

# FCC Test Report

**Applicant** : Zhejiang Lera New Energy Power Technology Co.,Ltd.

**Address** : 255 Kesheng Road, Haishu Wangchun Industrial Park, Ningbo City,Zhejiang Province, 315000, China

**Product Name** : PowerHUB

**Report Date** : May 10, 2023



**Shenzhen Anbotek Compliance Laboratory Limited**

**Shenzhen Anbotek Compliance Laboratory Limited**

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**Code: AB-RF-05-b**



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## TEST REPORT

Applicant : Zhejiang Lera New Energy Power Technology Co.,Ltd.

Manufacturer : Zhejiang Lera New Energy Power Technology Co.,Ltd.

Product Name : PowerHUB

Model No. : B300

Trade Mark : litheli

Rating(s) : Please see page 9

Test Standard(s) : FCC Part15 Subpart C, Paragraph 15.209

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

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited 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 Anbotek Compliance Laboratory Limited 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 Anbotek Compliance Laboratory Limited.

Date of Receipt

Apr. 10, 2023

Date of Test

Apr. 10 ~ 19 2023

Prepared By

Nian xiu Chen

(Nianxiu Chen)

Approved & Authorized Signer

Kingkong Jin

(Kingkong Jin)



## Revision History

| Report Version | Description     | Issued Date  |
|----------------|-----------------|--------------|
| R00            | Original Issue. | May 10, 2023 |
|                |                 |              |
|                |                 |              |



## 1. General Information

### 1.1. Client Information

|              |   |                                                                                                 |
|--------------|---|-------------------------------------------------------------------------------------------------|
| Applicant    | : | Zhejiang Lera New Energy Power Technology Co.,Ltd.                                              |
| Address      | : | 255 Kesheng Road, Haishu Wangchun Industrial Park, Ningbo City,Zhejiang Province, 315000, China |
| Manufacturer | : | Zhejiang Lera New Energy Power Technology Co.,Ltd.                                              |
| Address      | : | 255 Kesheng Road, Haishu Wangchun Industrial Park, Ningbo City,Zhejiang Province, 315000, China |
| Factory      | : | Zhejiang Lera New Energy Power Technology Co.,Ltd.                                              |
| Address      | : | 255 Kesheng Road, Haishu Wangchun Industrial Park, Ningbo City,Zhejiang Province, 315000, China |

### 1.2. Description of Device (EUT)

|                   |   |                                                                                                                                                                        |
|-------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name      | : | PowerHUB                                                                                                                                                               |
| Model No.         | : | B300                                                                                                                                                                   |
| Trade Mark        | : | litheli                                                                                                                                                                |
| Test Power Supply | : | AC 120V, 60Hz for Adapter/ DC 14.4V battery inside                                                                                                                     |
| Test Sample No.   | : | 1-2-1(Normal Sample), 1-2-2(Engineering Sample)                                                                                                                        |
| Adapter           | : | Model: A869-200325C-US1<br>Input: 100-240V~, 50/60Hz, 1.7A<br>Output: 5.0V---3.0A/ 9.0V---3.0A/12.0V---3.0A/15.0V---3.0A/20.0V---3.25A/<br>3.3-21.0V---3.25A 65.0W Max |

#### RF Specification

|                     |   |                              |
|---------------------|---|------------------------------|
| Operation Frequency | : | 110.1-205KHz                 |
| Modulation Type     | : | ASK                          |
| Antenna Type        | : | Inductive loop coil 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)                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------|
| Wireless charging load | Manufacturer: Shenzhen Ouju Technology Co., Ltd.<br>M/N: CD2577<br>Power: 5W/7.5W/10W/15W |

### 1.4. Description of Test Modes

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description                       |
|--------------|-----------------------------------|
| Mode 1       | Charging & Wireless Charging Mode |
| Mode 2       | Wireless Charging Mode            |

| For Conducted Emission |                                   |
|------------------------|-----------------------------------|
| Final Test Mode        | Description                       |
| Mode 1                 | Charging & Wireless Charging Mode |

| For Radiated Emission |                                   |
|-----------------------|-----------------------------------|
| Final Test Mode       | Description                       |
| Mode 1                | Charging & Wireless Charging Mode |
| Mode 2                | Wireless Charging Mode            |

