



中国认可  
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检测  
TESTING  
CNAS L5313

# Test Report

**FCC Part15 Subpart C (Class II Permissive Change)**

Product Name : Virtual Reality Controller

Model No. : B0-S8A526053-BZ

FCC ID : 2A13GS8A526053

Applicant : Pico Technology Inc.

Address : 20th Floor, Shining Tower, No.35 Xueyuan Road,  
HaiDian District, Beijing, The People

# Test Report Certification

Issued Date : Sep. 18, 2016

Report No. : 1672084R-RF-US-P06V01

Product Name : Virtual Reality Controller  
Applicant : Pico Technology Inc.  
Address : 20th Floor, Shining Tower, No.35 Xueyuan Road, HaiDian  
District, Beijing, The People

## Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

|                      |          |                       |
|----------------------|----------|-----------------------|
| <b>Taiwan R.O.C.</b> | <b>:</b> | <b>BSMI, NCC, TAF</b> |
| <b>USA</b>           | <b>:</b> | <b>FCC</b>            |
| <b>Japan</b>         | <b>:</b> | <b>VCCI</b>           |
| <b>China</b>         | <b>:</b> | <b>CNAS</b>           |

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The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : [http://www.quietek.com/index\\_en.aspx](http://www.quietek.com/index_en.aspx)

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## History of This Test Report

| REPORT NO.            | VERSION | DESCRIPTION                                  | ISSUED DATE   |
|-----------------------|---------|----------------------------------------------|---------------|
| 1672084R-RF-US-P06V03 | V1.0    | Initial Issued Report                        | Aug. 23, 2016 |
| 1672084R-RF-US-P06V03 | V1.1    | Comfirm the power and<br>modified the power. | Sep. 18, 2016 |
|                       |         |                                              |               |
|                       |         |                                              |               |

## 1. General Information

### 1.1. EUT Description

|                         |                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------|
| Product Name            | Virtual Reality Controller                                                             |
| Brand Name              |  Pico |
| Model No.               | B0-S8A526053-BZ                                                                        |
| Working Voltage         | DC 5V or 9V                                                                            |
| Bluetooth Specification | V4.0                                                                                   |
| Frequency Range         | 2402- 2480 MHz                                                                         |
| Channel Number          | V4.0: 40                                                                               |
| Channel Separation      | V4.0: 2MHz                                                                             |
| Type of Modulation      | V4.0: GFSK                                                                             |
| Data Rate               | V4.0: 1Mbps(GFSK)                                                                      |
| Antenna Type            | Reference to Antenna List                                                              |
| Peak Antenna Gain       | Reference to Antenna List                                                              |

## 1.2. Working Frequency of Each Channel:

| Bluetooth Working Frequency of Each Channel: (For BLE) |           |         |           |         |           |         |           |
|--------------------------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel                                                | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 00                                                     | 2402 MHz  | 01      | 2404 MHz  | 02      | 2406 MHz  | 03      | 2408 MHz  |
| 04                                                     | 2410 MHz  | 05      | 2412 MHz  | 06      | 2414 MHz  | 07      | 2416 MHz  |
| 08                                                     | 2418 MHz  | 09      | 2420 MHz  | 10      | 2422 MHz  | 11      | 2424 MHz  |
| 12                                                     | 2426 MHz  | 13      | 2428 MHz  | 14      | 2430 MHz  | 15      | 2432 MHz  |
| 16                                                     | 2434 MHz  | 17      | 2436 MHz  | 18      | 2438 MHz  | 19      | 2440 MHz  |
| 20                                                     | 2442 MHz  | 21      | 2444 MHz  | 22      | 2446 MHz  | 23      | 2448 MHz  |
| 24                                                     | 2450 MHz  | 25      | 2452 MHz  | 26      | 2454 MHz  | 27      | 2456 MHz  |
| 28                                                     | 2458 MHz  | 29      | 2460 MHz  | 30      | 2462 MHz  | 31      | 2464 MHz  |
| 32                                                     | 2466 MHz  | 33      | 2468 MHz  | 34      | 2470 MHz  | 35      | 2472 MHz  |
| 36                                                     | 2474 MHz  | 37      | 2476 MHz  | 38      | 2478 MHz  | 39      | 2480 MHz  |

## 1.3. Antenna information

|                      |                                               |                                                          |                                    |  |  |
|----------------------|-----------------------------------------------|----------------------------------------------------------|------------------------------------|--|--|
| Model No.            | AA077                                         |                                                          |                                    |  |  |
| Antenna manufacturer | Unictron                                      |                                                          |                                    |  |  |
| Antenna Delivery     | <input checked="" type="checkbox"/> 1*TX+1*RX | <input type="checkbox"/> 2*TX+2*RX                       | <input type="checkbox"/> 3*TX+3*RX |  |  |
| Antenna technology   | <input checked="" type="checkbox"/> SISO      |                                                          |                                    |  |  |
|                      | <input type="checkbox"/> MIMO                 | <input type="checkbox"/> Basic                           |                                    |  |  |
|                      |                                               | <input type="checkbox"/> CDD                             |                                    |  |  |
|                      |                                               | <input type="checkbox"/> Beam-forming                    |                                    |  |  |
| Antenna Type         | <input type="checkbox"/> External             | <input type="checkbox"/> Dipole                          |                                    |  |  |
|                      | <input checked="" type="checkbox"/> Internal  | <input type="checkbox"/> PIFA                            |                                    |  |  |
|                      |                                               | <input type="checkbox"/> PCB                             |                                    |  |  |
|                      |                                               | <input checked="" type="checkbox"/> Ceramic Chip Antenna |                                    |  |  |
|                      |                                               | <input type="checkbox"/> Metal plate type F antenna      |                                    |  |  |
| Antenna Gain         | 1.4dBi                                        |                                                          |                                    |  |  |

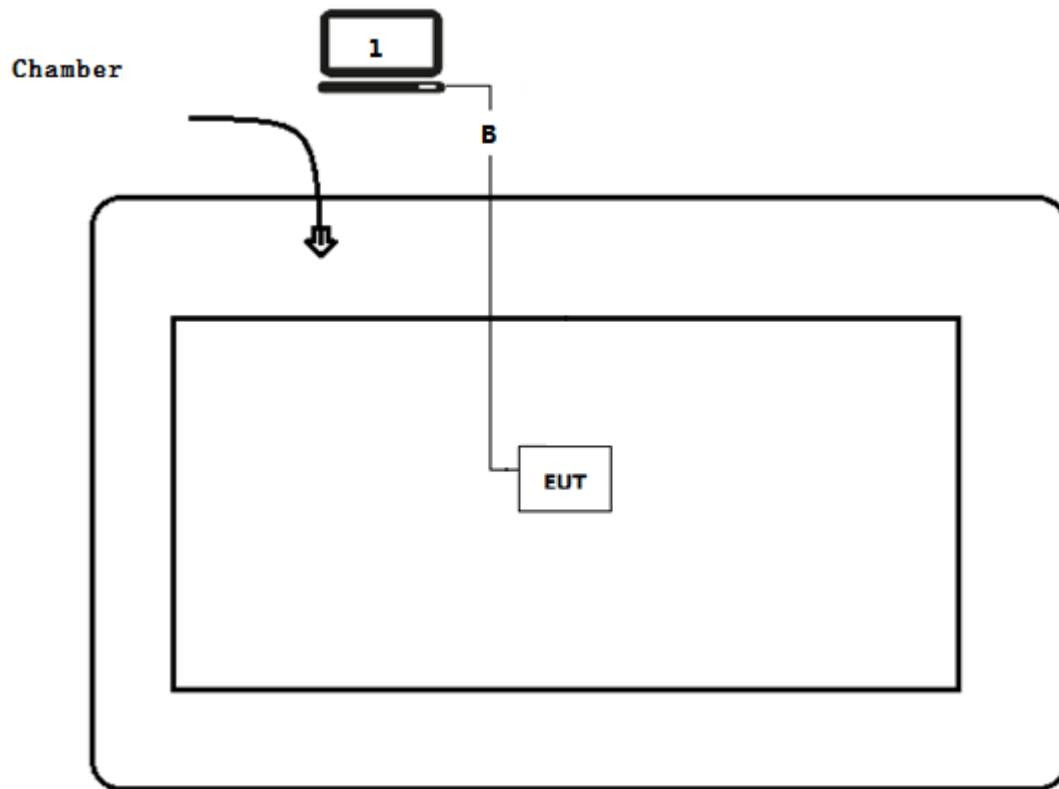
## 1.4. Mode of Operation

|           |
|-----------|
| Test Mode |
|-----------|

Mode 1: Transmit

## 1.6. Configuration of Tested System

Test setup Diagram- Radiated Emission



B: LAN Cable, Non-shield, 10m

### 1.7. EUT Exercise Software

|   |                                                                                                       |
|---|-------------------------------------------------------------------------------------------------------|
| 1 | Setup the EUT and simulators as shown on above.                                                       |
| 2 | Turn on the power of all equipment.                                                                   |
| 3 | Run the RF test software, and set the test mode and channel, then press OK to start continue receive. |

## 2. Technical Test

### 2.1. Summary of Test Result

| Performed Test Item                     | Normative References                                          | Limit      | Result |
|-----------------------------------------|---------------------------------------------------------------|------------|--------|
| Emissions in restricted frequency bands | FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209       | FCC 15.209 | PASS   |
| Radiated Emission Band Edge             | FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)            | FCC 15.209 | PASS   |
| Fundamental emission output power       | FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3) |            |        |

