

## FCC Test Report

### (Co-Located)

**Report No.:** RFBERD-WTW-P21100651A-4

**FCC ID:** COF-WMBACBM25

**Test Model:** WM-BAC-BM-25-FF3

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

**Received Date:** 2023/4/14

**Test Date:** 2023/5/10 ~ 2023/5/11

**Issued Date:** 2023/6/16

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

**Address:** 141, Lane 351, Sec. 1, Taiping Road., Tsautuen, 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-P21100651A-4 | Original Release | 2023/6/16   |

## 1 Certificate of Conformity

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

**Brand:** USI

**Test Model:** WM-BAC-BM-25-FF3

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

**Sample Status:** Engineering Sample

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

**Test Date:** 2023/5/10 ~ 2023/5/11

**Standards:** 47 CFR FCC Part 15, Subpart C (Section 15.247)  
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:** 2023/6/16  
Gina Liu / Specialist

**Approved by :** Jeremy Lin, **Date:** 2023/6/16  
Jeremy Lin / Project Engineer

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (Section 15.247)<br>47 CFR FCC Part 15, Subpart E (Section 15.407)<br>ANSI C63.10:2013 |                                              |        |                                                                                      |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------|--------------------------------------------------------------------------------------|
| FCC Clause                                                                                                           | Test Item                                    | Result | Remarks                                                                              |
| 15.205 /<br>15.209 /<br>15.247(d)<br>15.407(b)<br>(1/2/3/4(i/ii)/8)                                                  | Radiated Emissions and Band Edge Measurement | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -4.2 dB at 11590.00 MHz. |

### Note:

- 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-FF3                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Series Model</b>        | WM-BAC-BM-25, 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>     | WLAN                             | CCK, DQPSK, DBPSK for DSSS<br>256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                            | BT EDR                           | GFSK, $\pi/4$ -DQPSK, 8DPSK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                            | BT LE                            | GFSK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Operating Frequency</b> | WLAN                             | 2412 ~ 2462 MHz<br>5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 MHz,<br>5745 ~ 5825 MHz                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                            | BT EDR                           | 2402 ~ 2480 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                            | BT LE                            | 2402 ~ 2480 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Number of Channel</b>   | WLAN                             | 2.4G<br>11 for 802.11b, 802.11g, 802.11n (HT20)<br>7 for 802.11n (HT40)<br>5G<br>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>11 for 802.11a, 802.11n (HT20), 802.11ac (VHT20)<br>5 for 802.11n (HT40), 802.11ac (VHT40)<br>2 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) |
|                            | BT EDR                           | 79                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                            | BT LE                            | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <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. RF190103E03-5 and RFBERD-WTW-P21100651-4. The difference compared with original report is listed as below, only test item of Radiated Emissions and Maximum Peak Output Power were performed for this report.
  - Added one Model Name: WM-BAC-BM-25-FF3
  - Change Ant. Matching , power reduce

2. The EUT incorporates a SISO function. Physically, the EUT provide one completed transmitter and one receiver.

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

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 |                                                                                         |
|       | WM-BAC-BM-25-FF3 |                                                                                         |

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             |                      |                |

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

7. 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

#### WLAN 2.4GHz:

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 1       | 2412            | 7       | 2442            |
| 2       | 2417            | 8       | 2447            |
| 3       | 2422            | 9       | 2452            |
| 4       | 2427            | 10      | 2457            |
| 5       | 2432            | 11      | 2462            |
| 6       | 2437            |         |                 |

7 channels are provided for 802.11n (HT40):

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 3       | 2422            | 7       | 2442            |
| 4       | 2427            | 8       | 2447            |
| 5       | 2432            | 9       | 2452            |
| 6       | 2437            |         |                 |

# WLAN 5GHz:

## 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            |

## For 5500 ~ 5700 MHz

11 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            |         |                 |

5 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            |         |                 |

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

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

### 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            |

### BT EDR:

79 channels are provided to this EUT:

| Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 0       | 2402        | 20      | 2422        | 40      | 2442        | 60      | 2462        |
| 1       | 2403        | 21      | 2423        | 41      | 2443        | 61      | 2463        |
| 2       | 2404        | 22      | 2424        | 42      | 2444        | 62      | 2464        |
| 3       | 2405        | 23      | 2425        | 43      | 2445        | 63      | 2465        |
| 4       | 2406        | 24      | 2426        | 44      | 2446        | 64      | 2466        |
| 5       | 2407        | 25      | 2427        | 45      | 2447        | 65      | 2467        |
| 6       | 2408        | 26      | 2428        | 46      | 2448        | 66      | 2468        |
| 7       | 2409        | 27      | 2429        | 47      | 2449        | 67      | 2469        |
| 8       | 2410        | 28      | 2430        | 48      | 2450        | 68      | 2470        |
| 9       | 2411        | 29      | 2431        | 49      | 2451        | 69      | 2471        |
| 10      | 2412        | 30      | 2432        | 50      | 2452        | 70      | 2472        |
| 11      | 2413        | 31      | 2433        | 51      | 2453        | 71      | 2473        |
| 12      | 2414        | 32      | 2434        | 52      | 2454        | 72      | 2474        |
| 13      | 2415        | 33      | 2435        | 53      | 2455        | 73      | 2475        |
| 14      | 2416        | 34      | 2436        | 54      | 2456        | 74      | 2476        |
| 15      | 2417        | 35      | 2437        | 55      | 2457        | 75      | 2477        |
| 16      | 2418        | 36      | 2438        | 56      | 2458        | 76      | 2478        |
| 17      | 2419        | 37      | 2439        | 57      | 2459        | 77      | 2479        |
| 18      | 2420        | 38      | 2440        | 58      | 2460        | 78      | 2480        |
| 19      | 2421        | 39      | 2441        | 59      | 2461        |         |             |

### 3.2.1 Test Mode Applicability and Tested Channel Detail

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

Where **RE $\geq$ 1G**: Radiated Emission above 1 GHz **RE<1G**: Radiated Emission below 1 GHz

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.

#### **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 | Mode                      | Freq. Range (MHz) | Available Channel | Tested Channel | Modulation Technology |
|--------------------|---------------------------|-------------------|-------------------|----------------|-----------------------|
| -                  | 802.11g + BT EDR          | 2412 ~ 2462       | 1 to 11           | 6              | OFDM                  |
|                    |                           | 2402 ~ 2480       | 0 to 78           | 78             | FHSS                  |
| -                  | 802.11ac (VHT40) + BT EDR | 5745 ~ 5825       | 151 to 159        | 159            | OFDM                  |
|                    |                           | 2402 ~ 2480       | 0 to 78           | 78             | FHSS                  |

#### **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 | Mode                      | Freq. Range (MHz) | Available Channel | Tested Channel | Modulation Technology |
|--------------------|---------------------------|-------------------|-------------------|----------------|-----------------------|
| -                  | 802.11g + BT EDR          | 2412 ~ 2462       | 1 to 11           | 6              | OFDM                  |
|                    |                           | 2402 ~ 2480       | 0 to 78           | 78             | FHSS                  |
| -                  | 802.11ac (VHT40) + BT EDR | 5745 ~ 5825       | 151 to 159        | 159            | OFDM                  |
|                    |                           | 2402 ~ 2480       | 0 to 78           | 78             | FHSS                  |

#### **Test Condition:**

| Applicable To | Environmental Conditions | Input Power    | Tested by    |
|---------------|--------------------------|----------------|--------------|
| RE $\geq$ 1G  | 22.7 deg. C, 67.2 % RH   | 120 Vac, 60 Hz | Thomas Cheng |
| RE<1G         | 22.7 deg. C, 67.2 % RH   | 120 Vac, 60 Hz | Thomas Cheng |