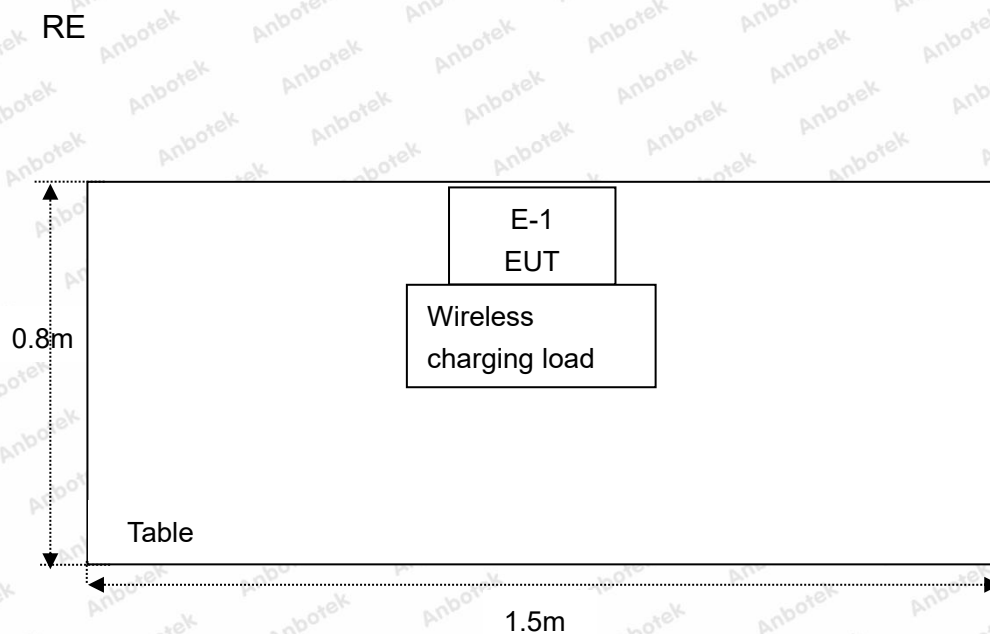
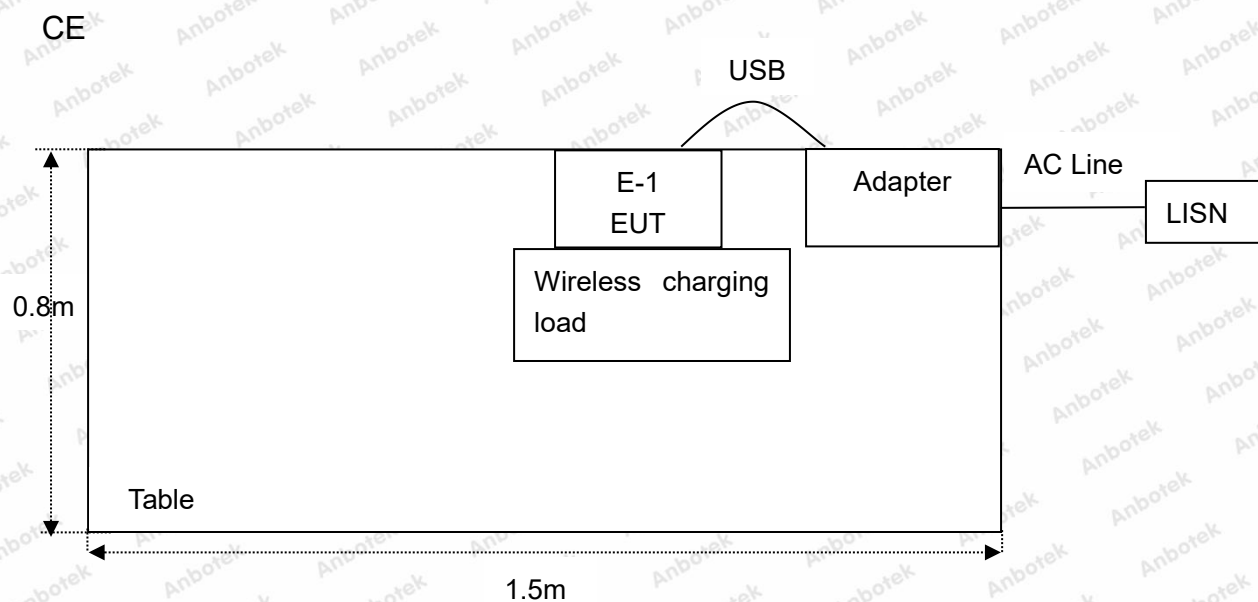
Note:

(1) Test channel is 0.1221MHz.

(2) All the situation(full load, half load and empty load) has been tested,only the worst situation (full load 15W) was recorded in the report.



## 1.5. Description Of Test Setup



## 1.6. Test Equipment List

| Item | Equipment                                         | Manufacturer            | Model No.     | Serial No.    | Last Cal.     | Cal. Interval |
|------|---------------------------------------------------|-------------------------|---------------|---------------|---------------|---------------|
| 1.   | L.I.S.N.<br>Artificial Mains<br>Network           | Rohde & Schwarz         | ENV216        | 100055        | Oct. 23, 2022 | 1 Year        |
| 2.   | Three Phase V-type<br>Artificial Power<br>Network | CYBERTEK                | EM5040DT      | E215040DT001  | Jul. 05, 2022 | 1 Year        |
| 3.   | EMI Test Receiver                                 | Rohde & Schwarz         | ESCI          | 100627        | Oct. 13, 2022 | 1 Year        |
| 4.   | EMI Test Receiver                                 | Rohde & Schwarz         | ESR26         | 101481        | Oct. 23, 2022 | 1 Year        |
| 5.   | RF Switching Unit                                 | Compliance<br>Direction | RSU-M2        | 38303         | Oct. 22, 2022 | 1 Year        |
| 6.   | MXA Spectrum<br>Analysis                          | Agilent                 | N9020A        | MY51170037    | Oct. 13, 2022 | 1 Year        |
| 7.   | EMI Preamplifier                                  | SKET Electronic         | LNPA-0118G-45 | SKET-PA-002   | Oct. 13, 2022 | 1 Year        |
| 8.   | Double Ridged Horn<br>Antenna                     | SCHWARZBECK             | BBHA 9120D    | 02555         | Oct. 16, 2022 | 3 Year        |
| 9.   | Bilog Broadband<br>Antenna                        | Schwarzbeck             | VULB9163      | VULB 9163-289 | Oct. 23, 2022 | 1 Year        |
| 10.  | Loop Antenna                                      | Schwarzbeck             | FMZB1519B     | 00053         | Oct. 23, 2022 | 1 Year        |
| 11.  | Horn Antenna                                      | A-INFO                  | LB-180400-KF  | J211060628    | Oct. 23, 2022 | 1 Year        |
| 12.  | Pre-amplifier                                     | SONOMA                  | 310N          | 186860        | Oct. 23, 2022 | 1 Year        |
| 13.  | EMI Test Software<br>EZ-EMC                       | SHURPLE                 | N/A           | N/A           | N/A           | N/A           |
| 14.  | MXA Spectrum<br>Analysis                          | KEYSIGHT                | N9020A        | MY53280032    | Oct. 13, 2022 | 1 Year        |
| 15.  | MXG RF Vector Signal<br>Generator                 | Agilent                 | N5182A        | MY48180656    | Oct. 13, 2022 | 1 Year        |
| 16.  | Signal Generator                                  | Agilent                 | E4421B        | MY41000743    | Oct. 13, 2022 | 1 Year        |
| 17.  | DC Power Supply                                   | IVYTECH                 | IV3605        | 1804D360510   | Oct. 22, 2022 | 1 Year        |
| 18.  | Constant Temperature<br>Humidity Chamber          | ZHONGJIAN               | ZJ-KHWS80B    | N/A           | Oct. 19, 2022 | 1 Year        |
| 19.  | Power Meter                                       | Agilent                 | N1914A        | MY50001102    | Oct.26, 2022  | 1 Year        |



