



MRT Technology (Taiwan) Co., Ltd  
Phone: +886-3-3288388  
Fax: +886-3-3288918  
Web: [www.mrt-cert.com](http://www.mrt-cert.com)

Report No.: 1708TW0105-U1  
Report Version: 1.0  
Issue Date: 2017-08-22

## MEASUREMENT REPORT

### FCC PART 15.249

---

**FCC ID:** 2AA8MWCPWSMS1RP  
**APPLICANT:** STAR WAVE TECHNOLOGY CO., LIMITED  
**Application Type:** Certification  
**Product:** Wireless Mouse  
**Model No.:** W-CPWSMS1-RP  
**FCC Classification:** (DXX) Part 15 Low Power Communication Device Transmitter  
**FCC Rule Part(s):** Part 15.249  
**Test Procedure(s):** ANSI C63.10-2013, KDB 558074 D01v03r05  
**Test Date:** August 21, 2017

Test By : *Kevin Ker*  
( Kevin Ker )  
Reviewed By : *Paddy Chen*  
( Paddy Chen )  
Approved By : *Chenz Ker*  
( Chenz Ker )



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01v03r05. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Taiwan) Co., Ltd.

---

## Revision History

| Report No.    | Version | Description     | Issue Date | Note |
|---------------|---------|-----------------|------------|------|
| 1708TW0105-U1 | 1.0     | Original report | 2017-08-22 |      |

# CONTENTS

| Description   | Page      |
|---|-----------|
| <b>§2.1033 General Information .....</b>                    | <b>5</b>  |
| <b>1. INTRODUCTION .....</b>                                | <b>6</b>  |
| 1.1. Scope.....   | 6         |
| 1.2. MRT Test Location .....                                | 6         |
| <b>2. PRODUCT INFORMATION .....</b>                         | <b>7</b>  |
| 2.1. Equipment Description .....                            | 7         |
| 2.2. Product Specification Subjective to this Standard..... | 7         |
| 2.3. Test Mode .....  | 7         |
| 2.4. Operation Frequency / Channel List.....                | 8         |
| 2.5. Test Configuration .....                               | 9         |
| 2.6. Test Software .....                                    | 9         |
| 2.7. EMI Suppression Device(s)/Modifications .....          | 9         |
| 2.8. Labeling Requirements .....                            | 9         |
| <b>3. DESCRIPTION of TEST .....</b>                         | <b>10</b> |
| 3.1. Evaluation Procedure .....                             | 10        |
| 3.2. Radiated Emissions .....                               | 11        |
| <b>4. ANTENNA REQUIREMENTS.....</b>                         | <b>12</b> |
| <b>5. TEST EQUIPMENT CALIBRATION DATE .....</b>             | <b>13</b> |
| <b>6. MEASUREMENT UNCERTAINTY .....</b>                     | <b>14</b> |
| <b>7. TEST RESULT .....</b>                                 | <b>15</b> |
| 7.1. Summary.....   | 15        |
| 7.2. Radiated Spurious Emission Measurement .....           | 16        |
| 7.2.1. Test Limit .....                                     | 16        |
| 7.2.2. Test Procedure Used.....                             | 16        |
| 7.2.3. Test Setting .....                                   | 16        |
| 7.2.4. Test Setup .....                                     | 18        |
| 7.2.5. Test Result .....                                    | 20        |
| 7.3. Radiated Restricted Band Edge Measurement.....         | 28        |
| 7.3.1. Test Limit .....                                     | 28        |
| 7.3.2. Test Procedure Used.....                             | 28        |
| 7.3.3. Test Setting .....                                   | 28        |
| 7.3.4. Test Setup .....                                     | 30        |
| 7.3.5. Test Result .....                                    | 31        |
| 7.4. Field strength of fundamental .....                    | 36        |
| 7.4.1. Test Limit .....                                     | 36        |
| 7.4.2. Test Procedure Used.....                             | 36        |
| 7.4.3. Test Setting .....                                   | 36        |
| 7.4.4. Test Setup .....                                     | 38        |
| 7.4.5. Test Result .....                                    | 39        |

---

|                     |    |
|---------------------|----|
| 8. CONCLUSION ..... | 45 |
|---------------------|----|

## §2.1033 General Information

|                                 |   |
|---------------------------------|---|
| <b>Applicant</b>                | STAR WAVE TECHNOLOGY CO., LIMITED   |
| <b>Applicant Address</b>        | UNIT 04 7/F BRIGHT WAY TOWER33 MONG KOK RDKL, HONGKONG  |
| <b>Manufacturer</b>             | STAR WAVE TECHNOLOGY CO., LIMITED   |
| <b>Manufacturer Address</b>     | UNIT 04 7/F BRIGHT WAY TOWER33 MONG KOK RDKL, HONGKONG  |
| <b>Test Site</b>                | MRT Technology (Taiwan) Co., Ltd  |
| <b>Test Site Address</b>        | No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)  |
| <b>MRT FCC Registration No.</b> | 291082  |
| <b>Test Device Serial No.</b>   | N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering |

### Test Facility / Accreditations

1. MRT facility is a FCC registered ( Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC, Industry Taiwan, EU and TELEC Rules.

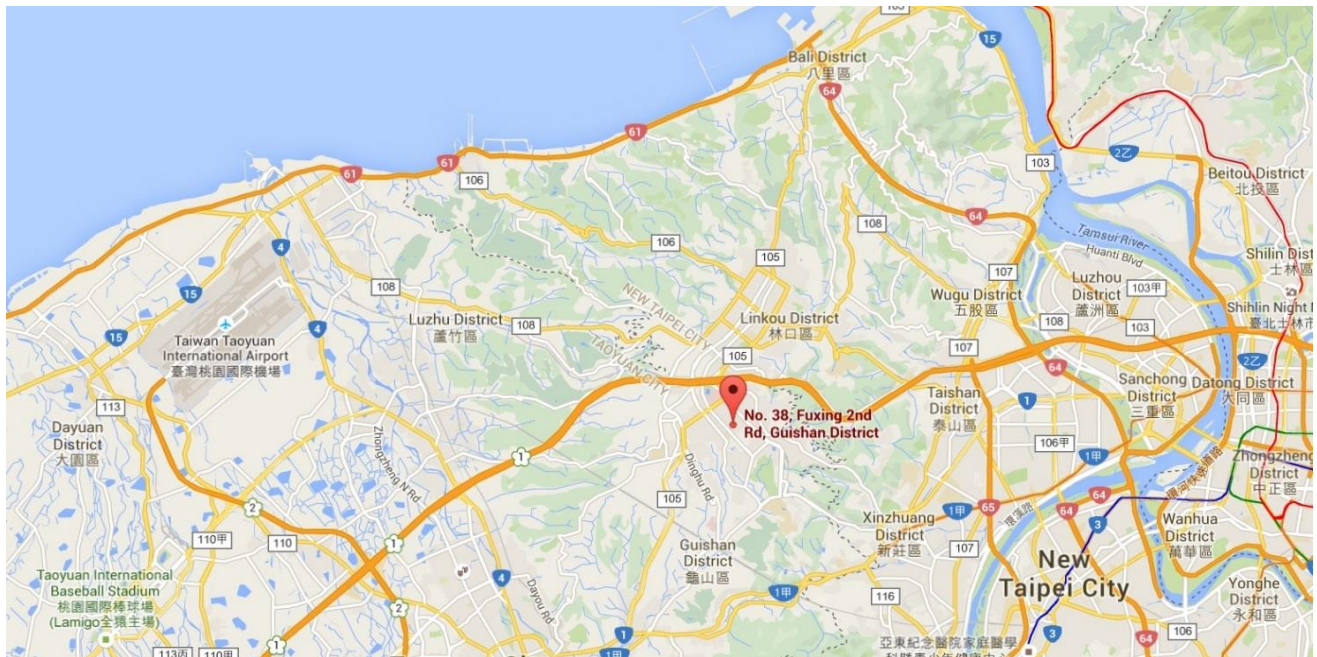
## 1. INTRODUCTION

### 1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

### 1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

|                                       |                |
|---------------------------------------|----------------|
| Product Name                          | Wireless Mouse |
| Model No.                             | W-CPWSMS1-RP   |
| Supports Radios Spec.                 | FHSS 2.4G      |
| Maximum Field Strength of Fundamental | 81.66dBuV/m    |

### 2.2. Product Specification Subjective to this Standard

|                     |                              |
|---------------------|------------------------------|
| Operating Frequency | 2402~2480MHz                 |
| Channel Number      | 40 channels                  |
| Hopping Type        | 16 Frequency, Active Hopping |
| Type of modulation  | GFSK                         |
| Channel Spacing     | 2MHz                         |
| Data Rate           | 2Mbps                        |

### 2.3. Test Mode

|           |                  |
|-----------|------------------|
| Test Mode | Mode 1: Transmit |
|-----------|------------------|

Note :

Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.

## 2.4. Operation Frequency / Channel List

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 1       | 2402 MHz  | 2       | 2404 MHz  | 3       | 2406 MHz  |
| 4       | 2408 MHz  | 5       | 2410 MHz  | 6       | 2412 MHz  |
| 7       | 2414 MHz  | 8       | 2416 MHz  | 9       | 2418 MHz  |
| 10      | 2420 MHz  | 11      | 2422 MHz  | 12      | 2424 MHz  |
| 13      | 2426 MHz  | 14      | 2428 MHz  | 15      | 2430 MHz  |
| 16      | 2432 MHz  | 17      | 2434 MHz  | 18      | 2436 MHz  |
| 19      | 2438 MHz  | 20      | 2440 MHz  | 21      | 2442 MHz  |
| 22      | 2444 MHz  | 23      | 2446 MHz  | 24      | 2448 MHz  |
| 25      | 2450 MHz  | 26      | 2452 MHz  | 27      | 2454 MHz  |
| 28      | 2456 MHz  | 29      | 2458 MHz  | 30      | 2460 MHz  |
| 31      | 2462 MHz  | 32      | 2464 MHz  | 33      | 2466 MHz  |
| 34      | 2468 MHz  | 35      | 2470 MHz  | 36      | 2472 MHz  |
| 37      | 2474 MHz  | 38      | 2476 MHz  | 39      | 2478 MHz  |
| 40      | 2480 MHz  | N/A     | N/A       | N/A     | N/A       |

Note: Each mouse work in the 16 channels, these 16 channels from 40 randomly generated.



## **2.5. Test Configuration**

This device was tested per the guidance of ANSI C63.10-2013 and DA 00-705. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

## **2.6. Test Software**

N/A.

## **2.7. EMI Suppression Device(s)/Modifications**

No EMI suppression device(s) were added and/or no modifications were made during testing.

## **2.8. Labeling Requirements**

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

### **3. DESCRIPTION of TEST**

#### **3.1. Evaluation Procedure**

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 558074 D01v03r05 were used in the measurement of the.

**Deviation from measurement procedure.....None**

### 3.2. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, which produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

Radiated emissions test results are shown in Section 7.6 & 7.7 .

#### 4. ANTENNA REQUIREMENTS

**Excerpt from §15.203 of the FCC Rules/Regulations:**

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the , is permanently attached.
- There are no provisions for connection to an external antenna.

**Conclusion:**

The EUT unit complies with the requirement of §15.203.

