# FCC Test Report

| | |
|---|---|
| **Report No.:** | RF170704D10 |
| **FCC ID:** | GV3M01380-M |
| **Test Model:** | M01380-M |
| **Received Date:** | Jul. 4, 2017 |
| **Test Date:** | Jul. 4, 2017 |
| **Issued Date:** | Jul. 31, 2017 |
| **Applicant:** | ACCO Brands, Inc. |
| **Address:** | 1500 Fashion Island Blvd., 3rd Floor, San Mateo, CA 94404, USA |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch |
| **Lab Address:** | No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.) |

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## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| RF170704D10 | Original release. | Jul. 31, 2017 |

## 1 Certificate of Conformity

| | |
|---|---|
| **Product:** | Wireless Mobile Trackball |
| **Brand:** | Kensington |
| **Test Model:** | M01380-M |
| **Sample Status:** | Engineering sample |
| **Applicant:** | ACCO Brands, Inc. |
| **Test Date:** | Jul. 4, 2017 |
| **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 :** Annie Chang , **Date:** Jul. 31, 2017

Annie Chang / Senior Specialist

**Approved by :** Rex. Lai , **Date:** Jul. 31, 2017

Rex Lai / Assistant 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 | N/A | Power supply is 3Vdc from batteries |
| 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 -9.58dB at 4816.00MHz. |

### 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) (±) |
|---|---|---|
| Radiated Emissions up to 1 GHz | 9kHz ~ 30MHz | 2.38 dB |
| | 30MHz ~ 1000MHz | 5.54 dB |
| Radiated Emissions above 1 GHz | Above 1GHz | 5.48 dB |

### 2.2 Modification Record

There were no modifications required for compliance.

## 3 General Information

### 3.1 General Description of EUT

| | |
|---|---|
| Product | Wireless Mobile Trackball |
| Brand | Kensington |
| Test Model | M01380-M |
| Status of EUT | Engineering sample |
| Power Supply Rating | 3Vdc from batteries |
| Modulation Type | GFSK |
| Operating Frequency | 2408MHz ~ 2474MHz |
| Number of Channel | 34 |
| Antenna Type | Printed antenna with -2.24dBi gain |
| Antenna Connector | N/A |
| Accessory Device | N/A |
| Data Cable Supplied | N/A |

Note:

1. The EUT is a Wireless Mobile Trackball.

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

34 channels are provided to this EUT:

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

### 3.2.1 Test Mode Applicability and Tested Channel Detail

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

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

**PLC:** Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

**NOTE:** No need to concern of Conducted Emission due to the EUT is powered by batteries

**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.

| EUT CONFIGURE MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TYPE |
|---|---|---|---|
| - | 1 to 34 | 1, 17, 34 | 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.

| EUT CONFIGURE MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TYPE |
|---|---|---|---|
| - | 1 to 34 | 1 | GFSK |

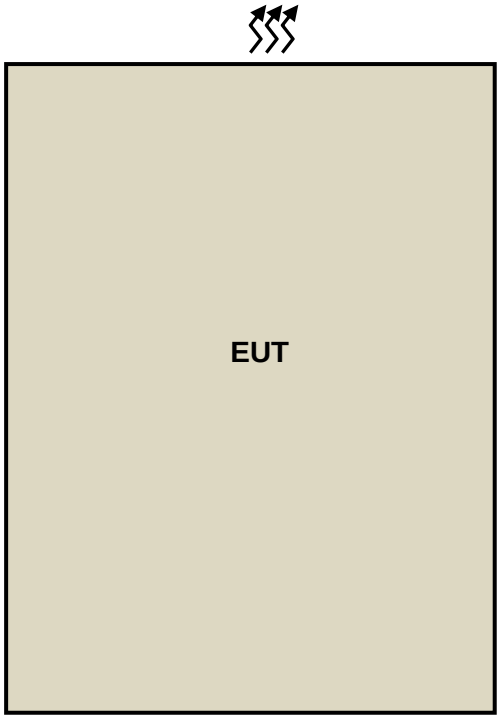
**Test Condition:**

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER | TESTED BY |
|---|---|---|---|
| RE≥1G | 32deg. C, 66%RH | 3Vdc | Ian Chang |
| RE<1G | 32deg. C, 66%RH | 3Vdc | Ian Chang |

### 3.3 Description of Support Units

The EUT has been tested as an independent unit together without other necessary accessories or support units.

