

# TEST REPORT

## CERTIFICATE OF CONFORMITY

**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

**Report No.:** RFBEMI-WTW-P25020703-3

**FCC ID:** NOIKBN367B

**Product:** Electronic Display Device

**Brand:** Rakuten kobo

**Model No.:** N367B

**Received Date:** 2025/2/28

**Test Date:** 2025/3/18 ~ 2025/3/27

**Issued Date:** 2025/6/3

**Applicant:** NETRONIX, INC.

**Address:** No. 945, Boai St., Jubei City, Hsin-Chu, 30265, Taiwan

**Factory:** (1) NETRONIX, INC.  
(2) NTX Electronics YANGZHOU CO., LTD.

**Address:** (1) No. 945, Boai St., Jubei City, Hsin-Chu, 30265, Taiwan  
(2) No. 8, Wuzhou West Road, Economic and technological Development Zone, Yangzhou, Jiangsu Province, 225009, China

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan

**FCC Registration /** 788550 / TW0003

**Designation Number:**

Approved by:

Jeremy Lin

Jeremy Lin / Project Engineer

, Date:

2025/6/3

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Prepared by : Polly Chien / Specialist

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## Release Control Record

| Issue No.              | Description       | Date Issued |
|------------------------|-------------------|-------------|
| RFBEMI-WTW-P25020703-3 | Original release. | 2025/6/3    |

## 1 Certificate

**Product:** Electronic Display Device

**Brand:** Rakuten kobo

**Test Model:** N367B

**Sample Status:** Engineering sample

**Applicant:** NETRONIX, INC.

**Test Date:** 2025/3/18 ~ 2025/3/27

**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

**Measurement** ANSI C63.10-2013

**procedure:** KDB 789033 D02 General UNII Test Procedure New Rules v02r01

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.

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart E (Section 15.407) |                                |        |                                                    |
|------------------------------------------------|--------------------------------|--------|----------------------------------------------------|
| Clause                                         | Test Item                      | Result | Remark                                             |
| 15.407(a)(1)<br>15.407(a)(3)                   | RF Output Power                | Pass   | Meet the requirement of limit.                     |
| 15.407(a)(1)<br>15.407(a)(3)                   | Power Spectral Density         | Pass   | Meet the requirement of limit.                     |
| 15.407(e)                                      | 6 dB Bandwidth                 | Pass   | Meet the requirement of limit. (U-NII-3 Band only) |
| ---                                            | Occupied Bandwidth             | -      | Reference only.                                    |
| 15.407(b)(9)                                   | AC Power Conducted Emissions   | Pass   | Minimum passing margin is -2.93 dB at 0.48600 MHz  |
| 15.407(b)(9)                                   | Unwanted Emissions below 1 GHz | Pass   | Minimum passing margin is -7.8 dB at 55.22 MHz     |
| 15.407(b) (1/10)<br>15.407(b) (4(i)/10)        | Unwanted Emissions above 1 GHz | Pass   | Minimum passing margin is -0.2 dB at 5150.00 MHz   |
| 15.203                                         | Antenna Requirement            | Pass   | No antenna connector is used.                      |

Notes: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 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:

| Parameter                      | Specification   | Expanded Uncertainty<br>(k=2)<br>(±) |
|--------------------------------|-----------------|--------------------------------------|
| RF Output Power                | -               | 1.371 dB                             |
| Power Spectral Density         | -               | 1.017 dB                             |
| 6 dB Bandwidth                 | -               | 206.5 Hz                             |
| Occupied Bandwidth             | -               | 72 Hz                                |
| AC Power Conducted Emissions   | 9 kHz ~ 30 MHz  | 2.90 dB                              |
| Unwanted Emissions below 1 GHz | 9 kHz ~ 30 MHz  | 3.59 dB                              |
|                                | 30 MHz ~ 1 GHz  | 3.6 dB                               |
| Unwanted Emissions above 1 GHz | 1 GHz ~ 18 GHz  | 2.29 dB                              |
|                                | 18 GHz ~ 40 GHz | 2.29 dB                              |

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

### 2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

|                       |                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| Product               | Electronic Display Device                                                                               |
| Brand                 | Rakuten kobo                                                                                            |
| Test Model            | N367B                                                                                                   |
| Status of EUT         | Engineering sample                                                                                      |
| Power Supply Rating   | 3.87 Vdc from battery<br>5 Vdc from adapter or host equipment                                           |
| Modulation Type       | 64QAM, 16QAM, QPSK, BPSK for OFDM<br>256QAM for OFDM in 11ac mode                                       |
| Modulation Technology | OFDM                                                                                                    |
| Transfer Rate         | Up to 433.3 Mbps                                                                                        |
| Operating Frequency   | 5.18 GHz ~ 5.24 GHz<br>5.745 GHz ~ 5.825 GHz                                                            |
| Number of Channel     | 802.11a, 802.11n (HT20), 802.11ac (VHT20):9<br>802.11n (HT40), 802.11ac (VHT40):4<br>802.11ac (VHT80):2 |
| Output Power          | 5.18 GHz ~ 5.24 GHz : 24.044 mW (13.81 dBm)<br>5.745 GHz ~ 5.825 GHz : 31.55 mW (14.99 dBm)             |
| EUT Category          | Client device                                                                                           |

Note:

1. The EUT uses following accessories.

| Item                 | Brand        | Model        | Supplier Model       | Color | Specification                              | Material | TID number |
|----------------------|--------------|--------------|----------------------|-------|--------------------------------------------|----------|------------|
| 1st source USB Cable | LUXSHARE-ICT | LB93US005-1H | -                    | Black | Signal Line : Shielded: Y, 1.0M, Core: N/A | TPE      | -          |
|                      |              | LB93US006-1H | -                    | White | Signal Line : Shielded: Y, 1.0M, Core: N/A | TPE      | -          |
| 2nd source USB Cable | Yih Fone     | SH-0846      | YF-USB2-A-C-1M(K)    | Black | Signal Line : Shielded: Y, 1.0M, Core: N/A | TPE      | 12574      |
|                      |              | SH-0837      | YF-USB2-A-C-1M-WH(K) | White | Signal Line : Shielded: Y, 1.0M, Core: N/A | TPE      | 12575      |

2. The EUT will be supported with the following eMMC and DRAM LP-DDR4 sources.

| Item                    | Brand    | Model               |
|-------------------------|----------|---------------------|
| 1st source eMMC         | Phison   | PTE7A0YJ-16GE       |
| 2nd source eMMC         | Kingston | EMMC16G-PJ30-GA02   |
| 3rd source eMMC         | FORESEE  | FEMDNN016G-A3A55    |
| 1st source DRAM LP-DDR4 | Nanya    | NT6AN256M16AV-J2    |
| 2nd source DRAM LP-DDR4 | Leahkinn | LTHS0005GS4-ZPI1    |
| 3rd source DRAM LP-DDR4 | Micron   | MT53E256M16D1DS-046 |

3. There are Bluetooth and WLAN (2.4 GHz & 5 GHz) technology used for the EUT.

4. Simultaneously transmission condition.

| Condition | Technology     |           |
|-----------|----------------|-----------|
| 1         | WLAN (2.4 GHz) | Bluetooth |
| 2         | WLAN (5 GHz)   | Bluetooth |

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 Antenna Description of EUT

1. The antenna information is listed as below.

| Gain (dBi) | Antenna Type | Connector Type |
|------------|--------------|----------------|
| 3.41       | Chip         | N/A            |

\*Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2. The EUT provides 1 completed transmitter and 1 receiver.

| 5 GHz Band       |                       |     |
|------------------|-----------------------|-----|
| Modulation Mode  | TX & RX Configuration |     |
| 802.11a          | 1TX                   | 1RX |
| 802.11n (HT20)   | 1TX                   | 1RX |
| 802.11n (HT40)   | 1TX                   | 1RX |
| 802.11ac (VHT20) | 1TX                   | 1RX |
| 802.11ac (VHT40) | 1TX                   | 1RX |
| 802.11ac (VHT80) | 1TX                   | 1RX |

### 3.3 Channel List

#### For 5180 ~ 5240 MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 36      | 5180 MHz  | 44      | 5220 MHz  |
| 40      | 5200 MHz  | 48      | 5240 MHz  |

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 38      | 5190 MHz  | 46      | 5230 MHz  |

1 channel is provided for 802.11ac (VHT80):

| Channel | Frequency |
|---------|-----------|
| 42      | 5210 MHz  |

#### For 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 149     | 5745 MHz  | 161     | 5805 MHz  |
| 153     | 5765 MHz  | 165     | 5825 MHz  |
| 157     | 5785 MHz  |         |           |

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 151     | 5755 MHz  | 159     | 5795 MHz  |

1 channel is provided for 802.11ac (VHT80):

| Channel | Frequency |
|---------|-----------|
| 155     | 5775 MHz  |

### 3.4 Test Mode Applicability and Tested Channel Detail

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-Scan:   | <ol style="list-style-type: none"> <li>1. For Radiated, pre-scan Power from AC Adapter via USB Cable / Laptop via USB Cable / Battery and find the worst case as a representative test condition.</li> <li>2. For AC conduction, pre-scan Power from AC Adapter via USB Cable / Laptop via USB Cable and find the worst case as a representative test condition.</li> <li>3. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.</li> <li>4. The USB Cable has the following models: LB93US005-1H(Black) / SH-0846(Black). Pre-scan these models of USB Cables and find the worst case as a representative test condition.</li> <li>5. The DRAM LP-DDR4 has the following models: NT6AN256M16AV-J2 / LTHS0005GS4-ZPI1 / MT53E256M16D1DS-046. Pre-scan these models of DRAM LP-DDR4 and find the worst case as a representative test condition.</li> <li>6. The eMMC has the following models: PTE7A0YJ-16GE / EMMC16G-PJ30-GA02 / FEMDNN016G-A3A55. Pre-scan these models of eMMC and find the worst case as a representative test condition.</li> <li>7. 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).</li> </ol> |
| Worst Case: | <ol style="list-style-type: none"> <li>1. For Radiated Worst Condition: AC Adapter via USB Cable</li> <li>2. For AC conduction Worst Condition: AC Adapter via USB Cable</li> <li>3. X-axis/ Y-axis/ Z-axis Worst Condition: Y-axis</li> <li>4. USB Cable Worst Condition: SH-0846(Black)</li> <li>5. DRAM LP-DDR4 Worst Condition: MT53E256M16D1DS-046</li> <li>6. eMMC Worst Condition: FEMDNN016G-A3A55</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

Note: Both USB cables are identical to each other except for exterior color and model names

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

| Test Item                                   | Mode             | Tested Channel            | Modulation | Data Rate Parameter |
|---------------------------------------------|------------------|---------------------------|------------|---------------------|
| RF Output Power                             | 802.11a          | 36, 40, 48, 149, 157, 165 | BPSK       | 6Mb/s               |
|                                             | 802.11n (HT20)   | 36, 40, 48, 149, 157, 165 | BPSK       | MCS0                |
|                                             | 802.11n (HT40)   | 38, 46, 151, 159          | BPSK       | MCS0                |
|                                             | 802.11ac (VHT20) | 36, 40, 48, 149, 157, 165 | BPSK       | MCS0                |
|                                             | 802.11ac (VHT40) | 38, 46, 151, 159          | BPSK       | MCS0                |
|                                             | 802.11ac (VHT80) | 42, 155                   | BPSK       | MCS0                |
| Power Spectral Density / Occupied Bandwidth | 802.11a          | 36, 40, 48, 149, 157, 165 | BPSK       | 6Mb/s               |
|                                             | 802.11ac (VHT20) | 36, 40, 48, 149, 157, 165 | BPSK       | MCS0                |
|                                             | 802.11ac (VHT40) | 38, 46, 151, 159          | BPSK       | MCS0                |
|                                             | 802.11ac (VHT80) | 42, 155                   | BPSK       | MCS0                |
| 6 dB Bandwidth                              | 802.11a          | 149, 157, 165             | BPSK       | 6Mb/s               |
|                                             | 802.11ac (VHT20) | 149, 157, 165             | BPSK       | MCS0                |
|                                             | 802.11ac (VHT40) | 151, 159                  | BPSK       | MCS0                |
|                                             | 802.11ac (VHT80) | 155                       | BPSK       | MCS0                |
| AC Power Conducted Emissions                | 802.11ac (VHT80) | 155                       | BPSK       | MCS0                |
| Unwanted Emissions below 1 GHz              | 802.11ac (VHT80) | 155                       | BPSK       | MCS0                |
| Unwanted Emissions above 1 GHz              | 802.11a          | 36, 40, 48, 149, 157, 165 | BPSK       | 6Mb/s               |
|                                             | 802.11ac (VHT20) | 36, 40, 48, 149, 157, 165 | BPSK       | MCS0                |
|                                             | 802.11ac (VHT40) | 38, 46, 151, 159          | BPSK       | MCS0                |
|                                             | 802.11ac (VHT80) | 42, 155                   | BPSK       | MCS0                |

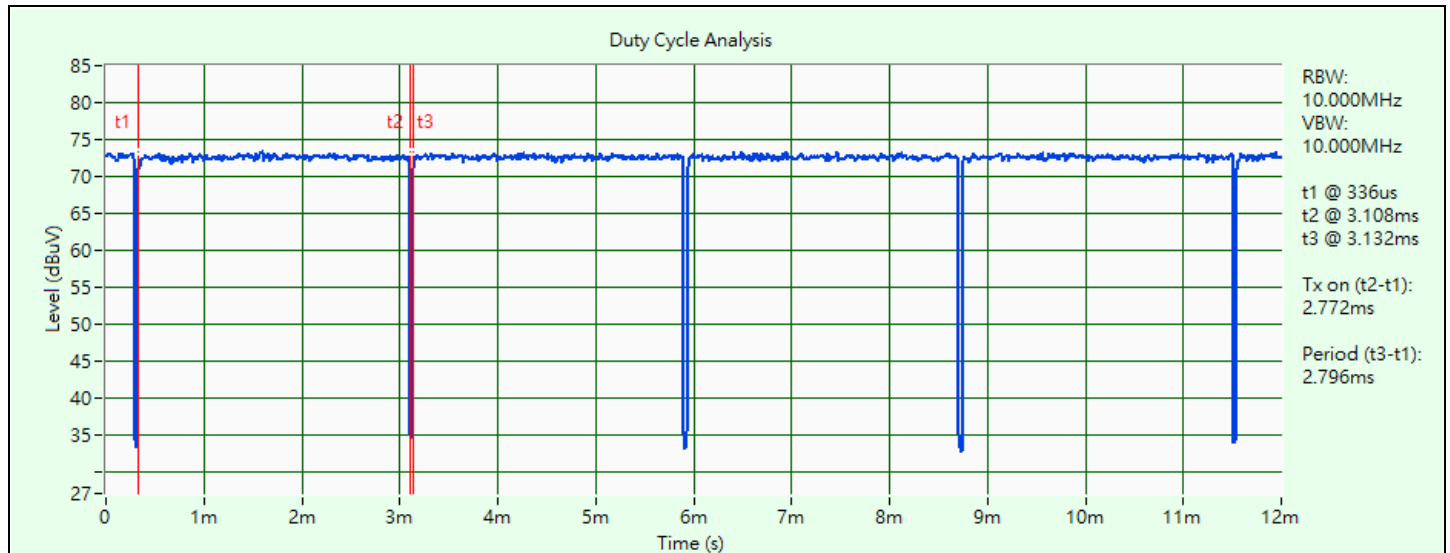
### 3.5 Duty Cycle of Test Signal

**802.11a:** Duty cycle = 2.772 ms / 2.796 ms x 100% = 99.1%

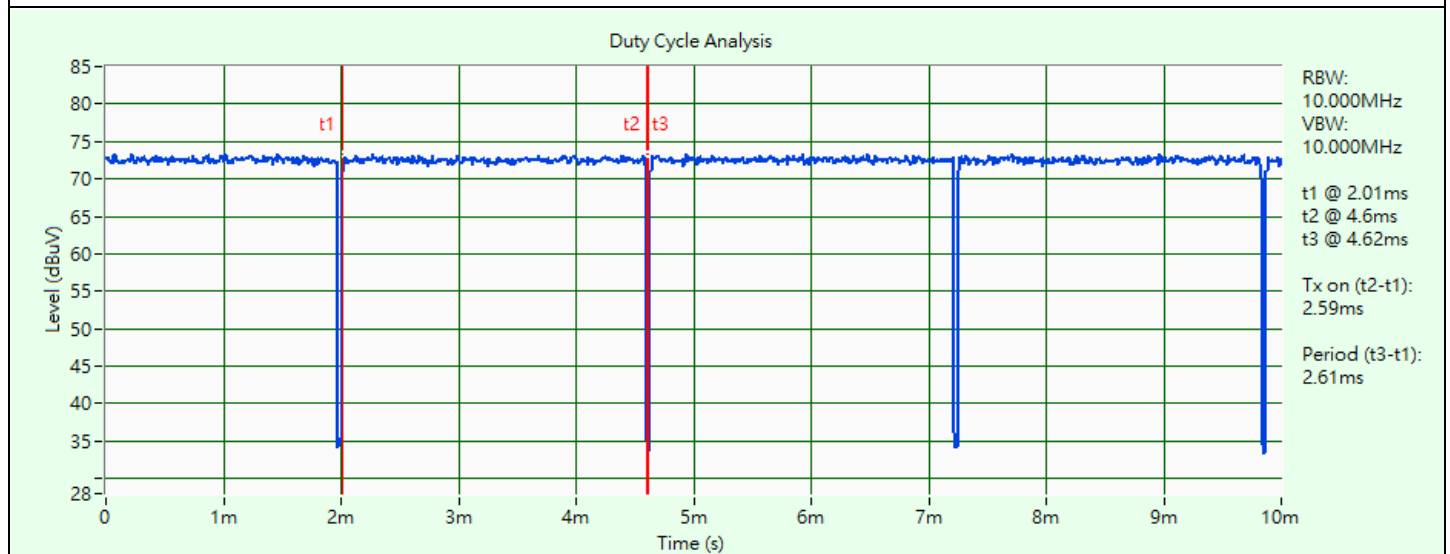
**802.11ac (VHT20):** Duty cycle = 2.59 ms / 2.61 ms x 100% = 99.2%

**802.11ac (VHT40):** Duty cycle = 1.265 ms / 1.3 ms x 100% = 97.3%, duty factor =  $10 \cdot \log(1/\text{Duty cycle}) = 0.12 \text{ dB}$

**802.11ac (VHT80):** Duty cycle = 0.609 ms / 0.645 ms x 100% = 94.4%, duty factor =  $10 \cdot \log(1/\text{Duty cycle}) = 0.25 \text{ dB}$

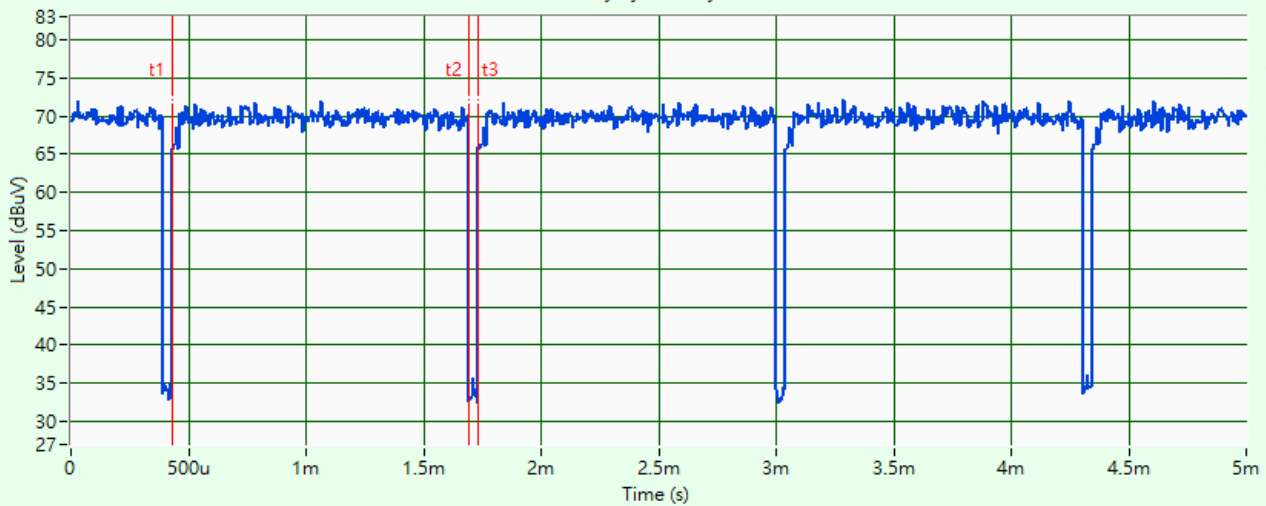


802.11a



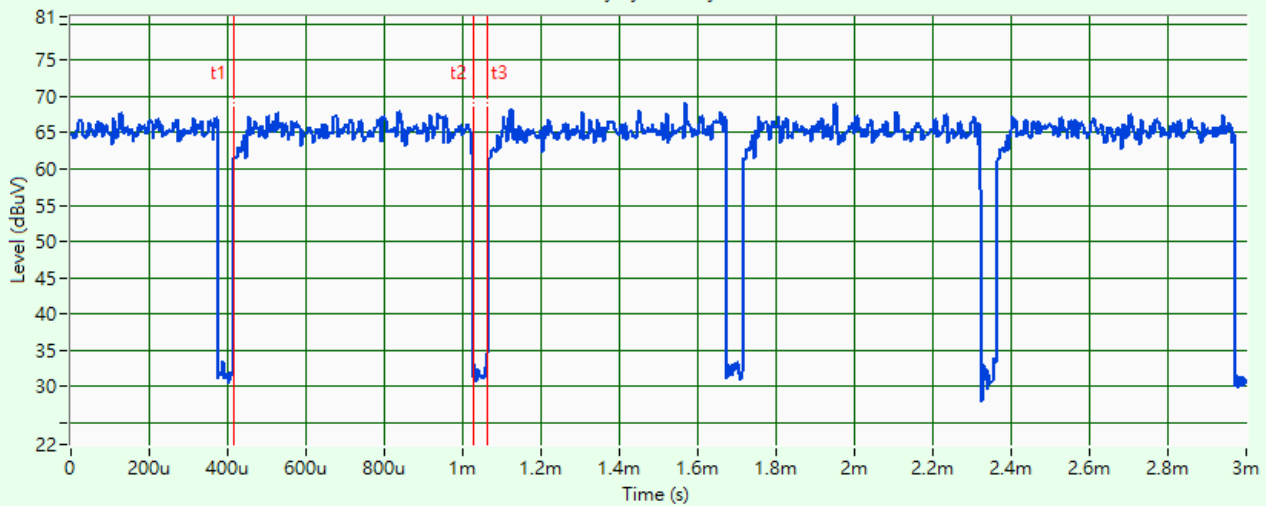
802.11ac (VHT20)