Antenna List

| No. | Manufacturer | Part No.   | Antenna Type | Peak Gain |
|-----|--------------|------------|--------------|-----------|
| 1   | N/A          | IBM 2.4GHz | Print on PCB | -1.52dBi  |

## 5. TEST EQUIPMENT CALIBRATION DATE

### Conducted Emissions – SR2

| Instrument         | Manufacturer | Type No.                    | Asset No.   | Cali. Interval | Cali. Due Date |
|--------------------|--------------|-----------------------------|-------------|----------------|----------------|
| Two-Line V-Network | R&S          | ENV216                      | MRTTWA00019 | 1 year         | 2018.03.15     |
| Cable              | Rosnol       | N1C50-RG400-B<br>1C50-500CM | MRTTWE00013 | 1 year         | 2018.05.19     |
| EMI Test Receiver  | R&S          | ESR3                        | MRTTWA00009 | 1 year         | 2018.03.16     |

### Radiated Emissions – AC1

| Instrument               | Manufacturer | Type No.                  | Asset No.   | Cali. Interval | Cali. Due Date |
|--------------------------|--------------|---------------------------|-------------|----------------|----------------|
| Broadband TRILOG Antenna | SCHWARZBECK  | VULB 9162                 | MRTTWA00001 | 1 year         | 2018.05.14     |
| EMI Test Receiver        | R&S          | ESR3                      | MRTTWA00009 | 1 year         | 2018.03.16     |
| Active Loop Antenna      | Schwarzbeck  | FMZB 1519B                | MRTTWA00002 | 1 year         | 2018.04.13     |
| Broadband Horn antenna   | SCHWARZBECK  | BBHA 9120D                | MRTTWA00003 | 1 year         | 2018.04.17     |
| Breitband Hornantenna    | Schwarzbeck  | BBHA 9170                 | MRTTWA00004 | 1 year         | 2018.04.24     |
| Broadband Amplifier      | Schwarzbeck  | BBV 9721                  | MRTTWA00006 | 1 year         | 2018.04.24     |
| Broadband Preamplifier   | SCHWARZBECK  | BBV 9718                  | MRTTWA00005 | 1 year         | 2018.04.19     |
| Cable                    | HUBERSUHNER  | SF106                     | MRTTWA00010 | 1 year         | 2018.05.19     |
| Cable                    | Rosnol       | K1K50-UP0264-<br>K1K50-4M | MRTTWA00012 | 1 year         | 2018.05.19     |

### Conducted Test Equipment – SR2

| Instrument                | Manufacturer | Type No. | Asset No.   | Cali. Interval | Cali. Due Date |
|---------------------------|--------------|----------|-------------|----------------|----------------|
| Spectrum Analyzer         | KEYSIGHT     | N9010A   | MRTTWA00012 | 1 year         | 2018.07.24     |
| USB Wideband Power Sensor | KEYSIGHT     | U2021XA  | MRTTWA00015 | 1 year         | 2018.03.19     |

### Test Software

| Software | Version   | Function          |
|----------|-----------|-------------------|
| e3       | 9.160520a | EMI Test Software |
| EMI      | V3        | EMI Test Software |

## 6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

|   |                    |
|---|--------------------|
| AC Conducted Emission Measurement – SR2                                       |                    |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_c(y)$ ):       |                    |
| 150kHz~30MHz: 2.42dB  |                    |
| Conducted Measurement– SR1  |                    |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_c(y)$ ): 1.3dB |                    |
| Radiated Emission Measurement – AC1   |                    |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2U_c(y)$ ):       |                    |
| Horizontal:   | 9K~30MHz: 4.14dB   |
|   | 30MHz~1GHz: 4.22dB |
|   | 1GHz~40GHz: 4.05dB |
| Vertical:   | 9K~30MHz: 4.14dB   |
|   | 30MHz~1GHz: 3.37dB |
|   | 1GHz~40GHz: 4.08dB |

## 7. TEST RESULT

### 7.1. Summary

**Product Name:** Wireless Mouse

**FCC Classification:** (DXX) Part 15 Low Power Communication Device Transmitter

| FCC Part Section(s) | Test Description              | Test Limit  | Test Condition | Test Result | Reference   |
|---------------------|-------------------------------|---|----------------|-------------|-------------|
| 15.205<br>15.209    | Spurious Emission             | < FCC 15.209 limits   | Radiated       | Pass        | Section 7.2 |
| 15.205<br>15.209    | Band Edge Measurement         | $\leq 74\text{dBuV/m(Peak)}$<br>$\leq 54\text{dBuV/m(Average)}$ |                | Pass        | Section 7.3 |
| 15.249              | Field strength of fundamental | < FCC 15.249 limits   |                | Pass        | Section 7.4 |

#### Notes:

- 1) All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.

## 7.2. Radiated Spurious Emission Measurement

### 7.2.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

| FCC Part 15 Subpart C Paragraph 15.209 |                         |                               |
|--|-------------------------|-------------------------------|
| Frequency<br>[MHz]                     | Field Strength<br>[V/m] | Measured Distance<br>[Meters] |
| 0.009 - 0.490                          | 2400/F (kHz)            | 300                           |
| 0.490 - 1.705                          | 24000/F (kHz)           | 30                            |
| 1.705 - 30                             | 30                      | 30                            |
| 30 - 88                                | 100                     | 3                             |
| 88 - 216                               | 150                     | 3                             |
| 216 - 960                              | 200                     | 3                             |
| Above 960                              | 500                     | 3                             |

### 7.2.2. Test Procedure Used

KDB 558074 D01v03r05- Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r05- Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r05- Section 12.2.5 (average power measurements)

### 7.2.3. Test Setting

#### Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple



6. Trace mode = max hold

7. Trace was allowed to stabilize

**Table 1 - RBW as a function of frequency**

| Frequency     | RBW           |
|---------------|---------------|
| 9 ~ 150 kHz   | 200 ~ 300 Hz  |
| 0.15 ~ 30 MHz | 9 ~ 10 kHz    |
| 30 ~ 1000 MHz | 100 ~ 120 kHz |
| > 1000 MHz    | 1 MHz         |

### **Average Field Strength Measurements**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

2. RBW = 1MHz

3. VBW  $\geq 1/T$

4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode

5. Detector = Peak

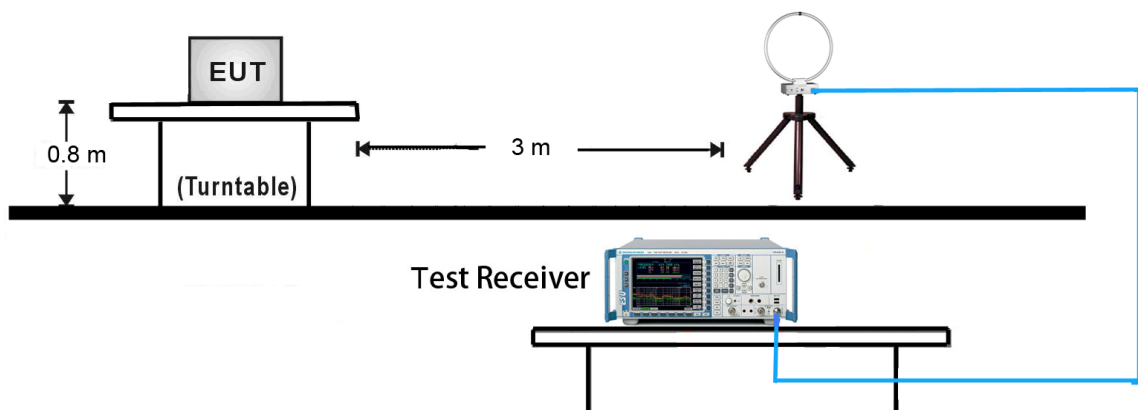
6. Sweep time = auto

7. Trace mode = max hold

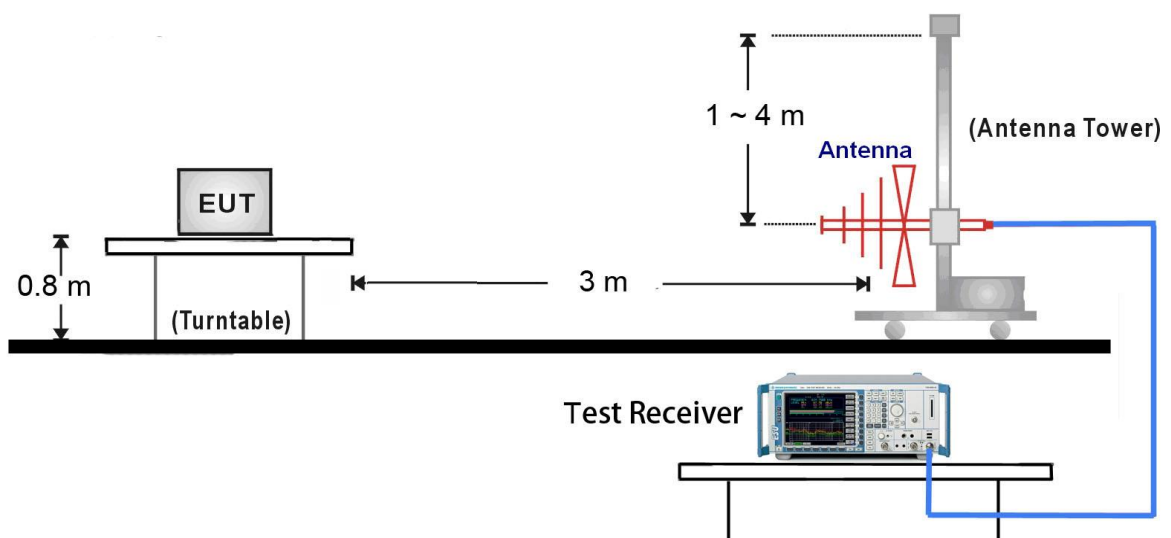
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

#### 7.2.4. Test Setup

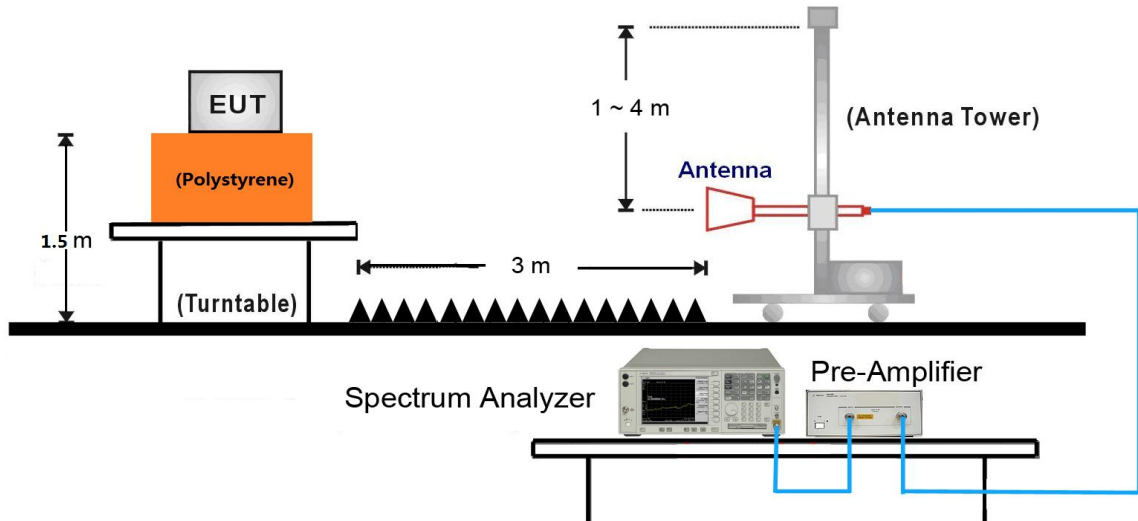
##### 9kHz ~ 30MHz Test Setup:



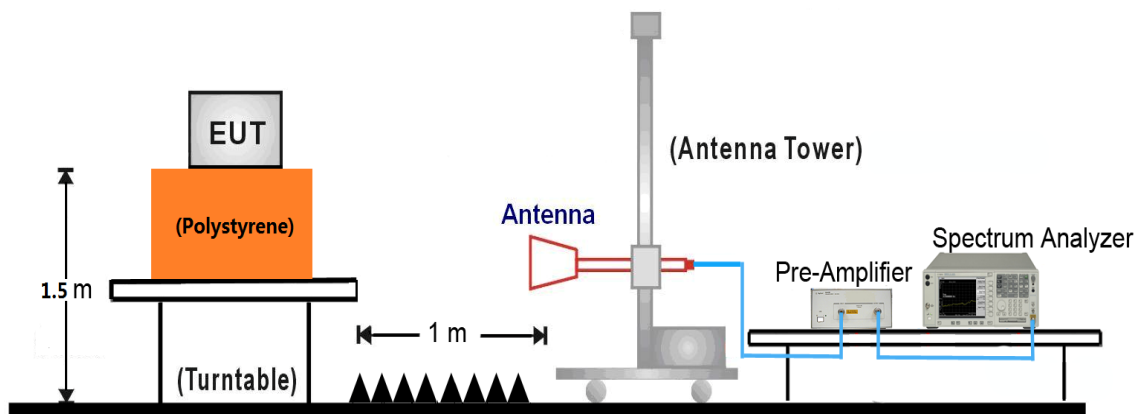
##### 30MHz ~ 1GHz Test Setup:



