

# TEST REPORT

Applicant Name: Fanvil Link Technology Co.,LTD  
Address: Room 1517, Building G, Hualian City Panorama.27 Region,  
Bao'an District; Shenzhen, China  
Report Number: SZ1231214-75461E-RF-00A  
FCC ID: 2BCUQ-RC10

**Test Standard (s)**  
FCC PART 15.407

## Sample Description

Product Type: All-in-one Conference Solution  
Model No.: RC10  
Multiple Model(s) No.: CA400; CA400-RC10  
Trade Mark: **LINKVIL**  
Date Received: 2023/12/14  
Report Date: 2024/02/05

|              |       |
|--------------|-------|
| Test Result: | Pass▲ |
|--------------|-------|

▲ In the configuration tested, the EUT complied with the standards above.

## Prepared and Checked By:

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Andy Yu  
RF Engineer

## Approved By:

*Nancy Wang*

Nancy Wang  
RF Supervisor

Note: The information marked # is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

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## Bay Area Compliance Laboratories Corp. (Shenzhen)

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|  |            |
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## DOCUMENT REVISION HISTORY

| Revision Number | Report Number           | Description of Revision | Date of Revision |
|-----------------|-------------------------|-------------------------|------------------|
| 0               | SZ1231214-75461E-RF-00A | Original Report         | 2024/02/05       |

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

|  |   |
|--|---|
| Product                                | All-in-one Conference Solution  |
| Tested Model                           | RC10  |
| Multiple Model(s)                      | CA400; CA400-RC10<br>(Please refer to the DoS <sup>#</sup> provided by the applicant)                         |
| Frequency Range                        | 5G Wi-Fi: 5150-5250MHz; 5250-5350MHz; 5470-5725MHz; 5725-5850MHz  |
| Mode                                   | 802.11a/n20/n40/ac20/ac40/ac80  |
| Maximum Conducted Average Output Power | 5150-5250MHz: 16.50dBm<br>5250-5350MHz: 13.58dBm<br>5470-5725MHz: 15.55dBm<br>5725-5850MHz: 15.78dBm          |
| Modulation Technique                   | OFDM  |
| Antenna Specification <sup>#</sup>     | 5.3dBi (provided by the applicant)  |
| Voltage Range                          | DC5V from adapter   |
| Sample serial number                   | 2FBD-1 for Conducted and Radiated Emissions Test<br>2FBD-2 for RF Conducted Test (Assigned by BACL, Shenzhen) |
| Sample/EUT Status                      | Good condition  |
| Adapter Information                    | Model: AS1201A-0502000USL<br>Input: AC 100-240V 50/60Hz 0.35A MAX<br>Output: DC 5V 2000mA                     |

### Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB789033 D02 General U-NII Test Procedures New Rules v02r01.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

**Measurement Uncertainty**

| Parameter                          |                             | Uncertainty                             |
|------------------------------------|-----------------------------|---|
| Occupied Channel Bandwidth         |                             | ±5%                                     |
| RF Frequency                       |                             | 213.55 Hz(k=2, 95% level of confidence) |
| RF output power, conducted         |                             | 0.72 dB(k=2, 95% level of confidence)   |
| Unwanted Emission, conducted       |                             | 1.75 dB(k=2, 95% level of confidence)   |
| AC Power Lines Conducted Emissions | 9kHz-150kHz                 | 3.94dB(k=2, 95% level of confidence)    |
|                                    | 150kHz-30MHz                | 3.84dB(k=2, 95% level of confidence)    |
| Radiated Emissions                 | 9kHz - 30MHz                | 3.30dB(k=2, 95% level of confidence)    |
|                                    | 30MHz~200MHz (Horizontal)   | 4.48dB(k=2, 95% level of confidence)    |
|                                    | 30MHz~200MHz (Vertical)     | 4.55dB(k=2, 95% level of confidence)    |
|                                    | 200MHz~1000MHz (Horizontal) | 4.85dB(k=2, 95% level of confidence)    |
|                                    | 200MHz~1000MHz (Vertical)   | 5.05dB(k=2, 95% level of confidence)    |
|                                    | 1GHz - 6GHz                 | 5.35dB(k=2, 95% level of confidence)    |
|                                    | 6GHz - 18GHz                | 5.44dB(k=2, 95% level of confidence)    |
|                                    | 18GHz - 40GHz               | 5.16dB(k=2, 95% level of confidence)    |
| Temperature                        |                             | ±1°C                                    |
| Humidity                           |                             | ±1%                                     |
| Supply voltages                    |                             | ±0.4%                                   |

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

**Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in an engineering mode, which was provided by manufacturer.

The system support 802.11a/n ht20/n ht40/ac vht20/ac vht40/ac vht80, the 802.11 n ht20/n ht40 were reduced since the identical parameters with 802.11ac vht20 and vht40.

For 5150-5250MHz Band, 7 channels are provided to testing:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 36      | 5180            | 44      | 5220            |
| 38      | 5190            | 46      | 5230            |
| 40      | 5200            | 48      | 5240            |
| 42      | 5210            | /       | /               |

For 802.11a/ac20 mode: channel 36, 40, 48 were tested;

For 802.11ac40 mode: channel 38, 46 were tested;

For 802.11ac80 mode, channel 42 was tested.

For 5250-5350MHz Band, 7 channels are provided to testing:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 52      | 5260            | 60      | 5300            |
| 54      | 5270            | 62      | 5310            |
| 56      | 5280            | 64      | 5320            |
| 58      | 5290            | /       | /               |

For 802.11a, 802.11n20/ac20 mode: channel 52, 56, 64 were tested;

For 802.11n40/ac40 mode: channel 54, 62 were tested;

For 802.11ac80 mode, channel 58 was tested.

For 5470-5725MHz Band, 21 channels are provided to testing:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 100     | 5500            | 124     | 5620            |
| 102     | 5510            | 126     | 5630            |
| 104     | 5520            | 128     | 5640            |
| 106     | 5530            | 132     | 5660            |
| 108     | 5540            | 134     | 5670            |
| 110     | 5550            | 136     | 5680            |
| 112     | 5560            | 138     | 5690            |
| 116     | 5580            | 140     | 5700            |
| 118     | 5590            | 142     | 5710            |
| 120     | 5600            | 144     | 5720            |
| 122     | 5610            | /       | /               |

For 802.11a, 802.11n20/ac20 mode: channel 100, 116, 140, 144 were tested;

For 802.11n40/ac40 mode: channel 102, 110, 134, 142 were tested;

For 802.11ac80 mode, channel 106, 122, 138 was tested.

For 5725-5850MHz Band, 8 channels are provided to testing:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 149     | 5745            | 157     | 5785            |
| 151     | 5755            | 159     | 5795            |
| 153     | 5765            | 161     | 5805            |
| 155     | 5775            | 165     | 5825            |

For 802.11a/ac20 mode: channel 149, 157, 165 were tested;

For 802.11ac40 mode: channel 151, 159 were tested;

For 802.11ac80 mode, channel 155 was tested.



**EUT Exercise Software**

“CMD.exe”<sup>#</sup> software was used and power level as below. The software and power level was provided by the applicant. The device was tested with the worst case was performed as below:

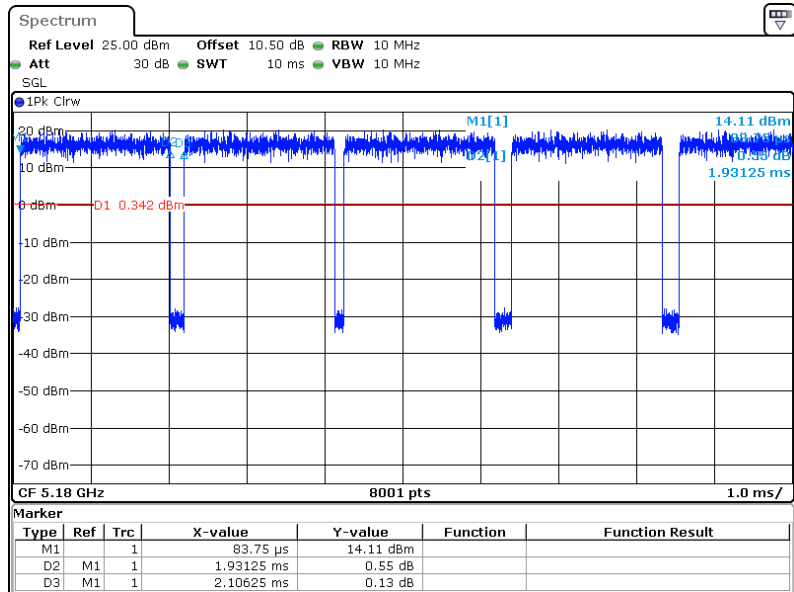
| <b>5150-5250 MHz Band:</b> |               |                      |           |                                  |         |
|----------------------------|---------------|----------------------|-----------|----------------------------------|---------|
| Test Modes                 | Test Channels | Test Frequency (MHz) | Data rate | Power Level Setting <sup>#</sup> |         |
|                            |               |                      |           | ANT 1                            | ANT 2   |
| 802.11a                    | Lowest        | 5180                 | 6Mbps     | Default                          | Default |
|                            | Middle        | 5200                 | 6Mbps     | Default                          | Default |
|                            | Highest       | 5240                 | 6Mbps     | Default                          | Default |
| 802.11ac vht20             | Lowest        | 5180                 | MCS0      | Default                          | Default |
|                            | Middle        | 5200                 | MCS0      | Default                          | Default |
|                            | Highest       | 5240                 | MCS0      | Default                          | Default |
| 802.11ac vht40             | Lowest        | 5190                 | MCS0      | Default                          | Default |
|                            | Highest       | 5230                 | MCS0      | Default                          | Default |
| 802.11ac vht80             | Middle        | 5210                 | MCS0      | Default                          | Default |
| <b>5250-5350 MHz Band:</b> |               |                      |           |                                  |         |
| Test Modes                 | Test Channels | Test Frequency (MHz) | Data rate | Power Level Setting <sup>#</sup> |         |
|                            |               |                      |           | ANT 1                            | ANT 2   |
| 802.11a                    | Lowest        | 5260                 | 6Mbps     | Default                          | Default |
|                            | Middle        | 5280                 | 6Mbps     | Default                          | Default |
|                            | Highest       | 5320                 | 6Mbps     | Default                          | Default |
| 802.11ac vht20             | Lowest        | 5260                 | MCS0      | Default                          | Default |
|                            | Middle        | 5280                 | MCS0      | Default                          | Default |
|                            | Highest       | 5320                 | MCS0      | Default                          | Default |
| 802.11ac vht40             | Lowest        | 5270                 | MCS0      | Default                          | Default |
|                            | Highest       | 5310                 | MCS0      | Default                          | Default |
| 802.11ac vht80             | Middle        | 5290                 | MCS0      | Default                          | Default |

| 5470-5725 MHz Band:   |               |                      |           |                                  |         |
|---|---------------|----------------------|-----------|----------------------------------|---------|
| Test Modes  | Test Channels | Test Frequency (MHz) | Data rate | Power Level Setting <sup>#</sup> |         |
|   |               |                      |           | ANT 1                            | ANT 2   |
| 802.11a   | Lowest        | 5500                 | 6Mbps     | Default                          | Default |
|   | Middle        | 5580                 | 6Mbps     | Default                          | Default |
|   | Highest       | 5700                 | 6Mbps     | Default                          | Default |
|   | Cross         | 5720                 | 6Mbps     | Default                          | Default |
| 802.11ac vht20  | Lowest        | 5500                 | MCS0      | Default                          | Default |
|   | Middle        | 5580                 | MCS0      | Default                          | Default |
|   | Highest       | 5700                 | MCS0      | Default                          | Default |
|   | Cross         | 5720                 | MCS0      | Default                          | Default |
| 802.11ac vht40  | Lowest        | 5510                 | MCS0      | Default                          | Default |
|   | Middle        | 5550                 | MCS0      | Default                          | Default |
|   | Highest       | 5670                 | MCS0      | Default                          | Default |
|   | Cross         | 5710                 | MCS0      | Default                          | Default |
| 802.11ac vht80  | Lowest        | 5530                 | MCS0      | Default                          | Default |
|   | Highest       | 5610                 | MCS0      | Default                          | Default |
|   | Cross         | 5690                 | MCS0      | Default                          | Default |
| 5725-5850 MHz Band:   |               |                      |           |                                  |         |
| Test Modes  | Test Channels | Test Frequency (MHz) | Data rate | Power Level Setting <sup>#</sup> |         |
|   |               |                      |           | ANT 1                            | ANT 2   |
| 802.11a   | Lowest        | 5745                 | 6Mbps     | Default                          | Default |
|   | Middle        | 5785                 | 6Mbps     | Default                          | Default |
|   | Highest       | 5825                 | 6Mbps     | Default                          | Default |
| 802.11ac vht20  | Lowest        | 5745                 | MCS0      | Default                          | Default |
|   | Middle        | 5785                 | MCS0      | Default                          | Default |
|   | Highest       | 5825                 | MCS0      | Default                          | Default |
| 802.11ac vht40  | Lowest        | 5755                 | MCS0      | Default                          | Default |
|   | Highest       | 5795                 | MCS0      | Default                          | Default |
| 802.11ac vht80  | Middle        | 5775                 | MCS0      | Default                          | Default |
| <p>1. The above are the worst-case data rates, which are determined for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations.</p> <p>2. For 802.11 a mode, the device only support SISO mode.</p> <p>3. For 802.11n/ac modes, the device supports SISO and MIMO in all modes, per pretest, the MIMO mode was the worst mode for all the modes.</p> |               |                      |           |                                  |         |

**Duty cycle**

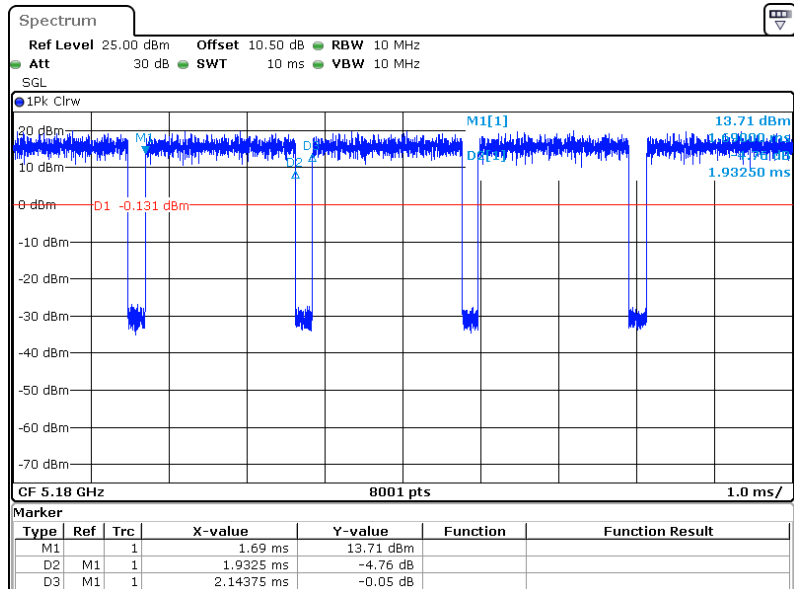
| Test Modes     | Ton (ms) | Ton+off (ms) | Duty Cycle (%) | Duty Cycle Factor (dB) | 1/T (Hz) | VBW Setting (Hz) |
|----------------|----------|--------------|----------------|------------------------|----------|------------------|
| 802.11a        | 1.931    | 2.106        | 91.69          | 0.38                   | 518      | 1000             |
| 802.11ac vht20 | 1.933    | 2.144        | 90.16          | 0.45                   | 517      | 1000             |
| 802.11ac vht40 | 0.951    | 1.199        | 79.32          | 1.01                   | 1052     | 2000             |
| 802.11ac vht80 | 0.459    | 0.608        | 75.49          | 1.22                   | 2179     | 3000             |

802.11a



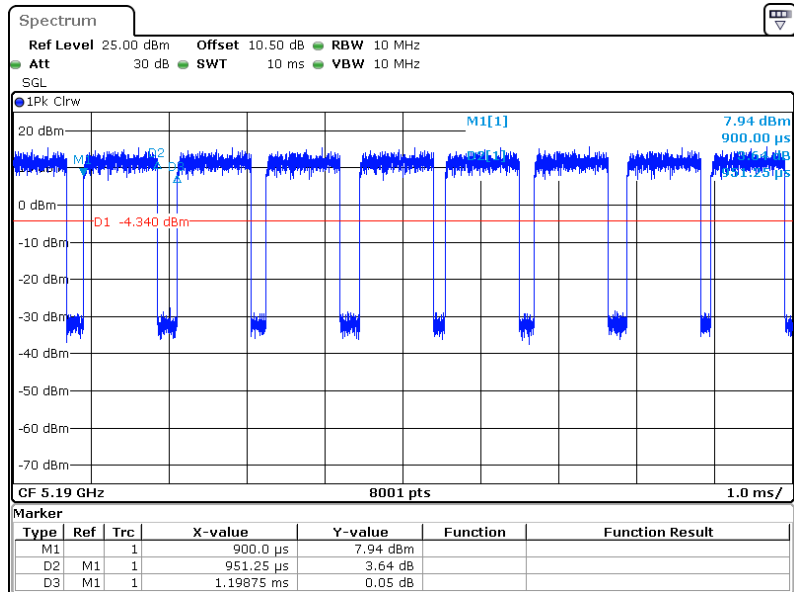
ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
 Date: 21.JAN.2024 05:44:24

802.11ac 20



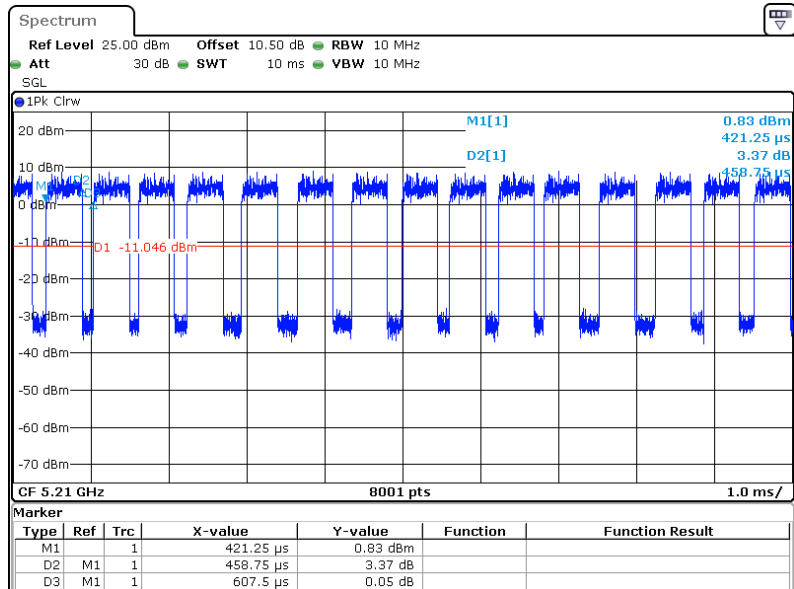
ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
 Date: 21.JAN.2024 07:43:44

802.11ac 40



ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
 Date: 21.JAN.2024 05:45:22

802.11ac 80



ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
 Date: 21.JAN.2024 05:46:09

Equipment Modifications

No modification was made to the EUT tested.

**Support Equipment List and Details**

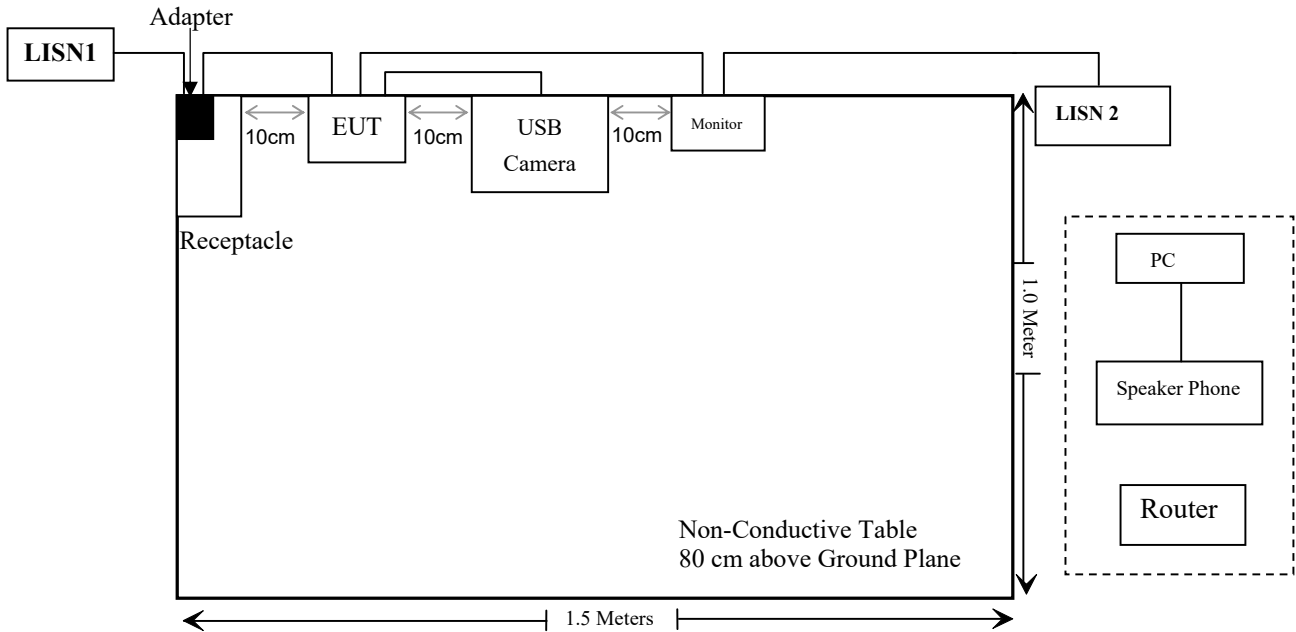
| Manufacturer | Description   | Model          | Serial Number |
|--------------|---------------|----------------|---------------|
| DELL         | PC            | Latitude E5430 | JG3NLV1       |
| LINKVIL      | USB camera    | CM70           | Unknown       |
| Redmi        | Monitor       | RMMNT238NF     | Unknown       |
| LINKVIL      | Speaker phone | MS10           | Unknown       |
| HUAWEI       | Router        | WS5100         | A4933FEF1D01  |

**External I/O Cable**

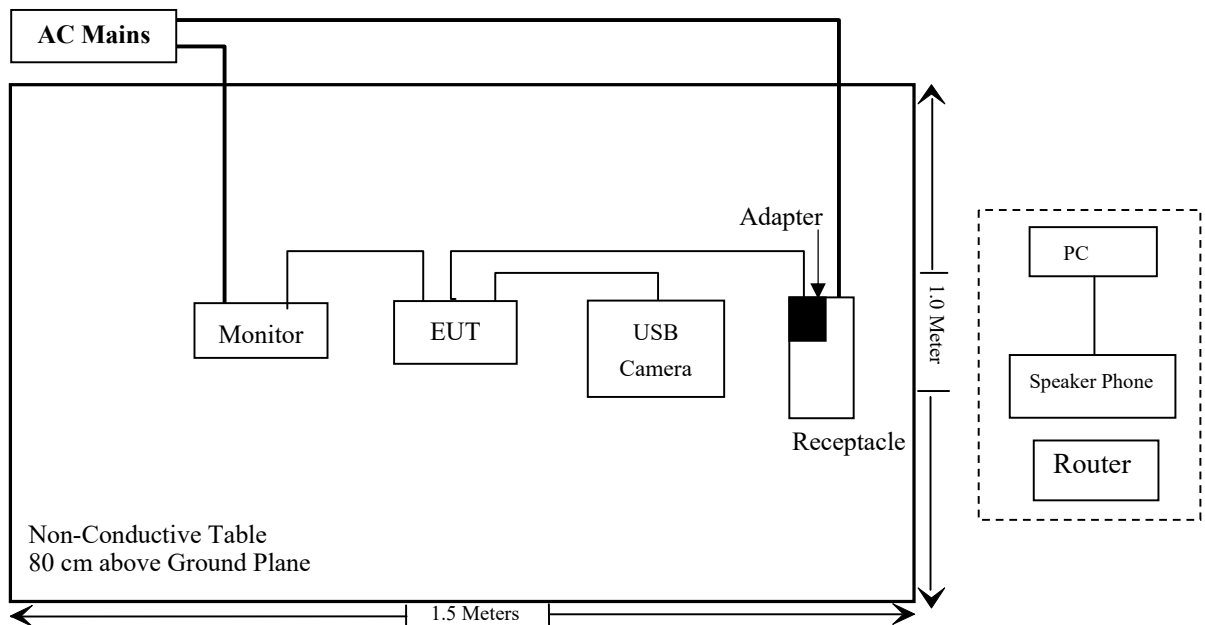
| Cable Description                  | Length (m) | From Port       | To         |
|------------------------------------|------------|-----------------|------------|
| Unshielded un-detachable AC cable  | 1.2        | LISN1/ AC Mains | Receptacle |
| Unshielded un-detachable DC cable  | 1.5        | Adapter         | EUT        |
| Unshielded detachable USB cable    | 1.2        | EUT             | USB camera |
| Unshielded detachable HDMI cable   | 1.2        | EUT             | Monitor    |
| Unshielded un-detachable AC cable  | 1.5        | AC Mains/LISN2  | Monitor    |
| Unshielded un-detachable USB cable | 0.6        | Speaker phone   | PC         |

### Block Diagram of Test Setup

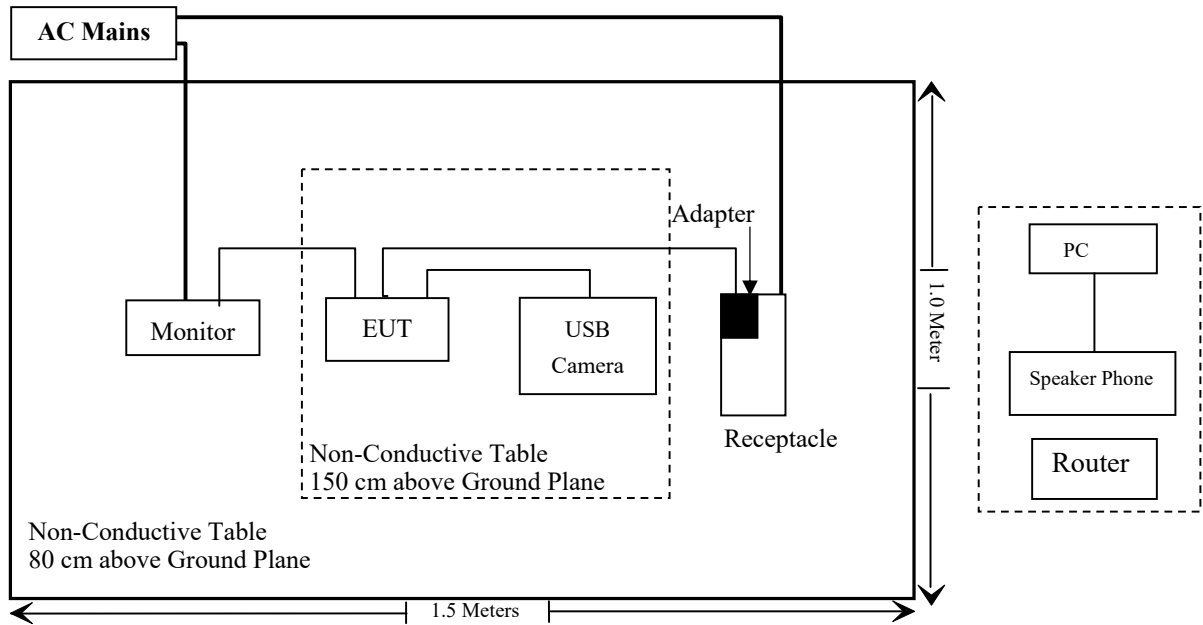
For Conducted Emissions



For Radiated Emissions (Below 1GHz):



For Radiated Emissions (Above 1GHz):



## SUMMARY OF TEST RESULTS

| FCC Rules                       | Description of Test                      | Result         |
|---------------------------------|--|----------------|
| §1.1307 (b) & §2.1091           | MPE-Based Exemption                      | Compliant      |
| §15.203                         | Antenna Requirement                      | Compliant      |
| §15.407(b)(9)& §15.207(a)       | Conducted Emissions                      | Compliant      |
| §15.205& §15.209<br>&§15.407(b) | Undesirable Emission& Restricted Bands   | Compliant      |
| §15.407(a) (e)                  | 26 dB Emission Bandwidth & 6dB Bandwidth | Compliant      |
| §15.407(a)                      | Conducted Transmitter Output Power       | Compliant      |
| §15.407 (a)                     | Power Spectral Density                   | Compliant      |
| §15.407 (h)                     | Transmit Power Control (TPC)             | Not Applicable |
| §15.407 (h)                     | Dynamic Frequency Selection (DFS)        | Compliant*     |

Compliant\*: Please refer to the DFS report SZ1231214-75461E-RF-00B.

Not Applicable –The supplier declared that the equipment has no this function.



**TEST EQUIPMENT LIST**

| Manufacturer                    | Description           | Model                   | Serial Number          | Calibration Date | Calibration Due Date |
|---------------------------------|-----------------------|-------------------------|------------------------|------------------|----------------------|
| <b>Conducted Emissions Test</b> |                       |                         |                        |                  |                      |
| Rohde & Schwarz                 | EMI Test Receiver     | ESCI                    | 101120                 | 2023/02/08       | 2024/02/07           |
| Rohde & Schwarz                 | LISN                  | ENV216                  | 101613                 | 2023/02/08       | 2024/02/07           |
| Rohde & Schwarz                 | Transient Limiter     | ESH3Z2                  | DE25985                | 2023/08/03       | 2024/08/02           |
| Unknown                         | CE Cable              | CE Cable                | UF A210B-1-0720-504504 | 2023/08/03       | 2024/08/02           |
| Audix                           | EMI Test software     | E3                      | 191218                 | NCR              | NCR                  |
| Narda                           | LISN                  | L3-100                  | 210WT600902            | 2023/02/08       | 2024/02/07           |
| <b>Radiated Emissions Test</b>  |                       |                         |                        |                  |                      |
| R&S                             | EMI Test Receiver     | ESR3                    | 102455                 | 2023/02/08       | 2024/02/07           |
| Sonoma instrument               | Pre-amplifier         | 310 N                   | 186238                 | 2023/06/08       | 2024/06/07           |
| Sunol Sciences                  | Broadband Antenna     | JB1                     | A040904-1              | 2023/07/20       | 2024/07/19           |
| ETS                             | Passive Loop Antenna  | 6512                    | 29604                  | 2023/07/07       | 2024/07/06           |
| Unknown                         | Cable                 | Chamber Cable 1         | F-03-EM236             | 2023/08/03       | 2024/08/02           |
| Unknown                         | Cable                 | Chamber Cable 4         | EC-007                 | 2023/08/03       | 2024/08/02           |
| Audix                           | EMI Test software     | E3                      | 19821b(V9)             | NCR              | NCR                  |
| Rohde & Schwarz                 | Spectrum Analyzer     | FSV40                   | 101605                 | 2023/04/18       | 2024/04/17           |
| COM-POWER                       | Pre-amplifier         | PA-122                  | 181919                 | 2023/06/29       | 2024/06/28           |
| Schwarzbeck                     | Horn Antenna          | BBHA9120D(1201)         | 1143                   | 2023/07/26       | 2024/07/25           |
| Unknown                         | RF Cable              | KMSE                    | 0735                   | 2023/10/08       | 2024/10/07           |
| Unknown                         | RF Cable              | UFA147                  | 219661                 | 2023/10/08       | 2024/10/07           |
| Unknown                         | RF Cable              | XH750A-N                | J-10M                  | 2023/10/08       | 2024/10/07           |
| SNSD                            | 5G Band Reject filter | BSF5150-5850MN-0899-004 | 5G filter              | 2023/08/03       | 2024/08/02           |
| A.H.System                      | Pre-amplifier         | PAM-1840VH              | 190                    | 2023/08/03       | 2024/08/02           |
| Electro-Mechanics Co            | Horn Antenna          | 3116                    | 9510-2270              | 2023/09/18       | 2026/09/17           |
| UTIFLEX                         | RF Cable              | NO. 13                  | 232308-001             | 2023/08/03       | 2024/08/02           |

| Manufacturer             | Description                  | Model   | Serial Number | Calibration Date | Calibration Due Date |
|--------------------------|------------------------------|---------|---------------|------------------|----------------------|
| <b>RF Conducted Test</b> |                              |         |               |                  |                      |
| Agilent                  | USB wideband power sensor    | U2021XA | MY52350001    | 2023/06/08       | 2024/06/07           |
| Rohde & Schwarz          | Signal and Spectrum Analyzer | FSV40   | 101473        | 2023/02/08       | 2024/02/07           |
| MARCONI                  | 10dB Attenuator              | 6534/3  | 2942          | 2023/07/04       | 2024/07/03           |
| Micro-Tronics            | RF Cable                     | 8082135 | W1113         | 2023/07/04       | 2024/07/03           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## FCC §1.1307 (B) & §2.1091- MPE-BASED EXEMPTION

### Applicable Standard

According to subpart subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 Interim General RF Exposure Guidance

MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

| RF Source frequency (MHz) | Threshold ERP (watts) |
|---------------------------|-----------------------|
| 0.3-1.34                  | $1,920 R^2$ .         |
| 1.34-30                   | $3,450 R^2/f^2$ .     |
| 30-300                    | $3.83 R^2$ .          |
| 300-1,500                 | $0.0128 R^2 f$ .      |
| 1,500-100,000             | $19.2 R^2$ .          |

R is the minimum separation distance in meters  
 f = frequency in MHz

### Result

| Mode       | Frequency (MHz) | Tune up conducted power <sup>#</sup> | Antenna Gain <sup>#</sup> |       | ERP   |        | Evaluation Distance (m) | ERP Limit (mW) |
|------------|-----------------|--------------------------------------|---------------------------|-------|-------|--------|-------------------------|----------------|
|            |                 | (dBm)                                | (dBi)                     | (dBd) | (dBm) | (mW)   |                         |                |
| 5.2G Wi-Fi | 5180-5240       | 17.0                                 | 5.3                       | 3.15  | 20.15 | 103.51 | 0.2                     | 768            |
| 5.3G Wi-Fi | 5260-5320       | 14.0                                 | 5.3                       | 3.15  | 17.15 | 51.88  | 0.2                     | 768            |
| 5.6G Wi-Fi | 5500-5720       | 16.0                                 | 5.3                       | 3.15  | 19.15 | 82.22  | 0.2                     | 768            |
| 5.8G Wi-Fi | 5745-5825       | 16.0                                 | 5.3                       | 3.15  | 19.15 | 82.22  | 0.2                     | 768            |

Note: The tune up conducted power and antenna gain was declared by the applicant.

To maintain compliance with the FCC’s RF exposure guidelines, place the equipment at least 20cm from nearby persons.

**Result: Compliant**

## **FCC §15.203 – ANTENNA REQUIREMENT**

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### **Applicable Standard**

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall 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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.407 (a), if the transmitting antennas of directional gain greater than 6dBi are used, the transmit power and power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **Antenna Connector Construction**

The EUT has two internal antennas which was permanently attached, and the maximum antenna gain<sup>#</sup> is 5.3dBi, fulfill the requirement of this section. Please refer to the EUT photos.

**Result: Compliant**

**FCC §15.407 (b) (6) §15.207 (a) – CONDUCTED EMISSIONS**

**Applicable Standard**

FCC §15.207, §15.407(b) (6)

**EUT Setup**



- Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

**EMI Test Receiver Setup**

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range  | IF B/W |
|------------------|--------|
| 150 kHz – 30 MHz | 9 kHz  |

**Test Procedure**

During the conducted emission test, the adapter was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and Average detection mode.

## Factor & Over Limit Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

$$\text{Factor} = \text{LISN VDF} + \text{Cable Loss}$$

The “**Over limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

$$\begin{aligned}\text{Over Limit} &= \text{Level} - \text{Limit} \\ \text{Level} &= \text{Read Level} + \text{Factor}\end{aligned}$$

Note: The term "cable loss" refers to the combination of a cable and a 10dB transient limiter (attenuator).

## Test Data

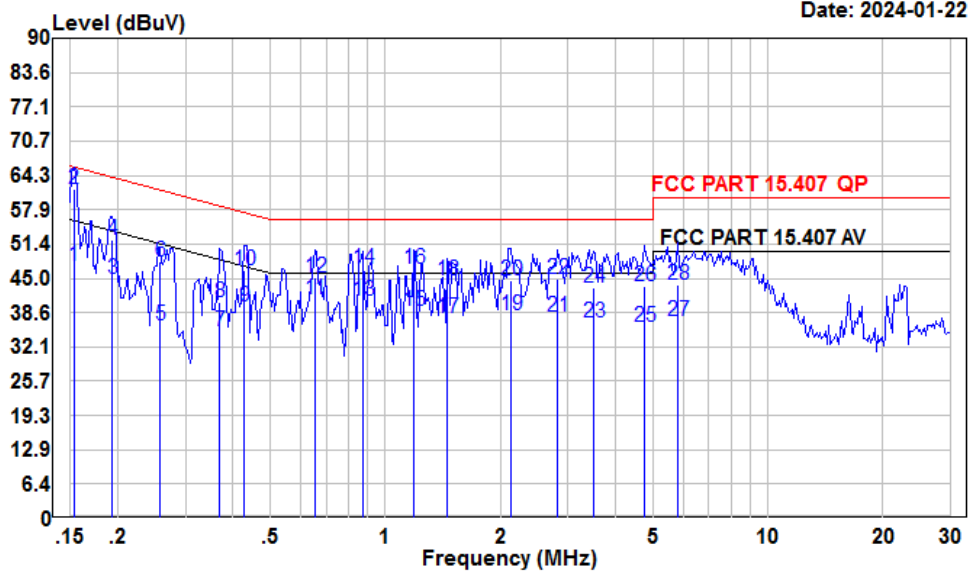
### Environmental Conditions

|                           |         |
|---------------------------|---------|
| <b>Temperature:</b>       | 25 °C   |
| <b>Relative Humidity:</b> | 50 %    |
| <b>ATM Pressure:</b>      | 101 kPa |

*The testing was performed by Macy Shi on 2024-01-22.*

*EUT operation mode: Transmitting (Maximum output power mode, 802.11 ac 80 5210MHz MIMO)*

AC 120V/60 Hz, Line



Condition: Line  
 Project : SZ1231214-75461E-RF  
 Tester : Macy shi  
 Note : 5G WIFI

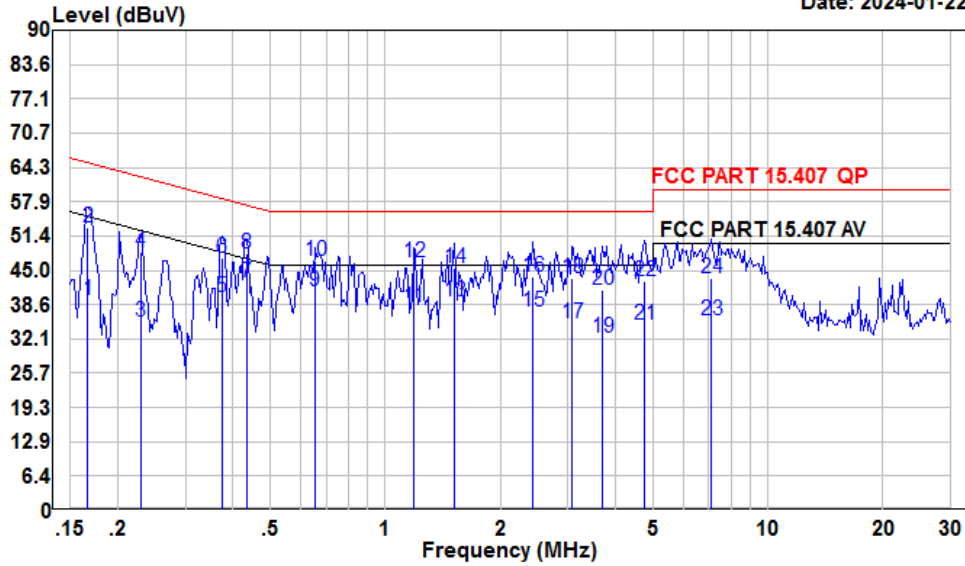
|    | Read Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|-----------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz       | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 1  | 0.15      | 26.84      | 47.19      | 10.20       | 10.15      | 55.82      | -8.63      | Average |
| 2  | 0.15      | 41.46      | 61.81      | 10.20       | 10.15      | 65.82      | -4.01      | QP      |
| 3  | 0.19      | 24.60      | 44.90      | 10.20       | 10.10      | 53.89      | -8.99      | Average |
| 4  | 0.19      | 31.80      | 52.10      | 10.20       | 10.10      | 63.89      | -11.79     | QP      |
| 5  | 0.26      | 15.77      | 36.17      | 10.20       | 10.20      | 51.51      | -15.34     | Average |
| 6  | 0.26      | 27.77      | 48.17      | 10.20       | 10.20      | 61.51      | -13.34     | QP      |
| 7  | 0.37      | 14.80      | 35.18      | 10.20       | 10.18      | 48.52      | -13.34     | Average |
| 8  | 0.37      | 20.20      | 40.58      | 10.20       | 10.18      | 58.52      | -17.94     | QP      |
| 9  | 0.43      | 19.27      | 39.67      | 10.20       | 10.20      | 47.29      | -7.62      | Average |
| 10 | 0.43      | 26.16      | 46.56      | 10.20       | 10.20      | 57.29      | -10.73     | QP      |
| 11 | 0.65      | 20.42      | 40.99      | 10.36       | 10.21      | 46.00      | -5.01      | Average |
| 12 | 0.65      | 24.56      | 45.13      | 10.36       | 10.21      | 56.00      | -10.87     | QP      |
| 13 | 0.87      | 20.30      | 40.75      | 10.28       | 10.17      | 46.00      | -5.25      | Average |
| 14 | 0.87      | 26.30      | 46.75      | 10.28       | 10.17      | 56.00      | -9.25      | QP      |
| 15 | 1.18      | 18.50      | 38.76      | 10.20       | 10.06      | 46.00      | -7.24      | Average |
| 16 | 1.18      | 26.60      | 46.86      | 10.20       | 10.06      | 56.00      | -9.14      | QP      |

|    | Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz  | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 17 | 1.45 | 17.30      | 37.56      | 10.20       | 10.06      | 46.00      | -8.44      | Average |
| 18 | 1.45 | 24.40      | 44.66      | 10.20       | 10.06      | 56.00      | -11.34     | QP      |
| 19 | 2.12 | 17.80      | 38.20      | 10.21       | 10.19      | 46.00      | -7.80      | Average |
| 20 | 2.12 | 24.20      | 44.60      | 10.21       | 10.19      | 56.00      | -11.40     | QP      |
| 21 | 2.82 | 17.20      | 37.70      | 10.25       | 10.25      | 46.00      | -8.30      | Average |
| 22 | 2.82 | 24.30      | 44.80      | 10.25       | 10.25      | 56.00      | -11.20     | QP      |
| 23 | 3.49 | 16.10      | 36.65      | 10.28       | 10.27      | 46.00      | -9.35      | Average |
| 24 | 3.49 | 22.80      | 43.35      | 10.28       | 10.27      | 56.00      | -12.65     | QP      |
| 25 | 4.75 | 15.49      | 35.96      | 10.24       | 10.23      | 46.00      | -10.04     | Average |
| 26 | 4.75 | 23.06      | 43.53      | 10.24       | 10.23      | 56.00      | -12.47     | QP      |
| 27 | 5.81 | 16.55      | 36.94      | 10.17       | 10.22      | 50.00      | -13.06     | Average |
| 28 | 5.81 | 23.27      | 43.66      | 10.17       | 10.22      | 60.00      | -16.34     | QP      |



AC 120V/60 Hz, Neutral

Date: 2024-01-22



Condition: Neutral  
 Project : SZ1231214-75461E-RF  
 Tester : Macy shi  
 Note : 5G WIFI

|    | Read Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|-----------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz       | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 1  | 0.17      | 19.07      | 39.46      | 10.24       | 10.15      | 55.12      | -15.66     | Average |
| 2  | 0.17      | 32.65      | 53.04      | 10.24       | 10.15      | 65.12      | -12.08     | QP      |
| 3  | 0.23      | 14.84      | 35.29      | 10.29       | 10.16      | 52.48      | -17.19     | Average |
| 4  | 0.23      | 27.94      | 48.39      | 10.29       | 10.16      | 62.48      | -14.09     | QP      |
| 5  | 0.37      | 19.53      | 39.95      | 10.23       | 10.19      | 48.43      | -8.48      | Average |
| 6  | 0.37      | 26.85      | 47.27      | 10.23       | 10.19      | 58.43      | -11.16     | QP      |
| 7  | 0.43      | 22.19      | 42.61      | 10.22       | 10.20      | 47.20      | -4.59      | Average |
| 8  | 0.43      | 27.59      | 48.01      | 10.22       | 10.20      | 57.20      | -9.19      | QP      |
| 9  | 0.65      | 20.70      | 41.19      | 10.28       | 10.21      | 46.00      | -4.81      | Average |
| 10 | 0.65      | 26.40      | 46.89      | 10.28       | 10.21      | 56.00      | -9.11      | QP      |
| 11 | 1.18      | 17.90      | 38.21      | 10.25       | 10.06      | 46.00      | -7.79      | Average |
| 12 | 1.18      | 26.30      | 46.61      | 10.25       | 10.06      | 56.00      | -9.39      | QP      |
| 13 | 1.51      | 18.72      | 39.10      | 10.32       | 10.06      | 46.00      | -6.90      | Average |
| 14 | 1.51      | 24.97      | 45.35      | 10.32       | 10.06      | 56.00      | -10.65     | QP      |
| 15 | 2.44      | 16.60      | 37.15      | 10.34       | 10.21      | 46.00      | -8.85      | Average |
| 16 | 2.44      | 23.30      | 43.85      | 10.34       | 10.21      | 56.00      | -12.15     | QP      |

|    | Freq | Read Level | LISN Level | LISN Factor | Cable Loss | Limit Line | Over Limit | Remark  |
|----|------|------------|------------|-------------|------------|------------|------------|---------|
|    | MHz  | dBuV       | dBuV       | dB          | dB         | dBuV       | dB         |         |
| 17 | 3.07 | 14.60      | 35.15      | 10.28       | 10.27      | 46.00      | -10.85     | Average |
| 18 | 3.07 | 23.00      | 43.55      | 10.28       | 10.27      | 56.00      | -12.45     | QP      |
| 19 | 3.68 | 12.01      | 32.49      | 10.22       | 10.26      | 46.00      | -13.51     | Average |
| 20 | 3.68 | 20.91      | 41.39      | 10.22       | 10.26      | 56.00      | -14.61     | QP      |
| 21 | 4.75 | 14.35      | 34.78      | 10.20       | 10.23      | 46.00      | -11.22     | Average |
| 22 | 4.75 | 22.55      | 42.98      | 10.20       | 10.23      | 56.00      | -13.02     | QP      |
| 23 | 7.10 | 15.21      | 35.63      | 10.20       | 10.22      | 50.00      | -14.37     | Average |
| 24 | 7.10 | 23.08      | 43.50      | 10.20       | 10.22      | 60.00      | -16.50     | QP      |

## §15.205 & §15.209 & §15.407(B)– UNDESIRABLE EMISSION

### Applicable Standard

FCC §15.407 (b); §15.209; §15.205;

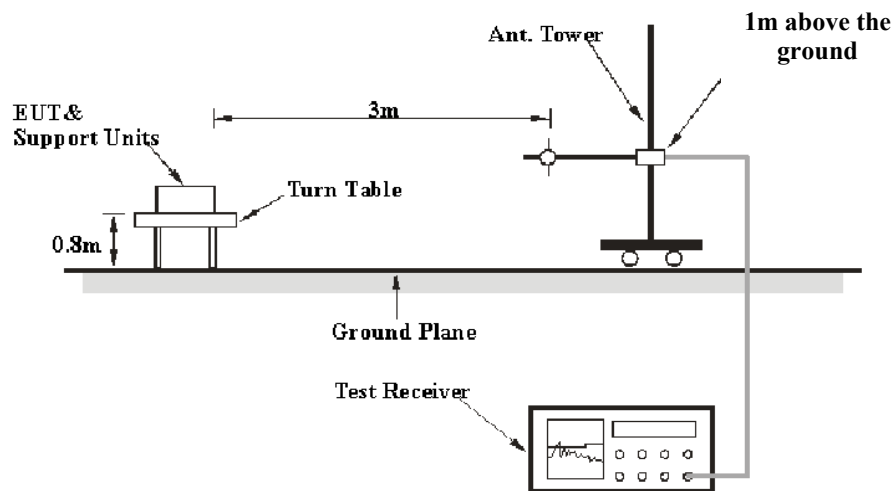
(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
  - (i) All emissions shall be limited to a level of  $-27$  dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

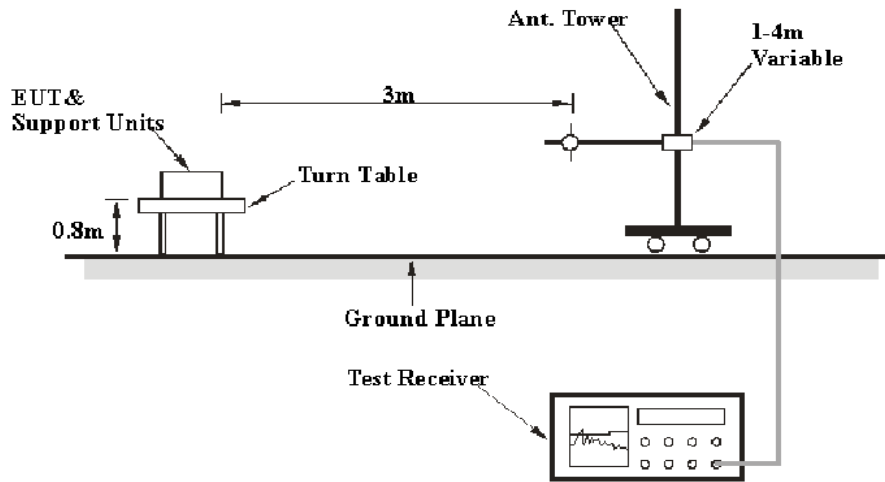
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

### EUT Setup

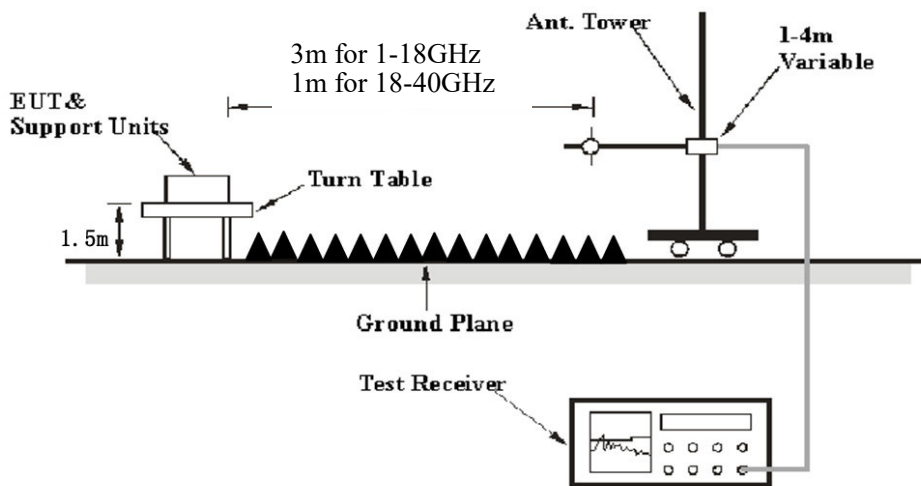
9 kHz-30MHz:



**30MHz-1GHz:**



**Above 1 GHz:**



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

## EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9 kHz-1GHz:

| Frequency Range   | RBW     | Video B/W | IF B/W  | Measurement |
|-------------------|---------|-----------|---------|-------------|
| 9 kHz – 150 kHz   | /       | /         | 200 Hz  | QP          |
|                   | 300 Hz  | 1 kHz     | /       | PK          |
| 150 kHz – 30 MHz  | /       | /         | 9 kHz   | QP          |
|                   | 10 kHz  | 30 kHz    | /       | PK          |
| 30 MHz – 1000 MHz | /       | /         | 120 kHz | QP          |
|                   | 100 kHz | 300 kHz   | /       | PK          |

1-40GHz:

| Frequency Range | Duty cycle | RBW  | Video B/W  |
|-----------------|------------|------|------------|
| PK              | Any        | 1MHz | 3 MHz      |
| AV              | >98%       | 1MHz | 10 Hz      |
|                 | <98%       | 1MHz | $\geq 1/T$ |

Note: T is minimum transmission duration

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

## Test Procedure

### Radiated Spurious Emission

During the radiated emission test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all the installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to ANSI C63.10-2013,9.4: For field strength measurements made at other than the distance at which the applicable limit is specified, extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance). In some cases, a different distance correction factor may be required;

$$E_{\text{SpecLimit}} = E_{\text{Meas}} + 20 \log \left( \frac{d_{\text{Meas}}}{d_{\text{SpecLimit}}} \right)$$

where

- $E_{\text{SpecLimit}}$  is the field strength of the emission at the distance specified by the limit, in dB $\mu$ V/m
- $E_{\text{Meas}}$  is the field strength of the emission at the measurement distance, in dB $\mu$ V/m
- $d_{\text{Meas}}$  is the measurement distance, in m
- $d_{\text{SpecLimit}}$  is the distance specified by the limit, in m

So the extrapolation factor of 1m is  $20 * \log(1/3) = -9.5$  dB, for 18-40GHz range, the limit of 1m distance was added by 9.5dB from limit of 3m to compared with the result measurement at 1m distance.