### Duty Cycle Analysis



802.11ac (VHT40)

### Duty Cycle Analysis

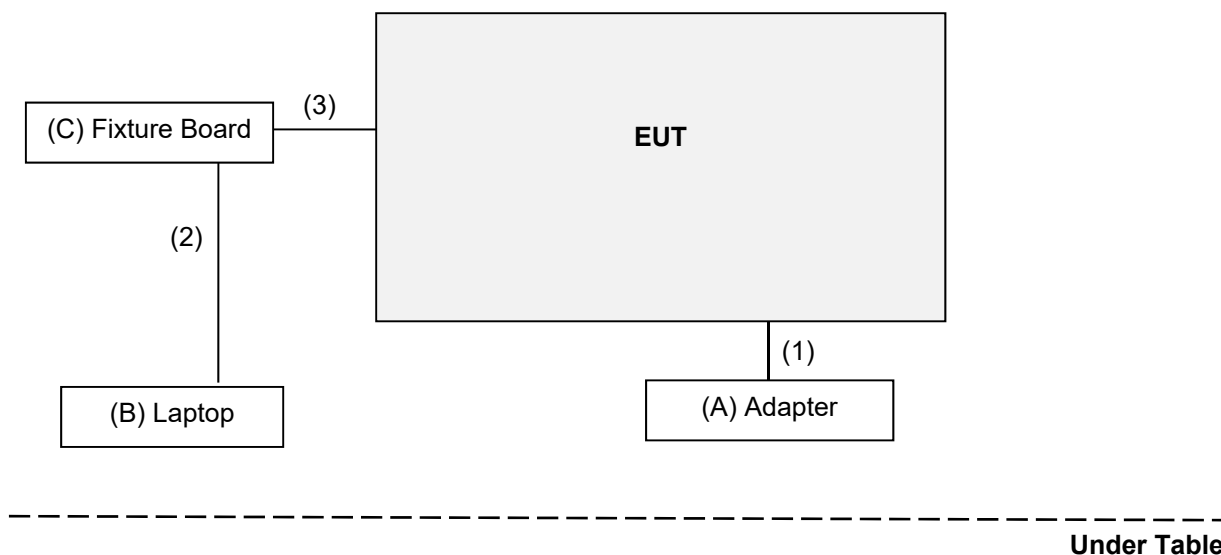


802.11ac (VHT80)

### 3.6 Test Program Used and Operation Descriptions

Controlling software Terminal version 2.10 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

### 3.7 Connection Diagram of EUT and Peripheral Devices



### 3.8 Configuration of Peripheral Devices and Cable Connections

| ID | Product       | Brand    | Model No.                 | Serial No. | FCC ID | Remarks               |
|----|---------------|----------|---------------------------|------------|--------|-----------------------|
| A. | Adapter       | LITEON   | PA-1050-39                | N/A        | N/A    | Provided by Lab       |
| B. | Laptop        | Lenovo   | L470                      | PF0U96K5   | N/A    | Provided by Lab       |
| C. | Fixture Board | Netronix | N367B console board(1.8V) | N/A        | N/A    | Supplied by applicant |

| No. | Cable Descriptions | Qty. | Length (m) | Shielded (Yes/ No) | Cores (Qty.) | Remark                                           |
|-----|--------------------|------|------------|--------------------|--------------|--------------------------------------------------|
| 1.  | USB Cable          | 1    | 1          | Yes                | 0            | Accessory of EUT                                 |
| 2.  | USB Cable          | 1    | 1          | Yes                | 0            | Supplied by applicant                            |
| 3.  | Console Cable      | 1    | 0.6        | No                 | 0            | Supplied by applicant, Attached on Fixture Board |

## 4 Test Instruments

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

### 4.1 RF Output Power

| Description<br>Manufacturer       | Model No. | Serial No. | Calibrated<br>Date | Calibrated<br>Until |
|-----------------------------------|-----------|------------|--------------------|---------------------|
| Peak Power Analyzer<br>Keysight   | 8990B     | MY51000538 | 2024/4/29          | 2025/4/28           |
| Wideband Power Sensor<br>Keysight | N1923A    | MY58200003 | 2024/6/17          | 2025/6/16           |

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/3/27

### 4.2 Power Spectral Density

| Description<br>Manufacturer       | Model No.                        | Serial No. | Calibrated<br>Date | Calibrated<br>Until |
|-----------------------------------|----------------------------------|------------|--------------------|---------------------|
| Signal & Spectrum Analyzer<br>R&S | FSV3044                          | 101504     | 2024/6/18          | 2025/6/17           |
| Software<br>BV                    | ADT_RF Test Software<br>V7.6.5.4 | N/A        | N/A                | N/A                 |

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/3/27

### 4.3 6 dB Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

### 4.4 Occupied Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

#### 4.5 AC Power Conducted Emissions

| Description<br>Manufacturer | Model No.               | Serial No.     | Calibrated<br>Date | Calibrated<br>Until |
|-----------------------------|-------------------------|----------------|--------------------|---------------------|
| 50 ohm terminal resistance  | E1-011279               | 04             | 2024/11/28         | 2025/11/27          |
|                             | E1-011280               | 05             | 2024/11/28         | 2025/11/27          |
|                             | E1-011311               | 09             | 2024/11/28         | 2025/11/27          |
| DC-LISN<br>Schwarzbeck      | NNBM 8126G              | 8126G-069      | 2024/11/5          | 2025/11/4           |
| EMI Test Receiver<br>R&S    | ESR3                    | 102783         | 2024/12/17         | 2025/12/16          |
| Fixed Attenuator<br>STI     | BNC5W10dB               | PAD-COND2-01   | 2024/8/25          | 2025/8/24           |
| LISN<br>R&S                 | ESH2-Z5                 | 100100         | 2025/3/5           | 2026/3/4            |
|                             | ESH3-Z5                 | 100312         | 2024/9/9           | 2025/9/8            |
| RF Coaxial Cable<br>Woken   | 5D-FB                   | Cable-cond2-01 | 2024/8/25          | 2025/8/24           |
| Software<br>BVADT           | BVADT_Cond_<br>V7.4.1.0 | N/A            | N/A                | N/A                 |
| V-LISN<br>Schwarzbeck       | NNBL 8226-2             | 8226-142       | 2024/8/28          | 2025/8/27           |

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2025/3/19

#### 4.6 Unwanted Emissions below 1 GHz

| Description<br>Manufacturer       | Model No.                    | Serial No.   | Calibrated<br>Date | Calibrated<br>Until |
|-----------------------------------|------------------------------|--------------|--------------------|---------------------|
| Antenna Tower & Turn<br>BV ADT    | AT100                        | AT93021705   | N/A                | N/A                 |
| Bi_Log Antenna<br>Schwarzbeck     | VULB 9168                    | 9168-160     | 2024/10/9          | 2025/10/8           |
| Loop Antenna<br>TESEQ             | HLA 6121                     | 45745        | 2024/8/21          | 2025/8/20           |
| MXE EMI Receiver<br>Agilent       | N9038A                       | MY51210203   | 2024/8/27          | 2025/8/26           |
| Preamplifier<br>Agilent           | 8447D                        | 2944A10638   | 2024/5/1           | 2025/4/30           |
| RF Coaxial Cable<br>Woken         | 8D-FB                        | Cable-CH9-01 | 2024/5/1           | 2025/4/30           |
| Signal & Spectrum Analyzer<br>R&S | FSW43                        | 101866       | 2024/3/26          | 2025/3/25           |
| Software<br>BV ADT                | ADT_Radiated_<br>V7.6.15.9.5 | N/A          | N/A                | N/A                 |
| Turn Table<br>BV ADT              | TT100                        | TT93021705   | N/A                | N/A                 |
| Turn Table Controller<br>BV ADT   | SC100                        | SC93021705   | N/A                | N/A                 |

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2025/3/20

#### 4.7 Unwanted Emissions above 1 GHz

| Description<br>Manufacturer           | Model No.                         | Serial No.                      | Calibrated<br>Date | Calibrated<br>Until |
|---------------------------------------|-----------------------------------|---------------------------------|--------------------|---------------------|
| Antenna Tower & Turn<br>BV ADT        | AT100                             | AT93021705                      | N/A                | N/A                 |
| Boresight antenna tower fixture<br>BV | BAF-02                            | 5                               | N/A                | N/A                 |
| Horn Antenna<br>Schwarzbeck           | BBHA 9120D                        | 9120D-1169                      | 2024/11/10         | 2025/11/9           |
|                                       | BBHA 9170                         | 9170-480                        | 2024/11/10         | 2025/11/9           |
|                                       |                                   | BBHA9170243                     | 2024/11/10         | 2025/11/9           |
| MXE EMI Receiver<br>Agilent           | N9038A                            | MY51210203                      | 2024/8/27          | 2025/8/26           |
| Preamplifier<br>Agilent               | 8449B                             | 3008A02367                      | 2025/1/5           | 2026/1/4            |
| Preamplifier<br>EMCI                  | EMC 184045                        | 980116                          | 2024/9/24          | 2025/9/23           |
| RF Coaxial Cable<br>EMCI              | EMC102-KM-KM-600                  | 150928                          | 2024/7/6           | 2025/7/5            |
|                                       | EMC102-KM-KM-3000                 | 150929                          | 2024/7/6           | 2025/7/5            |
| RF Coaxial Cable<br>HUBER+SUHNER      | SUCOFLEX 104                      | CABLE-CH9-(250795/4)            | 2025/1/5           | 2026/1/4            |
| RF Coaxial Cable<br>HUBER+SUHNER&EMCI | SUCOFLEX 104&<br>EMC104-SM-SM8000 | CABLE-CH9-02<br>(248780+171006) | 2025/1/5           | 2026/1/4            |
| Signal & Spectrum Analyzer<br>R&S     | FSW43                             | 101866                          | 2024/3/26          | 2025/3/25           |
| Software<br>BV ADT                    | ADT_Radiated_<br>V7.6.15.9.5      | N/A                             | N/A                | N/A                 |
| Turn Table<br>BV ADT                  | TT100                             | TT93021705                      | N/A                | N/A                 |
| Turn Table Controller<br>BV ADT       | SC100                             | SC93021705                      | N/A                | N/A                 |

**Notes:**

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2025/3/18

## 5 Limits of Test Items

### 5.1 RF Output Power

| Operation Band | EUT Category                      | Limit                                                                                                                       |
|----------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| U-NII-1        | Outdoor Access Point              | 1 Watt (30 dBm)<br>(Max. e.i.r.p $\leq$ 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)                                                                                                             |
|                | Mobile and Portable client device | 250mW (24 dBm)                                                                                                              |

| Operation Band | Limit           |
|----------------|-----------------|
| U-NII-3        | 1 Watt (30 dBm) |

### 5.2 Power Spectral Density

| Operation Band | EUT Category                      | Limit      |
|----------------|-----------------------------------|------------|
| U-NII-1        | Outdoor Access Point              | 17 dBm/MHz |
|                | Fixed point-to-point Access Point |            |
|                | Indoor Access Point               |            |
|                | Mobile and Portable client device | 11 dBm/MHz |

| Operation Band | Limit          |
|----------------|----------------|
| U-NII-3        | 30 dBm/500 kHz |

### 5.3 6 dB Bandwidth

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

### 5.4 Occupied Bandwidth

The results are for reference only.

### 5.5 AC Power Conducted Emissions

| 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      |

Notes:

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 0.50 MHz.

## 5.6 Unwanted Emissions below 1 GHz

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                             |

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

## 5.7 Unwanted Emissions above 1 GHz

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) |
|-------------------|-----------------------------------|-------------------------------|
| Above 960         | 500                               | 3                             |

Notes:

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 1000 MHz, 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 20 dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

| Applicable To                                              | Limit                 |                 |
|------------------------------------------------------------|-----------------------|-----------------|
| 789033 D02 General UNII Test Procedure New Rules<br>v02r01 | Field Strength at 3 m |                 |
|                                                            | PK: 74 (dBμV/m)       | AV: 54 (dBμV/m) |

For transmitters operating in the 5.15-5.25 GHz band:

| Applicable To | EIRP Limit        | Equivalent Field Strength at 3 m |
|---------------|-------------------|----------------------------------|
| 15.407(b)(1)  | PK: -27 (dBm/MHz) | PK: 68.2 (dBμV/m)                |

For transmitters operating in the 5.725-5.850 GHz band:

| Applicable To   | EIRP Limit                                                                                                                              | Equivalent Field Strength at 3 m                                                                                                            |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 15.407(b)(4)(i) | PK: -27 (dBm/MHz) <sup>*1</sup><br>PK: 10 (dBm/MHz) <sup>*2</sup><br>PK: 15.6 (dBm/MHz) <sup>*3</sup><br>PK: 27 (dBm/MHz) <sup>*4</sup> | PK: 68.2 (dBμV/m) <sup>*1</sup><br>PK: 105.2 (dBμV/m) <sup>*2</sup><br>PK: 110.8 (dBμV/m) <sup>*3</sup><br>PK: 122.2 (dBμV/m) <sup>*4</sup> |

<sup>\*1</sup> beyond 75 MHz or more above of the band edge.

<sup>\*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

<sup>\*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

<sup>\*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

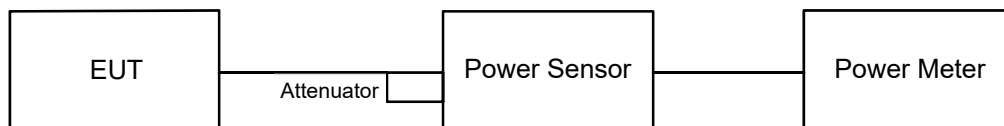
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

## 6 Test Arrangements

### 6.1 RF Output Power

#### 6.1.1 Test Setup

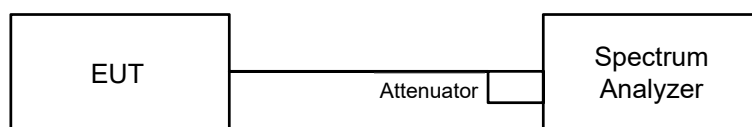


#### 6.1.2 Test Procedure

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.

### 6.2 Power Spectral Density

#### 6.2.1 Test Setup



#### 6.2.2 Test Procedure

##### For specified measurement bandwidth 1 MHz:

###### Method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
- Sweep points  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Record the max value

##### For specified measurement bandwidth 1 MHz:

###### Method SA-2

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
- Sweep points  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- Record the max value and add  $10 \log (1/\text{duty cycle})$ .

**For specified measurement bandwidth 500 kHz:**

Method SA-1

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where  $BWCF = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- d. Sweep points  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
- e. Sweep time = auto, trigger set to "free run".
- f. Trace average at least 100 traces in power averaging mode.
- g. Record the max value

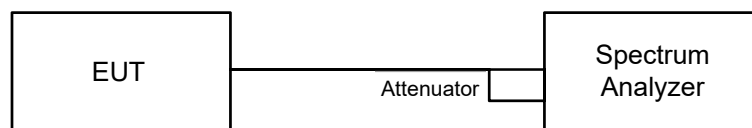
**For specified measurement bandwidth 500 kHz:**

Method SA-2

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where  $BWCF = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- d. Sweep points  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
- e. Sweep time = auto, trigger set to "free run".
- f. Trace average at least 100 traces in power averaging mode.
- g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- h. Record the max value and add  $10 \log (1/\text{duty cycle})$ .

### 6.3 6 dB Bandwidth

#### 6.3.1 Test Setup

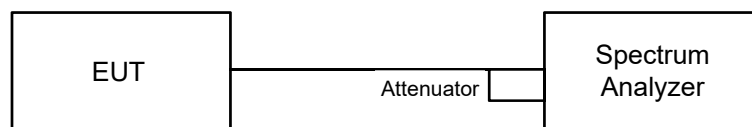


#### 6.3.2 Test Procedure

- Set resolution bandwidth (RBW) = 100 kHz.
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 6.4 Occupied Bandwidth

#### 6.4.1 Test Setup

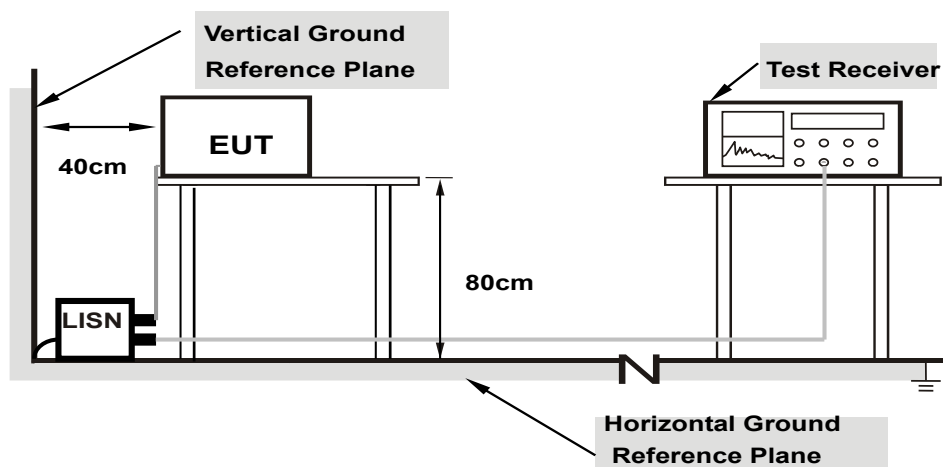


#### 6.4.2 Test Procedure

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 Sampling. 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.

## 6.5 AC Power Conducted Emissions

### 6.5.1 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).

### 6.5.2 Test Procedure

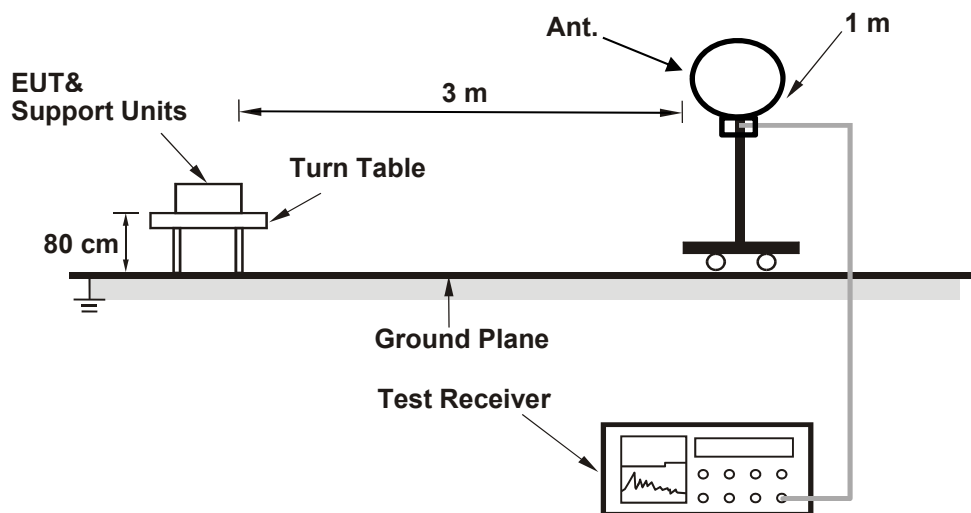
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

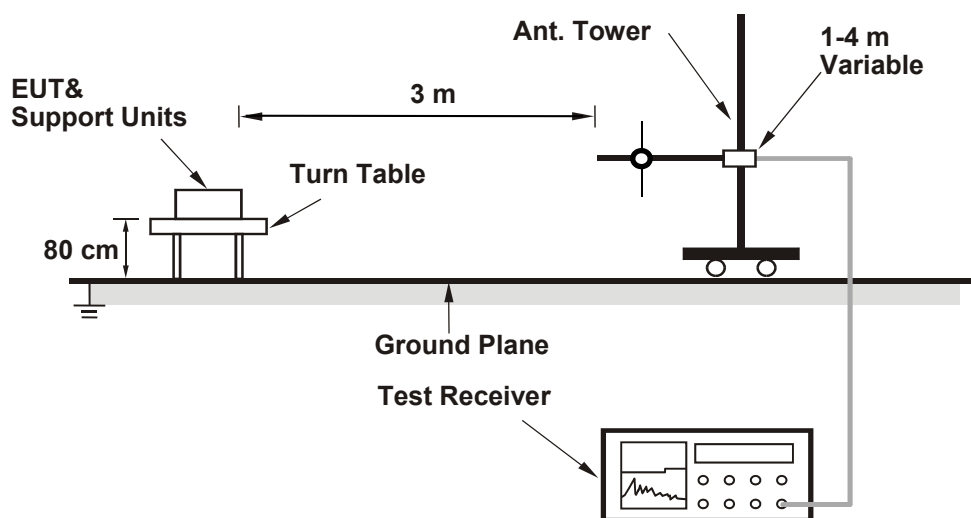
## 6.6 Unwanted Emissions below 1 GHz

### 6.6.1 Test Setup

#### For Radiated emission below 30 MHz



#### For Radiated emission above 30 MHz



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

## 6.6.2 Test Procedure

### For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters 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. 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, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

#### Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

### For Radiated emission above 30 MHz

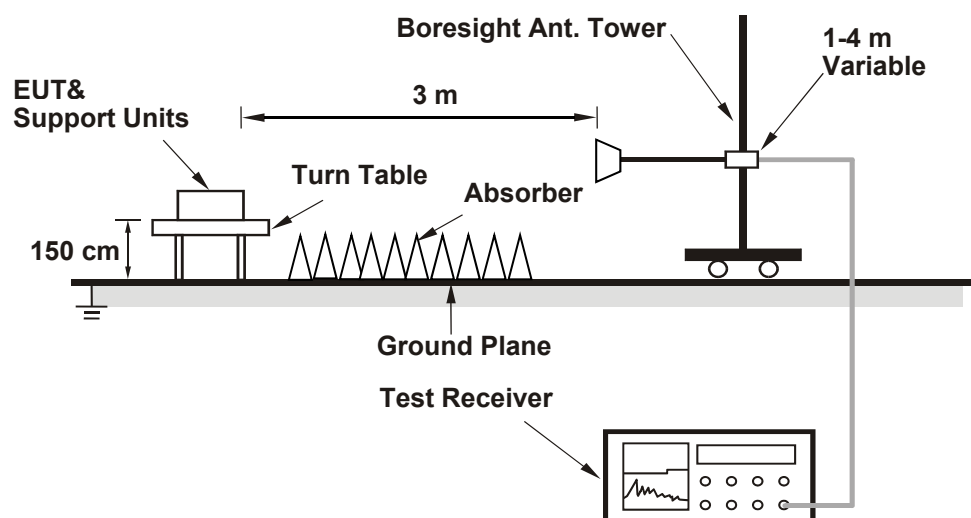
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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.

#### Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
- 2.
3. All modes of operation were investigated and the worst-case emissions are reported.

## 6.7 Unwanted Emissions above 1 GHz

### 6.7.1 Test Setup



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

### 6.7.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- 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.

#### Notes:

- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10 Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

## 7 Test Results of Test Item

### 7.1 RF Output Power

|              |                |                           |              |            |           |
|--------------|----------------|---------------------------|--------------|------------|-----------|
| Input Power: | 120 Vac, 60 Hz | Environmental Conditions: | 25°C, 60% RH | Tested By: | Chris Lin |
|--------------|----------------|---------------------------|--------------|------------|-----------|

#### 802.11a

| Chan. | Chan. Freq. (MHz) | Average Power (mW) | Average Power (dBm) | Power Limit (dBm) | Test Result |
|-------|-------------------|--------------------|---------------------|-------------------|-------------|
| 36    | 5180              | 23.659             | 13.74               | 24                | Pass        |
| 40    | 5200              | 23.768             | 13.76               | 24                | Pass        |
| 48    | 5240              | 23.388             | 13.69               | 24                | Pass        |
| 149   | 5745              | 30.479             | 14.84               | 30                | Pass        |
| 157   | 5785              | 30.761             | 14.88               | 30                | Pass        |
| 165   | 5825              | 30.061             | 14.78               | 30                | Pass        |

Notes:

1. For U-NII-1, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.

#### 802.11n (HT20)

| Chan. | Chan. Freq. (MHz) | Average Power (mW) | Average Power (dBm) | Power Limit (dBm) | Test Result |
|-------|-------------------|--------------------|---------------------|-------------------|-------------|
| 36    | 5180              | 21.928             | 13.41               | 24                | Pass        |
| 40    | 5200              | 22.646             | 13.55               | 24                | Pass        |
| 48    | 5240              | 21.827             | 13.39               | 24                | Pass        |
| 149   | 5745              | 28.907             | 14.61               | 30                | Pass        |
| 157   | 5785              | 28.445             | 14.54               | 30                | Pass        |
| 165   | 5825              | 28.249             | 14.51               | 30                | Pass        |

Notes:

1. For U-NII-1, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.

#### 802.11n (HT40)

| Chan. | Chan. Freq. (MHz) | Average Power (mW) | Average Power (dBm) | Power Limit (dBm) | Test Result |
|-------|-------------------|--------------------|---------------------|-------------------|-------------|
| 38    | 5190              | 22.594             | 13.54               | 24                | Pass        |
| 46    | 5230              | 23.067             | 13.63               | 24                | Pass        |
| 151   | 5755              | 29.107             | 14.64               | 30                | Pass        |
| 159   | 5795              | 28.774             | 14.59               | 30                | Pass        |

Notes:

1. For U-NII-1, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.

### 802.11ac (VHT20)

| Chan. | Chan. Freq. (MHz) | Average Power (mW) | Average Power (dBm) | Power Limit (dBm) | Test Result |
|-------|-------------------|--------------------|---------------------|-------------------|-------------|
| 36    | 5180              | 22.961             | 13.61               | 24                | Pass        |
| 40    | 5200              | 23.227             | 13.66               | 24                | Pass        |
| 48    | 5240              | 23.227             | 13.66               | 24                | Pass        |
| 149   | 5745              | 29.992             | 14.77               | 30                | Pass        |
| 157   | 5785              | 29.444             | 14.69               | 30                | Pass        |
| 165   | 5825              | 29.512             | 14.70               | 30                | Pass        |

**Notes:**

1. For U-NII-1, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.

### 802.11ac (VHT40)

| Chan. | Chan. Freq. (MHz) | Average Power (mW) | Average Power (dBm) | Power Limit (dBm) | Test Result |
|-------|-------------------|--------------------|---------------------|-------------------|-------------|
| 38    | 5190              | 23.121             | 13.64               | 24                | Pass        |
| 46    | 5230              | 23.55              | 13.72               | 24                | Pass        |
| 151   | 5755              | 30.13              | 14.79               | 30                | Pass        |
| 159   | 5795              | 29.512             | 14.70               | 30                | Pass        |

**Notes:**

1. For U-NII-1, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.

### 802.11ac (VHT80)

| Chan. | Chan. Freq. (MHz) | Average Power (mW) | Average Power (dBm) | Power Limit (dBm) | Test Result |
|-------|-------------------|--------------------|---------------------|-------------------|-------------|
| 42    | 5210              | 24.044             | 13.81               | 24                | Pass        |
| 155   | 5775              | 31.55              | 14.99               | 30                | Pass        |

**Notes:**

1. For U-NII-1, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the output power limit shall not be reduced.

## 7.2 Power Spectral Density

|              |                |                           |              |            |           |
|--------------|----------------|---------------------------|--------------|------------|-----------|
| Input Power: | 120 Vac, 60 Hz | Environmental Conditions: | 25°C, 60% RH | Tested By: | Chris Lin |
|--------------|----------------|---------------------------|--------------|------------|-----------|

### 802.11a

| Chan. | Chan. Freq. (MHz) | PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Test Result |
|-------|-------------------|---------------|--------------------------|-------------|
| 36    | 5180              | 0.86          | 11                       | Pass        |
| 40    | 5200              | 0.74          | 11                       | Pass        |
| 48    | 5240              | 0.78          | 11                       | Pass        |

Note: For U-NII-1, the antenna gain is 3.41 dBi < 6dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT20)

| Chan. | Chan. Freq. (MHz) | PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Test Result |
|-------|-------------------|---------------|--------------------------|-------------|
| 36    | 5180              | 0.67          | 11                       | Pass        |
| 40    | 5200              | 0.44          | 11                       | Pass        |
| 48    | 5240              | 0.62          | 11                       | Pass        |

Note: For U-NII-1, the antenna gain is 3.41 dBi < 6dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT40)

| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) | Duty Factor (dB) | PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Test Result |
|-------|-------------------|-------------------------------|------------------|---------------|--------------------------|-------------|
| 38    | 5190              | -1.96                         | 0.12             | -1.84         | 11                       | Pass        |
| 46    | 5230              | -2.01                         | 0.12             | -1.89         | 11                       | Pass        |

Note: For U-NII-1, the antenna gain is 3.41 dBi < 6dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT80)

| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) | Duty Factor (dB) | PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Test Result |
|-------|-------------------|-------------------------------|------------------|---------------|--------------------------|-------------|
| 42    | 5210              | -5.13                         | 0.25             | -4.88         | 11                       | Pass        |

Note: For U-NII-1, the antenna gain is 3.41 dBi < 6dBi, so the power density limit shall not be reduced.

### 802.11a

| Chan. | Chan. Freq. (MHz) | PSD (dBm/300kHz) | PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Test Result |
|-------|-------------------|------------------|------------------|------------------------|-------------|
| 149   | 5745              | -6.49            | -4.27            | 30                     | Pass        |
| 157   | 5785              | -6.47            | -4.25            | 30                     | Pass        |
| 165   | 5825              | -6.48            | -4.26            | 30                     | Pass        |

Note: For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT20)

| Chan. | Chan. Freq. (MHz) | PSD (dBm/300kHz) | PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Test Result |
|-------|-------------------|------------------|------------------|------------------------|-------------|
| 149   | 5745              | -6.37            | -4.15            | 30                     | Pass        |
| 157   | 5785              | -7.17            | -4.95            | 30                     | Pass        |
| 165   | 5825              | -6.68            | -4.46            | 30                     | Pass        |

Note: For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT40)

| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) | Duty Factor (dB) | PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Test Result |
|-------|-------------------|----------------------------------|------------------|------------------|------------------------|-------------|
| 151   | 5755              | -10.57                           | 0.12             | -8.23            | 30                     | Pass        |
| 159   | 5795              | -10.93                           | 0.12             | -8.59            | 30                     | Pass        |

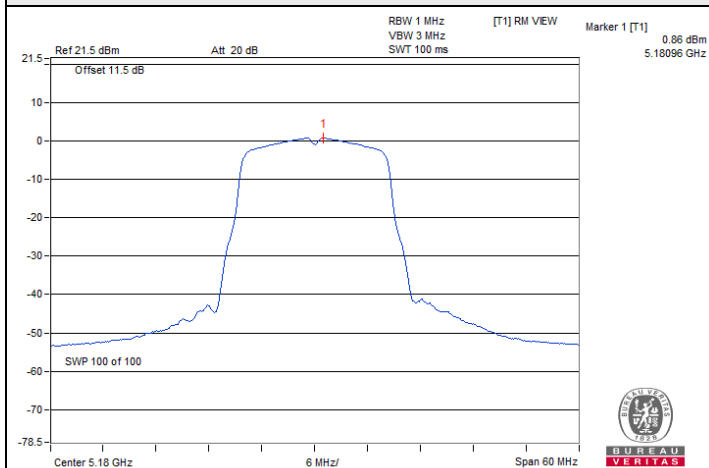
Note: For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT80)

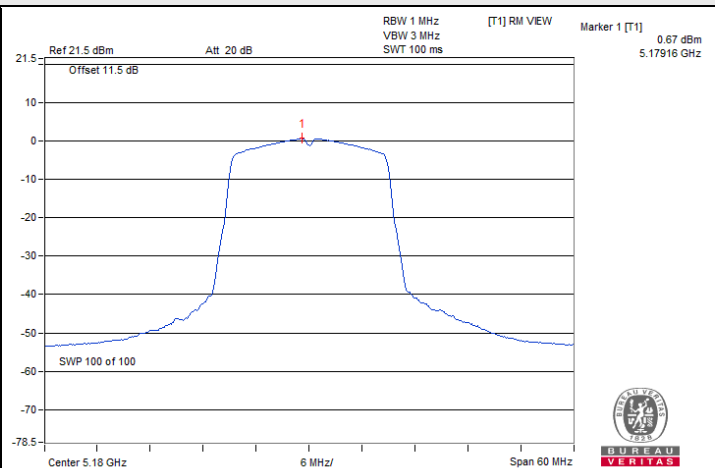
| Chan. | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) | Duty Factor (dB) | PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Test Result |
|-------|-------------------|----------------------------------|------------------|------------------|------------------------|-------------|
| 155   | 5775              | -14.43                           | 0.25             | -11.96           | 30                     | Pass        |

Note: For U-NII-3, the antenna gain is 3.41 dBi < 6 dBi, so the power density limit shall not be reduced.

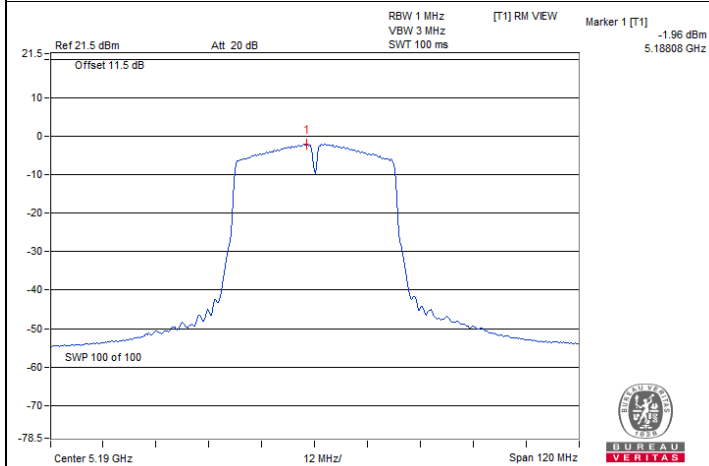
## Spectrum Plot of Maximum Value



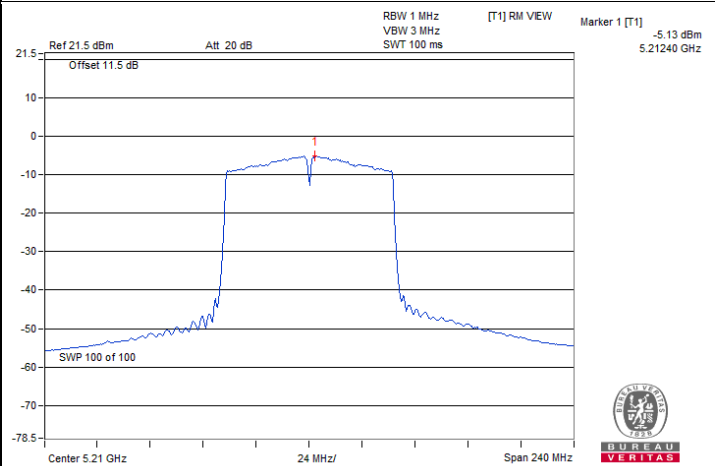
802.11a : CH 36



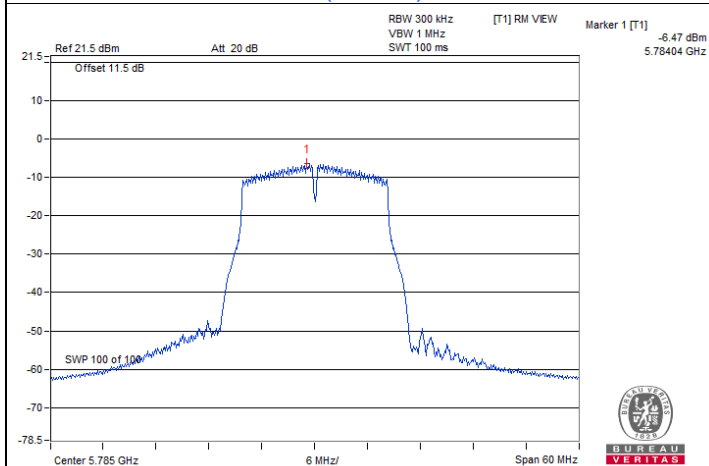
802.11ac (VHT20) : CH 36



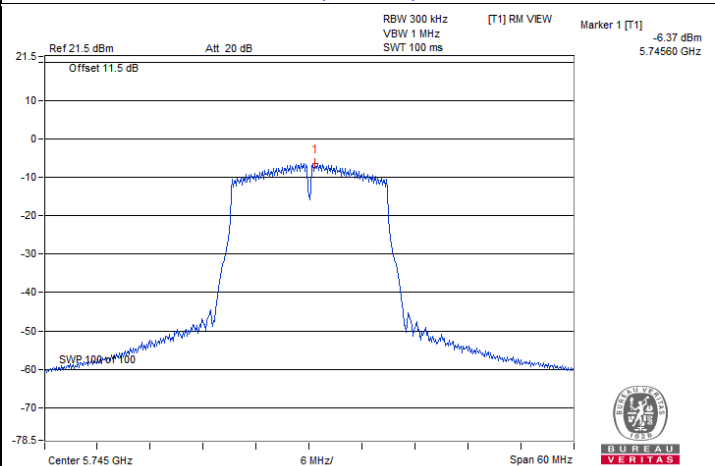
802.11ac (VHT40) : CH 38



802.11ac (VHT80) : CH 42

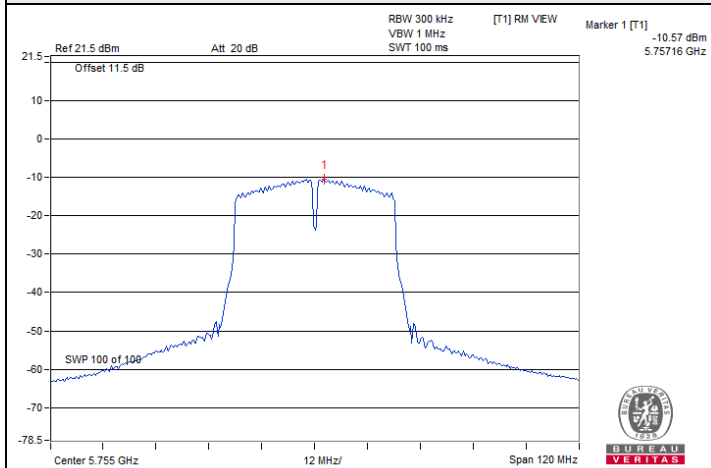


802.11a : CH 157

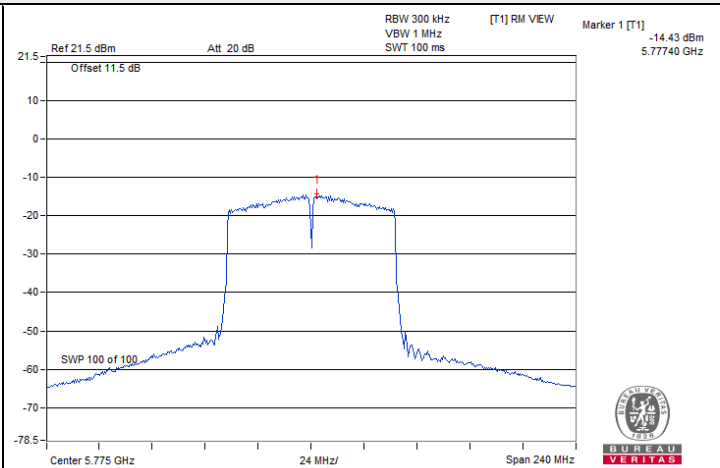


802.11ac (VHT20) : CH 149

### Spectrum Plot of Maximum Value



802.11ac (VHT40) : CH 151



802.11ac (VHT80) : CH 155

### 7.3 6 dB Bandwidth

|              |                |                           |              |            |           |
|--------------|----------------|---------------------------|--------------|------------|-----------|
| Input Power: | 120 Vac, 60 Hz | Environmental Conditions: | 25°C, 60% RH | Tested By: | Chris Lin |
|--------------|----------------|---------------------------|--------------|------------|-----------|

#### 802.11a

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Test Result |
|---------|-----------------|----------------------|---------------------|-------------|
| 149     | 5745            | 15.18                | 0.5                 | Pass        |
| 157     | 5785            | 15.18                | 0.5                 | Pass        |
| 165     | 5825            | 15.18                | 0.5                 | Pass        |

#### 802.11ac (VHT20)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Test Result |
|---------|-----------------|----------------------|---------------------|-------------|
| 149     | 5745            | 15.16                | 0.5                 | Pass        |
| 157     | 5785            | 15.19                | 0.5                 | Pass        |
| 165     | 5825            | 15.17                | 0.5                 | Pass        |

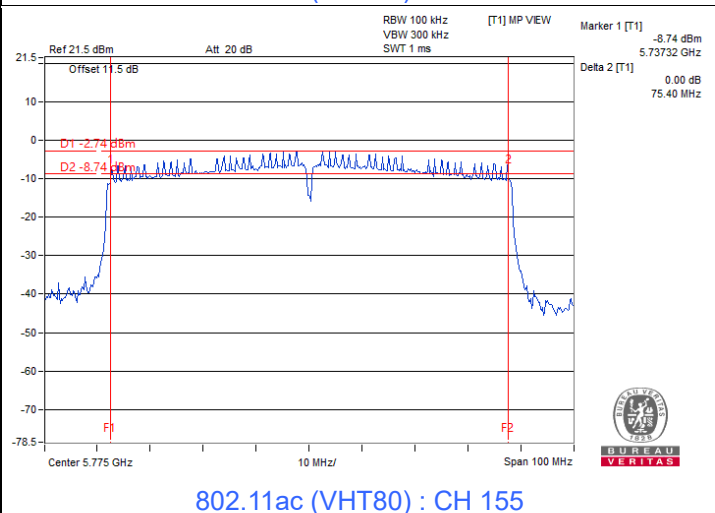
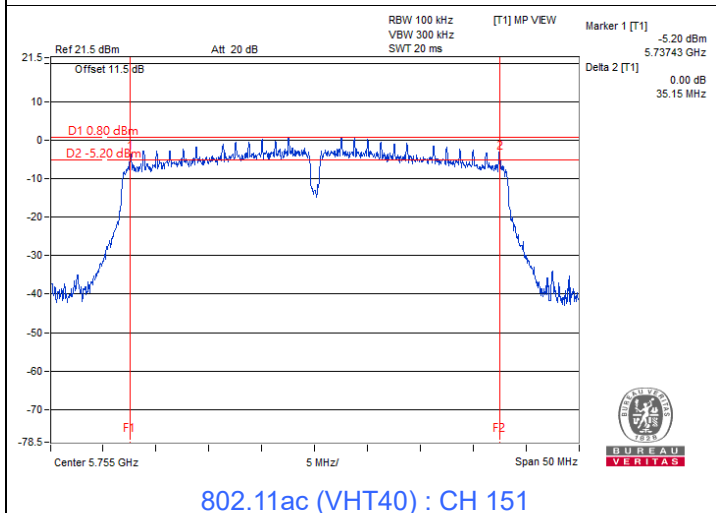
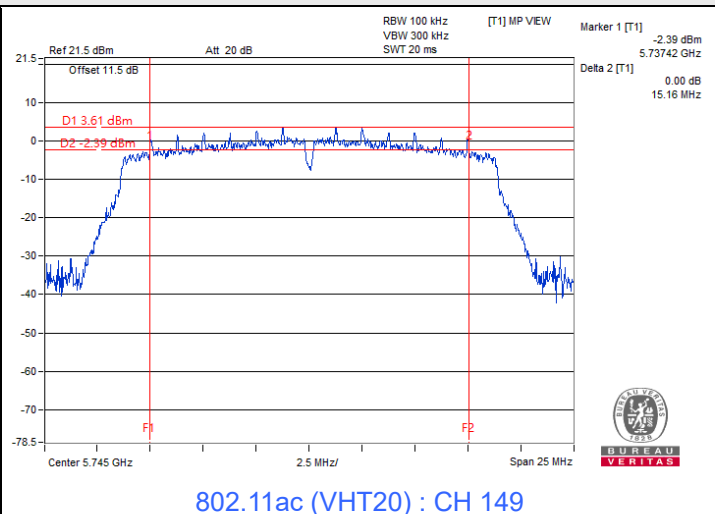
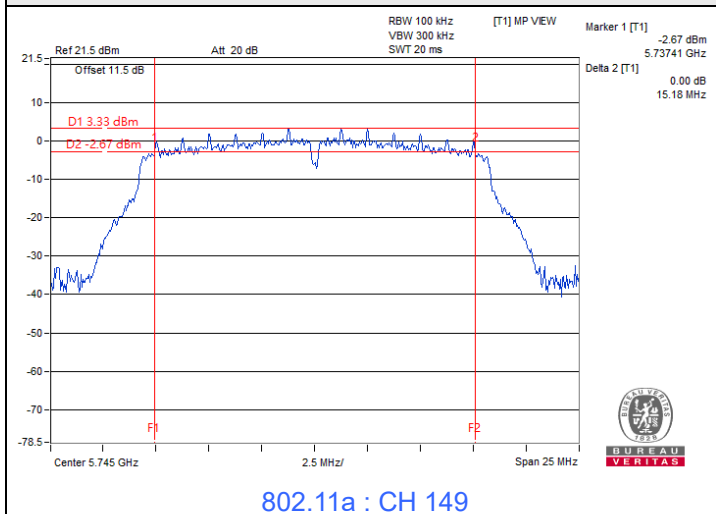
#### 802.11ac (VHT40)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Test Result |
|---------|-----------------|----------------------|---------------------|-------------|
| 151     | 5755            | 35.15                | 0.5                 | Pass        |
| 159     | 5795            | 35.27                | 0.5                 | Pass        |

