



# FCC Test Report

**Applicant** : Shenzhen Fangai Technology Co., Ltd.

**Address** : Building B, Room 305, No. 6 Futai South Road,  
Pingxi Community, Pingdi Street, Longgang  
District, Shenzhen

**Product Name** : Wildolo Sex Machine

**Report Date** : 08. 28, 2023

**Shenzhen Tian Hai Test Technology Co., Ltd.**



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## TEST REPORT

Applicant : Shenzhen Fangai Technology Co., Ltd.  
Manufacturer : Shenzhen Fangai Technology Co., Ltd.  
Product Name : Wildolo Sex Machine  
Model No. : HS29  
Trade Mark : WILDOLO  
Rating(s) : Input: 24V, 4A(via adapter input: 100-240V~50/60Hz, (2A Max)

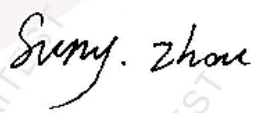
**Test Standard(s) : FCC Part15 Subpart C, Paragraph 15.249**

**Test Method(s) : ANSI C63.10: 2020**

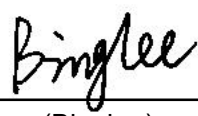
The device described above is tested by Shenzhen Tian Hai Test Technology Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Tian Hai Test Technology Co., Ltd. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Tian Hai Test Technology Co., Ltd..

Date of Receipt : 08. 19, 2023  
Date of Test : 08. 19~08. 28, 2023

Tested by :   
(Suny Zhuo)

Reviewed by :   
(Blue Hu)

Approved & Authorized Signer :   
(Binglee)



### Revision History

| Report Version | Description     | Issued Date  |
|----------------|-----------------|--------------|
| R00            | Original Issue. | 08. 05, 2021 |
|                |                 |              |
|                |                 |              |



## 1. General Information

### 1.1. Client Information

|              |   |                                                                                                            |
|--------------|---|------------------------------------------------------------------------------------------------------------|
| Applicant    | : | Shenzhen Fangai Technology Co., Ltd.                                                                       |
| Address      | : | Building B, Room 305, No. 6 Futai South Road, Pingxi Community, Pingdi Street, Longgang District, Shenzhen |
| Manufacturer | : | Shenzhen Fangai Technology Co., Ltd.                                                                       |
| Address      | : | Building B, Room 305, No. 6 Futai South Road, Pingxi Community, Pingdi Street, Longgang District, Shenzhen |
| Factory      | : | Shenzhen Fangai Technology Co., Ltd.                                                                       |
| Address      | : | Building B, Room 305, No. 6 Futai South Road, Pingxi Community, Pingdi Street, Longgang District, Shenzhen |

### 1.2. Description of Device (EUT)

|                   |   |                                                                                        |
|-------------------|---|----------------------------------------------------------------------------------------|
| Product Name      | : | Wildolo Sex Machine                                                                    |
| Model No.         | : | HS29                                                                                   |
| Trade Mark        | : | WILDOLO                                                                                |
| Test Power Supply | : | AC 120V, 60Hz                                                                          |
| Test Sample No.   | : | 1-2-1(Normal Sample), 1-2-2(Engineering Sample)                                        |
| Adapter           | : | MODEL:YHY-24004000<br>P/N:DS240096C14-W<br>INPUT:100-240V~50-60Hz, 2A<br>OUTPUT:24V=4A |

#### RF Specification

|                     |   |                              |
|---------------------|---|------------------------------|
| Operation Frequency | : | 2402~2480MHz                 |
| Number of Channel   | : | 40 Channels                  |
| Modulation Type     | : | GFSK                         |
| Antenna Type        | : | PCB antenna                  |
| Antenna Gain(Peak)  | : | 0 dBi (Provided by customer) |

**Remark:** 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



### 1.3. Auxiliary Equipment Used During Test

| Description | Rating(s)                                                                              |
|-------------|----------------------------------------------------------------------------------------|
| Adapter     | MODEL:YHY-24004000<br>P/N:DS240096C14-W<br>INPUT:100-240V~50-60Hz, 2A<br>OUTPUT:24==4A |

### 1.4. Description of Test Configuration

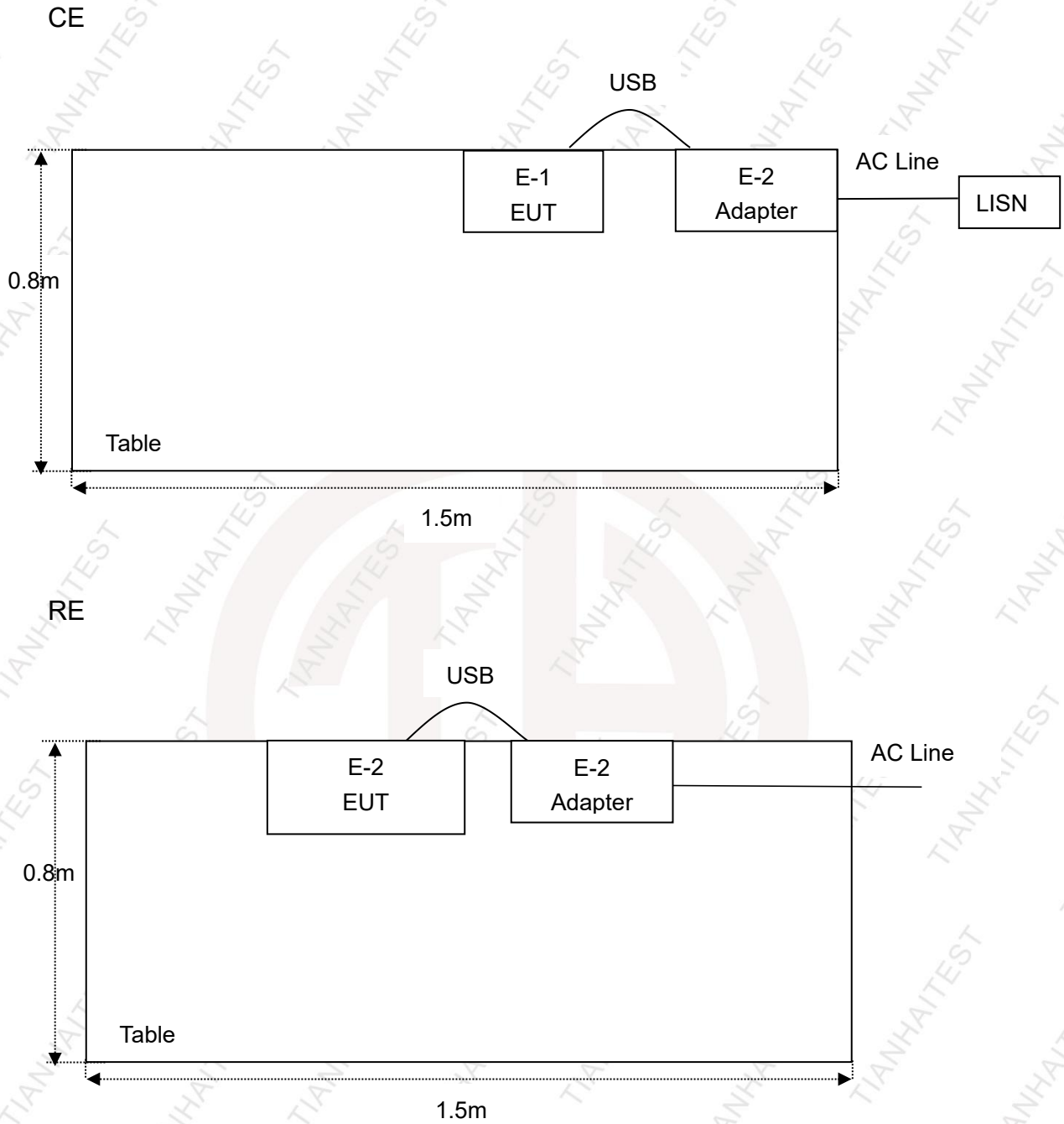
|    |      |    |      |    |      |    |      |    |      |
|----|------|----|------|----|------|----|------|----|------|
| 00 | 2402 | 09 | 2420 | 18 | 2438 | 27 | 2456 | 36 | 2474 |
| 01 | 2404 | 10 | 2422 | 19 | 2440 | 28 | 2458 | 37 | 2476 |
| 02 | 2406 | 11 | 2424 | 20 | 2442 | 29 | 2460 | 38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