### Factor & Over Limit/Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit/Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit/Margin} &= \text{Level/Corrected Amplitude} - \text{Limit} \\ \text{Level / Corrected Amplitude} &= \text{Read Level} + \text{Factor} \end{aligned}$$

### Test Data

#### Environmental Conditions

|                           |            |
|---------------------------|------------|
| <b>Temperature:</b>       | 23~25.1 °C |
| <b>Relative Humidity:</b> | 50~55 %    |
| <b>ATM Pressure:</b>      | 101 kPa    |

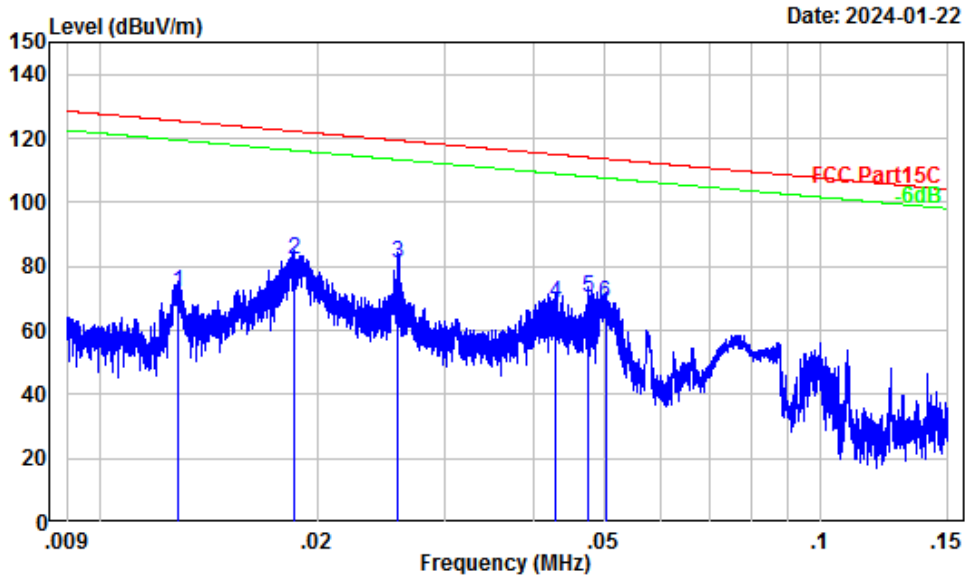
*The testing was performed by Warren Huang on 2024-01-22 for below 1GHz and Tyler Wu and Zenos Qiao from 2024-01-22 to 2024-02-02 for above 1GHz.*

*EUT operation mode: Transmitting*

*Note: After pre-scan in the X, Y and Z axes of orientation, the worst case is below.*

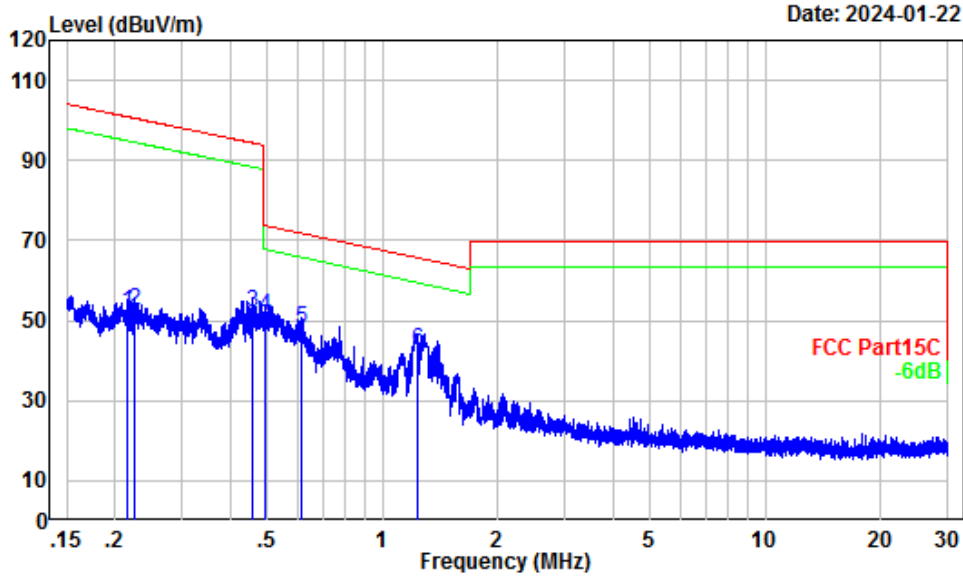
**9 kHz-30MHz:** (Maximum output power mode, 802.11 ac 80 5210MHz MIMO)

Parallel:



Site : chamber  
 Condition : 3m  
 Project Number: SZ1231214-75461E-RF  
 Note : 5G WIFI  
 Tester : Warren Huang

|   | Freq | Factor | Read Level | Level  | Limit  | Over   | Remark |
|---|------|--------|------------|--------|--------|--------|--------|
|   | MHz  | dB/m   | dBuV       | dBuV/m | dBuV/m | dB     |        |
| 1 | 0.01 | 52.44  | 19.60      | 72.04  | 125.44 | -53.40 | QP     |
| 2 | 0.02 | 50.65  | 31.46      | 82.11  | 122.19 | -40.08 | QP     |
| 3 | 0.03 | 48.41  | 32.50      | 80.91  | 119.33 | -38.42 | QP     |
| 4 | 0.04 | 43.19  | 25.44      | 68.63  | 114.95 | -46.32 | QP     |
| 5 | 0.05 | 41.79  | 28.35      | 70.14  | 114.08 | -43.94 | QP     |
| 6 | 0.05 | 40.97  | 27.33      | 68.30  | 113.58 | -45.28 | QP     |



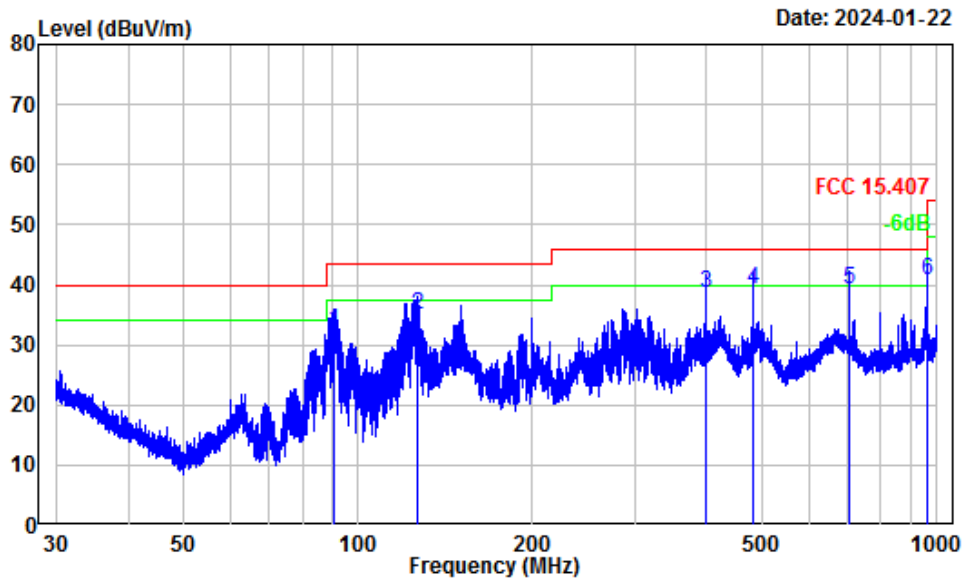
Site : chamber  
 Condition : 3m  
 Project Number: SZ1231214-75461E-RF  
 Note : 5G WIFI  
 Tester : Warren Huang

|   | Freq | Factor | Read Level | Level  | Limit  | Over   | Remark |
|---|------|--------|------------|--------|--------|--------|--------|
|   | MHz  | dB/m   | dBuV       | dBuV/m | dBuV/m | dB     |        |
| 1 | 0.22 | 28.41  | 23.55      | 51.96  | 100.91 | -48.95 | QP     |
| 2 | 0.23 | 28.06  | 24.51      | 52.57  | 100.52 | -47.95 | QP     |
| 3 | 0.46 | 21.52  | 30.68      | 52.20  | 94.37  | -42.17 | QP     |
| 4 | 0.49 | 21.03  | 30.11      | 51.14  | 73.73  | -22.59 | QP     |
| 5 | 0.61 | 19.48  | 28.55      | 48.03  | 71.79  | -23.76 | QP     |
| 6 | 1.23 | 14.31  | 28.33      | 42.64  | 65.64  | -23.00 | QP     |



**30 MHz–1 GHz: (Maximum output power mode, 802.11 ac 80 5210MHz MIMO)**

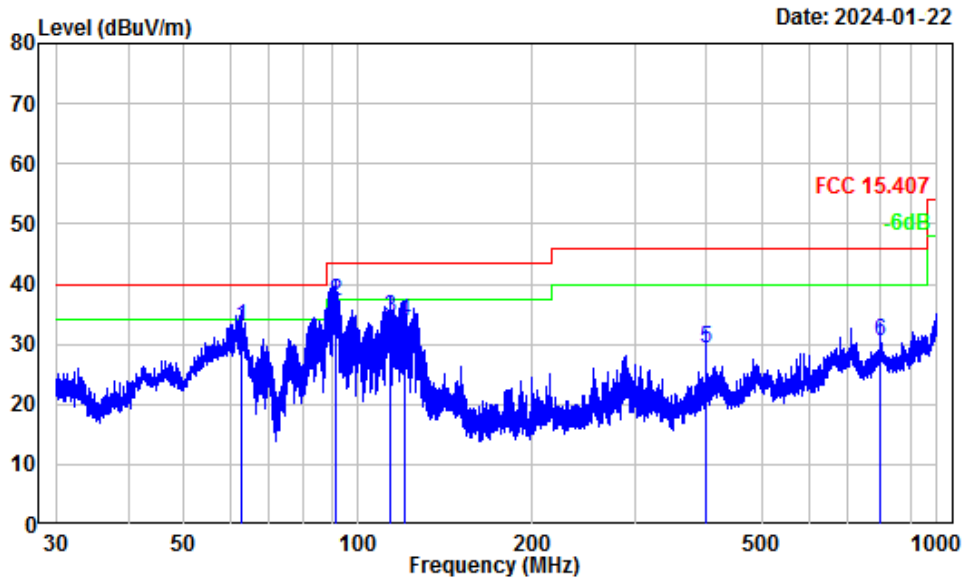
**Horizontal**



Site : chamber  
 Condition : 3m Horizontal  
 Project Number: SZ1231214-75461E-RF  
 Note : 5G WIFI  
 Tester : Warren Huang

|   | Freq   |        | Read Level |        | Limit | Over   | Remark |
|---|--------|--------|------------|--------|-------|--------|--------|
|   | MHz    | dB/m   | dBuV       | dBuV/m | Line  | Limit  |        |
| 1 | 90.70  | -16.36 | 48.72      | 32.36  | 43.50 | -11.14 | QP     |
| 2 | 126.38 | -10.31 | 45.36      | 35.05  | 43.50 | -8.45  | QP     |
| 3 | 400.08 | -7.36  | 45.95      | 38.59  | 46.00 | -7.41  | QP     |
| 4 | 480.11 | -5.28  | 44.42      | 39.14  | 46.00 | -6.86  | QP     |
| 5 | 704.23 | -1.52  | 40.81      | 39.29  | 46.00 | -6.71  | QP     |
| 6 | 960.06 | 2.00   | 38.80      | 40.80  | 54.00 | -13.20 | QP     |

**Vertical**



Site : chamber  
 Condition : 3m Vertical  
 Project Number: SZ1231214-75461E-RF  
 Note : 5G WIFI  
 Tester : Warren Huang

|   | Freq Factor |        | Read Level |        | Limit Line | Over Limit | Remark |
|---|-------------|--------|------------|--------|------------|------------|--------|
|   | MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 62.87       | -17.50 | 50.29      | 32.79  | 40.00      | -7.21      | QP     |
| 2 | 91.41       | -17.06 | 54.19      | 37.13  | 43.50      | -6.37      | QP     |
| 3 | 113.61      | -11.77 | 46.22      | 34.45  | 43.50      | -9.05      | QP     |
| 4 | 120.01      | -10.75 | 44.62      | 33.87  | 43.50      | -9.63      | QP     |
| 5 | 400.08      | -7.56  | 36.79      | 29.23  | 46.00      | -16.77     | QP     |
| 6 | 798.28      | -0.70  | 31.21      | 30.51  | 46.00      | -15.49     | QP     |

**Above 1GHz:**

**5150-5250 MHz:**

| Frequency (MHz)        | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11a (ANT 1)</b> |                |        |             |               |                              |                |             |
| 5180MHz                |                |        |             |               |                              |                |             |
| 10360.00               | 45.36          | PK     | H           | 13.07         | 58.43                        | 68.2           | -9.77       |
| 10360.00               | 44.37          | PK     | V           | 13.07         | 57.44                        | 68.2           | -10.76      |
| 5200MHz                |                |        |             |               |                              |                |             |
| 10400.00               | 45.83          | PK     | H           | 13.12         | 58.95                        | 68.2           | -9.25       |
| 10400.00               | 46.12          | PK     | V           | 13.12         | 59.24                        | 68.2           | -8.96       |
| 5240MHz                |                |        |             |               |                              |                |             |
| 10480.00               | 46.71          | PK     | H           | 13.07         | 59.78                        | 68.2           | -8.42       |
| 10480.00               | 47.06          | PK     | V           | 13.07         | 60.13                        | 68.2           | -8.07       |
| <b>802.11a (ANT 2)</b> |                |        |             |               |                              |                |             |
| 5180MHz                |                |        |             |               |                              |                |             |
| 10360.00               | 44.59          | PK     | H           | 13.07         | 57.66                        | 68.2           | -10.54      |
| 10360.00               | 44.94          | PK     | V           | 13.07         | 58.01                        | 68.2           | -10.19      |
| 5200MHz                |                |        |             |               |                              |                |             |
| 10400.00               | 45.03          | PK     | H           | 13.12         | 58.15                        | 68.2           | -10.05      |
| 10400.00               | 45.26          | PK     | V           | 13.12         | 58.38                        | 68.2           | -9.82       |
| 5240MHz                |                |        |             |               |                              |                |             |
| 10480.00               | 45.24          | PK     | H           | 13.07         | 58.31                        | 68.2           | -9.89       |
| 10480.00               | 45.88          | PK     | V           | 13.07         | 58.95                        | 68.2           | -9.25       |
| <b>802.11ac20</b>      |                |        |             |               |                              |                |             |
| 5180MHz                |                |        |             |               |                              |                |             |
| 10360.00               | 45.83          | PK     | H           | 13.07         | 58.90                        | 68.2           | -9.30       |
| 10360.00               | 46.12          | PK     | V           | 13.07         | 59.19                        | 68.2           | -9.01       |
| 5200MHz                |                |        |             |               |                              |                |             |
| 10400.00               | 45.62          | PK     | H           | 13.12         | 58.74                        | 68.2           | -9.46       |
| 10400.00               | 46.07          | PK     | V           | 13.12         | 59.19                        | 68.2           | -9.01       |
| 5240MHz                |                |        |             |               |                              |                |             |
| 10480.00               | 45.43          | PK     | H           | 13.07         | 58.50                        | 68.2           | -9.70       |
| 10480.00               | 45.08          | PK     | V           | 13.07         | 58.15                        | 68.2           | -10.05      |

| Frequency (MHz)   | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBμV/m) | Limit (dBμV/m) | Margin (dB) |
|-------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                   | Reading (dBμV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11ac40</b> |                |        |             |               |                              |                |             |
| 5190MHz           |                |        |             |               |                              |                |             |
| 10380.00          | 44.81          | PK     | H           | 13.09         | 57.90                        | 68.2           | -10.30      |
| 10380.00          | 44.53          | PK     | V           | 13.09         | 57.62                        | 68.2           | -10.58      |
| 5230MHz           |                |        |             |               |                              |                |             |
| 10460.00          | 45.29          | PK     | H           | 13.09         | 58.38                        | 68.2           | -9.82       |
| 10460.00          | 44.91          | PK     | V           | 13.09         | 58.00                        | 68.2           | -10.20      |
| <b>802.11AC80</b> |                |        |             |               |                              |                |             |
| 5210MHz           |                |        |             |               |                              |                |             |
| 10420.00          | 44.92          | PK     | H           | 13.12         | 58.04                        | 68.2           | -10.16      |
| 10420.00          | 45.26          | PK     | V           | 13.12         | 58.38                        | 68.2           | -9.82       |

**5250-5350MHz:**

| Frequency (MHz)        | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11a (ANT 1)</b> |                |        |             |               |                              |                |             |
| 5260MHz                |                |        |             |               |                              |                |             |
| 10520.00               | 45.24          | PK     | H           | 13.05         | 58.29                        | 68.2           | -9.91       |
| 10520.00               | 46.05          | PK     | V           | 13.05         | 59.10                        | 68.2           | -9.10       |
| 5280MHz                |                |        |             |               |                              |                |             |
| 10560.00               | 47.64          | PK     | H           | 13.02         | 60.66                        | 68.2           | -7.54       |
| 10560.00               | 48.85          | PK     | V           | 13.02         | 61.87                        | 68.2           | -6.33       |
| 5320MHz                |                |        |             |               |                              |                |             |
| 10640.00               | 50.86          | PK     | H           | 13.19         | 64.05                        | 74             | -9.95       |
| 10640.00               | 36.15          | AV     | H           | 13.19         | 49.34                        | 54             | -4.66       |
| 10640.00               | 51.12          | PK     | V           | 13.19         | 64.31                        | 74             | -9.69       |
| 10640.00               | 37.07          | AV     | V           | 13.19         | 50.26                        | 54             | -3.74       |
| <b>802.11a (ANT 2)</b> |                |        |             |               |                              |                |             |
| 5260MHz                |                |        |             |               |                              |                |             |
| 10520.00               | 45.68          | PK     | H           | 13.05         | 58.73                        | 68.2           | -9.47       |
| 10520.00               | 45.37          | PK     | V           | 13.05         | 58.42                        | 68.2           | -9.78       |
| 5280MHz                |                |        |             |               |                              |                |             |
| 10560.00               | 45.47          | PK     | H           | 13.02         | 58.49                        | 68.2           | -9.71       |
| 10560.00               | 45.49          | PK     | V           | 13.02         | 58.51                        | 68.2           | -9.69       |
| 5320MHz                |                |        |             |               |                              |                |             |
| 10640.00               | 46.16          | PK     | H           | 13.19         | 59.35                        | 74             | -14.65      |
| 10640.00               | 32.54          | AV     | H           | 13.19         | 45.73                        | 54             | -8.27       |
| 10640.00               | 46.92          | PK     | V           | 13.19         | 60.11                        | 74             | -13.89      |
| 10640.00               | 33.27          | AV     | V           | 13.19         | 46.46                        | 54             | -7.54       |
| <b>802.11ac20</b>      |                |        |             |               |                              |                |             |
| 5260MHz                |                |        |             |               |                              |                |             |
| 10520.00               | 46.53          | PK     | H           | 13.05         | 59.58                        | 68.2           | -8.62       |
| 10520.00               | 47.67          | PK     | V           | 13.05         | 60.72                        | 68.2           | -7.48       |
| 5280MHz                |                |        |             |               |                              |                |             |
| 10560.00               | 45.44          | PK     | H           | 13.02         | 58.46                        | 68.2           | -9.74       |
| 10560.00               | 45.32          | PK     | V           | 13.02         | 58.34                        | 68.2           | -9.86       |
| 5320MHz                |                |        |             |               |                              |                |             |
| 10640.00               | 46.17          | PK     | H           | 13.19         | 59.36                        | 74             | -14.64      |
| 10640.00               | 32.54          | AV     | H           | 13.19         | 45.73                        | 54             | -8.27       |
| 10640.00               | 46.59          | PK     | V           | 13.19         | 59.78                        | 74             | -14.22      |

|          |       |    |   |       |       |    |       |
|----------|-------|----|---|-------|-------|----|-------|
| 10640.00 | 33.32 | AV | V | 13.19 | 46.51 | 54 | -7.49 |
|----------|-------|----|---|-------|-------|----|-------|

| Frequency (MHz)   | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|-------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                   | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11ac40</b> |                |        |             |               |                              |                |             |
| 5270MHz           |                |        |             |               |                              |                |             |
| 10520.00          | 45.24          | PK     | H           | 13.05         | 58.29                        | 68.2           | -9.91       |
| 10520.00          | 46.05          | PK     | V           | 13.05         | 59.10                        | 68.2           | -9.10       |
| 5310MHz           |                |        |             |               |                              |                |             |
| 10620.00          | 45.02          | PK     | H           | 13.09         | 58.11                        | 74             | -15.89      |
| 10620.00          | 32.51          | AV     | H           | 13.09         | 45.60                        | 54             | -8.40       |
| 10620.00          | 45.93          | PK     | V           | 13.09         | 59.02                        | 74             | -14.98      |
| 10620.00          | 32.89          | AV     | V           | 13.09         | 45.98                        | 54             | -8.02       |
| <b>802.11AC80</b> |                |        |             |               |                              |                |             |
| 5290MHz           |                |        |             |               |                              |                |             |
| 10580.00          | 45.03          | PK     | H           | 13.00         | 58.03                        | 68.2           | -10.17      |
| 10580.00          | 44.91          | PK     | V           | 13.00         | 57.91                        | 68.2           | -10.29      |

**5470-5725MHz:**

| Frequency (MHz)        | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11a (ANT 1)</b> |                |        |             |               |                              |                |             |
| 5500MHz                |                |        |             |               |                              |                |             |
| 11000.00               | 46.78          | PK     | H           | 13.98         | 60.76                        | 74             | -13.24      |
| 11000.00               | 33.25          | AV     | H           | 13.98         | 47.23                        | 54             | -6.77       |
| 11000.00               | 47.54          | PK     | V           | 13.98         | 61.52                        | 74             | -12.48      |
| 11000.00               | 34.02          | AV     | V           | 13.98         | 48.00                        | 54             | -6.00       |
| 5580MHz                |                |        |             |               |                              |                |             |
| 11160.00               | 46.96          | PK     | H           | 13.62         | 60.58                        | 74             | -13.42      |
| 11160.00               | 33.43          | AV     | H           | 13.62         | 47.05                        | 54             | -6.95       |
| 11160.00               | 47.78          | PK     | V           | 13.62         | 61.40                        | 74             | -12.60      |
| 11160.00               | 34.25          | AV     | V           | 13.62         | 47.87                        | 54             | -6.13       |
| 5700MHz                |                |        |             |               |                              |                |             |
| 11400.00               | 47.27          | PK     | H           | 14.08         | 61.35                        | 74             | -12.65      |
| 11400.00               | 33.76          | AV     | H           | 14.08         | 47.84                        | 54             | -6.16       |
| 11400.00               | 48.03          | PK     | V           | 14.08         | 62.11                        | 74             | -11.89      |
| 11400.00               | 34.49          | AV     | V           | 14.08         | 48.57                        | 54             | -5.43       |
| 5720MHz                |                |        |             |               |                              |                |             |
| 11440.00               | 47.45          | PK     | H           | 14.08         | 61.53                        | 74             | -12.47      |
| 11440.00               | 34.12          | AV     | H           | 14.08         | 48.20                        | 54             | -5.80       |
| 11440.00               | 48.39          | PK     | V           | 14.08         | 62.47                        | 74             | -11.53      |
| 11440.00               | 34.68          | AV     | V           | 14.08         | 48.76                        | 54             | -5.24       |



| Frequency (MHz)        | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11a (ANT 2)</b> |                |        |             |               |                              |                |             |
| 5500MHz                |                |        |             |               |                              |                |             |
| 11000.00               | 45.69          | PK     | H           | 13.98         | 59.67                        | 74             | -14.33      |
| 11000.00               | 31.24          | AV     | H           | 13.98         | 45.22                        | 54             | -8.78       |
| 11000.00               | 45.92          | PK     | V           | 13.98         | 59.90                        | 74             | -14.10      |
| 11000.00               | 31.45          | AV     | V           | 13.98         | 45.43                        | 54             | -8.57       |
| 5580MHz                |                |        |             |               |                              |                |             |
| 11160.00               | 45.87          | PK     | H           | 13.62         | 59.49                        | 74             | -14.51      |
| 11160.00               | 31.48          | AV     | H           | 13.62         | 45.10                        | 54             | -8.90       |
| 11160.00               | 46.13          | PK     | V           | 13.62         | 59.75                        | 74             | -14.25      |
| 11160.00               | 31.66          | AV     | V           | 13.62         | 45.28                        | 54             | -8.72       |
| 5700MHz                |                |        |             |               |                              |                |             |
| 11400.00               | 46.33          | PK     | H           | 14.08         | 60.41                        | 74             | -13.59      |
| 11400.00               | 31.76          | AV     | H           | 14.08         | 45.84                        | 54             | -8.16       |
| 11400.00               | 46.57          | PK     | V           | 14.08         | 60.65                        | 74             | -13.35      |
| 11400.00               | 31.98          | AV     | V           | 14.08         | 46.06                        | 54             | -7.94       |
| 5720MHz                |                |        |             |               |                              |                |             |
| 11440.00               | 46.69          | PK     | H           | 14.08         | 60.77                        | 74             | -13.23      |
| 11440.00               | 32.04          | AV     | H           | 14.08         | 46.12                        | 54             | -7.88       |
| 11440.00               | 47.05          | PK     | V           | 14.08         | 61.13                        | 74             | -12.87      |
| 11440.00               | 32.57          | AV     | V           | 14.08         | 46.65                        | 54             | -7.35       |

| Frequency (MHz)   | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|-------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                   | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11ac20</b> |                |        |             |               |                              |                |             |
| 5500MHz           |                |        |             |               |                              |                |             |
| 11000.00          | 45.45          | PK     | H           | 13.98         | 59.43                        | 74             | -14.57      |
| 11000.00          | 31.37          | AV     | H           | 13.98         | 45.35                        | 54             | -8.65       |
| 11000.00          | 45.89          | PK     | V           | 13.98         | 59.87                        | 74             | -14.13      |
| 11000.00          | 31.91          | AV     | V           | 13.98         | 45.89                        | 54             | -8.11       |
| 5580MHz           |                |        |             |               |                              |                |             |
| 11160.00          | 45.84          | PK     | H           | 13.62         | 59.46                        | 74             | -14.54      |
| 11160.00          | 31.98          | AV     | H           | 13.62         | 45.60                        | 54             | -8.40       |
| 11160.00          | 46.35          | PK     | V           | 13.62         | 59.97                        | 74             | -14.03      |
| 11160.00          | 32.56          | AV     | V           | 13.62         | 46.18                        | 54             | -7.82       |
| 5700MHz           |                |        |             |               |                              |                |             |
| 11400.00          | 46.39          | PK     | H           | 14.08         | 60.47                        | 74             | -13.53      |
| 11400.00          | 32.78          | AV     | H           | 14.08         | 46.86                        | 54             | -7.14       |
| 11400.00          | 46.96          | PK     | V           | 14.08         | 61.04                        | 74             | -12.96      |
| 11400.00          | 33.47          | AV     | V           | 14.08         | 47.55                        | 54             | -6.45       |
| 5720MHz           |                |        |             |               |                              |                |             |
| 11440.00          | 47.21          | PK     | H           | 14.08         | 61.29                        | 74             | -12.71      |
| 11440.00          | 33.09          | AV     | H           | 14.08         | 47.17                        | 54             | -6.83       |
| 11440.00          | 47.68          | PK     | V           | 14.08         | 61.76                        | 74             | -12.24      |
| 11440.00          | 33.75          | AV     | V           | 14.08         | 47.83                        | 54             | -6.17       |

| Frequency (MHz)   | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|-------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                   | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11ac40</b> |                |        |             |               |                              |                |             |
| 5510MHz           |                |        |             |               |                              |                |             |
| 11020.00          | 45.47          | PK     | H           | 13.89         | 59.36                        | 74             | -14.64      |
| 11020.00          | 31.54          | AV     | H           | 13.89         | 45.43                        | 54             | -8.57       |
| 11020.00          | 45.83          | PK     | V           | 13.89         | 59.72                        | 74             | -14.28      |
| 11020.00          | 31.78          | AV     | V           | 13.89         | 45.67                        | 54             | -8.33       |
| 5550MHz           |                |        |             |               |                              |                |             |
| 11100.00          | 45.89          | PK     | H           | 13.53         | 59.42                        | 74             | -14.58      |
| 11100.00          | 31.92          | AV     | H           | 13.53         | 45.45                        | 54             | -8.55       |
| 11100.00          | 46.18          | PK     | V           | 13.53         | 59.71                        | 74             | -14.29      |
| 11100.00          | 32.23          | AV     | V           | 13.53         | 45.76                        | 54             | -8.24       |
| 5670MHz           |                |        |             |               |                              |                |             |
| 11340.00          | 46.43          | PK     | H           | 13.99         | 60.42                        | 74             | -13.58      |
| 11340.00          | 32.31          | AV     | H           | 13.99         | 46.30                        | 54             | -7.70       |
| 11340.00          | 46.62          | PK     | V           | 13.99         | 60.61                        | 74             | -13.39      |
| 11340.00          | 32.55          | AV     | V           | 13.99         | 46.54                        | 54             | -7.46       |
| 5710MHz           |                |        |             |               |                              |                |             |
| 11420.00          | 46.87          | PK     | H           | 14.08         | 60.95                        | 74             | -13.05      |
| 11420.00          | 32.63          | AV     | H           | 14.08         | 46.71                        | 54             | -7.29       |
| 11420.00          | 47.18          | PK     | V           | 14.08         | 61.26                        | 74             | -12.74      |
| 11420.00          | 32.96          | AV     | V           | 14.08         | 47.04                        | 54             | -6.96       |

| Frequency (MHz)   | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|-------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                   | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11AC80</b> |                |        |             |               |                              |                |             |
| 5530MHz           |                |        |             |               |                              |                |             |
| 11060.00          | 45.24          | PK     | H           | 13.71         | 58.95                        | 74             | -15.05      |
| 11060.00          | 32.31          | AV     | H           | 13.71         | 46.02                        | 54             | -7.98       |
| 11060.00          | 45.49          | PK     | V           | 13.71         | 59.20                        | 74             | -14.80      |
| 11060.00          | 32.53          | AV     | V           | 13.71         | 46.24                        | 54             | -7.76       |
| 5610MHz           |                |        |             |               |                              |                |             |
| 11220.00          | 46.14          | PK     | H           | 13.73         | 59.87                        | 74             | -14.13      |
| 11220.00          | 32.68          | AV     | H           | 13.73         | 46.41                        | 54             | -7.59       |
| 11220.00          | 46.47          | PK     | V           | 13.73         | 60.20                        | 74             | -13.80      |
| 11220.00          | 32.95          | AV     | V           | 13.73         | 46.68                        | 54             | -7.32       |
| 5690MHz           |                |        |             |               |                              |                |             |
| 11380.00          | 46.52          | PK     | H           | 13.99         | 60.51                        | 74             | -13.49      |
| 11380.00          | 32.94          | AV     | H           | 13.99         | 46.93                        | 54             | -7.07       |
| 11380.00          | 46.89          | PK     | V           | 13.99         | 60.88                        | 74             | -13.12      |
| 11380.00          | 33.27          | AV     | V           | 13.99         | 47.26                        | 54             | -6.74       |

**5725-5850 MHz:**

| Frequency (MHz)        | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|------------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                        | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11a (ANT 1)</b> |                |        |             |               |                              |                |             |
| 5745MHz                |                |        |             |               |                              |                |             |
| 11490.00               | 45.86          | PK     | H           | 14.31         | 60.17                        | 74             | -13.83      |
| 11490.00               | 30.73          | AV     | H           | 14.31         | 45.04                        | 54             | -8.96       |
| 11490.00               | 45.57          | PK     | V           | 14.31         | 59.88                        | 74             | -14.12      |
| 11490.00               | 30.59          | AV     | V           | 14.31         | 44.90                        | 54             | -9.10       |
| 5785MHz                |                |        |             |               |                              |                |             |
| 11570.00               | 46.09          | PK     | H           | 14.05         | 60.14                        | 74             | -13.86      |
| 11570.00               | 31.25          | AV     | H           | 14.05         | 45.30                        | 54             | -8.70       |
| 11570.00               | 45.87          | PK     | V           | 14.05         | 59.92                        | 74             | -14.08      |
| 11570.00               | 31.12          | AV     | V           | 14.05         | 45.17                        | 54             | -8.83       |
| 5825MHz                |                |        |             |               |                              |                |             |
| 11650.00               | 46.48          | PK     | H           | 13.83         | 60.31                        | 74             | -13.69      |
| 11650.00               | 31.65          | AV     | H           | 13.83         | 45.48                        | 54             | -8.52       |
| 11650.00               | 46.24          | PK     | V           | 13.83         | 60.07                        | 74             | -13.93      |
| 11650.00               | 31.52          | AV     | V           | 13.83         | 45.35                        | 54             | -8.65       |
| <b>802.11a (ANT 2)</b> |                |        |             |               |                              |                |             |
| 5745MHz                |                |        |             |               |                              |                |             |
| 11490.00               | 45.71          | PK     | H           | 14.31         | 60.02                        | 74             | -13.98      |
| 11490.00               | 30.67          | AV     | H           | 14.31         | 44.98                        | 54             | -9.02       |
| 11490.00               | 45.48          | PK     | V           | 14.31         | 59.79                        | 74             | -14.21      |
| 11490.00               | 30.55          | AV     | V           | 14.31         | 44.86                        | 54             | -9.14       |
| 5785MHz                |                |        |             |               |                              |                |             |
| 11570.00               | 45.94          | PK     | H           | 14.05         | 59.99                        | 74             | -14.01      |
| 11570.00               | 31.05          | AV     | H           | 14.05         | 45.10                        | 54             | -8.90       |
| 11570.00               | 45.72          | PK     | V           | 14.05         | 59.77                        | 74             | -14.23      |
| 11570.00               | 30.91          | AV     | V           | 14.05         | 44.96                        | 54             | -9.04       |
| 5825MHz                |                |        |             |               |                              |                |             |
| 11650.00               | 46.15          | PK     | H           | 13.83         | 59.98                        | 74             | -14.02      |
| 11650.00               | 31.53          | AV     | H           | 13.83         | 45.36                        | 54             | -8.64       |
| 11650.00               | 45.89          | PK     | V           | 13.83         | 59.72                        | 74             | -14.28      |
| 11650.00               | 31.42          | AV     | V           | 13.83         | 45.25                        | 54             | -8.75       |

| Frequency (MHz)   | Receiver       |        | Rx Antenna  | Factor (dB/m) | Corrected Amplitude (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
|-------------------|----------------|--------|-------------|---------------|------------------------------|----------------|-------------|
|                   | Reading (dBµV) | PK/Ave | Polar (H/V) |               |                              |                |             |
| <b>802.11ac20</b> |                |        |             |               |                              |                |             |
| 5745MHz           |                |        |             |               |                              |                |             |
| 11490.00          | 45.36          | PK     | H           | 14.31         | 59.67                        | 74             | -14.33      |
| 11490.00          | 31.01          | AV     | H           | 14.31         | 45.32                        | 54             | -8.68       |
| 11490.00          | 45.14          | PK     | V           | 14.31         | 59.45                        | 74             | -14.55      |
| 11490.00          | 30.88          | AV     | V           | 14.31         | 45.19                        | 54             | -8.81       |
| 5785MHz           |                |        |             |               |                              |                |             |
| 11570.00          | 45.78          | PK     | H           | 14.05         | 59.83                        | 74             | -14.17      |
| 11570.00          | 31.45          | AV     | H           | 14.05         | 45.50                        | 54             | -8.50       |
| 11570.00          | 45.56          | PK     | V           | 14.05         | 59.61                        | 74             | -14.39      |
| 11570.00          | 31.31          | AV     | V           | 14.05         | 45.36                        | 54             | -8.64       |
| 5825MHz           |                |        |             |               |                              |                |             |
| 11650.00          | 46.29          | PK     | H           | 13.83         | 60.12                        | 74             | -13.88      |
| 11650.00          | 31.87          | AV     | H           | 13.83         | 45.70                        | 54             | -8.30       |
| 11650.00          | 46.05          | PK     | V           | 13.83         | 59.88                        | 74             | -14.12      |
| 11650.00          | 31.73          | AV     | V           | 13.83         | 45.56                        | 54             | -8.44       |
| <b>802.11ac40</b> |                |        |             |               |                              |                |             |
| 5755MHz           |                |        |             |               |                              |                |             |
| 11510.00          | 45.71          | PK     | H           | 14.29         | 60.00                        | 74             | -14.00      |
| 11510.00          | 32.06          | AV     | H           | 14.29         | 46.35                        | 54             | -7.65       |
| 11510.00          | 45.94          | PK     | V           | 14.29         | 60.23                        | 74             | -13.77      |
| 11510.00          | 32.15          | AV     | V           | 14.29         | 46.44                        | 54             | -7.56       |
| 5795MHz           |                |        |             |               |                              |                |             |
| 11590.00          | 46.12          | PK     | H           | 13.97         | 60.09                        | 74             | -13.91      |
| 11590.00          | 32.28          | AV     | H           | 13.97         | 46.25                        | 54             | -7.75       |
| 11590.00          | 46.35          | PK     | V           | 13.97         | 60.32                        | 74             | -13.68      |
| 11590.00          | 32.43          | AV     | V           | 13.97         | 46.40                        | 54             | -7.60       |
| <b>802.11AC80</b> |                |        |             |               |                              |                |             |
| 5775MHz           |                |        |             |               |                              |                |             |
| 11550.00          | 45.64          | PK     | H           | 14.13         | 59.77                        | 74             | -14.23      |
| 11550.00          | 32.77          | AV     | H           | 14.13         | 46.90                        | 54             | -7.10       |
| 11550.00          | 45.89          | PK     | V           | 14.13         | 60.02                        | 74             | -13.98      |
| 11550.00          | 32.92          | AV     | V           | 14.13         | 47.05                        | 54             | -6.95       |

**Note:**

Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

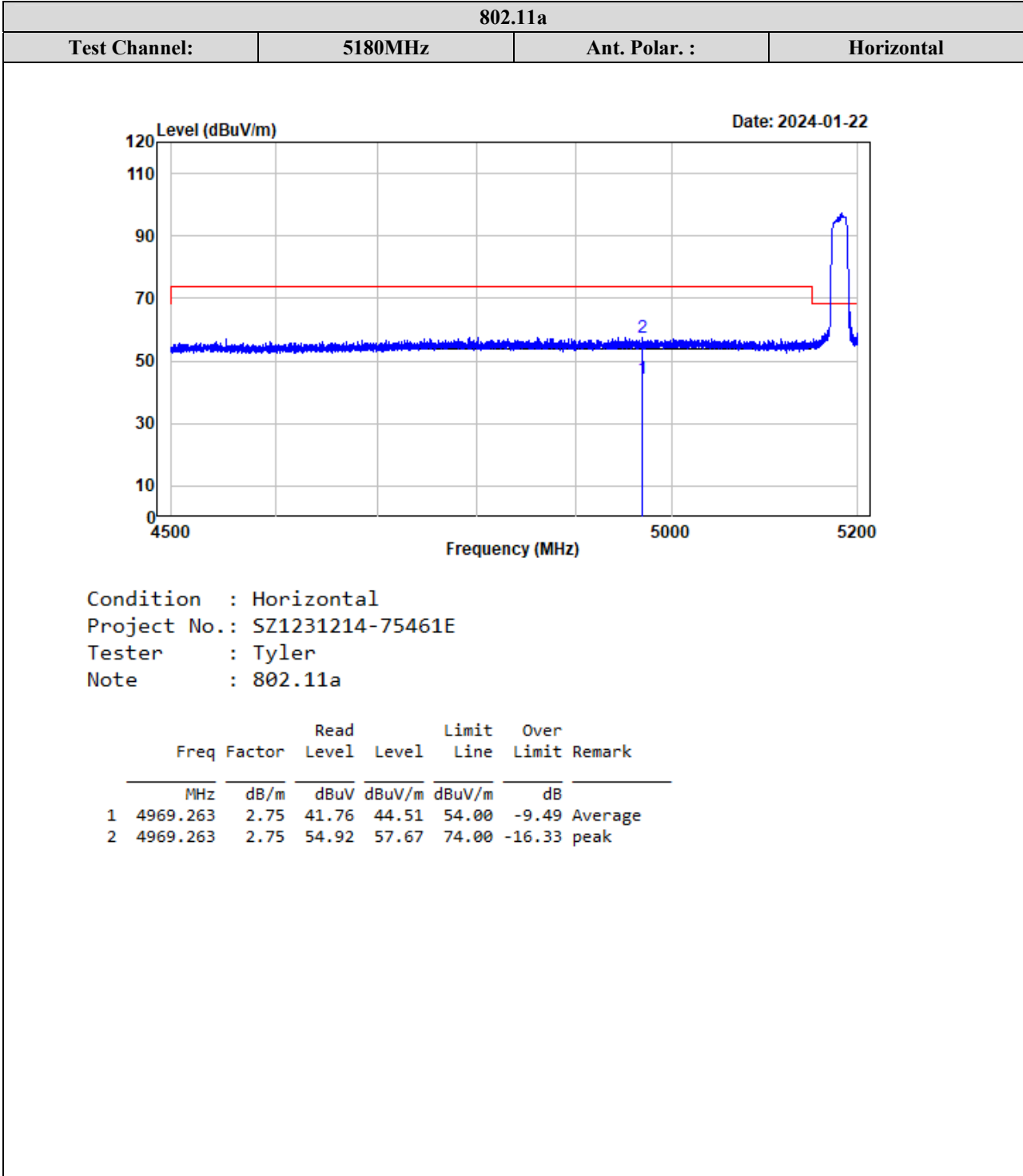
Corrected Amplitude = Factor + Reading

Margin = Corrected. Amplitude - Limit

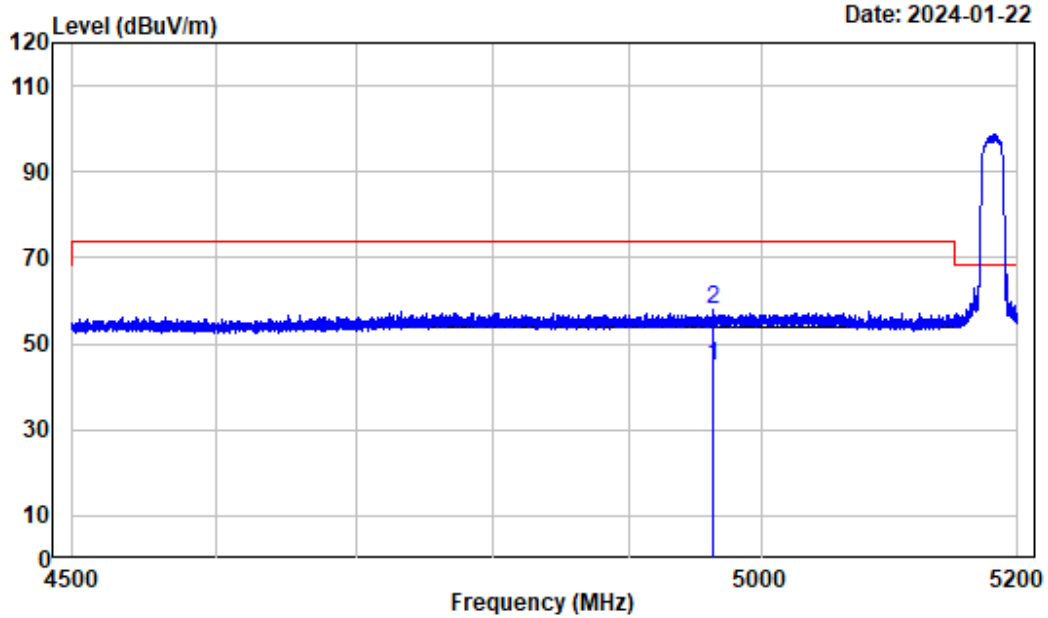
The other spurious emission which is in the noise floor level was not recorded.

**Test plots for Band Edge Measurements (Radiated)**

**5150-5250MHz:  
ANT 1**



| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5180MHz | Ant. Polar. : | Vertical |

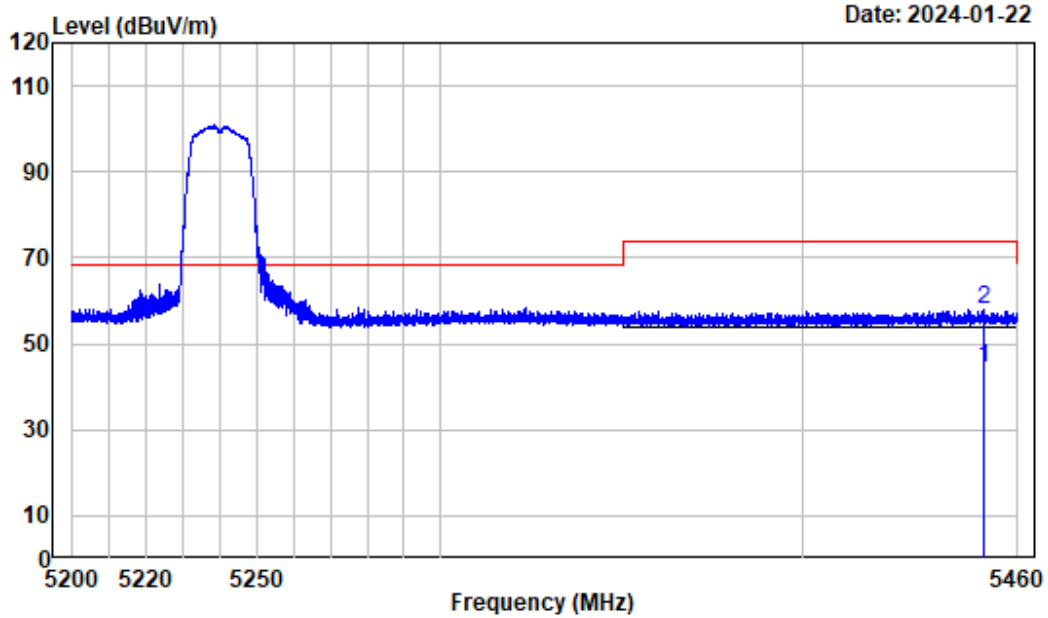


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 4964.100 | 2.70   | 41.98      | 44.68  | 54.00      | -9.32      | Average |
| 2 | 4964.100 | 2.70   | 55.20      | 57.90  | 74.00      | -16.10     | peak    |



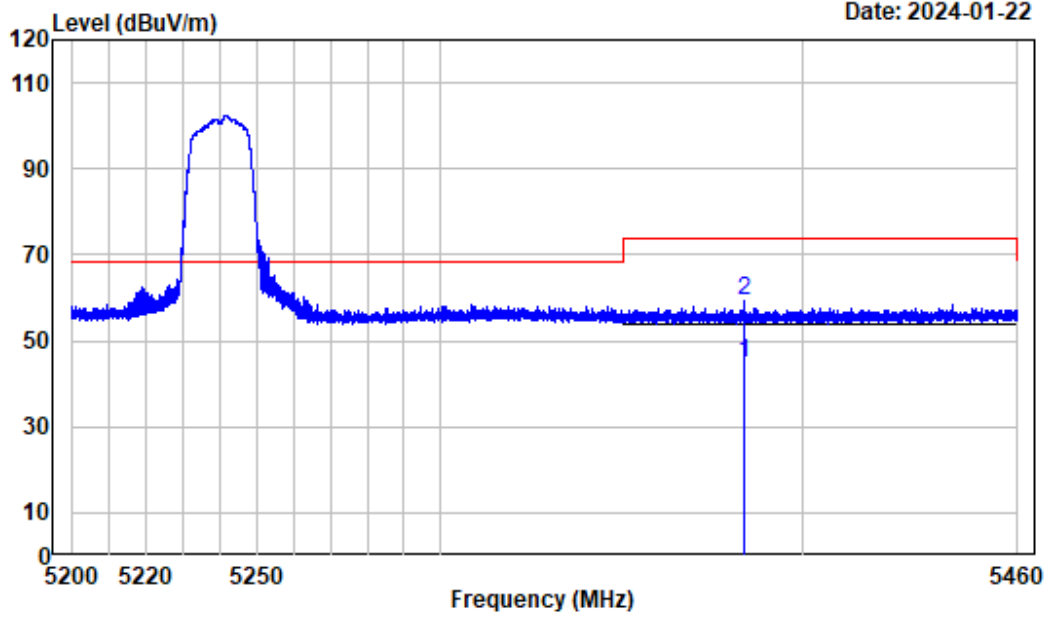
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5240MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5450.478 | 3.06   | 41.52      | 44.58  | 54.00      | -9.42      | Average |
| 2 | 5450.478 | 3.06   | 55.06      | 58.12  | 74.00      | -15.88     | peak    |

| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5240MHz | Ant. Polar. : | Vertical |

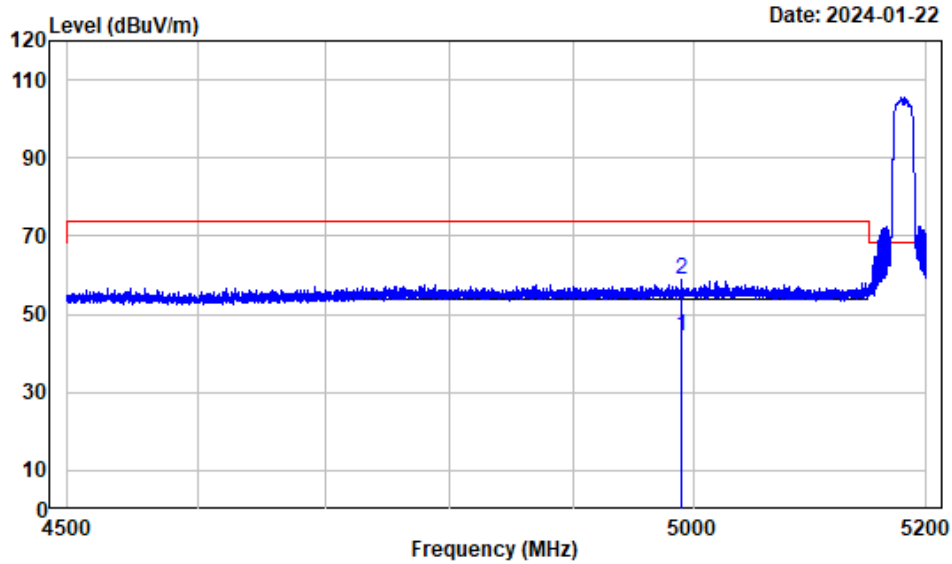


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5383.658 | 2.97   | 41.66      | 44.63  | 54.00      | -9.37      | Average |
| 2 | 5383.658 | 2.97   | 56.13      | 59.10  | 74.00      | -14.90     | peak    |

ANT 2

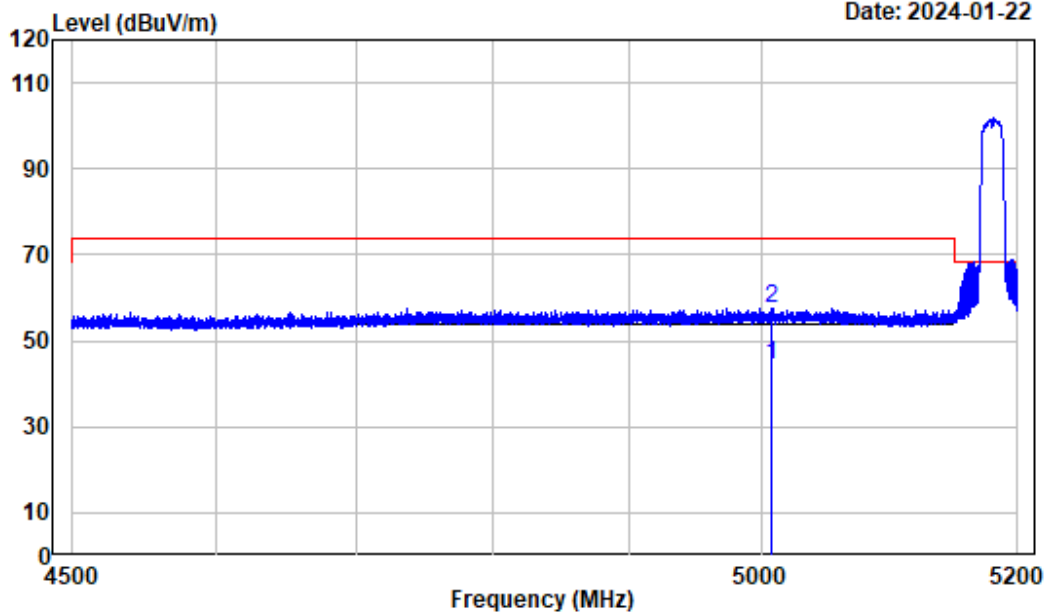
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5180MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Limit Level | Over Limit | Remark        |
|---|----------|--------|------------|-------------|------------|---------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB            |
| 1 | 4990.263 | 2.89   | 41.66      | 44.55       | 54.00      | -9.45 Average |
| 2 | 4990.263 | 2.89   | 56.07      | 58.96       | 74.00      | -15.04 peak   |

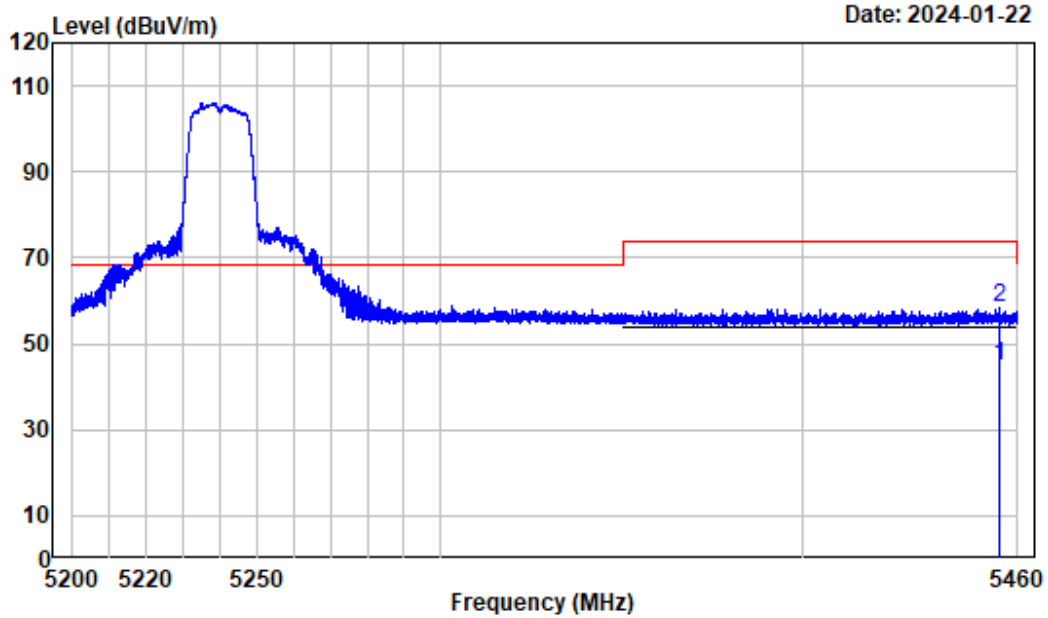
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5180MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5008.725 | 2.97   | 41.58      | 44.55  | 54.00      | -9.45      | Average |
| 2 | 5008.725 | 2.97   | 54.61      | 57.58  | 74.00      | -16.42     | peak    |

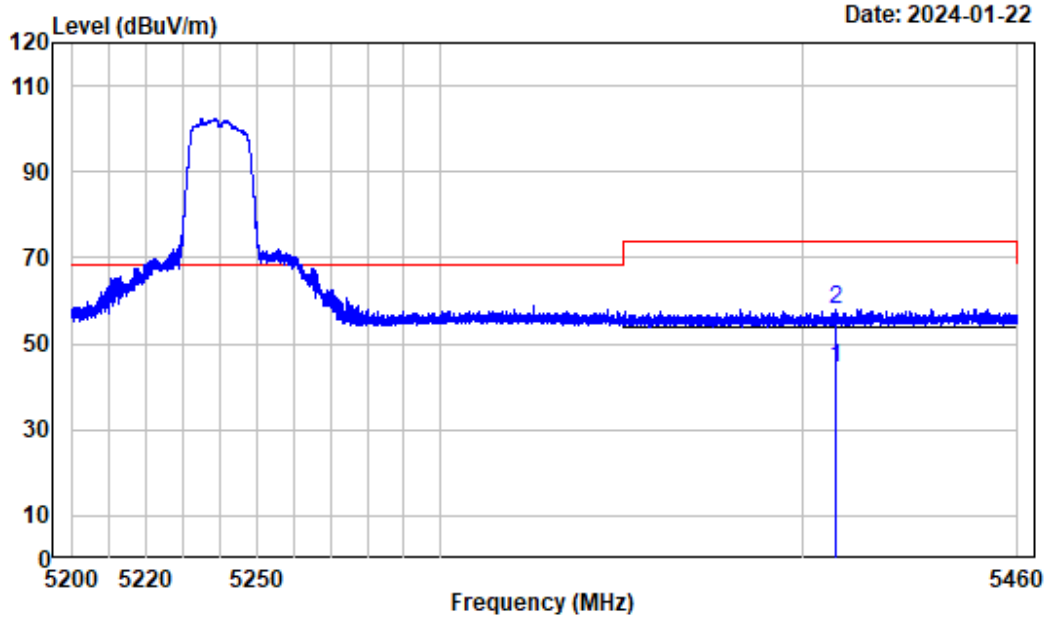
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5240MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5455.027 | 3.06   | 41.72      | 44.78  | 54.00      | -9.22      | Average |
| 2 | 5455.027 | 3.06   | 55.37      | 58.43  | 74.00      | -15.57     | peak    |

