

## Variant FCC Test Report

**Report No.:** RFBERD-WTW-P21100651-3

**FCC ID:** COF-WMBACBM25

**Test Model:** WM-BAC-BM-25

**Series Model:** WM-BAC-BM-25\_FF2

**Received Date:** Oct. 21, 2021

**Test Date:** Nov. 17 ~ Dec. 15, 2021

**Issued Date:** Dec. 27, 2021

**Applicant:** Universal Global Scientific Industrial Co., Ltd.

**Address:** 141, Lane 351, Sec. 1, Taiping Road., Tsao-tuen, Nantou 542007, Taiwan

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

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

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

| Issue No.              | Description      | Date Issued   |
|------------------------|------------------|---------------|
| RFBERD-WTW-P21100651-3 | Original Release | Dec. 27, 2021 |

## 1 Certificate of Conformity

**Product:** 802.11a/b/g/n/ac + BT 4.1 Module

**Brand:** USI

**Test Model:** WM-BAC-BM-25

**Series Model:** WM-BAC-BM-25\_FF2

**Sample Status:** Engineering Sample

**Applicant:** Universal Global Scientific Industrial Co., Ltd.

**Test Date:** Nov. 17 ~ Dec. 15, 2021

**Standards:** 47 CFR FCC Part 15, Subpart E (Section 15.407)  
ANSI C63.10:2013

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

**Prepared by :**

*Gina Liu*

**Date:** Dec. 27, 2021

Gina Liu / Specialist

**Approved by :**

*Jeremy Lin*

**Date:** Dec. 27, 2021

Jeremy Lin / Project Engineer

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart E (Section 15.407) |                                            |        |                                                                                   |
|------------------------------------------------|--------------------------------------------|--------|-----------------------------------------------------------------------------------|
| FCC Clause                                     | Test Item                                  | Result | Remarks                                                                           |
| 15.407(b)(8)                                   | AC Power Conducted Emissions               | N/A    | Refer to Note                                                                     |
| 15.407(b)<br>(1/2/3/4(i/ii)/8)                 | Radiated Emissions & Band Edge Measurement | Pass   | Meet the requirement of limit. Minimum passing margin is -2.85 dB at 5725.00 MHz. |
| 15.407(a)(1/2/3)                               | Max Average Transmit Power                 | Pass   | Meet the requirement of limit.                                                    |
| ---                                            | Occupied Bandwidth Measurement             | N/A    | Refer to Note                                                                     |
| 15.407(a)(1/2/3)                               | Peak Power Spectral Density                | N/A    | Refer to Note                                                                     |
| 15.407(e)                                      | 6 dB Bandwidth                             | N/A    | Refer to Note                                                                     |
| 15.407(g)                                      | Frequency Stability                        | N/A    | Refer to Note                                                                     |
| 15.203                                         | Antenna Requirement                        | Pass   | No antenna connector is used.                                                     |

Note:

1. This report is a partial report, only test item of Radiated Emissions and Conducted Power were performed for this report. Other testing data please refer to original report no.: RF190103E03-1.
2. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
3. For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
4. 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:

| Measurement                    | Frequency          | Expanded Uncertainty (k=2) ( $\pm$ ) |
|--------------------------------|--------------------|--------------------------------------|
| Radiated Emissions up to 1 GHz | 9 kHz ~ 30 MHz     | 3.04 dB                              |
|                                | 30 MHz ~ 200 MHz   | 2.93 dB                              |
|                                | 200 MHz ~ 1000 MHz | 2.95 dB                              |
| Radiated Emissions above 1 GHz | 1 GHz ~ 18 GHz     | 2.26 dB                              |
|                                | 18 GHz ~ 40 GHz    | 1.94 dB                              |

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product</b>               | 802.11a/b/g/n/ac + BT 4.1 Module                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Brand</b>                 | USI                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Test Model</b>            | WM-BAC-BM-25                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Series Model</b>          | WM-BAC-BM-25_FF2                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Status of EUT</b>         | Engineering Sample                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Power Supply Rating</b>   | 3.6 Vdc (host equipment)                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Modulation Type</b>       | 256QAM, 64QAM, 16QAM, QPSK, BPSK                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Modulation Technology</b> | OFDM                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Transfer Rate</b>         | 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps<br>802.11n: up to 150.0 Mbps<br>802.11ac: up to 433.3 Mbps                                                                                                                                                                                                                                                                                                          |
| <b>Operating Frequency</b>   | 5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5700 MHz,<br>5745 ~ 5825 MHz                                                                                                                                                                                                                                                                                                                                                          |
| <b>Number of Channel</b>     | 5180 ~ 5320 MHz:<br>8 for 802.11a, 802.11n (HT20), 802.11ac (VHT20)<br>4 for 802.11n (HT40), 802.11ac (VHT40)<br>2 for 802.11ac (VHT80)<br>5500 ~ 5700 MHz:<br>12 for 802.11a, 802.11n (HT20), 802.11ac (VHT20)<br>6 for 802.11n (HT40), 802.11ac (VHT40)<br>3 for 802.11ac (VHT80)<br>5745 ~ 5825 MHz:<br>5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20)<br>2 for 802.11n (HT40), 802.11ac (VHT40)<br>1 for 802.11ac (VHT80) |
| <b>Output Power</b>          | 92.683 mW for 5180 ~ 5240 MHz<br>83.176mW for 5260 ~ 5320 MHz<br>104.954 mW for 5500 ~ 5700 MHz<br>153.815 mW for 5745 ~ 5825 MHz                                                                                                                                                                                                                                                                                              |
| <b>Antenna Type</b>          | Refer to Note as below                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Antenna Connector</b>     | N/A                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Accessory Device</b>      | Refer to Note as below                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Data Cable Supplied</b>   | Refer to Note as below                                                                                                                                                                                                                                                                                                                                                                                                         |

**Note:**

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report to BV CPS report no. RF190103E03-1. The difference compared with original report is listed as below, only test item of Radiated Emissions and Conducted Power were performed for this report.
  - Added one Model Name: WM-BAC-BM-25\_FF2.
  - Change Ant. Matching , power reduce
  - Correct the address postal code
2. The EUT incorporates a SISO function. Physically, the EUT provide one completed transmitter and one receiver.

| Modulation Mode  | Tx Function |
|------------------|-------------|
| 802.11a          | 1TX         |
| 802.11n (HT20)   | 1TX         |
| 802.11n (HT40)   | 1TX         |
| 802.11ac (VHT20) | 1TX         |
| 802.11ac (VHT40) | 1TX         |
| 802.11ac (VHT80) | 1TX         |

\* The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40 / VHT80, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

3. All models are listed as below.

| Brand | Model            | Difference                                                                              |
|-------|------------------|-----------------------------------------------------------------------------------------|
| USI   | WM-BAC-BM-25     | All models are electrically identical, different model names are for marketing purpose. |
|       | WM-BAC-BM-25_FF2 |                                                                                         |

4. There are WLAN and Bluetooth technology used for the EUT.

5. Simultaneously transmission condition.

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

6. The antenna provided to the EUT, please refer to the following table:

| Brand | Model             | Antenna Net Gain(dBi) | Frequency range (GHz) | Antenna Type         | Connector Type |
|-------|-------------------|-----------------------|-----------------------|----------------------|----------------|
| YANGO | ANT3216A063R2455A | 1.59                  | 2.4~2.4835            | Ceramic Chip Antenna | none           |
|       |                   | 2.23                  | 5.15~5.85             |                      |                |

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

### 3.2 Description of Test Modes

#### For 5180 ~ 5320 MHz

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

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 36      | 5180            | 52      | 5260            |
| 40      | 5200            | 56      | 5280            |
| 44      | 5220            | 60      | 5300            |
| 48      | 5240            | 64      | 5320            |

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

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 38      | 5190            | 54      | 5270            |
| 46      | 5230            | 62      | 5310            |

2 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 42      | 5210            | 58      | 5290            |

1 channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

| Channel | Frequency (MHz) |
|---------|-----------------|
| 50      | 5250            |

### For 5500 ~ 5700 MHz

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

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 100     | 5500            | 124     | 5620            |
| 104     | 5520            | 128     | 5640            |
| 108     | 5540            | 132     | 5660            |
| 112     | 5560            | 136     | 5680            |
| 116     | 5580            | 140     | 5700            |
| 120     | 5600            | 144     | 5720            |

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

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 102     | 5510            | 126     | 5630            |
| 110     | 5550            | 134     | 5670            |
| 118     | 5590            | 142     | 5710            |

3 channels are provided for 802.11ac (VHT80), 802.11ax (HE80):

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 106     | 5530            | 138     | 5690            |
| 122     | 5610            |         |                 |

1 channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

| Channel | Frequency (MHz) |
|---------|-----------------|
| 114     | 5570            |

### For 5745 ~ 5825 MHz:

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

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

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

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

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

| Channel | Frequency (MHz) |
|---------|-----------------|
| 155     | 5775            |

### 3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT Configure Mode | Applicable To |       |      | Description |
|--------------------|---------------|-------|------|-------------|
|                    | RE $\geq$ 1G  | RE<1G | APCM |             |
| -                  | √             | √     | √    | -           |

Where **RE $\geq$ 1G**: Radiated Emission above 1 GHz **RE<1G**: Radiated Emission below 1 GHz  
**APCM**: Antenna Port Conducted Measurement

**Note:**

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.
2. "-" means no effect.

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

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

| EUT Configure Mode | Frequency Band (MHz) | Mode             | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) |
|--------------------|----------------------|------------------|-------------------|----------------|-----------------------|-----------------|------------------|
| -                  | 5180-5240            | 802.11a          | 36 to 48          | 36, 40, 48     | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 36 to 48          | 36, 40, 48     | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 38 to 46          | 38, 46         | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 42                | 42             | OFDM                  | BPSK            | 29.3             |
| -                  | 5260-5320            | 802.11a          | 52 to 64          | 52, 60, 64     | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 52 to 64          | 52, 60, 64     | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 54 to 62          | 54, 62         | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 58                | 58             | OFDM                  | BPSK            | 29.3             |
| -                  | 5500-5700            | 802.11a          | 100 to 140        | 100, 116, 140  | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 100 to 140        | 100, 116, 140  | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 102 to 134        | 102, 110, 134  | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 106 to 122        | 106, 122       | OFDM                  | BPSK            | 29.3             |
| -                  | 5745-5825            | 802.11a          | 149 to 165        | 149, 157, 165  | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 149 to 165        | 149, 157, 165  | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 151 to 159        | 151, 159       | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 155               | 155            | OFDM                  | BPSK            | 29.3             |

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

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

| EUT Configure Mode | Frequency Band (MHz) | Mode    | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) |
|--------------------|----------------------|---------|-------------------|----------------|-----------------------|-----------------|------------------|
| -                  | 5500-5700            | 802.11a | 100 to 140        | 140            | OFDM                  | BPSK            | 6.0              |

### **Antenna Port Conducted Measurement:**

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

| EUT Configure Mode | Frequency Band (MHz) | Mode             | Available Channel | Tested Channel | Modulation Technology | Modulation Type | Data Rate (Mbps) |
|--------------------|----------------------|------------------|-------------------|----------------|-----------------------|-----------------|------------------|
| -                  | 5180-5240            | 802.11a          | 36 to 48          | 36, 40, 48     | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 36 to 48          | 36, 40, 48     | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 38 to 46          | 38, 46         | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 42                | 42             | OFDM                  | BPSK            | 29.3             |
| -                  | 5260-5320            | 802.11a          | 52 to 64          | 52, 60, 64     | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 52 to 64          | 52, 60, 64     | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 54 to 62          | 54, 62         | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 58                | 58             | OFDM                  | BPSK            | 29.3             |
| -                  | 5500-5700            | 802.11a          | 100 to 140        | 100, 116, 140  | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 100 to 140        | 100, 116, 140  | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 102 to 134        | 102, 110, 134  | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 106 to 122        | 106, 122       | OFDM                  | BPSK            | 29.3             |
| -                  | 5745-5825            | 802.11a          | 149 to 165        | 149, 157, 165  | OFDM                  | BPSK            | 6.0              |
| -                  |                      | 802.11ac (VHT20) | 149 to 165        | 149, 157, 165  | OFDM                  | BPSK            | 7.2              |
| -                  |                      | 802.11ac (VHT40) | 151 to 159        | 151, 159       | OFDM                  | BPSK            | 15.0             |
| -                  |                      | 802.11ac (VHT80) | 155               | 155            | OFDM                  | BPSK            | 29.3             |

### **Test Condition:**

| Applicable To | Environmental Conditions | Input Power    | Tested by    |
|---------------|--------------------------|----------------|--------------|
| RE $\geq$ 1G  | 23 deg. C, 67 % RH       | 120 Vac, 60 Hz | Tim Chen     |
| RE<1G         | 23 deg. C, 67 % RH       | 120 Vac, 60 Hz | Randy Wu     |
| APCM          | 25 deg. C, 65 % RH       | 120 Vac, 60 Hz | Jisyong Wang |

### 3.3 Duty Cycle of Test Signal

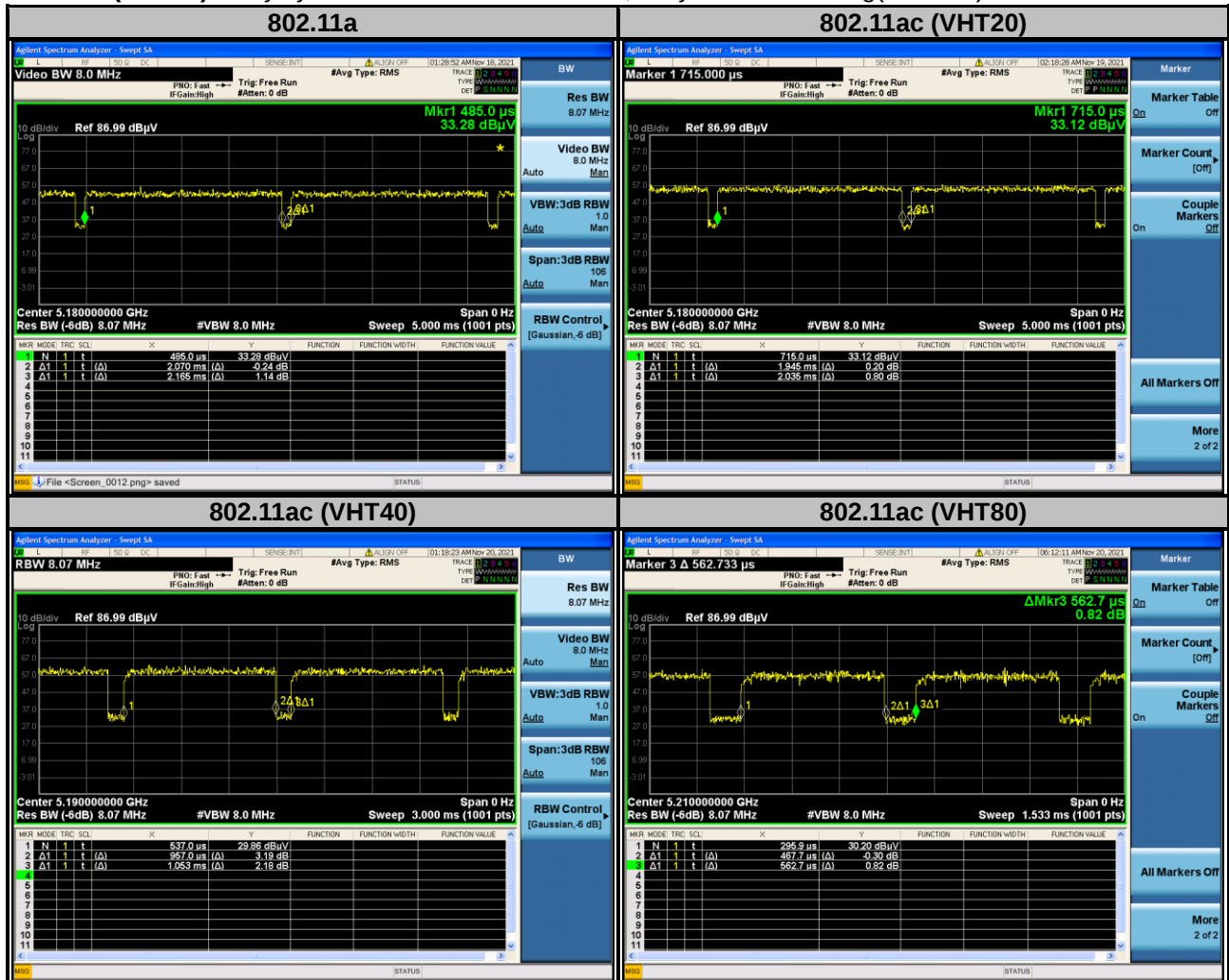
Duty cycle of test signal is < 98 %, duty factor is required.

