

## FCC Test Report

**Report No.:** RF191122C08B-3 R1

**FCC ID:** UJH-R1LOW

**Test Model:** R1LOW (refer to item 3.1 for more details)

**Received Date:** Feb. 15, 2020

**Test Date:** Feb. 25, 2020

**Issued Date:** Apr. 01, 2020

**Applicant:** Mitsubishi Electric Corporation Sanda Works

**Address:** 2-3-33 Miwa, Sanda-City, Hyogo 669-1513, Japan

**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 /** 788550 / TW0003  
**Designation Number:**



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### Release Control Record

| Issue No.         | Description                              | Date Issued   |
|-------------------|------------------------------------------|---------------|
| RF191122C08B-3    | Original release                         | Feb. 27, 2020 |
| RF191122C08B-3 R1 | Revised brand and antenna connector type | Apr. 01, 2020 |

## 1 Certificate of Conformity

**Product:** Display Audio

**Brand:** Mitsubishi Electric

**Test Model:** R1LOW (refer to item 3.1 for more details)

**Sample Status:** DV

**Applicant:** Mitsubishi Electric Corporation Sanda Works

**Test Date:** Feb. 25, 2020

**Standards:** 47 CFR FCC Part 15, Subpart C (Section 15.247)  
ANSI C63.10:2013

This report is issued as a supplementary report of RF191122C08-3 R1. This report shall be used combined together with its original report.

**Prepared by :** Pettie Chen, **Date:** Apr. 01, 2020  
Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen, **Date:** Apr. 01, 2020  
Bruce Chen / Senior Project Engineer

Note: Radiated Emissions test (Frequency range 30MHz~1GHz) is performed for the addendum. Refer to original report for the other test data.

## 2 Summary of Test Results

### 47 CFR FCC Part 15, Subpart C (Section 15.247)

| FCC Clause                        | Test Item                                    | Result | Remarks                                                                         |
|-----------------------------------|----------------------------------------------|--------|---------------------------------------------------------------------------------|
| 15.205 /<br>15.209 /<br>15.247(d) | Radiated Emissions and Band Edge Measurement | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -5.8dB at 30.00MHz. |

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 | 9kHz ~ 30MHz    | 3.04 dB                              |
|                                | 30MHz ~ 200MHz  | 3.59 dB                              |
|                                | 200MHz ~1000MHz | 3.60 dB                              |

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

|                     |                                             |
|---------------------|---------------------------------------------|
| Product             | Display Audio                               |
| Brand               | Mitsubishi Electric                         |
| Test Model          | R1LOW (refer to note for more details)      |
| Sample Status       | DV                                          |
| Power Supply Rating | 12Vdc                                       |
| Modulation Type     | GFSK                                        |
| Transfer Rate       | 1Mbps/2Mbps                                 |
| Operating Frequency | 2402~2480MHz                                |
| Number of Channel   | 40                                          |
| Channel Spacing     | 2MHz                                        |
| Output Power        | 1Mbps: 2.559mW<br>2Mbps: 2.553mW            |
| Antenna Type        | Refer to note                               |
| Antenna Connector   | Refer to note                               |
| Accessory Device    | 2m non-shielded DC power cable without core |
| Cable Supplied      | 0.5m shielded USB cable with 2 cores        |

Note:

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report of BVCPS report no.: RF191122C08-3 R1. Difference compared with the original report is adding knob. Only Radiated Emissions test (Frequency range 30MHz~1GHz) was performed for this addendum.
2. The following models with different panel size are provided to this EUT. (No. 45 is new)

| Brand               | Model | Description                    |
|---------------------|-------|--------------------------------|
| Mitsubishi Electric | R1LOW | No.12 (7" ICS Panel)           |
|                     |       | <b>No. 45 (7" n-ICS Panel)</b> |
|                     |       | No.13 (8.4" ICS Panel)         |

3. There two modules are collocated in the EUT.

| Module No. | Function                              |
|------------|---------------------------------------|
| 1          | WLAN 2.4GHz, 5GHz, BT EDR, BT LE (1M) |
| 2          | BT LE (1M, 2M)                        |

4. The EUT uses following antennas.

|                 |                         |           |           |           |
|-----------------|-------------------------|-----------|-----------|-----------|
| Type            | Sheet metal antenna     |           |           |           |
| Connector       | RF Receptacle Connector |           |           |           |
| Model           | 2342059-1               |           | 2342059-2 |           |
| Frequency (MHz) | 2400-2500               | 5150-5850 | 2400-2500 | 5150-5850 |
| Gain (dBi)      | 3                       | 2         | 1         | 4         |