Note:

1. The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.
2. EUT was tested with Channel 0, 19 and 39.



### 1.5. Description of Test Setup





## 1.6. Test Equipment List

| Conducted Emission                     |                       |                      |                  |                 |
|----------------------------------------|-----------------------|----------------------|------------------|-----------------|
| Kind of Equipment                      | Manufacturer          | Type                 | S/N              | Calibrate until |
| EMI Test Receiver                      | R&S                   | ESR7                 | 102333           | 2023-11-13      |
| L.I.S.N                                | Schwarzbeck           | NNLK 8128            | 5089             | 2023-11-13      |
| 8-Wire ISN CAT6                        | Schwarzbeck           | NTFM 8158            | 231              | 2023-11-13      |
| Pulse Limiter                          | Schwarzbeck           | VTSD 9561-F          | 847              | 2023-11-13      |
| Test software                          | FALA                  | /                    | EMC-CON<br>3A1.1 | /               |
| Radiated Emission (3m)                 |                       |                      |                  |                 |
| EMI Test Receiver                      | R&S                   | ESR7                 | 102333           | 2023-11-13      |
| MXA Signal Analyzer                    | Keysight              | N9020A               | MY51281805       | 2024-04-20      |
| Bilog Antenna                          | Schwarzbeck           | VULB 9168            | 01148            | 2023-11-20      |
| Pre-Amplifier                          | Schwarzbeck           | BBV 9718 B           | 00109            | 2023-11-13      |
| Pre-Amplifier                          | Schwarzbeck           | BBV 9743 B           | 00253            | 2023-11-13      |
| Pre-Amplifier                          | GUANGGU<br>ELECTRONIC | GLNA18-40GK-5<br>372 | 20210331001      | 2023-11-13      |
| Active Loop Antenna                    | Schwarzbeck           | FMZB 1519 B          | 00148            | 2023-11-13      |
| Horn Antenna                           | Schwarzbeck           | BBHA 9120            | 02379            | 2023-11-20      |
| Horn Antenna                           | A-INFO                | LB-180400-KF         | J258792          | 2023-11-20      |
| Test software                          | FALA                  | /                    | FA-03A2 RE       | /               |
| RF Test System                         |                       |                      |                  |                 |
| Wideband radio<br>communication tester | R&S                   | CMW500               | 131134           | 2023-11-13      |
| EXA Signal Analyzer                    | Keysight              | N9010A               | MY54488841       | 2024-04-20      |
| MXG Vector Signal<br>Generator         | Agilent               | N5182B               | MY59100603       | 2024-04-20      |
| Signal Generator                       | R&S                   | SMB100A              | 113650           | 2024-04-20      |
| RF control unit                        | Tonscend              | JS0806-2             | 21C8060397       | /               |
| DC Power supply                        | Agilent               | E3632A               | MY50120052       | /               |
| RF test system                         | Tonscend              | /                    | V2.6.88.0346     | /               |



### 1.7. Measurement Uncertainty

|                        |   |                          |
|------------------------|---|--------------------------|
| Radiation Uncertainty  | : | Ur = 3.9 dB (Horizontal) |
|                        | : | Ur = 3.8 dB (Vertical)   |
| Conduction Uncertainty | : | Uc = 3.4 dB              |

### 1.8. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### FCC-Registration No.: 6827.01

Shenzhen Tian Hai Test Technology Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 6827.01

#### Test Location

Shenzhen Tian Hai Test Technology Co., Ltd.

125-126, No.66, Zhangge Road, Zhangge Community, Fucheng Street, Longhua District, Shenzhen, Guangdong, China



## 2. Summary of Test Results

| Standard Section                                            | Test Item           | Result |
|-------------------------------------------------------------|---------------------|--------|
| 15.203                                                      | Antenna Requirement | PASS   |
| 15.207                                                      | Conducted Emission  | PASS   |
| 15.205/15.209/15.249                                        | Radiated Emission   | PASS   |
| 15.249(d)                                                   | Band Edge           | PASS   |
| 15.215(c)                                                   | 20dB Bandwidth      | PASS   |
| <b>Remark:</b> "N/A" is an abbreviation for Not Applicable. |                     |        |