**802.11a:** Duty cycle =  $2.070/2.165 = 0.956$ , Duty factor =  $10 * \log(1/0.956) = 0.195$

**802.11ac (VHT20):** Duty cycle =  $1.945/2.035 = 0.956$ , Duty factor =  $10 * \log(1/0.956) = 0.195$

**802.11ac (VHT40):** Duty cycle =  $0.957/1.053 = 0.909$ , Duty factor =  $10 * \log(1/0.909) = 0.414$

**802.11ac (VHT80):** Duty cycle =  $0.4677/0.5627 = 0.831$ , Duty factor =  $10 * \log(1/0.831) = 0.804$



### 3.4 Description of Support Units

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

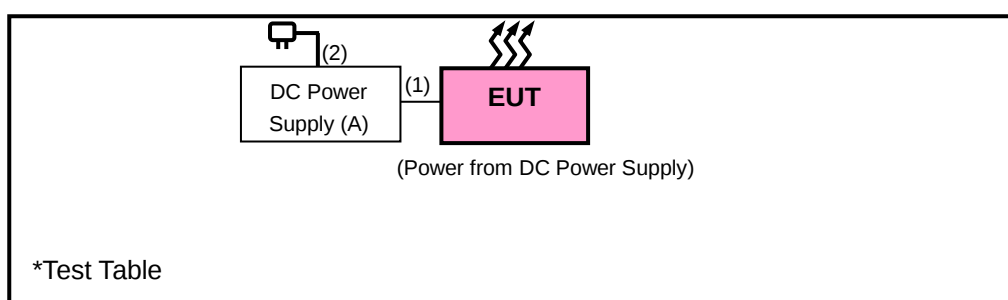
| No. | Product                        | Brand    | Model No. | Serial No.    | FCC ID |
|-----|--------------------------------|----------|-----------|---------------|--------|
| A.  | Single channel DC power supply | SCHLODER | SP3051    | SP30512113402 | N/A    |

| ID | Cable Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks |
|----|--------------------|------|------------|--------------------|--------------|---------|
| 1. | DC Cable           | 1    | 1.0        | N                  | 0            | --      |
| 2. | AC Cable           | 1    | 18         | N                  | 0            | --      |

Note:

1. All power cords of the above support units are non-shielded (1.8m).

#### 3.4.1 Configuration of System under Test



### 3.5 General Description of Applied Standards and References

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

#### Test Standard:

##### FCC Part 15, Subpart E (15.407)

ANSI C63.10-2013

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

#### References Test Guidance:

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

##### KDB 662911 D01 Multiple Transmitter Output v02r01

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

## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

#### 4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

**Note:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 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 Procedures<br>New Rules v02r01 |                                                     | Field Strength at 3 m                                                                                                               |                                                                                                                                           |
|                                                             |                                                     | PK: 74 (dBμV/m)                                                                                                                     | AV: 54 (dBμV/m)                                                                                                                           |
| Frequency Band                                              | Applicable To                                       | EIRP Limit                                                                                                                          | Equivalent Field Strength at 3 m                                                                                                          |
| 5150~5250 MHz                                               | 15.407(b)(1)                                        | PK: -27 (dBm/MHz)                                                                                                                   | PK: 68.2 (dBμV/m)                                                                                                                         |
| 5250~5350 MHz                                               | 15.407(b)(2)                                        |                                                                                                                                     |                                                                                                                                           |
| 5470~5725 MHz                                               | 15.407(b)(3)                                        |                                                                                                                                     |                                                                                                                                           |
| 5725~5850 MHz                                               | <input checked="" type="checkbox"/> 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> |
|                                                             | <input type="checkbox"/> 15.407(b)(4)(ii)           | Emission limits in section 15.247(d)                                                                                                |                                                                                                                                           |

<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:

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

#### 4.1.2 Test Instruments

| Description & Manufacturer                     | Model No.         | Serial No.                | Date of Calibration | Due Date of Calibration |
|------------------------------------------------|-------------------|---------------------------|---------------------|-------------------------|
| Spectrum Analyzer<br>Agilent                   | N9010A            | MY52220207                | Jan. 05, 2021       | Jan. 04, 2022           |
| Test Receiver<br>KEYSIGHT                      | N9038A            | MY51210203                | Sep. 22, 2021       | Sep. 21, 2022           |
| Spectrum Analyzer<br>ROHDE & SCHWARZ           | FSU43             | 101261                    | Apr. 12, 2021       | Apr. 11, 2022           |
| Broadband Horn Antenna<br>SCHWARZBECK          | BBHA 9170         | 148                       | Nov. 22, 2020       | Nov. 21, 2021           |
|                                                |                   |                           | Nov. 14, 2021       | Nov. 13, 2022           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9120D        | 9120D-969                 | Nov. 22, 2020       | Nov. 21, 2021           |
|                                                |                   |                           | Nov. 14, 2021       | Nov. 13, 2022           |
| BILOG Antenna<br>SCHWARZBECK                   | VULB 9168         | 9168-472                  | Oct. 28, 2021       | Oct. 27, 2022           |
| Fixed Attenuator<br>WOKEN                      | MDCS18N-10        | MDCS18N-10-01             | Apr. 13, 2021       | Apr. 12, 2022           |
| Preamplifier<br>EMCI                           | EMC 184045        | 980116                    | Oct. 05, 2021       | Oct. 04, 2022           |
| Preamplifier<br>EMCI                           | EMC001340         | 980201                    | Sep. 15, 2021       | Sep. 14, 2022           |
| Preamplifier<br>EMCI                           | EMC 012645        | 980115                    | Oct. 05, 2021       | Oct. 04, 2022           |
| Preamplifier<br>EMCI                           | EMC 330H          | 980112                    | Oct. 05, 2021       | Oct. 04, 2022           |
| RF Coaxial Cable<br>EMCI                       | EMC104-SM-SM-8000 | 171005                    | Oct. 05, 2021       | Oct. 04, 2022           |
| RF Coaxial Cable<br>HUBER+SUHNNER              | SUCOFLEX 104      | EMC104-SM-SM-1000(140807) | Oct. 05, 2021       | Oct. 04, 2022           |
| RF Coaxial Cable<br>WOKEN                      | 8D-FB             | Cable-Ch10-01             | Oct. 05, 2021       | Oct. 04, 2022           |
| Boresight Antenna Fixture                      | FBA-01            | FBA-SIP01                 | NA                  | NA                      |
| Software<br>BV ADT                             | E3<br>6.120103    | NA                        | NA                  | NA                      |
| Antenna Tower<br>MF                            | MFA-440H          | NA                        | NA                  | NA                      |
| Turn Table<br>MF                               | MFT-201SS         | NA                        | NA                  | NA                      |
| Antenna Tower & Turn Table<br>Controller<br>MF | MF-7802           | NA                        | NA                  | NA                      |
| Wideband Power Sensor<br>KEYSIGHT              | N1923A            | MY58020002                | Jan. 11, 2021       | Jan. 10, 2022           |
| Peak Power Analyzer<br>KEYSIGHT                | 8990B             | MY51000485                | Jan. 19, 2021       | Jan. 18, 2022           |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
 2. The test was performed in HwaYa Chamber 10.

#### 4.1.3 Test Procedures

##### **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 a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

##### **Note:**

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

##### **For Radiated Emission above 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

##### **Note:**

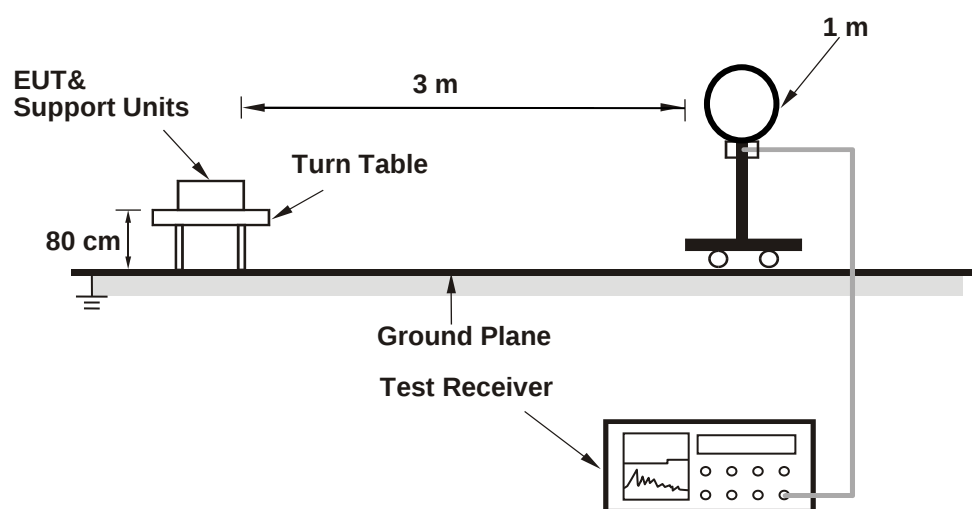
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. 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. (11a: RBW = 1 MHz, VBW = 510 Hz ; 11ac (VHT20): RBW = 1 MHz, VBW = 820 Hz ; 11ac (VHT40): RBW = 1 MHz, VBW = 1.2 kHz ; 11ac (VHT80): RBW = 1 MHz, VBW = 3 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.4 Deviation from Test Standard

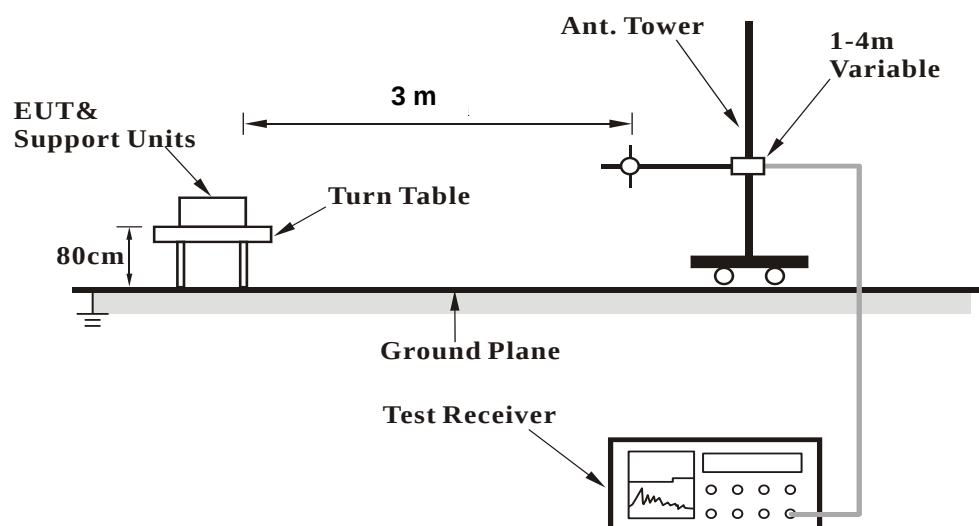
No deviation.

#### 4.1.5 Test Setup

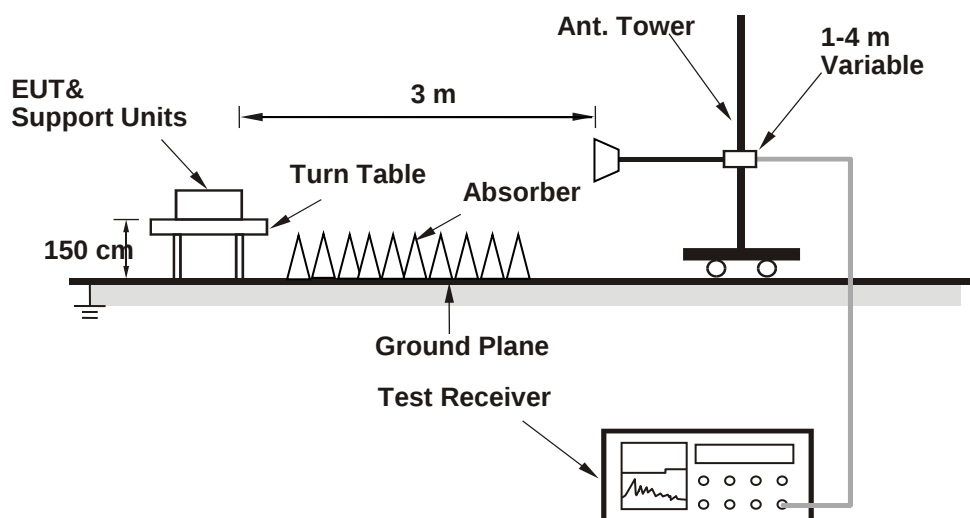
##### <Radiated Emission below 30 MHz>



##### <Radiated Emission 30 MHz to 1 GHz>



### <Radiated Emission above 1 GHz>



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

#### 4.1.6 EUT Operating Conditions

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.

#### 4.1.7 Test Results

##### Above 1 GHz Data :

|                        |              |                          |                           |
|------------------------|--------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11a   | <b>Channel</b>           | CH 36 : 5180 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 52.70 PK                | 74.00          | -21.30      | 2.18 H             | 64                   | 69.42            | -16.72                   |
| 2                                                    | 5150.00         | 42.74 AV                | 54.00          | -11.26      | 2.18 H             | 64                   | 59.46            | -16.72                   |
| 3                                                    | *5180.00        | 90.87 PK                |                |             | 2.18 H             | 64                   | 54.55            | 36.32                    |
| 4                                                    | *5180.00        | 83.18 AV                |                |             | 2.18 H             | 64                   | 46.86            | 36.32                    |
| 5                                                    | #10360.00       | 51.64 PK                | 68.20          | -16.56      | 2.68 H             | 92                   | 56.64            | -5.00                    |
| 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         | 58.12 PK                | 74.00          | -15.88      | 2.60 V             | 173                  | 74.84            | -16.72                   |
| 2                                                    | 5150.00         | 47.19 AV                | 54.00          | -6.81       | 2.60 V             | 173                  | 63.91            | -16.72                   |
| 3                                                    | *5180.00        | 97.60 PK                |                |             | 2.60 V             | 173                  | 61.28            | 36.32                    |
| 4                                                    | *5180.00        | 90.10 AV                |                |             | 2.60 V             | 173                  | 53.78            | 36.32                    |
| 5                                                    | #10360.00       | 51.72 PK                | 68.20          | -16.48      | 2.81 V             | 193                  | 56.72            | -5.00                    |

##### Remarks:

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

|                        |              |                          |                           |
|------------------------|--------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11a   | <b>Channel</b>           | CH 40 : 5200 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5200.00        | 90.48 PK                |                |             | 2.18 H             | 72                   | 54.14            | 36.34                    |
| 2                                                    | *5200.00        | 82.87 AV                |                |             | 2.18 H             | 72                   | 46.53            | 36.34                    |
| 3                                                    | #10400.00       | 51.88 PK                | 68.20          | -16.32      | 1.62 H             | 115                  | 56.73            | -4.85                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5200.00        | 97.30 PK                |                |             | 2.55 V             | 176                  | 60.96            | 36.34                    |
| 2                                                    | *5200.00        | 89.67 AV                |                |             | 2.55 V             | 176                  | 53.33            | 36.34                    |
| 3                                                    | #10400.00       | 51.98 PK                | 68.20          | -16.22      | 3.04 V             | 218                  | 56.83            | -4.85                    |

**Remarks:**

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

|                        |              |                          |                           |
|------------------------|--------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11a   | <b>Channel</b>           | CH 48 : 5240 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5240.00        | 89.98 PK                |                |             | 2.29 H             | 65                   | 53.71            | 36.27                    |
| 2                                                    | *5240.00        | 81.96 AV                |                |             | 2.29 H             | 65                   | 45.69            | 36.27                    |
| 3                                                    | 5350.00         | 50.30 PK                | 74.00          | -23.70      | 2.29 H             | 65                   | 66.83            | -16.53                   |
| 4                                                    | 5350.00         | 39.45 AV                | 54.00          | -14.55      | 2.29 H             | 65                   | 55.98            | -16.53                   |
| 5                                                    | #10480.00       | 52.57 PK                | 68.20          | -15.63      | 1.77 H             | 105                  | 56.64            | -4.07                    |
| 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        | 97.01 PK                |                |             | 2.58 V             | 174                  | 60.74            | 36.27                    |
| 2                                                    | *5240.00        | 89.42 AV                |                |             | 2.58 V             | 174                  | 53.15            | 36.27                    |
| 3                                                    | 5350.00         | 51.25 PK                | 74.00          | -22.75      | 2.58 V             | 174                  | 67.78            | -16.53                   |
| 4                                                    | 5350.00         | 40.21 AV                | 54.00          | -13.79      | 2.58 V             | 174                  | 56.74            | -16.53                   |
| 5                                                    | #10480.00       | 52.75 PK                | 68.20          | -15.45      | 2.91 V             | 188                  | 56.82            | -4.07                    |

**Remarks:**

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

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

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 50.94 PK                | 74.00          | -23.06      | 2.23 H             | 71                   | 67.66            | -16.72                   |
| 2                                                    | 5150.00         | 41.00 AV                | 54.00          | -13.00      | 2.23 H             | 71                   | 57.72            | -16.72                   |
| 3                                                    | *5260.00        | 89.25 PK                |                |             | 2.23 H             | 71                   | 53.04            | 36.21                    |
| 4                                                    | *5260.00        | 81.49 AV                |                |             | 2.23 H             | 71                   | 45.28            | 36.21                    |
| 5                                                    | #10520.00       | 52.73 PK                | 68.20          | -15.47      | 3.10 H             | 128                  | 56.62            | -3.89                    |
| 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         | 50.77 PK                | 74.00          | -23.23      | 2.55 V             | 198                  | 67.49            | -16.72                   |
| 2                                                    | 5150.00         | 42.70 AV                | 54.00          | -11.30      | 2.55 V             | 198                  | 59.42            | -16.72                   |
| 3                                                    | *5260.00        | 95.34 PK                |                |             | 2.55 V             | 198                  | 59.13            | 36.21                    |
| 4                                                    | *5260.00        | 87.81 AV                |                |             | 2.55 V             | 198                  | 51.60            | 36.21                    |
| 5                                                    | #10520.00       | 52.90 PK                | 68.20          | -15.30      | 3.01 V             | 158                  | 56.79            | -3.89                    |

**Remarks:**

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

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

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5300.00        | 87.44 PK                |                |             | 2.56 H             | 204                  | 51.34            | 36.10                    |
| 2                                                    | *5300.00        | 79.83 AV                |                |             | 2.56 H             | 204                  | 43.73            | 36.10                    |
| 3                                                    | 10600.00        | 52.70 PK                | 74.00          | -21.30      | 2.81 H             | 331                  | 56.62            | -3.92                    |
| 4                                                    | 10600.00        | 41.57 AV                | 54.00          | -12.43      | 2.81 H             | 331                  | 45.49            | -3.92                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5300.00        | 93.73 PK                |                |             | 2.67 V             | 171                  | 57.63            | 36.10                    |
| 2                                                    | *5300.00        | 86.17 AV                |                |             | 2.67 V             | 171                  | 50.07            | 36.10                    |
| 3                                                    | 10600.00        | 53.31 PK                | 74.00          | -20.69      | 2.83 V             | 196                  | 57.23            | -3.92                    |
| 4                                                    | 10600.00        | 42.12 AV                | 54.00          | -11.88      | 2.83 V             | 196                  | 46.04            | -3.92                    |

**Remarks:**

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

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

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5320.00        | 86.24 PK                |                |             | 2.17 H             | 203                  | 50.10            | 36.14                    |
| 2                                                    | *5320.00        | 78.60 AV                |                |             | 2.17 H             | 203                  | 42.46            | 36.14                    |
| 3                                                    | 5350.00         | 50.41 PK                | 74.00          | -23.59      | 2.17 H             | 203                  | 66.94            | -16.53                   |
| 4                                                    | 5350.00         | 39.55 AV                | 54.00          | -14.45      | 2.17 H             | 203                  | 56.08            | -16.53                   |
| 5                                                    | 10640.00        | 52.65 PK                | 74.00          | -21.35      | 2.98 H             | 86                   | 56.70            | -4.05                    |
| 6                                                    | 10640.00        | 41.58 AV                | 54.00          | -12.42      | 2.98 H             | 86                   | 45.63            | -4.05                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5320.00        | 92.05 PK                |                |             | 2.64 V             | 204                  | 55.91            | 36.14                    |
| 2                                                    | *5320.00        | 84.65 AV                |                |             | 2.64 V             | 204                  | 48.51            | 36.14                    |
| 3                                                    | 5350.00         | 50.64 PK                | 74.00          | -23.36      | 2.64 V             | 204                  | 67.17            | -16.53                   |
| 4                                                    | 5350.00         | 39.77 AV                | 54.00          | -14.23      | 2.64 V             | 204                  | 56.30            | -16.53                   |
| 5                                                    | 10640.00        | 52.73 PK                | 74.00          | -21.27      | 2.81 V             | 221                  | 56.78            | -4.05                    |
| 6                                                    | 10640.00        | 41.61 AV                | 54.00          | -12.39      | 2.81 V             | 221                  | 45.66            | -4.05                    |

**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.

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

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 50.81 PK                | 74.00          | -23.19      | 2.47 H             | 198                  | 66.92            | -16.11                   |
| 2                                                    | 5460.00         | 40.17 AV                | 54.00          | -13.83      | 2.47 H             | 198                  | 56.28            | -16.11                   |
| 3                                                    | #5470.00        | 50.90 PK                | 68.20          | -17.30      | 2.47 H             | 198                  | 67.01            | -16.11                   |
| 4                                                    | *5500.00        | 85.76 PK                |                |             | 2.47 H             | 198                  | 49.22            | 36.54                    |
| 5                                                    | *5500.00        | 78.14 AV                |                |             | 2.47 H             | 198                  | 41.60            | 36.54                    |
| 6                                                    | 11000.00        | 53.95 PK                | 74.00          | -20.05      | 3.17 H             | 265                  | 56.80            | -2.85                    |
| 7                                                    | 11000.00        | 42.89 AV                | 54.00          | -11.11      | 3.17 H             | 265                  | 45.74            | -2.85                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 50.63 PK                | 74.00          | -23.37      | 2.46 V             | 173                  | 66.74            | -16.11                   |
| 2                                                    | 5460.00         | 40.33 AV                | 54.00          | -13.67      | 2.46 V             | 173                  | 56.44            | -16.11                   |
| 3                                                    | #5470.00        | 51.27 PK                | 68.20          | -16.93      | 2.46 V             | 173                  | 67.38            | -16.11                   |
| 4                                                    | *5500.00        | 93.01 PK                |                |             | 2.46 V             | 173                  | 56.47            | 36.54                    |
| 5                                                    | *5500.00        | 85.45 AV                |                |             | 2.46 V             | 173                  | 48.91            | 36.54                    |
| 6                                                    | 11000.00        | 53.90 PK                | 74.00          | -20.10      | 2.87 V             | 292                  | 56.75            | -2.85                    |
| 7                                                    | 11000.00        | 42.86 AV                | 54.00          | -11.14      | 2.87 V             | 292                  | 45.71            | -2.85                    |

