# FCC Test Report

| | |
|---|---|
| **Report No.:** | RF160815E08 |
| **FCC ID:** | SERRC03 |
| **Test Model:** | RR-BK02 |
| **Received Date:** | Aug. 16, 2016 |
| **Test Date:** | Aug. 24, 2016 |
| **Issued Date:** | Sep. 08, 2016 |
| **Applicant:** | Sintai Optical(Shenzhen) Co.,Ltd. |
| **Address:** | Qiwei Industrial Park, Li Song Lang Industrial Zone, Gongming Street, Guangming New District, Shenzhen, P.R. China |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory |
| **Lab Address:** | E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C. |
| **Test Location (1):** | E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C. |
| **Test Location (2):** | No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C. |

## Table of Contents

## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| RF160815E08 | Original release. | Sep. 08, 2016 |

## 1 Certificate of Conformity

| | |
|---|---|
| **Product:** | Remote Controller-B |
| **Brand:** | PIXPRO |
| **Test Model:** | RR-BK02 |
| **Sample Status:** | ENGINEERING SAMPLE |
| **Applicant:** | Sintai Optical(Shenzhen) Co.,Ltd. |
| **Test Date:** | Aug. 24, 2016 |
| **Standards:** | 47 CFR FCC Part 15, Subpart C (Section 15.249)<br>ANSI C63.10: 2013 |

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

**Prepared by :** _____ , **Date:** Sep. 08, 2016
Midoli Peng / Specialist

**Approved by :** _____ , **Date:** Sep. 08, 2016
May Chen / Manager

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (SECTION 15.249) | | | |
|---|---|---|---|
| FCC Clause | Test Item | Result | Remarks |
| 15.207 | AC Power Conducted Emission | NA | Without AC power port of the EUT. |
| 15.209<br>15.249<br>15.249 (d) | Radiated Emission Test<br>Band Edge Measurement<br>Limit: 50dB less than the peak value of fundamental frequency or meet radiated emission limit in section 15.209 | PASS | Meet the requirement of limit.<br>Minimum passing margin is -0.1dB at 7441.74MHz. |

### 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 | Expended Uncertainty (k=2) (±) |
|---|---|---|
| Radiated Emissions up to 1 GHz | 30MHz ~ 1000MHz | 5.43 dB |
| Radiated Emissions above 1 GHz | 1GHz ~ 6GHz | 3.72 dB |
| | 6GHz ~ 18GHz | 4.00 dB |
| | 18GHz ~ 40GHz | 4.11 dB |

### 2.2 Modification Record

There were no modifications required for compliance.

## 3 General Information

### 3.1 General Description of EUT

| | |
|---|---|
| Product | Remote Controller-B |
| Brand | PIXPRO |
| Test Model | RR-BK02 |
| Status of EUT | ENGINEERING SAMPLE |
| Power Supply Rating | DC 3V from battery |
| Modulation Type | GFSK |
| Modulation Technology | LPRF |
| Transfer Rate | 1.2kbps |
| Operating Frequency | 2474.499695MHz~2480.581543MHz |
| Number of Channel | 16 |
| Antenna Type | Refer to Note |
| Antenna Connector | Refer to Note |
| Accessory Device | NA |
| Data Cable Supplied | NA |

Note:

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

| Brand | Model | Antenna Gain(dBi) | Frequency range (GHz ~ GHz) | Antenna Type | Connecter Type |
|---|---|---|---|---|---|
| WIESON | GY123B135-HD001 | 4.012 | 2.4~2.4835 | Dipole | R-SMA |