### 1GHz ~ 18GHz Test Setup:

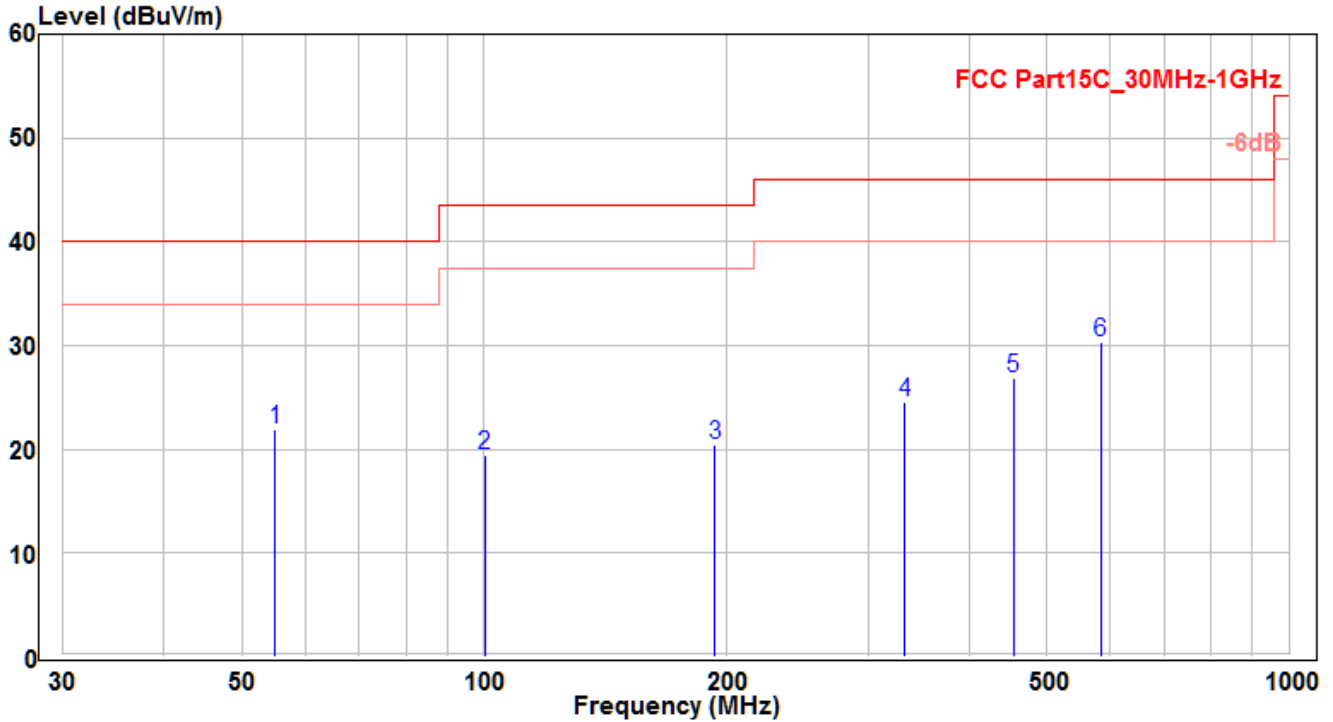


### 18GHz ~25GHz Test Setup:



### 7.2.5. Test Result

|           |                        |                  |             |
|-----------|------------------------|------------------|-------------|
| EUT       | Wireless Mouse         | Test Date        | 2017/08/21  |
| Factor    | VULB 9162 (30MHz~8GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Horizontal             | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2440MHz          | Test Voltage     | By Battery  |

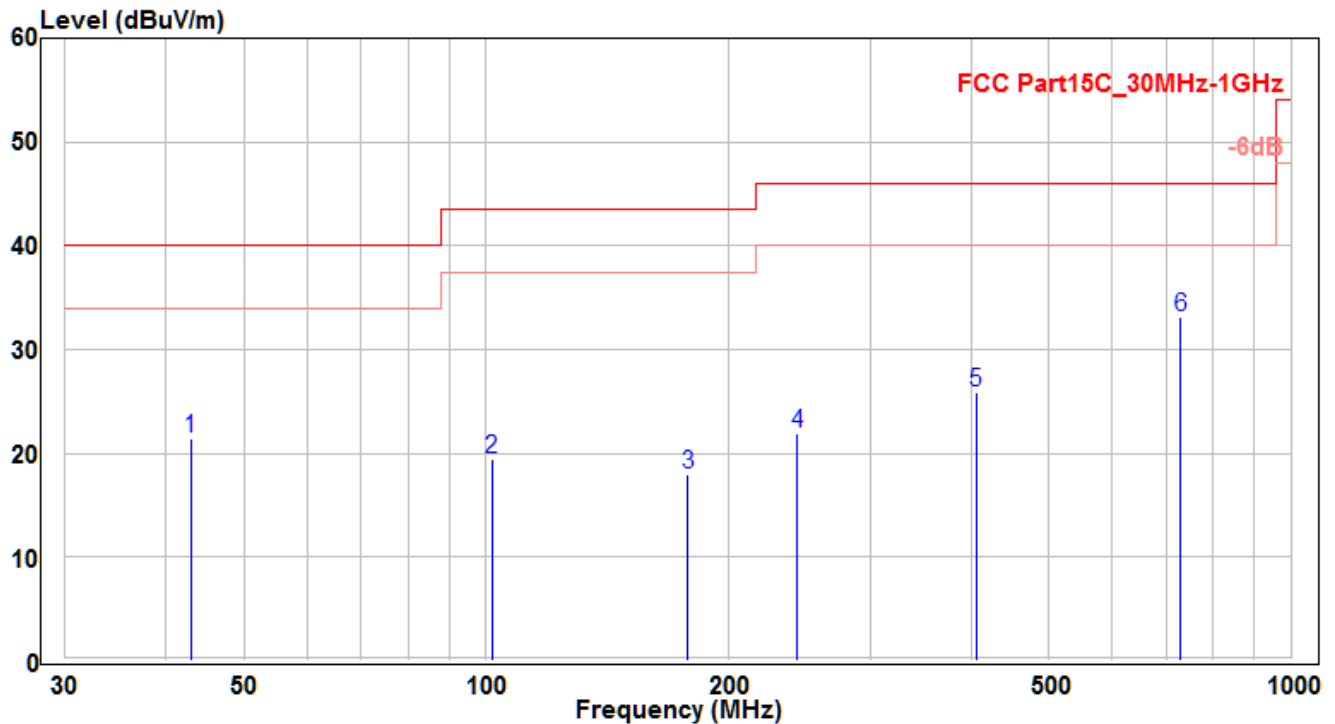


| No | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | 55.038          | 1.32           | 20.67    | 21.99                | -18.01      | 40             | 100         | 400         | QP                |
| 2  | 100.234         | 0.04           | 19.37    | 19.41                | -24.09      | 43.5           | 150         | 200         | QP                |
| 3  | 193.536         | 1.46           | 18.94    | 20.4                 | -23.1       | 43.5           | 190         | 360         | QP                |
| 4  | 333.549         | 1.8            | 22.83    | 24.63                | -21.37      | 46             | 125         | 175         | QP                |
| 5  | 454.618         | 1.72           | 25.19    | 26.91                | -19.09      | 46             | 250         | 280         | QP                |
| 6  | * 584.052       | 2.86           | 27.45    | 30.31                | -15.69      | 46             | 135         | -40         | QP                |

Note :

- " \* " means the worst value in this measurement data °
- Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
- Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
- The emission levels of other frequencies are very lower than the limit and not show in test report °
- Other channel/mode was also verified. The test results shown represent the worst case emissions °
- No emission found between lowest internal used/generated frequency to 30MHz °

|           |                        |                  |             |
|-----------|------------------------|------------------|-------------|
| EUT       | Wireless Mouse         | Test Date        | 2017/08/21  |
| Factor    | VULB 9162 (30MHz~8GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Vertical               | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2440MHz          | Test Voltage     | By Battery  |

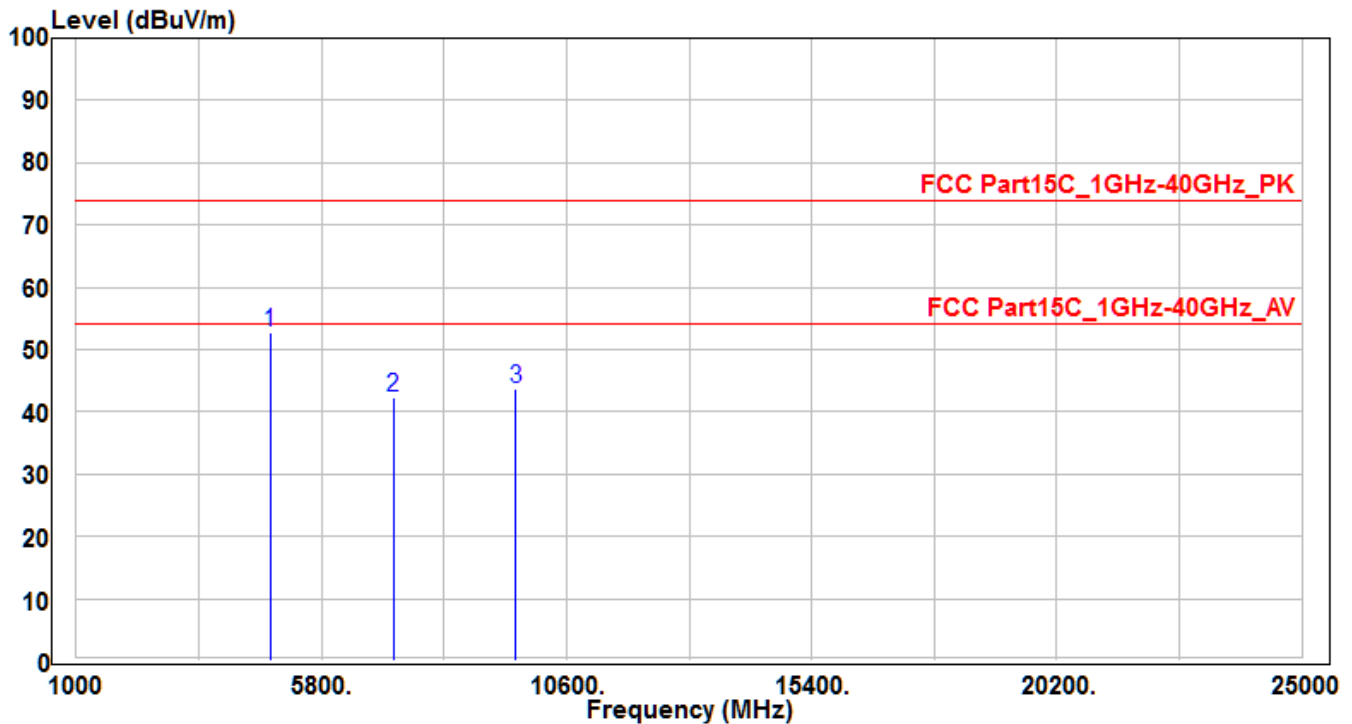


| No | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | 43.004          | 0.43           | 21.07    | 21.5                 | -18.5       | 40             | 100         | 200         | QP                |
| 2  | 101.78          | 0.23           | 19.28    | 19.51                | -23.99      | 43.5           | 150         | 360         | QP                |
| 3  | 178.289         | 0.88           | 17.17    | 18.05                | -25.45      | 43.5           | 190         | 280         | QP                |
| 4  | 243.733         | 1.55           | 20.33    | 21.88                | -24.12      | 46             | 175         | 175         | QP                |
| 5  | 405.966         | 1.67           | 24.28    | 25.95                | -20.05      | 46             | 250         | 225         | QP                |
| 6  | * 729.037       | 3.16           | 29.93    | 33.09                | -12.91      | 46             | 145         | -40         | QP                |

Note :

- " \* " means the worst value in this measurement data °
- Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
- Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
- The emission levels of other frequencies are very lower than the limit and not show in test report °
- Other channel/mode was also verified. The test results shown represent the worst case emissions °
- No emission found between lowest internal used/generated frequency to 30MHz °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2402MHz           | Test Voltage     | By Battery  |

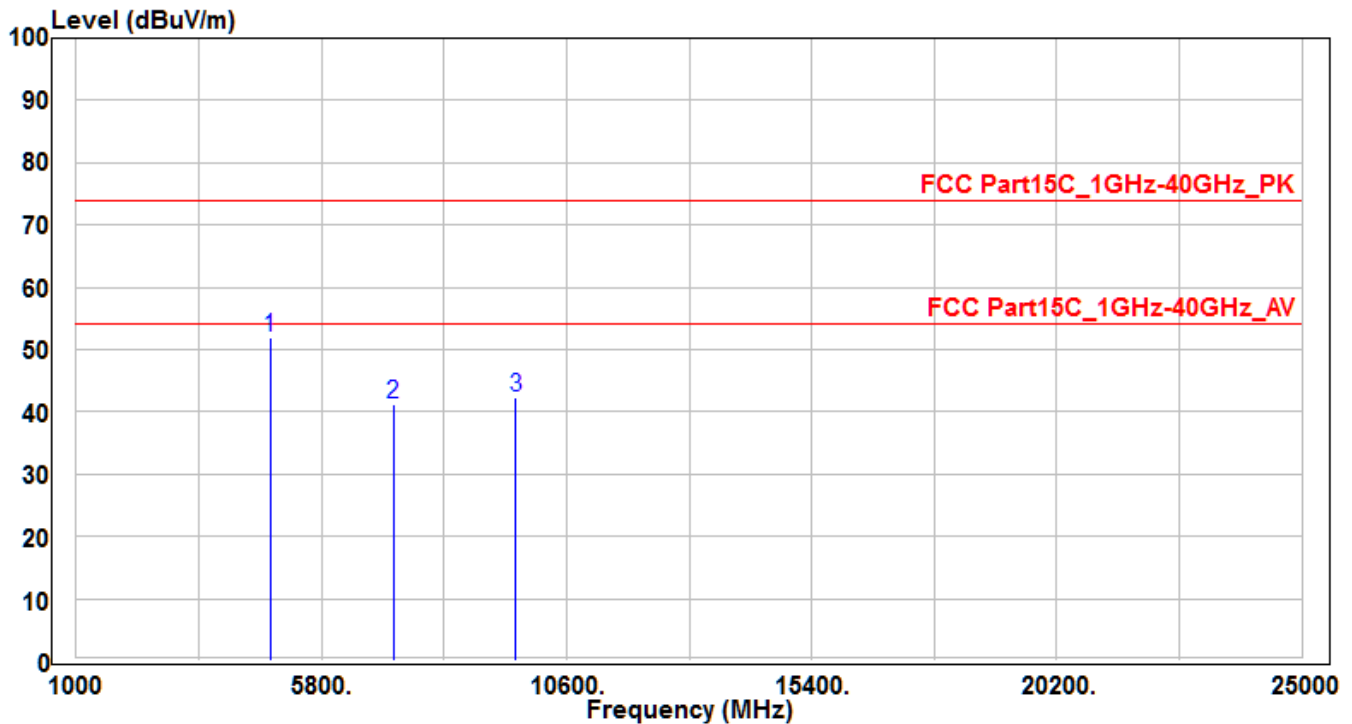


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 4804            | 50.14          | 2.7      | 52.84                | -21.16      | 74             | 150         | 400         | Peak              |
| 2  |   | 7206            | 31.13          | 11.26    | 42.39                | -31.61      | 74             | 150         | 400         | Peak              |
| 3  |   | 9608            | 29.09          | 14.47    | 43.56                | -30.44      | 74             | 150         | 400         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
3. Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
4. The emission levels of other frequencies are very lower than the limit and not show in test report °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2402MHz           | Test Voltage     | By Battery  |

