

## RF MEASUREMENT REPORT

---

**FCC ID:** Q9DAPIN0634

**Applicant:** Hewlett Packard Enterprise Company

**Product:** ACCESS POINT

**Model No.:** APIN0634

**Trademark:**  , 

**FCC Classification:** 15E 6GHz Standard Power Access Point (6SD)

**FCC Rule Part(s):** Part 15 Subpart E (Section 15.407)

**Result:** Complies

**Received Date:** 2023-06-25

**Test Date:** 2023-07-01 ~ 2023-11-18

**Reviewed By:**

\_\_\_\_\_  
Jame Yuan

**Approved By:**

\_\_\_\_\_  
Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB789033. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

---

**Revision History**

| Report No.    | Version | Description     | Issue Date | Note    |
|---------------|---------|-----------------|------------|---------|
| 2306RSU040-U7 | V01     | Initial Report  | 2024-04-28 | Invalid |
| 2306RSU040-U7 | V02     | Update two typo | 2024-08-07 | Valid   |
|               |         |                 |            |         |

## CONTENTS

| Description                                                | Page      |
|------------------------------------------------------------|-----------|
| <b>1. General Information .....</b>                        | <b>6</b>  |
| 1.1. Applicant .....                                       | 6         |
| 1.2. Manufacturer .....                                    | 6         |
| 1.3. Testing Facility .....                                | 6         |
| 1.4. Product Information .....                             | 7         |
| 1.5. Radio Specification under Test .....                  | 7         |
| 1.6. Working Frequencies .....                             | 8         |
| 1.7. Antenna Details .....                                 | 10        |
| <b>2. Test Configuration .....</b>                         | <b>12</b> |
| 2.1. Test Mode .....                                       | 12        |
| 2.2. Test System Connection Diagram .....                  | 12        |
| 2.3. Test Software .....                                   | 12        |
| 2.4. Applied Standards .....                               | 13        |
| 2.5. Test Environment Condition .....                      | 13        |
| <b>3. Antenna Requirements .....</b>                       | <b>14</b> |
| <b>4. Measuring Instrument .....</b>                       | <b>15</b> |
| <b>5. Decision Rules and Measurement Uncertainty .....</b> | <b>17</b> |
| 5.1. Decision Rules .....                                  | 17        |
| 5.2. Measurement Uncertainty .....                         | 17        |
| <b>6. Test Result .....</b>                                | <b>18</b> |
| 6.1. Summary .....                                         | 18        |
| 6.2. Channel Bandwidth Measurement .....                   | 19        |
| 6.2.1. Test Limit .....                                    | 19        |
| 6.2.2. Test Procedure .....                                | 19        |
| 6.2.3. Test Setting .....                                  | 19        |
| 6.2.4. Test Setup .....                                    | 20        |
| 6.2.5. Test Result .....                                   | 20        |
| 6.3. Output Power Measurement .....                        | 21        |
| 6.3.1. Test Limit .....                                    | 21        |
| 6.3.2. Test Procedure .....                                | 21        |
| 6.3.3. Test Setting .....                                  | 21        |
| 6.3.4. Test Setup .....                                    | 21        |
| 6.3.5. Test Result .....                                   | 21        |
| 6.4. Power Spectral Density Measurement .....              | 22        |
| 6.4.1. Test Limit .....                                    | 22        |

|                   |                                                |           |
|-------------------|------------------------------------------------|-----------|
| 6.4.2.            | Test Procedure .....                           | 22        |
| 6.4.3.            | Test Setting .....                             | 22        |
| 6.4.4.            | Test Setup.....                                | 22        |
| 6.4.5.            | Test Result.....                               | 23        |
| 6.5.              | In-Band Emission Measurement .....             | 24        |
| 6.5.1.            | Test Limit .....                               | 24        |
| 6.5.2.            | Test Procedure .....                           | 24        |
| 6.5.3.            | Test Setting .....                             | 24        |
| 6.5.4.            | Test Setup.....                                | 25        |
| 6.5.5.            | Test Result.....                               | 25        |
| 6.6.              | Frequency Stability Measurement.....           | 26        |
| 6.6.1.            | Test Limit .....                               | 26        |
| 6.6.2.            | Test Procedure .....                           | 26        |
| 6.6.3.            | Test Setup.....                                | 26        |
| 6.6.4.            | Test Result.....                               | 27        |
| 6.7.              | Radiated Spurious Emission Measurement .....   | 28        |
| 6.7.1.            | Test Limit .....                               | 28        |
| 6.7.2.            | Test Procedure .....                           | 28        |
| 6.7.3.            | Test Setting .....                             | 29        |
| 6.7.4.            | Test Setup.....                                | 30        |
| 6.7.5.            | Test Result.....                               | 32        |
| 6.8.              | Radiated Restricted Band Edge Measurement..... | 33        |
| 6.8.1.            | Test Limit .....                               | 33        |
| 6.8.2.            | Test Procedure .....                           | 33        |
| 6.8.3.            | Test Setting .....                             | 33        |
| 6.8.4.            | Test Setup.....                                | 34        |
| 6.8.5.            | Test Result.....                               | 34        |
| 6.9.              | AC Conducted Emissions Measurement.....        | 35        |
| 6.9.1.            | Test Limit .....                               | 35        |
| 6.9.2.            | Test Setup.....                                | 35        |
| 6.9.3.            | Test Result.....                               | 35        |
| <b>Appendix A</b> | <b>- Test Result.....</b>                      | <b>36</b> |
| A.1               | Duty Cycle Test Result .....                   | 36        |
| A.2               | Channel Bandwidth Test Result .....            | 37        |
| A.3               | Output Power Test Result .....                 | 42        |
| A.4               | Power Spectral Density Test Result.....        | 43        |
| A.5               | In-Band Emission Measurement .....             | 52        |
| A.6               | Frequency Stability Test Result .....          | 68        |

|                   |                                                 |            |
|-------------------|-------------------------------------------------|------------|
| A.7               | Radiated Spurious Emission Test Result .....    | 69         |
| A.8               | Radiated Restricted Band Edge Test Result ..... | 143        |
| A.9               | AC Conducted Emissions Test Result .....        | 191        |
| <b>Appendix B</b> | <b>- Test Setup Photograph .....</b>            | <b>193</b> |
| <b>Appendix C</b> | <b>- EUT Photograph .....</b>                   | <b>194</b> |

## 1. General Information

### 1.1. Applicant

Hewlett Packard Enterprise Company  
6280 America Center Drive, San Jose CA 95002, United States

### 1.2. Manufacturer

Hewlett Packard Enterprise Company  
6280 America Center Drive, San Jose CA 95002, United States

### 1.3. Testing Facility

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | <b>Test Site – MRT Suzhou Laboratory</b><br><b>Laboratory Location (Suzhou - Wuzhong)</b><br>D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China<br><b>Laboratory Location (Suzhou - SIP)</b><br>4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China<br><b>Laboratory Accreditations</b><br>A2LA: 3628.01 CNAS: L10551<br>FCC: CN1166 ISED: CN0001<br>VCCI: <input type="checkbox"/> R-20025 <input type="checkbox"/> G-20034 <input type="checkbox"/> C-20020 <input type="checkbox"/> T-20020<br><input type="checkbox"/> R-20141 <input type="checkbox"/> G-20134 <input type="checkbox"/> C-20103 <input type="checkbox"/> T-20104 |
| <input type="checkbox"/>            | <b>Test Site – MRT Shenzhen Laboratory</b><br><b>Laboratory Location (Shenzhen)</b><br>1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China<br><b>Laboratory Accreditations</b><br>A2LA: 3628.02 CNAS: L10551<br>FCC: CN1284 ISED: CN0105                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <input type="checkbox"/>            | <b>Test Site – MRT Taiwan Laboratory</b><br><b>Laboratory Location (Taiwan)</b><br>No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)<br><b>Laboratory Accreditations</b><br>TAF: 3261<br>FCC: 291082, TW3261 ISED: TW3261                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

#### 1.4. Product Information

|                                                                                                                                                     |                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Product Name                                                                                                                                        | ACCESS POINT                        |
| Model No.                                                                                                                                           | APIN0634                            |
| Serial No.                                                                                                                                          | CNQJLZJ016                          |
| Software Version                                                                                                                                    | 20210105 spf.11.3.css               |
| Wi-Fi Specification                                                                                                                                 | 802.11a/b/g/n/ac/ax                 |
| Bluetooth Specification                                                                                                                             | v5.0 single mode, BLE only          |
| Zigbee Specification                                                                                                                                | 802.15.4                            |
| GNSS Specification                                                                                                                                  | GPS, Galileo                        |
| Working Voltage                                                                                                                                     | AC/DC Adapter or PoE Injector input |
| Operating Temperature                                                                                                                               | 0 ~ 50 °C                           |
| Operating Environment                                                                                                                               | Indoor Use                          |
| Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. |                                     |

#### 1.5. Radio Specification under Test

|                             |                                                                                                                                                                                                            |                                                 |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Frequency Range             | For 802.11ax-HE20: 5955 ~ 6415MHz, 6535 ~ 6855MHz<br>For 802.11ax-HE40: 5965 ~ 6405MHz, 6565 ~ 6845MHz<br>For 802.11ax-HE80: 5985 ~ 6385MHz, 6625 ~ 6785MHz<br>For 802.11ax-HE160: 6025 ~ 6345MHz, 6665MHz |                                                 |
| Type of Modulation          | 802.11ax: OFDMA                                                                                                                                                                                            |                                                 |
| Data Rate                   | 802.11ax: up to 2402Mbps                                                                                                                                                                                   |                                                 |
| Channel Puncturing Function | <input type="checkbox"/> Supported                                                                                                                                                                         | <input checked="" type="checkbox"/> Unsupported |
| Support RU                  | <input checked="" type="checkbox"/> Full RU                                                                                                                                                                | <input type="checkbox"/> Partial RU             |

## 1.6. Working Frequencies

### 802.11ax-HE20

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 1       | 5955 MHz  | 5       | 5975 MHz  | 9       | 5995 MHz  |
| 13      | 6015 MHz  | 17      | 6035 MHz  | 21      | 6055 MHz  |
| 25      | 6075 MHz  | 29      | 6095 MHz  | 33      | 6115 MHz  |
| 37      | 6135 MHz  | 41      | 6155 MHz  | 45      | 6175 MHz  |
| 49      | 6195 MHz  | 53      | 6215 MHz  | 57      | 6235 MHz  |
| 61      | 6255 MHz  | 65      | 6275 MHz  | 69      | 6295 MHz  |
| 73      | 6315 MHz  | 77      | 6335 MHz  | 81      | 6355 MHz  |
| 85      | 6375 MHz  | 89      | 6395 MHz  | 93      | 6415 MHz  |
| 117     | 6535 MHz  | 121     | 6555 MHz  | 125     | 6575 MHz  |
| 129     | 6595 MHz  | 133     | 6615 MHz  | 137     | 6635 MHz  |
| 141     | 6655 MHz  | 145     | 6675 MHz  | 149     | 6695 MHz  |
| 153     | 6715 MHz  | 157     | 6735 MHz  | 161     | 6755 MHz  |
| 165     | 6775 MHz  | 169     | 6795 MHz  | 173     | 6815 MHz  |
| 177     | 6835 MHz  | 181     | 6855 MHz  | --      | --        |

### 802.11ax-HE40

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 3       | 5965 MHz  | 11      | 6005 MHz  | 19      | 6045 MHz  |
| 27      | 6085 MHz  | 35      | 6125 MHz  | 43      | 6165 MHz  |
| 51      | 6205 MHz  | 59      | 6245 MHz  | 67      | 6285 MHz  |
| 75      | 6325 MHz  | 83      | 6365 MHz  | 91      | 6405 MHz  |
| 123     | 6565 MHz  | 131     | 6605 MHz  | 139     | 6645 MHz  |
| 147     | 6685 MHz  | 155     | 6725 MHz  | 163     | 6765 MHz  |
| 171     | 6805 MHz  | 179     | 6845 MHz  | --      | --        |

### 802.11ax-HE80

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 7       | 5985 MHz  | 23      | 6065 MHz  | 39      | 6145 MHz  |
| 55      | 6225 MHz  | 71      | 6305 MHz  | 87      | 6385 MHz  |
| 135     | 6625 MHz  | 151     | 6705 MHz  | 167     | 6785 MHz  |

## 802.11ax-HE160

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 15      | 6025 MHz  | 47      | 6185 MHz  | 79      | 6345 MHz  |
| 143     | 6665 MHz  | --      | --        | --      | --        |