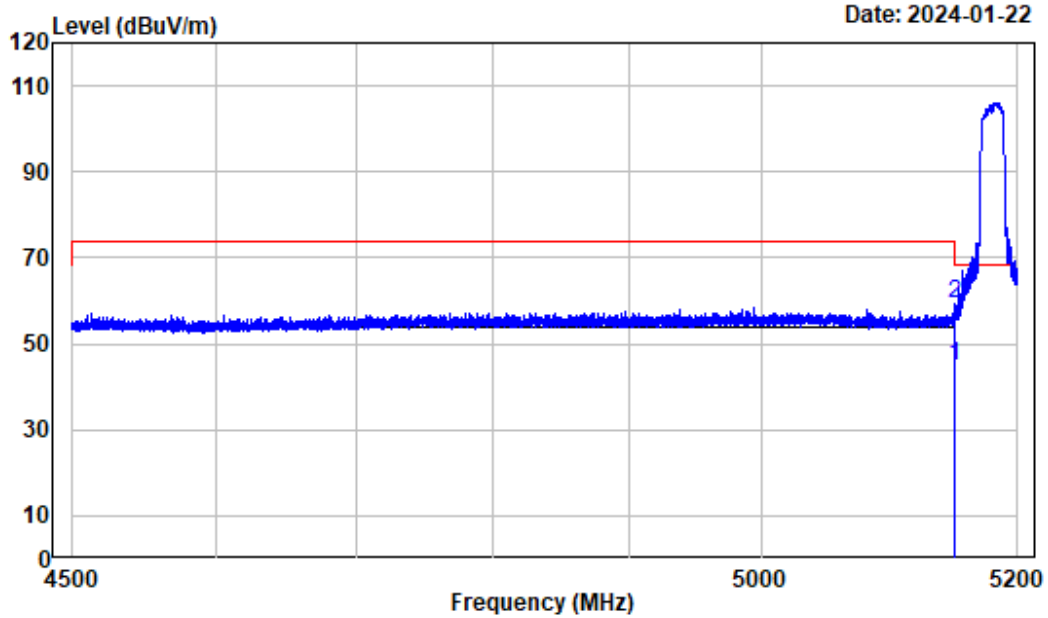
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5240MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5408.813 | 3.00   | 41.42      | 44.42  | 54.00      | -9.58      | Average |
| 2 | 5408.813 | 3.00   | 55.15      | 58.15  | 74.00      | -15.85     | peak    |

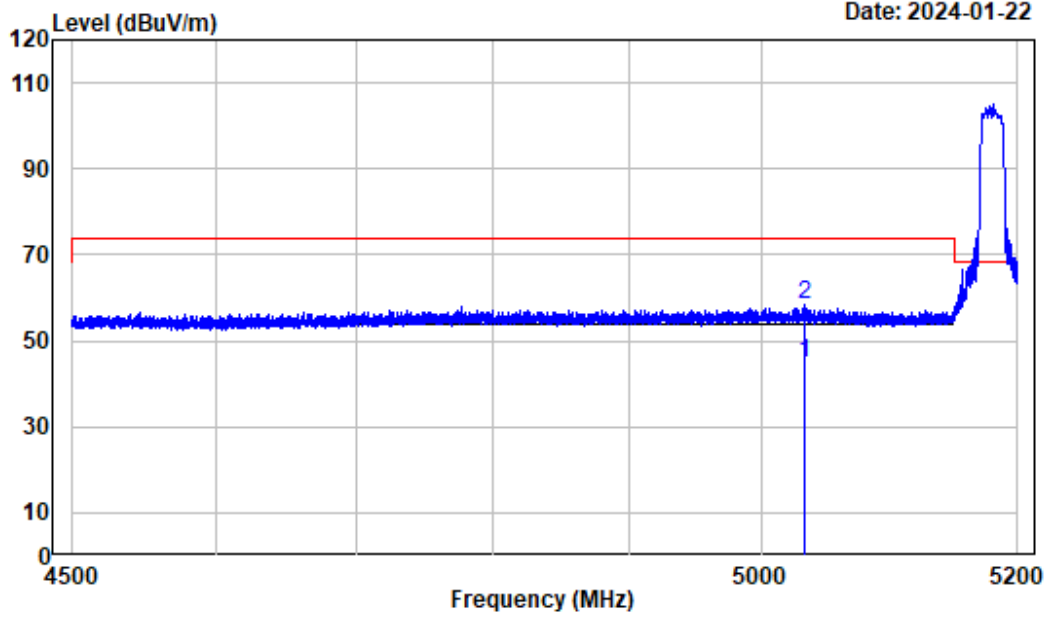
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5180MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5149.950 | 2.71   | 42.06      | 44.77  | 54.00      | -9.23      | Average |
| 2 | 5149.950 | 2.71   | 56.39      | 59.10  | 74.00      | -14.90     | peak    |

| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5180MHz | Ant. Polar. : | Vertical |

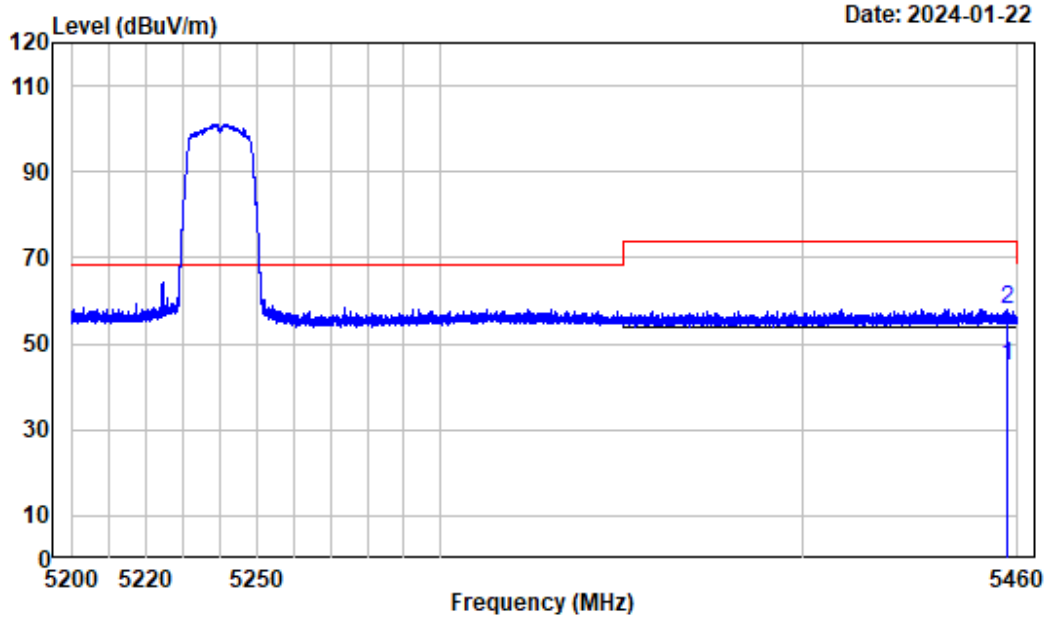


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5034.188 | 2.95   | 42.05      | 45.00  | 54.00      | -9.00      | Average |
| 2 | 5034.188 | 2.95   | 55.49      | 58.44  | 74.00      | -15.56     | peak    |



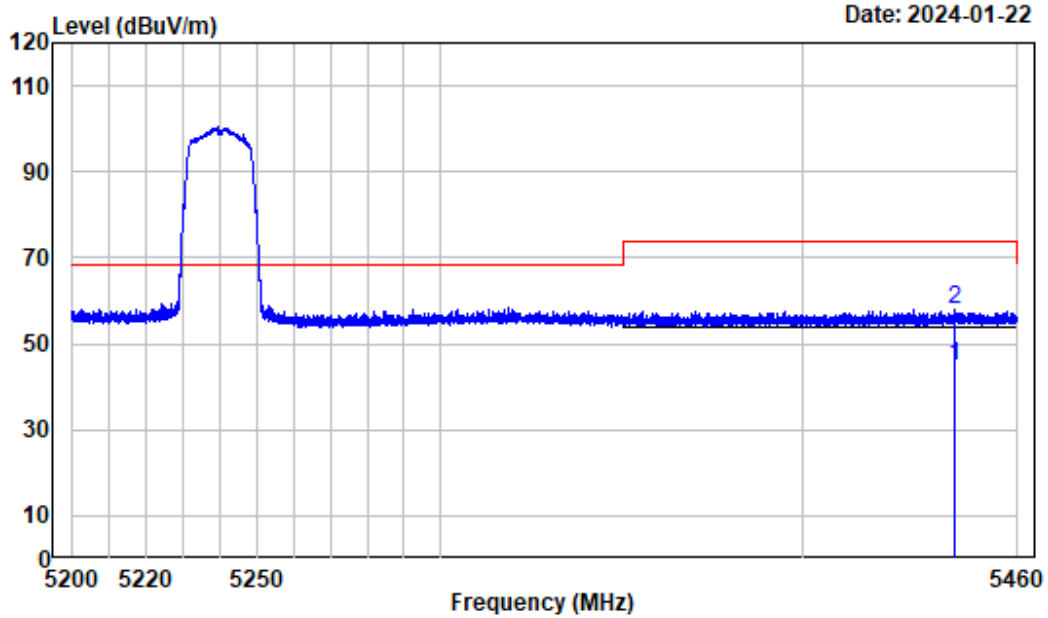
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5240MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5457.368 | 3.06   | 41.94      | 45.00  | 54.00      | -9.00      | Average |
| 2 | 5457.368 | 3.06   | 55.12      | 58.18  | 74.00      | -15.82     | peak    |

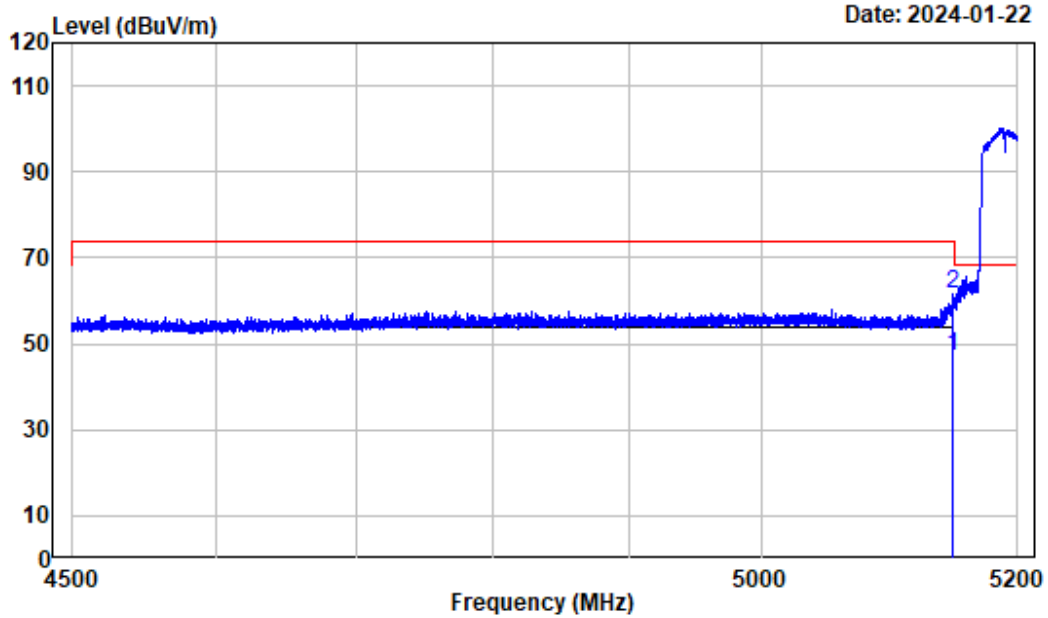
| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5240MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5442.385 | 3.04   | 41.92      | 44.96  | 54.00      | -9.04      | Average |
| 2 | 5442.385 | 3.04   | 54.87      | 57.91  | 74.00      | -16.09     | peak    |

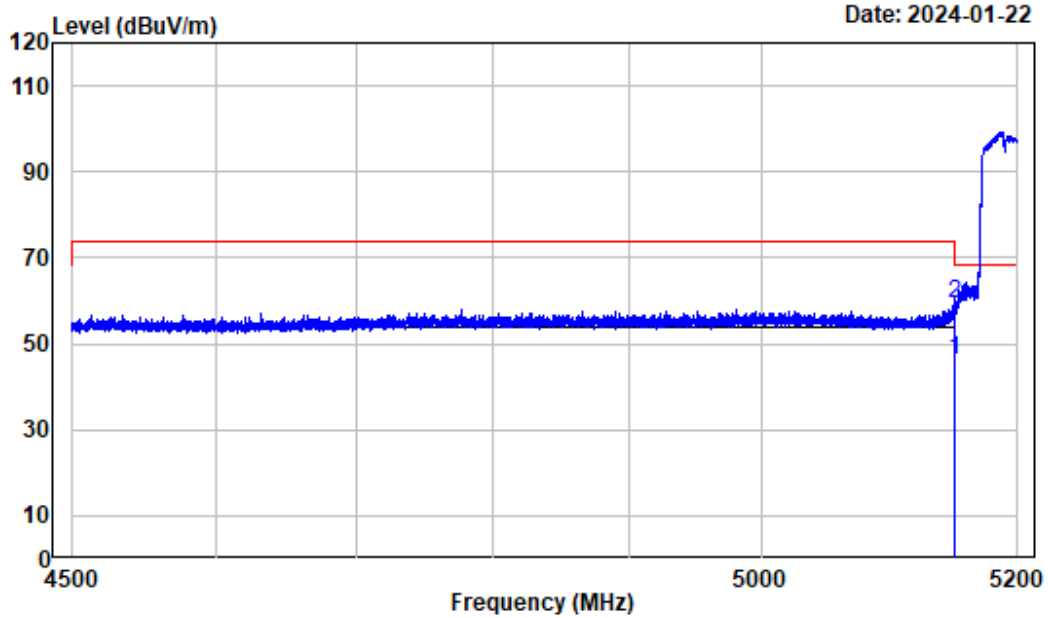
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5190MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5149.075 | 2.71   | 44.50      | 47.21  | 54.00      | -6.79      | Average |
| 2 | 5149.075 | 2.71   | 58.86      | 61.57  | 74.00      | -12.43     | peak    |

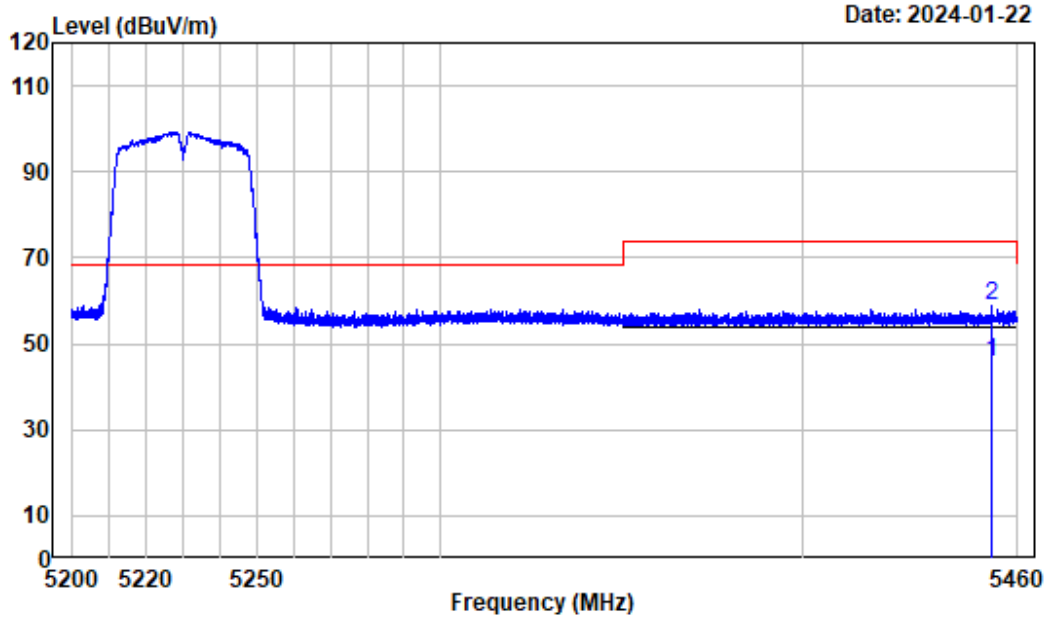
| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5190MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5149.862 | 2.71   | 43.63      | 46.34  | 54.00      | -7.66      | Average |
| 2 | 5149.862 | 2.71   | 56.56      | 59.27  | 74.00      | -14.73     | peak    |

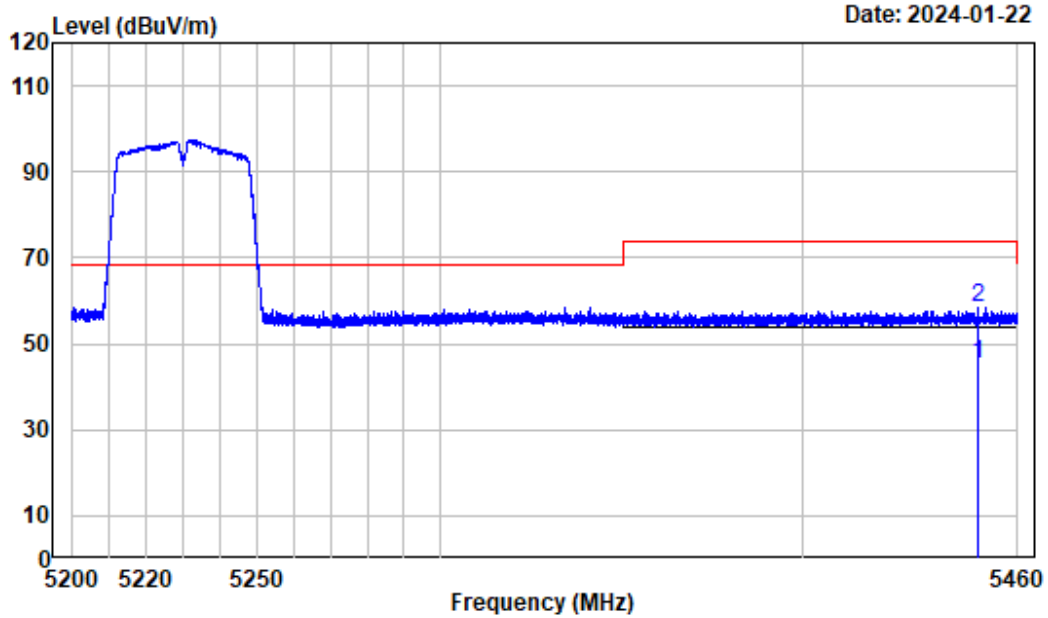
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5230MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5452.752 | 3.06   | 42.61      | 45.67  | 54.00      | -8.33      | Average |
| 2 | 5452.752 | 3.06   | 55.83      | 58.89  | 74.00      | -15.11     | peak    |

| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5230MHz | Ant. Polar. : | Vertical |

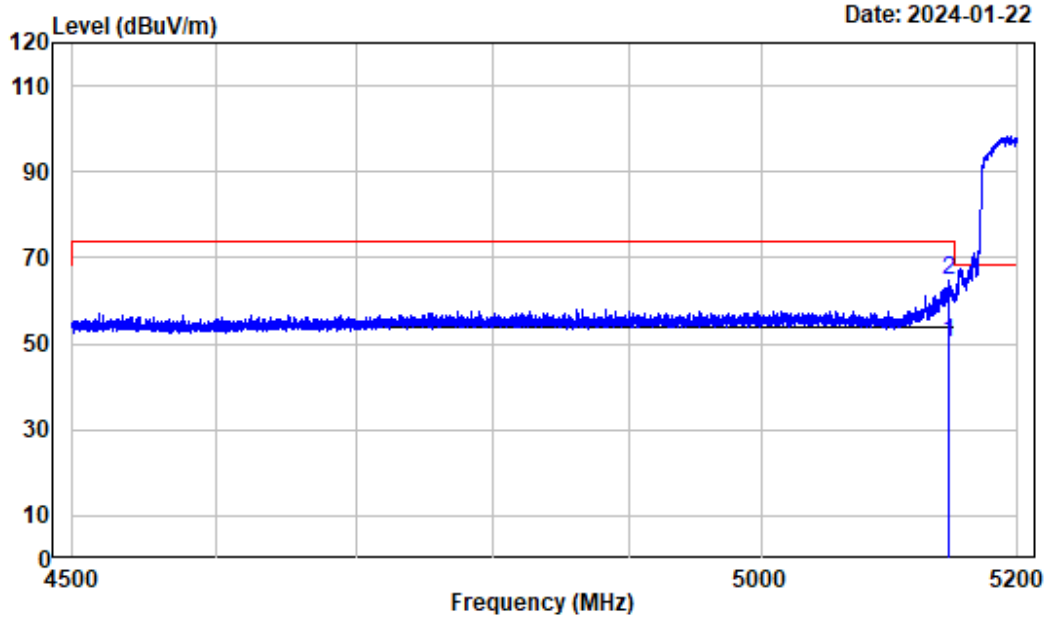


Date: 2024-01-22

Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5449.112 | 3.07   | 42.33      | 45.40  | 54.00      | -8.60      | Average |
| 2 | 5449.112 | 3.07   | 55.45      | 58.52  | 74.00      | -15.48     | peak    |

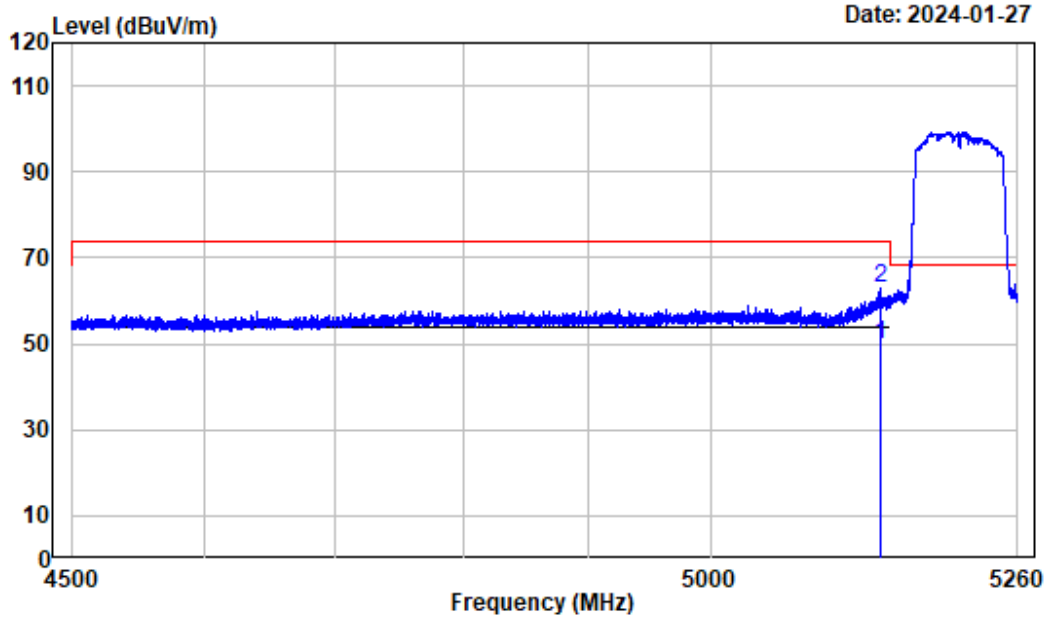
| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5210MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac80

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5146.188 | 2.70   | 47.53      | 50.23  | 54.00      | -3.77      | Average |
| 2 | 5146.188 | 2.70   | 62.14      | 64.84  | 74.00      | -9.16      | peak    |

| 802.11ac80    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5210MHz | Ant. Polar. : | Vertical |

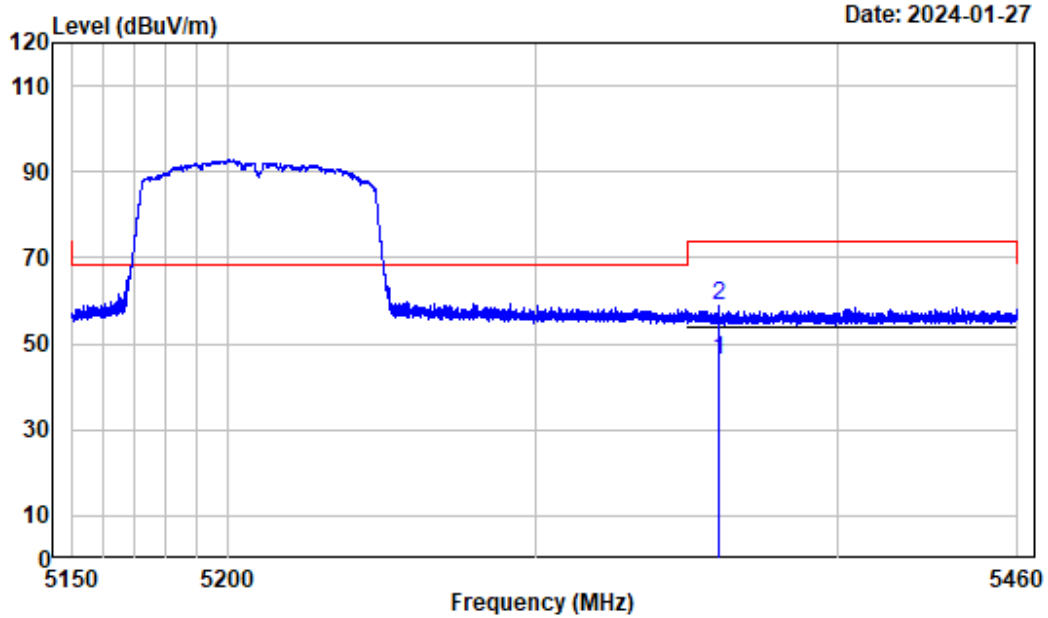


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac80

|   | Freq     | Factor | Read Level | Level  | Limit  | Line Remark | Over Limit |
|---|----------|--------|------------|--------|--------|-------------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |             | dB         |
| 1 | 5142.105 | 2.70   | 46.92      | 49.62  | 54.00  | Average     | -4.38      |
| 2 | 5142.105 | 2.70   | 60.21      | 62.91  | 74.00  | peak        | -11.09     |



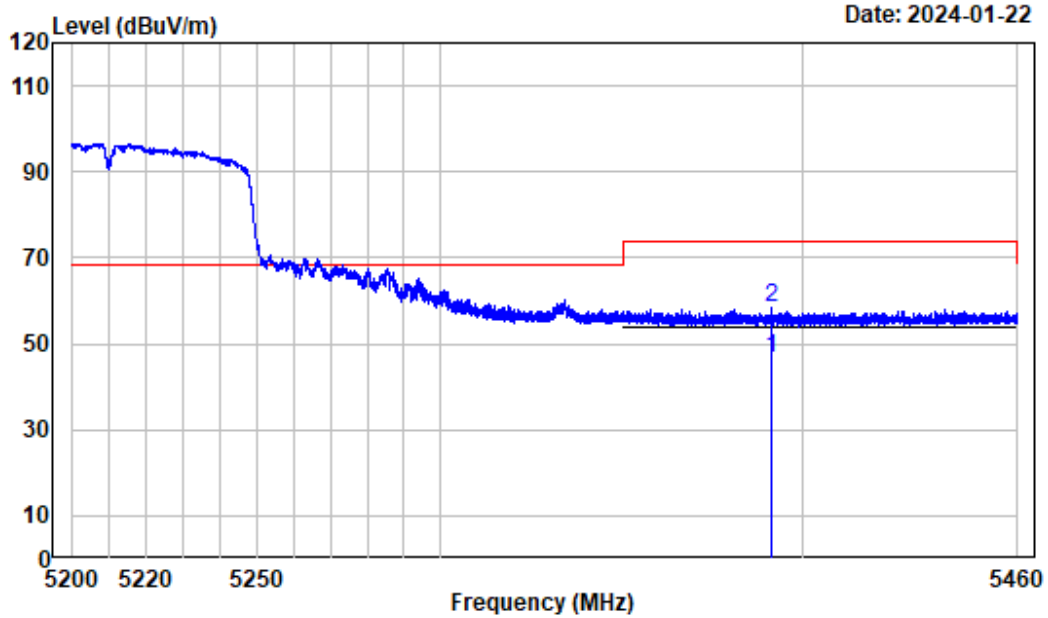
| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5210MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac80

|   | Freq     | Factor | Read Level | Level  | Limit  | Remark  | Over Limit |
|---|----------|--------|------------|--------|--------|---------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |         | dB         |
| 1 | 5360.141 | 2.92   | 43.23      | 46.15  | 54.00  | Average | -7.85      |
| 2 | 5360.141 | 2.92   | 55.77      | 58.69  | 74.00  | peak    | -15.31     |

| 802.11ac80    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5210MHz | Ant. Polar. : | Vertical |

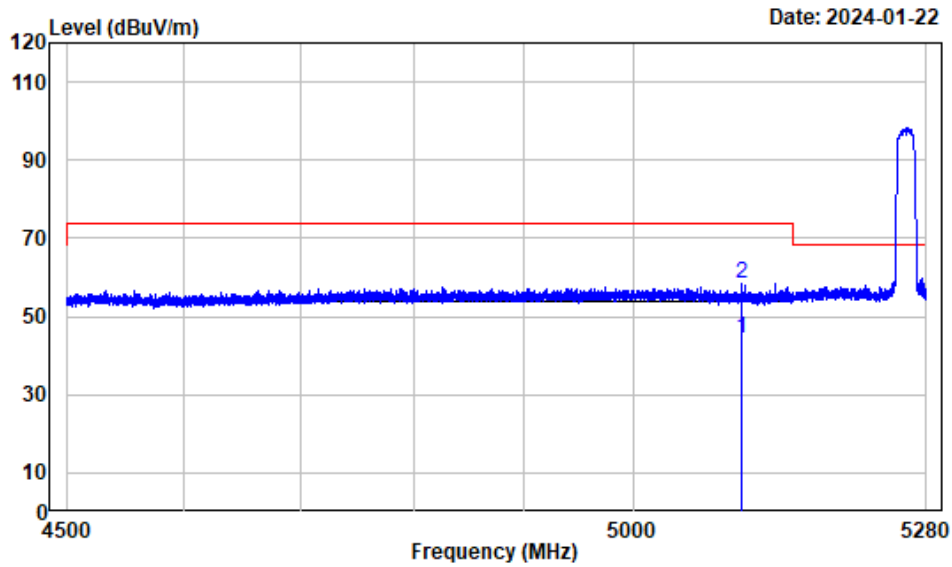


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac80

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5391.328 | 2.97   | 43.79      | 46.76  | 54.00      | -7.24      | Average |
| 2 | 5391.328 | 2.97   | 55.58      | 58.55  | 74.00      | -15.45     | peak    |

5250-5350MHz:  
ANT 1

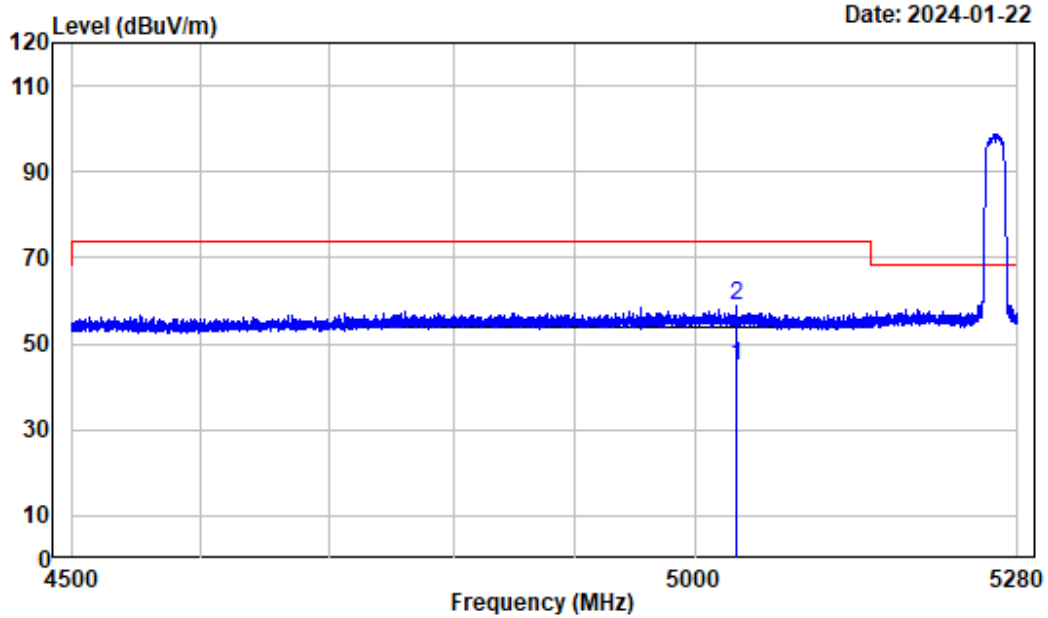
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5260MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5101.965 | 2.73   | 41.85      | 44.58  | 54.00      | -9.42      | Average |
| 2 | 5101.965 | 2.73   | 55.89      | 58.62  | 74.00      | -15.38     | peak    |

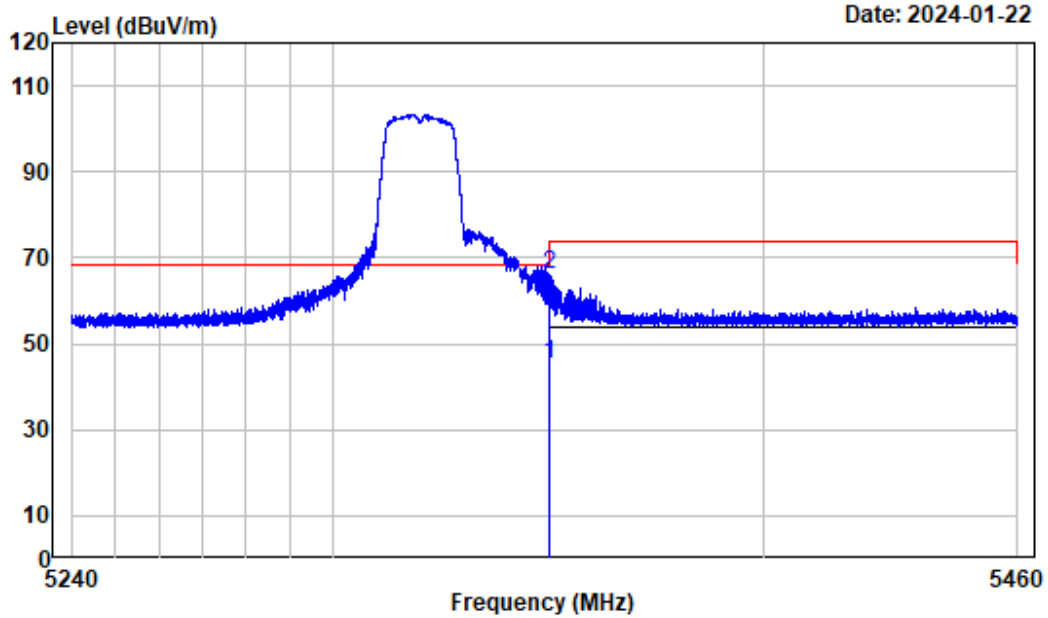
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5260MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5034.592 | 2.95   | 41.82      | 44.77  | 54.00      | -9.23      | Average |
| 2 | 5034.592 | 2.95   | 55.79      | 58.74  | 74.00      | -15.26     | peak    |

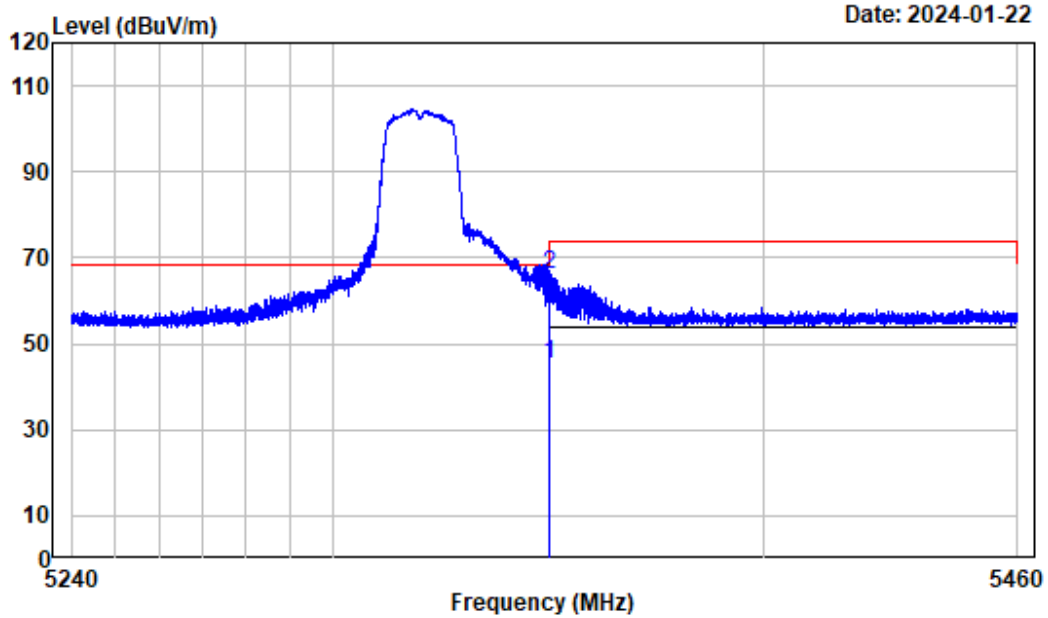
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5320MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|      | Read     | Limit | Over   |        |       |       |         |
|------|----------|-------|--------|--------|-------|-------|---------|
| Freq | Factor   | Level | Level  | Line   |       |       |         |
| MHz  | dB/m     | dBuV  | dBuV/m | dBuV/m |       |       |         |
| 1    | 5350.165 | 2.90  | 42.18  | 45.08  | 54.00 | -8.92 | Average |
| 2    | 5350.165 | 2.90  | 63.37  | 66.27  | 74.00 | -7.73 | peak    |

| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5320MHz | Ant. Polar. : | Vertical |

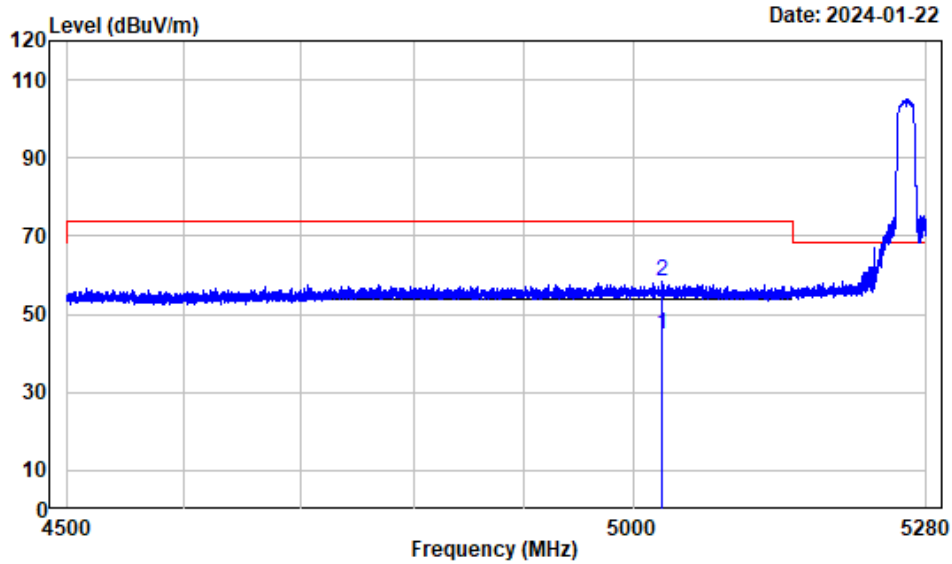


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5350.165 | 2.90   | 42.28      | 45.18  | 54.00      | -8.82      | Average |
| 2 | 5350.165 | 2.90   | 63.40      | 66.30  | 74.00      | -7.70      | peak    |

ANT 2

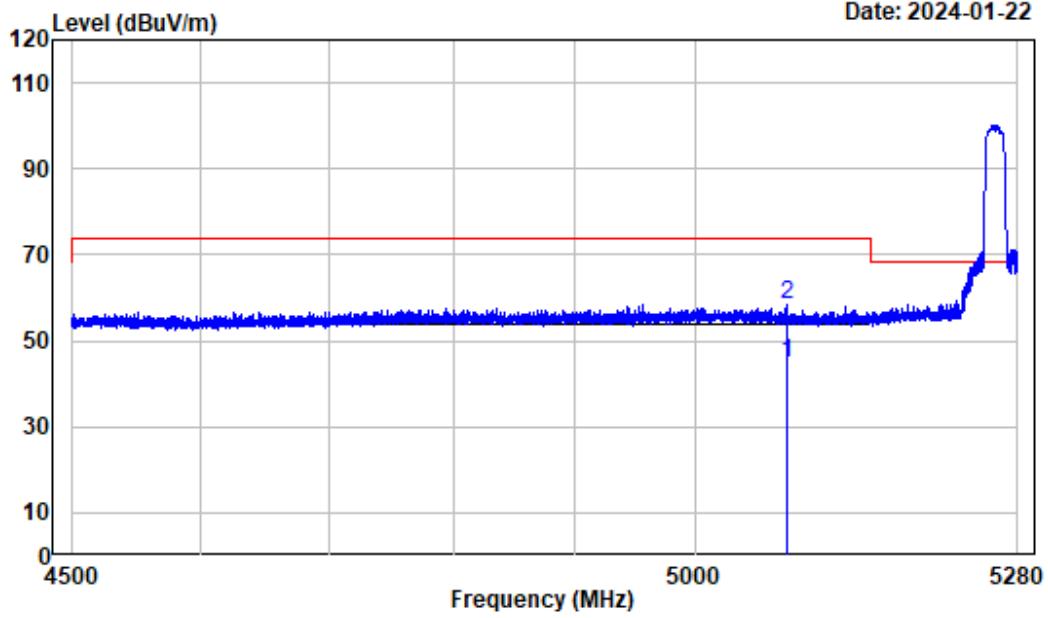
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5260MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|-------------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |         |
| 1 | 5026.598 | 2.96   | 42.05      | 45.01       | 54.00      | -8.99      | Average |
| 2 | 5026.598 | 2.96   | 55.27      | 58.23       | 74.00      | -15.77     | peak    |

| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5260MHz | Ant. Polar. : | Vertical |

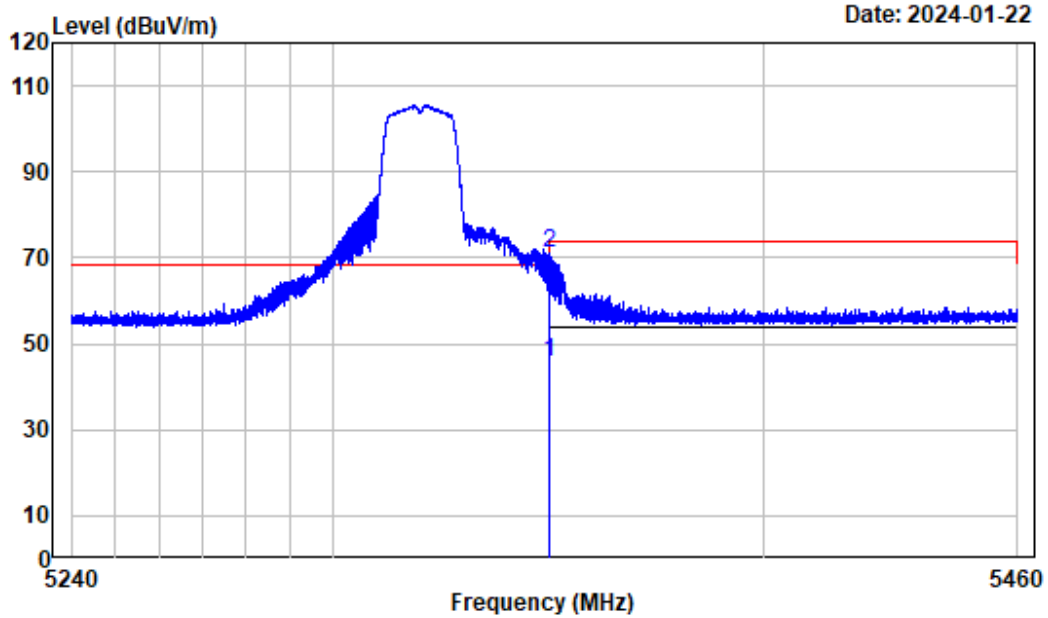


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5078.857 | 2.81   | 41.93      | 44.74  | 54.00      | -9.26      | Average |
| 2 | 5078.857 | 2.81   | 55.69      | 58.50  | 74.00      | -15.50     | peak    |



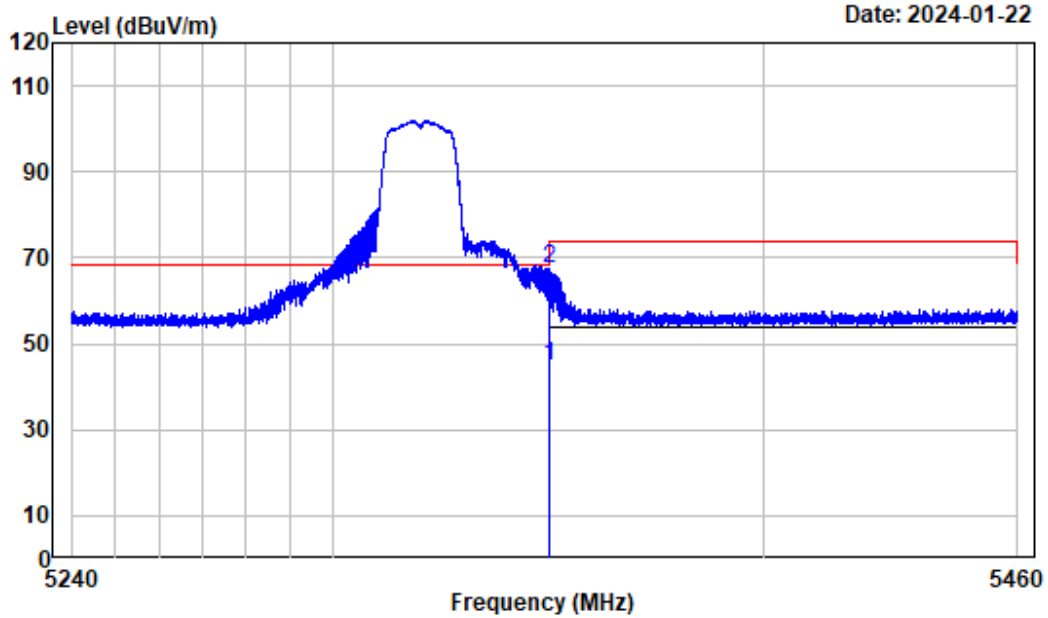
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5320MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5350.083 | 2.90   | 42.72      | 45.62  | 54.00      | -8.38      | Average |
| 2 | 5350.083 | 2.90   | 67.97      | 70.87  | 74.00      | -3.13      | peak    |

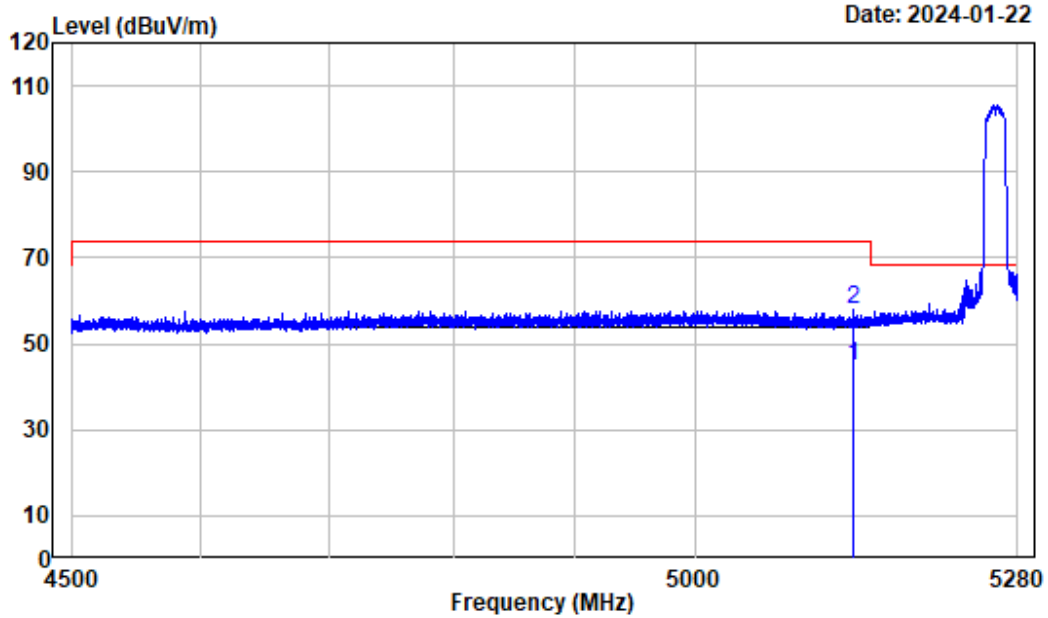
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5320MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11a

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5350.027 | 2.90   | 42.05      | 44.95  | 54.00      | -9.05      | Average |
| 2 | 5350.027 | 2.90   | 64.45      | 67.35  | 74.00      | -6.65      | peak    |

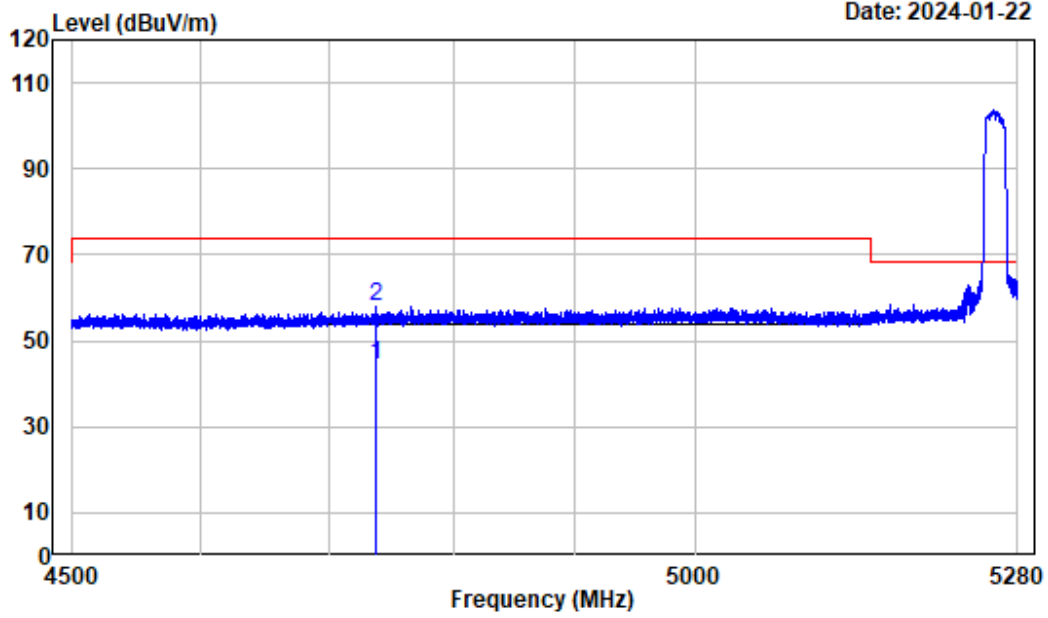
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5260MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5135.212 | 2.71   | 42.24      | 44.95  | 54.00      | -9.05      | Average |
| 2 | 5135.212 | 2.71   | 55.24      | 57.95  | 74.00      | -16.05     | peak    |

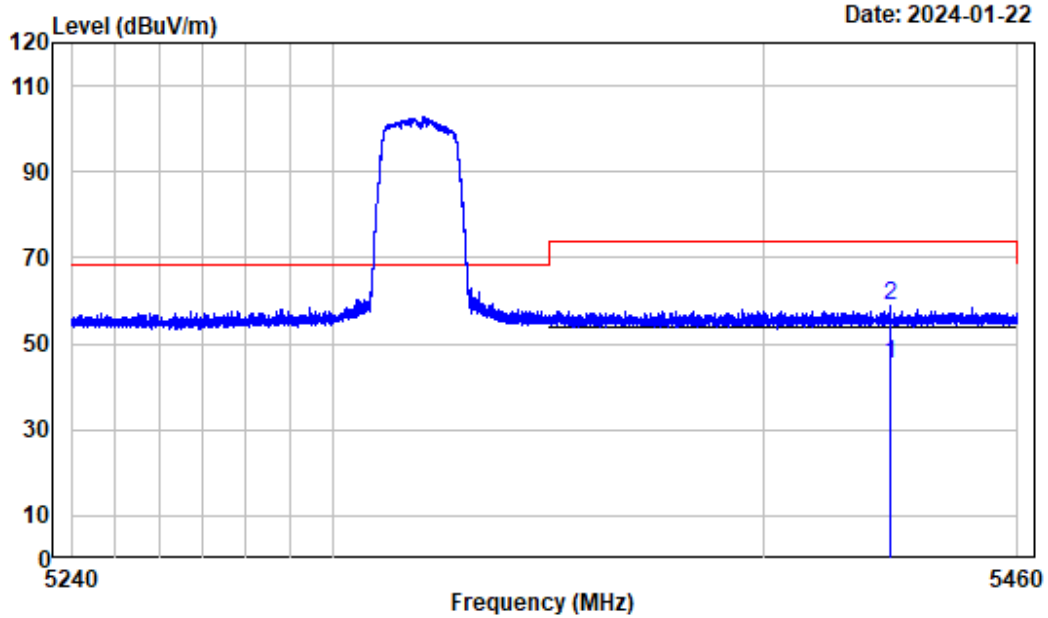
| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5260MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 4737.803 | 2.34   | 42.19      | 44.53  | 54.00      | -9.47      | Average |
| 2 | 4737.803 | 2.34   | 55.78      | 58.12  | 74.00      | -15.88     | peak    |

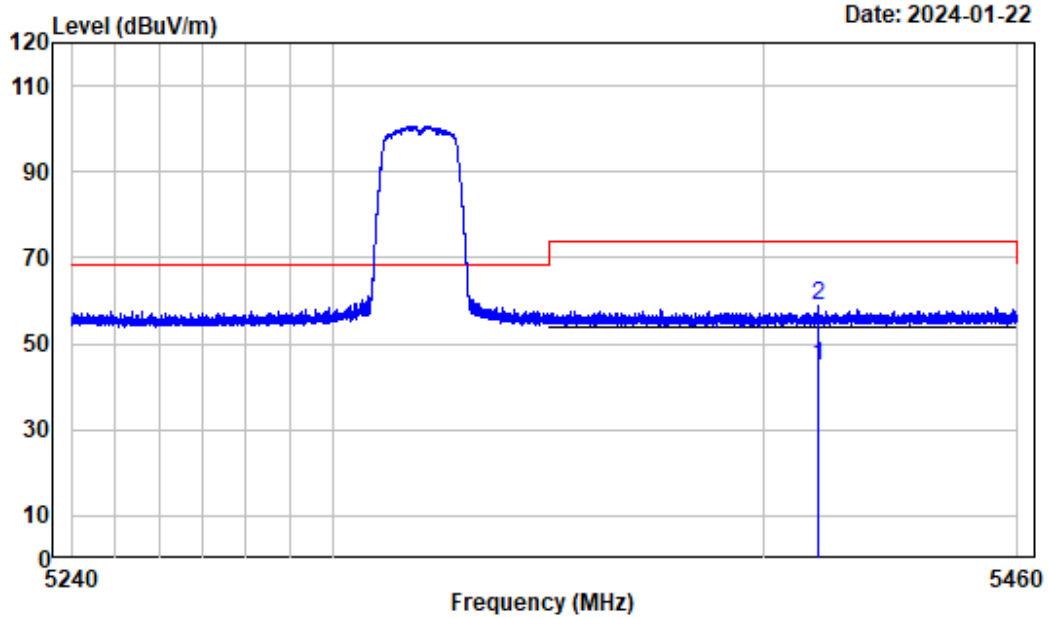
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5320MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5429.915 | 3.04   | 42.14      | 45.18  | 54.00      | -8.82      | Average |
| 2 | 5429.915 | 3.04   | 55.91      | 58.95  | 74.00      | -15.05     | peak    |