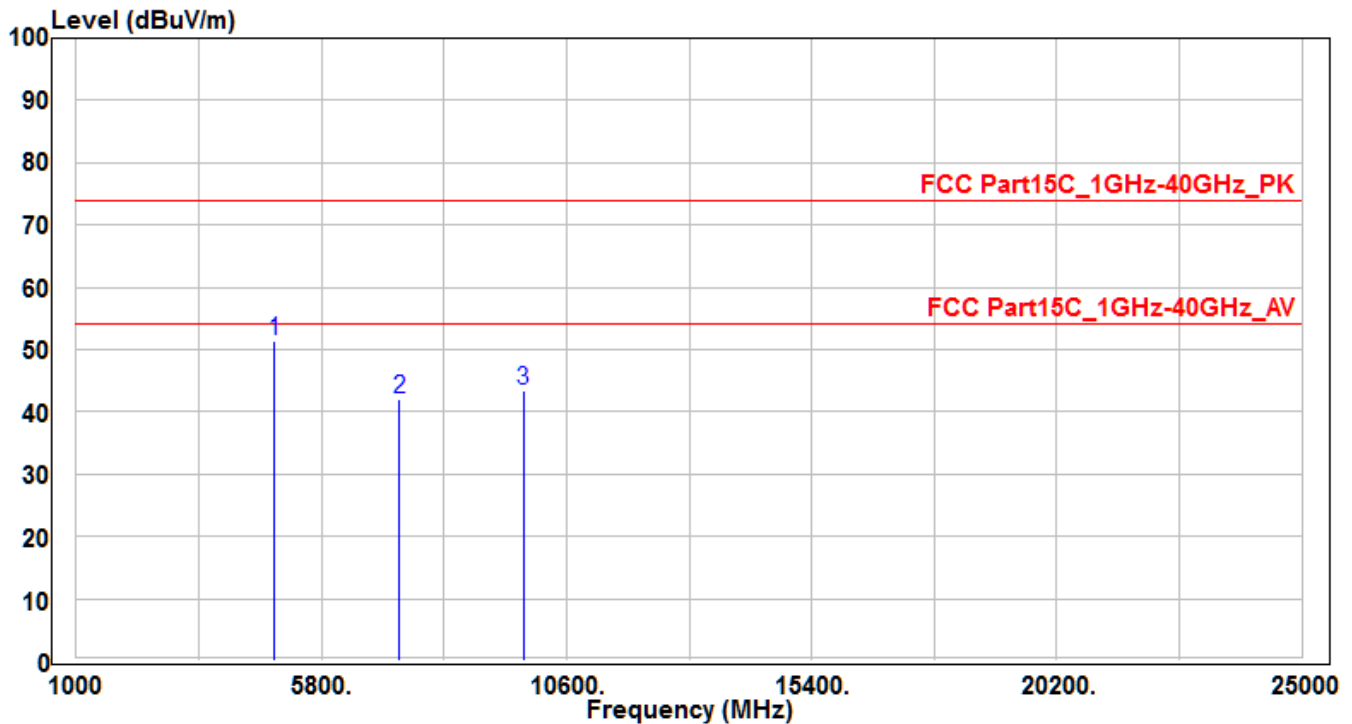


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 4804            | 49.24          | 2.7      | 51.94                | -22.06      | 74             | 150         | 400         | Peak              |
| 2  |   | 7206            | 29.93          | 11.26    | 41.19                | -32.81      | 74             | 150         | 400         | Peak              |
| 3  |   | 9608            | 27.89          | 14.47    | 42.36                | -31.64      | 74             | 150         | 400         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
3. Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
4. The emission levels of other frequencies are very lower than the limit and not show in test report °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2440MHz           | Test Voltage     | By Battery  |



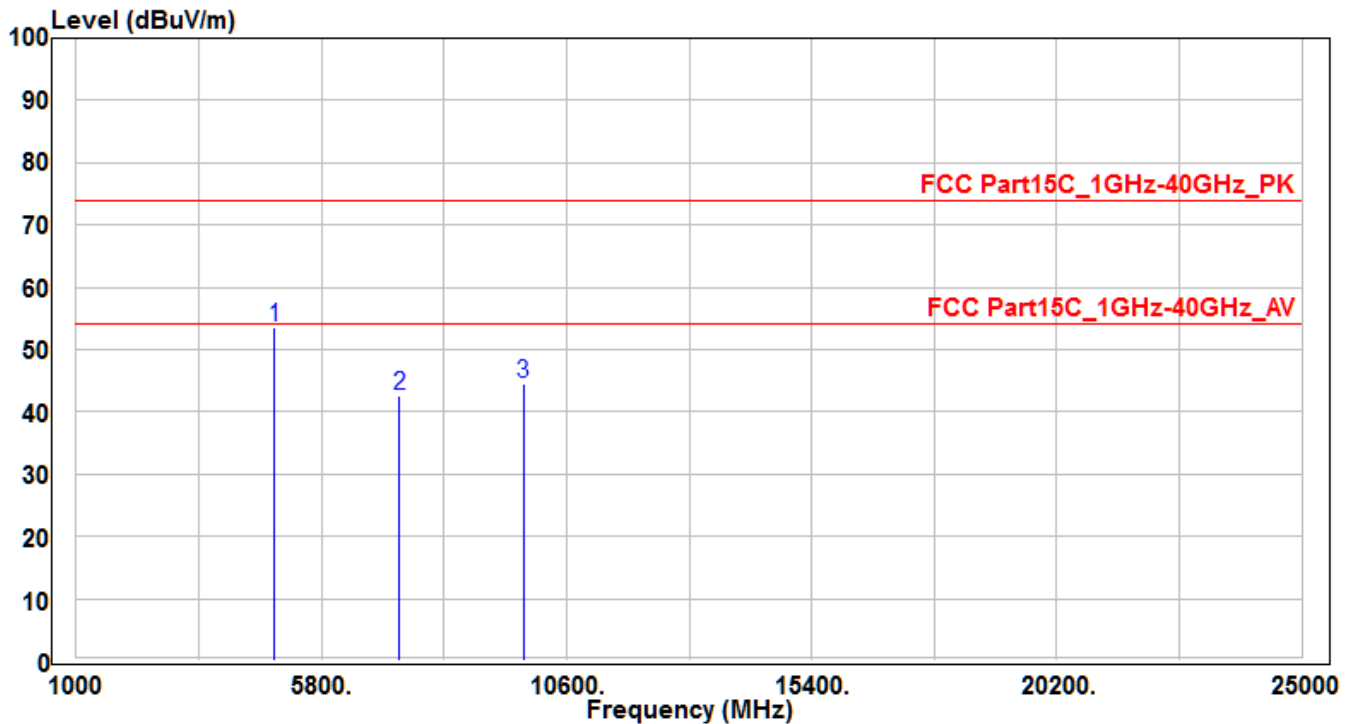
| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 4880            | 48.46          | 2.83     | 51.29                | -22.71      | 74             | 150         | 400         | Peak              |
| 2  |   | 7320            | 30.13          | 11.79    | 41.92                | -32.08      | 74             | 150         | 400         | Peak              |
| 3  |   | 9760            | 28.59          | 14.81    | 43.4                 | -30.6       | 74             | 150         | 400         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
3. Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
4. The emission levels of other frequencies are very lower than the limit and not show in test report °



|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2440MHz           | Test Voltage     | By Battery  |

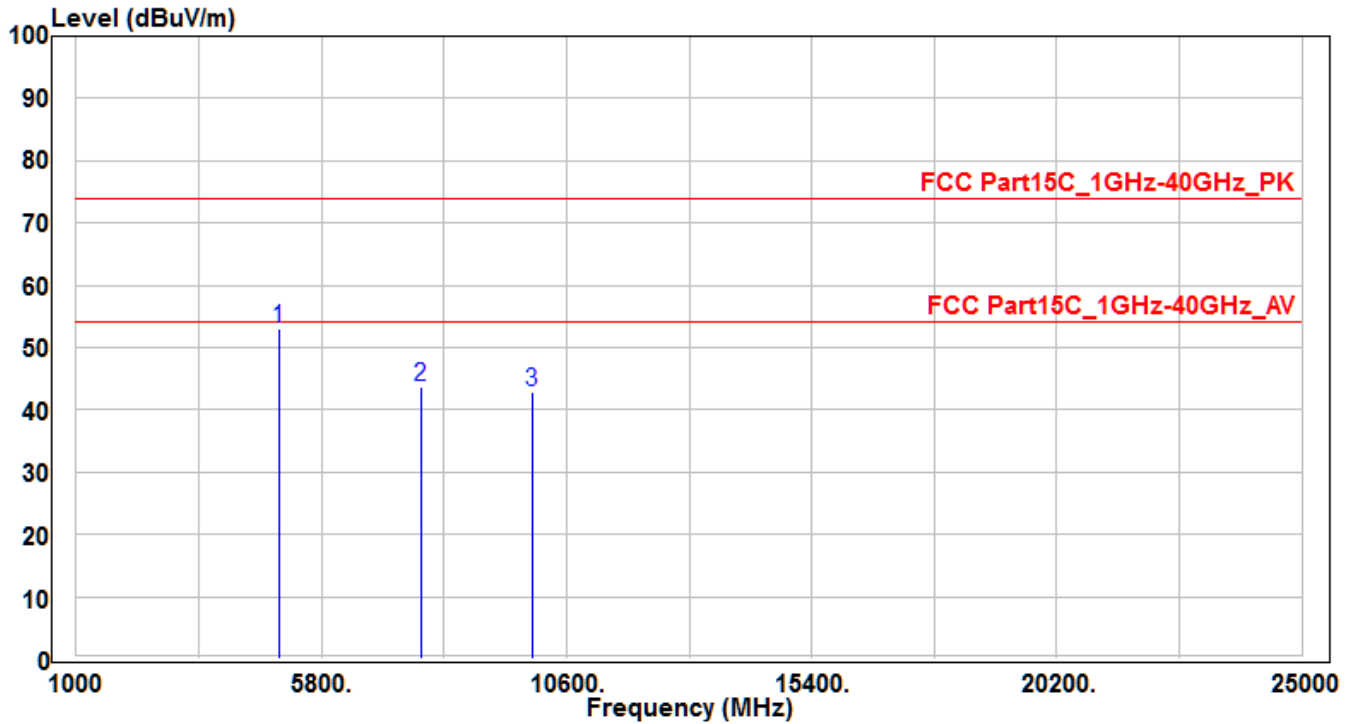


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 4880            | 50.7           | 2.83     | 53.53                | -20.47      | 74             | 150         | 400         | Peak              |
| 2  |   | 7320            | 30.78          | 11.79    | 42.57                | -31.43      | 74             | 150         | 400         | Peak              |
| 3  |   | 9760            | 29.77          | 14.81    | 44.58                | -29.42      | 74             | 150         | 400         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
3. Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
4. The emission levels of other frequencies are very lower than the limit and not show in test report °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2480MHz           | Test Voltage     | By Battery  |