### 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.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, 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. 184111.

#### ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

#### Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518102

#### Rating(s):

Capacity: 14.4V $\Rightarrow$  20.8Ah 300Wh

Total Output Power: 300W

AC output (x1): 300W(rated), 110VAC, 60Hz

USB-A output (x2): 5V $\Rightarrow$  2 4A, 12W(Max)

TYPE-C Output (x1): 5V $\Rightarrow$  3A/9V $\Rightarrow$  3A/12V $\Rightarrow$  3A/15V $\Rightarrow$  3A/20V $\Rightarrow$  5A, 100W( Max)

Wireless Charging Output (x1): 15W

Vehicle Charging Output (x1): 12.0V $\Rightarrow$  10A, 120W(Max)

Solar Charging Input (DC7909): 100W(Max)11-30VDC 7A

Vehicle Charging Input(DC7909): 100W(Max) 7A

TYPE-C Input: 5V $\Rightarrow$  3A/9V $\Rightarrow$  3A/12V $\Rightarrow$  3A/15V $\Rightarrow$  3A/20V $\Rightarrow$  5A,100W(Max)



## 2. Summary of Test Results

| Standard Section | Test Item               | Result |
|------------------|-------------------------|--------|
| 15.203           | Antenna Requirement     | PASS   |
| 15.207           | Conducted Emission Test | PASS   |
| 15.205/15.209    | Spurious Emission       | PASS   |



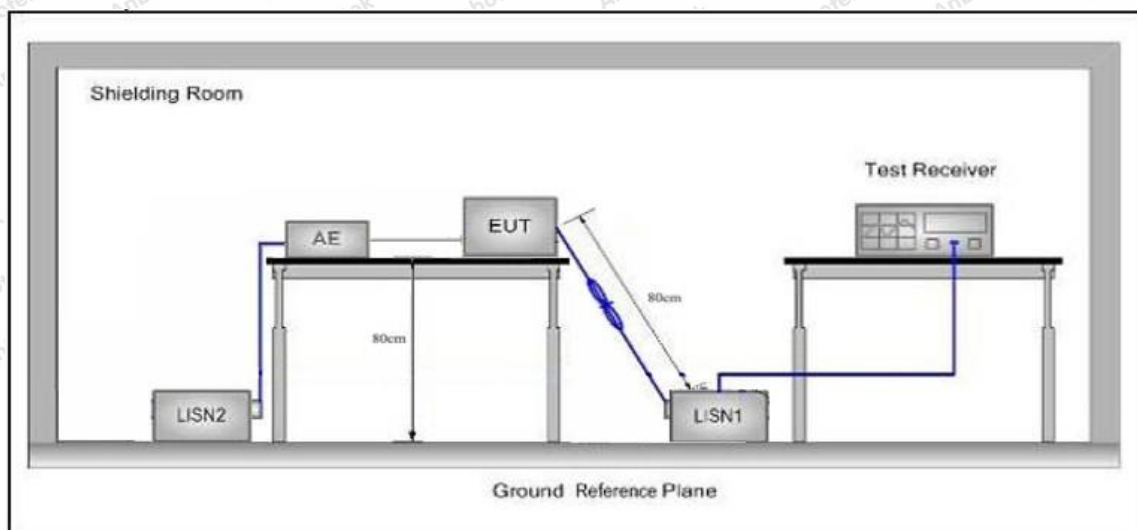
### 3. Conducted Emission Test

#### 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            |

**Remark:** (1) \*Decreasing linearly with logarithm of the frequency.  
(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 (ESCI) set at 9kHz.

