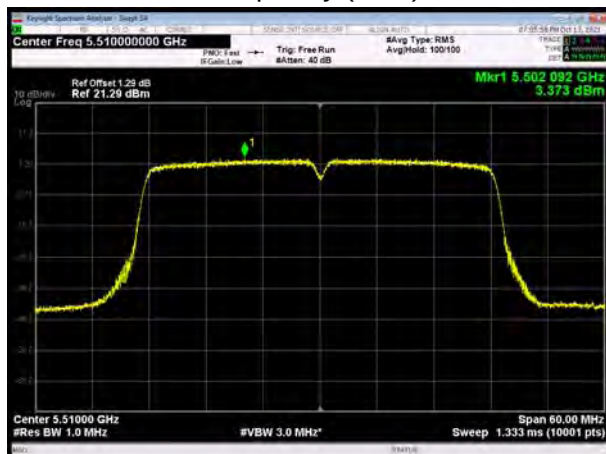
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5710



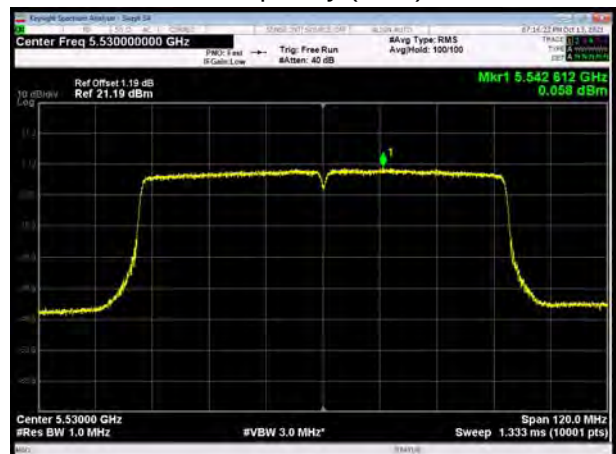
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5720



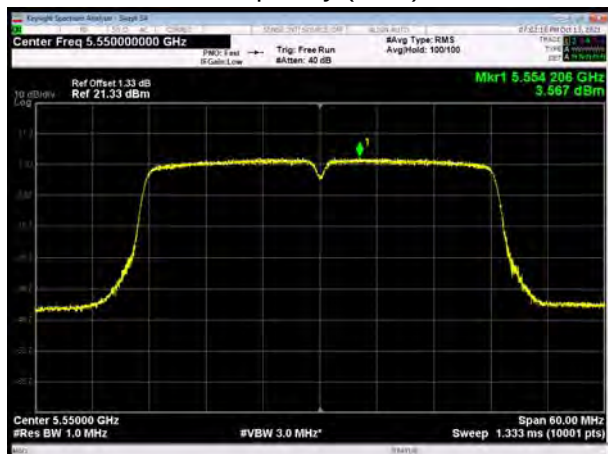
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5510



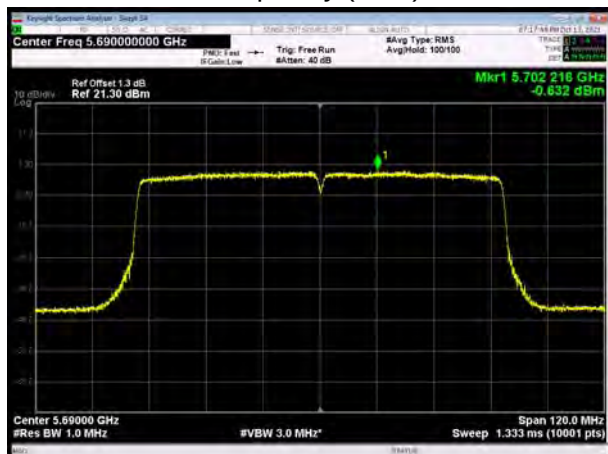
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5530



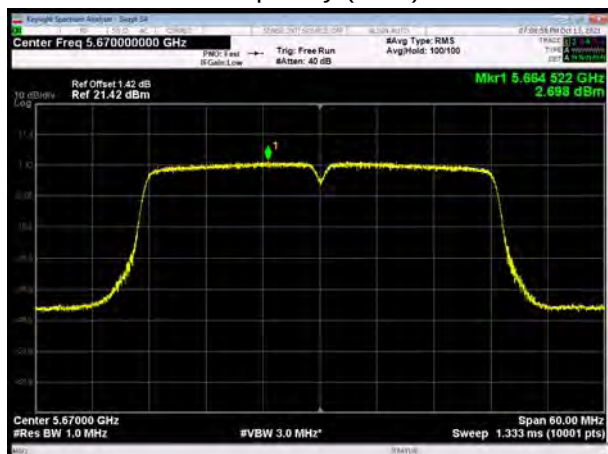
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5550



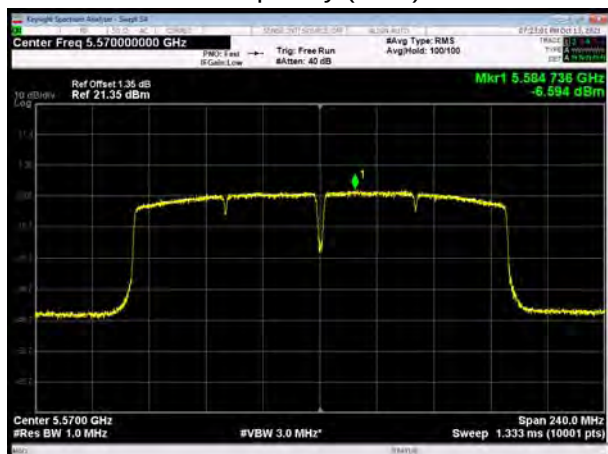
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5690



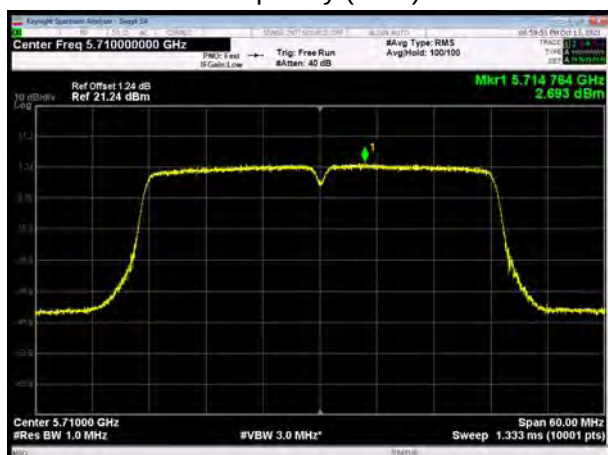
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5670



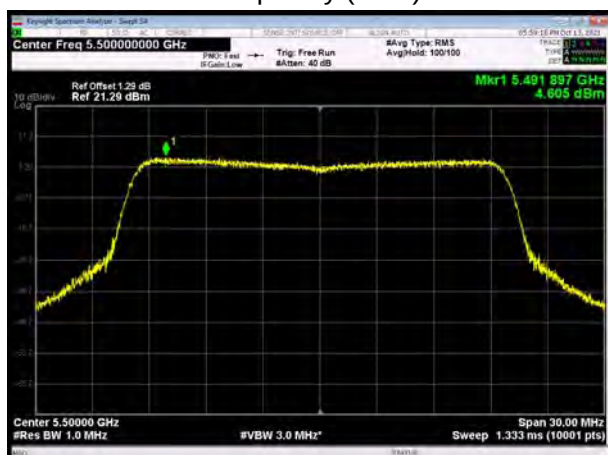
U-NII-2C, 802.11ac VHT160  
Carrier frequency (MHz): 5570



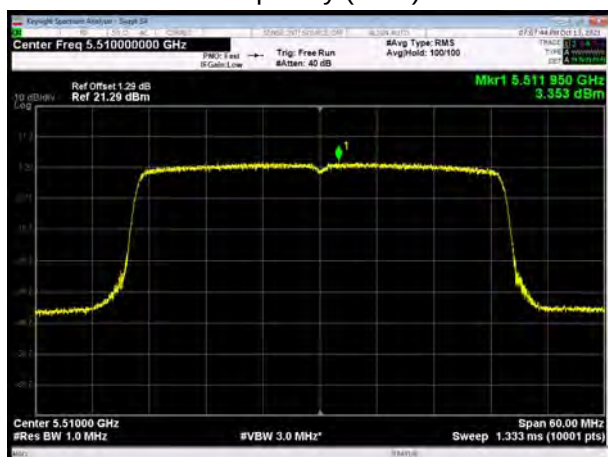
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5710



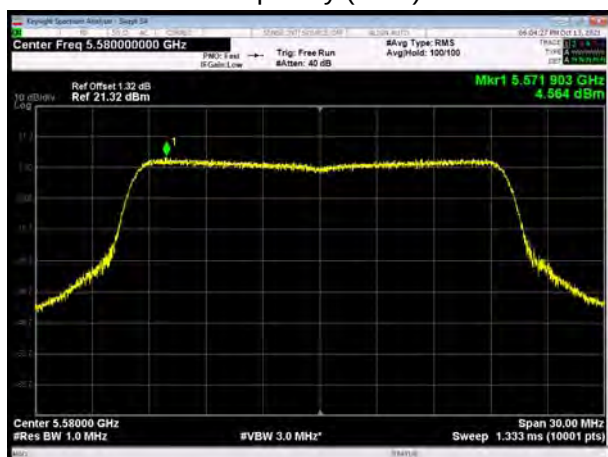
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5500



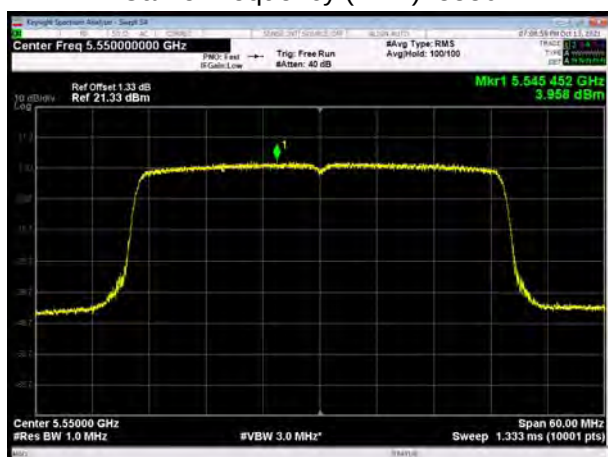
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5510



U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5580



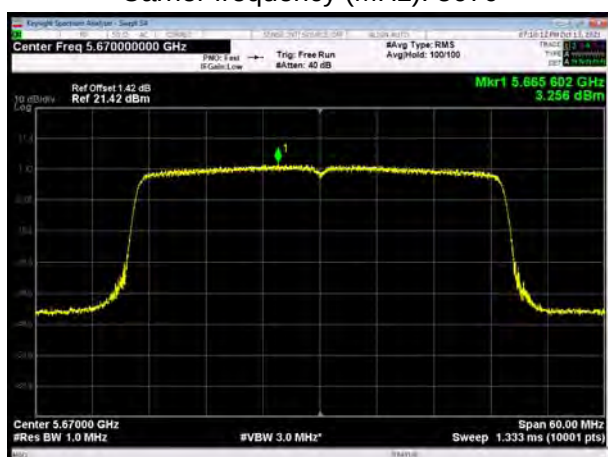
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5550



U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5700



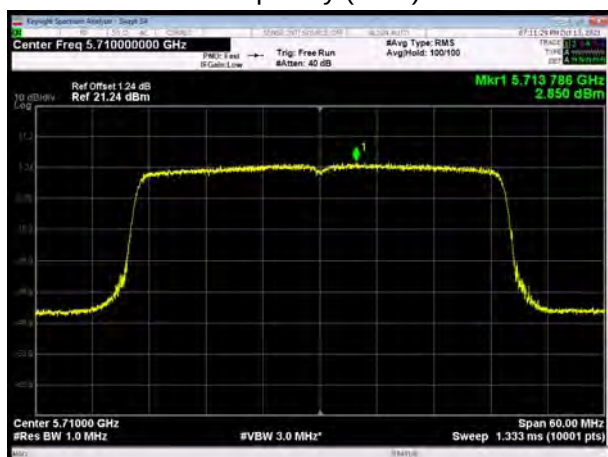
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5670



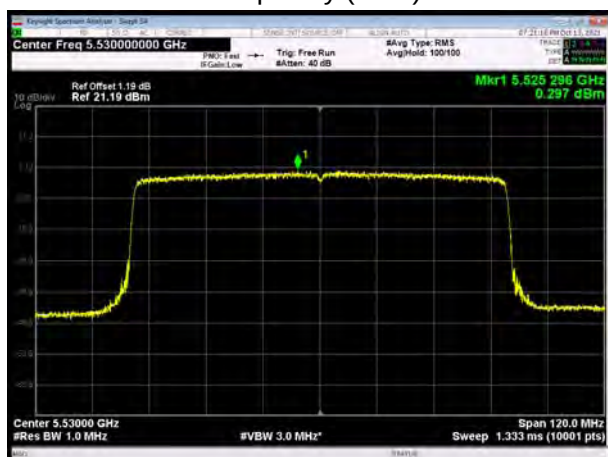
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5720



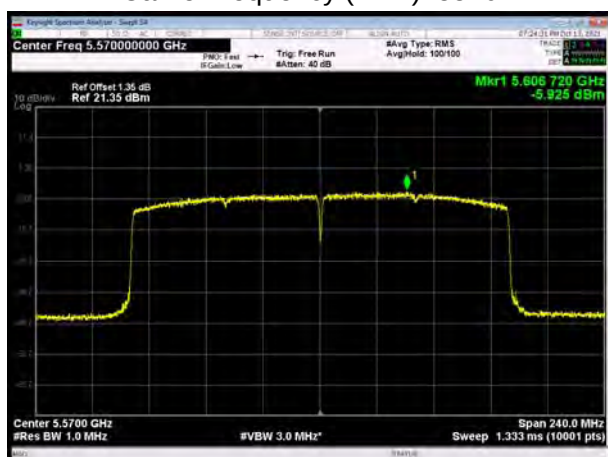
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5710



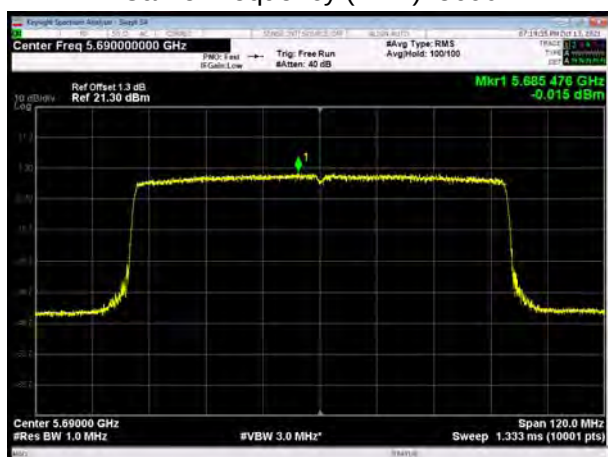
U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5530



U-NII-2C, 802.11ax HE160  
Carrier frequency (MHz): 5570



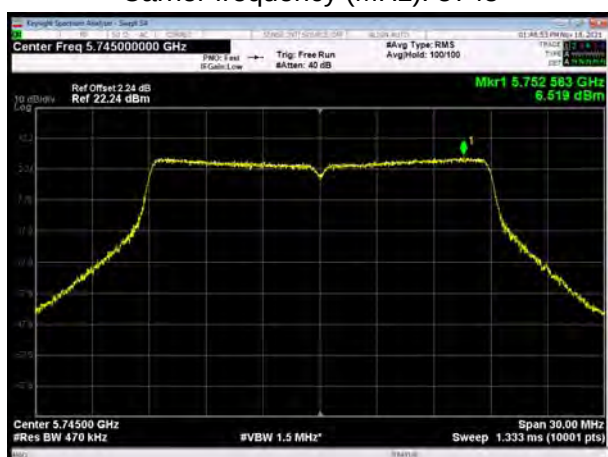
U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5690



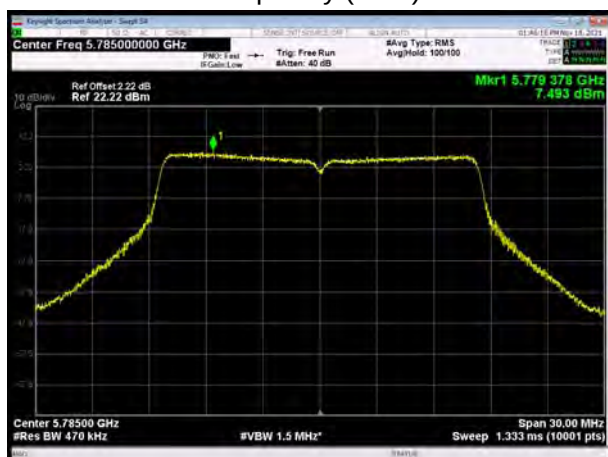
U-NII-3, 802.11a  
Carrier frequency (MHz): 5745



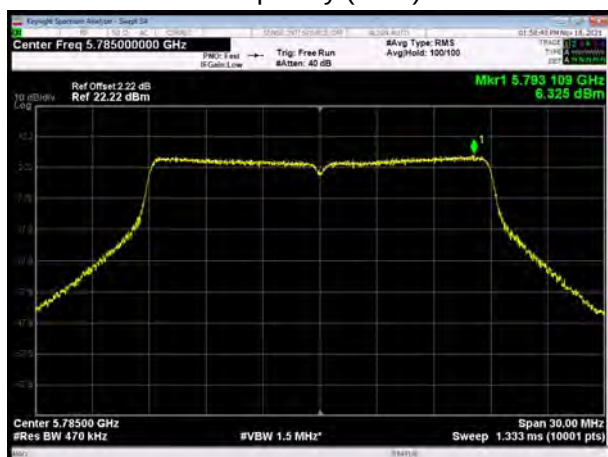
U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5745



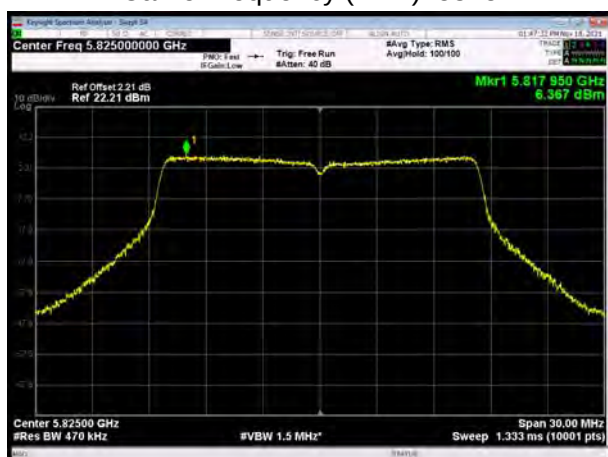
U-NII-3, 802.11a  
Carrier frequency (MHz): 5785



U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5785



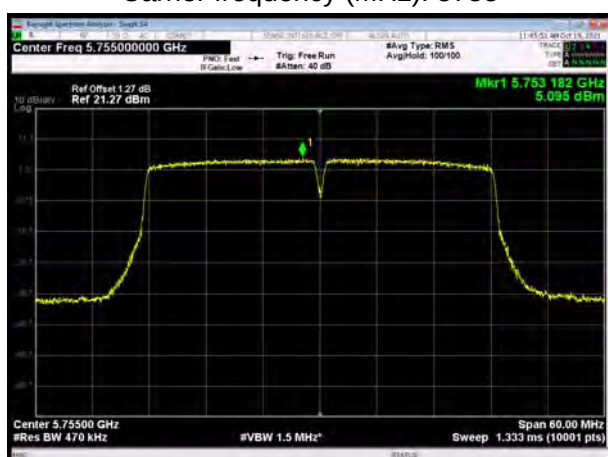
U-NII-3, 802.11a  
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5825



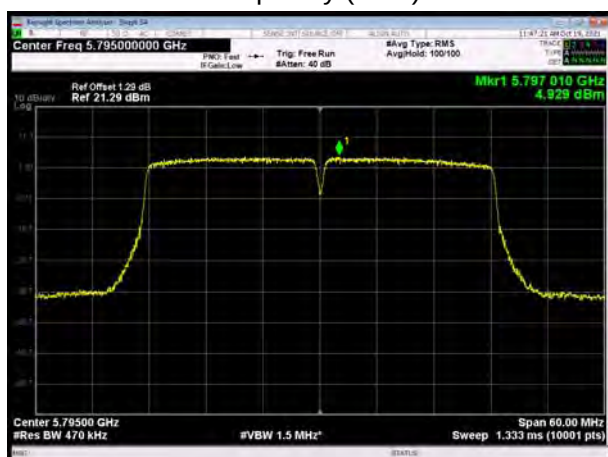
U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5755



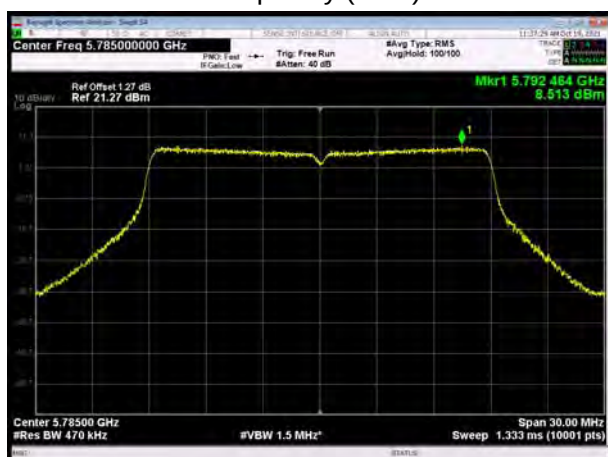
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5745



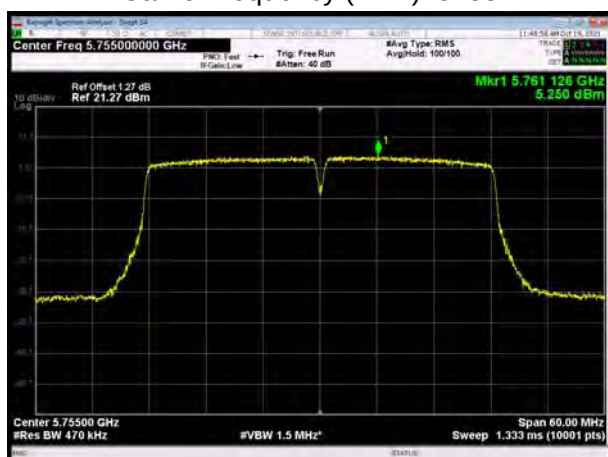
U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5785



U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5755



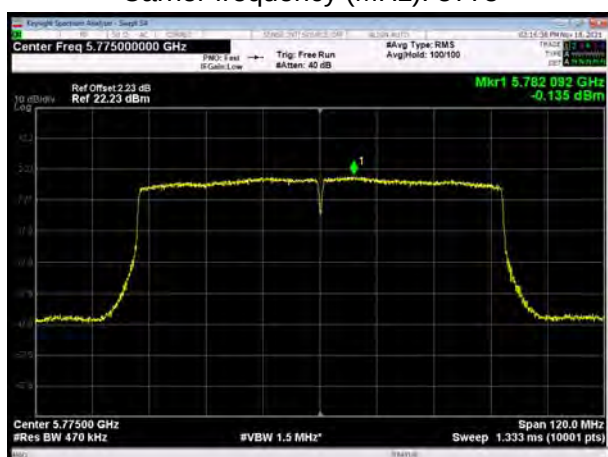
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5825



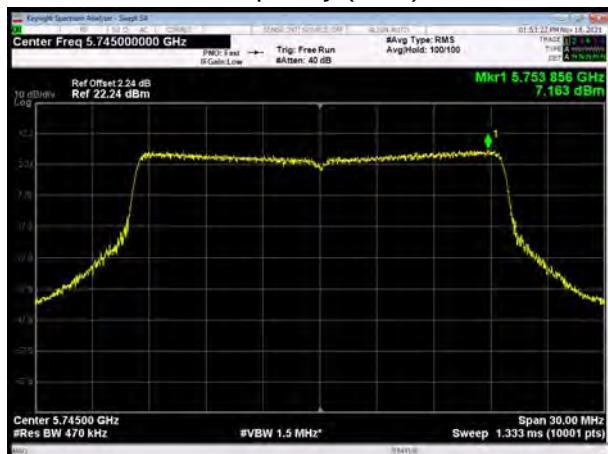
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5795