#### 802.11ac (VHT80)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Test Result |
|---------|-----------------|----------------------|---------------------|-------------|
| 155     | 5775            | 75.4                 | 0.5                 | Pass        |

## Spectrum Plot of Minimum Value



#### 7.4 Occupied Bandwidth

|              |                |                           |              |            |           |
|--------------|----------------|---------------------------|--------------|------------|-----------|
| Input Power: | 120 Vac, 60 Hz | Environmental Conditions: | 25°C, 60% RH | Tested By: | Chris Lin |
|--------------|----------------|---------------------------|--------------|------------|-----------|

##### 802.11a

| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-----------------|--------------------------|
| 36      | 5180            | 16.68                    |
| 40      | 5200            | 16.68                    |
| 48      | 5240            | 16.68                    |
| 149     | 5745            | 16.8                     |
| 157     | 5785            | 16.68                    |
| 165     | 5825            | 16.68                    |

##### 802.11ac (VHT20)

| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-----------------|--------------------------|
| 36      | 5180            | 17.64                    |
| 40      | 5200            | 17.64                    |
| 48      | 5240            | 17.64                    |
| 149     | 5745            | 17.76                    |
| 157     | 5785            | 17.64                    |
| 165     | 5825            | 17.64                    |

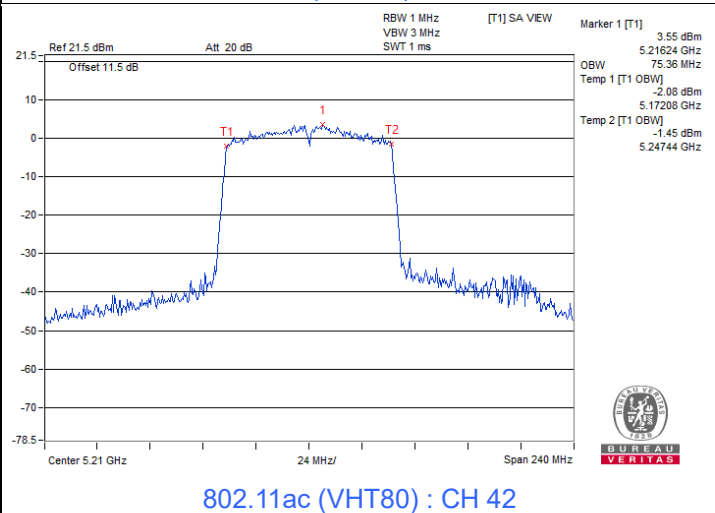
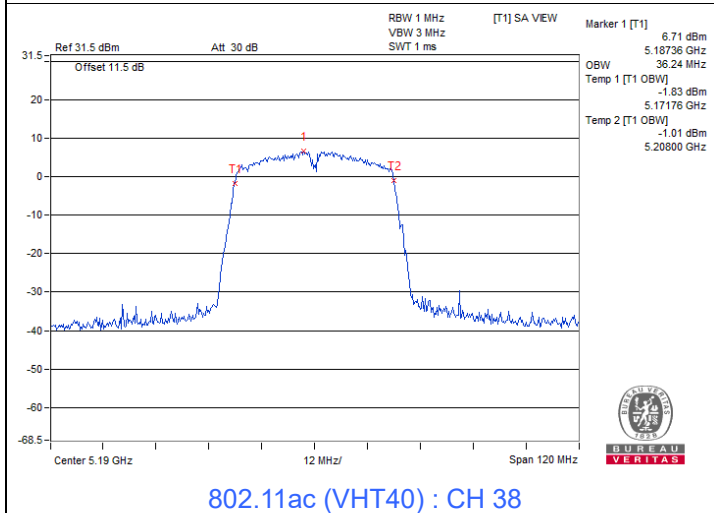
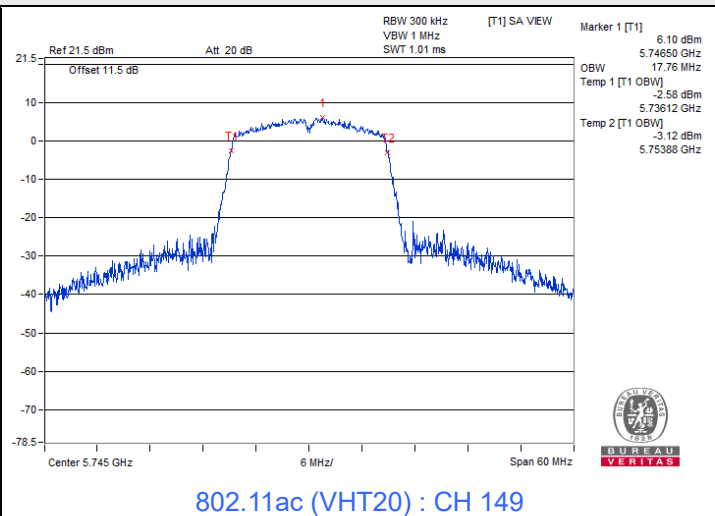
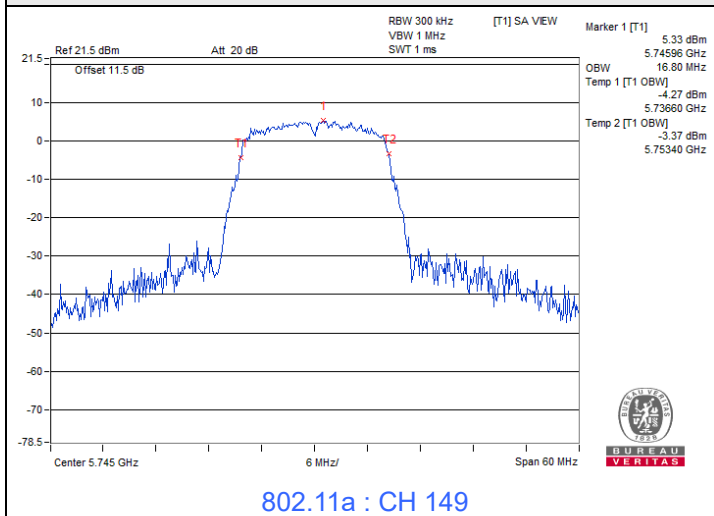
##### 802.11ac (VHT40)

| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-----------------|--------------------------|
| 38      | 5190            | 36.24                    |
| 46      | 5230            | 36.24                    |
| 151     | 5755            | 36.12                    |
| 159     | 5795            | 36                       |

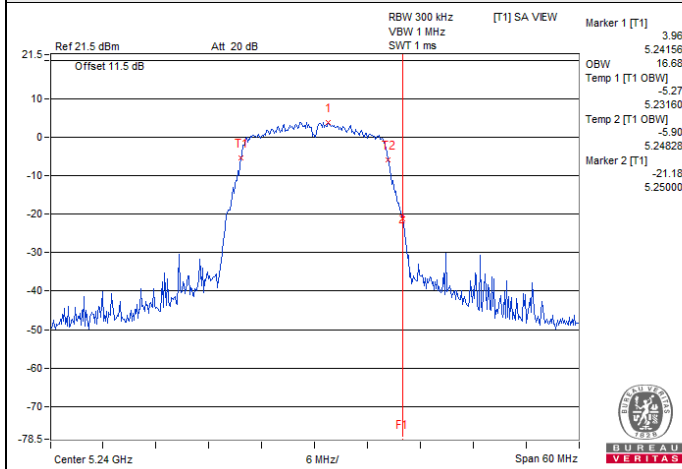
##### 802.11ac (VHT80)

| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-----------------|--------------------------|
| 42      | 5210            | 75.36                    |
| 155     | 5775            | 75.36                    |

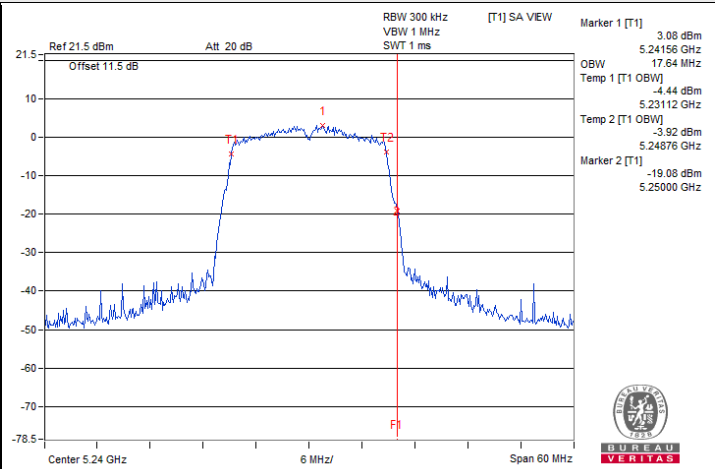
## Spectrum Plot of Maximum Value



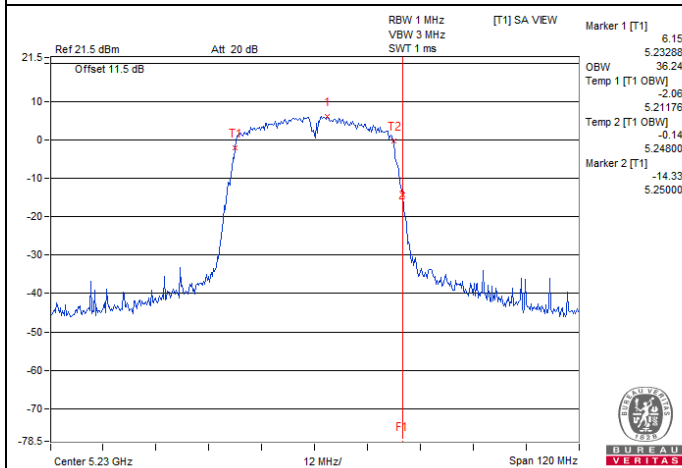
# Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



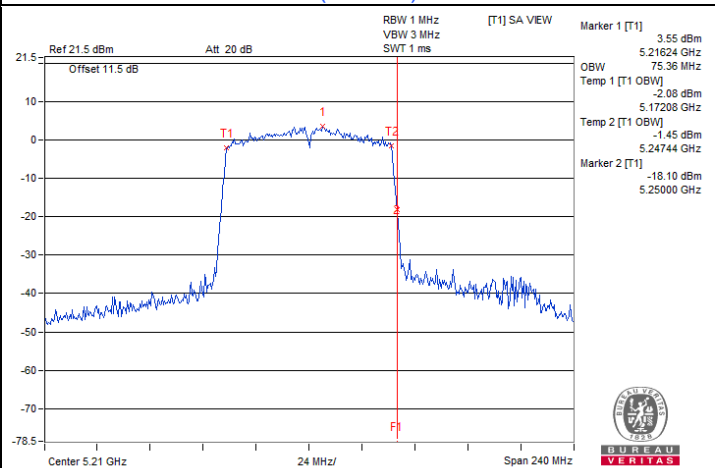
802.11a : CH 48



802.11ac (VHT20) : CH 48

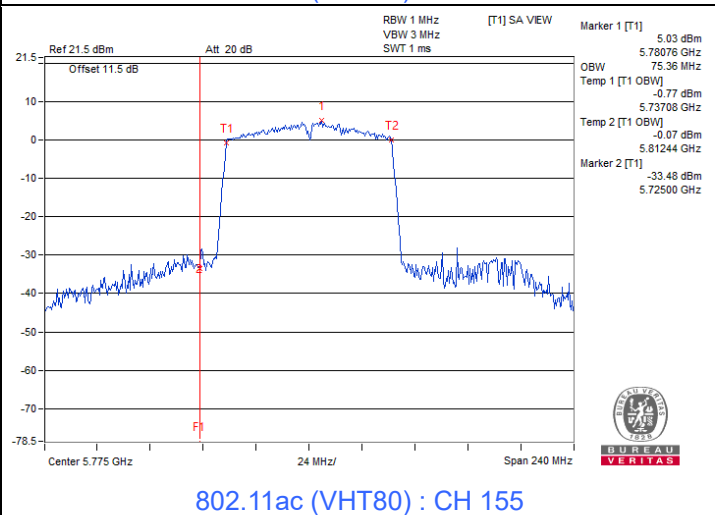
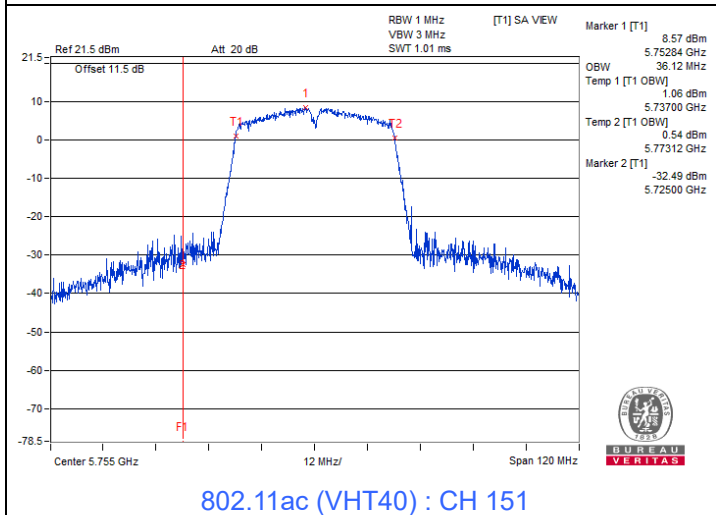
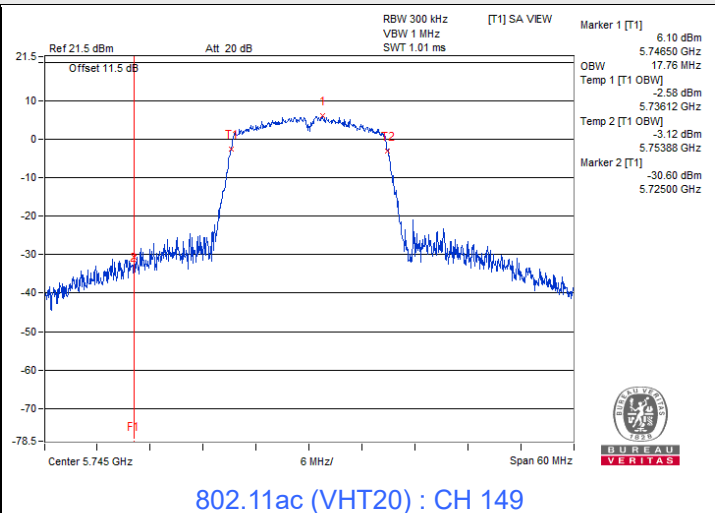
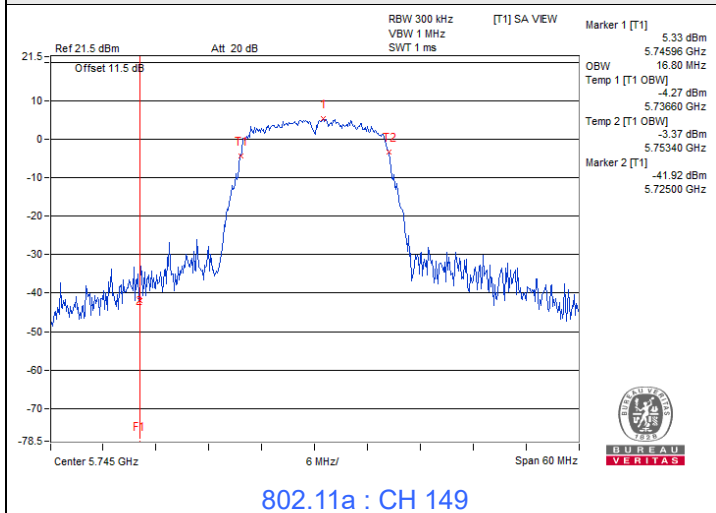


802.11ac (VHT40) : CH 46



802.11ac (VHT80) : CH 42

## Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)



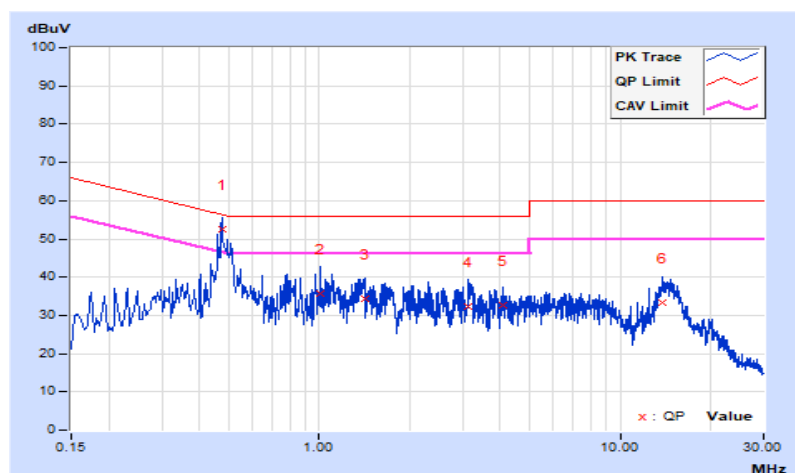
## 7.5 AC Power Conducted Emissions

|                        |                  |                                                     |                                       |
|------------------------|------------------|-----------------------------------------------------|---------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT80) | <b>Channel</b>                                      | CH 155 : 5775 MHz                     |
| <b>Frequency Range</b> | 150 kHz ~ 30 MHz | <b>Detector Function &amp; Resolution Bandwidth</b> | Quasi-Peak (QP) / Average (AV), 9 kHz |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>                     | 23 °C, 67 % RH                        |
| <b>Tested By</b>       | Adair Peng       |                                                     |                                       |

| Phase Of Power : Line (L) |                 |                        |                      |       |                       |       |              |       |             |        |
|---------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No                        | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) |       | Emission Level (dBuV) |       | Limit (dBuV) |       | Margin (dB) |        |
|                           |                 |                        | Q.P.                 | AV.   | Q.P.                  | AV.   | Q.P.         | AV.   | Q.P.        | AV.    |
| 1                         | 0.47400         | 10.21                  | 42.37                | 33.07 | 52.58                 | 43.28 | 56.44        | 46.44 | -3.86       | -3.16  |
| 2                         | 1.00600         | 10.27                  | 25.42                | 15.04 | 35.69                 | 25.31 | 56.00        | 46.00 | -20.31      | -20.69 |
| 3                         | 1.41400         | 10.31                  | 24.14                | 14.37 | 34.45                 | 24.68 | 56.00        | 46.00 | -21.55      | -21.32 |
| 4                         | 3.14200         | 10.42                  | 21.95                | 13.11 | 32.37                 | 23.53 | 56.00        | 46.00 | -23.63      | -22.47 |
| 5                         | 4.10200         | 10.45                  | 22.19                | 13.54 | 32.64                 | 23.99 | 56.00        | 46.00 | -23.36      | -22.01 |
| 6                         | 13.82200        | 10.54                  | 22.93                | 10.45 | 33.47                 | 20.99 | 60.00        | 50.00 | -26.53      | -29.01 |

### 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

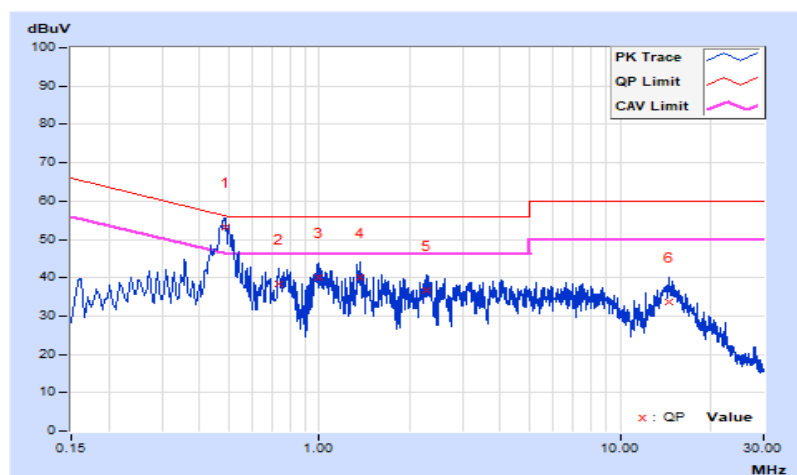


|                 |                  |                                          |                                       |
|-----------------|------------------|------------------------------------------|---------------------------------------|
| RF Mode         | 802.11ac (VHT80) | Channel                                  | CH 155 : 5775 MHz                     |
| Frequency Range | 150 kHz ~ 30 MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9 kHz |
| Input Power     | 120 Vac, 60 Hz   | Environmental Conditions                 | 23 °C, 67 % RH                        |
| Tested By       | Adair Peng       |                                          |                                       |

| Phase Of Power : Neutral (N) |                 |                        |                      |       |                       |       |              |       |             |        |
|------------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No                           | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) |       | Emission Level (dBuV) |       | Limit (dBuV) |       | Margin (dB) |        |
|                              |                 |                        | Q.P.                 | AV.   | Q.P.                  | AV.   | Q.P.         | AV.   | Q.P.        | AV.    |
| 1                            | 0.48600         | 10.24                  | 43.07                | 32.93 | 53.31                 | 43.17 | 56.24        | 46.24 | -2.93       | -3.07  |
| 2                            | 0.73400         | 10.27                  | 28.07                | 17.49 | 38.34                 | 27.76 | 56.00        | 46.00 | -17.66      | -18.24 |
| 3                            | 0.99000         | 10.31                  | 29.66                | 19.91 | 39.97                 | 30.22 | 56.00        | 46.00 | -16.03      | -15.78 |
| 4                            | 1.37000         | 10.33                  | 29.61                | 20.88 | 39.94                 | 31.21 | 56.00        | 46.00 | -16.06      | -14.79 |
| 5                            | 2.27400         | 10.39                  | 26.46                | 18.45 | 36.85                 | 28.84 | 56.00        | 46.00 | -19.15      | -17.16 |
| 6                            | 14.51800        | 10.73                  | 22.87                | 12.51 | 33.60                 | 23.24 | 60.00        | 50.00 | -26.40      | -26.76 |