## 2.2. Test Frequency configuration:

| Bluetooth Working Frequency of Each Channel: (For BLE) |           |         |           |         |           |         |           |
|--------------------------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel                                                | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 00                                                     | 2402 MHz  | 01      | 2404 MHz  | 02      | 2406 MHz  | 03      | 2408 MHz  |
| 04                                                     | 2410 MHz  | 05      | 2412 MHz  | 06      | 2414 MHz  | 07      | 2416 MHz  |
| 08                                                     | 2418 MHz  | 09      | 2420 MHz  | 10      | 2422 MHz  | 11      | 2424 MHz  |
| 12                                                     | 2426 MHz  | 13      | 2428 MHz  | 14      | 2430 MHz  | 15      | 2432 MHz  |
| 16                                                     | 2434 MHz  | 17      | 2436 MHz  | 18      | 2438 MHz  | 19      | 2440 MHz  |
| 20                                                     | 2442 MHz  | 21      | 2444 MHz  | 22      | 2446 MHz  | 23      | 2448 MHz  |
| 24                                                     | 2450 MHz  | 25      | 2452 MHz  | 26      | 2454 MHz  | 27      | 2456 MHz  |
| 28                                                     | 2458 MHz  | 29      | 2460 MHz  | 30      | 2462 MHz  | 31      | 2464 MHz  |
| 32                                                     | 2466 MHz  | 33      | 2468 MHz  | 34      | 2470 MHz  | 35      | 2472 MHz  |
| 36                                                     | 2474 MHz  | 37      | 2476 MHz  | 38      | 2478 MHz  | 39      | 2480 MHz  |

### 2.3. Test Environment

| Items                      | Required (IEC 68-1) | Actual   |
|----------------------------|---------------------|----------|
| Temperature (°C)           | 15-35               | 21       |
| Humidity (%RH)             | 25-75               | 50       |
| Barometric pressure (mbar) | 860-1060            | 950-1000 |

### 2.4. Measurement Uncertainty

| Test Items | Uncertainty |
|------------|-------------|
|------------|-------------|

AC Power Line Conducted Emission

### 3. Emissions in restricted frequency bands

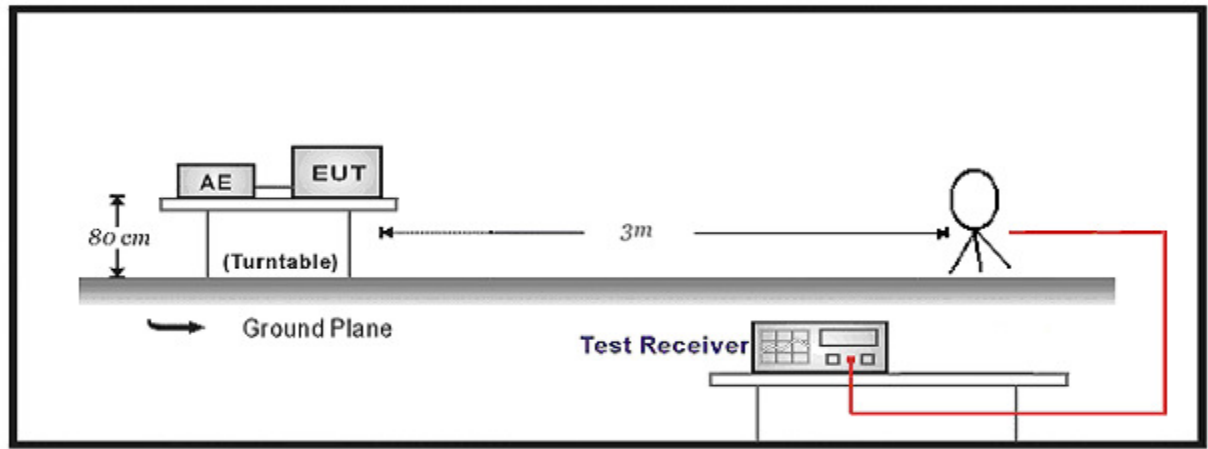
#### 3.1. Test Equipment

| Radiated Emission(Below 1GHz) / AC-2                                                                                                       |              |              |            |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No.     | Serial No. | Cal. Date  | Cal. Due Date |
| EMI Test Receiver                                                                                                                          | R&S          | ESCI         | 100573     | 2016.03.05 | 2017.03.05    |
| Loop Antenna                                                                                                                               | R&S          | HFH2-Z2      | 833799/003 | 2015.11.07 | 2016.11.07    |
| Bilog Chainenna                                                                                                                            | Teseq GmbH   | CBL6112D     | 27611      | 2015.09.25 | 2016.09.25    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC2-C      | 2017.02.28 | 2017.02.28    |
| Temperature/Humidity Meter                                                                                                                 | Zhichen      | ZC1-2        | AC2-TH     | 2016.01.05 | 2017.01.05    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |              |            |            |               |

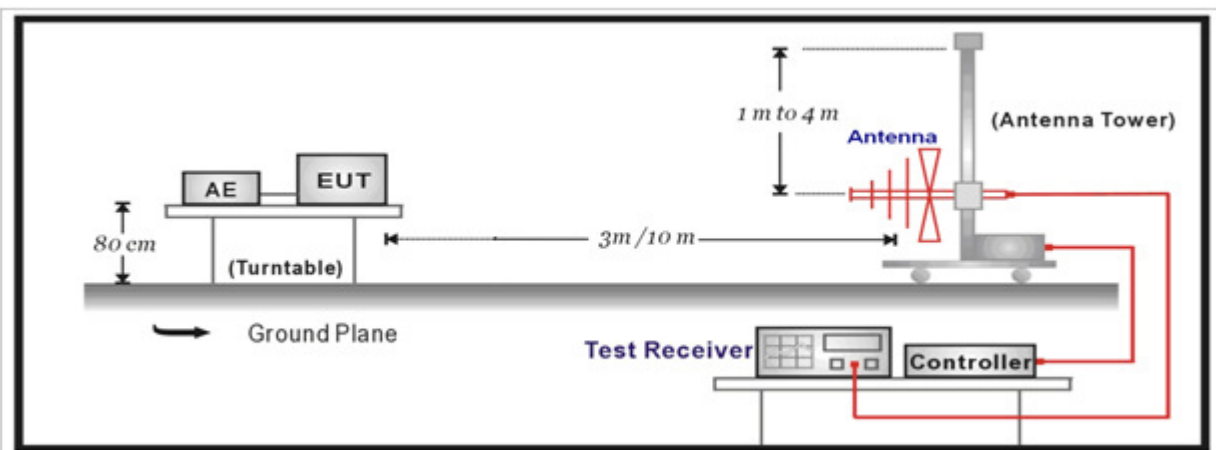
| Radiated Emission(Above 1GHz) / AC-5                                                                                                       |              |              |            |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No.     | Serial No. | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                                                                                                                          | Agilent      | E4446A       | MY45300103 | 2016.01.04 | 2017.01.04    |
| Preamplifier                                                                                                                               | Miteq        | NSP1800-25   | 1364185    | 2016.05.03 | 2017.05.03    |
| DRG Horn                                                                                                                                   | ETS-Lindgren | 3117         | 00167055   | 2016.07.23 | 2017.07.23    |
| Broad-Band Horn Antenna                                                                                                                    | Schwarzbeck  | BBHA9170     | 1126450    | 2014.09.18 | 2016.09.18    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C1     | 2017.02.28 | 2017.02.28    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C2     | 2017.02.28 | 2017.02.28    |
| EMI Receiver                                                                                                                               | Agilent      | N9038A       | MY51210196 | 2016.07.16 | 2017.07.16    |
| Temperature/Humidity Meter                                                                                                                 | Zhichen      | ZC1-2        | AC5-TH     | 2016.01.05 | 2017.01.05    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |              |            |            |               |

### 3.2. Test Setup

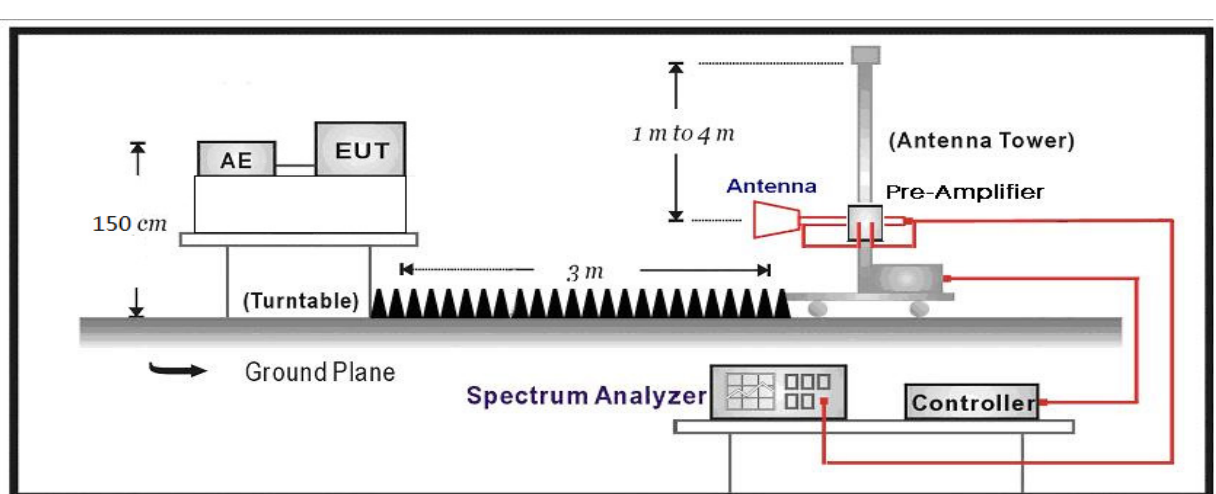
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