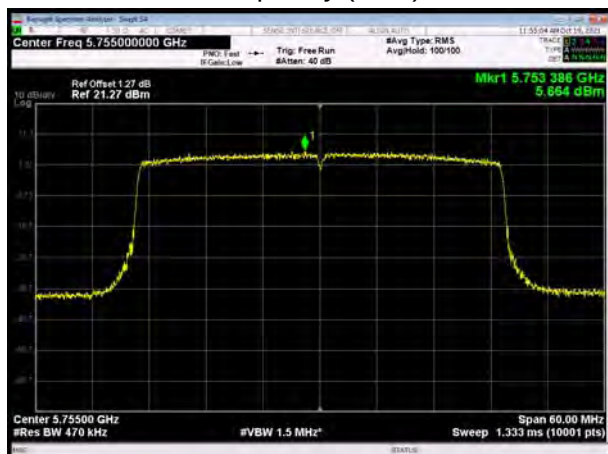
U-NII-3, 802.11ac VHT80  
Carrier frequency (MHz): 5775



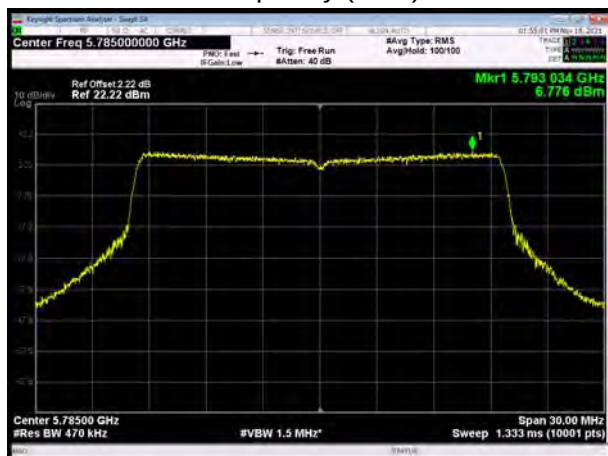
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5745



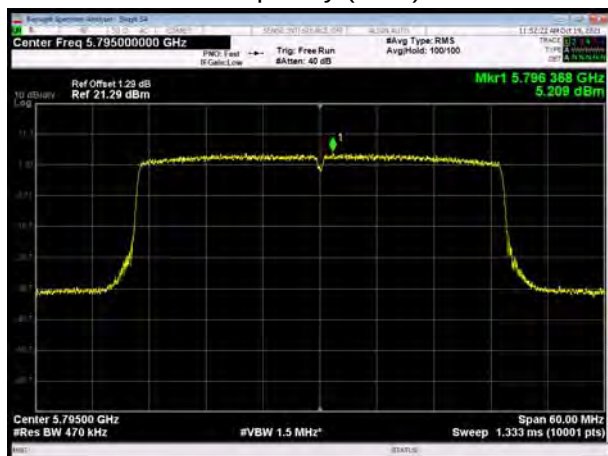
U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5755



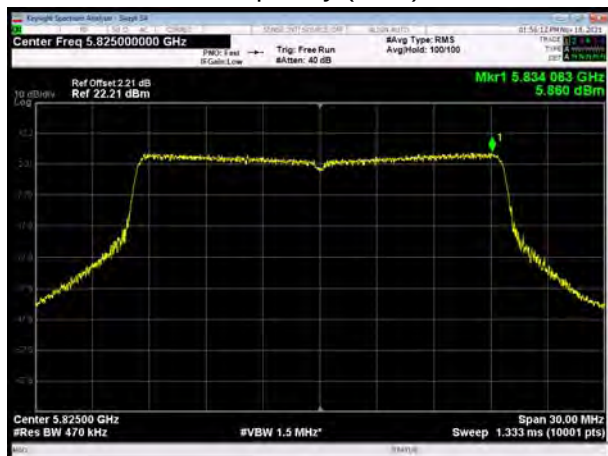
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5785



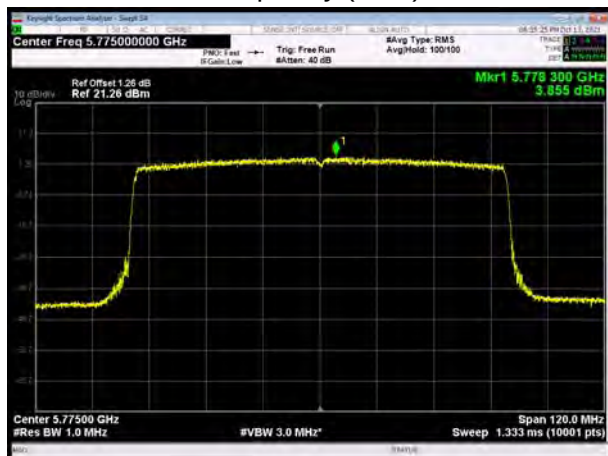
U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5825



U-NII-3, 802.11ax HE80  
Carrier frequency (MHz): 5775



## Antenna 2

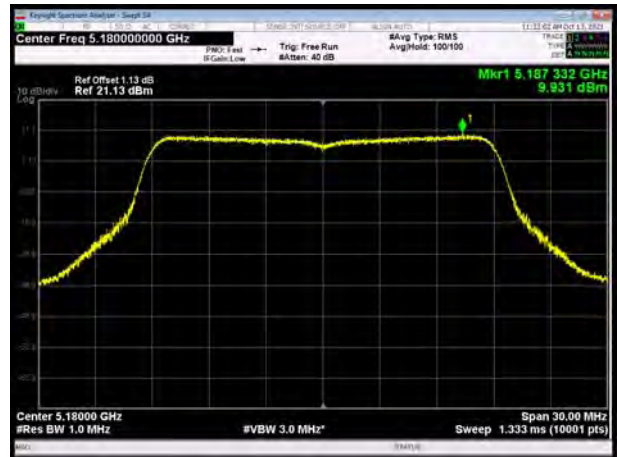
U-NII-1, 802.11a

Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5180



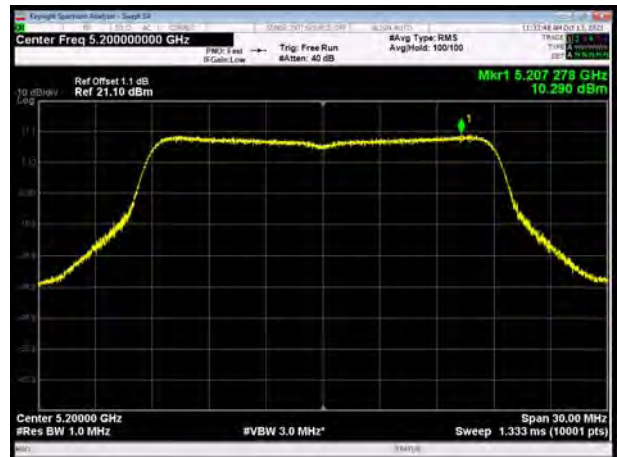
U-NII-1, 802.11a

Carrier frequency (MHz): 5200



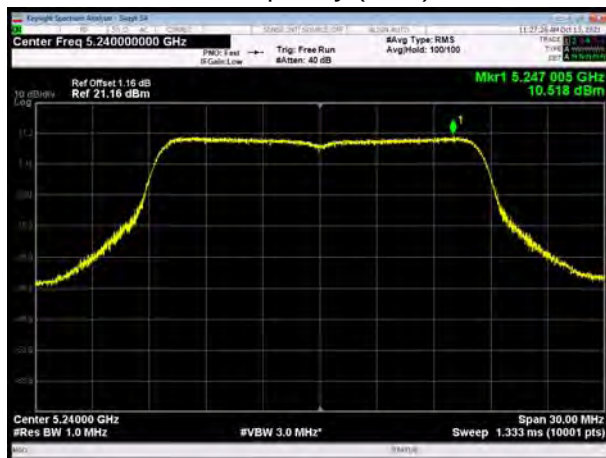
U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5200



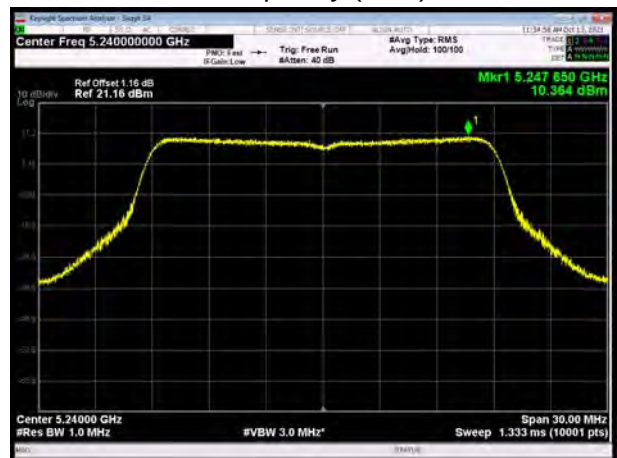
U-NII-1, 802.11a

Carrier frequency (MHz): 5240

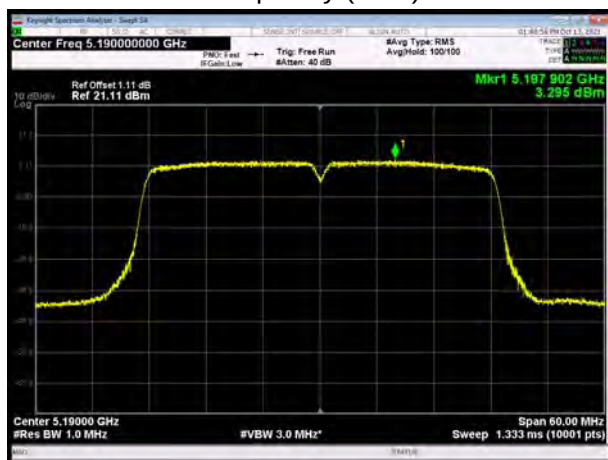


U-NII-1, 802.11n HT20

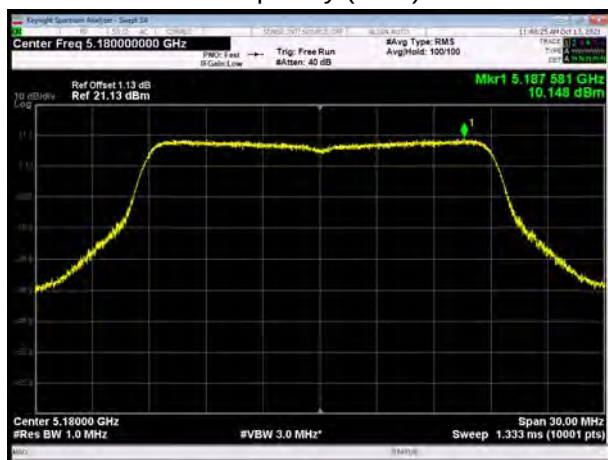
Carrier frequency (MHz): 5240



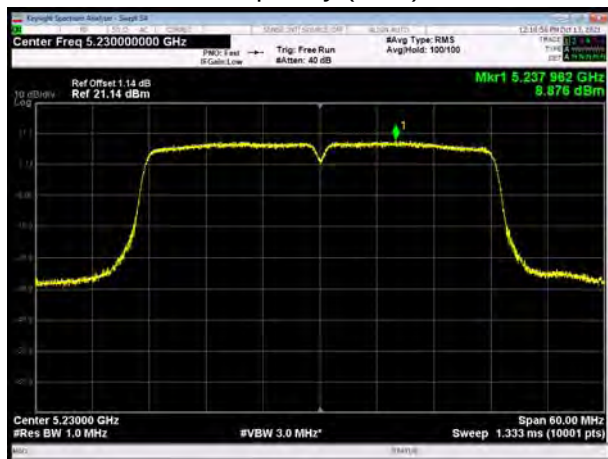
U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5190



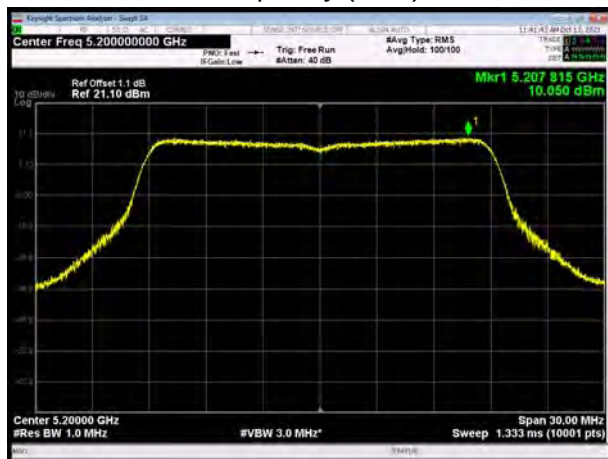
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5180



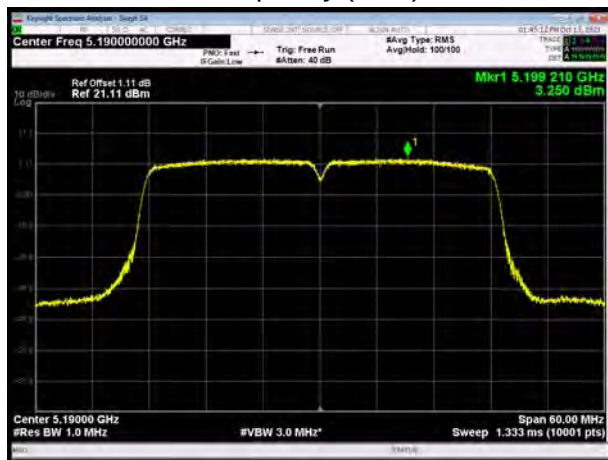
U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5230



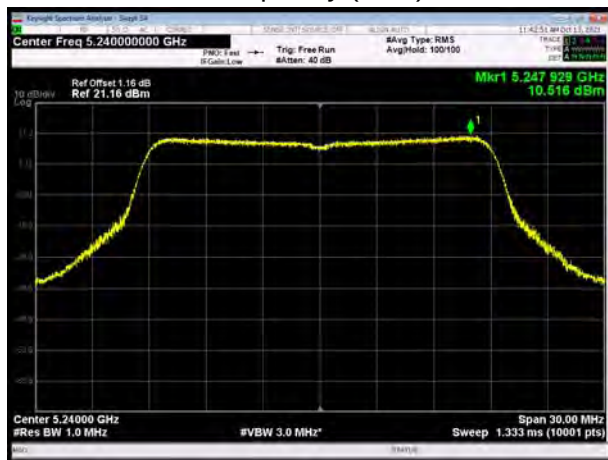
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5200



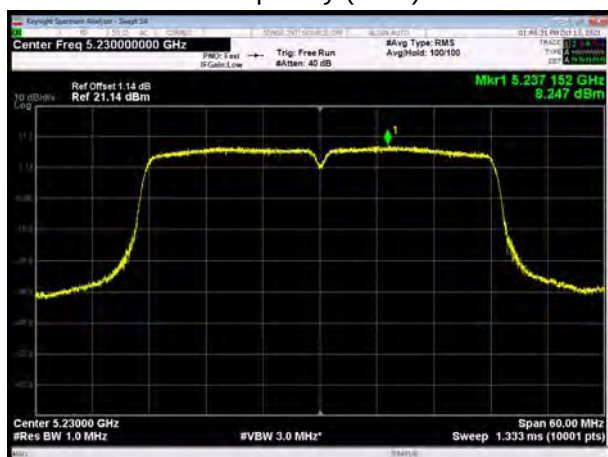
U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5190



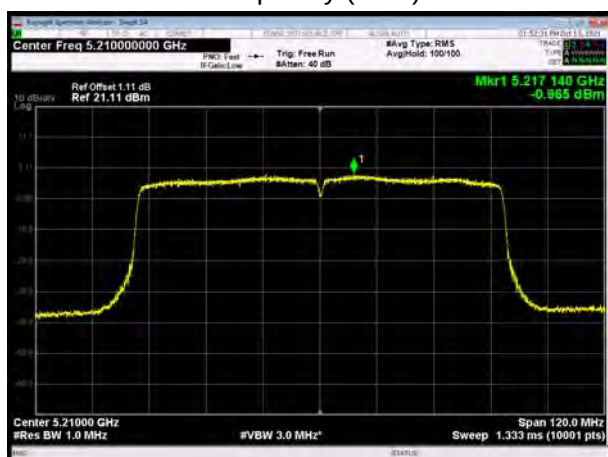
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5240



U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5230



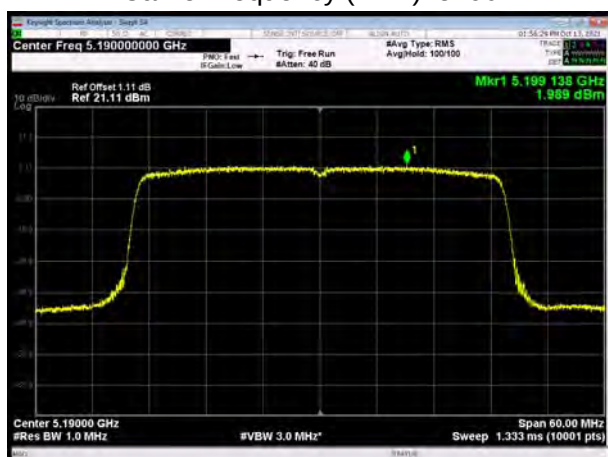
U-NII-1, 802.11ac VHT80  
Carrier frequency (MHz): 5210



U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5180



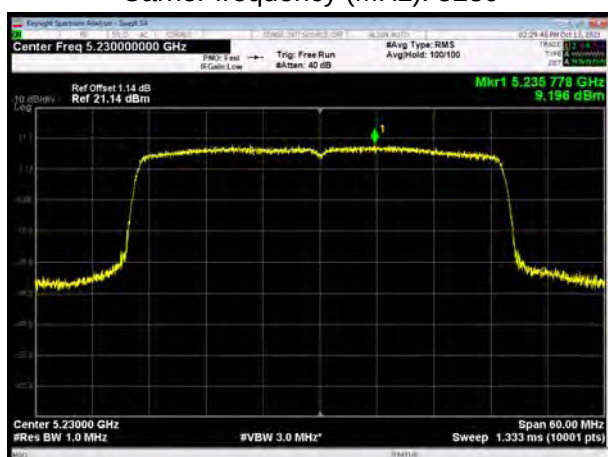
U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5190



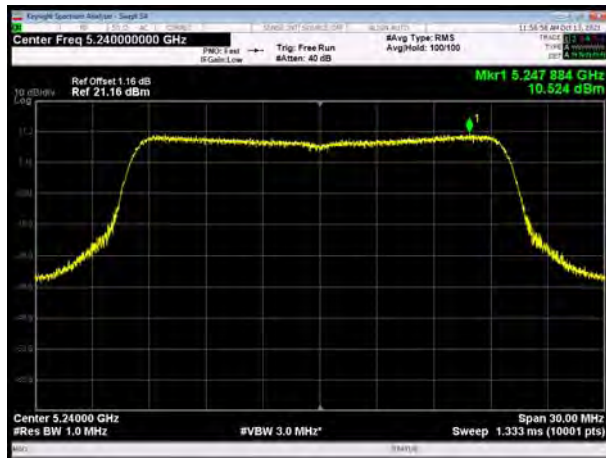
U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5200



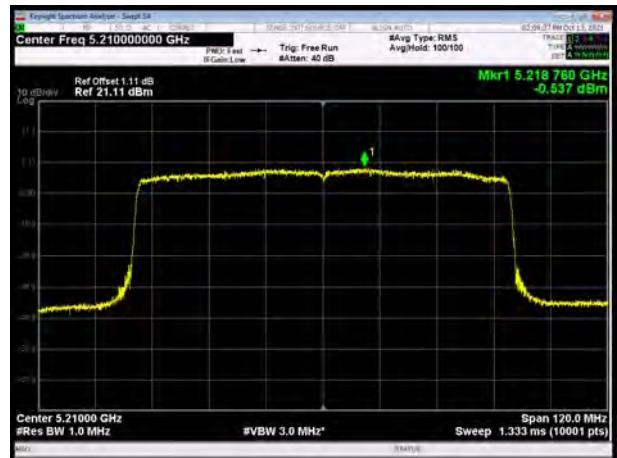
U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5230



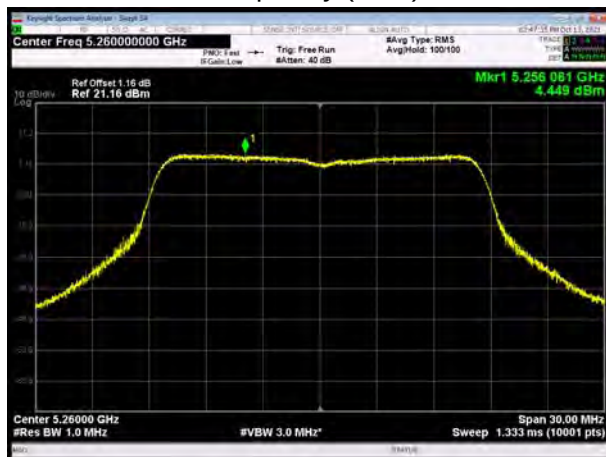
U-NII-1, 802.11ax HE20  
Carrier frequency (MHz):5240



U-NII-1, 802.11ax HE80  
Carrier frequency (MHz): 5210



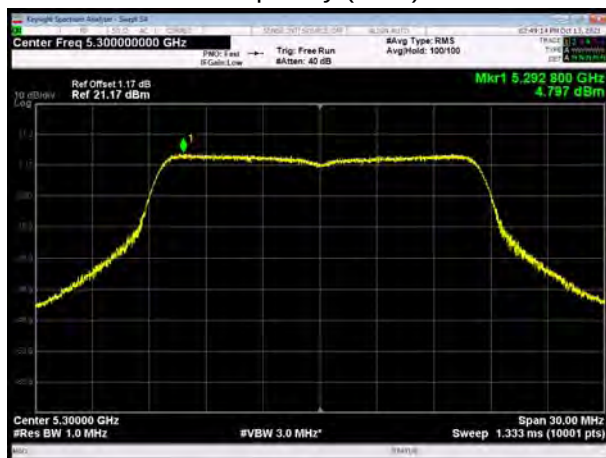
U-NII-2A, 802.11a  
Carrier frequency (MHz): 5260



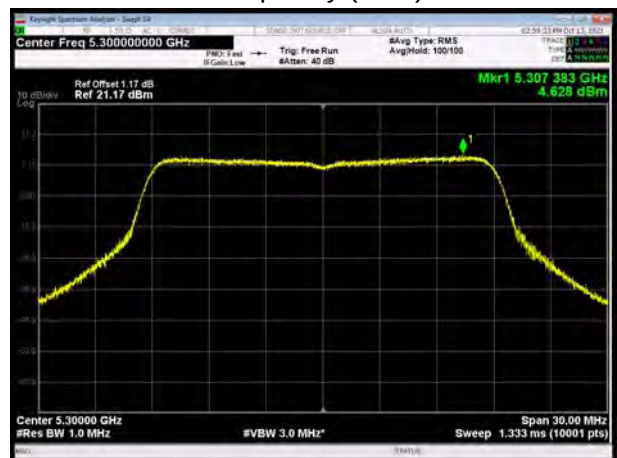
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5260



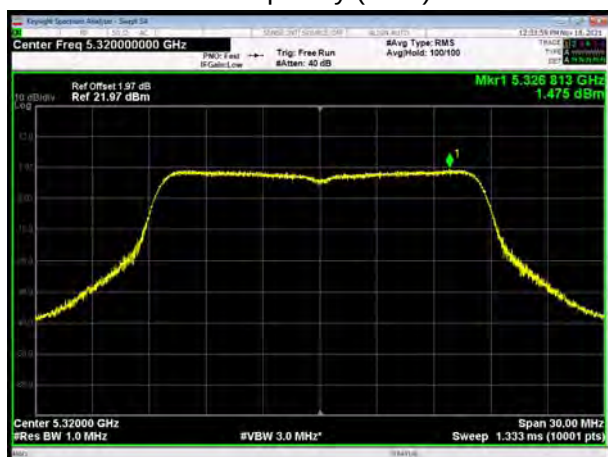
U-NII-2A, 802.11a  
Carrier frequency (MHz): 5300