#### 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



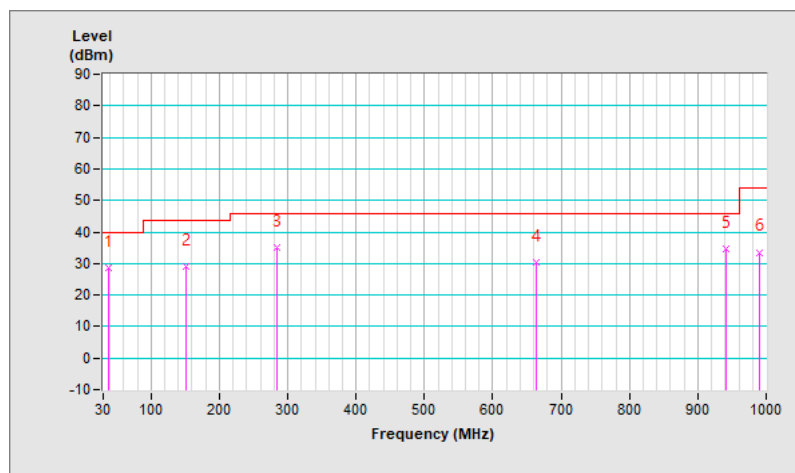
## 7.6 Unwanted Emissions below 1 GHz

|                 |                  |                               |                               |
|-----------------|------------------|-------------------------------|-------------------------------|
| RF Mode         | 802.11ac (VHT80) | Channel                       | CH 155 : 5775 MHz             |
| Frequency Range | 30 MHz ~ 1 GHz   | Detector Function & Bandwidth | QP: RB=120kHz, DET=Quasi-Peak |
| Input Power     | 120 Vac, 60 Hz   | Environmental Conditions      | 24.1 °C, 74.3 % RH            |
| Tested By       | Rex Wang         |                               |                               |

| 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                                                    | 38.73           | 28.7 QP                 | 40.0           | -11.3       | 1.00 H             | 31                   | 10.2             | 18.5                     |
| 2                                                    | 151.25          | 28.9 QP                 | 43.5           | -14.6       | 2.00 H             | 303                  | 9.3              | 19.6                     |
| 3                                                    | 285.11          | 34.9 QP                 | 46.0           | -11.1       | 1.00 H             | 138                  | 14.4             | 20.5                     |
| 4                                                    | 664.38          | 30.5 QP                 | 46.0           | -15.5       | 1.00 H             | 39                   | 1.5              | 29.0                     |
| 5                                                    | 941.80          | 34.5 QP                 | 46.0           | -11.5       | 1.00 H             | 341                  | 1.5              | 33.0                     |
| 6                                                    | 989.33          | 33.6 QP                 | 54.0           | -20.4       | 1.00 H             | 152                  | 0.3              | 33.3                     |

### 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 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

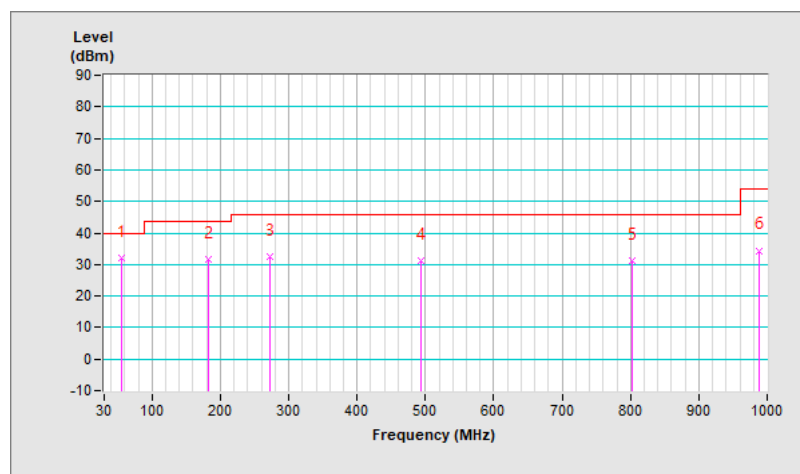


|                 |                  |                               |                               |
|-----------------|------------------|-------------------------------|-------------------------------|
| RF Mode         | 802.11ac (VHT80) | Channel                       | CH 155 : 5775 MHz             |
| Frequency Range | 30 MHz ~ 1 GHz   | Detector Function & Bandwidth | QP: RB=120kHz, DET=Quasi-Peak |
| Input Power     | 120 Vac, 60 Hz   | Environmental Conditions      | 24.1 °C, 74.3 % RH            |
| Tested By       | Rex Wang         |                               |                               |

| 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                                                  | 55.22           | 32.2 QP                 | 40.0           | -7.8        | 1.00 V             | 193                  | 13.0             | 19.2                     |
| 2                                                  | 183.26          | 31.8 QP                 | 43.5           | -11.7       | 1.00 V             | 333                  | 14.0             | 17.8                     |
| 3                                                  | 272.50          | 32.6 QP                 | 46.0           | -13.4       | 1.00 V             | 117                  | 12.6             | 20.0                     |
| 4                                                  | 493.66          | 31.2 QP                 | 46.0           | -14.8       | 1.00 V             | 181                  | 5.5              | 25.7                     |
| 5                                                  | 803.09          | 31.4 QP                 | 46.0           | -14.6       | 1.00 V             | 130                  | 0.0              | 31.4                     |
| 6                                                  | 988.36          | 34.5 QP                 | 54.0           | -19.5       | 1.00 V             | 35                   | 1.2              | 33.3                     |

#### 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 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



## 7.7 Unwanted Emissions above 1 GHz

|                        |                |                                          |                                                                      |
|------------------------|----------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11a        | <b>Channel</b>                           | CH 36 : 5180 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang       |                                          |                                                                      |

| 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         | 67.7 PK                 | 74.0           | -6.3        | 2.29 H             | 291                  | 46.0             | 21.7                     |
| 2                                                    | 5150.00         | 51.5 AV                 | 54.0           | -2.5        | 2.29 H             | 291                  | 29.8             | 21.7                     |
| 3                                                    | *5180.00        | 108.8 PK                |                |             | 2.29 H             | 291                  | 66.8             | 42.0                     |
| 4                                                    | *5180.00        | 98.8 AV                 |                |             | 2.29 H             | 291                  | 56.8             | 42.0                     |
| 5                                                    | #10360.00       | 63.5 PK                 | 68.2           | -4.7        | 2.02 H             | 345                  | 39.1             | 24.4                     |
| 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         | 73.2 PK                 | 74.0           | -0.8        | 1.20 V             | 62                   | 51.5             | 21.7                     |
| 2                                                    | 5150.00         | 53.4 AV                 | 54.0           | -0.6        | 1.20 V             | 62                   | 31.7             | 21.7                     |
| 3                                                    | *5180.00        | 110.7 PK                |                |             | 1.20 V             | 62                   | 68.7             | 42.0                     |
| 4                                                    | *5180.00        | 100.6 AV                |                |             | 1.20 V             | 62                   | 58.6             | 42.0                     |
| 5                                                    | #10360.00       | 63.7 PK                 | 68.2           | -4.5        | 1.56 V             | 102                  | 39.3             | 24.4                     |

### 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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                |                                          |                                                                      |
|------------------------|----------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11a        | <b>Channel</b>                           | CH 40 : 5200 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang       |                                          |                                                                      |

| 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         | 65.3 PK                 | 74.0           | -8.7        | 2.19 H             | 299                  | 43.6             | 21.7                     |
| 2                                                    | 5150.00         | 51.3 AV                 | 54.0           | -2.7        | 2.19 H             | 299                  | 29.6             | 21.7                     |
| 3                                                    | *5200.00        | 112.5 PK                |                |             | 2.19 H             | 299                  | 70.5             | 42.0                     |
| 4                                                    | *5200.00        | 102.8 AV                |                |             | 2.19 H             | 299                  | 60.8             | 42.0                     |
| 5                                                    | #10400.00       | 63.4 PK                 | 68.2           | -4.8        | 2.00 H             | 347                  | 38.7             | 24.7                     |
| 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         | 67.3 PK                 | 74.0           | -6.7        | 1.09 V             | 65                   | 45.6             | 21.7                     |
| 2                                                    | 5150.00         | 53.1 AV                 | 54.0           | -0.9        | 1.09 V             | 65                   | 31.4             | 21.7                     |
| 3                                                    | *5200.00        | 113.0 PK                |                |             | 1.09 V             | 65                   | 71.0             | 42.0                     |
| 4                                                    | *5200.00        | 103.2 AV                |                |             | 1.09 V             | 65                   | 61.2             | 42.0                     |
| 5                                                    | #10400.00       | 63.6 PK                 | 68.2           | -4.6        | 1.55 V             | 104                  | 38.9             | 24.7                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                |                                          |                                                                      |
|------------------------|----------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11a        | <b>Channel</b>                           | CH 48 : 5240 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang       |                                          |                                                                      |

| 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                                                    | *5240.00        | 114.8 PK                |                |             | 2.19 H             | 299                  | 73.1             | 41.7                     |
| 2                                                    | *5240.00        | 104.8 AV                |                |             | 2.19 H             | 299                  | 63.1             | 41.7                     |
| 3                                                    | 5350.00         | 60.9 PK                 | 74.0           | -13.1       | 2.19 H             | 299                  | 39.5             | 21.4                     |
| 4                                                    | 5350.00         | 47.3 AV                 | 54.0           | -6.7        | 2.19 H             | 299                  | 25.9             | 21.4                     |
| 5                                                    | #10480.00       | 63.7 PK                 | 68.2           | -4.5        | 2.04 H             | 346                  | 38.9             | 24.8                     |
| 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                                                    | *5240.00        | 116.5 PK                |                |             | 1.31 V             | 97                   | 74.8             | 41.7                     |
| 2                                                    | *5240.00        | 106.4 AV                |                |             | 1.31 V             | 97                   | 64.7             | 41.7                     |
| 3                                                    | 5350.00         | 61.1 PK                 | 74.0           | -12.9       | 1.31 V             | 97                   | 39.7             | 21.4                     |
| 4                                                    | 5350.00         | 47.4 AV                 | 54.0           | -6.6        | 1.31 V             | 97                   | 26.0             | 21.4                     |
| 5                                                    | #10480.00       | 64.0 PK                 | 68.2           | -4.2        | 1.57 V             | 104                  | 39.2             | 24.8                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                |                                          |                                                                      |
|------------------------|----------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11a        | <b>Channel</b>                           | CH 149 : 5745 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng     |                                          |                                                                      |

| 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                                                    | #5640.00        | 60.9 PK                 | 68.2           | -7.3        | 2.35 H             | 300                  | 39.0             | 21.9                     |
| 2                                                    | *5745.00        | 113.4 PK                |                |             | 2.35 H             | 300                  | 71.1             | 42.3                     |
| 3                                                    | *5745.00        | 103.5 AV                |                |             | 2.35 H             | 300                  | 61.2             | 42.3                     |
| 4                                                    | #5987.60        | 61.6 PK                 | 68.2           | -6.6        | 2.35 H             | 300                  | 39.0             | 22.6                     |
| 5                                                    | 11490.00        | 65.0 PK                 | 74.0           | -9.0        | 1.97 H             | 350                  | 38.8             | 26.2                     |
| 6                                                    | 11490.00        | 51.5 AV                 | 54.0           | -2.5        | 1.97 H             | 350                  | 25.3             | 26.2                     |
| 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                                                    | #5628.40        | 60.3 PK                 | 68.2           | -7.9        | 2.17 V             | 100                  | 38.5             | 21.8                     |
| 2                                                    | *5745.00        | 115.0 PK                |                |             | 2.17 V             | 100                  | 72.7             | 42.3                     |
| 3                                                    | *5745.00        | 105.2 AV                |                |             | 2.17 V             | 100                  | 62.9             | 42.3                     |
| 4                                                    | #5999.60        | 61.2 PK                 | 68.2           | -7.0        | 2.17 V             | 100                  | 38.6             | 22.6                     |
| 5                                                    | 11490.00        | 65.2 PK                 | 74.0           | -8.8        | 1.60 V             | 115                  | 39.0             | 26.2                     |
| 6                                                    | 11490.00        | 51.9 AV                 | 54.0           | -2.1        | 1.60 V             | 115                  | 25.7             | 26.2                     |

**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, the limit was restricted at the RF Output Power.

|                        |                |                                          |                                                                      |
|------------------------|----------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11a        | <b>Channel</b>                           | CH 157 : 5785 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng     |                                          |                                                                      |

| 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                                                    | #5611.20        | 60.8 PK                 | 68.2           | -7.4        | 2.28 H             | 293                  | 39.1             | 21.7                     |
| 2                                                    | *5785.00        | 113.1 PK                |                |             | 2.28 H             | 293                  | 70.8             | 42.3                     |
| 3                                                    | *5785.00        | 102.9 AV                |                |             | 2.28 H             | 293                  | 60.6             | 42.3                     |
| 4                                                    | #5980.80        | 61.7 PK                 | 68.2           | -6.5        | 2.28 H             | 293                  | 39.1             | 22.6                     |
| 5                                                    | 11570.00        | 64.5 PK                 | 74.0           | -9.5        | 2.00 H             | 349                  | 38.6             | 25.9                     |
| 6                                                    | 11570.00        | 50.9 AV                 | 54.0           | -3.1        | 2.00 H             | 349                  | 25.0             | 25.9                     |
| 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                                                    | #5618.80        | 61.2 PK                 | 68.2           | -7.0        | 2.17 V             | 90                   | 39.4             | 21.8                     |
| 2                                                    | *5785.00        | 114.5 PK                |                |             | 2.17 V             | 90                   | 72.2             | 42.3                     |
| 3                                                    | *5785.00        | 104.5 AV                |                |             | 2.17 V             | 90                   | 62.2             | 42.3                     |
| 4                                                    | #5996.80        | 61.9 PK                 | 68.2           | -6.3        | 2.17 V             | 90                   | 39.3             | 22.6                     |
| 5                                                    | 11570.00        | 64.7 PK                 | 74.0           | -9.3        | 1.57 V             | 119                  | 38.8             | 25.9                     |
| 6                                                    | 11570.00        | 51.1 AV                 | 54.0           | -2.9        | 1.57 V             | 119                  | 25.2             | 25.9                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                |                                          |                                                                      |
|------------------------|----------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11a        | <b>Channel</b>                           | CH 165 : 5825 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng     |                                          |                                                                      |

| 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                                                    | #5649.20        | 60.0 PK                 | 68.2           | -8.2        | 2.38 H             | 298                  | 38.0             | 22.0                     |
| 2                                                    | *5825.00        | 111.8 PK                |                |             | 2.38 H             | 298                  | 69.4             | 42.4                     |
| 3                                                    | *5825.00        | 102.0 AV                |                |             | 2.38 H             | 298                  | 59.6             | 42.4                     |
| 4                                                    | #5996.80        | 61.8 PK                 | 68.2           | -6.4        | 2.38 H             | 298                  | 39.2             | 22.6                     |
| 5                                                    | 11650.00        | 64.3 PK                 | 74.0           | -9.7        | 2.05 H             | 346                  | 38.7             | 25.6                     |
| 6                                                    | 11650.00        | 50.6 AV                 | 54.0           | -3.4        | 2.05 H             | 346                  | 25.0             | 25.6                     |
| 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                                                    | #5606.80        | 61.0 PK                 | 68.2           | -7.2        | 2.23 V             | 93                   | 39.3             | 21.7                     |
| 2                                                    | *5825.00        | 113.7 PK                |                |             | 2.23 V             | 93                   | 71.3             | 42.4                     |
| 3                                                    | *5825.00        | 103.8 AV                |                |             | 2.23 V             | 93                   | 61.4             | 42.4                     |
| 4                                                    | #5995.60        | 61.0 PK                 | 68.2           | -7.2        | 2.23 V             | 93                   | 38.4             | 22.6                     |
| 5                                                    | 11650.00        | 64.4 PK                 | 74.0           | -9.6        | 1.54 V             | 115                  | 38.8             | 25.6                     |
| 6                                                    | 11650.00        | 50.9 AV                 | 54.0           | -3.1        | 1.54 V             | 115                  | 25.3             | 25.6                     |

**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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT20) | <b>Channel</b>                           | CH 36 : 5180 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang         |                                          |                                                                      |

| 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         | 68.5 PK                 | 74.0           | -5.5        | 2.29 H             | 298                  | 46.8             | 21.7                     |
| 2                                                    | 5150.00         | 52.3 AV                 | 54.0           | -1.7        | 2.29 H             | 298                  | 30.6             | 21.7                     |
| 3                                                    | *5180.00        | 109.8 PK                |                |             | 2.29 H             | 298                  | 67.8             | 42.0                     |
| 4                                                    | *5180.00        | 100.0 AV                |                |             | 2.29 H             | 298                  | 58.0             | 42.0                     |
| 5                                                    | #10360.00       | 63.1 PK                 | 68.2           | -5.1        | 2.03 H             | 344                  | 38.7             | 24.4                     |
| 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         | 71.8 PK                 | 74.0           | -2.2        | 1.16 V             | 74                   | 50.1             | 21.7                     |
| 2                                                    | 5150.00         | 53.7 AV                 | 54.0           | -0.3        | 1.16 V             | 74                   | 32.0             | 21.7                     |
| 3                                                    | *5180.00        | 110.5 PK                |                |             | 1.16 V             | 74                   | 68.5             | 42.0                     |
| 4                                                    | *5180.00        | 100.4 AV                |                |             | 1.16 V             | 74                   | 58.4             | 42.0                     |
| 5                                                    | #10360.00       | 63.4 PK                 | 68.2           | -4.8        | 1.58 V             | 105                  | 39.0             | 24.4                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT20) | <b>Channel</b>                           | CH 40 : 5200 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang         |                                          |                                                                      |

| 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         | 66.0 PK                 | 74.0           | -8.0        | 2.31 H             | 299                  | 44.3             | 21.7                     |
| 2                                                    | 5150.00         | 52.3 AV                 | 54.0           | -1.7        | 2.31 H             | 299                  | 30.6             | 21.7                     |
| 3                                                    | *5200.00        | 112.7 PK                |                |             | 2.31 H             | 299                  | 70.7             | 42.0                     |
| 4                                                    | *5200.00        | 103.2 AV                |                |             | 2.31 H             | 299                  | 61.2             | 42.0                     |
| 5                                                    | #10400.00       | 63.3 PK                 | 68.2           | -4.9        | 2.04 H             | 344                  | 38.6             | 24.7                     |
| 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         | 68.5 PK                 | 74.0           | -5.5        | 1.17 V             | 50                   | 46.8             | 21.7                     |
| 2                                                    | 5150.00         | 53.2 AV                 | 54.0           | -0.8        | 1.17 V             | 50                   | 31.5             | 21.7                     |
| 3                                                    | *5200.00        | 113.2 PK                |                |             | 1.17 V             | 50                   | 71.2             | 42.0                     |
| 4                                                    | *5200.00        | 103.7 AV                |                |             | 1.17 V             | 50                   | 61.7             | 42.0                     |
| 5                                                    | #10400.00       | 63.5 PK                 | 68.2           | -4.7        | 1.52 V             | 103                  | 38.8             | 24.7                     |

**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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT20) | <b>Channel</b>                           | CH 48 : 5240 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang         |                                          |                                                                      |

| 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                                                    | *5240.00        | 114.9 PK                |                |             | 2.21 H             | 296                  | 73.2             | 41.7                     |
| 2                                                    | *5240.00        | 104.6 AV                |                |             | 2.21 H             | 296                  | 62.9             | 41.7                     |
| 3                                                    | 5350.00         | 60.8 PK                 | 74.0           | -13.2       | 2.21 H             | 296                  | 39.4             | 21.4                     |
| 4                                                    | 5350.00         | 47.3 AV                 | 54.0           | -6.7        | 2.21 H             | 296                  | 25.9             | 21.4                     |
| 5                                                    | #10480.00       | 63.5 PK                 | 68.2           | -4.7        | 2.05 H             | 346                  | 38.7             | 24.8                     |
| 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                                                    | *5240.00        | 116.2 PK                |                |             | 1.16 V             | 98                   | 74.5             | 41.7                     |
| 2                                                    | *5240.00        | 106.2 AV                |                |             | 1.16 V             | 98                   | 64.5             | 41.7                     |
| 3                                                    | 5350.00         | 61.0 PK                 | 74.0           | -13.0       | 1.16 V             | 98                   | 39.6             | 21.4                     |
| 4                                                    | 5350.00         | 47.4 AV                 | 54.0           | -6.6        | 1.16 V             | 98                   | 26.0             | 21.4                     |
| 5                                                    | #10480.00       | 63.7 PK                 | 68.2           | -4.5        | 1.55 V             | 104                  | 38.9             | 24.8                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT20) | <b>Channel</b>                           | CH 149 : 5745 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng       |                                          |                                                                      |

| 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                                                    | #5631.20        | 60.9 PK                 | 68.2           | -7.3        | 2.45 H             | 303                  | 39.1             | 21.8                     |
| 2                                                    | *5745.00        | 113.0 PK                |                |             | 2.45 H             | 303                  | 70.7             | 42.3                     |
| 3                                                    | *5745.00        | 103.2 AV                |                |             | 2.45 H             | 303                  | 60.9             | 42.3                     |
| 4                                                    | #5937.20        | 61.5 PK                 | 68.2           | -6.7        | 2.45 H             | 303                  | 39.2             | 22.3                     |
| 5                                                    | 11490.00        | 64.8 PK                 | 74.0           | -9.2        | 2.00 H             | 342                  | 38.6             | 26.2                     |
| 6                                                    | 11490.00        | 51.5 AV                 | 54.0           | -2.5        | 2.00 H             | 342                  | 25.3             | 26.2                     |
| 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                                                    | #5643.20        | 60.8 PK                 | 68.2           | -7.4        | 2.67 V             | 77                   | 38.8             | 22.0                     |
| 2                                                    | *5745.00        | 114.8 PK                |                |             | 2.67 V             | 77                   | 72.5             | 42.3                     |
| 3                                                    | *5745.00        | 104.5 AV                |                |             | 2.67 V             | 77                   | 62.2             | 42.3                     |
| 4                                                    | #5986.40        | 61.2 PK                 | 68.2           | -7.0        | 2.67 V             | 77                   | 38.6             | 22.6                     |
| 5                                                    | 11490.00        | 65.2 PK                 | 74.0           | -8.8        | 1.50 V             | 117                  | 39.0             | 26.2                     |
| 6                                                    | 11490.00        | 51.7 AV                 | 54.0           | -2.3        | 1.50 V             | 117                  | 25.5             | 26.2                     |