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

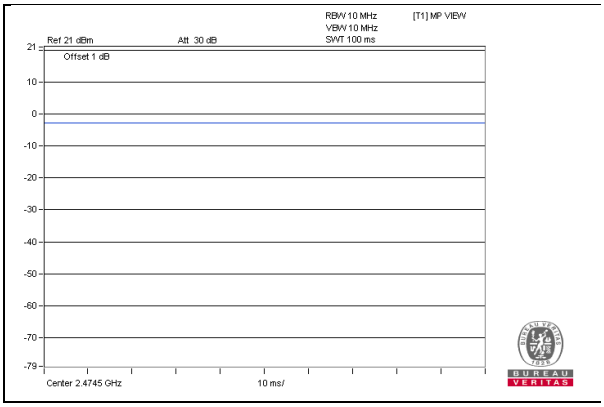
### 3.2 Description of Test Modes

16 channels are provided to EUT:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---|---|---|---|
| 0 | 2474.499695 | 8 | 2477.743347 |
| 1 | 2474.905151 | 9 | 2478.148803 |
| 2 | 2475.310608 | 10 | 2478.55426 |
| 3 | 2475.716064 | 11 | 2478.959716 |
| 4 | 2476.121521 | 12 | 2479.365173 |
| 5 | 2476.526977 | 13 | 2479.77063 |
| 6 | 2476.932434 | 14 | 2480.176086 |
| 7 | 2477.33789 | 15 | 2480.581543 |

### 3.3 Duty Cycle of Test Signal

Duty cycle of test signal is 100 %, duty factor is not required.



### 3.3.1 Test Mode Applicability and Tested Channel Detail

| EUT CONFIGURE MODE | APPLICABLE TO | | | DESCRIPTION |
|---|---|---|---|---|
| | RE≥1G | RE<1G | PLC | |
| - | √ | √ | - | - |

Where RE≥1G: Radiated Emission above 1GHz & Bandedge Measurement **RE<1G:** Radiated Emission below 1GHz

**PLC:** Power Line Conducted Emission

**NOTE:** 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane** (below 1GHz) & **Y-plane** (above 1GHz)

2. "-"means no effect.

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

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

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

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TYPE |
|---|---|---|
| 0 to 15 | 0, 7, 15 | GFSK |

**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.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TYPE |
|---|---|---|
| 0 to 15 | 15 | GFSK |

**Test Condition:**

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER (system) | TESTED BY |
|---|---|---|---|
| RE≥1G | 24deg. C, 68%RH | 120Vac, 60Hz | Andy Ho |
| RE<1G | 25deg. C, 72%RH | 120Vac, 60Hz | Andy Ho |

### 3.4 Description of Support Units

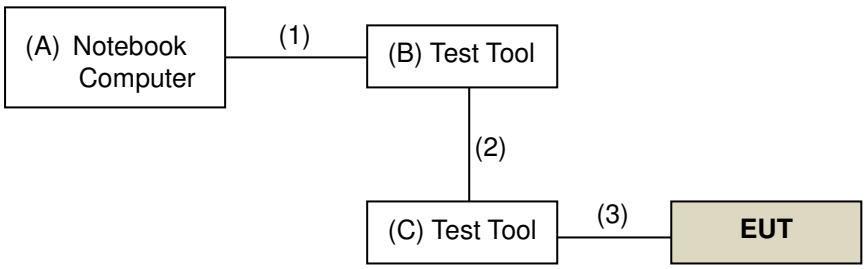
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| ID | Product | Brand | Model No. | Serial No. | FCC ID | Remarks |
|---|---|---|---|---|---|---|
| A. | Notebook Computer | DELL | E6440 | F9LYQ32 | FCC DoC | Provided by Lab |
| B. | Test Tool | TEXAS Instruments | CC Debugger | NA | NA | Supplied by client |
| C. | Test Tool | NA | NA | NA | NA | Supplied 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. | USB Cable | 1 | 0.8 | Yes | 0 | Supplied by client(for RF Setup) |
| 2. | Console Cable | 1 | 0.2 | No | 0 | Supplied by client(for RF Setup) |
| 3. | Console Cable | 1 | 0.1 | No | 0 | Supplied by client(for RF Setup) |

#### 3.4.1 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:

**FCC Part 15, Subpart C (15.249)**
ANSI C63.10-2013

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

## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following

| Fundamental Frequency | Field Strength of Fundamental (millivolts/meter) | Field Strength of Harmonics (microvolts/meter) |
|---|---|---|
| 902 ~ 928 MHz | 50 | 500 |
| 2400 ~ 2483.5 MHz | 50 | 500 |
| 5725 ~ 5875 MHz | 50 | 500 |
| 24 ~ 24.25 GHz | 250 | 2500 |