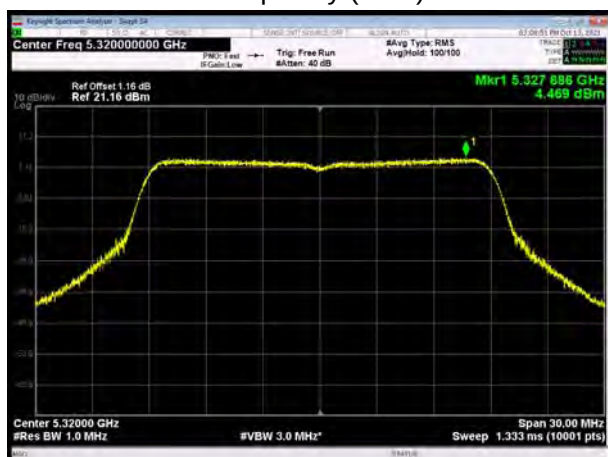
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5300



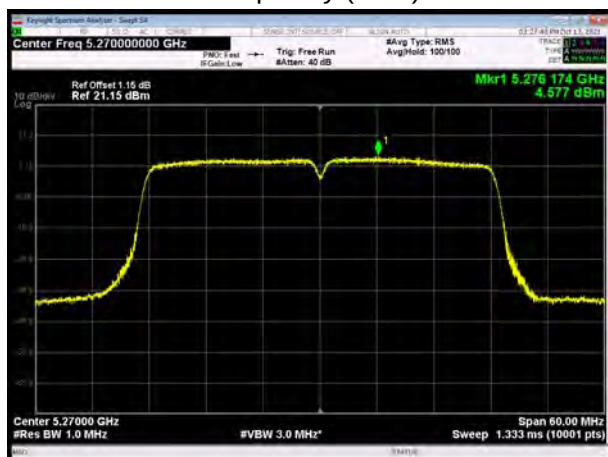
U-NII-2A, 802.11a  
Carrier frequency (MHz):5320



U-NII-2A, 802.11n HT20  
Carrier frequency (MHz):5320



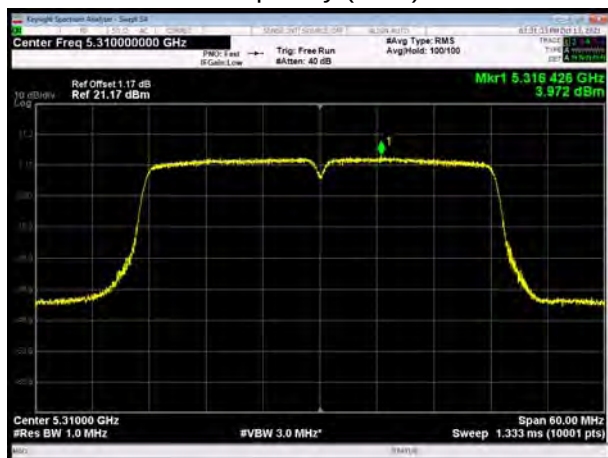
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5270



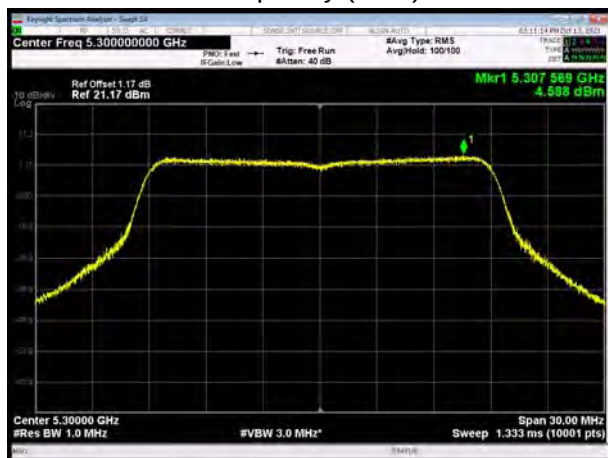
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz):5260



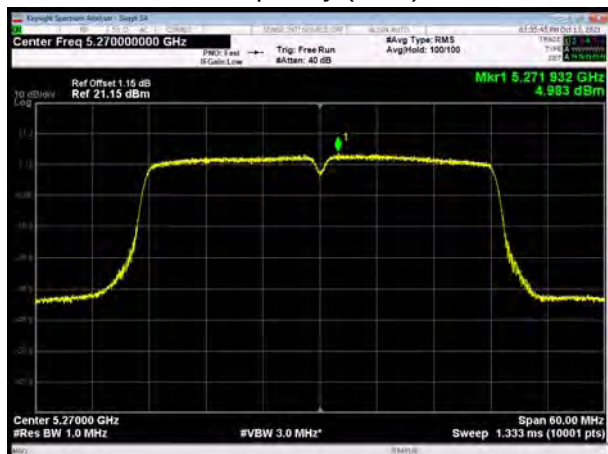
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5310



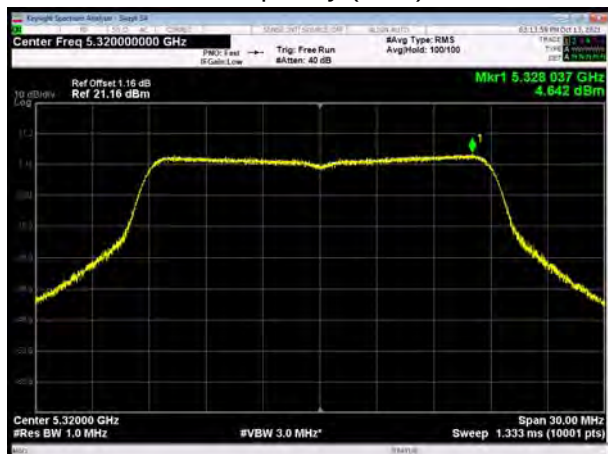
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5300



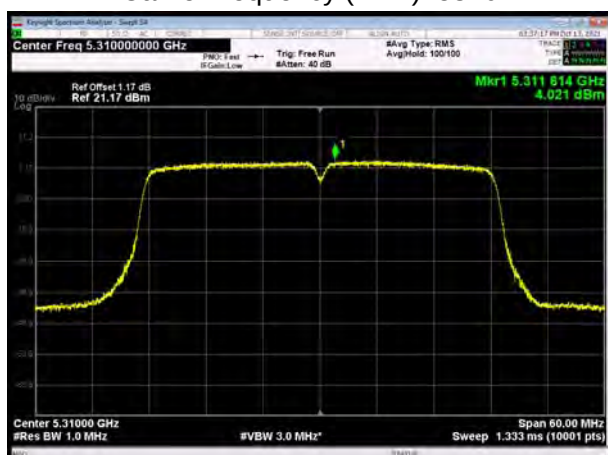
U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5270



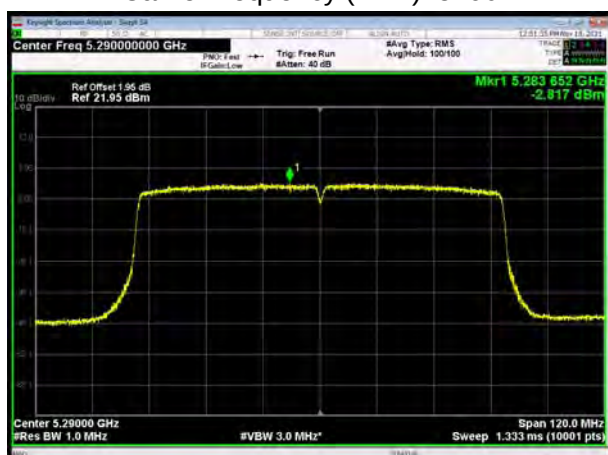
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5320



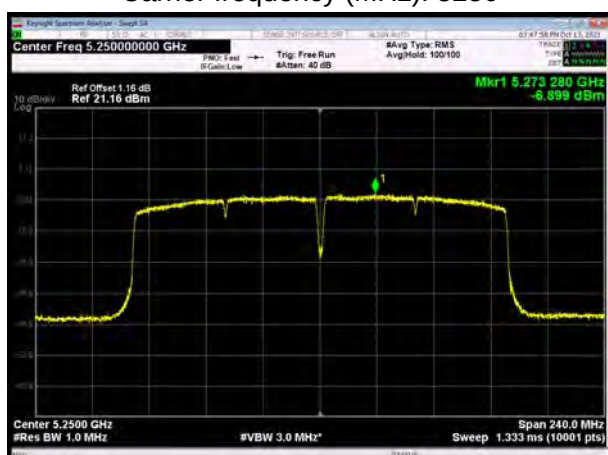
U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5310



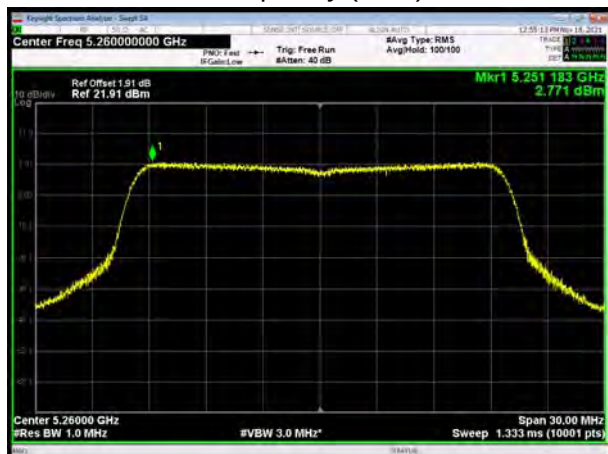
U-NII-2A, 802.11ac VHT80  
Carrier frequency (MHz): 5290



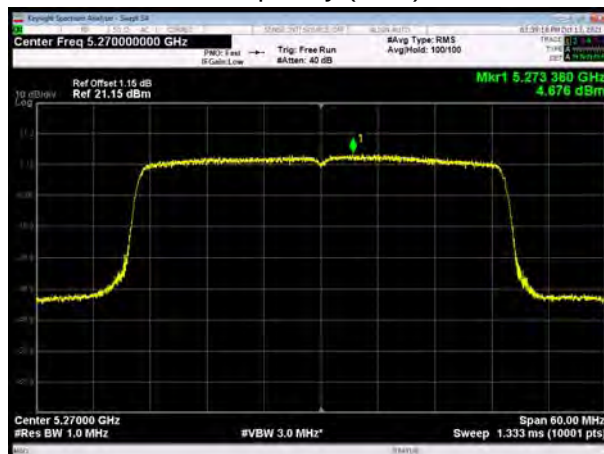
U-NII-2A, 802.11ac VHT160  
Carrier frequency (MHz): 5250



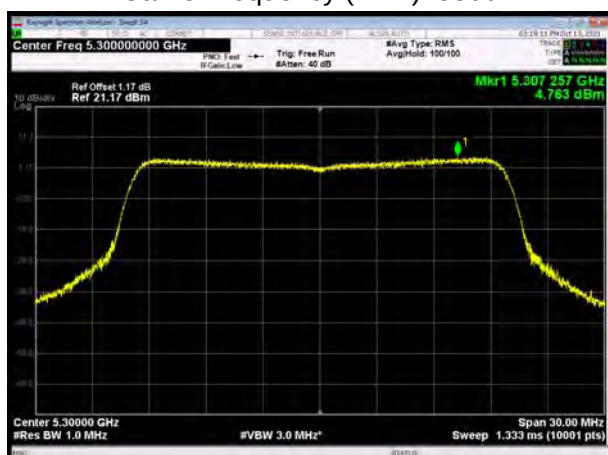
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5260



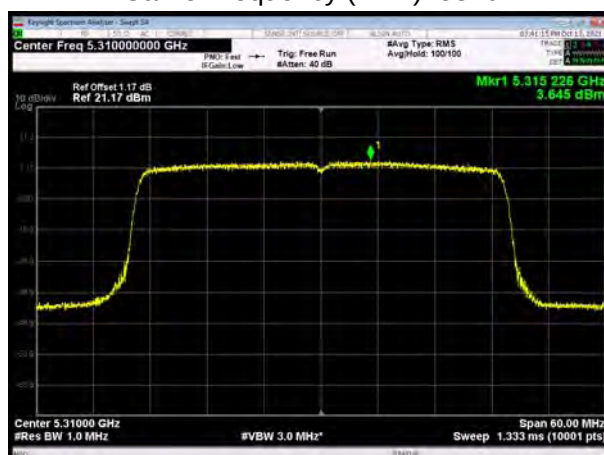
U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5270



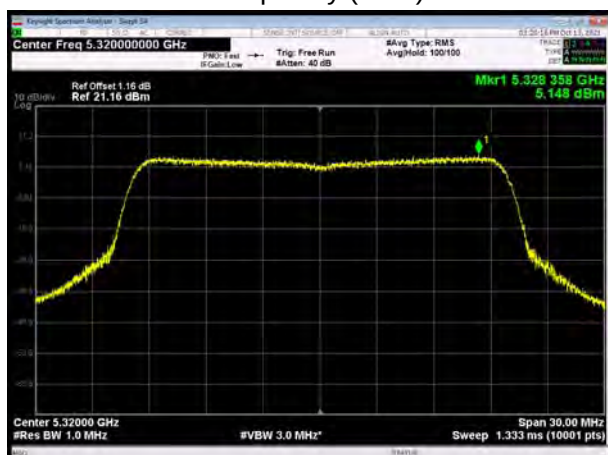
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz): 5300



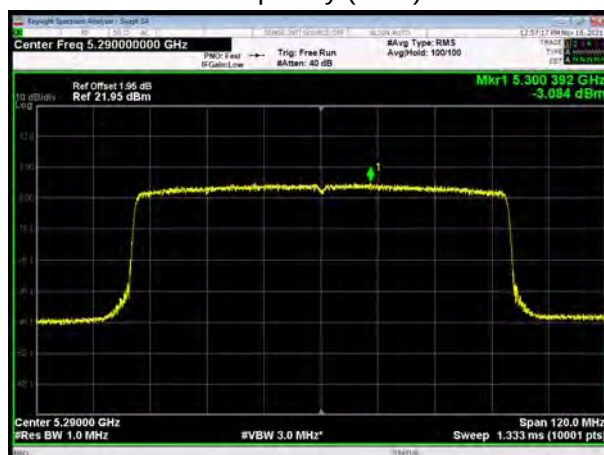
U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5310



U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5320



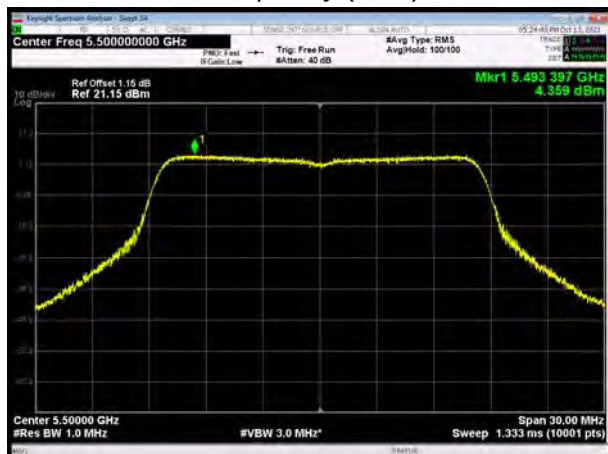
U-NII-2A, 802.11ax HE80  
Carrier frequency (MHz): 5290



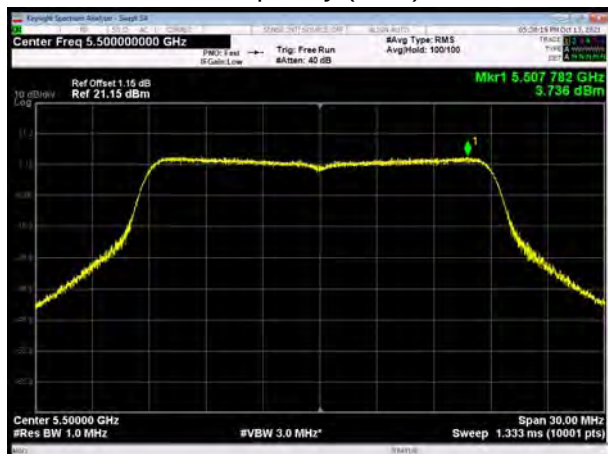
U-NII-2A, 802.11ax HE160  
Carrier frequency (MHz): 5250



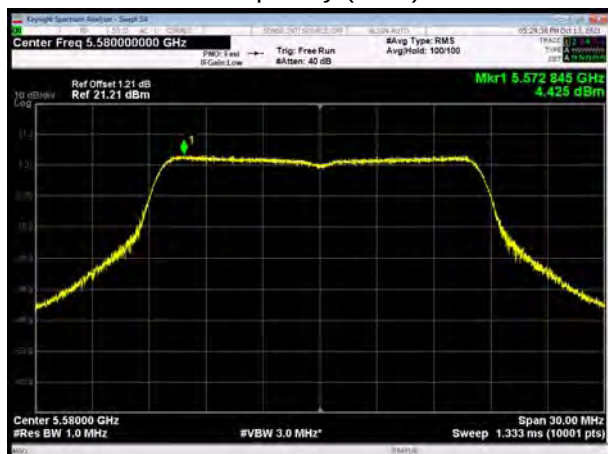
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5500



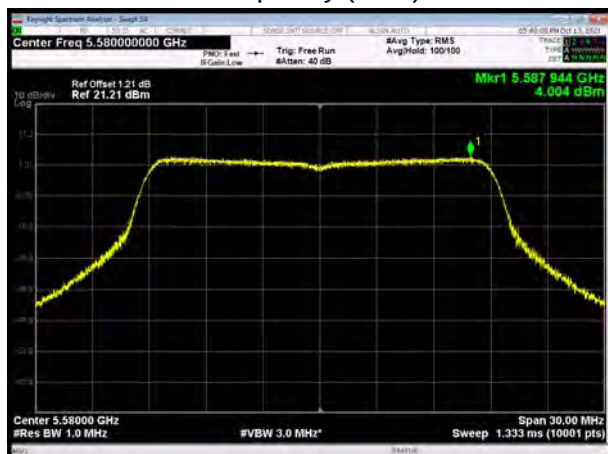
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5500



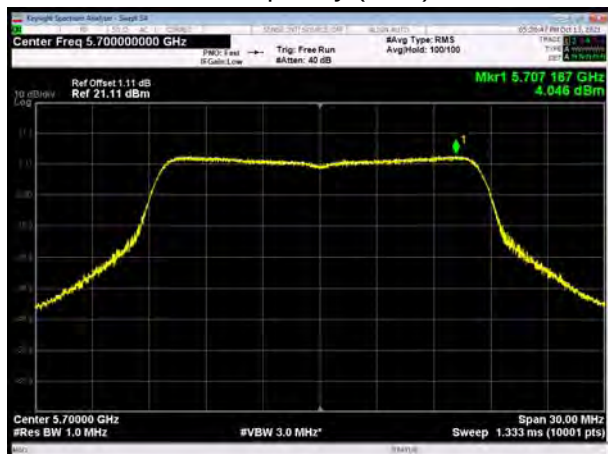
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5580



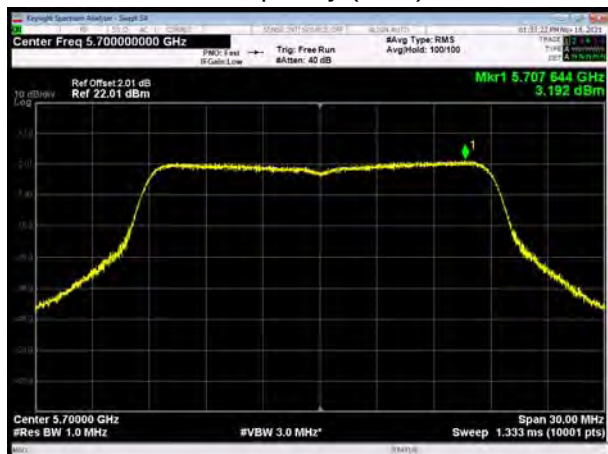
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5580



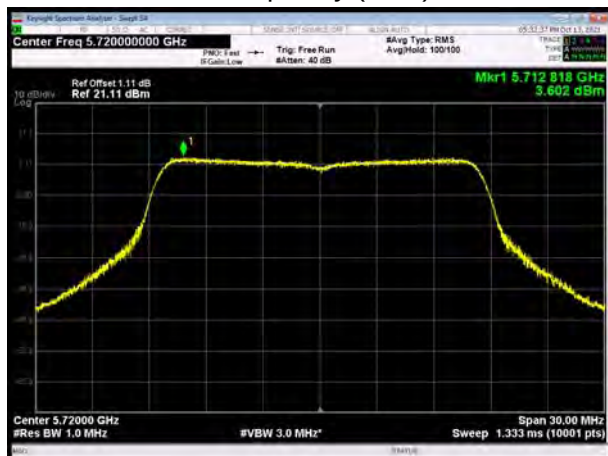
U-NII-2C, 802.11a  
Carrier frequency (MHz):5700



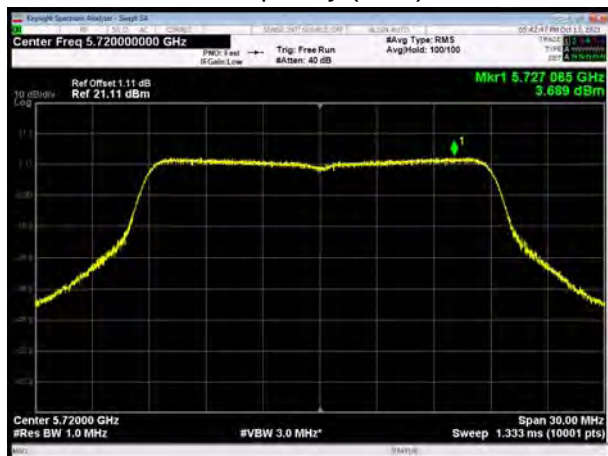
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz):5700



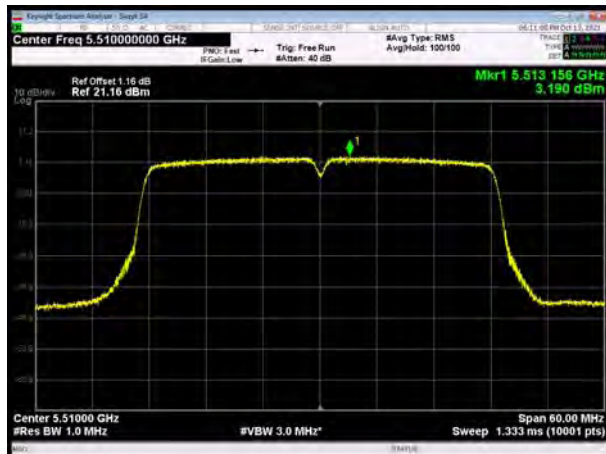
U-NII-2C, 802.11a  
Carrier frequency (MHz):5720



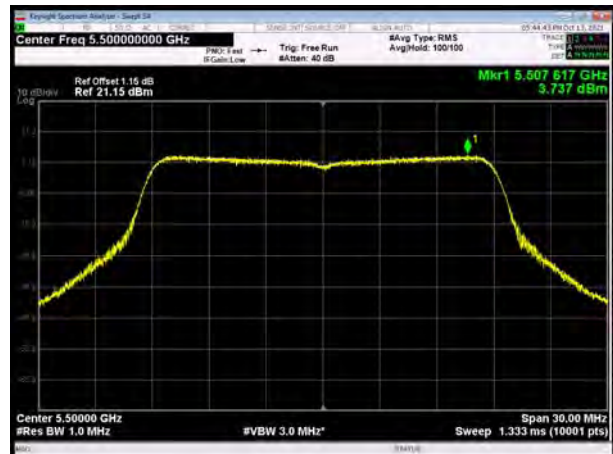
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz):5720



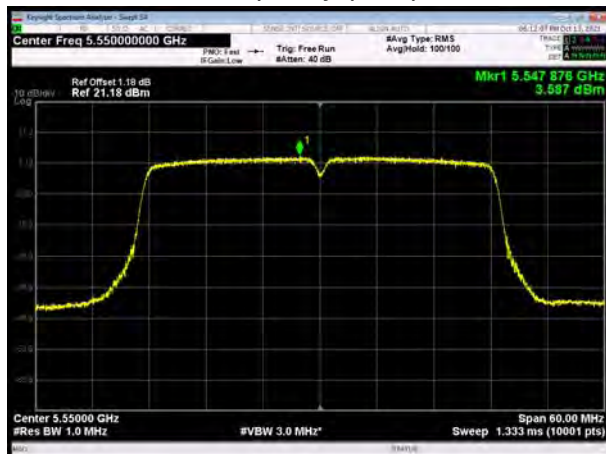
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5510