### 1.7. Antenna Details

| Polarization                           | Antenna Name             | Frequency<br>Band<br>(GHz) | Max Peak<br>Gain<br>(dBi) | CDD Directional Gain<br>(dBi) |         | BF<br>Directional<br>Gain<br>(dBi) |
|----------------------------------------|--------------------------|----------------------------|---------------------------|-------------------------------|---------|------------------------------------|
|                                        |                          |                            |                           | For Power                     | For PSD |                                    |
| Wi-Fi External Antenna List (2*2 MIMO) |                          |                            |                           |                               |         |                                    |
| Omni                                   | AP-ANT-311               | 2.4 ~ 2.5                  | 3.0                       | 3.0                           | 6.01    | 6.01                               |
|                                        |                          | 5.15 ~ 5.9                 | 6.0                       | 6.0                           | 9.01    | 9.01                               |
|                                        |                          | 5.9 ~ 7.2                  | 6.0                       | 6.0                           | 9.01    | 9.01                               |
| Omni                                   | AP-ANT-312               | 2.4 ~ 2.5                  | 3.3                       | 3.3                           | 6.31    | 6.31                               |
|                                        |                          | 5.15 ~ 5.9                 | 3.3                       | 3.3                           | 6.31    | 6.31                               |
|                                        |                          | 5.9 ~ 7.2                  | 4.1                       | 4.1                           | 7.11    | 7.11                               |
| Omni                                   | AP-ANT-313               | 2.4 ~ 2.5                  | 3.0                       | 3.0                           | 6.01    | 6.01                               |
|                                        |                          | 5.15 ~ 5.9                 | 6.0                       | 6.0                           | 9.01    | 9.01                               |
|                                        |                          | 5.9 ~ 7.2                  | 6.0                       | 6.0                           | 9.01    | 9.01                               |
| Omni                                   | AP-ANT-320<br>AP-ANT-340 | 2.4 ~ 2.5                  | 4.0                       | 4.0                           | 7.01    | 7.01                               |
|                                        |                          | 5.15 ~ 5.9                 | 5.0                       | 5.0                           | 8.01    | 8.01                               |
|                                        |                          | 5.9 ~ 7.2                  | 5.0                       | 5.0                           | 8.01    | 8.01                               |
| Directional<br>(Note 4)                | AP-ANT-325<br>AP-ANT-345 | 2.4 ~ 2.5                  | 6.1                       | 6.1                           | 6.1     | 6.1                                |
|                                        |                          | 5.15 ~ 5.9                 | 6.1                       | 6.1                           | 6.1     | 6.1                                |
|                                        |                          | 5.9 ~ 7.2                  | 5.4                       | 5.4                           | 5.4     | 5.4                                |
| Directional<br>(Note 4)                | AP-ANT-328<br>AP-ANT-348 | 2.4 ~ 2.5                  | 7.5                       | 7.5                           | 7.5     | 7.5                                |
|                                        |                          | 5.15 ~ 5.9                 | 8.0                       | 8.0                           | 8.0     | 8.0                                |
|                                        |                          | 5.9 ~ 7.2                  | 8.0                       | 8.0                           | 8.0     | 8.0                                |

Note:

1, The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

For CDD transmissions, directional gain is calculated as follows,  $N_{ANT} = 2$ ,  $N_{SS} = 1$ .

If all antennas have the same gain,  $G_{ANT}$ , Directional gain =  $G_{ANT} + \text{Array Gain}$ , where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices,

$$\text{Array Gain} = 10 \log(N_{ANT}/N_{SS}) \text{ dB} = 3.01;$$

- For power measurements on IEEE 802.11 devices,

$$\text{Array Gain} = 0 \text{ dB for } N_{ANT} \leq 4;$$

2, The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac/ax, not include 802.11a/b/g.

3, The antenna specification is provided by the applicant.

4, These antennas are cross polarized design and the detail refers to antenna specification.

5, AP-ANT-325 is a tri-band and 2-element antenna and AP-ANT-345 is a tri-band and 4-element antenna.

AP-ANT-328 is a tri-band and 2-element antenna and AP-ANT-348 is a tri-band and 4-element antenna.

6. Low gain antenna (AP-ANT-312) was selected to perform all RF testing that can get maximum power setting, high gain different type antenna (AP-ANT-311 & AP-ANT-348) was selected to perform radiated spurious emission and band edge testing. High gain antenna power setting will be reduced according to difference value of antenna gain declared by applicant.

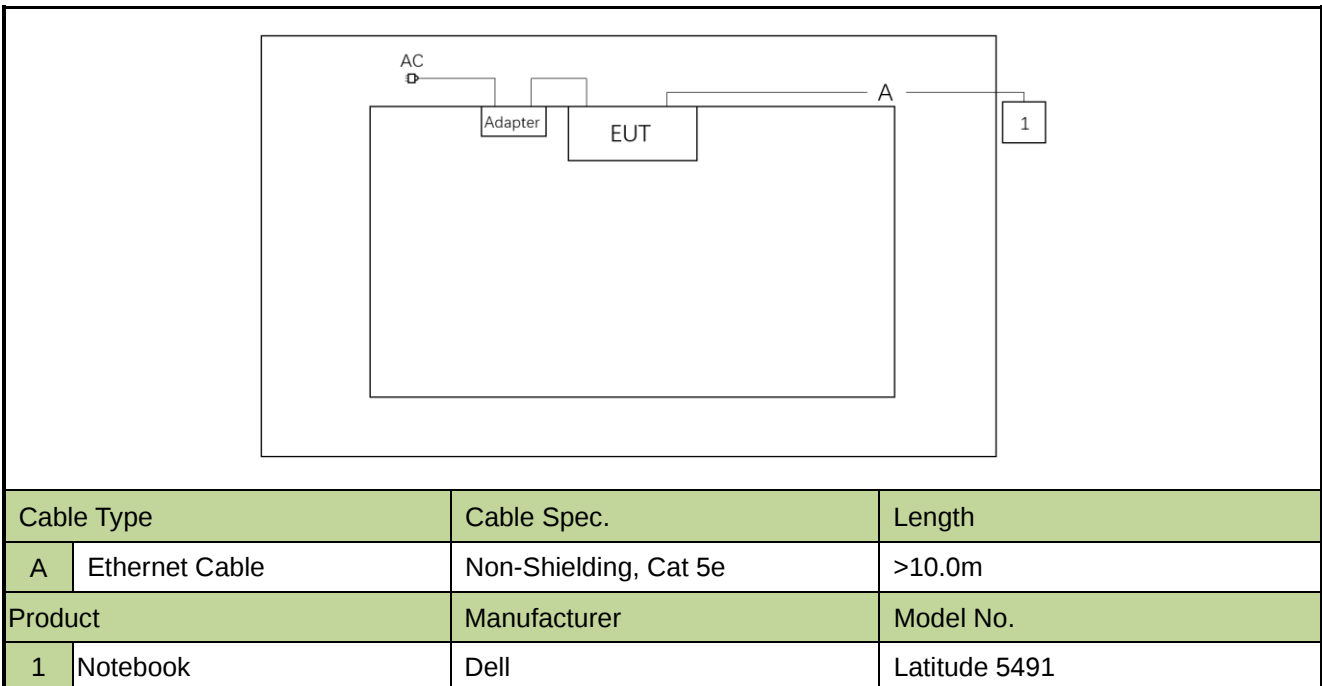
## 2. Test Configuration

### 2.1. Test Mode

|                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode 1: Transmit by 802.11ax-HE20_Nss=1 (MCS0)                                                                                                                                              |
| Mode 2: Transmit by 802.11ax-HE40_Nss=1 (MCS0)                                                                                                                                              |
| Mode 3: Transmit by 802.11ax-HE80_Nss=1 (MCS0)                                                                                                                                              |
| Mode 4: Transmit by 802.11ax-HE160_Nss=1 (MCS0)                                                                                                                                             |
| Note:                                                                                                                                                                                       |
| 1. All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worst data rate.                                                           |
| 2. For beamforming operation, manufacturer automatically backs power down based on a $10\log(N_{ANT})$ factor based on CDD power. Therefore, only the CDD mode was evaluated in this report |

### 2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.



### 2.3. Test Software

The test utility software used during testing was “QSPR”, and the version was 5.0-00196.

#### 2.4. Applied Standards

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

- ANSI C63.10-2013
- FCC KDB 789033 D02v02r01
- FCC KDB 987594 D02v02r01
- FCC KDB 987594 D04v02
- FCC KDB 662911 D01v02r01
- FCC KDB 414788 D01v01r01
- FCC KDB 412172 D01v01r01

#### 2.5. Test Environment Condition

|                     |            |
|---------------------|------------|
| Ambient Temperature | 15 ~ 35°C  |
| Relative Humidity   | 20 ~ 75%RH |

### **3. Antenna Requirements**

#### **Excerpt from §15.203 of the FCC Rules/Regulations:**

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

#### **Conclusion:**

The product is defined as the professional installation of equipment by the manufacturer, there is no necessary to comply with the requirement of §15.203.

#### 4. Measuring Instrument

| Instrument         | Manufacturer | Model No.   | Asset No.   | Cali. Interval | Cali. Due Date | Test Site |
|--------------------|--------------|-------------|-------------|----------------|----------------|-----------|
| TRILOG Antenna     | Schwarzbeck  | VULB 9168   | MRTSUE06172 | 1 year         | 2024-06-09     | WZ-AC1    |
| Thermohygrometer   | testo        | 608-H1      | MRTSUE11039 | 1 year         | 2023-11-01     | WZ-AC1    |
|                    |              |             |             | 1 year         | 2024-10-25     | WZ-AC1    |
| Signal Analyzer    | Keysight     | N9010B      | MRTSUE06607 | 1 year         | 2023-12-28     | WZ-AC1    |
|                    |              |             |             | 1 year         | 2024-10-23     | WZ-AC1    |
| Preamplifier       | Agilent      | 83017A      | MRTSUE06076 | 1 year         | 2024-05-07     | WZ-AC1    |
|                    |              |             |             | 1 year         | 2024-11-09     | WZ-AC1    |
| Horn Antenna       | Schwarzbeck  | BBHA 9120D  | MRTSUE06023 | 1 year         | 2023-08-22     | WZ-AC1    |
|                    |              |             |             | 1 year         | 2024-08-09     | WZ-AC1    |
| EMI Test Receiver  | R&S          | ESR7        | MRTSUE06001 | 1 year         | 2023-12-28     | WZ-AC1    |
|                    |              |             |             | 1 year         | 2024-12-17     | WZ-AC1    |
| Anechoic Chamber   | TDK          | WZ-AC1      | MRTSUE06212 | 1 year         | 2024-04-20     | WZ-AC1    |
|                    |              |             |             | 1 year         | 2025-04-19     | WZ-AC1    |
| Horn Antenna       | Schwarzbeck  | BBHA 9170   | MRTSUE06597 | 1 year         | 2023-11-05     | WZ-AC1    |
|                    |              |             |             | 1 year         | 2024-11-04     | WZ-AC2    |
| Preamplifier       | EMCI         | EMC184045SE | MRTSUE06640 | 1 year         | 2024-01-12     | WZ-AC1    |
| TRILOG Antenna     | Schwarzbeck  | VULB 9162   | MRTSUE06022 | 1 year         | 2024-05-15     | WZ-AC2    |
| Thermohygrometer   | testo        | 608-H1      | MRTSUE11263 | 1 year         | 2024-11-07     | WZ-AC2    |
| Preamplifier       | Schwarzbeck  | BBV 9718    | MRTSUE06176 | 1 year         | 2024-05-07     | WZ-AC2    |
| Horn Antenna       | Schwarzbeck  | BBHA 9120D  | MRTSUE06171 | 1 year         | 2023-10-13     | WZ-AC2    |
|                    |              |             |             | 1 year         | 2024-10-11     | WZ-AC2    |
| EMI Test Receiver  | Agilent      | N9038A      | MRTSUE06125 | 1 year         | 2024-05-23     | WZ-AC2    |
| Anechoic Chamber   | RIKEN        | WZ-AC2      | MRTSUE06213 | 1 year         | 2024-04-20     | WZ-AC2    |
|                    |              |             |             | 1 year         | 2025-04-18     | WZ-AC2    |
| Two-Line V-Network | R&S          | ENV216      | MRTSUE06002 | 1 year         | 2024-05-23     | WZ-SR2    |
| Thermohygrometer   | testo        | 608-H1      | MRTSUE06404 | 1 year         | 2024-05-31     | WZ-SR2    |
| Shielding Room     | MIX-BEP      | WZ-SR2      | MRTSUE06215 | 5 years        | 2026-12-20     | WZ-SR2    |
| EMI Test Receiver  | R&S          | ESR3        | MRTSUE06909 | 1 year         | 2023-10-27     | WZ-SR2    |
|                    |              |             |             | 1 year         | 2024-09-27     | WZ-SR2    |
| USB Power Sensor   | Agilent      | U2021XA     | MRTSUE06030 | 1 year         | 2023-10-08     | WZ-SR5    |
|                    |              |             |             | 1 year         | 2024-09-27     | WZ-SR5    |
| Thermohygrometer   | testo        | 608-H1      | MRTSUE06402 | 1 year         | 2024-05-31     | WZ-SR5    |
| Signal Analyzer    | Keysight     | N9010B      | MRTSUE06457 | 1 year         | 2024-05-23     | WZ-SR5    |
| Shielding Room     | HUAMING      | WZ-SR5      | MRTSUE06442 | N/A            | N/A            | WZ-SR5    |
| Thermohygrometer   | testo        | 608-H1      | MRTSUE11268 | 1 year         | 2024-12-14     | WZ-TR3    |

| Instrument          | Manufacturer | Model No. | Asset No.   | Cali. Interval | Cali. Due Date | Test Site |
|---------------------|--------------|-----------|-------------|----------------|----------------|-----------|
| Temperature Chamber | BAOYT        | BYH-150CL | MRTSUE06051 | 1 year         | 2023-10-08     | WZ-TR3    |
|                     |              |           |             | 1 year         | 2024-09-27     | WZ-TR3    |
| Signal Analyzer     | Keysight     | N9010B    | MRTSUE07027 | 1 year         | 2023-11-25     | WZ-TR3    |
|                     |              |           |             | 1 year         | 2024-10-23     | WZ-TR3    |

| Software             | Version | Function               |
|----------------------|---------|------------------------|
| EMI Software         | V3.0.0  | EMI Test Software      |
| BenchVue Power Meter | 2018.1  | Power                  |
| Controller_MF 7802   | 2.03C   | RE Antenna & Turntable |
| Controller_MF 7802   | 1.02    | RE Antenna & Turntable |