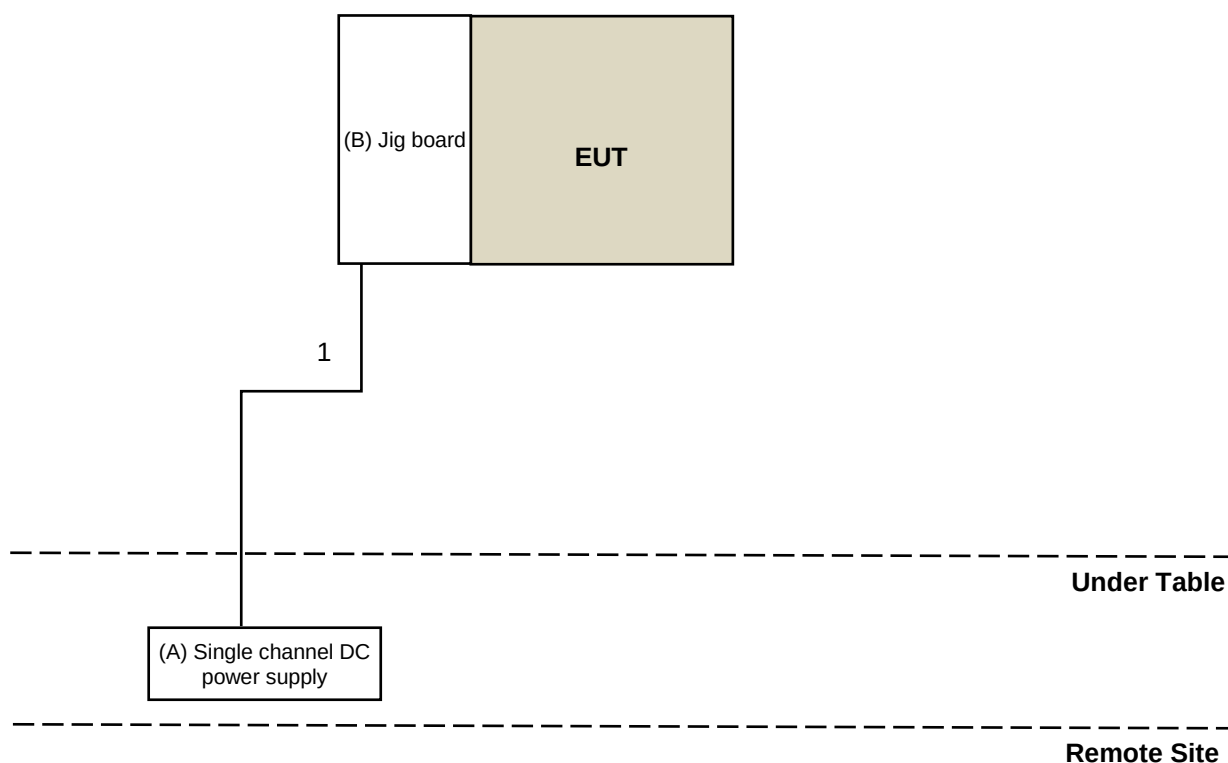
### 3.3 Description of Support Units

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 | JIN YIH Technology | SP3051    | SP30512113422 | N/A    |
| B.  | Jig board                      | N/A                | N/A       | N/A           | N/A    |

| ID | Cable Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks         |
|----|--------------------|------|------------|--------------------|--------------|-----------------|
| 1. | DC Cable           | 1    | 1.8        | N                  | 0            | Provided by Lab |

### 3.4 Configuration of System under Test



### 3.5 General Description of Applied Standards

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

**Test Standard:**

**FCC Part 15, Subpart C (Section 15.247)**

**FCC Part 15, Subpart E (Section 15.407)**

ANSI C63.10-2013

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

**References Test Guidance:**

**KDB 558074 D01 15.247 Meas Guidance v05r02**

**KDB 789033 D02 General UNII Test Procedure New Rules 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 Measurement

#### 4.1.1 Limits of Radiated Emission Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:  
Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

| Frequencies<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(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:

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

#### 4.1.2 Test Instruments

| Description & Manufacturer         | Model No.                | Serial No.                | Date of Calibration | Due Date of Calibration |
|------------------------------------|--------------------------|---------------------------|---------------------|-------------------------|
| Antenna Tower & Turn Max-Full      | MFA-440H                 | AT93021705                | N/A                 | N/A                     |
| Bi_Log Antenna Schwarzbeck         | VULB 9168                | 9168-472                  | 2022/10/21          | 2023/10/20              |
| EXA Signal Analyzer Agilent        | N9010A                   | MY52220207                | 2023/1/3            | 2024/1/2                |
| Loop Antenna Electro-Metrics       | EM-6879                  | 269                       | 2022/9/19           | 2023/9/18               |
| Loop Antenna TESEQ                 | HLA 6121                 | 45745                     | 2022/7/27           | 2023/7/26               |
| MXE EMI Receiver KEYSIGHT          | N9038A                   | MY55420137                | 2023/5/3            | 2024/5/2                |
| Preamplifier EMCI                  | EMC 330H                 | 980112                    | 2022/10/1           | 2023/9/30               |
|                                    | EMC001340                | 980201                    | 2022/9/23           | 2023/9/22               |
| RF Coaxial Cable EMCI              | 5D-NM-BM                 | 140903+140902             | 2023/1/7            | 2024/1/6                |
| RF Coaxial Cable WORKEN            | 8D-FB                    | Cable-Ch10-01             | 2022/10/1           | 2023/9/30               |
| Turn Table Max-Full                | MFT-201SS                | N/A                       | N/A                 | N/A                     |
| Turn Table Controller Max-Full     | MG-7802                  | N/A                       | N/A                 | N/A                     |
| Boresight antenna tower fixture BV | BAF-02                   | 7                         | N/A                 | N/A                     |
| Horn Antenna Schwarzbeck           | BBHA 9120D               | 9120D-969                 | 2022/11/13          | 2023/11/12              |
|                                    | BBHA 9170                | 148                       | 2022/11/13          | 2023/11/12              |
| Notch Filter MICRO-TRONICS         | BRM17690                 | 004                       | 2023/1/11           | 2024/1/10               |
|                                    | BRM50716                 | 060                       | 2023/1/11           | 2024/1/10               |
| Preamplifier EMCI                  | EMC 012645               | 980115                    | 2022/10/1           | 2023/9/30               |
|                                    | EMC 184045               | 980116                    | 2022/10/1           | 2023/9/30               |
| RF Coaxial Cable EMCI              | EMC102-KM-KM-600         | 150928                    | 2022/7/9            | 2023/7/8                |
|                                    | EMC102-KM-KM-3000        | 150929                    | 2022/7/9            | 2023/7/8                |
|                                    | EMC104-SM-SM-8000+3000   | 171005                    | 2022/10/1           | 2023/9/30               |
| RF Coaxial Cable HUBER SUHNER      | SUCOFLEX 104             | EMC104-SM-SM-1000(140807) | 2022/10/1           | 2023/9/30               |
| Software BV ADT                    | ADT_Radiated_V7.6.15.9.5 | N/A                       | N/A                 | N/A                     |