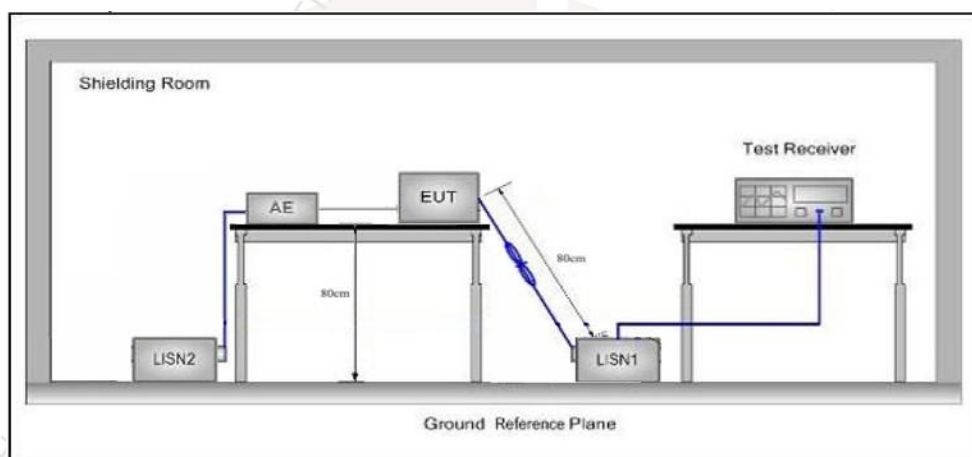


### 3. Conducted Emission Test

#### 3.1. Test Standard and Limit

| Test Standard                                                                                                                            | FCC Part15 Section 15.207 |                                |               |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------|---------------|
| Test Limit                                                                                                                               | Frequency                 | Maximum RF Line Voltage (dBuV) |               |
|                                                                                                                                          |                           | Quasi-peak Level               | Average Level |
|                                                                                                                                          | 150kHz~500kHz             | 66 ~ 56 *                      | 56 ~ 46 *     |
|                                                                                                                                          | 500kHz~5MHz               | 56                             | 46            |
|                                                                                                                                          | 5MHz~30MHz                | 60                             | 50            |
| <b>Remark:</b> (1) *Decreasing linearly with logarithm of the frequency.<br>(2) The lower limit shall apply at the transition frequency. |                           |                                |               |

#### 3.2. Test Setup



#### 3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10-2020 on Conducted Emission Measurement.

The bandwidth of test receiver (ESR) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

#### 3.4. Test Data

During the test, pre-scan all modes, and found the Low CH (2402MHz) which is the worst case, only the worst case is recorded in the report.

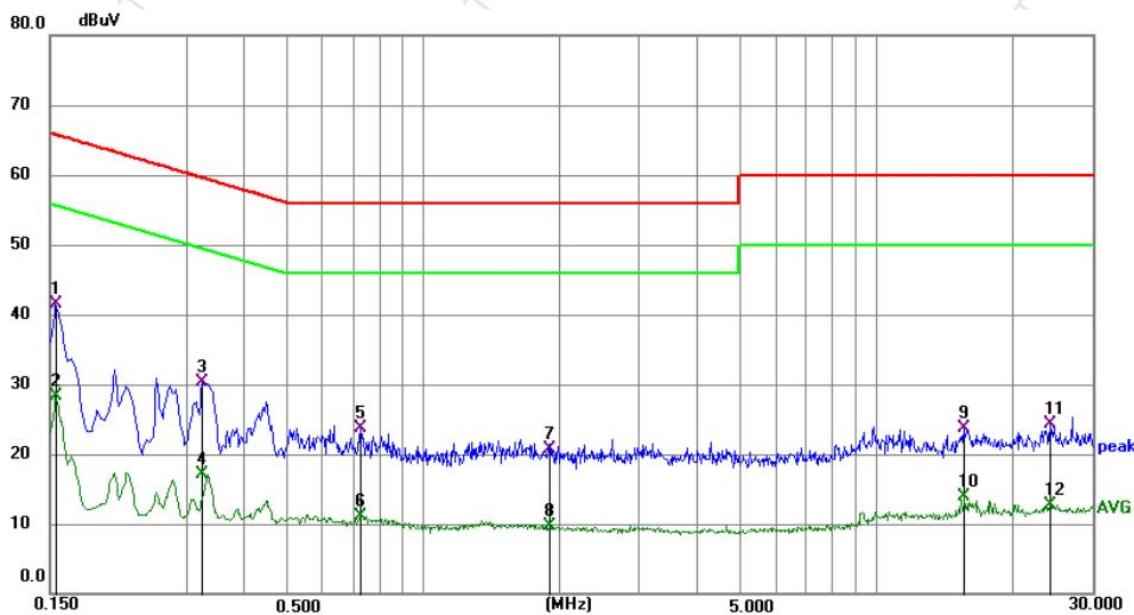
AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/60Hz modes, recorded worst case AC 120V/60Hz.

Please to see the following pages.



## Conducted Emission Test Data

Test Site: 1# Shielded Room  
Operating Condition: Low CH (2402MHz)  
Test Specification: AC 120V, 60Hz for adapter  
Comment: Live Line  
Temp.(°C)/Hum.(%RH): 22.1°C/52%RH



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1 * | 0.1545          | 31.33          | 10.26       | 41.59        | 65.75        | -24.16      | QP       | P   |
| 2   | 0.1545          | 17.97          | 10.26       | 28.23        | 55.75        | -27.52      | AVG      | P   |
| 3   | 0.3255          | 20.06          | 10.27       | 30.33        | 59.57        | -29.24      | QP       | P   |
| 4   | 0.3255          | 6.76           | 10.27       | 17.03        | 49.57        | -32.54      | AVG      | P   |
| 5   | 0.7304          | 13.27          | 10.35       | 23.62        | 56.00        | -32.38      | QP       | P   |
| 6   | 0.7304          | 0.81           | 10.35       | 11.16        | 46.00        | -34.84      | AVG      | P   |
| 7   | 1.8960          | 10.26          | 10.46       | 20.72        | 56.00        | -35.28      | QP       | P   |
| 8   | 1.8960          | -0.69          | 10.46       | 9.77         | 46.00        | -36.23      | AVG      | P   |
| 9   | 15.6345         | 13.00          | 10.73       | 23.73        | 60.00        | -36.27      | QP       | P   |
| 10  | 15.6345         | 3.17           | 10.73       | 13.90        | 50.00        | -36.10      | AVG      | P   |
| 11  | 24.2520         | 13.30          | 10.98       | 24.28        | 60.00        | -35.72      | QP       | P   |
| 12  | 24.2520         | 1.68           | 10.98       | 12.66        | 50.00        | -37.34      | AVG      | P   |