## 5. Decision Rules and Measurement Uncertainty

### 5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.  
(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

### 5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

|                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AC Conducted Emission Measurement</b>                                                                                                                                                                                                                                                                                   |
| <p>The maximum measurement uncertainty is evaluated as:</p> <p>9kHz~150kHz: 3.58dB</p> <p>150kHz~30MHz: 3.20dB</p>                                                                                                                                                                                                         |
| <b>Radiated Emission Measurement</b>                                                                                                                                                                                                                                                                                       |
| <p>The maximum measurement uncertainty is evaluated as:</p> <p>Coaxial: 9kHz~30MHz: 2.61dB</p> <p>Coplanar: 9kHz~30MHz: 2.62dB</p> <p>Horizontal: 30MHz~200MHz: 3.79dB</p> <p>200MHz~1GHz: 3.91dB</p> <p>1GHz~40GHz: 4.99dB</p> <p>Vertical: 30MHz~200MHz: 4.06dB</p> <p>200MHz~1GHz: 5.21dB</p> <p>1GHz~40GHz: 4.90dB</p> |
| <b>Spurious Emissions, Conducted</b>                                                                                                                                                                                                                                                                                       |
| <p>Measuring Uncertainty for a Level of Confidence of 95% (<math>U=2U_c(y)</math>):</p> <p>2.2dB</p>                                                                                                                                                                                                                       |
| <b>Output Power</b>                                                                                                                                                                                                                                                                                                        |
| <p>Measuring Uncertainty for a Level of Confidence of 95% (<math>U=2U_c(y)</math>):</p> <p>1.4dB</p>                                                                                                                                                                                                                       |
| <b>Power Spectrum Density</b>                                                                                                                                                                                                                                                                                              |
| <p>Measuring Uncertainty for a Level of Confidence of 95% (<math>U=2U_c(y)</math>):</p> <p>2.2dB</p>                                                                                                                                                                                                                       |
| <b>Occupied Bandwidth</b>                                                                                                                                                                                                                                                                                                  |
| <p>Measuring Uncertainty for a Level of Confidence of 95% (<math>U=2U_c(y)</math>):</p> <p>2.7%</p>                                                                                                                                                                                                                        |

## 6. Test Result

### 6.1. Summary

| FCC Section(s)          | Test Description                                                | Test Condition | Verdict               |
|-------------------------|-----------------------------------------------------------------|----------------|-----------------------|
| 15.407(a)(11)           | Channel Bandwidth                                               | Conducted      | Pass                  |
| 15.407(a)(4)            | Maximum Equivalent Isotropically Radiated Power (EIRP)          |                | Pass                  |
| 15.407(a)(4)            | Maximum Power Spectral Density (EIRP)                           |                | Pass                  |
| 15.407(b)(7)            | In-Band Emission                                                |                | Pass                  |
| 15.407(k)               | Automated Frequency Coordination                                |                | Pass <sup>Note3</sup> |
| 15.407(b)(6)            | Unwanted Emissions                                              |                | Pass                  |
| 15.407(b)(8), (9), (10) | General Field Strength (Restricted Bands and Radiated Emission) | Radiated       | Pass                  |
| 15.207                  | AC Conducted Emissions<br>150kHz - 30MHz                        | Line Conducted | Pass                  |

#### Notes:

- The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer.  
The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
- Automated Frequency Coordination refers to report "2306RSU040-U8".

## **6.2. Channel Bandwidth Measurement**

### **6.2.1. Test Limit**

The maximum transmitter channel bandwidth for U–NII devices in the 5.925–7.125 GHz band is 320 megahertz.

### **6.2.2. Test Procedure**

KDB 789033 D02v02r01- Section II)C)1) (26dB Bandwidth)

KDB 789033 D02v02r01- Section II)D) (99% Bandwidth)

### **6.2.3. Test Setting**

#### **26dB Bandwidth**

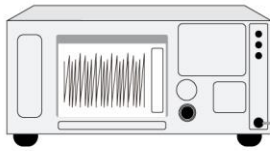
1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth
2. RBW = approximately 1% of the emission bandwidth.
3. VBW > RBW
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.  
Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

#### **99% Bandwidth**

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 1% to 5% of the OBW
3.  $VBW \geq 3 \times RBW$
4. Span = 1.5 times to 5 times the OBW
5. Detector = peak
6. Trace mode = max hold
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument.

#### 6.2.4. Test Setup

Spectrum Analyzer



DC Block  
&  
Attenuator



EUT



#### 6.2.5. Test Result

Refer to Appendix A.2.

### 6.3. Output Power Measurement

#### 6.3.1. Test Limit

For a standard access point operating in the 5.925-6.425 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm.

#### 6.3.2. Test Procedure

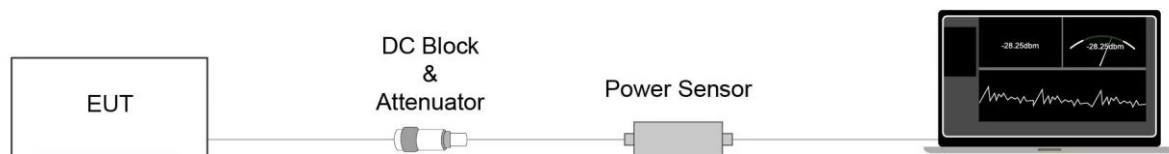
KDB 789033D02v02r01- Section II)E)3)b) Method PM-G

#### 6.3.3. Test Setting

##### Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

#### 6.3.4. Test Setup



#### 6.3.5. Test Result

Refer to Appendix A.3.

## 6.4. Power Spectral Density Measurement

### 6.4.1. Test Limit

For a standard access point operating in the 5.925-6.425 GHz band, the maximum power spectral density must not exceed 23 dBm e.i.r.p. in any 1-megahertz band.

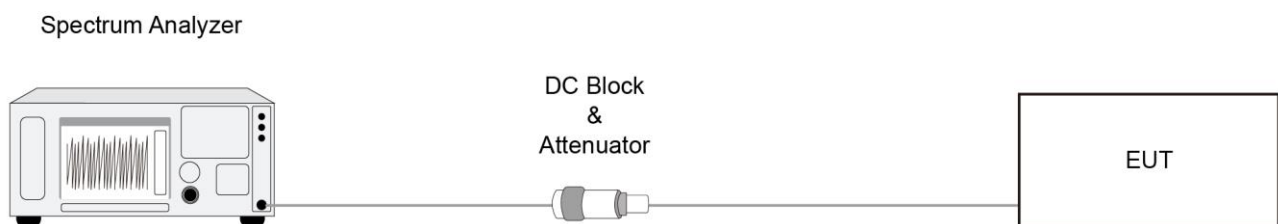
### 6.4.2. Test Procedure

KDB 789033 D02v02r01-Section II)F)

### 6.4.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz
4. VBW = 3MHz
5. Number of sweep points  $\geq 2 \times (\text{span} / \text{RBW})$
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
10. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
11. Add  $10 \cdot \log(1/x)$ , where  $x$  is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add  $10 \cdot \log(1/0.25) = 6$  dB if the duty cycle is 25 percent.

### 6.4.4. Test Setup



#### **6.4.5. Test Result**

Refer to Appendix A.4.

## **6.5. In-Band Emission Measurement**

### **6.5.1. Test Limit**

Suppressed by 20 dB at 1 MHz outside of the channel edge.

(The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)

Suppressed by 28 dB at one channel bandwidth from the channel center.

Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.

### **6.5.2. Test Procedure**

KDB 987594 D02v01r01- Section II)J)

### **6.5.3. Test Setting**

#### Emissions Mask Reference Level Measurement

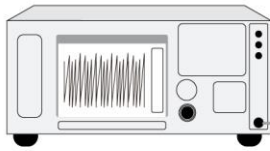
1. Set the span to encompass the entire 26 dB EBW of the signal.
2. Set RBW = same RBW used for 26 dB EBW measurement.
3. Set VBW  $\geq 3 \times$  RBW.
4. Number of points in sweep  $\geq [2 \times \text{span} / \text{RBW}]$ .
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging (rms) mode.
8. Use the peak search function on the instrument to find the peak of the spectrum.

#### In-Band Emission

1. Using the measuring equipment limit line function, develop the emissions mask based on rule.
2. Adjust the span to encompass the entire mask as necessary.
3. Clear trace.
4. Trace average at least 100 traces in power averaging (rms) mode.
5. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

#### 6.5.4. Test Setup

Spectrum Analyzer



DC Block  
&  
Attenuator



EUT



#### 6.5.5. Test Result

Refer to Appendix A.5.

## 6.6. Frequency Stability Measurement

### 6.6.1. Test Limit

Manufactures 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 user's manual.

### 6.6.2. Test Procedure

#### Frequency Stability Under Temperature Variations:

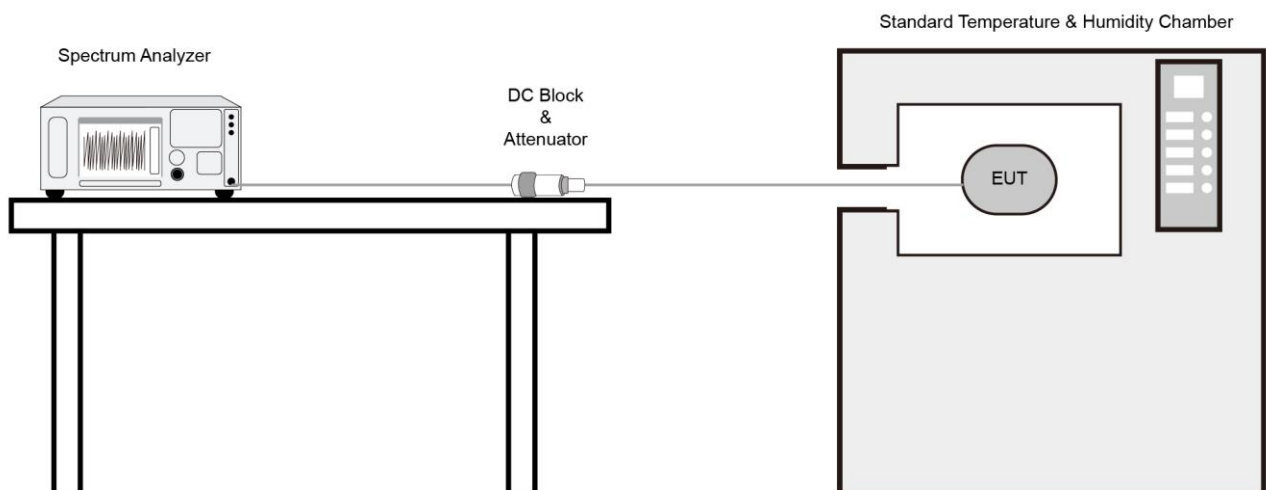
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

#### Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

### 6.6.3. Test Setup



#### **6.6.4. Test Result**

Refer to Appendix A.6.

## 6.7. Radiated Spurious Emission Measurement

### 6.7.1. Test Limit

For 15.407(b)(5) requirement

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Refer to 987594 D02 U-NII 6GHz EMC Measurement v01 clause G

Use guidance in KDB 789033 for measurements below 1000 MHz and above 1000 MHz. Unwanted emissions outside of restricted bands are measured with a RMS detector. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

| FCC Part 15 Subpart C Paragraph 15.209 |                                |                               |
|----------------------------------------|--------------------------------|-------------------------------|
| Frequency<br>[MHz]                     | Field Strength<br>[ $\mu$ V/m] | Measured Distance<br>[Meters] |
| 0.009 - 0.490                          | 2400/F (kHz)                   | 300                           |
| 0.490 - 1.705                          | 24000/F (kHz)                  | 30                            |
| 1.705 - 30                             | 30                             | 30                            |
| 30 - 88                                | 100                            | 3                             |
| 88 - 216                               | 150                            | 3                             |
| 216 - 960                              | 200                            | 3                             |
| Above 960                              | 500                            | 3                             |

### 6.7.2. Test Procedure

KDB 789033 D02v02r01-Section II)G)

### 6.7.3. Test Setting

**Table 1 - RBW as a function of frequency**

| Frequency     | RBW           |
|---------------|---------------|
| 9 ~ 150 kHz   | 200 ~ 300 Hz  |
| 0.15 ~ 30 MHz | 9 ~ 10 kHz    |
| 30 ~ 1000 MHz | 100 ~ 120 kHz |
| > 1000MHz     | 1MHz          |

#### **Quasi-Peak Measurements below 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

#### **Peak Measurements above 1GHz**

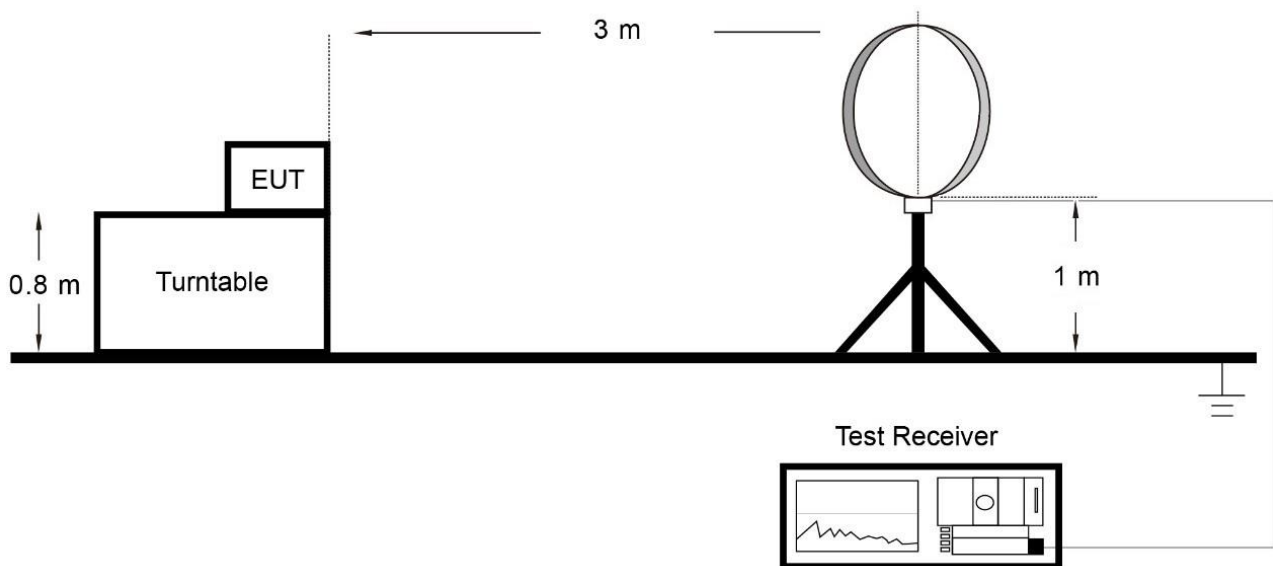
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### **Average Measurements above 1GHz (Method VB)**