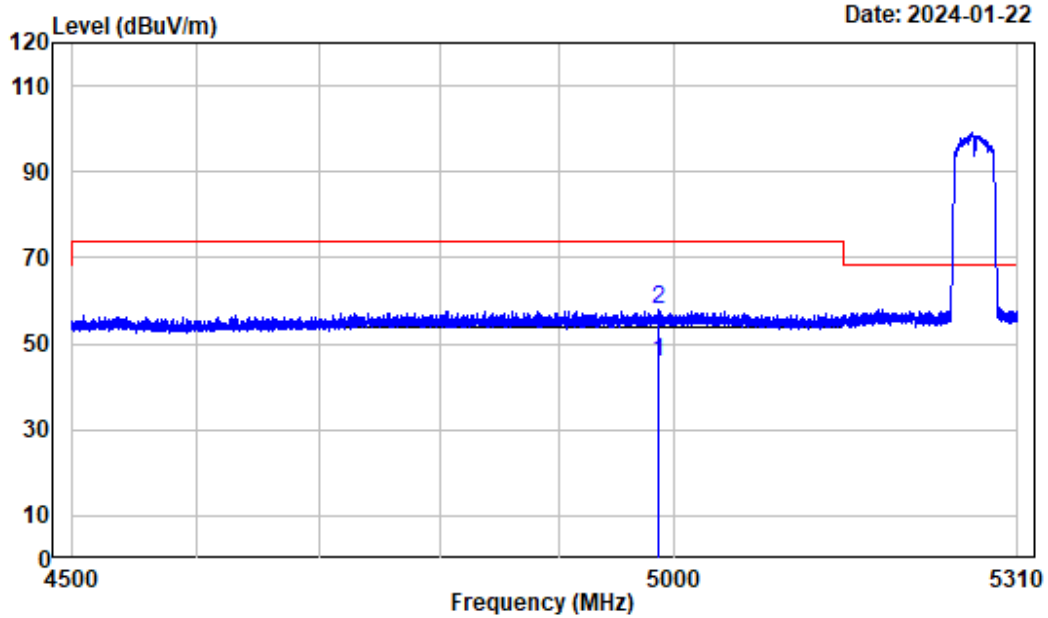
| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5320MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5413.030 | 3.01   | 41.93      | 44.94  | 54.00      | -9.06      | Average |
| 2 | 5413.030 | 3.01   | 55.69      | 58.70  | 74.00      | -15.30     | peak    |

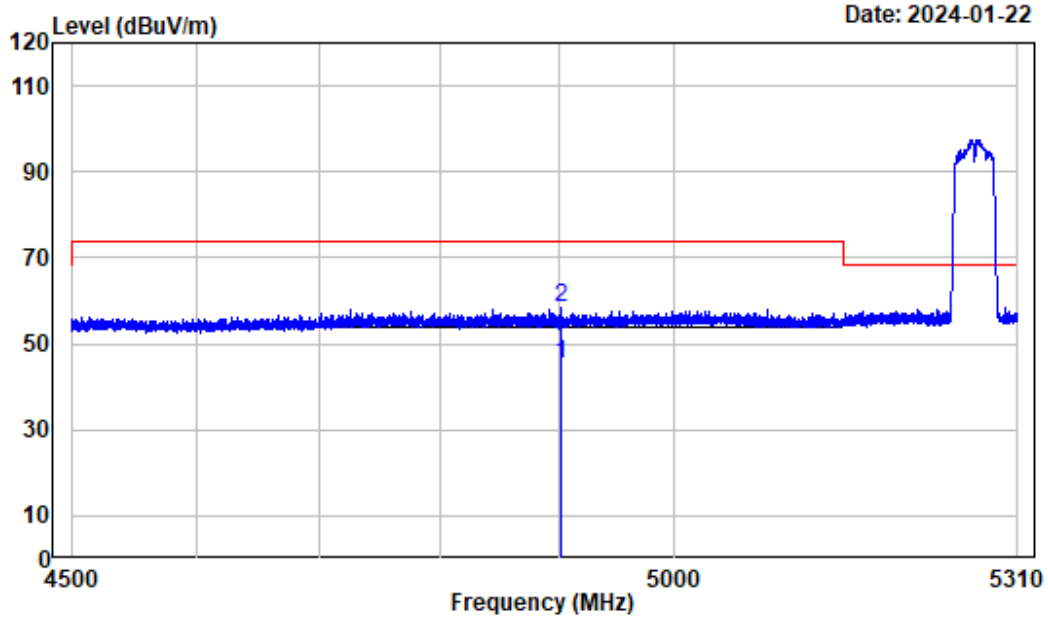
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5270MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 4987.417 | 2.87   | 42.66      | 45.53  | 54.00      | -8.47      | Average |
| 2 | 4987.417 | 2.87   | 54.98      | 57.85  | 74.00      | -16.15     | peak    |

| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5270MHz | Ant. Polar. : | Vertical |

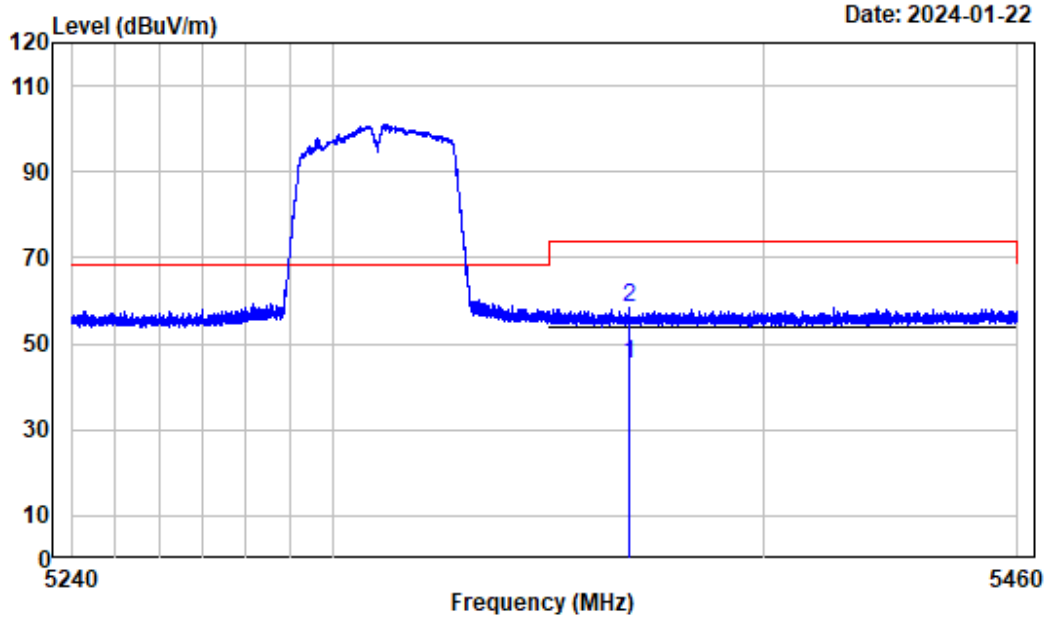


Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 4902.165 | 2.65   | 42.72      | 45.37  | 54.00      | -8.63      | Average |
| 2 | 4902.165 | 2.65   | 55.61      | 58.26  | 74.00      | -15.74     | peak    |



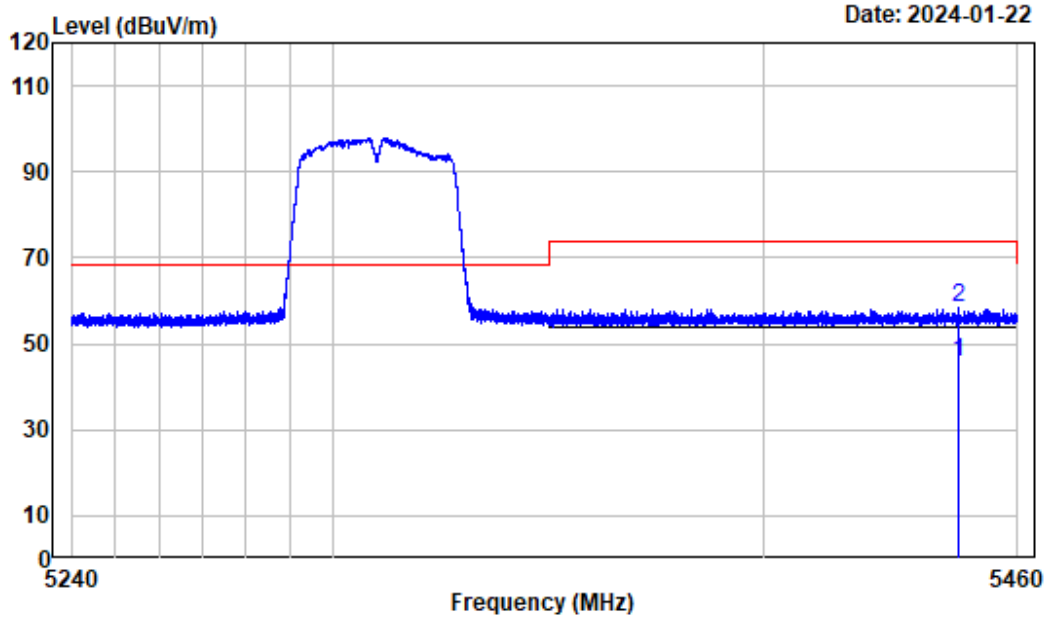
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5310MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5368.783 | 2.94   | 42.56      | 45.50  | 54.00      | -8.50      | Average |
| 2 | 5368.783 | 2.94   | 55.34      | 58.28  | 74.00      | -15.72     | peak    |

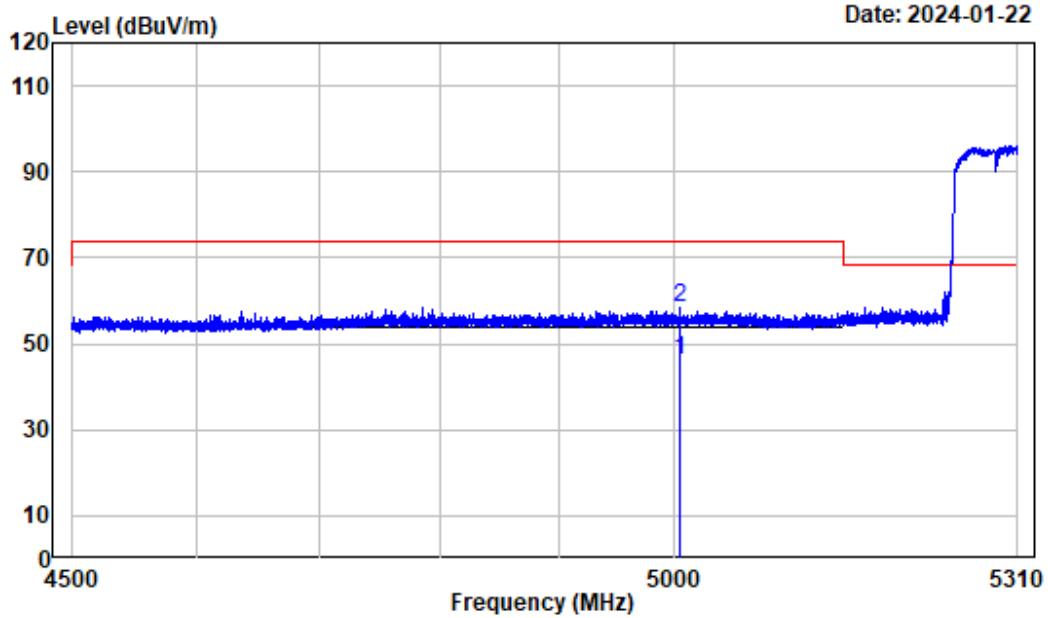
| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5310MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5446.030 | 3.06   | 42.54      | 45.60  | 54.00      | -8.40      | Average |
| 2 | 5446.030 | 3.06   | 55.48      | 58.54  | 74.00      | -15.46     | peak    |

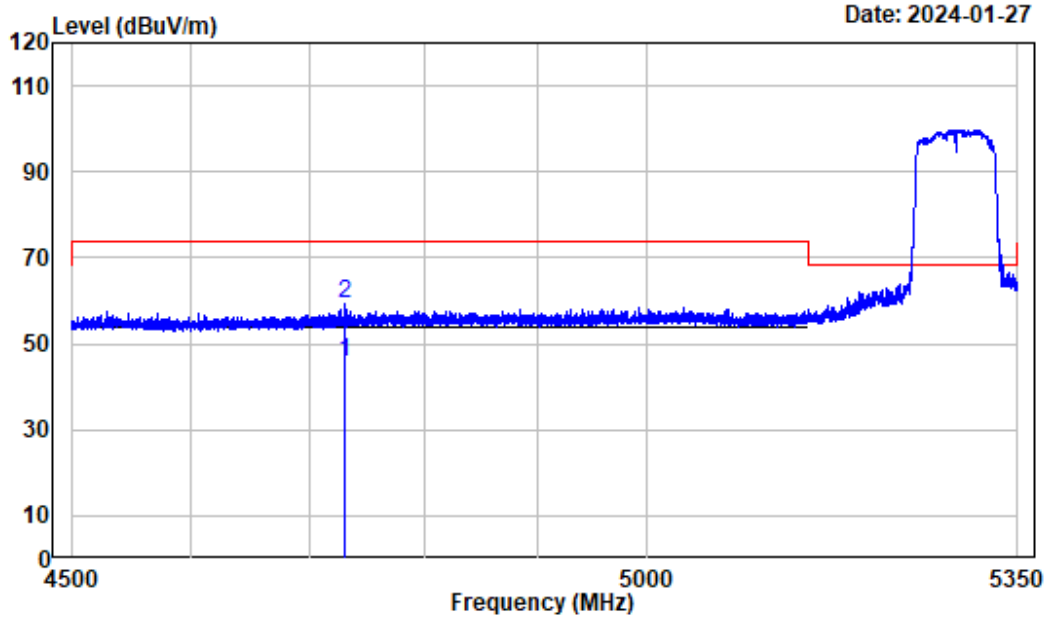
| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5290MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac80

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark  |
|---|----------|--------|------------|--------|------------|------------|---------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |         |
| 1 | 5004.833 | 2.96   | 43.03      | 45.99  | 54.00      | -8.01      | Average |
| 2 | 5004.833 | 2.96   | 55.53      | 58.49  | 74.00      | -15.51     | peak    |

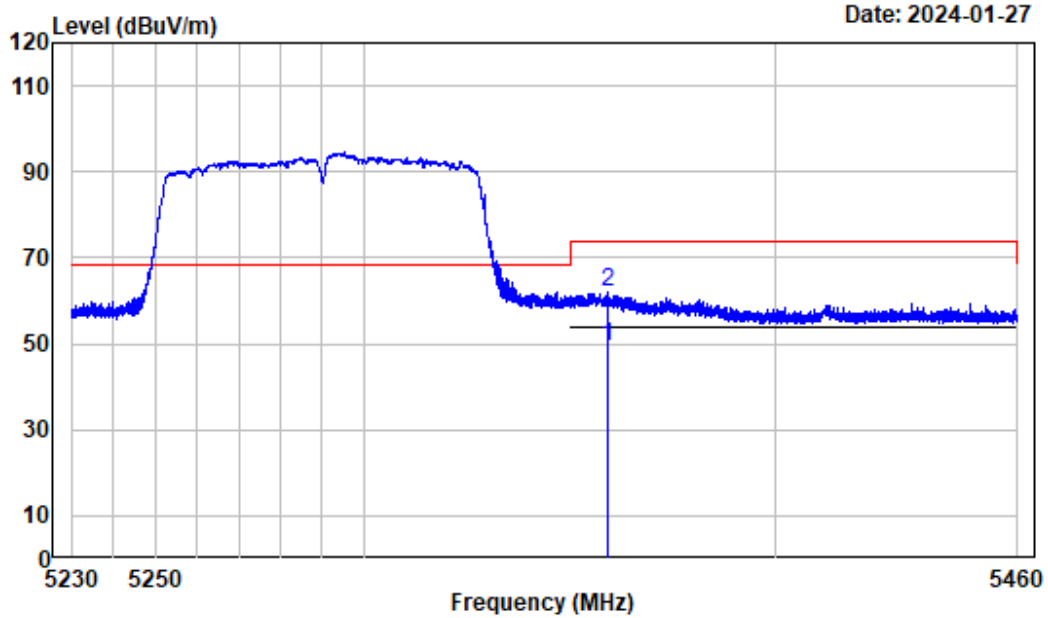
| 802.11ac80    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5290MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac80

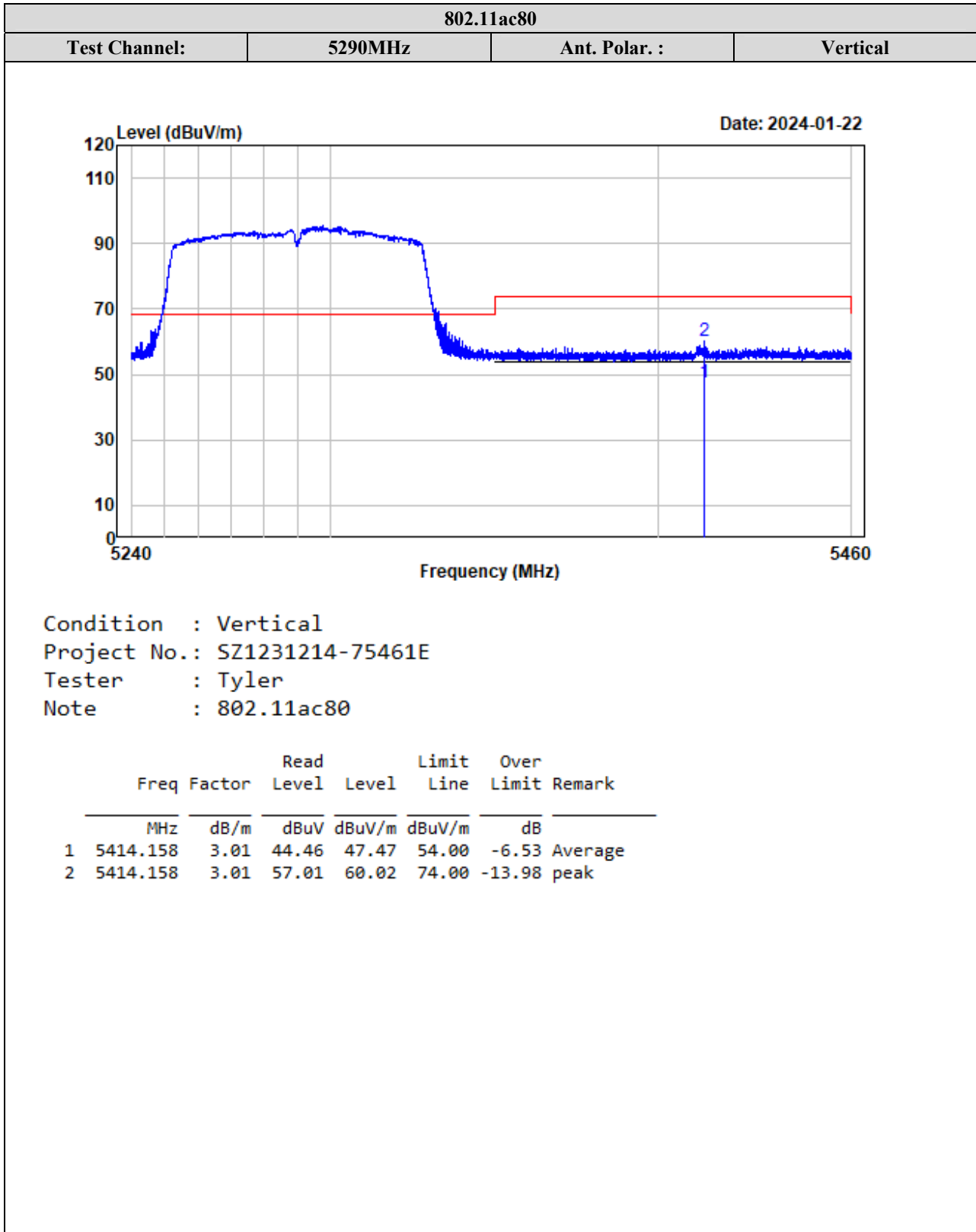
|   | Freq     | Factor | Read Level | Level  | Limit  | Remark  | Over Limit |
|---|----------|--------|------------|--------|--------|---------|------------|
|   | MHz      | dB/m   | dBuV       | dBUV/m | dBUV/m |         | dB         |
| 1 | 4731.094 | 2.28   | 43.56      | 45.84  | 54.00  | Average | -8.16      |
| 2 | 4731.094 | 2.28   | 56.93      | 59.21  | 74.00  | peak    | -14.79     |

| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5290MHz | Ant. Polar. : | Horizontal |



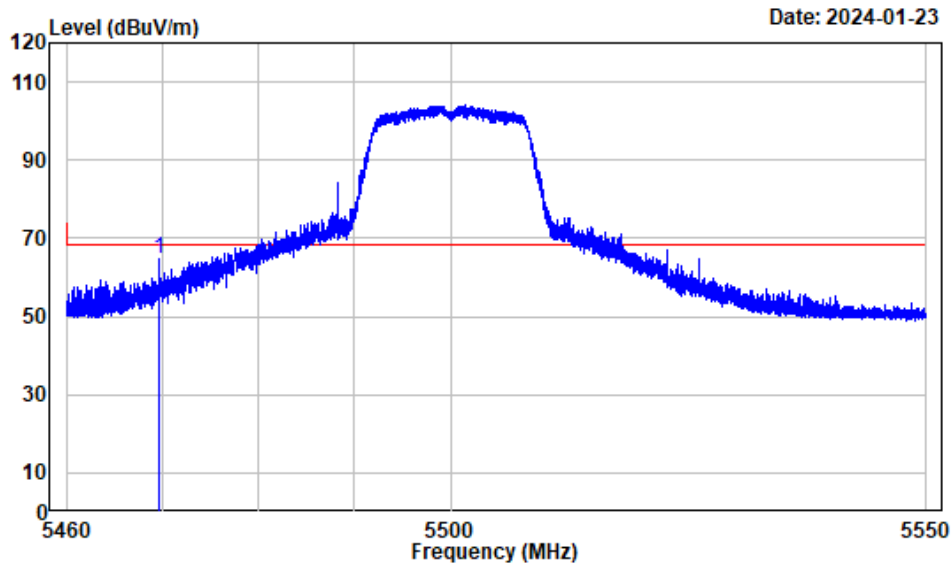
Condition : Horizontal  
 Project No.: SZ1231214-75461E  
 Tester : Tyler  
 Note : 802.11ac80

|   | Freq     | Factor | Read Level | Limit Level | Limit  | Over Limit    |
|---|----------|--------|------------|-------------|--------|---------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m | dB            |
| 1 | 5359.317 | 2.92   | 46.64      | 49.56       | 54.00  | Average -4.44 |
| 2 | 5359.317 | 2.92   | 58.94      | 61.86       | 74.00  | peak -12.14   |



5470-5725MHz:  
ANT 1

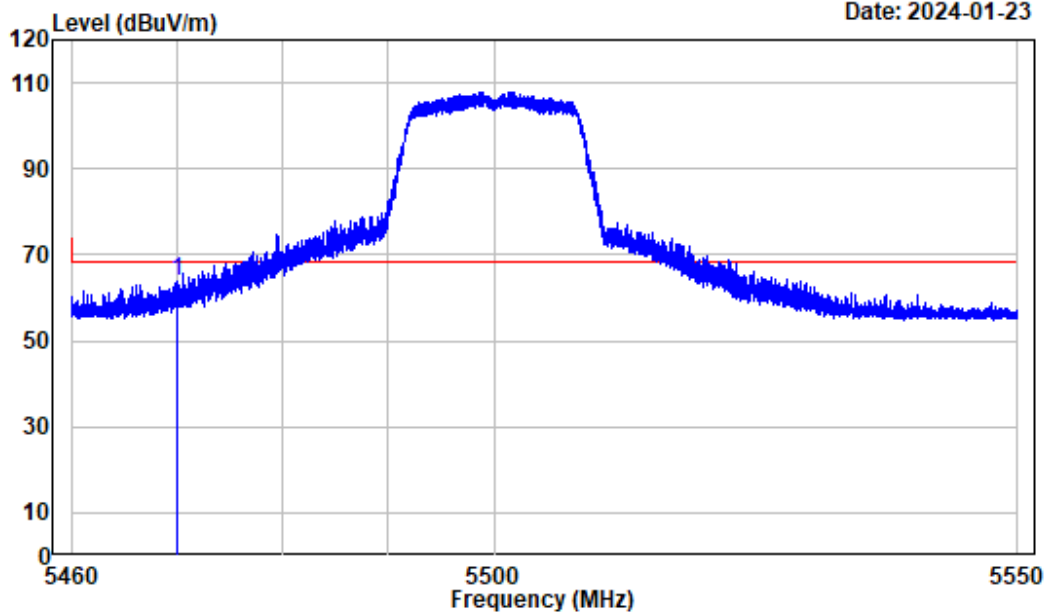
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5500MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read  |        | Limit  | Remark | Over  |
|---|----------|--------|-------|--------|--------|--------|-------|
|   |          |        | Level | Level  | Line   |        | Limit |
|   | MHz      | dB/m   | dBuV  | dBUV/m | dBUV/m |        | dB    |
| 1 | 5469.596 | 3.05   | 61.64 | 64.69  | 68.20  | Peak   | -3.51 |

| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5500MHz | Ant. Polar. : | Vertical |

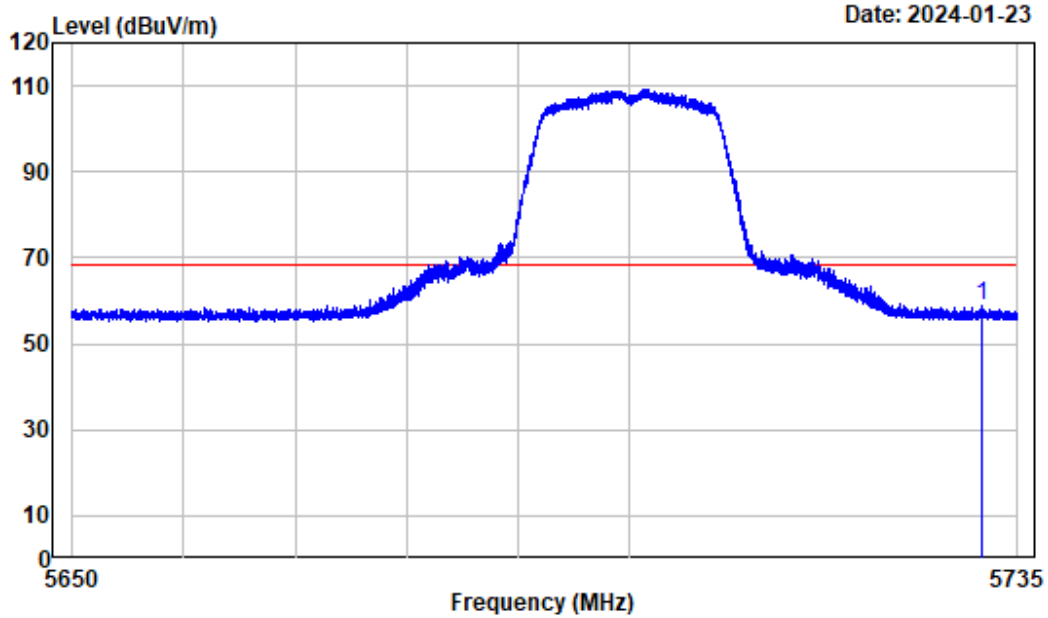


Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read Level | Level  | Limit  | Remark | Over Limit |
|---|----------|--------|------------|--------|--------|--------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |        | dB         |
| 1 | 5469.911 | 3.05   | 60.97      | 64.02  | 68.20  | Peak   | -4.18      |



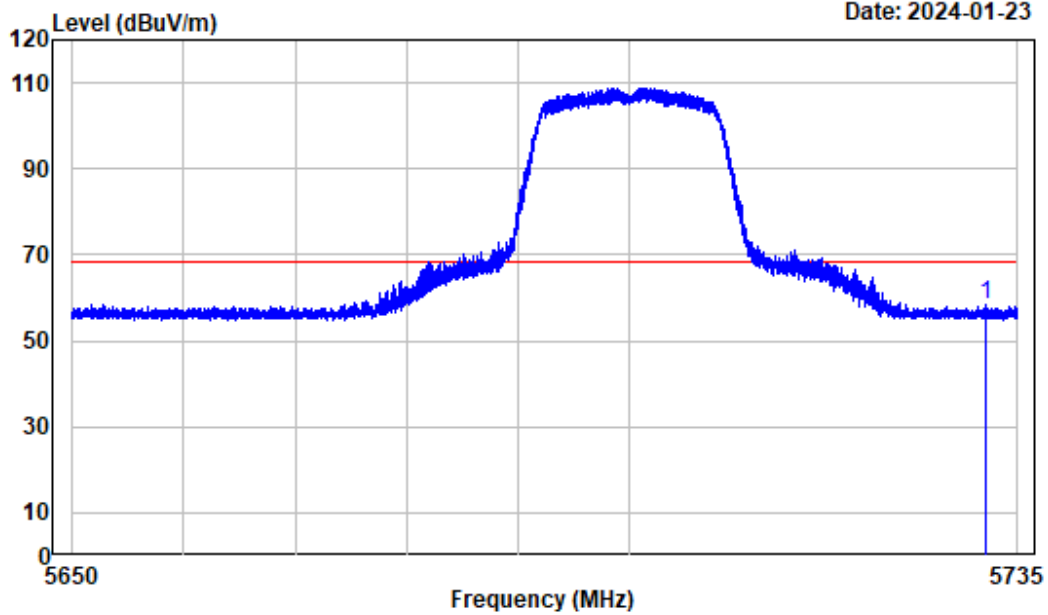
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5700MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read Level | Level  | Limit  | Line Remark | Over Limit |
|---|----------|--------|------------|--------|--------|-------------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |             | dB         |
| 1 | 5731.706 | 3.50   | 55.15      | 58.65  | 68.20  | Peak        | -9.55      |

| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5700MHz | Ant. Polar. : | Vertical |

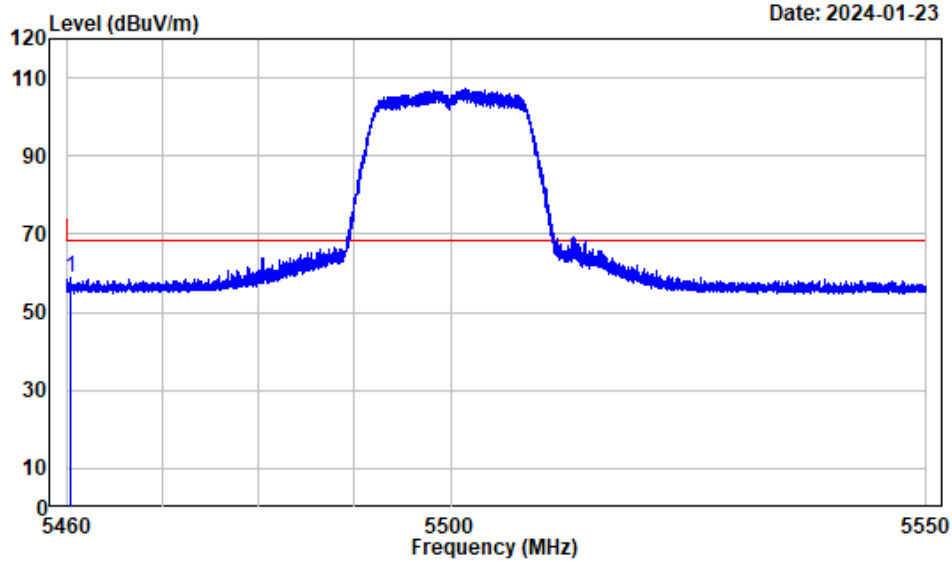


Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read Level | Level  | Limit  | Line Remark | Over Limit |
|---|----------|--------|------------|--------|--------|-------------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |             | dB         |
| 1 | 5732.057 | 3.49   | 54.83      | 58.32  | 68.20  | Peak        | -9.88      |

ANT 2

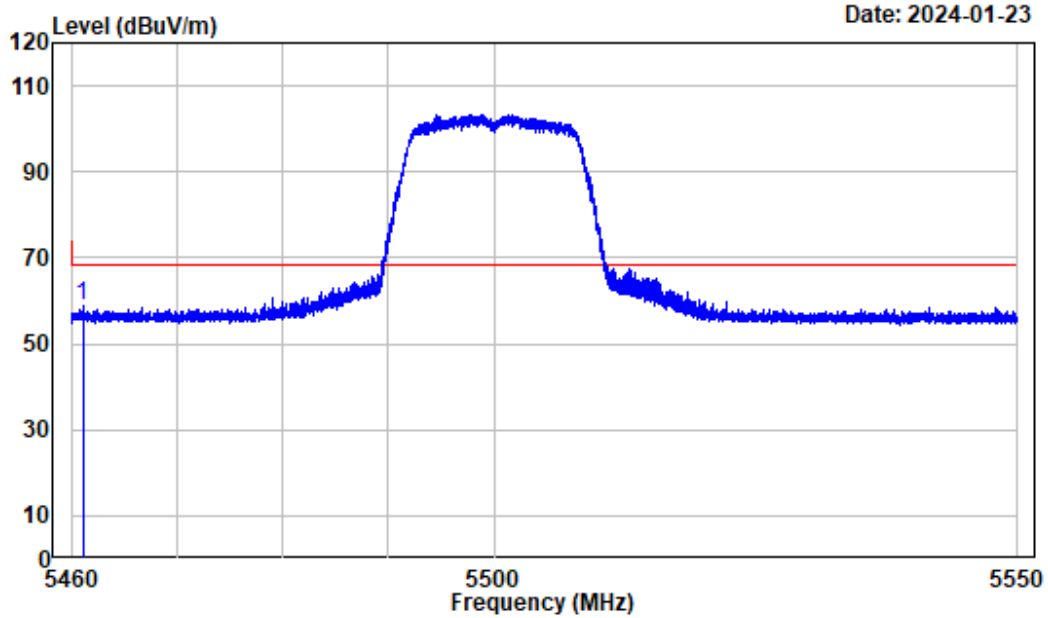
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5500MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read Level | Level  | Limit  | Line | Remark | Over Limit |
|---|----------|--------|------------|--------|--------|------|--------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |      |        | dB         |
| 1 | 5460.416 | 3.05   | 55.85      | 58.90  | 68.20  | Peak |        | -9.30      |

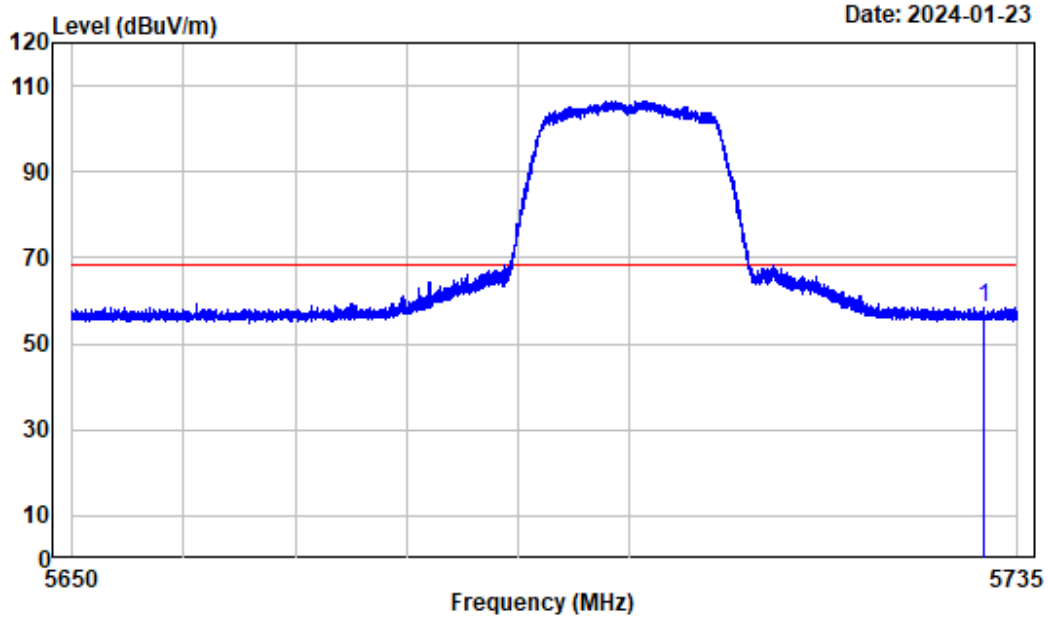
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5500MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read  |        | Limit  | Remark | Over  |
|---|----------|--------|-------|--------|--------|--------|-------|
|   |          |        | Level | Level  | Line   |        | Limit |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m |        | dB    |
| 1 | 5461.069 | 3.06   | 55.80 | 58.86  | 68.20  | Peak   | -9.34 |

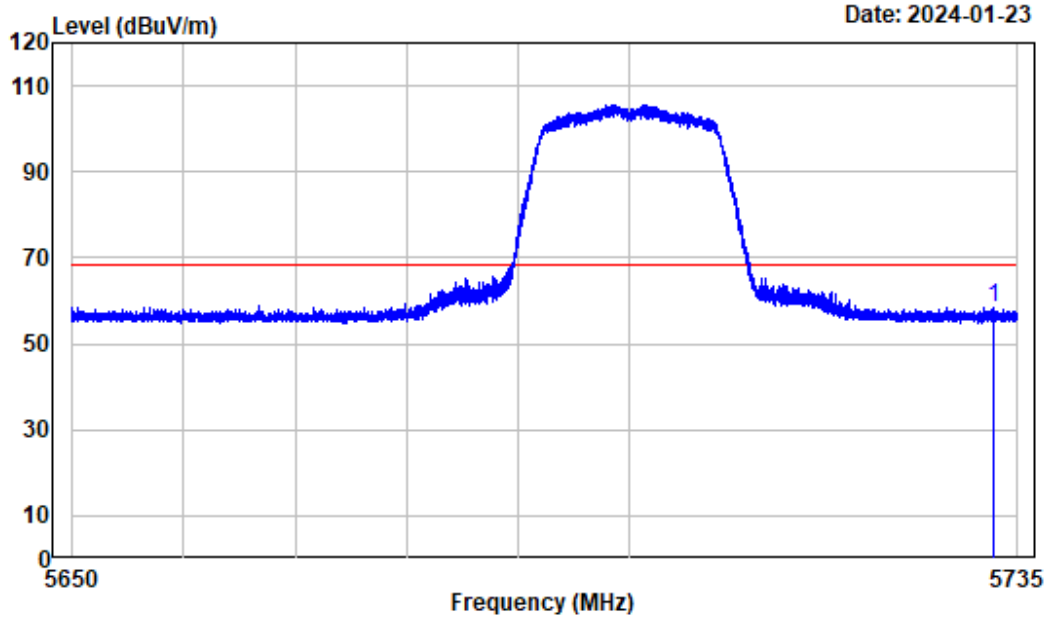
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5700MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read Level | Level  | Limit  | Line Remark | Over Limit |
|---|----------|--------|------------|--------|--------|-------------|------------|
|   | MHz      | dB/m   | dBuV       | dBUV/m | dBUV/m |             | dB         |
| 1 | 5731.961 | 3.49   | 55.10      | 58.59  | 68.20  | Peak        | -9.61      |

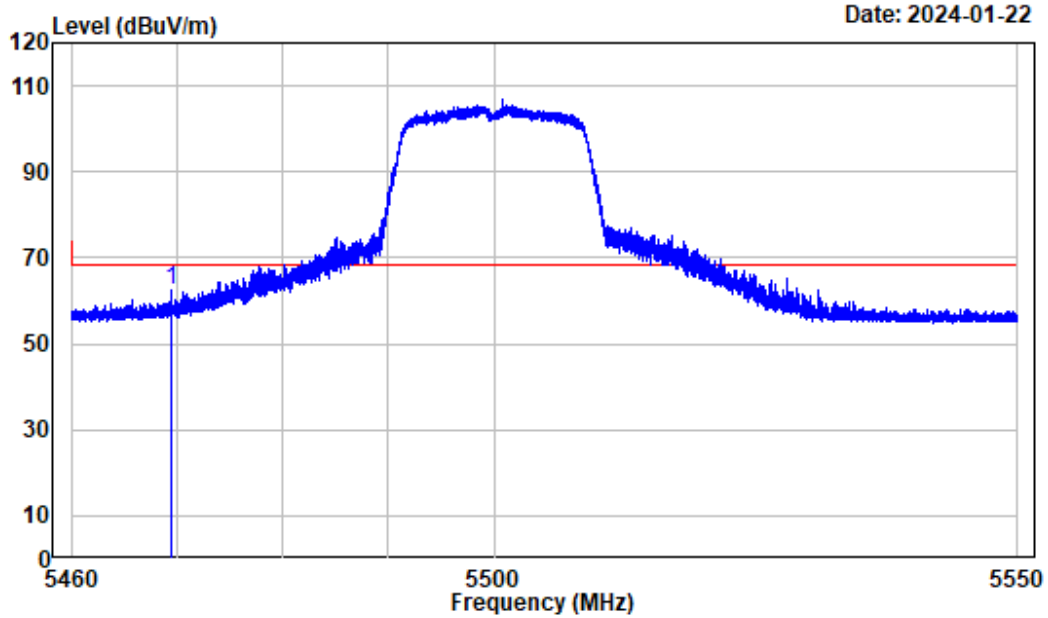
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5700MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read Level | Level  | Limit  | Line Remark | Over Limit |
|---|----------|--------|------------|--------|--------|-------------|------------|
|   | MHz      | dB/m   | dBuV       | dBUV/m | dBUV/m |             | dB         |
| 1 | 5732.917 | 3.50   | 54.71      | 58.21  | 68.20  | Peak        | -9.99      |

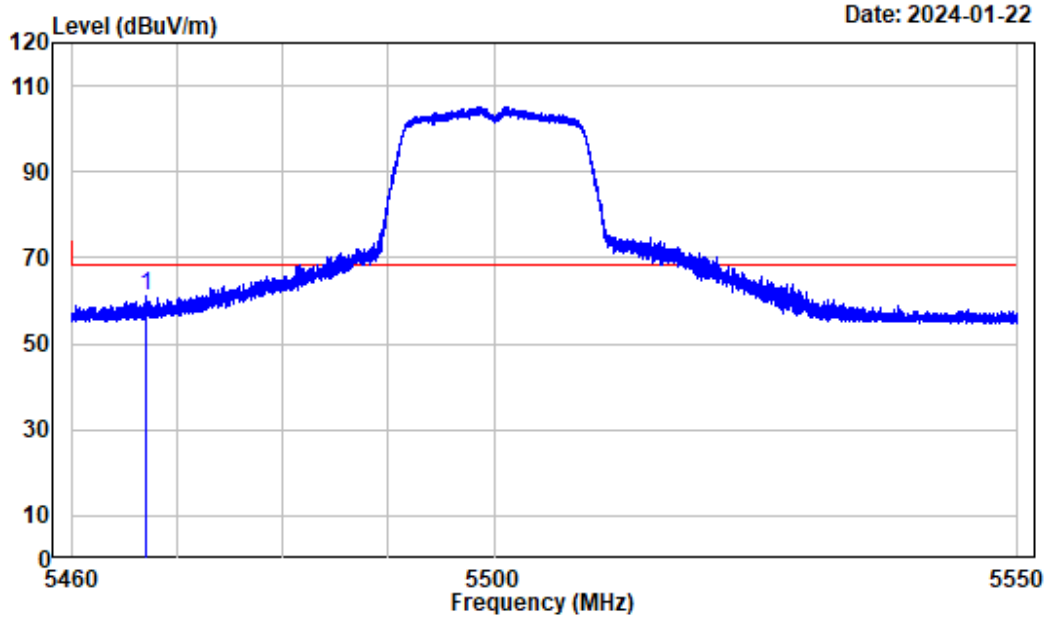
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5500MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5469.360 | 3.05   | 59.47      | 62.52  | 68.20      | -5.68      | Peak   |

| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5500MHz | Ant. Polar. : | Vertical |

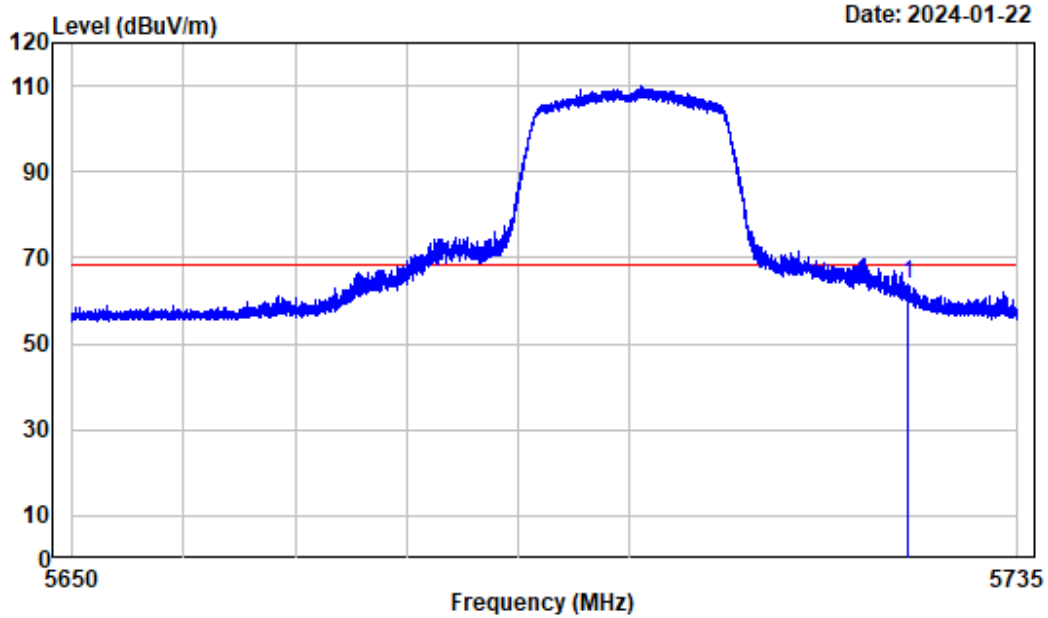


Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5467.087 | 3.06   | 58.15      | 61.21  | 68.20      | -6.99      | Peak   |



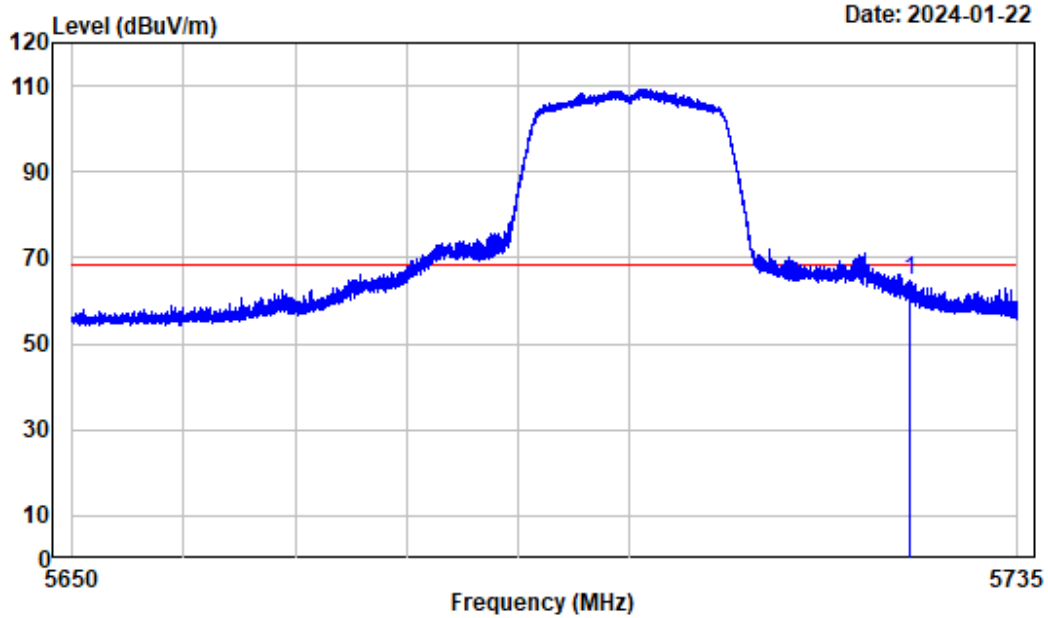
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5700MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5725.161 | 3.48   | 60.18      | 63.66  | 68.20      | -4.54      | Peak   |

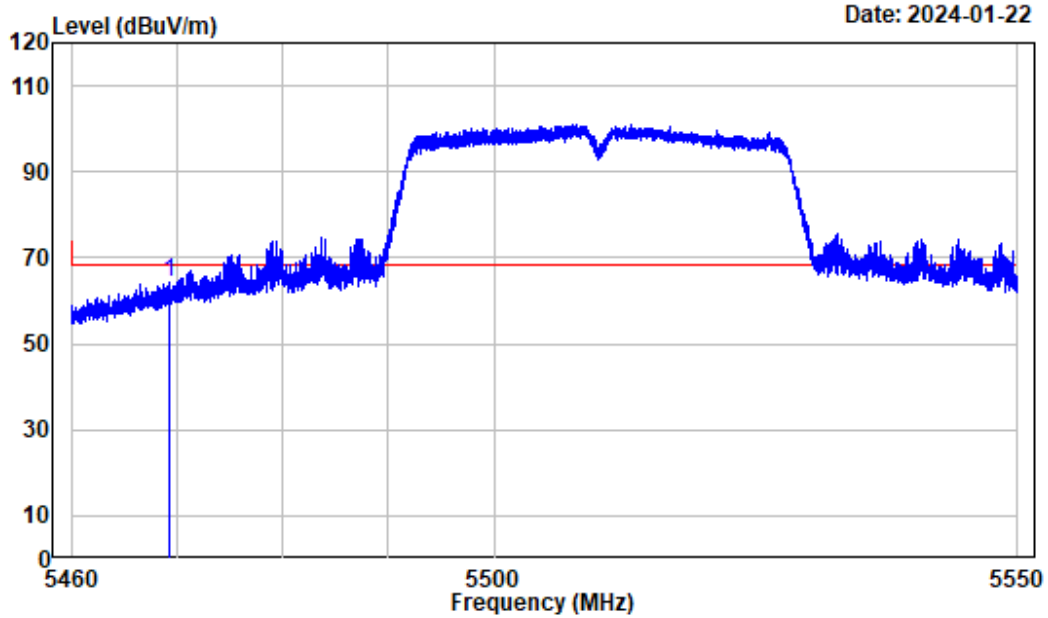
| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5700MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBUV/m | dBUV/m     | dB         |        |
| 1 | 5725.246 | 3.48   | 61.33      | 64.81  | 68.20      | -3.39      | Peak   |

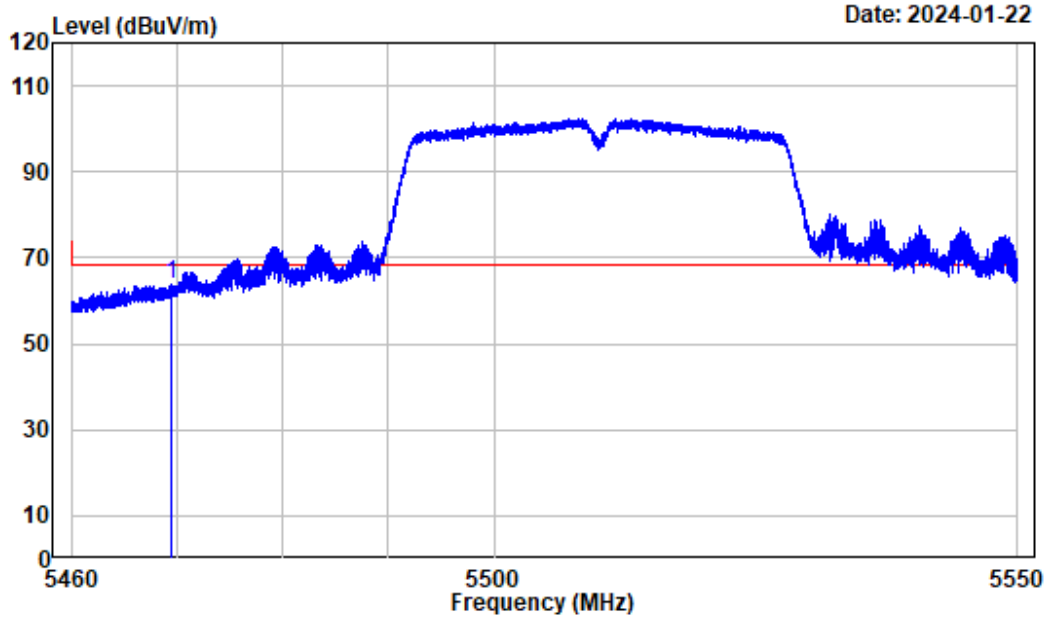
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5510MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|   | Freq     | Factor | Read  |        | Limit  | Over  | Remark |
|---|----------|--------|-------|--------|--------|-------|--------|
|   |          |        | Level | Level  |        |       |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB    |        |
| 1 | 5469.326 | 3.05   | 61.29 | 64.34  | 68.20  | -3.86 | Peak   |

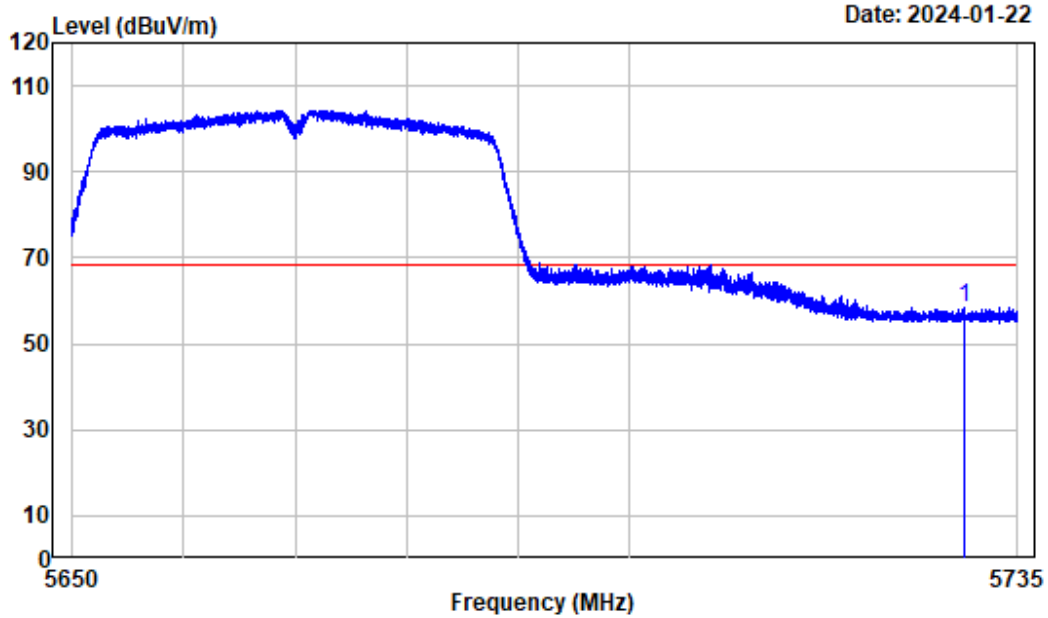
| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5510MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|   | Freq     | Factor | Read  |        | Limit  | Over  | Remark |
|---|----------|--------|-------|--------|--------|-------|--------|
|   |          |        | Level | Level  | Line   | Limit |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB    |        |
| 1 | 5469.518 | 3.05   | 60.71 | 63.76  | 68.20  | -4.44 | Peak   |

