# FCC Test Report (WLAN)

| | |
|---|---|
| **Report No.:** | RFBEIH-WTW-P20100011 |
| **FCC ID:** | P27IP5446A |
| **Test Model:** | SAX1V1R |
| **Received Date:** | Oct. 5, 2020 |
| **Test Date:** | Oct. 14 to Nov. 9, 2020 |
| **Issued Date:** | Nov. 11, 2020 |
| **Applicant:** | Sercomm Corp. |
| **Address:** | 8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C. (NanKang Software Park) |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories |
| **Lab Address:** | No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan |
| **FCC Registration / Designation Number:** | 198487 / TW2021 |

Testing Laboratory
2021

## Table of Contents

## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| RFBEIH-WTW-P20100011 | Original release. | Nov. 11, 2020 |

## 1 Certificate of Conformity

| | |
|---|---|
| **Product:** | 11AX ROUTER_NON IOT |
| **Brand:** | Charter Spectrum |
| **Test Model:** | SAX1V1R |
| **Sample Status:** | Engineering sample |
| **Applicant:** | Sercomm Corp. |
| **Test Date:** | Oct. 14 to Nov. 9, 2020 |
| **Standard:** | 47 CFR FCC Part 15, Subpart E (Section 15.407)<br>ANSI C63.10: 2013 |

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Jessica Cheng , **Date:** Nov. 11, 2020

Jessica Cheng / Senior Specialist

**Approved by :** Rex. Lai , **Date:** Nov. 11, 2020

Rex Lai / Associate Technical Manager

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart E (Section 15.407) | | | |
|---|---|---|---|
| FCC Clause | Test Item | Result | Remarks |
| 15.407(b)(6) | AC Power Conducted Emissions | Pass | Meet the requirement of limit. Minimum passing margin is -11.79dB at 0.41204MHz. |
| 15.407(b) (1/2/3/4(i/ii)/6) | Radiated Emissions & Band Edge Measurement | Pass | Meet the requirement of limit. Minimum passing margin is -1.01dB at 5470.00MHz. |
| 15.407(a)(1/2/3) | Max Average Transmit Power | Pass | Meet the requirement of limit. |
| --- | Occupied Bandwidth Measurement | - | Reference only. |
| 15.407(a)(1/2/3) | Peak Power Spectral Density | Pass | Meet the requirement of limit. |
| 15.407(e) | 6dB bandwidth | N/A | Meet the requirement of limit. (U-NII-3 Band only) |
| 15.407(g) | Frequency Stability | Pass | Meet the requirement of limit. |
| 15.203 | Antenna Requirement | Pass | Antenna connector is IPEX not a standard connector. |

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. For U-NII-2A, U-NII-2C bands compliance with rule 15.407(b) of band-edge items, the test plots were recorded in Annex A. Test Procedures refer to report 4.1.3.
3. N/A: Not Applicable

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement | Frequency | Expanded Uncertainty (k=2) (±) |
|---|---|---|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz | 2.94 dB |
| Conducted Emissions | 9kHz ~ 40GHz | 2.63 dB |
| Radiated Emissions up to 1 GHz | 9kHz ~ 30MHz | 2.61 dB |
| | 30MHz ~ 1GHz | 5.43 dB |
| Radiated Emissions above 1 GHz | Above 1GHz | 5.42 dB |

### 2.2 Modification Record

There were no modifications required for compliance.

## 3 General Information

### 3.1 General Description of EUT

| | |
|---|---|
| Product | 11AX ROUTER_NON IOT |
| Brand | Charter Spectrum |
| Test Model | SAX1V1R |
| Status of EUT | Engineering sample |
| Power Supply Rating | 12Vdc from adapter |
| Modulation Type | 802.11a: BPSK, QPSK, 16QAM, 64QAM<br>802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM<br>802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM |
| Modulation Technology | OFDM |
| Transfer Rate | 802.11a: 54/48/36/24/18/12/9/6Mbps<br>802.11n (20MHz/40MHz): up to 600Mbps<br>802.11ac (20MHz/40MHz/80MHz): up to 1733.3Mbps<br>802.11ax (20MHz/40MHz/80MHz): up to 2402Mbps |
| Operating Frequency | 5260~5320MHz, 5500~5700MHz |
| Number of Channel | 5260~5320MHz:<br>802.11a, 802.11n (20MHz), 802.11ac (20MHz) , 802.11ax (20MHz): 4<br>802.11n (40MHz), 802.11ac (40MHz) , 802.11ax (40MHz): 2<br>802.11ac (80MHz) , 802.11ax (80MHz): 1<br>5500~5700MHz:<br>802.11a, 802.11n (20MHz), 802.11ac (20MHz) , 802.11ax (20MHz): 11<br>802.11n (40MHz), 802.11ac (40MHz) , 802.11ax (40MHz): 5<br>802.11ac (80MHz) , 802.11ax (80MHz): 2 |
| Output Power | 5260~5320MHz:<br>CDD Mode: 161.677mW<br>Beamforming Mode: 81.031mW<br>5500~5700MHz:<br>CDD Mode: 226.526mW<br>Beamforming Mode: 82.17mW |
| Antenna Type | Refer to Note as below |
| Antenna Connector | Refer to Note as below |
| Accessory Device | Adapter |
| Data Cable Supplied | N/A |

Note:

1. This report is prepared for FCC class II permissive change.
2. This report is issued as a supplementary report of original BV CPS report no. RF200610D09-1. The difference compared with original report is adding U-NII-2A and U-NII-2C bands; therefore the EUT is re-tested in this report.

3. The EUT incorporates a MIMO function. Physically, the EUT provides 4 completed transmitters and 4 receivers.

| Modulation Mode | CDD Mode | Beamforming Mode | TX Function |
|---|---|---|---|
| 802.11a | Support | Not Support | 4TX |
| 802.11n (20MHz) | Support | Not Support | 4TX |
| 802.11n (40MHz) | Support | Not Support | 4TX |
| 802.11ac (20MHz) | Support | Support | 4TX |
| 802.11ac (40MHz) | Support | Support | 4TX |
| 802.11ac (80MHz) | Support | Support | 4TX |
| 802.11ax (20MHz) | Support | Support | 4TX |
| 802.11ax (40MHz) | Support | Support | 4TX |
| 802.11ax (80MHz) | Support | Support | 4TX |

* The bandwidth and modulation are similar for 20MHz/40MHz on 802.11n mode and 20MHz/40MHz on 802.11n mode and 20MHz/40MHz on 802.11ax mode. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

* For 802.11n/ac/ax, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

4. The following antennas were provided to the EUT.

| Antenna Type | Printed | Antenna Type | Printed | | Printed | |
|---|---|---|---|---|---|---|
| Antenna Connector | IPEX | Antenna Connector | IPEX | | IPEX | |
| Antenna No. | Gain (dBi) | Antenna No. | Gain (dBi) | | Gain (dBi) | |
| | 2412MHz ~ 2462MHz | | 5150MHz ~ 5250MHz | 5745MHz ~ 5825MHz | 5260 MHz ~5320MHz | 5500 MHz ~5700MHz |
| Ant1 | 4.9 | Ant5 | 5.0 | 5.7 | 5.7 | 5.7 |
| Ant2 | 2.7 | Ant6 | 4.3 | 3.1 | 4.3 | 3.2 |
| Ant3 | 3.4 | Ant7 | 4.7 | 3.8 | 4.6 | 4.8 |
| Ant4 | 3.5 | Ant8 | 5.0 | 5.0 | 4.6 | 4.8 |
| Remark | Original | | | | New | |

The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

5. The EUT uses following adapter.

| Adapter 1 | |
|---|---|
| Brand | NetBit |
| Model | NBS36J120300VU |
| Input Power | 100-120Vac, 1.0A, 50/60Hz |
| Output Power | 12.0Vdc, 3.0A |
| Power Cord | AC 2-Pin, Non-shielded DC cable (1.8m) |
| Adapter 2 | |
| Brand | Delta |
| Model | ADH-36EW B |
| Input Power | 100-125Vac, 1.5A, 50-60Hz |
| Output Power | 12.0Vdc, 3.0A |
| Power Cord | AC 2-Pin, Non-shielded DC cable (1.8m) |

The above two adapters were pre-tested, and Adapter 2 was the worst case for final test.

6. 2.4GHz & 5GHz technologies can transmit at same time.
7. Spurious emission of the simultaneous operation (2.4GHz & 5GHz technologies) has been evaluated and no non-compliance was found.

8. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

### 3.2 Description of Test Modes

5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz), 802.11ax (20MHz):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 52 | 5260 MHz | 60 | 5300 MHz |
| 56 | 5280 MHz | 64 | 5320 MHz |

2 channels are provided for 802.11n (40MHz), 802.11ac (40MHz), 802.11ax (40MHz):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 54 | 5270 MHz | 62 | 5310 MHz |

1 channel is provided for 802.11ac (80MHz), 802.11ax (80MHz):

| Channel | Frequency |
|---|---|
| 58 | 5290MHz |

5500~5700MHz:

11 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz), 802.11ax (20MHz):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 100 | 5500 MHz | 124 | 5620 MHz |
| 104 | 5520 MHz | 128 | 5640 MHz |
| 108 | 5540 MHz | 132 | 5660 MHz |
| 112 | 5560 MHz | 136 | 5680 MHz |
| 116 | 5580 MHz | 140 | 5700 MHz |
| 120 | 5600 MHz | | |

5 channels are provided for 802.11n (40MHz), 802.11ac (40MHz) , 802.11ax (40MHz)::

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 102 | 5510 MHz | 126 | 5630 MHz |
| 110 | 5550 MHz | 134 | 5670 MHz |
| 118 | 5590 MHz | | |

2 channels are provided for 802.11ac (80MHz) , 802.11ax (80MHz):

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 106 | 5530 MHz | 122 | 5610MHz |

### 3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT Configure Mode | Applicable To | | | | Description |
|---|---|---|---|---|---|
| | RE≥1G | RE<1G | PLC | APCM | |
| - | √ | √ | √ | √ | - |

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
**PLC:** Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

**Radiated Emission Test (Above 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Frequency Band (MHz) | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| CDD Mode | | | | | | |
| - | 802.11a | 5260-5320 | 52 to 64 | 52, 60, 64 | OFDM | 6.0 |
| | 802.11ax (20MHz) | | 52 to 64 | 52, 60, 64 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 54 to 62 | 54, 62 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 58 | 58 | OFDMA | MCS0 |
| - | 802.11a | 5500-5700 | 100 to 140 | 100, 116, 140 | OFDM | 6.0 |
| | 802.11ax (20MHz) | | 100 to 140 | 100, 116, 140 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 102 to 134 | 102, 110, 134 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 106 to 122 | 106, 122 | OFDMA | MCS0 |
| Beamforming Mode | | | | | | |
| | 802.11ax (20MHz) | 5260-5320 | 52 to 64 | 52, 60, 64 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 54 to 62 | 54, 62 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 58 | 58 | OFDMA | MCS0 |
| | 802.11ax (20MHz) | 5500-5700 | 100 to 140 | 100, 116, 140 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 102 to 134 | 102, 110, 134 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 106 to 122 | 106, 122 | OFDMA | MCS0 |

**Radiated Emission Test (Below 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Frequency Band (MHz) | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| CDD Mode | | | | | | |
| - | 802.11ax (20MHz) | 5260-5320 | 52 to 64 | 64 | OFDMA | MCS0 |
| - | 802.11ax (20MHz) | 5500-5700 | 100 to 140 | | OFDMA | MCS0 |

**Power Line Conducted Emission Test:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Frequency Band (MHz) | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| CDD Mode | | | | | | |
| - | 802.11ax (20MHz) | 5260-5320 | 52 to 64 | 64 | OFDMA | MCS0 |
| - | 802.11ax (20MHz) | 5500-5700 | 100 to 140 | | OFDMA | MCS0 |

**Antenna Port Conducted Measurement:**

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Mode | Frequency Band (MHz) | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) |
|---|---|---|---|---|---|---|
| CDD Mode | | | | | | |
| - | 802.11a | 5260-5320 | 52 to 64 | 52, 60, 64 | OFDM | 6.0 |
| | 802.11n (20MHz)* | | 52 to 64 | 52, 60, 64 | OFDM | 6.5 |
| | 802.11n (40MHz)* | | 54 to 62 | 54, 62 | OFDM | 13.5 |
| | 802.11ac (20MHz)* | | 52 to 64 | 52, 60, 64 | OFDM | 6.5 |
| | 802.11ac (40MHz)* | | 54 to 62 | 54, 62 | OFDM | 13.5 |
| | 802.11ac (80MHz)* | | 58 | 58 | OFDM | 65.0 |
| | 802.11ax (20MHz) | | 52 to 64 | 52, 60, 64 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 54 to 62 | 54, 62 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 58 | 58 | OFDMA | MCS0 |
| - | 802.11a | 5500-5700 | 100 to 140 | 100, 116, 140 | OFDM | 6.0 |
| | 802.11n (20MHz)* | | 100 to 140 | 100, 116, 140 | OFDM | 6.5 |
| | 802.11n (40MHz)* | | 102 to 134 | 102, 110, 134 | OFDM | 13.5 |
| | 802.11ac (20MHz)* | | 100 to 140 | 100, 116, 140 | OFDM | 6.5 |
| | 802.11ac (40MHz)* | | 102 to 134 | 102, 110, 134 | OFDM | 13.5 |
| | 802.11ac (80MHz)* | | 106 to 122 | 106, 122 | OFDM | 65.0 |
| | 802.11ax (20MHz) | | 100 to 140 | 100, 116, 140 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 102 to 134 | 102, 110, 134 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 106 to 122 | 106, 122 | OFDMA | MCS0 |

*802.11n (20MHz), 802.11n (40MHz), 802.11ac (20MHz), 802.11ac (40MHz), 802.11ac (80MHz) are for Conducted Output Power Measurement only.

| Beamforming Mode (Conducted Power Measurement only) | | | | | | |
|---|---|---|---|---|---|---|
| - | 802.11n (20MHz) | 5260-5320 | 52 to 64 | 52, 60, 64 | OFDM | 6.5 |
| | 802.11n (40MHz) | | 54 to 62 | 54, 62 | OFDM | 13.5 |
| | 802.11ac (20MHz) | | 52 to 64 | 52, 60, 64 | OFDM | 6.5 |
| | 802.11ac (40MHz) | | 54 to 62 | 54, 62 | OFDM | 13.5 |
| | 802.11ac (80MHz) | | 58 | 58 | OFDM | 65.0 |
| | 802.11ax (20MHz) | | 52 to 64 | 52, 60, 64 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 54 to 62 | 54, 62 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 58 | 58 | OFDMA | MCS0 |
| - | 802.11n (20MHz) | 5500-5700 | 100 to 140 | 100, 116, 140 | OFDM | 6.5 |
| | 802.11n (40MHz) | | 102 to 134 | 102, 110, 134 | OFDM | 13.5 |
| | 802.11ac (20MHz) | | 100 to 140 | 100, 116, 140 | OFDM | 6.5 |
| | 802.11ac (40MHz) | | 102 to 134 | 102, 110, 134 | OFDM | 13.5 |
| | 802.11ac (80MHz) | | 106 to 122 | 106, 122 | OFDM | 65.0 |
| | 802.11ax (20MHz) | | 100 to 140 | 100, 116, 140 | OFDMA | MCS0 |
| | 802.11ax (40MHz) | | 102 to 134 | 102, 110, 134 | OFDMA | MCS0 |
| | 802.11ax (80MHz) | | 106 to 122 | 106, 122 | OFDMA | MCS0 |

**Test Condition:**

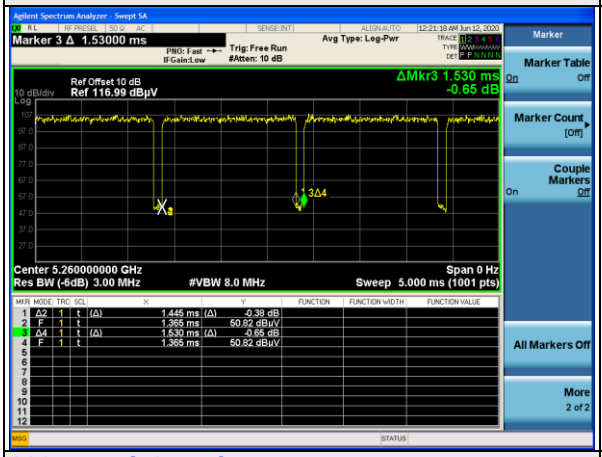
| Applicable To | Environmental Conditions | Input Power | Tested By |
|---|---|---|---|
| **RE≥1G** | 25deg. C, 67%RH | 120Vac, 60Hz | Dalen Dai |
| **RE<1G** | 22deg. C, 77%RH | 120Vac, 60Hz | Ian Chang |
| **PLC** | 25deg. C, 75%RH | 120Vac, 60Hz | Ian Chang |
| **APCM** | 25deg. C, 76%RH | 120Vac, 60Hz | Saxon Lee |

### 3.3 Duty Cycle of Test Signal

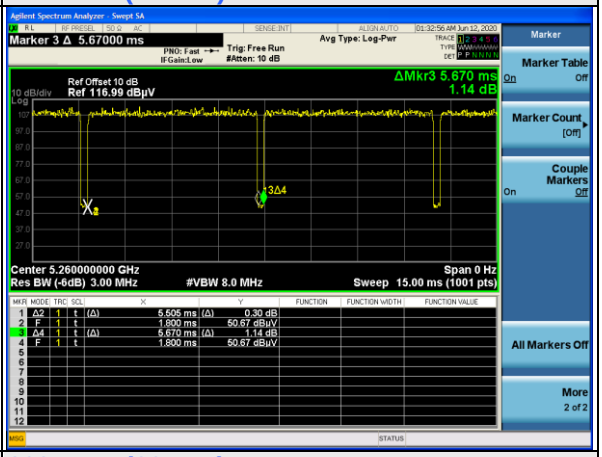
Duty cycle of test signal is < 98 %, duty factor is required.

Duty cycle of test signal is < 98%, duty factor is required.
802.11a: Duty cycle = 1.445/1.53 = 0.944, Duty factor = 10 * log (1/0.944) = 0.25
802.11ax (20MHz): Duty cycle = 5.505/5.67 = 0.971, Duty factor = 10 * log (1/0.971) = 0.13
802.11ax (40MHz): Duty cycle = 5.48/6.18 = 0.887, Duty factor = 10 * log (1/0.887) = 0.52
802.11ax (80MHz): Duty cycle = 5.52/5.68 = 0.972, Duty factor = 10 * log (1/0.972) = 0.12

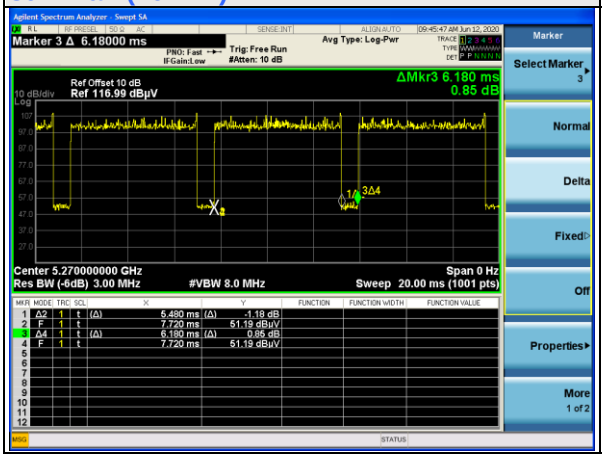
802.11a



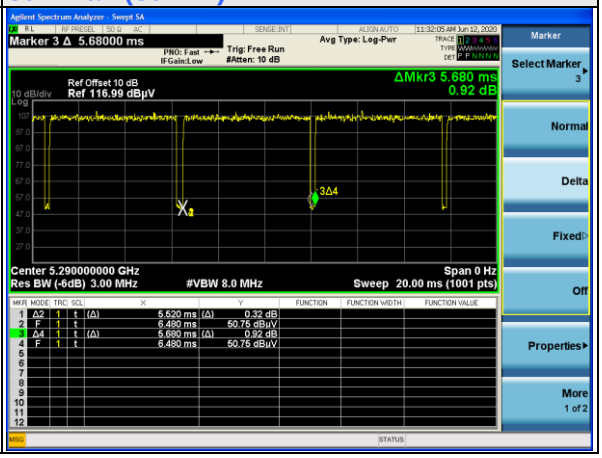

802.11ax (20MHz)




802.11ax (40MHz)




802.11ax (80MHz)



## 3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| ID | Product | Brand | Model No. | Serial No. | FCC ID | Remarks |
|---|---|---|---|---|---|---|
| A. | Notebook PC | SONY | SVS151A12P | 275548477000760 | N/A | Provided by Lab |
| B. | Load | N/A | N/A | N/A | N/A | Provided by Lab |

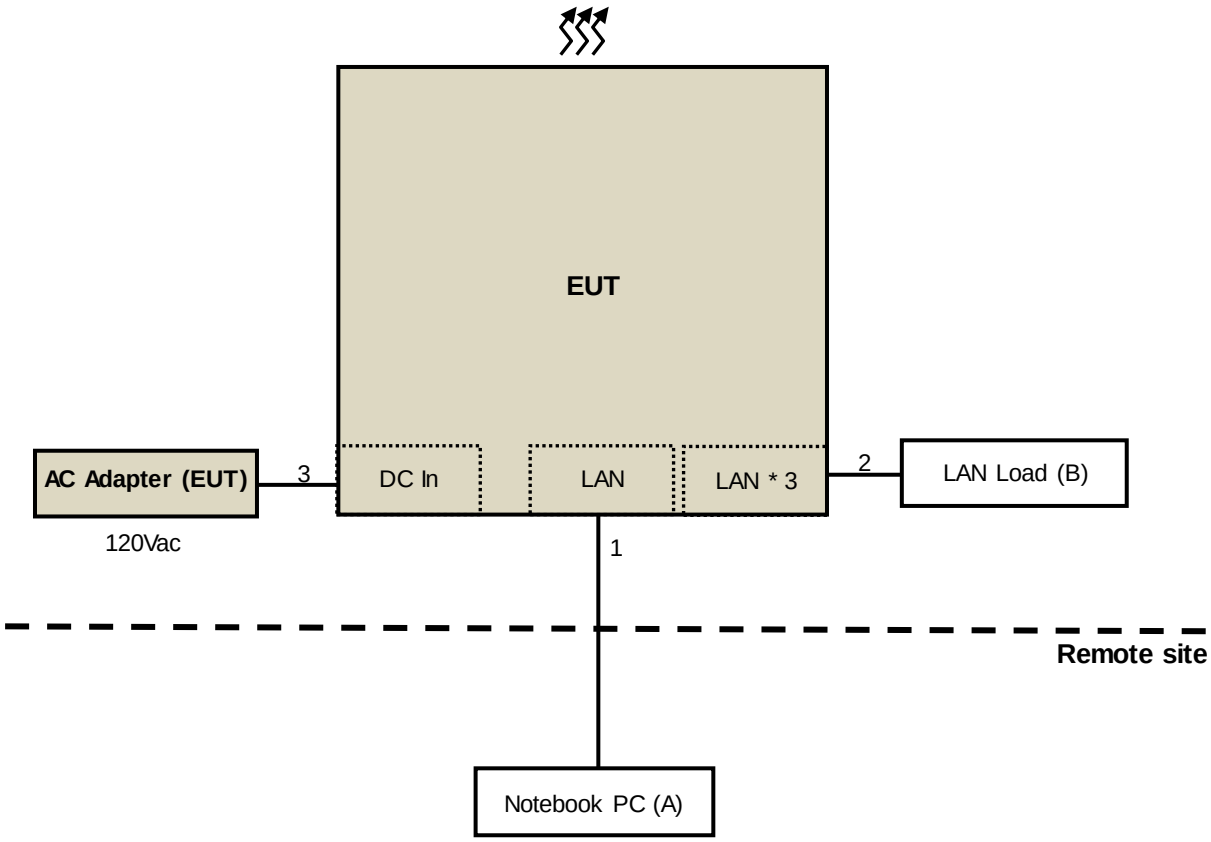
Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as communication partners to transfer data.

| ID | Cable Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks |
|---|---|---|---|---|---|---|
| 1. | LAN cable | 1 | 10 | N | 0 | Provided by Lab (RJ45, Cat.5e) |
| 2. | LAN cable | 3 | 1.5 | N | 0 | Supplied by client (RJ45, Cat.5e) |
| 3. | DC cable | 1 | 1.8 | N | 0 | Supplied by client |

Note: The core(s) is(are) originally attached to the cable(s).

### 3.4.1 Configuration of System under Test



## 3.5 General Description of Applied Standard and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

**Test standard:**

**FCC Part 15, Subpart E (15.407)**
**ANSI C63.10-2013**

All test items have been performed and recorded as per the above standards.

**References Test Guidance :**

**KDB 789033 D02 General UNII Test Procedure New Rules v02r01**
**KDB 662911 D01 Multiple Transmitter Output v02r01**

All test items have been performed as a reference to the above KDB test guidance.

## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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

**NOTE**:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

<table>
<tr><td colspan="3">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v02r01</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK:74 (dBµV/m)</td><td>AV:54 (dBµV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK:-27 (dBm/MHz)</td><td rowspan="3">PK:68.2(dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1<br>PK:10 (dBm/MHz) *2<br>PK:15.6 (dBm/MHz) *3<br>PK:27 (dBm/MHz) *4</td><td>PK: 68.2(dBµV/m) *1<br>PK:105.2 (dBµV/m) *2<br>PK: 110.8(dBµV/m) *3<br>PK:122.2 (dBµV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*1 beyond 75 MHz or more above of the band edge.<br>*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.<br>*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.<br>*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

**Note:**

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ µV/m, where P is the eirp (Watts).