#### 3.3.1 Configuration of System under Test




(Powered from batteries)

### 3.4 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 |
|---|---|---|---|---|
| HP Preamplifier | 8447D | 2432A03504 | Feb. 21, 2017 | Feb. 20, 2018 |
| HP Preamplifier | 8449B | 3008A01201 | Feb. 22, 2017 | Feb. 21, 2018 |
| MITEQ Preamplifier | AMF-6F-260400-33-8P | 892164 | Feb. 21, 2017 | Feb. 20, 2018 |
| Agilent TEST RECEIVER | N9038A | MY51210129 | Feb. 08, 2017 | Feb. 07, 2018 |
| Schwarzbeck Antenna | VULB 9168 | 139 | Dec. 13, 2016 | Dec. 12, 2017 |
| Schwarzbeck Antenna | VHBA 9123 | 480 | May 19, 2017 | May 18, 2019 |
| Schwarzbeck Horn Antenna | BBHA-9170 | 212 | Dec. 30, 2016 | Dec. 29, 2017 |
| Schwarzbeck Horn Antenna | BBHA 9120-D1 | D130 | Dec. 27, 2016 | Dec. 26, 2017 |
| ADT. Turn Table | TT100 | 0306 | NA | NA |
| ADT. Tower | AT100 | 0306 | NA | NA |
| Software | Radiated_V7.6.15.9.5 | NA | NA | NA |
| SUHNER RF cable With 4dB PAD | SF104 | CABLE-CH6 | Aug. 15, 2016 | Aug. 14, 2017 |
| SUHNER RF cable With 3dB PAD | SF102 | Cable-CH8-3.6m | Aug. 15, 2016 | Aug. 14, 2017 |
| KEYSIGHT Spectrum Analyzer | N9030A | MY54490260 | Jul. 26, 2016 | Jul. 25, 2017 |
| Loop Antenna EMCI | LPA600 | 270 | Aug. 20, 2015 | Aug. 19, 2017 |
| EMCO Horn Antenna | 3115 | 00028257 | Dec. 15, 2016 | Dec. 14, 2017 |
| Highpass filter Wainwright Instruments | WHK 3.1/18G-10SS | SN 8 | NA | NA |
| ROHDE & SCHWARZ Spectrum Analyzer | FSV40 | 101042 | Sep. 30, 2016 | Sep. 29, 2017 |
| Anritsu Power Sensor | MA2411B | 0738404 | Apr. 24, 2017 | Apr. 23, 2018 |
| Anritsu Power Meter | ML2495A | 0842014 | Apr. 24, 2017 | Apr. 23, 2018 |

**NOTE:** 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

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. Both X and Y axes 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:**