### 3.2 Description of Test Modes

40 channels are provided for EUT:

| Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---------|-------------|---------|-------------|---------|-------------|---------|-------------|
| 0       | 2402        | 10      | 2422        | 20      | 2442        | 30      | 2462        |
| 1       | 2404        | 11      | 2424        | 21      | 2444        | 31      | 2464        |
| 2       | 2406        | 12      | 2426        | 22      | 2446        | 32      | 2466        |
| 3       | 2408        | 13      | 2428        | 23      | 2448        | 33      | 2468        |
| 4       | 2410        | 14      | 2430        | 24      | 2450        | 34      | 2470        |
| 5       | 2412        | 15      | 2432        | 25      | 2452        | 35      | 2472        |
| 6       | 2414        | 16      | 2434        | 26      | 2454        | 36      | 2474        |
| 7       | 2416        | 17      | 2436        | 27      | 2456        | 37      | 2476        |
| 8       | 2418        | 18      | 2438        | 28      | 2458        | 38      | 2478        |
| 9       | 2420        | 19      | 2440        | 29      | 2460        | 39      | 2480        |

### 3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT Configure Mode | Applicable to | Description |          |
|--------------------|---------------|-------------|----------|
|                    | RE<1G         | EUT         | Module   |
| A                  | √             | EUT: No. 45 | Module 1 |
| B                  | √             |             | Module 2 |

Where RE $\geq$ 1G: Radiated Emission above 1GHz & Bandedge Measurement  
 RE<1G: Radiated Emission below 1GHz  
 PLC: Power Line Conducted Emission  
 APCM: Antenna Port Conducted Measurement

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

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

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

| EUT Configure Mode | Available Channel | Tested Channel | Modulation Technology | Data Rate (Mbps) | Remark |
|--------------------|-------------------|----------------|-----------------------|------------------|--------|
| A                  | 0 to 39           | 19             | GFSK                  | 1                | -      |
| B                  | 0 to 39           | 39             | GFSK                  | 1                | -      |

#### Test Condition:

| Applicable to | Environmental Conditions | Input Power (system) | Tested by |
|---------------|--------------------------|----------------------|-----------|
| RE<1G         | 22 deg. C, 66% RH        | 120Vac, 60Hz         | Han Wu    |

### 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.

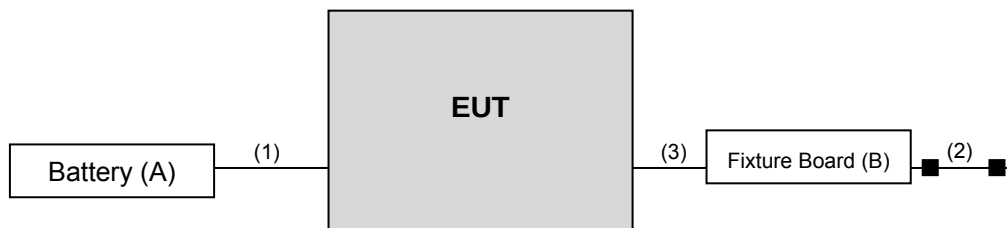
| ID | Product       | Brand | Model No.     | Serial No. | FCC ID | Remarks            |
|----|---------------|-------|---------------|------------|--------|--------------------|
| A. | Battery       | YUASA | 75D23R-CMF II | NA         | NA     | -                  |
| B. | Fixture Board | NA    | NA            | NA         | NA     | Provided by client |

Note:

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

| ID | Descriptions   | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks            |
|----|----------------|------|------------|--------------------|--------------|--------------------|
| 1. | DC power cable | 1    | 2          | N                  | 0            | Accessory          |
| 2. | USB cable      | 1    | 0.5        | Y                  | 2            | Accessory          |
| 3. | Harness cable  | 1    | 2          | N                  | 0            | Provided by client |

#### 3.3.1 Configuration of System under Test



### 3.4 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:

**Test Standard:**

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

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**

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. Other emissions shall be at least 20dB below the highest level of the desired power:

| 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 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