4.1.2 Test Instruments

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|---|---|---|---|
| HP Preamplifier | 8447D | 2432A03504 | Feb. 19, 2020 | Feb. 18, 2021 |
| HP Preamplifier | 8449B | 3008A01201 | Feb. 20, 2020 | Feb. 19, 2021 |
| MITEQ Preamplifier | AMF-6F-260400-33-8P | 892164 | Feb. 19, 2020 | Feb. 18, 2021 |
| Agilent TEST RECEIVER | N9038A | MY51210129 | Mar. 18, 2020 | Mar. 17, 2021 |
| Schwarzbeck Antenna | VULB 9168 | 139 | Nov. 7, 2019 | Nov. 6, 2020 |
| | | | Nov. 6, 2020 | Nov. 5, 2021 |
| Schwarzbeck Antenna | VHBA 9123 | 480 | Jun. 3, 2019 | Jun. 2, 2021 |
| Schwarzbeck Horn Antenna | BBHA-9170 | 212 | Nov. 24, 2019 | Nov. 23, 2020 |
| Schwarzbeck Horn Antenna | BBHA 9120-D1 | D130 | Nov. 24, 2019 | Nov. 23, 2020 |
| ADT. Turn Table | TT100 | 0306 | NA | NA |
| ADT. Tower | AT100 | 0306 | NA | NA |
| Software | Radiated_V7.6.15.9.5 | NA | NA | NA |
| SUHNER RF cable With 4dB PAD | SF102 | Cable-CH6-01 | Jul. 9, 2020 | Jul. 8, 2021 |
| EMEC RF cable With 3/4dB PAD | EM102-KMKM | 01 | Aug. 21, 2020 | Aug. 20, 2021 |
| KEYSIGHT MIMO Powermeasurement Test set | U2021XA | U2021XA-001 | Jun. 16, 2020 | Jun. 15, 2021 |
| KEYSIGHT Spectrum Analyzer | N9030A | MY54490260 | Jul. 22, 2020 | Jul. 21, 2021 |
| Loop Antenna EMCI | LPA600 | 270 | Aug. 23, 2019 | Aug. 22, 2021 |
| EMCO Horn Antenna | 3115 | 00028257 | Nov. 24, 2019 | Nov. 23, 2020 |
| Highpass filter Wainwright Instruments | WHK 3.1/18G-10SS | SN 8 | NA | NA |
| ROHDE & SCHWARZ Spectrum Analyzer | FSV40 | 101042 | Sep. 8, 2020 | Sep. 7, 2021 |
| Anritsu Power Sensor | MA2411B | 0738404 | Apr. 13, 2020 | Apr. 12, 2021 |
| Anritsu Power Meter | ML2495A | 0842014 | Apr. 13, 2020 | Apr. 12, 2021 |

**NOTE:** 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.

4.1.3 Test Procedure

**For Radiated emission below 30MHz**

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

**For Radiated emission above 30MHz**

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

**Note:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.

   The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz. (802.11a: RBW = 1MHz, VBW = 750Hz; 802.11ax (20MHz): RBW = 1MHz, VBW = 200Hz; 802.11ax (40MHz): RBW = 1MHz, VBW = 200Hz; 802.11ax (80MHz): RBW = 1MHz, VBW = 200Hz)

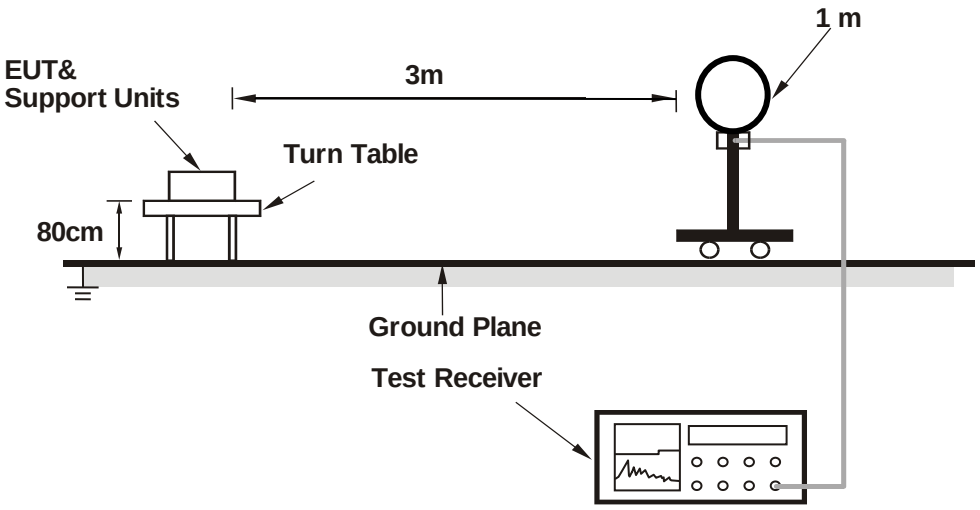
3. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

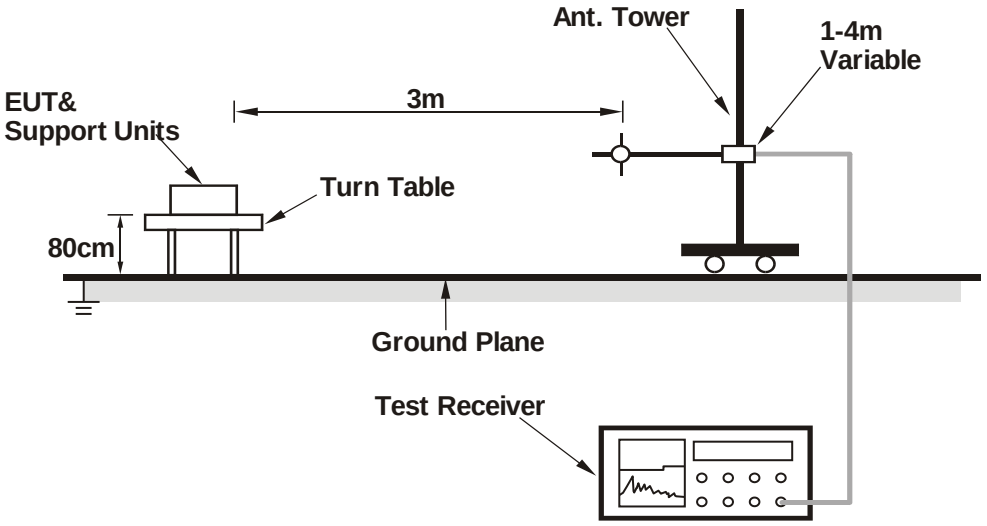
No deviation.

4.1.5 Test Setup

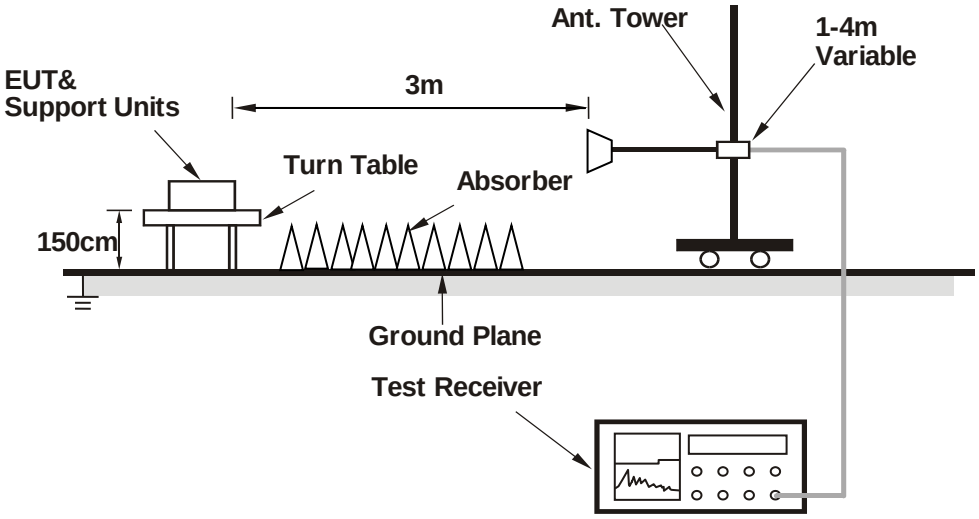
**For Radiated emission below 30MHz**




**For Radiated emission 30MHz to 1GHz**



**For Radiated emission above 1GHz**




For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Condition

a. Placed the EUT on the testing table.
b. Prepared a notebook to act as a communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".

4.1.7 Test Results

**CDD Mode**

**ABOVE 1GHz DATA**

| **RF Mode** | TX 802.11a | **Channel** | CH 52 : 5260 MHz |
|---|---|---|---|
| **Frequency Range** | 1GHz ~ 40GHz | **Detector Function** | Peak (PK)<br>Average (AV) |

| **Antenna Polarity & Test Distance : Horizontal at 3 m** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **No** | **Frequency (MHz)** | **Emission Level (dBuV/m)** | **Limit (dBuV/m)** | **Margin (dB)** | **Antenna Height (m)** | **Table Angle (Degree)** | **Raw Value (dBuV)** | **Correction Factor (dB/m)** |
| 1 | 5150.00 | 61.85 PK | 74.00 | -12.15 | 3.70 H | 28 | 52.14 | 9.71 |
| 2 | 5150.00 | 51.13 AV | 54.00 | -2.87 | 3.70 H | 28 | 41.42 | 9.71 |
| 3 | *5260.00 | 108.35 PK | | | 3.70 H | 28 | 98.23 | 10.12 |
| 4 | *5260.00 | 101.15 AV | | | 3.70 H | 28 | 91.03 | 10.12 |
| 5 | #10520.00 | 55.43 PK | 68.20 | -12.77 | 2.07 H | 315 | 39.46 | 15.97 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| **No** | **Frequency (MHz)** | **Emission Level (dBuV/m)** | **Limit (dBuV/m)** | **Margin (dB)** | **Antenna Height (m)** | **Table Angle (Degree)** | **Raw Value (dBuV)** | **Correction Factor (dB/m)** |
| 1 | 5150.00 | 62.61 PK | 74.00 | -11.39 | 1.00 V | 67 | 52.90 | 9.71 |
| 2 | 5150.00 | 51.41 AV | 54.00 | -2.59 | 1.00 V | 67 | 41.70 | 9.71 |
| 3 | *5260.00 | 120.31 PK | | | 1.00 V | 67 | 110.19 | 10.12 |
| 4 | *5260.00 | 112.59 AV | | | 1.00 V | 67 | 102.47 | 10.12 |
| 5 | #10520.00 | 55.91 PK | 68.20 | -12.29 | 1.42 V | 253 | 39.94 | 15.97 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11a | Channel | CH 60：5300 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5300.00 | 108.25 PK | | | 3.66 H | 23 | 97.88 | 10.37 |
| 2 | *5300.00 | 101.06 AV | | | 3.66 H | 23 | 90.69 | 10.37 |
| 3 | 10600.00 | 55.19 PK | 74.00 | -18.81 | 2.12 H | 311 | 39.37 | 15.82 |
| 4 | 10600.00 | 45.35 AV | 54.00 | -8.65 | 2.12 H | 311 | 29.53 | 15.82 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5300.00 | 121.25 PK | | | 1.06 V | 56 | 110.88 | 10.37 |
| 2 | *5300.00 | 113.26 AV | | | 1.06 V | 56 | 102.89 | 10.37 |
| 3 | 10600.00 | 55.31 PK | 74.00 | -18.69 | 1.39 V | 247 | 39.49 | 15.82 |
| 4 | 10600.00 | 45.52 AV | 54.00 | -8.48 | 1.39 V | 247 | 29.70 | 15.82 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11a | Channel | CH 64：5320 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5320.00 | 108.94 PK | | | 3.46 H | 23 | 98.45 | 10.49 |
| 2 | *5320.00 | 101.98 AV | | | 3.46 H | 23 | 91.49 | 10.49 |
| 3 | 5350.00 | 61.82 PK | 74.00 | -12.18 | 3.46 H | 23 | 51.14 | 10.68 |
| 4 | 5350.00 | 51.29 AV | 54.00 | -2.71 | 3.46 H | 23 | 40.61 | 10.68 |
| 5 | 10640.00 | 55.09 PK | 74.00 | -18.91 | 2.03 H | 317 | 39.06 | 16.03 |
| 6 | 10640.00 | 45.57 AV | 54.00 | -8.43 | 2.03 H | 317 | 29.54 | 16.03 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5320.00 | 121.25 PK | | | 1.03 V | 59 | 110.76 | 10.49 |
| 2 | *5320.00 | 113.31 AV | | | 1.03 V | 59 | 102.82 | 10.49 |
| 3 | 5350.00 | 64.11 PK | 74.00 | -9.89 | 1.03 V | 59 | 53.43 | 10.68 |
| 4 | 5350.00 | 52.44 AV | 54.00 | -1.56 | 1.03 V | 59 | 41.76 | 10.68 |
| 5 | 10640.00 | 55.25 PK | 74.00 | -18.75 | 1.46 V | 249 | 39.22 | 16.03 |
| 6 | 10640.00 | 45.63 AV | 54.00 | -8.37 | 1.46 V | 249 | 29.60 | 16.03 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11a | Channel | CH 100：5500 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 62.40 PK | 74.00 | -11.60 | 3.87 H | 64 | 51.03 | 11.37 |
| 2 | 5460.00 | 52.25 AV | 54.00 | -1.75 | 3.87 H | 64 | 40.88 | 11.37 |
| 3 | #5470.00 | 63.17 PK | 68.20 | -5.03 | 3.87 H | 64 | 51.72 | 11.45 |
| 4 | *5500.00 | 111.55 PK | | | 3.87 H | 64 | 99.89 | 11.66 |
| 5 | *5500.00 | 103.18 AV | | | 3.87 H | 64 | 91.52 | 11.66 |
| 6 | 11000.00 | 56.12 PK | 74.00 | -17.88 | 2.23 H | 208 | 39.34 | 16.78 |
| 7 | 11000.00 | 45.24 AV | 54.00 | -8.76 | 2.23 H | 208 | 28.46 | 16.78 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 62.90 PK | 74.00 | -11.10 | 1.26 V | 56 | 51.53 | 11.37 |
| 2 | 5460.00 | 52.60 AV | 54.00 | -1.40 | 1.26 V | 56 | 41.23 | 11.37 |
| 3 | #5470.00 | 63.95 PK | 68.20 | -4.25 | 1.26 V | 56 | 52.50 | 11.45 |
| 4 | *5500.00 | 121.74 PK | | | 1.26 V | 56 | 110.08 | 11.66 |
| 5 | *5500.00 | 114.06 AV | | | 1.26 V | 56 | 102.40 | 11.66 |
| 6 | 11000.00 | 56.94 PK | 74.00 | -17.06 | 1.82 V | 236 | 40.16 | 16.78 |
| 7 | 11000.00 | 46.09 AV | 54.00 | -7.91 | 1.82 V | 236 | 29.31 | 16.78 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11a | Channel | CH 116：5580 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5580.00 | 110.15 PK | | | 3.79 H | 69 | 99.24 | 10.91 |
| 2 | *5580.00 | 102.28 AV | | | 3.79 H | 69 | 91.37 | 10.91 |
| 3 | 11160.00 | 57.12 PK | 74.00 | -16.88 | 1.82 H | 241 | 39.44 | 17.68 |
| 4 | 11160.00 | 46.30 AV | 54.00 | -7.70 | 1.82 H | 241 | 28.62 | 17.68 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5580.00 | 120.91 PK | | | 1.18 V | 51 | 110.00 | 10.91 |
| 2 | *5580.00 | 112.85 AV | | | 1.18 V | 51 | 101.94 | 10.91 |
| 3 | 11160.00 | 57.74 PK | 74.00 | -16.26 | 1.85 V | 241 | 40.06 | 17.68 |
| 4 | 11160.00 | 46.92 AV | 54.00 | -7.08 | 1.85 V | 241 | 29.24 | 17.68 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11a | Channel | CH 140：5700 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5700.00 | 109.32 PK | | | 3.79 H | 68 | 98.67 | 10.65 |
| 2 | *5700.00 | 100.90 AV | | | 3.79 H | 68 | 90.25 | 10.65 |
| 3 | #5725.00 | 62.59 PK | 68.20 | -5.61 | 3.79 H | 68 | 52.01 | 10.58 |
| 4 | 11400.00 | 57.34 PK | 74.00 | -16.66 | 1.38 H | 222 | 39.48 | 17.86 |
| 5 | 11400.00 | 46.15 AV | 54.00 | -7.85 | 1.38 H | 222 | 28.29 | 17.86 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5700.00 | 120.49 PK | | | 1.11 V | 52 | 109.84 | 10.65 |
| 2 | *5700.00 | 112.49 AV | | | 1.11 V | 52 | 101.84 | 10.65 |
| 3 | #5725.00 | 63.89 PK | 68.20 | -4.31 | 1.11 V | 52 | 53.31 | 10.58 |
| 4 | 11400.00 | 58.22 PK | 74.00 | -15.78 | 1.52 V | 298 | 40.36 | 17.86 |
| 5 | 11400.00 | 47.03 AV | 54.00 | -6.97 | 1.52 V | 298 | 29.17 | 17.86 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 52：5260 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 62.04 PK | 74.00 | -11.96 | 2.49 H | 243 | 52.33 | 9.71 |
| 2 | 5150.00 | 51.01 AV | 54.00 | -2.99 | 2.49 H | 243 | 41.30 | 9.71 |
| 3 | *5260.00 | 111.99 PK | | | 2.49 H | 243 | 101.87 | 10.12 |
| 4 | *5260.00 | 101.14 AV | | | 2.49 H | 243 | 91.02 | 10.12 |
| 5 | #10520.00 | 55.36 PK | 68.20 | -12.84 | 1.93 H | 322 | 39.39 | 15.97 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 62.68 PK | 74.00 | -11.32 | 1.06 V | 55 | 52.97 | 9.71 |
| 2 | 5150.00 | 51.39 AV | 54.00 | -2.61 | 1.06 V | 55 | 41.68 | 9.71 |
| 3 | *5260.00 | 122.44 PK | | | 1.06 V | 55 | 112.32 | 10.12 |
| 4 | *5260.00 | 111.48 AV | | | 1.06 V | 55 | 101.36 | 10.12 |
| 5 | #10520.00 | 55.69 PK | 68.20 | -12.51 | 1.37 V | 243 | 39.72 | 15.97 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 60：5300 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5300.00 | 111.73 PK | | | 2.58 H | 241 | 101.36 | 10.37 |
| 2 | *5300.00 | 101.52 AV | | | 2.58 H | 241 | 91.15 | 10.37 |
| 3 | 10600.00 | 55.22 PK | 74.00 | -18.78 | 2.08 H | 316 | 39.40 | 15.82 |
| 4 | 10600.00 | 45.31 AV | 54.00 | -8.69 | 2.08 H | 316 | 29.49 | 15.82 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5300.00 | 122.16 PK | | | 1.03 V | 52 | 111.79 | 10.37 |
| 2 | *5300.00 | 111.25 AV | | | 1.03 V | 52 | 100.88 | 10.37 |
| 3 | 10600.00 | 55.50 PK | 74.00 | -18.50 | 1.41 V | 245 | 39.68 | 15.82 |
| 4 | 10600.00 | 45.46 AV | 54.00 | -8.54 | 1.41 V | 245 | 29.64 | 15.82 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 64：5320 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5320.00 | 112.43 PK | | | 1.11 H | 29 | 101.94 | 10.49 |
| 2 | *5320.00 | 101.14 AV | | | 1.11 H | 29 | 90.65 | 10.49 |
| 3 | 5350.00 | 62.03 PK | 74.00 | -11.97 | 1.11 H | 29 | 51.35 | 10.68 |
| 4 | 5350.00 | 51.25 AV | 54.00 | -2.75 | 1.11 H | 29 | 40.57 | 10.68 |
| 5 | 10640.00 | 55.47 PK | 74.00 | -18.53 | 2.17 H | 309 | 39.44 | 16.03 |
| 6 | 10640.00 | 45.52 AV | 54.00 | -8.48 | 2.17 H | 309 | 29.49 | 16.03 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5320.00 | 123.29 PK | | | 1.11 V | 57 | 112.80 | 10.49 |
| 2 | *5320.00 | 112.43 AV | | | 1.11 V | 57 | 101.94 | 10.49 |
| 3 | 5350.00 | 63.72 PK | 74.00 | -10.28 | 1.11 V | 57 | 53.04 | 10.68 |
| 4 | 5350.00 | 52.72 AV | 54.00 | -1.28 | 1.11 V | 57 | 42.04 | 10.68 |
| 5 | 10640.00 | 55.83 PK | 74.00 | -18.17 | 1.38 V | 252 | 39.80 | 16.03 |
| 6 | 10640.00 | 45.91 AV | 54.00 | -8.09 | 1.38 V | 252 | 29.88 | 16.03 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 100：5500 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 62.60 PK | 74.00 | -11.40 | 3.72 H | 62 | 51.23 | 11.37 |
| 2 | 5460.00 | 52.09 AV | 54.00 | -1.91 | 3.72 H | 62 | 40.72 | 11.37 |
| 3 | #5470.00 | 65.50 PK | 68.20 | -2.70 | 3.72 H | 62 | 54.05 | 11.45 |
| 4 | *5500.00 | 113.20 PK | | | 3.72 H | 62 | 101.54 | 11.66 |
| 5 | *5500.00 | 103.23 AV | | | 3.72 H | 62 | 91.57 | 11.66 |
| 6 | 11000.00 | 56.14 PK | 74.00 | -17.86 | 1.78 H | 194 | 39.36 | 16.78 |
| 7 | 11000.00 | 45.40 AV | 54.00 | -8.60 | 1.78 H | 194 | 28.62 | 16.78 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 63.19 PK | 74.00 | -10.81 | 1.20 V | 47 | 51.82 | 11.37 |
| 2 | 5460.00 | 52.42 AV | 54.00 | -1.58 | 1.20 V | 47 | 41.05 | 11.37 |
| 3 | #5470.00 | 66.76 PK | 68.20 | -1.44 | 1.20 V | 47 | 55.31 | 11.45 |
| 4 | *5500.00 | 124.63 PK | | | 1.20 V | 47 | 112.97 | 11.66 |
| 5 | *5500.00 | 113.75 AV | | | 1.20 V | 47 | 102.09 | 11.66 |
| 6 | 11000.00 | 57.04 PK | 74.00 | -16.96 | 1.88 V | 251 | 40.26 | 16.78 |
| 7 | 11000.00 | 45.95 AV | 54.00 | -8.05 | 1.88 V | 251 | 29.17 | 16.78 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 116：5580 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5580.00 | 112.80 PK | | | 3.79 H | 69 | 101.89 | 10.91 |
| 2 | *5580.00 | 102.73 AV | | | 3.79 H | 69 | 91.82 | 10.91 |
| 3 | 11160.00 | 56.94 PK | 74.00 | -17.06 | 2.28 H | 54 | 39.26 | 17.68 |
| 4 | 11160.00 | 46.06 AV | 54.00 | -7.94 | 2.28 H | 54 | 28.38 | 17.68 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5580.00 | 122.91 PK | | | 1.11 V | 44 | 112.00 | 10.91 |
| 2 | *5580.00 | 111.80 AV | | | 1.11 V | 44 | 100.89 | 10.91 |
| 3 | 11160.00 | 58.23 PK | 74.00 | -15.77 | 1.69 V | 220 | 40.55 | 17.68 |
| 4 | 11160.00 | 47.38 AV | 54.00 | -6.62 | 1.69 V | 220 | 29.70 | 17.68 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 140：5700 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5700.00 | 112.19 PK | | | 3.75 H | 62 | 101.54 | 10.65 |
| 2 | *5700.00 | 101.99 AV | | | 3.75 H | 62 | 91.34 | 10.65 |
| 3 | #5725.00 | 62.94 PK | 68.20 | -5.26 | 3.75 H | 62 | 52.36 | 10.58 |
| 4 | 11400.00 | 57.11 PK | 74.00 | -16.89 | 2.36 H | 210 | 39.25 | 17.86 |
| 5 | 11400.00 | 46.48 AV | 54.00 | -7.52 | 2.36 H | 210 | 28.62 | 17.86 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5700.00 | 123.11 PK | | | 1.17 V | 47 | 112.46 | 10.65 |
| 2 | *5700.00 | 111.89 AV | | | 1.17 V | 47 | 101.24 | 10.65 |
| 3 | #5725.00 | 66.81 PK | 68.20 | -1.39 | 1.17 V | 47 | 56.23 | 10.58 |
| 4 | 11400.00 | 58.08 PK | 74.00 | -15.92 | 1.78 V | 241 | 40.22 | 17.86 |
| 5 | 11400.00 | 47.23 AV | 54.00 | -6.77 | 1.78 V | 241 | 29.37 | 17.86 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 54：5270 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 61.84 PK | 74.00 | -12.16 | 3.56 H | 57 | 52.13 | 9.71 |
| 2 | 5150.00 | 50.70 AV | 54.00 | -3.30 | 3.56 H | 57 | 40.99 | 9.71 |
| 3 | *5270.00 | 110.07 PK | | | 3.56 H | 57 | 99.89 | 10.18 |
| 4 | *5270.00 | 98.83 AV | | | 3.56 H | 57 | 88.65 | 10.18 |
| 5 | #10540.00 | 55.79 PK | 68.20 | -12.41 | 1.89 H | 241 | 39.86 | 15.93 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 62.40 PK | 74.00 | -11.60 | 1.38 V | 18 | 52.69 | 9.71 |
| 2 | 5150.00 | 51.11 AV | 54.00 | -2.89 | 1.38 V | 18 | 41.40 | 9.71 |
| 3 | *5270.00 | 121.54 PK | | | 1.38 V | 18 | 111.36 | 10.18 |
| 4 | *5270.00 | 109.95 AV | | | 1.38 V | 18 | 99.77 | 10.18 |
| 5 | #10540.00 | 56.49 PK | 68.20 | -11.71 | 1.69 V | 235 | 40.56 | 15.93 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 62：5310 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5310.00 | 106.33 PK | | | 3.87 H | 69 | 95.89 | 10.44 |
| 2 | *5310.00 | 95.22 AV | | | 3.87 H | 69 | 84.78 | 10.44 |
| 3 | 5350.00 | 62.24 PK | 74.00 | -11.76 | 3.87 H | 69 | 51.56 | 10.68 |
| 4 | 5350.00 | 51.51 AV | 54.00 | -2.49 | 3.87 H | 69 | 40.83 | 10.68 |
| 5 | 10620.00 | 55.15 PK | 74.00 | -18.85 | 1.45 H | 251 | 39.23 | 15.92 |
| 6 | 10620.00 | 44.36 AV | 54.00 | -9.64 | 1.45 H | 251 | 28.44 | 15.92 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5310.00 | 118.02 PK | | | 1.44 V | 51 | 107.58 | 10.44 |
| 2 | *5310.00 | 106.98 AV | | | 1.44 V | 51 | 96.54 | 10.44 |
| 3 | 5350.00 | 63.39 PK | 74.00 | -10.61 | 1.44 V | 51 | 52.71 | 10.68 |
| 4 | 5350.00 | 52.73 AV | 54.00 | -1.27 | 1.44 V | 51 | 42.05 | 10.68 |
| 5 | 10620.00 | 56.11 PK | 74.00 | -17.89 | 1.84 V | 241 | 40.19 | 15.92 |
| 6 | 10620.00 | 44.60 AV | 54.00 | -9.40 | 1.84 V | 241 | 28.68 | 15.92 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 102：5510 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 62.60 PK | 74.00 | -11.40 | 3.72 H | 63 | 51.23 | 11.37 |
| 2 | 5460.00 | 51.95 AV | 54.00 | -2.05 | 3.72 H | 63 | 40.58 | 11.37 |
| 3 | #5470.00 | 64.14 PK | 68.20 | -4.06 | 3.72 H | 63 | 52.69 | 11.45 |
| 4 | *5510.00 | 108.40 PK | | | 3.72 H | 63 | 96.84 | 11.56 |
| 5 | *5510.00 | 98.25 AV | | | 3.72 H | 63 | 86.69 | 11.56 |
| 6 | 11020.00 | 56.53 PK | 74.00 | -17.47 | 1.17 H | 48 | 39.63 | 16.90 |
| 7 | 11020.00 | 45.31 AV | 54.00 | -8.69 | 1.17 H | 48 | 28.41 | 16.90 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 63.05 PK | 74.00 | -10.95 | 1.14 V | 46 | 51.68 | 11.37 |
| 2 | 5460.00 | 52.59 AV | 54.00 | -1.41 | 1.14 V | 46 | 41.22 | 11.37 |
| 3 | #5470.00 | 65.73 PK | 68.20 | -2.47 | 1.14 V | 46 | 54.28 | 11.45 |
| 4 | *5510.00 | 119.41 PK | | | 1.14 V | 46 | 107.85 | 11.56 |
| 5 | *5510.00 | 108.62 AV | | | 1.14 V | 46 | 97.06 | 11.56 |
| 6 | 11020.00 | 57.17 PK | 74.00 | -16.83 | 1.56 V | 219 | 40.27 | 16.90 |
| 7 | 11020.00 | 46.21 AV | 54.00 | -7.79 | 1.56 V | 219 | 29.31 | 16.90 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 110：5550 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5550.00 | 109.07 PK | | | 3.74 H | 72 | 97.89 | 11.18 |
| 2 | *5550.00 | 98.44 AV | | | 3.74 H | 72 | 87.26 | 11.18 |
| 3 | 11100.00 | 56.60 PK | 74.00 | -17.40 | 1.84 H | 223 | 39.23 | 17.37 |
| 4 | 11100.00 | 45.98 AV | 54.00 | -8.02 | 1.84 H | 223 | 28.61 | 17.37 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5550.00 | 120.74 PK | | | 1.84 V | 60 | 109.56 | 11.18 |
| 2 | *5550.00 | 109.79 AV | | | 1.84 V | 60 | 98.61 | 11.18 |
| 3 | 11100.00 | 57.89 PK | 74.00 | -16.11 | 1.82 V | 251 | 40.52 | 17.37 |
| 4 | 11100.00 | 46.69 AV | 54.00 | -7.31 | 1.82 V | 251 | 29.32 | 17.37 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 134：5670 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5670.00 | 108.54 PK | | | 3.66 H | 59 | 97.85 | 10.69 |
| 2 | *5670.00 | 97.53 AV | | | 3.66 H | 59 | 86.84 | 10.69 |
| 3 | #5725.00 | 62.32 PK | 68.20 | -5.88 | 3.66 H | 59 | 51.74 | 10.58 |
| 4 | 11340.00 | 56.64 PK | 74.00 | -17.36 | 1.92 H | 278 | 39.24 | 17.40 |
| 5 | 11340.00 | 45.71 AV | 54.00 | -8.29 | 1.92 H | 278 | 28.31 | 17.40 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5670.00 | 119.58 PK | | | 1.82 V | 41 | 108.89 | 10.69 |
| 2 | *5670.00 | 108.52 AV | | | 1.82 V | 41 | 97.83 | 10.69 |
| 3 | #5725.00 | 62.68 PK | 68.20 | -5.52 | 1.82 V | 41 | 52.10 | 10.58 |
| 4 | 11340.00 | 57.92 PK | 74.00 | -16.08 | 1.85 V | 241 | 40.52 | 17.40 |
| 5 | 11340.00 | 46.71 AV | 54.00 | -7.29 | 1.85 V | 241 | 29.31 | 17.40 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (80MHz) | Channel | CH 58：5290 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 61.52 PK | 74.00 | -12.48 | 3.77 H | 66 | 51.81 | 9.71 |
| 2 | 5150.00 | 50.74 AV | 54.00 | -3.26 | 3.77 H | 66 | 41.03 | 9.71 |
| 3 | *5290.00 | 101.19 PK | | | 3.77 H | 66 | 90.88 | 10.31 |
| 4 | *5290.00 | 89.94 AV | | | 3.77 H | 66 | 79.63 | 10.31 |
| 5 | 5350.00 | 62.64 PK | 74.00 | -11.36 | 3.77 H | 66 | 51.96 | 10.68 |
| 6 | 5350.00 | 52.05 AV | 54.00 | -1.95 | 3.77 H | 66 | 41.37 | 10.68 |
| 7 | #10580.00 | 55.48 PK | 68.20 | -12.72 | 1.42 H | 251 | 39.63 | 15.85 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 61.74 PK | 74.00 | -12.26 | 1.19 V | 48 | 52.03 | 9.71 |
| 2 | 5150.00 | 51.16 AV | 54.00 | -2.84 | 1.19 V | 48 | 41.45 | 9.71 |
| 3 | *5290.00 | 112.51 PK | | | 1.19 V | 48 | 102.20 | 10.31 |
| 4 | *5290.00 | 102.31 AV | | | 1.19 V | 48 | 92.00 | 10.31 |
| 5 | 5350.00 | 62.71 PK | 74.00 | -11.29 | 1.19 V | 48 | 52.03 | 10.68 |
| 6 | 5350.00 | 52.94 AV | 54.00 | -1.06 | 1.19 V | 48 | 42.26 | 10.68 |
| 7 | #10580.00 | 55.93 PK | 68.20 | -12.27 | 1.96 V | 201 | 40.08 | 15.85 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (80MHz) | Channel | CH 106：5530 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 63.00 PK | 74.00 | -11.00 | 3.85 H | 77 | 51.63 | 11.37 |
| 2 | 5460.00 | 52.25 AV | 54.00 | -1.75 | 3.85 H | 77 | 40.88 | 11.37 |
| 3 | #5470.00 | 65.74 PK | 68.20 | -2.46 | 3.85 H | 77 | 54.29 | 11.45 |
| 4 | *5530.00 | 101.16 PK | | | 3.85 H | 77 | 89.79 | 11.37 |
| 5 | *5530.00 | 90.63 AV | | | 3.85 H | 77 | 79.26 | 11.37 |
| 6 | 11060.00 | 56.41 PK | 74.00 | -17.59 | 1.46 H | 68 | 39.28 | 17.13 |
| 7 | 11060.00 | 45.79 AV | 54.00 | -8.21 | 1.46 H | 68 | 28.66 | 17.13 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 64.04 PK | 74.00 | -9.96 | 1.72 V | 63 | 52.67 | 11.37 |
| 2 | 5460.00 | 52.97 AV | 54.00 | -1.03 | 1.72 V | 63 | 41.60 | 11.37 |
| 3 | #5470.00 | 67.13 PK | 68.20 | -1.07 | 1.72 V | 63 | 55.68 | 11.45 |
| 4 | *5530.00 | 111.59 PK | | | 1.72 V | 63 | 100.22 | 11.37 |
| 5 | *5530.00 | 101.76 AV | | | 1.72 V | 63 | 90.39 | 11.37 |
| 6 | 11060.00 | 57.54 PK | 74.00 | -16.46 | 1.95 V | 291 | 40.41 | 17.13 |
| 7 | 11060.00 | 46.32 AV | 54.00 | -7.68 | 1.95 V | 291 | 29.19 | 17.13 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (80MHz) | Channel | CH 122：5610 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5610.00 | 106.19 PK | | | 3.77 H | 61 | 95.46 | 10.73 |
| 2 | *5610.00 | 95.52 AV | | | 3.77 H | 61 | 84.79 | 10.73 |
| 3 | #5725.00 | 62.63 PK | 68.20 | -5.57 | 3.77 H | 61 | 52.05 | 10.58 |
| 4 | 11220.00 | 56.95 PK | 74.00 | -17.05 | 1.96 H | 65 | 39.22 | 17.73 |
| 5 | 11220.00 | 46.37 AV | 54.00 | -7.63 | 1.96 H | 65 | 28.64 | 17.73 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5610.00 | 117.51 PK | | | 1.18 V | 42 | 106.78 | 10.73 |
| 2 | *5610.00 | 106.51 AV | | | 1.18 V | 42 | 95.78 | 10.73 |
| 3 | #5725.00 | 64.75 PK | 68.20 | -3.45 | 1.18 V | 42 | 54.17 | 10.58 |
| 4 | 11220.00 | 57.95 PK | 74.00 | -16.05 | 1.72 V | 264 | 40.22 | 17.73 |
| 5 | 11220.00 | 46.89 AV | 54.00 | -7.11 | 1.72 V | 264 | 29.16 | 17.73 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