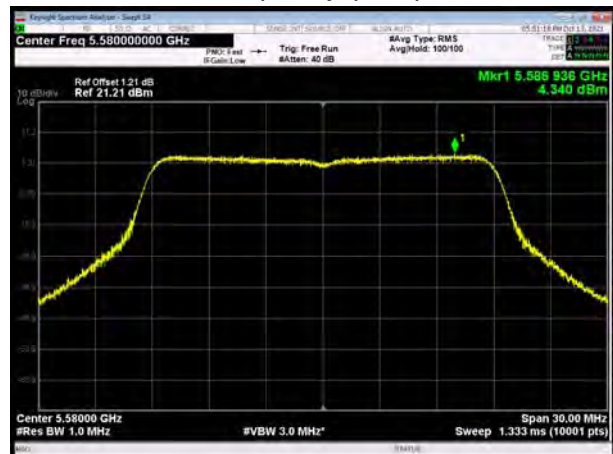
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5500



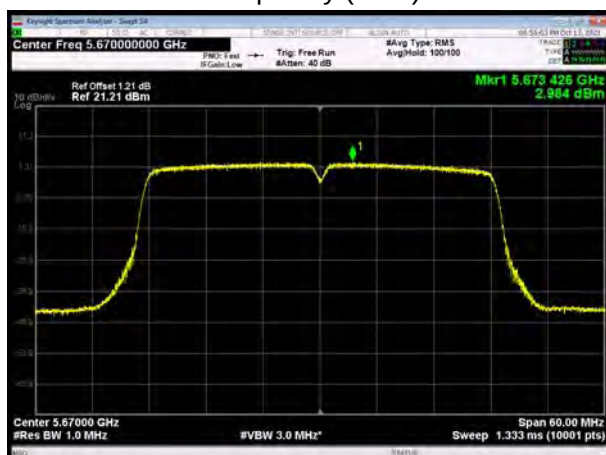
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5550



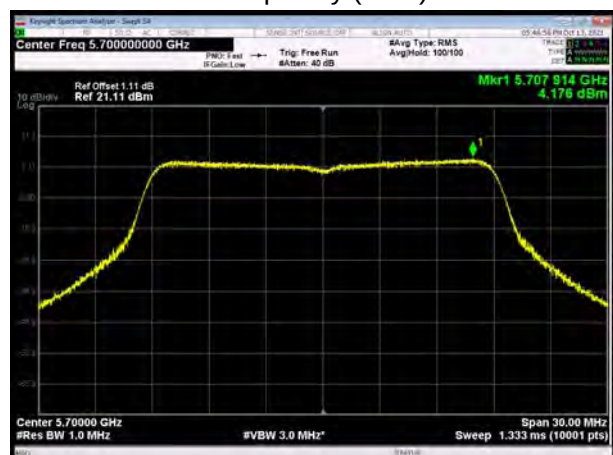
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5580



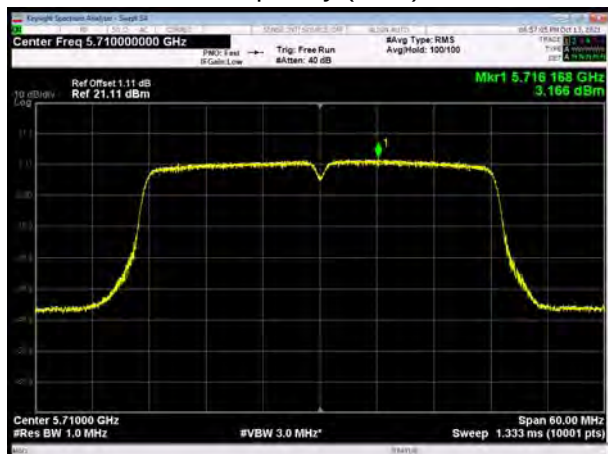
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5670



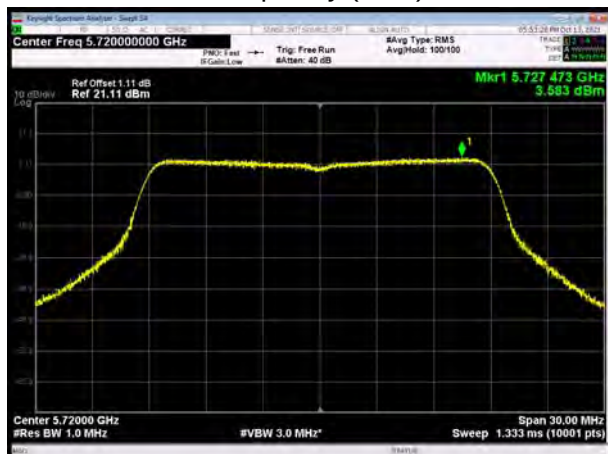
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5700



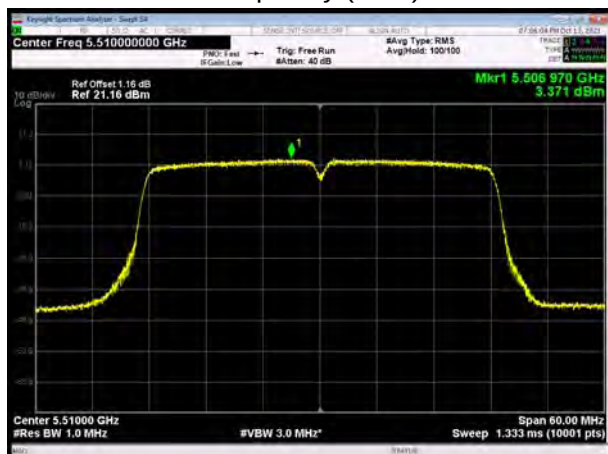
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5710



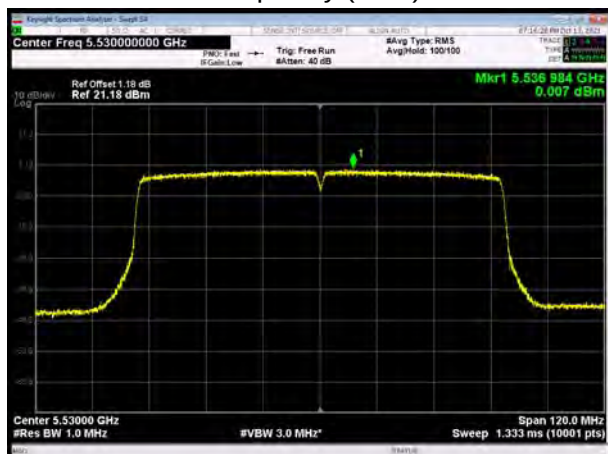
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5720



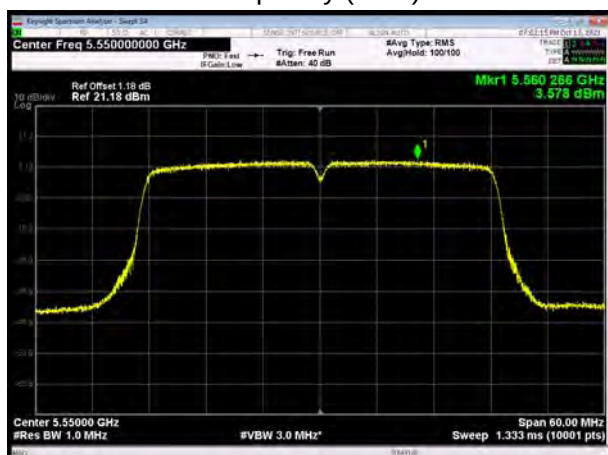
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5510



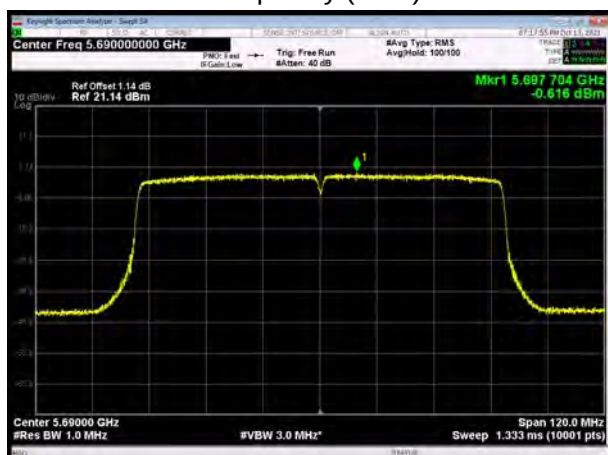
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5530



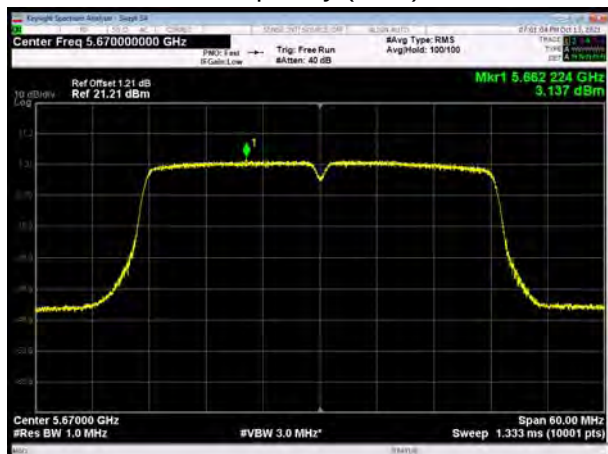
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5550



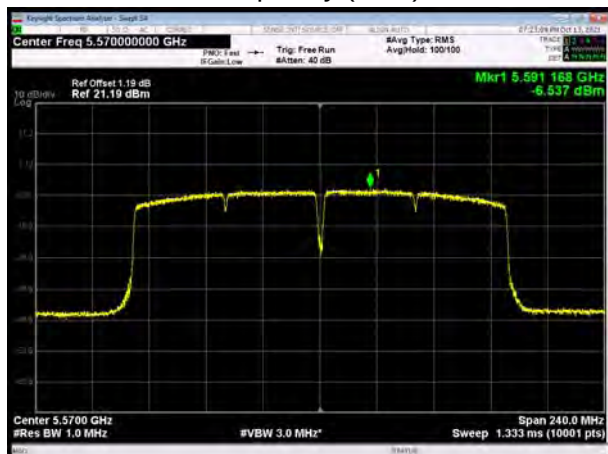
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5690



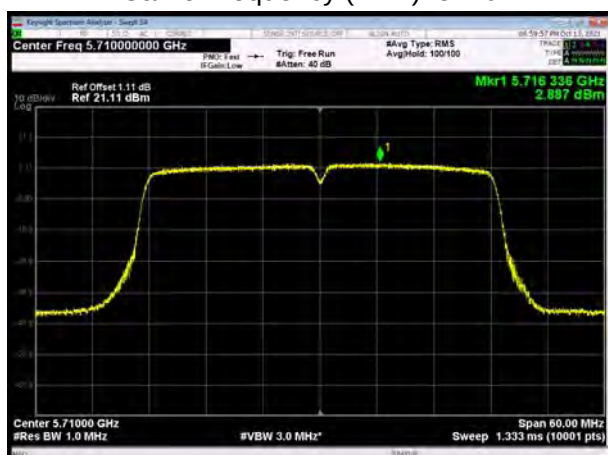
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5670



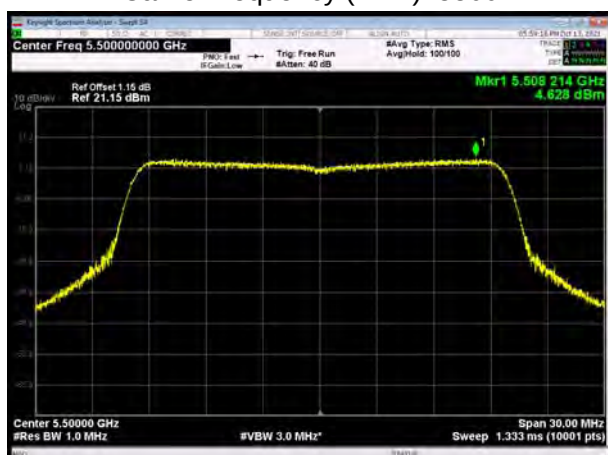
U-NII-2C, 802.11ac VHT160  
Carrier frequency (MHz): 5570



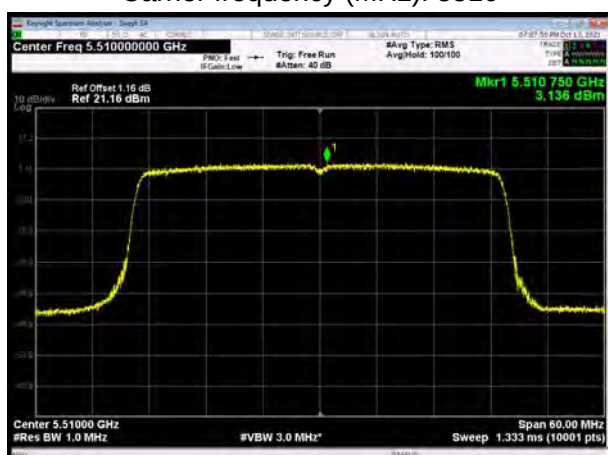
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5710



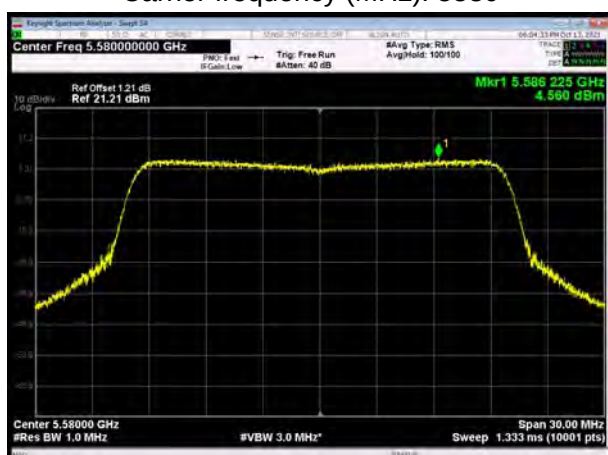
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5500



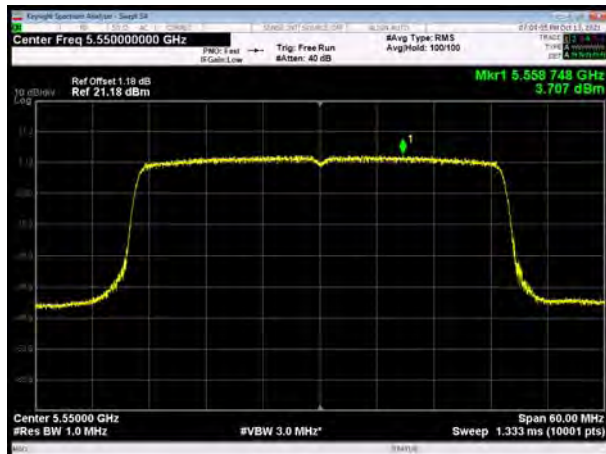
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5510



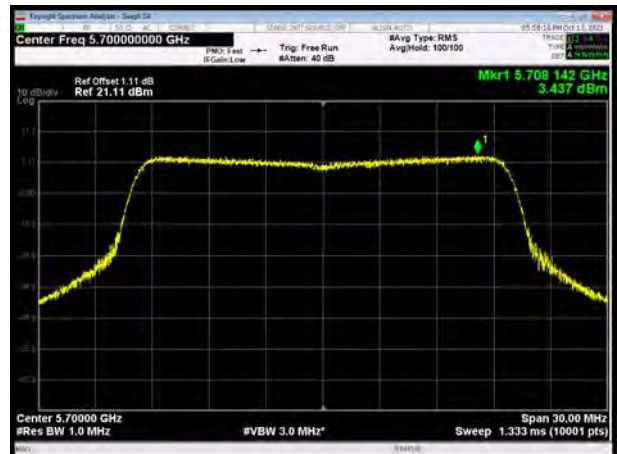
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5580



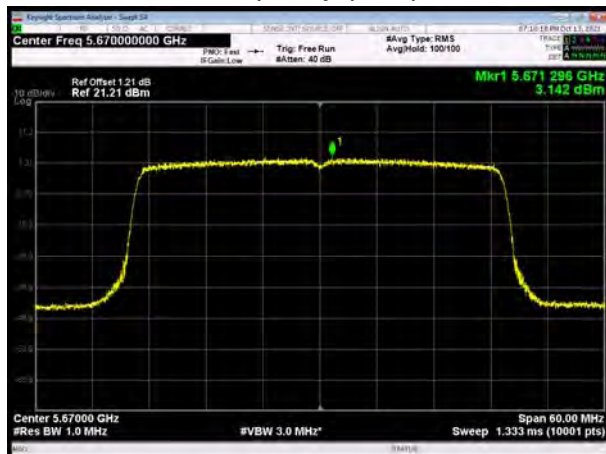
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5550



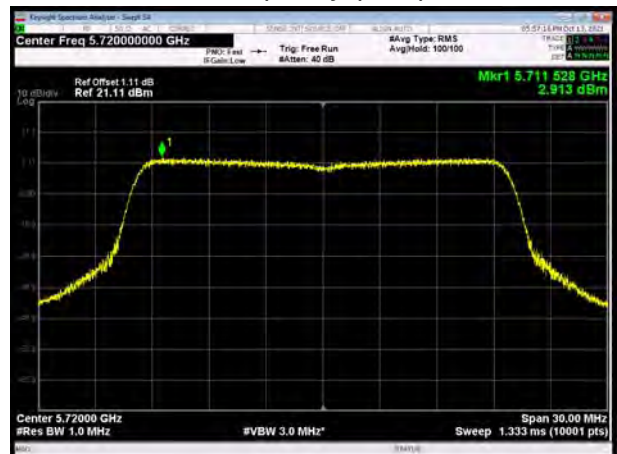
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5700



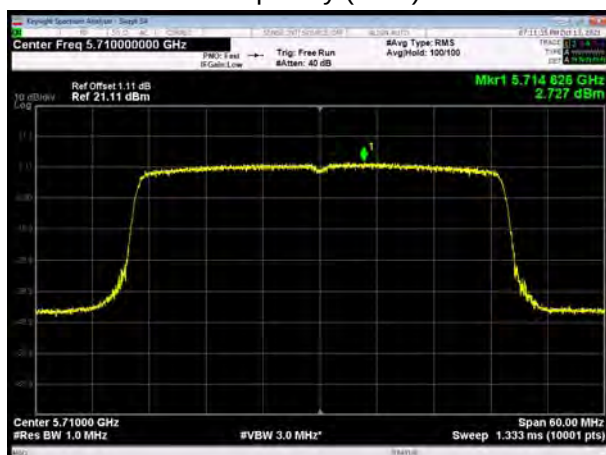
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5670



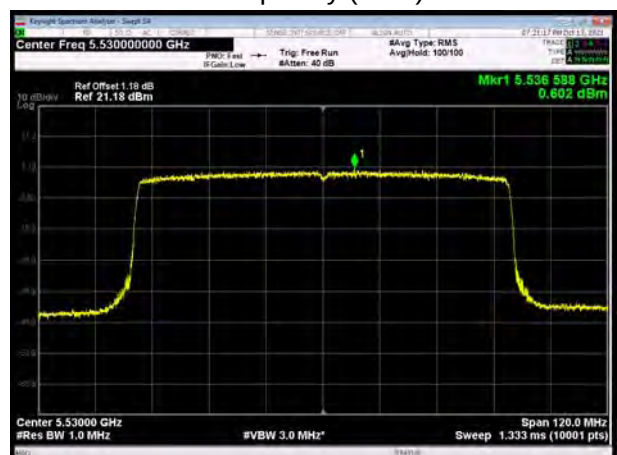
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5720



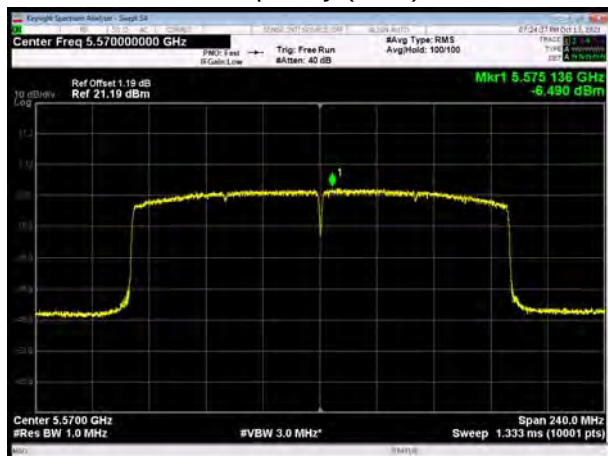
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5710



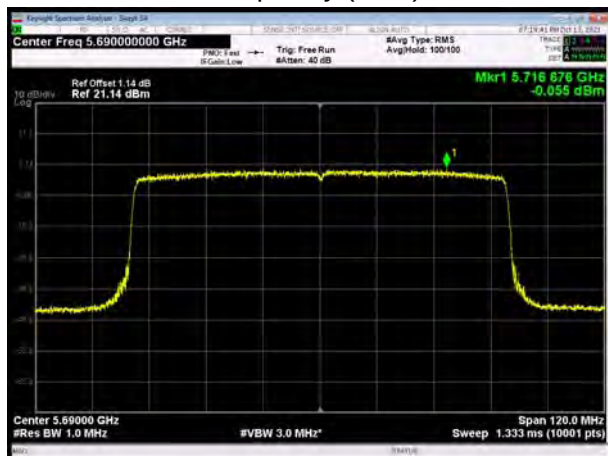
U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5530



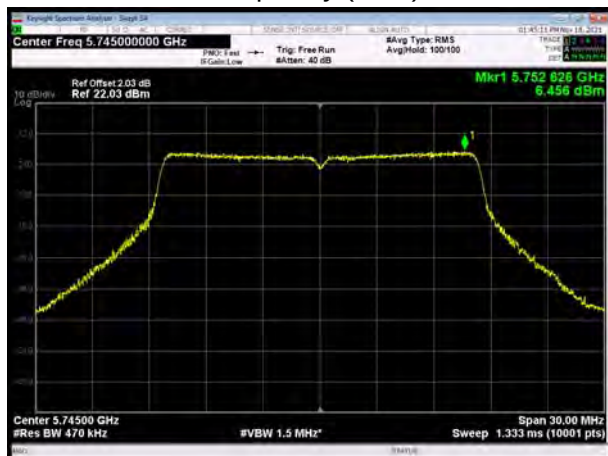
U-NII-2C, 802.11ax HE160  
Carrier frequency (MHz): 5570



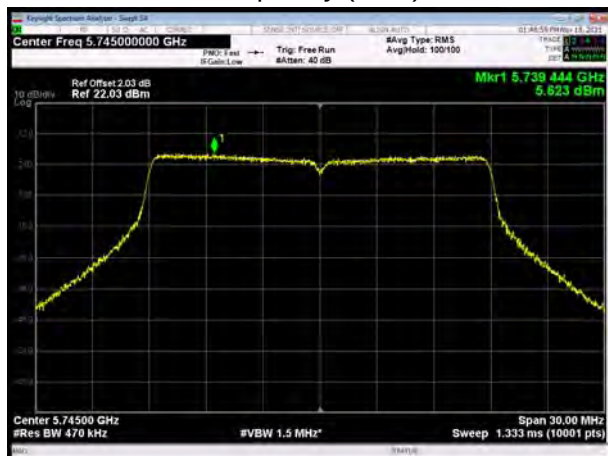
U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5690



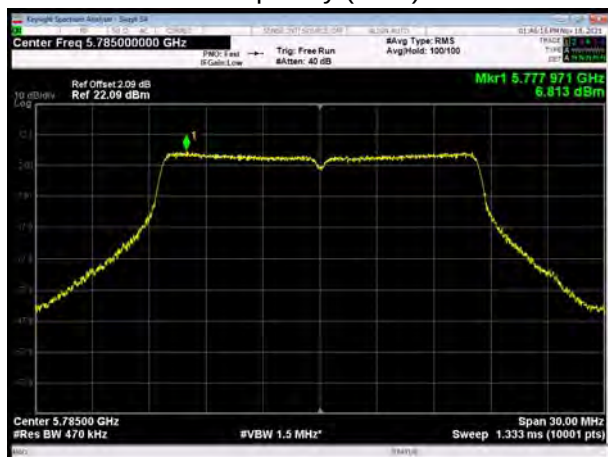
U-NII-3, 802.11a  
Carrier frequency (MHz): 5745