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 HY - 966 chamber 5.

#### 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:**

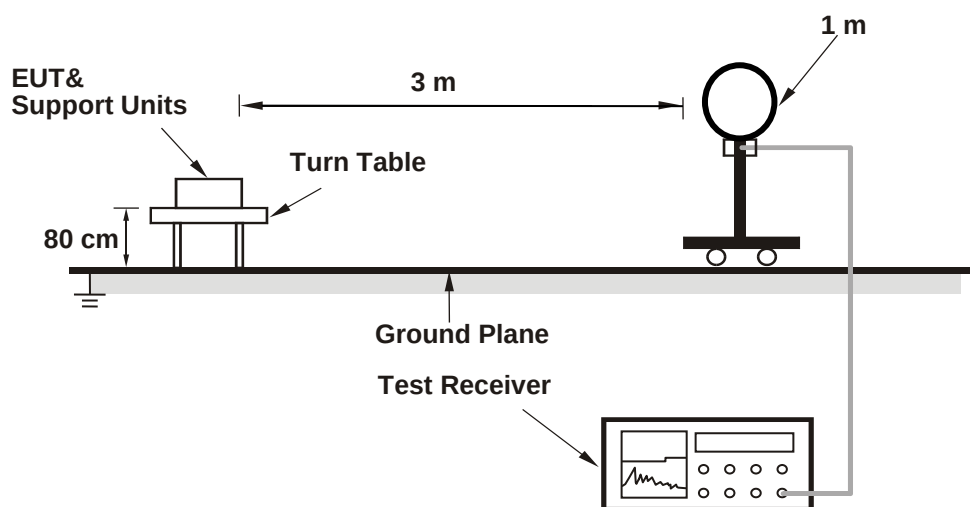
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK)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

#### 4.1.4 Deviation from Test Standard

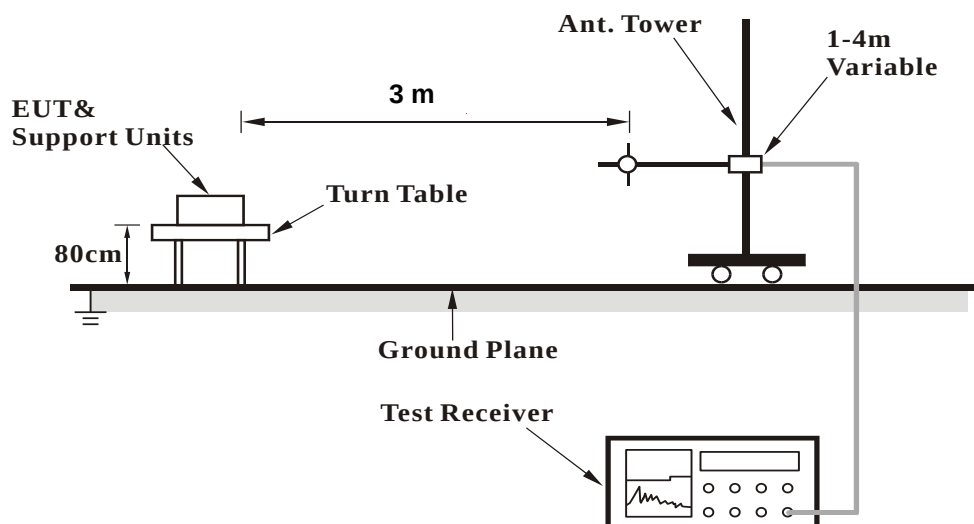
No deviation.