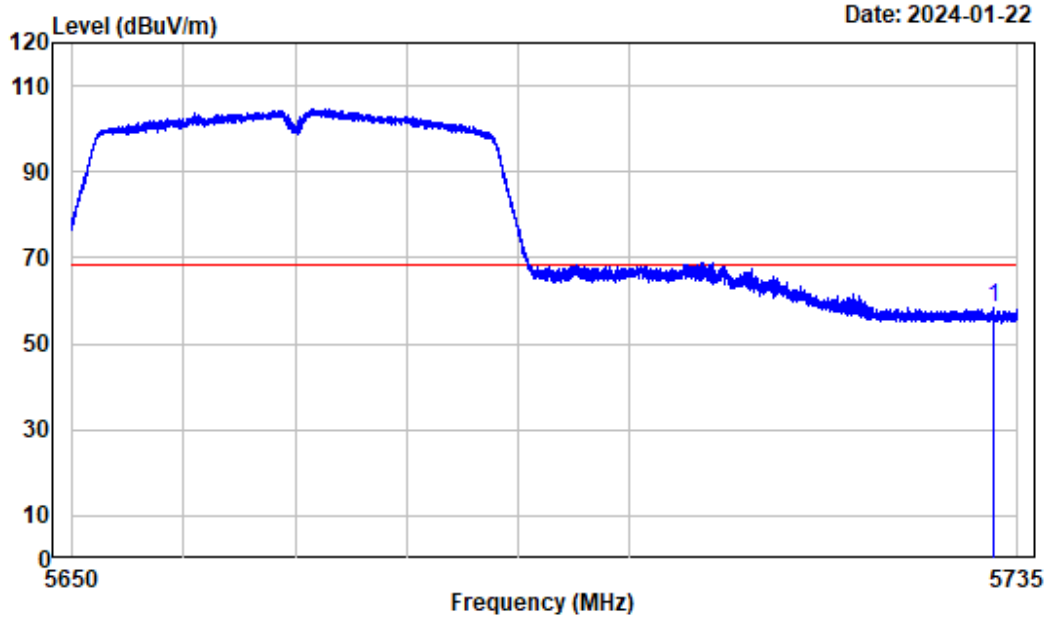
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5670MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5730.229 | 3.50   | 54.96      | 58.46  | 68.20      | -9.74      | Peak   |

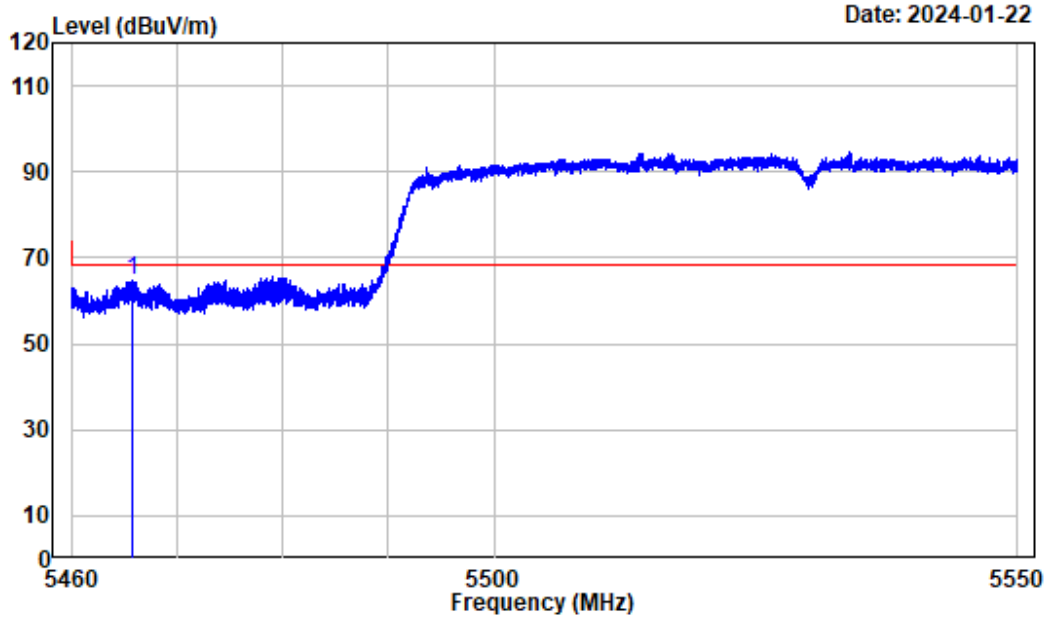
| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5670MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5732.779 | 3.50   | 54.74      | 58.24  | 68.20      | -9.96      | Peak   |

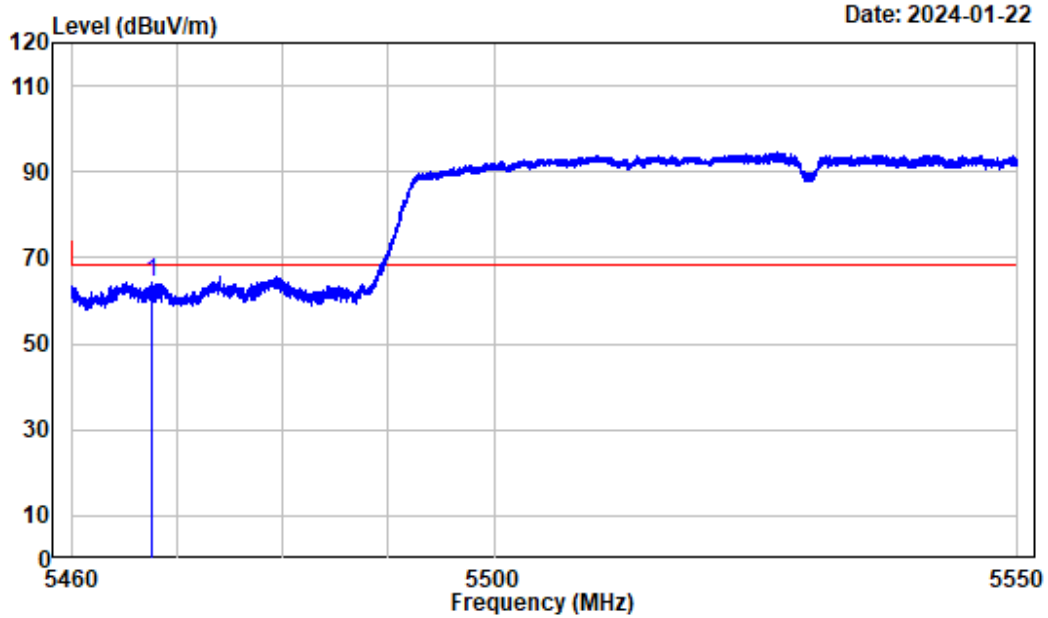
| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5530MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5465.828 | 3.06   | 61.72      | 64.78  | 68.20      | -3.42      | Peak   |

| 802.11ac80    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5530MHz | Ant. Polar. : | Vertical |

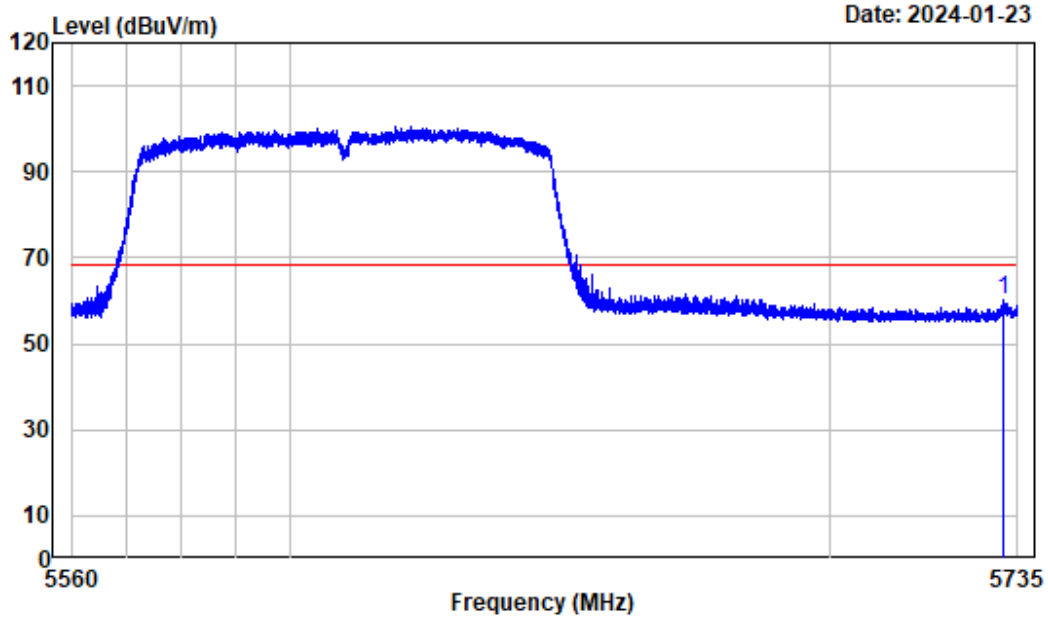


Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5467.583 | 3.06   | 61.30      | 64.36  | 68.20      | -3.84      | Peak   |



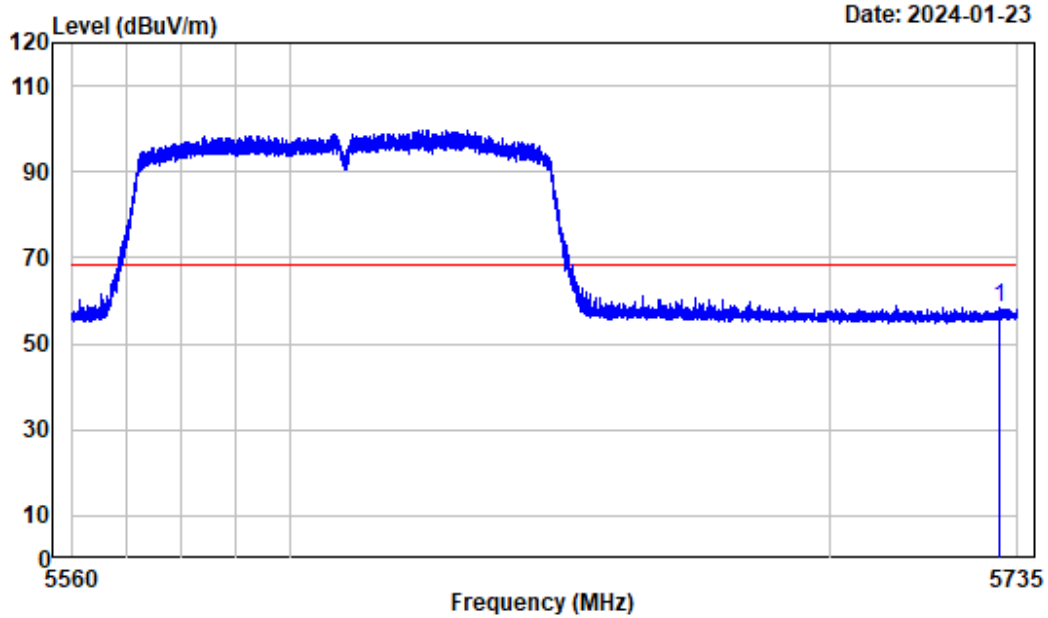
| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5610MHz | Ant. Polar. : | Horizontal |



Site : chamber  
 Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|   | Freq     | Factor | Read  |        | Limit  |        | Over  |
|---|----------|--------|-------|--------|--------|--------|-------|
|   |          |        | Level | Level  | Line   | Remark |       |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m |        | dB    |
| 1 | 5732.310 | 3.49   | 56.68 | 60.17  | 68.20  | Peak   | -8.03 |

| 802.11ac80    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5610MHz | Ant. Polar. : | Vertical |

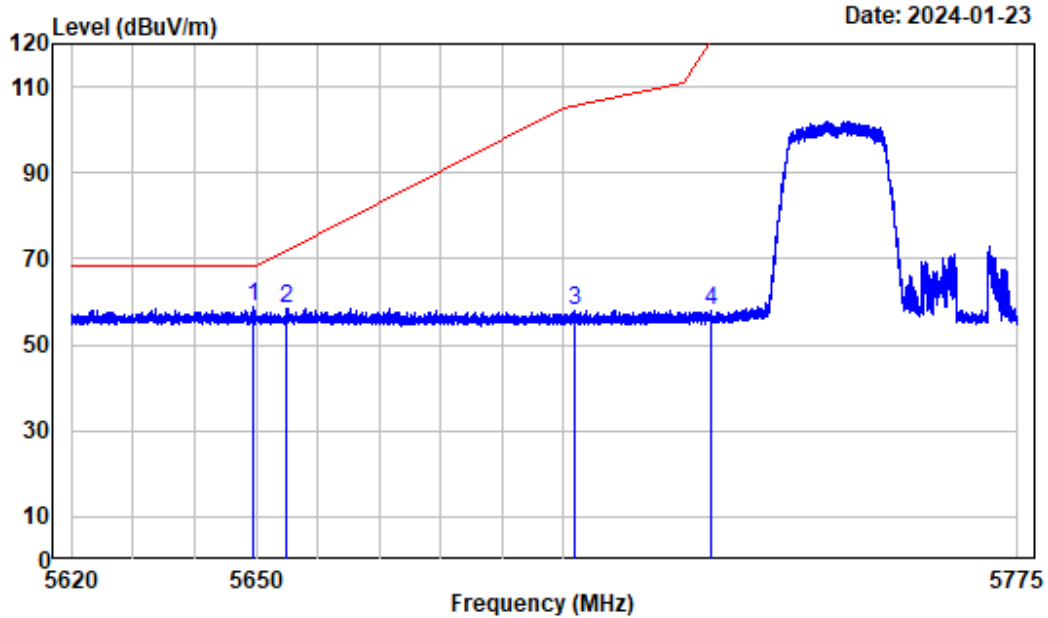


Site : chamber  
 Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|   | Freq     | Factor | Read  |        | Limit  |        | Over  |
|---|----------|--------|-------|--------|--------|--------|-------|
|   |          |        | Level | Level  | Line   | Remark |       |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m |        | dB    |
| 1 | 5731.631 | 3.50   | 54.87 | 58.37  | 68.20  | Peak   | -9.83 |

5725-5850MHz:  
ANT 1

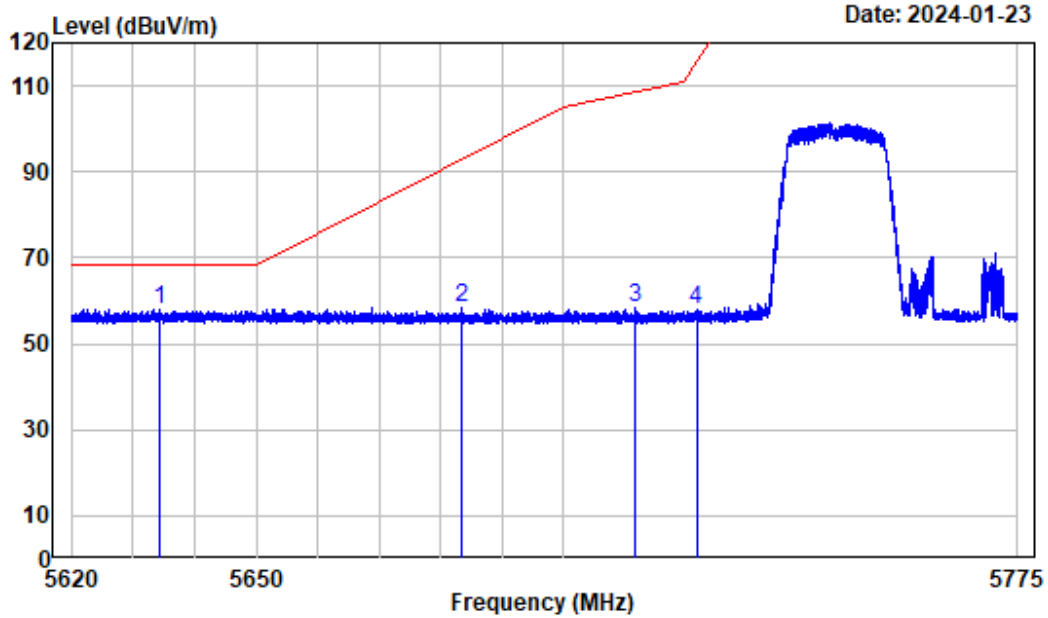
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5745MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Remark | Over Limit |
|---|----------|--------|------------|-------------|------------|--------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     |        | dB         |
| 1 | 5649.353 | 3.27   | 55.41      | 58.68       | 68.20      | Peak   | -9.52      |
| 2 | 5654.914 | 3.29   | 55.28      | 58.57       | 71.85      | Peak   | -13.28     |
| 3 | 5701.956 | 3.45   | 54.63      | 58.08       | 105.75     | Peak   | -47.67     |
| 4 | 5724.257 | 3.48   | 54.40      | 57.88       | 120.51     | Peak   | -62.63     |

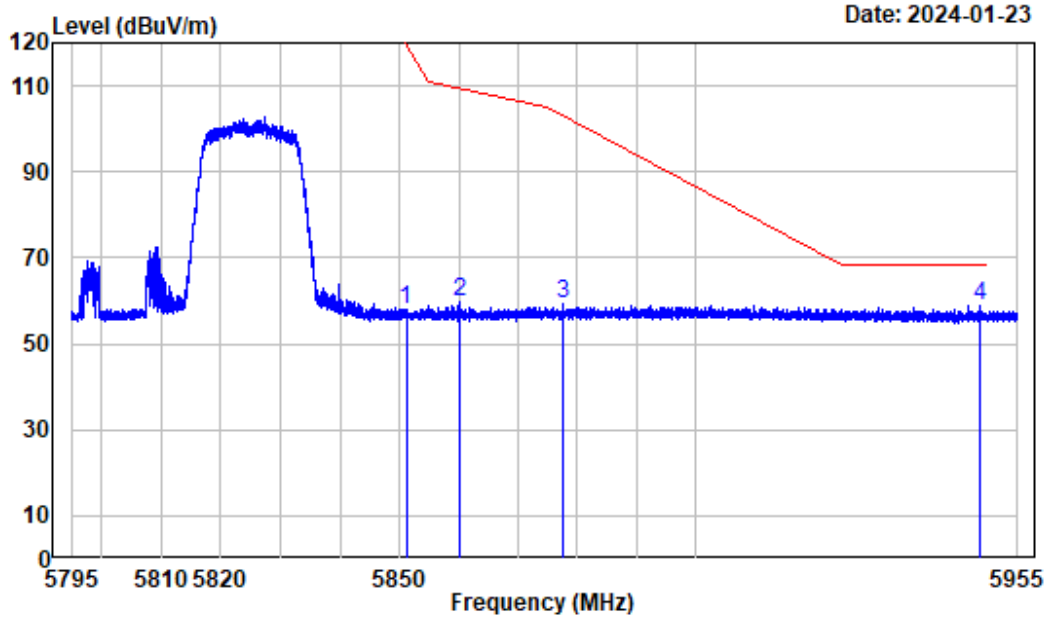
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5745MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read Level | Level  | Limit  | Line Remark | Over Limit |
|---|----------|--------|------------|--------|--------|-------------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |             | dB         |
| 1 | 5634.202 | 3.15   | 54.86      | 58.01  | 68.20  | Peak        | -10.19     |
| 2 | 5683.453 | 3.39   | 55.09      | 58.48  | 92.99  | Peak        | -34.51     |
| 3 | 5711.760 | 3.47   | 54.98      | 58.45  | 108.50 | Peak        | -50.05     |
| 4 | 5721.932 | 3.48   | 54.57      | 58.05  | 115.21 | Peak        | -57.16     |

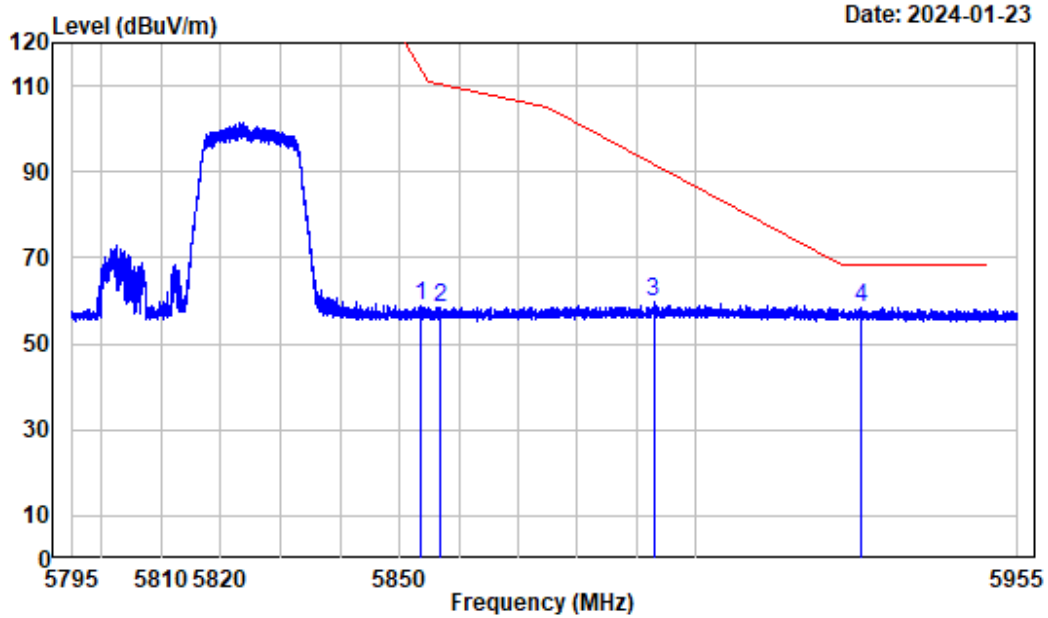
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5825MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read Level | Limit Level | Limit  | Over Limit  |
|---|----------|--------|------------|-------------|--------|-------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m | dB          |
| 1 | 5851.120 | 3.67   | 54.47      | 58.14       | 119.65 | Peak -61.51 |
| 2 | 5860.160 | 3.71   | 56.09      | 59.80       | 109.35 | Peak -49.55 |
| 3 | 5877.540 | 3.77   | 55.56      | 59.33       | 103.31 | Peak -43.98 |
| 4 | 5948.600 | 3.74   | 54.97      | 58.71       | 68.20  | Peak -9.49  |

| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5825MHz | Ant. Polar. : | Vertical |

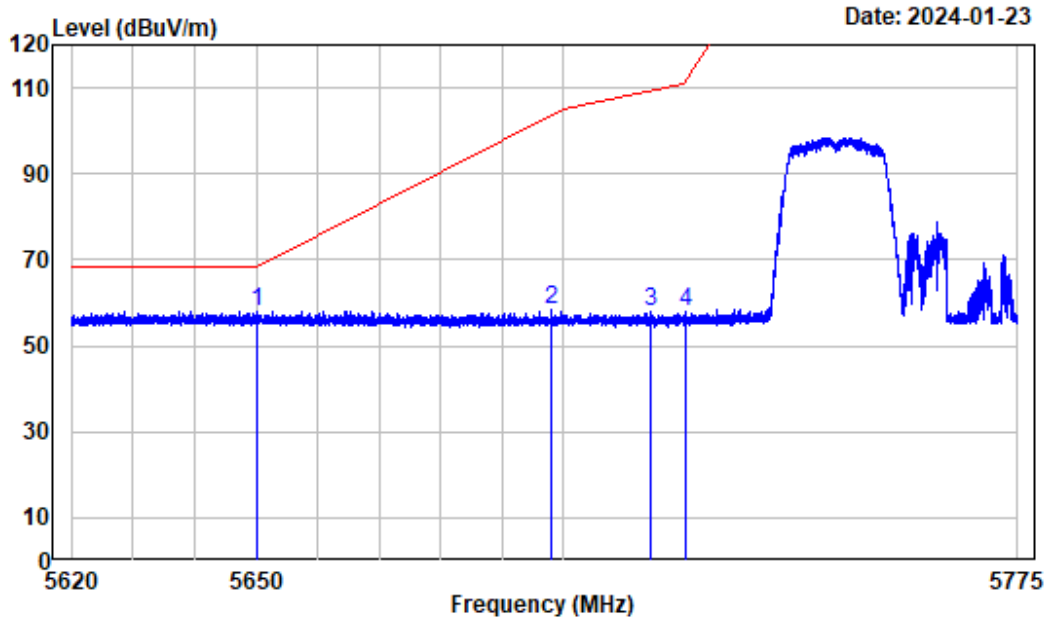


Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT1

|   | Freq     | Factor | Read Level | Limit Level | Limit  | Remark | Over Limit |
|---|----------|--------|------------|-------------|--------|--------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m |        | dB         |
| 1 | 5853.640 | 3.69   | 55.26      | 58.95       | 113.90 | Peak   | -54.95     |
| 2 | 5856.780 | 3.71   | 54.90      | 58.61       | 110.30 | Peak   | -51.69     |
| 3 | 5892.940 | 3.83   | 55.78      | 59.61       | 91.89  | Peak   | -32.28     |
| 4 | 5928.140 | 3.78   | 54.75      | 58.53       | 68.20  | Peak   | -9.67      |

ANT 2

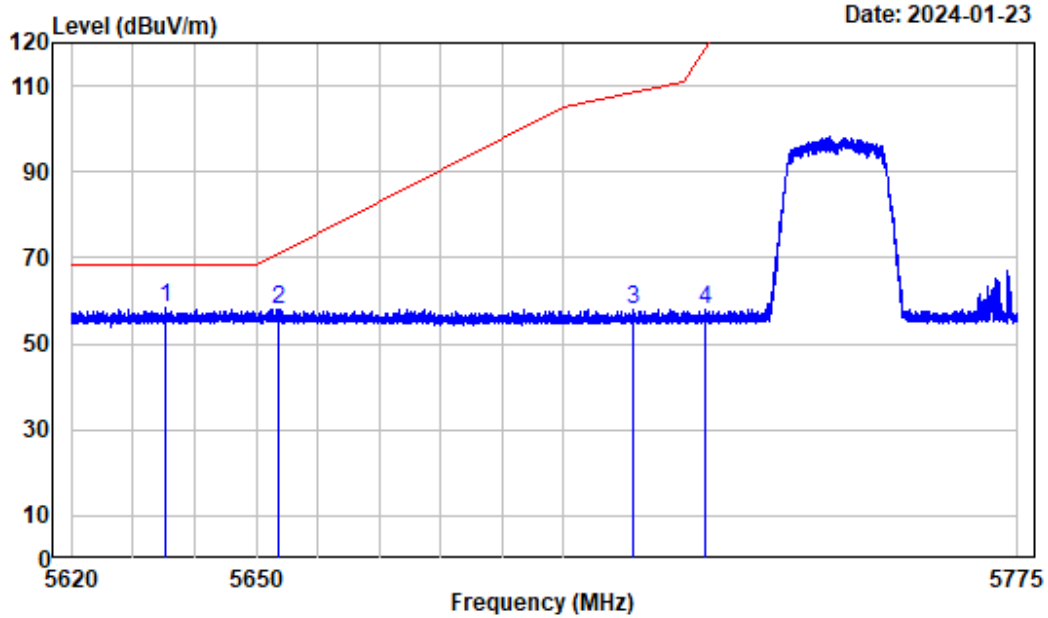
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5745MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read Level | Level  | Limit  | Remark | Over Limit |
|---|----------|--------|------------|--------|--------|--------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |        | dB         |
| 1 | 5649.954 | 3.28   | 54.62      | 57.90  | 68.20  | Peak   | -10.30     |
| 2 | 5698.217 | 3.44   | 55.06      | 58.50  | 103.89 | Peak   | -45.39     |
| 3 | 5714.298 | 3.47   | 54.62      | 58.09  | 109.21 | Peak   | -51.12     |
| 4 | 5720.130 | 3.48   | 54.60      | 58.08  | 111.10 | Peak   | -53.02     |

| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5745MHz | Ant. Polar. : | Vertical |

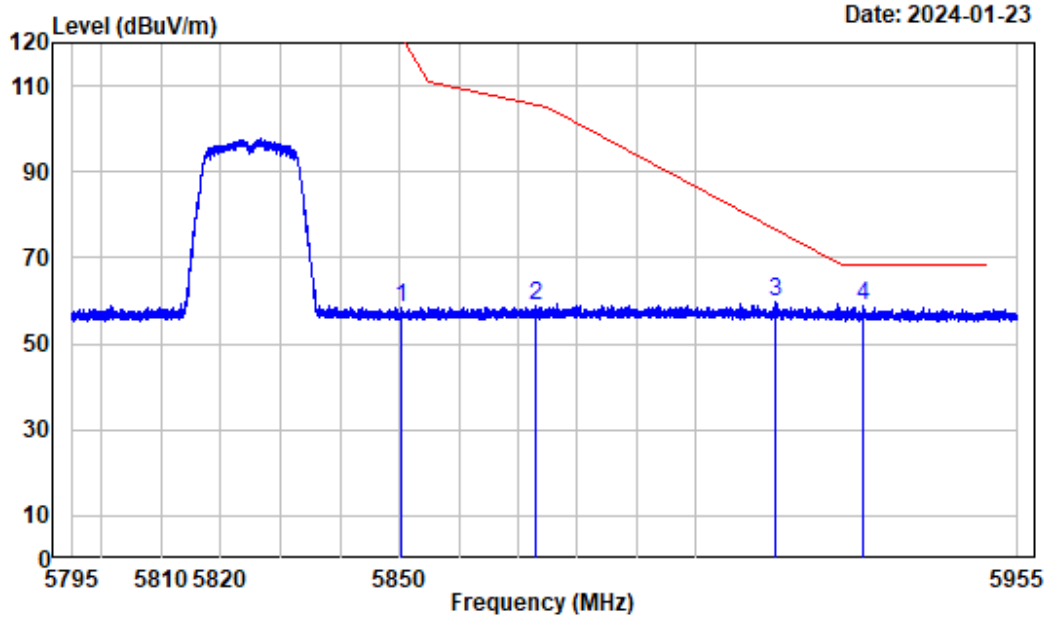


Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read Level | Level  | Limit  | Line Remark | Over Limit |
|---|----------|--------|------------|--------|--------|-------------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m |             | dB         |
| 1 | 5635.287 | 3.16   | 55.16      | 58.32  | 68.20  | Peak        | -9.88      |
| 2 | 5653.538 | 3.28   | 54.90      | 58.18  | 70.83  | Peak        | -12.65     |
| 3 | 5711.566 | 3.47   | 54.56      | 58.03  | 108.44 | Peak        | -50.41     |
| 4 | 5723.443 | 3.48   | 54.28      | 57.76  | 118.65 | Peak        | -60.89     |



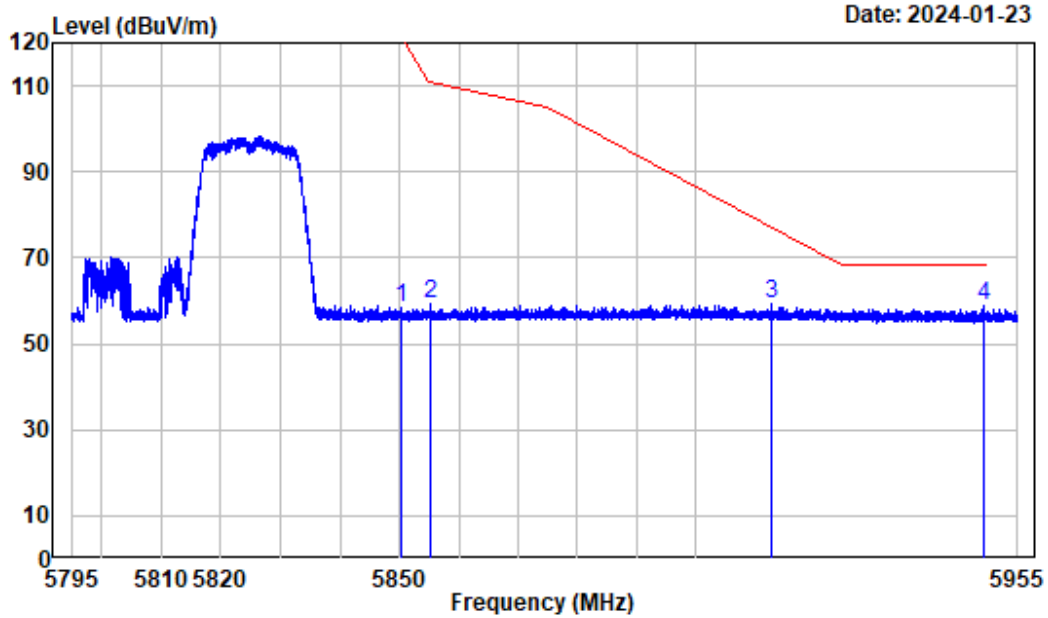
| 802.11a       |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5825MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read Level | Limit Level | Limit  | Remark | Over Limit |
|---|----------|--------|------------|-------------|--------|--------|------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m |        | dB         |
| 1 | 5850.160 | 3.67   | 54.63      | 58.30       | 121.83 | Peak   | -63.53     |
| 2 | 5872.900 | 3.76   | 55.09      | 58.85       | 105.79 | Peak   | -46.94     |
| 3 | 5913.780 | 3.81   | 55.79      | 59.60       | 76.48  | Peak   | -16.88     |
| 4 | 5928.440 | 3.78   | 54.93      | 58.71       | 68.20  | Peak   | -9.49      |

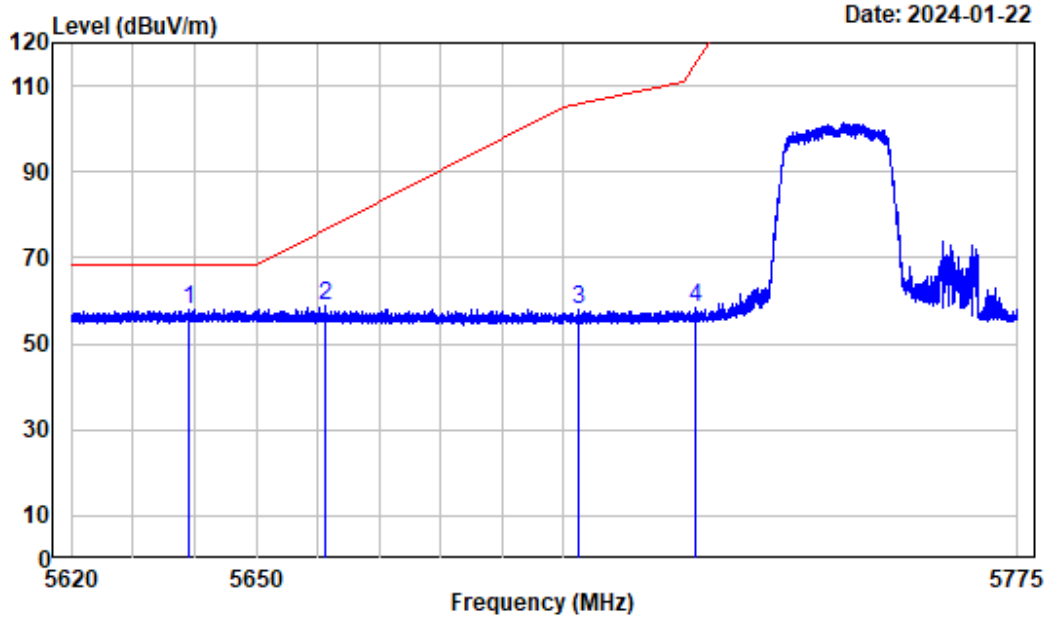
| 802.11a       |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5825MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75457E-RF  
 Tester : Zenos Qiao  
 Note : 802.11A\_ANT2

|   | Freq     | Factor | Read Level | Limit Level | Limit  | Over Limit  |
|---|----------|--------|------------|-------------|--------|-------------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m | dB          |
| 1 | 5850.300 | 3.67   | 54.67      | 58.34       | 121.52 | Peak -63.18 |
| 2 | 5855.320 | 3.70   | 55.59      | 59.29       | 110.71 | Peak -51.42 |
| 3 | 5912.900 | 3.82   | 55.53      | 59.35       | 77.13  | Peak -17.78 |
| 4 | 5949.220 | 3.74   | 54.98      | 58.72       | 68.20  | Peak -9.48  |

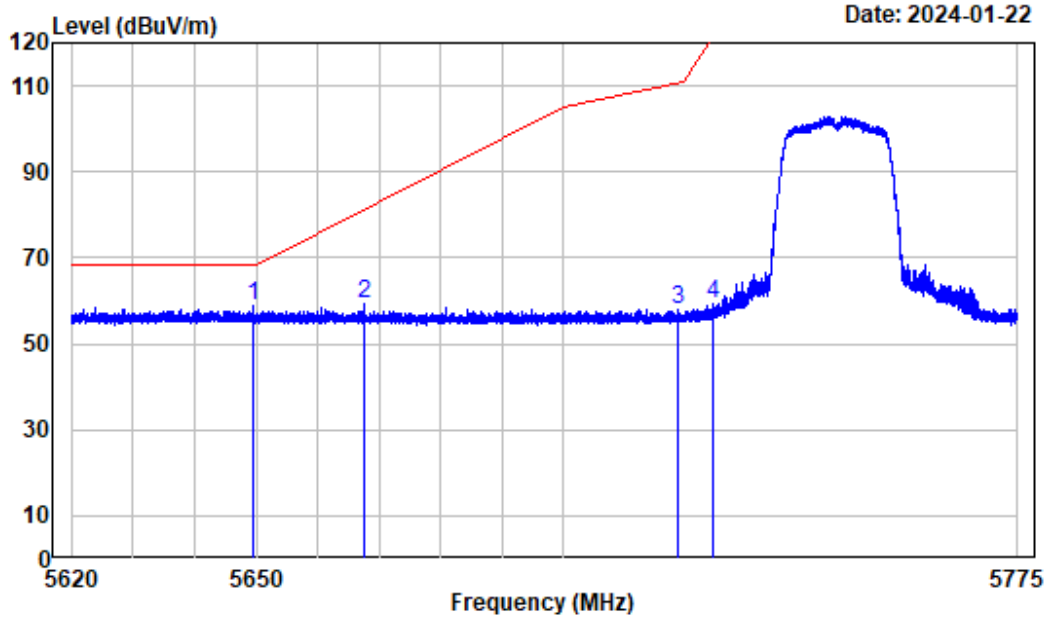
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5745MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5639.026 | 3.19   | 54.99      | 58.18  | 68.20      | -10.02     | Peak   |
| 2 | 5661.094 | 3.30   | 55.55      | 58.85  | 76.44      | -17.59     | Peak   |
| 3 | 5702.692 | 3.46   | 54.63      | 58.09  | 105.96     | -47.87     | Peak   |
| 4 | 5721.796 | 3.48   | 55.05      | 58.53  | 114.90     | -56.37     | Peak   |

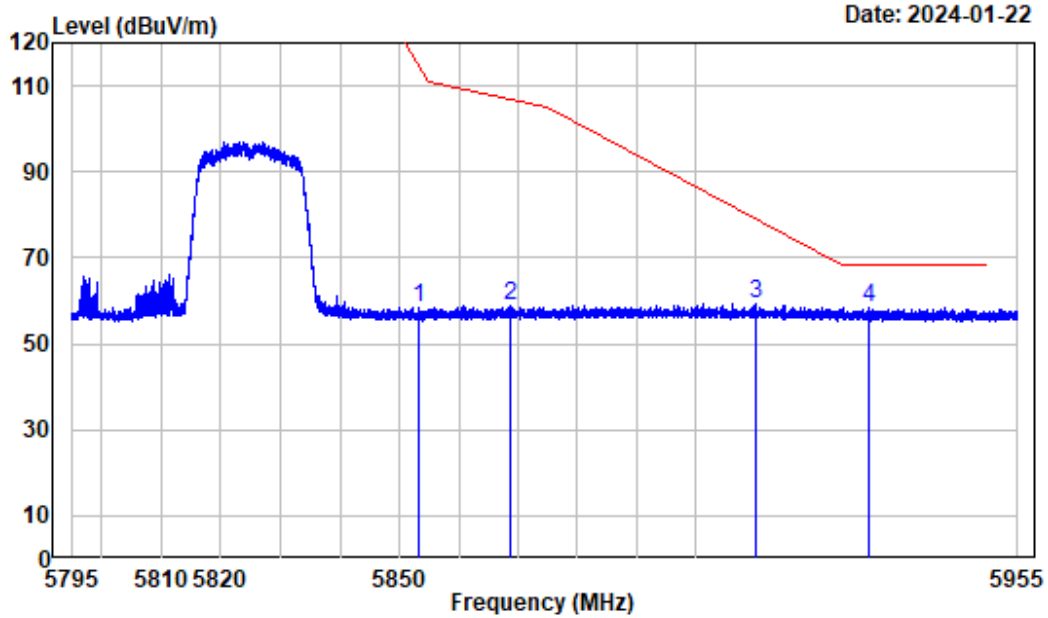
| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5745MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|-------------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |        |
| 1 | 5649.334 | 3.27   | 55.47      | 58.74       | 68.20      | -9.46      | Peak   |
| 2 | 5667.527 | 3.34   | 55.86      | 59.20       | 81.21      | -22.01     | Peak   |
| 3 | 5718.890 | 3.48   | 54.58      | 58.06       | 110.49     | -52.43     | Peak   |
| 4 | 5724.547 | 3.48   | 55.76      | 59.24       | 121.17     | -61.93     | Peak   |

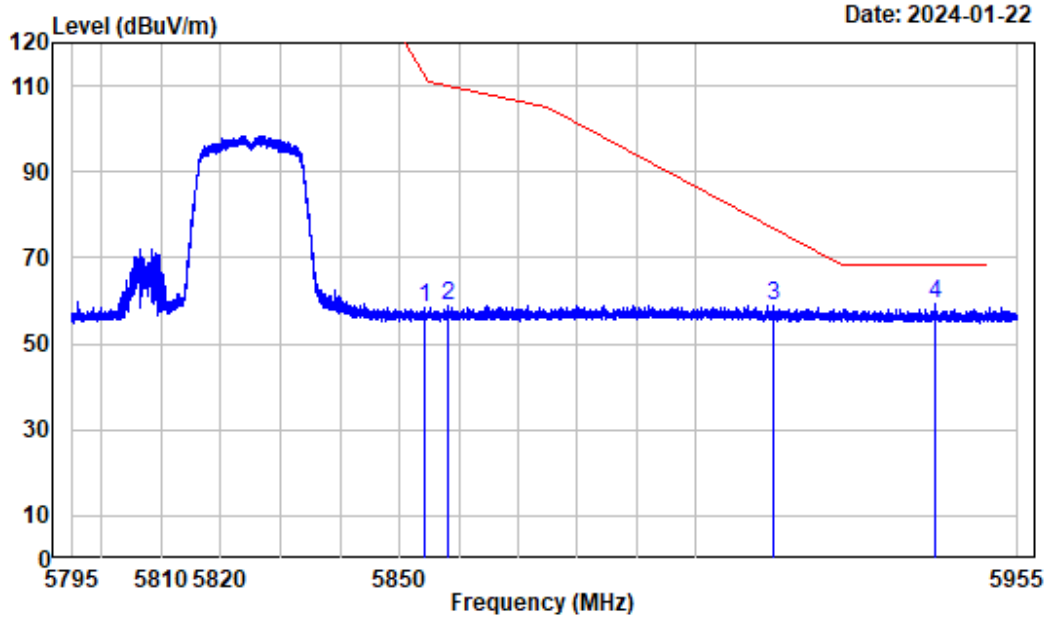
| 802.11ac20    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5825MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|      | Read     | Limit | Over   |        |        |        |      |
|------|----------|-------|--------|--------|--------|--------|------|
| Freq | Factor   | Level | Level  | Line   |        |        |      |
| MHz  | dB/m     | dBuV  | dBuV/m | dBuV/m |        |        |      |
| 1    | 5853.200 | 3.69  | 54.87  | 58.56  | 114.90 | -56.34 | Peak |
| 2    | 5868.620 | 3.74  | 55.13  | 58.87  | 106.98 | -48.11 | Peak |
| 3    | 5910.400 | 3.83  | 55.54  | 59.37  | 78.97  | -19.60 | Peak |
| 4    | 5929.720 | 3.79  | 54.72  | 58.51  | 68.20  | -9.69  | Peak |

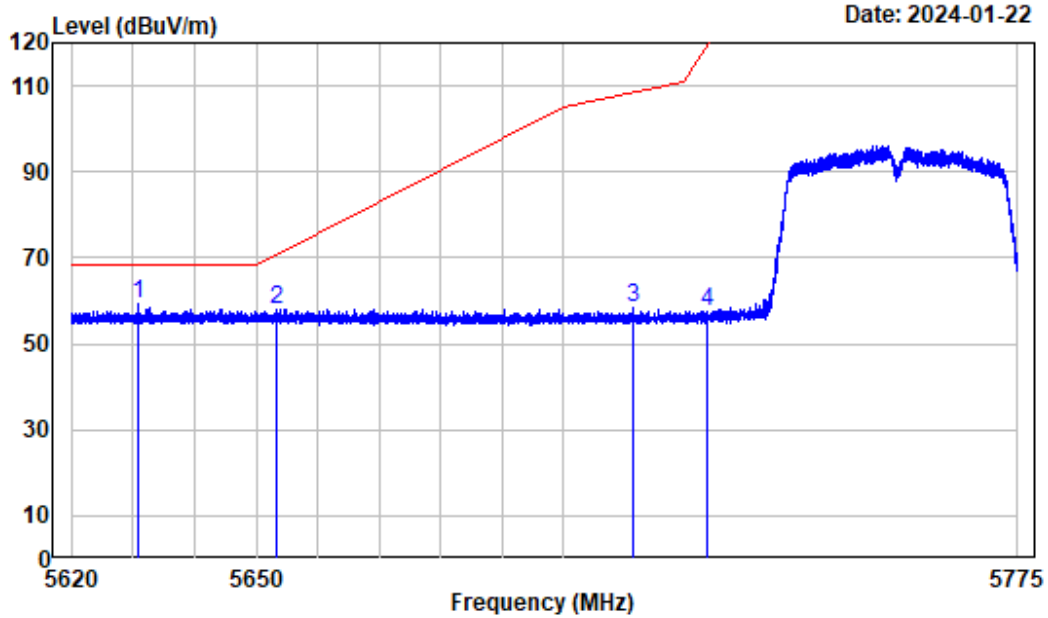
| 802.11ac20    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5825MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC20

|   | Freq     | Factor | Read Level | Level  | Limit  | Over   | Remark |
|---|----------|--------|------------|--------|--------|--------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m | dB     |        |
| 1 | 5854.100 | 3.70   | 54.66      | 58.36  | 112.85 | -54.49 | Peak   |
| 2 | 5858.160 | 3.71   | 55.35      | 59.06  | 109.91 | -50.85 | Peak   |
| 3 | 5913.160 | 3.82   | 55.16      | 58.98  | 76.93  | -17.95 | Peak   |
| 4 | 5940.860 | 3.76   | 55.39      | 59.15  | 68.20  | -9.05  | Peak   |

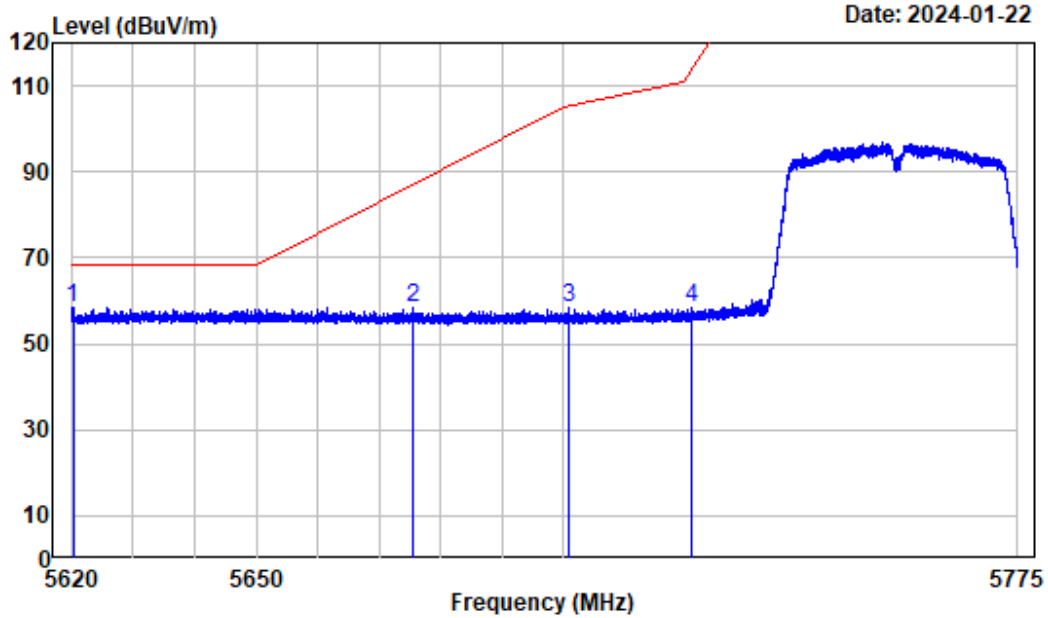
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5755MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|-------------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |        |
| 1 | 5630.792 | 3.13   | 56.01      | 59.14       | 68.20      | -9.06      | Peak   |
| 2 | 5653.325 | 3.28   | 54.75      | 58.03       | 70.67      | -12.64     | Peak   |
| 3 | 5711.489 | 3.47   | 54.73      | 58.20       | 108.42     | -50.22     | Peak   |
| 4 | 5723.695 | 3.48   | 54.14      | 57.62       | 119.23     | -61.61     | Peak   |

| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5755MHz | Ant. Polar. : | Vertical |

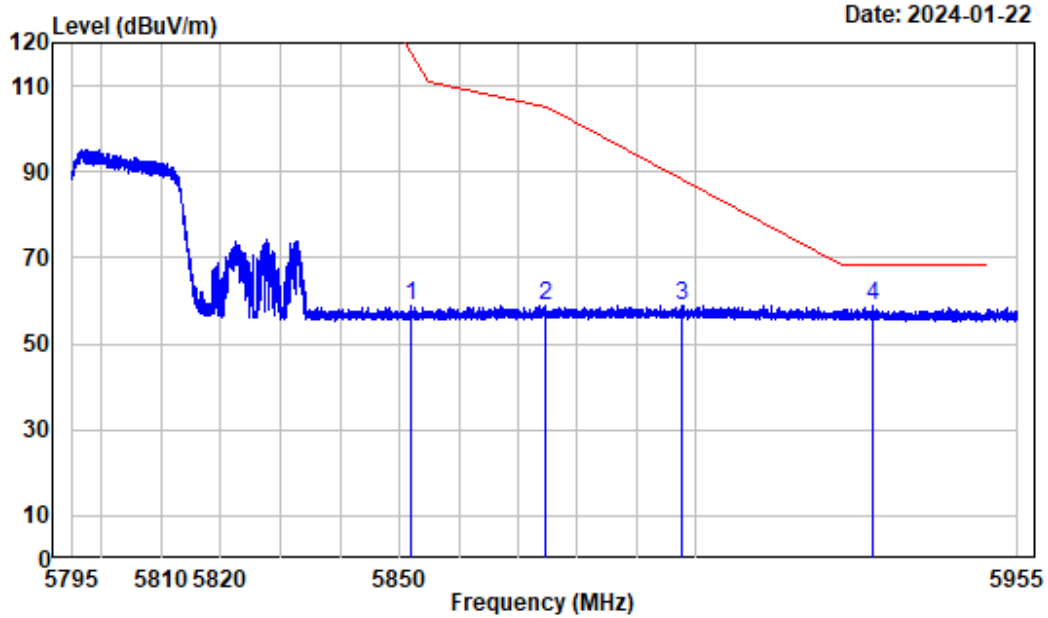


Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|-------------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |        |
| 1 | 5620.252 | 3.05   | 55.35      | 58.40       | 68.20      | -9.80      | Peak   |
| 2 | 5675.374 | 3.36   | 55.11      | 58.47       | 87.02      | -28.55     | Peak   |
| 3 | 5701.026 | 3.45   | 54.97      | 58.42       | 105.49     | -47.07     | Peak   |
| 4 | 5721.157 | 3.48   | 54.72      | 58.20       | 113.44     | -55.24     | Peak   |



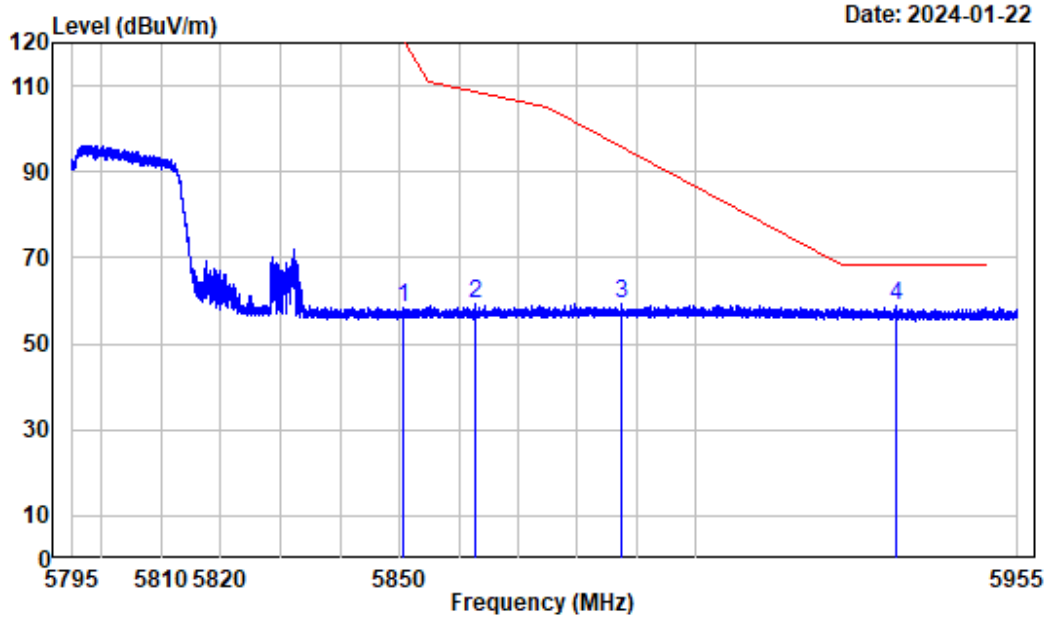
| 802.11ac40    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5795MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|      | Read     | Limit | Over   |        |        |        |      |
|------|----------|-------|--------|--------|--------|--------|------|
| Freq | Factor   | Level | Level  | Line   |        |        |      |
| MHz  | dB/m     | dBuV  | dBuV/m | dBuV/m |        |        |      |
| 1    | 5851.960 | 3.69  | 55.28  | 58.97  | 117.73 | -58.76 | Peak |
| 2    | 5874.680 | 3.77  | 55.10  | 58.87  | 105.29 | -46.42 | Peak |
| 3    | 5897.820 | 3.84  | 55.24  | 59.08  | 88.27  | -29.19 | Peak |
| 4    | 5930.400 | 3.79  | 54.93  | 58.72  | 68.20  | -9.48  | Peak |