### 3.3. Limit

| Restricted Bands of operation |                       |                 |                 |
|-------------------------------|-----------------------|-----------------|-----------------|
| Frequency (MHz)               | Frequency (MHz)       | Frequency (MHz) | Frequency (GHz) |
| 0.090 – 0.110                 | 16.42 – 16.423        | 399.9 – 410     | 4.5 – 5.15      |
| 0.495 – 0.505                 | 16.69475 – 16.69525   | 608 – 614       | 5.35 – 5.46     |
| 2.1735 – 2.1905               | 16.80425 – 16.80475   | 960 – 1240      | 7.25 – 7.75     |
| 4.125 – 4.128                 | 25.5 – 25.67          | 1300 – 1427     | 8.025 – 8.5     |
| 4.17725 – 4.17775             | 37.5 – 38.25          | 1435 – 1626.5   | 9.0 – 9.2       |
| 4.20725 – 4.20775             | 73 – 74.6             | 1645.5 – 1646.5 | 9.3 – 9.5       |
| 6.215 – 6.218                 | 74.8 – 75.2           | 1660 – 1710     | 10.6 – 12.7     |
| 6.26775 – 6.26825             | 108 – 121.94          | 1718.8 – 1722.2 | 13.25 – 13.4    |
| 6.31175 – 6.31225             | 123 – 138             | 2200 – 2300     | 14.47 – 14.5    |
| 8.291 – 8.294                 | 149.9 – 150.05        | 2310 – 2390     | 15.35 – 16.2    |
| 8.362 – 8.366                 | 156.52475 – 156.52525 | 2483.5 – 2500   | 17.7 – 21.4     |
| 8.37625 – 8.38675             | 156.7 – 156.9         | 2690 – 2900     | 22.01 – 23.12   |
| 8.81425 – 8.81475             | 162.0125 – 167.17     | 3260 – 3267     | 23.6 – 24.0     |
| 12.29 – 12.293                | 167.72 – 173.2        | 3332 – 3339     | 31.2 – 31.8     |
| 12.51975 – 12.52025           | 240 – 285             | 3345.8 – 3358   | 36.43 – 36.5    |
| 12.57675 – 12.57725           | 322 – 335.4           | 3600 – 4400     |                 |
| 13.36 – 13.41                 |                       |                 |                 |

Restricted Band Emissions Limit

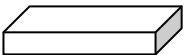
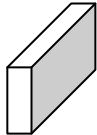
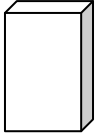
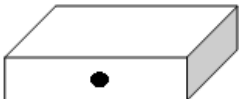
Frequency  
(MHz)

Field strength  
(

### 3.4. Test Procedure

| Test Method                         |                                     |                                     |                                     |                                             |                                                                                                  |                                                                                                    |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                                     | References Rule                     |                                     | Chapter                             | Description                                 |                                                                                                  |                                                                                                    |
| <input type="checkbox"/>            | ANSI C63.10                         |                                     | 11.11                               | Emissions in non-restricted frequency bands |                                                                                                  |                                                                                                    |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         | 11.11.2                             | Reference level measurement                 |                                                                                                  |                                                                                                    |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         | 11.11.3                             | Emission level measurement                  |                                                                                                  |                                                                                                    |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 11.12                               | Emissions in restricted frequency bands     |                                                                                                  |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.1                             | Radiated emission measurements              |                                                                                                  |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.7                           | Radiated spurious emission test             |                                                                                                  |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.4                                         | Radiated emissions from unlicensed wireless devices below 30 MHz                                 |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.5                                         | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.6                                         | Radiated emissions from unlicensed wireless devices above 1 GHz                                  |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2                             | Antenna-port conducted measurements         |                                                                                                  |                                                                                                    |
|                                     |                                     | <input type="checkbox"/>            | ANSI C63.10                         | 11.12.2.3                                   | Quasi-peak measurement procedure                                                                 |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.4                                   | Peak power measurement procedure                                                                 |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.5                                   | Average power measurement procedures                                                             |                                                                                                    |
|                                     |                                     |                                     | <input type="checkbox"/>            | ANSI C63.10                                 | 11.12.2.5.1                                                                                      | Trace averaging with continuous EUT transmission at full power                                     |
|                                     |                                     |                                     | <input type="checkbox"/>            | ANSI C63.10                                 | 11.12.2.5.2                                                                                      | Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction |
|                                     |                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                                 | 11.12.2.5.3                                                                                      | Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold               |

### 3.5. EUT test Axis definition

| Item            | Emissions in non-restricted frequency bands                                          |                                                                                      |                                                                                     |                                                                                     |
|-----------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>                                                             | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>                                                  | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                                                                               |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input checked="" type="checkbox"/>                                                  | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                                                                      | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                                                                      |     |  |  |
|                 |                                                                                      | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input checked="" type="checkbox"/>                                      | Worst Axis <input type="checkbox"/>                                                 |
|                 | <input type="checkbox"/>                                                             | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              |                                                                                     |                                                                                     |
|                 |                                                                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              | Chain 1                                                                             |                                                                                     |
|                 |                                                                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              | Chain 1                                                                             | Chain 2                                                                             |
|                 |  |                                                                                      |                                                                                     |                                                                                     |

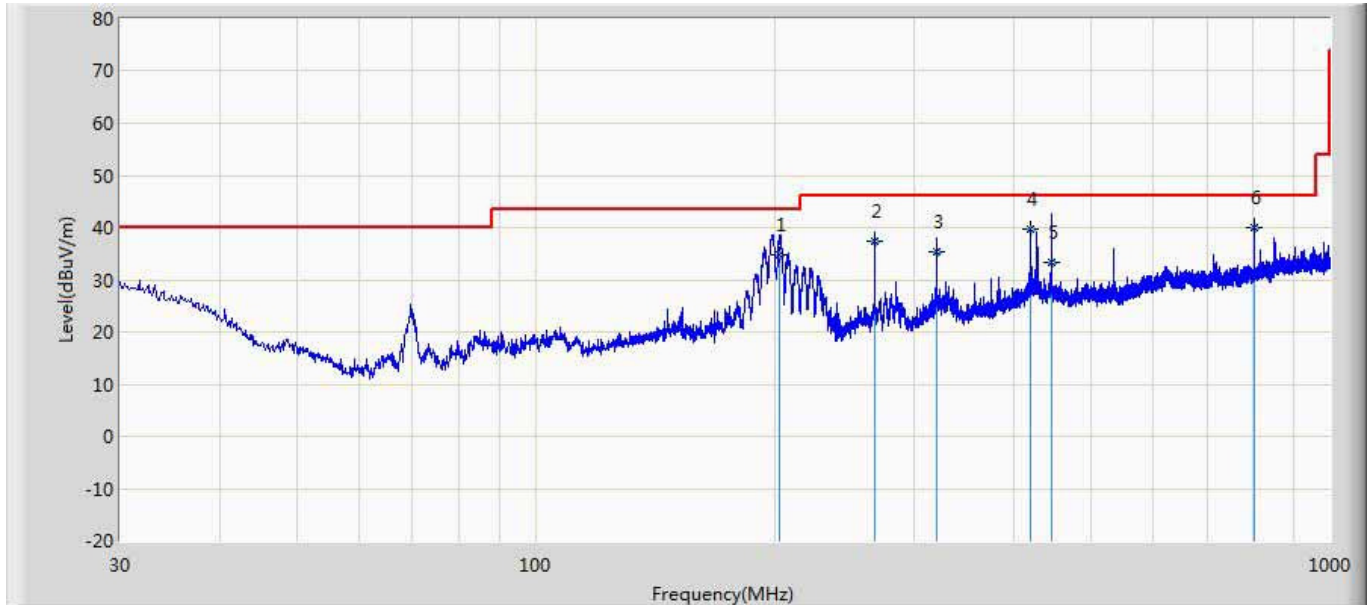
### 3.6. Test Result

|              |   |                            |           |   |              |
|--------------|---|----------------------------|-----------|---|--------------|
| Product Name | : | Virtual Reality Controller | Power     | : | AC 120V/60Hz |
| Test Mode    | : | Mode 1                     | Test Site | : | AC-5         |

| Chain | CH | Antenna | Frequency<br>(MHz) | Measure<br>Level<br>(dB) |
|-------|----|---------|--------------------|--------------------------|
|-------|----|---------|--------------------|--------------------------|

The worst case of Radiated Emission below 1GHz:

|                                     |                      |
|-------------------------------------|----------------------|
| Site: AC2                           | Time: 2016/08/18     |
| Limit: FCC_Part15.109_RE(3m)_ClassB | Margin: 0            |
| Probe: CB7_CBL6112_0726             | Polarity: Horizontal |
| EUT: Virtual Reality Controller     | Power: AC 120V/60Hz  |
| Note: Mode 1                        |                      |