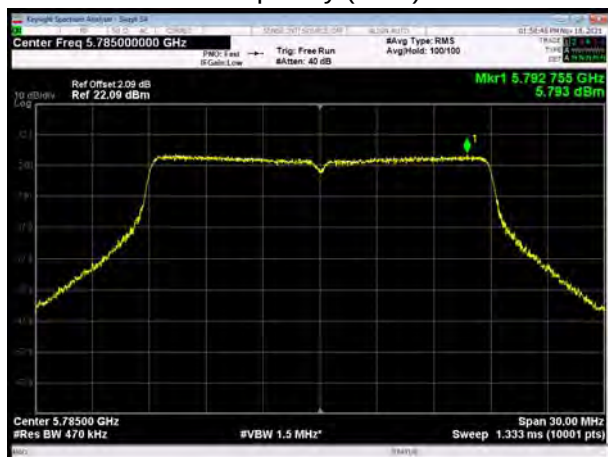
U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5745



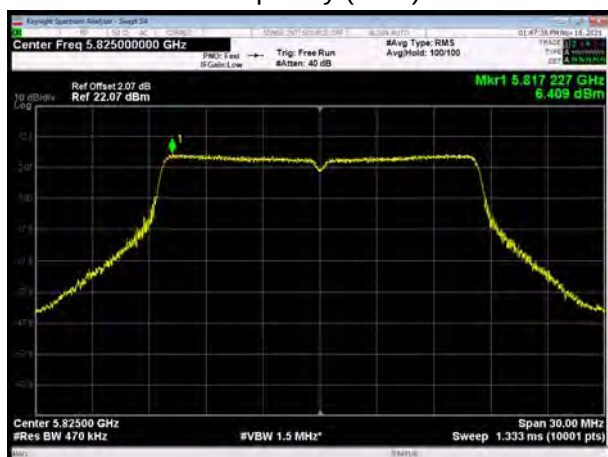
U-NII-3, 802.11a  
Carrier frequency (MHz): 5785



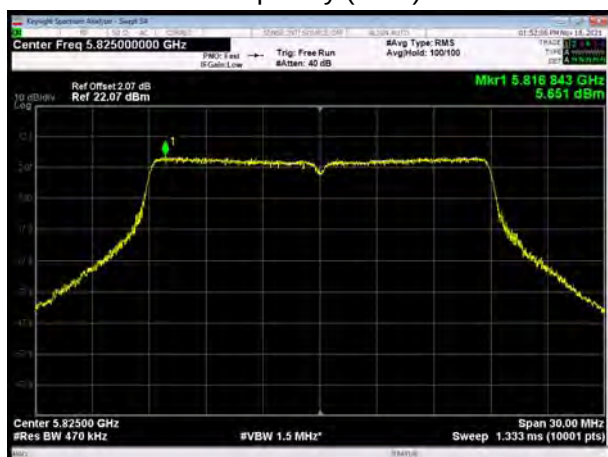
U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5785



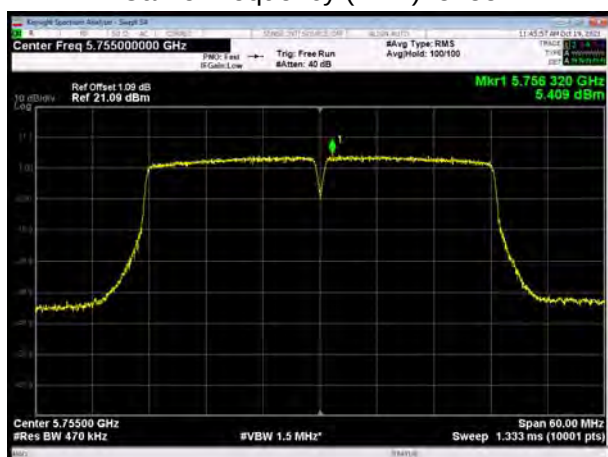
U-NII-3, 802.11a  
Carrier frequency (MHz): 5825



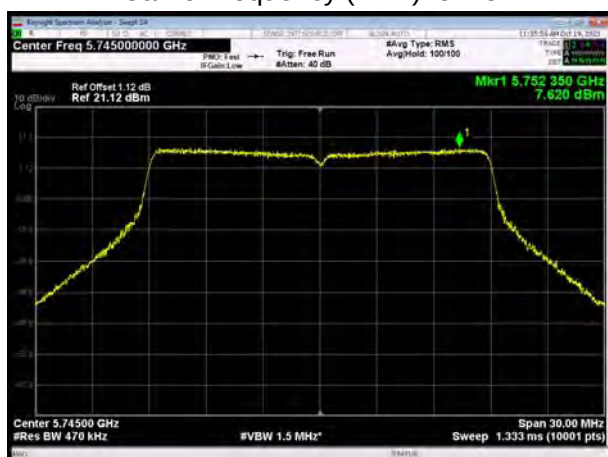
U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5825



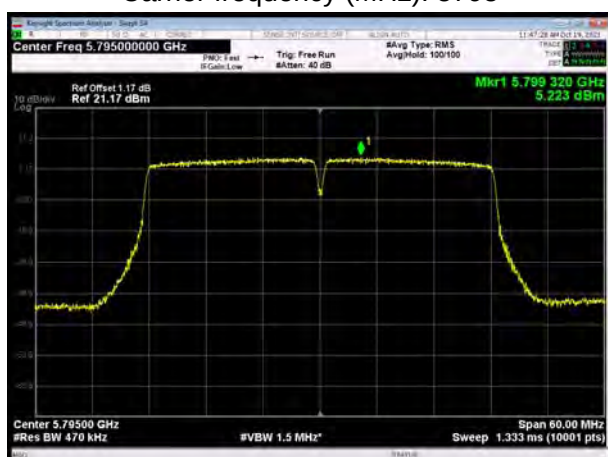
U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5755



U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5745



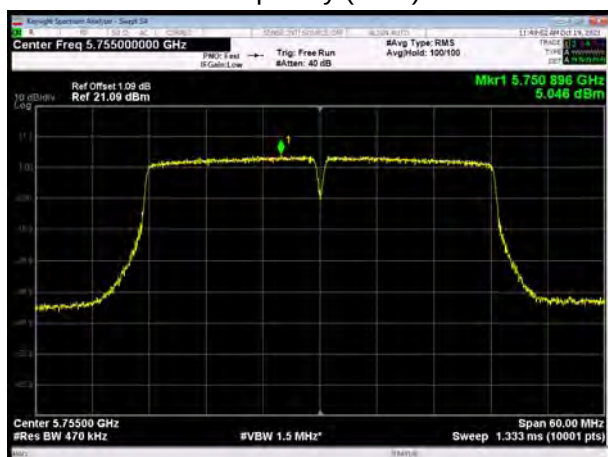
U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5795



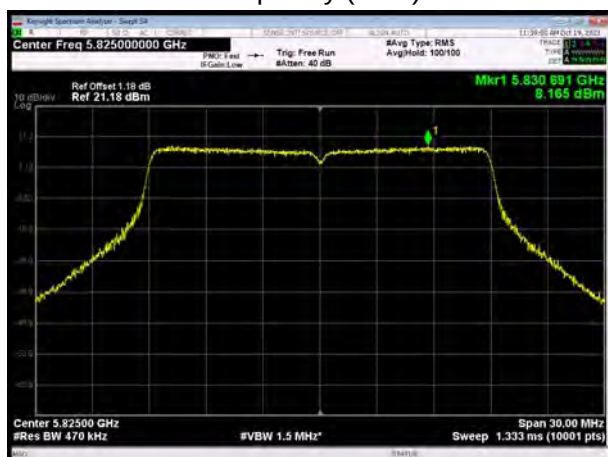
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5785



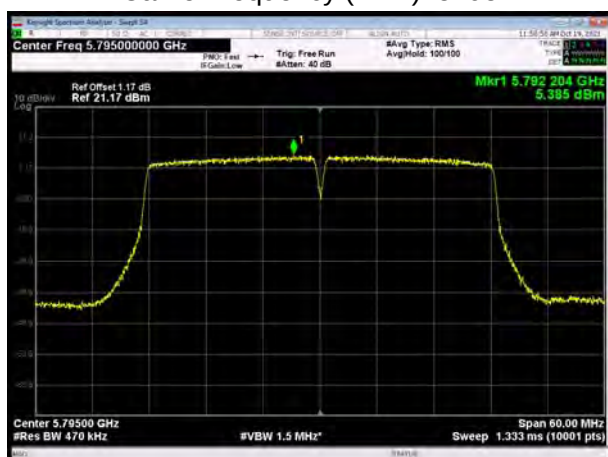
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5755



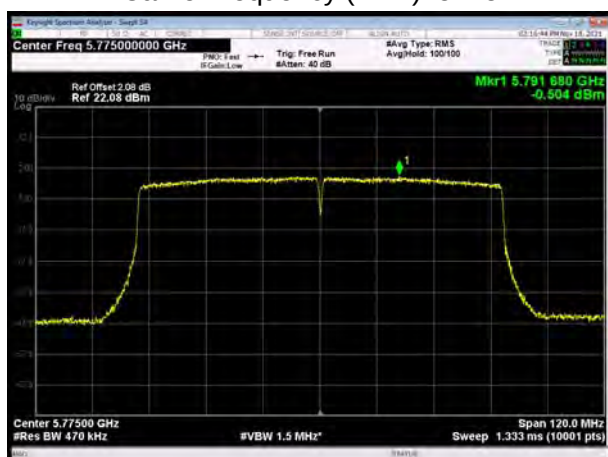
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5825



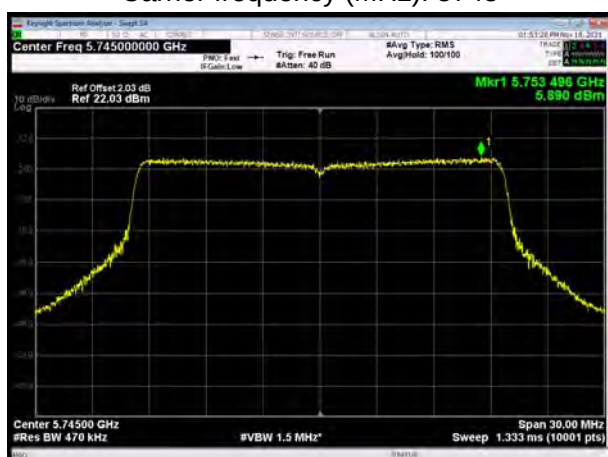
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5795



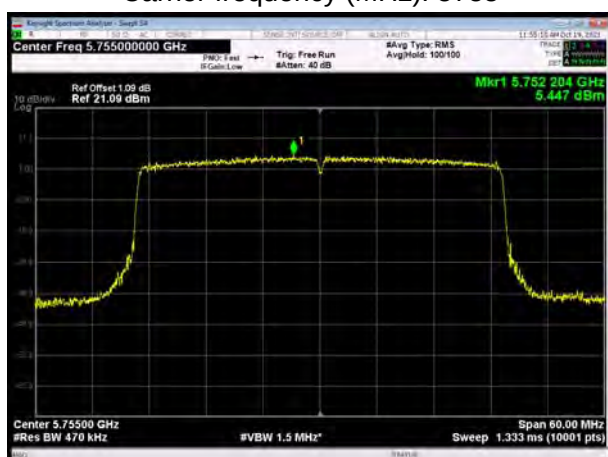
U-NII-3, 802.11ac VHT80  
Carrier frequency (MHz): 5775



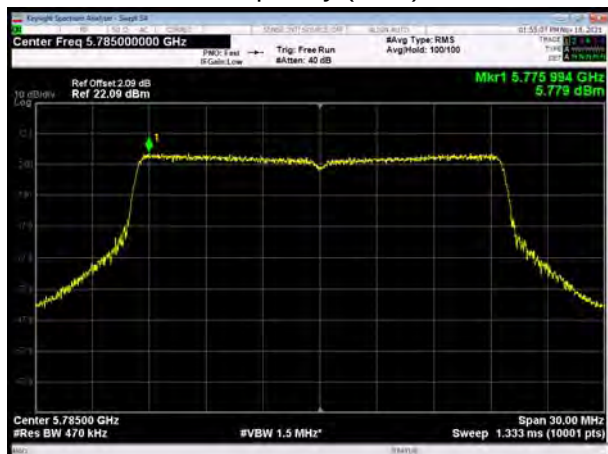
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5745



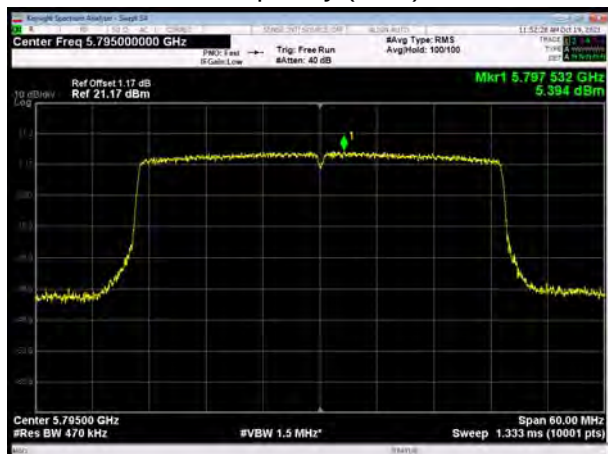
U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5755



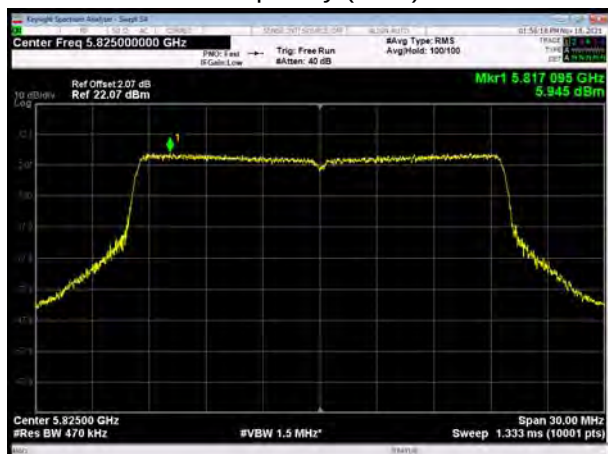
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5785



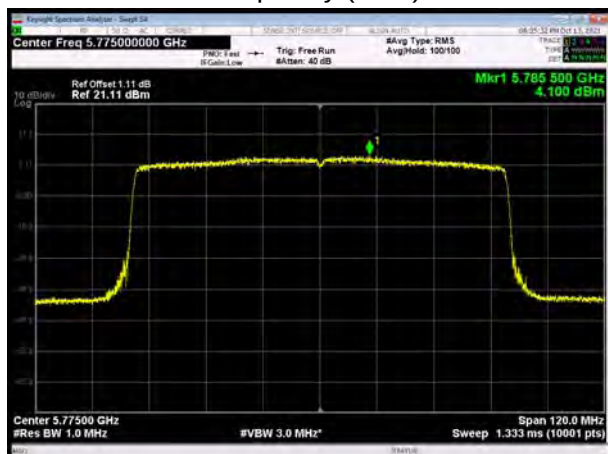
U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5825



U-NII-3, 802.11ax HE80  
Carrier frequency (MHz): 5775



# Antenna 3

U-NII-1, 802.11a

Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5180



U-NII-1, 802.11a

Carrier frequency (MHz): 5200



U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5200



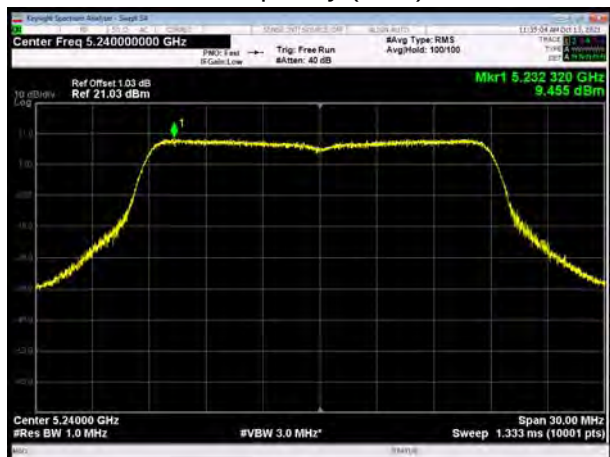
U-NII-1, 802.11a

Carrier frequency (MHz): 5240

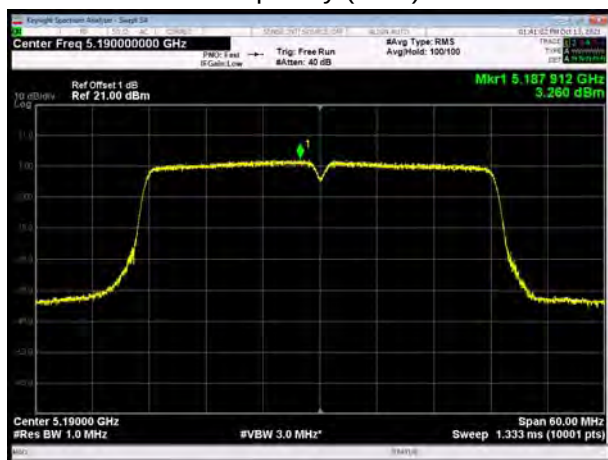


U-NII-1, 802.11n HT20

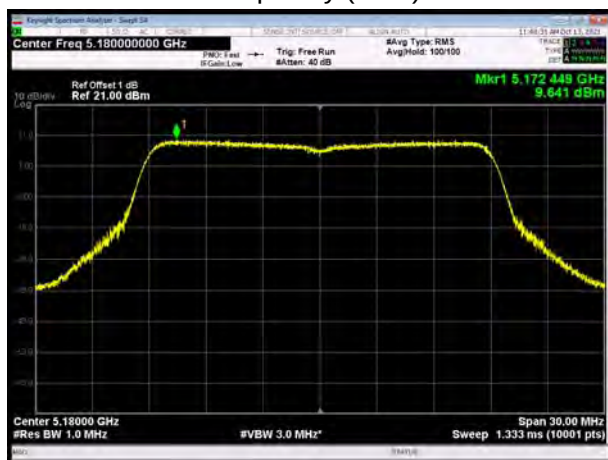
Carrier frequency (MHz): 5240



U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5180



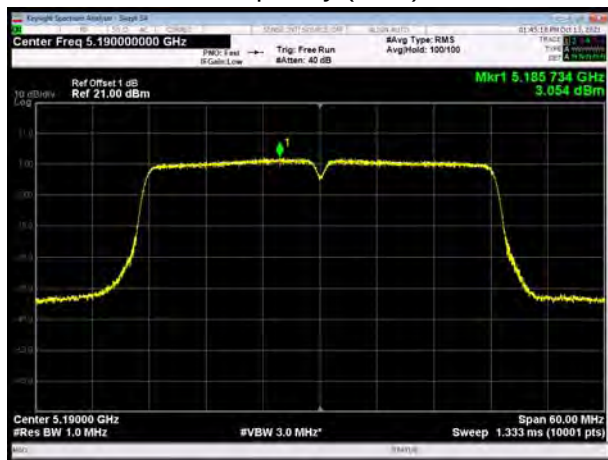
U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5230



U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5200



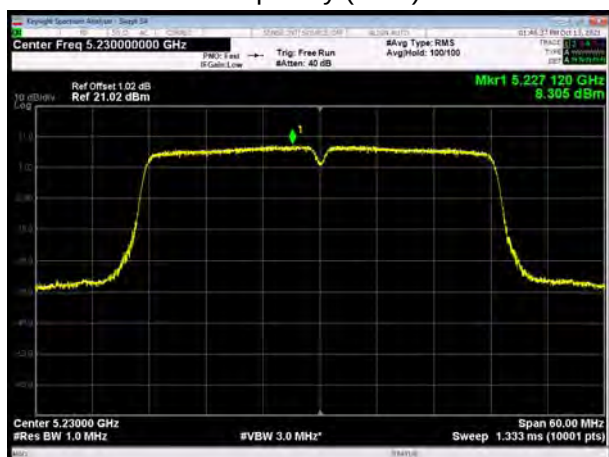
U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5190



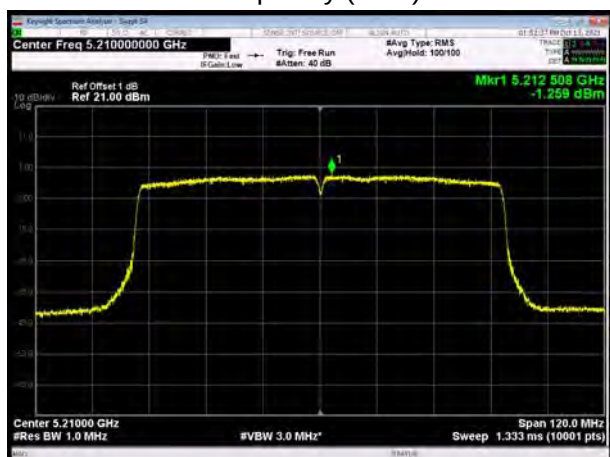
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5240



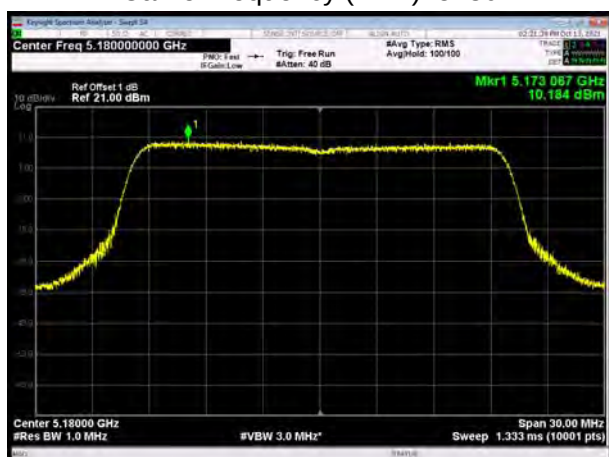
U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5230



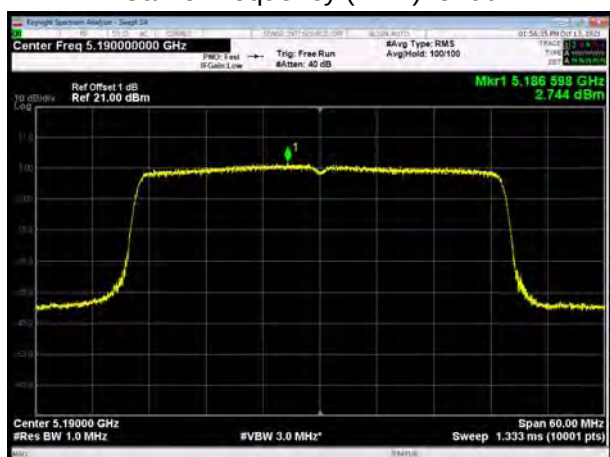
U-NII-1, 802.11ac VHT80  
Carrier frequency (MHz): 5210



U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5180



U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5190



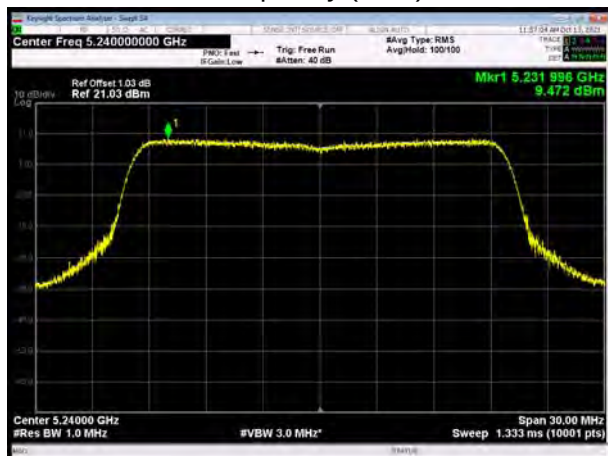
U-NII-1, 802.11ax HE20  
Carrier frequency (MHz): 5200