#### 4.1.5 Test Set Up

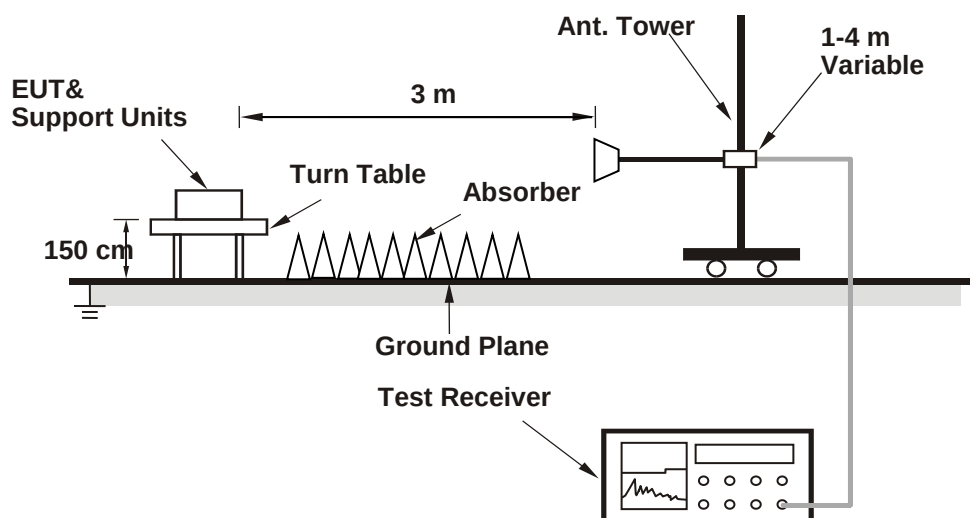
##### <Radiated Emission below 30 MHz>



##### <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 802.11g + TX BT_GFSK | <b>Channel</b>           | CH 6 : 2437 MHz +<br>CH 78 : 2480 MHz |
| <b>Frequency Range</b> | 1GHz ~ 25GHz            | <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                                                    | *2437.00        | 106.8 PK                |                |             | 1.26 H             | 96                   | 72.5             | 34.3                     |
| 2                                                    | *2437.00        | 99.5 AV                 |                |             | 1.26 H             | 96                   | 65.2             | 34.3                     |
| 3                                                    | *2480.00        | 95.6 PK                 |                |             | 1.31 H             | 345                  | 61.2             | 34.4                     |
| 4                                                    | *2480.00        | 65.1 AV                 |                |             | 1.31 H             | 345                  | 30.7             | 34.4                     |
| 5                                                    | 2483.50         | 53.7 PK                 | 74.0           | -20.3       | 1.31 H             | 345                  | 55.6             | -1.9                     |
| 6                                                    | 2483.50         | 23.2 AV                 | 54.0           | -30.8       | 1.31 H             | 345                  | 25.1             | -1.9                     |
| 7                                                    | 4874.00         | 49.8 PK                 | 74.0           | -24.2       | 3.70 H             | 88                   | 54.1             | -4.3                     |
| 8                                                    | 4874.00         | 39.9 AV                 | 54.0           | -14.1       | 3.70 H             | 88                   | 44.2             | -4.3                     |
| 9                                                    | 4960.00         | 53.9 PK                 | 74.0           | -20.1       | 2.66 H             | 115                  | 58.2             | -4.3                     |
| 10                                                   | 4960.00         | 23.4 AV                 | 54.0           | -30.6       | 2.66 H             | 115                  | 27.7             | -4.3                     |
| 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                                                    | *2437.00        | 113.8 PK                |                |             | 1.55 V             | 31                   | 79.5             | 34.3                     |
| 2                                                    | *2437.00        | 106.3 AV                |                |             | 1.55 V             | 31                   | 72.0             | 34.3                     |
| 3                                                    | *2480.00        | 103.8 PK                |                |             | 1.85 V             | 328                  | 69.4             | 34.4                     |
| 4                                                    | *2480.00        | 73.3 AV                 |                |             | 1.85 V             | 328                  | 38.9             | 34.4                     |
| 5                                                    | 2483.50         | 57.6 PK                 | 74.0           | -16.4       | 1.85 V             | 328                  | 59.5             | -1.9                     |
| 6                                                    | 2483.50         | 27.1 AV                 | 54.0           | -26.9       | 1.85 V             | 328                  | 29.0             | -1.9                     |
| 7                                                    | 4874.00         | 50.7 PK                 | 74.0           | -23.3       | 2.23 V             | 122                  | 55.0             | -4.3                     |
| 8                                                    | 4874.00         | 40.6 AV                 | 54.0           | -13.4       | 2.23 V             | 122                  | 44.9             | -4.3                     |
| 9                                                    | 4960.00         | 54.5 PK                 | 74.0           | -19.5       | 1.78 V             | 205                  | 58.8             | -4.3                     |
| 10                                                   | 4960.00         | 24.0 AV                 | 54.0           | -30.0       | 1.78 V             | 205                  | 28.3             | -4.3                     |