**Remarks:**

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

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

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5580.00        | 91.20 PK                |                |             | 2.63 H             | 198                  | 54.54            | 36.66                    |
| 2                                                    | *5580.00        | 83.90 AV                |                |             | 2.63 H             | 198                  | 47.24            | 36.66                    |
| 3                                                    | 11160.00        | 53.42 PK                | 74.00          | -20.58      | 2.95 H             | 82                   | 56.63            | -3.21                    |
| 4                                                    | 11160.00        | 42.51 AV                | 54.00          | -11.49      | 2.95 H             | 82                   | 45.72            | -3.21                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5580.00        | 99.31 PK                |                |             | 2.53 V             | 173                  | 62.65            | 36.66                    |
| 2                                                    | *5580.00        | 91.80 AV                |                |             | 2.53 V             | 173                  | 55.14            | 36.66                    |
| 3                                                    | 11160.00        | 53.62 PK                | 74.00          | -20.38      | 1.98 V             | 215                  | 56.83            | -3.21                    |
| 4                                                    | 11160.00        | 42.53 AV                | 54.00          | -11.47      | 1.98 V             | 215                  | 45.74            | -3.21                    |

**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.

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

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 50.69 PK                | 74.00          | -23.31      | 2.42 H             | 200                  | 66.80            | -16.11                   |
| 2                                                    | 5460.00         | 39.92 AV                | 54.00          | -14.08      | 2.42 H             | 200                  | 56.03            | -16.11                   |
| 3                                                    | #5470.00        | 51.02 PK                | 68.20          | -17.18      | 2.42 H             | 200                  | 67.13            | -16.11                   |
| 4                                                    | *5700.00        | 92.70 PK                |                |             | 2.42 H             | 200                  | 55.62            | 37.08                    |
| 5                                                    | *5700.00        | 84.91 AV                |                |             | 2.42 H             | 200                  | 47.83            | 37.08                    |
| 6                                                    | #5725.00        | 58.95 PK                | 68.20          | -9.25       | 2.42 H             | 200                  | 74.57            | -15.62                   |
| 7                                                    | 11400.00        | 54.23 PK                | 74.00          | -19.77      | 2.53 H             | 248                  | 57.27            | -3.04                    |
| 8                                                    | 11400.00        | 43.27 AV                | 54.00          | -10.73      | 2.53 H             | 248                  | 46.31            | -3.04                    |

| Antenna Polarity & Test Distance : Vertical at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                 | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 5460.00         | 50.09 PK                | 74.00          | -23.91      | 2.39 V             | 205                  | 66.20            | -16.11                   |
| 2                                                  | 5460.00         | 39.84 AV                | 54.00          | -14.16      | 2.39 V             | 205                  | 55.95            | -16.11                   |
| 3                                                  | #5470.00        | 51.09 PK                | 68.20          | -17.11      | 2.39 V             | 205                  | 67.20            | -16.11                   |
| 4                                                  | *5700.00        | 101.45 PK               |                |             | 2.39 V             | 205                  | 64.37            | 37.08                    |
| 5                                                  | *5700.00        | 93.86 AV                |                |             | 2.39 V             | 205                  | 56.78            | 37.08                    |
| 6                                                  | #5725.00        | 65.35 PK                | 68.20          | -2.85       | 2.39 V             | 205                  | 80.97            | -15.62                   |
| 7                                                  | 11400.00        | 53.89 PK                | 74.00          | -20.11      | 3.04 V             | 221                  | 56.93            | -3.04                    |
| 8                                                  | 11400.00        | 42.81 AV                | 54.00          | -11.19      | 3.04 V             | 221                  | 45.85            | -3.04                    |

**Remarks:**

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

|                        |              |                          |                           |
|------------------------|--------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11a   | <b>Channel</b>           | CH 149 : 5745 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5745.00        | 98.18 PK                |                |             | 2.42 H             | 200                  | 61.18            | 37.00                    |
| 2                                                    | *5745.00        | 90.22 AV                |                |             | 2.42 H             | 200                  | 53.22            | 37.00                    |
| 3                                                    | 11490.00        | 54.30 PK                | 74.00          | -19.70      | 2.81 H             | 336                  | 56.92            | -2.62                    |
| 4                                                    | 11490.00        | 43.26 AV                | 54.00          | -10.74      | 2.81 H             | 336                  | 45.88            | -2.62                    |
| 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                                                    | *5745.00        | 108.09 PK               |                |             | 2.40 V             | 205                  | 71.09            | 37.00                    |
| 2                                                    | *5745.00        | 100.30 AV               |                |             | 2.40 V             | 205                  | 63.30            | 37.00                    |
| 3                                                    | 11490.00        | 54.76 PK                | 74.00          | -19.24      | 2.83 V             | 127                  | 57.38            | -2.62                    |
| 4                                                    | 11490.00        | 43.63 AV                | 54.00          | -10.37      | 2.83 V             | 127                  | 46.25            | -2.62                    |

**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.

|                        |              |                          |                           |
|------------------------|--------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11a   | <b>Channel</b>           | CH 157 : 5785 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5785.00        | 98.31 PK                |                |             | 2.26 H             | 201                  | 61.32            | 36.99                    |
| 2                                                    | *5785.00        | 90.38 AV                |                |             | 2.26 H             | 201                  | 53.39            | 36.99                    |
| 3                                                    | 11570.00        | 54.26 PK                | 74.00          | -19.74      | 3.12 H             | 224                  | 57.06            | -2.80                    |
| 4                                                    | 11570.00        | 43.14 AV                | 54.00          | -10.86      | 3.12 H             | 224                  | 45.94            | -2.80                    |
| 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                                                    | *5785.00        | 108.64 PK               |                |             | 2.46 V             | 205                  | 71.65            | 36.99                    |
| 2                                                    | *5785.00        | 100.66 AV               |                |             | 2.46 V             | 205                  | 63.67            | 36.99                    |
| 3                                                    | 11570.00        | 54.58 PK                | 74.00          | -19.42      | 1.63 V             | 208                  | 57.38            | -2.80                    |
| 4                                                    | 11570.00        | 43.41 AV                | 54.00          | -10.59      | 1.63 V             | 208                  | 46.21            | -2.80                    |

**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.

|                        |              |                          |                           |
|------------------------|--------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11a   | <b>Channel</b>           | CH 165 : 5825 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5825.00        | 98.03 PK                |                |             | 2.44 H             | 173                  | 60.84            | 37.19                    |
| 2                                                    | *5825.00        | 90.17 AV                |                |             | 2.44 H             | 173                  | 52.98            | 37.19                    |
| 3                                                    | 11650.00        | 54.09 PK                | 74.00          | -19.91      | 2.18 H             | 168                  | 57.08            | -2.99                    |
| 4                                                    | 11650.00        | 44.00 AV                | 54.00          | -10.00      | 2.18 H             | 168                  | 46.99            | -2.99                    |
| 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                                                    | *5825.00        | 109.00 PK               |                |             | 2.42 V             | 203                  | 71.81            | 37.19                    |
| 2                                                    | *5825.00        | 101.34 AV               |                |             | 2.42 V             | 203                  | 64.15            | 37.19                    |
| 3                                                    | 11650.00        | 44.35 PK                | 74.00          | -29.65      | 1.93 V             | 117                  | 47.34            | -2.99                    |
| 4                                                    | 11650.00        | 43.16 AV                | 54.00          | -10.84      | 1.93 V             | 117                  | 46.15            | -2.99                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 36 : 5180 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 53.24 PK                | 74.00          | -20.76      | 1.00 H             | 80                   | 69.96            | -16.72                   |
| 2                                                    | 5150.00         | 43.10 AV                | 54.00          | -10.90      | 1.00 H             | 80                   | 59.82            | -16.72                   |
| 3                                                    | *5180.00        | 92.31 PK                |                |             | 1.00 H             | 80                   | 55.99            | 36.32                    |
| 4                                                    | *5180.00        | 84.51 AV                |                |             | 1.00 H             | 80                   | 48.19            | 36.32                    |
| 5                                                    | #10360.00       | 53.52 PK                | 68.20          | -14.68      | 1.30 H             | 118                  | 58.52            | -5.00                    |
| 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         | 56.04 PK                | 74.00          | -17.96      | 2.41 V             | 179                  | 72.76            | -16.72                   |
| 2                                                    | 5150.00         | 44.25 AV                | 54.00          | -9.75       | 2.41 V             | 179                  | 60.97            | -16.72                   |
| 3                                                    | *5180.00        | 96.14 PK                |                |             | 2.41 V             | 179                  | 59.82            | 36.32                    |
| 4                                                    | *5180.00        | 87.38 AV                |                |             | 2.41 V             | 179                  | 51.06            | 36.32                    |
| 5                                                    | #10360.00       | 53.62 PK                | 68.20          | -14.58      | 3.02 V             | 242                  | 58.62            | -5.00                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 40 : 5200 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5200.00        | 93.22 PK                |                |             | 1.22 H             | 78                   | 56.88            | 36.34                    |
| 2                                                    | *5200.00        | 85.08 AV                |                |             | 1.22 H             | 78                   | 48.74            | 36.34                    |
| 3                                                    | #10400.00       | 53.79 PK                | 68.20          | -14.41      | 2.81 H             | 142                  | 58.64            | -4.85                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5200.00        | 94.83 PK                |                |             | 2.57 V             | 180                  | 58.49            | 36.34                    |
| 2                                                    | *5200.00        | 87.21 AV                |                |             | 2.57 V             | 180                  | 50.87            | 36.34                    |
| 3                                                    | #10400.00       | 53.86 PK                | 68.20          | -14.34      | 3.62 V             | 172                  | 58.71            | -4.85                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 48 : 5240 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5240.00        | 90.95 PK                |                |             | 1.25 H             | 79                   | 54.68            | 36.27                    |
| 2                                                    | *5240.00        | 83.48 AV                |                |             | 1.25 H             | 79                   | 47.21            | 36.27                    |
| 3                                                    | 5350.00         | 50.72 PK                | 74.00          | -23.28      | 1.25 H             | 79                   | 67.25            | -16.53                   |
| 4                                                    | 5350.00         | 40.31 AV                | 54.00          | -13.69      | 1.25 H             | 79                   | 56.84            | -16.53                   |
| 5                                                    | #10480.00       | 54.70 PK                | 68.20          | -13.50      | 2.85 H             | 341                  | 58.77            | -4.07                    |
| 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        | 95.44 PK                |                |             | 2.59 V             | 194                  | 58.75            | 36.69                    |
| 2                                                    | *5240.00        | 86.60 AV                |                |             | 2.59 V             | 194                  | 49.91            | 36.69                    |
| 3                                                    | 5350.00         | 51.04 PK                | 74.00          | -22.96      | 2.59 V             | 194                  | 67.15            | -16.11                   |
| 4                                                    | 5350.00         | 40.00 AV                | 54.00          | -14.00      | 2.59 V             | 194                  | 56.11            | -16.11                   |
| 5                                                    | #10480.00       | 54.62 PK                | 68.20          | -13.58      | 3.14 V             | 108                  | 59.54            | -4.92                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 52 : 5260 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 51.11 PK                | 74.00          | -22.89      | 1.26 H             | 79                   | 67.83            | -16.72                   |
| 2                                                    | 5150.00         | 41.47 AV                | 54.00          | -12.53      | 1.26 H             | 79                   | 58.19            | -16.72                   |
| 3                                                    | *5260.00        | 92.29 PK                |                |             | 1.26 H             | 79                   | 56.08            | 36.21                    |
| 4                                                    | *5260.00        | 83.88 AV                |                |             | 1.26 H             | 79                   | 47.67            | 36.21                    |
| 5                                                    | #10520.00       | 54.70 PK                | 68.20          | -13.50      | 2.02 H             | 91                   | 58.59            | -3.89                    |
| 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         | 50.64 PK                | 74.00          | -23.36      | 2.93 V             | 183                  | 67.36            | -16.72                   |
| 2                                                    | 5150.00         | 42.03 AV                | 54.00          | -11.97      | 2.93 V             | 183                  | 58.75            | -16.72                   |
| 3                                                    | *5260.00        | 96.13 PK                |                |             | 2.93 V             | 183                  | 59.92            | 36.21                    |
| 4                                                    | *5260.00        | 87.81 AV                |                |             | 2.93 V             | 183                  | 51.60            | 36.21                    |
| 5                                                    | #10520.00       | 54.77 PK                | 68.20          | -13.43      | 3.11 V             | 82                   | 58.66            | -3.89                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 60 : 5300 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5300.00        | 90.97 PK                |                |             | 1.34 H             | 79                   | 54.87            | 36.10                    |
| 2                                                    | *5300.00        | 82.72 AV                |                |             | 1.34 H             | 79                   | 46.62            | 36.10                    |
| 3                                                    | 10600.00        | 54.72 PK                | 74.00          | -19.28      | 1.06 H             | 296                  | 58.64            | -3.92                    |
| 4                                                    | 10600.00        | 43.84 AV                | 54.00          | -10.16      | 1.06 H             | 296                  | 47.76            | -3.92                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5300.00        | 95.70 PK                |                |             | 2.95 V             | 190                  | 59.60            | 36.10                    |
| 2                                                    | *5300.00        | 87.34 AV                |                |             | 2.95 V             | 190                  | 51.24            | 36.10                    |
| 3                                                    | 10600.00        | 54.86 PK                | 74.00          | -19.14      | 2.74 V             | 162                  | 58.78            | -3.92                    |
| 4                                                    | 10600.00        | 43.80 AV                | 54.00          | -10.20      | 2.74 V             | 162                  | 47.72            | -3.92                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 64 : 5320 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5320.00        | 88.54 PK                |                |             | 1.35 H             | 80                   | 52.40            | 36.14                    |
| 2                                                    | *5320.00        | 80.28 AV                |                |             | 1.35 H             | 80                   | 44.14            | 36.14                    |
| 3                                                    | 5350.00         | 50.94 PK                | 74.00          | -23.06      | 1.35 H             | 80                   | 67.47            | -16.53                   |
| 4                                                    | 5350.00         | 40.52 AV                | 54.00          | -13.48      | 1.35 H             | 80                   | 57.05            | -16.53                   |
| 5                                                    | 10640.00        | 54.52 PK                | 74.00          | -19.48      | 1.88 H             | 137                  | 58.57            | -4.05                    |
| 6                                                    | 10640.00        | 43.61 AV                | 54.00          | -10.39      | 1.88 H             | 137                  | 47.66            | -4.05                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5320.00        | 93.56 PK                |                |             | 2.55 V             | 183                  | 57.42            | 36.14                    |
| 2                                                    | *5320.00        | 84.85 AV                |                |             | 2.55 V             | 183                  | 48.71            | 36.14                    |
| 3                                                    | 5350.00         | 56.04 PK                | 74.00          | -17.96      | 2.55 V             | 183                  | 72.57            | -16.53                   |
| 4                                                    | 5350.00         | 42.39 AV                | 54.00          | -11.61      | 2.55 V             | 183                  | 58.92            | -16.53                   |
| 5                                                    | 10640.00        | 54.76 PK                | 74.00          | -19.24      | 3.35 V             | 226                  | 58.81            | -4.05                    |
| 6                                                    | 10640.00        | 43.72 AV                | 54.00          | -10.28      | 3.35 V             | 226                  | 47.77            | -4.05                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 100 : 5500 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 50.97 PK                | 74.00          | -23.03      | 1.21 H             | 65                   | 67.08            | -16.11                   |
| 2                                                    | 5460.00         | 40.83 AV                | 54.00          | -13.17      | 1.21 H             | 65                   | 56.94            | -16.11                   |
| 3                                                    | #5470.00        | 51.65 PK                | 68.20          | -16.55      | 1.21 H             | 65                   | 67.76            | -16.11                   |
| 4                                                    | *5500.00        | 85.12 PK                |                |             | 1.21 H             | 65                   | 48.58            | 36.54                    |
| 5                                                    | *5500.00        | 76.87 AV                |                |             | 1.21 H             | 65                   | 40.33            | 36.54                    |
| 6                                                    | 11000.00        | 55.78 PK                | 74.00          | -18.22      | 2.92 H             | 148                  | 58.63            | -2.85                    |
| 7                                                    | 11000.00        | 44.93 AV                | 54.00          | -9.07       | 2.92 H             | 148                  | 47.78            | -2.85                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 51.07 PK                | 74.00          | -22.93      | 2.38 V             | 182                  | 67.18            | -16.11                   |
| 2                                                    | 5460.00         | 40.73 AV                | 54.00          | -13.27      | 2.38 V             | 182                  | 56.84            | -16.11                   |
| 3                                                    | #5470.00        | 51.64 PK                | 68.20          | -16.56      | 2.38 V             | 182                  | 67.75            | -16.11                   |
| 4                                                    | *5500.00        | 92.14 PK                |                |             | 2.38 V             | 182                  | 55.60            | 36.54                    |
| 5                                                    | *5500.00        | 84.01 AV                |                |             | 2.38 V             | 182                  | 47.47            | 36.54                    |
| 6                                                    | 11000.00        | 55.96 PK                | 74.00          | -18.04      | 3.42 V             | 341                  | 58.81            | -2.85                    |
| 7                                                    | 11000.00        | 45.08 AV                | 54.00          | -8.92       | 3.42 V             | 341                  | 47.93            | -2.85                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 116 : 5580 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5580.00        | 88.58 PK                |                |             | 1.12 H             | 63                   | 51.92            | 36.66                    |
| 2                                                    | *5580.00        | 80.25 AV                |                |             | 1.12 H             | 63                   | 43.59            | 36.66                    |
| 3                                                    | 11160.00        | 55.58 PK                | 74.00          | -18.42      | 1.36 H             | 104                  | 58.79            | -3.21                    |
| 4                                                    | 11160.00        | 44.49 AV                | 54.00          | -9.51       | 1.36 H             | 104                  | 47.70            | -3.21                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5580.00        | 97.08 PK                |                |             | 2.26 V             | 185                  | 60.42            | 36.66                    |
| 2                                                    | *5580.00        | 88.95 AV                |                |             | 2.26 V             | 185                  | 52.29            | 36.66                    |
| 3                                                    | 11160.00        | 55.62 PK                | 74.00          | -18.38      | 2.95 V             | 316                  | 58.83            | -3.21                    |
| 4                                                    | 11160.00        | 44.56 AV                | 54.00          | -9.44       | 2.95 V             | 316                  | 47.77            | -3.21                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 140 : 5700 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 51.07 PK                | 74.00          | -22.93      | 1.00 H             | 101                  | 67.18            | -16.11                   |
| 2                                                    | 5460.00         | 40.68 AV                | 54.00          | -13.32      | 1.00 H             | 101                  | 56.79            | -16.11                   |
| 3                                                    | #5470.00        | 51.08 PK                | 68.20          | -17.12      | 1.00 H             | 101                  | 67.19            | -16.11                   |
| 4                                                    | *5700.00        | 93.47 PK                |                |             | 1.00 H             | 101                  | 56.39            | 37.08                    |
| 5                                                    | *5700.00        | 85.98 AV                |                |             | 1.00 H             | 101                  | 48.90            | 37.08                    |
| 6                                                    | #5725.00        | 54.44 PK                | 68.20          | -13.76      | 1.00 H             | 101                  | 70.06            | -15.62                   |
| 7                                                    | 11400.00        | 55.74 PK                | 74.00          | -18.26      | 1.68 H             | 111                  | 58.78            | -3.04                    |
| 8                                                    | 11400.00        | 44.82 AV                | 54.00          | -9.18       | 1.68 H             | 111                  | 47.86            | -3.04                    |