**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, the limit was restricted at the RF Output Power.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT20) | <b>Channel</b>                           | CH 157 : 5785 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng       |                                          |                                                                      |

| 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                                                    | #5601.20        | 60.3 PK                 | 68.2           | -7.9        | 2.50 H             | 299                  | 38.6             | 21.7                     |
| 2                                                    | *5785.00        | 111.6 PK                |                |             | 2.50 H             | 299                  | 69.3             | 42.3                     |
| 3                                                    | *5785.00        | 101.6 AV                |                |             | 2.50 H             | 299                  | 59.3             | 42.3                     |
| 4                                                    | #5996.40        | 61.5 PK                 | 68.2           | -6.7        | 2.50 H             | 299                  | 38.9             | 22.6                     |
| 5                                                    | 11570.00        | 64.6 PK                 | 74.0           | -9.4        | 1.93 H             | 347                  | 38.7             | 25.9                     |
| 6                                                    | 11570.00        | 51.1 AV                 | 54.0           | -2.9        | 1.93 H             | 347                  | 25.2             | 25.9                     |
| 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                                                    | #5648.40        | 60.8 PK                 | 68.2           | -7.4        | 2.61 V             | 104                  | 38.8             | 22.0                     |
| 2                                                    | *5785.00        | 113.7 PK                |                |             | 2.61 V             | 104                  | 71.4             | 42.3                     |
| 3                                                    | *5785.00        | 103.3 AV                |                |             | 2.61 V             | 104                  | 61.0             | 42.3                     |
| 4                                                    | #5950.80        | 61.9 PK                 | 68.2           | -6.3        | 2.61 V             | 104                  | 39.5             | 22.4                     |
| 5                                                    | 11570.00        | 64.7 PK                 | 74.0           | -9.3        | 1.48 V             | 112                  | 38.8             | 25.9                     |
| 6                                                    | 11570.00        | 51.3 AV                 | 54.0           | -2.7        | 1.48 V             | 112                  | 25.4             | 25.9                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT20) | <b>Channel</b>                           | CH 165 : 5825 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng       |                                          |                                                                      |

| 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                                                    | #5612.40        | 61.7 PK                 | 68.2           | -6.5        | 2.25 H             | 306                  | 40.0             | 21.7                     |
| 2                                                    | *5825.00        | 110.9 PK                |                |             | 2.25 H             | 360                  | 68.5             | 42.4                     |
| 3                                                    | *5825.00        | 100.8 AV                |                |             | 2.25 H             | 360                  | 58.4             | 42.4                     |
| 4                                                    | #5986.00        | 61.6 PK                 | 68.2           | -6.6        | 2.25 H             | 306                  | 39.0             | 22.6                     |
| 5                                                    | 11650.00        | 64.2 PK                 | 74.0           | -9.8        | 1.57 H             | 111                  | 38.6             | 25.6                     |
| 6                                                    | 11650.00        | 50.5 AV                 | 54.0           | -3.5        | 1.57 H             | 111                  | 24.9             | 25.6                     |
| 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                                                    | #5622.00        | 60.8 PK                 | 68.2           | -7.4        | 2.14 V             | 75                   | 39.0             | 21.8                     |
| 2                                                    | *5825.00        | 112.3 PK                |                |             | 2.14 V             | 75                   | 69.9             | 42.4                     |
| 3                                                    | *5825.00        | 102.4 AV                |                |             | 2.14 V             | 75                   | 60.0             | 42.4                     |
| 4                                                    | #5967.60        | 61.7 PK                 | 68.2           | -6.5        | 2.14 V             | 75                   | 39.3             | 22.4                     |
| 5                                                    | 11650.00        | 64.4 PK                 | 74.0           | -9.6        | 1.54 V             | 110                  | 38.8             | 25.6                     |
| 6                                                    | 11650.00        | 50.8 AV                 | 54.0           | -3.2        | 1.54 V             | 110                  | 25.2             | 25.6                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT40) | <b>Channel</b>                           | CH 38 : 5190 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=1 kHz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang         |                                          |                                                                      |

| 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         | 70.1 PK                 | 74.0           | -3.9        | 2.32 H             | 296                  | 48.4             | 21.7                     |
| 2                                                    | 5150.00         | 53.0 AV                 | 54.0           | -1.0        | 2.32 H             | 296                  | 31.3             | 21.7                     |
| 3                                                    | *5190.00        | 105.8 PK                |                |             | 2.32 H             | 296                  | 63.8             | 42.0                     |
| 4                                                    | *5190.00        | 95.7 AV                 |                |             | 2.32 H             | 296                  | 53.7             | 42.0                     |
| 5                                                    | #10380.00       | 63.1 PK                 | 68.2           | -5.1        | 1.96 H             | 347                  | 38.6             | 24.5                     |
| 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         | 72.5 PK                 | 74.0           | -1.5        | 1.00 V             | 95                   | 50.8             | 21.7                     |
| 2                                                    | 5150.00         | 53.8 AV                 | 54.0           | -0.2        | 1.00 V             | 95                   | 32.1             | 21.7                     |
| 3                                                    | *5190.00        | 106.5 PK                |                |             | 1.00 V             | 95                   | 64.5             | 42.0                     |
| 4                                                    | *5190.00        | 96.3 AV                 |                |             | 1.00 V             | 95                   | 54.3             | 42.0                     |
| 5                                                    | #10380.00       | 63.4 PK                 | 68.2           | -4.8        | 1.57 V             | 104                  | 38.9             | 24.5                     |

**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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT40) | <b>Channel</b>                           | CH 46 : 5230 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=1 kHz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang         |                                          |                                                                      |

| 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         | 65.9 PK                 | 74.0           | -8.1        | 2.23 H             | 302                  | 44.2             | 21.7                     |
| 2                                                    | 5150.00         | 52.9 AV                 | 54.0           | -1.1        | 2.23 H             | 302                  | 31.2             | 21.7                     |
| 3                                                    | *5230.00        | 110.1 PK                |                |             | 2.23 H             | 302                  | 68.3             | 41.8                     |
| 4                                                    | *5230.00        | 100.1 AV                |                |             | 2.23 H             | 302                  | 58.3             | 41.8                     |
| 5                                                    | 5350.00         | 61.0 PK                 | 74.0           | -13.0       | 2.23 H             | 302                  | 39.6             | 21.4                     |
| 6                                                    | 5350.00         | 48.5 AV                 | 54.0           | -5.5        | 2.23 H             | 302                  | 27.1             | 21.4                     |
| 7                                                    | #10460.00       | 63.5 PK                 | 68.2           | -4.7        | 2.03 H             | 345                  | 38.7             | 24.8                     |
| 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         | 68.2 PK                 | 74.0           | -5.8        | 1.16 V             | 74                   | 46.5             | 21.7                     |
| 2                                                    | 5150.00         | 53.5 AV                 | 54.0           | -0.5        | 1.16 V             | 74                   | 31.8             | 21.7                     |
| 3                                                    | *5230.00        | 111.7 PK                |                |             | 1.16 V             | 74                   | 69.9             | 41.8                     |
| 4                                                    | *5230.00        | 101.3 AV                |                |             | 1.16 V             | 74                   | 59.5             | 41.8                     |
| 5                                                    | 5350.00         | 62.2 PK                 | 74.0           | -11.8       | 1.16 V             | 74                   | 40.8             | 21.4                     |
| 6                                                    | 5350.00         | 48.7 AV                 | 54.0           | -5.3        | 1.16 V             | 74                   | 27.3             | 21.4                     |
| 7                                                    | #10460.00       | 63.7 PK                 | 68.2           | -4.5        | 1.58 V             | 105                  | 38.9             | 24.8                     |

**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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT40) | <b>Channel</b>                           | CH 151 : 5755 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=1 kHz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng       |                                          |                                                                      |

| 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                                                    | #5647.60        | 64.3 PK                 | 68.2           | -3.9        | 2.28 H             | 297                  | 42.3             | 22.0                     |
| 2                                                    | *5755.00        | 110.8 PK                |                |             | 2.28 H             | 297                  | 68.5             | 42.3                     |
| 3                                                    | *5755.00        | 100.2 AV                |                |             | 2.28 H             | 297                  | 57.9             | 42.3                     |
| 4                                                    | #5942.00        | 61.6 PK                 | 68.2           | -6.6        | 2.28 H             | 297                  | 39.3             | 22.3                     |
| 5                                                    | 11510.00        | 64.8 PK                 | 74.0           | -9.2        | 1.91 H             | 353                  | 38.6             | 26.2                     |
| 6                                                    | 11510.00        | 51.2 AV                 | 54.0           | -2.8        | 1.91 H             | 353                  | 25.0             | 26.2                     |
| 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                                                    | #5650.00        | 65.6 PK                 | 68.2           | -2.6        | 2.51 V             | 85                   | 43.6             | 22.0                     |
| 2                                                    | *5755.00        | 112.2 PK                |                |             | 2.51 V             | 85                   | 69.9             | 42.3                     |
| 3                                                    | *5755.00        | 102.0 AV                |                |             | 2.51 V             | 85                   | 59.7             | 42.3                     |
| 4                                                    | #5987.60        | 62.0 PK                 | 68.2           | -6.2        | 2.51 V             | 85                   | 39.4             | 22.6                     |
| 5                                                    | 11510.00        | 65.0 PK                 | 74.0           | -9.0        | 1.60 V             | 113                  | 38.8             | 26.2                     |
| 6                                                    | 11510.00        | 51.5 AV                 | 54.0           | -2.5        | 1.60 V             | 113                  | 25.3             | 26.2                     |

**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, the limit was restricted at the RF Output Power.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT40) | <b>Channel</b>                           | CH 159 : 5795 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=1 kHz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng       |                                          |                                                                      |

| 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                                                    | #5643.20        | 61.3 PK                 | 68.2           | -6.9        | 2.39 H             | 298                  | 39.3             | 22.0                     |
| 2                                                    | *5795.00        | 110.1 PK                |                |             | 2.39 H             | 298                  | 67.8             | 42.3                     |
| 3                                                    | *5795.00        | 99.9 AV                 |                |             | 2.39 H             | 298                  | 57.6             | 42.3                     |
| 4                                                    | #5933.20        | 61.7 PK                 | 68.2           | -6.5        | 2.39 H             | 298                  | 39.4             | 22.3                     |
| 5                                                    | 11590.00        | 64.4 PK                 | 74.0           | -9.6        | 1.93 H             | 345                  | 38.7             | 25.7                     |
| 6                                                    | 11590.00        | 50.8 AV                 | 54.0           | -3.2        | 1.93 H             | 345                  | 25.1             | 25.7                     |
| 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                                                    | #5647.60        | 61.9 PK                 | 68.2           | -6.3        | 2.59 V             | 93                   | 39.9             | 22.0                     |
| 2                                                    | *5795.00        | 112.6 PK                |                |             | 2.59 V             | 93                   | 70.3             | 42.3                     |
| 3                                                    | *5795.00        | 101.7 AV                |                |             | 2.59 V             | 93                   | 59.4             | 42.3                     |
| 4                                                    | #5928.00        | 62.8 PK                 | 68.2           | -5.4        | 2.59 V             | 93                   | 40.5             | 22.3                     |
| 5                                                    | 11590.00        | 64.6 PK                 | 74.0           | -9.4        | 1.54 V             | 117                  | 38.9             | 25.7                     |
| 6                                                    | 11590.00        | 51.0 AV                 | 54.0           | -3.0        | 1.54 V             | 117                  | 25.3             | 25.7                     |

**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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT80) | <b>Channel</b>                           | CH 42 : 5210 MHz                                                     |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=3 kHz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Rex Wang         |                                          |                                                                      |

| 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         | 68.4 PK                 | 74.0           | -5.6        | 2.10 H             | 301                  | 46.7             | 21.7                     |
| 2                                                    | 5150.00         | 51.3 AV                 | 54.0           | -2.7        | 2.10 H             | 301                  | 29.6             | 21.7                     |
| 3                                                    | *5210.00        | 101.7 PK                |                |             | 2.10 H             | 301                  | 59.7             | 42.0                     |
| 4                                                    | *5210.00        | 91.4 AV                 |                |             | 2.10 H             | 301                  | 49.4             | 42.0                     |
| 5                                                    | #10420.00       | 63.3 PK                 | 68.2           | -4.9        | 2.00 H             | 344                  | 38.6             | 24.7                     |
| 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         | 71.4 PK                 | 74.0           | -2.6        | 1.13 V             | 91                   | 49.7             | 21.7                     |
| 2                                                    | 5150.00         | 53.0 AV                 | 54.0           | -1.0        | 1.13 V             | 91                   | 31.3             | 21.7                     |
| 3                                                    | *5210.00        | 104.3 PK                |                |             | 1.13 V             | 91                   | 62.3             | 42.0                     |
| 4                                                    | *5210.00        | 93.7 AV                 |                |             | 1.13 V             | 91                   | 51.7             | 42.0                     |
| 5                                                    | #10420.00       | 63.4 PK                 | 68.2           | -4.8        | 1.54 V             | 103                  | 38.7             | 24.7                     |

**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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

|                        |                  |                                          |                                                                      |
|------------------------|------------------|------------------------------------------|----------------------------------------------------------------------|
| <b>RF Mode</b>         | 802.11ac (VHT80) | <b>Channel</b>                           | CH 155 : 5775 MHz                                                    |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz   | <b>Detector Function &amp; Bandwidth</b> | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=3 kHz, DET=Peak |
| <b>Input Power</b>     | 120 Vac, 60 Hz   | <b>Environmental Conditions</b>          | 23 °C, 67 % RH                                                       |
| <b>Tested By</b>       | Adair Peng       |                                          |                                                                      |

| 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                                                    | #5645.60        | 65.3 PK                 | 68.2           | -2.9        | 2.46 H             | 296                  | 43.3             | 22.0                     |
| 2                                                    | *5775.00        | 105.1 PK                |                |             | 2.46 H             | 296                  | 62.8             | 42.3                     |
| 3                                                    | *5775.00        | 94.8 AV                 |                |             | 2.46 H             | 296                  | 52.5             | 42.3                     |
| 4                                                    | #5934.40        | 62.1 PK                 | 68.2           | -6.1        | 2.46 H             | 296                  | 39.8             | 22.3                     |
| 5                                                    | 11550.00        | 64.6 PK                 | 74.0           | -9.4        | 1.92 H             | 341                  | 38.6             | 26.0                     |
| 6                                                    | 11550.00        | 51.6 AV                 | 54.0           | -2.4        | 1.92 H             | 341                  | 25.6             | 26.0                     |
| 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                                                    | #5642.80        | 67.2 PK                 | 68.2           | -1.0        | 2.49 V             | 56                   | 45.2             | 22.0                     |
| 2                                                    | *5775.00        | 106.9 PK                |                |             | 2.49 V             | 56                   | 64.6             | 42.3                     |
| 3                                                    | *5775.00        | 96.1 AV                 |                |             | 2.49 V             | 56                   | 53.8             | 42.3                     |
| 4                                                    | #5929.20        | 63.5 PK                 | 68.2           | -4.7        | 2.49 V             | 56                   | 41.2             | 22.3                     |
| 5                                                    | 11550.00        | 64.9 PK                 | 74.0           | -9.1        | 1.52 V             | 110                  | 38.9             | 26.0                     |
| 6                                                    | 11550.00        | 51.9 AV                 | 54.0           | -2.1        | 1.52 V             | 110                  | 25.9             | 26.0                     |

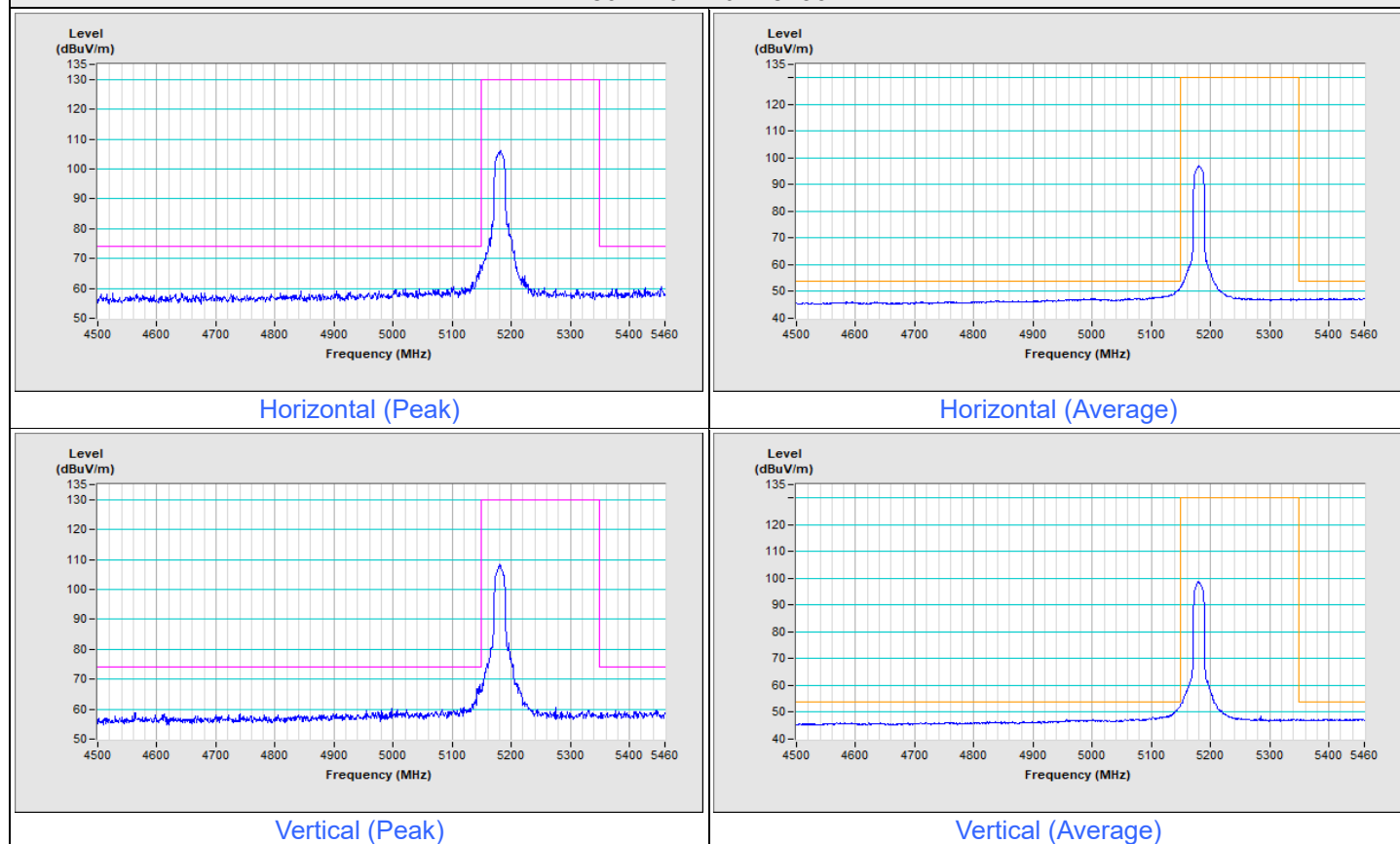
**Remarks:**

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, the limit was restricted at the RF Output Power.