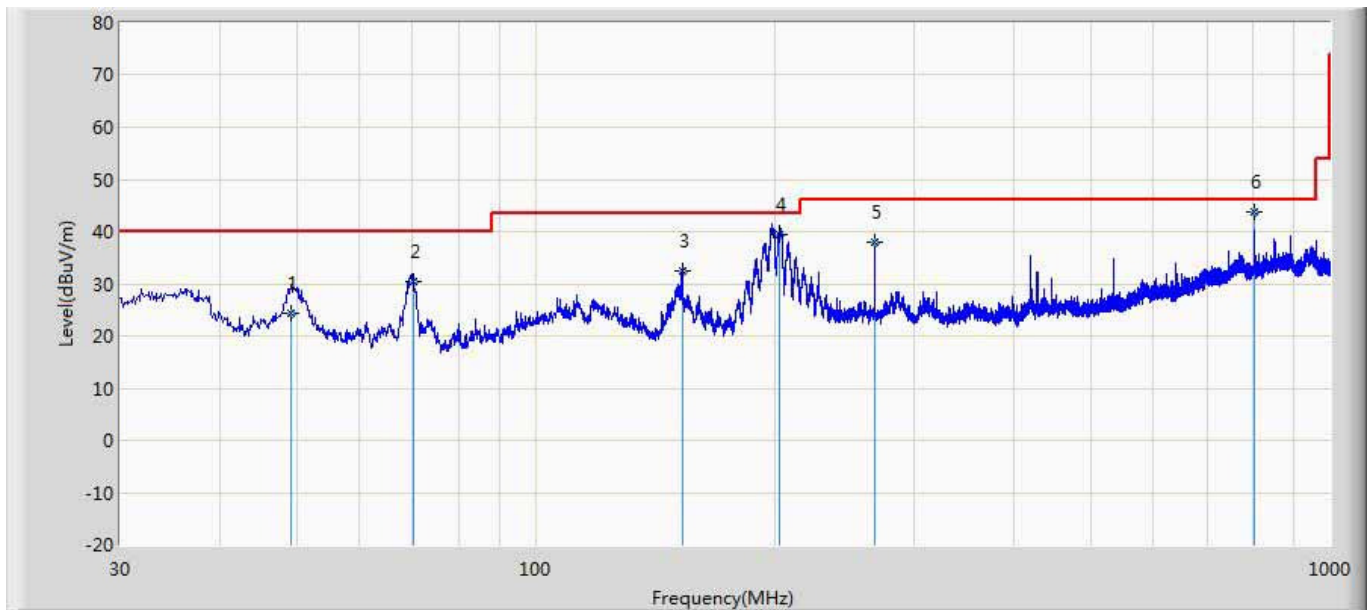


| No | Mark | Frequency<br>(MHz) | Measure<br>Level<br>(dBuV/m) | Reading<br>Level<br>(dBuV) | Over<br>Limit<br>(dB) | Limit<br>(dBuV/m) | Probe<br>(dB/m) | Cable<br>(dB) | Amp<br>(dB) | Ant<br>Pos<br>(cm) | Table<br>Pos<br>(deg) | Type |
|----|------|--------------------|------------------------------|----------------------------|-----------------------|-------------------|-----------------|---------------|-------------|--------------------|-----------------------|------|
| 1  |      | 203.197            | 34.728                       | 46.964                     | -8.772                | 43.500            | 9.404           | 1.550         | 23.190      | 100                | 360                   | QP   |
| 2  |      | 267.610            | 37.463                       | 45.794                     | -8.537                | 46.000            | 13.110          | 1.760         | 23.200      | 100                | 50                    | QP   |
| 3  |      | 319.497            | 35.222                       | 42.339                     | -10.778               | 46.000            | 13.907          | 1.930         | 22.955      | 100                | 278                   | QP   |
| 4  |      | 420.532            | 39.635                       | 43.894                     | -6.365                | 46.000            | 16.411          | 2.260         | 22.930      | 100                | 355                   | QP   |
| 5  |      | 445.988            | 33.476                       | 37.046                     | -12.524               | 46.000            | 16.920          | 2.310         | 22.800      | 100                | 145                   | QP   |
| 6  | *    | 802.790            | 39.935                       | 39.109                     | -6.065                | 46.000            | 20.023          | 3.120         | 22.317      | 200                | 250                   | QP   |

Note:

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

|                                     |                     |
|-------------------------------------|---------------------|
| Site: AC2                           | Time: 2016/08/18    |
| Limit: FCC_Part15.109_RE(3m)_ClassB | Margin: 0           |
| Probe: CB7_CBL6112_0726             | Polarity: Vertical  |
| EUT: Virtual Reality Controller     | Power: AC 120V/60Hz |
| Note: Mode 1                        |                     |



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Probe (dB/m) | Cable (dB) | Amp (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|--------------|------------|----------|--------------|-----------------|------|
| 1  |      | 49.184          | 24.372                 | 38.165               | -15.628         | 40.000         | 8.526        | 0.768      | 23.087   | 100          | 44              | QP   |
| 2  |      | 70.064          | 30.322                 | 46.173               | -9.678          | 40.000         | 6.319        | 0.900      | 23.070   | 200          | 316             | QP   |
| 3  |      | 152.937         | 32.373                 | 43.716               | -11.127         | 43.500         | 10.324       | 1.340      | 23.007   | 100          | 337             | QP   |
| 4  |      | 203.025         | 39.335                 | 51.566               | -4.165          | 43.500         | 9.409        | 1.550      | 23.190   | 100          | 154             | QP   |
| 5  |      | 267.599         | 37.952                 | 46.281               | -8.048          | 46.000         | 13.112       | 1.759      | 23.201   | 100          | 59              | QP   |
| 6  | *    | 802.793         | 43.629                 | 42.803               | -2.371          | 46.000         | 20.023       | 3.120      | 22.317   | 100          | 27              | QP   |

Note:

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

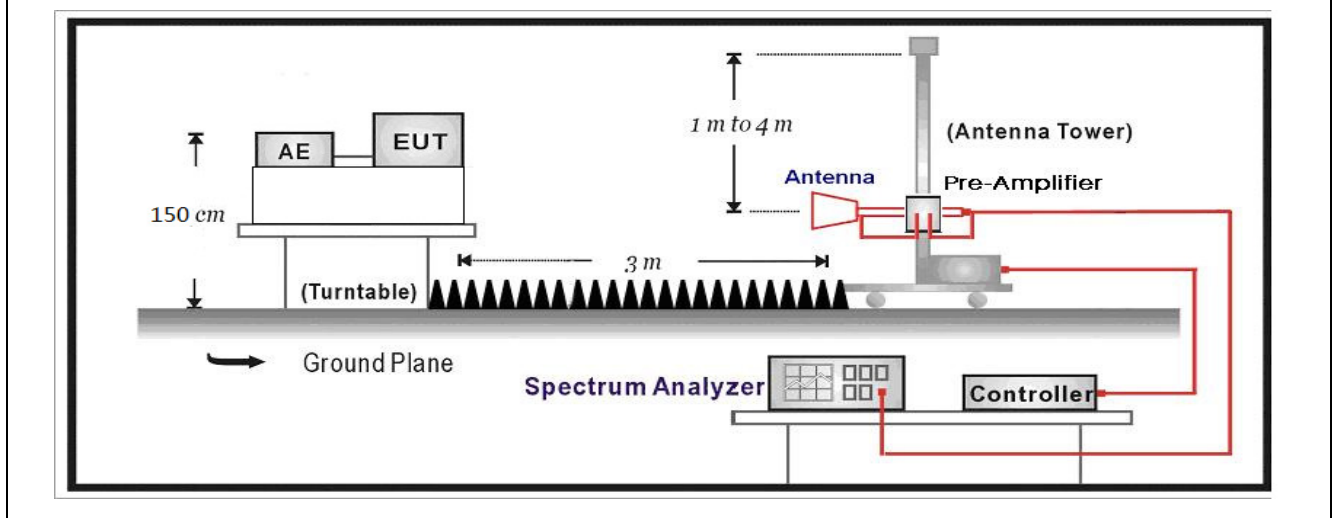
## 4. Radiated Emission Band Edge

### 4.1. Test Equipment

| Radiated Emission(Above 1GHz) / AC-5 |              |              |            |            |               |
|--------------------------------------|--------------|--------------|------------|------------|---------------|
| Instrument                           | Manufacturer | Type No.     | Serial No. | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                    | Agilent      | E4446A       | MY45300103 | 2016.01.04 | 2017.01.04    |
| Preamplifier                         | Miteq        | NSP1800-25   | 1364185    | 2016.05.03 | 2017.05.03    |
| DRG Horn                             | ETS-Lindgren | 3117         | 00167055   | 2016.07.23 | 2017.07.23    |
| Broad-Band Horn Antenna              | Schwarzbeck  | BBHA9170     | 1126450    | 2015.09.18 | 2016.09.18    |
| Coaxial Cable                        | Huber+Suhner | SUCOFLEX 106 | AC5-C1     | 2016.02.28 | 2017.02.28    |
| Coaxial Cable                        | Huber+Suhner | SUCOFLEX 106 | AC5-C2     | 2016.02.28 | 2017.02.28    |
| EMI Receiver                         | Agilent      | N9038A       | MY51210196 | 2016.07.16 | 2017.07.16    |
| Temperature/Humidity Meter           | Zhichen      | ZC1-2        | AC5-TH     | 2016.01.05 | 2017.01.05    |

## 4.2. Test Setup

Above 1GHz Test Setup:



## 4.3. Limit

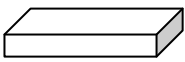
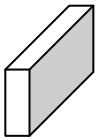
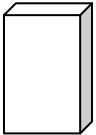
Band edge Limit

| Frequency bands (MHz) | Detector | Limit (dB) |
|-----------------------|----------|------------|
|-----------------------|----------|------------|