**Beamforming Mode**

**ABOVE 1GHz DATA**

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 52 : 5260 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 62.05 PK | 74.00 | -11.95 | 1.89 H | 65 | 52.34 | 9.71 |
| 2 | 5150.00 | 50.79 AV | 54.00 | -3.21 | 1.89 H | 65 | 41.08 | 9.71 |
| 3 | *5260.00 | 107.12 PK | | | 1.89 H | 65 | 97.00 | 10.12 |
| 4 | *5260.00 | 96.82 AV | | | 1.89 H | 65 | 86.70 | 10.12 |
| 5 | #10520.00 | 56.10 PK | 68.20 | -12.10 | 1.82 H | 154 | 40.13 | 15.97 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 62.53 PK | 74.00 | -11.47 | 2.22 V | 60 | 52.82 | 9.71 |
| 2 | 5150.00 | 51.10 AV | 54.00 | -2.90 | 2.22 V | 60 | 41.39 | 9.71 |
| 3 | *5260.00 | 120.28 PK | | | 2.22 V | 60 | 110.16 | 10.12 |
| 4 | *5260.00 | 110.15 AV | | | 2.22 V | 60 | 100.03 | 10.12 |
| 5 | #10520.00 | 56.49 PK | 68.20 | -11.71 | 1.64 V | 295 | 40.52 | 15.97 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 60：5300 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5300.00 | 107.21 PK | | | 1.91 H | 61 | 96.84 | 10.37 |
| 2 | *5300.00 | 97.17 AV | | | 1.91 H | 61 | 86.80 | 10.37 |
| 3 | 10600.00 | 56.10 PK | 74.00 | -17.90 | 1.47 H | 128 | 40.28 | 15.82 |
| 4 | 10600.00 | 44.01 AV | 54.00 | -9.99 | 1.47 H | 128 | 28.19 | 15.82 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5300.00 | 120.95 PK | | | 2.26 V | 68 | 110.58 | 10.37 |
| 2 | *5300.00 | 110.73 AV | | | 2.26 V | 68 | 100.36 | 10.37 |
| 3 | 10600.00 | 56.45 PK | 74.00 | -17.55 | 1.52 V | 258 | 40.63 | 15.82 |
| 4 | 10600.00 | 44.56 AV | 54.00 | -9.44 | 1.52 V | 258 | 28.74 | 15.82 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 64：5320 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5320.00 | 106.94 PK | | | 1.84 H | 69 | 96.45 | 10.49 |
| 2 | *5320.00 | 96.57 AV | | | 1.84 H | 69 | 86.08 | 10.49 |
| 3 | 5350.00 | 60.74 PK | 74.00 | -13.26 | 1.84 H | 69 | 50.06 | 10.68 |
| 4 | 5350.00 | 49.93 AV | 54.00 | -4.07 | 1.84 H | 69 | 39.25 | 10.68 |
| 5 | 10640.00 | 56.19 PK | 74.00 | -17.81 | 1.88 H | 47 | 40.16 | 16.03 |
| 6 | 10640.00 | 44.35 AV | 54.00 | -9.65 | 1.88 H | 47 | 28.32 | 16.03 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5320.00 | 119.87 PK | | | 2.22 V | 67 | 109.38 | 10.49 |
| 2 | *5320.00 | 108.82 AV | | | 2.22 V | 67 | 98.33 | 10.49 |
| 3 | 5350.00 | 61.32 PK | 74.00 | -12.68 | 2.22 V | 67 | 50.64 | 10.68 |
| 4 | 5350.00 | 50.64 AV | 54.00 | -3.36 | 2.22 V | 67 | 39.96 | 10.68 |
| 5 | 10640.00 | 56.77 PK | 74.00 | -17.23 | 1.89 V | 296 | 40.74 | 16.03 |
| 6 | 10640.00 | 44.72 AV | 54.00 | -9.28 | 1.89 V | 296 | 28.69 | 16.03 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 100：5500 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 62.50 PK | 74.00 | -11.50 | 1.79 H | 61 | 51.13 | 11.37 |
| 2 | 5460.00 | 51.26 AV | 54.00 | -2.74 | 1.79 H | 61 | 39.89 | 11.37 |
| 3 | #5470.00 | 62.52 PK | 68.20 | -5.68 | 1.79 H | 61 | 51.07 | 11.45 |
| 4 | *5500.00 | 111.52 PK | | | 1.79 H | 61 | 99.86 | 11.66 |
| 5 | *5500.00 | 100.45 AV | | | 1.79 H | 61 | 88.79 | 11.66 |
| 6 | 11000.00 | 56.46 PK | 74.00 | -17.54 | 2.16 H | 143 | 39.68 | 16.78 |
| 7 | 11000.00 | 44.46 AV | 54.00 | -9.54 | 2.16 H | 143 | 27.68 | 16.78 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 62.94 PK | 74.00 | -11.06 | 2.08 V | 87 | 51.57 | 11.37 |
| 2 | 5460.00 | 51.55 AV | 54.00 | -2.45 | 2.08 V | 87 | 40.18 | 11.37 |
| 3 | #5470.00 | 65.25 PK | 68.20 | -2.95 | 2.08 V | 87 | 53.80 | 11.45 |
| 4 | *5500.00 | 120.10 PK | | | 2.08 V | 87 | 108.44 | 11.66 |
| 5 | *5500.00 | 109.37 AV | | | 2.08 V | 87 | 97.71 | 11.66 |
| 6 | 11000.00 | 57.00 PK | 74.00 | -17.00 | 1.95 V | 287 | 40.22 | 16.78 |
| 7 | 11000.00 | 45.14 AV | 54.00 | -8.86 | 1.95 V | 287 | 28.36 | 16.78 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 116：5580 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5580.00 | 110.43 PK | | | 1.75 H | 66 | 99.52 | 10.91 |
| 2 | *5580.00 | 99.17 AV | | | 1.75 H | 66 | 88.26 | 10.91 |
| 3 | 11160.00 | 57.36 PK | 74.00 | -16.64 | 1.45 H | 248 | 39.68 | 17.68 |
| 4 | 11160.00 | 45.52 AV | 54.00 | -8.48 | 1.45 H | 248 | 27.84 | 17.68 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5580.00 | 119.37 PK | | | 2.12 V | 92 | 108.46 | 10.91 |
| 2 | *5580.00 | 108.56 AV | | | 2.12 V | 92 | 97.65 | 10.91 |
| 3 | 11160.00 | 57.86 PK | 74.00 | -16.14 | 2.32 V | 26 | 40.18 | 17.68 |
| 4 | 11160.00 | 46.04 AV | 54.00 | -7.96 | 2.32 V | 26 | 28.36 | 17.68 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (20MHz) | Channel | CH 140：5700 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5700.00 | 110.78 PK | | | 1.78 H | 59 | 100.13 | 10.65 |
| 2 | *5700.00 | 99.94 AV | | | 1.78 H | 59 | 89.29 | 10.65 |
| 3 | #5725.00 | 62.22 PK | 68.20 | -5.98 | 1.78 H | 59 | 51.64 | 10.58 |
| 4 | 11400.00 | 57.58 PK | 74.00 | -16.42 | 1.26 H | 230 | 39.72 | 17.86 |
| 5 | 11400.00 | 45.49 AV | 54.00 | -8.51 | 1.26 H | 230 | 27.63 | 17.86 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5700.00 | 119.69 PK | | | 2.08 V | 90 | 109.04 | 10.65 |
| 2 | *5700.00 | 108.71 AV | | | 2.08 V | 90 | 98.06 | 10.65 |
| 3 | #5725.00 | 64.47 PK | 68.20 | -3.73 | 2.08 V | 90 | 53.89 | 10.58 |
| 4 | 11400.00 | 58.28 PK | 74.00 | -15.72 | 1.55 V | 294 | 40.42 | 17.86 |
| 5 | 11400.00 | 46.35 AV | 54.00 | -7.65 | 1.55 V | 294 | 28.49 | 17.86 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 54：5270 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 60.84 PK | 74.00 | -13.16 | 1.74 H | 55 | 51.13 | 9.71 |
| 2 | 5150.00 | 50.79 AV | 54.00 | -3.21 | 1.74 H | 55 | 41.08 | 9.71 |
| 3 | *5270.00 | 110.97 PK | | | 1.74 H | 55 | 100.79 | 10.18 |
| 4 | *5270.00 | 100.43 AV | | | 1.74 H | 55 | 90.25 | 10.18 |
| 5 | #10540.00 | 56.00 PK | 68.20 | -12.20 | 1.88 H | 265 | 40.07 | 15.93 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 61.27 PK | 74.00 | -12.73 | 2.06 V | 49 | 51.56 | 9.71 |
| 2 | 5150.00 | 51.14 AV | 54.00 | -2.86 | 2.06 V | 49 | 41.43 | 9.71 |
| 3 | *5270.00 | 117.56 PK | | | 2.06 V | 49 | 107.38 | 10.18 |
| 4 | *5270.00 | 106.52 AV | | | 2.06 V | 49 | 96.34 | 10.18 |
| 5 | #10540.00 | 56.58 PK | 68.20 | -11.62 | 1.92 V | 265 | 40.65 | 15.93 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 62：5310 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5310.00 | 111.28 PK | | | 1.79 H | 82 | 100.84 | 10.44 |
| 2 | *5310.00 | 100.67 AV | | | 1.79 H | 82 | 90.23 | 10.44 |
| 3 | 5350.00 | 60.88 PK | 74.00 | -13.12 | 1.79 H | 82 | 50.20 | 10.68 |
| 4 | 5350.00 | 50.94 AV | 54.00 | -3.06 | 1.79 H | 82 | 40.26 | 10.68 |
| 5 | 10620.00 | 56.23 PK | 74.00 | -17.77 | 1.77 H | 222 | 40.31 | 15.92 |
| 6 | 10620.00 | 44.18 AV | 54.00 | -9.82 | 1.77 H | 222 | 28.26 | 15.92 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5310.00 | 117.92 PK | | | 2.05 V | 57 | 107.48 | 10.44 |
| 2 | *5310.00 | 108.38 AV | | | 2.05 V | 57 | 97.94 | 10.44 |
| 3 | 5350.00 | 61.64 PK | 74.00 | -12.36 | 2.05 V | 57 | 50.96 | 10.68 |
| 4 | 5350.00 | 52.72 AV | 54.00 | -1.28 | 2.05 V | 57 | 42.04 | 10.68 |
| 5 | 10620.00 | 56.66 PK | 74.00 | -17.34 | 2.15 V | 206 | 40.74 | 15.92 |
| 6 | 10620.00 | 44.51 AV | 54.00 | -9.49 | 2.15 V | 206 | 28.59 | 15.92 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 102：5510 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 62.99 PK | 74.00 | -11.01 | 1.79 H | 52 | 51.62 | 11.37 |
| 2 | 5460.00 | 52.06 AV | 54.00 | -1.94 | 1.79 H | 52 | 40.69 | 11.37 |
| 3 | #5470.00 | 63.79 PK | 68.20 | -4.41 | 1.79 H | 52 | 52.34 | 11.45 |
| 4 | *5510.00 | 110.33 PK | | | 1.79 H | 52 | 98.77 | 11.56 |
| 5 | *5510.00 | 99.25 AV | | | 1.79 H | 52 | 87.69 | 11.56 |
| 6 | 11020.00 | 56.48 PK | 74.00 | -17.52 | 1.45 H | 227 | 39.58 | 16.90 |
| 7 | 11020.00 | 44.34 AV | 54.00 | -9.66 | 1.45 H | 227 | 27.44 | 16.90 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 63.82 PK | 74.00 | -10.18 | 1.93 V | 62 | 52.45 | 11.37 |
| 2 | 5460.00 | 52.65 AV | 54.00 | -1.35 | 1.93 V | 62 | 41.28 | 11.37 |
| 3 | #5470.00 | 67.12 PK | 68.20 | -1.08 | 1.93 V | 62 | 55.67 | 11.45 |
| 4 | *5510.00 | 118.05 PK | | | 1.93 V | 62 | 106.49 | 11.56 |
| 5 | *5510.00 | 107.45 AV | | | 1.93 V | 62 | 95.89 | 11.56 |
| 6 | 11020.00 | 57.34 PK | 74.00 | -16.66 | 1.92 V | 25 | 40.44 | 16.90 |
| 7 | 11020.00 | 45.09 AV | 54.00 | -8.91 | 1.92 V | 25 | 28.19 | 16.90 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 110：5550 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5550.00 | 109.74 PK | | | 1.69 H | 48 | 98.56 | 11.18 |
| 2 | *5550.00 | 98.37 AV | | | 1.69 H | 48 | 87.19 | 11.18 |
| 3 | 11100.00 | 57.15 PK | 74.00 | -16.85 | 2.14 H | 161 | 39.78 | 17.37 |
| 4 | 11100.00 | 45.05 AV | 54.00 | -8.95 | 2.14 H | 161 | 27.68 | 17.37 |
| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5550.00 | 117.41 PK | | | 2.01 V | 66 | 106.23 | 11.18 |
| 2 | *5550.00 | 106.35 AV | | | 2.01 V | 66 | 95.17 | 11.18 |
| 3 | 11100.00 | 57.70 PK | 74.00 | -16.30 | 1.85 V | 259 | 40.33 | 17.37 |
| 4 | 11100.00 | 45.79 AV | 54.00 | -8.21 | 1.85 V | 259 | 28.42 | 17.37 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

| RF Mode | TX 802.11ax (40MHz) | Channel | CH 134：5670 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5670.00 | 110.26 PK | | | 1.81 H | 69 | 99.57 | 10.69 |
| 2 | *5670.00 | 99.38 AV | | | 1.81 H | 69 | 88.69 | 10.69 |
| 3 | #5725.00 | 61.66 PK | 68.20 | -6.54 | 1.81 H | 69 | 51.08 | 10.58 |
| 4 | 11340.00 | 57.02 PK | 74.00 | -16.98 | 2.68 H | 44 | 39.62 | 17.40 |
| 5 | 11340.00 | 45.21 AV | 54.00 | -8.79 | 2.68 H | 44 | 27.81 | 17.40 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5670.00 | 117.16 PK | | | 1.94 V | 55 | 106.47 | 10.69 |
| 2 | *5670.00 | 107.20 AV | | | 1.94 V | 55 | 96.51 | 10.69 |
| 3 | #5725.00 | 61.71 PK | 68.20 | -6.49 | 1.94 V | 55 | 51.13 | 10.58 |
| 4 | 11340.00 | 57.92 PK | 74.00 | -16.08 | 1.28 V | 241 | 40.52 | 17.40 |
| 5 | 11340.00 | 45.87 AV | 54.00 | -8.13 | 1.28 V | 241 | 28.47 | 17.40 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (80MHz) | Channel | CH 58：5290 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 59.89 PK | 74.00 | -14.11 | 1.81 H | 59 | 50.18 | 9.71 |
| 2 | 5150.00 | 48.80 AV | 54.00 | -5.20 | 1.81 H | 59 | 39.09 | 9.71 |
| 3 | *5290.00 | 105.54 PK | | | 1.81 H | 59 | 95.23 | 10.31 |
| 4 | *5290.00 | 98.73 AV | | | 1.81 H | 59 | 88.42 | 10.31 |
| 5 | 5350.00 | 62.42 PK | 74.00 | -11.58 | 1.81 H | 59 | 51.74 | 10.68 |
| 6 | 5350.00 | 51.74 AV | 54.00 | -2.26 | 1.81 H | 59 | 41.06 | 10.68 |
| 7 | #10580.00 | 55.96 PK | 68.20 | -12.24 | 2.13 H | 206 | 40.11 | 15.85 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5150.00 | 60.05 PK | 74.00 | -13.95 | 2.04 V | 62 | 50.34 | 9.71 |
| 2 | 5150.00 | 49.09 AV | 54.00 | -4.91 | 2.04 V | 62 | 39.38 | 9.71 |
| 3 | *5290.00 | 114.30 PK | | | 2.04 V | 62 | 103.99 | 10.31 |
| 4 | *5290.00 | 107.07 AV | | | 2.04 V | 62 | 96.76 | 10.31 |
| 5 | 5350.00 | 62.88 PK | 74.00 | -11.12 | 2.04 V | 62 | 52.20 | 10.68 |
| 6 | 5350.00 | 52.11 AV | 54.00 | -1.89 | 2.04 V | 62 | 41.43 | 10.68 |
| 7 | #10580.00 | 56.50 PK | 68.20 | -11.70 | 1.88 V | 267 | 40.65 | 15.85 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (80MHz) | Channel | CH 106：5530 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 63.24 PK | 74.00 | -10.76 | 1.87 H | 69 | 51.87 | 11.37 |
| 2 | 5460.00 | 51.21 AV | 54.00 | -2.79 | 1.87 H | 69 | 39.84 | 11.37 |
| 3 | #5470.00 | 63.58 PK | 68.20 | -4.62 | 1.87 H | 69 | 52.13 | 11.45 |
| 4 | *5530.00 | 103.81 PK | | | 1.87 H | 69 | 92.44 | 11.37 |
| 5 | *5530.00 | 96.06 AV | | | 1.87 H | 69 | 84.69 | 11.37 |
| 6 | 11060.00 | 56.92 PK | 74.00 | -17.08 | 1.45 H | 261 | 39.79 | 17.13 |
| 7 | 11060.00 | 45.01 AV | 54.00 | -8.99 | 1.45 H | 261 | 27.88 | 17.13 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 5460.00 | 64.78 PK | 74.00 | -9.22 | 2.08 V | 88 | 53.41 | 11.37 |
| 2 | 5460.00 | 52.97 AV | 54.00 | -1.03 | 2.08 V | 88 | 41.60 | 11.37 |
| **3** | **#5470.00** | **67.19 PK** | **68.20** | **-1.01** | **2.08 V** | **88** | **55.74** | **11.45** |
| 4 | *5530.00 | 113.09 PK | | | 2.08 V | 88 | 101.72 | 11.37 |
| 5 | *5530.00 | 105.18 AV | | | 2.08 V | 88 | 93.81 | 11.37 |
| 6 | 11060.00 | 57.68 PK | 74.00 | -16.32 | 1.92 V | 275 | 40.55 | 17.13 |
| 7 | 11060.00 | 45.39 AV | 54.00 | -8.61 | 1.92 V | 275 | 28.26 | 17.13 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

| RF Mode | TX 802.11ax (80MHz) | Channel | CH 122：5610 MHz |
|---|---|---|---|
| Frequency Range | 1GHz ~ 40GHz | Detector Function | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5610.00 | 103.09 PK | | | 1.68 H | 67 | 92.36 | 10.73 |
| 2 | *5610.00 | 95.50 AV | | | 1.68 H | 67 | 84.77 | 10.73 |
| 3 | #5725.00 | 62.46 PK | 68.20 | -5.74 | 1.68 H | 67 | 51.88 | 10.58 |
| 4 | 11220.00 | 57.45 PK | 74.00 | -16.55 | 2.14 H | 197 | 39.72 | 17.73 |
| 5 | 11220.00 | 45.41 AV | 54.00 | -8.59 | 2.14 H | 197 | 27.68 | 17.73 |
| **Antenna Polarity & Test Distance : Vertical at 3 m** | | | | | | | | |
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | *5610.00 | 112.71 PK | | | 1.91 V | 63 | 101.98 | 10.73 |
| 2 | *5610.00 | 105.48 AV | | | 1.91 V | 63 | 94.75 | 10.73 |
| 3 | #5725.00 | 62.88 PK | 68.20 | -5.32 | 1.91 V | 63 | 52.30 | 10.58 |
| 4 | 11220.00 | 58.24 PK | 74.00 | -15.76 | 1.59 V | 227 | 40.51 | 17.73 |
| 5 | 11220.00 | 46.06 AV | 54.00 | -7.94 | 1.59 V | 227 | 28.33 | 17.73 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

## Below 1GHz Data:

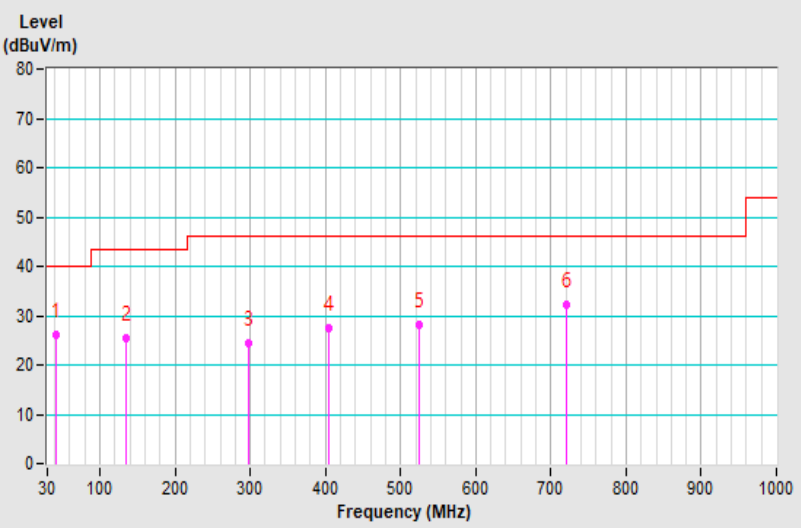
## 802.11ax (20MHz)

| CHANNEL | TX Channel 64 | DETECTOR FUNCTION | Quasi-Peak (QP) |
|---|---|---|---|
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 40.72 | 26.05 QP | 40.00 | -13.95 | 1.69 H | 117 | 33.80 | -7.75 |
| 2 | 133.94 | 25.42 QP | 43.50 | -18.08 | 2.18 H | 256 | 33.11 | -7.69 |
| 3 | 297.62 | 24.43 QP | 46.00 | -21.57 | 2.66 H | 98 | 29.02 | -4.59 |
| 4 | 404.61 | 27.40 QP | 46.00 | -18.60 | 1.82 H | 132 | 29.63 | -2.23 |
| 5 | 524.36 | 28.25 QP | 46.00 | -17.75 | 1.74 H | 34 | 27.82 | 0.43 |
| 6 | 720.15 | 32.20 QP | 46.00 | -13.80 | 1.46 H | 65 | 27.89 | 4.31 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

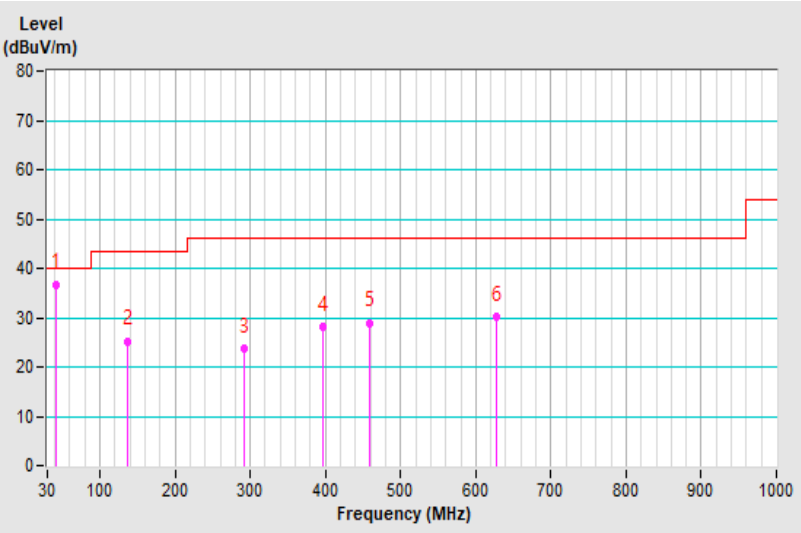


| CHANNEL | TX Channel 64 | DETECTOR FUNCTION | Quasi-Peak (QP) |
|---|---|---|---|
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 40.77 | 36.66 QP | 40.00 | -3.34 | 1.06 V | 65 | 44.40 | -7.74 |
| 2 | 137.48 | 25.20 QP | 43.50 | -18.30 | 1.18 V | 128 | 32.54 | -7.34 |
| 3 | 291.17 | 23.60 QP | 46.00 | -22.40 | 1.34 V | 233 | 28.35 | -4.75 |
| 4 | 396.81 | 28.04 QP | 46.00 | -17.96 | 1.29 V | 101 | 30.41 | -2.37 |
| 5 | 458.79 | 28.92 QP | 46.00 | -17.08 | 1.54 V | 104 | 29.51 | -0.59 |
| 6 | 627.67 | 30.08 QP | 46.00 | -15.92 | 1.69 V | 152 | 27.16 | 2.92 |

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz) | Conducted Limit (dBuV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 - 0.5 | 66 - 56 | 56 - 46 |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30.0 | 60 | 50 |

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 4.2.2 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|
| ROHDE & SCHWARZ<br>TEST RECEIVER | ESR3 | 102413 | Feb. 17, 2020 | Feb. 16, 2021 |
| ROHDE & SCHWARZ<br>Artificial Mains Network (for EUT) | ESH2-Z5 | 100104 | Dec. 13, 2019 | Dec. 12, 2020 |
| LISN With Adapter (for EUT) | AD10 | C09Ada-001 | Dec. 13, 2019 | Dec. 12, 2020 |
| ROHDE & SCHWARZ<br>Artificial Mains Network<br>(for peripherals) | ESH3-Z5 | 100220 | Nov. 18, 2019 | Nov. 17, 2020 |
| SCHWARZBECK<br>Artificial Mains Network (For EUT) | NNLK8129 | 8129229 | May 14, 2020 | May 13, 2021 |
| SCHWARZBECK<br>Artificial Mains Network (For EUT) | NNLK 8121 | 8121-808 | Apr. 10, 2020 | Apr. 9, 2021 |
| Software | Cond_V7.3.7.4 | NA | NA | NA |
| RF cable (JYEBAO)<br>With 10dB PAD | 5D-FB | Cable-C09.01 | Aug. 14, 2020 | Aug. 13, 2021 |
| SUHNER Terminator<br>(For ROHDE & SCHWARZ LISN) | 65BNC-5001 | E1-010789 | May 13, 2020 | May 12, 2021 |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 9. (Conduction 9)

4.2.3 Test Procedure

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

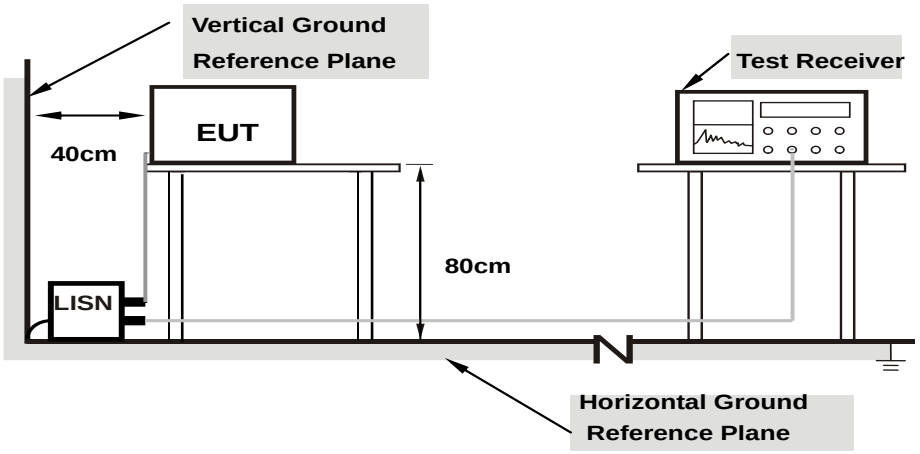
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup




**Note: 1.Support units were connected to second LISN.**

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Condition

Same as 4.1.6.