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits as below table, whichever is the lesser attenuation

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

**NOTE**:

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

4.1.2 Test Instruments

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|---|---|---|---|
| Test Receiver<br>Agilent | N9038A | MY51210202 | Dec. 16, 2015 | Dec. 15, 2016 |
| Pre-Amplifier(*)<br>EMCI | EMC001340 | 980142 | Jan. 20, 2016 | Jan. 19, 2018 |
| Loop Antenna(*)<br>Electro-Metrics | EM-6879 | 264 | Dec. 16, 2014 | Dec. 15, 2016 |
| RF Cable | NA | LOOPCAB-001<br>LOOPCAB-002 | Jan. 18, 2016 | Jan. 17, 2017 |
| Pre-Amplifier<br>Mini-Circuits | ZFL-1000VH2B | AMP-ZFL-04 | Nov. 11, 2015 | Nov. 10, 2016 |
| Trilog Broadband Antenna<br>SCHWARZBECK | VULB 9168 | 9168-361 | Jan. 07, 2016 | Jan. 06, 2017 |
| RF Cable | 8D-FB | CHHCAB-001-1<br>CHHCAB-001-2 | Oct. 04, 2015 | Oct. 03, 2016 |
| | RF-141 | CHHCAB-004 | Oct. 04, 2015 | Oct. 03, 2016 |
| Horn_Antenna<br>FT-RF | HA-07M18G-NF | 0000220091110 | Jan. 18, 2016 | Jan. 17, 2017 |
| Pre-Amplifier<br>Agilent | 8449B | 3008A01923 | Oct. 27, 2015 | Oct. 26, 2016 |
| RF Cable | NA | 131206<br>131213<br>131215<br>SNMY23685/4 | Jan. 15, 2016 | Jan. 14, 2017 |
| Spectrum Analyzer<br>Agilent | E4446A | MY48250254 | Nov. 25, 2015 | Nov. 24, 2016 |
| Pre-Amplifier<br>SPACEK LABS | SLKKa-48-6 | 9K16 | Dec. 11, 2015 | Dec. 10, 2016 |
| Horn_Antenna<br>SCHWARZBECK | BBHA 9170 | 9170-424 | Jan. 18, 2016 | Jan. 17, 2017 |
| RF Cable | SUCOFLEX 102 | 36442/2<br>36434/2 | Dec. 10, 2015 | Dec. 09, 2016 |
| Software | ADT_Radiated_V8.7.08 | NA | NA | NA |
| Antenna Tower & Turn Table<br>CT | CM100 | NA | NA | NA |
| Boresight Antenna Fixture | FBA-01 | FBA-WD02 | NA | NA |

**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 calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3 Loop antenna was used for all emissions below 30 MHz.
4. The test was performed in 966 Chamber No. H.
4. The FCC Site Registration No. is 797305.
5. The CANADA Site Registration No. is IC 7450H-3.
6. Tested Date: Aug. 24, 2016

4.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 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:**

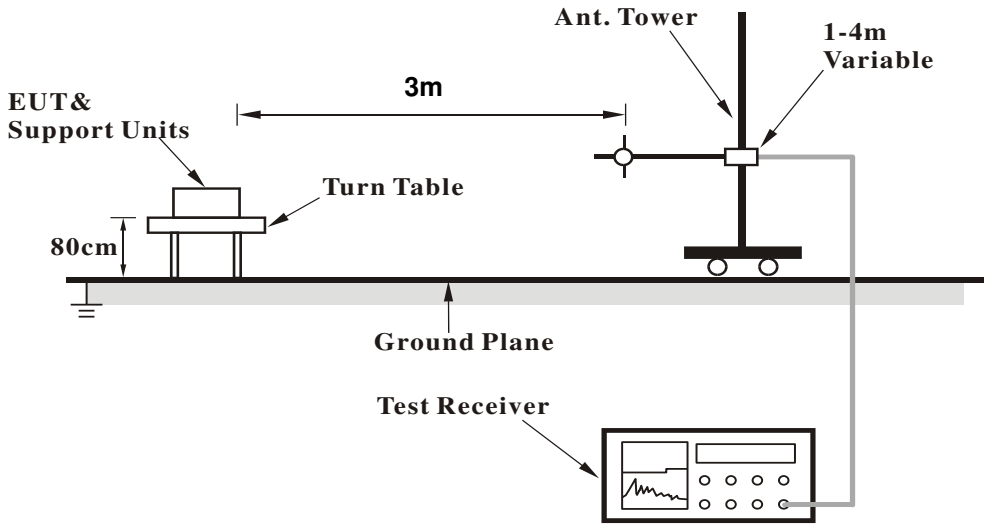
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