#### 4.4. Test Procedure

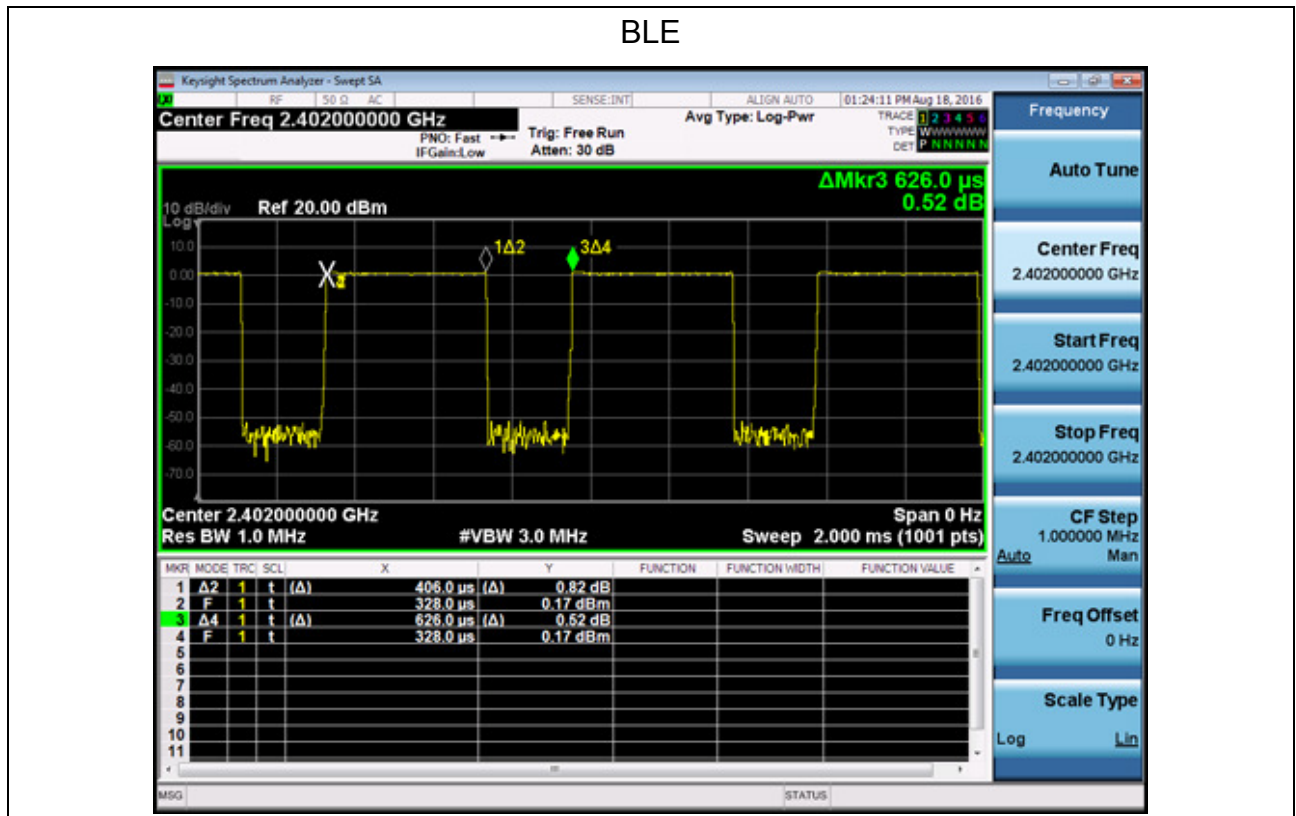
| Test Method                         |                                     |                                     |             |                                                                                                  |                                                                                                    |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                                     | References Rule                     |                                     | Chapter     | Description                                                                                      |                                                                                                    |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 6.10        | Band-edge testing                                                                                |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.10.5      | Restricted-band band-edge measurements                                                           |                                                                                                    |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         | 6.10.6      | Marker-delta method                                                                              |                                                                                                    |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 11.12       | Emissions in restricted frequency bands                                                          |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.1     | Radiated emission measurements                                                                   |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.7   | Radiated spurious emission test                                                                  |                                                                                                    |
| <input type="checkbox"/>            | ANSI C63.10                         |                                     | 6.4         | Radiated emissions from unlicensed wireless devices below 30 MHz                                 |                                                                                                    |
| <input type="checkbox"/>            | ANSI C63.10                         |                                     | 6.5         | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz |                                                                                                    |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 6.6         | Radiated emissions from unlicensed wireless devices above 1 GHz                                  |                                                                                                    |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         |             | 11.12.2                                                                                          | Antenna-port conducted measurements                                                                |
|                                     |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.12.2.3                                                                                        | Quasi-peak measurement procedure                                                                   |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.12.2.4                                                                                        | Peak power measurement procedure                                                                   |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.12.2.5                                                                                        | Average power measurement procedures                                                               |
|                                     |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.12.2.5.1                                                                                      | Trace averaging with continuous EUT transmission at full power                                     |
|                                     |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.12.2.5.2                                                                                      | Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.12.2.5.3                                                                                      | Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold               |
|                                     |                                     |                                     |             |                                                                                                  |                                                                                                    |

#### 4.5. EUT test definition

| Item            | Emissions in non-restricted frequency bands                                          |                                                                                      |                                                                                     |                                                                                     |
|-----------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>                                                             | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>                                                  | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                                                                               |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input checked="" type="checkbox"/>                                                  | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                                                                      | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                                                                      |     |  |  |
|                 |                                                                                      | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input checked="" type="checkbox"/>                                      | Worst Axis <input type="checkbox"/>                                                 |
|                 | <input type="checkbox"/>                                                             | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              |                                                                                     |                                                                                     |
|                 |                                                                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              | Chain 1                                                                             |                                                                                     |
|                 |                                                                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              | Chain 1                                                                             | Chain 2                                                                             |
|                 |  |                                                                                      |                                                                                     |                                                                                     |

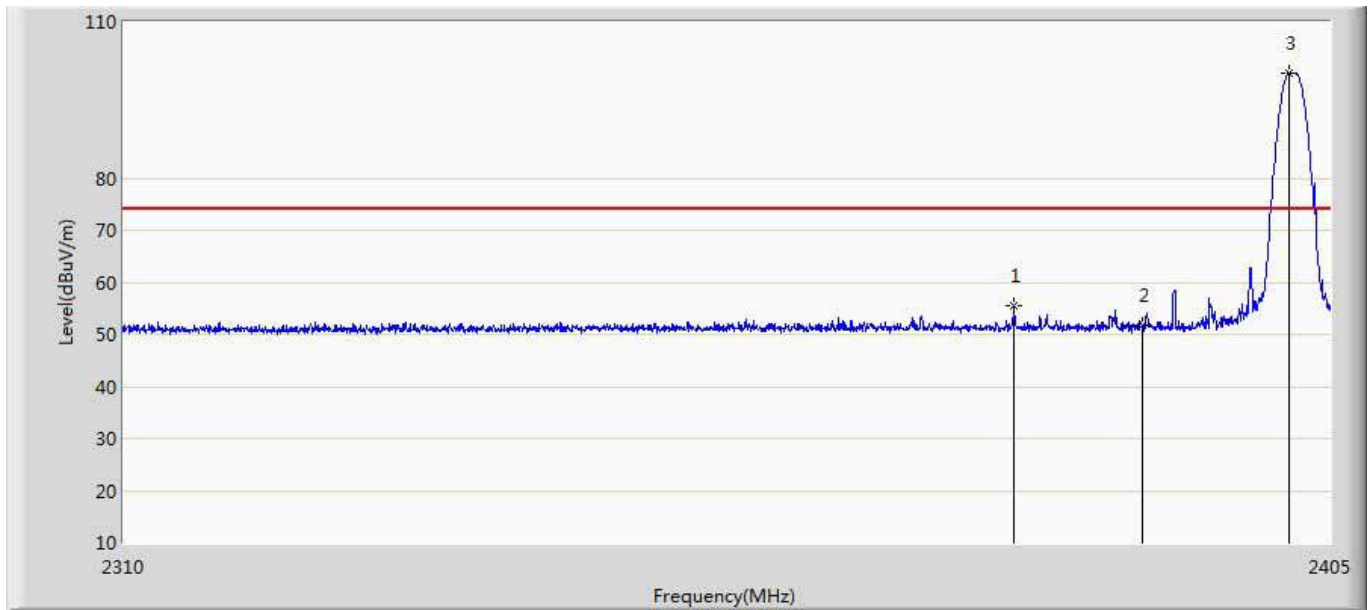
#### 4.6. Duty Cycle

| Test Mode | Tx On (ms) | Tx Off (ms) | Reduced VBW (Hz) | Tx On + Tx Off (ms) | Duty Cycle |
|-----------|------------|-------------|------------------|---------------------|------------|
| BLE       | 0.406      | 0.220       | 3000             | 0.626               | 64.86%     |