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

#### 3.4. Test Data

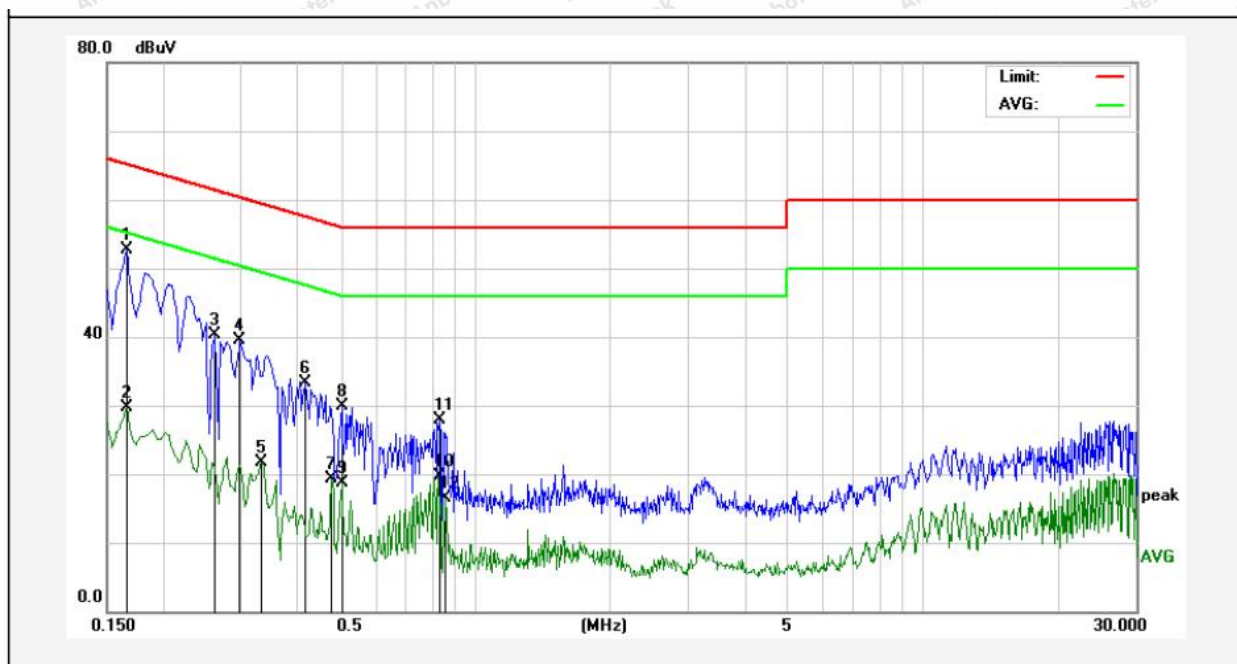
AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/60Hz modes, recorded worst case AC 120V/60Hz.

Please to see the following pages.



**Conducted Emission Test Data**

Test Site: 1# Shielded Room  
Operating Condition: Mode 1  
Test Specification: AC 120V, 60Hz for Adapter  
Comment: Live Line  
Temp.(°C)/Hum.(%RH): 22.8°C/51%RH

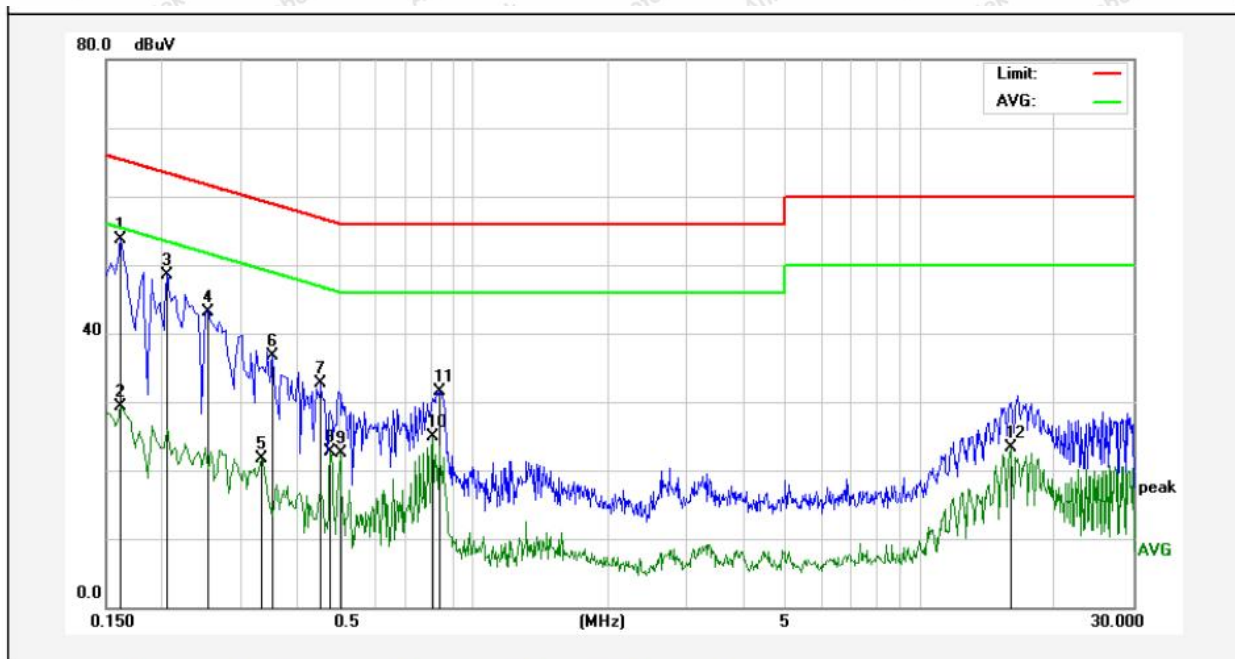


| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit (dBuV) | Over Limit (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|--------------|-----------------|----------|--------|
| 1   | 0.1660      | 42.82          | 9.83        | 52.65         | 65.15        | -12.50          | QP       |        |
| 2   | 0.1660      | 19.95          | 9.83        | 29.78         | 55.15        | -25.37          | AVG      |        |
| 3   | 0.2620      | 30.46          | 9.83        | 40.29         | 61.36        | -21.07          | QP       |        |
| 4   | 0.2980      | 29.64          | 9.83        | 39.47         | 60.30        | -20.83          | QP       |        |
| 5   | 0.3339      | 11.96          | 9.82        | 21.78         | 49.35        | -27.57          | AVG      |        |
| 6   | 0.4180      | 23.50          | 9.82        | 33.32         | 57.49        | -24.17          | QP       |        |
| 7   | 0.4780      | 9.46           | 9.84        | 19.30         | 46.37        | -27.07          | AVG      |        |
| 8   | 0.5020      | 19.99          | 9.85        | 29.84         | 56.00        | -26.16          | QP       |        |
| 9   | 0.5020      | 8.79           | 9.85        | 18.64         | 46.00        | -27.36          | AVG      |        |
| 10  | 0.8300      | 9.80           | 9.86        | 19.66         | 46.00        | -26.34          | AVG      |        |
| 11  | 0.8340      | 18.01          | 9.86        | 27.87         | 56.00        | -28.13          | QP       |        |
| 12  | 0.8580      | 6.65           | 9.86        | 16.51         | 46.00        | -29.49          | AVG      |        |