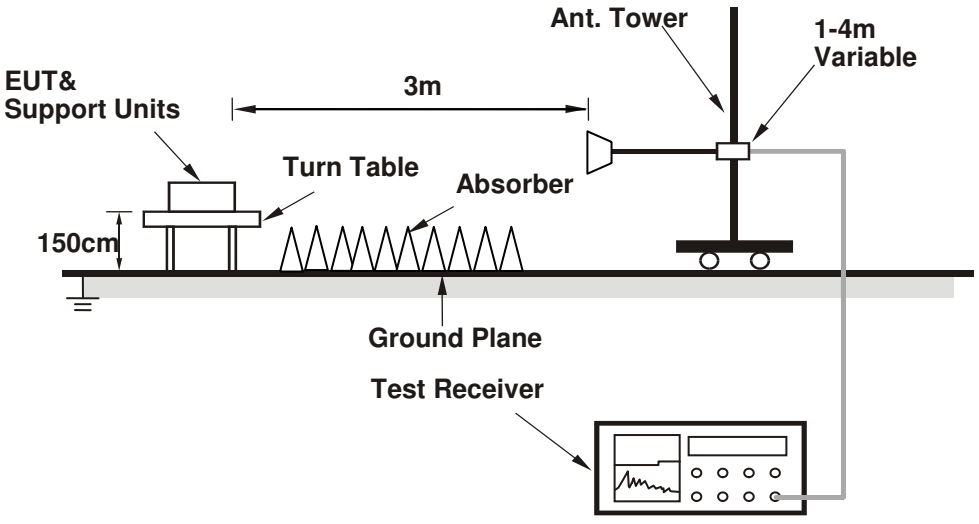
No deviation.

4.1.5 Test Set Up

**<Frequency Range below 1GHz>**




**<Frequency Range above 1GHz>**




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

4.1.6 EUT Operating Conditions

1. Placed the EUT on testing table.
2. Controlling software (SmartRF Flash Programmer.exe) has been activated to set the EUT under transmission/receiving condition continuously.

4.1.7 Test Results

**Above 1GHz Data：**

| CHANNEL | TX Channel 0 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

| 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 | 2400.00 | 49.8 PK | 74.0 | -24.2 | 1.76 H | 300 | 49.1 | 0.7 |
| 2 | 2400.00 | 37.6 AV | 54.0 | -16.4 | 1.76 H | 300 | 36.9 | 0.7 |
| 3 | *2474.50 | 90.7 PK | 114.0 | -23.3 | 1.76 H | 300 | 89.8 | 0.9 |
| 4 | *2474.50 | 84.0 AV | 94.0 | -10.0 | 1.76 H | 300 | 83.1 | 0.9 |
| 5 | 2483.50 | 51.5 PK | 74.0 | -22.5 | 1.76 H | 300 | 50.6 | 0.9 |
| 6 | 2483.50 | 38.7 AV | 54.0 | -15.3 | 1.76 H | 300 | 37.8 | 0.9 |
| 7 | 4949.00 | 54.7 PK | 74.0 | -19.3 | 1.22 H | 39 | 45.2 | 9.5 |
| 8 | 4949.00 | 45.7 AV | 54.0 | -8.3 | 1.22 H | 39 | 36.2 | 9.5 |
| 9 | 7423.50 | 59.4 PK | 74.0 | -14.6 | 1.08 H | 219 | 43.4 | 16.0 |
| 10 | 7423.50 | 53.2 AV | 54.0 | -0.8 | 1.08 H | 219 | 37.2 | 16.0 |
| 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 | 2400.00 | 50.5 PK | 74.0 | -23.5 | 1.40 V | 347 | 49.8 | 0.7 |
| 2 | 2400.00 | 39.1 AV | 54.0 | -14.9 | 1.40 V | 347 | 38.4 | 0.7 |
| 3 | *2474.50 | 96.3 PK | 114.0 | -17.7 | 1.40 V | 347 | 95.4 | 0.9 |
| 4 | *2474.50 | 93.7 AV | 94.0 | -0.3 | 1.40 V | 347 | 92.8 | 0.9 |
| 5 | 2483.50 | 52.7 PK | 74.0 | -21.3 | 1.40 V | 347 | 51.8 | 0.9 |
| 6 | 2483.50 | 40.4 AV | 54.0 | -13.6 | 1.40 V | 347 | 39.5 | 0.9 |
| 7 | 4949.00 | 55.3 PK | 74.0 | -18.7 | 1.48 V | 358 | 45.8 | 9.5 |
| 8 | 4949.00 | 45.8 AV | 54.0 | -8.2 | 1.48 V | 358 | 36.3 | 9.5 |
| 9 | 7423.50 | 60.0 PK | 74.0 | -14.0 | 1.41 V | 202 | 44.0 | 16.0 |
| 10 | 7423.50 | 53.6 AV | 54.0 | -0.4 | 1.41 V | 202 | 37.6 | 16.0 |