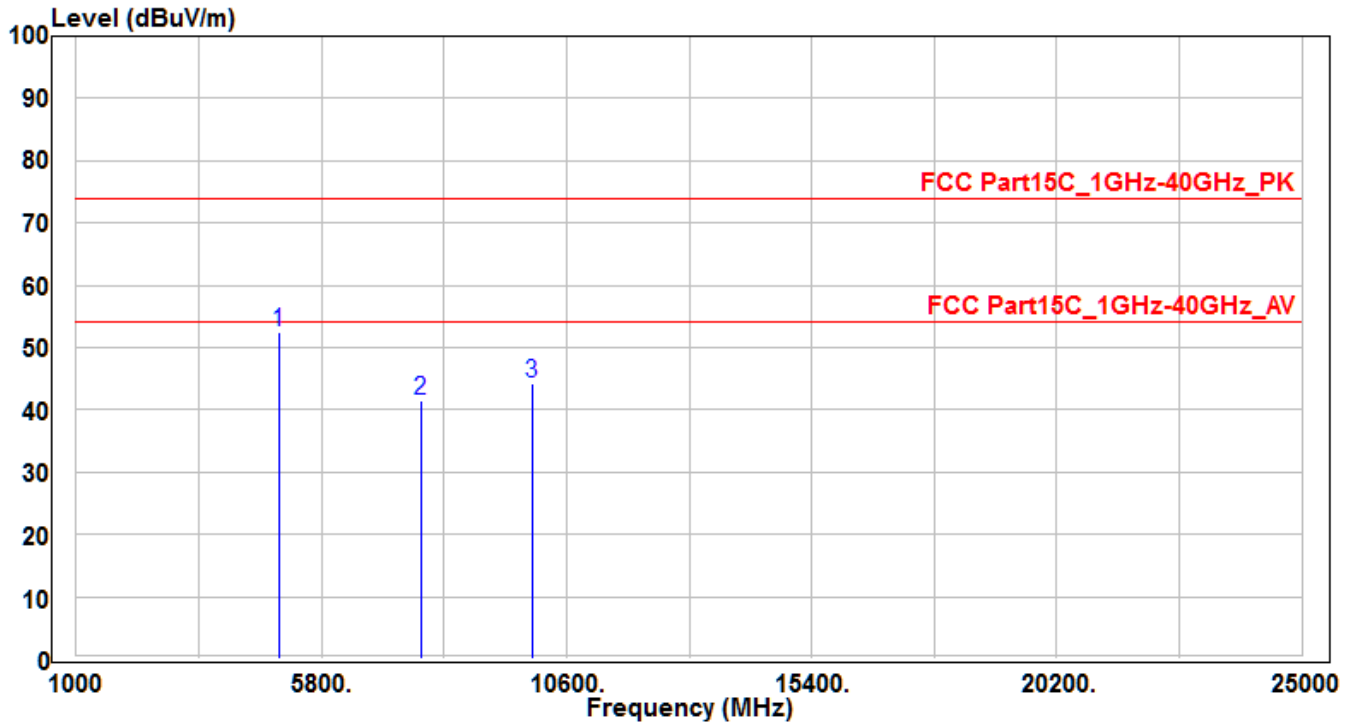


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 4960            | 50.19          | 2.98     | 53.17                | -20.83      | 74             | 150         | 400         | Peak              |
| 2  |   | 7740            | 31.4           | 12.28    | 43.68                | -30.32      | 74             | 150         | 400         | Peak              |
| 3  |   | 9920            | 27.69          | 15.18    | 42.87                | -31.13      | 74             | 150         | 400         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
3. Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
4. The emission levels of other frequencies are very lower than the limit and not show in test report °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 25°C / 60%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2480MHz           | Test Voltage     | By Battery  |



| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 4960            | 49.61          | 2.98     | 52.59                | -21.41      | 74             | 150         | 400         | Peak              |
| 2  |   | 7740            | 29.26          | 12.28    | 41.54                | -32.46      | 74             | 150         | 400         | Peak              |
| 3  |   | 9920            | 29.11          | 15.18    | 44.29                | -29.71      | 74             | 150         | 400         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB) °
3. Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) °
4. The emission levels of other frequencies are very lower than the limit and not show in test report °

### 7.3. Radiated Restricted Band Edge Measurement

#### 7.3.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

| FCC Part 15 Subpart C Paragraph 15.209 |                         |                               |
|--|-------------------------|-------------------------------|
| Frequency<br>[MHz]                     | Field Strength<br>[V/m] | Measured Distance<br>[Meters] |
| 0.009 - 0.490                          | 2400/F (kHz)            | 300                           |
| 0.490 - 1.705                          | 24000/F (kHz)           | 30                            |
| 1.705 – 30                             | 30                      | 30                            |
| 30 – 88                                | 100                     | 3                             |
| 88 – 216                               | 150                     | 3                             |
| 216 – 960                              | 200                     | 3                             |
| Above 960                              | 500                     | 3                             |

#### 7.3.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.12.1

#### 7.3.3. Test Setting

##### Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 \* RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Table 1 - RBW as a function of frequency**

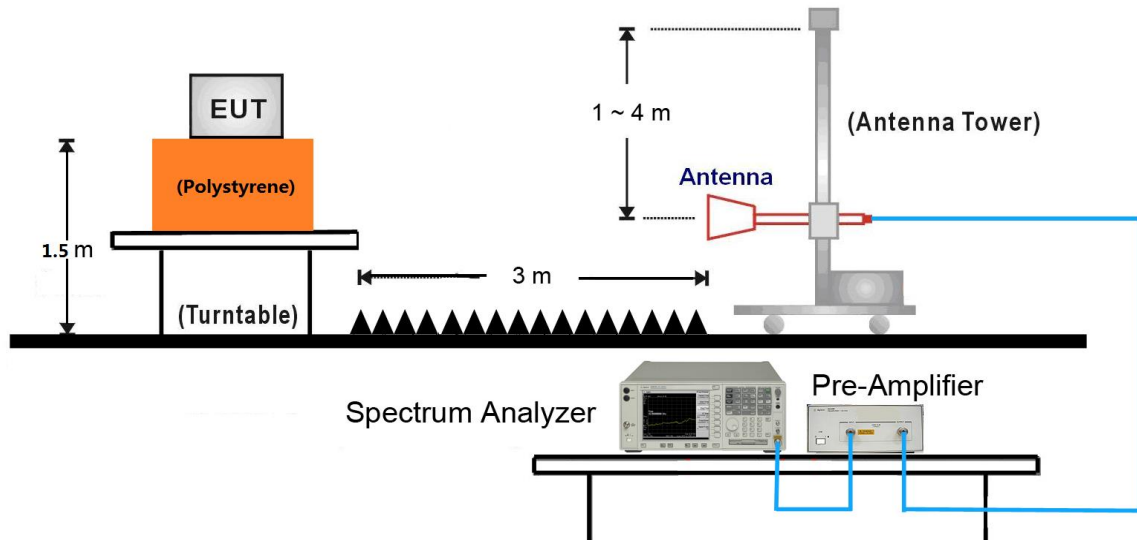
| Frequency     | RBW           |
|---------------|---------------|
| 9 ~ 150 kHz   | 200 ~ 300 Hz  |
| 0.15 ~ 30 MHz | 9 ~ 10 kHz    |
| 30 ~ 1000 MHz | 100 ~ 120 kHz |
| > 1000 MHz    | 1 MHz         |

**Average Field Strength Measurements**

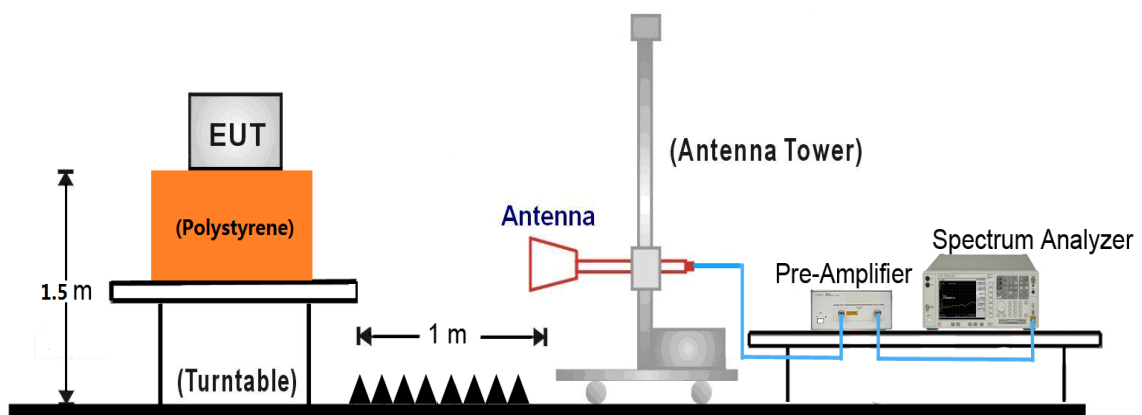
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW  $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

### 7.3.4. Test Setup

#### 1GHz ~ 18GHz Test Setup:

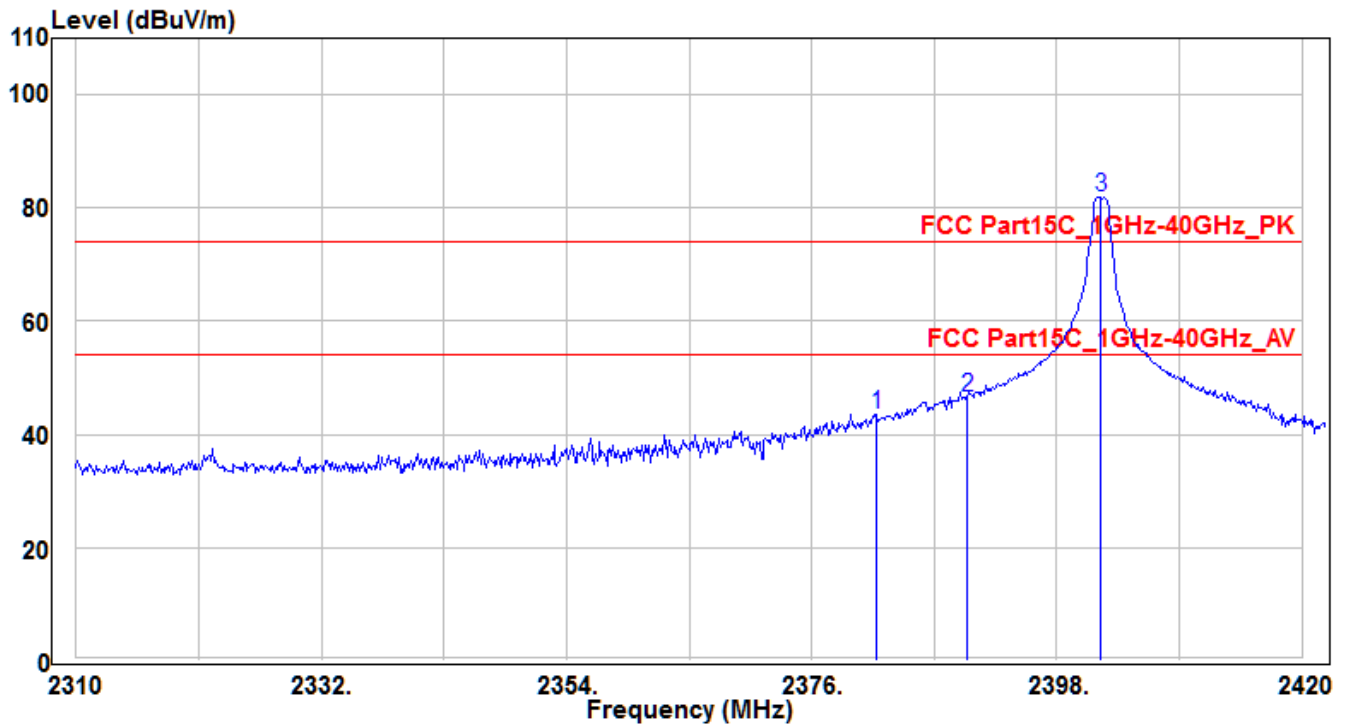


#### 18GHz ~40GHz Test Setup:



### 7.3.5. Test Result

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2402MHz           | Test Voltage     | By Battery  |

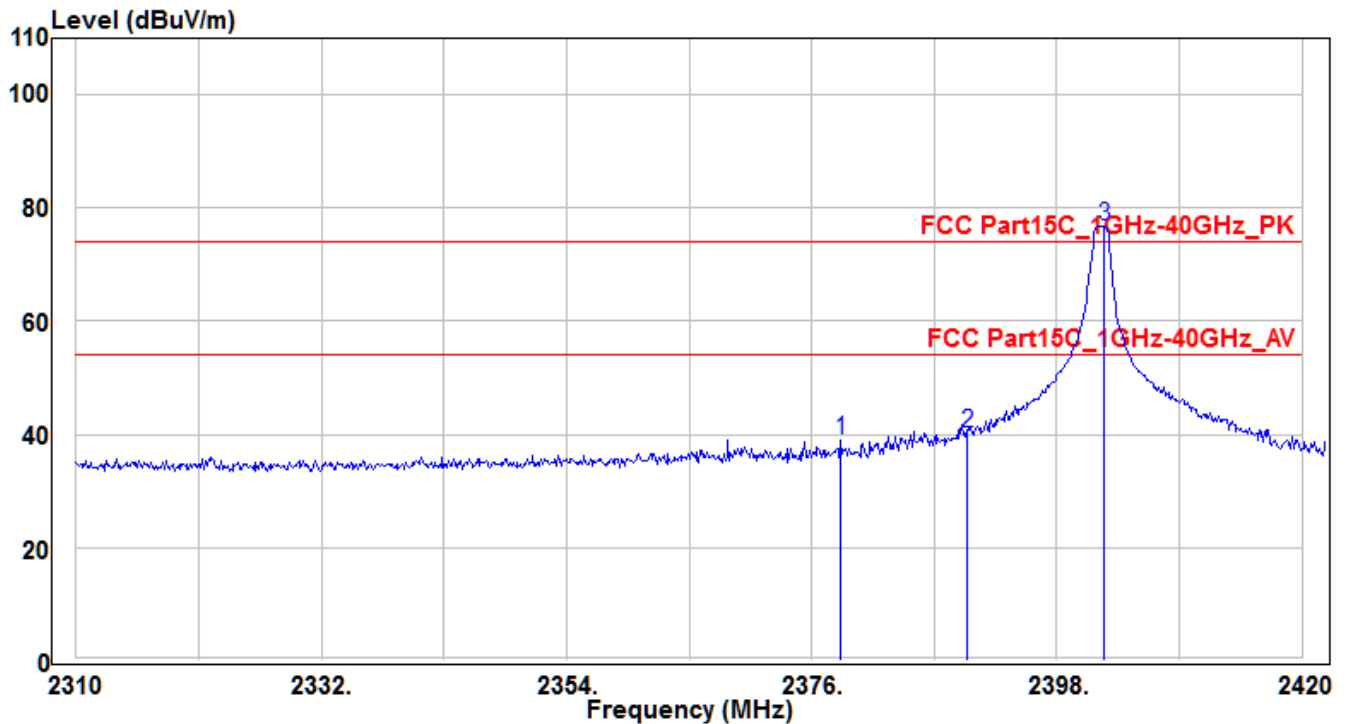


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  |   | 2381.875        | 46.15          | -2.63    | 43.52                | -30.48      | 74             | 170         | 400         | Peak              |
| 2  | * | 2390            | 49.02          | -2.59    | 46.43                | -27.57      | 74             | 170         | 400         | Peak              |
| 3  |   | 2402            | 84.33          | -2.53    | 81.8                 | 7.8         | 74             | 170         | 400         | Peak              |

#### Note :

1. " \* " means the worst value in this measurement data .
2. C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) .
3. Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) .