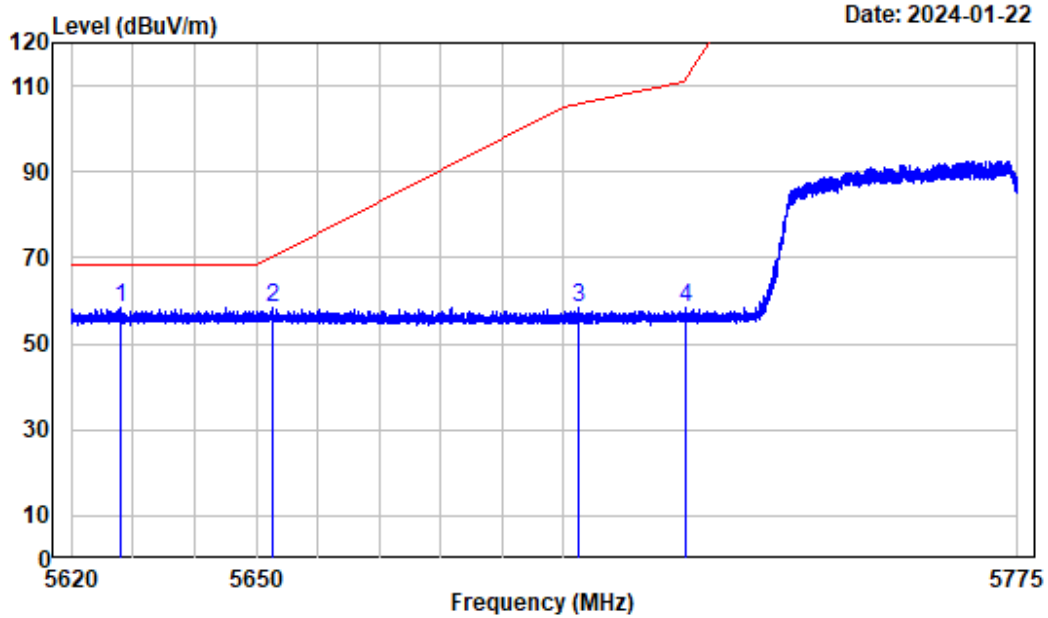
| 802.11ac40    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5795MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC40

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|-------------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |        |
| 1 | 5850.700 | 3.67   | 54.77      | 58.44       | 120.60     | -62.16     | Peak   |
| 2 | 5862.780 | 3.72   | 55.46      | 59.18       | 108.62     | -49.44     | Peak   |
| 3 | 5887.560 | 3.81   | 55.40      | 59.21       | 95.88      | -36.67     | Peak   |
| 4 | 5934.320 | 3.77   | 54.99      | 58.76       | 68.20      | -9.44      | Peak   |

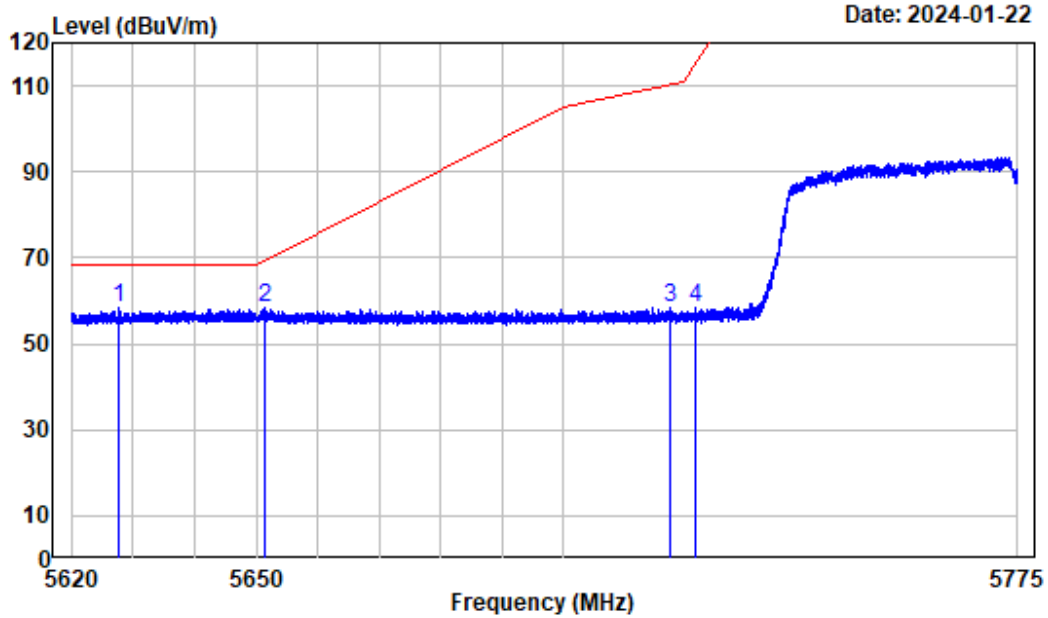
| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5775MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|-------------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |        |
| 1 | 5628.080 | 3.10   | 55.36      | 58.46       | 68.20      | -9.74      | Peak   |
| 2 | 5652.531 | 3.28   | 54.99      | 58.27       | 70.08      | -11.81     | Peak   |
| 3 | 5702.692 | 3.46   | 54.76      | 58.22       | 105.96     | -47.74     | Peak   |
| 4 | 5720.111 | 3.48   | 54.95      | 58.43       | 111.05     | -52.62     | Peak   |

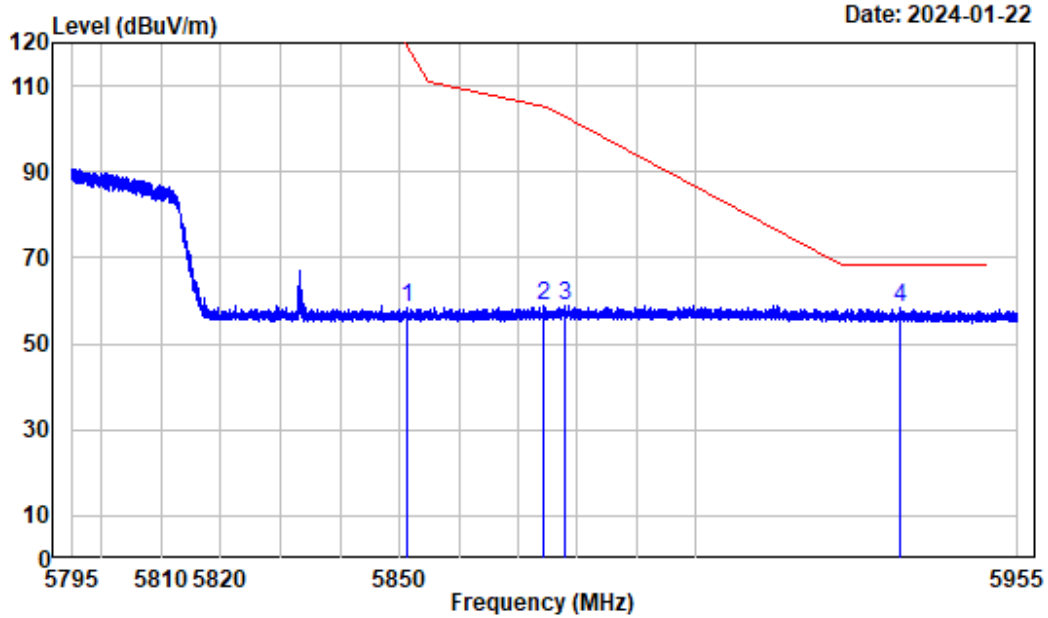
| 802.11ac80    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5775MHz | Ant. Polar. : | Vertical |



Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|   | Freq     | Factor | Read Level | Limit Level | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|-------------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |        |
| 1 | 5627.789 | 3.10   | 55.35      | 58.45       | 68.20      | -9.75      | Peak   |
| 2 | 5651.310 | 3.28   | 55.09      | 58.37       | 69.17      | -10.80     | Peak   |
| 3 | 5717.650 | 3.48   | 55.02      | 58.50       | 110.14     | -51.64     | Peak   |
| 4 | 5721.622 | 3.48   | 54.80      | 58.28       | 114.50     | -56.22     | Peak   |

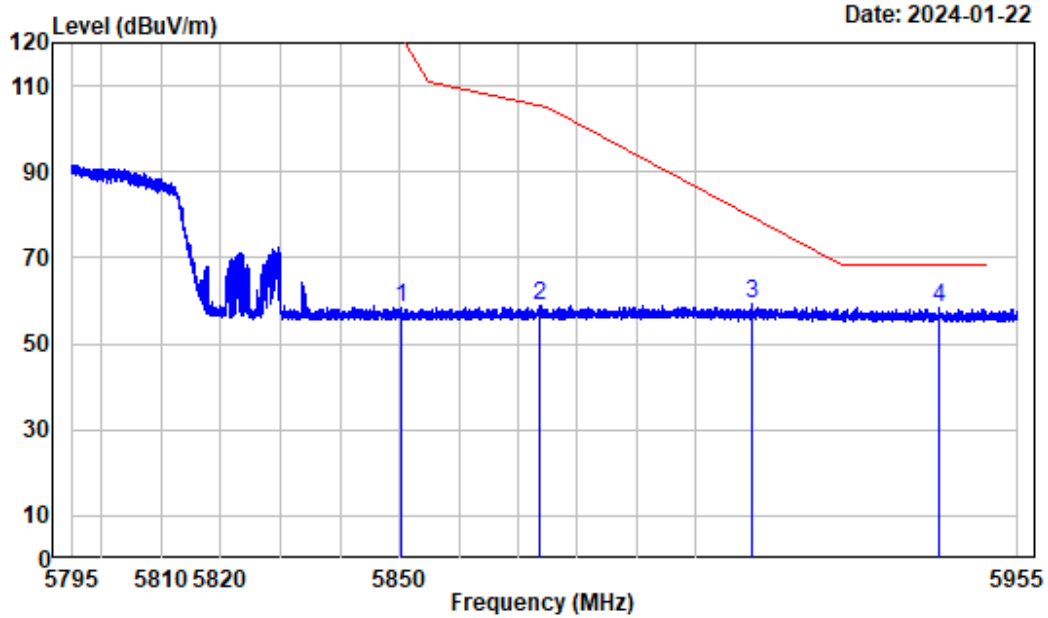
| 802.11ac80    |         |               |            |
|---------------|---------|---------------|------------|
| Test Channel: | 5775MHz | Ant. Polar. : | Horizontal |



Condition : Horizontal  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|      | Read     | Limit | Over   |        |        |        |      |
|------|----------|-------|--------|--------|--------|--------|------|
| Freq | Factor   | Level | Level  | Line   |        |        |      |
| MHz  | dB/m     | dBuV  | dBuV/m | dBuV/m |        |        |      |
| 1    | 5851.180 | 3.67  | 54.84  | 58.51  | 119.51 | -61.00 | Peak |
| 2    | 5874.440 | 3.77  | 55.04  | 58.81  | 105.36 | -46.55 | Peak |
| 3    | 5878.080 | 3.77  | 55.31  | 59.08  | 102.91 | -43.83 | Peak |
| 4    | 5935.020 | 3.77  | 54.45  | 58.22  | 68.20  | -9.98  | Peak |

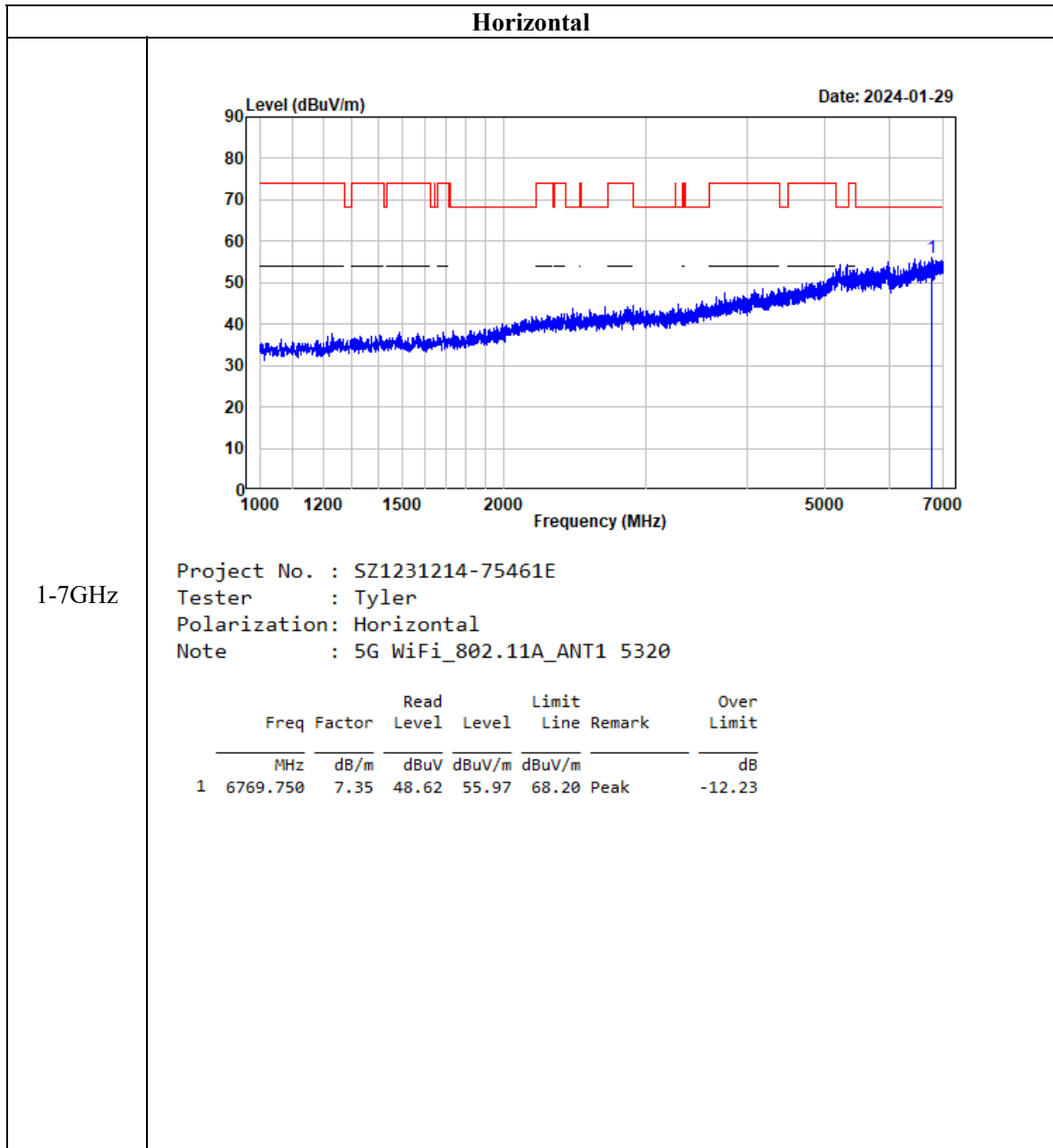
| 802.11ac80    |         |               |          |
|---------------|---------|---------------|----------|
| Test Channel: | 5775MHz | Ant. Polar. : | Vertical |



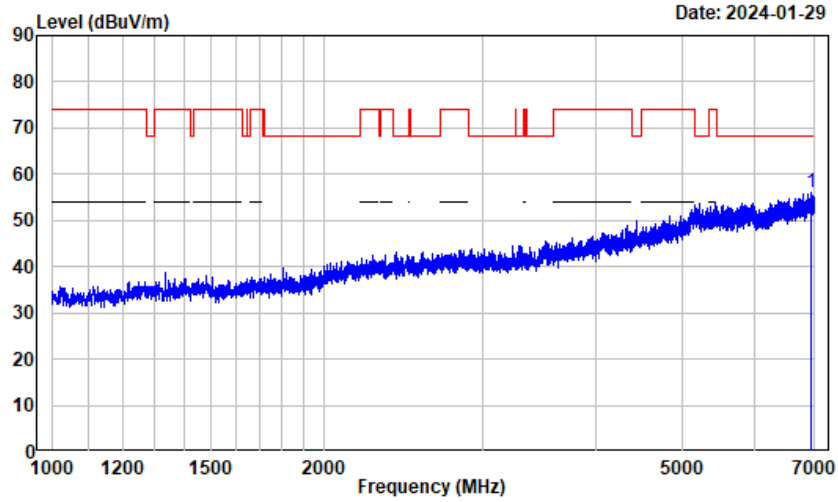
Condition : Vertical  
 Project No.: SZ1231214-75461E-RF  
 Tester : Zenos Qiao  
 Note : 802.11AC80

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 5850.320 | 3.67   | 54.82      | 58.49  | 121.47     | -62.98     | Peak   |
| 2 | 5873.660 | 3.76   | 55.07      | 58.83  | 105.57     | -46.74     | Peak   |
| 3 | 5909.660 | 3.83   | 55.35      | 59.18  | 79.52      | -20.34     | Peak   |
| 4 | 5941.720 | 3.75   | 54.60      | 58.35  | 68.20      | -9.85      | Peak   |

Listed with the worst harmonic margin test plot (802.11a, ANT1, 5320MHz)



**Vertical**



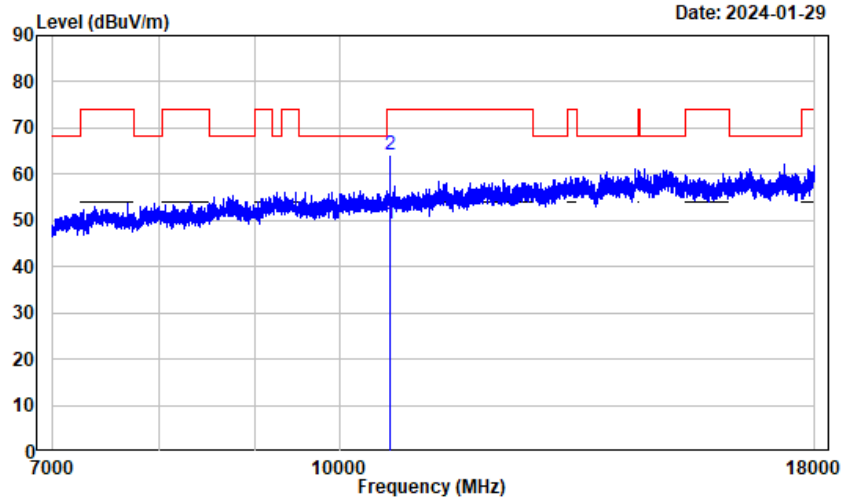
1-7GHz

Project No. : SZ1231214-75461E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 5G WiFi\_802.11A\_ANT1 5320

|   | Freq     | Factor | Read  |        | Limit  | Remark | Over   |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  |        |        |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m |        | dB     |
| 1 | 6939.250 | 8.56   | 47.33 | 55.89  | 68.20  | Peak   | -12.31 |



**Horizontal**

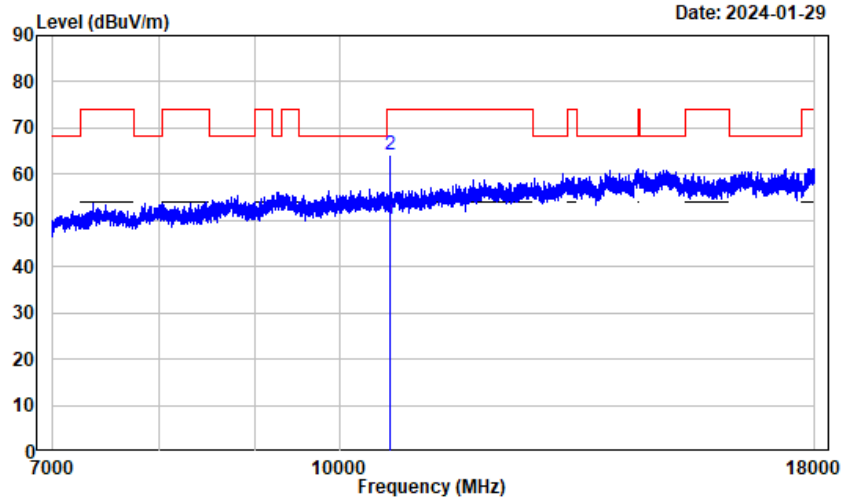


7-18GHz

Project No. : SZ1231214-75461E  
 Tester : Tyler  
 Polarization: Horizontal  
 Note : 5G WiFi\_802.11A\_ANT1 5320

|   | Freq      | Factor | Read  |        | Limit  | Remark  | Over  |
|---|-----------|--------|-------|--------|--------|---------|-------|
|   |           |        | Level | Level  |        |         |       |
|   | MHz       | dB/m   | dBuV  | dBuV/m | dBuV/m |         | dB    |
| 1 | 10640.000 | 13.19  | 36.15 | 49.34  | 54.00  | Average | -4.66 |
| 2 | 10640.000 | 13.19  | 50.86 | 64.05  | 74.00  | Peak    | -9.95 |

**Vertical**



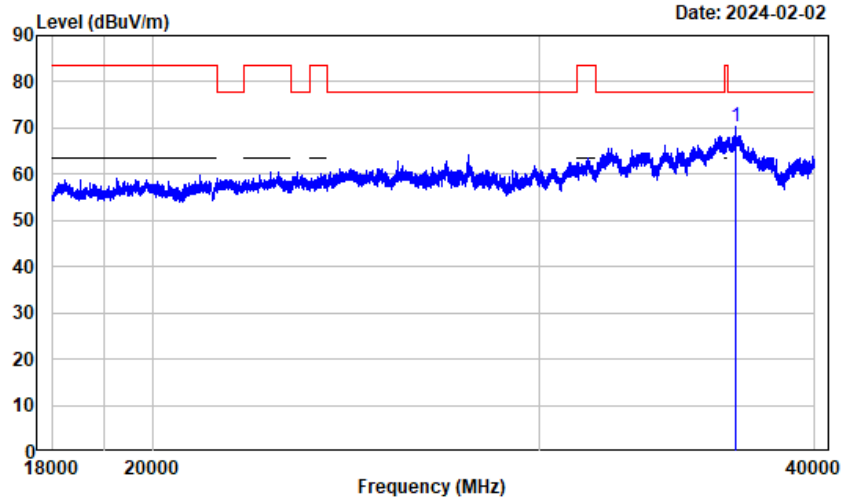
7-18GHz

Project No. : SZ1231214-75461E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 5G WiFi\_802.11A\_ANT1 5320

| Line | Freq      | Factor | Read  |        | Limit  |         | Remark | Over Limit |
|------|-----------|--------|-------|--------|--------|---------|--------|------------|
|      |           |        | Level | Level  | Line   | Line    |        |            |
|      | MHz       | dB/m   | dBuV  | dBuV/m | dBuV/m |         |        | dB         |
| 1    | 10640.000 | 13.19  | 37.07 | 50.26  | 54.00  | Average | -3.74  |            |
| 2    | 10640.000 | 13.19  | 51.12 | 64.31  | 74.00  | Peak    | -9.69  |            |

**Horizontal**

18-40GHz

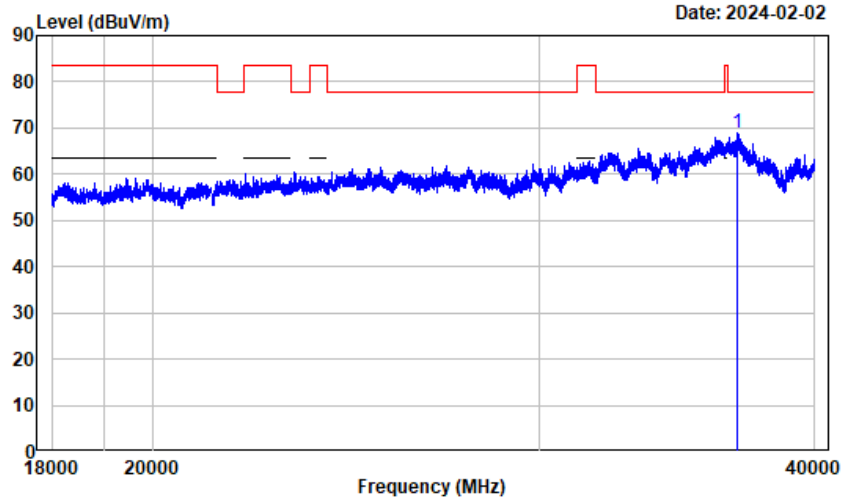


Project No. : SZ1231214-75461E  
 Tester : Tyler  
 Polarization: Horizontal  
 Note : 5gWIFI\_802.11A\_ANT1\_5320

| Freq        | Factor | Read  |        | Limit  | Remark | Over  |
|-------------|--------|-------|--------|--------|--------|-------|
|             |        | Level | Level  | Line   |        | Limit |
| MHz         | dB/m   | dBuV  | dBuV/m | dBuV/m |        | dB    |
| 1 36840.250 | 25.06  | 45.09 | 70.15  | 77.70  | Peak   | -7.55 |

**Vertical**

18-40GHz



Project No. : SZ1231214-75461E  
 Tester : Tyler  
 Polarization: Vertical  
 Note : 5gWIFI\_802.11A\_ANT1\_5320

| Freq        | Factor | Read  |        | Limit  | Remark | Over  |
|-------------|--------|-------|--------|--------|--------|-------|
|             |        | Level | Level  | Line   |        | Limit |
| MHz         | dB/m   | dBuV  | dBuV/m | dBuV/m |        | dB    |
| 1 36884.250 | 25.01  | 43.83 | 68.84  | 77.70  | Peak   | -8.86 |

## **FCC §15.407(a), (e) – 26 dB & 6dB EMISSION BANDWIDTH**

### **Applicable Standard**

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

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

### **Test Procedure**

According to KDB789033 D02 section II.C and section II.D

#### **1. Emission Bandwidth (EBW)**

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) 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%.

#### **2. Minimum Emission Bandwidth for the band 5.725-5.85 GHz**

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) 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.

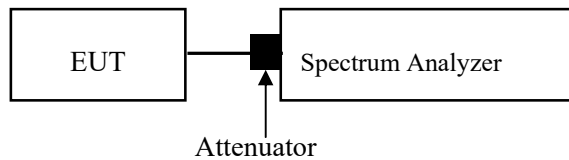
#### **3. 99% Occupied Bandwidth:**

According to ANSI C63.10-2013 Section 12.4.2&6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (OBW/RBW)]$  below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



**Test Data**

**Environmental Conditions**

|                           |            |
|---------------------------|------------|
| <b>Temperature:</b>       | 25.2~26 °C |
| <b>Relative Humidity:</b> | 39~46 %    |
| <b>ATM Pressure:</b>      | 101 kPa    |

*The testing was performed by Leo Jin on 2024-01-21 and 2024-02-04.*

*EUT operation mode: Transmitting*

**Test Result: Compliant.**

**5150-5250MHz:**

| Test Modes  | Test Frequency (MHz) | 26 dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|---|----------------------|-----------------------|------------------------------|
| 802.11a   | 5180                 | 18.840                | 16.304                       |
|   | 5200                 | 19.150                | 16.344                       |
|   | 5240                 | 18.720                | 16.304                       |
| 802.11ac vht20  | 5180                 | 19.600                | 17.463                       |
|   | 5200                 | 19.750                | 17.502                       |
|   | 5240                 | 19.700                | 17.463                       |
| 802.11ac vht40  | 5190                 | 39.680                | 35.964                       |
|   | 5230                 | 39.780                | 36.044                       |
| 802.11ac vht80  | 5210                 | 82.450                | 74.805                       |
| Note: Test only was performed at ANT 1.<br>The 99% Occupied Bandwidth have not fall into the band 5250-5350MHz,<br>please refer to the test plots of 99% Occupied Bandwidth |                      |                       |                              |

**5250-5350MHz:**

| Test Modes                              | Test Frequency (MHz) | 26 dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|---|----------------------|-----------------------|------------------------------|
| 802.11a                                 | 5260                 | 18.720                | 16.264                       |
|   | 5280                 | 18.800                | 16.304                       |
|   | 5320                 | 18.840                | 16.304                       |
| 802.11ac vht20                          | 5260                 | 18.800                | 16.304                       |
|   | 5280                 | 18.560                | 16.304                       |
|   | 5320                 | 18.800                | 16.304                       |
| 802.11ac vht40                          | 5270                 | 39.600                | 35.964                       |
|   | 5310                 | 39.440                | 35.964                       |
| 802.11ac vht80                          | 5290                 | 83.680                | 75.125                       |
| Note: Test only was performed at ANT 1. |                      |                       |                              |

**5470-5725MHz:**

| Test Modes     | Test Frequency (MHz) | 26 dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|----------------|----------------------|-----------------------|------------------------------|
| 802.11a        | 5500                 | 28.680                | 17.063                       |
|                | 5580                 | 30.800                | 17.702                       |
|                | 5700                 | 23.360                | 16.464                       |
|                | 5720                 | 21.040                | 16.384                       |
| 802.11ac vht20 | 5500                 | 19.600                | 17.463                       |
|                | 5580                 | 20.200                | 17.542                       |
|                | 5700                 | 19.680                | 17.383                       |
|                | 5720                 | 20.000                | 17.542                       |
| 802.11ac vht40 | 5510                 | 39.520                | 35.964                       |
|                | 5550                 | 39.440                | 35.964                       |
|                | 5670                 | 39.360                | 35.884                       |
|                | 5710                 | 39.520                | 35.884                       |
| 802.11ac vht80 | 5530                 | 82.240                | 74.805                       |
|                | 5610                 | 82.200                | 75.764                       |
|                | 5690                 | 91.680                | 74.965                       |

Note: Test only was performed at ANT 1.

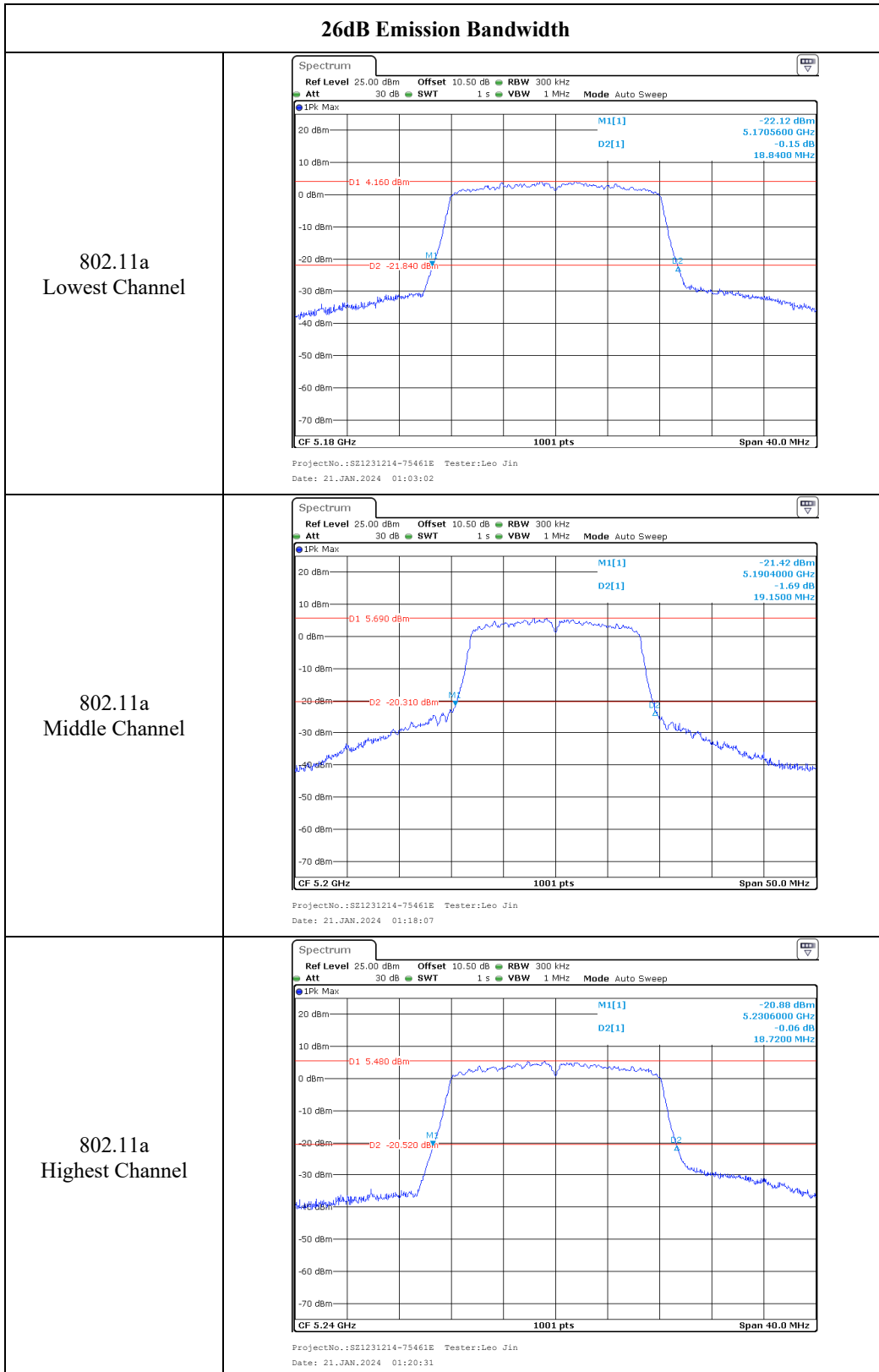
**5725-5850MHz:**

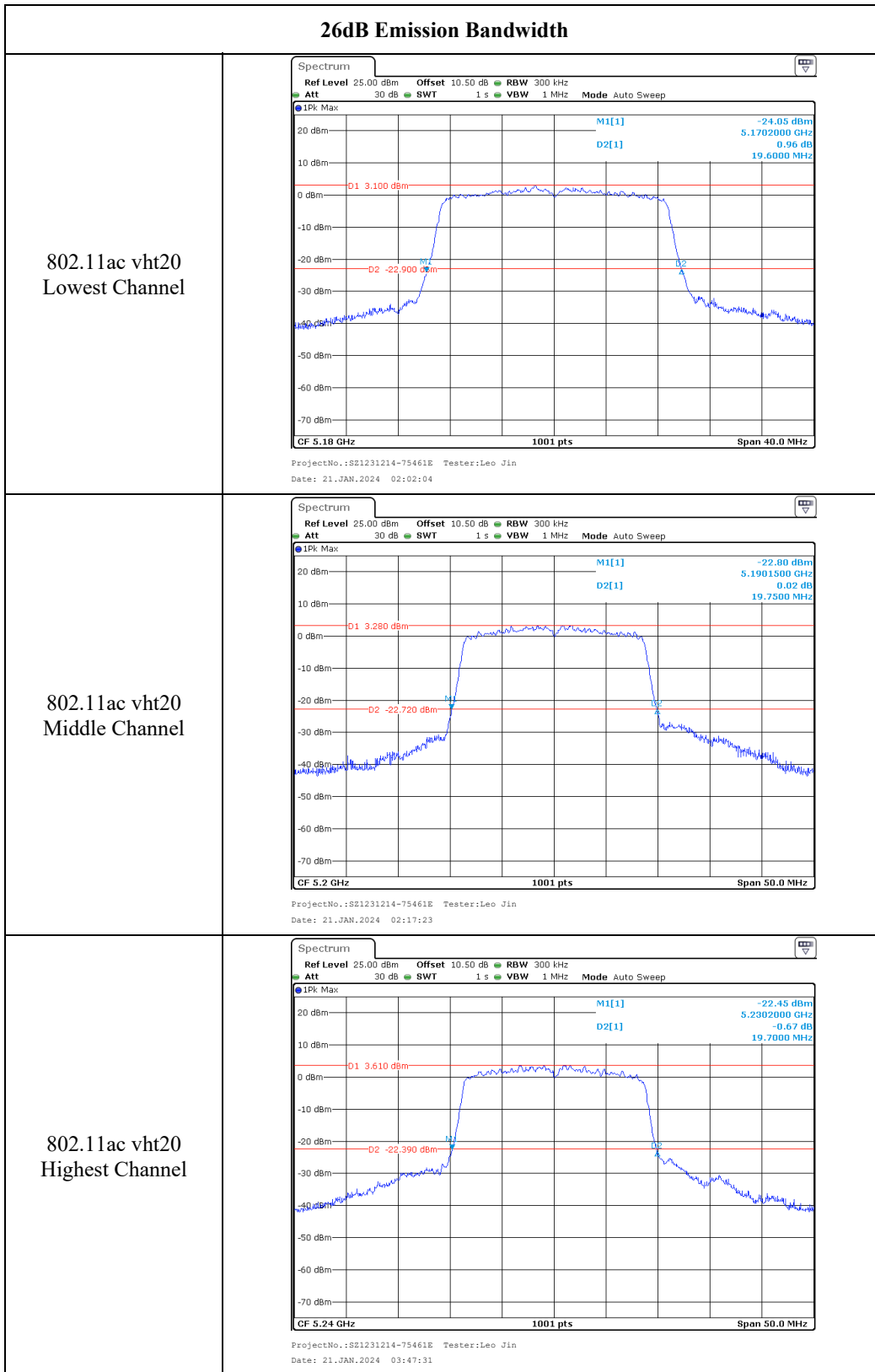
| Test Modes     | Test Frequency (MHz) | 6 dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|----------------|----------------------|----------------------|------------------------------|
| 802.11a        | 5745                 | 15.440               | 17.143                       |
|                | 5785                 | 15.640               | 19.221                       |
|                | 5825                 | 15.600               | 19.700                       |
| 802.11ac vht20 | 5745                 | 16.000               | 17.822                       |
|                | 5785                 | 16.040               | 17.782                       |
|                | 5825                 | 16.760               | 19.620                       |
| 802.11ac vht40 | 5755                 | 35.280               | 36.284                       |
|                | 5795                 | 35.360               | 36.523                       |
| 802.11ac vht80 | 5775                 | 75.480               | 75.764                       |

Note:  
 Test only was performed at ANT 1.  
 6dB Emission Bandwidth Limit:  $\geq 0.5$  MHz  
 The 99% Occupied Bandwidth have not fall into the band 5470-5725MHz,  
 please refer to the test plots of 99% Occupied Bandwidth.



5150-5250MHz:





### 26dB Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht40<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 08:58:59</p> |
| <p>802.11ac vht40<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:00:10</p> |
| <p>802.11ac vht80<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:02:16</p> |

**99% Emission Bandwidth**

|                                    |  |
|------------------------------------|--|
| <p>802.11a<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 01:02:26</p> |
| <p>802.11a<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 01:17:37</p> |
| <p>802.11a<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 01:20:05</p> |

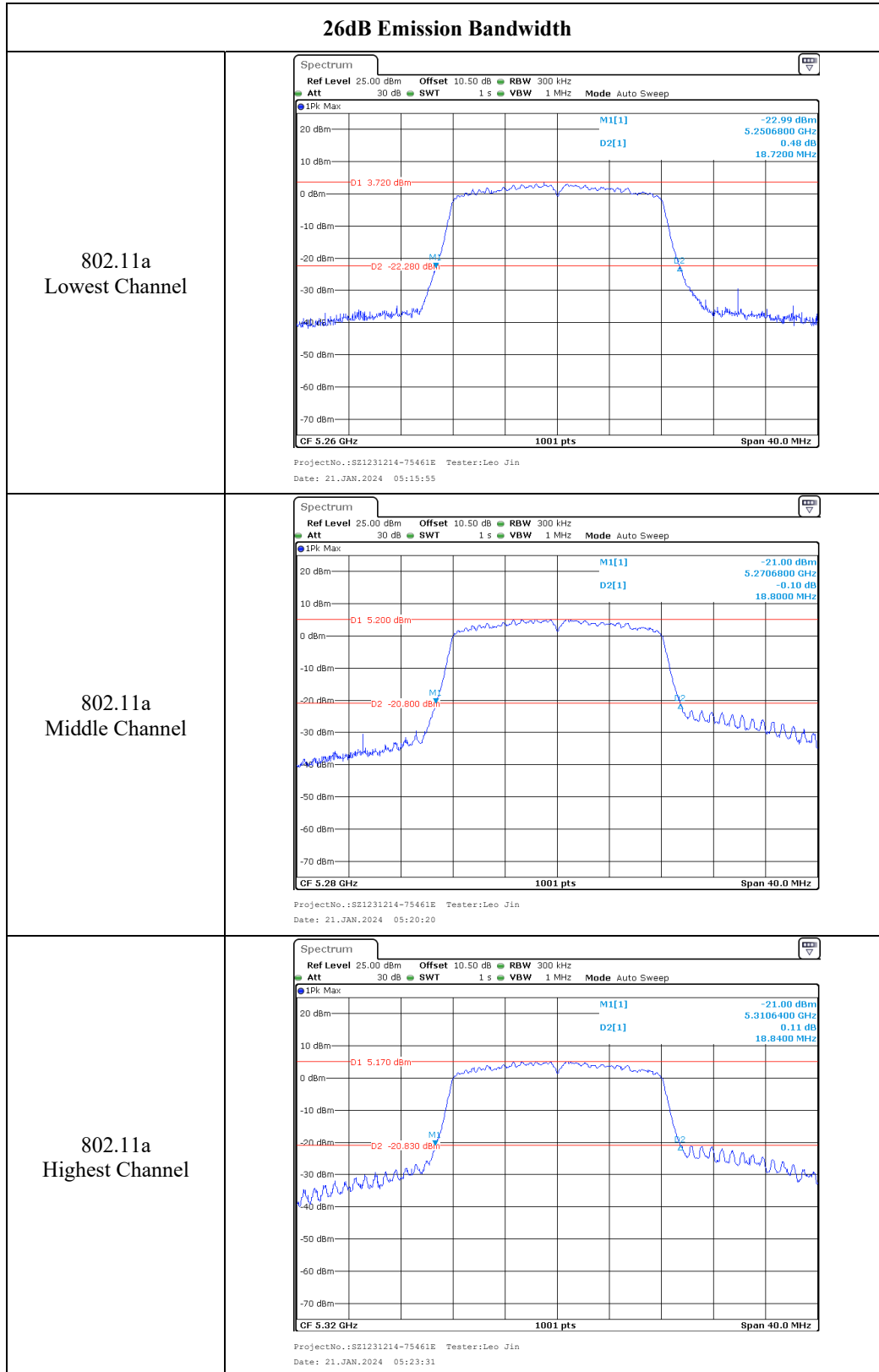
99% Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 02:01:41</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 02:17:08</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 03:46:56</p> |

99% Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht40<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 08:58:38</p> |
| <p>802.11ac vht40<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 08:59:49</p> |
| <p>802.11ac vht80<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:01:54</p> |

5250-5350MHz:

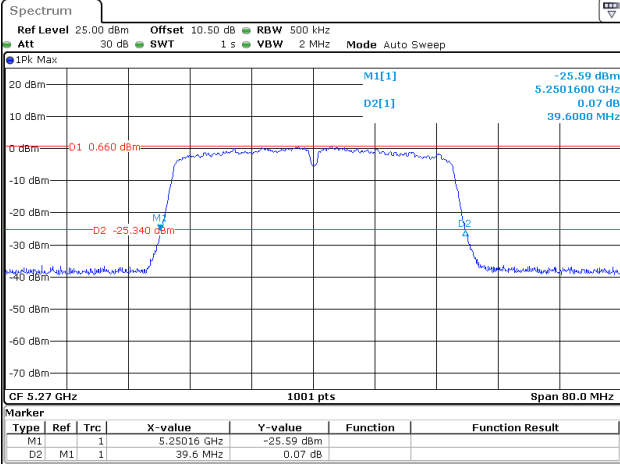
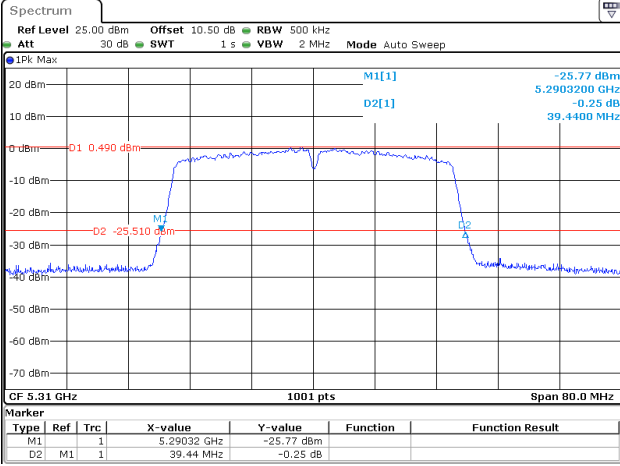
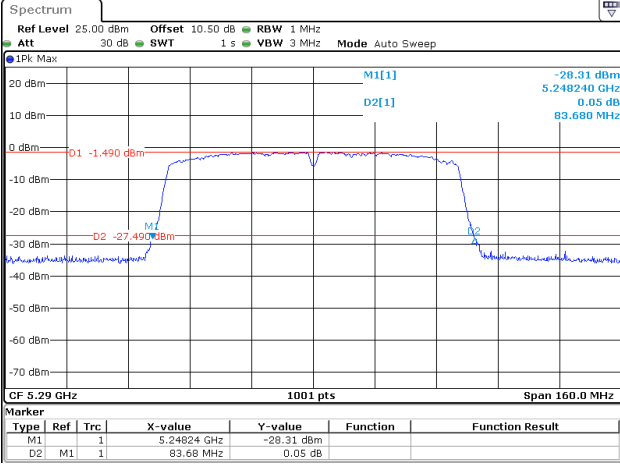


**26dB Emission Bandwidth**

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:43:51</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:48:43</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:58:41</p> |



### 26dB Emission Bandwidth

|   |   |
|---|---|
| <p>802.11ac vht40<br/>Lowest Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:04:09</p>   |
| <p>802.11ac vht40<br/>Highest Channel</p> |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:05:18</p>  |
| <p>802.11ac vht80<br/>Middle Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:06:24</p> |

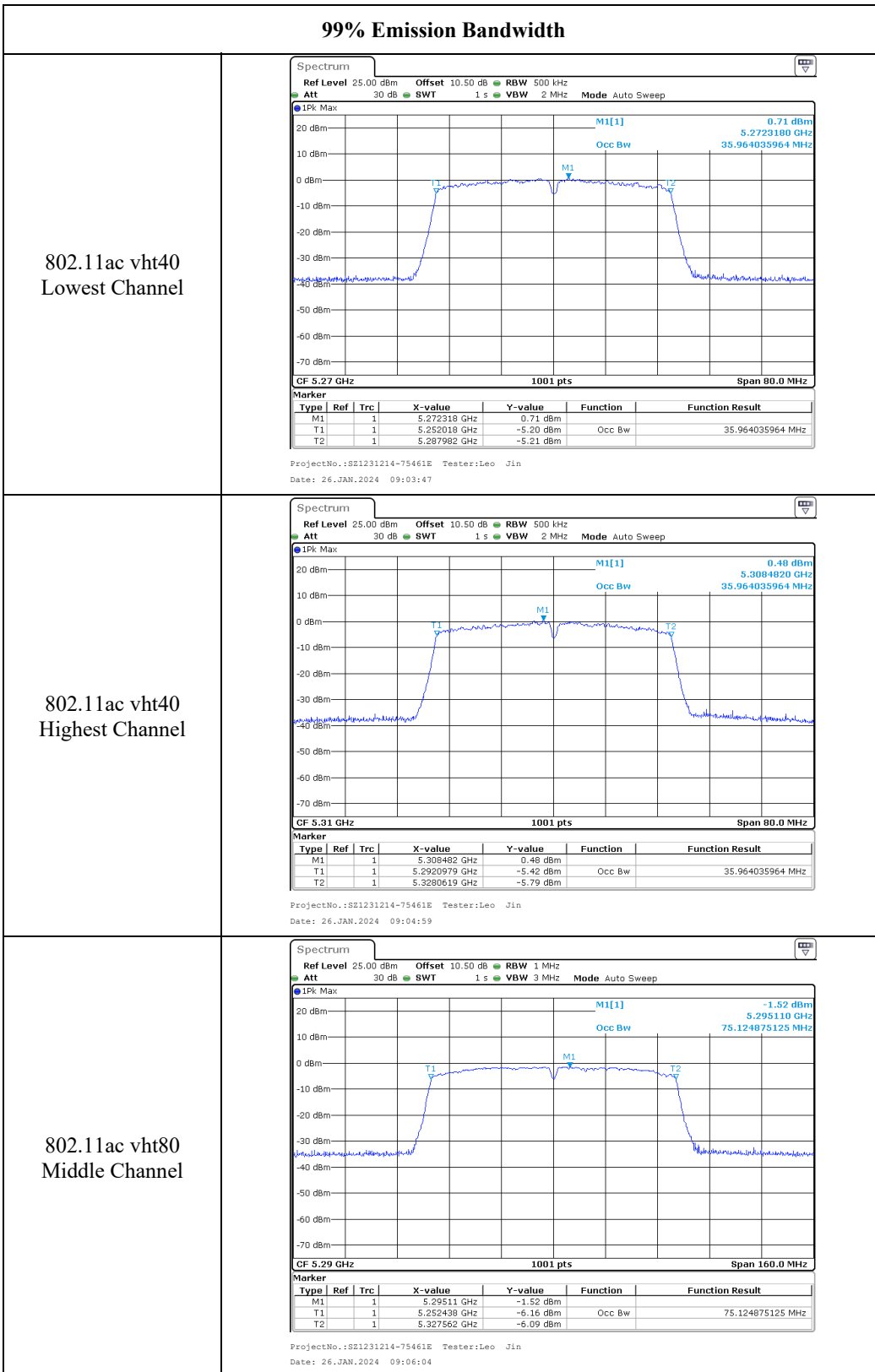
**99% Emission Bandwidth**

|                                    |  |
|------------------------------------|--|
| <p>802.11a<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:15:18</p> |
| <p>802.11a<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:19:45</p> |
| <p>802.11a<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:22:56</p> |

99% Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:43:23</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:48:09</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 05:58:06</p> |

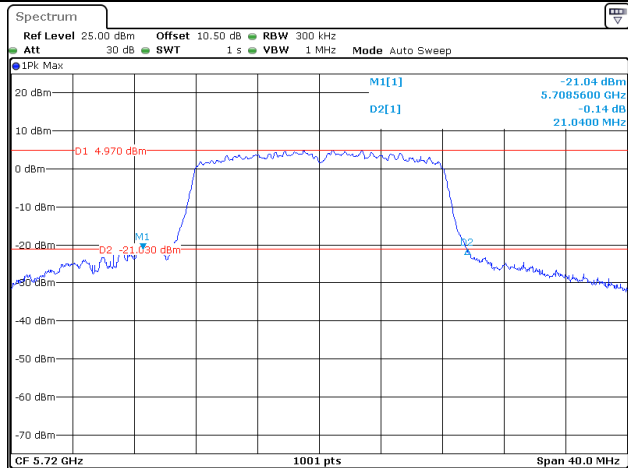
99% Emission Bandwidth



5470-5725MHz:

| <b>26dB Emission Bandwidth</b> |  |
|--------------------------------|--|
| 802.11a<br>Lowest Channel      | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 01:54:45</p> |
| 802.11a<br>Middle Channel      | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 01:59:04</p> |
| 802.11a<br>Highest Channel     | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 02:07:45</p> |

802.11a  
Cross Channel

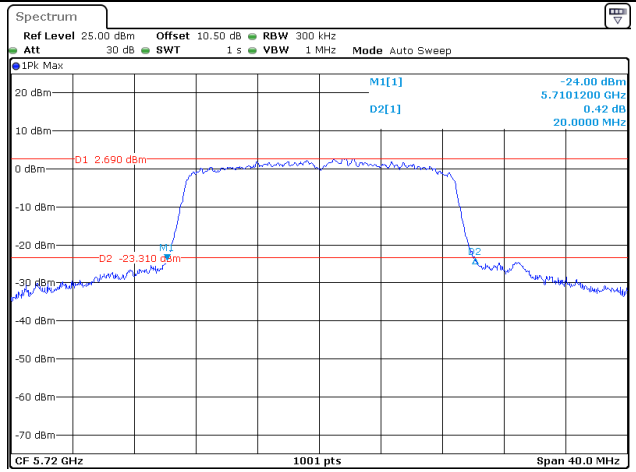


ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 22.JAN.2024 04:06:07

26dB Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 03:27:24</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 03:25:47</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 03:23:59</p> |

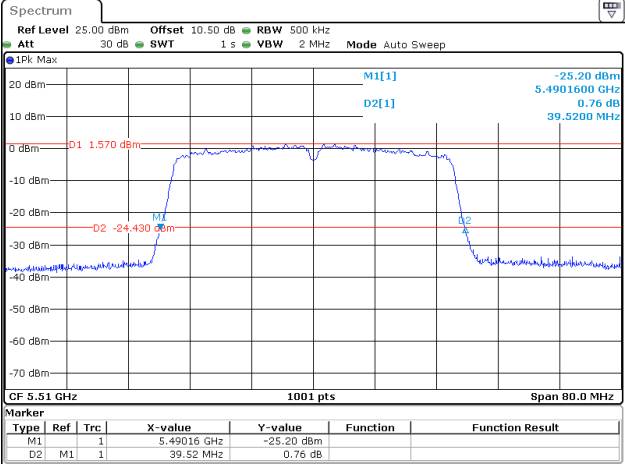
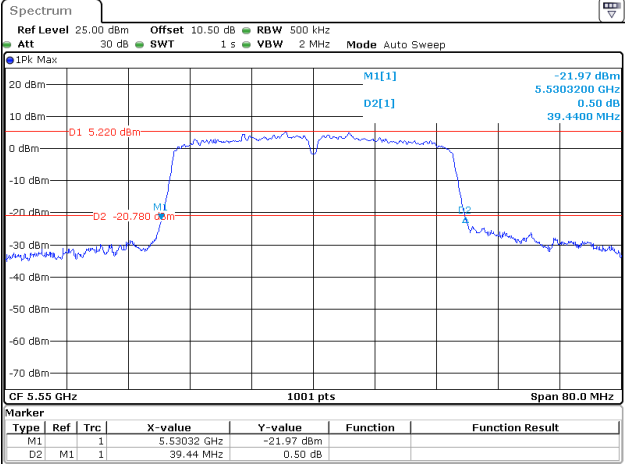
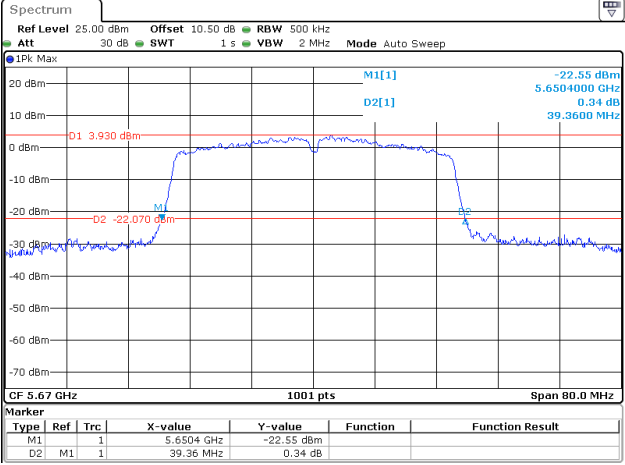
802.11ac vht20  
Cross Channel



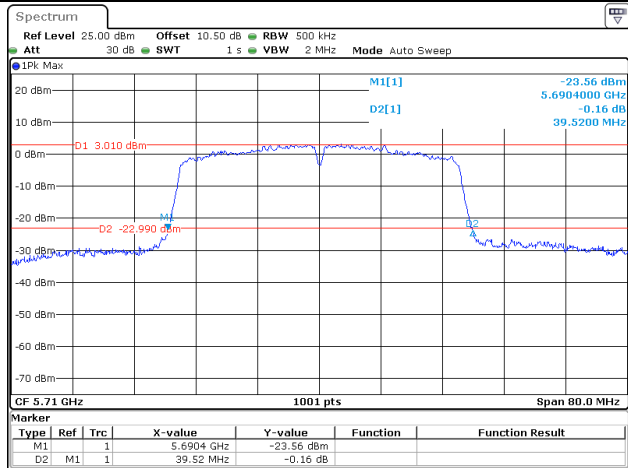
ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 22.JAN.2024 03:57:14



### 26dB Emission Bandwidth

|   |   |
|---|---|
| <p>802.11ac vht40<br/>Lowest Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:08:01</p>   |
| <p>802.11ac vht40<br/>Middle Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 4.FEB.2024 16:33:32</p>   |
| <p>802.11ac vht40<br/>Highest Channel</p> |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:09:00</p> |