| Antenna Polarity & Test Distance : Vertical at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                 | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 5460.00         | 51.02 PK                | 74.00          | -22.98      | 2.34 V             | 189                  | 67.13            | -16.11                   |
| 2                                                  | 5460.00         | 40.42 AV                | 54.00          | -13.58      | 2.34 V             | 189                  | 56.53            | -16.11                   |
| 3                                                  | #5470.00        | 51.08 PK                | 68.20          | -17.12      | 2.34 V             | 189                  | 67.19            | -16.11                   |
| 4                                                  | *5700.00        | 100.35 PK               |                |             | 2.34 V             | 189                  | 63.27            | 37.08                    |
| 5                                                  | *5700.00        | 92.95 AV                |                |             | 2.34 V             | 189                  | 55.87            | 37.08                    |
| 6                                                  | #5725.00        | 60.62 PK                | 68.20          | -7.58       | 2.34 V             | 189                  | 76.24            | -15.62                   |
| 7                                                  | 11400.00        | 56.00 PK                | 74.00          | -18.00      | 2.40 V             | 271                  | 59.04            | -3.04                    |
| 8                                                  | 11400.00        | 44.92 AV                | 54.00          | -9.08       | 2.40 V             | 271                  | 47.96            | -3.04                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 149 : 5745 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5745.00        | 99.58 PK                |                |             | 1.00 H             | 104                  | 62.58            | 37.00                    |
| 2                                                    | *5745.00        | 91.59 AV                |                |             | 1.00 H             | 104                  | 54.59            | 37.00                    |
| 3                                                    | 11490.00        | 56.69 PK                | 74.00          | -17.31      | 1.62 H             | 281                  | 59.31            | -2.62                    |
| 4                                                    | 11490.00        | 45.44 AV                | 54.00          | -8.56       | 1.62 H             | 281                  | 48.06            | -2.62                    |
| 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                                                    | *5745.00        | 106.46 PK               |                |             | 2.33 V             | 190                  | 69.46            | 37.00                    |
| 2                                                    | *5745.00        | 98.51 AV                |                |             | 2.33 V             | 190                  | 61.51            | 37.00                    |
| 3                                                    | 11490.00        | 56.60 PK                | 74.00          | -17.40      | 2.94 V             | 108                  | 59.22            | -2.62                    |
| 4                                                    | 11490.00        | 45.45 AV                | 54.00          | -8.55       | 2.94 V             | 108                  | 48.07            | -2.62                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 157 : 5785 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5785.00        | 99.47 PK                |                |             | 1.00 H             | 106                  | 62.48            | 36.99                    |
| 2                                                    | *5785.00        | 91.56 AV                |                |             | 1.00 H             | 106                  | 54.57            | 36.99                    |
| 3                                                    | 11570.00        | 56.06 PK                | 74.00          | -17.94      | 1.24 H             | 288                  | 58.86            | -2.80                    |
| 4                                                    | 11570.00        | 44.92 AV                | 54.00          | -9.08       | 1.24 H             | 288                  | 47.72            | -2.80                    |
| 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                                                    | *5785.00        | 107.05 PK               |                |             | 2.30 V             | 189                  | 70.06            | 36.99                    |
| 2                                                    | *5785.00        | 99.10 AV                |                |             | 2.30 V             | 189                  | 62.11            | 36.99                    |
| 3                                                    | 11570.00        | 56.27 PK                | 74.00          | -17.73      | 1.85 V             | 294                  | 59.07            | -2.80                    |
| 4                                                    | 11570.00        | 45.08 AV                | 54.00          | -8.92       | 1.85 V             | 294                  | 47.88            | -2.80                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT20) | <b>Channel</b>           | CH 165 : 5825 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5825.00        | 101.48 PK               |                |             | 1.00 H             | 107                  | 64.29            | 37.19                    |
| 2                                                    | *5825.00        | 93.27 AV                |                |             | 1.00 H             | 107                  | 56.08            | 37.19                    |
| 3                                                    | 11650.00        | 55.84 PK                | 74.00          | -18.16      | 1.00 H             | 107                  | 58.83            | -2.99                    |
| 4                                                    | 11650.00        | 44.75 AV                | 54.00          | -9.25       | 1.00 H             | 107                  | 47.74            | -2.99                    |
| 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                                                    | *5825.00        | 107.74 PK               |                |             | 2.29 V             | 191                  | 70.55            | 37.19                    |
| 2                                                    | *5825.00        | 99.93 AV                |                |             | 2.29 V             | 191                  | 62.74            | 37.19                    |
| 3                                                    | 11650.00        | 56.27 PK                | 74.00          | -17.73      | 3.13 V             | 249                  | 59.26            | -2.99                    |
| 4                                                    | 11650.00        | 44.83 AV                | 54.00          | -9.17       | 3.13 V             | 249                  | 47.82            | -2.99                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 38 : 5190 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 51.69 PK                | 74.00          | -22.31      | 1.00 H             | 80                   | 68.41            | -16.72                   |
| 2                                                    | 5150.00         | 41.13 AV                | 54.00          | -12.87      | 1.00 H             | 80                   | 57.85            | -16.72                   |
| 3                                                    | *5190.00        | 85.48 PK                |                |             | 1.00 H             | 80                   | 49.15            | 36.33                    |
| 4                                                    | *5190.00        | 78.45 AV                |                |             | 1.00 H             | 80                   | 42.12            | 36.33                    |
| 5                                                    | #10380.00       | 53.60 PK                | 68.20          | -14.60      | 1.69 H             | 57                   | 58.52            | -4.92                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 53.82 PK                | 74.00          | -20.18      | 2.80 V             | 38                   | 70.54            | -16.72                   |
| 2                                                    | 5150.00         | 43.36 AV                | 54.00          | -10.64      | 2.80 V             | 38                   | 60.08            | -16.72                   |
| 3                                                    | *5190.00        | 90.43 PK                |                |             | 2.80 V             | 38                   | 54.10            | 36.33                    |
| 4                                                    | *5190.00        | 82.81 AV                |                |             | 2.80 V             | 38                   | 46.48            | 36.33                    |
| 5                                                    | #10380.00       | 53.72 PK                | 68.20          | -14.48      | 3.18 V             | 160                  | 58.64            | -4.92                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 46 : 5230 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 49.52 PK                | 74.00          | -24.48      | 1.00 H             | 68                   | 66.24            | -16.72                   |
| 2                                                    | 5150.00         | 39.84 AV                | 54.00          | -14.16      | 1.00 H             | 68                   | 56.56            | -16.72                   |
| 3                                                    | *5230.00        | 85.81 PK                |                |             | 1.00 H             | 68                   | 49.52            | 36.29                    |
| 4                                                    | *5230.00        | 78.07 AV                |                |             | 1.00 H             | 68                   | 41.78            | 36.29                    |
| 5                                                    | #10460.00       | 54.39 PK                | 68.20          | -13.81      | 1.72 H             | 86                   | 58.66            | -4.27                    |
| 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         | 50.92 PK                | 74.00          | -23.08      | 2.35 V             | 35                   | 67.64            | -16.72                   |
| 2                                                    | 5150.00         | 40.99 AV                | 54.00          | -13.01      | 2.35 V             | 35                   | 57.71            | -16.72                   |
| 3                                                    | *5230.00        | 90.15 PK                |                |             | 2.35 V             | 35                   | 53.86            | 36.29                    |
| 4                                                    | *5230.00        | 82.23 AV                |                |             | 2.35 V             | 35                   | 45.94            | 36.29                    |
| 5                                                    | #10460.00       | 54.64 PK                | 68.20          | -13.56      | 2.62 V             | 104                  | 58.91            | -4.27                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 54 : 5270 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5270.00        | 86.88 PK                |                |             | 1.00 H             | 67                   | 50.70            | 36.18                    |
| 2                                                    | *5270.00        | 79.52 AV                |                |             | 1.00 H             | 67                   | 43.34            | 36.18                    |
| 3                                                    | 5350.00         | 51.43 PK                | 74.00          | -22.57      | 1.00 H             | 67                   | 67.96            | -16.53                   |
| 4                                                    | 5350.00         | 41.37 AV                | 54.00          | -12.63      | 1.00 H             | 67                   | 57.90            | -16.53                   |
| 5                                                    | #10540.00       | 54.77 PK                | 68.20          | -13.43      | 1.22 H             | 184                  | 58.68            | -3.91                    |
| 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                                                    | *5270.00        | 91.48 PK                |                |             | 2.89 V             | 35                   | 55.30            | 36.18                    |
| 2                                                    | *5270.00        | 84.08 AV                |                |             | 2.89 V             | 35                   | 47.90            | 36.18                    |
| 3                                                    | 5350.00         | 53.40 PK                | 74.00          | -20.60      | 2.89 V             | 35                   | 69.93            | -16.53                   |
| 4                                                    | 5350.00         | 43.37 AV                | 54.00          | -10.63      | 2.89 V             | 35                   | 59.90            | -16.53                   |
| 5                                                    | #10540.00       | 55.52 PK                | 68.20          | -12.68      | 2.58 V             | 81                   | 59.43            | -3.91                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 62 : 5310 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5310.00        | 82.62 PK                |                |             | 1.00 H             | 67                   | 46.50            | 36.12                    |
| 2                                                    | *5310.00        | 74.93 AV                |                |             | 1.00 H             | 67                   | 38.81            | 36.12                    |
| 3                                                    | 5350.00         | 51.24 PK                | 74.00          | -22.76      | 1.00 H             | 67                   | 67.77            | -16.53                   |
| 4                                                    | 5350.00         | 41.13 AV                | 54.00          | -12.87      | 1.00 H             | 67                   | 57.66            | -16.53                   |
| 5                                                    | 10620.00        | 54.69 PK                | 74.00          | -19.31      | 1.82 H             | 117                  | 58.67            | -3.98                    |
| 6                                                    | 10620.00        | 43.37 AV                | 54.00          | -10.63      | 1.82 H             | 117                  | 47.35            | -3.98                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5310.00        | 87.86 PK                |                |             | 3.14 V             | 36                   | 51.74            | 36.12                    |
| 2                                                    | *5310.00        | 80.50 AV                |                |             | 3.14 V             | 36                   | 44.38            | 36.12                    |
| 3                                                    | 5350.00         | 56.38 PK                | 74.00          | -17.62      | 3.14 V             | 36                   | 72.91            | -16.53                   |
| 4                                                    | 5350.00         | 43.35 AV                | 54.00          | -10.65      | 3.14 V             | 36                   | 59.88            | -16.53                   |
| 5                                                    | 10620.00        | 55.06 PK                | 74.00          | -18.94      | 2.64 V             | 342                  | 59.04            | -3.98                    |
| 6                                                    | 10620.00        | 43.44 AV                | 54.00          | -10.56      | 2.64 V             | 342                  | 47.42            | -3.98                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 102 : 5510 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 49.63 PK                | 74.00          | -24.37      | 1.00 H             | 68                   | 65.74            | -16.11                   |
| 2                                                    | 5460.00         | 40.44 AV                | 54.00          | -13.56      | 1.00 H             | 68                   | 56.55            | -16.11                   |
| 3                                                    | #5470.00        | 50.38 PK                | 68.20          | -17.82      | 1.00 H             | 68                   | 66.49            | -16.11                   |
| 4                                                    | *5510.00        | 84.93 PK                |                |             | 1.00 H             | 68                   | 48.36            | 36.57                    |
| 5                                                    | *5510.00        | 76.77 AV                |                |             | 1.00 H             | 68                   | 40.20            | 36.57                    |
| 6                                                    | 11020.00        | 55.79 PK                | 74.00          | -18.21      | 1.79 H             | 140                  | 58.75            | -2.96                    |
| 7                                                    | 11020.00        | 44.45 AV                | 54.00          | -9.55       | 1.79 H             | 140                  | 47.41            | -2.96                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 50.91 PK                | 74.00          | -23.09      | 3.16 V             | 28                   | 67.02            | -16.11                   |
| 2                                                    | 5460.00         | 40.70 AV                | 54.00          | -13.30      | 3.16 V             | 28                   | 56.81            | -16.11                   |
| 3                                                    | #5470.00        | 52.06 PK                | 68.20          | -16.14      | 3.16 V             | 28                   | 68.17            | -16.11                   |
| 4                                                    | *5510.00        | 92.05 PK                |                |             | 3.16 V             | 28                   | 55.48            | 36.57                    |
| 5                                                    | *5510.00        | 84.78 AV                |                |             | 3.16 V             | 28                   | 48.21            | 36.57                    |
| 6                                                    | 11020.00        | 56.28 PK                | 74.00          | -17.72      | 3.87 V             | 128                  | 59.24            | -2.96                    |
| 7                                                    | 11020.00        | 44.69 AV                | 54.00          | -9.31       | 3.87 V             | 128                  | 47.65            | -2.96                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 110 : 5550 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5550.00        | 90.34 PK                |                |             | 1.00 H             | 68                   | 53.66            | 36.68                    |
| 2                                                    | *5550.00        | 82.56 AV                |                |             | 1.00 H             | 68                   | 45.88            | 36.68                    |
| 3                                                    | 11100.00        | 55.83 PK                | 74.00          | -18.17      | 2.25 H             | 79                   | 59.17            | -3.34                    |
| 4                                                    | 11100.00        | 44.19 AV                | 54.00          | -9.81       | 2.25 H             | 79                   | 47.53            | -3.34                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5550.00        | 97.47 PK                |                |             | 2.98 V             | 25                   | 60.79            | 36.68                    |
| 2                                                    | *5550.00        | 89.87 AV                |                |             | 2.98 V             | 25                   | 53.19            | 36.68                    |
| 3                                                    | 11100.00        | 55.90 PK                | 74.00          | -18.10      | 3.45 V             | 184                  | 59.24            | -3.34                    |
| 4                                                    | 11100.00        | 44.07 AV                | 54.00          | -9.93       | 3.45 V             | 184                  | 47.41            | -3.34                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 134 : 5670 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5670.00        | 88.99 PK                |                |             | 1.00 H             | 67                   | 51.62            | 37.37                    |
| 2                                                    | *5670.00        | 81.13 AV                |                |             | 1.00 H             | 67                   | 43.76            | 37.37                    |
| 3                                                    | #5725.00        | 52.06 PK                | 68.20          | -16.14      | 1.00 H             | 67                   | 67.26            | -15.20                   |
| 4                                                    | 11340.00        | 55.71 PK                | 74.00          | -18.29      | 1.16 H             | 271                  | 59.78            | -4.07                    |
| 5                                                    | 11340.00        | 44.41 AV                | 54.00          | -9.59       | 1.16 H             | 271                  | 48.48            | -4.07                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5670.00        | 98.24 PK                |                |             | 3.02 V             | 24                   | 61.29            | 36.95                    |
| 2                                                    | *5670.00        | 90.53 AV                |                |             | 3.02 V             | 24                   | 53.58            | 36.95                    |
| 3                                                    | #5725.00        | 60.55 PK                | 68.20          | -7.65       | 3.02 V             | 24                   | 76.17            | -15.62                   |
| 4                                                    | 11340.00        | 55.79 PK                | 74.00          | -18.21      | 2.68 V             | 84                   | 58.81            | -3.02                    |
| 5                                                    | 11340.00        | 44.46 AV                | 54.00          | -9.54       | 2.68 V             | 84                   | 47.48            | -3.02                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 151 : 5755 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5755.00        | 92.10 PK                |                |             | 1.00 H             | 343                  | 55.11            | 36.99                    |
| 2                                                    | *5755.00        | 83.74 AV                |                |             | 1.00 H             | 343                  | 46.75            | 36.99                    |
| 3                                                    | 11510.00        | 56.79 PK                | 74.00          | -17.21      | 1.84 H             | 290                  | 59.41            | -2.62                    |
| 4                                                    | 11510.00        | 45.21 AV                | 54.00          | -8.79       | 1.84 H             | 290                  | 47.83            | -2.62                    |
| 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                                                    | *5755.00        | 102.30 PK               |                |             | 3.11 V             | 24                   | 65.31            | 36.99                    |
| 2                                                    | *5755.00        | 94.33 AV                |                |             | 3.11 V             | 24                   | 57.34            | 36.99                    |
| 3                                                    | 11510.00        | 57.00 PK                | 74.00          | -17.00      | 2.17 V             | 76                   | 59.62            | -2.62                    |
| 4                                                    | 11510.00        | 45.18 AV                | 54.00          | -8.82       | 2.17 V             | 76                   | 47.80            | -2.62                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) | <b>Channel</b>           | CH 159 : 5795 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5795.00        | 93.64 PK                |                |             | 1.00 H             | 342                  | 56.64            | 37.00                    |
| 2                                                    | *5795.00        | 85.62 AV                |                |             | 1.00 H             | 342                  | 48.62            | 37.00                    |
| 3                                                    | 11590.00        | 56.44 PK                | 74.00          | -17.56      | 1.08 H             | 255                  | 59.28            | -2.84                    |
| 4                                                    | 11590.00        | 44.62 AV                | 54.00          | -9.38       | 1.08 H             | 255                  | 47.46            | -2.84                    |
| 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                                                    | *5795.00        | 102.45 PK               |                |             | 3.09 V             | 25                   | 65.45            | 37.00                    |
| 2                                                    | *5795.00        | 94.44 AV                |                |             | 3.09 V             | 25                   | 57.44            | 37.00                    |
| 3                                                    | 11590.00        | 56.78 PK                | 74.00          | -17.22      | 3.64 V             | 97                   | 59.62            | -2.84                    |
| 4                                                    | 11590.00        | 44.84 AV                | 54.00          | -9.16       | 3.64 V             | 97                   | 47.68            | -2.84                    |