**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.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| CHANNEL | TX Channel 7 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

| 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 | *2477.34 | 91.4 PK | 114.0 | -22.6 | 1.77 H | 314 | 90.5 | 0.9 |
| 2 | *2477.34 | 84.7 AV | 94.0 | -9.3 | 1.77 H | 314 | 83.8 | 0.9 |
| 3 | 2483.50 | 51.6 PK | 74.0 | -22.4 | 1.77 H | 314 | 50.7 | 0.9 |
| 4 | 2483.50 | 38.7 AV | 54.0 | -15.3 | 1.77 H | 314 | 37.8 | 0.9 |
| 5 | 4954.68 | 54.2 PK | 74.0 | -19.8 | 1.25 H | 38 | 44.8 | 9.4 |
| 6 | 4954.68 | 45.2 AV | 54.0 | -8.8 | 1.25 H | 38 | 35.8 | 9.4 |
| 7 | 7432.02 | 59.7 PK | 74.0 | -14.3 | 1.11 H | 204 | 43.7 | 16.0 |
| 8 | 7432.02 | 53.4 AV | 54.0 | -0.6 | 1.11 H | 204 | 37.4 | 16.0 |
| 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 | *2477.34 | 94.9 PK | 114.0 | -19.1 | 1.50 V | 360 | 94.0 | 0.9 |
| 2 | *2477.34 | 93.2 AV | 94.0 | -0.8 | 1.50 V | 360 | 92.3 | 0.9 |
| 3 | 2483.50 | 53.7 PK | 74.0 | -20.3 | 1.50 V | 360 | 52.8 | 0.9 |
| 4 | 2483.50 | 41.2 AV | 54.0 | -12.8 | 1.50 V | 360 | 40.3 | 0.9 |
| 5 | 4954.68 | 54.6 PK | 74.0 | -19.4 | 1.51 V | 360 | 45.2 | 9.4 |
| 6 | 4954.68 | 45.3 AV | 54.0 | -8.7 | 1.51 V | 360 | 35.9 | 9.4 |
| 7 | 7432.02 | 60.4 PK | 74.0 | -13.6 | 1.50 V | 201 | 44.4 | 16.0 |
| 8 | 7432.02 | 53.8 AV | 54.0 | -0.2 | 1.50 V | 201 | 37.8 | 16.0 |