802.11ac vht40  
Cross Channel



ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 26.JAN.2024 09:11:33

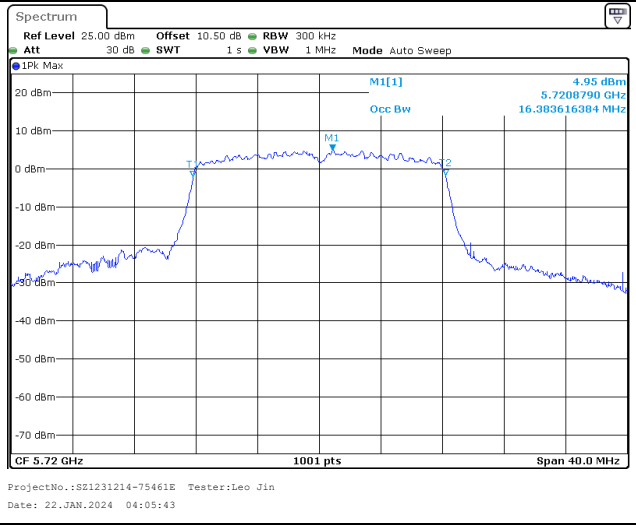
### 26dB Emission Bandwidth

| <p>802.11ac vht80<br/>Lowest Channel</p>  | <p><b>Spectrum</b><br/>         Ref Level 25.00 dBm Offset 10.50 dB RBW 1 MHz<br/>         Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>1Pk Max<br/>         20 dBm M1[1] -24.53 dBm<br/>         5.488880 GHz<br/>         10 dBm D2[1] -0.11 dBm<br/>         82.240 MHz</p> <p>0 dBm D1 1.730 dBm<br/>         -20 dBm D2 -24.270 dBm</p> <p>CF 5.53 GHz 1001 pts Span 160.0 MHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td></td> <td>1</td> <td>5.48888 GHz</td> <td>-24.53 dBm</td> <td></td> <td></td> </tr> <tr> <td>D2</td> <td>M1</td> <td>1</td> <td>82.24 MHz</td> <td>-0.11 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>         Date: 26.JAN.2024 09:19:08</p> | Type | Ref         | Trc        | X-value  | Y-value         | Function | Function Result | M1 |  | 1 | 5.48888 GHz | -24.53 dBm |  |  | D2 | M1 | 1 | 82.24 MHz | -0.11 dB |  |  |
|---|---|------|-------------|------------|----------|-----------------|----------|-----------------|----|--|---|-------------|------------|--|--|----|----|---|-----------|----------|--|--|
| Type                                      | Ref   | Trc  | X-value     | Y-value    | Function | Function Result |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| M1  |   | 1    | 5.48888 GHz | -24.53 dBm |          |                 |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| D2  | M1  | 1    | 82.24 MHz   | -0.11 dB   |          |                 |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| <p>802.11ac vht80<br/>Highest Channel</p> | <p><b>Spectrum</b><br/>         Ref Level 25.00 dBm Offset 10.50 dB RBW 1 MHz<br/>         Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>1Pk Max<br/>         20 dBm M1[1] -23.32 dBm<br/>         5.568600 GHz<br/>         10 dBm D2[1] -0.21 dBm<br/>         82.200 MHz</p> <p>0 dBm D1 3.050 dBm<br/>         -20 dBm D2 -22.950 dBm</p> <p>CF 5.61 GHz 1001 pts Span 200.0 MHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td></td> <td>1</td> <td>5.5686 GHz</td> <td>-23.32 dBm</td> <td></td> <td></td> </tr> <tr> <td>D2</td> <td>M1</td> <td>1</td> <td>82.2 MHz</td> <td>-0.21 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>         Date: 4.FEB.2024 09:47:26</p>    | Type | Ref         | Trc        | X-value  | Y-value         | Function | Function Result | M1 |  | 1 | 5.5686 GHz  | -23.32 dBm |  |  | D2 | M1 | 1 | 82.2 MHz  | -0.21 dB |  |  |
| Type                                      | Ref   | Trc  | X-value     | Y-value    | Function | Function Result |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| M1  |   | 1    | 5.5686 GHz  | -23.32 dBm |          |                 |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| D2  | M1  | 1    | 82.2 MHz    | -0.21 dB   |          |                 |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| <p>802.11ac vht80<br/>Cross Channel</p>   | <p><b>Spectrum</b><br/>         Ref Level 25.00 dBm Offset 10.50 dB RBW 1 MHz<br/>         Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>1Pk Max<br/>         20 dBm M1[1] -24.13 dBm<br/>         5.644720 GHz<br/>         10 dBm D2[1] -0.49 dBm<br/>         91.680 MHz</p> <p>0 dBm D1 1.880 dBm<br/>         -20 dBm D2 -24.120 dBm</p> <p>CF 5.69 GHz 1001 pts Span 160.0 MHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td></td> <td>1</td> <td>5.64472 GHz</td> <td>-24.13 dBm</td> <td></td> <td></td> </tr> <tr> <td>D2</td> <td>M1</td> <td>1</td> <td>91.68 MHz</td> <td>-0.49 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>         Date: 26.JAN.2024 09:15:53</p> | Type | Ref         | Trc        | X-value  | Y-value         | Function | Function Result | M1 |  | 1 | 5.64472 GHz | -24.13 dBm |  |  | D2 | M1 | 1 | 91.68 MHz | -0.49 dB |  |  |
| Type                                      | Ref   | Trc  | X-value     | Y-value    | Function | Function Result |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| M1  |   | 1    | 5.64472 GHz | -24.13 dBm |          |                 |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |
| D2  | M1  | 1    | 91.68 MHz   | -0.49 dB   |          |                 |          |                 |    |  |   |             |            |  |  |    |    |   |           |          |  |  |

**99% Emission Bandwidth**

|                                    |  |
|------------------------------------|--|
| <p>802.11a<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 01:54:21</p> |
| <p>802.11a<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 01:56:28</p> |
| <p>802.11a<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 02:07:22</p> |

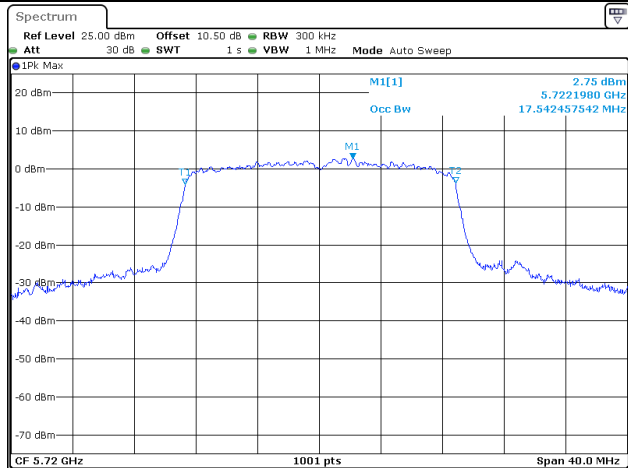
802.11a  
Cross Channel



99% Emission Bandwidth

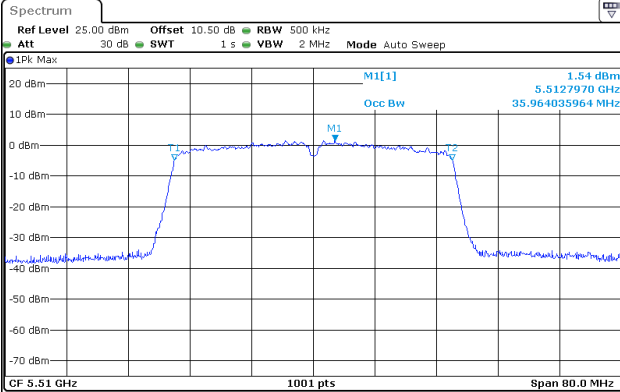
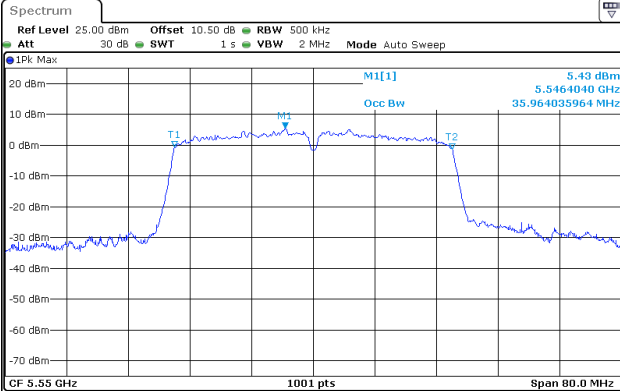
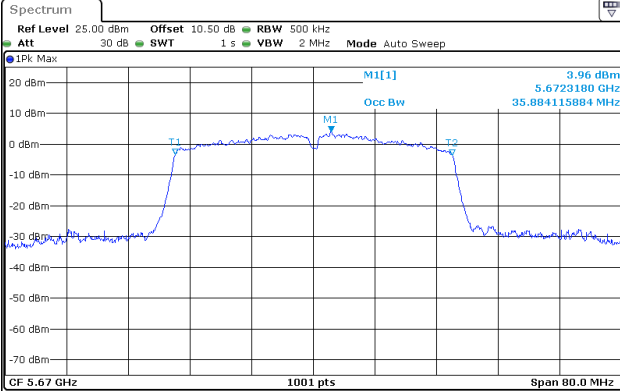
|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 03:27:09</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 03:25:23</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 03:23:44</p> |

802.11ac vht20  
Cross Channel



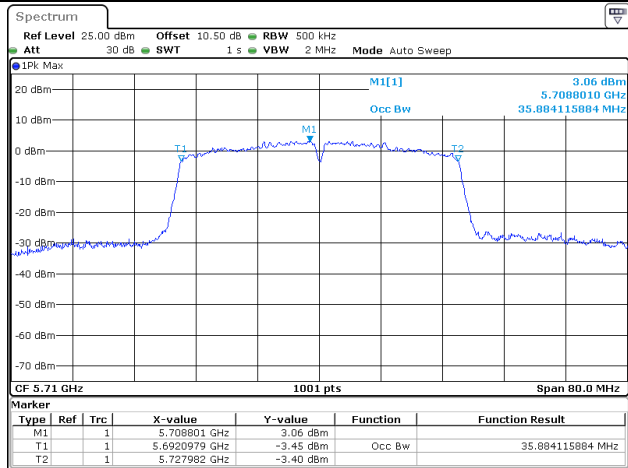
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Date: 22.JAN.2024 03:56:56

### 99% Emission Bandwidth

|   |   |
|---|---|
| <p>802.11ac vht40<br/>Lowest Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:07:40</p>   |
| <p>802.11ac vht40<br/>Middle Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 4.FEB.2024 16:33:11</p>   |
| <p>802.11ac vht40<br/>Highest Channel</p> |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:08:40</p> |



802.11ac vht40  
Cross Channel

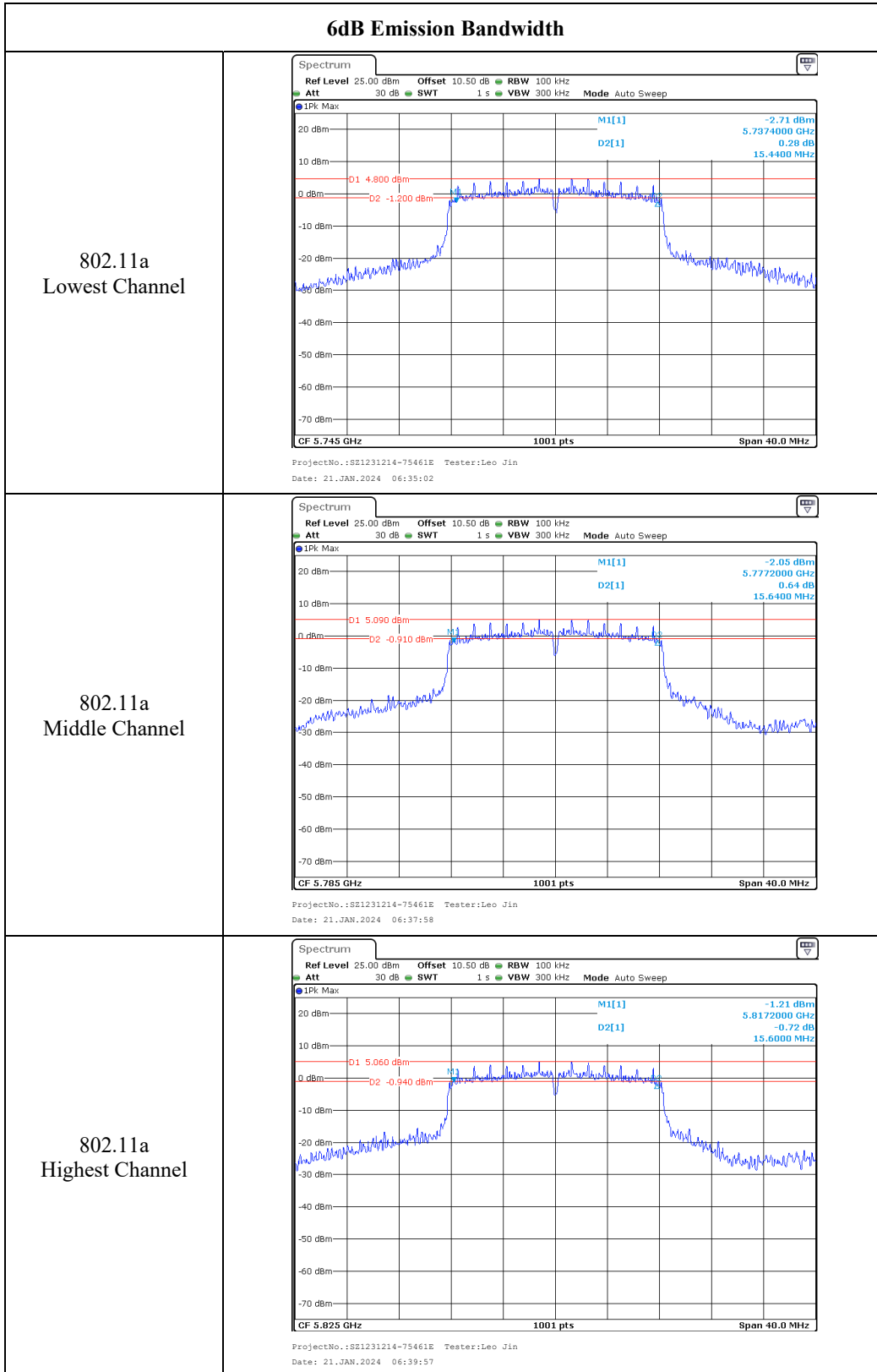


ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 26.JAN.2024 09:11:12

### 99% Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht80<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:18:47</p> |
| <p>802.11ac vht80<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:12:57</p> |
| <p>802.11ac vht80<br/>Cross Channel</p>   | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:15:31</p> |

5725-5850MHz:



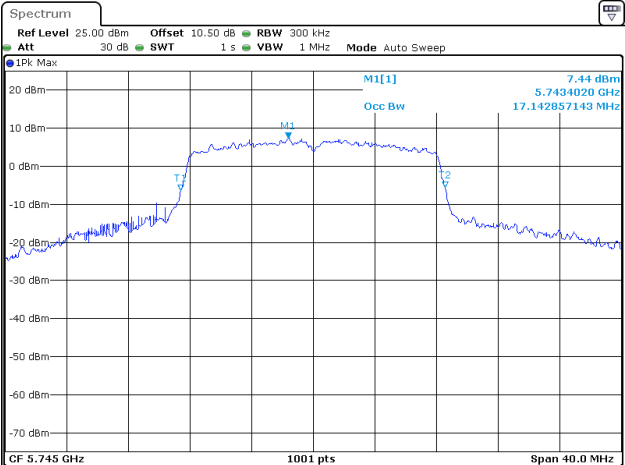
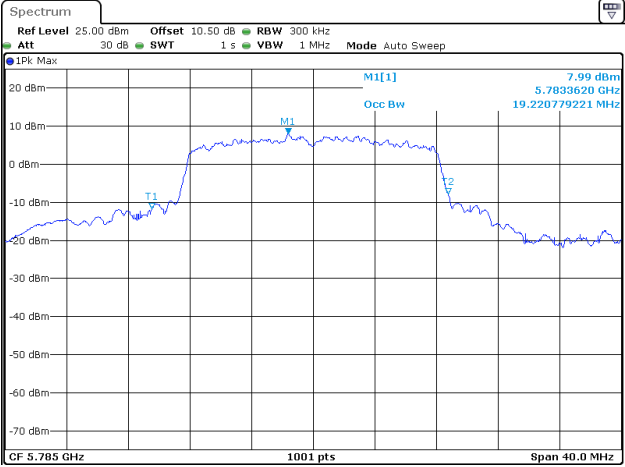
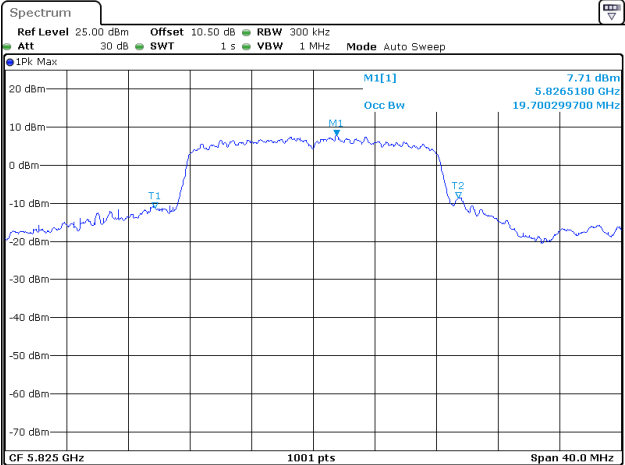
6dB Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 07:00:58</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:58:56</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:56:27</p> |

### 6dB Emission Bandwidth

|   |  |
|---|--|
| <p>802.11ac vht40<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:25:23</p> |
| <p>802.11ac vht40<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:26:40</p> |
| <p>802.11ac vht80<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:28:25</p> |

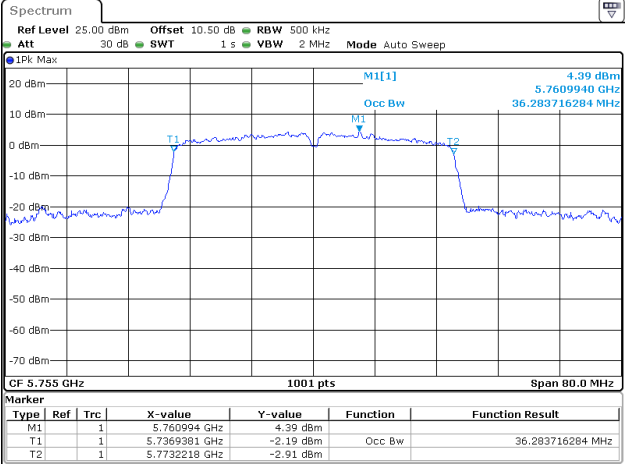
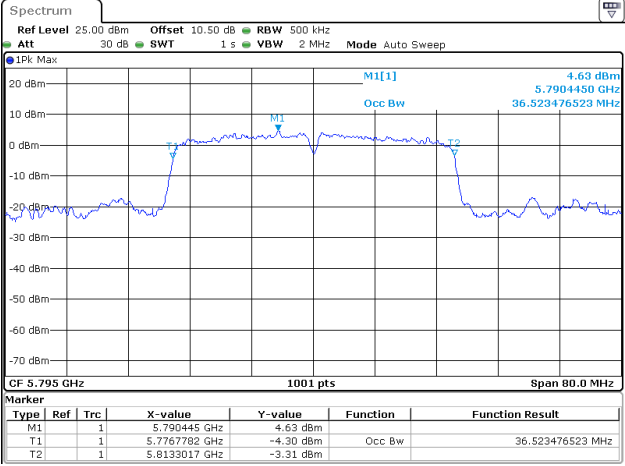
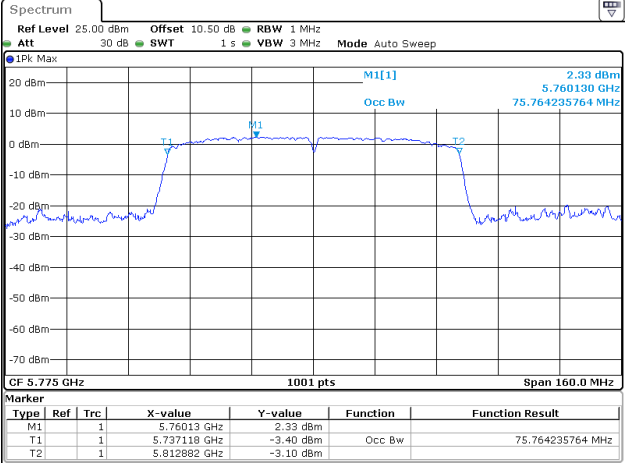
99% Emission Bandwidth

|                                    |   |
|------------------------------------|---|
| <p>802.11a<br/>Lowest Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:34:27</p>   |
| <p>802.11a<br/>Middle Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:37:22</p>  |
| <p>802.11a<br/>Highest Channel</p> |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:39:34</p> |

**99% Emission Bandwidth**

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 07:00:23</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:58:32</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:56:10</p> |

99% Emission Bandwidth

|   |   |
|---|---|
| <p>802.11ac vht40<br/>Lowest Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:25:03</p>   |
| <p>802.11ac vht40<br/>Highest Channel</p> |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:26:19</p>  |
| <p>802.11ac vht80<br/>Middle Channel</p>  |  <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 26.JAN.2024 09:28:06</p> |



## FCC §15.407(a) – CONDUCTED TRANSMITTER OUTPUT POWER

### Applicable Standard

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.

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.

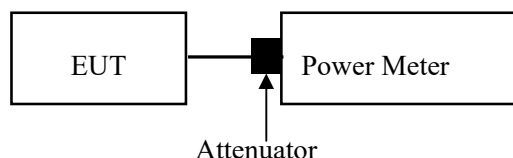
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall 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.

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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. 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.

### Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method PM-G should be applied

- a. Place the EUT on a bench and set it in transmitting mode.
- b. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.



**Test Data**

**Environmental Conditions**

|                           |            |
|---------------------------|------------|
| <b>Temperature:</b>       | 25.2~26 °C |
| <b>Relative Humidity:</b> | 39~46 %    |
| <b>ATM Pressure:</b>      | 101 kPa    |

The testing was performed by Leo Jin on 2024-01-21 and 2024-02-04.

EUT operation mode: Transmitting

**Test Result: Compliant.**

**5150-5250 MHz:**

| Test Modes     | Test Frequency (MHz) | Max. Conducted Average Output Power (dBm) |       |              |       |
|----------------|----------------------|---|-------|--------------|-------|
|                |                      | ANT 1                                     | ANT 2 | Total        | Limit |
| 802.11a        | 5180                 | 12.74                                     | 12.02 | /            | 24    |
|                | 5200                 | 12.63                                     | 12.32 | /            | 24    |
|                | 5240                 | 13.38                                     | 13.03 | /            | 24    |
| 802.11ac vht20 | 5180                 | 10.16                                     | 10.96 | 13.59        | 24    |
|                | 5200                 | 12.28                                     | 11.82 | 15.07        | 24    |
|                | 5240                 | 11.46                                     | 11.57 | 14.53        | 24    |
| 802.11ac vht40 | 5190                 | 7.42                                      | 6.76  | 10.11        | 24    |
|                | 5230                 | 9.35                                      | 9.27  | 12.32        | 24    |
| 802.11ac vht80 | 5210                 | 13.24                                     | 13.73 | <b>16.50</b> | 24    |

Note:

The device is a client unit.

The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$

|               |     |     |                   |     |     |
|---------------|-----|-----|-------------------|-----|-----|
| Antenna Gain: | 5.3 | dBi | Directional gain: | 5.3 | dBi |
|---------------|-----|-----|-------------------|-----|-----|

**5250-5350 MHz:**

| Test Modes   | Test Frequency (MHz) | Max. Conducted Average Output Power (dBm) |                   |       |       |
|--|----------------------|---|-------------------|-------|-------|
|  |                      | ANT 1                                     | ANT 2             | Total | Limit |
| 802.11a  | 5260                 | 13.42                                     | 13.21             | /     | 23.72 |
|  | 5280                 | 13.21                                     | <b>13.58</b>      | /     | 23.74 |
|  | 5320                 | 13.16                                     | 12.97             | /     | 23.75 |
| 802.11ac vht20   | 5260                 | 9.66                                      | 8.70              | 12.22 | 23.74 |
|  | 5280                 | 8.56                                      | 8.98              | 11.79 | 23.69 |
|  | 5320                 | 9.50                                      | 9.68              | 12.60 | 23.74 |
| 802.11ac vht40   | 5270                 | 8.51                                      | 9.39              | 11.98 | 24    |
|  | 5310                 | 6.47                                      | 5.59              | 9.06  | 24    |
| 802.11ac vht80   | 5290                 | 6.11                                      | 5.60              | 8.87  | 24    |
| Note: The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:<br>Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$ |                      |   |                   |       |       |
| Antenna Gain:  | 5.3                  | dBi                                       | Directional gain: | 5.3   | dBi   |

**5470-5725 MHz:**

| Test Modes   | Test Frequency (MHz) | Max. Conducted Average Output Power (dBm) |                   |       |       |
|--|----------------------|---|-------------------|-------|-------|
|  |                      | ANT 1                                     | ANT 2             | Total | Limit |
| 802.11a  | 5500                 | 15.04                                     | 14.28             | /     | 24    |
|  | 5580                 | <b>15.55</b>                              | 15.03             | /     | 24    |
|  | 5700                 | 15.41                                     | 15.23             | /     | 24    |
|  | 5720                 | 13.68                                     | 14.49             | /     | 24    |
| 802.11ac vht20   | 5500                 | 11.36                                     | 11.05             | 14.22 | 23.92 |
|  | 5580                 | 11.24                                     | 10.78             | 14.03 | 24    |
|  | 5700                 | 9.68                                      | 9.52              | 12.61 | 23.94 |
|  | 5720                 | 10.90                                     | 10.98             | 13.95 | 24    |
| 802.11ac vht40   | 5510                 | 6.96                                      | 7.05              | 10.02 | 24    |
|  | 5550                 | 9.05                                      | 9.21              | 12.14 | 24    |
|  | 5670                 | 8.60                                      | 8.65              | 11.64 | 24    |
|  | 5710                 | 8.78                                      | 8.97              | 11.89 | 24    |
| 802.11ac vht80   | 5530                 | 3.46                                      | 3.21              | 6.35  | 24    |
|  | 5610                 | 6.85                                      | 6.71              | 9.79  | 24    |
|  | 5690                 | 3.86                                      | 3.45              | 6.67  | 24    |
| Note: The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:<br>Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$ |                      |   |                   |       |       |
| Antenna Gain:  | 5.3                  | dBi                                       | Directional gain: | 5.3   | dBi   |

**5725-5850 MHz:**

| Test Modes   | Test Frequency (MHz) | Max. Conducted Average Output Power (dBm) |                   |       |       |
|--|----------------------|---|-------------------|-------|-------|
|  |                      | ANT 1                                     | ANT 2             | Total | Limit |
| 802.11a  | 5745                 | <b>15.78</b>                              | 15.65             | /     | 30    |
|  | 5785                 | 15.43                                     | 15.44             | /     | 30    |
|  | 5825                 | 15.45                                     | 15.59             | /     | 30    |
| 802.11ac vht20   | 5745                 | 10.91                                     | 11.72             | 14.34 | 30    |
|  | 5785                 | 11.25                                     | 11.96             | 14.63 | 30    |
|  | 5825                 | 11.27                                     | 12.40             | 14.88 | 30    |
| 802.11ac vht40   | 5755                 | 12.45                                     | 12.67             | 15.57 | 30    |
|  | 5795                 | 12.41                                     | 12.02             | 15.23 | 30    |
| 802.11ac vht80   | 5775                 | 11.39                                     | 11.63             | 14.52 | 30    |
| Note: The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:<br>Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$ |                      |   |                   |       |       |
| Antenna Gain:  | 5.3                  | dBi                                       | Directional gain: | 5.3   | dBi   |

## **FCC §15.407(a) - POWER SPECTRAL DENSITY**

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.

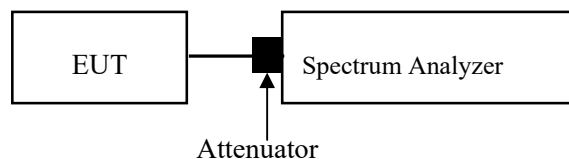
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall 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.

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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. 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.

### **Test Procedure**

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 should be applied

- a) Set span to encompass the entire EBW(or, alternatively, the entire 99% occupied Bandwidth) of the signal.
- b) Set sweep trigger to "free run."
- c) Set RBW=1MHz or 500kHz Set VBW>3 MHz or 2MHz.
- d) Number of points in sweep>2 x span/RBW.(This ensures that bin-to-bin spacing is <RBW/2. so that narrowband signals are not lost between frequency bins.)
- e) Sweep time = auto.
- f) Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
- g) Trace mode = max hold.
- h) Do not use sweep triggering. Allow the sweep to "free run."
- i) 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.
- j) Add  $10 \log (1/x)$ , 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).



**Test Data**

**Environmental Conditions**

|                           |            |
|---------------------------|------------|
| <b>Temperature:</b>       | 25.2~26 °C |
| <b>Relative Humidity:</b> | 39~55 %    |
| <b>ATM Pressure:</b>      | 101 kPa    |

The testing was performed by Leo Jin from 2024-01-21 to 2024-02-04.

EUT operation mode: Transmitting

**Test Result: Compliant.**

5150-5250 MHz:

| Test Modes     | Test Frequency (MHz) | Reading (dBm/MHz) |       | Duty Cycle Factor (dB) | Maximum Power Spectral Density with duty factor(dBm/MHz) |       |       |       |
|----------------|----------------------|-------------------|-------|------------------------|--|-------|-------|-------|
|                |                      | ANT 1             | ANT 2 |                        | ANT 1  | ANT 2 | Total | Limit |
| 802.11a        | 5180                 | 2.76              | 2.47  | 0.38                   | 3.14   | 2.85  | /     | 11    |
|                | 5200                 | 2.68              | 3.06  | 0.38                   | 3.06   | 3.44  | /     | 11    |
|                | 5240                 | 2.45              | 2.75  | 0.38                   | 2.83   | 3.13  | /     | 11    |
| 802.11ac vht20 | 5180                 | -1.06             | -0.20 | 0.45                   | -0.61  | 0.25  | 2.85  | 8.7   |
|                | 5200                 | 1.07              | 0.87  | 0.45                   | 1.52   | 1.32  | 4.43  | 8.7   |
|                | 5240                 | 0.57              | 0.12  | 0.45                   | 1.02   | 0.57  | 3.81  | 8.7   |
| 802.11ac vht40 | 5190                 | -6.09             | -6.75 | 1.01                   | -5.08  | -5.74 | -2.39 | 8.7   |
|                | 5230                 | -4.07             | -4.33 | 1.01                   | -3.06  | -3.32 | -0.18 | 8.7   |
| 802.11ac vht80 | 5210                 | -7.05             | -6.88 | 1.22                   | -5.83  | -5.66 | -2.73 | 8.7   |

Note:

The device is a client.

Method SA-2 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01 was used for PSD test, and the duty cycle factor was added into the result.

The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

Array Gain = 10 log(N<sub>ANT</sub>/N<sub>SS</sub>) dB

|               |     |    |                   |      |    |
|---------------|-----|----|-------------------|------|----|
| Antenna Gain: | 5.3 | dB | Directional gain: | 8.30 | dB |
|---------------|-----|----|-------------------|------|----|

5250-5350 MHz:

| Test Modes  | Test Frequency (MHz) | Reading (dBm/MHz) |        | Duty Cycle Factor (dB) | Maximum Power Spectral Density with duty factor(dBm/MHz) |       |       |       |
|---|----------------------|-------------------|--------|------------------------|--|-------|-------|-------|
|   |                      | ANT 1             | ANT 2  |                        | ANT 1  | ANT 2 | Total | Limit |
| 802.11a   | 5260                 | 2.82              | 2.56   | 0.38                   | 3.20   | 2.94  | /     | 11    |
|   | 5280                 | 2.97              | 3.54   | 0.38                   | 3.35   | 3.92  | /     | 11    |
|   | 5320                 | 2.79              | 2.26   | 0.38                   | 3.17   | 2.64  | /     | 11    |
| 802.11ac vht20  | 5260                 | -1.08             | -1.52  | 0.45                   | -0.63  | -1.07 | 2.17  | 8.7   |
|   | 5280                 | -1.38             | -1.26  | 0.45                   | -0.93  | -0.81 | 2.14  | 8.7   |
|   | 5320                 | -1.66             | -1.48  | 0.45                   | -1.21  | -1.03 | 1.89  | 8.7   |
| 802.11ac vht40  | 5270                 | -4.69             | -3.84  | 1.01                   | -3.68  | -2.83 | -0.22 | 8.7   |
|   | 5310                 | -6.20             | -6.80  | 1.01                   | -5.19  | -5.79 | -2.47 | 8.7   |
| 802.11ac vht80  | 5290                 | -10.27            | -11.14 | 1.22                   | -9.05  | -9.92 | -6.45 | 8.7   |
| <p>Method SA-2 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01 was used for PSD test, and the duty cycle factor was added into the result.<br/>                     The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:<br/>                     Array Gain = <math>10 \log(N_{ANT}/N_{SS})</math> dB</p> |                      |                   |        |                        |  |       |       |       |
| Antenna Gain:   | 5.3                  | dBi               |        | Directional gain:      | 8.30   | dBi   |       |       |

5470-5725 MHz:

| Test Modes  | Test Frequency (MHz) | Reading (dBm/MHz) |       | Duty Cycle Factor (dB) | Maximum Power Spectral Density with duty factor(dBm/MHz) |       |       |       |
|---|----------------------|-------------------|-------|------------------------|--|-------|-------|-------|
|   |                      | ANT 1             | ANT 2 |                        | ANT 1  | ANT 2 | Total | Limit |
| 802.11a   | 5500                 | 4.30              | 3.43  | 0.38                   | 4.68   | 3.81  | /     | 11    |
|   | 5580                 | 4.82              | 4.30  | 0.38                   | 5.20   | 4.68  | /     | 11    |
|   | 5700                 | 4.63              | 4.33  | 0.38                   | 5.01   | 4.71  | /     | 11    |
|   | 5720                 | 2.39              | 3.12  | 0.38                   | 2.77   | 3.50  | /     | 11    |
| 802.11ac vht20  | 5500                 | 0.73              | 0.61  | 0.45                   | 1.18   | 1.06  | 4.13  | 8.7   |
|   | 5580                 | 0.70              | 0.38  | 0.45                   | 1.15   | 0.83  | 4.00  | 8.7   |
|   | 5700                 | -0.99             | -1.08 | 0.45                   | -0.54  | -0.63 | 2.43  | 8.7   |
|   | 5720                 | 0.51              | 0.58  | 0.45                   | 0.96   | 1.03  | 4.01  | 8.7   |
| 802.11ac vht40  | 5510                 | -4.33             | -4.18 | 1.01                   | -3.32  | -3.17 | -0.23 | 8.7   |
|   | 5550                 | -1.92             | -1.85 | 1.01                   | -0.91  | -0.84 | 2.14  | 8.7   |
|   | 5670                 | -2.22             | -2.12 | 1.01                   | -1.21  | -1.11 | 1.85  | 8.7   |
|   | 5710                 | -2.02             | -2.01 | 1.01                   | -1.01  | -1.00 | 2.01  | 8.7   |
| 802.11ac vht80  | 5530                 | -8.20             | -8.67 | 1.22                   | -6.98  | -7.45 | -4.20 | 8.7   |
|   | 5610                 | -4.72             | -4.80 | 1.22                   | -3.50  | -3.58 | -0.53 | 8.7   |
|   | 5690                 | -7.85             | -8.20 | 1.22                   | -6.63  | -6.98 | -3.79 | 8.7   |
| <p>Method SA-2 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01 was used for PSD test, and the duty cycle factor was added into the result.<br/>                     The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:<br/>                     Array Gain = <math>10 \log(N_{ANT}/N_{SS})</math> dB</p> |                      |                   |       |                        |  |       |       |       |
| Antenna Gain:   | 5.3                  | dBi               |       | Directional gain:      | 8.30   | dBi   |       |       |

5725-5850 MHz:

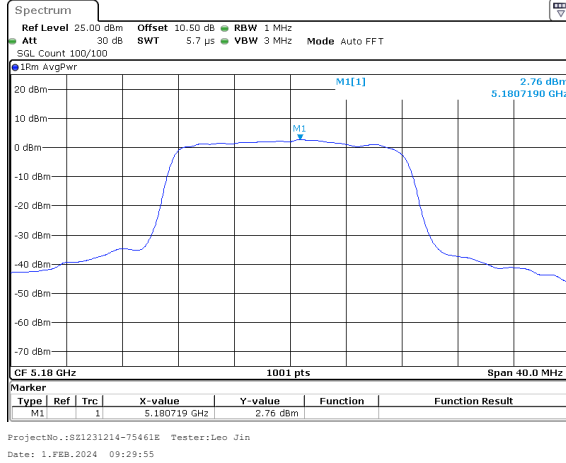
| Test Modes  | Test Frequency (MHz) | Reading (dBm/500kHz) |       | Duty Cycle Factor (dB) | Maximum Power Spectral Density with duty factor(dBm/500kHz) |       |       |       |
|---|----------------------|----------------------|-------|------------------------|---|-------|-------|-------|
|   |                      | ANT 1                | ANT 2 |                        | ANT 1   | ANT 2 | Total | Limit |
| 802.11a   | 5745                 | 2.78                 | 2.58  | 0.38                   | 3.16  | 2.96  | /     | 30    |
|   | 5785                 | 1.92                 | 2.20  | 0.38                   | 2.30  | 2.58  | /     | 30    |
|   | 5825                 | 2.25                 | 2.31  | 0.38                   | 2.63  | 2.69  | /     | 30    |
| 802.11ac vht20  | 5745                 | -2.55                | -2.14 | 0.45                   | -2.10   | -1.69 | 1.12  | 27.7  |
|   | 5785                 | -2.05                | -1.97 | 0.45                   | -1.60   | -1.52 | 1.45  | 27.7  |
|   | 5825                 | -2.03                | -1.23 | 0.45                   | -1.58   | -0.78 | 1.85  | 27.7  |
| 802.11ac vht40  | 5755                 | -3.77                | -3.42 | 1.01                   | -2.76   | -2.41 | 0.43  | 27.7  |
|   | 5795                 | -3.84                | -4.27 | 1.01                   | -2.83   | -3.26 | -0.03 | 27.7  |
| 802.11ac vht80  | 5775                 | -9.22                | -9.15 | 1.22                   | -8.00   | -7.93 | -4.95 | 27.7  |
| <p>Method SA-2 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01 was used for PSD test, and the duty cycle factor was added into the result.<br/>                     The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:<br/>                     Array Gain = <math>10 \log(N_{ANT}/N_{SS})</math> dB</p> |                      |                      |       |                        |   |       |       |       |
| Antenna Gain:   | 5.3                  | dBi                  |       | Directional gain:      | 8.30  | dBi   |       |       |



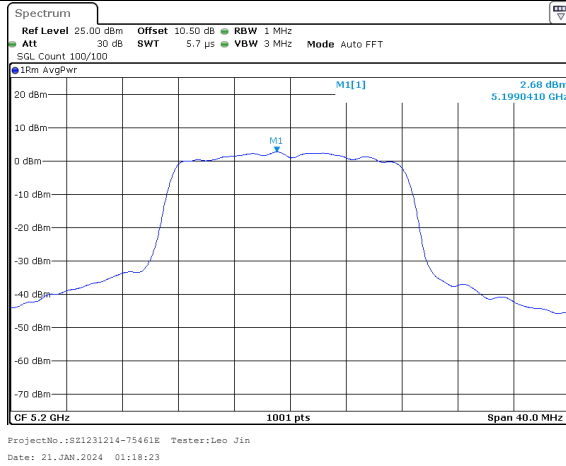
**ANT 1**  
**5150-5250MHz:**

**Maximum power spectral density**

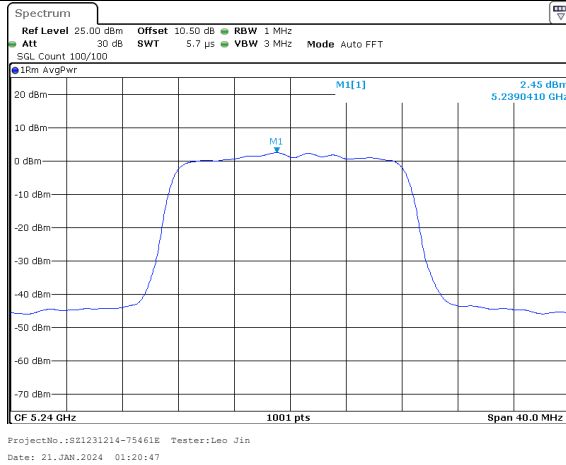
802.11a  
Lowest Channel



802.11a  
Middle Channel



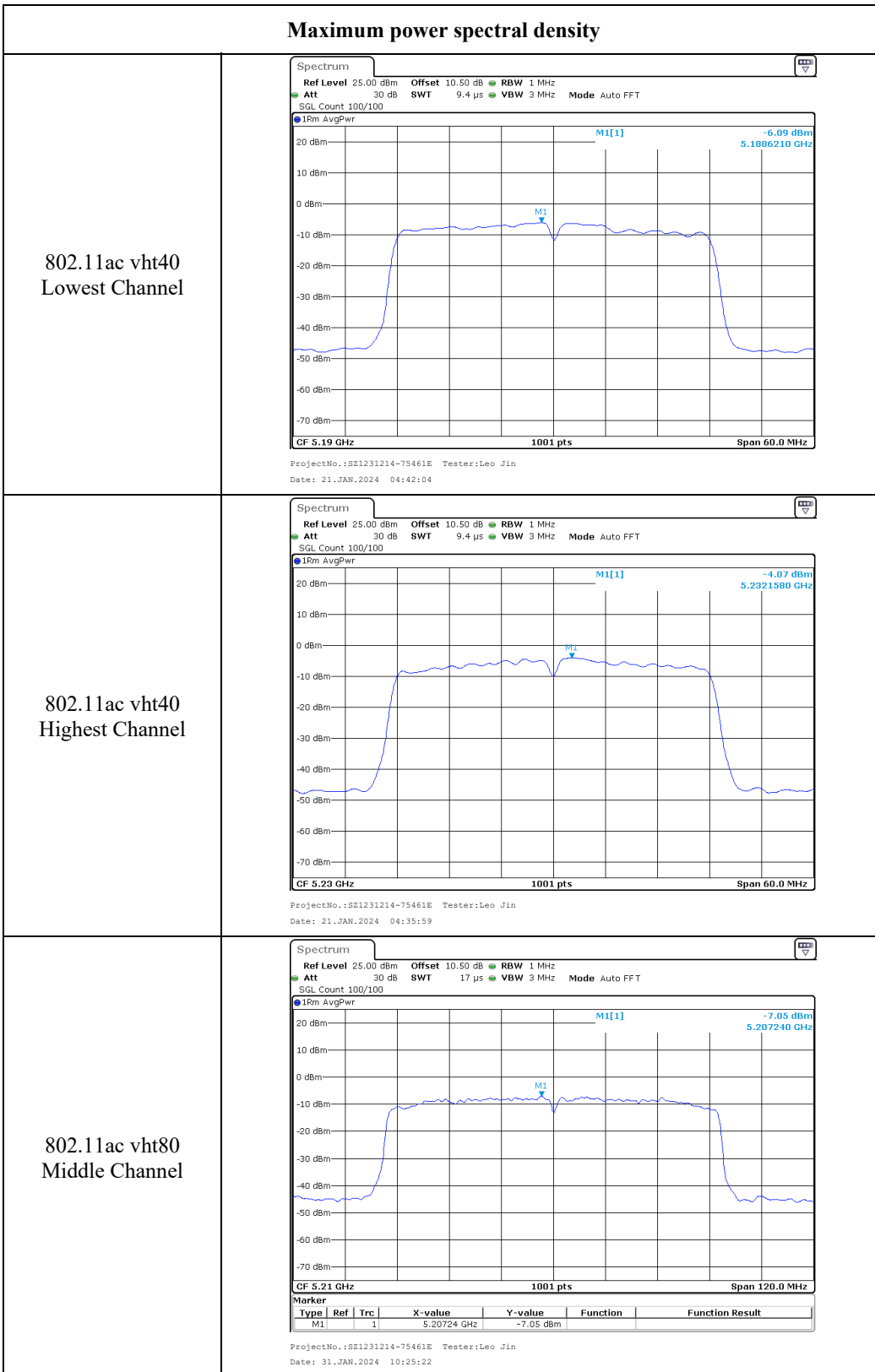
802.11a  
Highest Channel



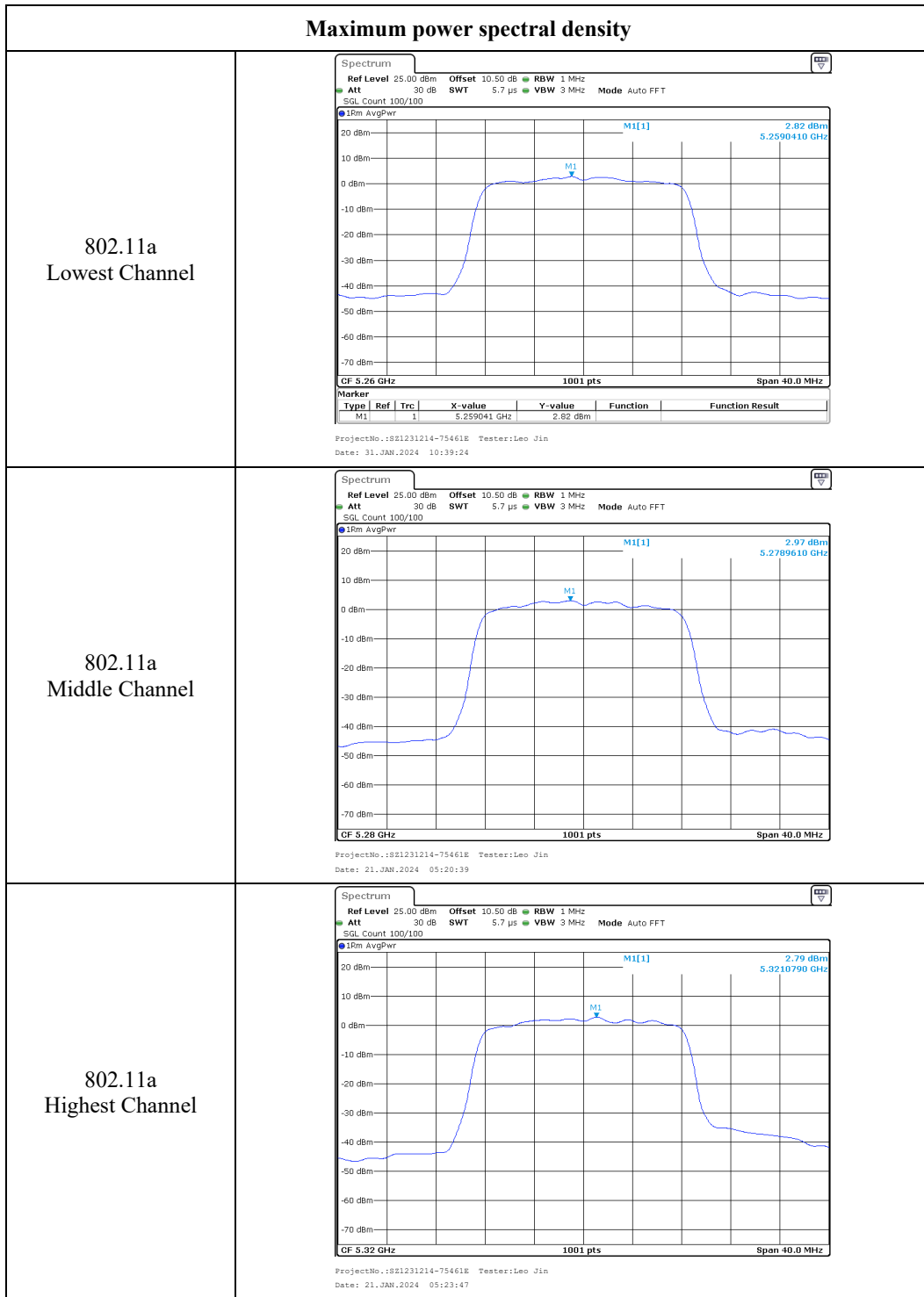
**Maximum power spectral density**

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 02:02:20</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 02:17:38</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 03:47:47</p> |

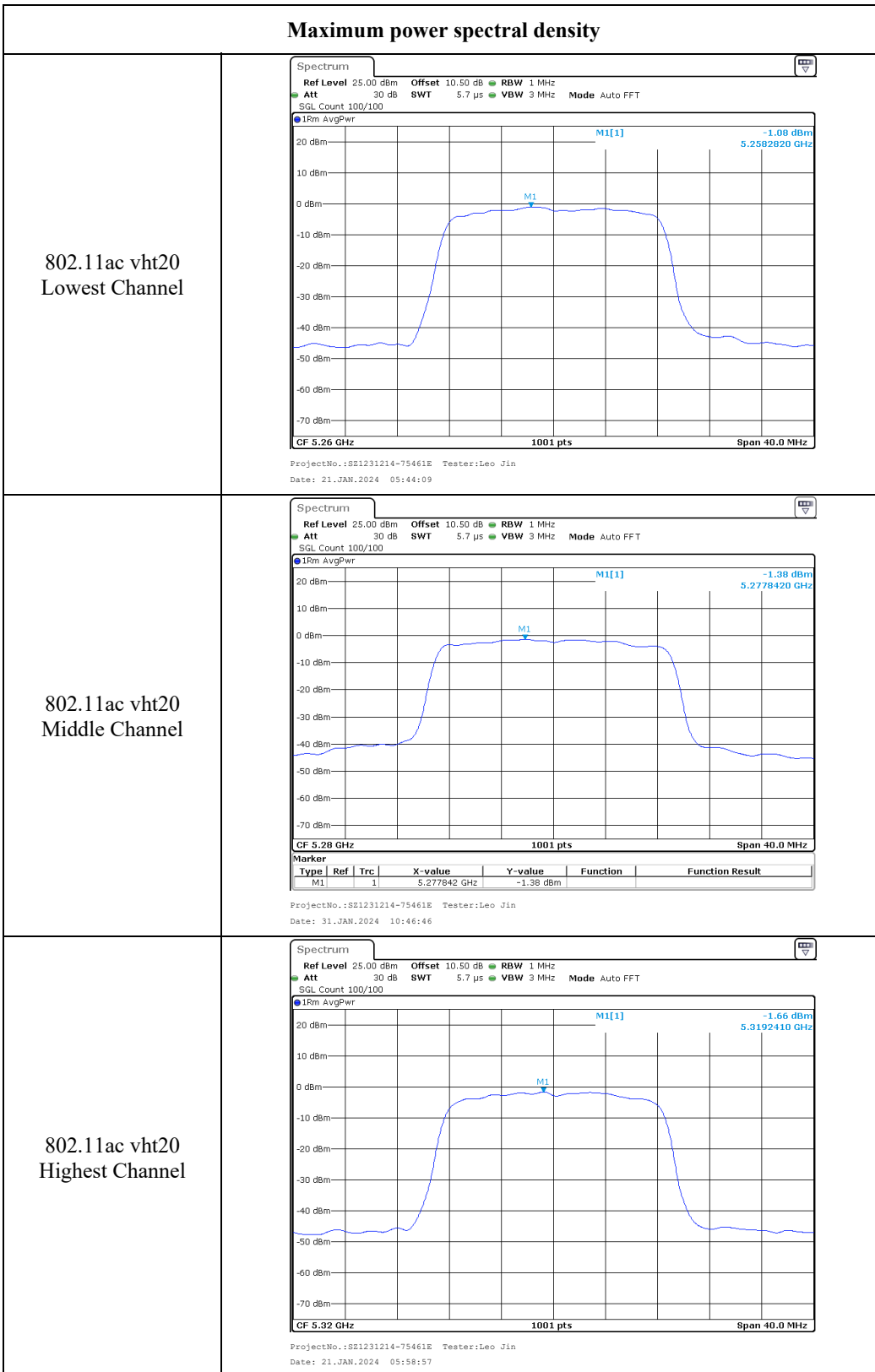
Maximum power spectral density



5250-5350MHz:



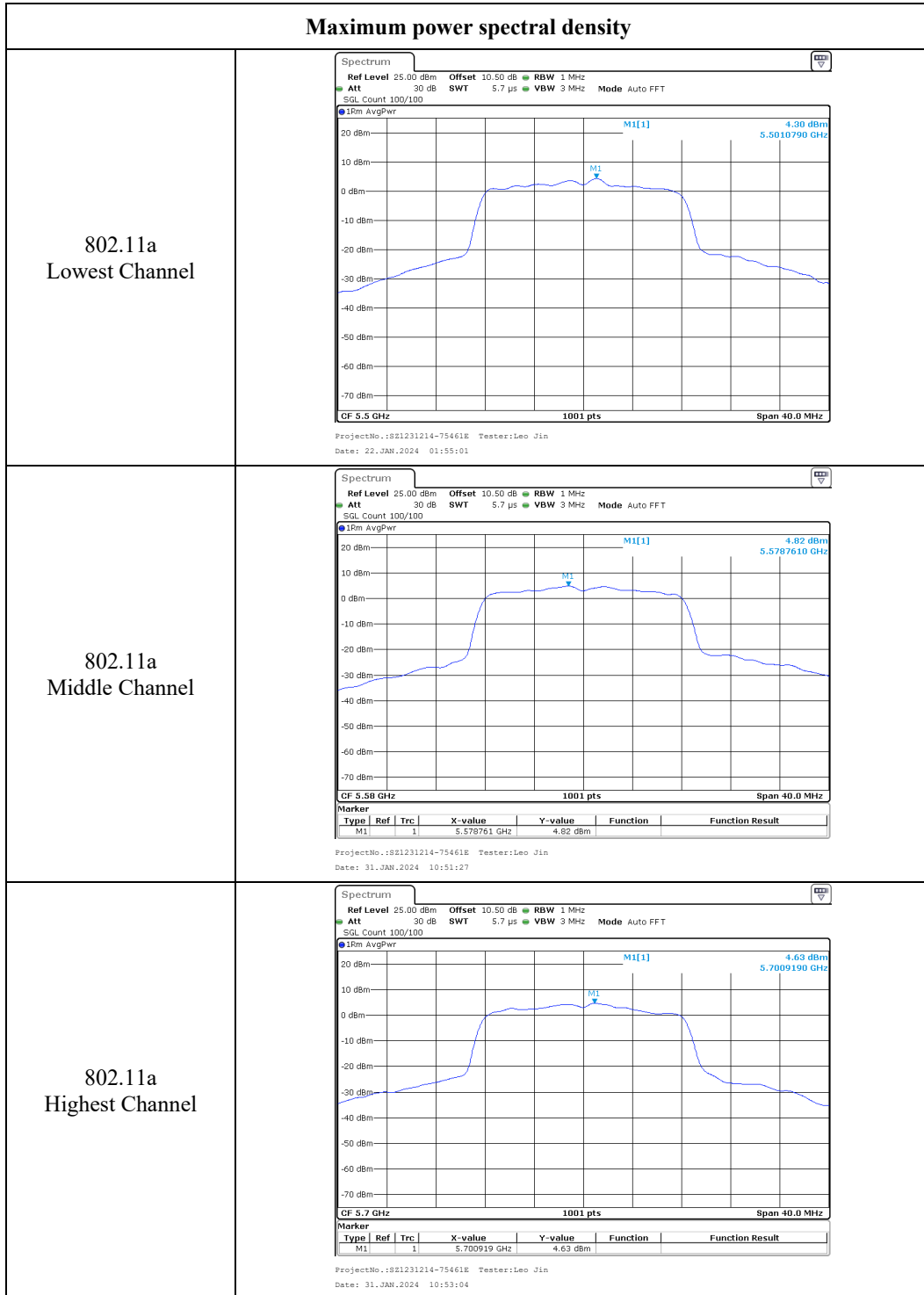
**Maximum power spectral density**



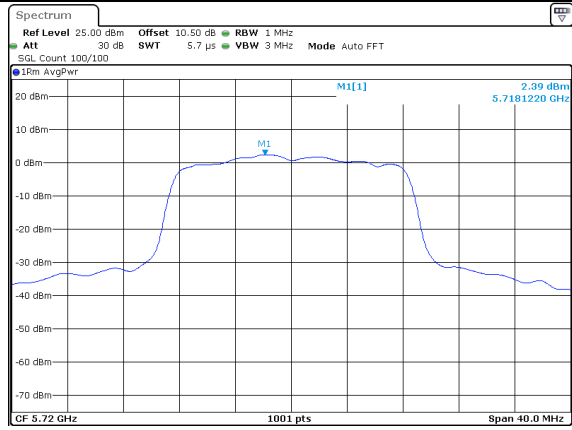
**Maximum power spectral density**

|   |  |
|---|--|
| <p>802.11ac vht40<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:19:03</p> |
| <p>802.11ac vht40<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:16:52</p> |
| <p>802.11ac vht80<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:27:01</p> |