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2402MHz           | Test Voltage     | By Battery  |



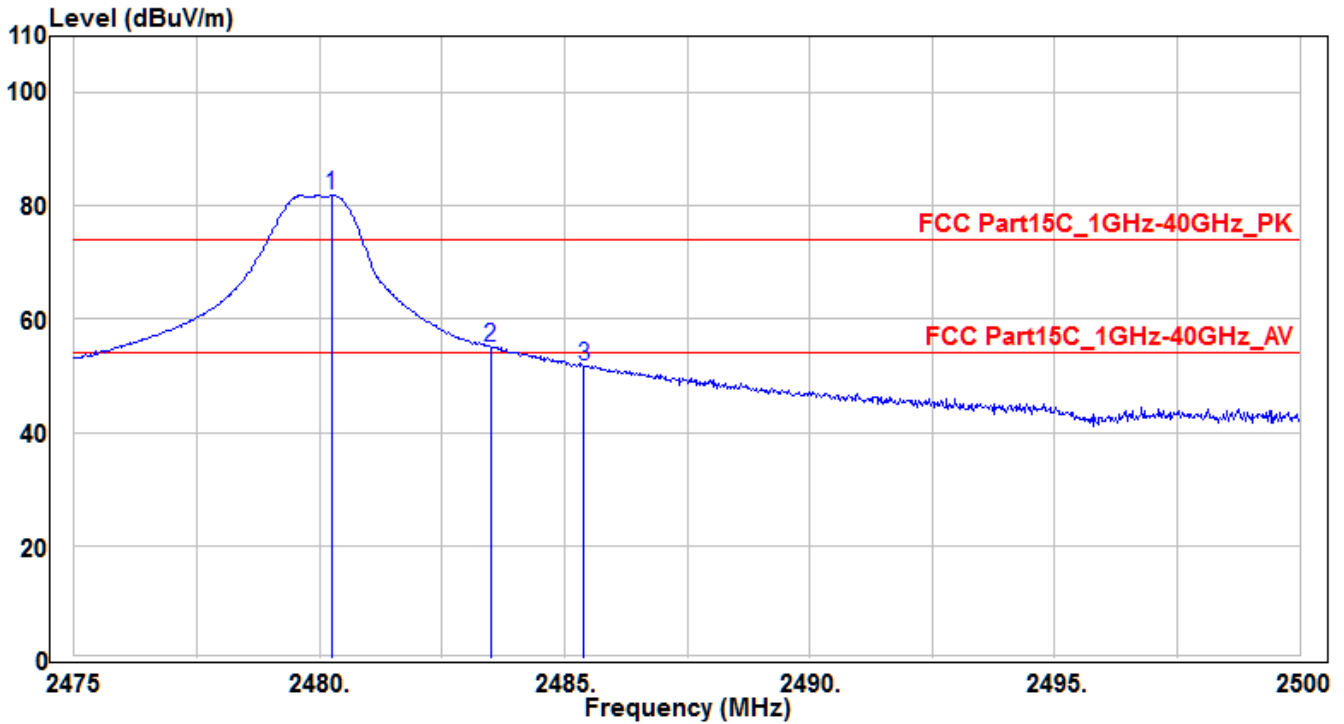
| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  |   | 2378.625        | 41.72          | -2.66    | 39.06                | -34.94      | 74             | 170         | 225         | Peak              |
| 2  | * | 2390            | 42.94          | -2.59    | 40.35                | -33.65      | 74             | 170         | 225         | Peak              |
| 3  |   | 2402.25         | 79.43          | -2.53    | 76.9                 | 2.9         | 74             | 170         | 225         | Peak              |

#### Note :

- " \* " means the worst value in this measurement data °
- C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
- Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °



|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2480MHz           | Test Voltage     | By Battery  |

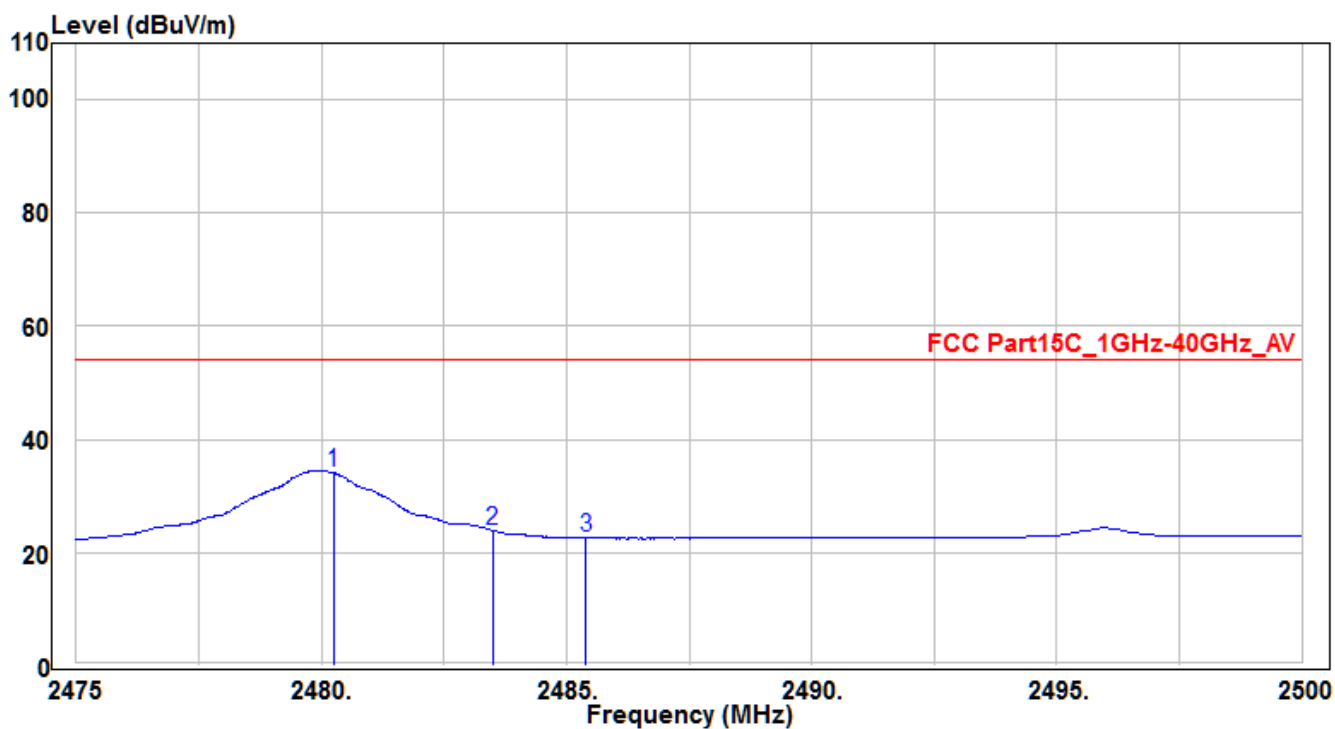


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  |   | 2480.25         | 83.95          | -2.12    | 81.83                | 7.83        | 74             | 165         | 380         | Peak              |
| 2  | * | 2483.5          | 57.12          | -2.11    | 55.01                | -18.99      | 74             | 165         | 380         | Peak              |
| 3  |   | 2485.4          | 53.83          | -2.1     | 51.73                | -22.27      | 74             | 165         | 380         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
3. Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2480MHz           | Test Voltage     | By Battery  |

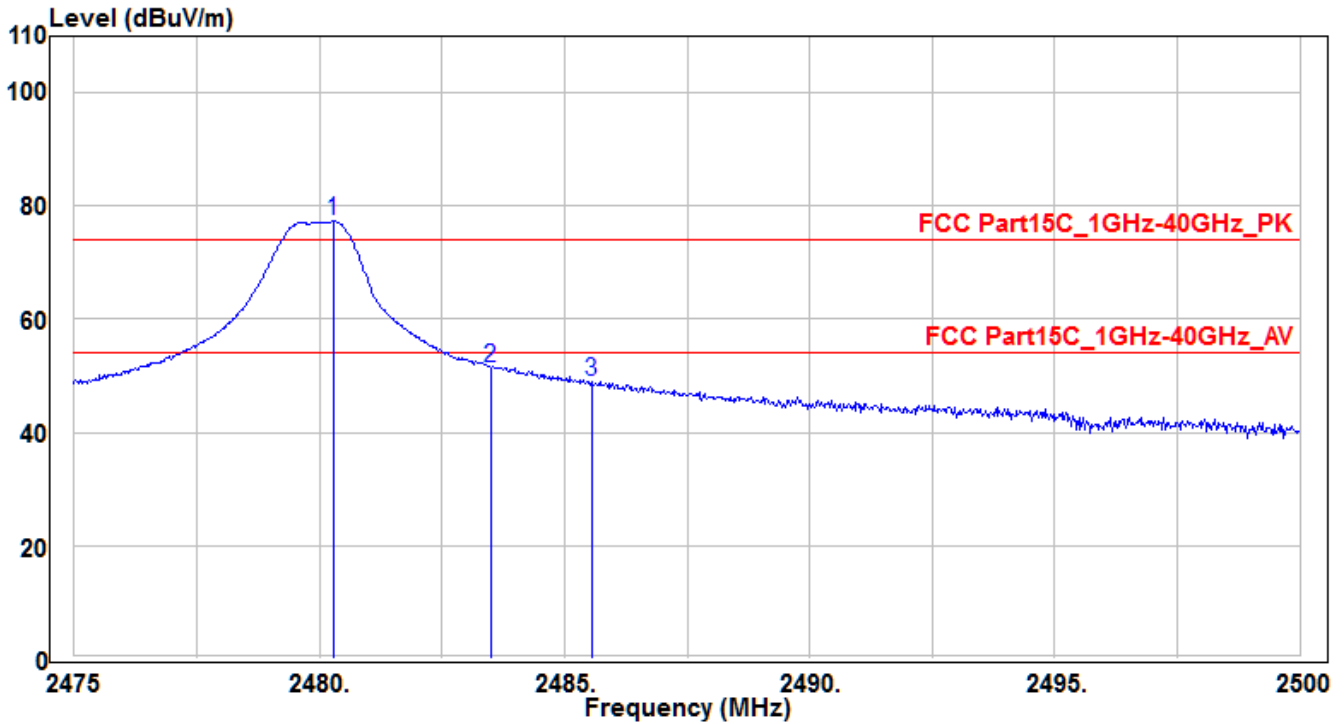


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 2480.25         | 36.2           | -2.12    | 34.08                | -19.92      | 54             | 165         | 380         | Average           |
| 2  |   | 2483.5          | 26.1           | -2.11    | 23.99                | -30.01      | 54             | 165         | 380         | Average           |
| 3  |   | 2485.4          | 24.7           | -2.1     | 22.6                 | -31.4       | 54             | 165         | 380         | Average           |

Note :

1. " \* " means the worst value in this measurement data °
2. C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
3. Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2480MHz           | Test Voltage     | By Battery  |



| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  |   | 2480.275        | 79.39          | -2.12    | 77.27                | 3.27        | 74             | 160         | 170         | Peak              |
| 2  | * | 2483.5          | 53.59          | -2.11    | 51.48                | -22.52      | 74             | 160         | 170         | Peak              |
| 3  |   | 2485.55         | 51.22          | -2.1     | 49.12                | -24.88      | 74             | 160         | 170         | Peak              |

Note :