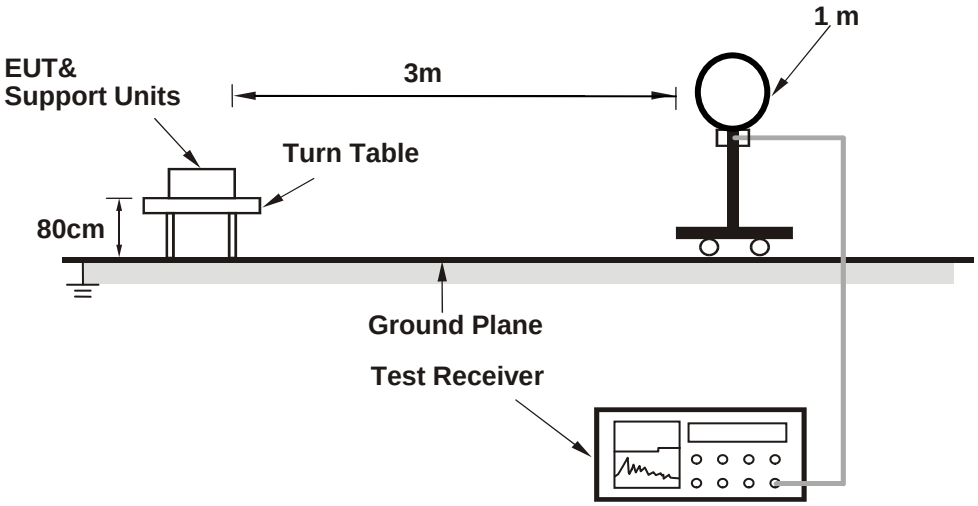
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

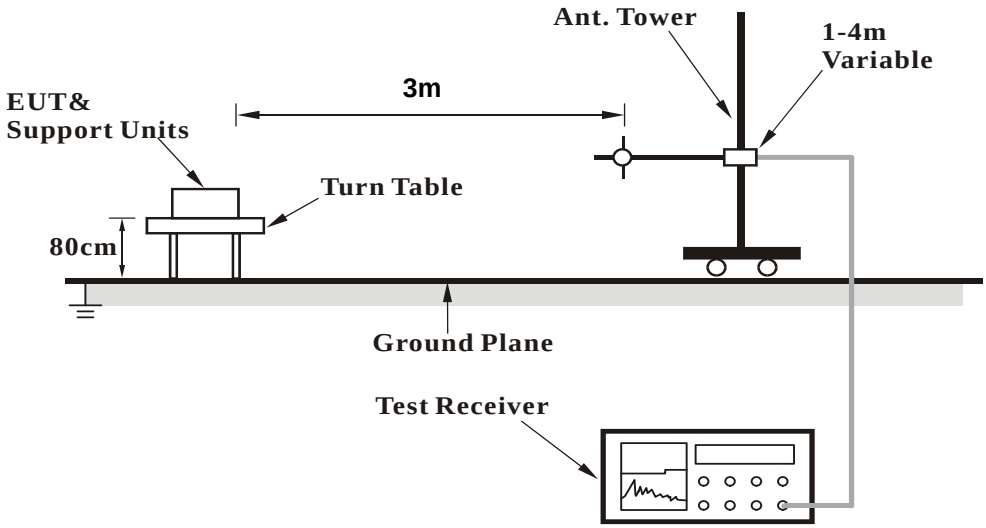
No deviation.