5470-5725MHz:

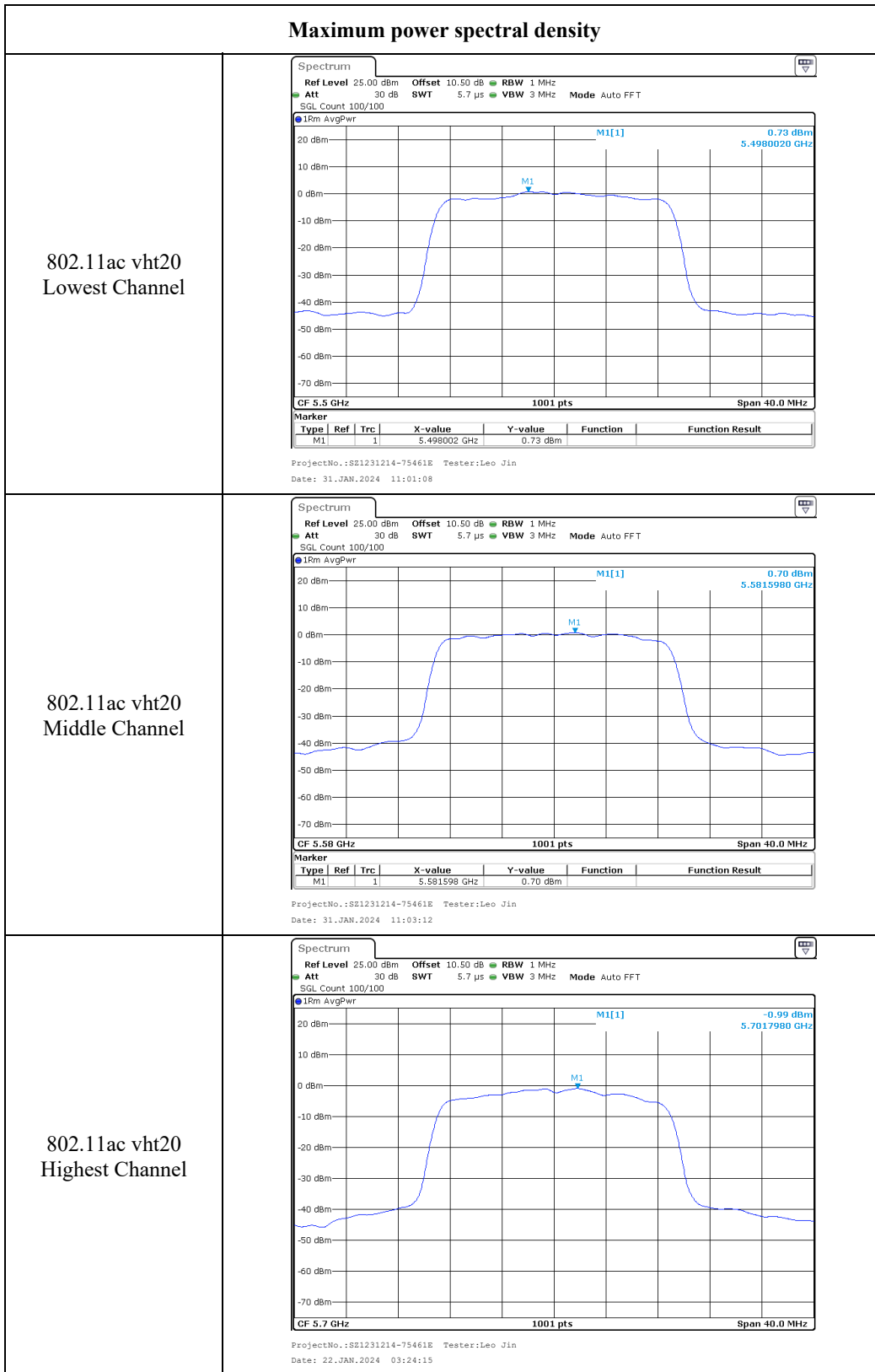


802.11a  
Cross Channel

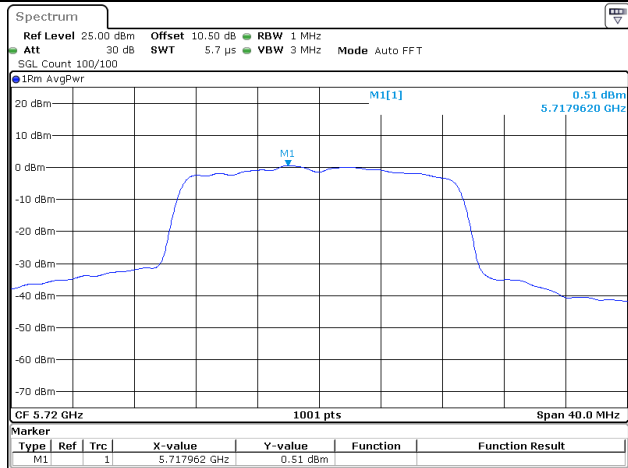


ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 22.JAN.2024 04:06:23



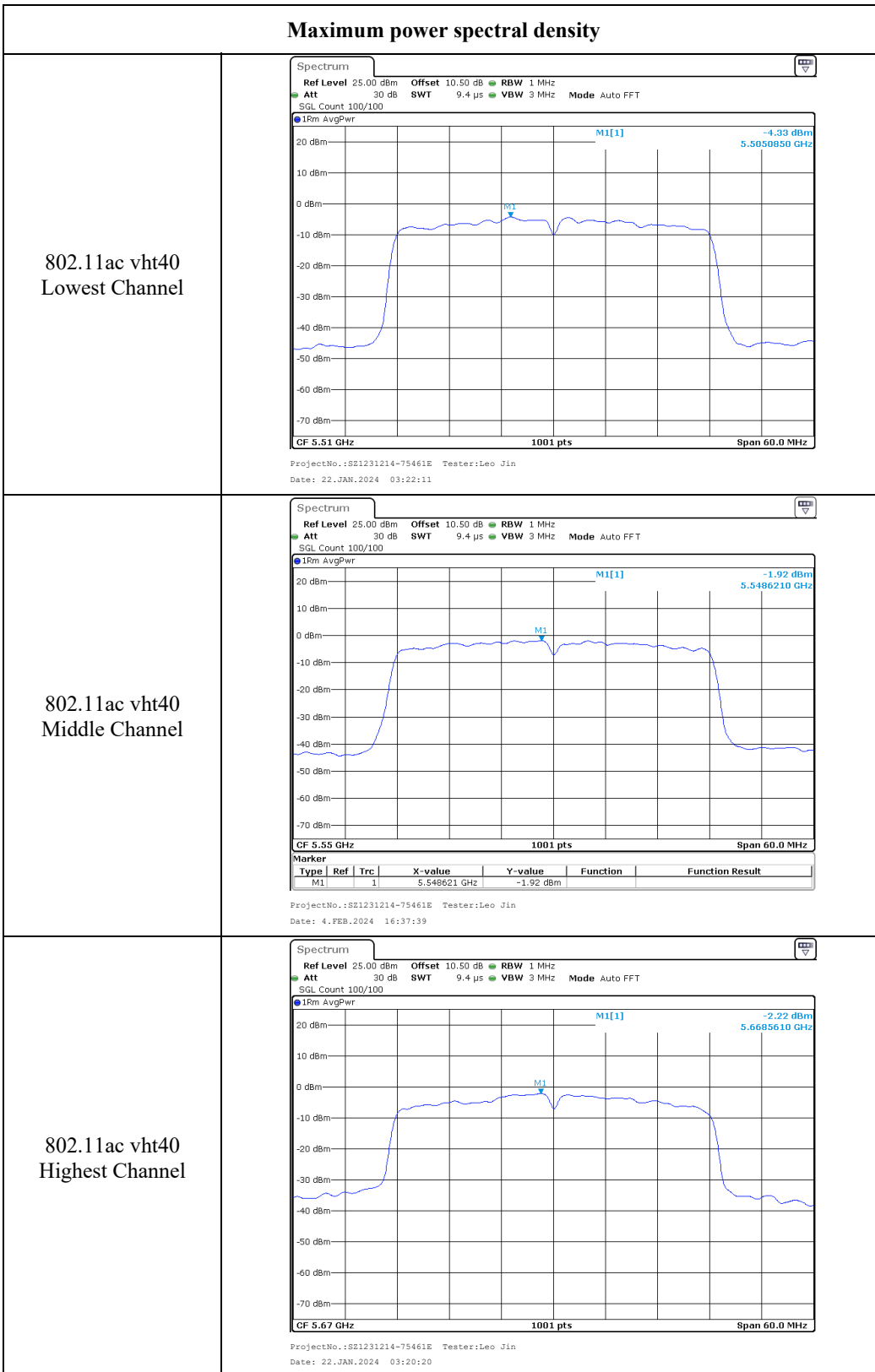


802.11ac vht20  
Cross Channel

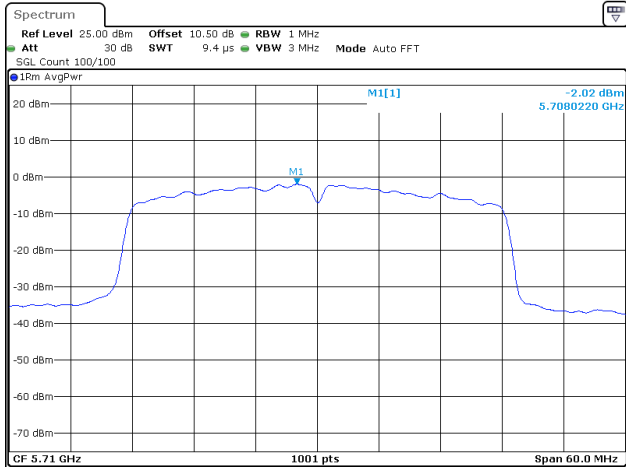


ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
 Date: 31.JAN.2024 11:13:01

Maximum power spectral density



802.11ac vht40  
Cross Channel

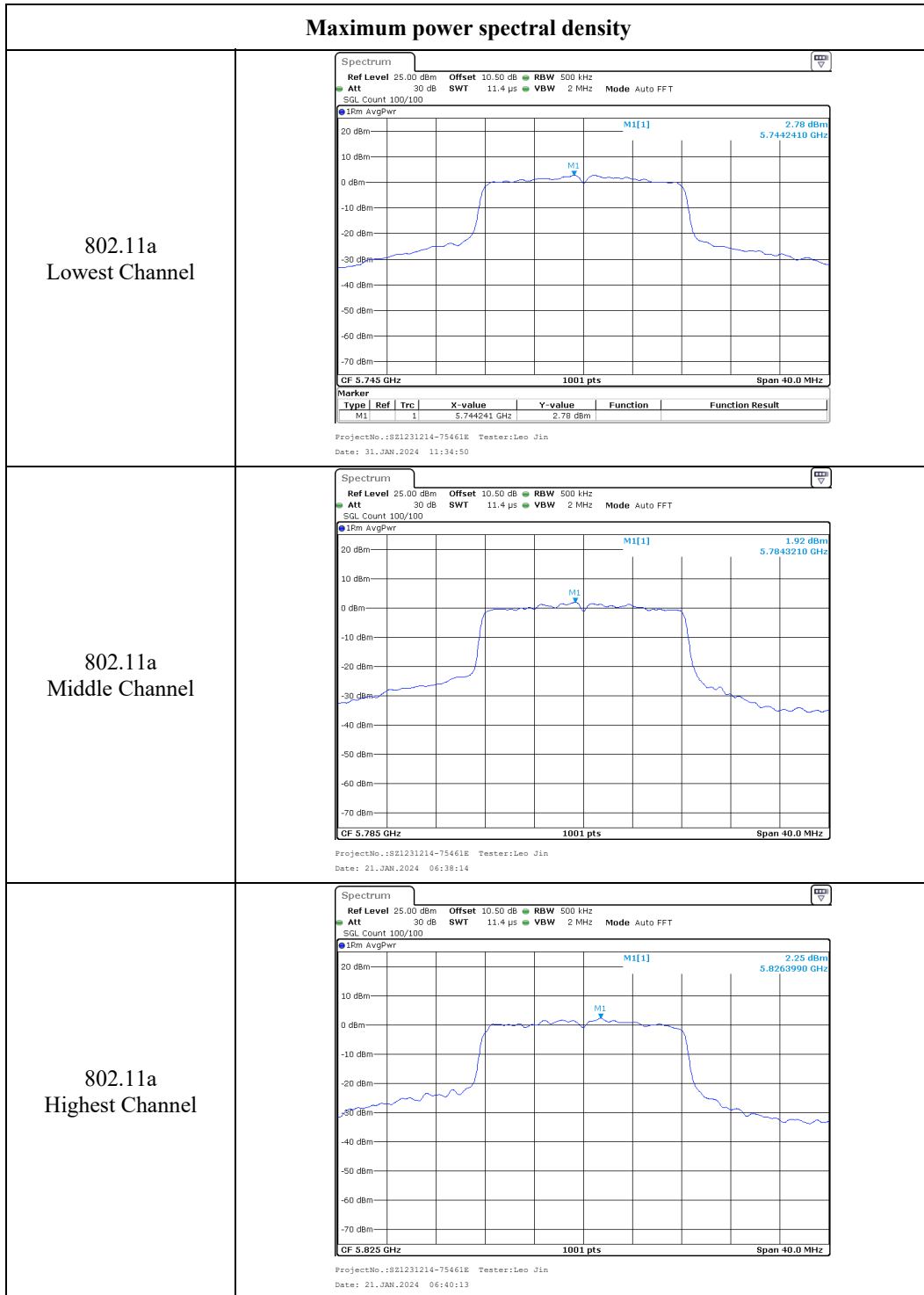


ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 22.JAN.2024 03:52:41

Maximum power spectral density

|   |  |
|---|--|
| <p>802.11ac vht80<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 31.JAN.2024 11:24:34</p> |
| <p>802.11ac vht80<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 22.JAN.2024 03:40:54</p> |
| <p>802.11ac vht80<br/>Cross Channel</p>   | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 31.JAN.2024 11:28:56</p> |

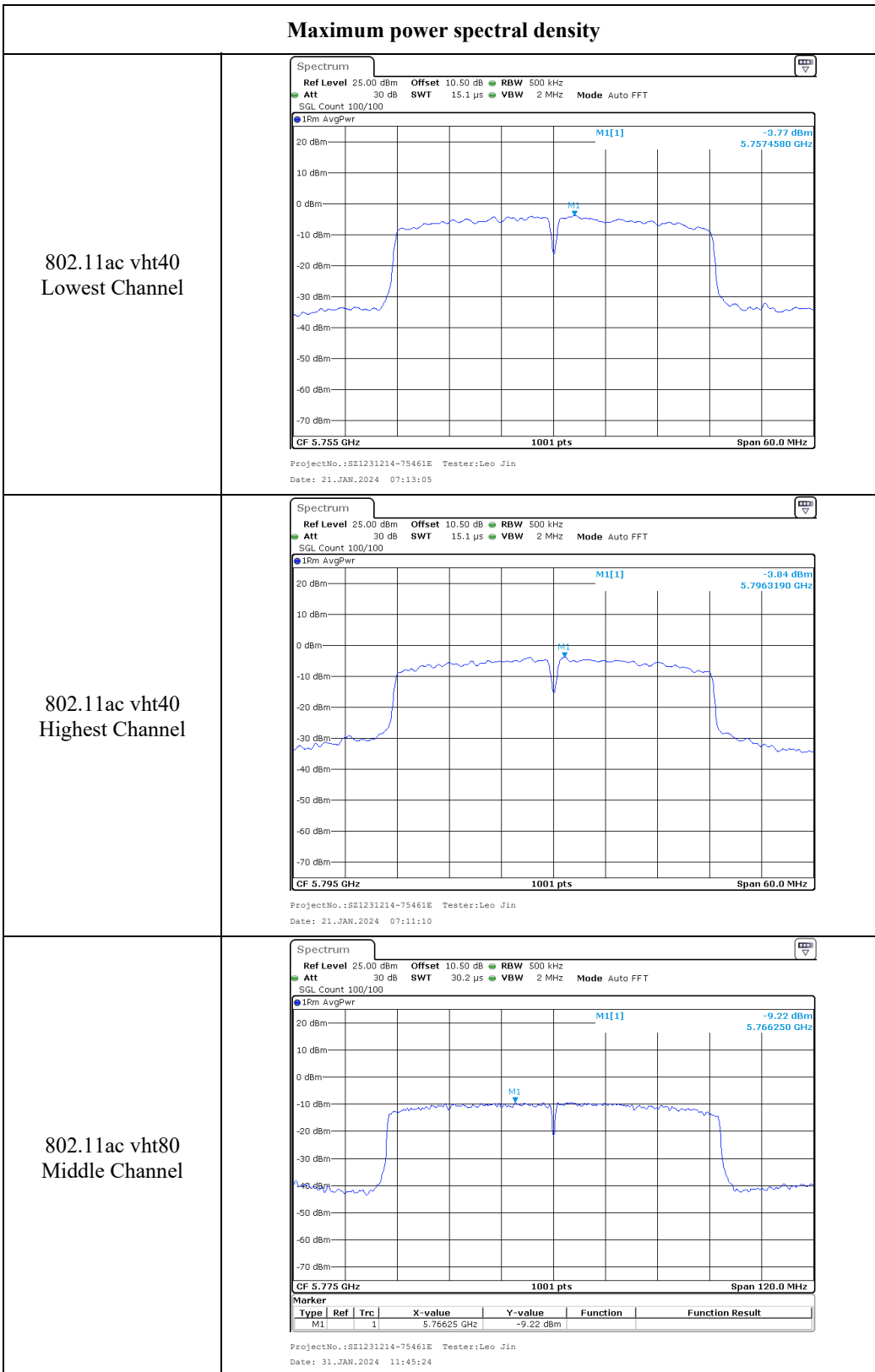
5725-5850MHz:



**Maximum power spectral density**

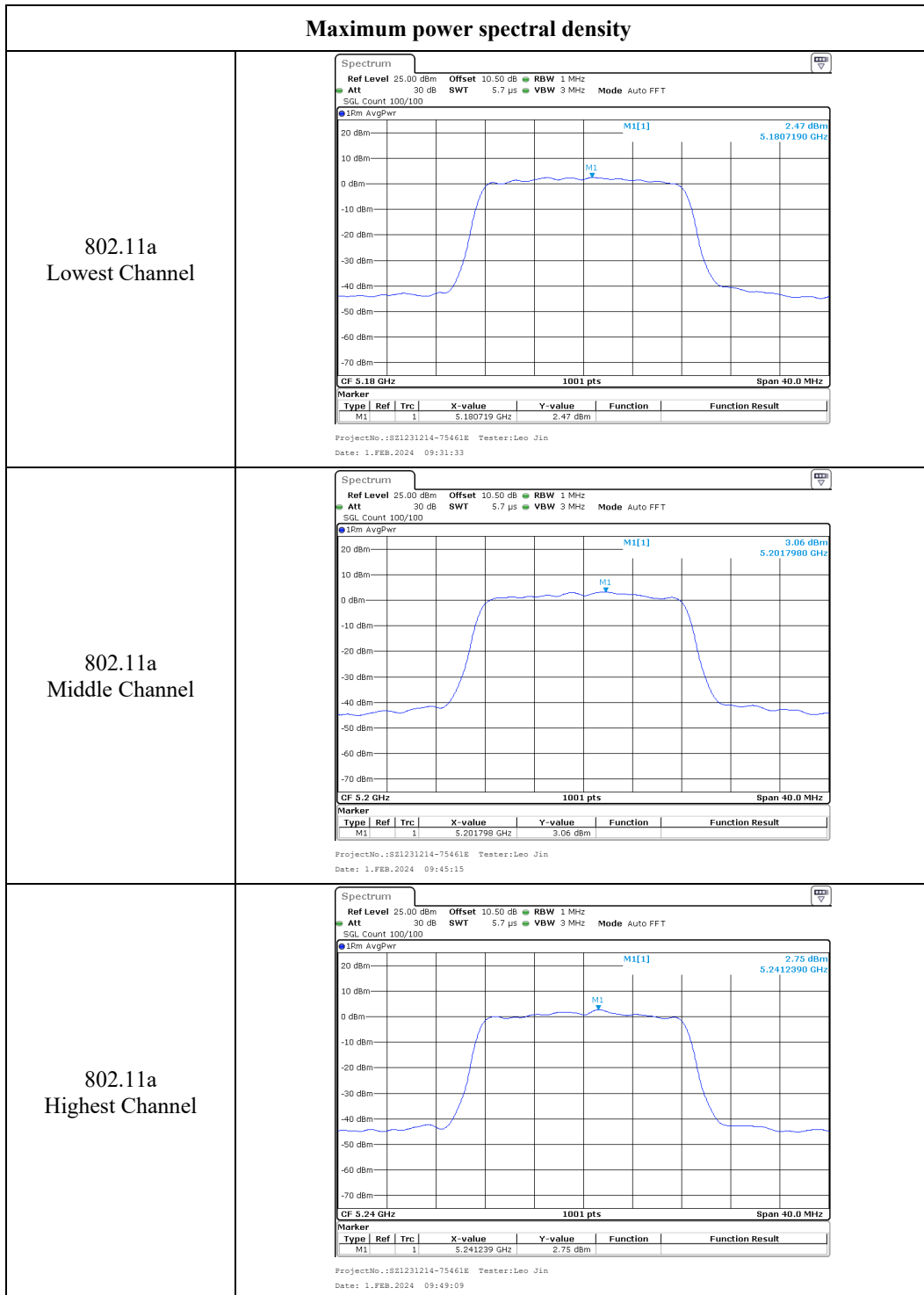
|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 07:01:15</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:59:15</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:56:42</p> |

### Maximum power spectral density





**ANT 2**  
**5150-5250MHz:**



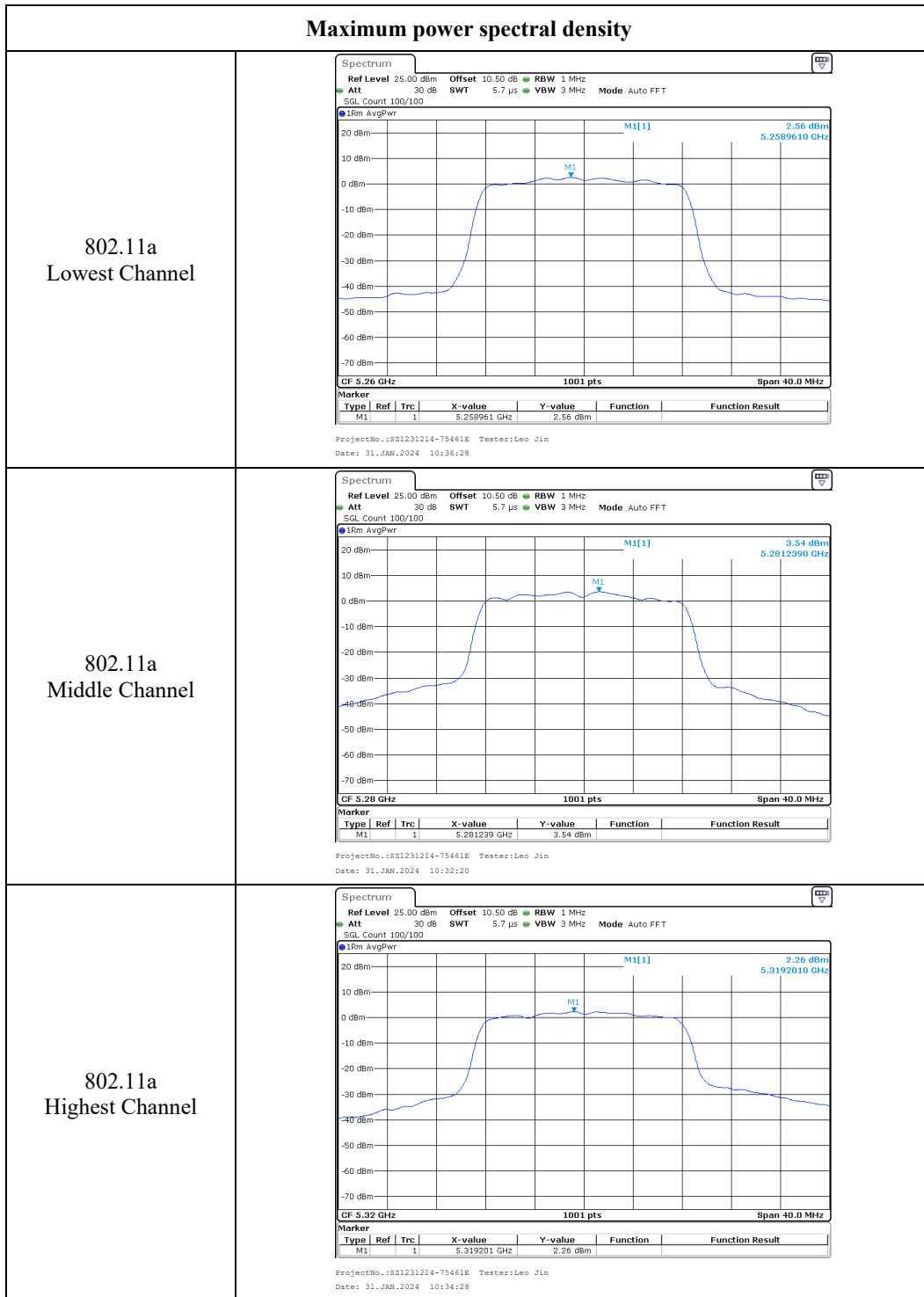
**Maximum power spectral density**

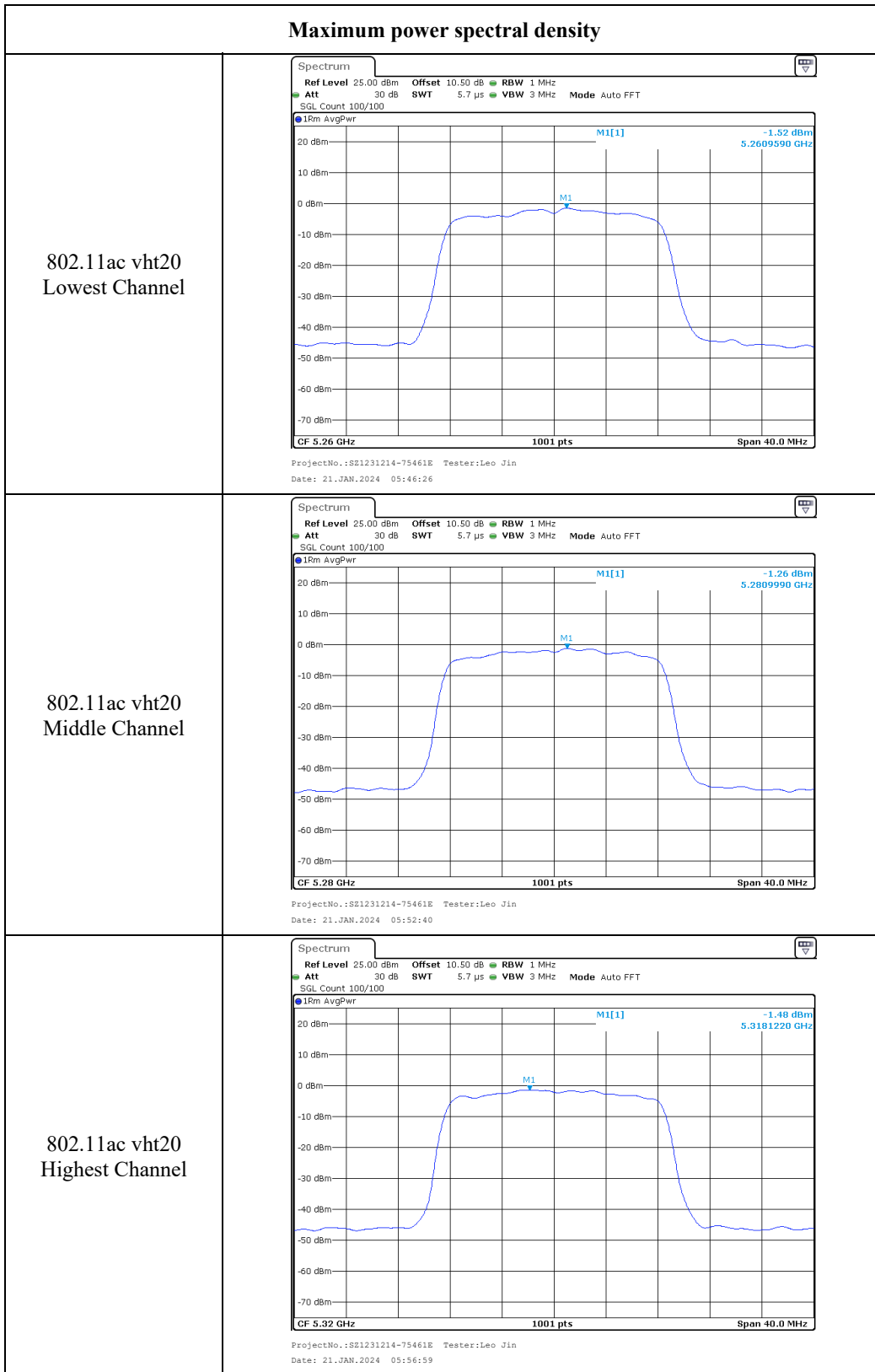
|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 01:59:31</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 02:19:41</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 03:45:37</p> |

Maximum power spectral density

|   |  |
|---|--|
| <p>802.11ac vht40<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 04:40:06</p> |
| <p>802.11ac vht40<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 04:37:41</p> |
| <p>802.11ac vht80<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 03:22:00</p> |

5250-5350MHz:

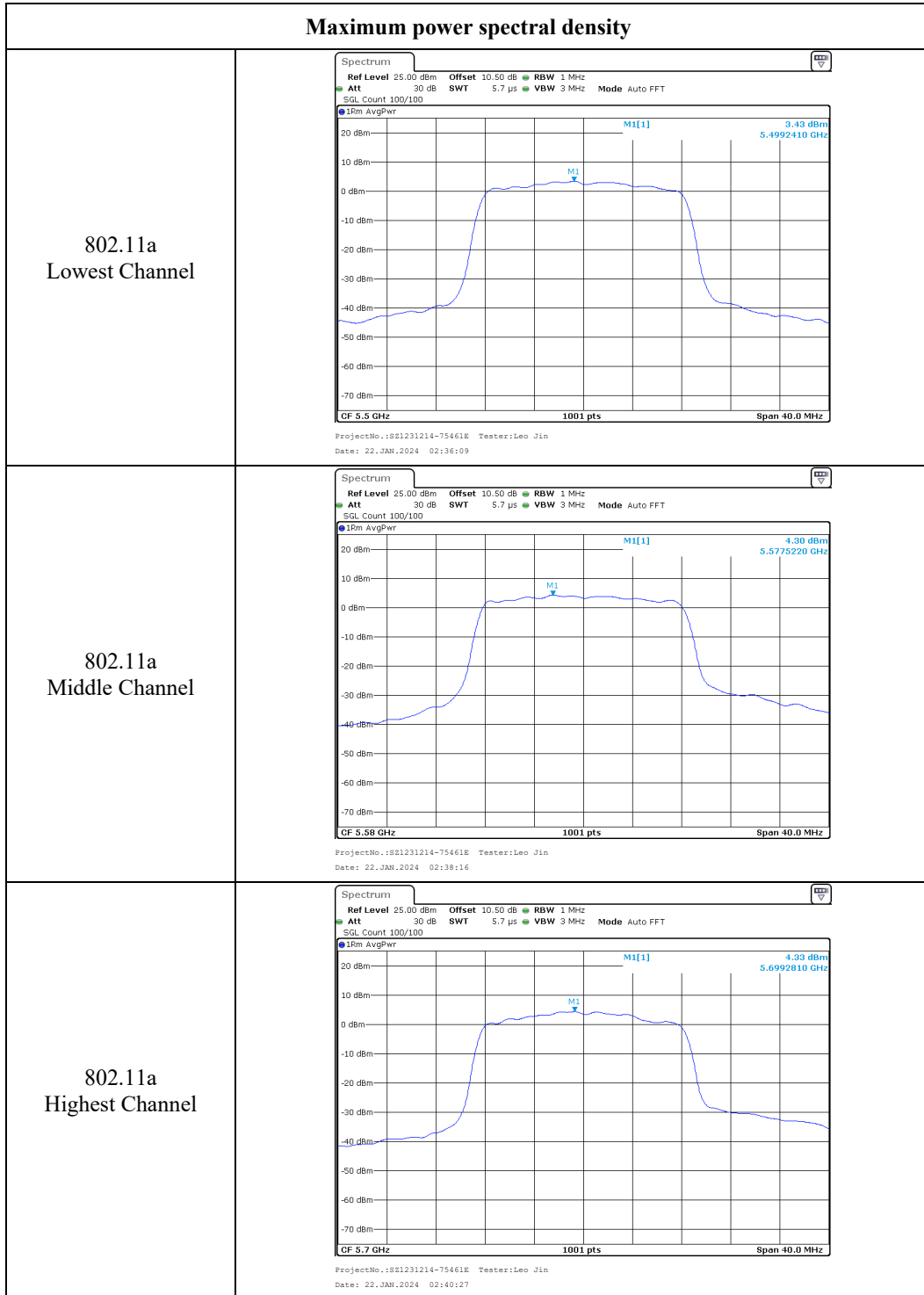




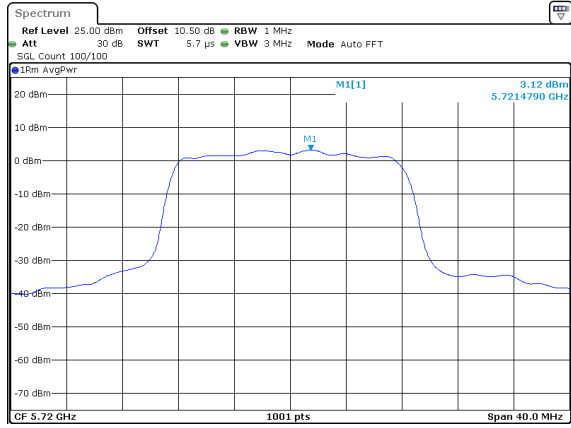
Maximum power spectral density

|   |  |
|---|--|
| <p>802.11ac vht40<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:21:25</p> |
| <p>802.11ac vht40<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:15:09</p> |
| <p>802.11ac vht80<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:24:44</p> |

5470-5725MHz:

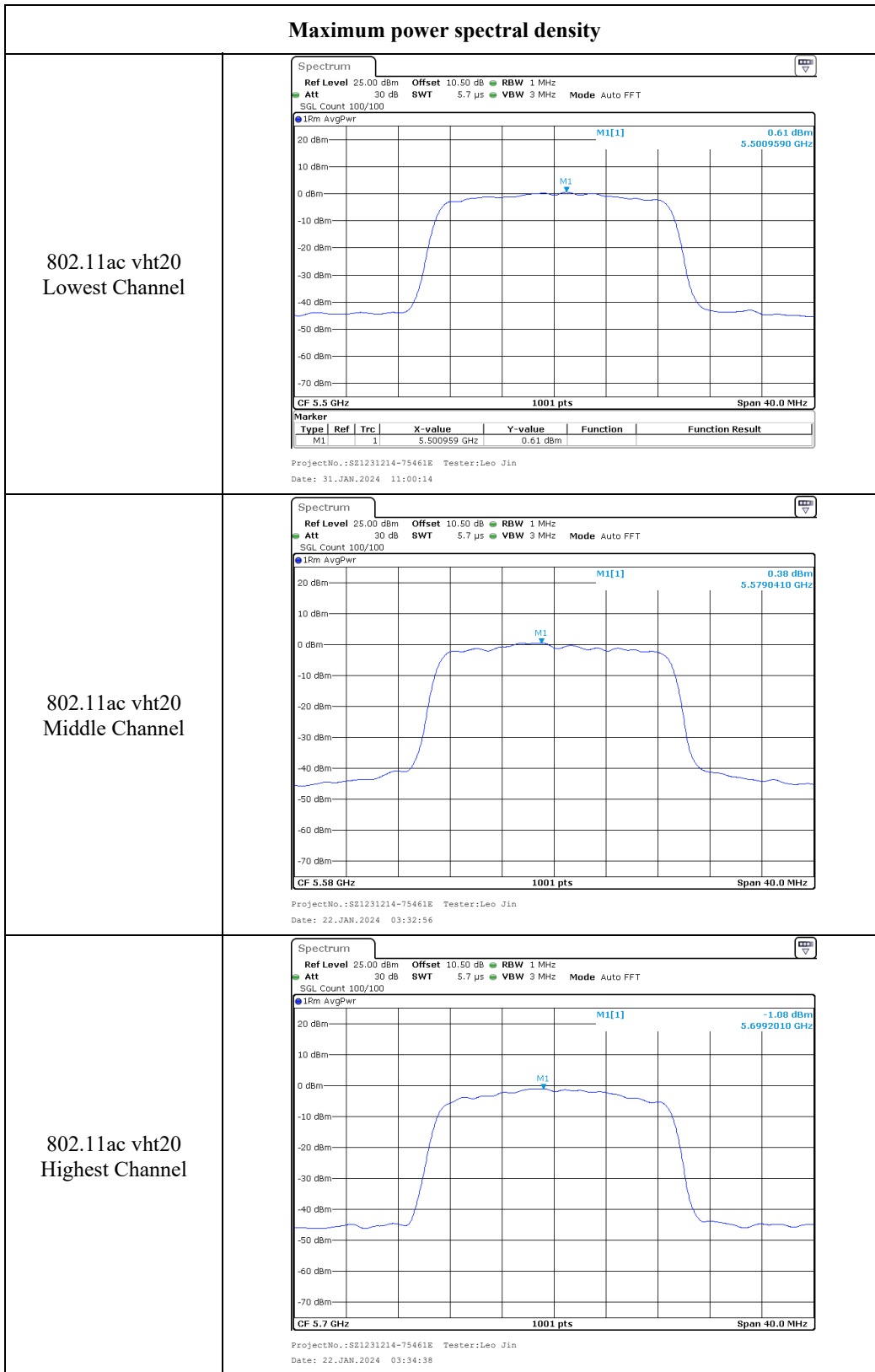


802.11a  
Cross Channel

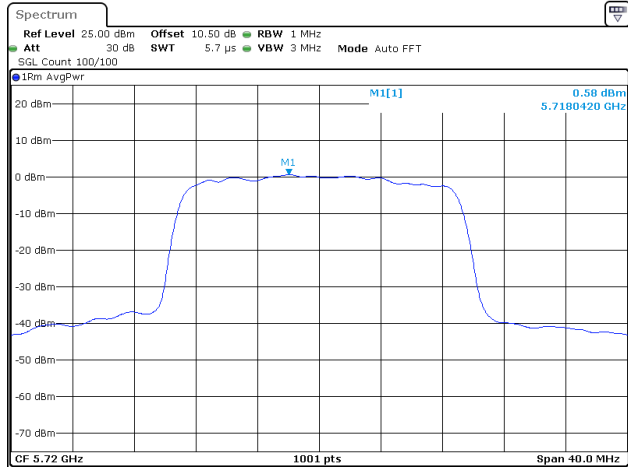


ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 22.JAN.2024 04:03:56

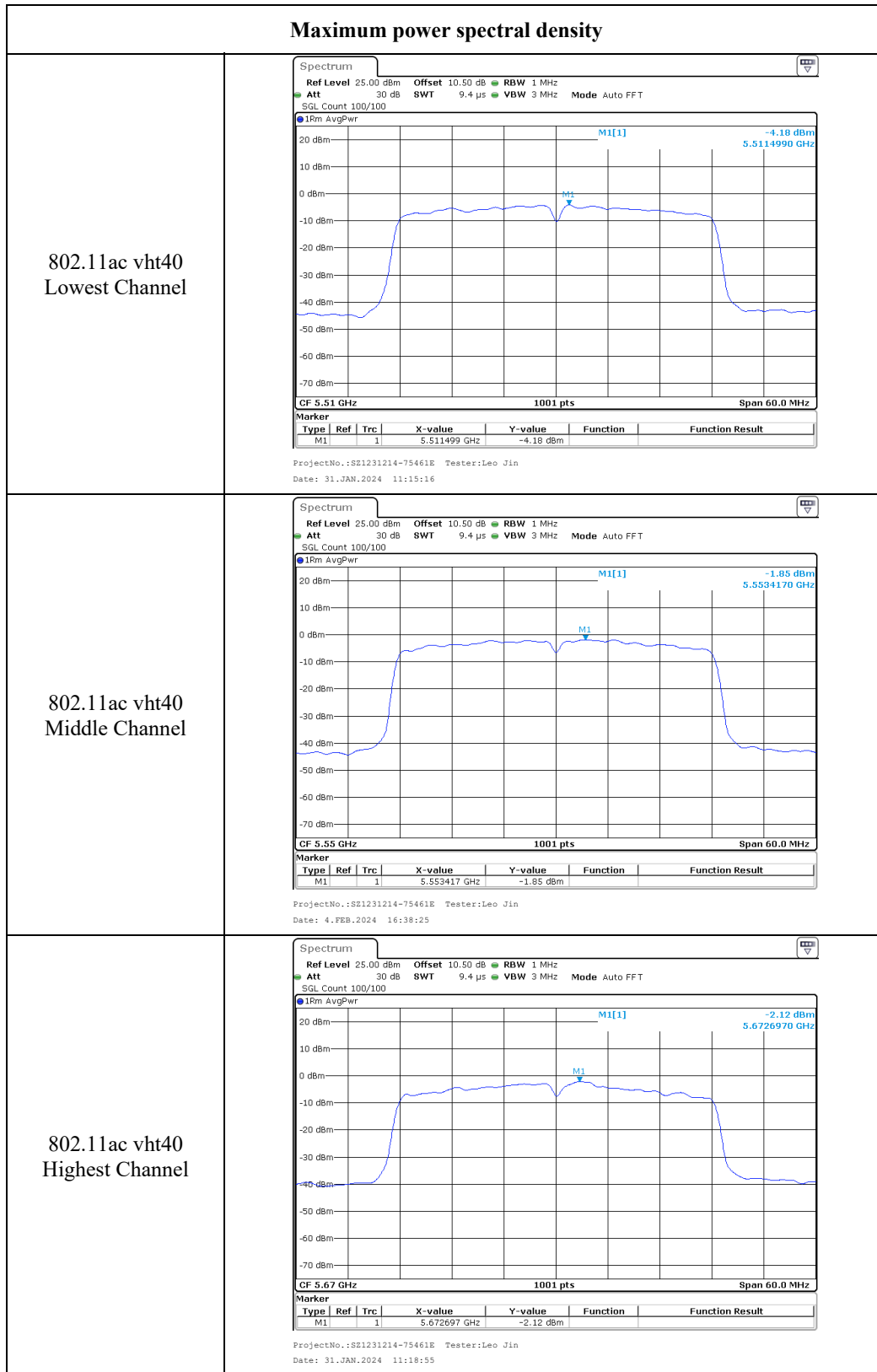




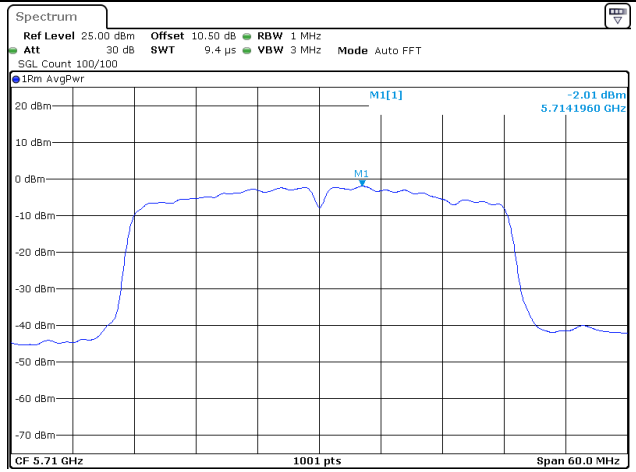
802.11ac vht20  
Cross Channel



ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 22.JAN.2024 03:59:38

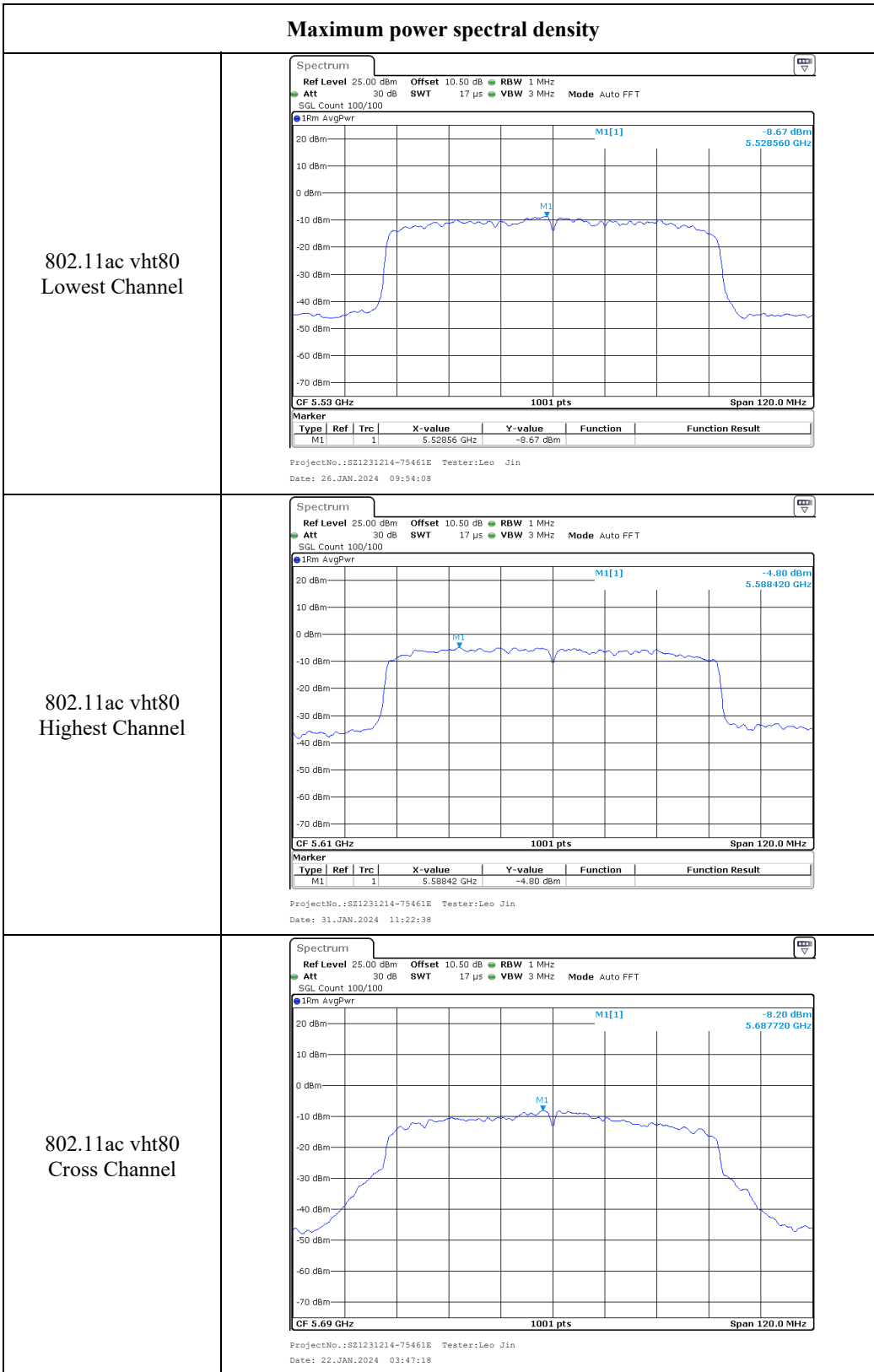


802.11ac vht40  
Cross Channel



ProjectNo.:SZ1231214-75461E Tester:Leo Jin  
Date: 22.JAN.2024 03:50:49

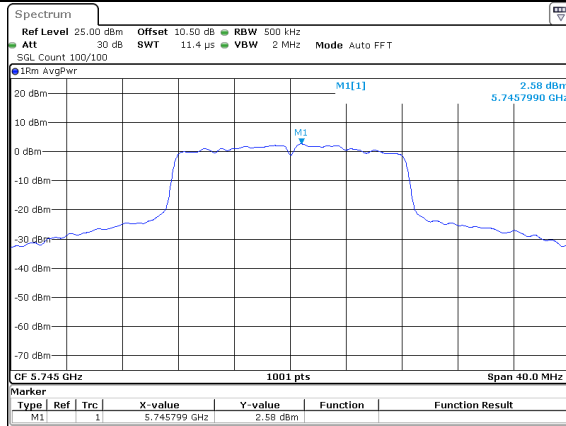
**Maximum power spectral density**



5725-5850MHz:

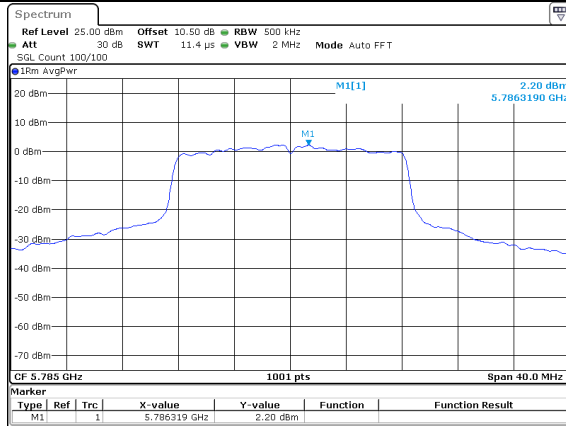
Maximum power spectral density

802.11a  
Lowest Channel



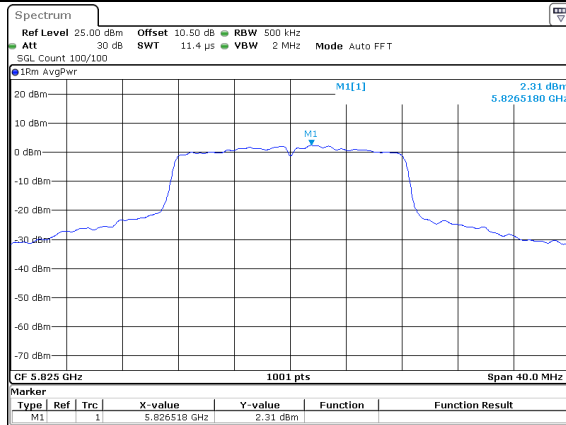
ProjectNo.:821231214-75461E Tester:Leo Jin  
 Date: 31.JAN.2024 11:34:10

802.11a  
Middle Channel



ProjectNo.:821231214-75461E Tester:Leo Jin  
 Date: 31.JAN.2024 11:38:51

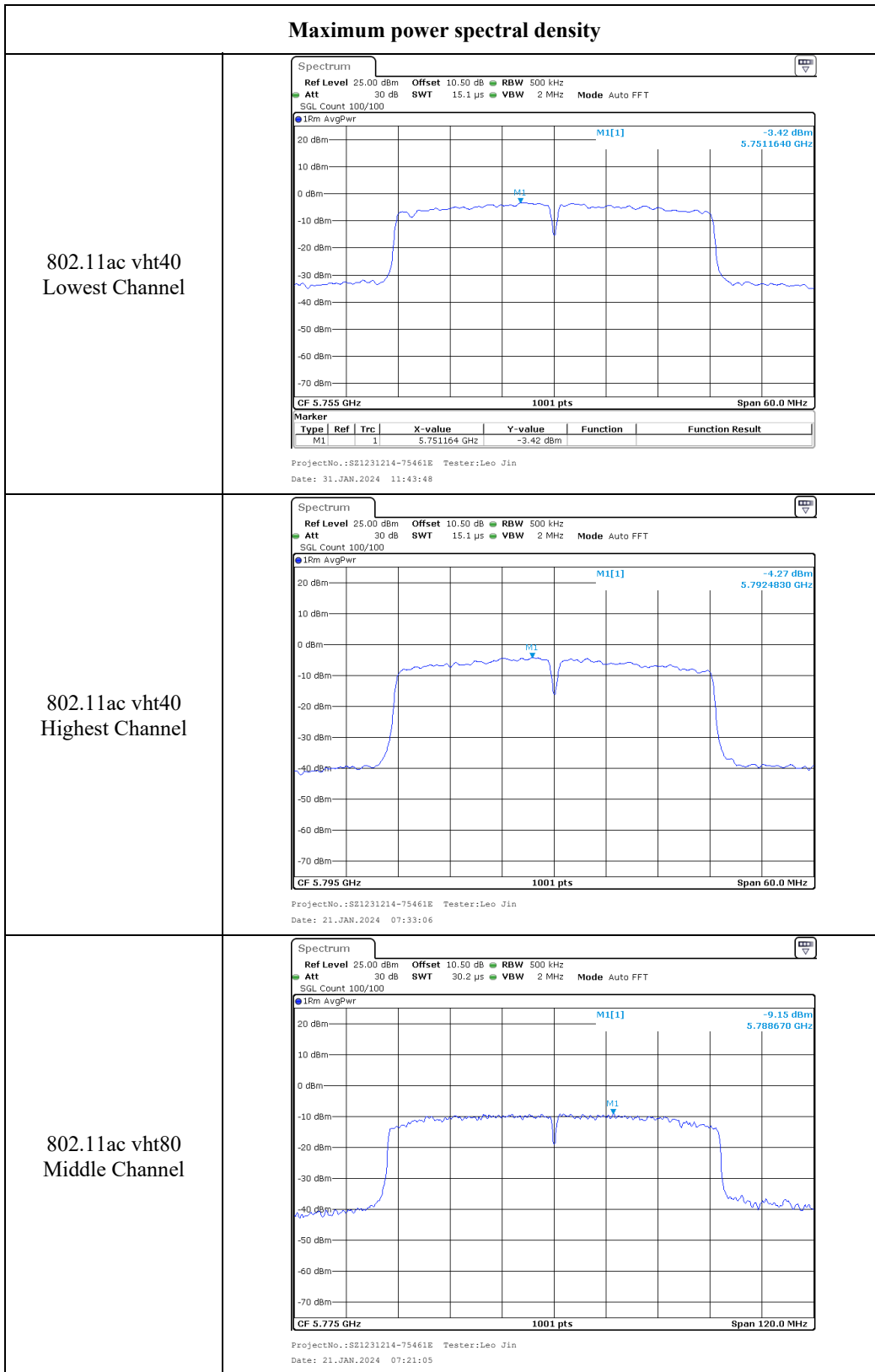
802.11a  
Highest Channel



ProjectNo.:821231214-75461E Tester:Leo Jin  
 Date: 31.JAN.2024 11:40:47

**Maximum power spectral density**

|   |  |
|---|--|
| <p>802.11ac vht20<br/>Lowest Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:49:06</p> |
| <p>802.11ac vht20<br/>Middle Channel</p>  | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:51:42</p> |
| <p>802.11ac vht20<br/>Highest Channel</p> | <p>ProjectNo.:SZ1231214-75461E Tester:Leo Jin<br/>Date: 21.JAN.2024 06:54:34</p> |





## **EUT PHOTOGRAPHS**

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Please refer to the attachment SZ1231214-75461E-RF External photo and SZ1231214-75461E-RF Internal photo.

## **TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment SZ1231214-75461E-RF Test Setup photo.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***