1. " \* " means the worst value in this measurement data °
2. C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
3. Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

## 7.4. Field strength of fundamental

### 7.4.1. Test Limit

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

| FCC Part 15 Subpart C Paragraph 15.249 |   |   |
|--|---|---|
| Frequency<br>[MHz]                     | Field Strength of Fundamental<br>[Millivolts/Meter] | Field Strength of Harmonics<br>[Microvolts/Meter] |
| 902-928                                | 50  | 500   |
| 2400-2483.5                            | 50  | 500   |
| 5725-5875                              | 50  | 500   |
| 24000-24250                            | 250   | 2500  |

### 7.4.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.12.1

### 7.4.3. Test Setting

#### Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 \* RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Table 1 - RBW as a function of frequency**

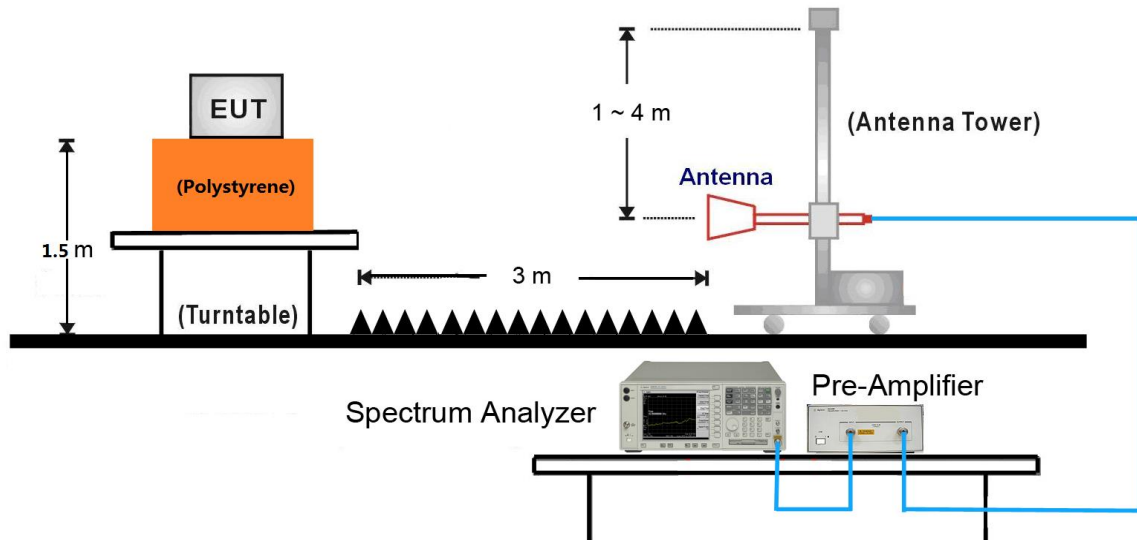
| Frequency     | RBW           |
|---------------|---------------|
| 9 ~ 150 kHz   | 200 ~ 300 Hz  |
| 0.15 ~ 30 MHz | 9 ~ 10 kHz    |
| 30 ~ 1000 MHz | 100 ~ 120 kHz |
| > 1000 MHz    | 1 MHz         |

### **Average Field Strength Measurements**

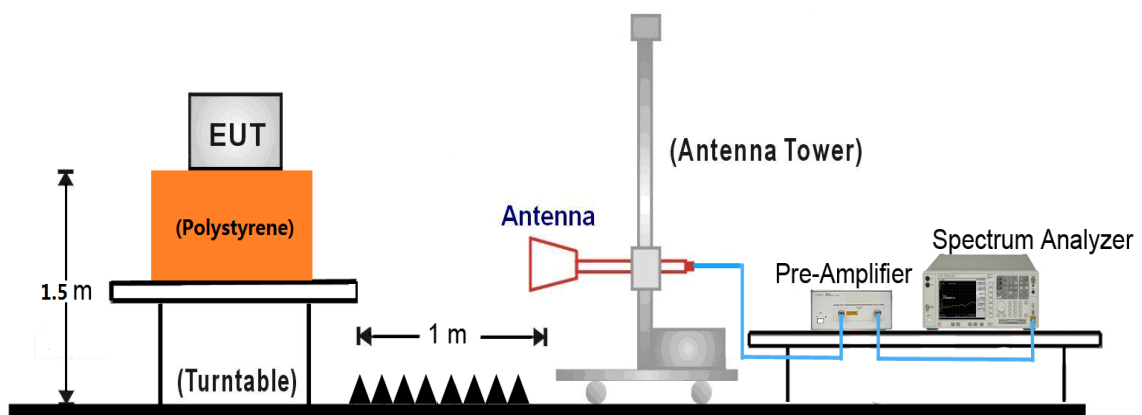
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW  $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

#### 7.4.4. Test Setup

##### 1GHz ~ 18GHz Test Setup:

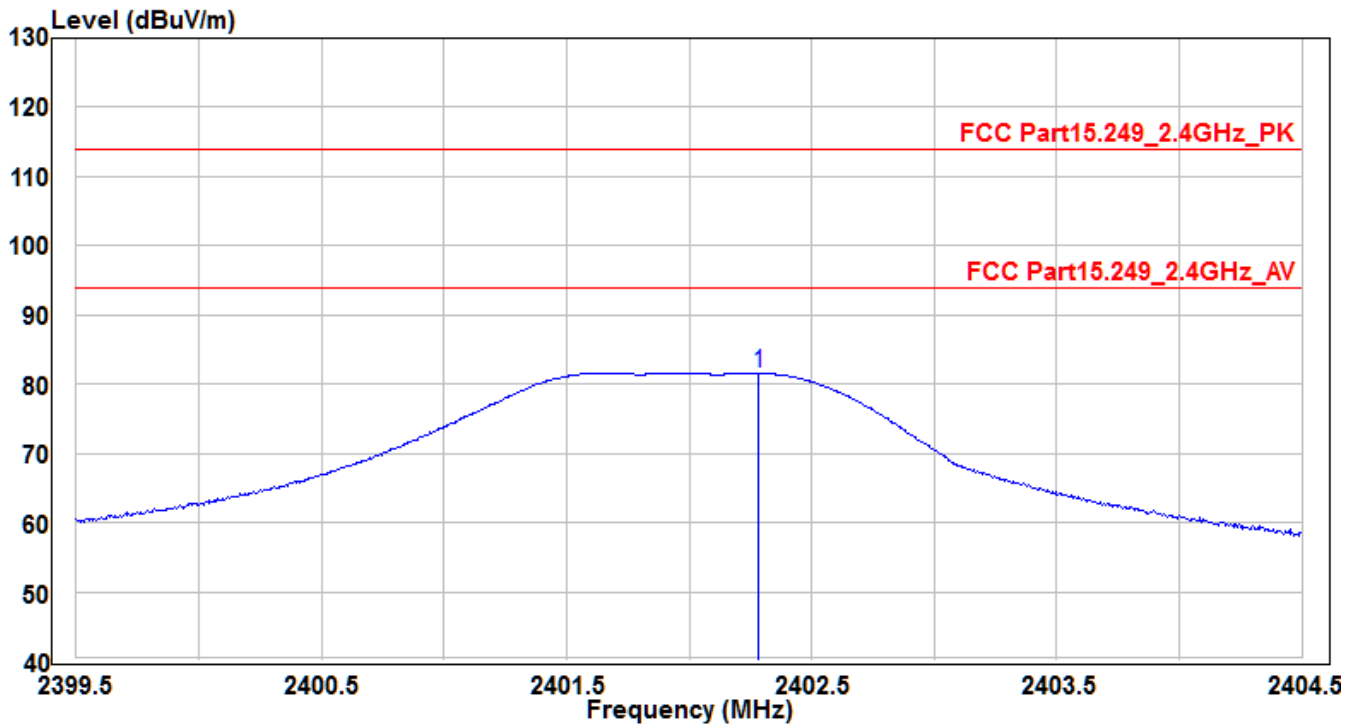


##### 18GHz ~40GHz Test Setup:



#### 7.4.5. Test Result

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2402MHz           | Test Voltage     | By Battery  |

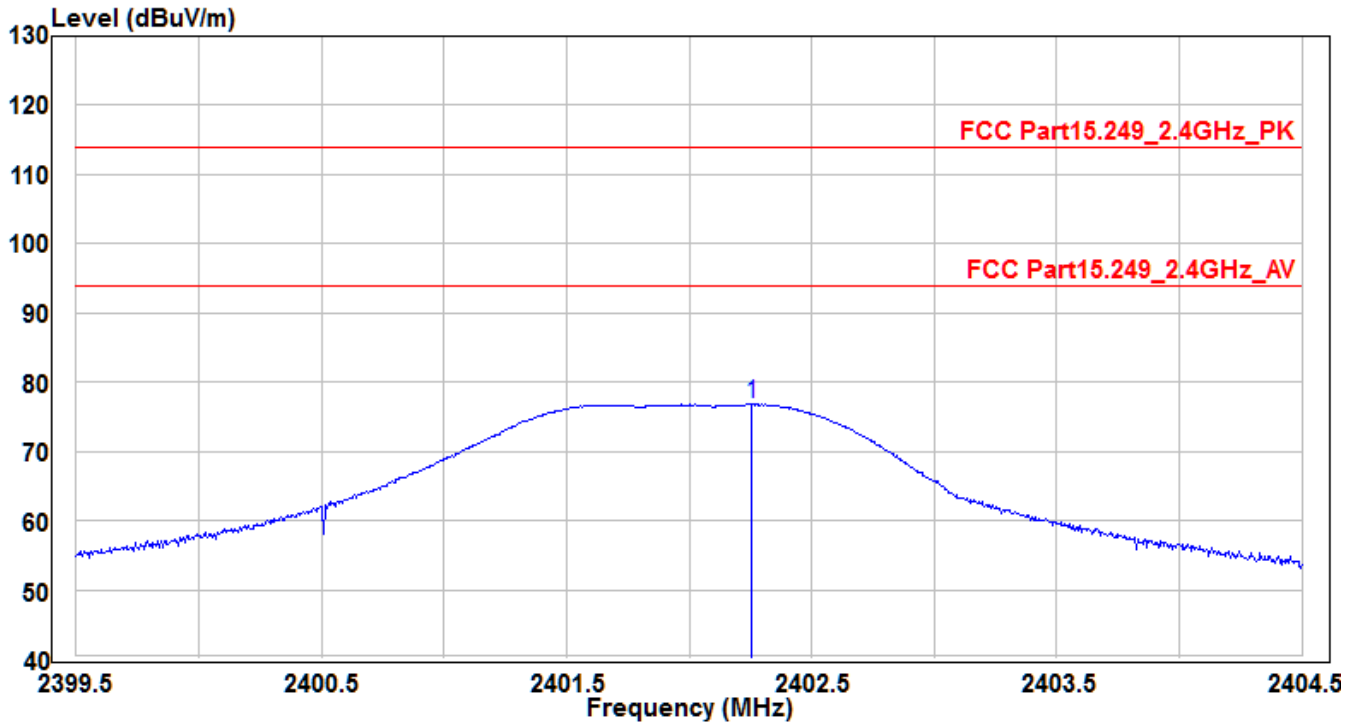


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 2402.285        | 84.19          | -2.53    | 81.66                | -32.34      | 114            | 170         | 400         | Peak              |

Note :

- "\*" means the worst value in this measurement data °
- C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
- Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2402MHz           | Test Voltage     | By Battery  |



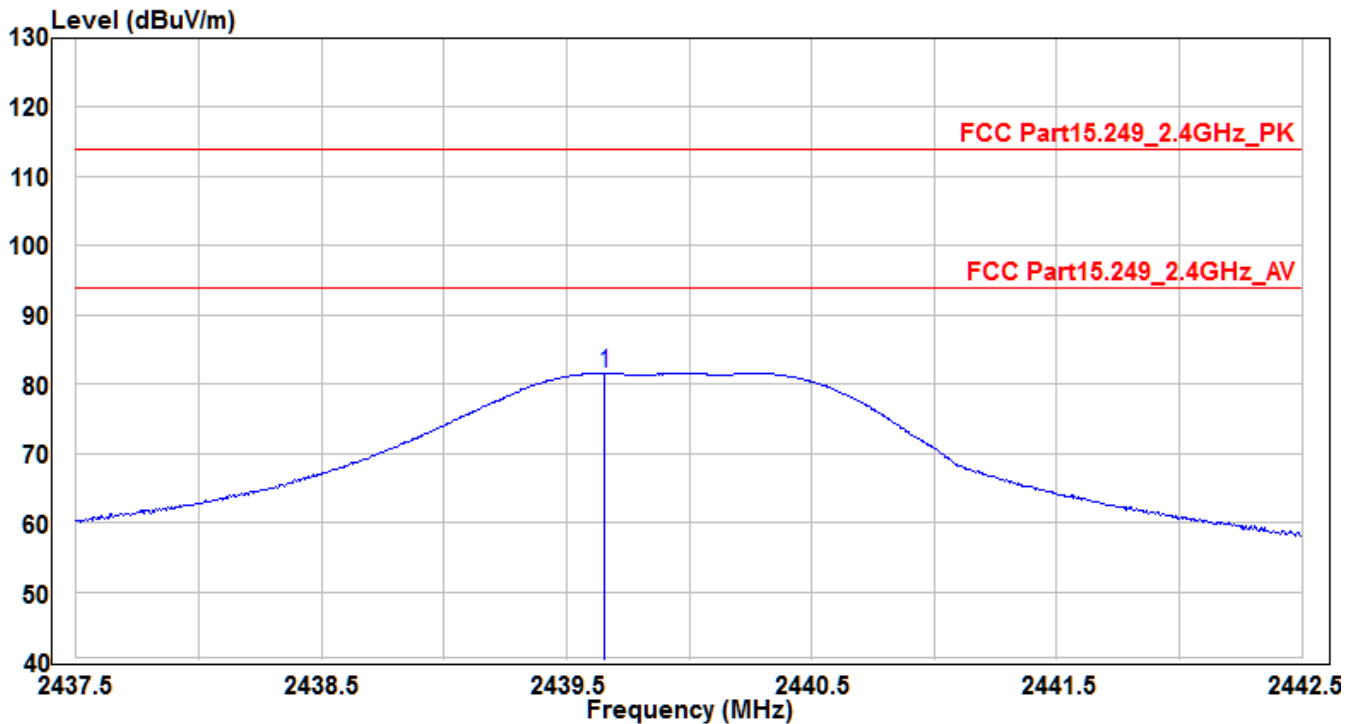
| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 2402.255        | 79.31          | -2.53    | 76.78                | -37.22      | 114            | 170         | 225         | Peak              |

