

# EMC TEST REPORT

**Applicant** : Shanghai Goodview Electronics Technology Co., Ltd.  
Room 866, NO.888, West Huanhu 2 Road,  
**Address of Applicant** : NanhuiXincheng Town, Pudong, Shanghai, China  
**Product Name** : LCD DIGITAL DISPLAY/PCAP Touch  
All-in-one Monitor  
**Model No.** : TC\*\*\*\*\*

**Standards** : 47 CFR Part 15 Subpart B  
ICES-003(Issue6,January 2016)  
ANSI C63.4-2014  
**Date of Receipt** : 2019-11-15  
**Date of Test** : 2019-12-05~2020-01-06  
**Date of Issue** : 2020-01-07

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**REMARK:**

*This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.*

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## 1. GENERAL INFORMATION

### 1.1 Testing Laboratory

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| <b>Company Name</b> | ICAS Testing Technology Services (Shanghai) Co., Ltd. |
| <b>Address</b>      | 1298 Pingan Rd, Minhang District, Shanghai, China     |
| <b>Telephone</b>    | 0086 21-51682999                                      |
| <b>Fax</b>          | 0086 21-54711112                                      |
| <b>Homepage</b>     | www.icasiso.com                                       |

### 1.2 Product Description for Equipment under Test (EUT)

|                     |                                                   |
|---------------------|---------------------------------------------------|
| <b>Product Name</b> | LCD DIGITAL DISPLAY/PCAP Touch All-in-one Monitor |
| <b>Brand Name</b>   | GOODVIEW                                          |
| <b>Model No.</b>    | TC*****                                           |
| <b>Class type</b>   | Class B                                           |
| <b>Power</b>        | AC100V-220V,1A                                    |

## 2. SUMMARY OF TEST RESULTS

### 2.1 Test Standards

| 47 CFR Part 15 Subpart B<br>ICES-003(Issue6,January 2016) |                    |            |
|-----------------------------------------------------------|--------------------|------------|
| Rule                                                      | Description        | Results    |
| § FCC Part 15.107<br>§ ICES-003 6.1                       | Conducted Emission | Compliance |
| § FCC Part 15.109<br>§ ICES-003 6.1                       | Radiated Emission  | Compliance |

| No. | Identity                                      | Document Title                                                                                                                                                          |
|-----|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 15 Subpart B<br>(10-1-16 Edition) | PART 15—RADIO FREQUENCY DEVICES<br>--Unintentional Radiators                                                                                                            |
| 2   | ICES-003(Issue6,January<br>2016)              | Information Technology Equipment(Including Digital<br>Apparatus)—Limits and Methods of Measurement                                                                      |
| 3   | ANSI C63.4-2014                               | American National Standard for Methods of Measurement of<br>Radio-Noise Emissions from Low-Voltage Electrical and<br>Electronic Equipment in the Range of 9kHz to 40GHz |

### 2.2 Test Uncertainty

| Measurement                                                            | U cispr |
|------------------------------------------------------------------------|---------|
| Conducted disturbance at mains port<br>(9 kHz to 30 MHz)               | 1.9 dB  |
| Conducted disturbance at telecommunication port<br>(150 kHz to 30 MHz) | 1.9 dB  |
| Radiated disturbance (30 MHz to 1000 MHz)                              | 3.2 dB  |
| Radiated disturbance (1 GHz to 18 GHz)                                 | 3.2 dB  |

Note :

All test items were verified and recorded according to the standards and without any addition/  
deviation/exclusion during the test