4.2.7 Test Results

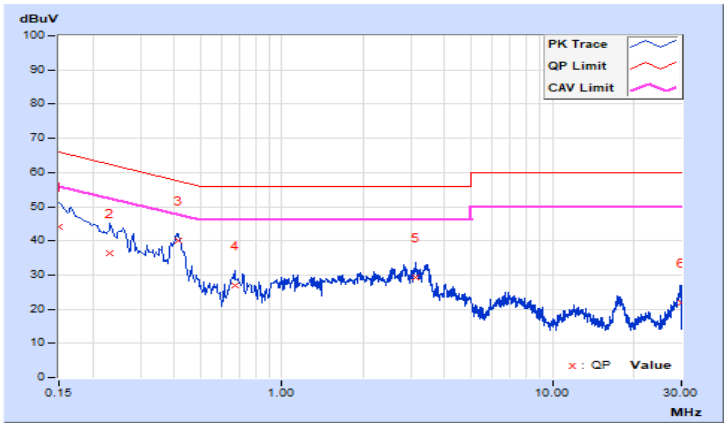
**CDD Mode**

| Phase | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|---|---|---|---|

| No | Freq. | Corr. Factor | Reading Value | | Emission Level | | Limit | | Margin | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | [dB (uV)] | | [dB (uV)] | | [dB (uV)] | | (dB) | |
| | [MHz] | (dB) | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.15000 | 10.22 | 34.03 | 19.92 | 44.25 | 30.14 | 66.00 | 56.00 | -21.75 | -25.86 |
| 2 | 0.23213 | 10.25 | 26.24 | 15.34 | 36.49 | 25.59 | 62.37 | 52.37 | -25.88 | -26.78 |
| **3** | **0.41204** | **10.28** | **29.62** | **25.54** | **39.90** | **35.82** | **57.61** | **47.61** | **-17.71** | **-11.79** |
| 4 | 0.66817 | 10.33 | 16.48 | 8.26 | 26.81 | 18.59 | 56.00 | 46.00 | -29.19 | -27.41 |
| 5 | 3.12819 | 10.58 | 18.68 | 10.77 | 29.26 | 21.35 | 56.00 | 46.00 | -26.74 | -24.65 |
| 6 | 29.89743 | 11.55 | 10.36 | 3.11 | 21.91 | 14.66 | 60.00 | 50.00 | -38.09 | -35.34 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

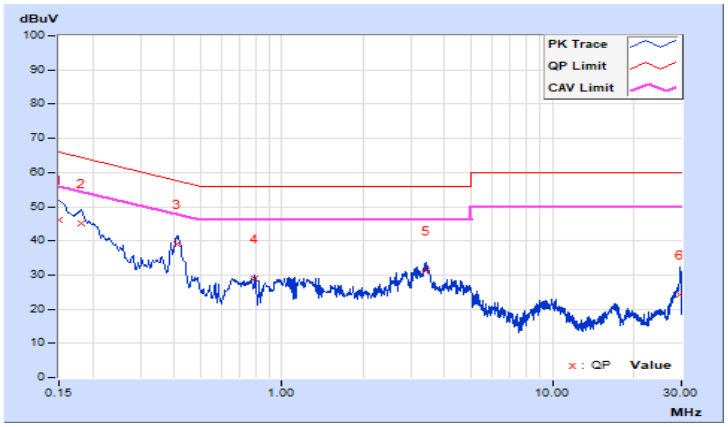


| Phase | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|---|---|---|---|

| No | Freq. | Corr. Factor | Reading Value [dB (uV)] | | Emission Level [dB (uV)] | | Limit [dB (uV)] | | Margin (dB) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | (dB) | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.15000 | 10.19 | 36.10 | 22.18 | 46.29 | 32.37 | 66.00 | 56.00 | -19.71 | -23.63 |
| 2 | 0.18122 | 10.21 | 35.02 | 24.19 | 45.23 | 34.40 | 64.43 | 54.43 | -19.20 | -20.03 |
| 3 | 0.41016 | 10.26 | 28.89 | 24.85 | 39.15 | 35.11 | 57.65 | 47.65 | -18.50 | -12.54 |
| 4 | 0.79724 | 10.31 | 18.59 | 11.81 | 28.90 | 22.12 | 56.00 | 46.00 | -27.10 | -23.88 |
| 5 | 3.41761 | 10.55 | 20.92 | 11.51 | 31.47 | 22.06 | 56.00 | 46.00 | -24.53 | -23.94 |
| 6 | 29.70970 | 10.91 | 13.35 | 7.29 | 24.26 | 18.20 | 60.00 | 50.00 | -35.74 | -31.80 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



## 4.3 Transmit Power Measurement

### 4.3.1 Limits of Transmit Power Measurement

| Operation Band | EUT Category | | Limit |
|---|---|---|---|
| U-NII-1 | | Outdoor Access Point | 1 Watt (30 dBm)<br>(Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon) |
| | | Fixed point-to-point Access Point | 1 Watt (30 dBm) |
| | | Indoor Access Point | 1 Watt (30 dBm) |
| | | Client device | 250mW (24 dBm) |
| U-NII-2A | √ | | 250mW (24 dBm) or 11 dBm+10 log B* |
| U-NII-2C | √ | | 250mW (24 dBm) or 11 dBm+10 log B* |
| U-NII-3 | | | 1 Watt (30 dBm) |

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

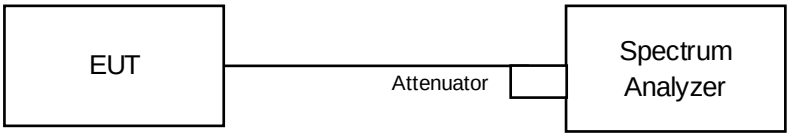
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any $N_{ANT}$;
Array Gain = 5 log($N_{ANT}/N_{SS}$) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = 10 log($N_{ANT}/N_{SS}$) dB.

4.3.2 Test Setup

**For Power Output Measurement**


**For 26dB Occupied Bandwidth**




4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

**For Average Power Measurement**

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to AVERAGE. Duty factor is not added to measured value.

**For 26dB Occupied Bandwidth**

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak 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%.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Result

**CDD Mode**

**Power Output:**

**802.11a**

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 52 | 5260 | 12.45 | 11.89 | 12.26 | 12.54 | 67.806 | 18.31 | 23.85 | Pass |
| 60 | 5300 | 12.39 | 11.93 | 12.54 | 12.52 | 68.746 | 18.37 | 23.86 | Pass |
| 64 | 5320 | 12.69 | 12.18 | 12.48 | 12.49 | 70.541 | 18.48 | 23.86 | Pass |
| 100 | 5500 | 11.78 | 12.02 | 11.75 | 12.58 | 64.064 | 18.07 | 23.89 | Pass |
| 116 | 5580 | 13.17 | 12.70 | 13.58 | 12.56 | 80.204 | 19.04 | 23.90 | Pass |
| 140 | 5700 | 12.97 | 12.70 | 13.11 | 12.54 | 76.848 | 18.86 | 23.90 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 19.46) = 23.89 dBm < 24dBm.
2. 11dBm + 10log( 19.4 ) = 23.88 dBm < 24dBm.
3. 11dBm + 10log( 19.48) = 23.90 dBm < 24dBm.
4. 11dBm + 10log( 19.56) = 23.91 dBm < 24dBm.
5. 11dBm + 10log( 19.53) = 23.90 dBm < 24dBm.
6. 11dBm + 10log( 19.53) = 23.90 dBm < 24dBm.

**Chain 1**

1. 11dBm + 10log( 19.41 ) = 23.88 dBm < 24dBm.
2. 11dBm + 10log( 19.36 ) = 23.86 dBm < 24dBm.
3. 11dBm + 10log( 19.35 ) = 23.86 dBm < 24dBm.
4. 11dBm + 10log( 19.48 ) = 23.89 dBm < 24dBm.
5. 11dBm + 10log( 19.59 ) = 23.92 dBm < 24dBm.
6. 11dBm + 10log( 19.57 ) = 23.92 dBm < 24dBm.

**Chain 2**

1. 11dBm + 10log( 19.33) = 23.86 dBm < 24dBm.
2. 11dBm + 10log( 19.44) = 23.89 dBm < 24dBm.
3. 11dBm + 10log( 19.33) = 23.86 dBm < 24dBm.
4. 11dBm + 10log( 19.68) = 23.94 dBm < 24dBm.
5. 11dBm + 10log( 19.59) = 23.92 dBm < 24dBm.
6. 11dBm + 10log( 19.56) = 23.91 dBm < 24dBm.

**Chain 3**

1. 11dBm + 10log( 19.29 ) = 23.85 dBm < 24dBm.
2. 11dBm + 10log( 19.37 ) = 23.87 dBm < 24dBm.
3. 11dBm + 10log( 19.37 ) = 23.87 dBm < 24dBm.
4. 11dBm + 10log( 19.54 ) = 23.91 dBm < 24dBm.
5. 11dBm + 10log( 19.61 ) = 23.92 dBm < 24dBm.
6. 11dBm + 10log( 19.65 ) = 23.93 dBm < 24dBm.

### 802.11n (20MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 52 | 5260 | 12.32 | 11.93 | 12.05 | 11.94 | 64.32 | 18.08 | 24.00 | Pass |
| 60 | 5300 | 12.45 | 11.92 | 12.14 | 12.04 | 65.503 | 18.16 | 24.00 | Pass |
| 64 | 5320 | 12.40 | 12.07 | 12.18 | 11.98 | 65.78 | 18.18 | 24.00 | Pass |
| 100 | 5500 | 12.32 | 11.83 | 12.69 | 11.93 | 66.475 | 18.23 | 24.00 | Pass |
| 116 | 5580 | 12.31 | 11.83 | 12.81 | 12.02 | 67.283 | 18.28 | 24.00 | Pass |
| 140 | 5700 | 12.37 | 11.79 | 12.63 | 12.03 | 66.641 | 18.24 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.
2. 11dBm + 10log( 21.25) = 24.27 dBm > 24dBm.
3. 11dBm + 10log( 21.56) = 24.34 dBm > 24dBm.
4. 11dBm + 10log( 21.32) = 24.29 dBm > 24dBm.
5. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.
6. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 21.22 ) = 24.27 dBm > 24dBm.
2. 11dBm + 10log( 21.55 ) = 24.33 dBm > 24dBm.
3. 11dBm + 10log( 21.28 ) = 24.28 dBm > 24dBm.
4. 11dBm + 10log( 21.37 ) = 24.30 dBm > 24dBm.
5. 11dBm + 10log( 21.41 ) = 24.31 dBm > 24dBm.
6. 11dBm + 10log( 21.36 ) = 24.30 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 21.09) = 24.24 dBm > 24dBm.
2. 11dBm + 10log( 21.5 ) = 24.32 dBm > 24dBm.
3. 11dBm + 10log( 21.55) = 24.33 dBm > 24dBm.
4. 11dBm + 10log( 21.26) = 24.28 dBm > 24dBm.
5. 11dBm + 10log( 21.26) = 24.28 dBm > 24dBm.
6. 11dBm + 10log( 21.34) = 24.29 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 21.42 ) = 24.31 dBm > 24dBm.
2. 11dBm + 10log( 21.48 ) = 24.32 dBm > 24dBm.
3. 11dBm + 10log( 21.56 ) = 24.34 dBm > 24dBm.
4. 11dBm + 10log( 21.33 ) = 24.29 dBm > 24dBm.
5. 11dBm + 10log( 21.4 ) = 24.30 dBm > 24dBm.
6. 11dBm + 10log( 21.47 ) = 24.32 dBm > 24dBm.

### 802.11n (40MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 54 | 5270 | 15.40 | 14.61 | 15.40 | 15.19 | 131.291 | 21.18 | 24.00 | Pass |
| 62 | 5310 | 13.82 | 13.15 | 13.33 | 13.24 | 87.367 | 19.41 | 24.00 | Pass |
| 102 | 5510 | 14.47 | 14.26 | 14.26 | 15.17 | 114.212 | 20.58 | 24.00 | Pass |
| 110 | 5550 | 15.08 | 14.89 | 15.27 | 15.19 | 129.731 | 21.13 | 24.00 | Pass |
| 134 | 5670 | 16.25 | 14.74 | 16.25 | 15.21 | 147.314 | 21.68 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 40.84) = 27.11 dBm > 24dBm.
2. 11dBm + 10log( 40.95) = 27.12 dBm > 24dBm.
3. 11dBm + 10log( 41.15) = 27.14 dBm > 24dBm.
4. 11dBm + 10log( 40.96) = 27.12 dBm > 24dBm.
5. 11dBm + 10log( 41.14) = 27.14 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 40.55 ) = 27.08 dBm > 24dBm.
2. 11dBm + 10log( 41.09 ) = 27.14 dBm > 24dBm.
3. 11dBm + 10log( 41.05 ) = 27.13 dBm > 24dBm.
4. 11dBm + 10log( 41.08 ) = 27.14 dBm > 24dBm.
5. 11dBm + 10log( 41.37 ) = 27.17 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 41.18) = 27.15 dBm > 24dBm.
2. 11dBm + 10log( 40.97) = 27.12 dBm > 24dBm.
3. 11dBm + 10log( 41.14) = 27.14 dBm > 24dBm.
4. 11dBm + 10log( 41.2 ) = 27.15 dBm > 24dBm.
5. 11dBm + 10log( 41.32) = 27.16 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 41.13 ) = 27.14 dBm > 24dBm.
2. 11dBm + 10log( 40.75 ) = 27.10 dBm > 24dBm.
3. 11dBm + 10log( 41.18 ) = 27.15 dBm > 24dBm.
4. 11dBm + 10log( 41.14 ) = 27.14 dBm > 24dBm.
5. 11dBm + 10log( 41.49 ) = 27.18 dBm > 24dBm.

### 802.11ac (20MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 52 | 5260 | 12.61 | 12.17 | 12.32 | 12.18 | 68.301 | 18.34 | 24.00 | Pass |
| 60 | 5300 | 12.67 | 12.19 | 12.42 | 12.27 | 69.374 | 18.41 | 24.00 | Pass |
| 64 | 5320 | 12.66 | 12.35 | 12.44 | 12.20 | 69.764 | 18.44 | 24.00 | Pass |
| 100 | 5500 | 12.57 | 12.12 | 12.97 | 12.22 | 70.852 | 18.50 | 24.00 | Pass |
| 116 | 5580 | 12.54 | 12.12 | 13.04 | 12.24 | 71.127 | 18.52 | 24.00 | Pass |
| 140 | 5700 | 12.63 | 12.04 | 12.89 | 12.25 | 70.56 | 18.49 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.
2. 11dBm + 10log( 21.25) = 24.27 dBm > 24dBm.
3. 11dBm + 10log( 21.56) = 24.34 dBm > 24dBm.
4. 11dBm + 10log( 21.32) = 24.29 dBm > 24dBm.
5. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.
6. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 21.22 ) = 24.27 dBm > 24dBm.
2. 11dBm + 10log( 21.55 ) = 24.33 dBm > 24dBm.
3. 11dBm + 10log( 21.28 ) = 24.28 dBm > 24dBm.
4. 11dBm + 10log( 21.37 ) = 24.30 dBm > 24dBm.
5. 11dBm + 10log( 21.41 ) = 24.31 dBm > 24dBm.
6. 11dBm + 10log( 21.36 ) = 24.30 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 21.09) = 24.24 dBm > 24dBm.
2. 11dBm + 10log( 21.5 ) = 24.32 dBm > 24dBm.
3. 11dBm + 10log( 21.55) = 24.33 dBm > 24dBm.
4. 11dBm + 10log( 21.26) = 24.28 dBm > 24dBm.
5. 11dBm + 10log( 21.26) = 24.28 dBm > 24dBm.
6. 11dBm + 10log( 21.34) = 24.29 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 21.42 ) = 24.31 dBm > 24dBm.
2. 11dBm + 10log( 21.48 ) = 24.32 dBm > 24dBm.
3. 11dBm + 10log( 21.56 ) = 24.34 dBm > 24dBm.
4. 11dBm + 10log( 21.33 ) = 24.29 dBm > 24dBm.
5. 11dBm + 10log( 21.4 ) = 24.30 dBm > 24dBm.
6. 11dBm + 10log( 21.47 ) = 24.32 dBm > 24dBm.

### 802.11ac (40MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 54 | 5270 | 15.64 | 14.89 | 15.69 | 15.42 | 139.377 | 21.44 | 24.00 | Pass |
| 62 | 5310 | 14.09 | 13.36 | 13.55 | 13.47 | 92.201 | 19.65 | 24.00 | Pass |
| 102 | 5510 | 14.70 | 14.55 | 14.47 | 15.40 | 120.686 | 20.82 | 24.00 | Pass |
| 110 | 5550 | 15.37 | 15.15 | 15.49 | 15.47 | 137.806 | 21.39 | 24.00 | Pass |
| 134 | 5670 | 16.47 | 14.96 | 16.47 | 15.47 | 155.292 | 21.91 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 40.84) = 27.11 dBm > 24dBm.
2. 11dBm + 10log( 40.95) = 27.12 dBm > 24dBm.
3. 11dBm + 10log( 41.15) = 27.14 dBm > 24dBm.
4. 11dBm + 10log( 40.96) = 27.12 dBm > 24dBm.
5. 11dBm + 10log( 41.14) = 27.14 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 40.55 ) = 27.08 dBm > 24dBm.
2. 11dBm + 10log( 41.09 ) = 27.14 dBm > 24dBm.
3. 11dBm + 10log( 41.05 ) = 27.13 dBm > 24dBm.
4. 11dBm + 10log( 41.08 ) = 27.14 dBm > 24dBm.
5. 11dBm + 10log( 41.37 ) = 27.17 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 41.18) = 27.15 dBm > 24dBm.
2. 11dBm + 10log( 40.97) = 27.12 dBm > 24dBm.
3. 11dBm + 10log( 41.14) = 27.14 dBm > 24dBm.
4. 11dBm + 10log( 41.2 ) = 27.15 dBm > 24dBm.
5. 11dBm + 10log( 41.32) = 27.16 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 41.13 ) = 27.14 dBm > 24dBm.
2. 11dBm + 10log( 40.75 ) = 27.10 dBm > 24dBm.
3. 11dBm + 10log( 41.18 ) = 27.15 dBm > 24dBm.
4. 11dBm + 10log( 41.14 ) = 27.14 dBm > 24dBm.
5. 11dBm + 10log( 41.49 ) = 27.18 dBm > 24dBm.

### 802.11ac (80MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 58 | 5290 | 12.62 | 11.73 | 12.12 | 11.84 | 64.743 | 18.11 | 24.00 | Pass |
| 106 | 5530 | 12.13 | 12.31 | 12.51 | 13.03 | 71.267 | 18.53 | 24.00 | Pass |
| 122 | 5610 | 17.35 | 16.08 | 17.78 | 15.96 | 194.301 | 22.88 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 82.05) = 30.14 dBm > 24dBm.
2. 11dBm + 10log( 82.42) = 30.16 dBm > 24dBm.
3. 11dBm + 10log( 82.34) = 30.16 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 82.29 ) = 30.15 dBm > 24dBm.
2. 11dBm + 10log( 82.62 ) = 30.17 dBm > 24dBm.
3. 11dBm + 10log( 82.32 ) = 30.16 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 82.37) = 30.16 dBm > 24dBm.
2. 11dBm + 10log( 82.74) = 30.18 dBm > 24dBm.
3. 11dBm + 10log( 82.53) = 30.17 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 82.23 ) = 30.15 dBm > 24dBm.
2. 11dBm + 10log( 83.28 ) = 30.21 dBm > 24dBm.
3. 11dBm + 10log( 82.37 ) = 30.16 dBm > 24dBm.

### 802.11ax (20MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 52 | 5260 | 13.26 | 12.82 | 13.00 | 12.87 | 79.643 | 19.01 | 24.00 | Pass |
| 60 | 5300 | 13.29 | 12.87 | 13.08 | 12.89 | 80.472 | 19.06 | 24.00 | Pass |
| 64 | 5320 | 13.31 | 12.98 | 13.09 | 12.87 | 81.024 | 19.09 | 24.00 | Pass |
| 100 | 5500 | 13.25 | 12.76 | 13.58 | 12.88 | 82.227 | 19.15 | 24.00 | Pass |
| 116 | 5580 | 13.22 | 12.78 | 13.66 | 12.85 | 82.459 | 19.16 | 24.00 | Pass |
| 140 | 5700 | 13.28 | 12.69 | 13.54 | 12.93 | 82.087 | 19.14 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.
2. 11dBm + 10log( 21.25) = 24.27 dBm > 24dBm.
3. 11dBm + 10log( 21.56) = 24.34 dBm > 24dBm.
4. 11dBm + 10log( 21.32) = 24.29 dBm > 24dBm.
5. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.
6. 11dBm + 10log( 21.47) = 24.32 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 21.22 ) = 24.27 dBm > 24dBm.
2. 11dBm + 10log( 21.55 ) = 24.33 dBm > 24dBm.
3. 11dBm + 10log( 21.28 ) = 24.28 dBm > 24dBm.
4. 11dBm + 10log( 21.37 ) = 24.30 dBm > 24dBm.
5. 11dBm + 10log( 21.41 ) = 24.31 dBm > 24dBm.
6. 11dBm + 10log( 21.36 ) = 24.30 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 21.09) = 24.24 dBm > 24dBm.
2. 11dBm + 10log( 21.5 ) = 24.32 dBm > 24dBm.
3. 11dBm + 10log( 21.55) = 24.33 dBm > 24dBm.
4. 11dBm + 10log( 21.26) = 24.28 dBm > 24dBm.
5. 11dBm + 10log( 21.26) = 24.28 dBm > 24dBm.
6. 11dBm + 10log( 21.34) = 24.29 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 21.42 ) = 24.31 dBm > 24dBm.
2. 11dBm + 10log( 21.48 ) = 24.32 dBm > 24dBm.
3. 11dBm + 10log( 21.56 ) = 24.34 dBm > 24dBm.
4. 11dBm + 10log( 21.33 ) = 24.29 dBm > 24dBm.
5. 11dBm + 10log( 21.4 ) = 24.30 dBm > 24dBm.
6. 11dBm + 10log( 21.47 ) = 24.32 dBm > 24dBm.

### 802.11ax (40MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 54 | 5270 | 16.27 | 15.56 | 16.36 | 16.03 | **161.677** | 22.09 | 24.00 | Pass |
| 62 | 5310 | 14.71 | 13.97 | 14.17 | 14.08 | 106.234 | 20.26 | 24.00 | Pass |
| 102 | 5510 | 15.35 | 15.19 | 15.16 | 16.06 | 140.488 | 21.48 | 24.00 | Pass |
| 110 | 5550 | 16.01 | 15.78 | 16.17 | 16.15 | 160.356 | 22.05 | 24.00 | Pass |
| 134 | 5670 | 17.09 | 15.65 | 17.14 | 16.11 | 180.489 | 22.56 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 40.84) = 27.11 dBm > 24dBm.
2. 11dBm + 10log( 40.95) = 27.12 dBm > 24dBm.
3. 11dBm + 10log( 41.15) = 27.14 dBm > 24dBm.
4. 11dBm + 10log( 40.96) = 27.12 dBm > 24dBm.
5. 11dBm + 10log( 41.14) = 27.14 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 40.55 ) = 27.08 dBm > 24dBm.
2. 11dBm + 10log( 41.09 ) = 27.14 dBm > 24dBm.
3. 11dBm + 10log( 41.05 ) = 27.13 dBm > 24dBm.
4. 11dBm + 10log( 41.08 ) = 27.14 dBm > 24dBm.
5. 11dBm + 10log( 41.37 ) = 27.17 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 41.18) = 27.15 dBm > 24dBm.
2. 11dBm + 10log( 40.97) = 27.12 dBm > 24dBm.
3. 11dBm + 10log( 41.14) = 27.14 dBm > 24dBm.
4. 11dBm + 10log( 41.2 ) = 27.15 dBm > 24dBm.
5. 11dBm + 10log( 41.32) = 27.16 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 41.13 ) = 27.14 dBm > 24dBm.
2. 11dBm + 10log( 40.75 ) = 27.10 dBm > 24dBm.
3. 11dBm + 10log( 41.18 ) = 27.15 dBm > 24dBm.
4. 11dBm + 10log( 41.14 ) = 27.14 dBm > 24dBm.
5. 11dBm + 10log( 41.49 ) = 27.18 dBm > 24dBm.

### 802.11ax (80MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 58 | 5290 | 13.25 | 12.40 | 12.74 | 12.52 | 75.171 | 18.76 | 24.00 | Pass |
| 106 | 5530 | 12.80 | 12.97 | 13.17 | 13.68 | 82.954 | 19.19 | 24.00 | Pass |
| 122 | 5610 | 18.00 | 16.73 | 18.47 | 16.63 | **226.526** | 23.55 | 24.00 | Pass |

**NOTE:**

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 82.05) = 30.14 dBm > 24dBm.
2. 11dBm + 10log( 82.42) = 30.16 dBm > 24dBm.
3. 11dBm + 10log( 82.34) = 30.16 dBm > 24dBm.