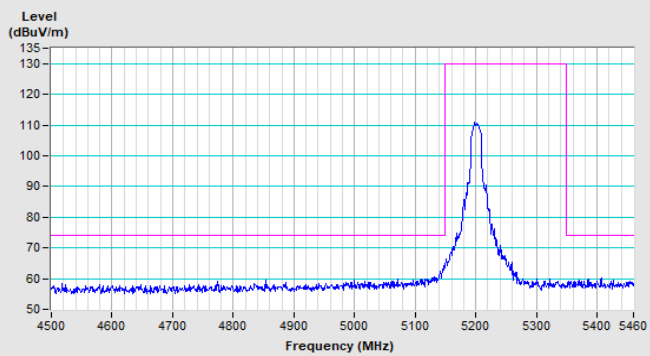
## Plot of Band Edge

|                 |                    |                               |                                                                      |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|
| Frequency Range | 4.5 GHz ~ 5.46 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|

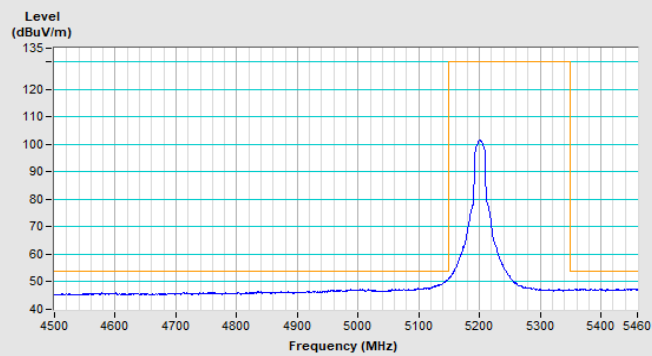
### 802.11a Channel 36



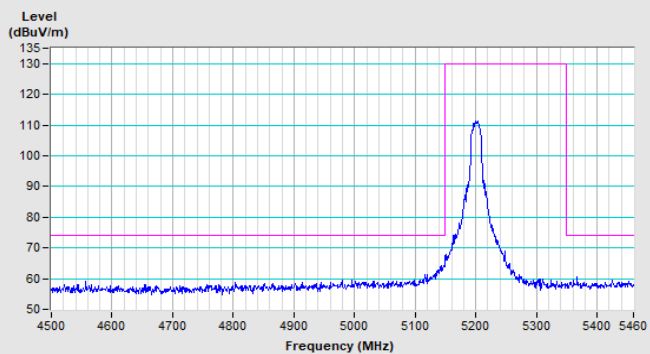
### 802.11a Channel 40



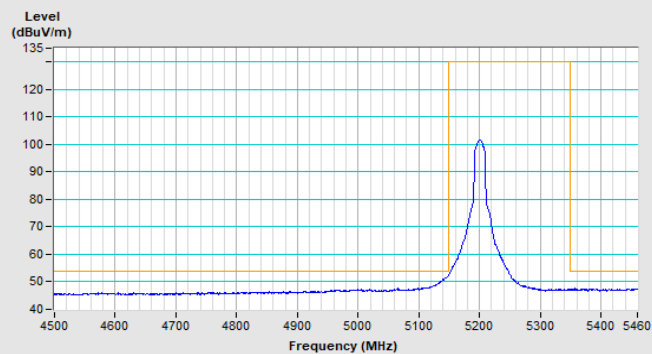
Horizontal (Peak)



Horizontal (Average)

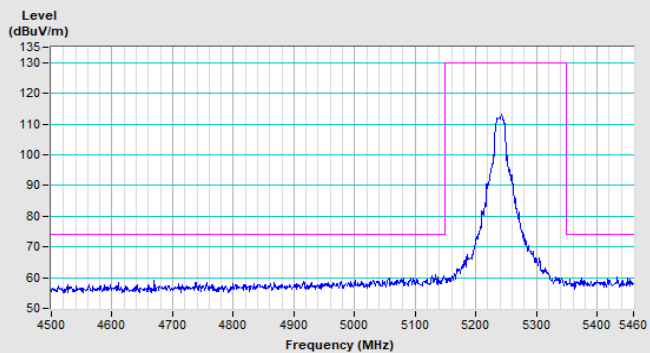


Vertical (Peak)

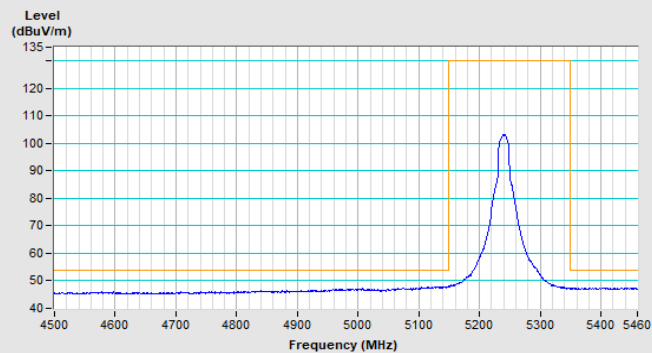


Vertical (Average)

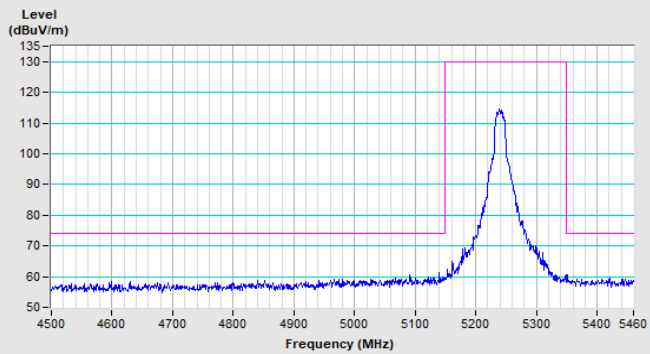
### 802.11a Channel 48



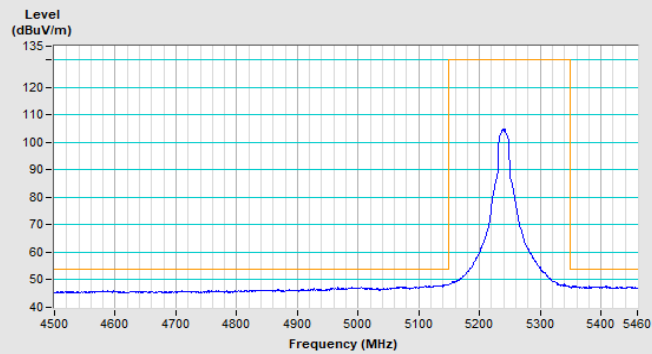
Horizontal (Peak)



Horizontal (Average)



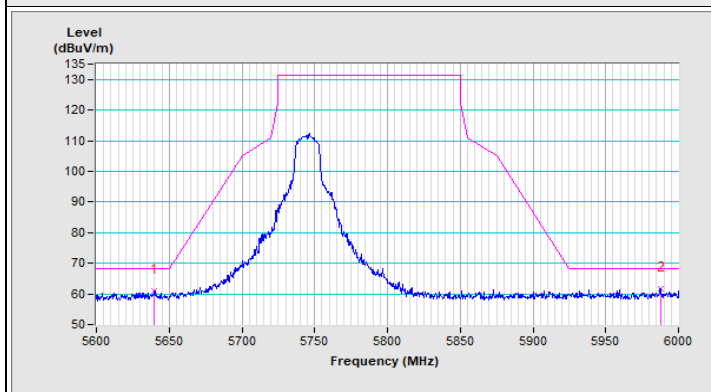
Vertical (Peak)



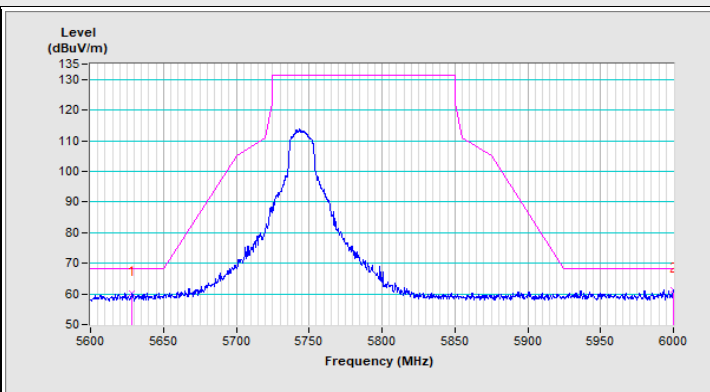
Vertical (Average)

|                 |                 |                               |                                  |
|-----------------|-----------------|-------------------------------|----------------------------------|
| Frequency Range | 5.6 GHz ~ 6 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak |
|-----------------|-----------------|-------------------------------|----------------------------------|

### 802.11a Channel 149

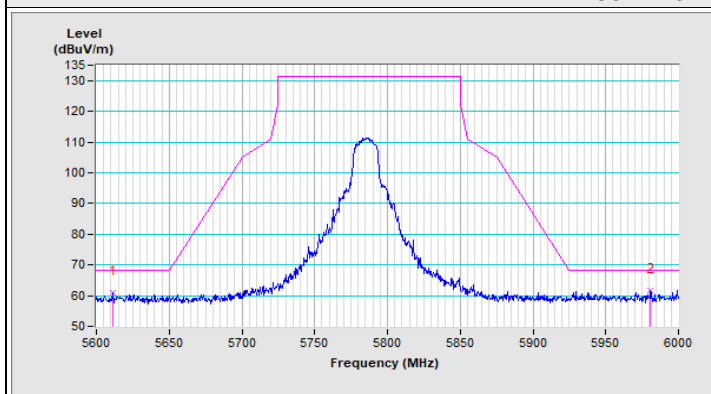


Horizontal (Peak)

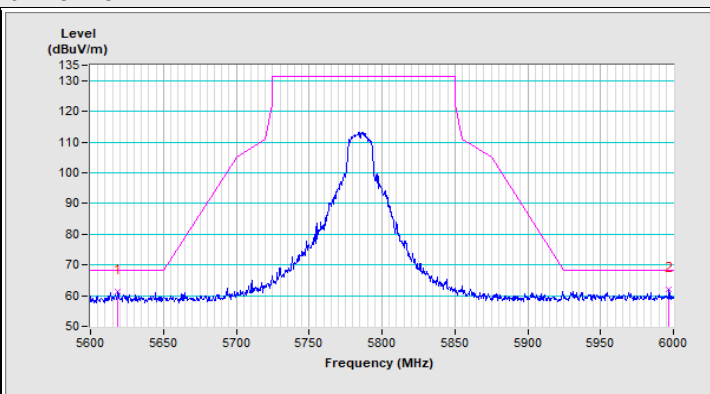


Vertical (Peak)

### 802.11a Channel 157

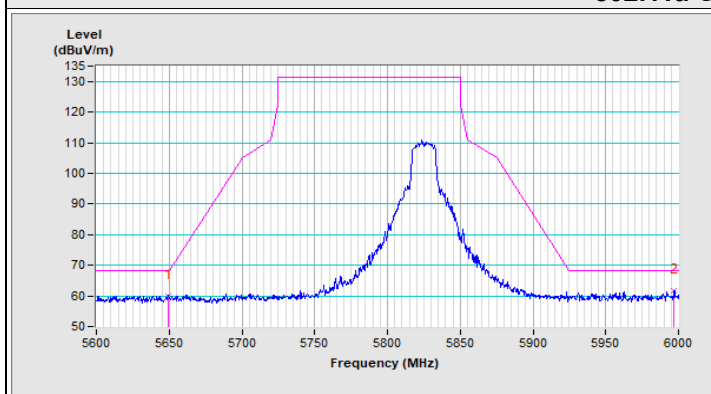


Horizontal (Peak)

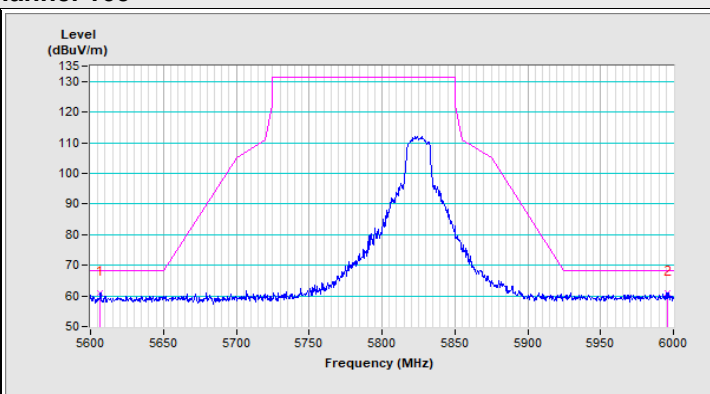


Vertical (Peak)

### 802.11a Channel 165



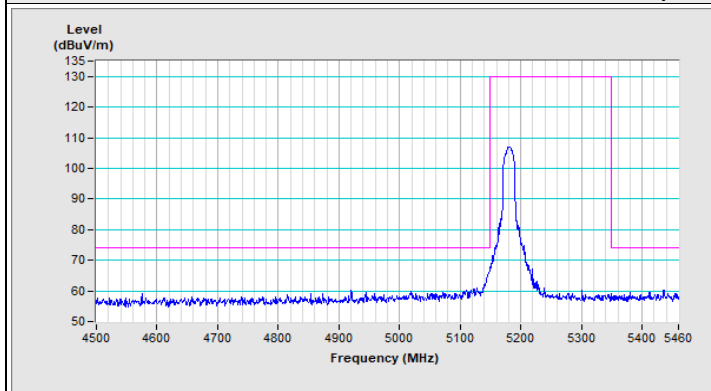
Horizontal (Peak)



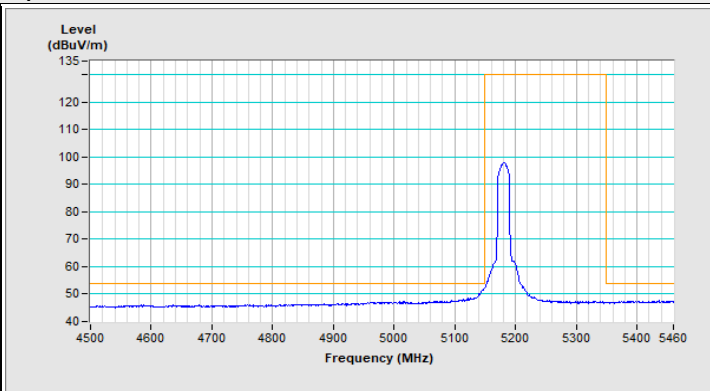
Vertical (Peak)

|                 |                    |                               |                                                                      |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|
| Frequency Range | 4.5 GHz ~ 5.46 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=10 Hz, DET=Peak |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|

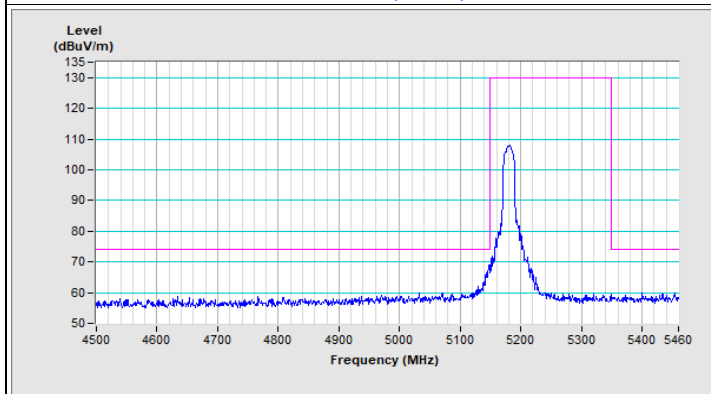
### 802.11ac (VHT20) Channel 36



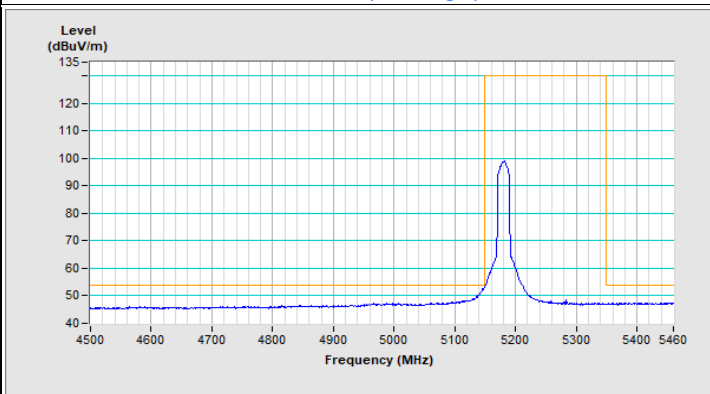
Horizontal (Peak)



Horizontal (Average)

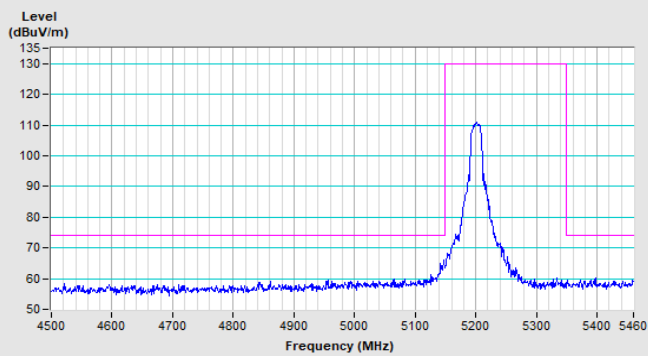


Vertical (Peak)

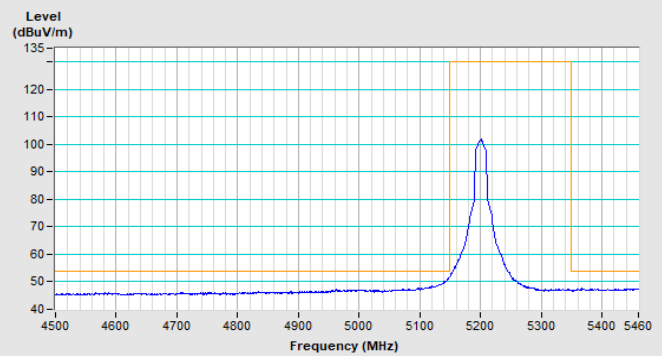


Vertical (Average)

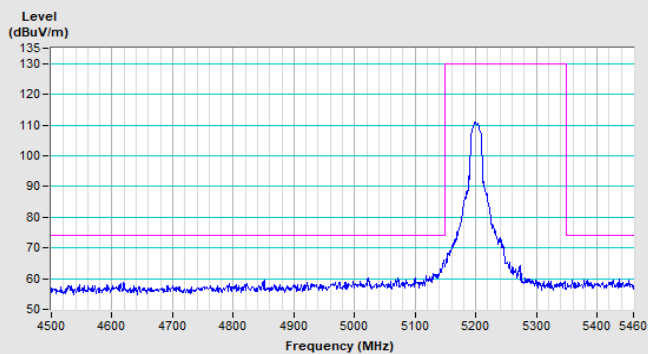
### 802.11ac (VHT20) Channel 40



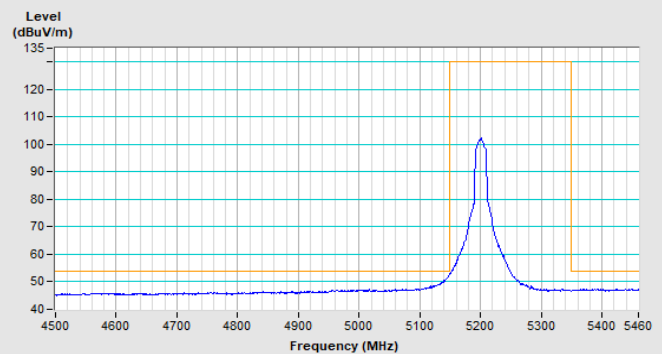
Horizontal (Peak)



Horizontal (Average)

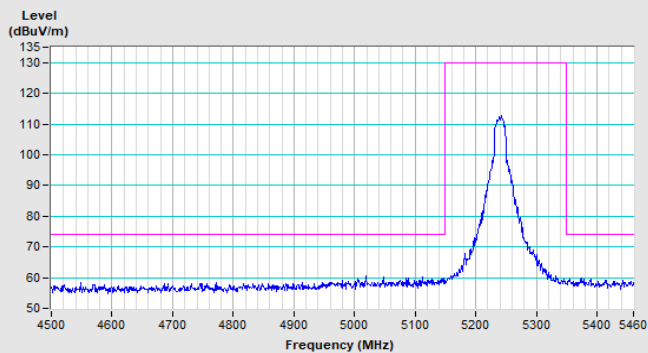


Vertical (Peak)

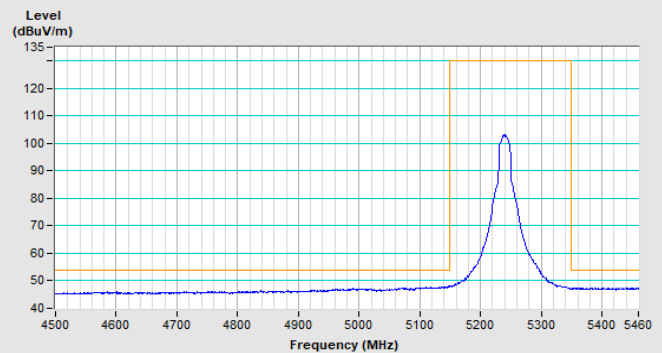


Vertical (Average)

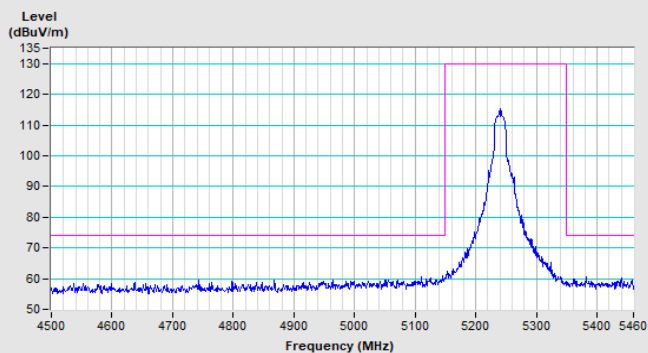
### 802.11ac (VHT20) Channel 48



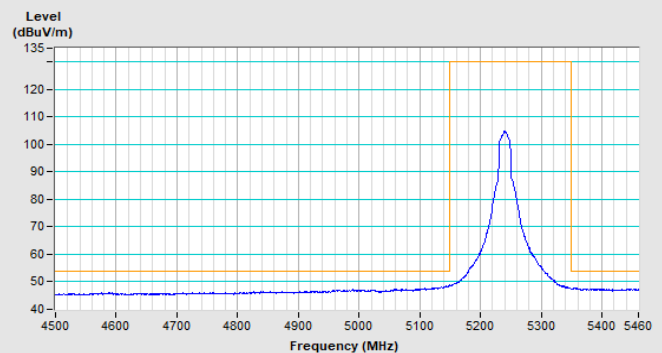
Horizontal (Peak)



Horizontal (Average)



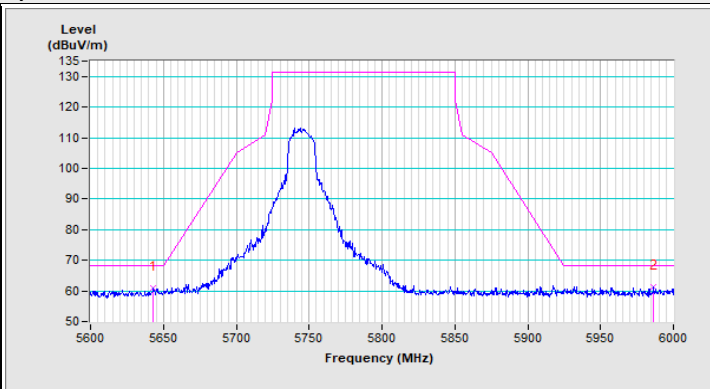
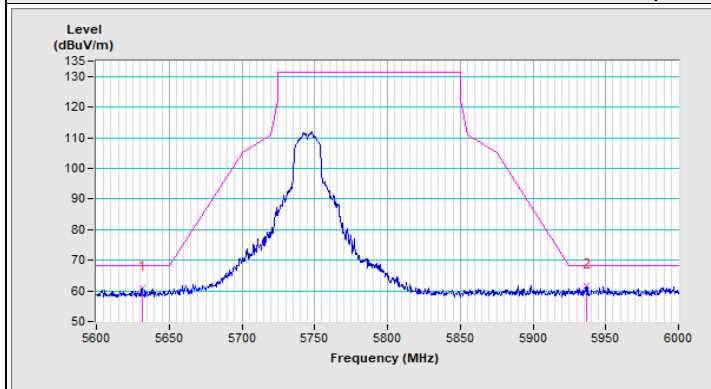
Vertical (Peak)