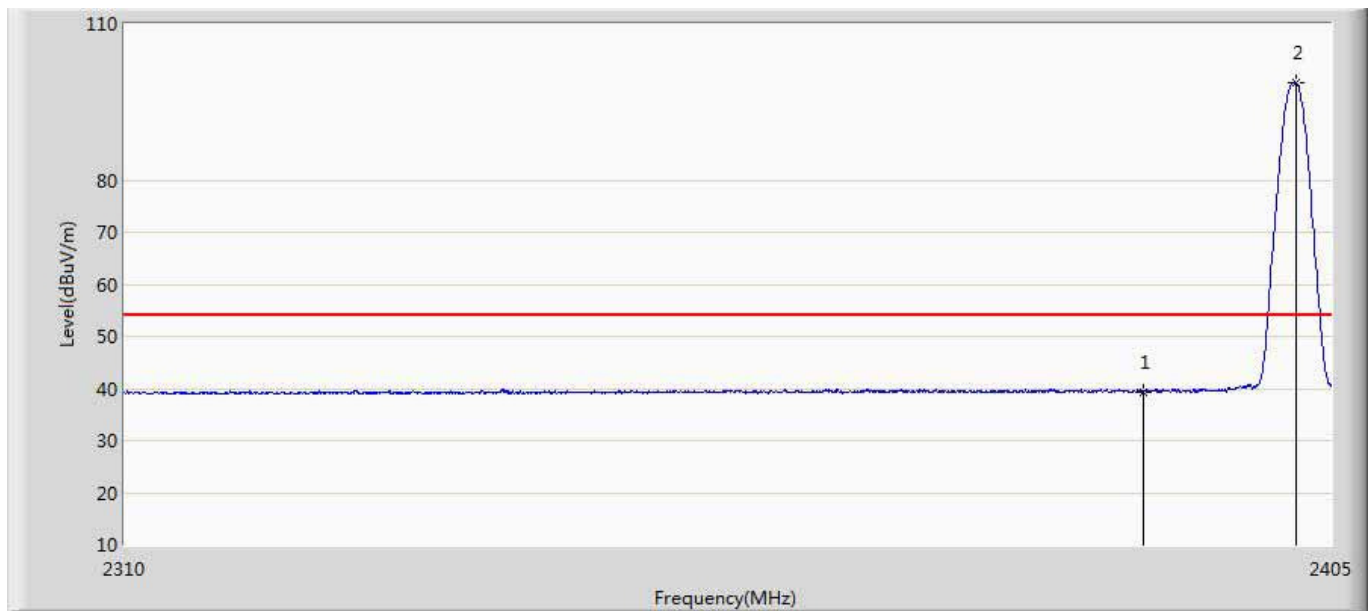
#### 4.7. Test Result

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 17:51 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Horizontal     |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2402 by BLE |                          |



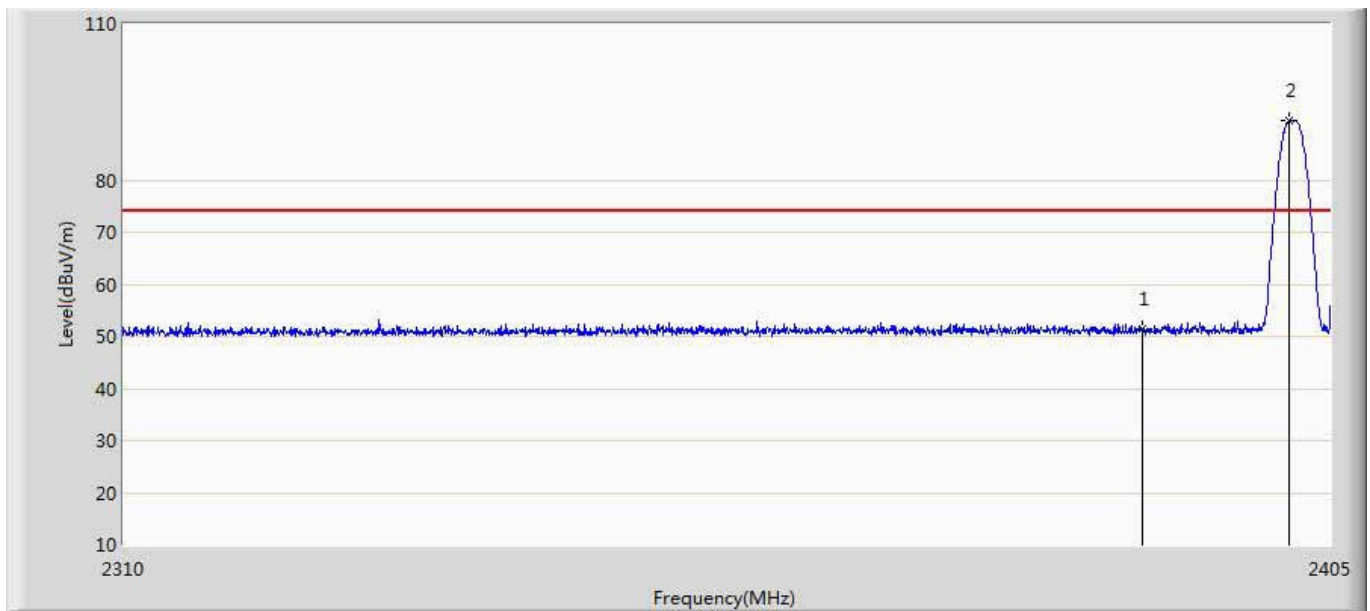
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      | 2379.778        | 55.577                 | 19.511               | -18.423         | 74.000         | 36.066      | PK   |
| 2  |      | 2390.000        | 51.607                 | 15.521               | -22.393         | 74.000         | 36.086      | PK   |
| 3  | *    | 2401.770        | 100.246                | 64.122               | 26.246          | 74.000         | 36.124      | PK   |

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 17:55 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Horizontal     |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2402 by BLE |                          |



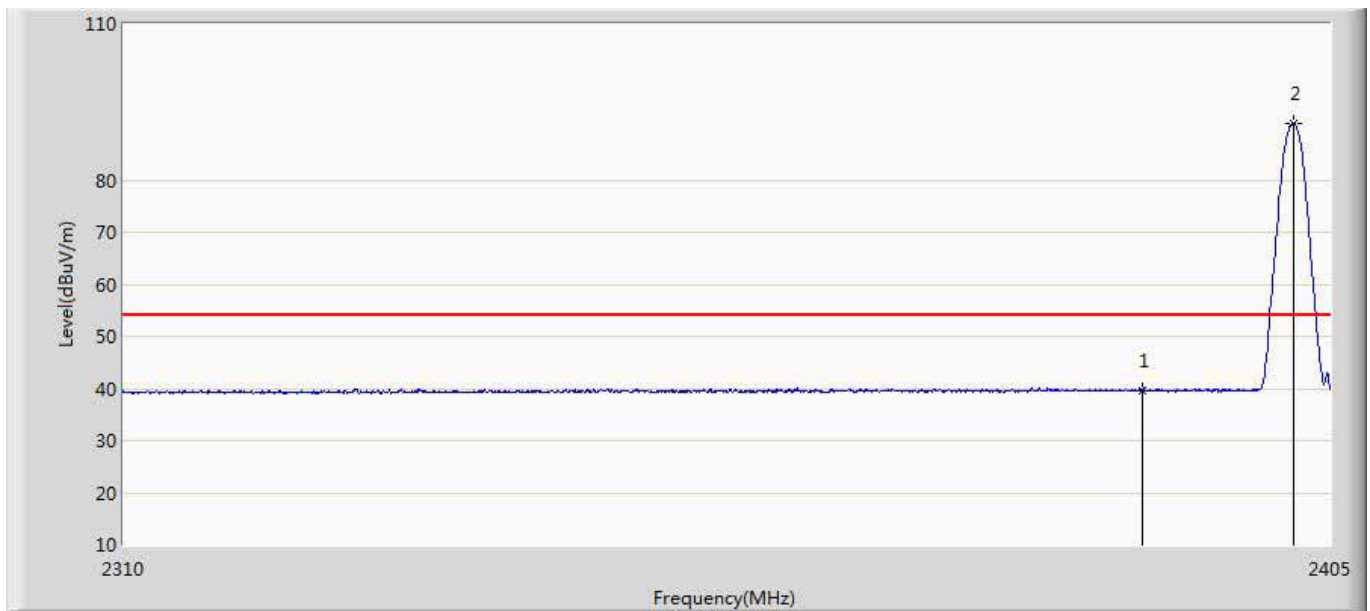
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      | 2390.000        | 39.319                 | 3.233                | -14.681         | 54.000         | 36.086      | AV   |
| 2  | *    | 2402.245        | 98.696                 | 62.570               | 44.696          | 54.000         | 36.126      | AV   |

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 17:59 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Vertical       |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2402 by BLE |                          |



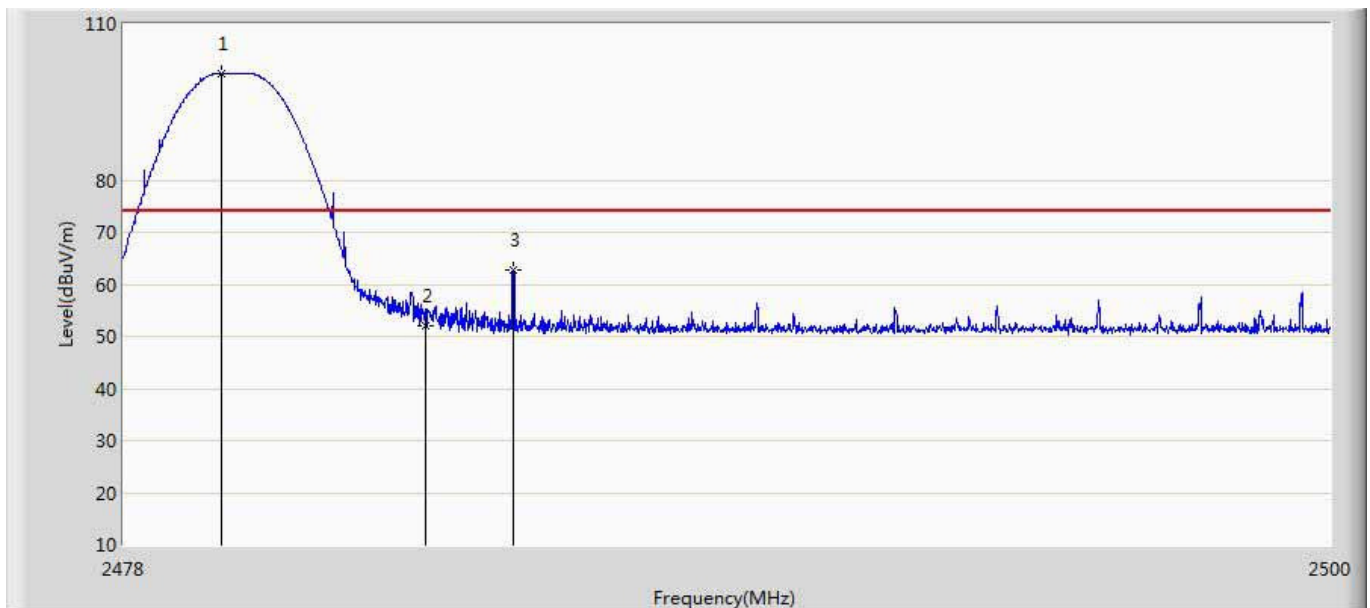
| No | Mark | Frequency<br>(MHz) | Measure Level<br>(dBuV/m) | Reading Level<br>(dBuV) | Over Limit<br>(dB) | Limit<br>(dBuV/m) | Factor<br>(dB) | Type |
|----|------|--------------------|---------------------------|-------------------------|--------------------|-------------------|----------------|------|
| 1  |      | 2390.000           | 51.321                    | 15.235                  | -22.679            | 74.000            | 36.086         | PK   |
| 2  | *    | 2401.770           | 91.468                    | 55.344                  | 17.468             | 74.000            | 36.124         | PK   |