**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.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| CHANNEL | TX Channel 15 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

| 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 | *2480.58 | 91.5 PK | 114.0 | -22.5 | 1.76 H | 321 | 90.6 | 0.9 |
| 2 | *2480.58 | 84.6 AV | 94.0 | -9.4 | 1.76 H | 321 | 83.7 | 0.9 |
| 3 | 2483.50 | 51.4 PK | 74.0 | -22.6 | 1.76 H | 321 | 50.5 | 0.9 |
| 4 | 2483.50 | 38.3 AV | 54.0 | -15.7 | 1.76 H | 321 | 37.4 | 0.9 |
| 5 | 4961.16 | 54.4 PK | 74.0 | -19.6 | 1.26 H | 34 | 44.9 | 9.5 |
| 6 | 4961.16 | 45.3 AV | 54.0 | -8.7 | 1.26 H | 34 | 35.8 | 9.5 |
| 7 | 7441.74 | 59.6 PK | 74.0 | -14.4 | 1.08 H | 210 | 43.6 | 16.0 |
| 8 | 7441.74 | 53.3 AV | 54.0 | -0.7 | 1.08 H | 210 | 37.3 | 16.0 |
| **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 | *2480.58 | 96.8 PK | 114.0 | -17.2 | 1.40 V | 338 | 95.9 | 0.9 |
| 2 | *2480.58 | 93.4 AV | 94.0 | -0.6 | 1.40 V | 338 | 92.5 | 0.9 |
| 3 | 2483.50 | 58.0 PK | 74.0 | -16.0 | 1.40 V | 338 | 57.1 | 0.9 |
| 4 | 2483.50 | 47.4 AV | 54.0 | -6.6 | 1.40 V | 338 | 46.5 | 0.9 |
| 5 | 4961.16 | 54.3 PK | 74.0 | -19.7 | 1.46 V | 360 | 44.8 | 9.5 |
| 6 | 4961.16 | 45.0 AV | 54.0 | -9.0 | 1.46 V | 360 | 35.5 | 9.5 |
| 7 | 7441.74 | 60.5 PK | 74.0 | -13.5 | 1.42 V | 197 | 44.5 | 16.0 |
| **8** | **7441.74** | **53.9 AV** | **54.0** | **-0.1** | **1.42 V** | **197** | **37.9** | **16.0** |

**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.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

**Below 1GHz Data:**

| CHANNEL | TX Channel 15 | DETECTOR FUNCTION | Quasi-Peak (QP) |
|---|---|---|---|
| FREQUENCY RANGE | Below 1GHz | | |

| 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 | 103.99 | 27.0 QP | 43.5 | -16.5 | 2.50 H | 98 | 38.7 | -11.7 |
| 2 | 130.01 | 27.6 QP | 43.5 | -15.9 | 2.50 H | 94 | 36.9 | -9.3 |
| 3 | 156.00 | 36.3 QP | 43.5 | -7.2 | 1.50 H | 86 | 44.2 | -7.9 |
| 4 | 182.00 | 29.7 QP | 43.5 | -13.8 | 1.50 H | 69 | 39.3 | -9.6 |
| 5 | 390.02 | 29.7 QP | 46.0 | -16.3 | 1.00 H | 296 | 34.0 | -4.3 |
| 6 | 728.01 | 33.7 QP | 46.0 | -12.3 | 2.00 H | 319 | 31.0 | 2.7 |
| **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 | 65.02 | 25.2 QP | 40.0 | -14.8 | 1.50 V | 21 | 34.7 | -9.5 |
| 2 | 166.58 | 30.0 QP | 43.5 | -13.5 | 1.00 V | 207 | 38.2 | -8.2 |
| 3 | 219.68 | 30.7 QP | 46.0 | -15.3 | 1.00 V | 0 | 41.2 | -10.5 |
| 4 | 374.28 | 33.8 QP | 46.0 | -12.2 | 2.00 V | 326 | 38.5 | -4.7 |
| 5 | 728.01 | 38.4 QP | 46.0 | -7.6 | 1.50 V | 187 | 35.7 | 2.7 |
| 6 | 995.47 | 42.9 QP | 54.0 | -11.1 | 2.00 V | 90 | 35.4 | 7.5 |

**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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

## 5 Pictures of Test Arrangements

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

**Appendix – Information on 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 accredited and approved according to ISO/IEC 17025.

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


**Linko EMC/RF Lab**
Tel: 886-2-26052180
Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**
Tel: 886-3-6668565
Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety Lab**
Tel: 886-3-3183232
Fax: 886-3-3270892

**Email:** service.adt@tw.bureauveritas.com
**Web Site:** www.bureauveritas-adt.com


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

**--- END ---**