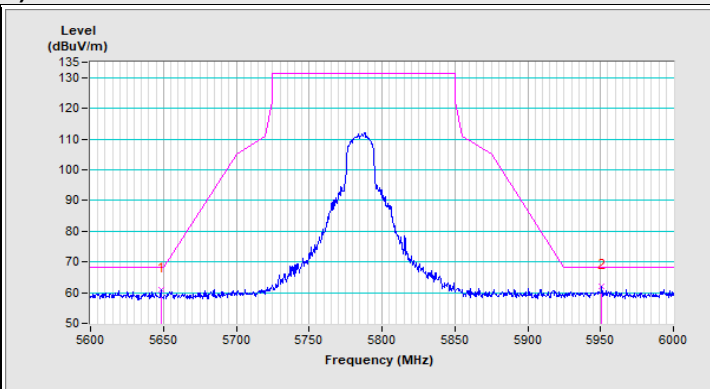
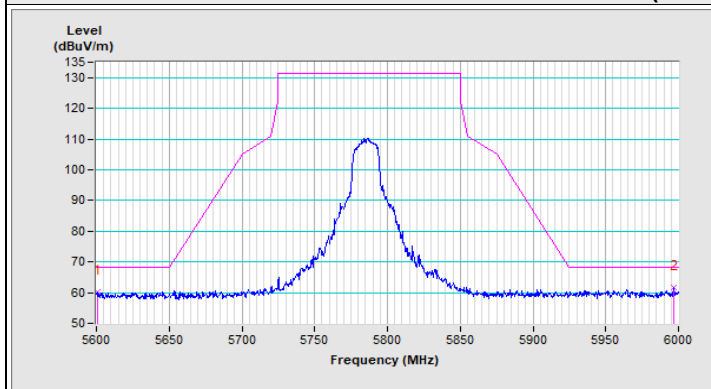
Vertical (Average)

|                 |                 |                               |                                  |
|-----------------|-----------------|-------------------------------|----------------------------------|
| Frequency Range | 5.6 GHz ~ 6 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak |
|-----------------|-----------------|-------------------------------|----------------------------------|

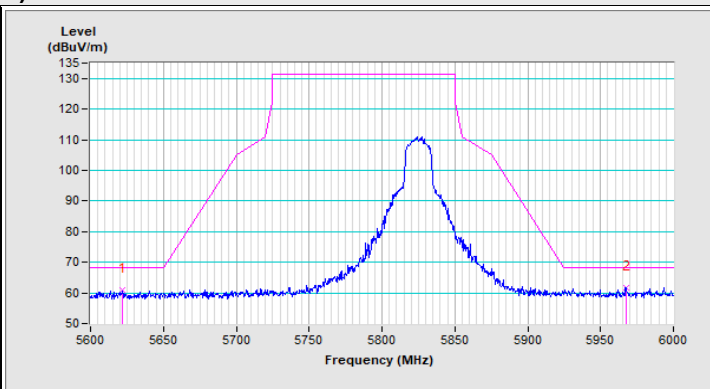
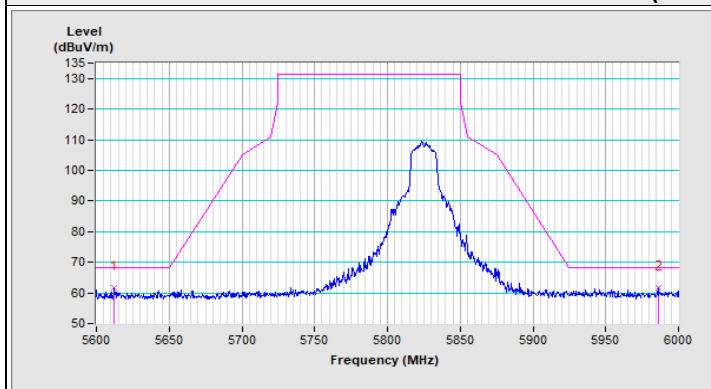
### 802.11ac (VHT20) Channel 149



### 802.11ac (VHT20) Channel 157

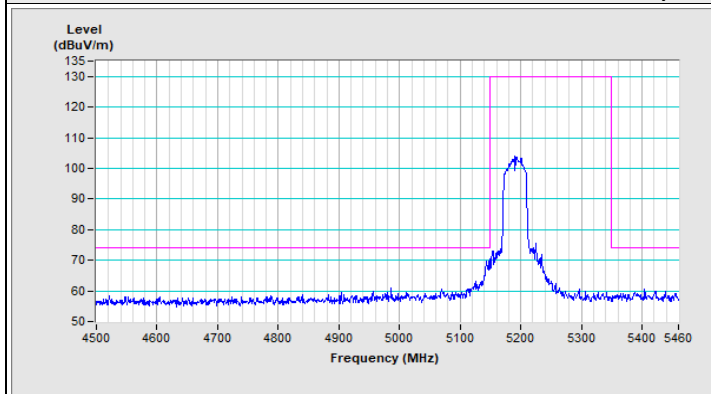


### 802.11ac (VHT20) Channel 165

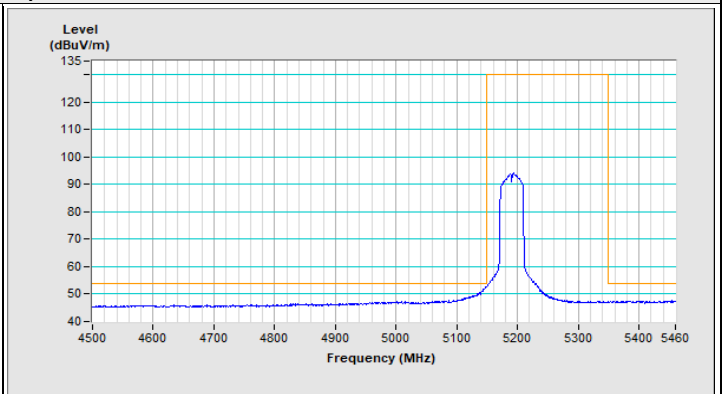


|                 |                    |                               |                                                                      |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|
| Frequency Range | 4.5 GHz ~ 5.46 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=1 kHz, DET=Peak |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|

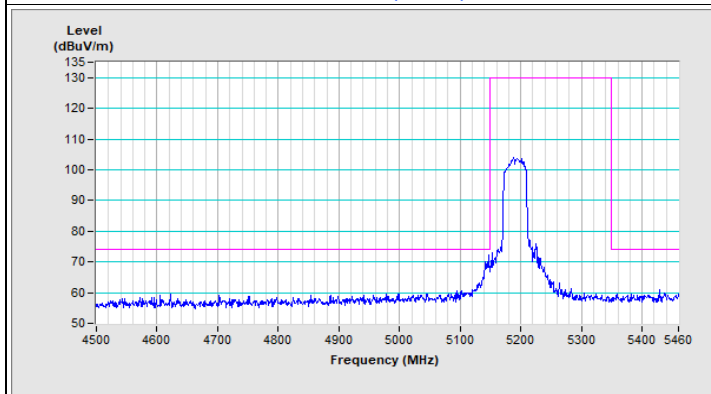
### 802.11ac (VHT40) Channel 38



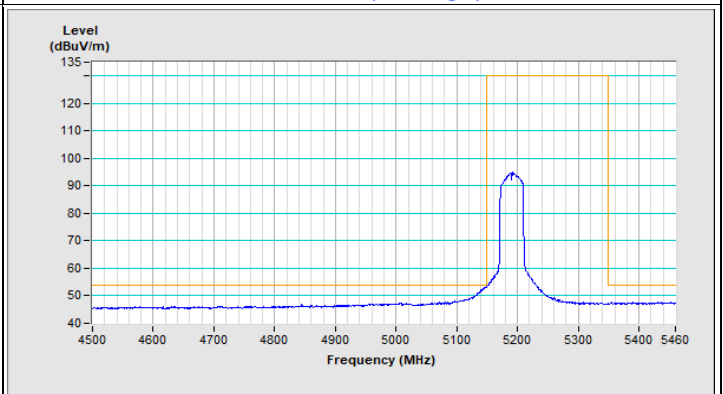
Horizontal (Peak)



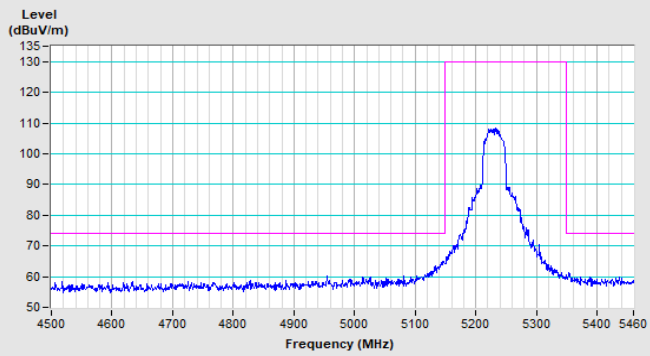
Horizontal (Average)



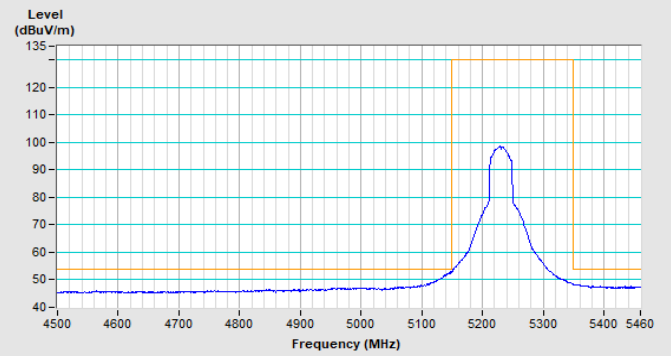
Vertical (Peak)



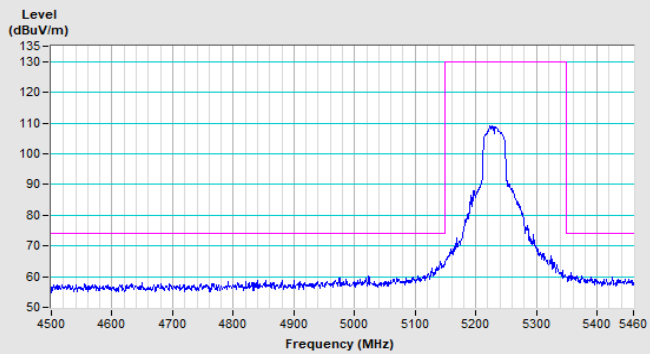
Vertical (Average)

**802.11ac (VHT40) Channel 46**

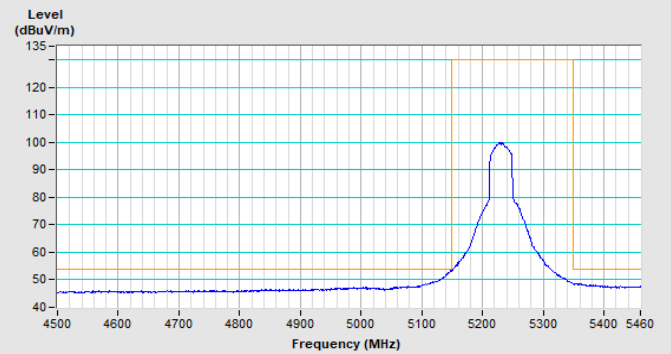
Horizontal (Peak)



Horizontal (Average)



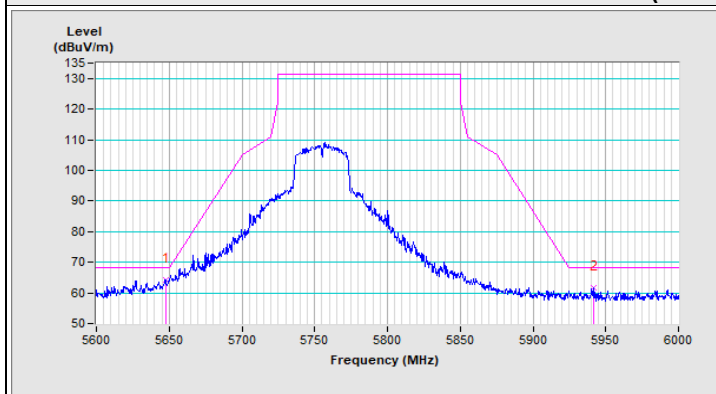
Vertical (Peak)



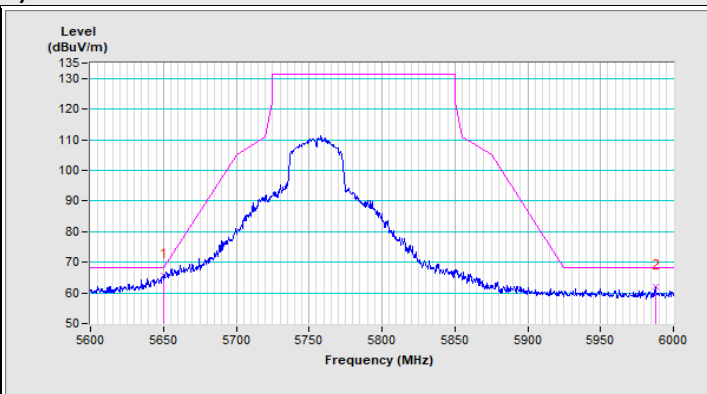
Vertical (Average)

|                 |                 |                               |                                  |
|-----------------|-----------------|-------------------------------|----------------------------------|
| Frequency Range | 5.6 GHz ~ 6 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak |
|-----------------|-----------------|-------------------------------|----------------------------------|

### 802.11ac (VHT40) Channel 151

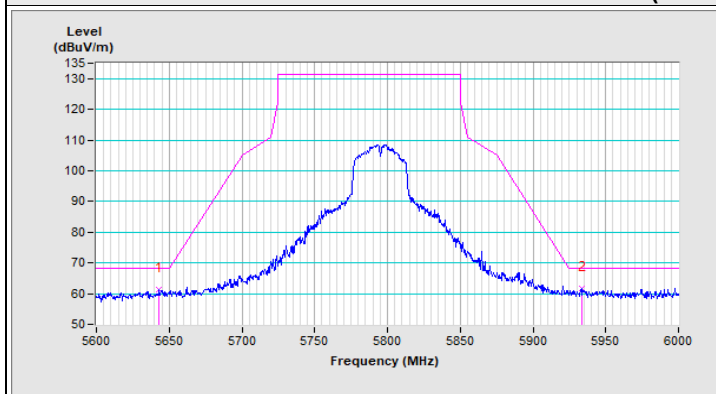


Horizontal (Peak)

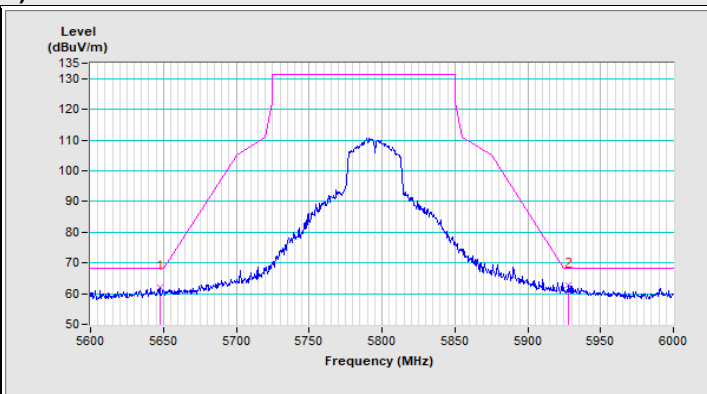


Vertical (Peak)

### 802.11ac (VHT40) Channel 159



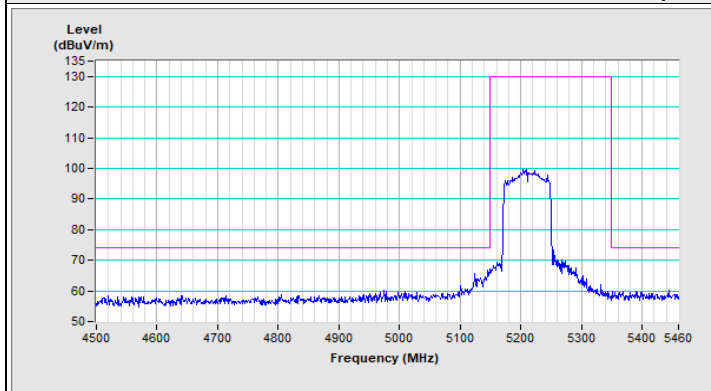
Horizontal (Peak)



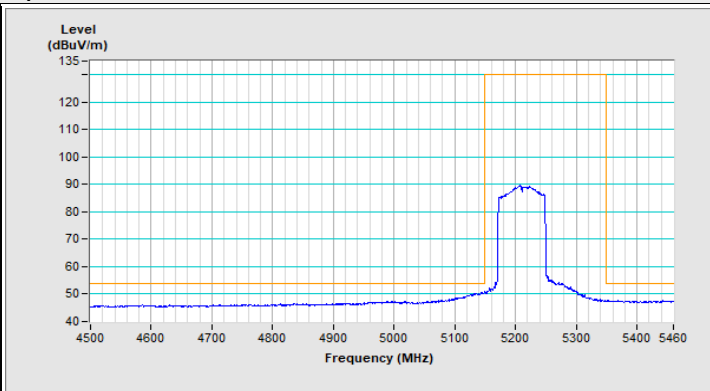
Vertical (Peak)

|                 |                    |                               |                                                                      |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|
| Frequency Range | 4.5 GHz ~ 5.46 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak<br>AV: RB=1 MHz, VB=2 kHz, DET=Peak |
|-----------------|--------------------|-------------------------------|----------------------------------------------------------------------|

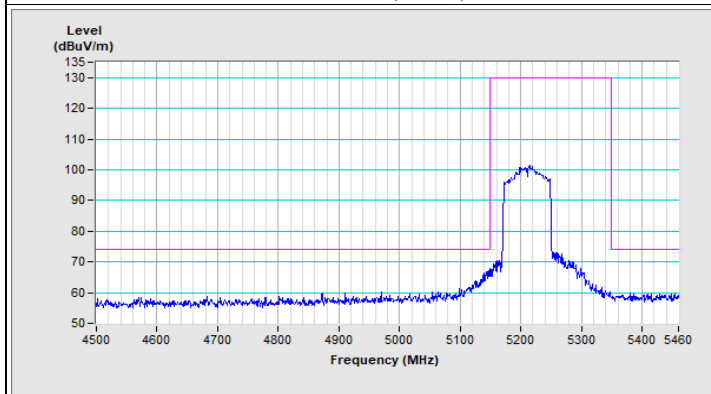
### 802.11ac (VHT80) Channel 42



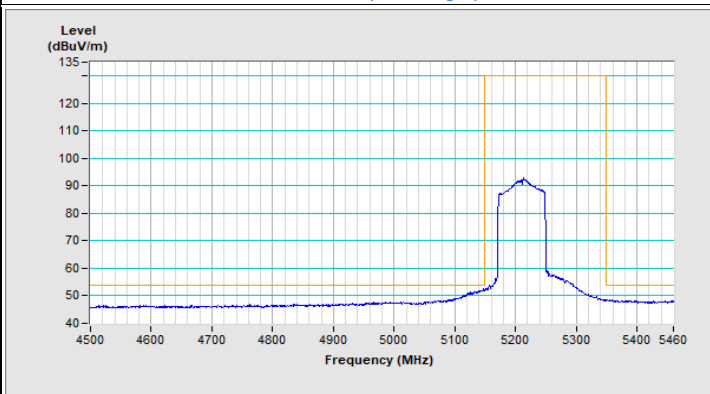
Horizontal (Peak)



Horizontal (Average)



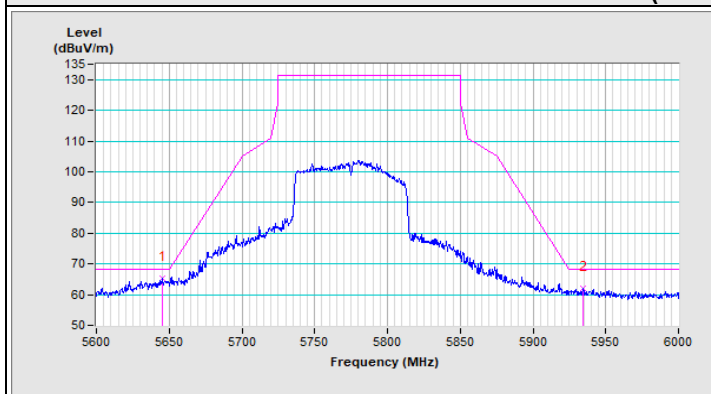
Vertical (Peak)



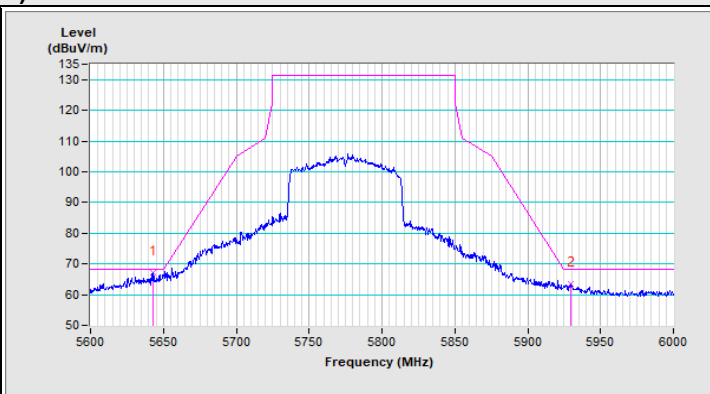
Vertical (Average)

|                 |                 |                               |                                  |
|-----------------|-----------------|-------------------------------|----------------------------------|
| Frequency Range | 5.6 GHz ~ 6 GHz | Detector Function & Bandwidth | PK: RB=1 MHz, VB=3 MHz, DET=Peak |
|-----------------|-----------------|-------------------------------|----------------------------------|

### 802.11ac (VHT80) Channel 155



Horizontal (Peak)



Vertical (Peak)

## 8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

## 9 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.

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The address and road map of all our labs can be found in our web site also.

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