**Chain 1**

1. 11dBm + 10log( 82.29 ) = 30.15 dBm > 24dBm.
2. 11dBm + 10log( 82.62 ) = 30.17 dBm > 24dBm.
3. 11dBm + 10log( 82.32 ) = 30.16 dBm > 24dBm.

**Chain 2**

1. 11dBm + 10log( 82.37) = 30.16 dBm > 24dBm.
2. 11dBm + 10log( 82.74) = 30.18 dBm > 24dBm.
3. 11dBm + 10log( 82.53) = 30.17 dBm > 24dBm.

**Chain 3**

1. 11dBm + 10log( 82.23 ) = 30.15 dBm > 24dBm.
2. 11dBm + 10log( 83.28 ) = 30.21 dBm > 24dBm.
3. 11dBm + 10log( 82.37 ) = 30.16 dBm > 24dBm.

## Beamforming Mode

### 802.11n (20MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 52 | 5260 | 12.29 | 11.85 | 12.08 | 11.92 | 63.957 | 18.06 | 19.16 | Pass |
| 60 | 5300 | 12.32 | 11.91 | 12.06 | 11.95 | 64.322 | 18.08 | 19.16 | Pass |
| 64 | 5320 | 12.30 | 12.08 | 12.21 | 11.92 | 65.32 | 18.15 | 19.16 | Pass |
| 100 | 5500 | 12.33 | 11.72 | 12.65 | 11.88 | 65.784 | 18.18 | 19.31 | Pass |
| 116 | 5580 | 12.25 | 11.79 | 12.71 | 11.88 | 65.97 | 18.19 | 19.31 | Pass |
| 140 | 5700 | 12.32 | 11.78 | 12.55 | 11.94 | 65.747 | 18.18 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 21.47) = 24.32 dBm > 19.16dBm.
2. 11dBm + 10log( 21.25) = 24.27 dBm > 19.16dBm.
3. 11dBm + 10log( 21.56) = 24.34 dBm > 19.16dBm.
4. 11dBm + 10log( 21.32) = 24.29 dBm > 19.31dBm.
5. 11dBm + 10log( 21.47) = 24.32 dBm > 19.31dBm.
6. 11dBm + 10log( 21.47) = 24.32 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 21.22 ) = 24.27 dBm > 19.16dBm.
2. 11dBm + 10log( 21.55 ) = 24.33 dBm > 19.16dBm.
3. 11dBm + 10log( 21.28 ) = 24.28 dBm > 19.16dBm.
4. 11dBm + 10log( 21.37 ) = 24.30 dBm > 19.31dBm.
5. 11dBm + 10log( 21.41 ) = 24.31 dBm > 19.31dBm.
6. 11dBm + 10log( 21.36 ) = 24.30 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 21.09) = 24.24 dBm > 19.16dBm.
2. 11dBm + 10log( 21.5 ) = 24.32 dBm > 19.16dBm.
3. 11dBm + 10log( 21.55) = 24.33 dBm > 19.16dBm.
4. 11dBm + 10log( 21.26) = 24.28 dBm > 19.31dBm.
5. 11dBm + 10log( 21.26) = 24.28 dBm > 19.31dBm.
6. 11dBm + 10log( 21.34) = 24.29 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 21.42 ) = 24.31 dBm > 19.16dBm.
2. 11dBm + 10log( 21.48 ) = 24.32 dBm > 19.16dBm.
3. 11dBm + 10log( 21.56 ) = 24.34 dBm > 19.16dBm.
4. 11dBm + 10log( 21.33 ) = 24.29 dBm > 19.31dBm.
5. 11dBm + 10log( 21.4 ) = 24.30 dBm > 19.31dBm.
6. 11dBm + 10log( 21.47 ) = 24.32 dBm > 19.31dBm.

**802.11n (40MHz)**

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 54 | 5270 | 12.40 | 11.70 | 12.47 | 12.14 | 66.198 | 18.21 | 19.16 | Pass |
| 62 | 5310 | 12.29 | 11.60 | 11.71 | 11.64 | 60.811 | 17.84 | 19.16 | Pass |
| 102 | 5510 | 12.20 | 11.86 | 11.97 | 12.67 | 66.175 | 18.21 | 19.31 | Pass |
| 110 | 5550 | 12.18 | 11.88 | 12.25 | 12.24 | 65.474 | 18.16 | 19.31 | Pass |
| 134 | 5670 | 12.18 | 11.74 | 12.18 | 12.36 | 65.186 | 18.14 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[(10$^{Chain0/20}$ + 10$^{Chain1/20}$+ 10$^{Chain2/20}$+ 10$^{Chain3/20}$)$^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain = 10 log[(10$^{Chain0/20}$ + 10$^{Chain1/20}$+ 10$^{Chain2/20}$+ 10$^{Chain3/20}$)$^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 40.84) = 27.11 dBm > 19.16dBm.
2. 11dBm + 10log( 40.95) = 27.12 dBm > 19.16dBm.
3. 11dBm + 10log( 41.15) = 27.14 dBm > 19.31dBm.
4. 11dBm + 10log( 40.96) = 27.12 dBm > 19.31dBm.
5. 11dBm + 10log( 41.14) = 27.14 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 40.55 ) = 27.08 dBm > 19.16dBm.
2. 11dBm + 10log( 41.09 ) = 27.14 dBm > 19.16dBm.
3. 11dBm + 10log( 41.05 ) = 27.13 dBm > 19.31dBm.
4. 11dBm + 10log( 41.08 ) = 27.14 dBm > 19.31dBm.
5. 11dBm + 10log( 41.37 ) = 27.17 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 41.18) = 27.15 dBm > 19.16dBm.
2. 11dBm + 10log( 40.97) = 27.12 dBm > 19.16dBm.
3. 11dBm + 10log( 41.14) = 27.14 dBm > 19.31dBm.
4. 11dBm + 10log( 41.2 ) = 27.15 dBm > 19.31dBm.
5. 11dBm + 10log( 41.32) = 27.16 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 41.13 ) = 27.14 dBm > 19.16dBm.
2. 11dBm + 10log( 40.75 ) = 27.10 dBm > 19.16dBm.
3. 11dBm + 10log( 41.18 ) = 27.15 dBm > 19.31dBm.
4. 11dBm + 10log( 41.14 ) = 27.14 dBm > 19.31dBm.
5. 11dBm + 10log( 41.49 ) = 27.18 dBm > 19.31dBm.

### 802.11ac (20MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 52 | 5260 | 12.52 | 12.09 | 12.32 | 12.16 | 67.55 | 18.30 | 19.16 | Pass |
| 60 | 5300 | 12.60 | 12.19 | 12.35 | 12.17 | 68.415 | 18.35 | 19.16 | Pass |
| 64 | 5320 | 12.58 | 12.32 | 12.45 | 12.20 | 69.349 | 18.41 | 19.16 | Pass |
| 100 | 5500 | 12.55 | 11.99 | 12.86 | 12.13 | 69.451 | 18.42 | 19.31 | Pass |
| 116 | 5580 | 12.50 | 12.05 | 12.97 | 12.16 | 70.074 | 18.46 | 19.31 | Pass |
| 140 | 5700 | 12.55 | 12.02 | 12.80 | 12.21 | 69.6 | 18.43 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 21.47) = 24.32 dBm > 19.16dBm.
2. 11dBm + 10log( 21.25) = 24.27 dBm > 19.16dBm.
3. 11dBm + 10log( 21.56) = 24.34 dBm > 19.16dBm.
4. 11dBm + 10log( 21.32) = 24.29 dBm > 19.31dBm.
5. 11dBm + 10log( 21.47) = 24.32 dBm > 19.31dBm.
6. 11dBm + 10log( 21.47) = 24.32 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 21.22 ) = 24.27 dBm > 19.16dBm.
2. 11dBm + 10log( 21.55 ) = 24.33 dBm > 19.16dBm.
3. 11dBm + 10log( 21.28 ) = 24.28 dBm > 19.16dBm.
4. 11dBm + 10log( 21.37 ) = 24.30 dBm > 19.31dBm.
5. 11dBm + 10log( 21.41 ) = 24.31 dBm > 19.31dBm.
6. 11dBm + 10log( 21.36 ) = 24.30 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 21.09) = 24.24 dBm > 19.16dBm.
2. 11dBm + 10log( 21.5 ) = 24.32 dBm > 19.16dBm.
3. 11dBm + 10log( 21.55) = 24.33 dBm > 19.16dBm.
4. 11dBm + 10log( 21.26) = 24.28 dBm > 19.31dBm.
5. 11dBm + 10log( 21.26) = 24.28 dBm > 19.31dBm.
6. 11dBm + 10log( 21.34) = 24.29 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 21.42 ) = 24.31 dBm > 19.16dBm.
2. 11dBm + 10log( 21.48 ) = 24.32 dBm > 19.16dBm.
3. 11dBm + 10log( 21.56 ) = 24.34 dBm > 19.16dBm.
4. 11dBm + 10log( 21.33 ) = 24.29 dBm > 19.31dBm.
5. 11dBm + 10log( 21.4 ) = 24.30 dBm > 19.31dBm.
6. 11dBm + 10log( 21.47 ) = 24.32 dBm > 19.31dBm.

### 802.11ac (40MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 54 | 5270 | 12.66 | 11.92 | 12.75 | 12.36 | 70.065 | 18.46 | 19.16 | Pass |
| 62 | 5310 | 12.55 | 11.83 | 11.98 | 11.92 | 64.565 | 18.10 | 19.16 | Pass |
| 102 | 5510 | 12.41 | 12.13 | 12.23 | 12.95 | 70.184 | 18.46 | 19.31 | Pass |
| 110 | 5550 | 12.39 | 12.13 | 12.49 | 12.53 | 69.317 | 18.41 | 19.31 | Pass |
| 134 | 5670 | 12.43 | 11.99 | 12.46 | 12.58 | 69.044 | 18.39 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[(10$^{Chain0/20}$ + 10$^{Chain1/20}$+ 10$^{Chain2/20}$+ 10$^{Chain3/20}$)$^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain = 10 log[(10$^{Chain0/20}$ + 10$^{Chain1/20}$+ 10$^{Chain2/20}$+ 10$^{Chain3/20}$)$^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 40.84) = 27.11 dBm > 19.16dBm.
2. 11dBm + 10log( 40.95) = 27.12 dBm > 19.16dBm.
3. 11dBm + 10log( 41.15) = 27.14 dBm > 19.31dBm.
4. 11dBm + 10log( 40.96) = 27.12 dBm > 19.31dBm.
5. 11dBm + 10log( 41.14) = 27.14 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 40.55 ) = 27.08 dBm > 19.16dBm.
2. 11dBm + 10log( 41.09 ) = 27.14 dBm > 19.16dBm.
3. 11dBm + 10log( 41.05 ) = 27.13 dBm > 19.31dBm.
4. 11dBm + 10log( 41.08 ) = 27.14 dBm > 19.31dBm.
5. 11dBm + 10log( 41.37 ) = 27.17 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 41.18) = 27.15 dBm > 19.16dBm.
2. 11dBm + 10log( 40.97) = 27.12 dBm > 19.16dBm.
3. 11dBm + 10log( 41.14) = 27.14 dBm > 19.31dBm.
4. 11dBm + 10log( 41.2 ) = 27.15 dBm > 19.31dBm.
5. 11dBm + 10log( 41.32) = 27.16 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 41.13 ) = 27.14 dBm > 19.16dBm.
2. 11dBm + 10log( 40.75 ) = 27.10 dBm > 19.16dBm.
3. 11dBm + 10log( 41.18 ) = 27.15 dBm > 19.31dBm.
4. 11dBm + 10log( 41.14 ) = 27.14 dBm > 19.31dBm.
5. 11dBm + 10log( 41.49 ) = 27.18 dBm > 19.31dBm.

### 802.11ac (80MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 58 | 5290 | 12.60 | 11.64 | 12.04 | 11.83 | 64.021 | 18.06 | 19.16 | Pass |
| 106 | 5530 | 12.16 | 12.29 | 12.41 | 13.04 | 70.942 | 18.51 | 19.31 | Pass |
| 122 | 5610 | 12.20 | 12.29 | 12.57 | 12.91 | 71.154 | 18.52 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 82.05) = 30.14 dBm > 19.16dBm.
2. 11dBm + 10log( 82.42) = 30.16 dBm > 19.31dBm.
3. 11dBm + 10log( 82.34) = 30.16 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 82.29 ) = 30.15 dBm > 19.16dBm.
2. 11dBm + 10log( 82.62 ) = 30.17 dBm > 19.31dBm.
3. 11dBm + 10log( 82.32 ) = 30.16 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 82.37) = 30.16 dBm > 19.16dBm.
2. 11dBm + 10log( 82.74) = 30.18 dBm > 19.31dBm.
3. 11dBm + 10log( 82.53) = 30.17 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 82.23 ) = 30.15 dBm > 19.16dBm.
2. 11dBm + 10log( 83.28 ) = 30.21 dBm > 19.31dBm.
3. 11dBm + 10log( 82.37 ) = 30.16 dBm > 19.31dBm.

### 802.11ax (20MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 52 | 5260 | 13.20 | 12.74 | 12.94 | 12.82 | 78.508 | 18.95 | 19.16 | Pass |
| 60 | 5300 | 13.22 | 12.83 | 13.00 | 12.84 | 79.36 | 19.00 | 19.16 | Pass |
| 64 | 5320 | 13.23 | 12.96 | 13.07 | 12.83 | 80.271 | 19.05 | 19.16 | Pass |
| 100 | 5500 | 13.20 | 12.68 | 13.53 | 12.81 | 81.069 | 19.09 | 19.31 | Pass |
| 116 | 5580 | 13.16 | 12.73 | 13.65 | 12.80 | 81.68 | 19.12 | 19.31 | Pass |
| 140 | 5700 | 13.19 | 12.68 | 13.47 | 12.88 | 81.022 | 19.09 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 21.47) = 24.32 dBm > 19.16dBm.
2. 11dBm + 10log( 21.25) = 24.27 dBm > 19.16dBm.
3. 11dBm + 10log( 21.56) = 24.34 dBm > 19.16dBm.
4. 11dBm + 10log( 21.32) = 24.29 dBm > 19.31dBm.
5. 11dBm + 10log( 21.47) = 24.32 dBm > 19.31dBm.
6. 11dBm + 10log( 21.47) = 24.32 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 21.22 ) = 24.27 dBm > 19.16dBm.
2. 11dBm + 10log( 21.55 ) = 24.33 dBm > 19.16dBm.
3. 11dBm + 10log( 21.28 ) = 24.28 dBm > 19.16dBm.
4. 11dBm + 10log( 21.37 ) = 24.30 dBm > 19.31dBm.
5. 11dBm + 10log( 21.41 ) = 24.31 dBm > 19.31dBm.
6. 11dBm + 10log( 21.36 ) = 24.30 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 21.09) = 24.24 dBm > 19.16dBm.
2. 11dBm + 10log( 21.5 ) = 24.32 dBm > 19.16dBm.
3. 11dBm + 10log( 21.55) = 24.33 dBm > 19.16dBm.
4. 11dBm + 10log( 21.26) = 24.28 dBm > 19.31dBm.
5. 11dBm + 10log( 21.26) = 24.28 dBm > 19.31dBm.
6. 11dBm + 10log( 21.34) = 24.29 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 21.42 ) = 24.31 dBm > 19.16dBm.
2. 11dBm + 10log( 21.48 ) = 24.32 dBm > 19.16dBm.
3. 11dBm + 10log( 21.56 ) = 24.34 dBm > 19.16dBm.
4. 11dBm + 10log( 21.33 ) = 24.29 dBm > 19.31dBm.
5. 11dBm + 10log( 21.4 ) = 24.30 dBm > 19.31dBm.
6. 11dBm + 10log( 21.47 ) = 24.32 dBm > 19.31dBm.

### 802.11ax (40MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 54 | 5270 | 13.27 | 12.56 | 13.36 | 13.03 | **81.031** | 19.09 | 19.16 | Pass |
| 62 | 5310 | 13.21 | 12.47 | 12.67 | 12.58 | 75.208 | 18.76 | 19.16 | Pass |
| 102 | 5510 | 13.05 | 12.82 | 12.88 | 13.61 | 81.697 | 19.12 | 19.31 | Pass |
| 110 | 5550 | 13.01 | 12.78 | 13.17 | 13.15 | 80.369 | 19.05 | 19.31 | Pass |
| 134 | 5670 | 13.09 | 12.65 | 13.14 | 13.26 | 80.568 | 19.06 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 40.84) = 27.11 dBm > 19.16dBm.
2. 11dBm + 10log( 40.95) = 27.12 dBm > 19.16dBm.
3. 11dBm + 10log( 41.15) = 27.14 dBm > 19.31dBm.
4. 11dBm + 10log( 40.96) = 27.12 dBm > 19.31dBm.
5. 11dBm + 10log( 41.14) = 27.14 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 40.55 ) = 27.08 dBm > 19.16dBm.
2. 11dBm + 10log( 41.09 ) = 27.14 dBm > 19.16dBm.
3. 11dBm + 10log( 41.05 ) = 27.13 dBm > 19.31dBm.
4. 11dBm + 10log( 41.08 ) = 27.14 dBm > 19.31dBm.
5. 11dBm + 10log( 41.37 ) = 27.17 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 41.18) = 27.15 dBm > 19.16dBm.
2. 11dBm + 10log( 40.97) = 27.12 dBm > 19.16dBm.
3. 11dBm + 10log( 41.14) = 27.14 dBm > 19.31dBm.
4. 11dBm + 10log( 41.2 ) = 27.15 dBm > 19.31dBm.
5. 11dBm + 10log( 41.32) = 27.16 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 41.13 ) = 27.14 dBm > 19.16dBm.
2. 11dBm + 10log( 40.75 ) = 27.10 dBm > 19.16dBm.
3. 11dBm + 10log( 41.18 ) = 27.15 dBm > 19.31dBm.
4. 11dBm + 10log( 41.14 ) = 27.14 dBm > 19.31dBm.
5. 11dBm + 10log( 41.49 ) = 27.18 dBm > 19.31dBm.

### 802.11ax (80MHz)

| CHAN. | FREQ. (MHz) | Maximum Conducted Power (dBm) | | | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass/ Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | | |
| 58 | 5290 | 13.23 | 12.33 | 12.71 | 12.47 | 74.462 | 18.72 | 19.16 | Pass |
| 106 | 5530 | 12.77 | 12.92 | 13.09 | 13.66 | 82.11 | 19.14 | 19.31 | Pass |
| 122 | 5610 | 12.79 | 12.93 | 13.12 | 13.62 | **82.17** | 19.15 | 19.31 | Pass |

**NOTE:**

**For U-NII-2A:**

Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.84dBi > 6dBi, so the power limit shall be reduced to 24-(10.84-6) = 19.16dBm.

**For U-NII-2C:**

Directional gain =10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] =10.69dBi > 6dBi, so the power limit shall be reduced to 24-(10.69-6) = 19.31dBm.

**For U-NII-2A, U-NII-2C Band:**

**Chain 0**

1. 11dBm + 10log( 82.05) = 30.14 dBm > 19.16dBm.
2. 11dBm + 10log( 82.42) = 30.16 dBm > 19.31dBm.
3. 11dBm + 10log( 82.34) = 30.16 dBm > 19.31dBm.

**Chain 1**

1. 11dBm + 10log( 82.29 ) = 30.15 dBm > 19.16dBm.
2. 11dBm + 10log( 82.62 ) = 30.17 dBm > 19.31dBm.
3. 11dBm + 10log( 82.32 ) = 30.16 dBm > 19.31dBm.

**Chain 2**

1. 11dBm + 10log( 82.37) = 30.16 dBm > 19.16dBm.
2. 11dBm + 10log( 82.74) = 30.18 dBm > 19.31dBm.
3. 11dBm + 10log( 82.53) = 30.17 dBm > 19.31dBm.

**Chain 3**

1. 11dBm + 10log( 82.23 ) = 30.15 dBm > 19.16dBm.
2. 11dBm + 10log( 83.28 ) = 30.21 dBm > 19.31dBm.
3. 11dBm + 10log( 82.37 ) = 30.16 dBm > 19.31dBm.

## 26dB Bandwidth:

### 802.11a

| Channel | Channel Frequency (MHz) | 26dBc Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 |
| 52 | 5260 | 19.46 | 19.41 | 19.33 | 19.29 |
| 60 | 5300 | 19.4 | 19.36 | 19.44 | 19.37 |
| 64 | 5320 | 19.48 | 19.35 | 19.33 | 19.37 |
| 100 | 5500 | 19.56 | 19.48 | 19.68 | 19.54 |
| 116 | 5580 | 19.53 | 19.59 | 19.59 | 19.61 |
| 140 | 5700 | 19.53 | 19.57 | 19.56 | 19.65 |

### 802.11ax (20MHz)

| Channel | Channel Frequency (MHz) | 26dBc Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 |
| 52 | 5260 | 21.47 | 21.22 | 21.09 | 21.42 |
| 60 | 5300 | 21.25 | 21.55 | 21.5 | 21.48 |
| 64 | 5320 | 21.56 | 21.28 | 21.55 | 21.56 |
| 100 | 5500 | 21.32 | 21.37 | 21.26 | 21.33 |
| 116 | 5580 | 21.47 | 21.41 | 21.26 | 21.4 |
| 140 | 5700 | 21.47 | 21.36 | 21.34 | 21.47 |

### 802.11ax (40MHz)

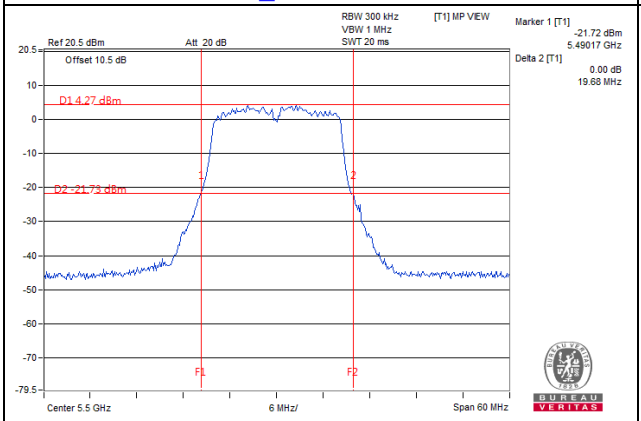
| Channel | Channel Frequency (MHz) | 26dBc Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 |
| 54 | 5270 | 40.84 | 40.55 | 41.18 | 41.13 |
| 62 | 5310 | 40.95 | 41.09 | 40.97 | 40.75 |
| 102 | 5510 | 41.15 | 41.05 | 41.14 | 41.18 |
| 110 | 5550 | 40.96 | 41.08 | 41.2 | 41.14 |
| 134 | 5670 | 41.14 | 41.37 | 41.32 | 41.49 |

### 802.11ax (80MHz)

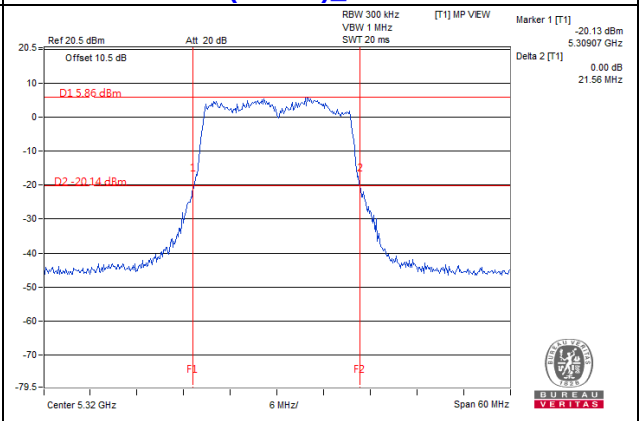
| Channel | Channel Frequency (MHz) | 26dBc Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 3 |
| 58 | 5290 | 82.05 | 82.29 | 82.37 | 82.23 |
| 106 | 5530 | 82.42 | 82.62 | 82.74 | 83.28 |
| 122 | 5610 | 82.34 | 82.32 | 82.53 | 82.37 |

## Spectrum Plot of Worst Value

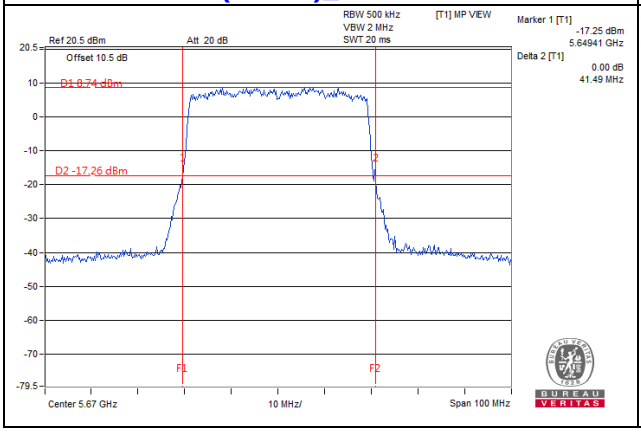
### 802.11a_Chain 2 / CH100



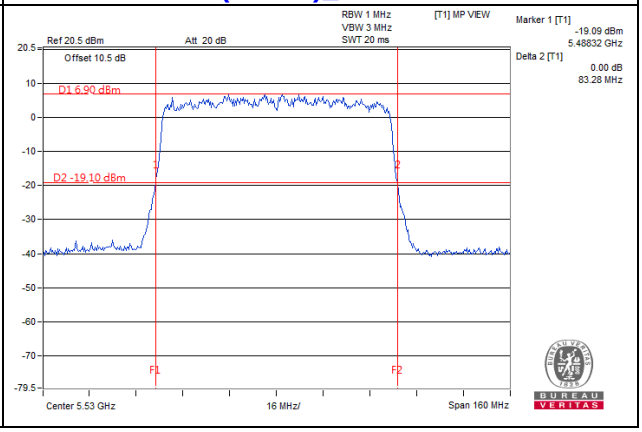

### 802.11ax (20MHz)_Chain 0 / CH64




### 802.11ax (40MHz)_Chain 3 / CH134

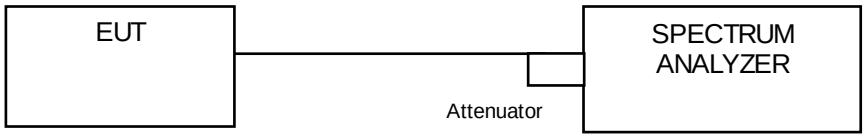



### 802.11ax (80MHz)_Chain 3 / CH106



## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Setup




### 4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.4.4 Test Results

802.11a

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | CHAIN 0 | CHAIN 1 | CHAIN 2 | CHAIN 3 |
| 52 | 5260 | 16.44 | 16.44 | 16.44 | 16.44 |
| 60 | 5300 | 16.44 | 16.44 | 16.44 | 16.44 |
| 64 | 5320 | 16.44 | 16.44 | 16.44 | 16.44 |
| 100 | 5500 | 16.44 | 16.44 | 16.44 | 16.44 |
| 116 | 5580 | 16.44 | 16.32 | 16.44 | 16.44 |
| 140 | 5700 | 16.44 | 16.44 | 16.44 | 16.44 |

802.11ax (20MHz)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | CHAIN 0 | CHAIN 1 | CHAIN 2 | CHAIN 3 |
| 52 | 5260 | 18.96 | 18.84 | 18.84 | 18.84 |
| 60 | 5300 | 18.96 | 19.08 | 18.96 | 19.08 |
| 64 | 5320 | 18.96 | 19.08 | 18.96 | 18.96 |
| 100 | 5500 | 18.96 | 18.96 | 18.96 | 18.96 |
| 116 | 5580 | 18.96 | 18.96 | 18.96 | 18.96 |
| 140 | 5700 | 18.96 | 18.96 | 18.96 | 18.96 |

802.11ax (40MHz)

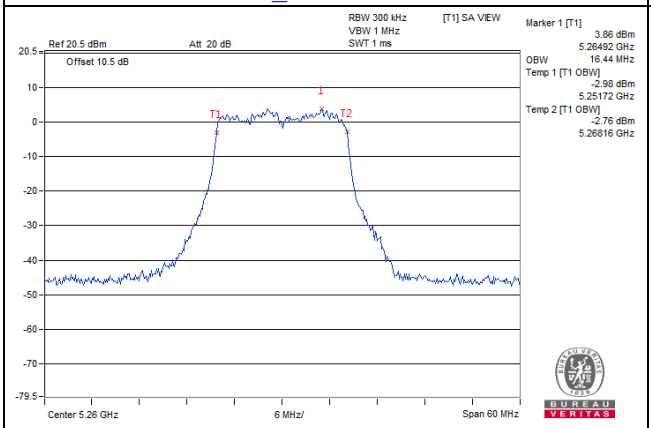
| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | CHAIN 0 | CHAIN 1 | CHAIN 2 | CHAIN 3 |
| 54 | 5270 | 37.8 | 37.8 | 37.8 | 37.8 |
| 62 | 5310 | 37.6 | 37.8 | 37.6 | 37.8 |
| 102 | 5510 | 37.8 | 37.8 | 37.8 | 37.8 |
| 110 | 5550 | 37.8 | 37.8 | 37.8 | 37.8 |
| 134 | 5670 | 37.8 | 37.8 | 37.8 | 37.8 |