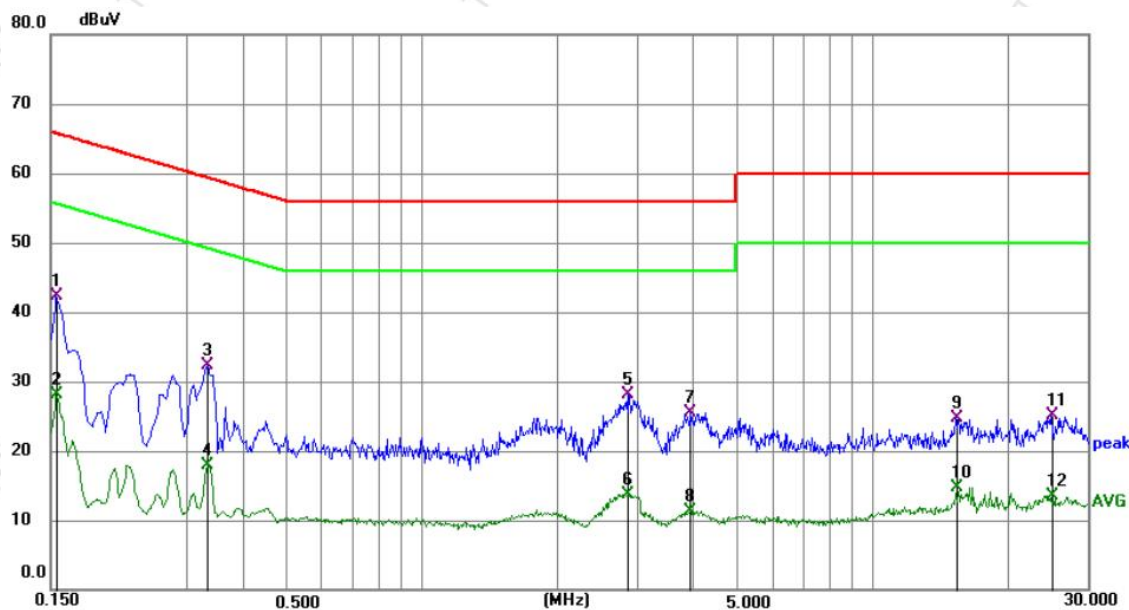
Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor



## Conducted Emission Test Data

Test Site: 1# Shielded Room  
Operating Condition: Low CH (2402MHz)  
Test Specification: AC 120V, 60Hz for adapter  
Comment: Neutral Line  
Temp.(°C)/Hum.(%RH): 22.1°C/52%RH



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1 * | 0.1545          | 32.00          | 10.22       | 42.22        | 65.75        | -23.53      | QP       | P   |
| 2   | 0.1545          | 17.92          | 10.22       | 28.14        | 55.75        | -27.61      | AVG      | P   |
| 3   | 0.3345          | 22.01          | 10.25       | 32.26        | 59.34        | -27.08      | QP       | P   |
| 4   | 0.3345          | 7.68           | 10.25       | 17.93        | 49.34        | -31.41      | AVG      | P   |
| 5   | 2.8635          | 17.74          | 10.45       | 28.19        | 56.00        | -27.81      | QP       | P   |
| 6   | 2.8635          | 3.34           | 10.45       | 13.79        | 46.00        | -32.21      | AVG      | P   |
| 7   | 3.9525          | 15.01          | 10.50       | 25.51        | 56.00        | -30.49      | QP       | P   |
| 8   | 3.9525          | 0.81           | 10.50       | 11.31        | 46.00        | -34.69      | AVG      | P   |
| 9   | 15.3105         | 14.05          | 10.72       | 24.77        | 60.00        | -35.23      | QP       | P   |
| 10  | 15.3105         | 4.07           | 10.72       | 14.79        | 50.00        | -35.21      | AVG      | P   |
| 11  | 24.9360         | 14.14          | 10.93       | 25.07        | 60.00        | -34.93      | QP       | P   |
| 12  | 24.9360         | 2.62           | 10.93       | 13.55        | 50.00        | -36.45      | AVG      | P   |

Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor



## 4. Radiated Emission and Band Edge

### 4.1. Test Standard and Limit

| Test Standard | FCC Part15 C Section 15.209 and 15.205 |                                  |                |            |                          |
|---------------|----------------------------------------|----------------------------------|----------------|------------|--------------------------|
| Test Limit    | Frequency (MHz)                        | Field strength (microvolt/meter) | Limit (dBuV/m) | Remark     | Measurement distance (m) |
|               | 0.009MHz~0.490MHz                      | 2400/F(kHz)                      | -              | -          | 300                      |
|               | 0.490MHz~1.705MHz                      | 24000/F(kHz)                     | -              | -          | 30                       |
|               | 1.705MHz~30MHz                         | 30                               | -              | -          | 30                       |
|               | 30MHz~88MHz                            | 100                              | 40.0           | Quasi-peak | 3                        |
|               | 88MHz~216MHz                           | 150                              | 43.5           | Quasi-peak | 3                        |
|               | 216MHz~960MHz                          | 200                              | 46.0           | Quasi-peak | 3                        |
|               | 960MHz~1000MHz                         | 500                              | 54.0           | Quasi-peak | 3                        |
|               | Above 1000MHz                          | 500                              | 54.0           | Average    | 3                        |
|               |                                        | -                                | 74.0           | Peak       | 3                        |

**Remark:**

(1)The lower limit shall apply at the transition frequency.

(2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

| Test Standard | FCC Part15 C Section 15.249 |                                                    |                                                |                |         |                          |
|---------------|-----------------------------|----------------------------------------------------|------------------------------------------------|----------------|---------|--------------------------|
| Test Limit    | Frequency (MHz)             | Field Strength of fundamental ((millivolts /meter) | Field Strength of Harmonics (microvolts/meter) | Limit (dBuV/m) | Remark  | Measurement distance (m) |
|               | 2400~2483.5                 | 50                                                 | -                                              | 114.0          | Peak    | 3                        |
|               | 2400~2483.5                 | 50                                                 | -                                              | 94.0           | Average | 3                        |
|               | 2400~2483.5                 | -                                                  | 500                                            | 74.0           | Peak    | 3                        |
|               | 2400~2483.5                 | -                                                  | 500                                            | 54.0           | Average | 3                        |

**Remark:**

(1) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.