4.1.5 Test Setup

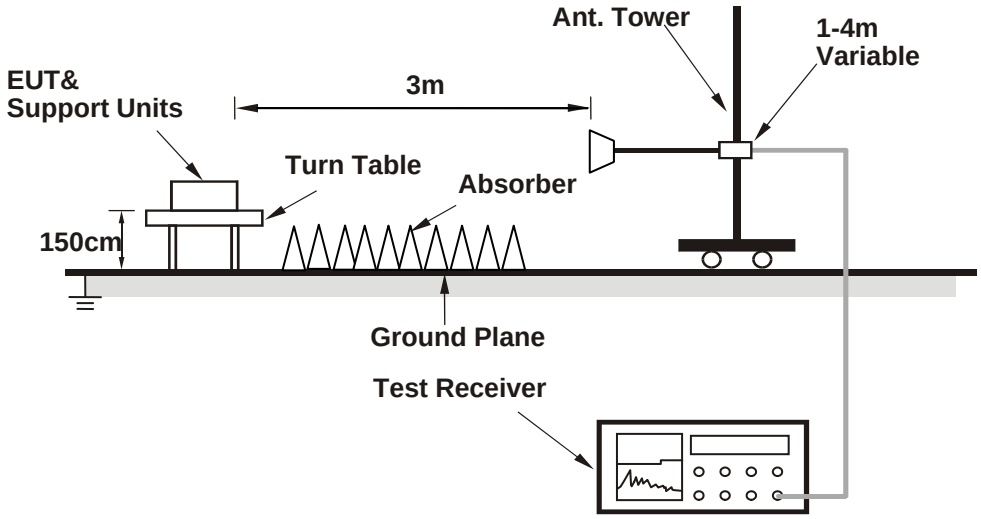
**For Radiated emission below 30MHz**




**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

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

4.1.7 Test Results

**ABOVE 1GHz DATA**

| | | | |
|---|---|---|---|
| **CHANNEL** | TX Channel 1 | **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 | 2390.00 | 53.98 PK | 74.00 | -20.02 | 1.30 H | 338 | 55.88 | -1.90 |
| 2 | 2390.00 | 40.44 AV | 54.00 | -13.56 | 1.30 H | 338 | 42.34 | -1.90 |
| 3 | 2400.00 | 56.45 PK | 74.00 | -17.55 | 1.30 H | 338 | 58.29 | -1.84 |
| 4 | 2400.00 | 40.39 AV | 54.00 | -13.61 | 1.30 H | 338 | 42.23 | -1.84 |
| 5 | *2408.00 | 88.16 PK | 114.00 | -25.84 | 1.30 H | 338 | 89.96 | -1.80 |
| 6 | *2408.00 | 59.16 AV | 94.00 | -34.84 | 1.30 H | 338 | 60.96 | -1.80 |
| 7 | 4816.00 | 52.34 PK | 74.00 | -21.66 | 1.00 H | 37 | 47.18 | 5.16 |
| 8 | 4816.00 | 42.72 AV | 54.00 | -11.28 | 1.00 H | 37 | 37.56 | 5.16 |
| **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 | 2390.00 | 56.55 PK | 74.00 | -17.45 | 1.05 V | 164 | 58.45 | -1.90 |
| 2 | 2390.00 | 41.67 AV | 54.00 | -12.33 | 1.05 V | 164 | 43.57 | -1.90 |
| 3 | 2400.00 | 61.08 PK | 74.00 | -12.92 | 1.05 V | 164 | 62.92 | -1.84 |
| 4 | 2400.00 | 42.22 AV | 54.00 | -11.78 | 1.05 V | 164 | 44.06 | -1.84 |
| 5 | *2408.00 | 91.57 PK | 114.00 | -22.43 | 1.05 V | 164 | 93.37 | -1.80 |
| 6 | *2408.00 | 63.04 AV | 94.00 | -30.96 | 1.05 V | 164 | 64.84 | -1.80 |
| 7 | 4816.00 | 53.47 PK | 74.00 | -20.53 | 2.55 V | 234 | 48.31 | 5.16 |
| **8** | **4816.00** | **44.42 AV** | **54.00** | **-9.58** | **2.55 V** | **234** | **39.26** | **5.16** |

**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 17 | 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 | *2440.00 | 85.87 PK | 114.00 | -28.13 | 1.42 H | 344 | 87.46 | -1.59 |
| 2 | *2440.00 | 57.29 AV | 94.00 | -36.71 | 1.42 H | 344 | 58.88 | -1.59 |
| 3 | 4880.00 | 51.57 PK | 74.00 | -22.43 | 1.05 H | 45 | 46.36 | 5.21 |
| 4 | 4880.00 | 41.57 AV | 54.00 | -12.43 | 1.05 H | 45 | 36.36 | 5.21 |
| 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 | *2440.00 | 87.93 PK | 114.00 | -26.07 | 1.03 V | 323 | 89.52 | -1.59 |
| 2 | *2440.00 | 58.77 AV | 94.00 | -35.23 | 1.03 V | 323 | 60.36 | -1.59 |
| 3 | 4880.00 | 52.45 PK | 74.00 | -21.55 | 2.41 V | 239 | 47.24 | 5.21 |
| 4 | 4880.00 | 44.17 AV | 54.00 | -9.83 | 2.41 V | 239 | 38.96 | 5.21 |