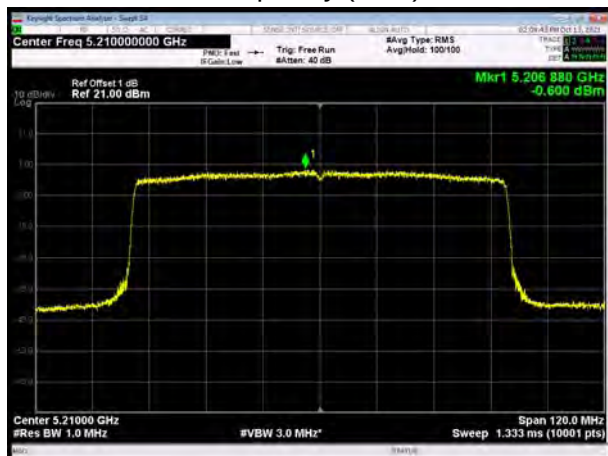
U-NII-1, 802.11ax HE40  
Carrier frequency (MHz): 5230



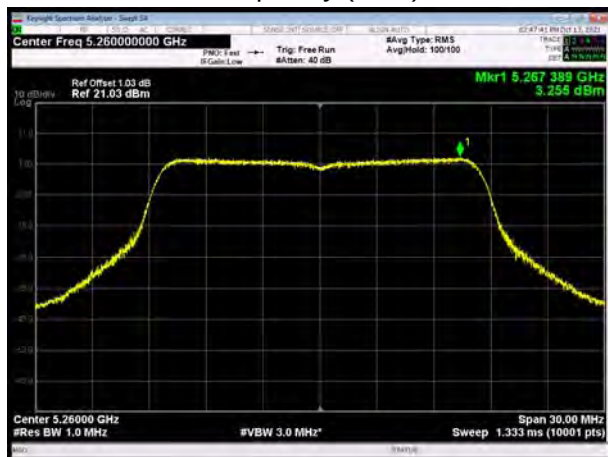
U-NII-1, 802.11ax HE20  
Carrier frequency (MHz):5240



U-NII-1, 802.11ax HE80  
Carrier frequency (MHz): 5210



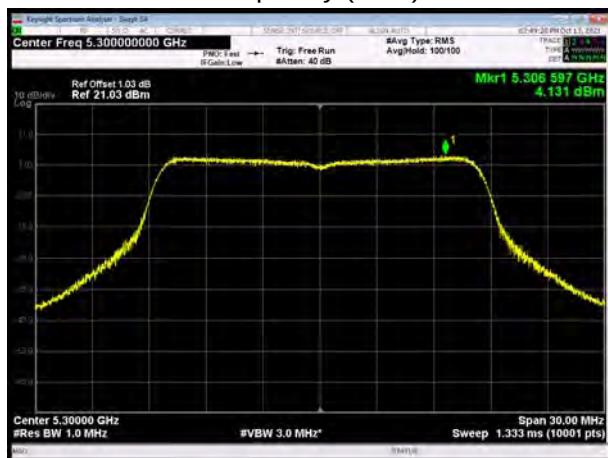
U-NII-2A, 802.11a  
Carrier frequency (MHz): 5260



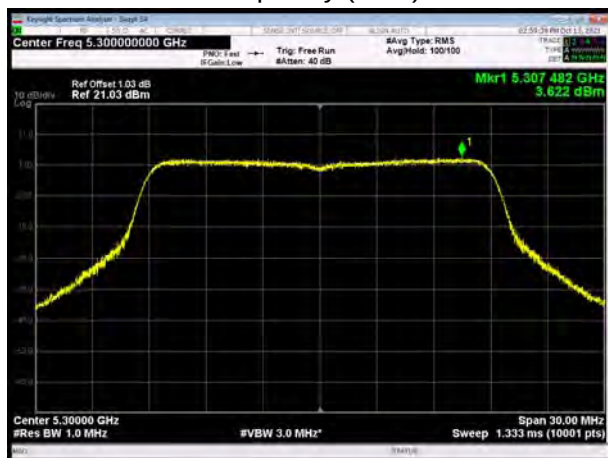
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5260



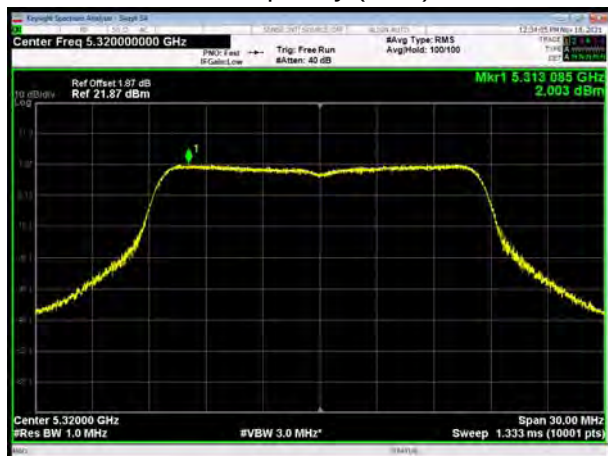
U-NII-2A, 802.11a  
Carrier frequency (MHz): 5300



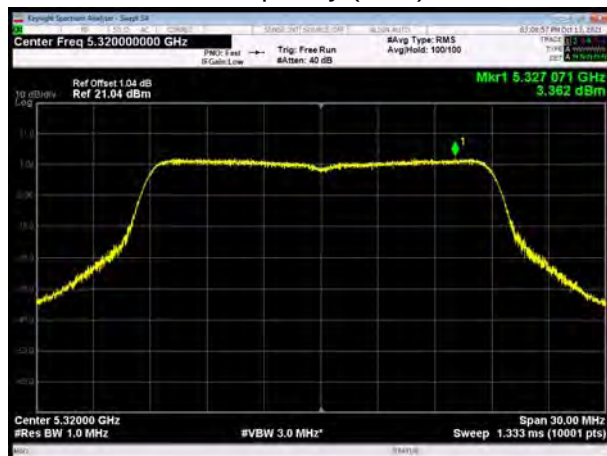
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz): 5300



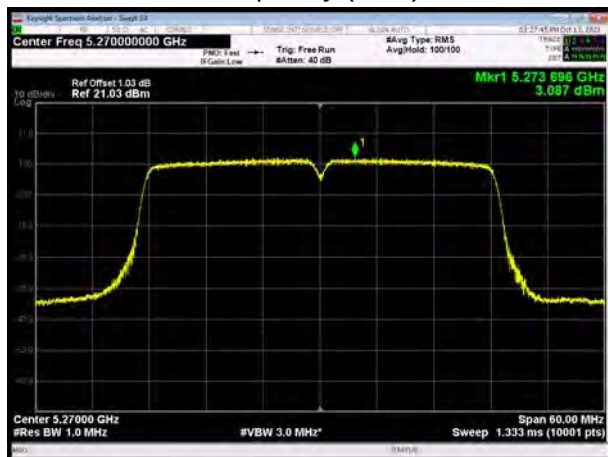
U-NII-2A, 802.11a  
Carrier frequency (MHz):5320



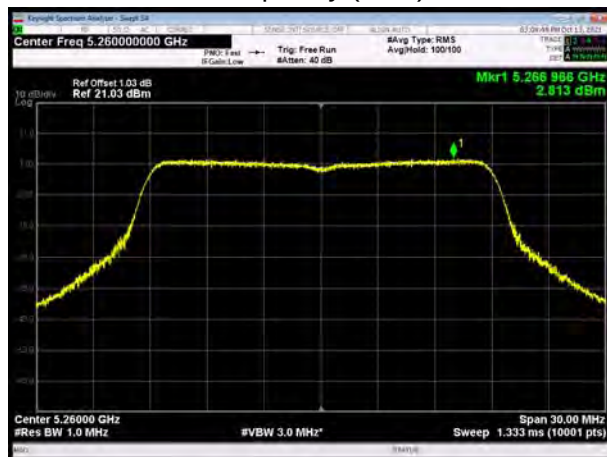
U-NII-2A, 802.11n HT20  
Carrier frequency (MHz):5320



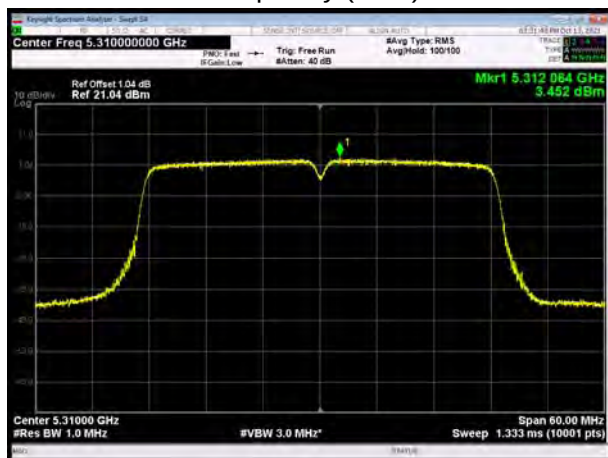
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5270



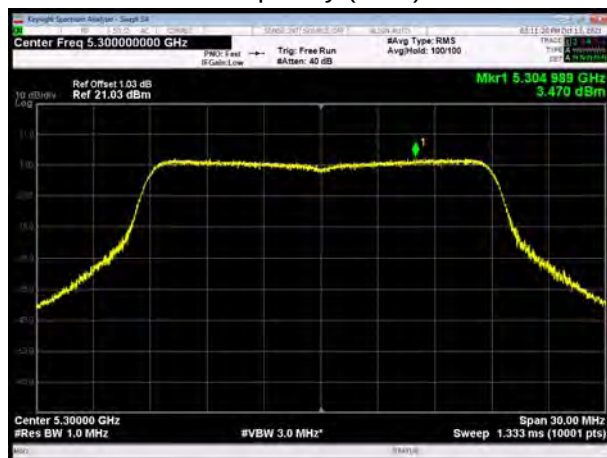
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz):5260



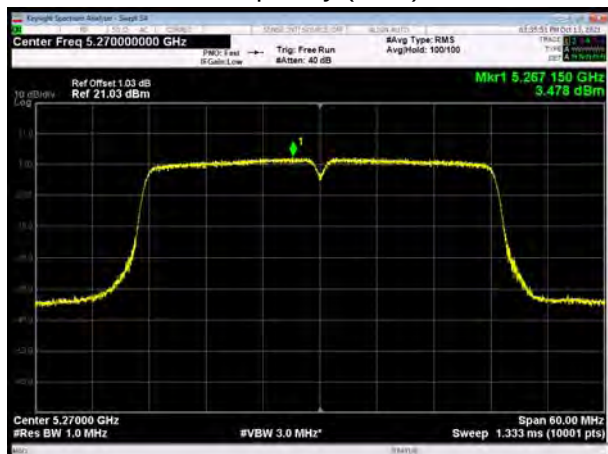
U-NII-2A, 802.11n HT40  
Carrier frequency (MHz): 5310



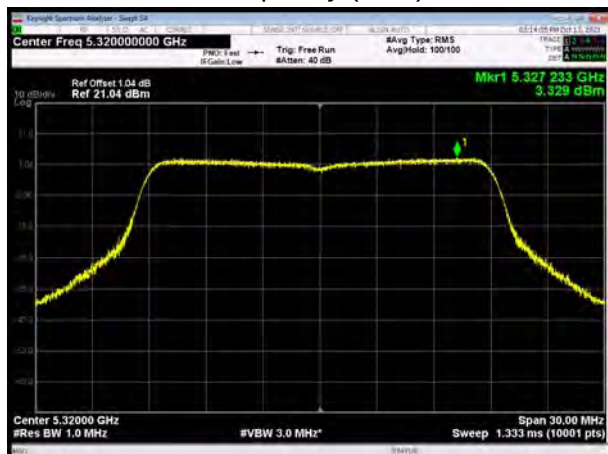
U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5300



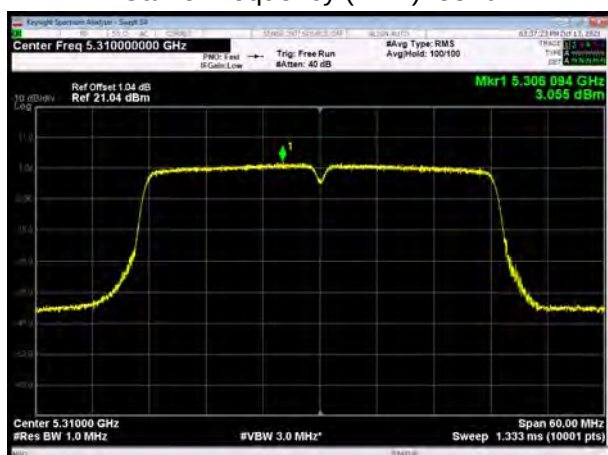
U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5270



U-NII-2A, 802.11ac VHT20  
Carrier frequency (MHz): 5320



U-NII-2A, 802.11ac VHT40  
Carrier frequency (MHz): 5310



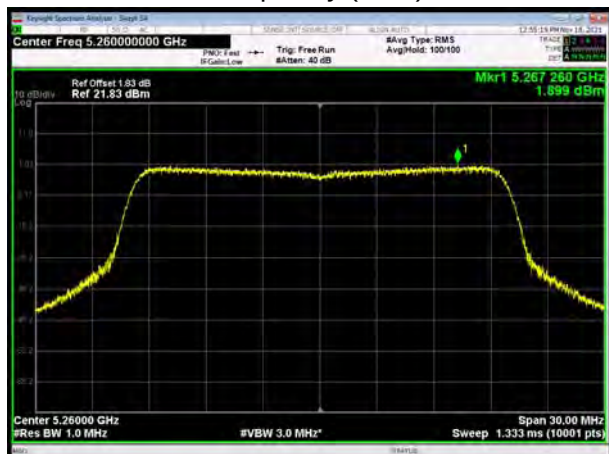
U-NII-2A, 802.11ac VHT80  
Carrier frequency (MHz): 5290



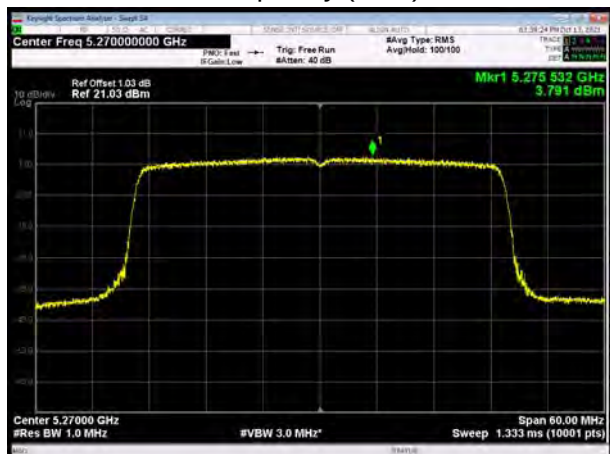
U-NII-2A, 802.11ac VHT160  
Carrier frequency (MHz): 5250



U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5260



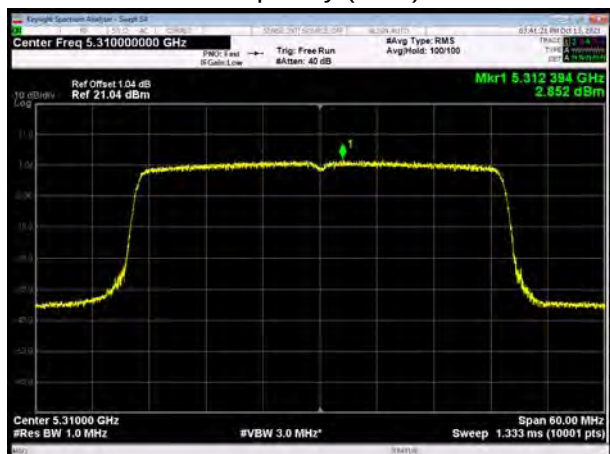
U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5270



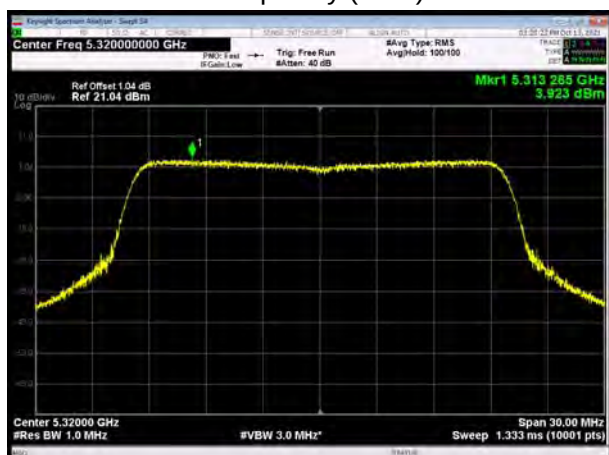
U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz): 5300



U-NII-2A, 802.11ax HE40  
Carrier frequency (MHz): 5310



U-NII-2A, 802.11ax HE20  
Carrier frequency (MHz):5320



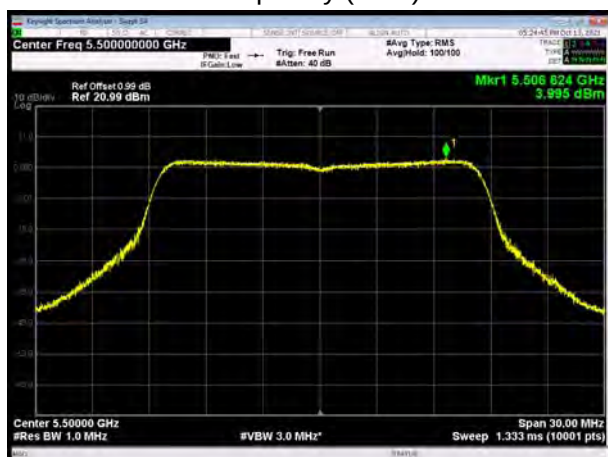
U-NII-2A, 802.11ax HE80  
Carrier frequency (MHz): 5290



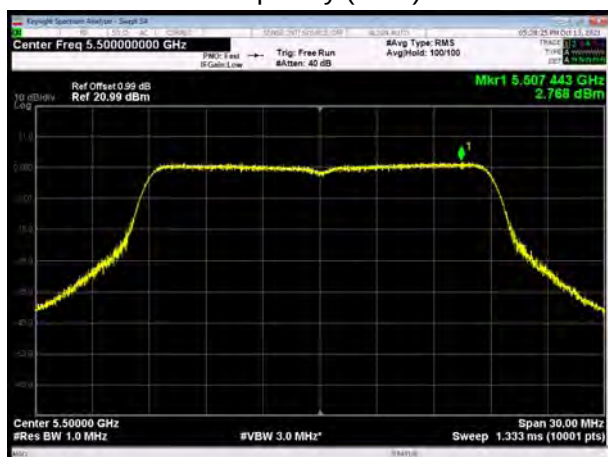
U-NII-2A, 802.11ax HE160  
Carrier frequency (MHz): 5250



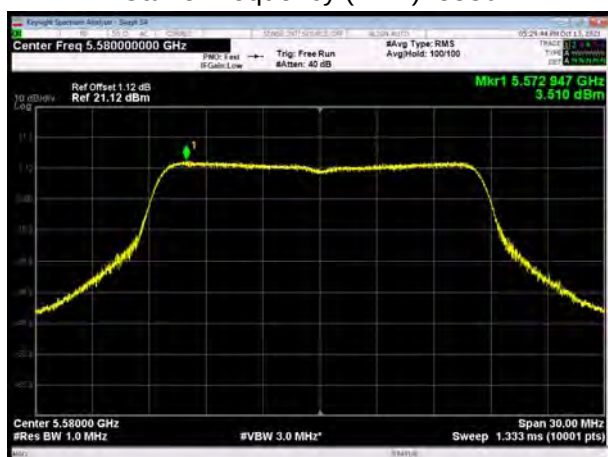
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5500



U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5500



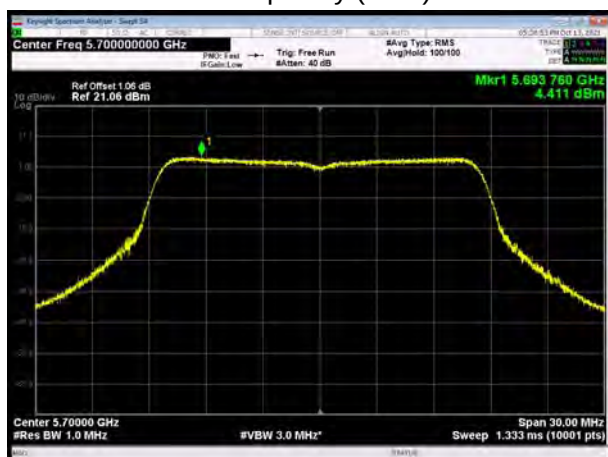
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5580



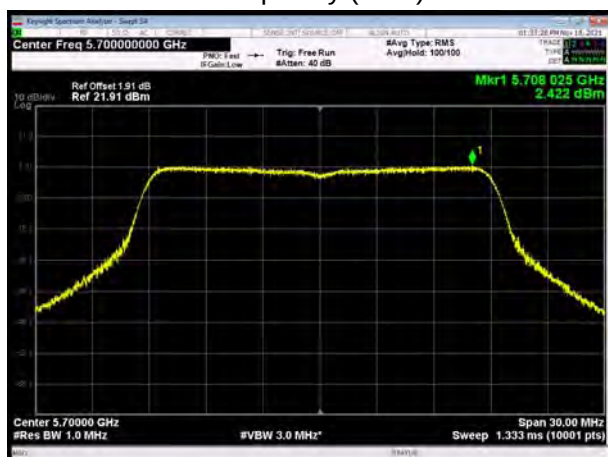
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5580



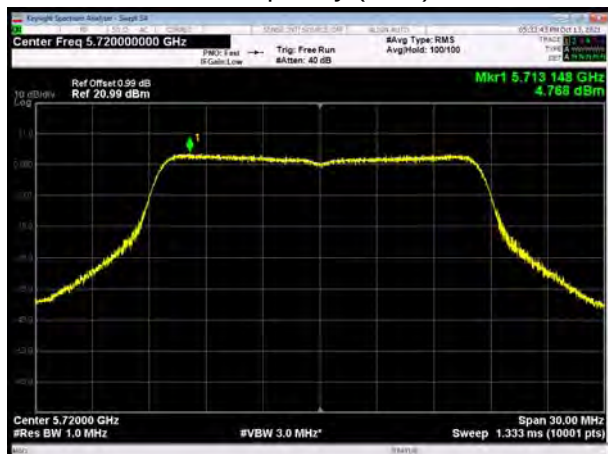
U-NII-2C, 802.11a  
Carrier frequency (MHz): 5700



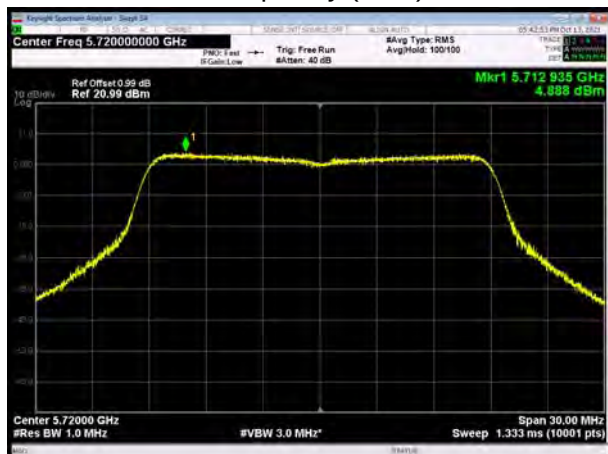
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz): 5700



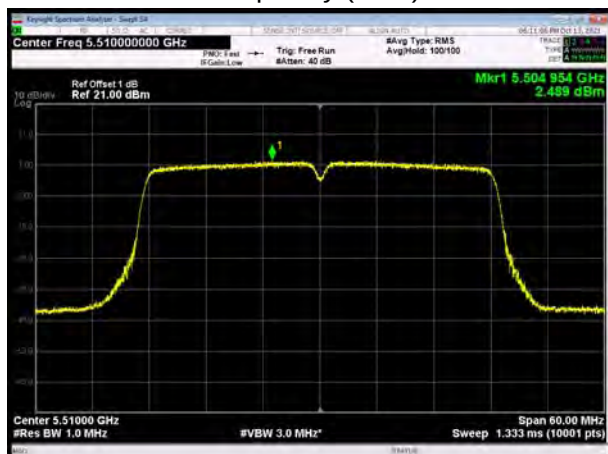
U-NII-2C, 802.11a  
Carrier frequency (MHz):5720