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 18:01 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Vertical       |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2402 by BLE |                          |



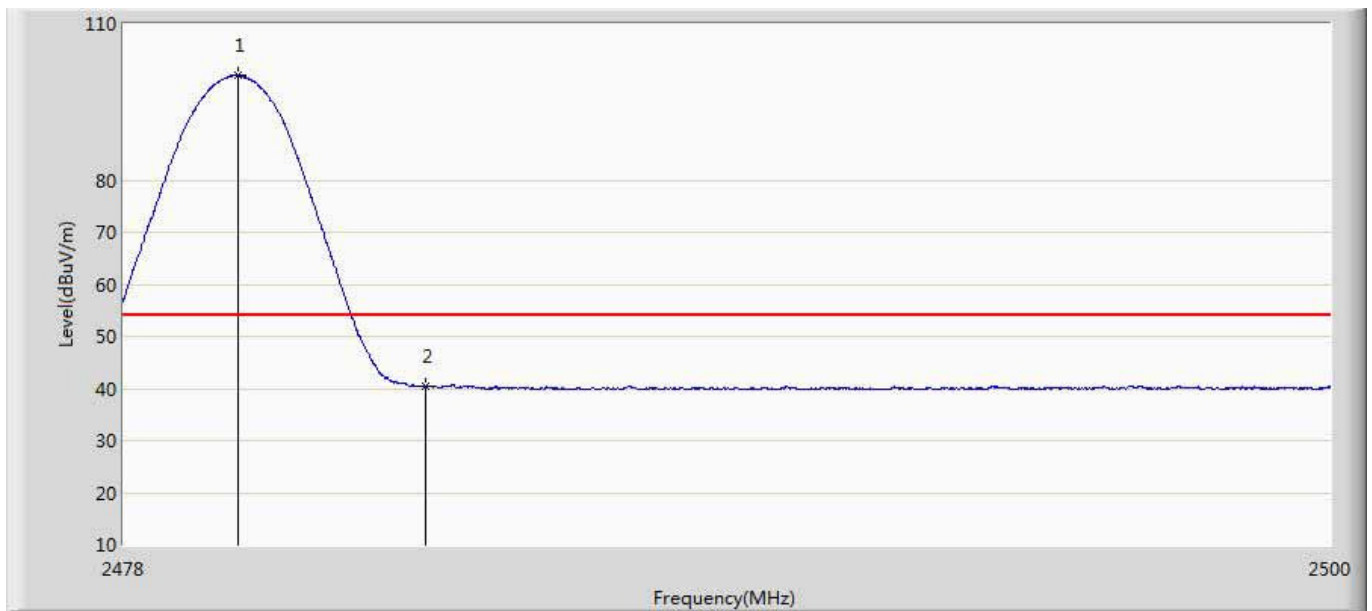
| No | Mark | Frequency<br>(MHz) | Measure Level<br>(dBuV/m) | Reading Level<br>(dBuV) | Over Limit<br>(dB) | Limit<br>(dBuV/m) | Factor<br>(dB) | Type |
|----|------|--------------------|---------------------------|-------------------------|--------------------|-------------------|----------------|------|
| 1  |      | 2390.000           | 39.625                    | 3.539                   | -14.375            | 54.000            | 36.086         | AV   |
| 2  | *    | 2402.055           | 90.952                    | 54.827                  | 36.952             | 54.000            | 36.124         | AV   |

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 18:04 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Horizontal     |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2480 by BLE |                          |



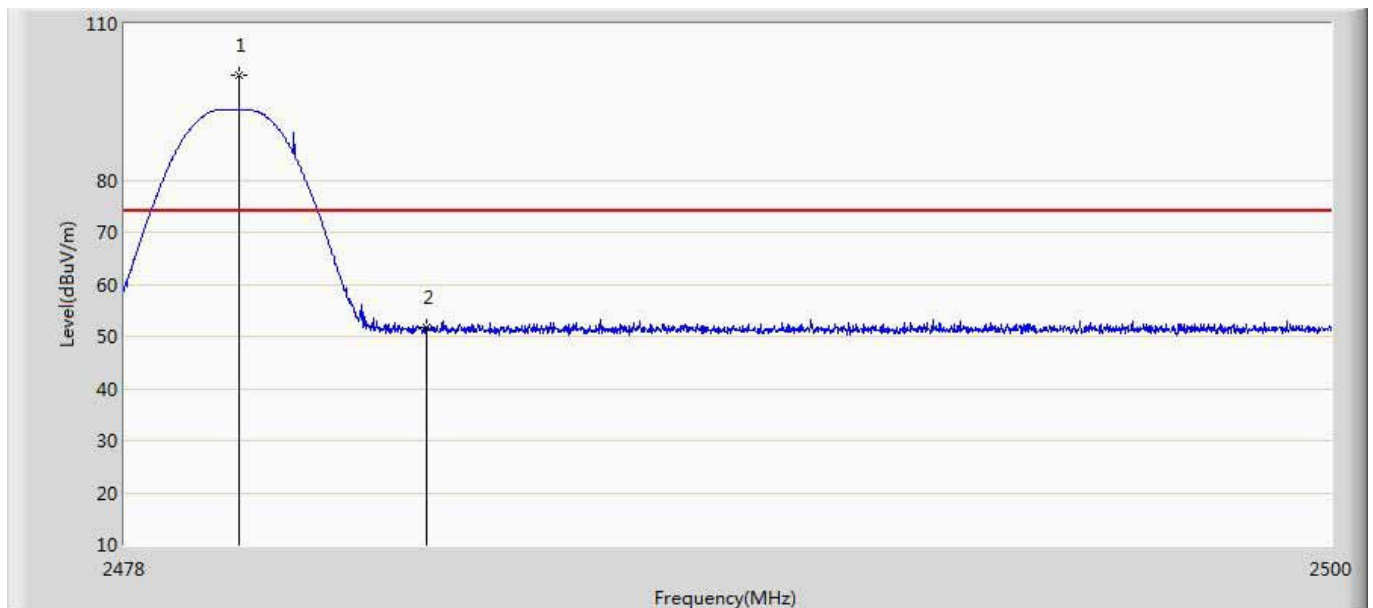
| No | Mark | Frequency<br>(MHz) | Measure Level<br>(dBuV/m) | Reading Level<br>(dBuV) | Over Limit<br>(dB) | Limit<br>(dBuV/m) | Factor<br>(dB) | Type |
|----|------|--------------------|---------------------------|-------------------------|--------------------|-------------------|----------------|------|
| 1  | *    | 2479.793           | 100.531                   | 64.281                  | 26.531             | 74.000            | 36.250         | PK   |
| 2  |      | 2483.500           | 52.020                    | 15.759                  | -21.980            | 74.000            | 36.261         | PK   |
| 3  |      | 2485.095           | 62.635                    | 26.369                  | -11.365            | 74.000            | 36.266         | PK   |

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 18:14 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Horizontal     |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2480 by BLE |                          |