802.11ac (80MHz)

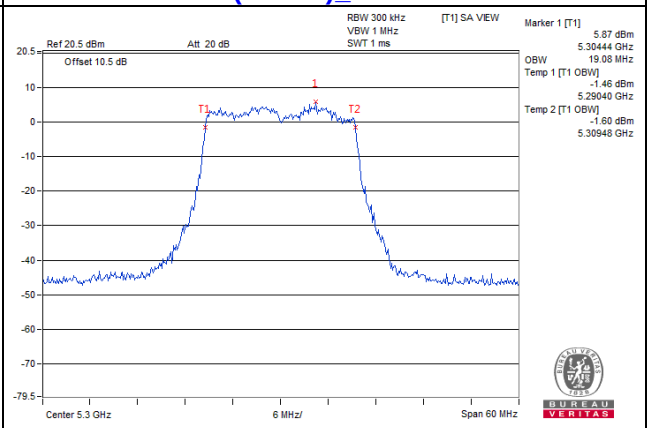
| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | | | |
|---|---|---|---|---|---|
| | | CHAIN 0 | CHAIN 1 | CHAIN 2 | CHAIN 3 |
| 58 | 5290 | 77.04 | 77.04 | 77.04 | 77.04 |
| 106 | 5530 | 77.28 | 77.28 | 77.28 | 77.28 |
| 122 | 5610 | 77.52 | 77.28 | 77.28 | 77.52 |

## Spectrum Plot of Worst Value

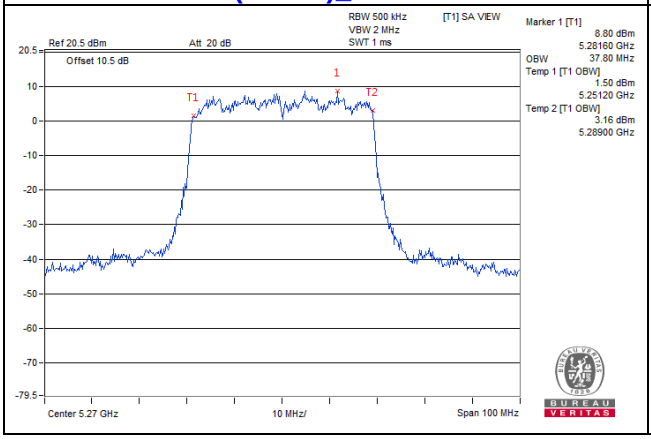
### 802.11a_Chain 0 / CH52



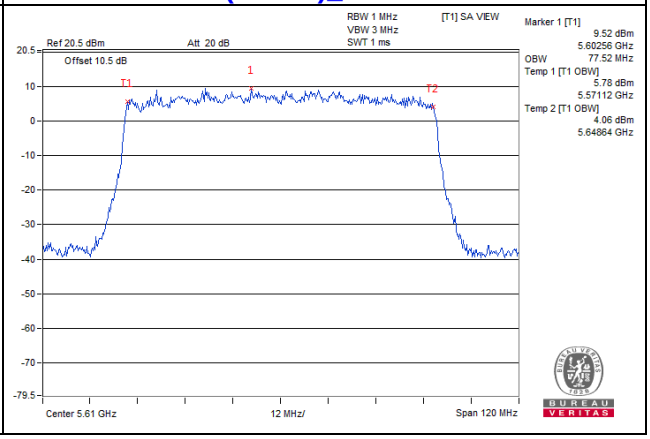

### 802.11ax (20MHz)_Chain 1 / CH60




### 802.11ax (40MHz)_Chain 0 / CH54




### 802.11ax (80MHz)_Chain 0 / CH122

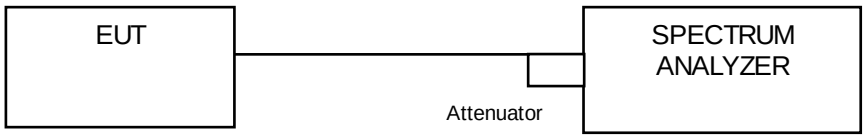


## 4.5 Peak Power Spectral Density Measurement

### 4.5.1 Limits of Peak Power Spectral Density Measurement

| Operation Band | EUT Category | | Limit |
|---|---|---|---|
| U-NII-1 | | Outdoor Access Point | 17dBm/ MHz |
| | | Fixed point-to-point Access Point | |
| | | Indoor Access Point | |
| | | Client device | 11dBm/ MHz |
| U-NII-2A | √ | | 11dBm/ MHz |
| U-NII-2C | √ | | 11dBm/ MHz |
| U-NII-3 | | | 30dBm/ 500kHz |

### 4.5.2 Test Setup




### 4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 Test Procedure

Using method SA-2
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value and add 10 log (1/duty cycle)

### 4.5.5 Deviation from Test Standard

No deviation.

### 4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

**802.11a**

| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm) | | | | Duty Factor (dB) | Total PSD With Duty Factor (dBm) | MAX. Limit (dBm) | Pass / Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 2 | | | | |
| 52 | 5260 | -0.67 | -0.64 | -0.67 | -0.65 | 0.25 | 5.61 | 6.16 | Pass |
| 60 | 5300 | -0.34 | -0.52 | -0.49 | -0.47 | 0.25 | 5.81 | 6.16 | Pass |
| 64 | 5320 | -0.62 | -0.55 | -0.58 | -0.61 | 0.25 | 5.68 | 6.16 | Pass |
| 100 | 5500 | -0.54 | -0.57 | -0.54 | -0.60 | 0.25 | 5.71 | 6.31 | Pass |
| 116 | 5580 | -0.26 | -0.21 | -0.26 | -0.22 | 0.25 | 6.03 | 6.31 | Pass |
| 140 | 5700 | -0.60 | -0.60 | -0.56 | -0.58 | 0.25 | 5.68 | 6.31 | Pass |

**Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. **<For U-NII-2A Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.84dBi > 6dBi, so the power density limit shall be reduced to 11-(10.84-6) = 6.16dBm.
**<For U-NII-2C Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.69dBi > 6dBi, so the power density limit shall be reduced to 11-(10.69-6) = 6.31Bm

3. Refer to section 3.3 for duty cycle spectrum plot.

**802.11ax (20MHz)**

| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm) | | | | Duty Factor (dB) | Total PSD With Duty Factor (dBm) | MAX. Limit (dBm) | Pass / Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 2 | | | | |
| 52 | 5260 | -0.66 | -0.72 | -0.52 | -0.61 | 0.13 | 5.52 | 6.16 | Pass |
| 60 | 5300 | -0.60 | -0.67 | -0.66 | -0.61 | 0.13 | 5.51 | 6.16 | Pass |
| 64 | 5320 | -0.81 | -0.77 | -0.85 | -0.70 | 0.13 | 5.37 | 6.16 | Pass |
| 100 | 5500 | -0.72 | -0.73 | -0.79 | -0.75 | 0.13 | 5.40 | 6.31 | Pass |
| 116 | 5580 | -0.72 | -0.85 | -0.95 | -0.72 | 0.13 | 5.34 | 6.31 | Pass |
| 140 | 5700 | -0.83 | -1.00 | -1.01 | -1.04 | 0.13 | 5.18 | 6.31 | Pass |

**Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. **<For U-NII-2A Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.84dBi > 6dBi, so the power density limit shall be reduced to 11-(10.84-6) = 6.16dBm.
**<For U-NII-2C Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.69dBi > 6dBi, so the power density limit shall be reduced to 11-(10.69-6) = 6.31Bm

3. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (40MHz)

| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm) | | | | Duty Factor (dB) | Total PSD With Duty Factor (dBm) | MAX. Limit (dBm) | Pass / Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 2 | | | | |
| 54 | 5270 | -0.52 | -0.42 | -0.28 | -0.47 | 0.52 | 6.12 | 6.16 | Pass |
| 62 | 5310 | -2.58 | -2.46 | -2.56 | -2.40 | 0.52 | 4.04 | 6.16 | Pass |
| 102 | 5510 | -0.91 | -0.78 | -0.84 | -0.89 | 0.52 | 5.69 | 6.31 | Pass |
| 110 | 5550 | -0.60 | -0.63 | -0.60 | -0.70 | 0.52 | 5.91 | 6.31 | Pass |
| 134 | 5670 | -0.58 | -0.57 | -0.57 | -0.58 | 0.52 | 5.97 | 6.31 | Pass |

**Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. **<For U-NII-2A Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.84dBi > 6dBi, so the power density limit shall be reduced to 11-(10.84-6) = 6.16dBm.
**<For U-NII-2C Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.69dBi > 6dBi, so the power density limit shall be reduced to 11-(10.69-6) = 6.31Bm

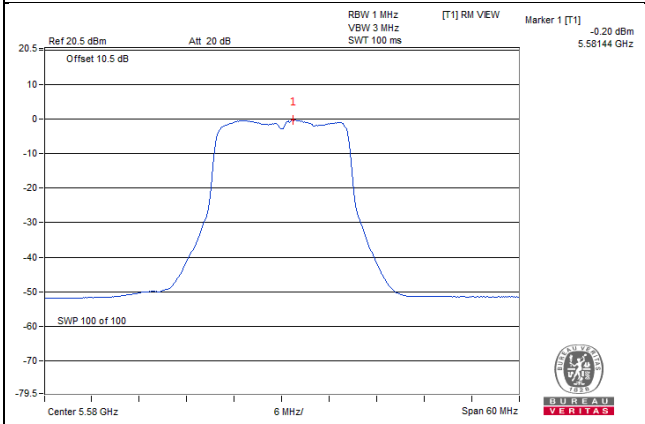
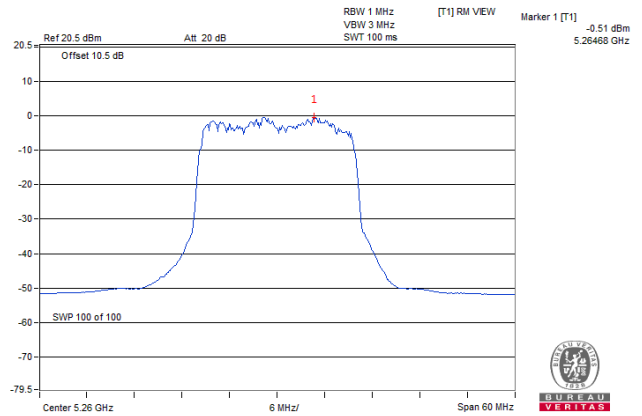
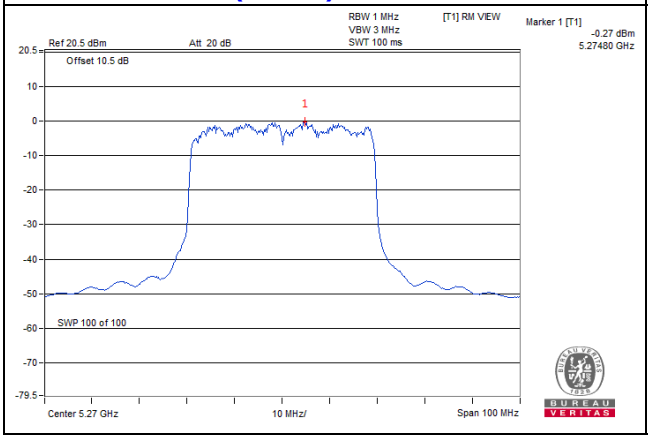
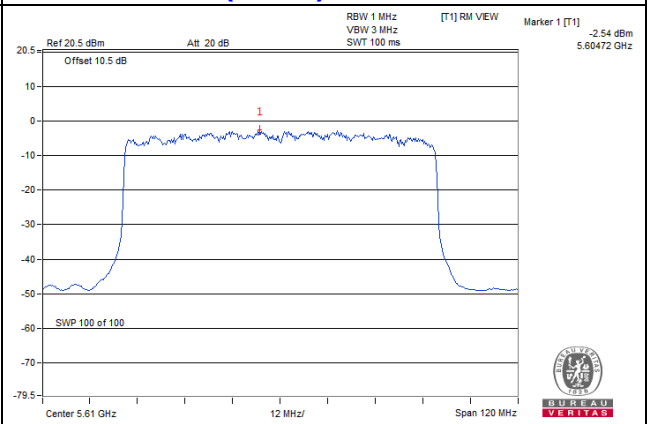
3. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (80MHz)

| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm) | | | | Duty Factor (dB) | Total PSD With Duty Factor (dBm) | MAX. Limit (dBm) | Pass / Fail |
|---|---|---|---|---|---|---|---|---|---|
| | | Chain 0 | Chain 1 | Chain 2 | Chain 2 | | | | |
| 58 | 5290 | -6.82 | -6.85 | -6.59 | -6.86 | 0.12 | -0.63 | 6.16 | Pass |
| 106 | 5530 | -5.89 | -5.72 | -5.90 | -5.85 | 0.12 | 0.31 | 6.31 | Pass |
| 122 | 5610 | -3.00 | -2.55 | -2.97 | -2.89 | 0.12 | 3.30 | 6.31 | Pass |

**Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. **<For U-NII-2A Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.84dBi > 6dBi, so the power density limit shall be reduced to 11-(10.84-6) = 6.16dBm.
**<For U-NII-2C Band>**
Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$+ $10^{Chain2/20}$+ $10^{Chain3/20}$)$^2$ / 4] = 10.69dBi > 6dBi, so the power density limit shall be reduced to 11-(10.69-6) = 6.31Bm

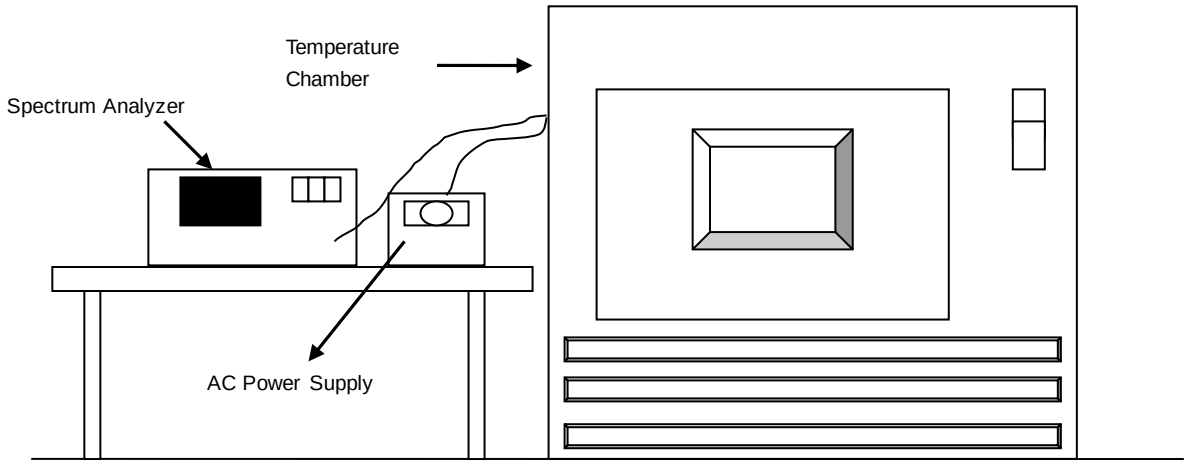
| Spectrum Plot of Worst Value | |
|---|---|
| **802.11a_Chain 1 / CH116** | **802.11ax (20MHz)_Chain 2 / CH52** |
|  |  |
| **802.11ax (40MHz)_Chain 2 / CH54** | **802.11ax (80MHz)_Chain 1 / CH122** |
|  |  |

## 4.6 Frequency Stability Measurement

### 4.6.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

### 4.6.2 Test Setup




### 4.6.3 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|
| ROHDE & SCHWARZ Spectrum Analyzer | FSV40 | 101042 | Sep. 8, 2020 | Sep. 7, 2021 |
| Temperature & Humidity Chamber | MHU-225AU | 920409 | May 22, 2020 | May 21, 2021 |
| DIGITAL POWER METER IDRC | CP-240 | 240515 | Sep. 10, 2020 | Sep. 9, 2021 |
| AC Power Source ExTech | CFW-105 | E000603 | NA | NA |

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

**CDD Mode**

| Frequency Stability Versus Temp. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Operating Frequency: 5260 MHz | | | | | | | | | |
| TEMP. (℃) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail |
| 50 | 120 | 5259.9825 | PASS | 5259.982 | PASS | 5259.98 | PASS | 5259.9841 | PASS |
| 40 | 120 | 5260.0012 | PASS | 5259.9978 | PASS | 5260.0017 | PASS | 5259.9982 | PASS |
| 30 | 120 | 5260.0107 | PASS | 5260.0063 | PASS | 5260.0076 | PASS | 5260.0083 | PASS |
| 20 | 120 | 5260.0255 | PASS | 5260.0255 | PASS | 5260.0251 | PASS | 5260.0243 | PASS |
| 10 | 120 | 5260.0177 | PASS | 5260.0225 | PASS | 5260.0181 | PASS | 5260.0206 | PASS |
| 0 | 120 | 5259.9851 | PASS | 5259.9823 | PASS | 5259.981 | PASS | 5259.9816 | PASS |
| -10 | 120 | 5260.0254 | PASS | 5260.0231 | PASS | 5260.0258 | PASS | 5260.021 | PASS |
| -20 | 120 | 5259.9886 | PASS | 5259.9888 | PASS | 5259.9916 | PASS | 5259.9914 | PASS |
| -30 | 120 | 5260.0255 | PASS | 5260.0212 | PASS | 5260.0229 | PASS | 5260.0234 | PASS |

| Frequency Stability Versus Voltage | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Operating Frequency: 5260 MHz | | | | | | | | | |
| TEMP. (℃) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail | Measured Frequency (MHz) | Pass/Fail |
| 20 | 138 | 5260.0262 | PASS | 5260.0252 | PASS | 5260.0255 | PASS | 5260.025 | PASS |
| | 120 | 5260.0255 | PASS | 5260.0255 | PASS | 5260.0251 | PASS | 5260.0243 | PASS |
| | 102 | 5260.0259 | PASS | 5260.0256 | PASS | 5260.0246 | PASS | 5260.0249 | PASS |

## 5 Pictures of Test Arrangements

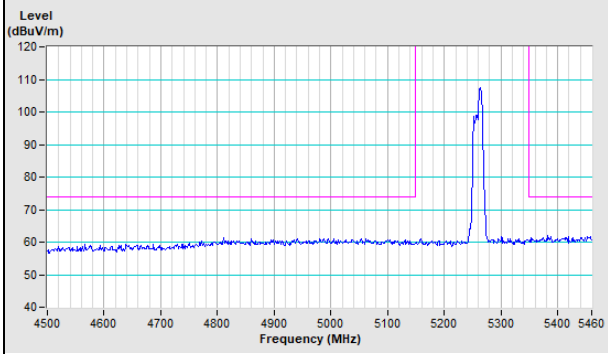
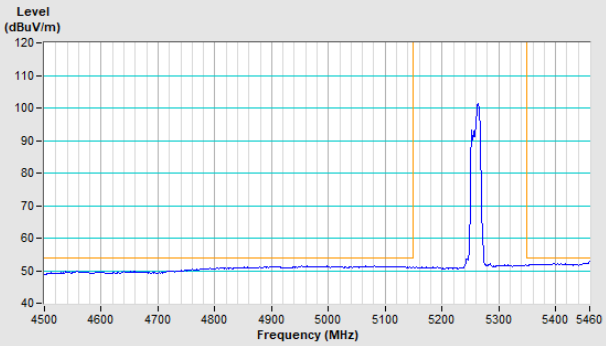
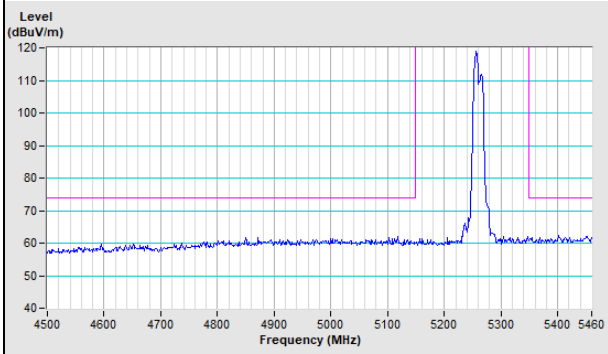
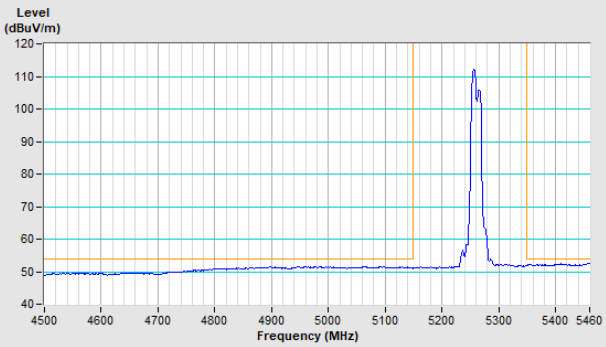
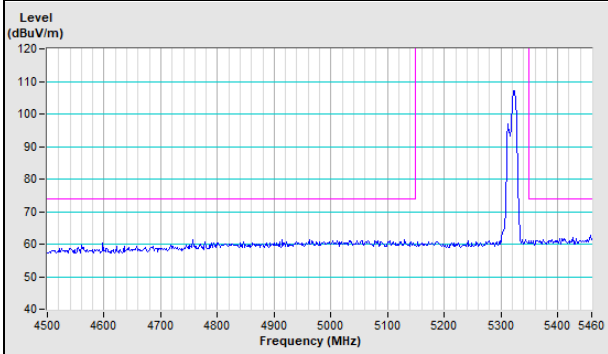
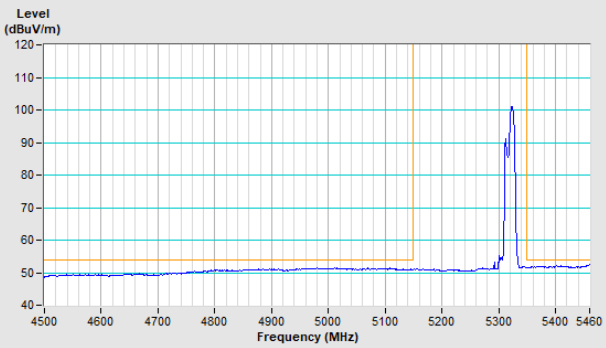
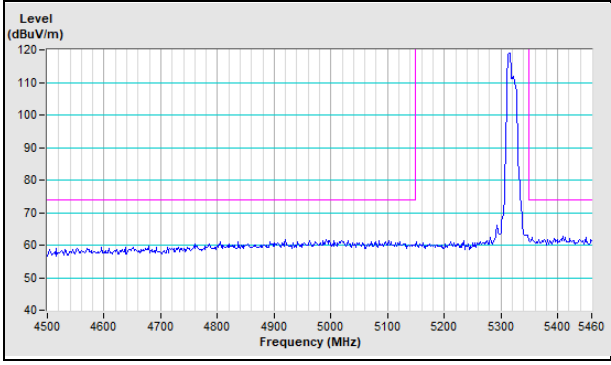
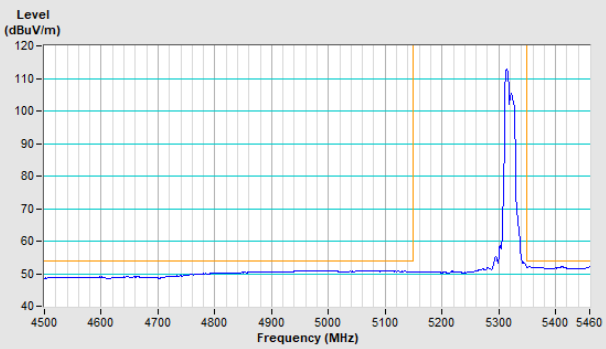
Please refer to the attached file (Test Setup Photo).

**Annex A- Bandedge Measurement**

The test plots shall address as below for reference.

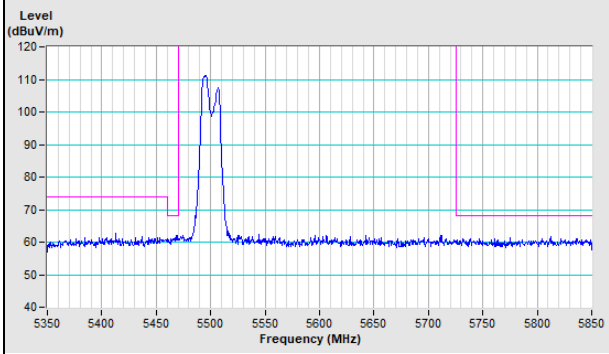
**CDD Mode**

**802.11a**

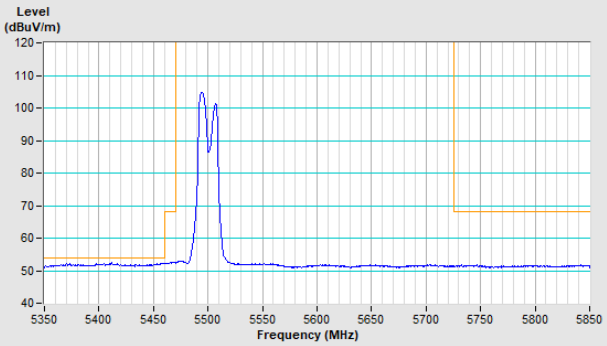
| 802.11a Channel 52 | |
|---|---|
| **Horizontal (Peak)** | **Horizontal (Average)** |
|  |  |
| **Vertical (Peak)** | **Vertical (Average)** |
|  |  |
| **802.11a Channel 64** | |
| **Horizontal (Peak)** | **Horizontal (Average)** |
|  |  |
| **Vertical (Peak)** | **Vertical (Average)** |
|  |  |

## 802.11a Channel 100

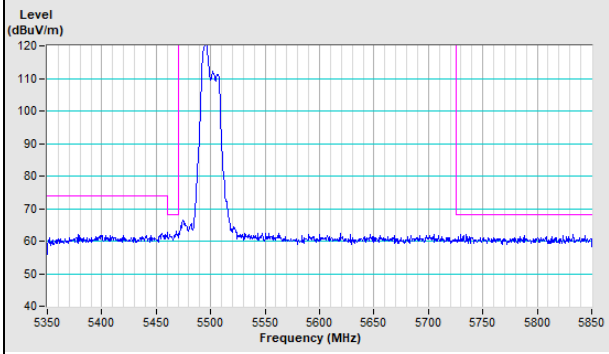
### Horizontal (Peak)