**REMARKS:**

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

| CHANNEL | TX Channel 34 | 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 | *2474.00 | 83.83 PK | 114.00 | -30.17 | 1.53 H | 356 | 85.21 | -1.38 |
| 2 | *2474.00 | 54.81 AV | 94.00 | -39.19 | 1.53 H | 356 | 56.19 | -1.38 |
| 3 | 2483.50 | 53.92 PK | 74.00 | -20.08 | 1.53 H | 356 | 55.25 | -1.33 |
| 4 | 2483.50 | 39.30 AV | 54.00 | -14.70 | 1.53 H | 356 | 40.63 | -1.33 |
| 5 | 4948.00 | 51.72 PK | 74.00 | -22.28 | 1.10 H | 60 | 46.36 | 5.36 |
| 6 | 4948.00 | 43.18 AV | 54.00 | -10.82 | 1.10 H | 60 | 37.82 | 5.36 |
| 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 | *2474.00 | 86.10 PK | 114.00 | -27.90 | 1.17 V | 315 | 87.48 | -1.38 |
| 2 | *2474.00 | 56.82 AV | 94.00 | -37.18 | 1.17 V | 315 | 58.20 | -1.38 |
| 3 | 2483.50 | 55.32 PK | 74.00 | -18.68 | 1.17 V | 315 | 56.65 | -1.33 |
| 4 | 2483.50 | 39.77 AV | 54.00 | -14.23 | 1.17 V | 315 | 41.10 | -1.33 |
| 5 | 4948.00 | 52.61 PK | 74.00 | -21.39 | 2.58 V | 215 | 47.25 | 5.36 |
| 6 | 4948.00 | 43.50 AV | 54.00 | -10.50 | 2.58 V | 215 | 38.14 | 5.36 |

**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 WORST-CASE DATA

| CHANNEL | TX Channel 1 | DETECTOR FUNCTION | Quasi-Peak (QP) |
|---|---|---|---|
| FREQUENCY RANGE | 9kHz ~ 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 | 53.23 | 19.99 QP | 40.00 | -20.01 | 2.20 H | 286 | 29.03 | -9.04 |
| 2 | 110.70 | 17.13 QP | 43.50 | -26.37 | 1.45 H | 149 | 29.68 | -12.55 |
| 3 | 163.08 | 19.21 QP | 43.50 | -24.29 | 1.87 H | 319 | 28.22 | -9.01 |
| 4 | 282.05 | 20.51 QP | 46.00 | -25.49 | 1.66 H | 83 | 28.23 | -7.72 |
| 5 | 449.04 | 25.48 QP | 46.00 | -20.52 | 2.08 H | 272 | 29.66 | -4.18 |
| 6 | 594.88 | 27.91 QP | 46.00 | -18.09 | 1.47 H | 105 | 28.92 | -1.01 |
| **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 | 43.77 | 22.52 QP | 40.00 | -17.48 | 1.67 V | 360 | 32.22 | -9.70 |
| 2 | 109.10 | 23.19 QP | 43.50 | -20.31 | 2.33 V | 343 | 35.84 | -12.65 |
| 3 | 163.86 | 18.81 QP | 43.50 | -24.69 | 1.74 V | 262 | 27.85 | -9.04 |
| 4 | 302.81 | 20.97 QP | 46.00 | -25.03 | 1.85 V | 152 | 28.23 | -7.26 |
| 5 | 407.57 | 23.56 QP | 46.00 | -22.44 | 1.96 V | 357 | 28.79 | -5.23 |
| 6 | 538.47 | 26.45 QP | 46.00 | -19.55 | 2.05 V | 27 | 28.83 | -2.38 |

**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: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Tel: 886-2-26052180
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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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