## 4.2. Test Setup

Figure 1. Below 30MHz

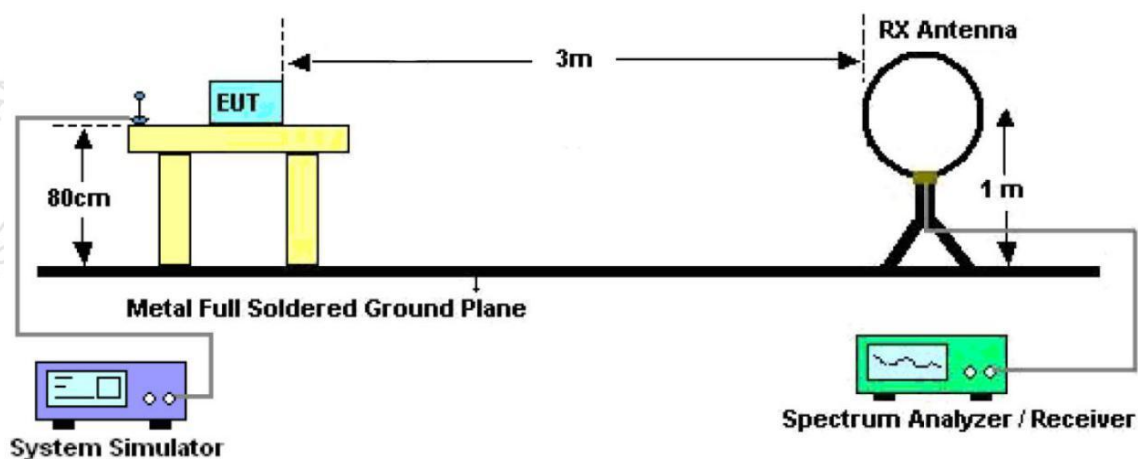


Figure 2. 30MHz to 1GHz

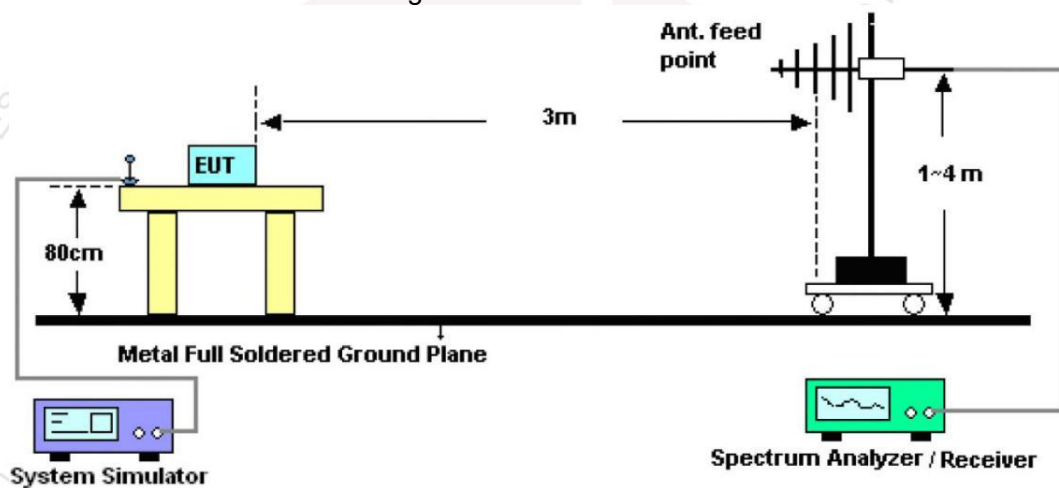
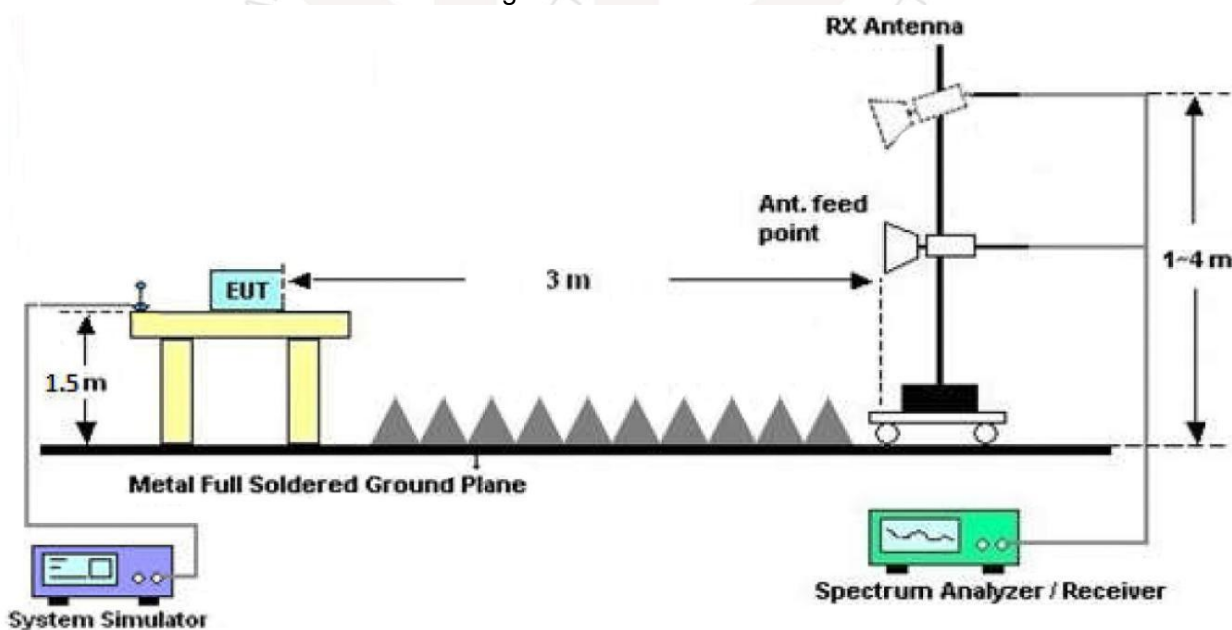


Figure 3. Above 1 GHz





### 4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane.

For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9\*6\*6 Chamber. The device is evaluated in xyz orientation.

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW =300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For above 1GHz,Set the spectrum analyzer as:

RBW =1MHz, VBW =1MHz, Detector= Peak, Trace mode= Max hold, Sweep- auto couple.

RBW =1MHz, VBW =10Hz, Detector= Average, Trace mode= Max hold, Sweep- auto couple.

### 4.4. Test Data

#### PASS

During the test, Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis is the worst case.

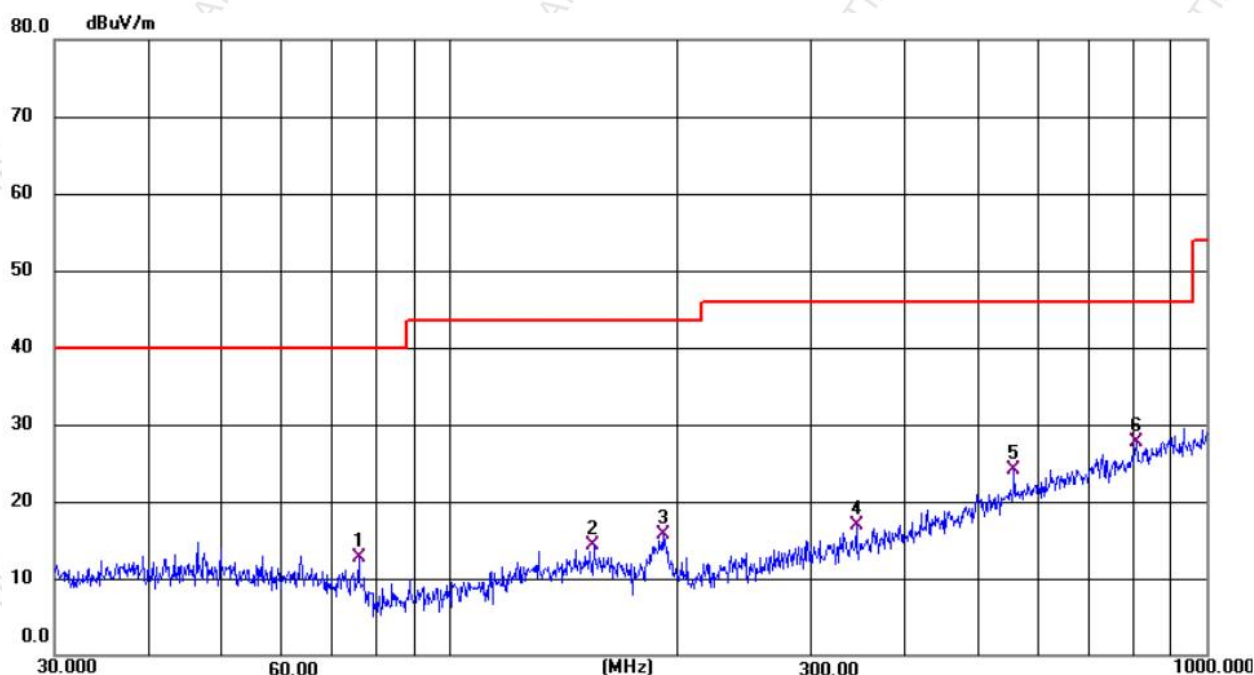
The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