**Conducted Emission Test Data**

Test Site: 1# Shielded Room  
Operating Condition: Mode 1  
Test Specification: AC 120V, 60Hz for Adapter  
Comment: Neutral Line  
Temp.(°C)/Hum.(%RH): 22.8°C/51%RH



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit (dBuV) | Over Limit (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|--------------|-----------------|----------|--------|
| 1   | 0.1620      | 43.80          | 9.83        | 53.63         | 65.36        | -11.73          | QP       |        |
| 2   | 0.1620      | 19.49          | 9.83        | 29.32         | 55.36        | -26.04          | AVG      |        |
| 3   | 0.2060      | 38.77          | 9.83        | 48.60         | 63.36        | -14.76          | QP       |        |
| 4   | 0.2540      | 33.37          | 9.83        | 43.20         | 61.62        | -18.42          | QP       |        |
| 5   | 0.3339      | 11.93          | 9.82        | 21.75         | 49.35        | -27.60          | AVG      |        |
| 6   | 0.3540      | 26.90          | 9.82        | 36.72         | 58.87        | -22.15          | QP       |        |
| 7   | 0.4540      | 22.87          | 9.83        | 32.70         | 56.80        | -24.10          | QP       |        |
| 8   | 0.4780      | 12.78          | 9.84        | 22.62         | 46.37        | -23.75          | AVG      |        |
| 9   | 0.5020      | 12.68          | 9.85        | 22.53         | 46.00        | -23.47          | AVG      |        |
| 10  | 0.8100      | 15.14          | 9.86        | 25.00         | 46.00        | -21.00          | AVG      |        |
| 11  | 0.8380      | 21.69          | 9.86        | 31.55         | 56.00        | -24.45          | QP       |        |
| 12  | 15.9220     | 13.06          | 10.21       | 23.27         | 50.00        | -26.73          | AVG      |        |