**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.

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT80) | <b>Channel</b>           | CH 42 : 5210 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5150.00         | 50.58 PK                | 74.00          | -23.42      | 1.00 H             | 69                   | 67.30            | -16.72                   |
| 2                                                    | 5150.00         | 42.12 AV                | 54.00          | -11.88      | 1.00 H             | 69                   | 58.84            | -16.72                   |
| 3                                                    | *5210.00        | 83.41 PK                |                |             | 1.00 H             | 69                   | 47.09            | 36.32                    |
| 4                                                    | *5210.00        | 76.16 AV                |                |             | 1.00 H             | 69                   | 39.84            | 36.32                    |
| 5                                                    | #10420.00       | 54.03 PK                | 68.20          | -14.17      | 1.62 H             | 341                  | 58.69            | -4.66                    |
| 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         | 54.74 PK                | 74.00          | -19.26      | 3.06 V             | 33                   | 71.46            | -16.72                   |
| 2                                                    | 5150.00         | 45.20 AV                | 54.00          | -8.80       | 3.06 V             | 33                   | 61.92            | -16.72                   |
| 3                                                    | *5210.00        | 87.73 PK                |                |             | 3.06 V             | 33                   | 51.41            | 36.32                    |
| 4                                                    | *5210.00        | 80.50 AV                |                |             | 3.06 V             | 33                   | 44.18            | 36.32                    |
| 5                                                    | #10420.00       | 53.96 PK                | 68.20          | -14.24      | 2.88 V             | 193                  | 58.62            | -4.66                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT80) | <b>Channel</b>           | CH 58 : 5290 MHz          |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5290.00        | 78.75 PK                |                |             | 1.00 H             | 67                   | 42.62            | 36.13                    |
| 2                                                    | *5290.00        | 71.14 AV                |                |             | 1.00 H             | 67                   | 35.01            | 36.13                    |
| 3                                                    | 5350.00         | 50.28 PK                | 74.00          | -23.72      | 1.00 H             | 67                   | 66.81            | -16.53                   |
| 4                                                    | 5350.00         | 40.74 AV                | 54.00          | -13.26      | 1.00 H             | 67                   | 57.27            | -16.53                   |
| 5                                                    | #10580.00       | 54.65 PK                | 68.20          | -13.55      | 1.17 H             | 168                  | 58.56            | -3.91                    |
| 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                                                    | *5290.00        | 83.27 PK                |                |             | 2.90 V             | 33                   | 47.14            | 36.13                    |
| 2                                                    | *5290.00        | 76.09 AV                |                |             | 2.90 V             | 33                   | 39.96            | 36.13                    |
| 3                                                    | 5350.00         | 51.58 PK                | 74.00          | -22.42      | 2.90 V             | 33                   | 68.11            | -16.53                   |
| 4                                                    | 5350.00         | 42.01 AV                | 54.00          | -11.99      | 2.90 V             | 33                   | 58.54            | -16.53                   |
| 5                                                    | #10580.00       | 54.75 PK                | 68.20          | -13.45      | 2.53 V             | 76                   | 58.66            | -3.91                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT80) | <b>Channel</b>           | CH 106 : 5530 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 50.47 PK                | 74.00          | -23.53      | 1.00 H             | 68                   | 66.58            | -16.11                   |
| 2                                                    | 5460.00         | 41.05 AV                | 54.00          | -12.95      | 1.00 H             | 68                   | 57.16            | -16.11                   |
| 3                                                    | #5470.00        | 50.49 PK                | 68.20          | -17.71      | 1.00 H             | 68                   | 66.60            | -16.11                   |
| 4                                                    | *5530.00        | 79.83 PK                |                |             | 1.00 H             | 68                   | 43.21            | 36.62                    |
| 5                                                    | *5530.00        | 72.88 AV                |                |             | 1.00 H             | 68                   | 36.26            | 36.62                    |
| 6                                                    | 11060.00        | 55.41 PK                | 74.00          | -18.59      | 1.48 H             | 106                  | 58.55            | -3.14                    |
| 7                                                    | 11060.00        | 44.16 AV                | 54.00          | -9.84       | 1.48 H             | 106                  | 47.30            | -3.14                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 5460.00         | 50.03 PK                | 74.00          | -23.97      | 3.15 V             | 28                   | 66.14            | -16.11                   |
| 2                                                    | 5460.00         | 41.46 AV                | 54.00          | -12.54      | 3.15 V             | 28                   | 57.57            | -16.11                   |
| 3                                                    | #5470.00        | 50.47 PK                | 68.20          | -17.73      | 3.15 V             | 28                   | 66.58            | -16.11                   |
| 4                                                    | *5530.00        | 87.34 PK                |                |             | 3.15 V             | 28                   | 50.72            | 36.62                    |
| 5                                                    | *5530.00        | 79.43 AV                |                |             | 3.15 V             | 28                   | 42.81            | 36.62                    |
| 6                                                    | 11060.00        | 55.52 PK                | 74.00          | -18.48      | 2.74 V             | 352                  | 58.66            | -3.14                    |
| 7                                                    | 11060.00        | 44.21 AV                | 54.00          | -9.79       | 2.74 V             | 352                  | 47.35            | -3.14                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT80) | <b>Channel</b>           | CH 122 : 5610 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5610.00        | 88.22 PK                |                |             | 1.00 H             | 68                   | 51.53            | 36.69                    |
| 2                                                    | *5610.00        | 80.68 AV                |                |             | 1.00 H             | 68                   | 43.99            | 36.69                    |
| 3                                                    | #5725.00        | 54.29 PK                | 68.20          | -13.91      | 1.00 H             | 68                   | 69.91            | -15.62                   |
| 4                                                    | 11220.00        | 55.79 PK                | 74.00          | -18.21      | 1.84 H             | 136                  | 58.89            | -3.10                    |
| 5                                                    | 11220.00        | 44.31 AV                | 54.00          | -9.69       | 1.84 H             | 136                  | 47.41            | -3.10                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5610.00        | 96.31 PK                |                |             | 3.09 V             | 28                   | 59.62            | 36.69                    |
| 2                                                    | *5610.00        | 88.45 AV                |                |             | 3.09 V             | 28                   | 51.76            | 36.69                    |
| 3                                                    | #5725.00        | 64.27 PK                | 68.20          | -3.93       | 3.09 V             | 28                   | 79.89            | -15.62                   |
| 4                                                    | 11220.00        | 55.64 PK                | 74.00          | -18.36      | 3.57 V             | 109                  | 58.74            | -3.10                    |
| 5                                                    | 11220.00        | 44.36 AV                | 54.00          | -9.64       | 3.57 V             | 109                  | 47.46            | -3.10                    |

**Remarks:**

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

|                        |                     |                          |                           |
|------------------------|---------------------|--------------------------|---------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT80) | <b>Channel</b>           | CH 155 : 5775 MHz         |
| <b>Frequency Range</b> | 1GHz ~ 40GHz        | <b>Detector Function</b> | Peak (PK)<br>Average (AV) |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5775.00        | 91.25 PK                |                |             | 1.00 H             | 342                  | 106.58           | -15.33                   |
| 2                                                    | *5775.00        | 83.38 AV                |                |             | 1.00 H             | 342                  | 98.71            | -15.33                   |
| 3                                                    | 11550.00        | 55.94 PK                | 74.00          | -18.06      | 2.17 H             | 281                  | 59.76            | -3.82                    |
| 4                                                    | 11550.00        | 44.58 AV                | 54.00          | -9.42       | 2.17 H             | 281                  | 48.40            | -3.82                    |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |                         |                |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | *5775.00        | 98.48 PK                |                |             | 2.96 V             | 27                   | 61.07            | 37.41                    |
| 2                                                    | *5775.00        | 91.10 AV                |                |             | 2.96 V             | 27                   | 53.69            | 37.41                    |
| 3                                                    | 11550.00        | 56.00 PK                | 74.00          | -18.00      | 1.74 V             | 276                  | 59.82            | -3.82                    |
| 4                                                    | 11550.00        | 44.52 AV                | 54.00          | -9.48       | 1.74 V             | 276                  | 48.34            | -3.82                    |

**Remarks:**

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

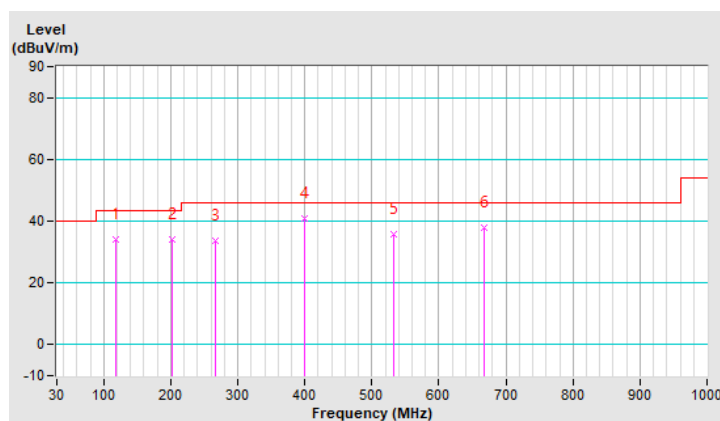
### 30 MHz ~ 1 GHz Worst-Case Data:

|                 |              |                   |                   |
|-----------------|--------------|-------------------|-------------------|
| RF Mode         | TX 802.11a   | Channel           | CH 140 : 5700 MHz |
| Frequency Range | 30MHz ~ 1GHz | Detector Function | Quasi-Peak (QP)   |

| 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                                                    | 117.30          | 34.16 QP                | 43.50          | -9.34       | 2.00 H             | 40                   | 54.75            | -20.59                   |
| 2                                                    | 202.66          | 33.90 QP                | 43.50          | -9.60       | 1.01 H             | 107                  | 55.62            | -21.72                   |
| 3                                                    | 266.68          | 33.72 QP                | 46.00          | -12.28      | 1.01 H             | 77                   | 52.47            | -18.75                   |
| 4                                                    | 399.57          | 40.85 QP                | 46.00          | -5.15       | 2.00 H             | 61                   | 56.03            | -15.18                   |
| 5                                                    | 533.43          | 35.92 QP                | 46.00          | -10.08      | 1.51 H             | 25                   | 48.23            | -12.31                   |
| 6                                                    | 667.29          | 37.98 QP                | 46.00          | -8.02       | 1.01 H             | 53                   | 47.73            | -9.75                    |

#### Remarks:

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

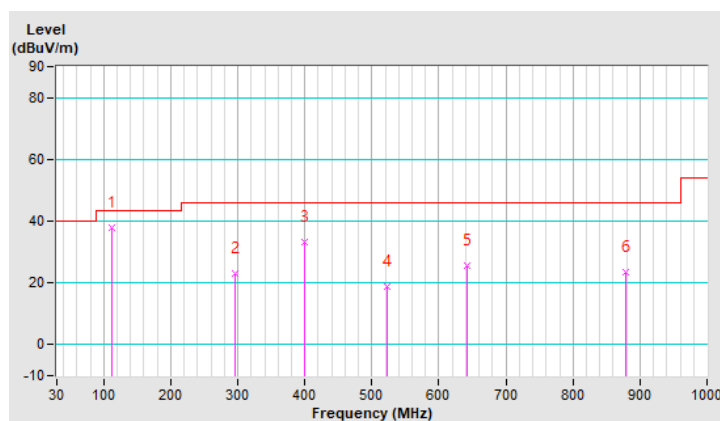


|                 |              |                   |                   |
|-----------------|--------------|-------------------|-------------------|
| RF Mode         | TX 802.11a   | Channel           | CH 140 : 5700 MHz |
| Frequency Range | 30MHz ~ 1GHz | Detector Function | Quasi-Peak (QP)   |

| 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                                                  | 112.45          | 37.89 QP                | 43.50          | -5.61       | 1.49 V             | 176                  | 58.95            | -21.06                   |
| 2                                                  | 296.75          | 22.87 QP                | 46.00          | -23.13      | 1.49 V             | 187                  | 40.56            | -17.69                   |
| 3                                                  | 399.57          | 33.40 QP                | 46.00          | -12.60      | 1.99 V             | 105                  | 48.58            | -15.18                   |
| 4                                                  | 523.73          | 18.83 QP                | 46.00          | -27.17      | 1.00 V             | 17                   | 31.19            | -12.36                   |
| 5                                                  | 643.04          | 25.64 QP                | 46.00          | -20.36      | 1.49 V             | 147                  | 35.36            | -9.72                    |
| 6                                                  | 878.75          | 23.44 QP                | 46.00          | -22.56      | 1.00 V             | 84                   | 30.09            | -6.65                    |

#### Remarks:

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



## 4.2 Transmit Power Measurement

### 4.2.1 Limits of Transmit Power Measurement

| Operation Band | EUT Category |                                   | Limit                                                                                                                         |
|----------------|--------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| U-NII-1        |              | Outdoor Access Point              | 1 Watt (30 dBm)<br>(Max. e.i.r.p $\leq$ 125 mW (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 | 250 mW (24 dBm)                                                                                                               |
| U-NII-2A       | √            |                                   | 250 mW (24 dBm) or 11 dBm + 10 log B*                                                                                         |
| U-NII-2C       | √            |                                   | 250 mW (24 dBm) or 11 dBm + 10 log B*                                                                                         |
| U-NII-3        | √            |                                   | 1 Watt (30 dBm)                                                                                                               |

\*B is the 26 dB emission bandwidth in megahertz

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

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

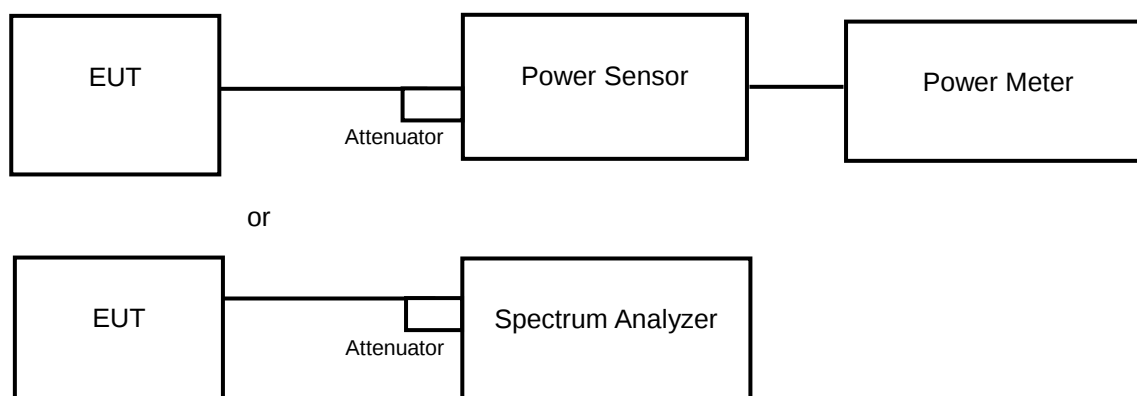
Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less for 20 MHz channel widths with  $N_{ANT} \geq 5$ .

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

### 4.2.2 Test Setup

#### <Power Output Measurement>



#### 4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.2.4 Test Procedure

##### **Average Power Measurement**

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

#### 4.2.5 Deviation from Test Standard

No deviation.

#### 4.2.6 EUT Operating Conditions

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

#### 4.2.7 Test Results

##### Power Output:

##### 802.11a

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36      | 5180            | 66.374                       | 18.22                         | 24                | Pass        |
| 40      | 5200            | 82.985                       | 19.19                         | 24                | Pass        |
| 48      | 5240            | 63.973                       | 18.06                         | 24                | Pass        |
| 52      | 5260            | 53.088                       | 17.25                         | 24                | Pass        |
| 60      | 5300            | 38.282                       | 15.83                         | 24                | Pass        |
| 64      | 5320            | 27.669                       | 14.42                         | 24                | Pass        |
| 100     | 5500            | 18.03                        | 12.56                         | 24                | Pass        |
| 116     | 5580            | 36.559                       | 15.63                         | 24                | Pass        |
| 140     | 5700            | 39.355                       | 15.95                         | 24                | Pass        |
| 149     | 5745            | 135.831                      | 21.33                         | 30                | Pass        |
| 157     | 5785            | 133.66                       | 21.26                         | 30                | Pass        |
| 165     | 5825            | 143.549                      | 21.57                         | 30                | Pass        |

##### 802.11ac (VHT20)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36      | 5180            | 77.09                        | 18.87                         | 24                | Pass        |
| 40      | 5200            | 92.683                       | 19.67                         | 24                | Pass        |
| 48      | 5240            | 61.094                       | 17.86                         | 24                | Pass        |
| 52      | 5260            | 74.302                       | 18.71                         | 24                | Pass        |
| 60      | 5300            | 58.749                       | 17.69                         | 24                | Pass        |
| 64      | 5320            | 44.463                       | 16.48                         | 24                | Pass        |
| 100     | 5500            | 21.577                       | 13.34                         | 24                | Pass        |
| 116     | 5580            | 32.137                       | 15.07                         | 24                | Pass        |
| 140     | 5700            | 44.978                       | 16.53                         | 24                | Pass        |
| 149     | 5745            | 134.586                      | 21.29                         | 30                | Pass        |
| 157     | 5785            | 137.088                      | 21.37                         | 30                | Pass        |
| 165     | 5825            | 144.877                      | 21.61                         | 30                | Pass        |

#### 802.11ac (VHT40)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 38      | 5190            | 69.024                       | 18.39                         | 24                | Pass        |
| 46      | 5230            | 54.954                       | 17.40                         | 24                | Pass        |
| 54      | 5270            | 83.176                       | 19.20                         | 24                | Pass        |
| 62      | 5310            | 34.914                       | 15.43                         | 24                | Pass        |
| 102     | 5510            | 27.102                       | 14.33                         | 24                | Pass        |
| 110     | 5550            | 84.528                       | 19.27                         | 24                | Pass        |
| 134     | 5670            | 63.973                       | 18.06                         | 24                | Pass        |
| 151     | 5755            | 143.88                       | 21.58                         | 30                | Pass        |
| 159     | 5795            | 153.815                      | 21.87                         | 30                | Pass        |

#### 802.11ac (VHT80)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 42      | 5210            | 70.958                       | 18.51                         | 24                | Pass        |
| 58      | 5290            | 22.856                       | 13.59                         | 24                | Pass        |
| 106     | 5530            | 17.947                       | 12.54                         | 24                | Pass        |
| 122     | 5610            | 104.954                      | 20.21                         | 24                | Pass        |
| 155     | 5775            | 106.905                      | 20.29                         | 30                | Pass        |

## 5 Pictures of Test Arrangements

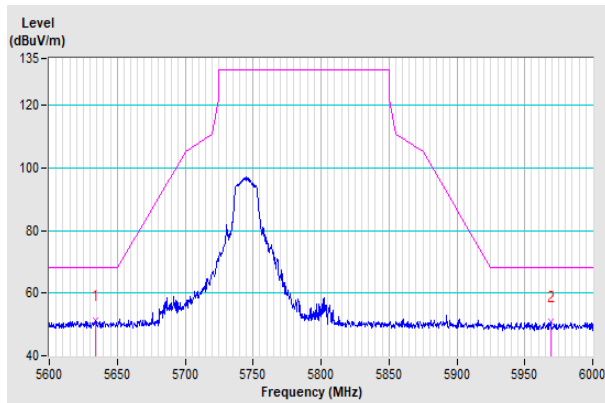
Please refer to the attached file (Test Setup Photo).

## Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

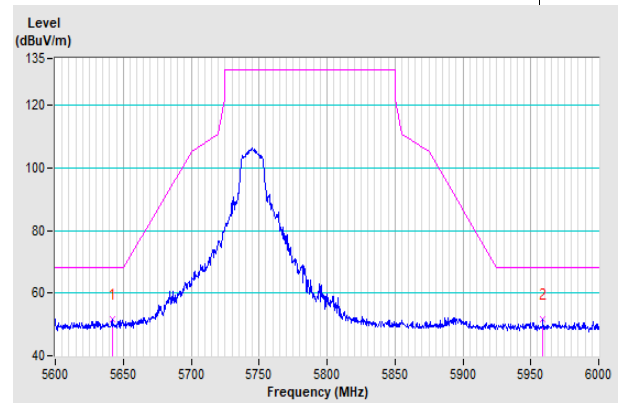
802.11a

CH 149 5745 MHz

Horizontal

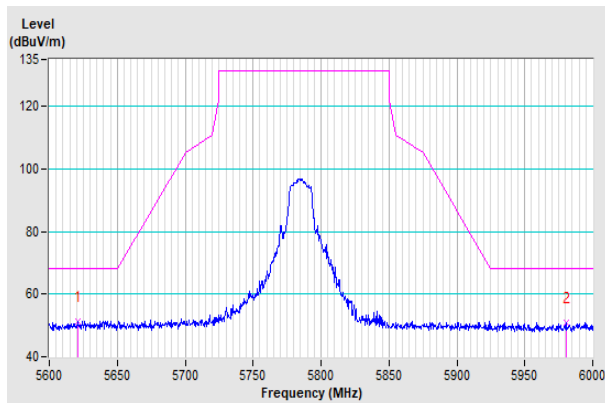


Vertical

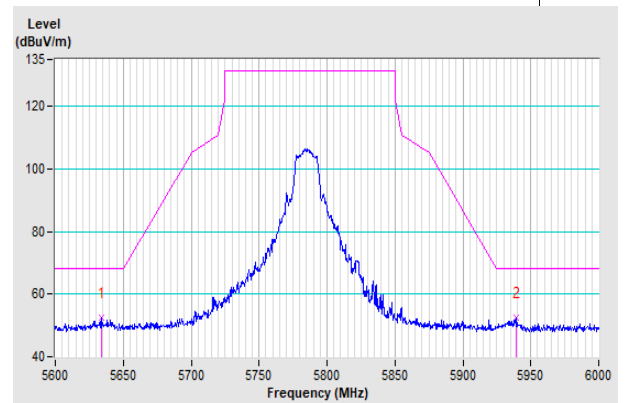


CH 157 5785 MHz

Horizontal

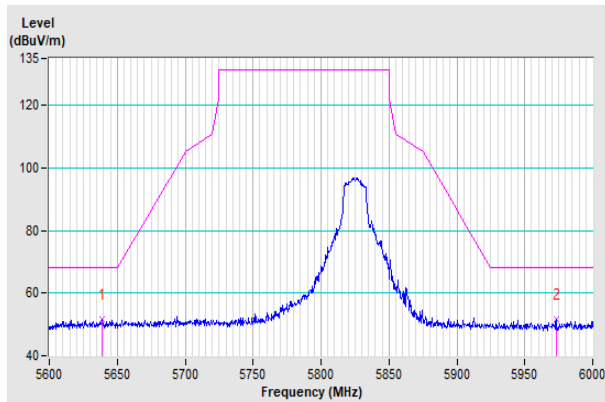


Vertical

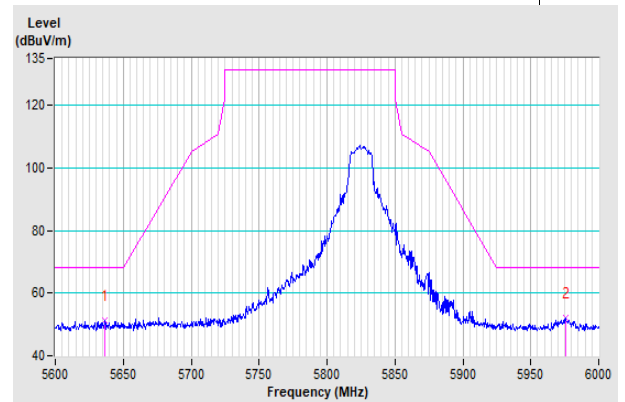


CH 165 5825 MHz

Horizontal



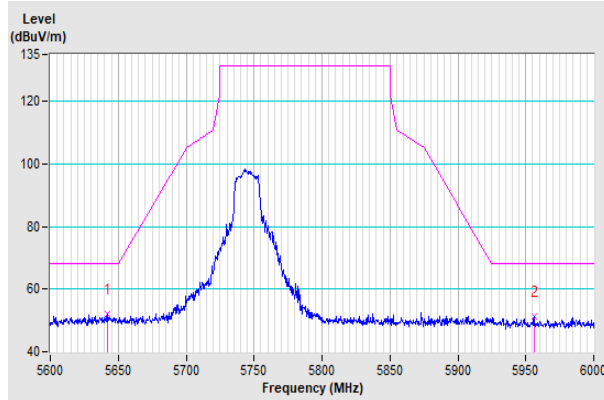
Vertical



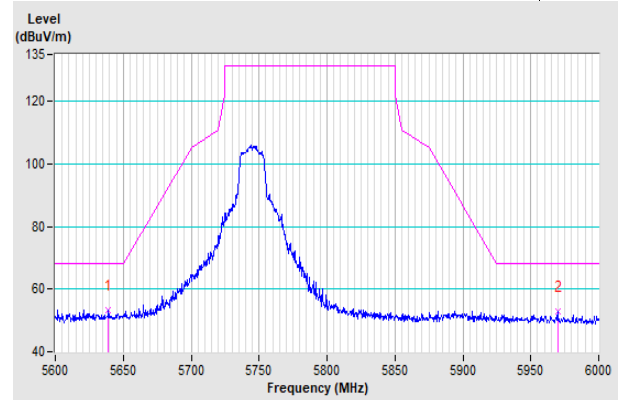
## 802.11ac (VHT20)

### CH 149 5745 MHz

#### Horizontal

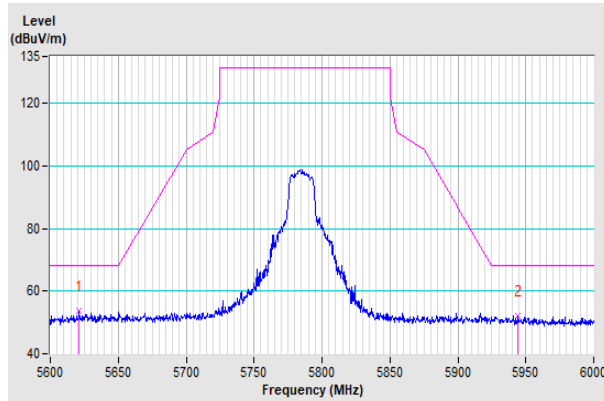


#### Vertical

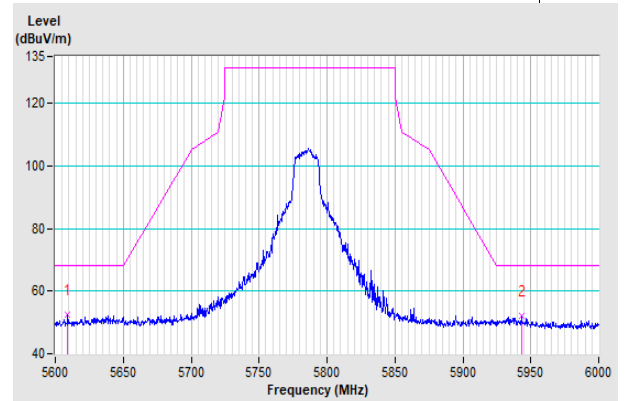


### CH 157 5785 MHz

#### Horizontal

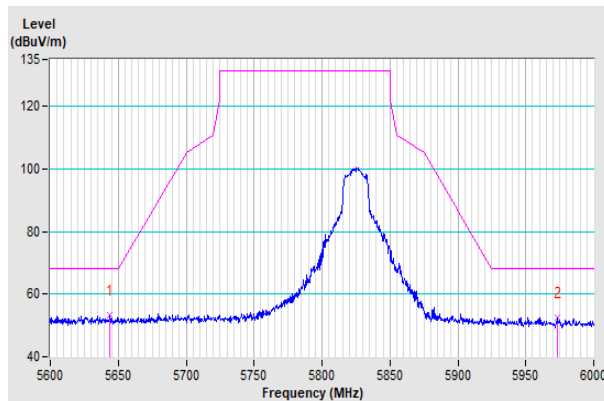


#### Vertical

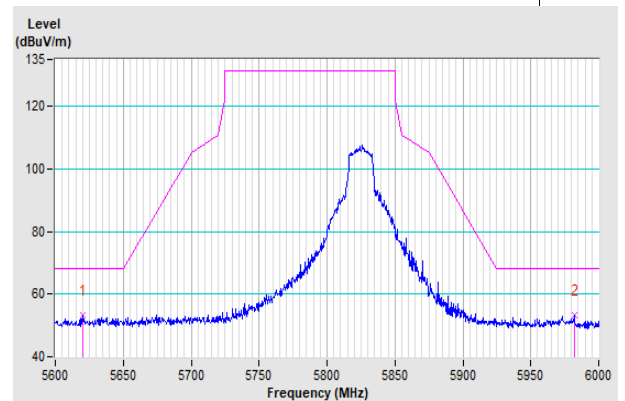


### CH 165 5825 MHz

#### Horizontal



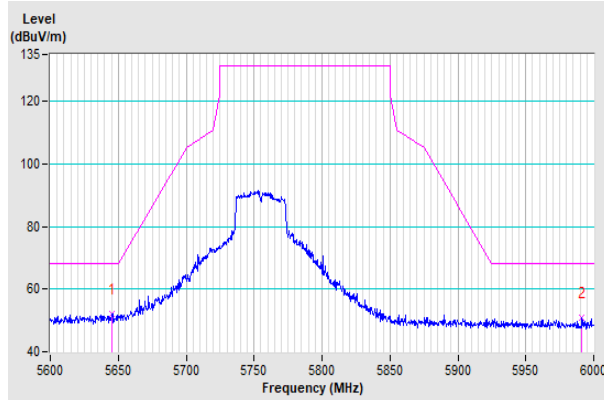
#### Vertical



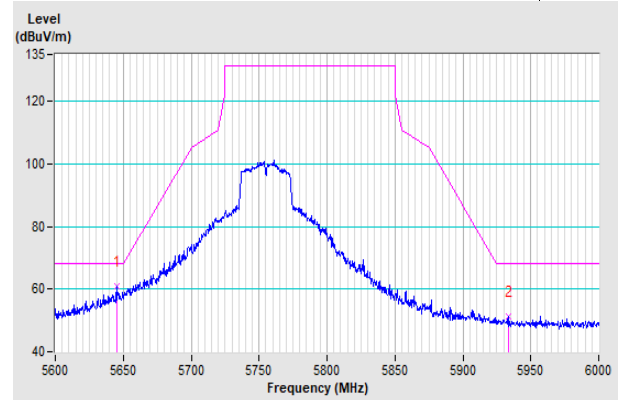
## 802.11ac (VHT40)

CH 151 5755 MHz

Horizontal

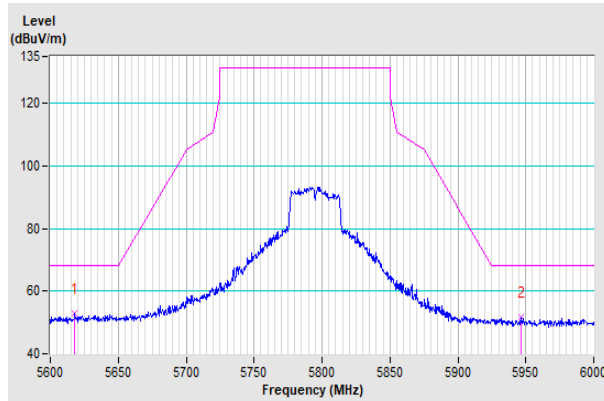


Vertical

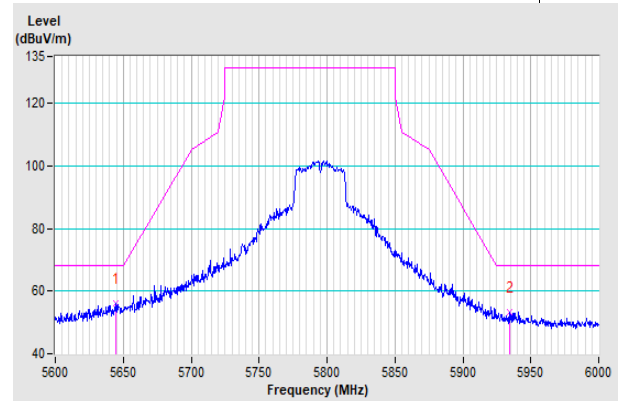


CH 159 5795 MHz

Horizontal



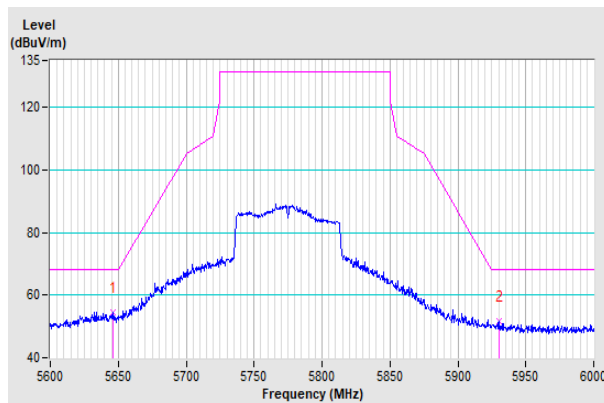
Vertical



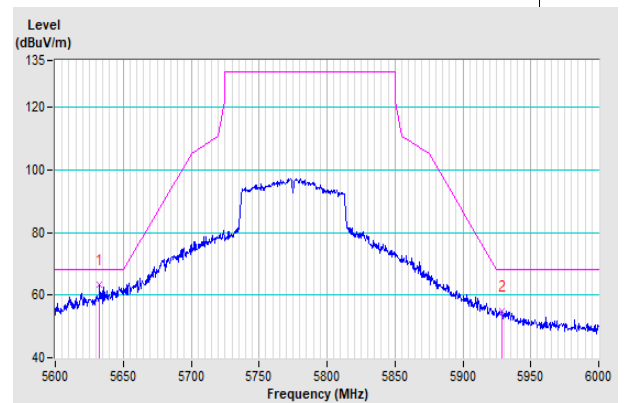
## 802.11ac (VHT80)