#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(3 \text{ ms} / 100 \text{ ms}) = -30.5 \text{ dB}$$

|                        |                                  |                          |                                      |
|------------------------|----------------------------------|--------------------------|--------------------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) + TX BT_GFSK | <b>Channel</b>           | CH 159 : 5795 MHz + CH 78 : 2480 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                                                    | *2480.00        | 95.5 PK                 |                |             | 1.33 H             | 344                  | 61.1             | 34.4                     |
| 2                                                    | *2480.00        | 65.0 AV                 |                |             | 1.33 H             | 344                  | 30.6             | 34.4                     |
| 3                                                    | 2483.50         | 54.1 PK                 | 74.0           | -19.9       | 1.33 H             | 344                  | 56.0             | -1.9                     |
| 4                                                    | 2483.50         | 23.6 AV                 | 54.0           | -30.4       | 1.33 H             | 344                  | 25.5             | -1.9                     |
| 5                                                    | 4960.00         | 53.8 PK                 | 74.0           | -20.2       | 2.50 H             | 192                  | 58.1             | -4.3                     |
| 6                                                    | 4960.00         | 23.3 AV                 | 54.0           | -30.7       | 1.50 H             | 276                  | 27.6             | -4.3                     |
| 7                                                    | *5795.00        | 104.0 PK                |                |             | 1.45 H             | 139                  | 61.5             | 42.5                     |
| 8                                                    | *5795.00        | 95.7 AV                 |                |             | 1.45 H             | 139                  | 53.2             | 42.5                     |
| 9                                                    | 11590.00        | 59.1 PK                 | 74.0           | -14.9       | 3.86 H             | 13                   | 44.0             | 15.1                     |
| 10                                                   | 11590.00        | 49.1 AV                 | 54.0           | -4.9        | 3.86 H             | 13                   | 34.0             | 15.1                     |
| 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                                                    | *2480.00        | 103.7 PK                |                |             | 1.85 V             | 330                  | 69.3             | 34.4                     |
| 2                                                    | *2480.00        | 73.2 AV                 |                |             | 1.85 V             | 330                  | 38.8             | 34.4                     |
| 3                                                    | 2483.50         | 58.0 PK                 | 74.0           | -16.0       | 1.85 V             | 330                  | 59.9             | -1.9                     |
| 4                                                    | 2483.50         | 27.5 AV                 | 54.0           | -26.5       | 1.85 V             | 330                  | 29.4             | -1.9                     |
| 5                                                    | 4960.00         | 54.4 PK                 | 74.0           | -19.6       | 1.84 V             | 167                  | 58.7             | -4.3                     |
| 6                                                    | 4960.00         | 23.9 AV                 | 54.0           | -30.1       | 1.84 V             | 167                  | 28.2             | -4.3                     |
| 7                                                    | *5795.00        | 110.7 PK                |                |             | 2.66 V             | 105                  | 68.2             | 42.5                     |
| 8                                                    | *5795.00        | 102.5 AV                |                |             | 2.66 V             | 105                  | 60.0             | 42.5                     |
| 9                                                    | 11590.00        | 60.1 PK                 | 74.0           | -13.9       | 3.30 V             | 152                  | 45.0             | 15.1                     |
| 10                                                   | 11590.00        | 49.8 AV                 | 54.0           | -4.2        | 3.30 V             | 152                  | 34.7             | 15.1                     |

**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 average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(3 \text{ ms} / 100 \text{ ms}) = -30.5 \text{ dB}$$