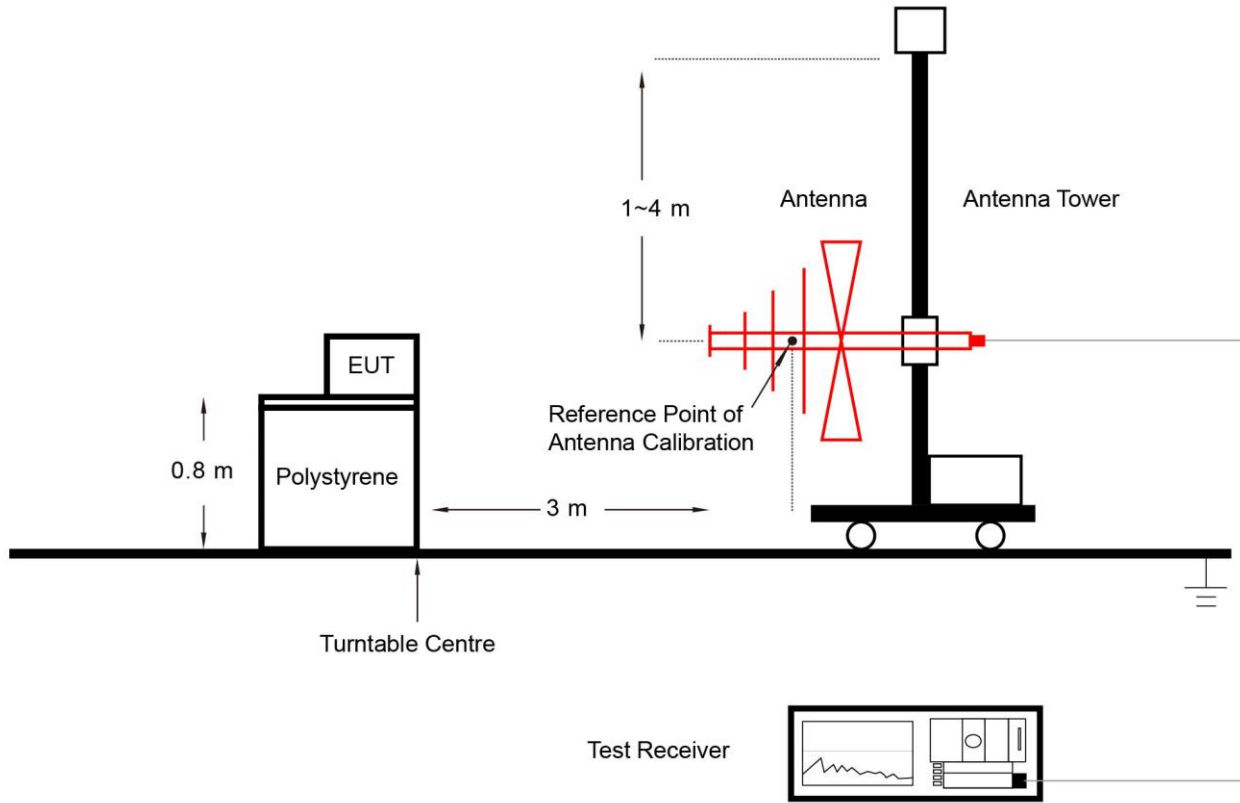
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10 Hz.  
If the EUT duty cycle is  $< 98\%$ , set VBW  $\geq 1/T$ . T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

### **6.7.4. Test Setup**

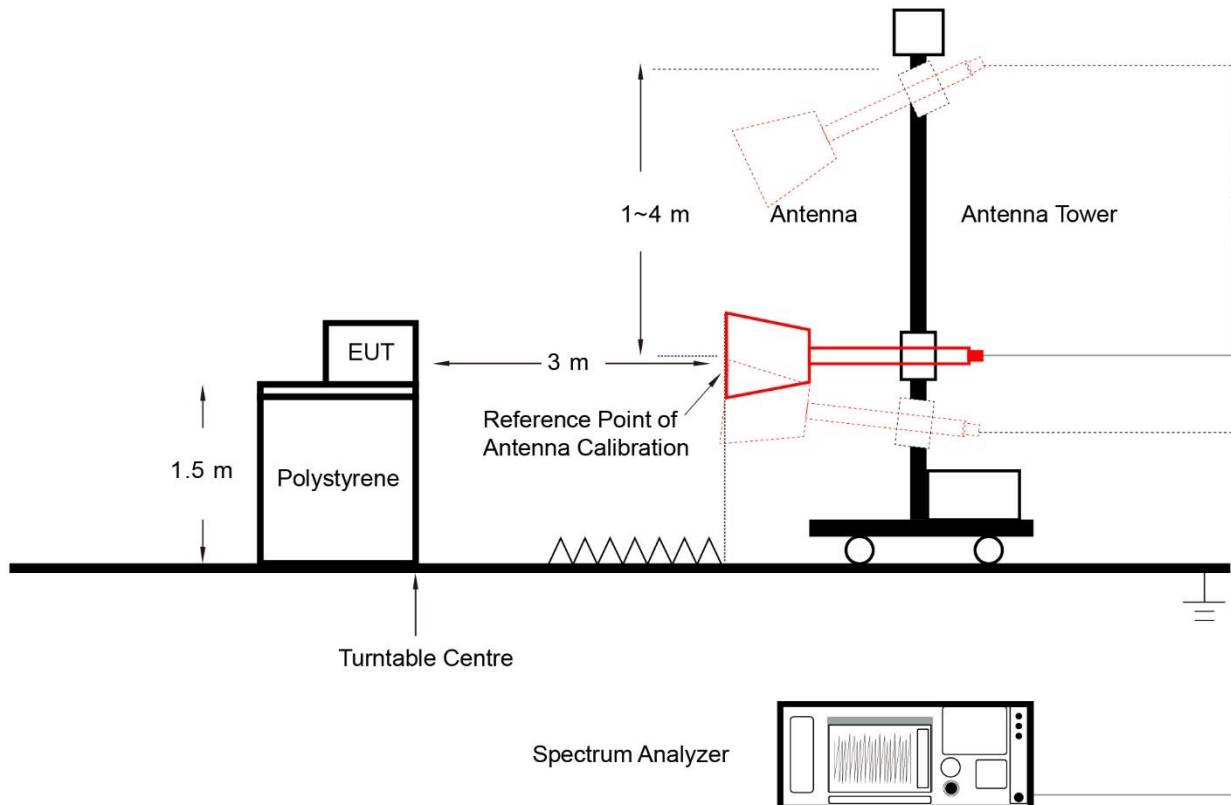
Below 30MHz Test Setup:



### Below 1GHz Test Setup:



### Above 1GHz Test Setup:



#### **6.7.5. Test Result**

Refer to Appendix A.7.

## **6.8. Radiated Restricted Band Edge Measurement**

### **6.8.1. Test Limit**

#### **For 15.407(b)(6) requirement:**

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of  $-27$  dBm/MHz.

Refer to 987594 D02 U-NII 6GHz EMC Measurement v01 clause G - Unwanted Emission Measurement

Use guidance in KDB 789033 for measurements below 1000 MHz and above 1000 MHz. Unwanted emissions outside of restricted bands are measured with a RMS detector. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit.

### **6.8.2. Test Procedure**

KDB 789033 D02v02r01-Section II)G)

### **6.8.3. Test Setting**

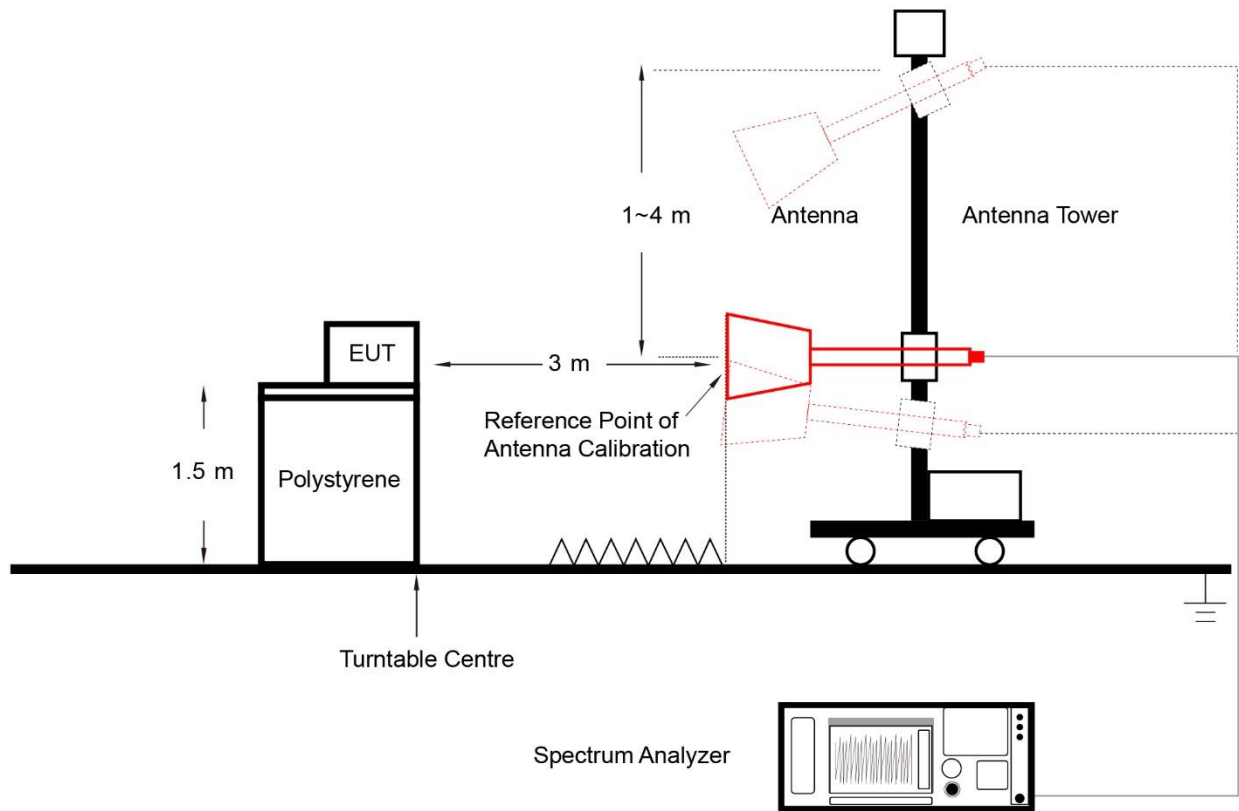
#### **Peak Measurements above 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

#### **Average Measurements above 1GHz (Method VB)**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; if the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10Hz  
If the EUT duty cycle is  $< 98\%$ , set VBW  $\geq 1/T$ . T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = Auto
6. Trace mode = Max hold
7. Trace was allowed to stabilize

#### 6.8.4. Test Setup



#### 6.8.5. Test Result

Refer to Appendix A.8.