During the test, pre-scan all the modes, and found the Low CH (2402MHz) which is the worst case, only the worst case is recorded in the report.



### Test Results (30~1000MHz)

Test Mode: Low CH (2402MHz)  
Power Source: AC 120V, 60Hz for adapter  
Polarization: Vertical  
Temp.(°C)/Hum.(%RH): 22.5°C/50%RH



| No. | Frequency (MHz) | Reading (dBUV) | Factor (dB/m) | Level (dBUV/m) | Limit (dBUV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1   | 75.7113         | 31.30          | -18.67        | 12.63          | 40.00          | -27.37      | QP       |
| 2   | 154.8204        | 29.80          | -15.50        | 14.30          | 43.50          | -29.20      | QP       |
| 3   | 191.0738        | 33.69          | -18.03        | 15.66          | 43.50          | -27.84      | QP       |
| 4   | 344.3855        | 30.52          | -13.67        | 16.85          | 46.00          | -29.15      | QP       |
| 5   | 556.7743        | 32.41          | -8.28         | 24.13          | 46.00          | -21.87      | QP       |
| 6 * | 807.4290        | 31.16          | -3.55         | 27.61          | 46.00          | -18.39      | QP       |

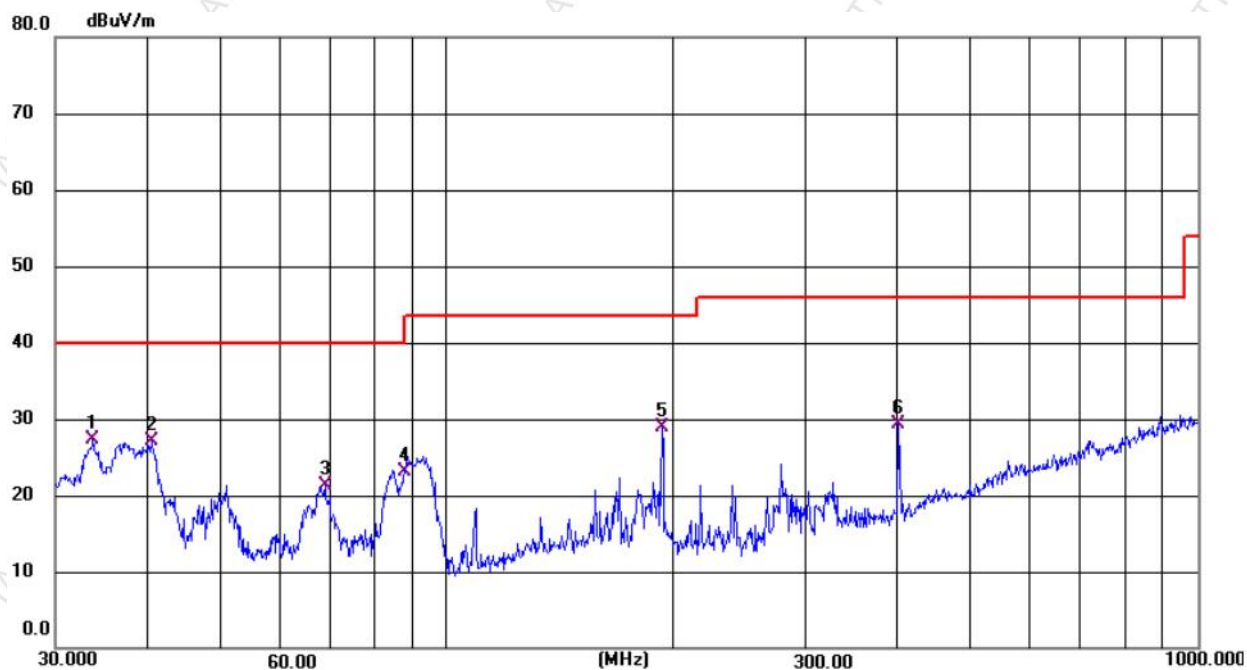
Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor



### Test Results (30~1000MHz)

Test Mode: Low CH (2402MHz)  
Power Source: AC 120V, 60Hz for adapter  
Polarization: Horizontal  
Temp.(°C)/Hum.(%RH): 22.5°C/50%RH



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1 * | 33.7394         | 42.83          | -15.62        | 27.21          | 40.00          | -12.79      | QP       |
| 2   | 40.2756         | 41.83          | -14.69        | 27.14          | 40.00          | -12.86      | QP       |
| 3   | 68.8721         | 38.52          | -17.23        | 21.29          | 40.00          | -18.71      | QP       |
| 4   | 87.8786         | 42.91          | -19.88        | 23.03          | 40.00          | -16.97      | QP       |
| 5   | 193.7727        | 46.71          | -17.86        | 28.85          | 43.50          | -14.65      | QP       |
| 6   | 400.4318        | 41.48          | -12.13        | 29.35          | 46.00          | -16.65      | QP       |

Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor



## Test Results (1GHz-25GHz)

Test channel: Lowest

### Peak value:

| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|-----------------|----------------|---------------|-----------------|---------------------|-----------------|--------------|
| 2402.00         | 75.63          | 25.59         | 101.22          | 114.00              | -12.78          | Vertical     |
| 4804.00         | 42.33          | 16.32         | 58.65           | 74.00               | -15.35          | Vertical     |
| 7206.00         | 47.12          | 14.25         | 61.37           | 74.00               | -12.63          | Vertical     |
| 9608.00         | 43.11          | 15.02         | 58.13           | 74.00               | -15.87          | Vertical     |
| 12010.00        | *              |               |                 | 74.00               |                 | Vertical     |
| 14412.00        | *              |               |                 | 74.00               |                 | Vertical     |
| 2402.00         | 74.26          | 24.68         | 98.94           | 114.00              | -15.06          | Horizontal   |
| 4804.00         | 42.33          | 17.49         | 59.82           | 74.00               | -14.18          | Horizontal   |
| 7206.00         | 47.12          | 15.56         | 62.68           | 74.00               | -11.32          | Horizontal   |
| 9608.00         | 43.11          | 15.37         | 58.48           | 74.00               | -15.52          | Horizontal   |
| 12010.00        | *              |               |                 | 74.00               |                 | Horizontal   |
| 14412.00        | *              |               |                 | 74.00               |                 | Horizontal   |