#### 4.1.2 Test Instruments

| Description & Manufacturer               | Model No.                              | Serial No.                                          | Date Of Calibration | Due Date Of Calibration |
|------------------------------------------|----------------------------------------|-----------------------------------------------------|---------------------|-------------------------|
| Test Receiver<br>KEYSIGHT                | N9038A                                 | MY55420137                                          | Apr. 15, 2019       | Apr. 14, 2020           |
| Spectrum Analyzer<br>ROHDE & SCHWARZ     | FSP40                                  | 100269                                              | Jun. 04, 2019       | Jun. 03, 2020           |
| BILOG Antenna<br>SCHWARZBECK             | VULB9168                               | 9168-160                                            | Nov. 07, 2019       | Nov. 06, 2020           |
| HORN Antenna<br>SCHWARZBECK              | BBHA 9120 D                            | 9120D-1169                                          | Nov. 24, 2019       | Nov. 23, 2020           |
| HORN Antenna<br>SCHWARZBECK              | BBHA 9170                              | BBHA9170241                                         | Nov. 24, 2019       | Nov. 23, 2020           |
| Preamplifier<br>Agilent<br>(Below 1GHz)  | 8447D                                  | 2944A10638                                          | Jul. 11, 2019       | Jul. 10, 2020           |
| Preamplifier<br>Agilent<br>(Above 1GHz)  | 8449B                                  | 3008A02367                                          | Feb. 18, 2020       | Feb. 17, 2021           |
| RF signal cable<br>HUBER+SUHNER&EMCI     | SUCOFLEX 104 &<br>EMC104-SM-SM80<br>00 | CABLE-CH9-02<br>(248780+171006)                     | Jan. 18, 2020       | Jan. 17, 2021           |
| RF signal cable<br>HUBER+SUHNER          | SUCOFLEX 104                           | CABLE-CH9-(25079<br>5/4)                            | Jul. 11, 2019       | Jul. 10, 2020           |
| RF signal cable<br>Woken                 | 8D-FB                                  | Cable-CH9-01                                        | Jul. 30, 2019       | Jul. 29, 2020           |
| Software<br>BV ADT                       | ADT_Radiated_<br>V7.6.15.9.5           | NA                                                  | NA                  | NA                      |
| Antenna Tower<br>EMCO                    | 2070/2080                              | 512.835.4684                                        | NA                  | NA                      |
| Turn Table<br>EMCO                       | 2087-2.03                              | NA                                                  | NA                  | NA                      |
| Antenna Tower & Turn<br>BV ADT           | AT100                                  | AT93021705                                          | NA                  | NA                      |
| Turn Table<br>BV ADT                     | TT100                                  | TT93021705                                          | NA                  | NA                      |
| Turn Table Controller<br>BV ADT          | SC100                                  | SC93021705                                          | NA                  | NA                      |
| Boresight Antenna Fixture                | FBA-01                                 | FBA-SIP01                                           | NA                  | NA                      |
| USB Wideband Power<br>Sensor<br>KEYSIGHT | U2021XA                                | MY55050005/MY55<br>190004/MY5519000<br>7/MY55210005 | Jul. 15, 2019       | Jul. 14, 2020           |

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 9.

#### 4.1.3 Test Procedures

##### For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

##### Note:

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

##### For Radiated emission above 30MHz

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

##### Note:

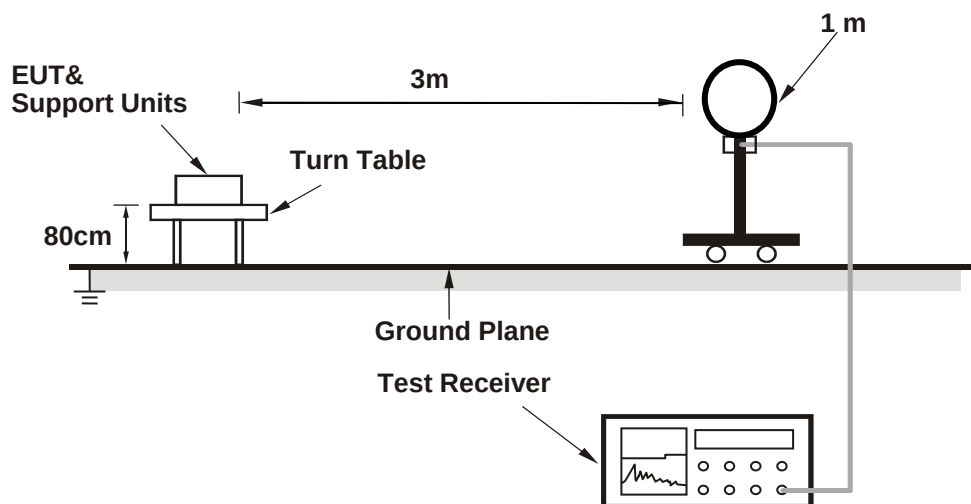
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz. (GFSK: 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