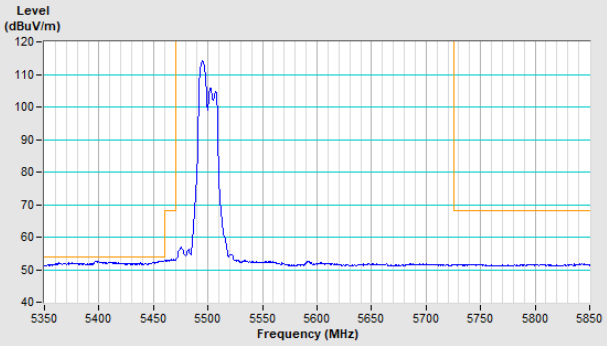

### Horizontal (Average)




### Vertical (Peak)

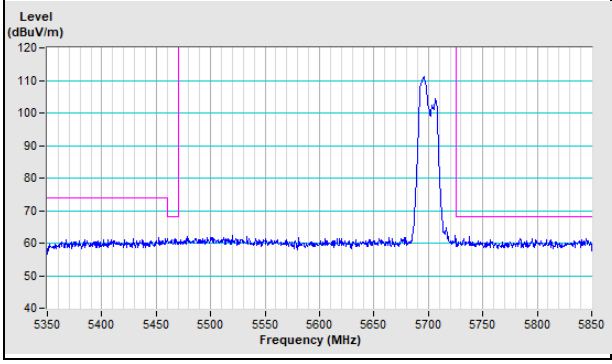



### Vertical (Average)

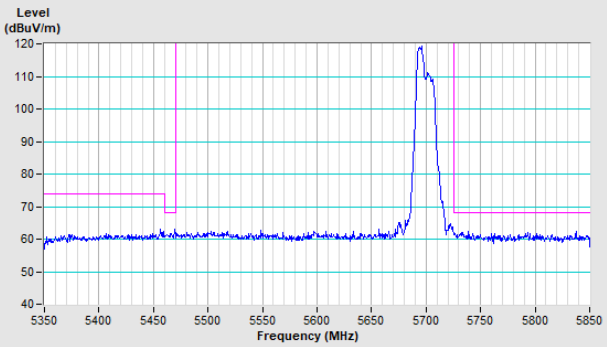



## 802.11a Channel 140

### Horizontal (Peak)

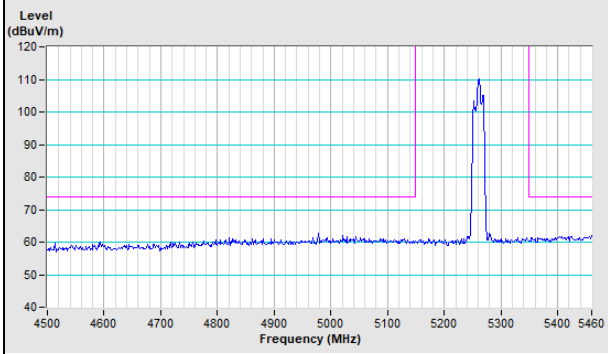



### Vertical (Peak)

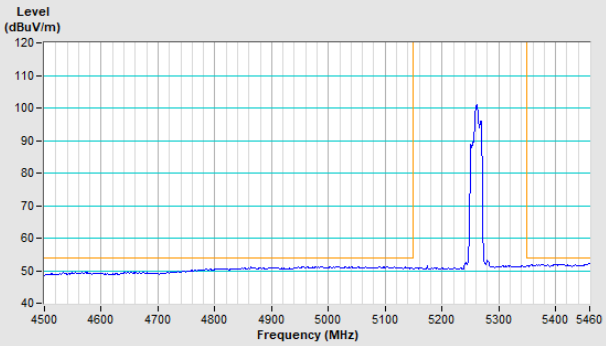


## 802.11ax (20MHz) Channel 52

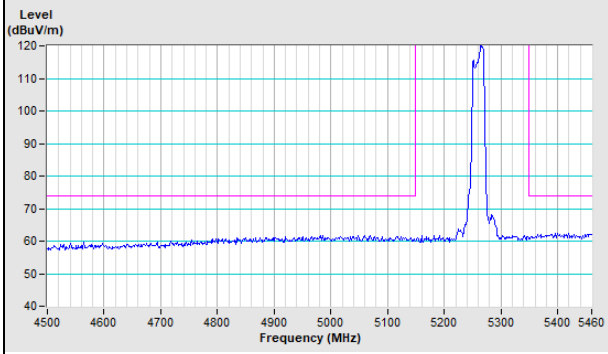
### Horizontal (Peak)



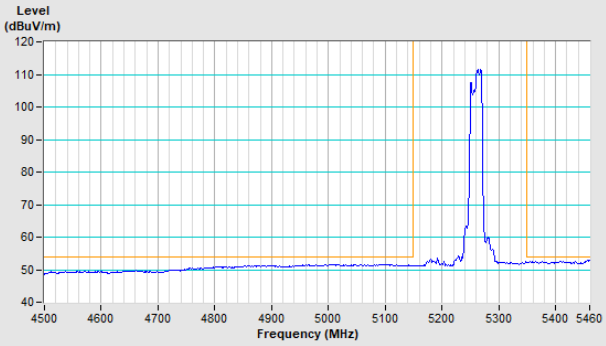

### Horizontal (Average)




### Vertical (Peak)

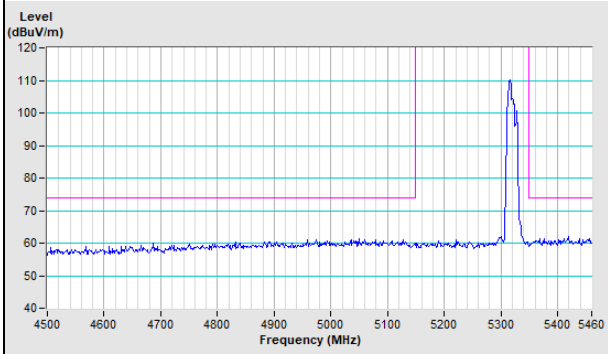



### Vertical (Average)

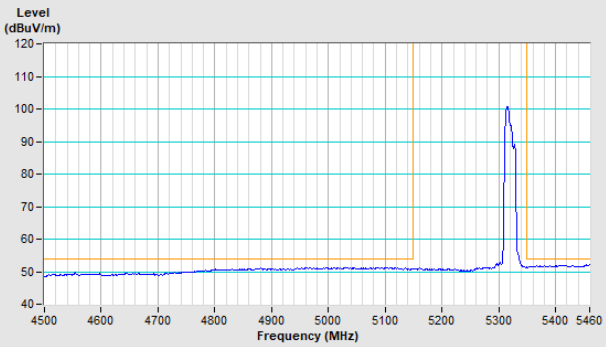



## 802.11ax (20MHz) Channel 64

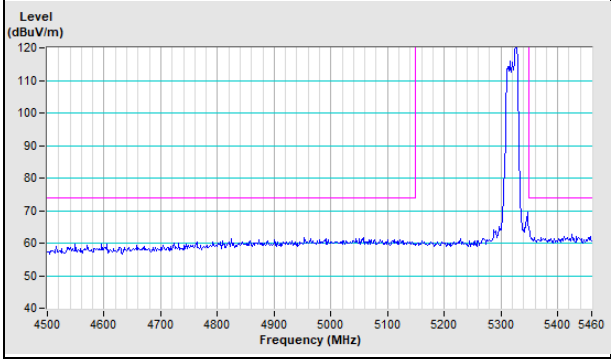
### Horizontal (Peak)



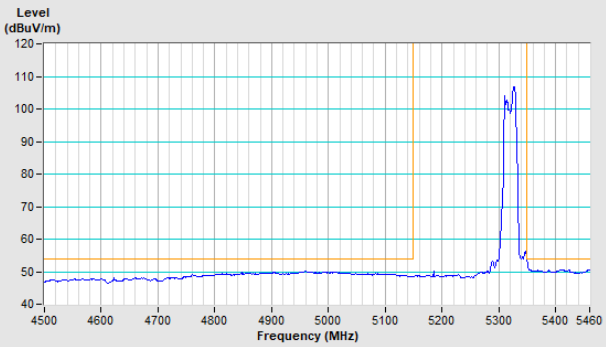

### Horizontal (Average)




### Vertical (Peak)

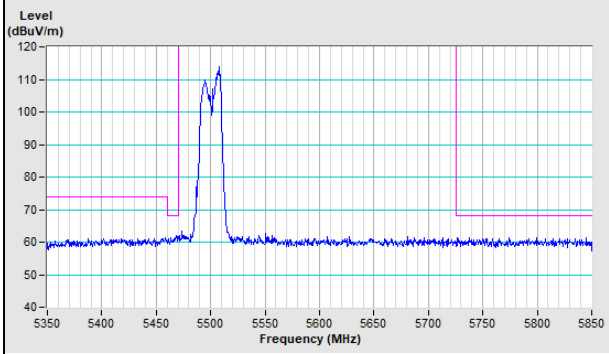



### Vertical (Average)

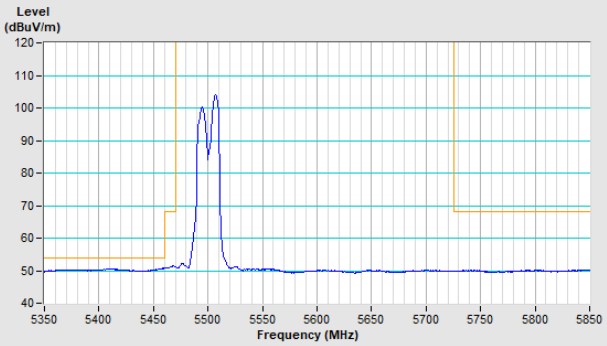


## 802.11ax (20MHz) Channel 100

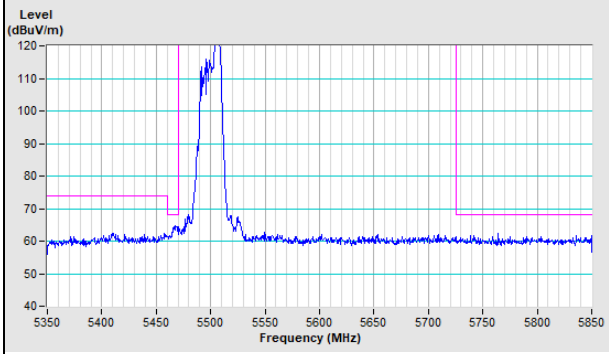
### Horizontal (Peak)



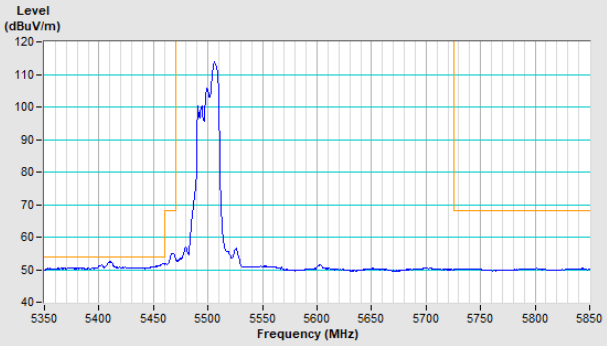

### Horizontal (Average)




### Vertical (Peak)

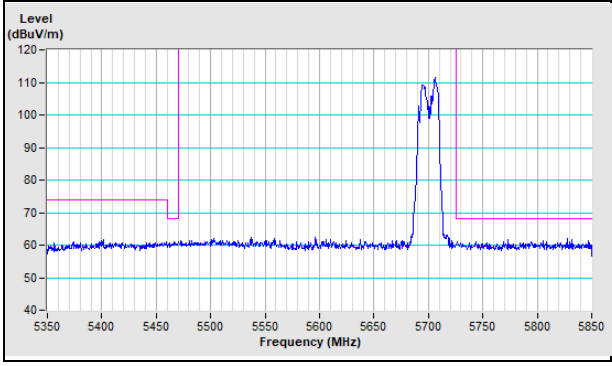



### Vertical (Average)

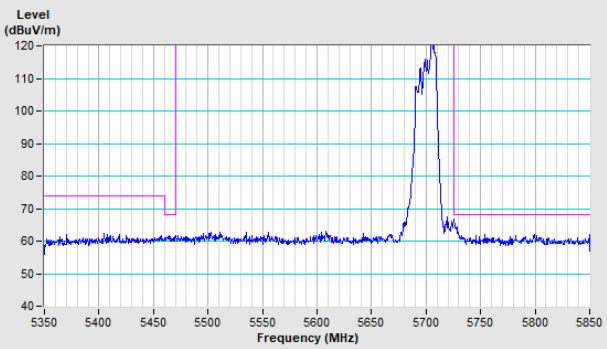



## 802.11ax (20MHz) Channel 140

### Horizontal (Peak)

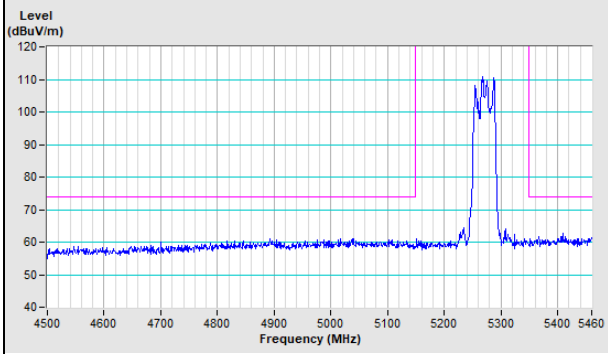



### Vertical (Peak)

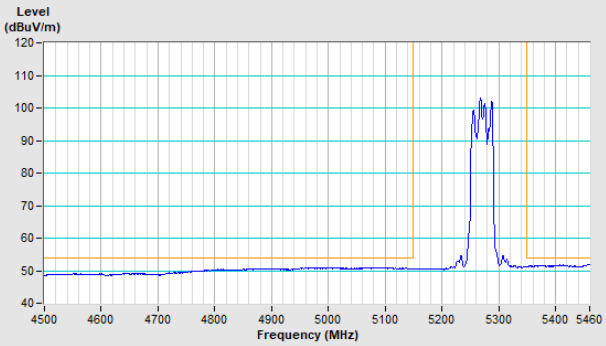


## 802.11ax (40MHz) Channel 54

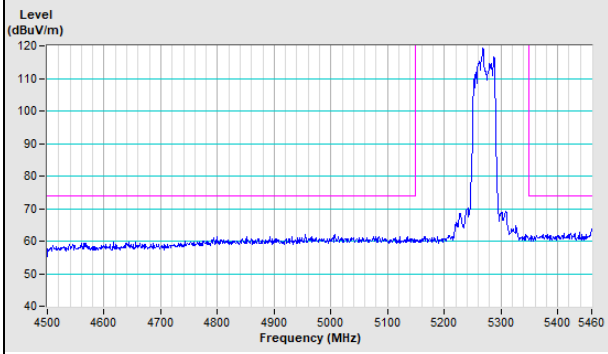
### Horizontal (Peak)



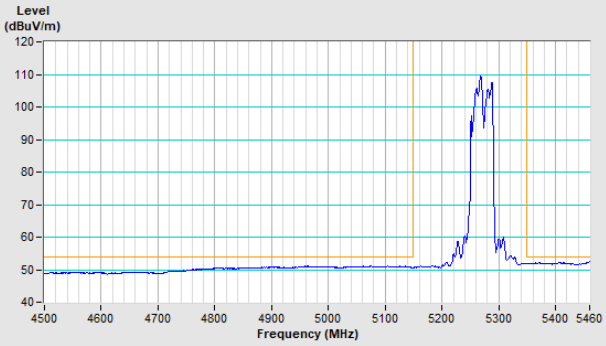

### Horizontal (Average)




### Vertical (Peak)

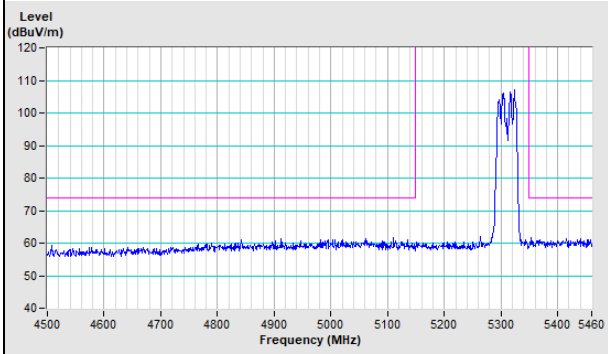



### Vertical (Average)

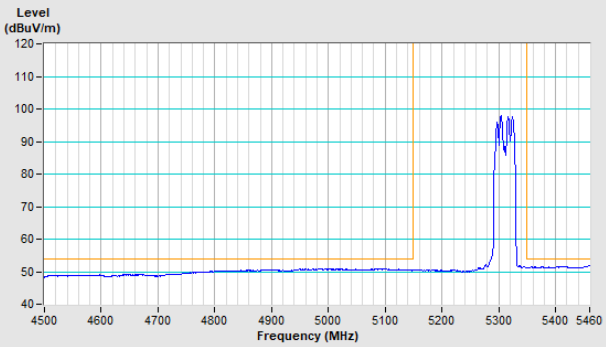



## 802.11ax (40MHz) Channel 62

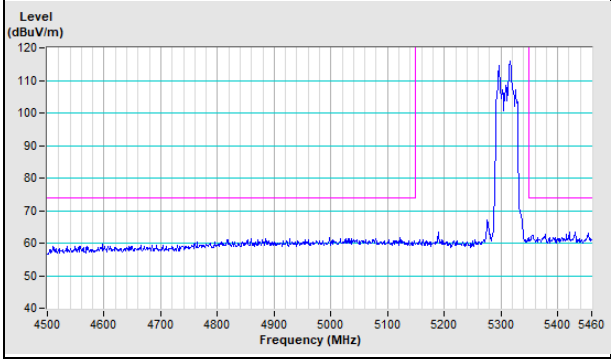
### Horizontal (Peak)



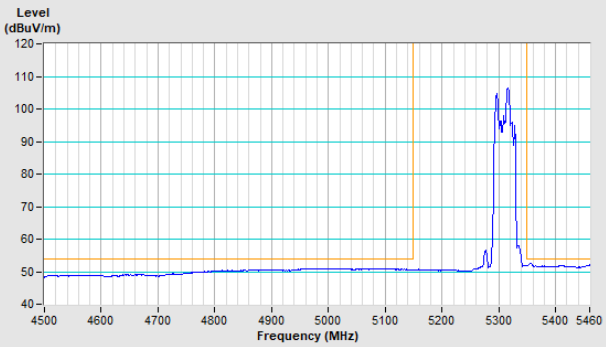

### Horizontal (Average)




### Vertical (Peak)

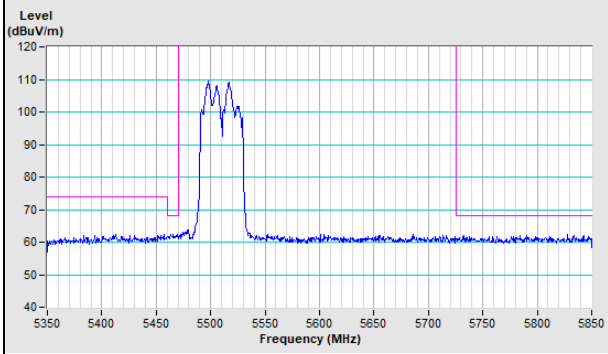



### Vertical (Average)

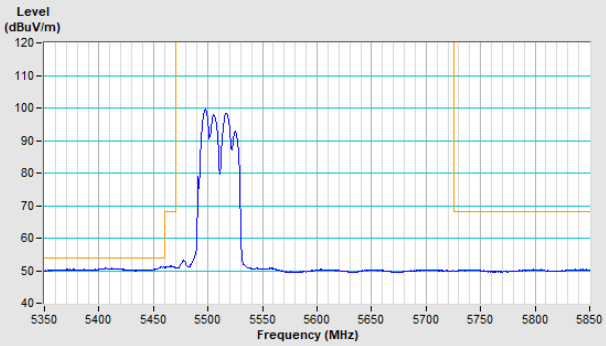


## 802.11ax (40MHz) Channel 102

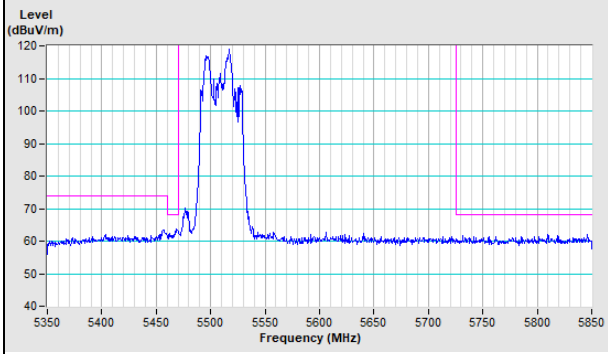
### Horizontal (Peak)



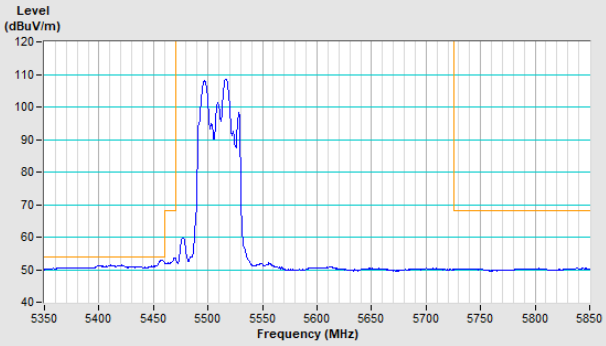

### Horizontal (Average)




### Vertical (Peak)

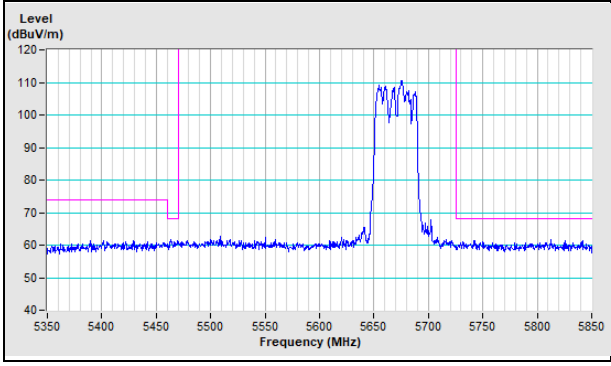



### Vertical (Average)

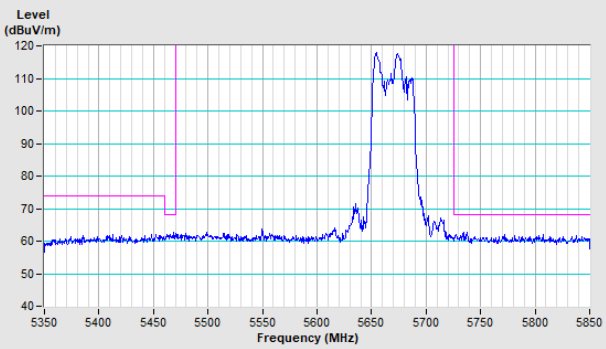



## 802.11ax (40MHz) Channel 134

### Horizontal (Peak)

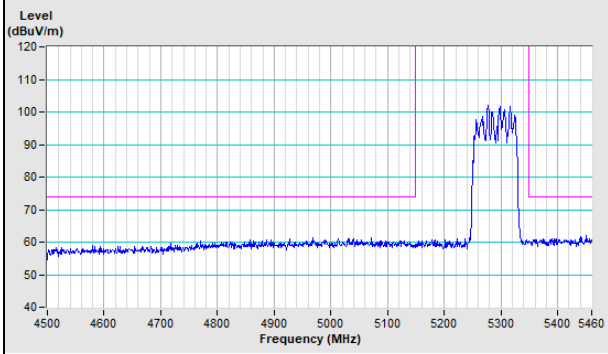



### Vertical (Peak)

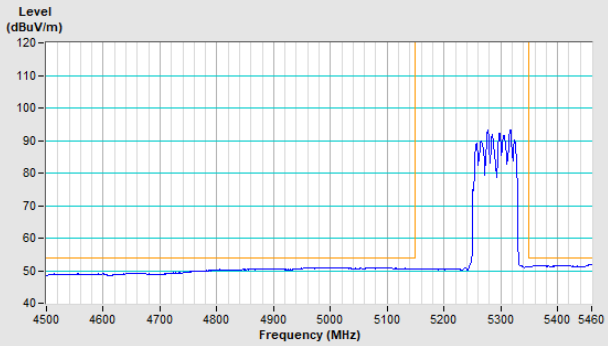


## 802.11ax (80MHz) Channel 58

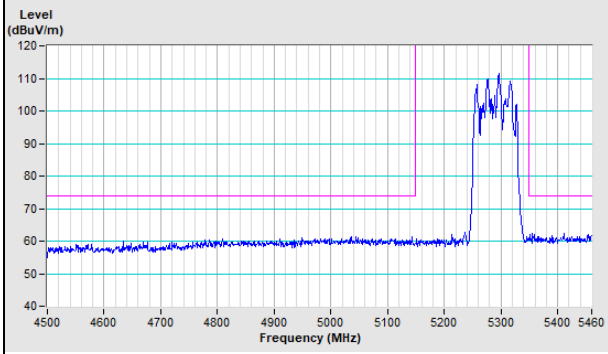
### Horizontal (Peak)



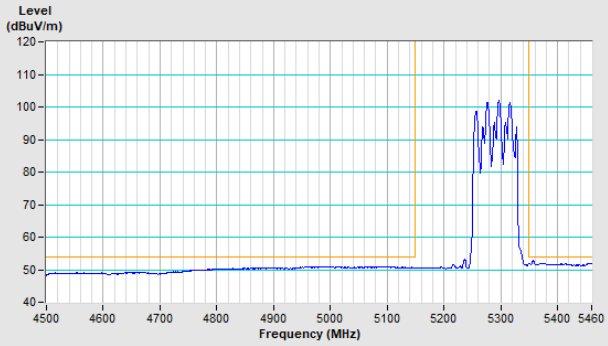

### Horizontal (Average)




### Vertical (Peak)

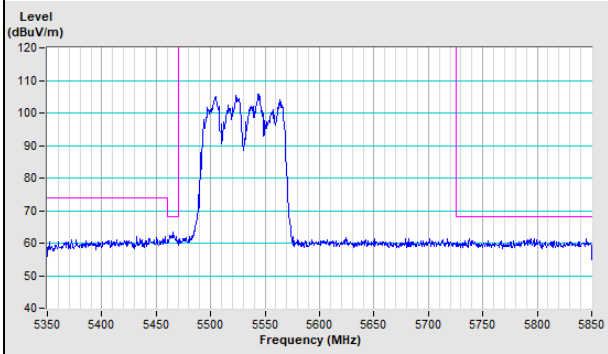



### Vertical (Average)

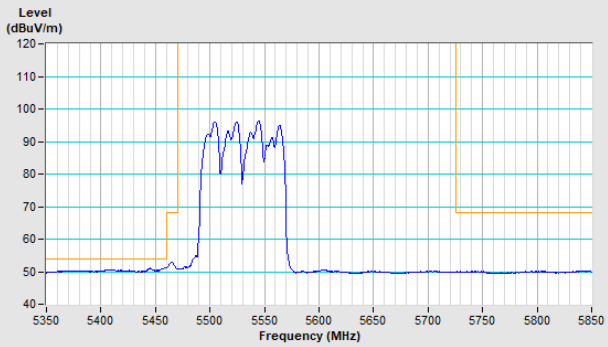



## 802.11ax (80MHz) Channel 106

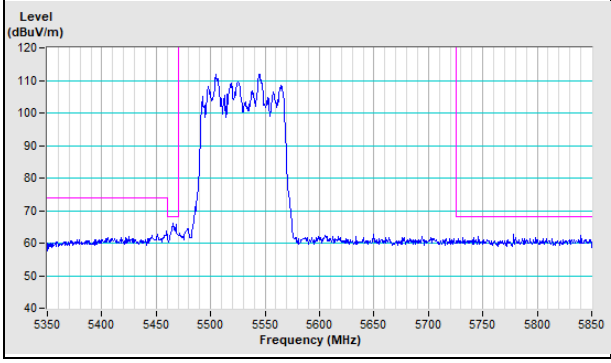
### Horizontal (Peak)



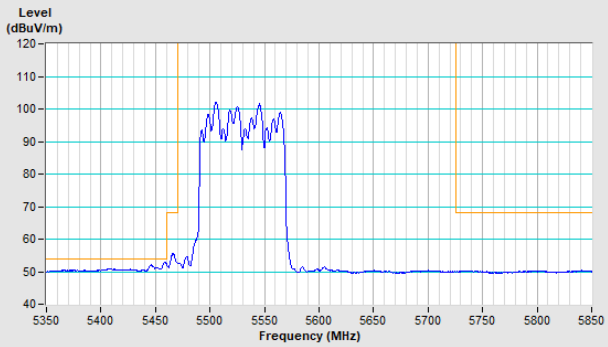

### Horizontal (Average)

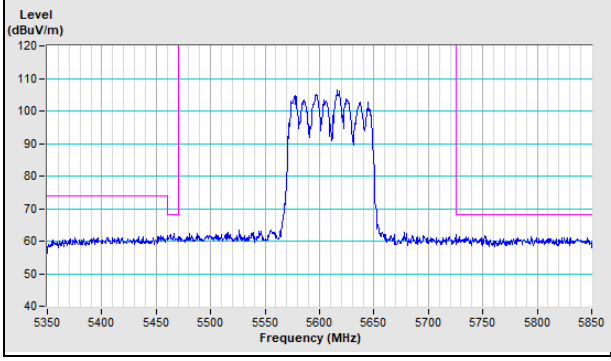
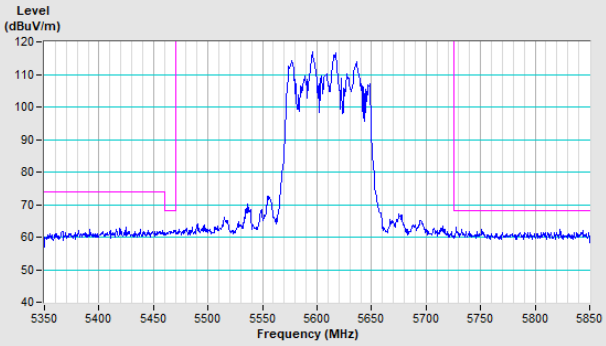