## 6.9. AC Conducted Emissions Measurement

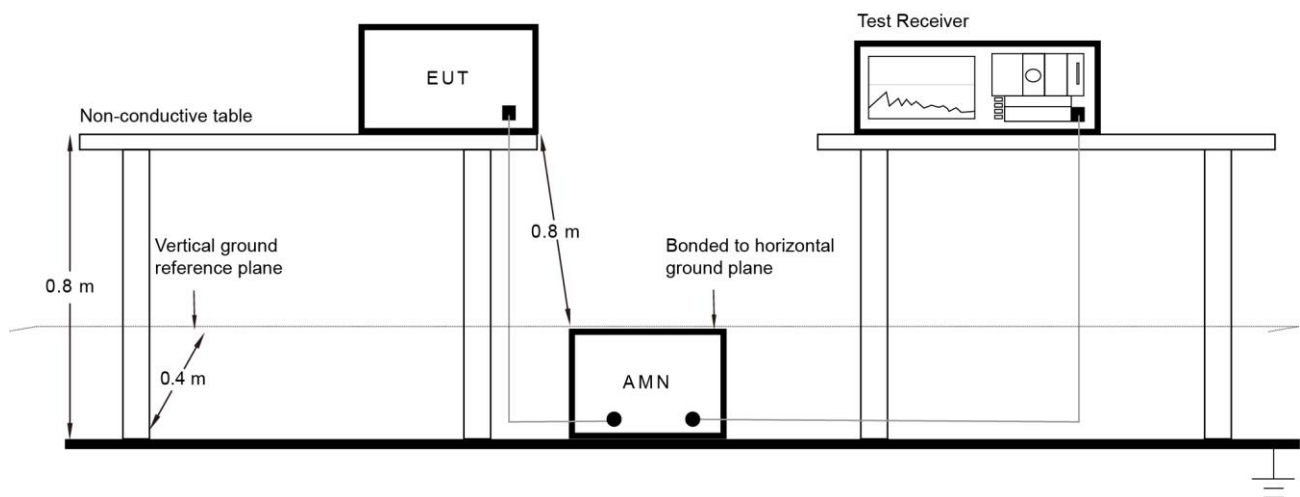
### 6.9.1. Test Limit

| FCC Part 15.207 Limits |                 |                 |
|------------------------|-----------------|-----------------|
| Frequency (MHz)        | QP (dB $\mu$ V) | AV (dB $\mu$ V) |
| 0.15 - 0.50            | 66 - 56         | 56 - 46         |
| 0.50 - 5.0             | 56              | 46              |
| 5.0 - 30               | 60              | 50              |

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

### 6.9.2. Test Setup



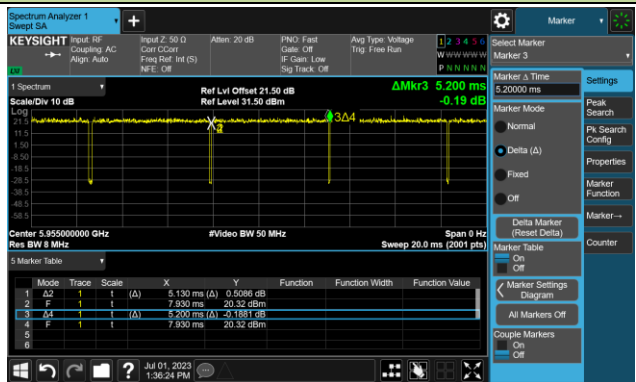
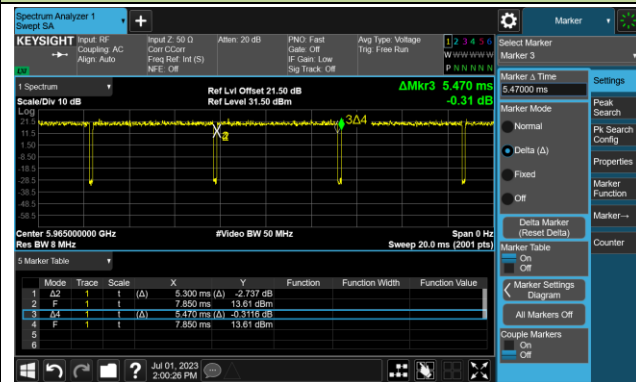
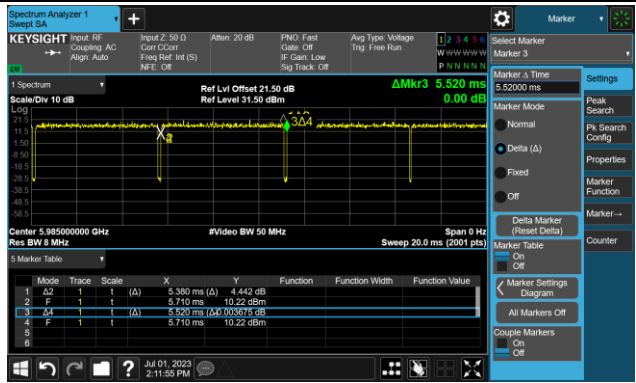
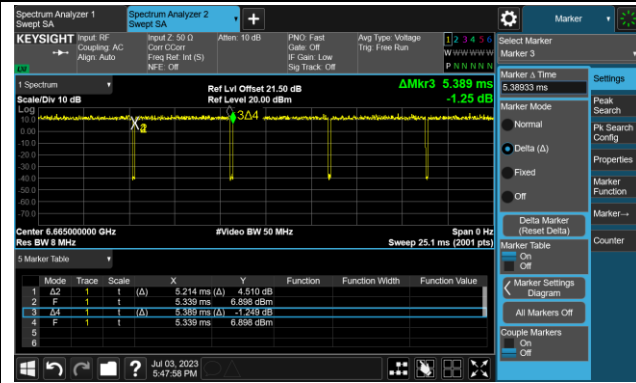
### 6.9.3. Test Result

Refer to Appendix A.9.

## Appendix A – Test Result

### A.1 Duty Cycle Test Result

|           |                       |               |           |
|-----------|-----------------------|---------------|-----------|
| Test Site | WZ-SR5                | Test Engineer | Lynn Yang |
| Test Date | 2023-07-01~2023-07-03 |               |           |

| Test Mode                                                                           | Duty Cycle                                                                           |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 802.11ax-HE20                                                                       | 98.65%                                                                               |
| 802.11ax-HE40                                                                       | 96.89%                                                                               |
| 802.11ax-HE80                                                                       | 97.46%                                                                               |
| 802.11ax-HE160                                                                      | 96.75%                                                                               |
| Duty Cycle (T = Transmission Duration)                                              |                                                                                      |
| 802.11ax-HE20 (T = 5.130ms)                                                         | 802.11ax-HE40 (T = 5.300ms)                                                          |
|   |   |
| 802.11ax-HE80 (T = 5.380ms)                                                         | 802.11ax-HE160 (T = 5.214ms)                                                         |
|  |  |

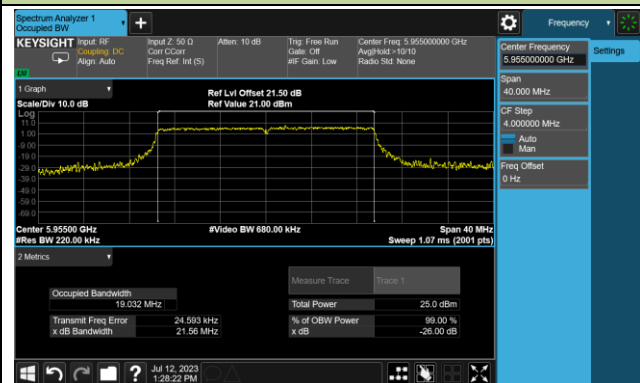
## A.2 Channel Bandwidth Test Result

|           |                       |               |           |
|-----------|-----------------------|---------------|-----------|
| Test Site | WZ-SR5                | Test Engineer | Lynn Yang |
| Test Date | 2024-07-12~2024-10-27 |               |           |

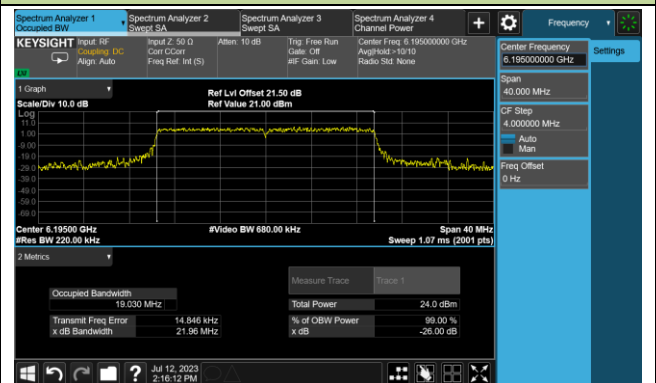
| Test Mode      | Data Rate/<br>MCS | Channel No. | Frequency<br>(MHz) | 26dB<br>Bandwidth<br>(MHz) | 99%<br>Bandwidth<br>(MHz) | Test Result |
|----------------|-------------------|-------------|--------------------|----------------------------|---------------------------|-------------|
| 802.11ax-HE20  | MCS0              | 1           | 5955               | 21.56                      | 19.032                    | Pass        |
| 802.11ax-HE20  | MCS0              | 49          | 6195               | 21.96                      | 19.030                    | Pass        |
| 802.11ax-HE20  | MCS0              | 93          | 6415               | 22.08                      | 18.997                    | Pass        |
| 802.11ax-HE20  | MCS0              | 117         | 6535               | 22.22                      | 19.018                    | Pass        |
| 802.11ax-HE20  | MCS0              | 153         | 6715               | 22.99                      | 18.984                    | Pass        |
| 802.11ax-HE20  | MCS0              | 181         | 6855               | 22.33                      | 19.003                    | Pass        |
| 802.11ax-HE40  | MCS0              | 3           | 5965               | 43.02                      | 37.881                    | Pass        |
| 802.11ax-HE40  | MCS0              | 51          | 6205               | 42.78                      | 37.864                    | Pass        |
| 802.11ax-HE40  | MCS0              | 91          | 6405               | 42.36                      | 37.823                    | Pass        |
| 802.11ax-HE40  | MCS0              | 123         | 6565               | 43.88                      | 37.907                    | Pass        |
| 802.11ax-HE40  | MCS0              | 147         | 6685               | 65.90                      | 38.315                    | Pass        |
| 802.11ax-HE40  | MCS0              | 179         | 6845               | 65.56                      | 38.300                    | Pass        |
| 802.11ax-HE80  | MCS0              | 7           | 5985               | 84.74                      | 77.349                    | Pass        |
| 802.11ax-HE80  | MCS0              | 55          | 6225               | 88.51                      | 77.914                    | Pass        |
| 802.11ax-HE80  | MCS0              | 87          | 6385               | 91.39                      | 77.746                    | Pass        |
| 802.11ax-HE80  | MCS0              | 135         | 6625               | 107.90                     | 78.030                    | Pass        |
| 802.11ax-HE80  | MCS0              | 151         | 6705               | 100.60                     | 77.727                    | Pass        |
| 802.11ax-HE80  | MCS0              | 167         | 6785               | 99.16                      | 77.926                    | Pass        |
| 802.11ax-HE160 | MCS0              | 15          | 6025               | 170.70                     | 156.64                    | Pass        |
| 802.11ax-HE160 | MCS0              | 47          | 6185               | 244.50                     | 157.90                    | Pass        |
| 802.11ax-HE160 | MCS0              | 79          | 6345               | 232.70                     | 158.05                    | Pass        |
| 802.11ax-HE160 | MCS0              | 143         | 6665               | 240.20                     | 157.70                    | Pass        |

## 802.11ax-HE20 26dB Bandwidth

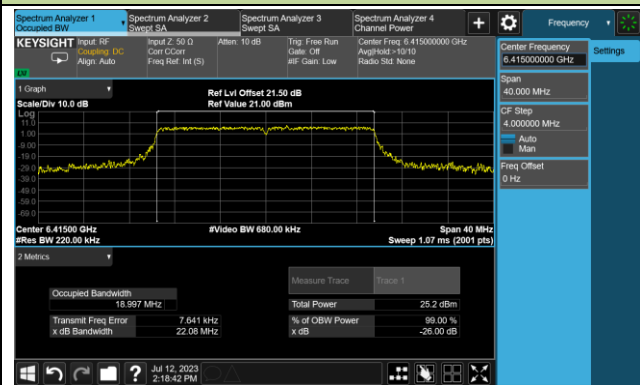
## Channel 1 (5955MHz)



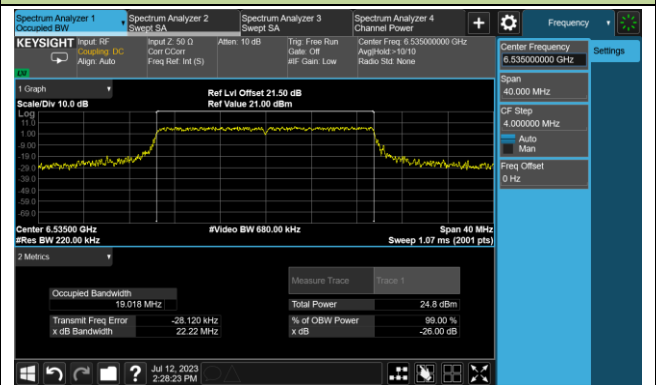
## Channel 49 (6195MHz)



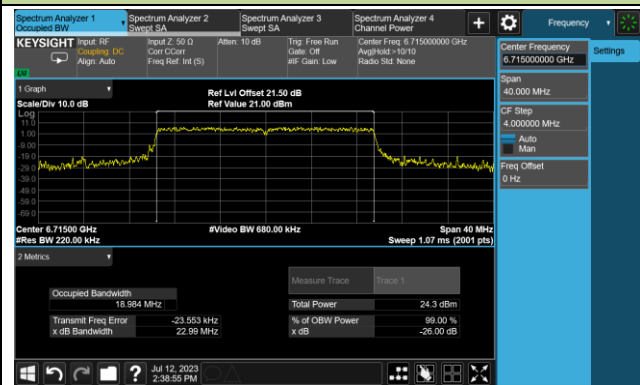
## Channel 93 (6415MHz)



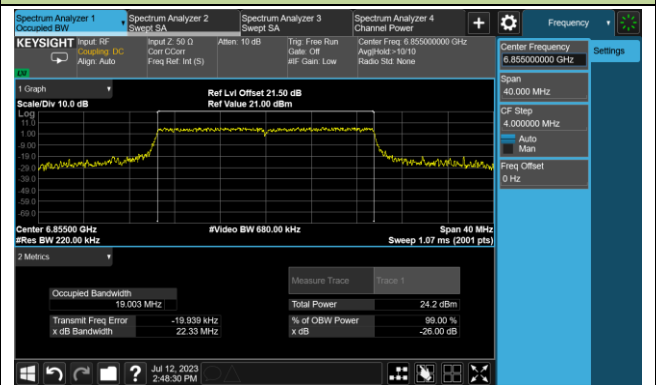
## Channel 117 (6535MHz)