CH 155 5775 MHz

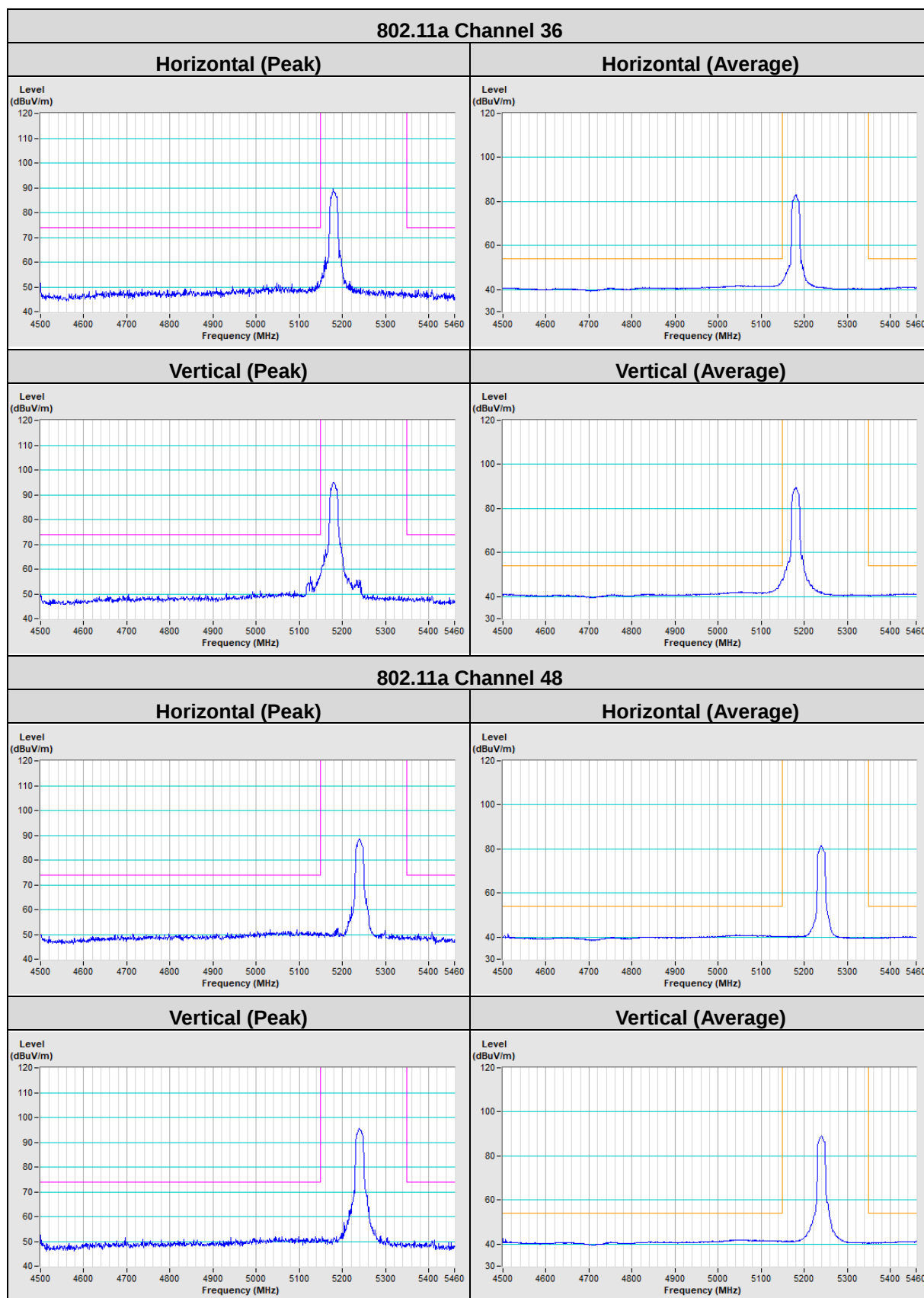
Horizontal

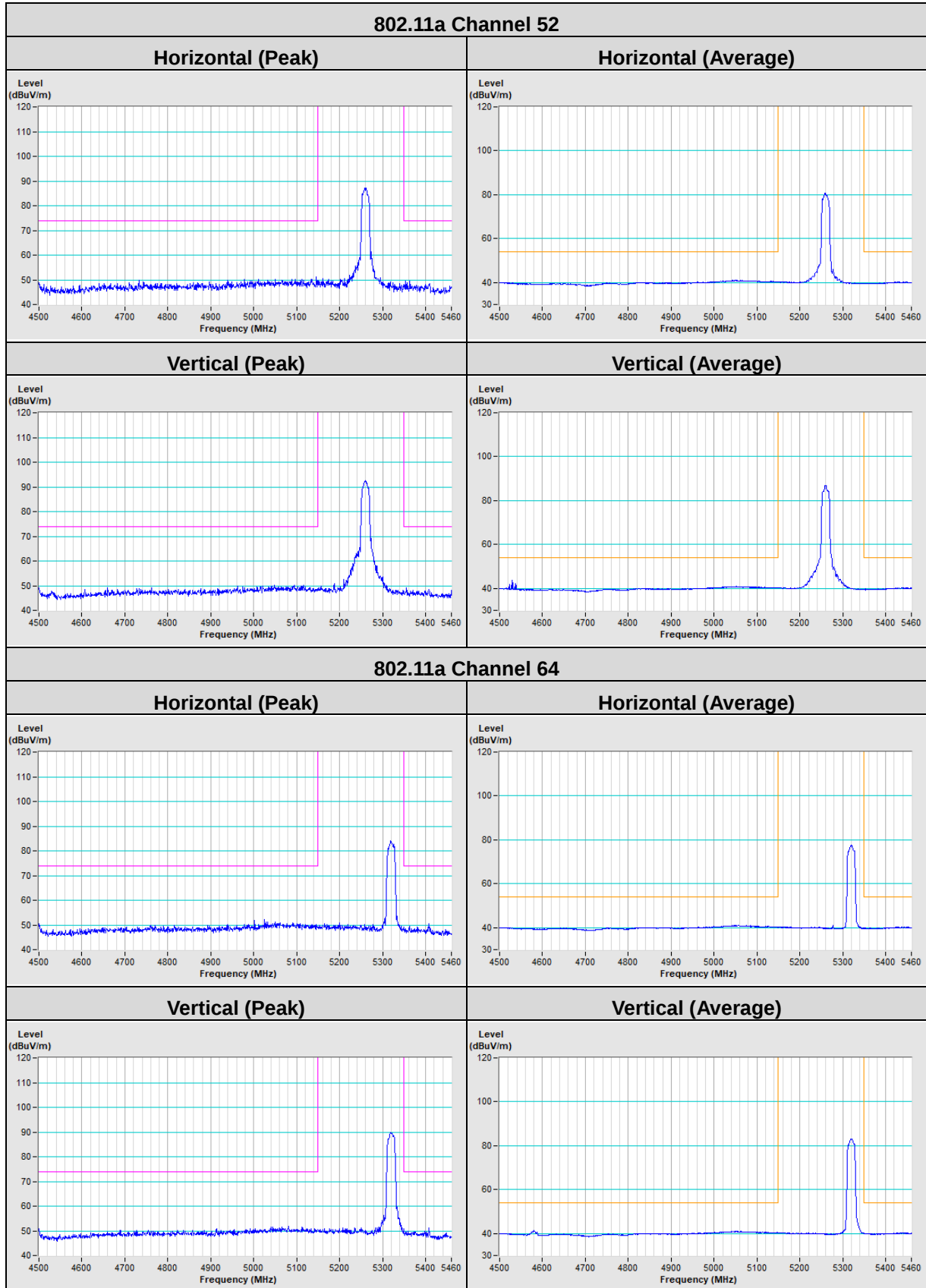


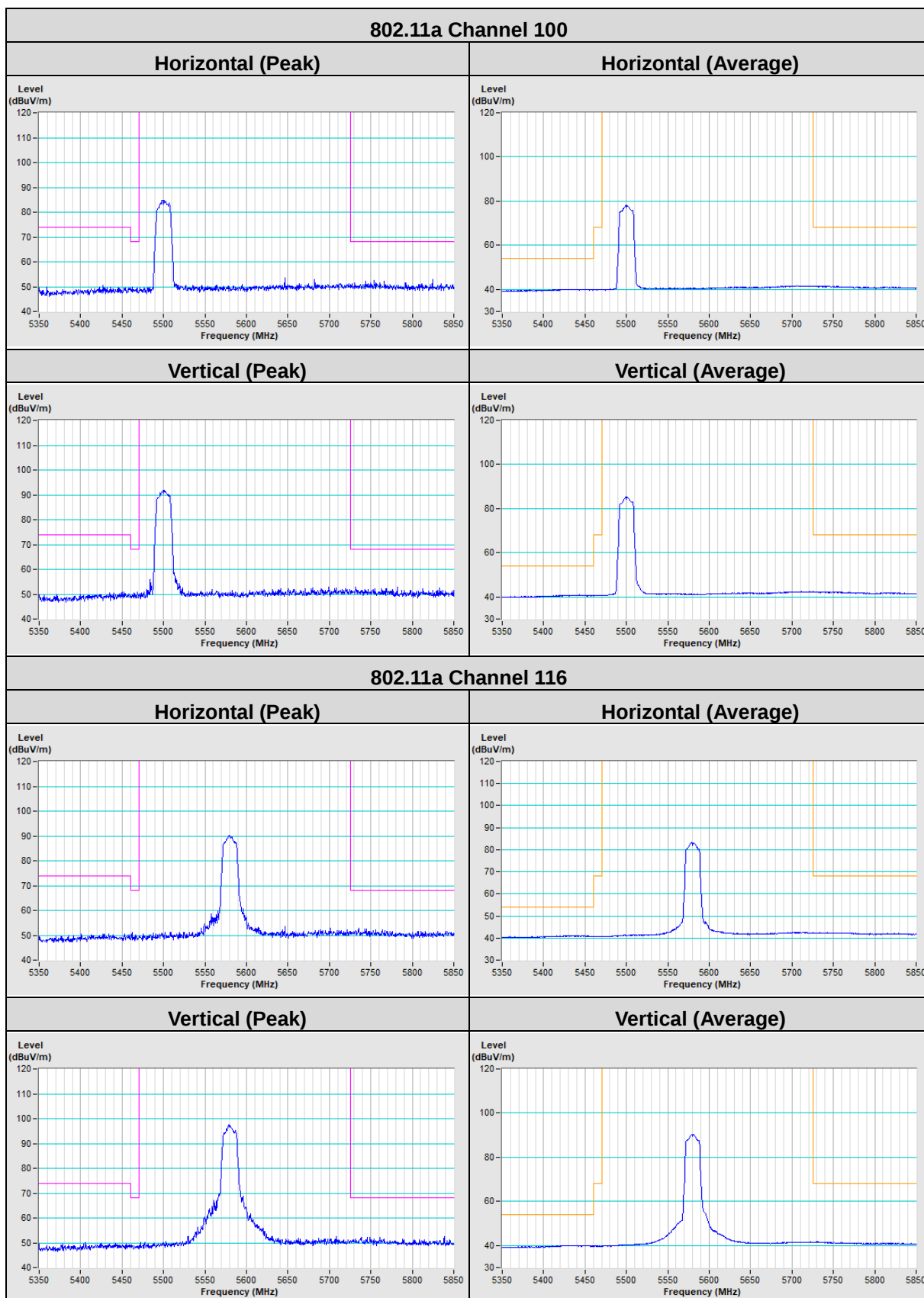
Vertical

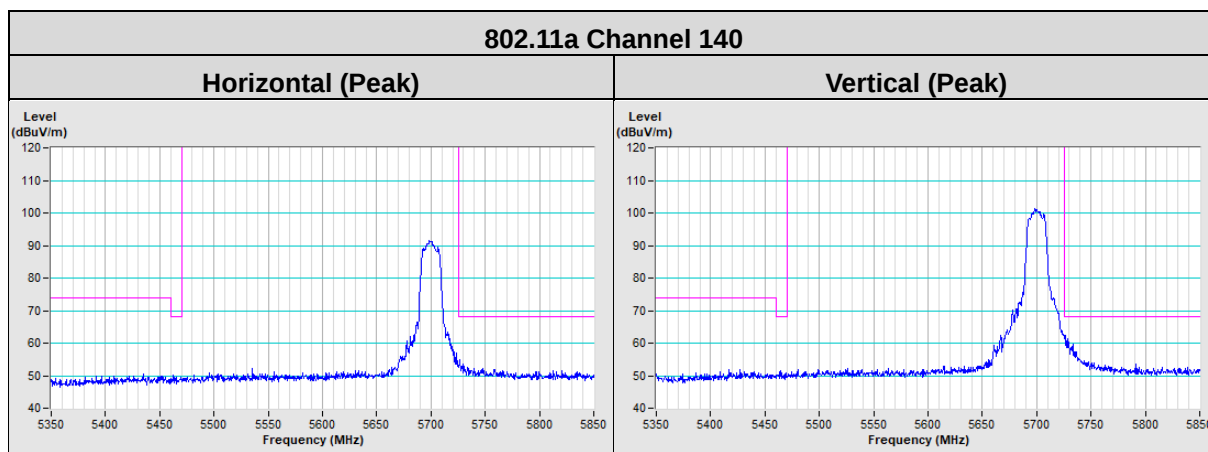


## Annex B- Band-edge measurement



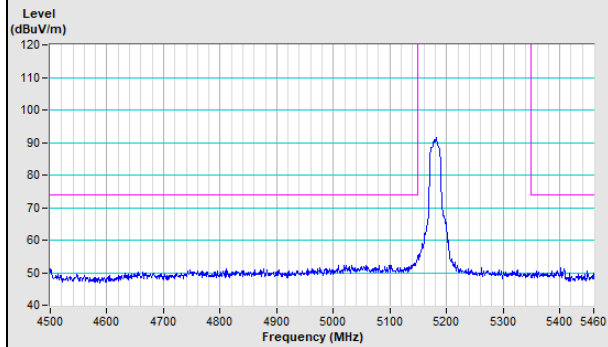




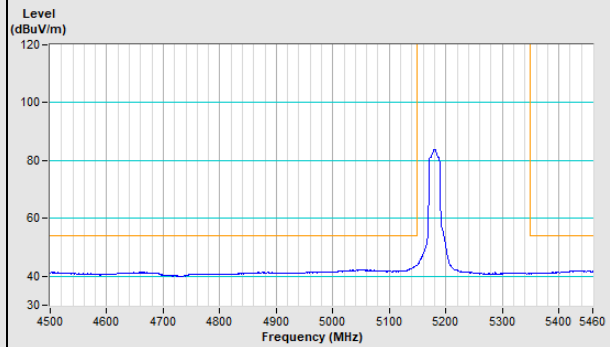


### 802.11ac (VHT20) Channel 36

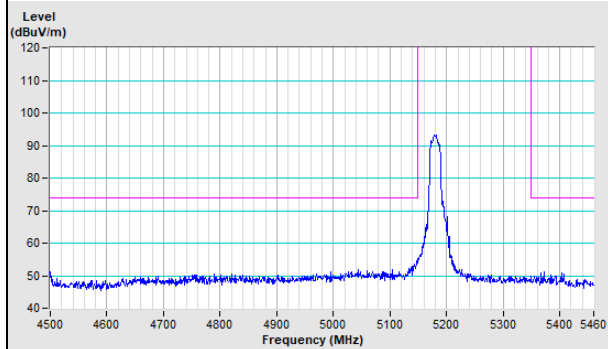
**Horizontal (Peak)**



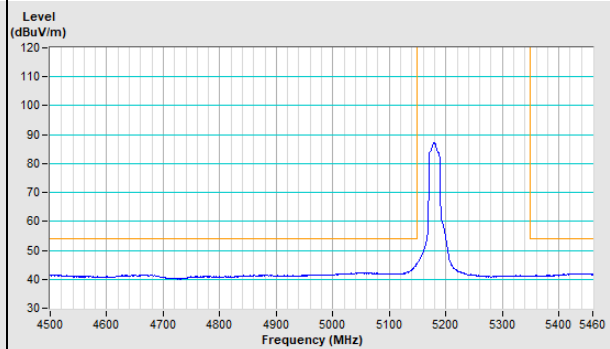
**Horizontal (Average)**



**Vertical (Peak)**

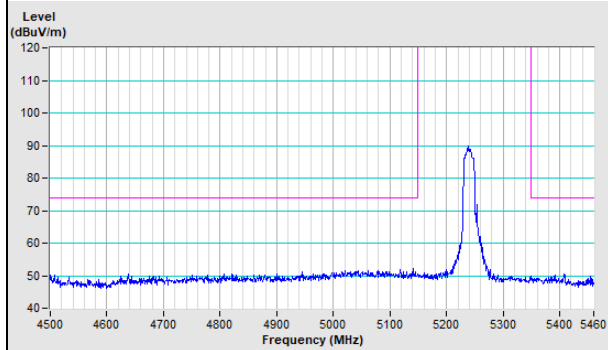


**Vertical (Average)**

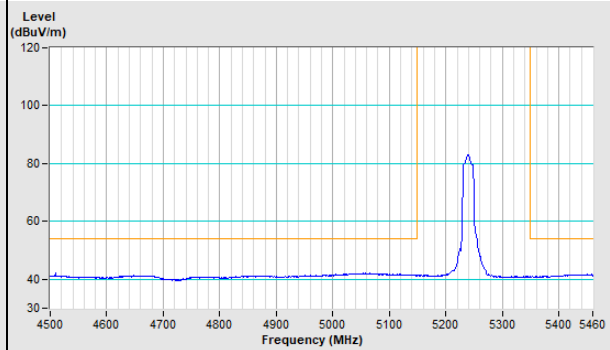


### 802.11ac (VHT20) Channel 48

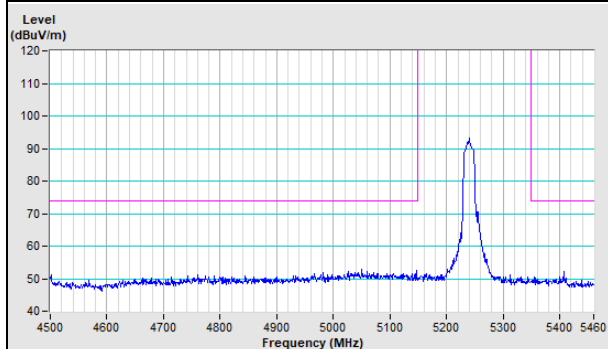