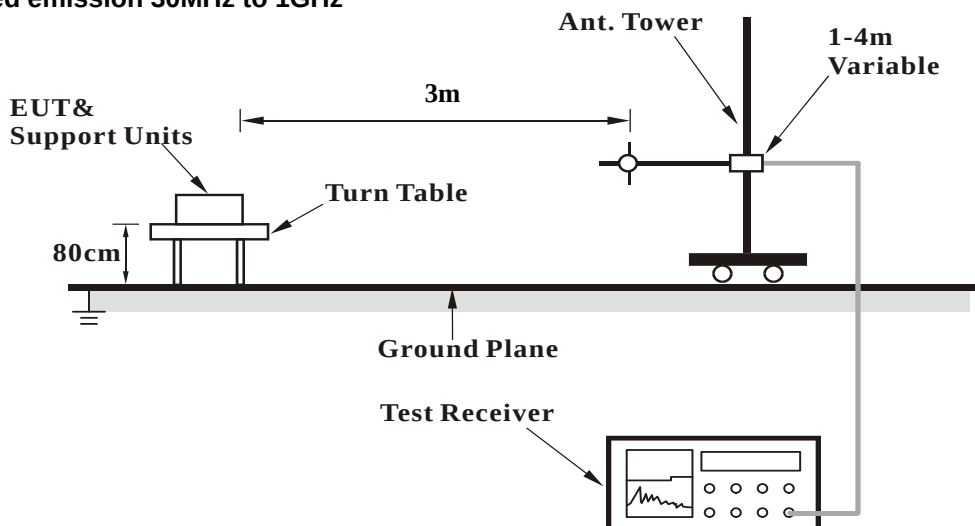
No deviation.

#### 4.1.5 Test Setup

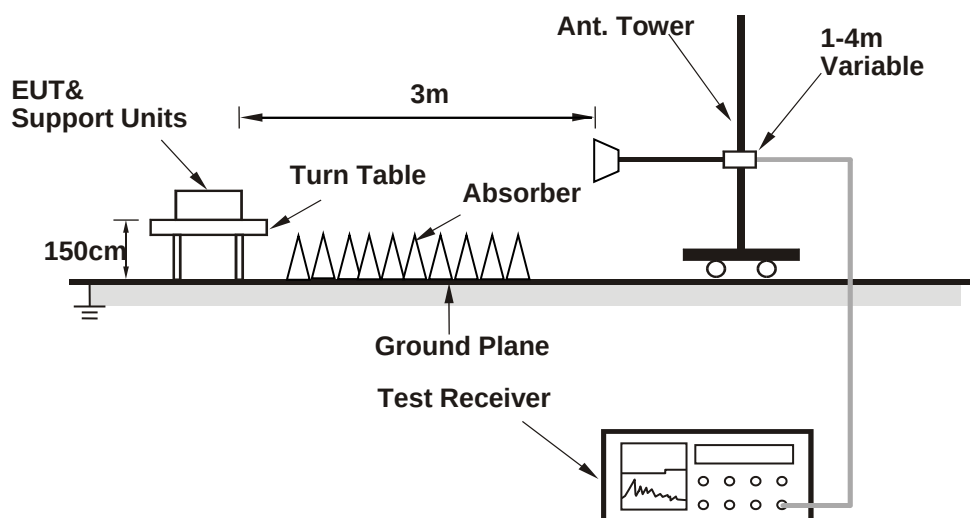
##### For Radiated emission below 30MHz



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



### For Radiated emission above 1GHz



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

#### 4.1.6 EUT Operating Conditions

- a. Set the EUT under transmission condition continuously at specific channel frequency.