### Vertical (Peak)




### Vertical (Average)

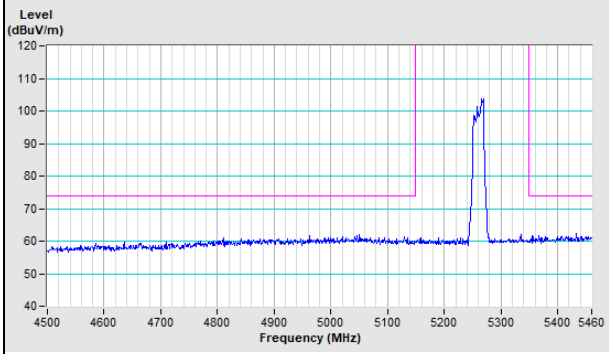


| 802.11ax (80MHz) Channel 122 | |
|---|---|
| **Horizontal (Peak)** | **Vertical (Peak)** |
|  |  |

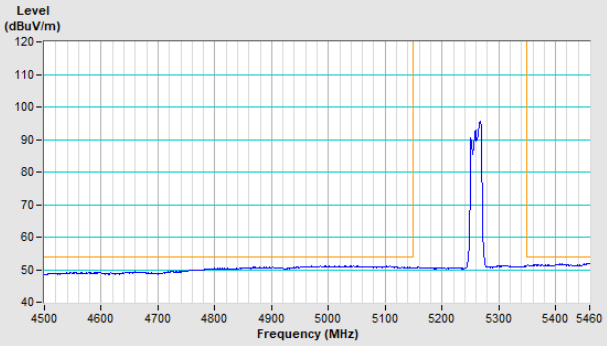
## Beamforming Mode

### 802.11ax (20MHz) Channel 52

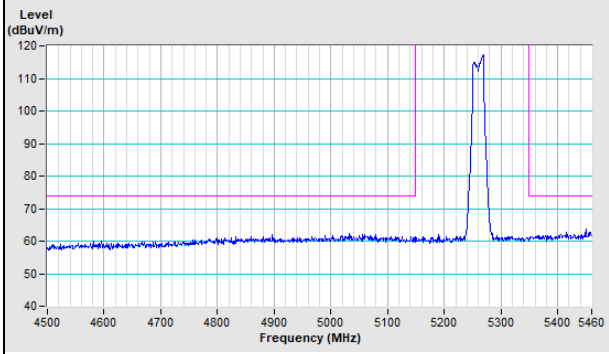
#### Horizontal (Peak)



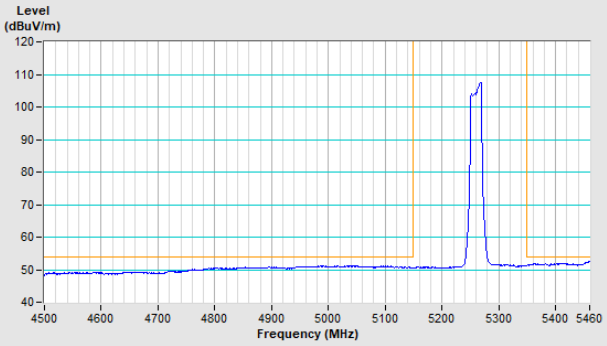

#### Horizontal (Average)




#### Vertical (Peak)

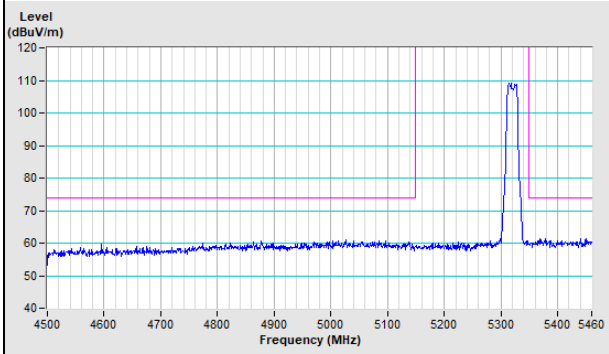



#### Vertical (Average)

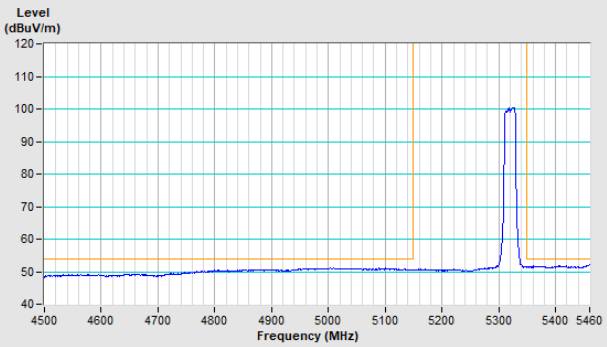



### 802.11ax (20MHz) Channel 64

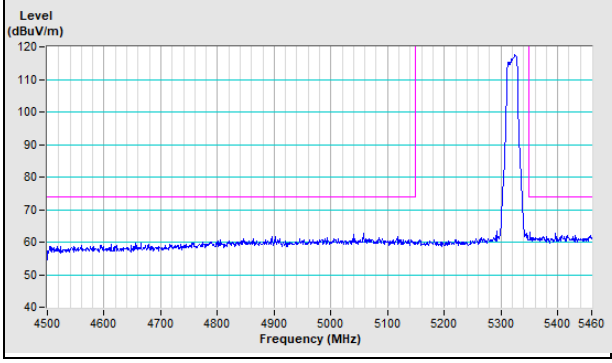
#### Horizontal (Peak)



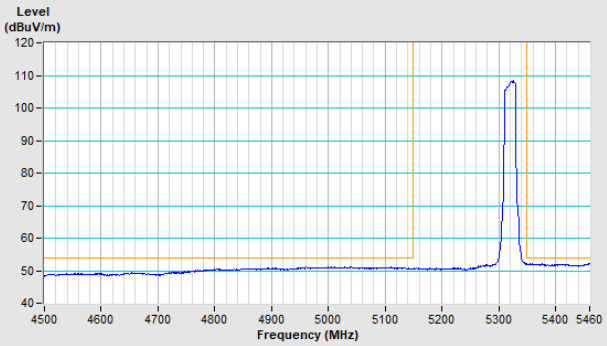

#### Horizontal (Average)




#### Vertical (Peak)

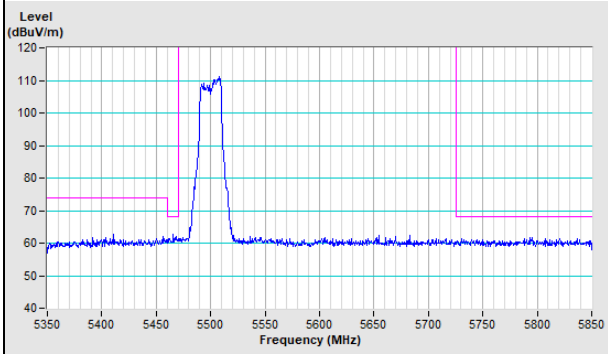



#### Vertical (Average)

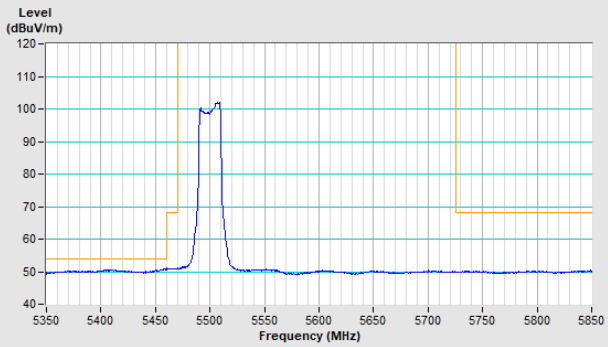


## 802.11ax (20MHz) Channel 100

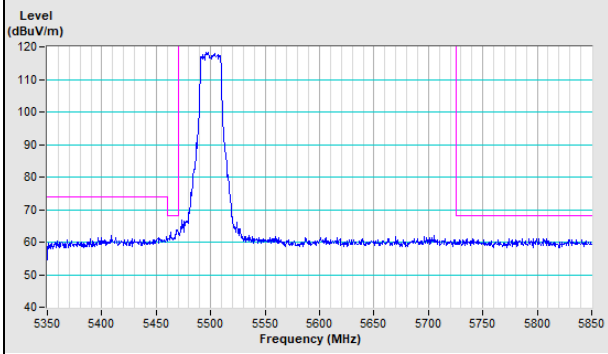
### Horizontal (Peak)



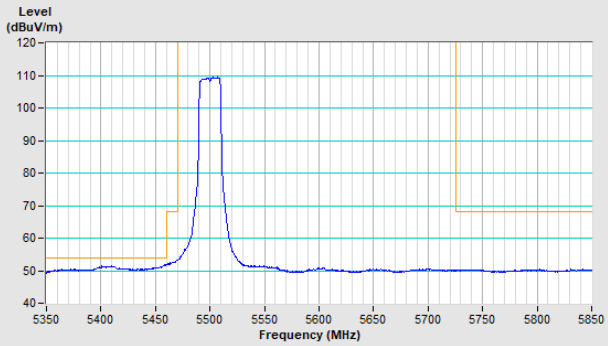

### Horizontal (Average)




### Vertical (Peak)

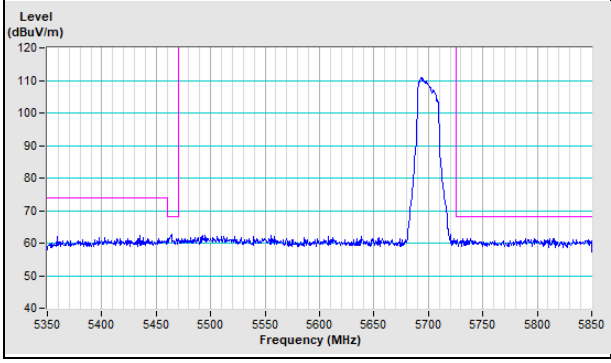



### Vertical (Average)

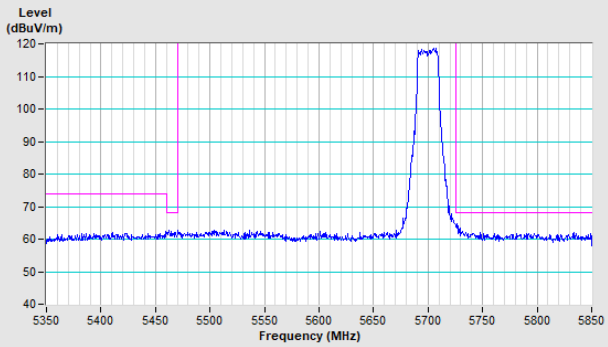



## 802.11ax (20MHz) Channel 140

### Horizontal (Peak)

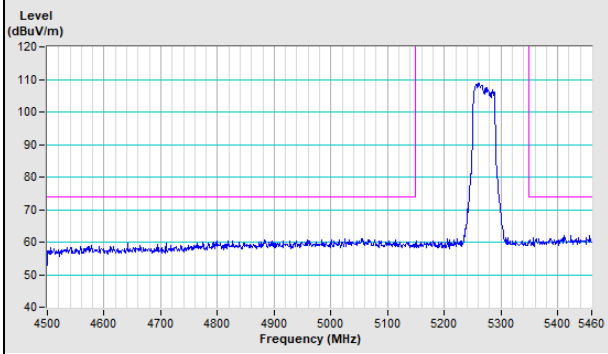



### Vertical (Peak)

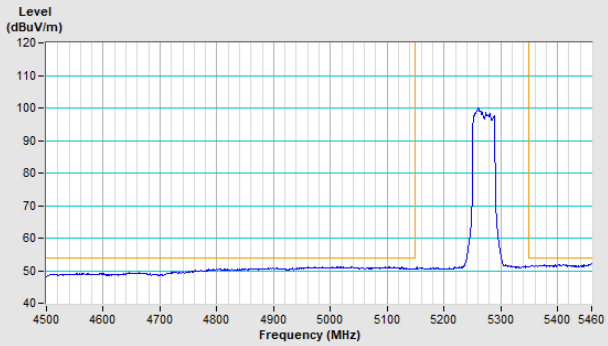


## 802.11ax (40MHz) Channel 54

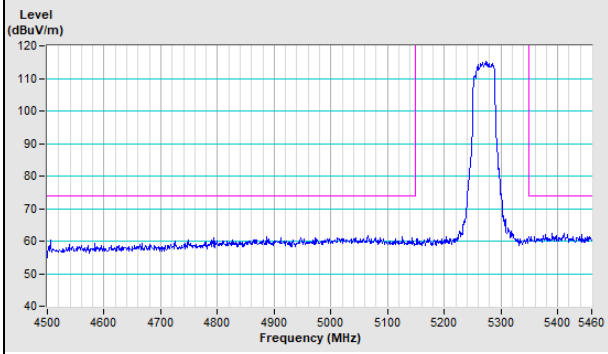
### Horizontal (Peak)



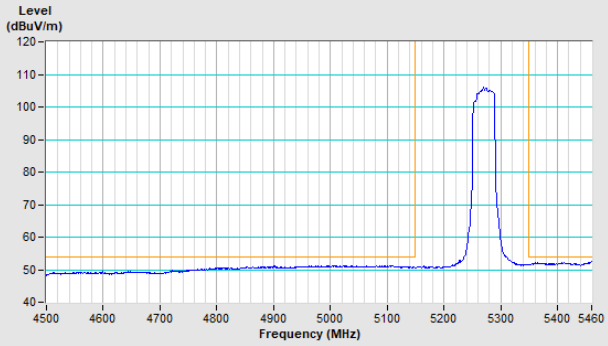

### Horizontal (Average)




### Vertical (Peak)

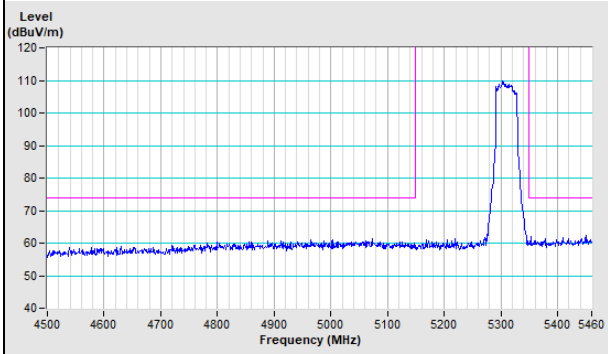



### Vertical (Average)

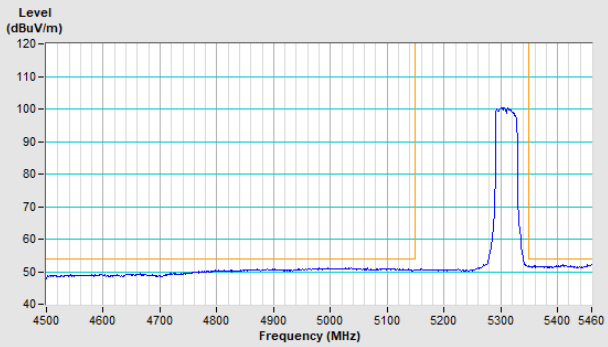



## 802.11ax (40MHz) Channel 62

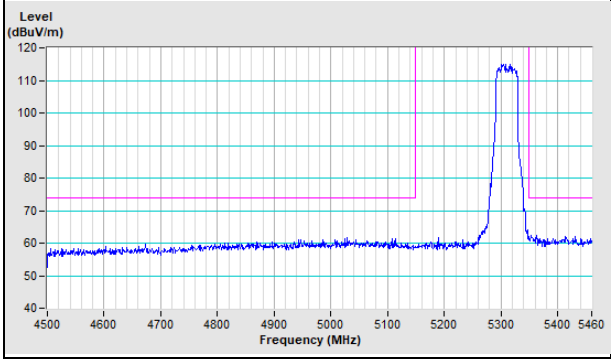
### Horizontal (Peak)



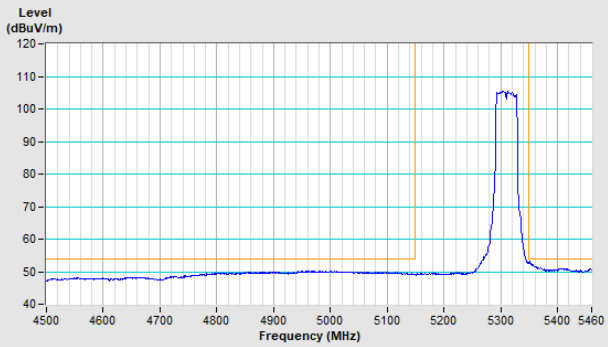

### Horizontal (Average)




### Vertical (Peak)

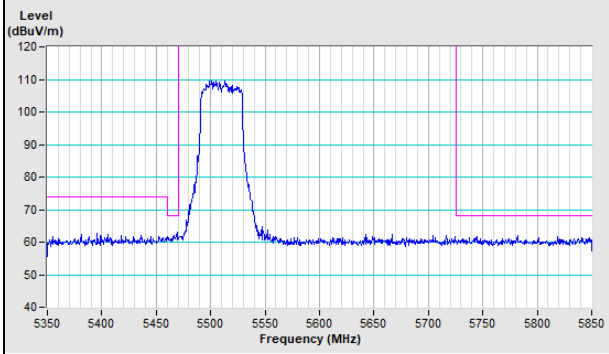



### Vertical (Average)

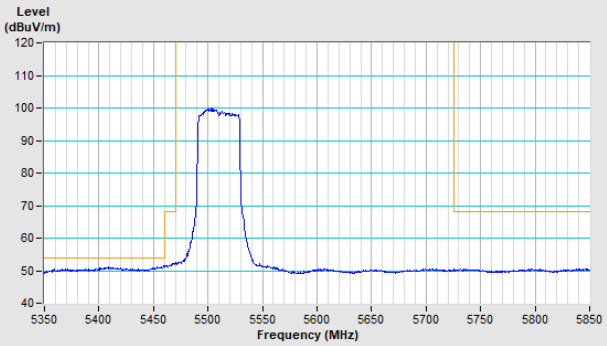


## 802.11ax (40MHz) Channel 102

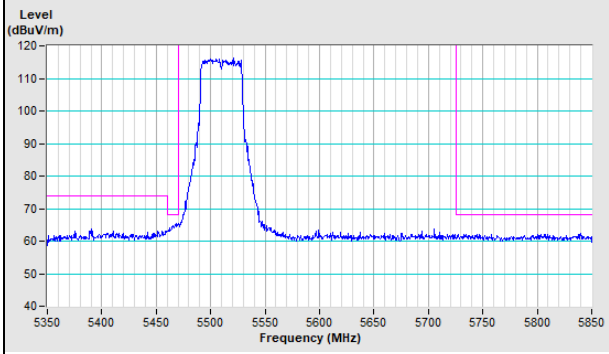
### Horizontal (Peak)



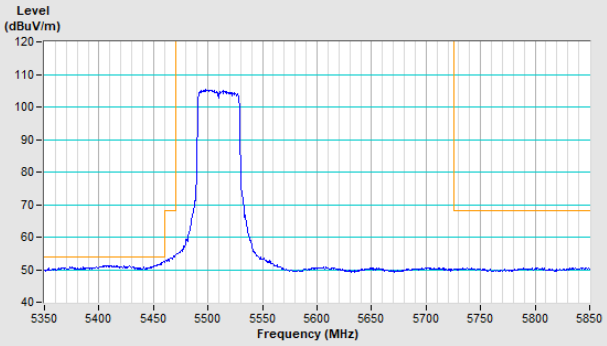

### Horizontal (Average)




### Vertical (Peak)

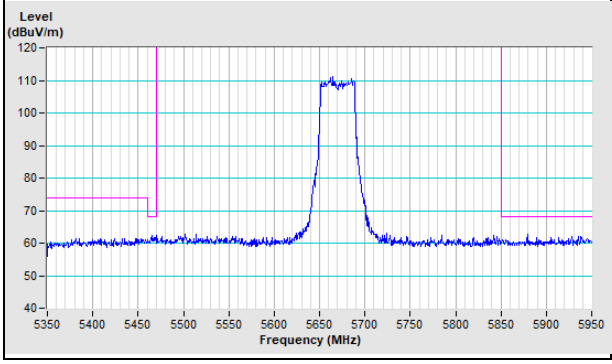



### Vertical (Average)

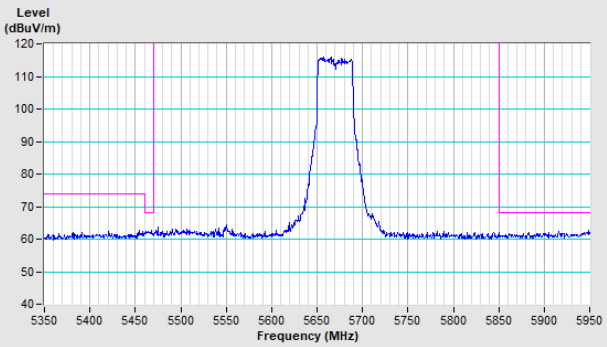



## 802.11ax (40MHz) Channel 134

### Horizontal (Peak)

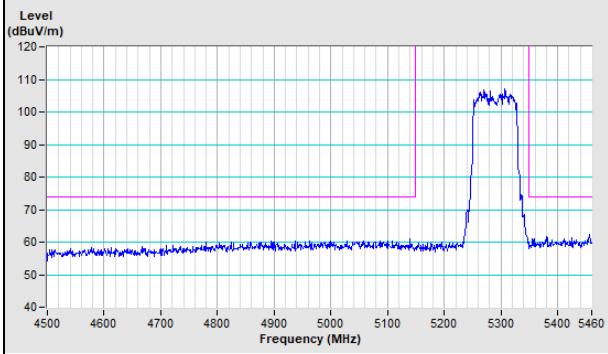



### Vertical (Peak)

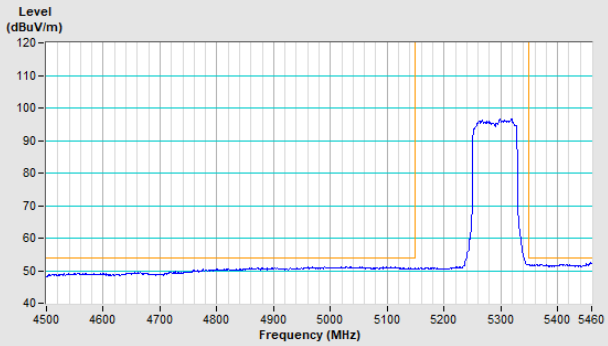


## 802.11ax (80MHz) Channel 58

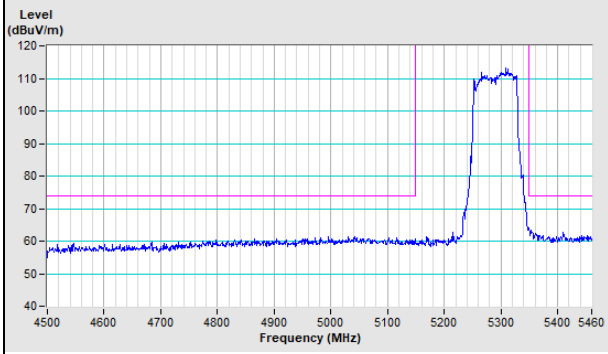
### Horizontal (Peak)



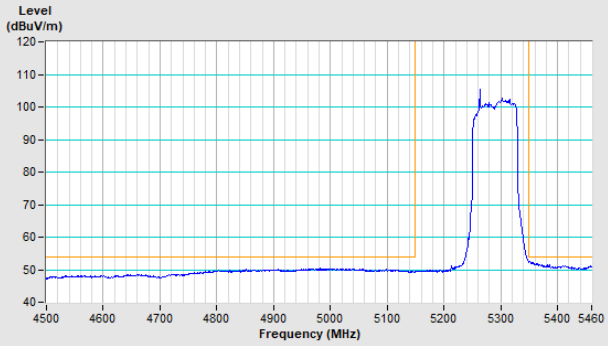

### Horizontal (Average)




### Vertical (Peak)

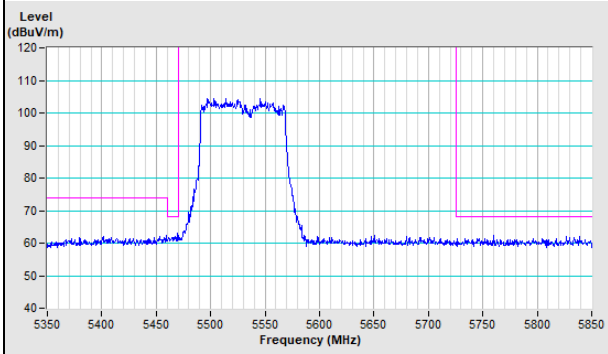



### Vertical (Average)

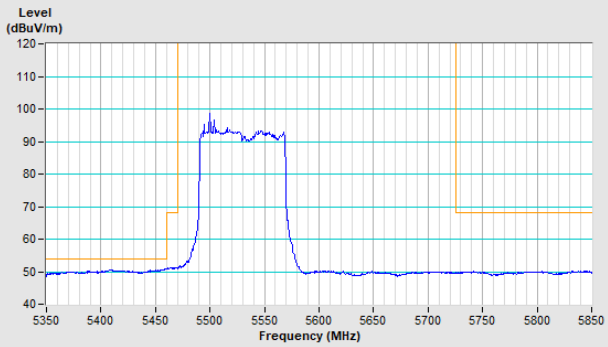



## 802.11ax (80MHz) Channel 106

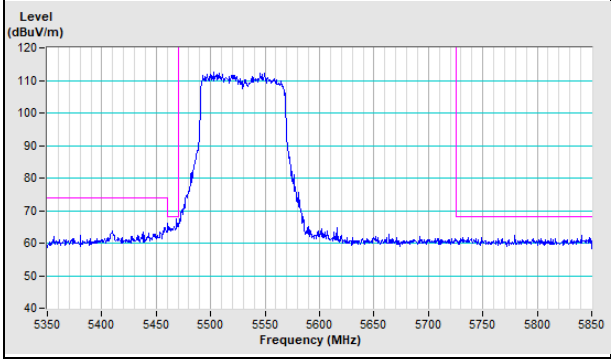
### Horizontal (Peak)



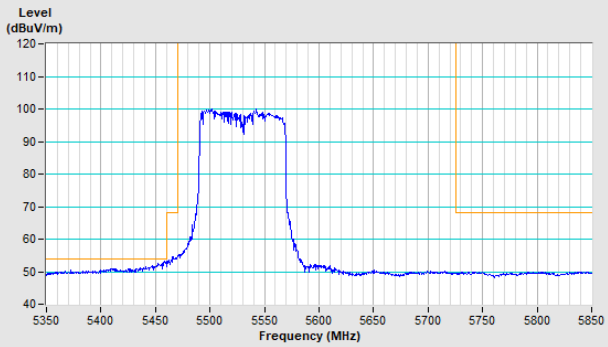

### Horizontal (Average)

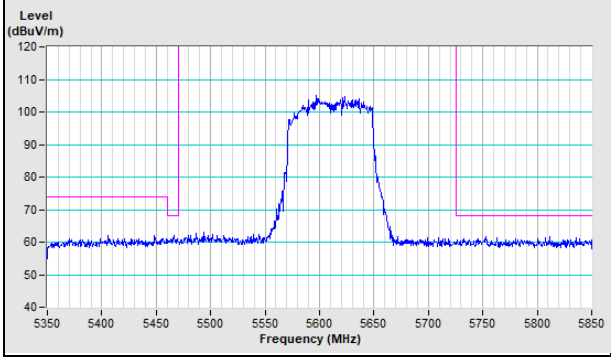
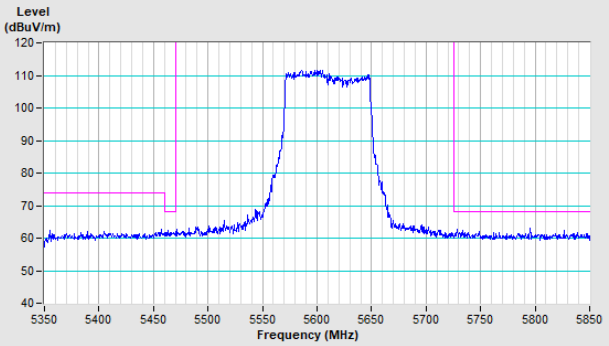



### Vertical (Peak)




### Vertical (Average)



| 802.11ax (80MHz) Channel 122 | |
|---|---|
| **Horizontal (Peak)** | **Vertical (Peak)** |
|  |  |

**Appendix – Information of the Testing Laboratories**

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following: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The address and road map of all our labs can be found in our web site also.

**--- END ---**