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

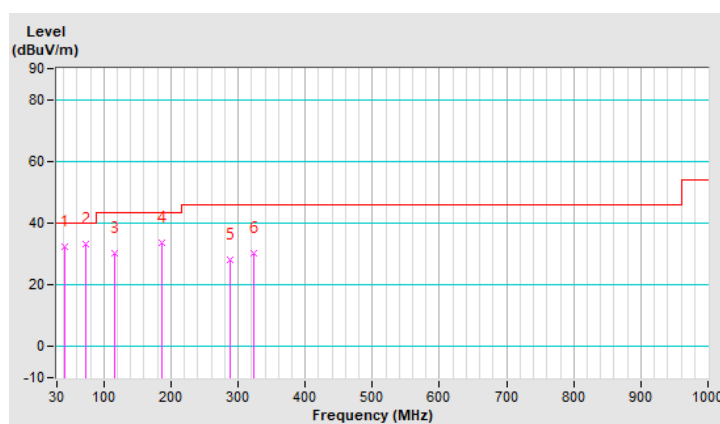
#### 802.11g + BT EDR

|                        |                         |                          |                                       |
|------------------------|-------------------------|--------------------------|---------------------------------------|
| <b>RF Mode</b>         | TX 802.11g + TX BT_GFSK | <b>Channel</b>           | CH 6 : 2437 MHz +<br>CH 78 : 2480 MHz |
| <b>Frequency Range</b> | 30MHz ~ 1GHz            | <b>Detector Function</b> | 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                                                    | 42.61           | 32.2 QP                 | 40.0           | -7.8        | 2.00 H             | 2                    | 44.5             | -12.3                    |
| 2                                                    | 72.68           | 33.1 QP                 | 40.0           | -6.9        | 2.00 H             | 210                  | 48.0             | -14.9                    |
| 3                                                    | 116.33          | 30.4 QP                 | 43.5           | -13.1       | 1.50 H             | 87                   | 45.0             | -14.6                    |
| 4                                                    | 187.14          | 33.5 QP                 | 43.5           | -10.0       | 1.50 H             | 106                  | 48.3             | -14.8                    |
| 5                                                    | 288.02          | 28.1 QP                 | 46.0           | -17.9       | 1.00 H             | 203                  | 40.2             | -12.1                    |
| 6                                                    | 322.94          | 30.3 QP                 | 46.0           | -15.7       | 1.50 H             | 203                  | 41.5             | -11.2                    |

#### Remarks:

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

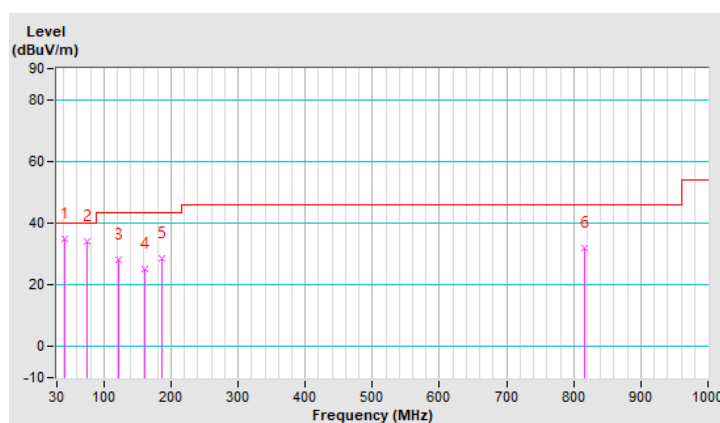


|                        |                         |                          |                                       |
|------------------------|-------------------------|--------------------------|---------------------------------------|
| <b>RF Mode</b>         | TX 802.11g + TX BT_GFSK | <b>Channel</b>           | CH 6 : 2437 MHz +<br>CH 78 : 2480 MHz |
| <b>Frequency Range</b> | 30MHz ~ 1GHz            | <b>Detector Function</b> | 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                                                  | 42.61           | 35.1 QP                 | 40.0           | -4.9        | 1.50 V             | 122                  | 47.4             | -12.3                    |
| 2                                                  | 74.62           | 34.2 QP                 | 40.0           | -5.8        | 1.50 V             | 58                   | 49.5             | -15.3                    |
| 3                                                  | 121.18          | 28.2 QP                 | 43.5           | -15.3       | 2.00 V             | 85                   | 42.3             | -14.1                    |
| 4                                                  | 160.95          | 25.0 QP                 | 43.5           | -18.5       | 1.00 V             | 8                    | 37.6             | -12.6                    |
| 5                                                  | 187.14          | 28.5 QP                 | 43.5           | -15.0       | 2.00 V             | 150                  | 43.3             | -14.8                    |
| 6                                                  | 815.70          | 31.8 QP                 | 46.0           | -14.2       | 1.50 V             | 337                  | 33.3             | -1.5                     |