#### 4.1.7 Test Results

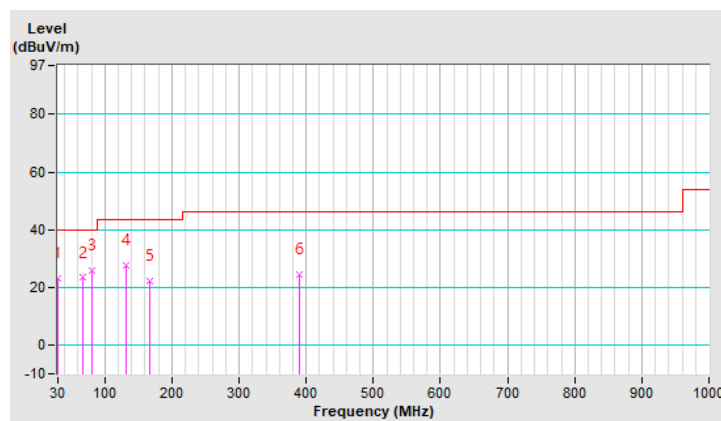
Below 1GHz worst-case data:

|                 |               |                   |                 |
|-----------------|---------------|-------------------|-----------------|
| FREQUENCY RANGE | 9kHz ~ 1GHz   | DETECTOR FUNCTION | Quasi-Peak (QP) |
| CHANNEL         | TX Channel 19 | TEST MODE         | A               |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 30.00       | 23.3 QP                 | 40.0           | -16.7       | 1.00 H             | 351                  | 34.6             | -11.3                    |
| 2                                                   | 66.86       | 23.3 QP                 | 40.0           | -16.7       | 1.00 H             | 98                   | 34.2             | -10.9                    |
| 3                                                   | 81.41       | 26.0 QP                 | 40.0           | -14.0       | 1.00 H             | 15                   | 40.2             | -14.2                    |
| 4                                                   | 131.85      | 27.6 QP                 | 43.5           | -15.9       | 1.00 H             | 249                  | 38.2             | -10.6                    |
| 5                                                   | 166.77      | 22.2 QP                 | 43.5           | -21.3       | 1.00 H             | 133                  | 31.5             | -9.3                     |
| 6                                                   | 388.90      | 24.5 QP                 | 46.0           | -21.5       | 1.00 H             | 92                   | 30.5             | -6.0                     |

Remarks:

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

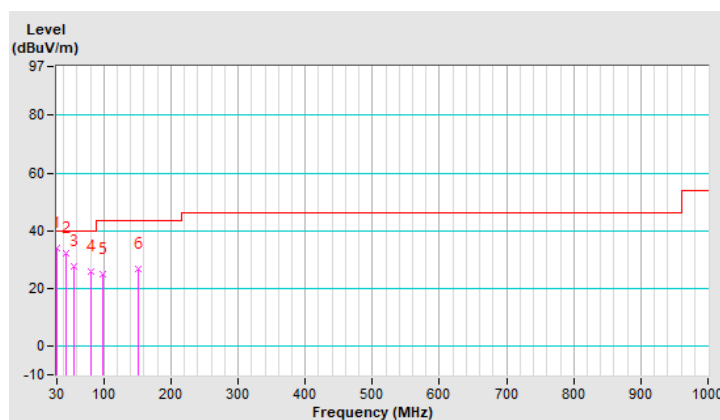


|                 |               |                   |                 |
|-----------------|---------------|-------------------|-----------------|
| FREQUENCY RANGE | 9kHz ~ 1GHz   | DETECTOR FUNCTION | Quasi-Peak (QP) |
| CHANNEL         | TX Channel 19 | TEST MODE         | A               |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|---------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                               | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                 | 30.00       | 34.2 QP                 | 40.0           | -5.8        | 1.00 V             | 19                   | 45.5             | -11.3                    |
| 2                                                 | 43.58       | 32.3 QP                 | 40.0           | -7.7        | 1.00 V             | 210                  | 42.4             | -10.1                    |
| 3                                                 | 56.19       | 27.5 QP                 | 40.0           | -12.5       | 1.00 V             | 148                  | 37.4             | -9.9                     |
| 4                                                 | 80.44       | 25.9 QP                 | 40.0           | -14.1       | 1.00 V             | 352                  | 39.8             | -13.9                    |
| 5                                                 | 97.90       | 24.8 QP                 | 43.5           | -18.7       | 1.00 V             | 300                  | 39.0             | -14.2                    |
| 6                                                 | 150.28      | 26.7 QP                 | 43.5           | -16.8       | 1.00 V             | 6                    | 35.9             | -9.2                     |

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. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