## Channel 153 (6715MHz)

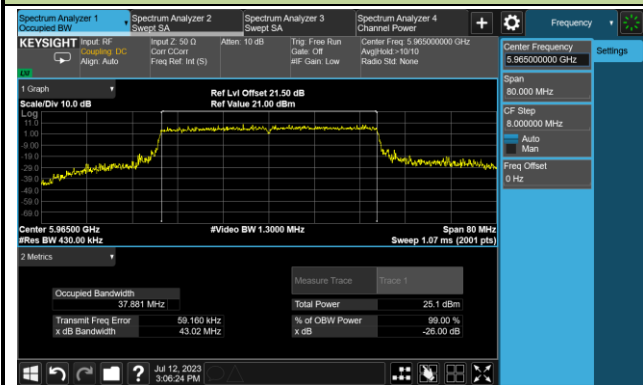


## Channel 181 (6855MHz)

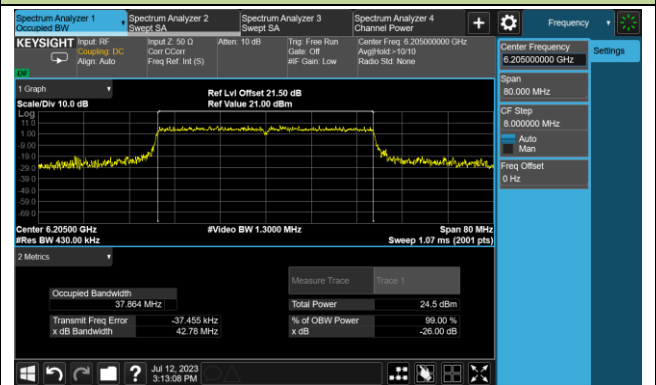


## 802.11ax-HE40 26dB Bandwidth

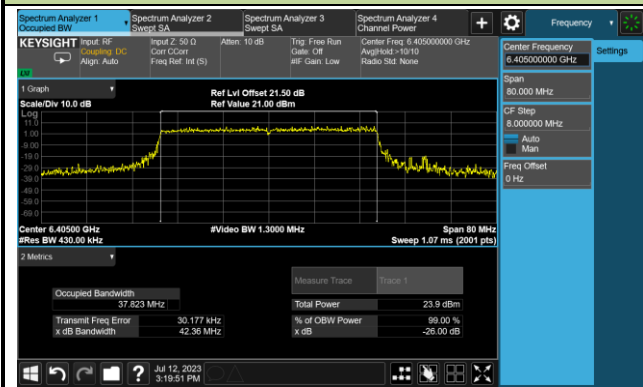
## Channel 3 (5965MHz)



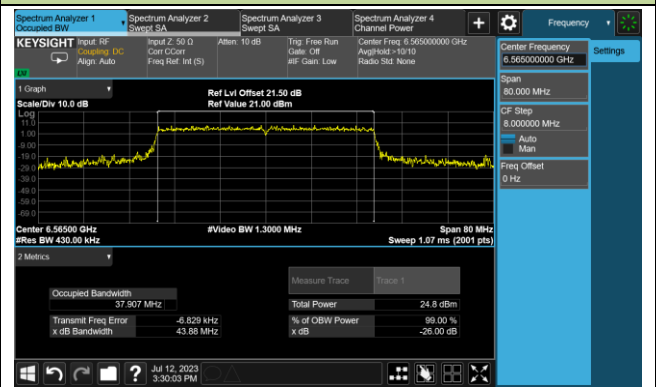
## Channel 51 (6205MHz)



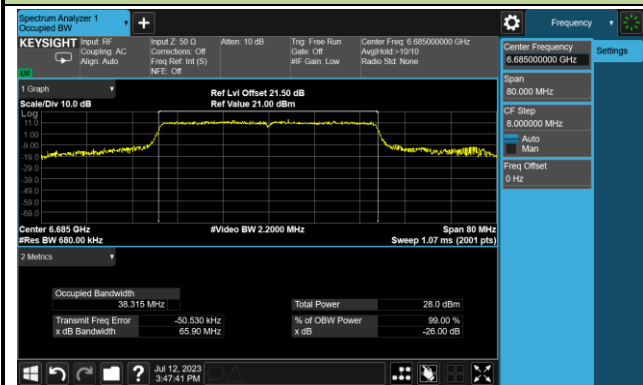
## Channel 91 (6405MHz)



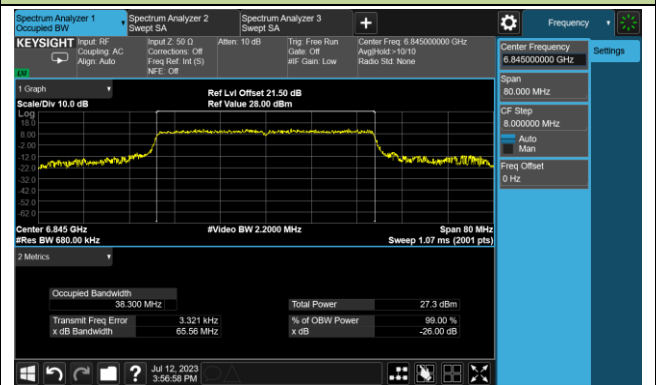
## Channel 123 (6565MHz)



## Channel 147 (6685MHz)

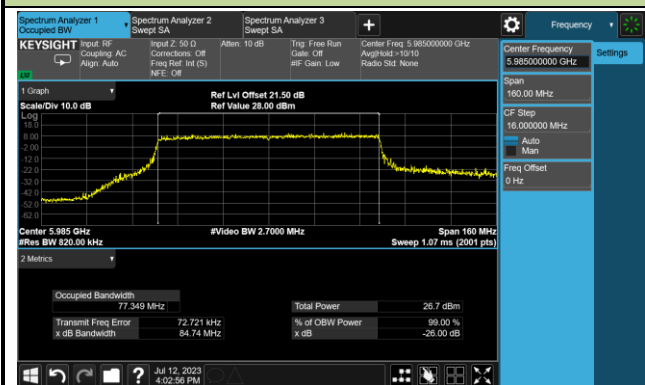


## Channel 179 (6845MHz)

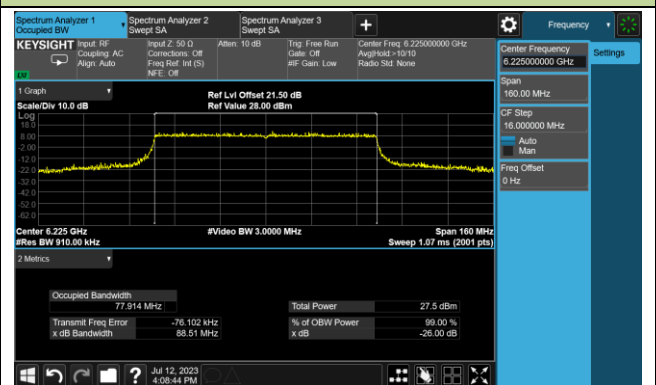


## 802.11ax-HE80 26dB Bandwidth

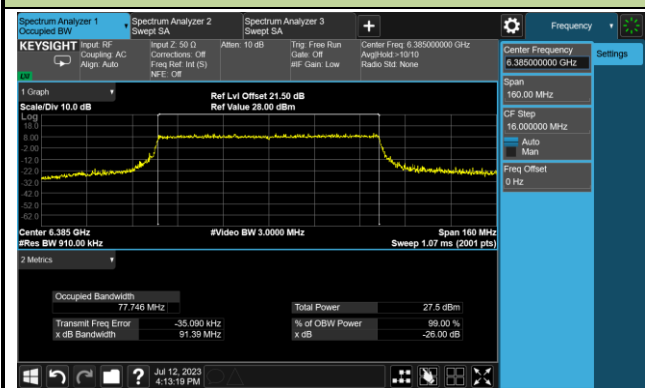
## Channel 7 (5985MHz)



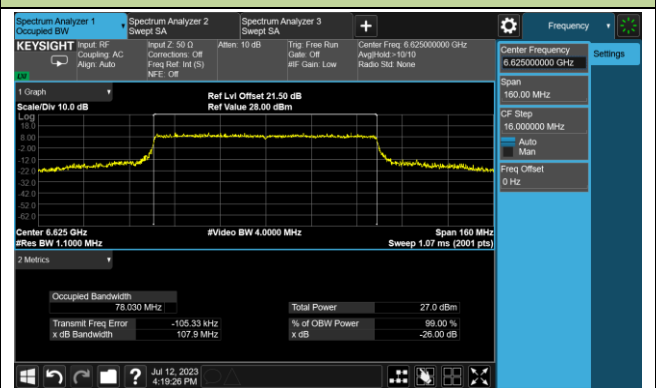
## Channel 55 (6225MHz)



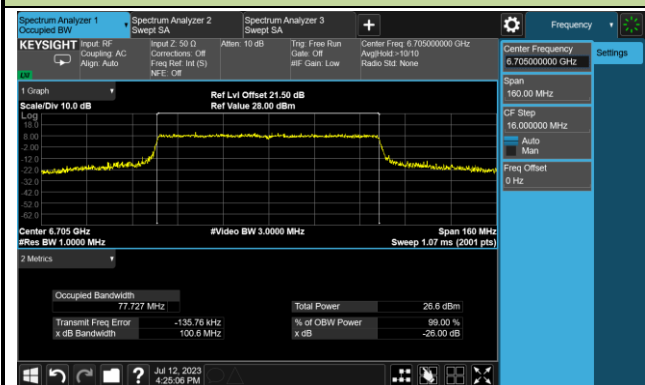
## Channel 87 (6385MHz)



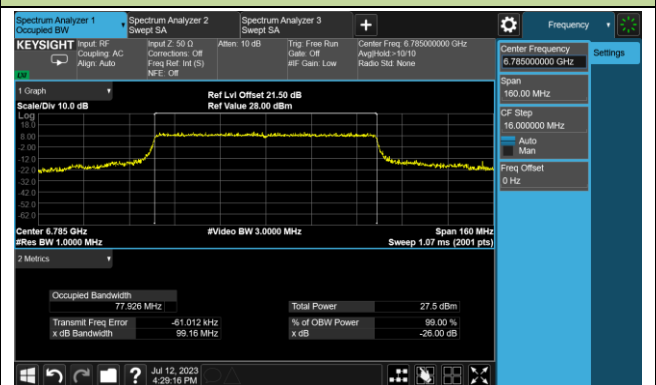
## Channel 135 (6625MHz)



## Channel 151 (6705MHz)

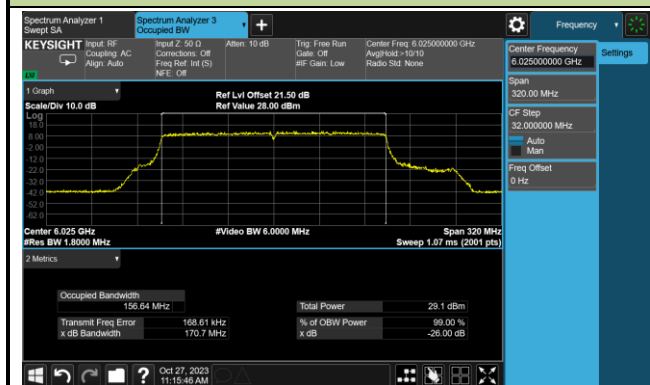


## Channel 167 (6785MHz)

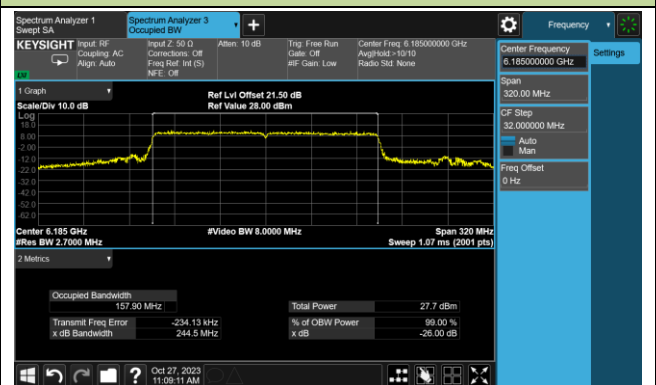


## 802.11ax-HE160 26dB Bandwidth

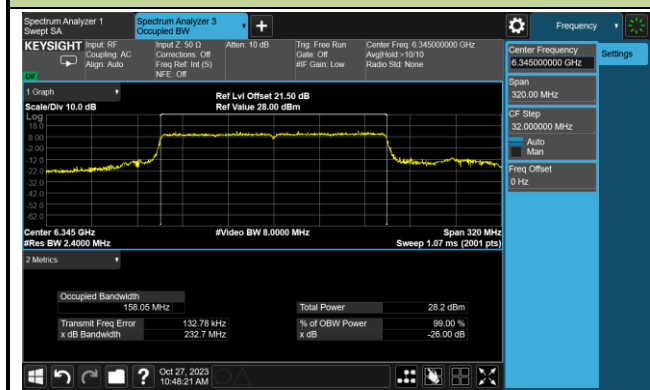
## Channel 15 (6025MHz)



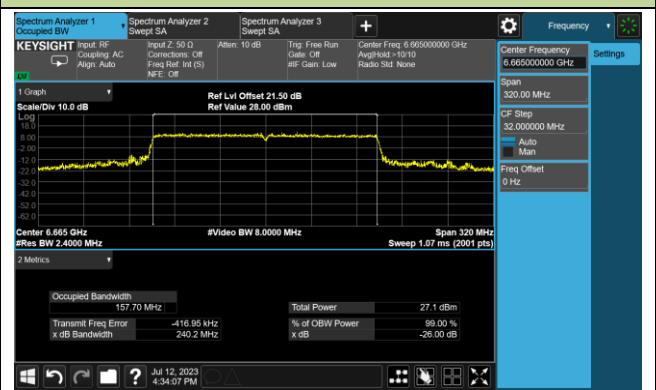
## Channel 47 (6185MHz)