## 4. Radiation Spurious Emission

### 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.

### 4.2. Test Setup

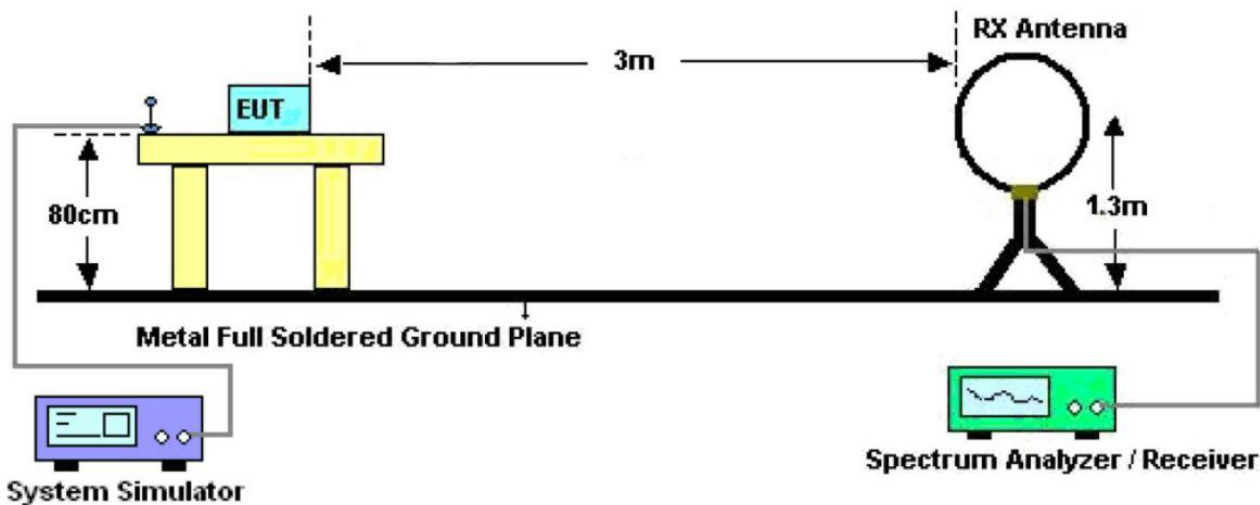


Figure 1. Below 30MHz



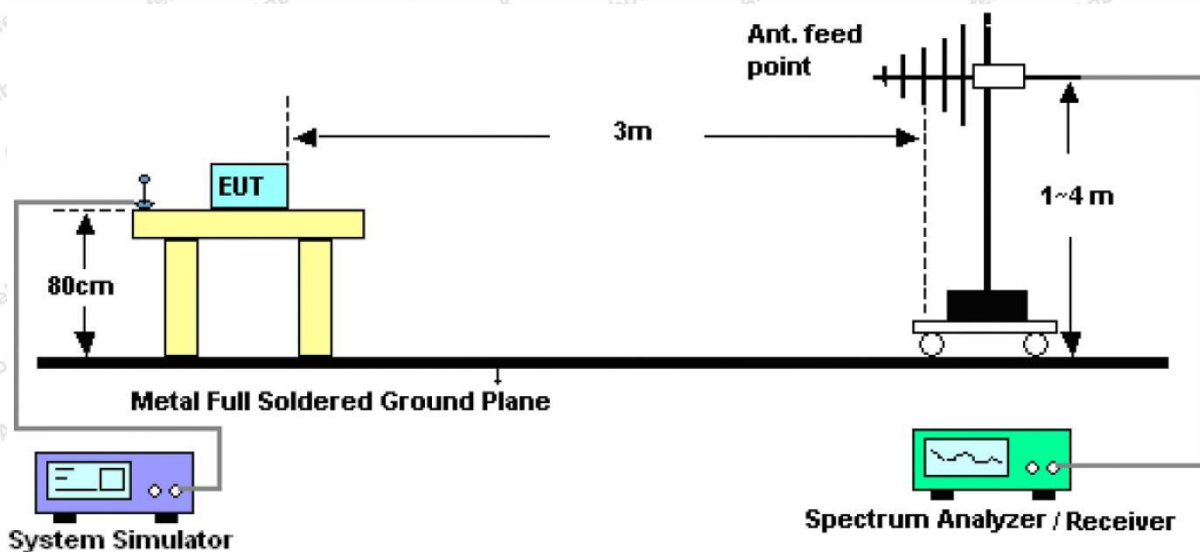


Figure 2. 30MHz to 1GHz

### 4.3. Test Procedure

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

### 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.



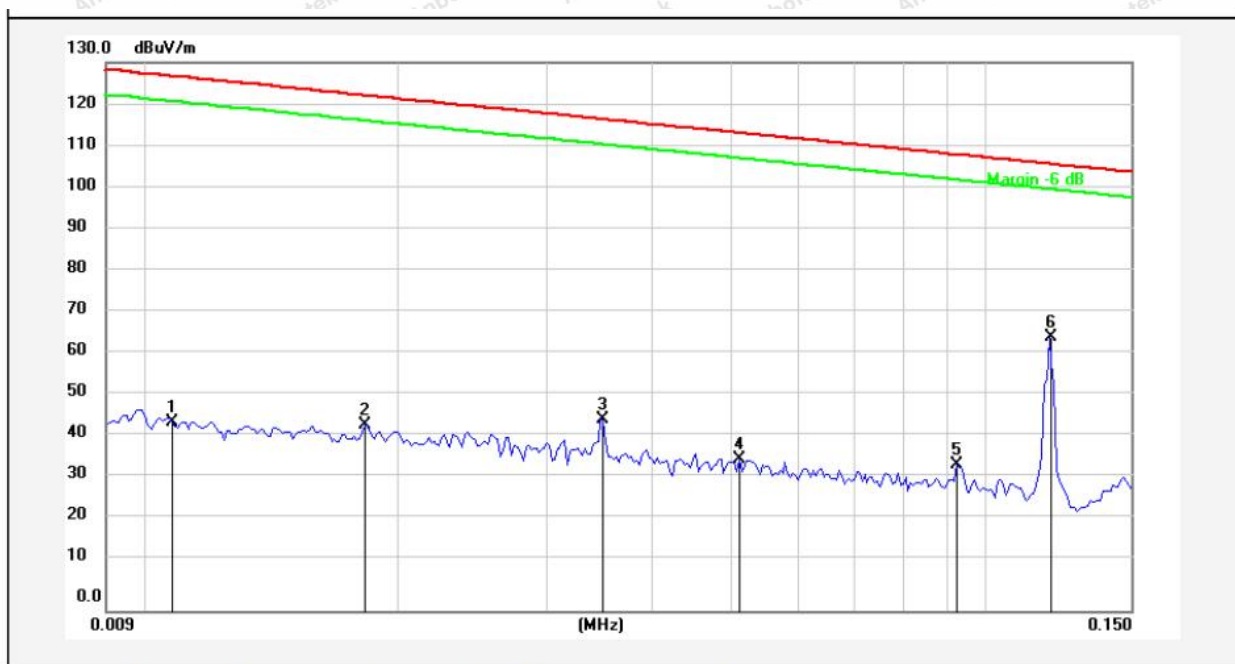
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FCC ID: 2BA8W-B300

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**Test Results (Between 9KHz – 150KHz)**

Test Mode: Mode 2  
Distance: 3m  
Power Source: DC 14.4V battery inside  
Temp.(°C)/Hum.(%RH): 24.2°C/57%RH



| No. | Freq. (MHz) | Reading (dBuV) | Factor () | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|-----------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 0.0108      | 24.78          | 20.06     | 44.84           | 126.73         | -81.89          | peak     |             |              |        |
| 2   | 0.0183      | 23.89          | 20.23     | 44.12           | 122.18         | -78.06          | peak     |             |              |        |
| 3   | 0.0352      | 24.88          | 20.48     | 45.36           | 116.53         | -71.17          | peak     |             |              |        |
| 4   | 0.0509      | 15.66          | 20.41     | 36.07           | 113.35         | -77.28          | peak     |             |              |        |
| 5   | 0.0926      | 14.35          | 20.33     | 34.68           | 108.18         | -73.50          | peak     |             |              |        |
| 6   | 0.1221      | 44.36          | 20.34     | 64.70           | 105.96         | -41.26          | peak     |             |              |        |