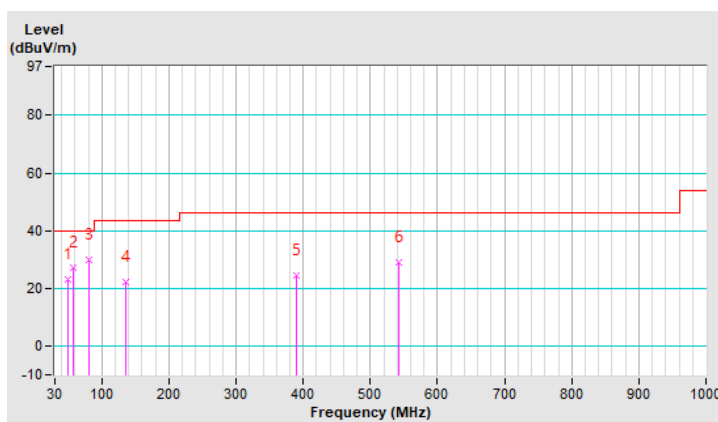


|                 |               |                   |                 |
|-----------------|---------------|-------------------|-----------------|
| FREQUENCY RANGE | 9kHz ~ 1GHz   | DETECTOR FUNCTION | Quasi-Peak (QP) |
| CHANNEL         | TX Channel 39 | TEST MODE         | B               |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 49.40       | 23.2 QP                 | 40.0           | -16.8       | 1.00 H             | 319                  | 32.9             | -9.7                     |
| 2                                                   | 58.13       | 27.0 QP                 | 40.0           | -13.0       | 1.00 H             | 56                   | 37.1             | -10.1                    |
| 3                                                   | 80.44       | 29.8 QP                 | 40.0           | -10.2       | 1.00 H             | 114                  | 43.7             | -13.9                    |
| 4                                                   | 135.73      | 22.2 QP                 | 43.5           | -21.3       | 1.00 H             | 115                  | 32.3             | -10.1                    |
| 5                                                   | 389.87      | 24.6 QP                 | 46.0           | -21.4       | 1.00 H             | 87                   | 30.6             | -6.0                     |
| 6                                                   | 543.13      | 28.8 QP                 | 46.0           | -17.2       | 1.00 H             | 228                  | 31.8             | -3.0                     |

Remarks:

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

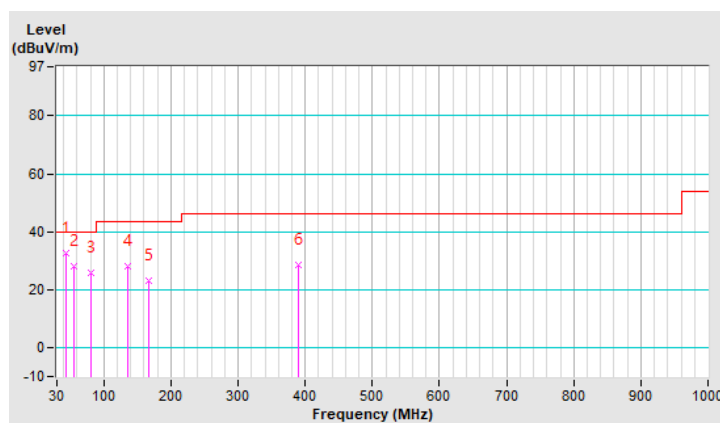


|                 |               |                   |                 |
|-----------------|---------------|-------------------|-----------------|
| FREQUENCY RANGE | 9kHz ~ 1GHz   | DETECTOR FUNCTION | Quasi-Peak (QP) |
| CHANNEL         | TX Channel 39 | TEST MODE         | B               |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|---------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                               | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                 | 44.55       | 32.5 QP                 | 40.0           | -7.5        | 1.00 V             | 187                  | 42.5             | -10.0                    |
| 2                                                 | 56.19       | 28.0 QP                 | 40.0           | -12.0       | 1.00 V             | 109                  | 37.9             | -9.9                     |
| 3                                                 | 80.44       | 25.9 QP                 | 40.0           | -14.1       | 1.00 V             | 184                  | 39.8             | -13.9                    |
| 4                                                 | 134.76      | 27.9 QP                 | 43.5           | -15.6       | 1.00 V             | 172                  | 38.2             | -10.3                    |
| 5                                                 | 166.77      | 23.2 QP                 | 43.5           | -20.3       | 1.00 V             | 311                  | 32.5             | -9.3                     |
| 6                                                 | 389.87      | 28.4 QP                 | 46.0           | -17.6       | 1.00 V             | 25                   | 34.4             | -6.0                     |

Remarks:

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