## Channel 79 (6345MHz)



## Channel 143 (6665MHz)



### A.3 Output Power Test Result

|           |                       |               |           |
|-----------|-----------------------|---------------|-----------|
| Test Site | WZ-SR5                | Test Engineer | Lynn Yang |
| Test Date | 2023-07-03~2023-10-27 |               |           |

| Test Mode      | Data Rate/<br>MCS | Channel<br>No. | Freq.<br>(MHz) | Average Power<br>(dBm) |       | Total<br>Conducted<br>Power<br>(dBm) | EIRP<br>(dBm) | Limit<br>(dBm) |
|----------------|-------------------|----------------|----------------|------------------------|-------|--------------------------------------|---------------|----------------|
|                |                   |                |                | Ant 0                  | Ant 1 |                                      |               |                |
| 802.11ax-HE20  | MCS0              | 1              | 5955           | 18.80                  | 18.35 | 21.59                                | 25.69         | ≤ 36.00        |
| 802.11ax-HE20  | MCS0              | 49             | 6195           | 18.55                  | 18.38 | 21.48                                | 25.58         | ≤ 36.00        |
| 802.11ax-HE20  | MCS0              | 93             | 6415           | 18.61                  | 18.16 | 21.40                                | 25.50         | ≤ 36.00        |
| 802.11ax-HE20  | MCS0              | 117            | 6535           | 18.65                  | 18.82 | 21.75                                | 25.85         | ≤ 36.00        |
| 802.11ax-HE20  | MCS0              | 153            | 6715           | 18.78                  | 18.17 | 21.50                                | 25.60         | ≤ 36.00        |
| 802.11ax-HE20  | MCS0              | 181            | 6855           | 18.60                  | 18.42 | 21.52                                | 25.62         | ≤ 36.00        |
| 802.11ax-HE40  | MCS0              | 3              | 5965           | 18.66                  | 17.75 | 21.24                                | 25.34         | ≤ 36.00        |
| 802.11ax-HE40  | MCS0              | 51             | 6205           | 18.79                  | 18.55 | 21.68                                | 25.78         | ≤ 36.00        |
| 802.11ax-HE40  | MCS0              | 91             | 6405           | 18.77                  | 18.06 | 21.44                                | 25.54         | ≤ 36.00        |
| 802.11ax-HE40  | MCS0              | 123            | 6565           | 18.62                  | 18.77 | 21.71                                | 25.81         | ≤ 36.00        |
| 802.11ax-HE40  | MCS0              | 147            | 6685           | 18.79                  | 18.22 | 21.52                                | 25.62         | ≤ 36.00        |
| 802.11ax-HE40  | MCS0              | 179            | 6845           | 18.74                  | 18.77 | 21.77                                | 25.87         | ≤ 36.00        |
| 802.11ax-HE80  | MCS0              | 7              | 5985           | 18.83                  | 18.09 | 21.49                                | 25.59         | ≤ 36.00        |
| 802.11ax-HE80  | MCS0              | 55             | 6225           | 18.62                  | 18.42 | 21.53                                | 25.63         | ≤ 36.00        |
| 802.11ax-HE80  | MCS0              | 87             | 6385           | 18.50                  | 17.99 | 21.26                                | 25.36         | ≤ 36.00        |
| 802.11ax-HE80  | MCS0              | 135            | 6625           | 18.88                  | 18.75 | 21.83                                | 25.93         | ≤ 36.00        |
| 802.11ax-HE80  | MCS0              | 151            | 6705           | 18.68                  | 17.92 | 21.33                                | 25.43         | ≤ 36.00        |
| 802.11ax-HE80  | MCS0              | 167            | 6785           | 18.91                  | 18.22 | 21.59                                | 25.69         | ≤ 36.00        |
| 802.11ax-HE160 | MCS0              | 15             | 6025           | 18.62                  | 18.51 | 21.58                                | 25.68         | ≤ 36.00        |
| 802.11ax-HE160 | MCS0              | 47             | 6185           | 18.40                  | 18.49 | 21.46                                | 25.56         | ≤ 36.00        |
| 802.11ax-HE160 | MCS0              | 79             | 6345           | 18.72                  | 18.50 | 21.62                                | 25.72         | ≤ 36.00        |
| 802.11ax-HE160 | MCS0              | 143            | 6665           | 18.65                  | 17.96 | 21.33                                | 25.43         | ≤ 36.00        |

Note 1: Total Average Power (dBm) =  $10 \cdot \log \{10^{(\text{Ant 0 Average Power} / 10)} + 10^{(\text{Ant 1 Average Power} / 10)}\}$ .

Note 2: EIRP (dBm) = Total Average Power (dBm) + Directional Gain for Power (dBi).

#### A.4 Power Spectral Density Test Result

|           |                       |               |           |
|-----------|-----------------------|---------------|-----------|
| Test Site | WZ-SR5                | Test Engineer | Lynn Yang |
| Test Date | 2023-07-03~2023-10-27 |               |           |

| Test Mode      | Data Rate/<br>MCS | Channel<br>No. | Freq.<br>(MHz) | PSD (dBm/MHz) |        | Duty Cycle<br>(%) | EIRP PSD<br>(dBm/MHz) | Limit<br>(dBm/MHz) |
|----------------|-------------------|----------------|----------------|---------------|--------|-------------------|-----------------------|--------------------|
|                |                   |                |                | Ant 0         | Ant 1  |                   |                       |                    |
| 802.11ax-HE20  | MCS0              | 1              | 5955           | 6.734         | 6.082  | 98.65             | 16.54                 | ≤ 23.00            |
| 802.11ax-HE20  | MCS0              | 49             | 6195           | 6.149         | 5.902  | 98.65             | 16.15                 | ≤ 23.00            |
| 802.11ax-HE20  | MCS0              | 93             | 6415           | 6.145         | 5.784  | 98.65             | 16.09                 | ≤ 23.00            |
| 802.11ax-HE20  | MCS0              | 117            | 6535           | 5.858         | 6.109  | 98.65             | 16.11                 | ≤ 23.00            |
| 802.11ax-HE20  | MCS0              | 153            | 6715           | 6.285         | 5.547  | 98.65             | 16.05                 | ≤ 23.00            |
| 802.11ax-HE20  | MCS0              | 181            | 6855           | 6.193         | 6.123  | 98.65             | 16.28                 | ≤ 23.00            |
| 802.11ax-HE40  | MCS0              | 3              | 5965           | 3.407         | 2.375  | 96.89             | 13.18                 | ≤ 23.00            |
| 802.11ax-HE40  | MCS0              | 51             | 6205           | 3.657         | 3.598  | 96.89             | 13.89                 | ≤ 23.00            |
| 802.11ax-HE40  | MCS0              | 91             | 6405           | 3.496         | 2.927  | 96.89             | 13.48                 | ≤ 23.00            |
| 802.11ax-HE40  | MCS0              | 123            | 6565           | 3.282         | 3.372  | 96.89             | 13.58                 | ≤ 23.00            |
| 802.11ax-HE40  | MCS0              | 147            | 6685           | 3.748         | 2.826  | 96.89             | 13.57                 | ≤ 23.00            |
| 802.11ax-HE40  | MCS0              | 179            | 6845           | 3.293         | 3.354  | 96.89             | 13.58                 | ≤ 23.00            |
| 802.11ax-HE80  | MCS0              | 7              | 5985           | 0.685         | -0.302 | 97.46             | 10.45                 | ≤ 23.00            |
| 802.11ax-HE80  | MCS0              | 55             | 6225           | 0.370         | 0.109  | 97.46             | 10.47                 | ≤ 23.00            |
| 802.11ax-HE80  | MCS0              | 87             | 6385           | 0.306         | -0.264 | 97.46             | 10.26                 | ≤ 23.00            |
| 802.11ax-HE80  | MCS0              | 135            | 6625           | 0.424         | 0.305  | 97.46             | 10.60                 | ≤ 23.00            |
| 802.11ax-HE80  | MCS0              | 151            | 6705           | 0.445         | -0.395 | 97.46             | 10.28                 | ≤ 23.00            |
| 802.11ax-HE80  | MCS0              | 167            | 6785           | 0.648         | -0.037 | 97.46             | 10.55                 | ≤ 23.00            |
| 802.11ax-HE160 | MCS0              | 15             | 6025           | -2.171        | -2.652 | 96.75             | 7.86                  | ≤ 23.00            |
| 802.11ax-HE160 | MCS0              | 47             | 6185           | -2.920        | -3.147 | 96.75             | 7.23                  | ≤ 23.00            |
| 802.11ax-HE160 | MCS0              | 79             | 6345           | -2.861        | -3.012 | 96.75             | 7.33                  | ≤ 23.00            |
| 802.11ax-HE160 | MCS0              | 143            | 6665           | -2.631        | -3.405 | 96.75             | 7.26                  | ≤ 23.00            |

Note:

When EUT duty cycle < 98%, EIRP PSD (dBm/MHz) =  $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$  (dBm/MHz) +  $10 \cdot \log (1/\text{Duty Cycle})$  + Directional Gain for PSD (dBi).

When EUT duty cycle ≥ 98%, EIRP PSD (dBm/MHz) =  $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$  (dBm/MHz) + Directional Gain for PSD (dBi).

## 802.11ax-HE20 Power Spectral Density- Ant 0

Channel 1 (5955MHz)



Channel 49 (6195MHz)



Channel 93 (6415MHz)



Channel 117 (6535MHz)



Channel 153 (6715MHz)

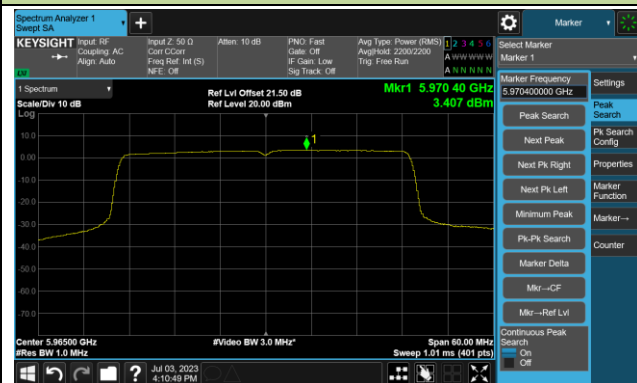


Channel 181 (6855MHz)

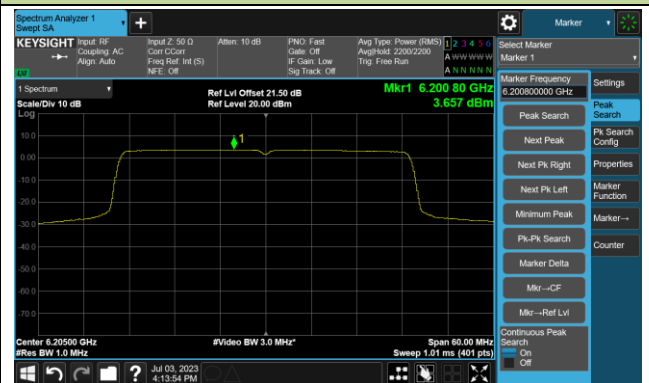


## 802.11ax-HE40 Power Spectral Density- Ant 0

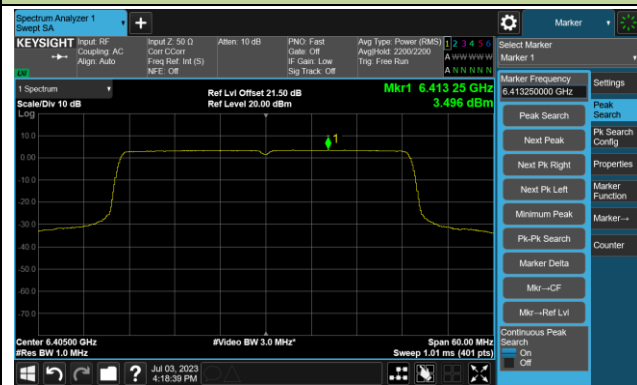
Channel 3 (5965MHz)



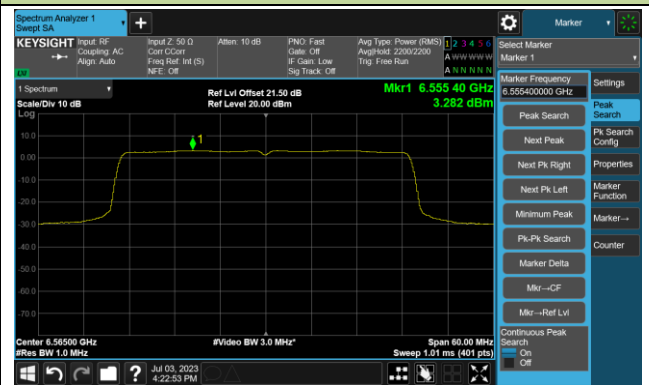
Channel 51 (6205MHz)



Channel 91 (6405MHz)



Channel 123 (6565MHz)



Channel 147 (6685MHz)

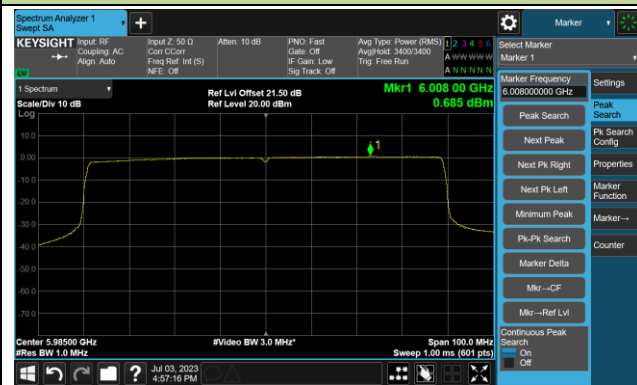


Channel 179 (6845MHz)