**Remarks:**

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



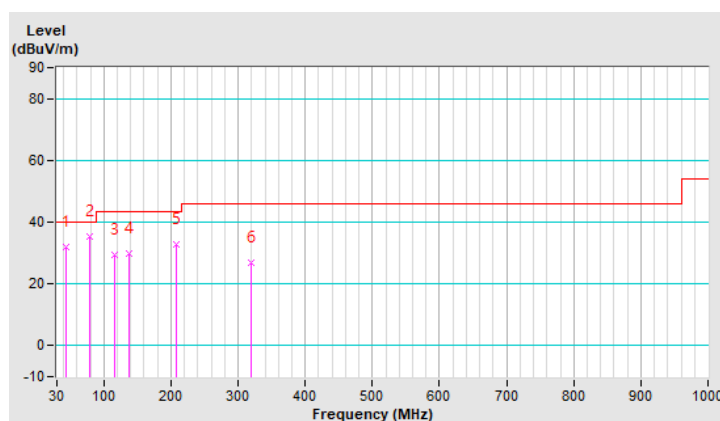
# 802.11ac (VHT40) + BT EDR

|                 |                                  |                   |                                      |
|-----------------|----------------------------------|-------------------|--------------------------------------|
| RF Mode         | TX 802.11ac (VHT40) + TX BT_GFSK | Channel           | CH 159 : 5795 MHz + CH 78 : 2480 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                                                    | 43.58           | 32.0 QP                 | 40.0           | -8.0        | 1.00 H             | 73                   | 44.4             | -12.4                    |
| 2                                                    | 78.50           | 35.5 QP                 | 40.0           | -4.5        | 2.50 H             | 233                  | 51.9             | -16.4                    |
| 3                                                    | 116.33          | 29.4 QP                 | 43.5           | -14.1       | 1.50 H             | 128                  | 44.0             | -14.6                    |
| 4                                                    | 137.67          | 29.7 QP                 | 43.5           | -13.8       | 1.50 H             | 111                  | 42.6             | -12.9                    |
| 5                                                    | 208.48          | 32.7 QP                 | 43.5           | -10.8       | 2.00 H             | 252                  | 48.4             | -15.7                    |
| 6                                                    | 319.06          | 27.0 QP                 | 46.0           | -19.0       | 1.00 H             | 253                  | 38.3             | -11.3                    |

## Remarks:

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

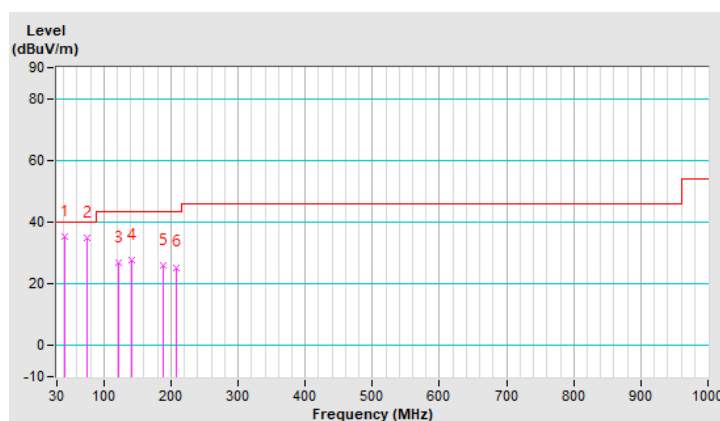


|                        |                                  |                          |                                      |
|------------------------|----------------------------------|--------------------------|--------------------------------------|
| <b>RF Mode</b>         | TX 802.11ac (VHT40) + TX BT_GFSK | <b>Channel</b>           | CH 159 : 5795 MHz + CH 78 : 2480 MHz |
| <b>Frequency Range</b> | 30MHz ~ 1GHz                     | <b>Detector Function</b> | 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                                                  | 42.61           | 35.4 QP                 | 40.0           | -4.6        | 1.01 V             | 2                    | 47.7             | -12.3                    |
| 2                                                  | 74.62           | 35.1 QP                 | 40.0           | -4.9        | 1.01 V             | 310                  | 50.4             | -15.3                    |
| 3                                                  | 122.15          | 27.0 QP                 | 43.5           | -16.5       | 1.01 V             | 90                   | 41.1             | -14.1                    |
| 4                                                  | 141.55          | 27.7 QP                 | 43.5           | -15.8       | 2.00 V             | 358                  | 40.3             | -12.6                    |
| 5                                                  | 189.08          | 25.9 QP                 | 43.5           | -17.6       | 2.00 V             | 138                  | 41.0             | -15.1                    |
| 6                                                  | 208.48          | 25.4 QP                 | 43.5           | -18.1       | 2.00 V             | 188                  | 41.1             | -15.7                    |

**Remarks:**

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



## 5 Pictures of Test Arrangements

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

## Appendix – Information of the Testing Laboratories

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

If you have any comments, please feel free to contact us at the following:

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

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