### Average value:

| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | polarization |
|-----------------|----------------|---------------|-----------------|----------------|-----------------|--------------|
| 2402.00         | 56.23          | 24.11         | 80.34           | 94.00          | -13.66          | Vertical     |
| 4804.00         | 33.59          | 7.69          | 41.28           | 54.00          | -12.72          | Vertical     |
| 7206.00         | 37.74          | 8.07          | 45.81           | 54.00          | -8.19           | Vertical     |
| 9608.00         | 35.66          | 8.26          | 43.92           | 54.00          | -10.08          | Vertical     |
| 12010.00        | *              |               |                 | 54.00          |                 | Vertical     |
| 14412.00        | *              |               |                 | 54.00          |                 | Vertical     |
| 2402.00         | 62.36          | 23.84         | 86.20           | 94.00          | -7.80           | Horizontal   |
| 4804.00         | 36.97          | 8.29          | 45.26           | 54.00          | -8.74           | Horizontal   |
| 7206.00         | 31.22          | 7.07          | 38.29           | 54.00          | -15.71          | Horizontal   |
| 9608.00         | 32.28          | 7.26          | 39.54           | 54.00          | -14.46          | Horizontal   |
| 12010.00        | *              |               |                 | 54.00          |                 | Horizontal   |
| 14412.00        | *              |               |                 | 54.00          |                 | Horizontal   |

Remark:

- 1.Result =Reading + Factor
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



**Test Results (1GHz-25GHz)**

| Test channel: Middle |                |               |                 |                     |                 |              |
|----------------------|----------------|---------------|-----------------|---------------------|-----------------|--------------|
| Peak value:          |                |               |                 |                     |                 |              |
| Frequency (MHz)      | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 2440.00              | 76.89          | 25.36         | 102.25          | 114.00              | -11.75          | Vertical     |
| 4880.00              | 45.88          | 14.25         | 60.13           | 74.00               | -13.87          | Vertical     |
| 7320.00              | 46.97          | 16.32         | 63.29           | 74.00               | -10.71          | Vertical     |
| 9760.00              | 45.27          | 14.78         | 60.05           | 74.00               | -13.95          | Vertical     |
| 12200.00             | *              |               |                 | 74.00               |                 | Vertical     |
| 14640.00             | *              |               |                 | 74.00               |                 | Vertical     |
| 2440.00              | 76.58          | 26.65         | 103.23          | 114.00              | -10.77          | Horizontal   |
| 4880.00              | 46.32          | 15.36         | 61.68           | 74.00               | -12.32          | Horizontal   |
| 7320.00              | 45.14          | 14.35         | 59.49           | 74.00               | -14.51          | Horizontal   |
| 9760.00              | 43.78          | 15.21         | 58.99           | 74.00               | -15.01          | Horizontal   |
| 12200.00             | *              |               |                 | 74.00               |                 | Horizontal   |
| 14640.00             | *              |               |                 | 74.00               |                 | Horizontal   |
| Average value:       |                |               |                 |                     |                 |              |
| Frequency (MHz)      | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m)      | Over Limit (dB) | polarization |
| 2440.00              | 58.26          | 21.35         | 79.61           | 94.00               | -14.39          | Vertical     |
| 4880.00              | 37.59          | 10.23         | 47.82           | 54.00               | -6.18           | Vertical     |
| 7320.00              | 35.49          | 10.68         | 46.17           | 54.00               | -7.83           | Vertical     |
| 9760.00              | 35.63          | 12.32         | 47.95           | 54.00               | -6.05           | Vertical     |
| 12200.00             | *              |               |                 | 54.00               |                 | Vertical     |
| 14640.00             | *              |               |                 | 54.00               |                 | Vertical     |
| 2440.00              | 60.21          | 23.04         | 83.25           | 94.00               | -10.75          | Horizontal   |
| 4880.00              | 36.63          | 9.23          | 45.86           | 54.00               | -8.14           | Horizontal   |
| 7320.00              | 38.00          | 9.28          | 47.28           | 54.00               | -6.72           | Horizontal   |
| 9760.00              | 36.63          | 9.32          | 45.95           | 54.00               | -8.05           | Horizontal   |
| 12200.00             | *              |               |                 | 54.00               |                 | Horizontal   |
| 14640.00             | *              |               |                 | 54.00               |                 | Horizontal   |

Remark:

- 1.Result =Reading + Factor
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



### Test Results (1GHz-25GHz)

Test channel: Highest

#### Peak value:

| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|-----------------|----------------|---------------|-----------------|---------------------|-----------------|--------------|
| 2480.00         | 75.69          | 25.21         | 100.90          | 114.00              | -13.10          | Vertical     |
| 4960.00         | 44.36          | 13.11         | 57.47           | 74.00               | -16.53          | Vertical     |
| 7440.00         | 45.02          | 14.68         | 59.70           | 74.00               | -14.30          | Vertical     |
| 9920.00         | 44.27          | 14.36         | 58.63           | 74.00               | -15.37          | Vertical     |
| 12400.00        | *              |               |                 | 74.00               |                 | Vertical     |
| 14880.00        | *              |               |                 | 74.00               |                 | Vertical     |
| 2480.00         | 72.69          | 28.21         | 100.90          | 114.00              | -13.10          | Horizontal   |
| 4960.00         | 46.32          | 11.11         | 57.43           | 74.00               | -16.57          | Horizontal   |
| 7440.00         | 45.62          | 12.68         | 58.30           | 74.00               | -15.70          | Horizontal   |
| 9920.00         | 43.68          | 12.89         | 56.57           | 74.00               | -17.43          | Horizontal   |
| 12400.00        | *              |               |                 | 74.00               |                 | Horizontal   |
| 14880.00        | *              |               |                 | 74.00               |                 | Horizontal   |