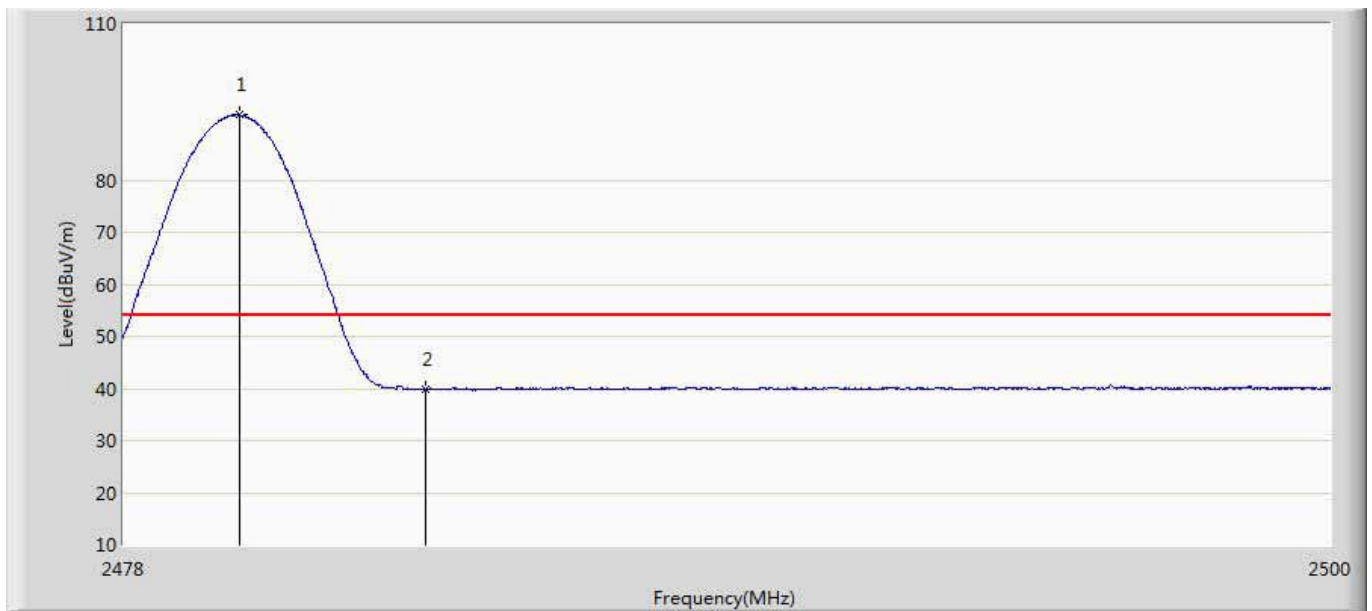
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  | *    | 2480.079        | 100.058                | 63.807               | 46.058          | 54.000         | 36.251      | AV   |
| 2  |      | 2483.500        | 40.448                 | 4.187                | -13.552         | 54.000         | 36.261      | AV   |

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 18:17 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Vertical       |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2480 by BLE |                          |



| No | Mark | Frequency<br>(MHz) | Measure Level<br>(dBuV/m) | Reading Level<br>(dBuV) | Over Limit<br>(dB) | Limit<br>(dBuV/m) | Factor<br>(dB) | Type |
|----|------|--------------------|---------------------------|-------------------------|--------------------|-------------------|----------------|------|
| 1  | *    | 2480.079           | 100.058                   | 63.807                  | 26.058             | 74.000            | 36.251         | PK   |
| 2  |      | 2483.500           | 51.683                    | 15.422                  | -22.317            | 74.000            | 36.261         | PK   |

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Engineer: Simon                               |                          |
| Site: AC5                                     | Time: 2016/07/30 - 18:19 |
| Limit: FCC_Part15.209_RE(3m)                  | Margin: 0                |
| Probe: Horn_3117_00167055(1-18GHz)            | Polarity: Vertical       |
| EUT: Virtual Reality Controller               | Power: AC 120V/60Hz      |
| Note: Mode 1: Transmit at channel 2480 by BLE |                          |



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  | *    | 2480.112        | 92.490                 | 56.239               | 38.490          | 54.000         | 36.251      | AV   |
| 2  |      | 2483.500        | 39.899                 | 3.638                | -14.101         | 54.000         | 36.261      | AV   |

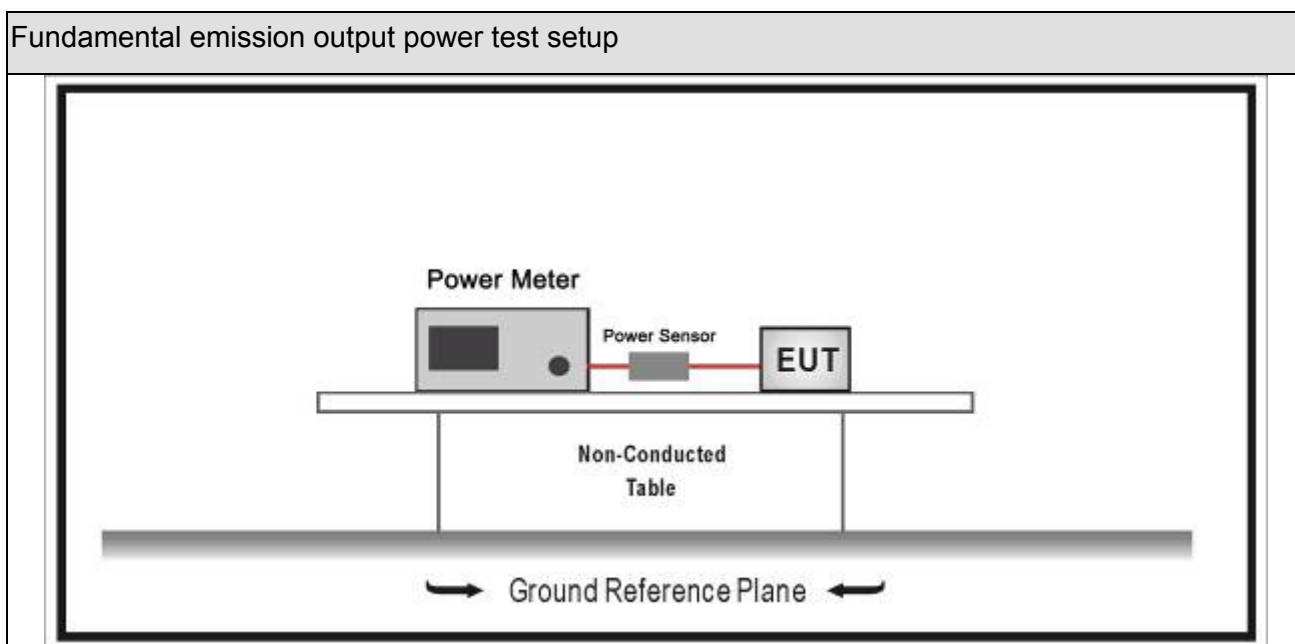
## 5. Fundamental emission output power

### 5.1. Test Equipment

| Fundamental emission output power/ TR-8 |              |          |            |            |               |
|-----------------------------------------|--------------|----------|------------|------------|---------------|
| Instrument                              | Manufacturer | Type No. | Serial No. | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                       | Agilent      | E4446A   | MY45300103 | 2016.01.04 | 2017.01.04    |
| Spectrum Analyzer                       | Agilent      | N9010A   | MY48030494 | 2016.02.04 | 2017.02.04    |
| Wideband Peak Power Meter               | Anritsu      | ML2495A  | 0905006    | 2015.10.14 | 2016.10.14    |
| Power Sensor                            | Anritsu      | MA2411B  | 0846014    | 2015.10.14 | 2016.10.14    |
| Temperature/Humidity Meter              | zhicheng     | ZC1-2    | TR8-TH     | 2016.04.10 | 2017.04.10    |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 5.2. Test Setup



### 5.3. Limit

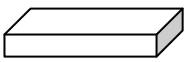
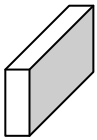
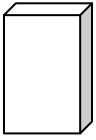
Fundamental emission output power Limit

☒ GTX

## 5.4. Test Procedure

| Fundamental emission output power Test Method |                                     |                                     |             |                           |                                            |
|-----------------------------------------------|-------------------------------------|-------------------------------------|-------------|---------------------------|--------------------------------------------|
|                                               | References Rule                     |                                     |             | Chapter                   | Description                                |
| <input checked="" type="checkbox"/>           | ANSI C63.10                         |                                     |             | 11.9                      | Fundamental emission output power          |
|                                               | <input checked="" type="checkbox"/> | ANSI C63.10                         |             | 11.9.1                    | Maximum peak conducted output power        |
|                                               |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.9.1.1                  | RBW ≥ DTS bandwidth                        |
|                                               |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.9.1.2                  | Integrated band power method               |
|                                               |                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.9.1.3                  | PKPM1 Peak power meter method              |
|                                               | <input type="checkbox"/>            | ANSI C63.10                         |             | 11.9.2                    | Maximum conducted (average) output power   |
|                                               |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.9.2.2                  | Measurement using a spectrum analyzer (SA) |
|                                               | <input type="checkbox"/>            | ANSI C63.10                         | 11.9.2.2.2  | Method AVGSA-1(Duty cycle |                                            |

## 5.5. EUT test definition

| Item            | Fundamental emission output power                                                    |                                                                                      |                                                                                     |                                                                                     |
|-----------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>                                                             | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>                                                  | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                                                                               |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input type="checkbox"/>                                                             | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                                                                      | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                                                                      |     |  |  |
|                 |                                                                                      | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input type="checkbox"/>                                                 | Worst Axis <input type="checkbox"/>                                                 |
|                 | <input checked="" type="checkbox"/>                                                  | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>                                                  | Chain 0                                                                              |                                                                                     |                                                                                     |
|                 |                                                                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              | Chain 1                                                                             |                                                                                     |
|                 |                                                                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                                                             | Chain 0                                                                              | Chain 1                                                                             | Chain 2                                                                             |
|                 |  |                                                                                      |                                                                                     |                                                                                     |

## 5.6. Test Result

|              |   |                            |            |   |              |
|--------------|---|----------------------------|------------|---|--------------|
| Product Name | : | Virtual Reality Controller | Test Power | : | AC 120V/60Hz |
| Test Site    | : | TR8                        |            |   |              |

| Mode | Channel | Test Frequency (MHz) | Measurement Power Output (dBm) | Limit (dBm) | Result |
|------|---------|----------------------|--------------------------------|-------------|--------|
| 1    | 00      | 2402                 | 2.18                           | 30          | Pass   |
| 1    | 19      | 2440                 | 2.87                           | 30          | Pass   |
| 1    | 39      | 2480                 | 2.92                           | 30          | Pass   |

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