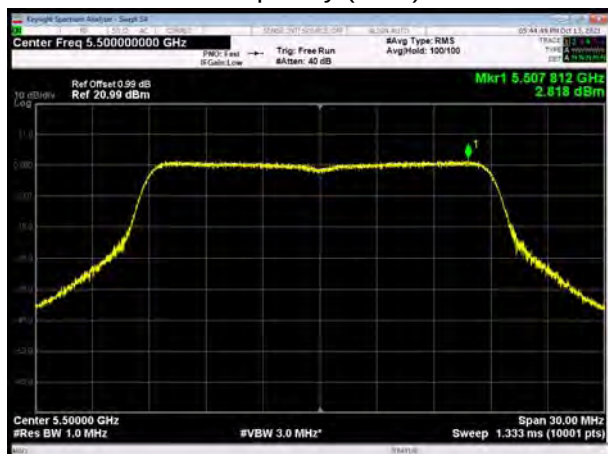
U-NII-2C, 802.11n HT20  
Carrier frequency (MHz):5720



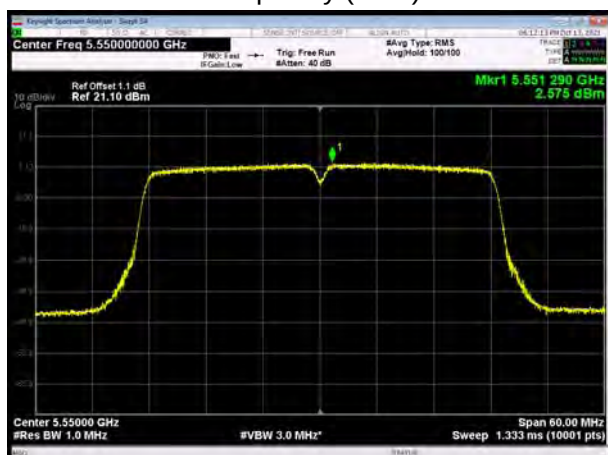
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5510



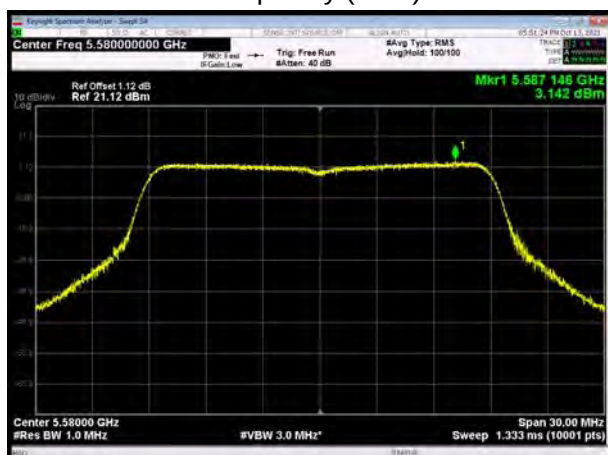
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5500



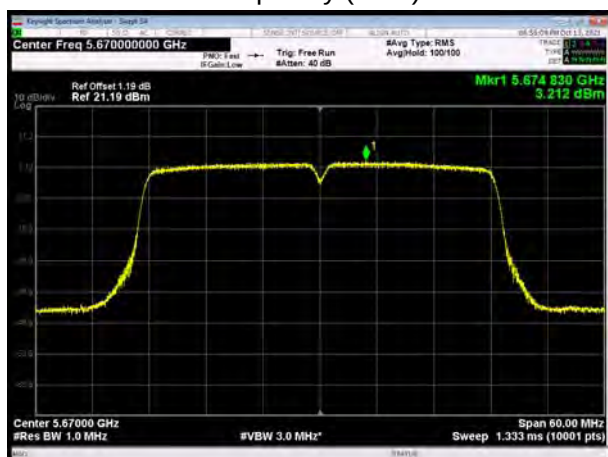
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5550



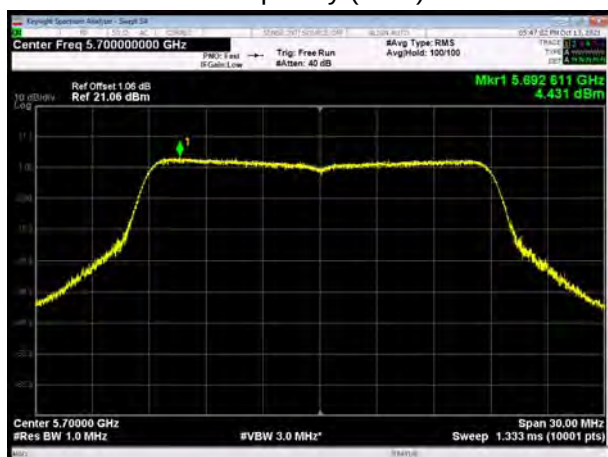
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5580



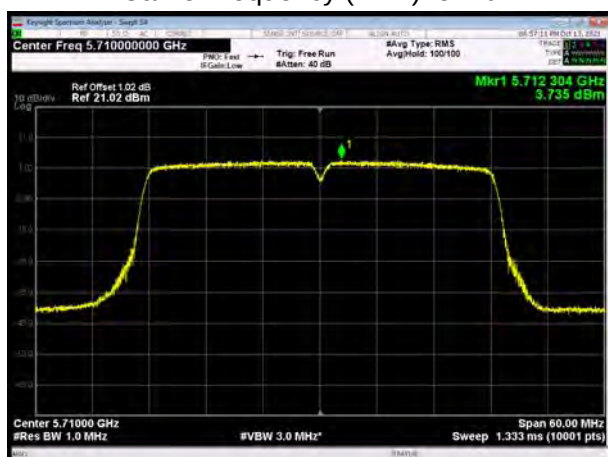
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5670



U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5700



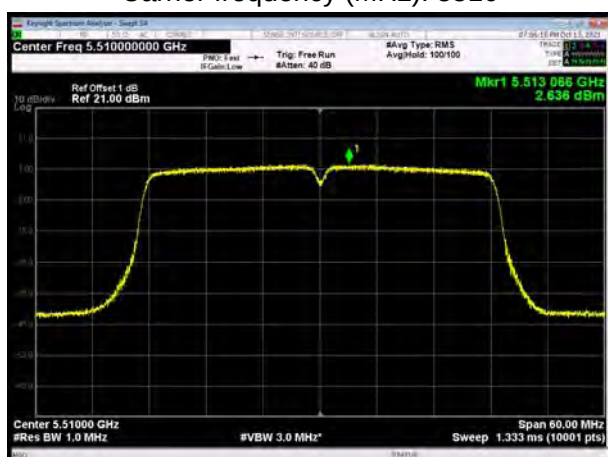
U-NII-2C, 802.11n HT40  
Carrier frequency (MHz): 5710



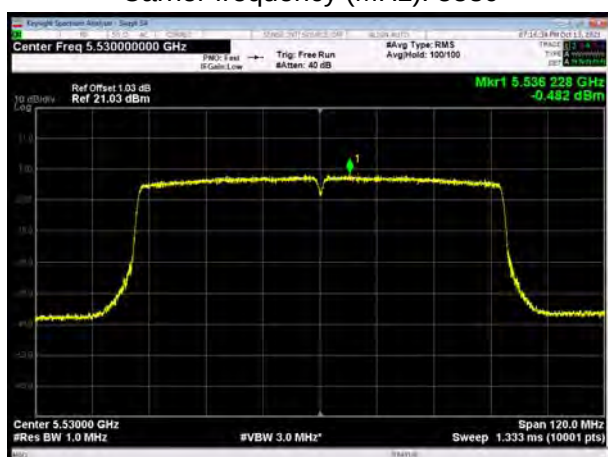
U-NII-2C, 802.11ac VHT20  
Carrier frequency (MHz): 5720



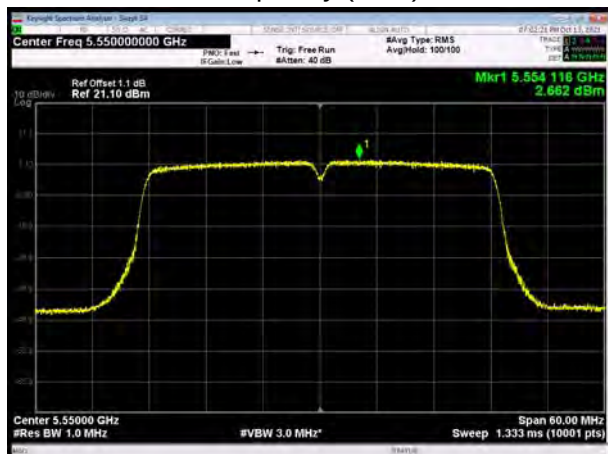
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5510



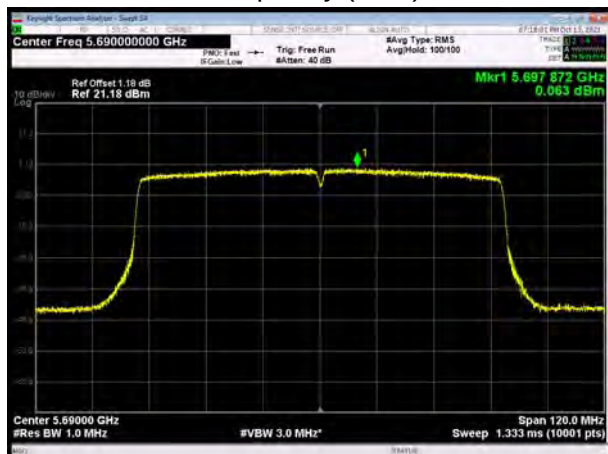
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5530



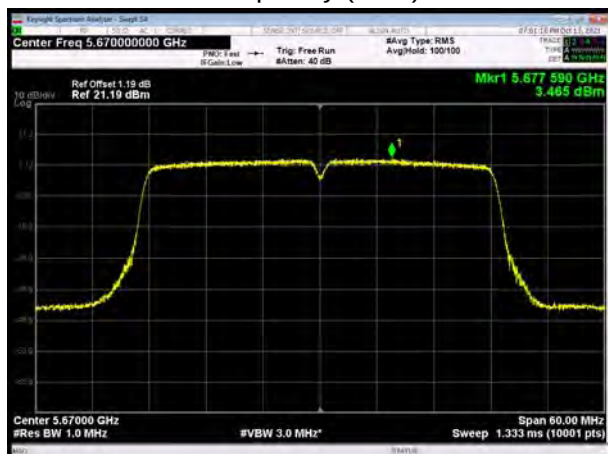
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5550



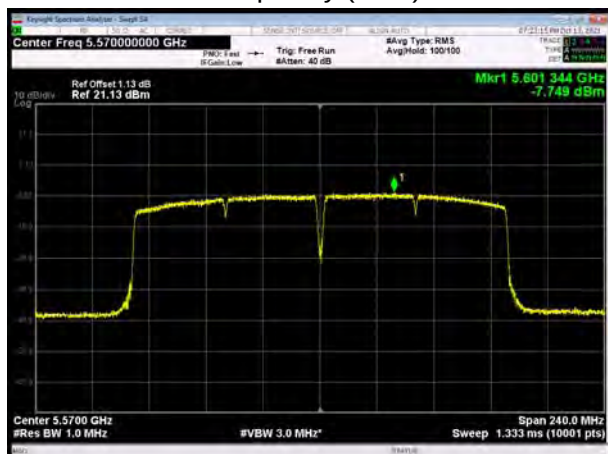
U-NII-2C, 802.11ac VHT80  
Carrier frequency (MHz): 5690



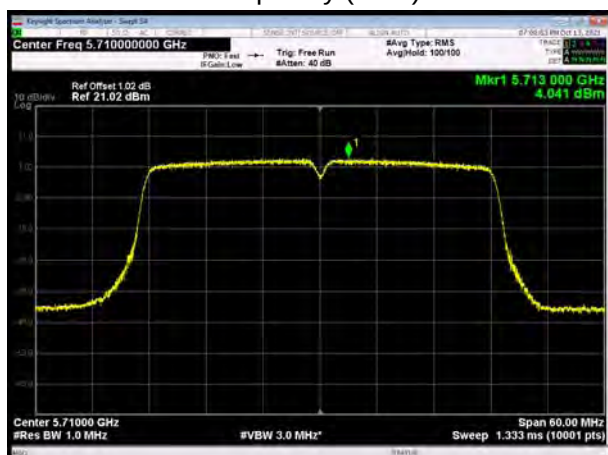
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5670



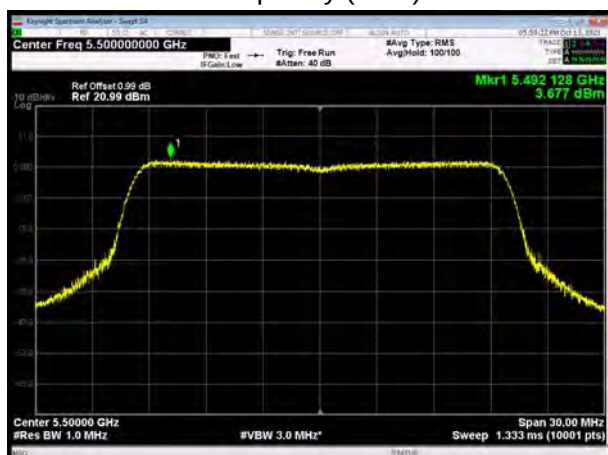
U-NII-2C, 802.11ac VHT160  
Carrier frequency (MHz): 5570



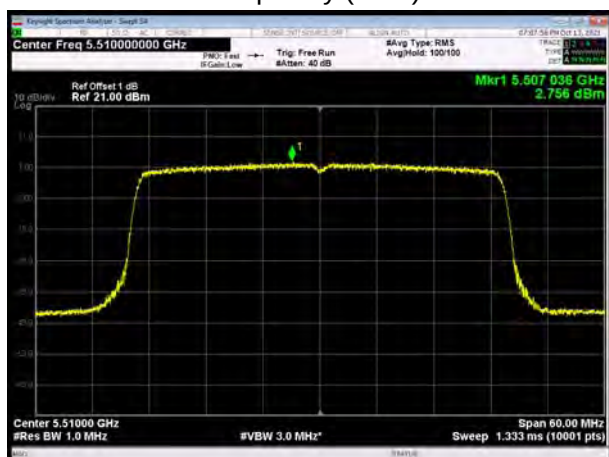
U-NII-2C, 802.11ac VHT40  
Carrier frequency (MHz): 5710



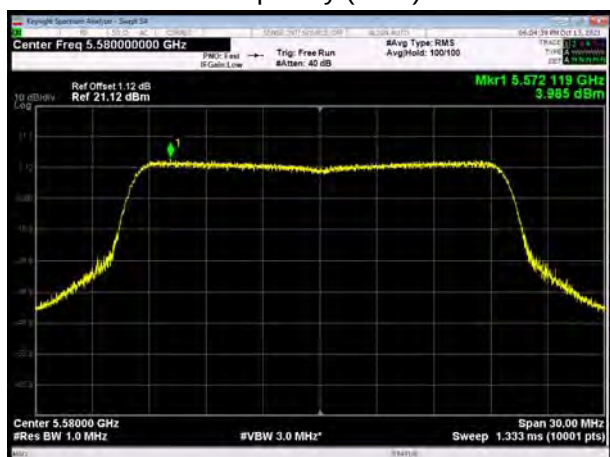
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5500



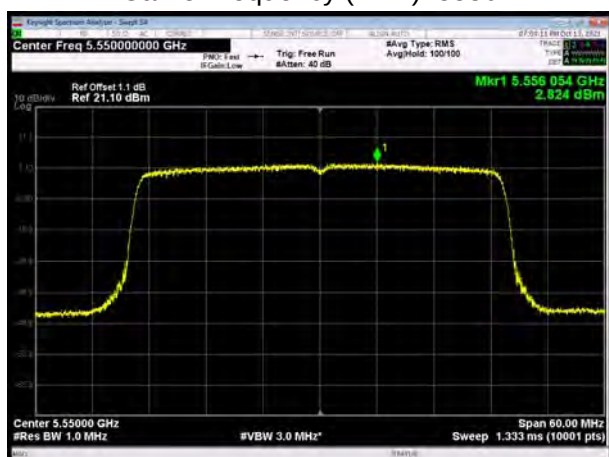
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5510



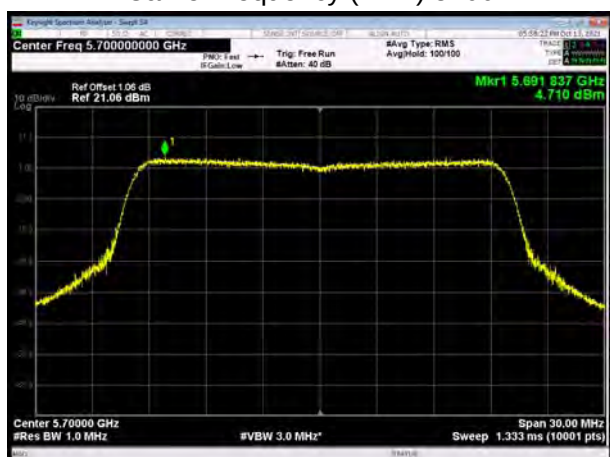
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5580



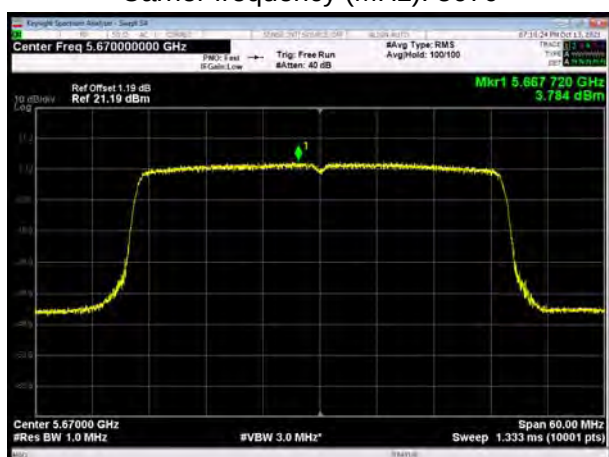
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5550



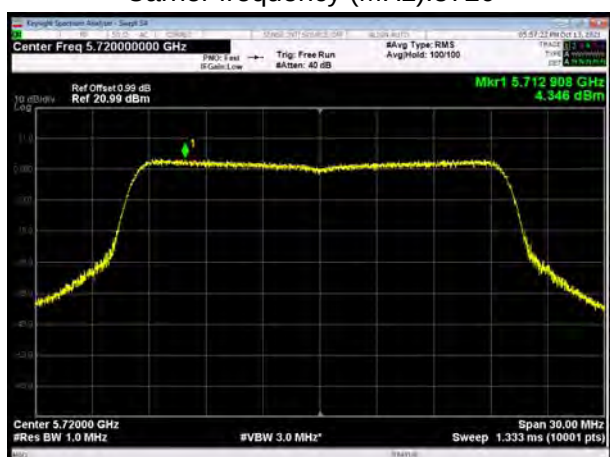
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5700



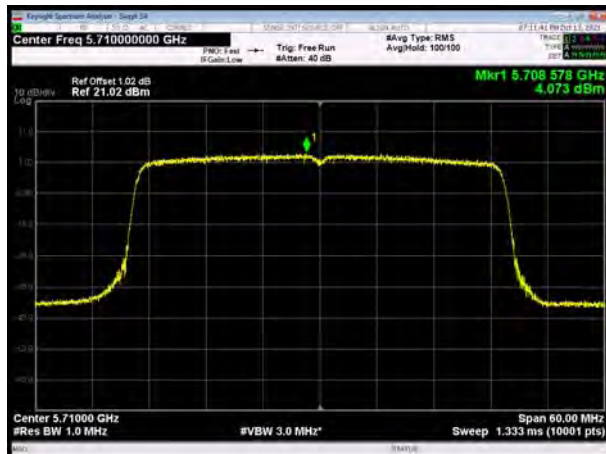
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5670



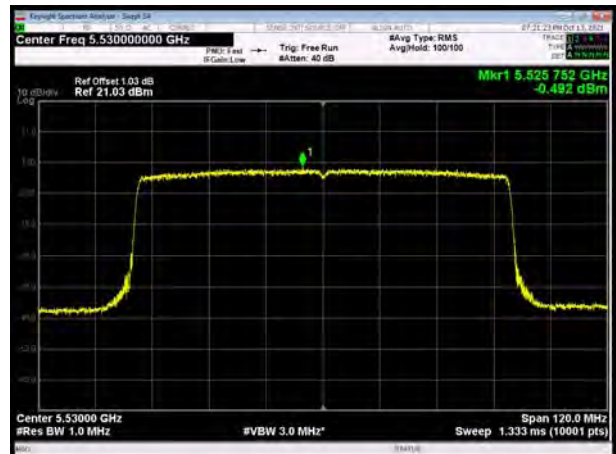
U-NII-2C, 802.11ax HE20  
Carrier frequency (MHz): 5720



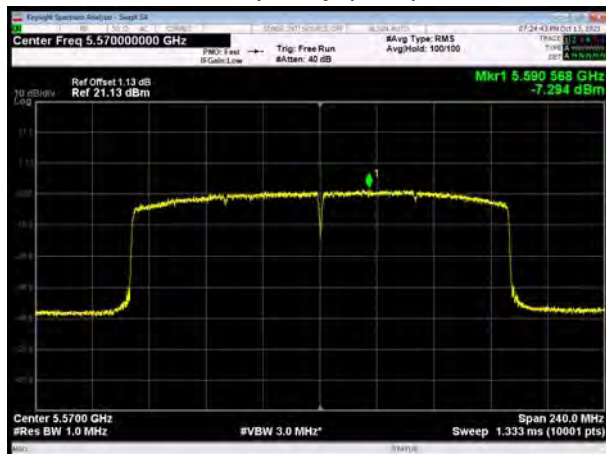
U-NII-2C, 802.11ax HE40  
Carrier frequency (MHz): 5710



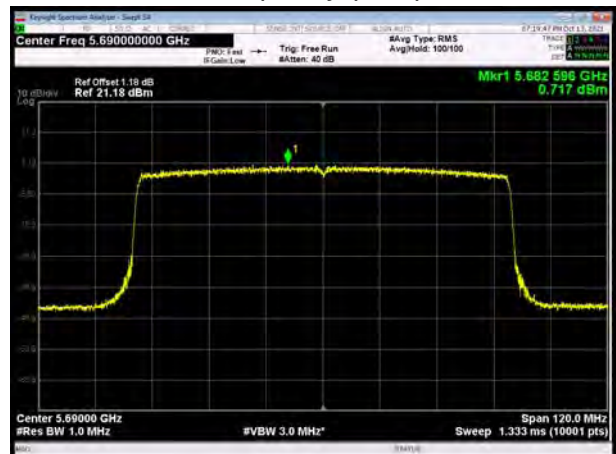
U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5530



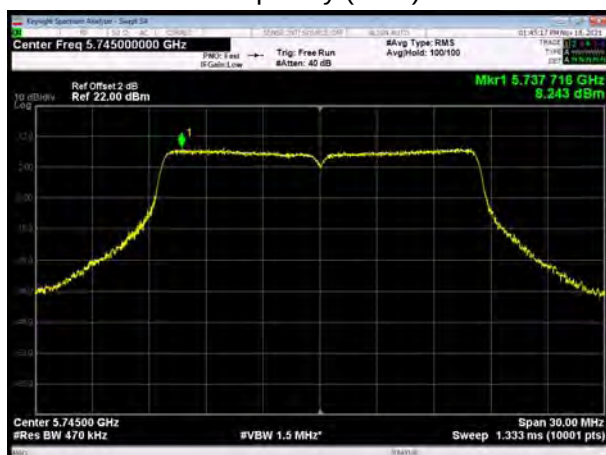
U-NII-2C, 802.11ax HE160  
Carrier frequency (MHz): 5570