Note :

- "\*" means the worst value in this measurement data °
- C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
- Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °



|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2440MHz           | Test Voltage     | By Battery  |

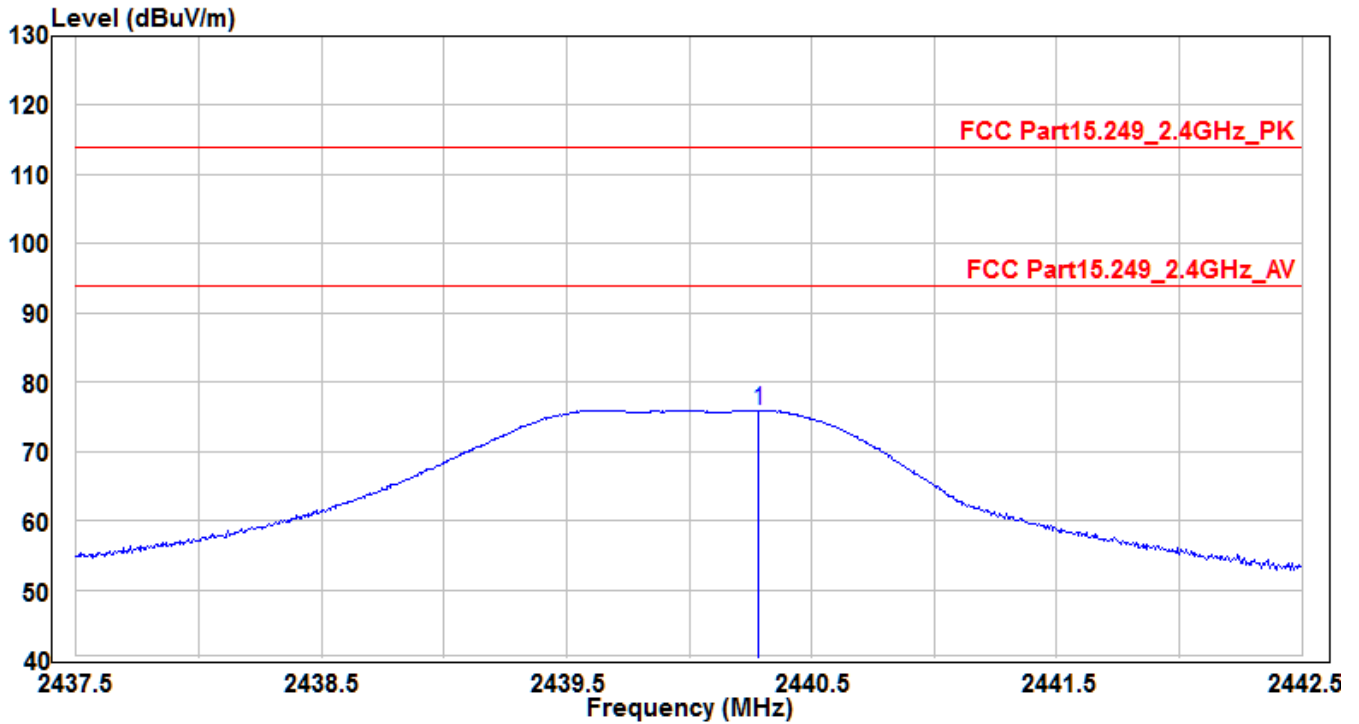


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 2439.655        | 83.91          | -2.33    | 81.58                | -32.42      | 114            | 165         | -10         | Peak              |

#### Note :

- "\*" means the worst value in this measurement data °
- C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
- Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2440MHz           | Test Voltage     | By Battery  |

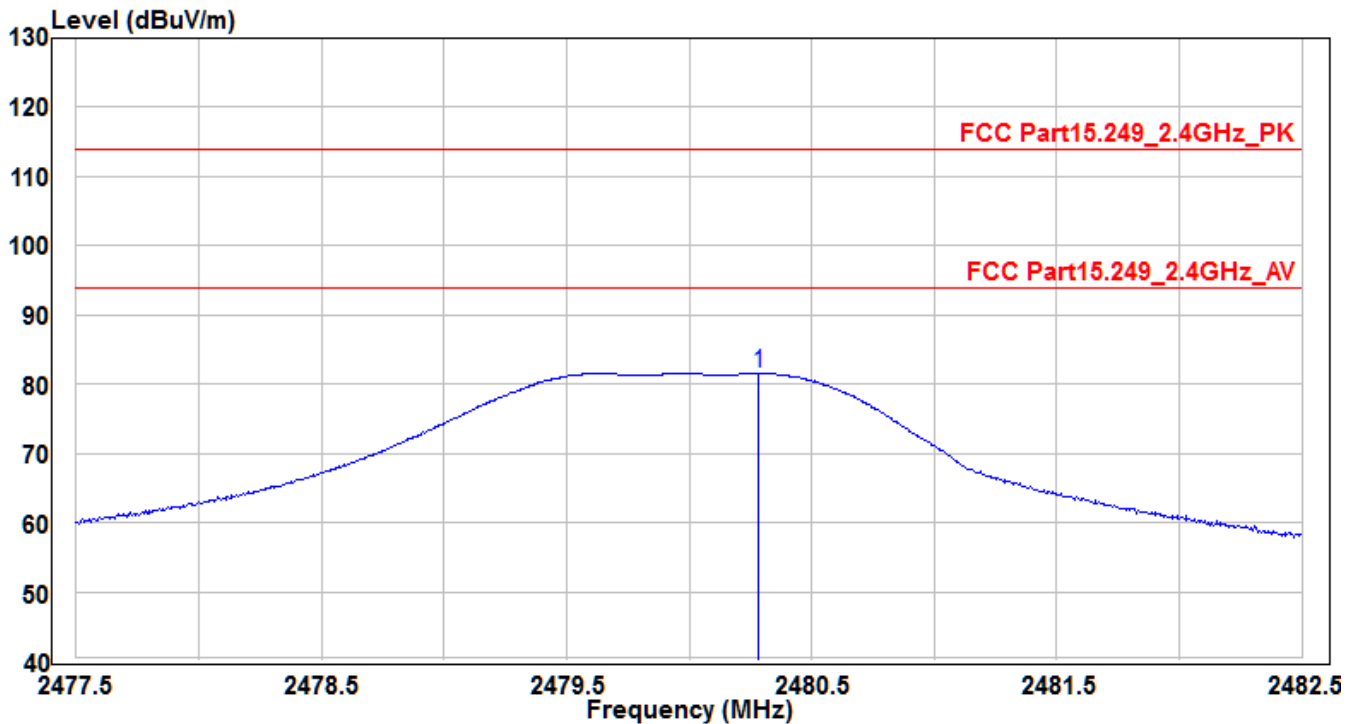


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 2440.285        | 78.31          | -2.33    | 75.98                | -38.02      | 114            | 150         | 305         | Peak              |

#### Note :

- "\*" means the worst value in this measurement data °
- C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
- Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Horizontal              | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2480MHz           | Test Voltage     | By Battery  |

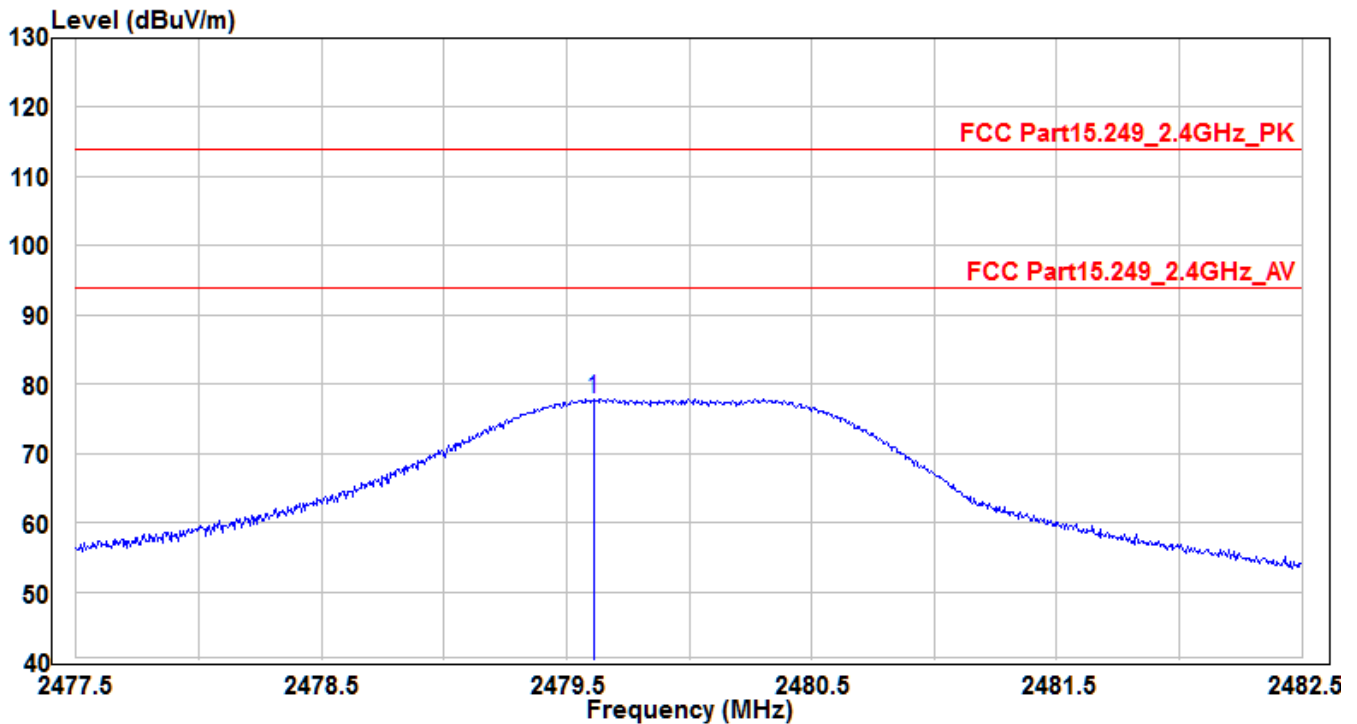


| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 2480.285        | 83.7           | -2.12    | 81.58                | -32.42      | 114            | 165         | 380         | Peak              |

#### Note :

- "\*" means the worst value in this measurement data °
- C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
- Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

|           |                         |                  |             |
|-----------|-------------------------|------------------|-------------|
| EUT       | Wireless Mouse          | Test Date        | 2017/08/21  |
| Factor    | BBHA 9120D (1GHz~18GHz) | Temp. / Humidity | 21°C / 57%  |
| Polarity  | Vertical                | Site / Engineer  | AC1 / Peter |
| Test Mode | MODE1-2480MHz           | Test Voltage     | By Battery  |



| No |   | Frequency (MHz) | Reading (dBuV) | C.F (dB) | Measurement (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Height (cm) | Angle (deg) | Remark (QP/PK/AV) |
|----|---|-----------------|----------------|----------|----------------------|-------------|----------------|-------------|-------------|-------------------|
| 1  | * | 2479.61         | 79.96          | -2.12    | 77.84                | -36.16      | 114            | 160         | 170         | Peak              |

#### Note :

- "\*" means the worst value in this measurement data °
- C.F ( Correction Factor ) = Antenna Factor (dB)+ Cable Loss (dB) – Preamplifier(dB) °
- Measurement (dBuV/m) = Reading(dBuV) + C.F ( Correction Factor ) °

## 8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Wireless Mouse** is in compliance with Part 15C of the FCC Rules.

\_\_\_\_\_ The End \_\_\_\_\_