**Horizontal (Peak)**



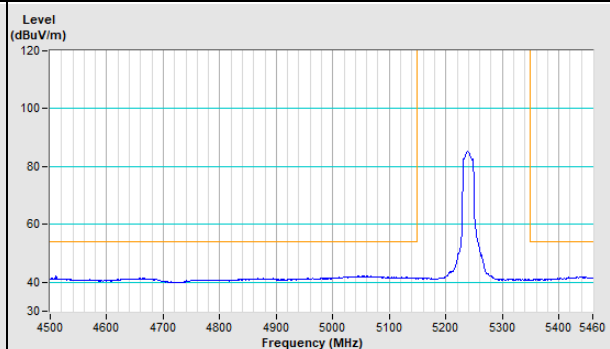
**Horizontal (Average)**

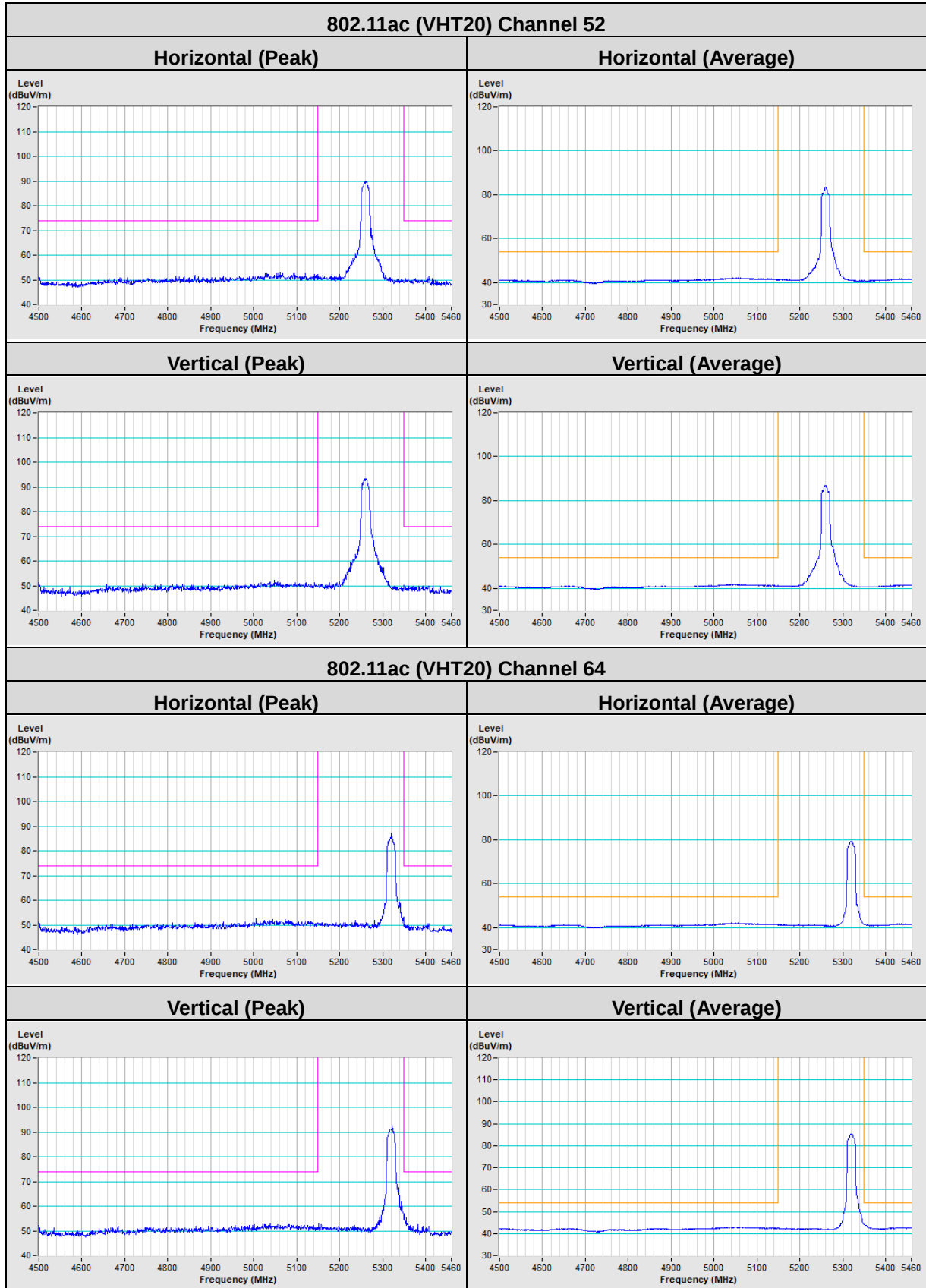


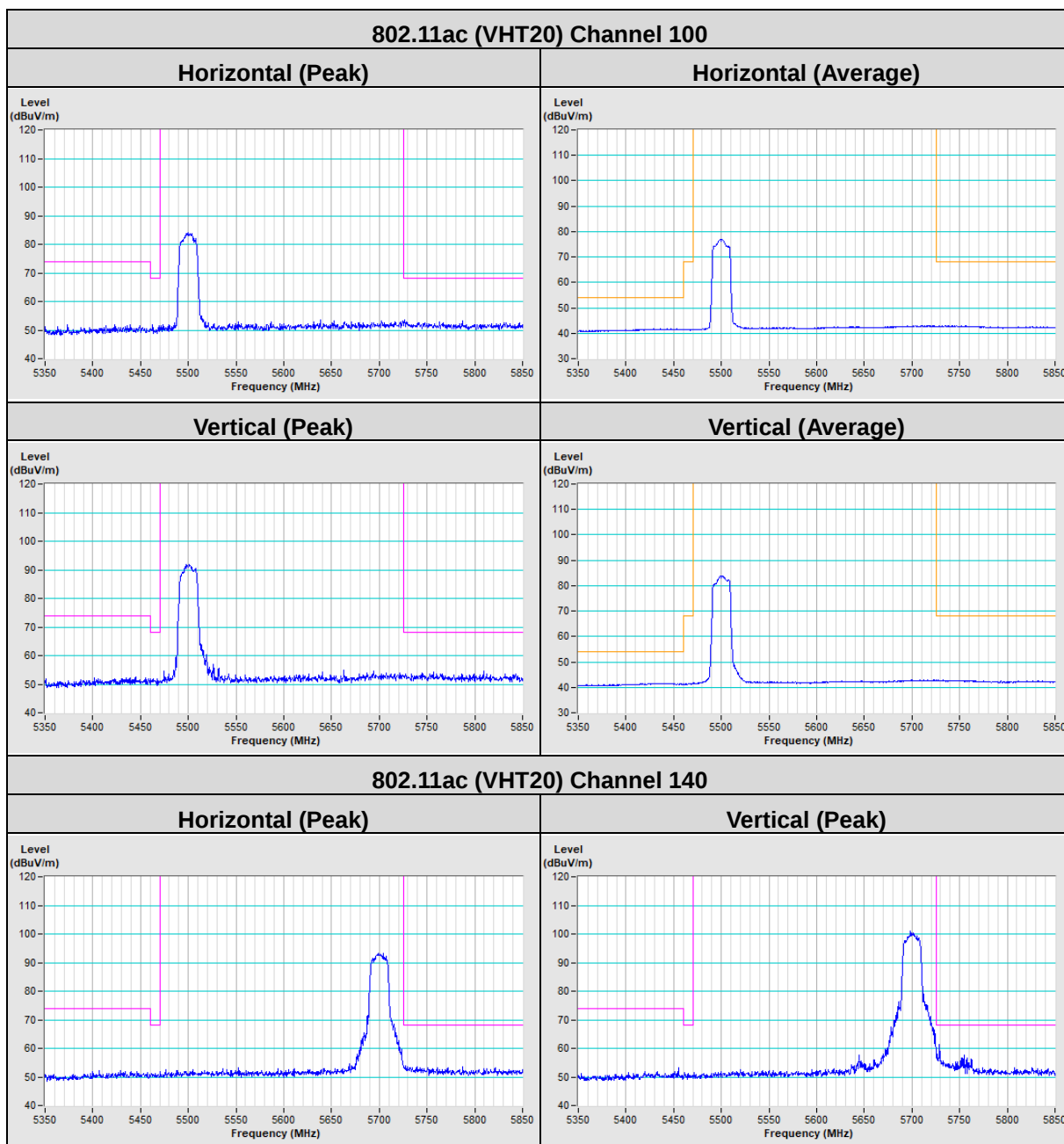
**Vertical (Peak)**

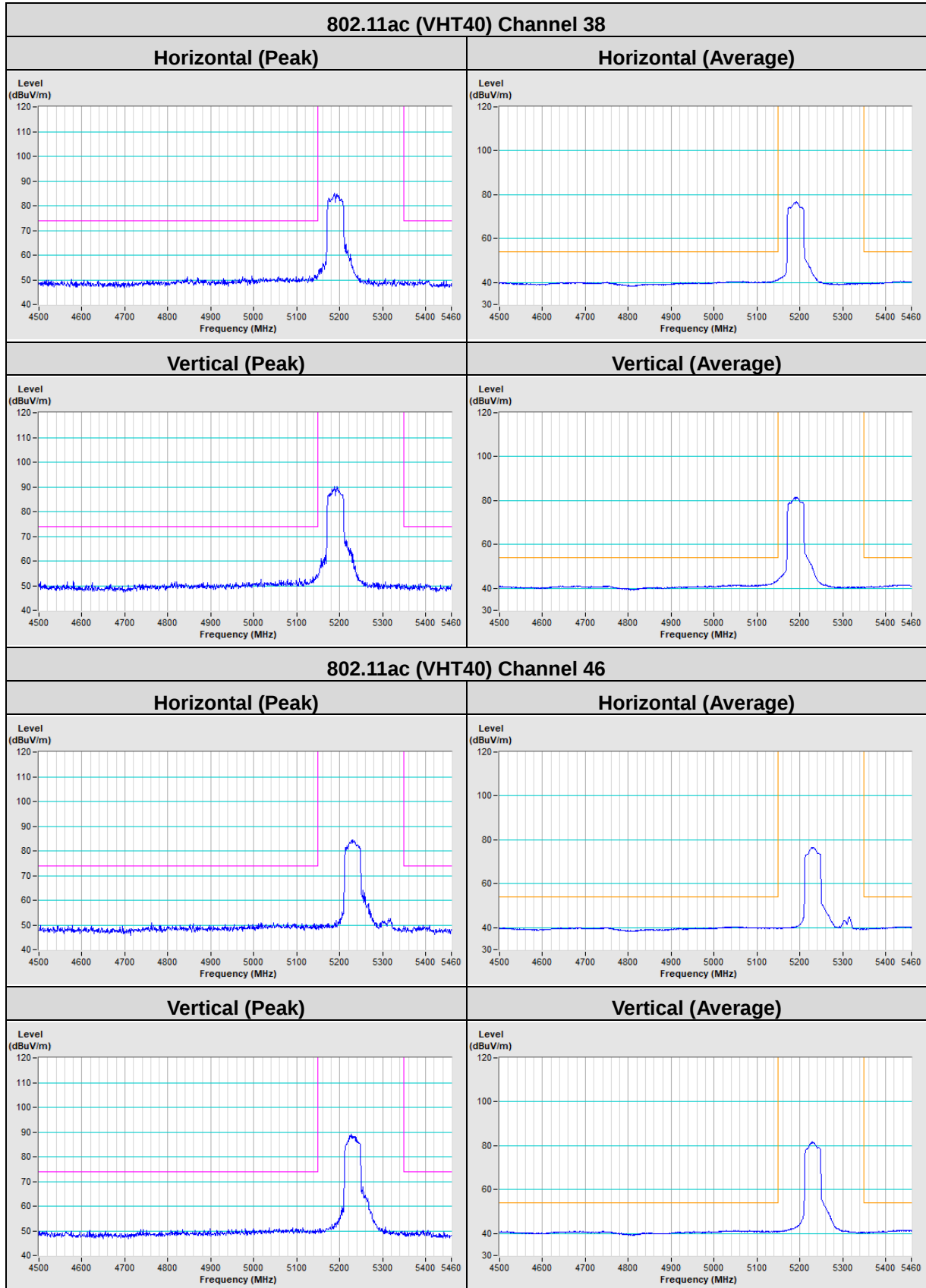


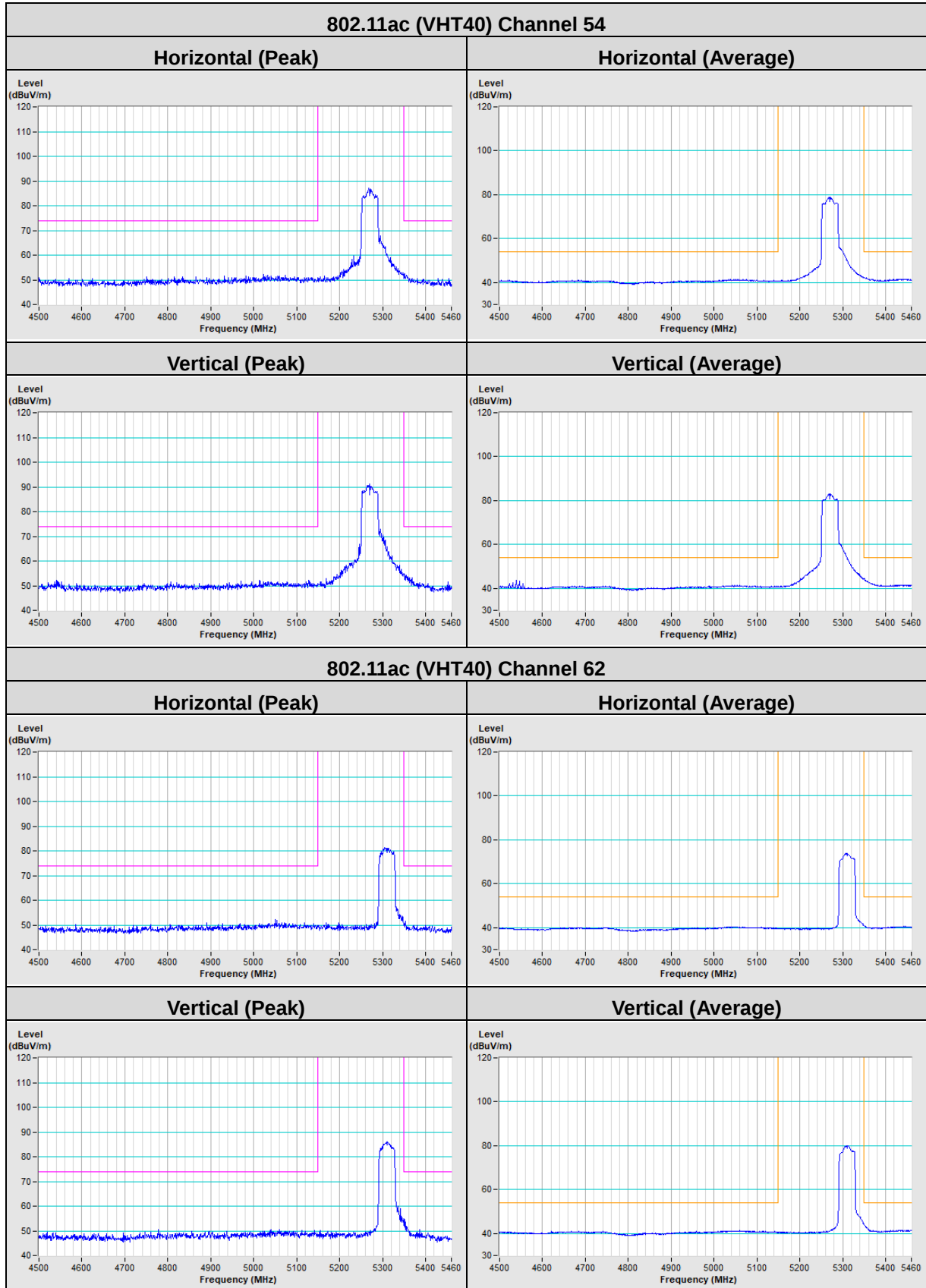
**Vertical (Average)**

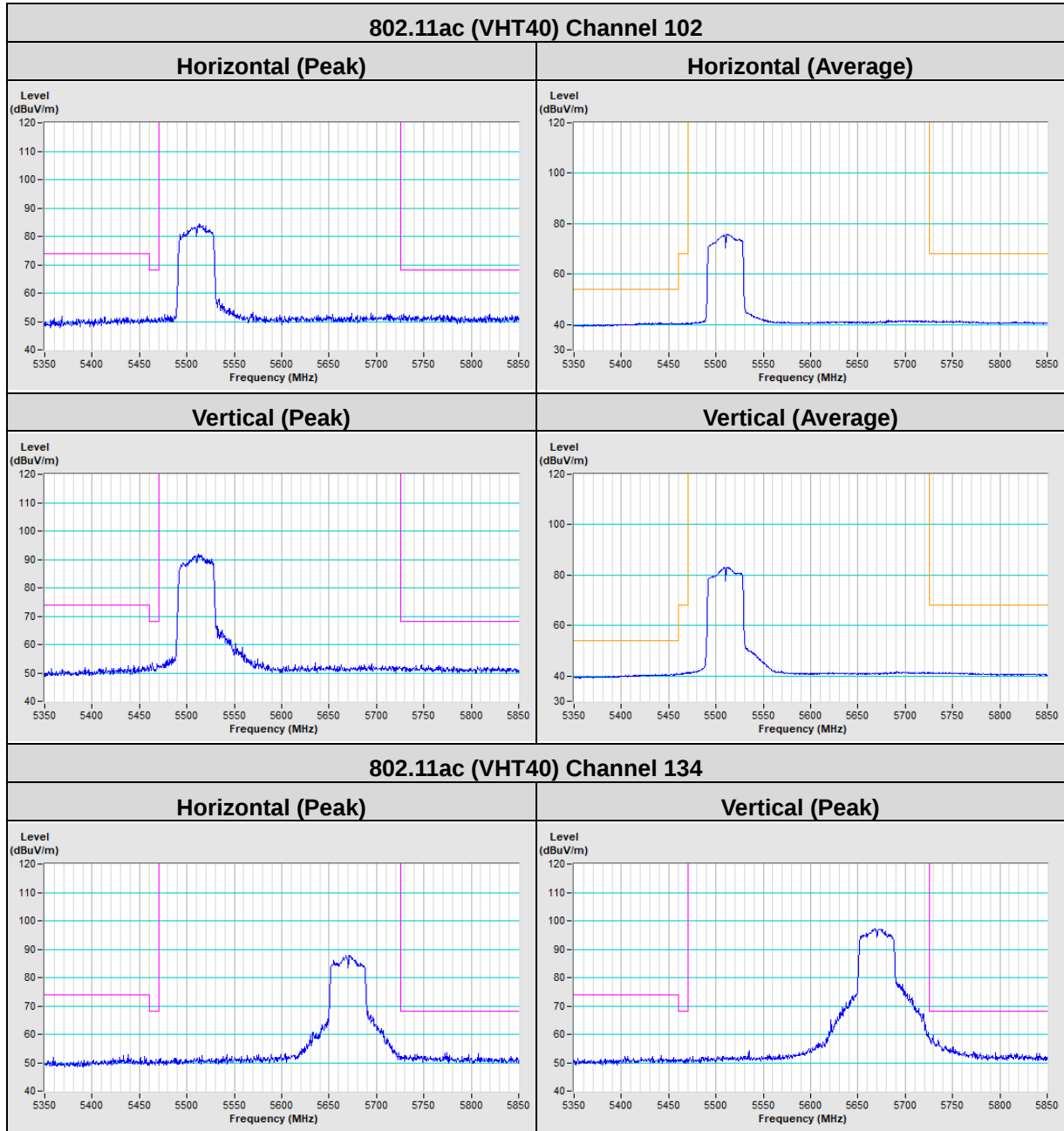


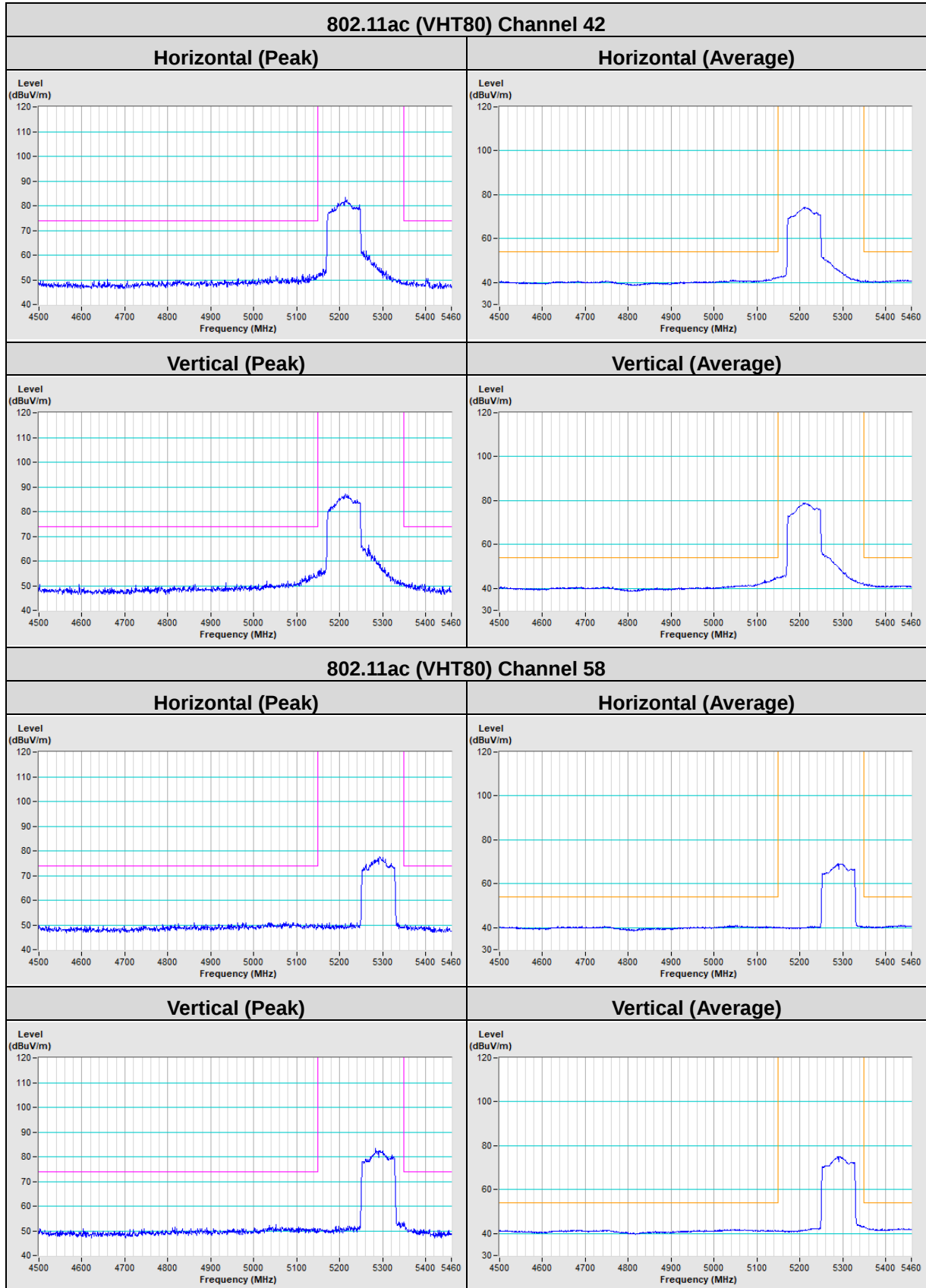


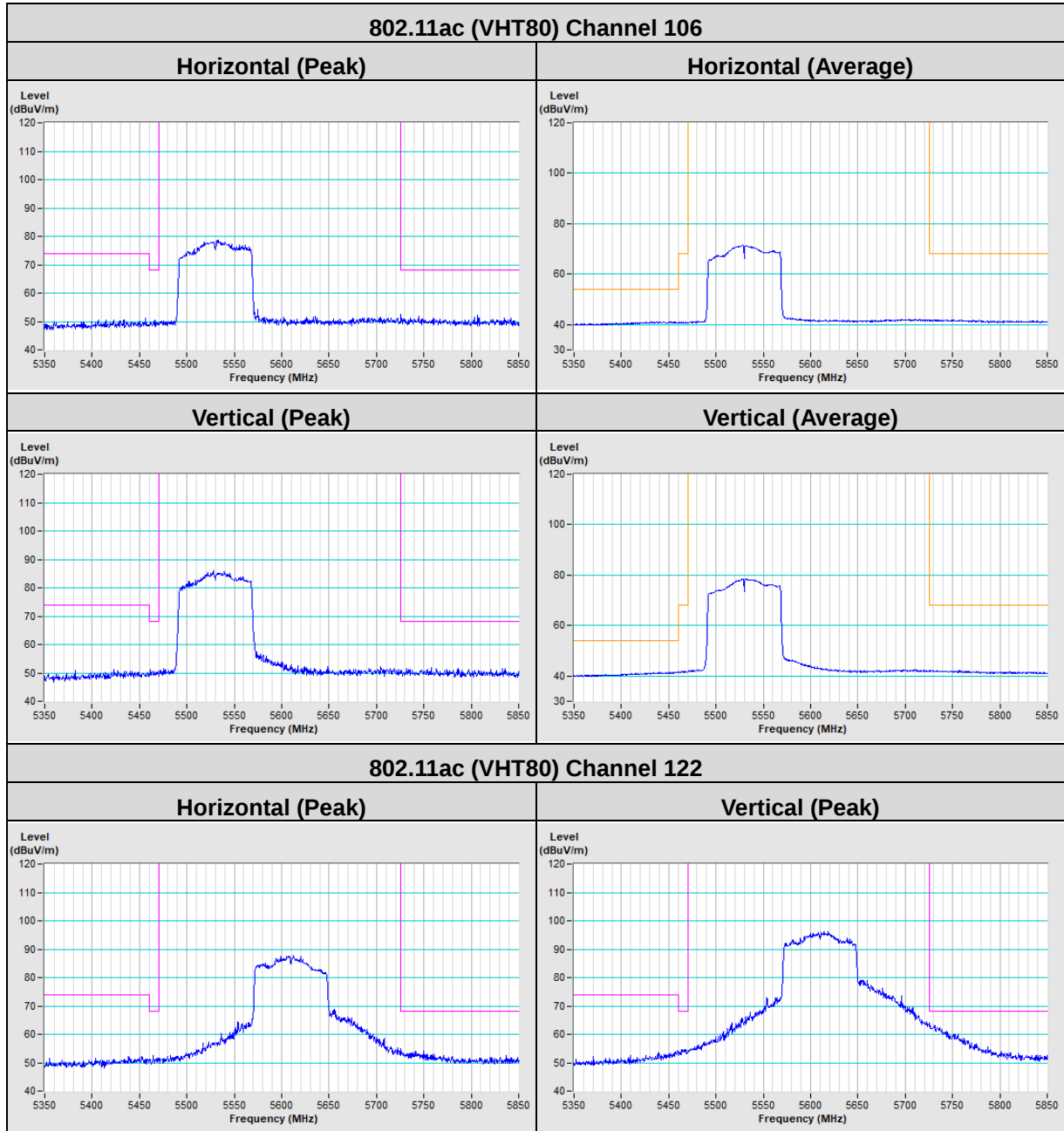












## Appendix – Information of the Testing Laboratories

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

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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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