#### Average value:

| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | polarization |
|-----------------|----------------|---------------|-----------------|----------------|-----------------|--------------|
| 2480.00         | 64.23          | 21.48         | 85.71           | 94.00          | -8.29           | Vertical     |
| 4960.00         | 24.23          | 14.48         | 38.71           | 54.00          | -15.29          | Vertical     |
| 7440.00         | 27.49          | 18.18         | 45.67           | 54.00          | -8.33           | Vertical     |
| 9920.00         | 22.11          | 17.39         | 39.50           | 54.00          | -14.50          | Vertical     |
| 12400.00        | *              |               |                 | 54.00          |                 | Vertical     |
| 14880.00        | *              |               |                 | 54.00          |                 | Vertical     |
| 2480.00         | 55.23          | 24.11         | 79.34           | 94.00          | -14.66          | Horizontal   |
| 4960.00         | 36.36          | 10.23         | 46.59           | 54.00          | -7.41           | Horizontal   |
| 7440.00         | 36.74          | 10.68         | 47.42           | 54.00          | -6.58           | Horizontal   |
| 9920.00         | 33.41          | 12.32         | 45.73           | 54.00          | -8.27           | Horizontal   |
| 12400.00        | *              |               |                 | 54.00          |                 | Horizontal   |
| 14880.00        | *              |               |                 | 54.00          |                 | Horizontal   |

Remark:

1.Result =Reading + Factor

2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



**Radiated Band Edge:**

| Test channel: Lowest  |                |               |                 |                |                 |              |          |
|-----------------------|----------------|---------------|-----------------|----------------|-----------------|--------------|----------|
| Frequency (MHz)       | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Antenna Pol. | Detector |
| 2390                  | 36.58          | 7.38          | 43.96           | 54             | -10.04          | H            | Peak     |
| 2400                  | 34.19          | 7.41          | 41.6            | 54             | -12.4           | V            | Peak     |
| 2390                  | 58.64          | 7.38          | 66.02           | 74             | -7.98           | H            | AVG      |
| 2400                  | 56.66          | 7.41          | 64.07           | 74             | -9.93           | V            | AVG      |
| Test channel: Highest |                |               |                 |                |                 |              |          |
| Frequency (MHz)       | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Antenna Pol. | Detector |
| 2483.5                | 35.18          | 7.44          | 42.62           | 54             | -11.38          | H            | Peak     |
| 2500                  | 36.67          | 7.49          | 44.16           | 54             | -9.84           | V            | Peak     |
| 2483.5                | 54.18          | 7.44          | 61.62           | 74             | -12.38          | H            | AVG      |
| 2500                  | 53.27          | 7.49          | 60.76           | 74             | -13.24          | V            | AVG      |

Remark:

1. Level =Reading+ Factor

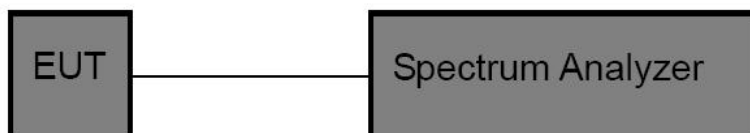


## 5. 20dB Bandwidth Test

### 5.1. Test Standard and Limit

|               |                                |
|---------------|--------------------------------|
| Test Standard | FCC Part15 C Section 15.215(c) |
| Test Limit    | N/A                            |

### 5.2. Test Setup



### 5.3. Test Procedure

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as:  
RBW = 43kHz, VBW $\geq$ 3\*RBW =130kHz,  
Detector= Average  
Trace mode= Max hold.  
Sweep- auto couple.
4. Mark the peak frequency and -20dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

### 5.4. Test Data

|              |                  |             |                    |
|--------------|------------------|-------------|--------------------|
| Test Item    | : 20dB Bandwidth | Test Mode   | : CH Low ~ CH High |
| Test Voltage | : DC 3.3V        | Temperature | : 22.4℃            |
| Test Result  | : PASS           | Humidity    | : 55%RH            |

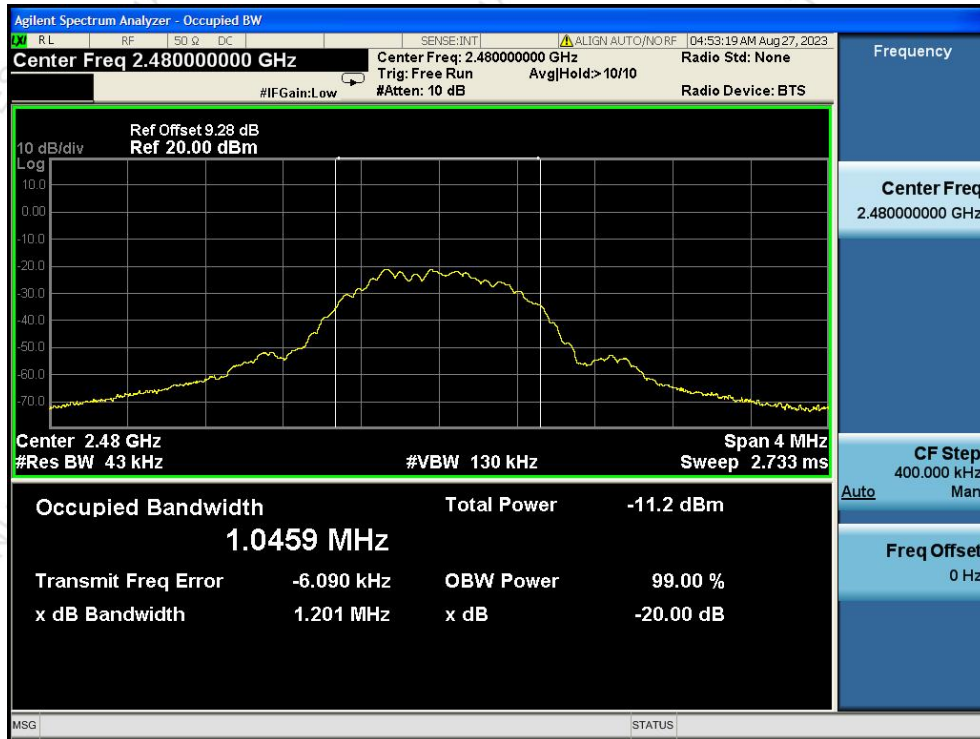
| Channel | Bandwidth (MHz) | Result |
|---------|-----------------|--------|
| Low     | 1.180           | PASS   |
| Middle  | 1.195           | PASS   |
| High    | 1.201           | PASS   |



Low Channel



Mid Channel



High Channel



## 6. Antenna Requirement

### 6.1. Test Standard and Requirement

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Standard | FCC Part15 Section 15.203                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Requirement   | 1) 15.203 requirement:<br>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall 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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. |

### 6.2. Antenna Connected Construction

The antenna is a PCB Antenna which permanently attached, and the best case gain of the antenna is 0 dBi. It complies with the standard requirement.



## **APPENDIX I -- TEST SETUP PHOTOGRAPH**

Please refer to separated files Appendix I -- Test Setup Photograph

## **APPENDIX II -- EXTERNAL PHOTOGRAPH**

Please refer to separated files Appendix II -- External Photograph

## **APPENDIX III -- INTERNAL PHOTOGRAPH**

Please refer to separated files Appendix III -- Internal Photograph

----- End of Report -----