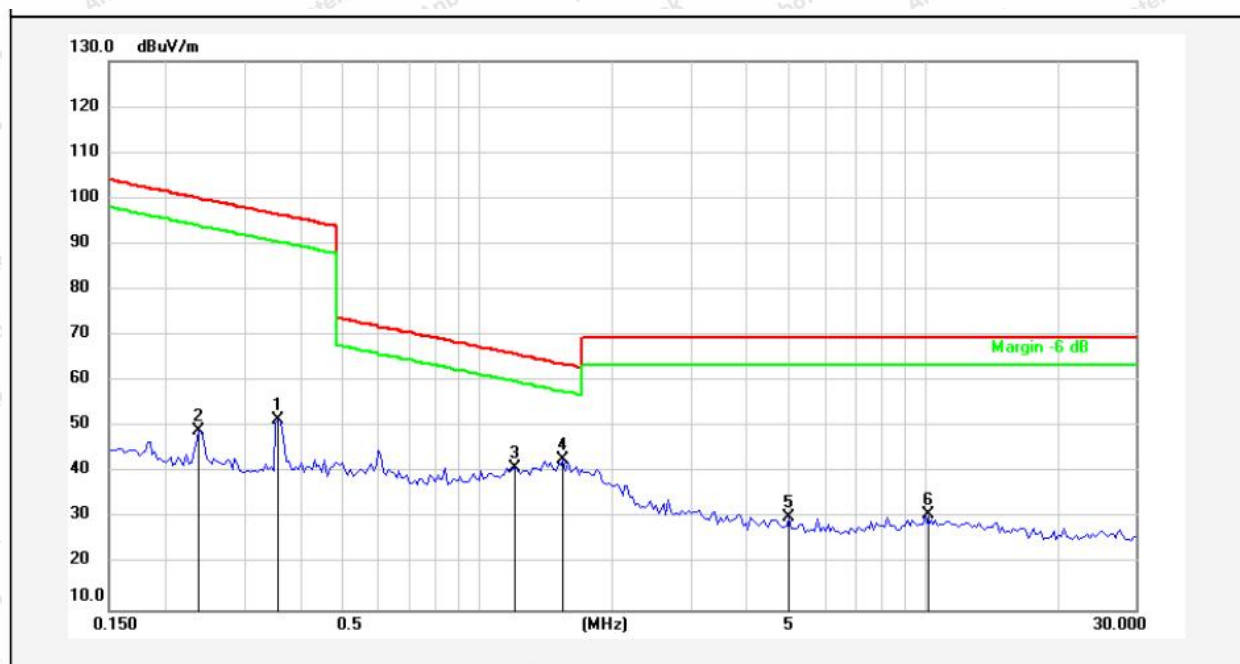
Report No.: 18360WC30004601

FCC ID: 2BA8W-B300

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**Test Results (Between 0.15MHz – 30MHz)**

Test Mode: Mode 2  
Distance: 3m  
Power Source: DC 14.4V battery inside  
Temp.(°C)/Hum.(%RH): 24.2°C/57%RH



| No. | Freq. (MHz) | Reading (dBuV) | Factor () | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|-----------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 0.3593      | 31.14          | 20.28     | 51.42           | 96.48          | -45.06          | QP       |             |              |        |
| 2   | 0.2384      | 28.93          | 20.30     | 49.23           | 100.02         | -50.79          | QP       |             |              |        |
| 3   | 1.2157      | 20.90          | 20.26     | 41.16           | 65.93          | -24.77          | QP       |             |              |        |
| 4   | 1.5642      | 22.44          | 20.26     | 42.70           | 63.75          | -21.05          | QP       |             |              |        |
| 5   | 5.0179      | 9.86           | 20.41     | 30.27           | 69.50          | -39.23          | QP       |             |              |        |
| 6   | 10.1254     | 10.37          | 20.51     | 30.88           | 69.50          | -38.62          | QP       |             |              |        |

**Remark:** According to FCC PART 15.209 (d), the emission limits for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, Radiated emission limits in these three bands are based on measurements employing an average detector.



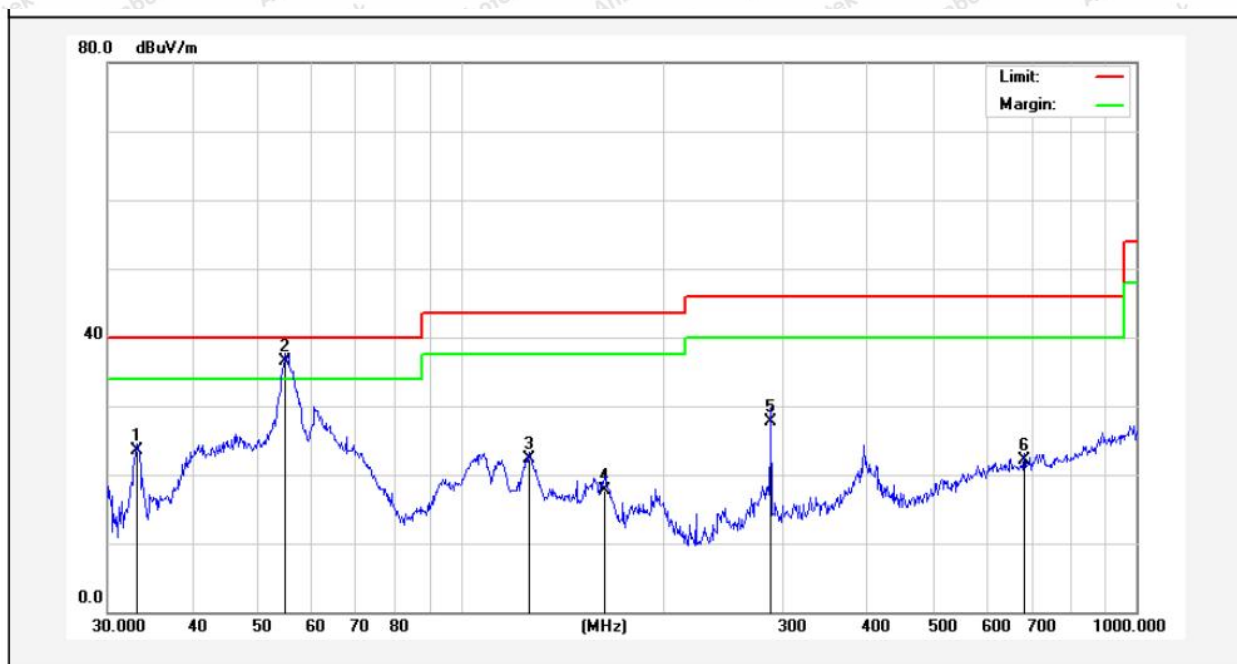
Report No.: 18360WC30004601

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**Test Results (Between 30MHz –1000 MHz)**