## 802.11ax-HE80 Power Spectral Density- Ant 0

Channel 7 (5985MHz)



Channel 55 (6225MHz)



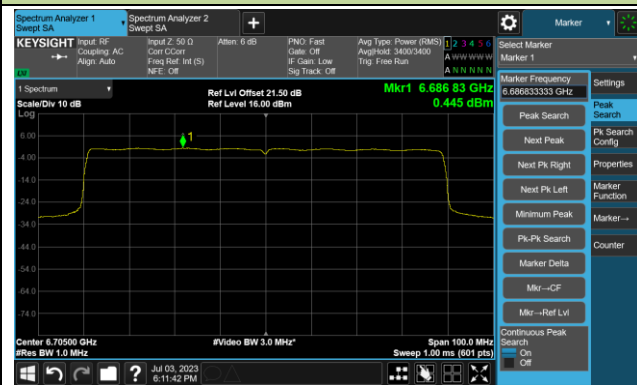
Channel 87 (6385MHz)



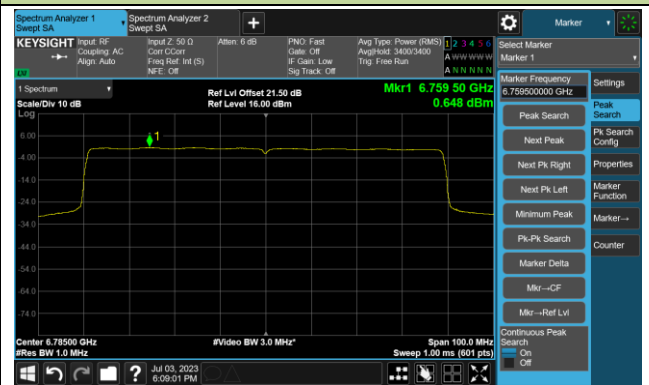
Channel 135 (6625MHz)



Channel 151 (6705MHz)

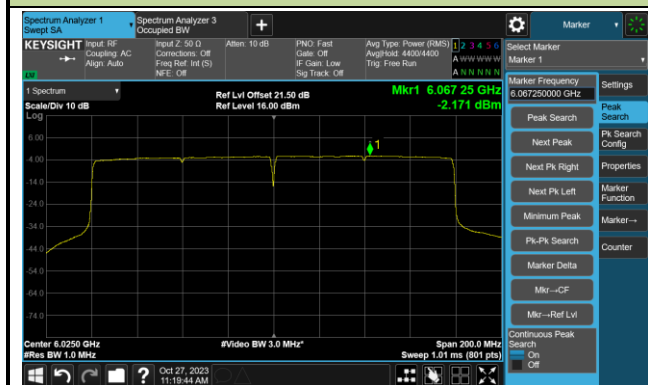


Channel 167 (6785MHz)

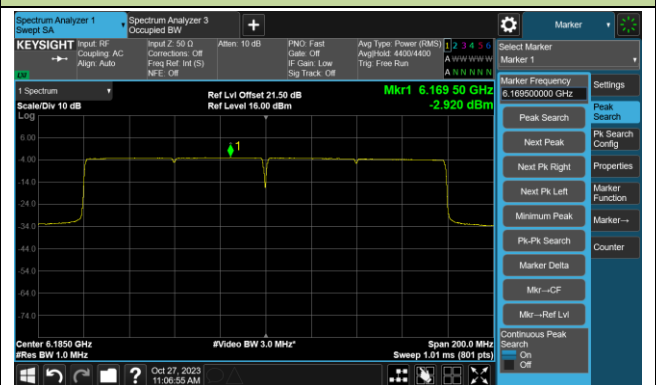


## 802.11ax-HE160 Power Spectral Density- Ant 0

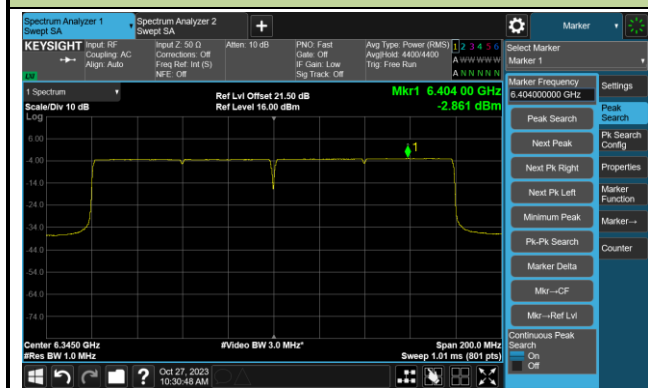
Channel 15 (6025MHz)



Channel 47 (6185MHz)



Channel 79 (6345MHz)

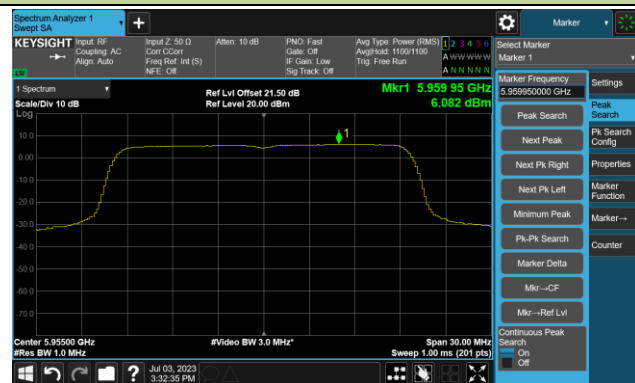


Channel 143 (6665MHz)



## 802.11ax-HE20 Power Spectral Density- Ant 1

Channel 1 (5955MHz)



Channel 49 (6195MHz)



Channel 93 (6415MHz)



Channel 117 (6535MHz)



Channel 153 (6715MHz)

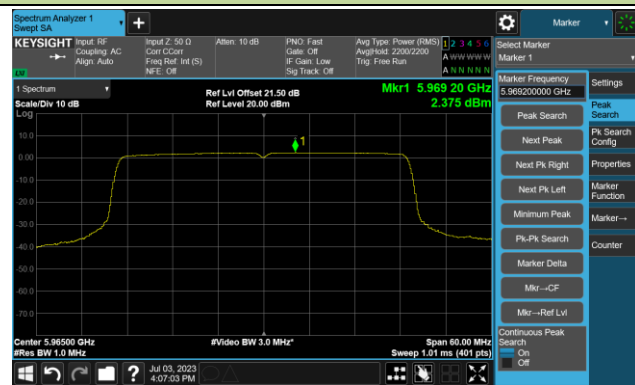


Channel 181 (6855MHz)

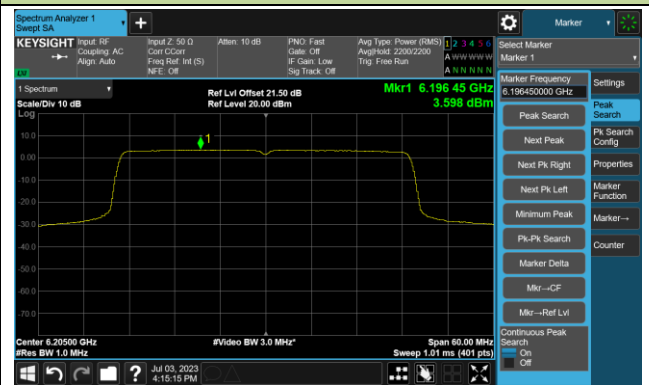


## 802.11ax-HE40 Power Spectral Density- Ant 1

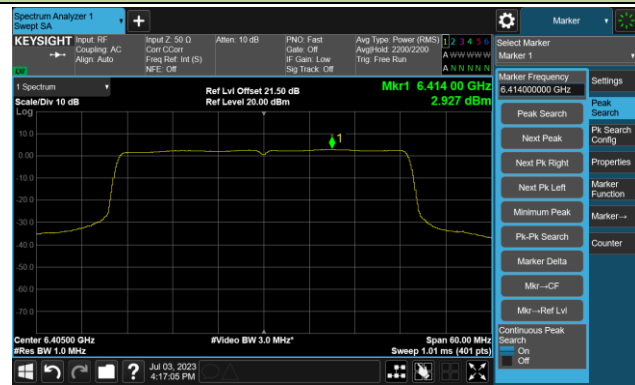
Channel 3 (5965MHz)



Channel 51 (6205MHz)



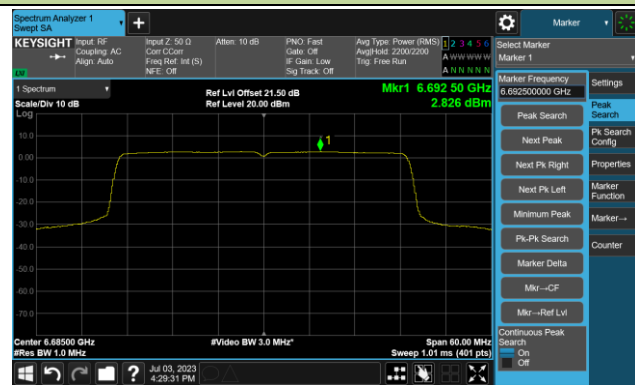
Channel 91 (6405MHz)



Channel 123 (6565MHz)



Channel 147 (6685MHz)

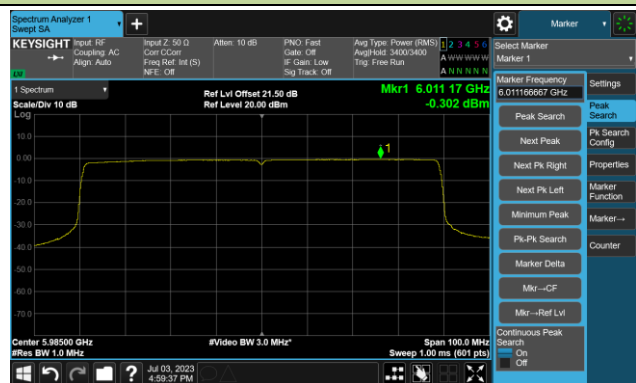


Channel 179 (6845MHz)



## 802.11ax-HE80 Power Spectral Density- Ant 1

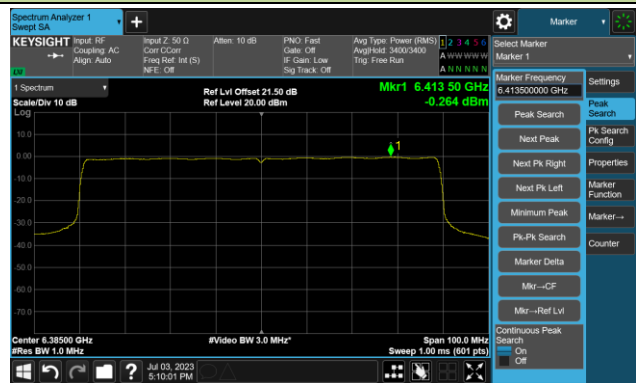
Channel 7 (5985MHz)



Channel 55 (6225MHz)



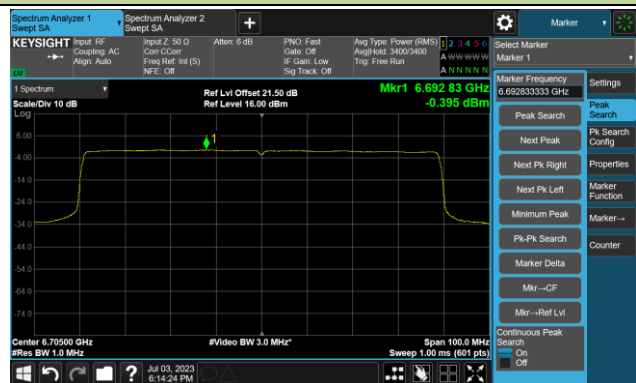
Channel 87 (6385MHz)



Channel 135 (6625MHz)



Channel 151 (6705MHz)

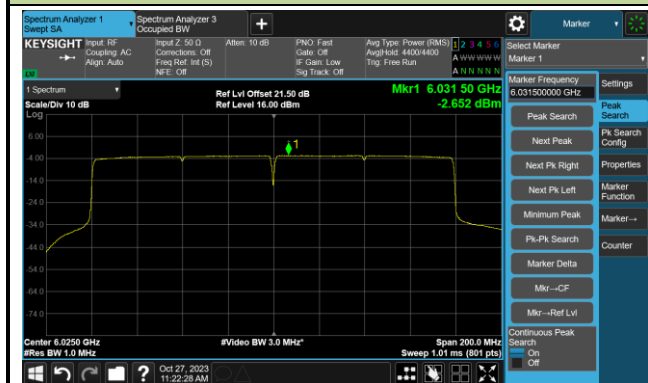


Channel 167 (6785MHz)



## 802.11ax-HE160 Power Spectral Density- Ant 1

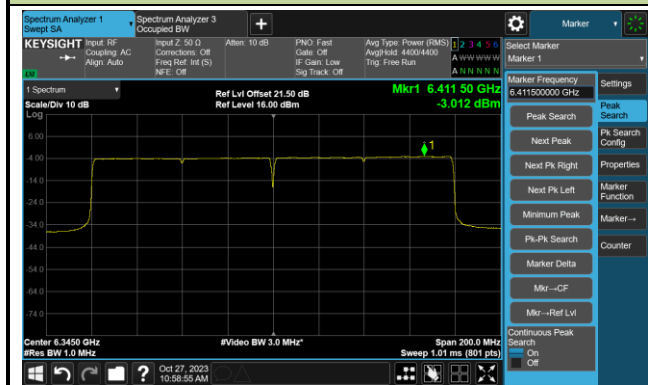
## Channel 15 (6025MHz)



## Channel 47 (6185MHz)



## Channel 79 (6345MHz)



## Channel 143 (6665MHz)