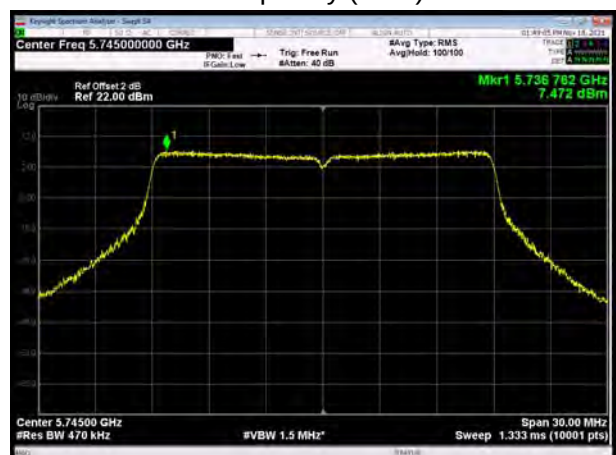
U-NII-2C, 802.11ax HE80  
Carrier frequency (MHz): 5690



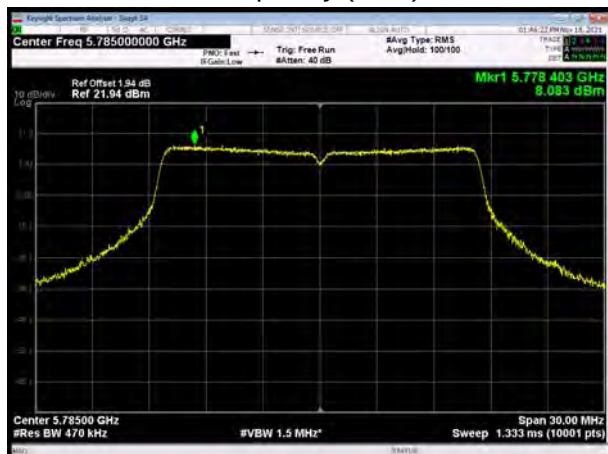
U-NII-3, 802.11a  
Carrier frequency (MHz): 5745



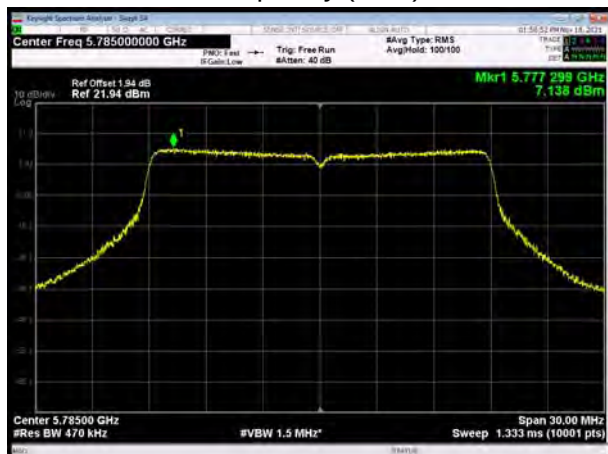
U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5745



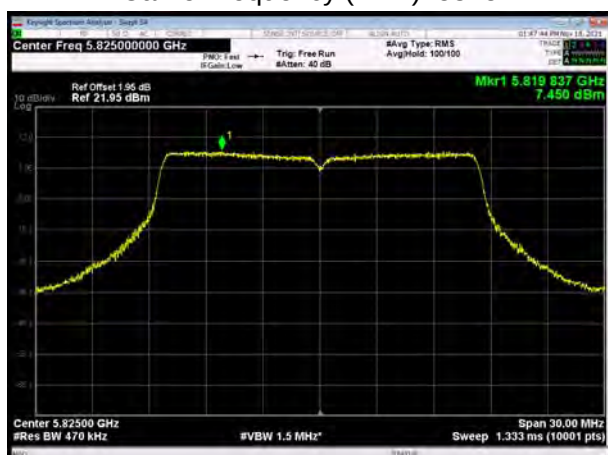
U-NII-3, 802.11a  
Carrier frequency (MHz): 5785



U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5785



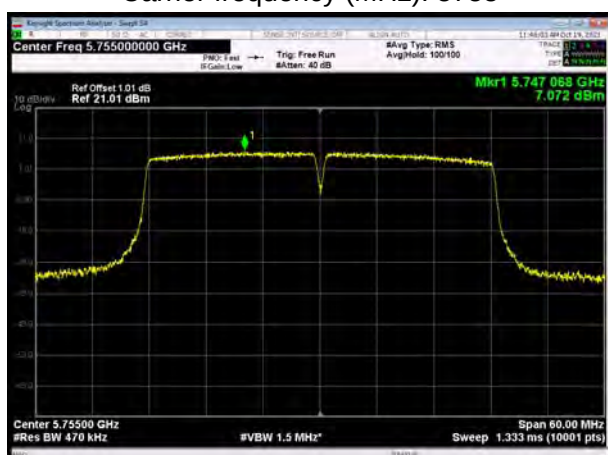
U-NII-3, 802.11a  
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT20  
Carrier frequency (MHz): 5825



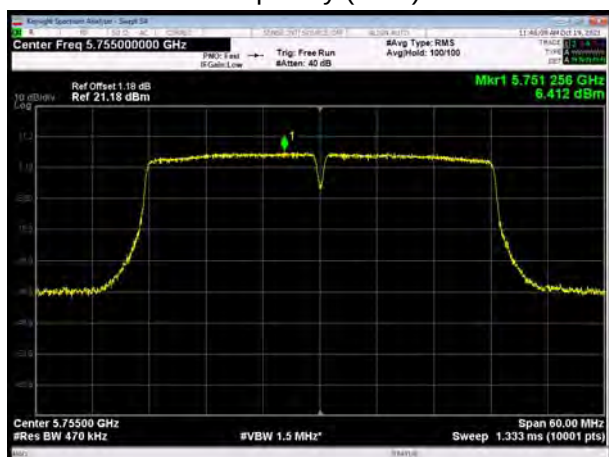
U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5755



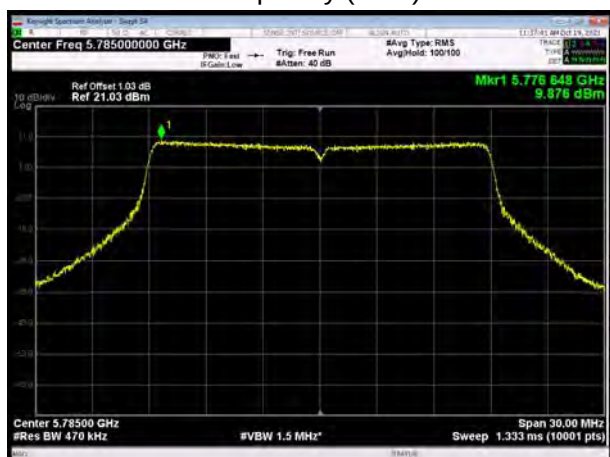
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5745



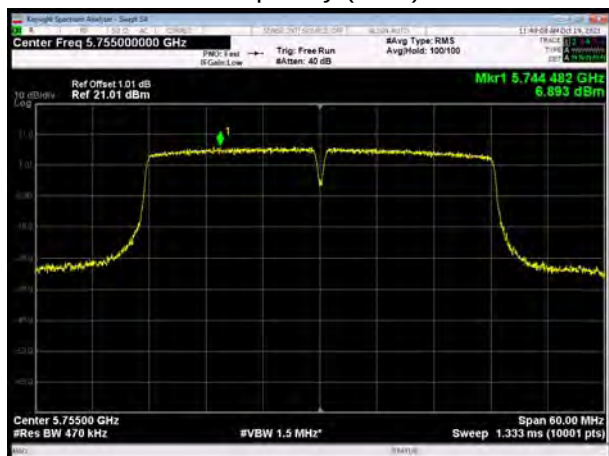
U-NII-3, 802.11n HT40  
Carrier frequency (MHz): 5795



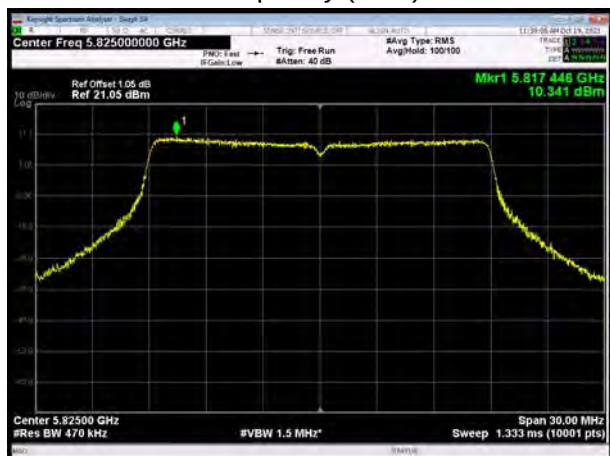
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5785



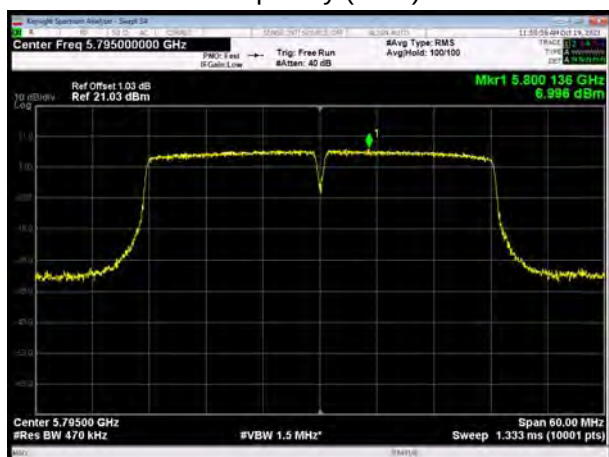
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5755



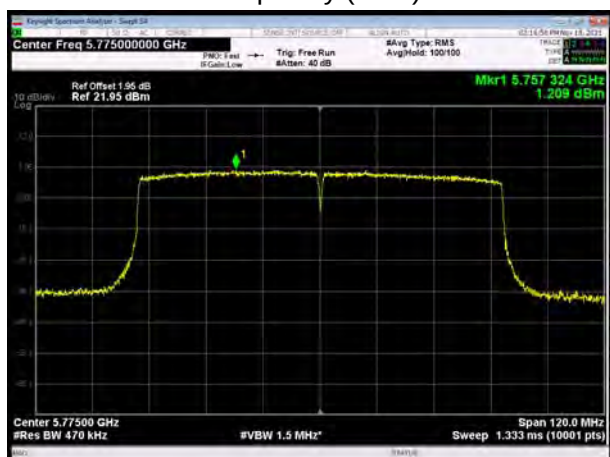
U-NII-3, 802.11ac VHT20  
Carrier frequency (MHz): 5825



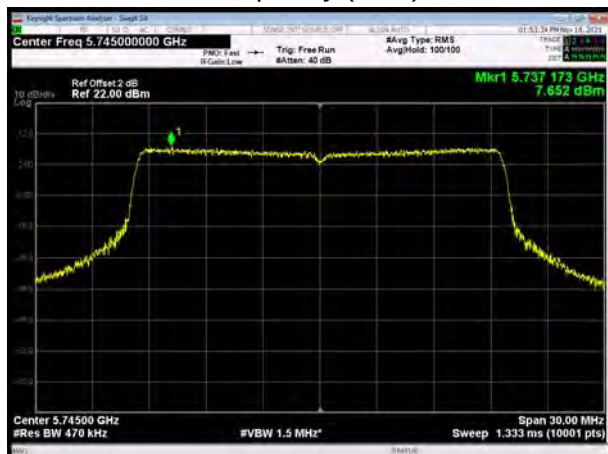
U-NII-3, 802.11ac VHT40  
Carrier frequency (MHz): 5795



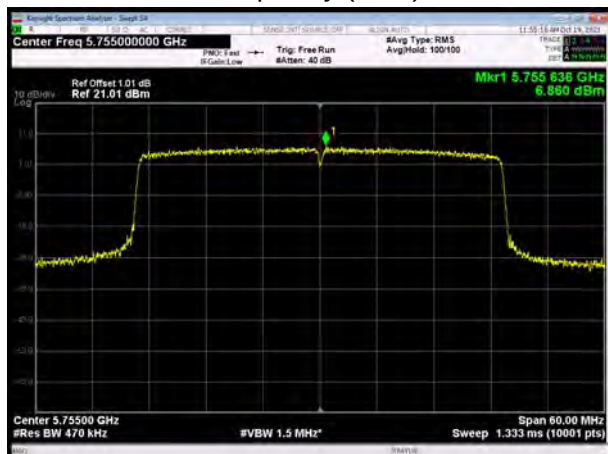
U-NII-3, 802.11ac VHT80  
Carrier frequency (MHz): 5775



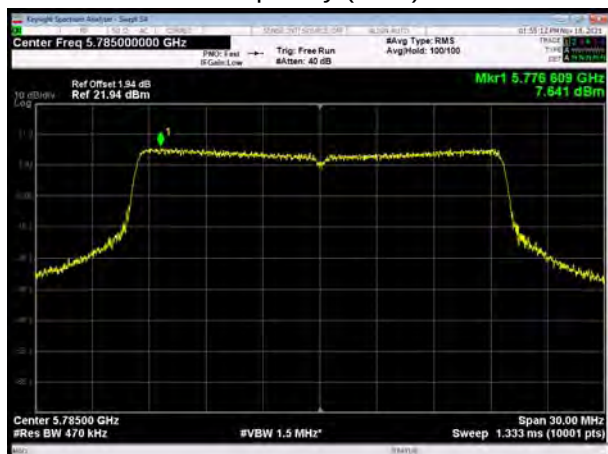
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5745



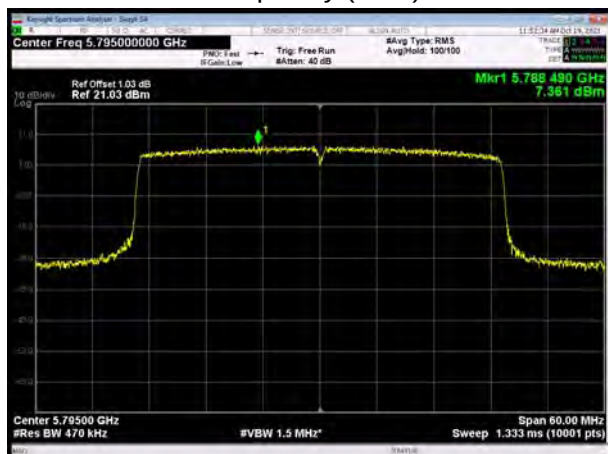
U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5755



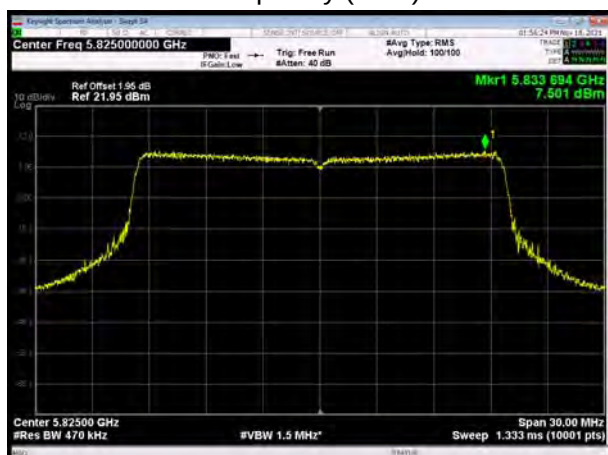
U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5785



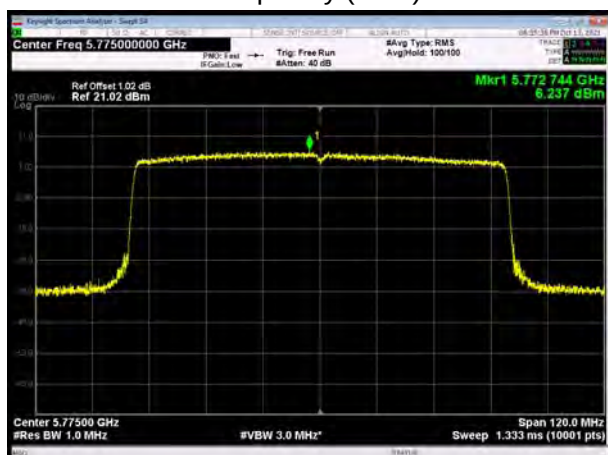
U-NII-3, 802.11ax HE40  
Carrier frequency (MHz): 5795



U-NII-3, 802.11ax HE20  
Carrier frequency (MHz): 5825

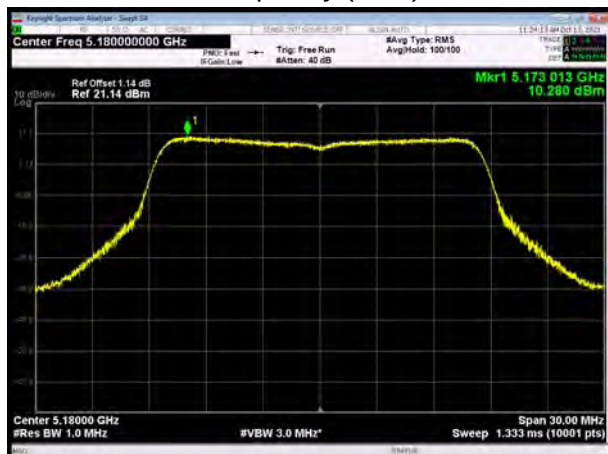


U-NII-3, 802.11ax HE80  
Carrier frequency (MHz): 5775

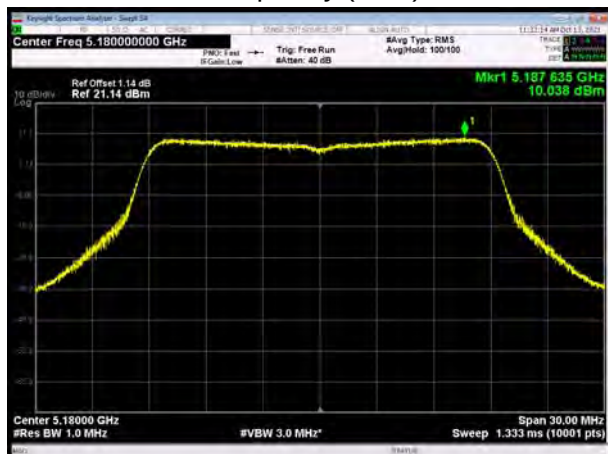


# Antenna 4

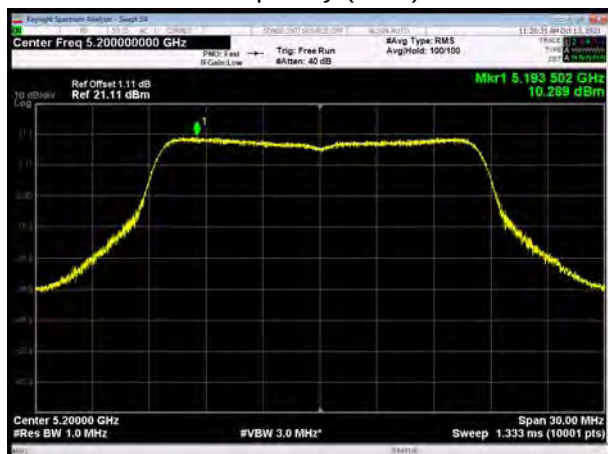
U-NII-1, 802.11a  
Carrier frequency (MHz): 5180



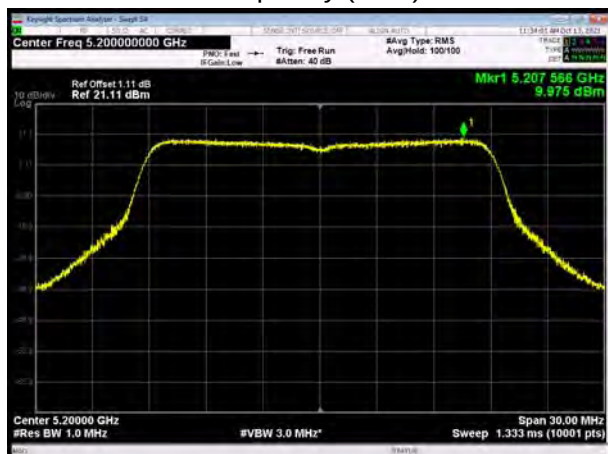
U-NII-1, 802.11n HT20  
Carrier frequency (MHz): 5180



U-NII-1, 802.11a  
Carrier frequency (MHz): 5200



U-NII-1, 802.11n HT20  
Carrier frequency (MHz): 5200



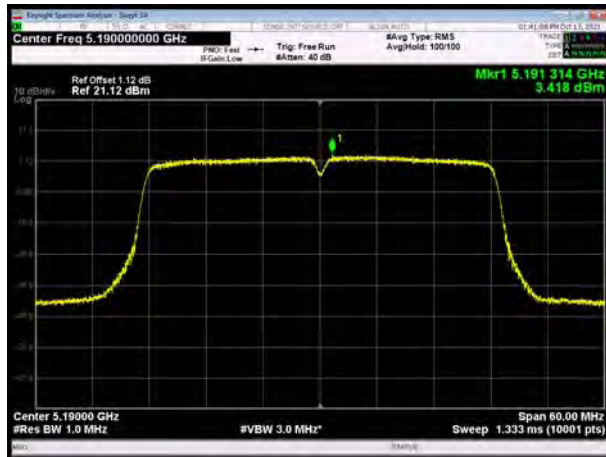
U-NII-1, 802.11a  
Carrier frequency (MHz):5240



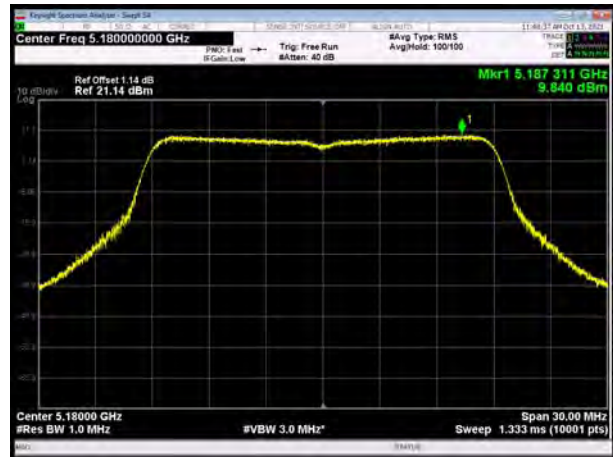
U-NII-1, 802.11n HT20  
Carrier frequency (MHz):5240



U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5190



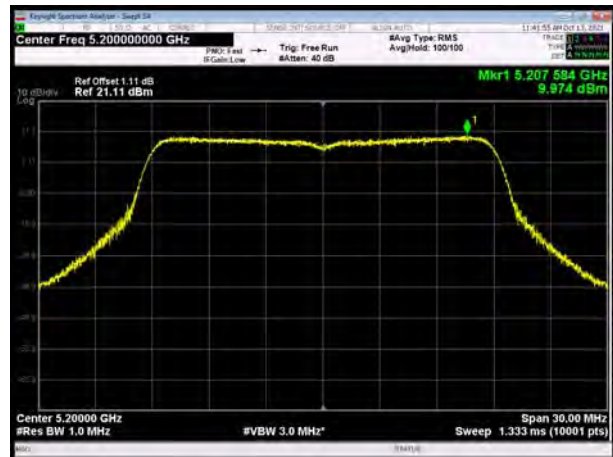
U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5180



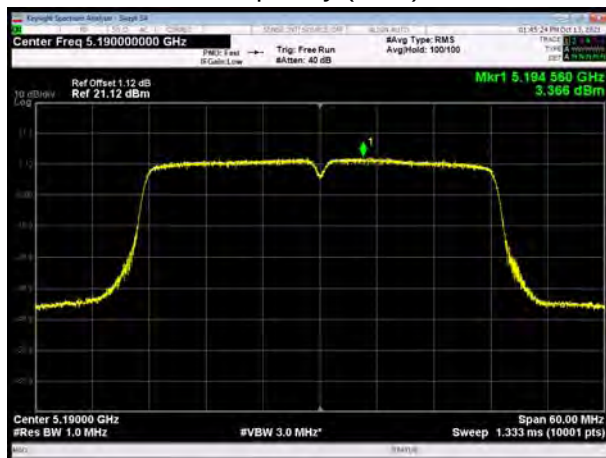
U-NII-1, 802.11n HT40  
Carrier frequency (MHz): 5230



U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5200



U-NII-1, 802.11ac VHT40  
Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20  
Carrier frequency (MHz): 5240