Test Mode: Mode 2  
Distance: 3m  
Power Source: DC 14.4V battery inside  
Polarization: Horizontal  
Temp.(°C)/Hum.(%RH): 20.2°C/54%RH



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 33.0950     | 42.67          | -19.13        | 23.54           | 40.00          | -16.46          | QP       |             |              |        |
| 2   | 55.0474     | 54.11          | -17.63        | 36.48           | 40.00          | -3.52           | QP       |             |              |        |
| 3   | 126.3286    | 45.35          | -23.04        | 22.31           | 43.50          | -21.19          | QP       |             |              |        |
| 4   | 163.1818    | 41.58          | -23.89        | 17.69           | 43.50          | -25.81          | QP       |             |              |        |
| 5   | 287.9904    | 45.90          | -18.20        | 27.70           | 46.00          | -18.30          | QP       |             |              |        |
| 6   | 682.3484    | 32.29          | -10.18        | 22.11           | 46.00          | -23.89          | QP       |             |              |        |

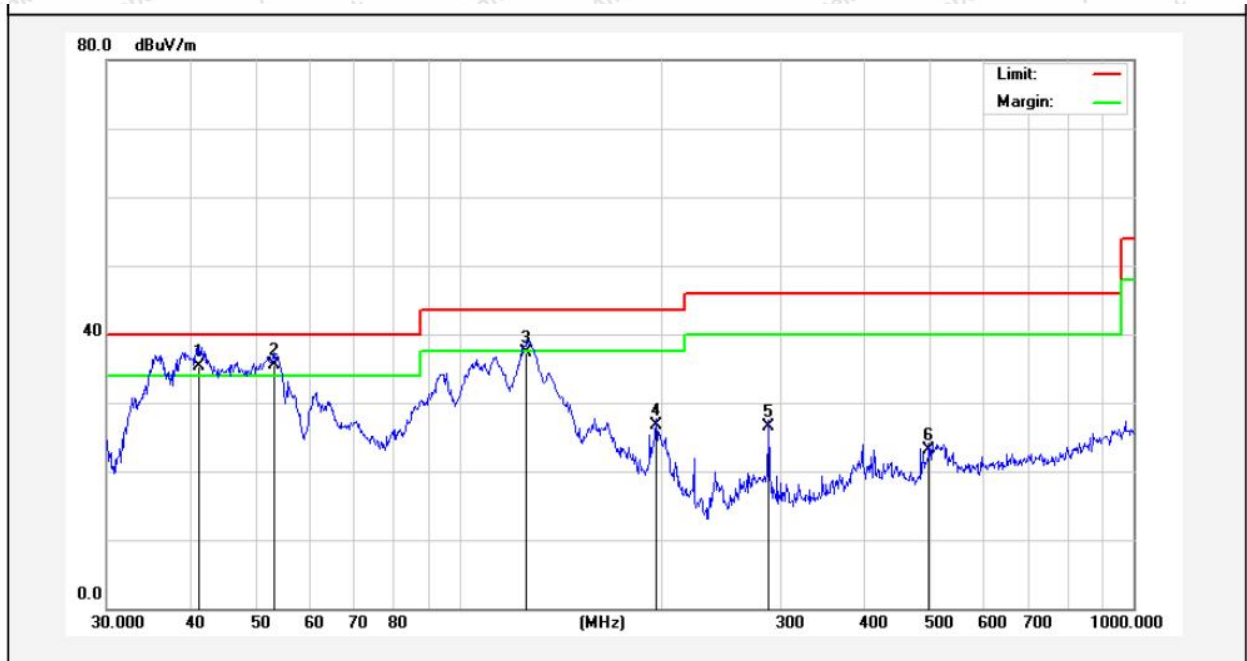


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Test Mode: Mode 2  
Distance: 3m  
Power Source: DC 14.4V battery inside  
Polarization: Vertical  
Temp.(°C)/Hum.(%RH): 20.2°C/54%RH



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 41.1320     | 49.88          | -14.66        | 35.22           | 40.00          | -4.78           | QP       |             |              |        |
| 2   | 53.1313     | 52.42          | -16.93        | 35.49           | 40.00          | -4.51           | QP       |             |              |        |
| 3   | 125.8864    | 58.09          | -20.84        | 37.25           | 43.50          | -6.25           | QP       |             |              |        |
| 4   | 195.8220    | 46.63          | -19.86        | 26.77           | 43.50          | -16.73          | QP       |             |              |        |
| 5   | 287.9904    | 43.13          | -16.67        | 26.46           | 46.00          | -19.54          | QP       |             |              |        |
| 6   | 497.6765    | 35.41          | -12.29        | 23.12           | 46.00          | -22.88          | QP       |             |              |        |



## 5. Antenna Requirement

### 5.1. 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. |

### 5.2. Antenna Connected Construction

The antenna is a Inductive loop coil 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 -----