### 3. SYSTEM TEST CONFIGURATION

#### 3.1 EUT Test Mode

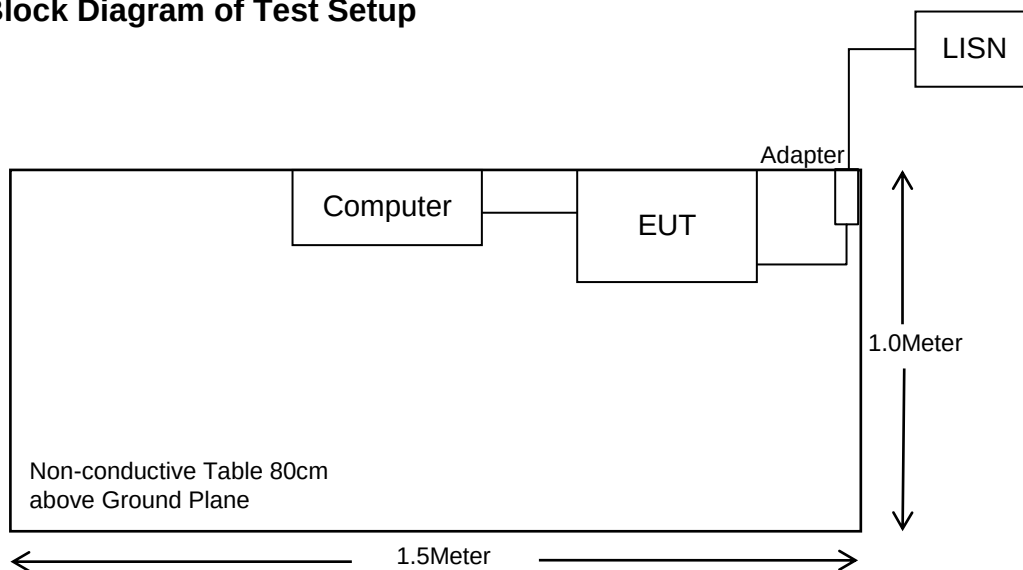
The system was configured for testing in a typical Mode(as normally used by a typical user).

#### 3.2 Support Equipment List and Details of test Equipment

| Manufacturer | Description | Model     | Serial Number |
|--------------|-------------|-----------|---------------|
| Lenovo       | Computer    | TP00083A  | PF-0XQQYR     |
| Manufacturer | Description | Length(m) | I/O Port      |
| N/A          | N/A         | N/A       | N/A           |

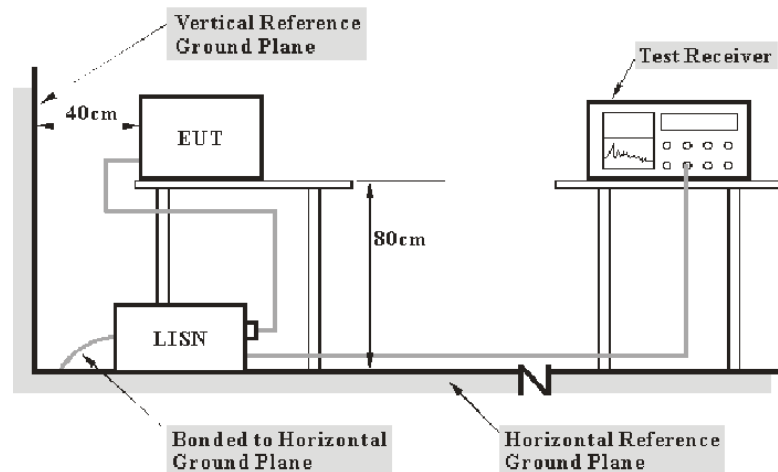
| Manufacturer | Description       | Model     | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-------------------|-----------|---------------|------------------|----------------------|
| R&S          | EMI Test Receiver | ESPI3     | 100173        | 2019/6/19        | 2020/6/19            |
| SCHWARZBECK  | V-network         | NSLK 8127 | 8127-902      | 2019/2/20        | 2020/2/20            |
| R&S          | EMI Test Receiver | ESR7      | 101911        | 2019/6/19        | 2020/6/19            |
| Schwarzbeck  | Antenna           | VULB9163  | 9163-1037     | 2019/1/27        | 2020/1/27            |
| Schwarzbeck  | Horn Antenna      | BBHA9120D | 9120D-1775    | 2019/7/26        | 2020/7/26            |

#### 3.3 Block Diagram of Test Setup



## 4. 47 CFR Part 15B & ICES-003 § CONDUCTED EMISSION (ANSI C63.4)

### 4.1 Test System Diagram



Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

### 4.2 EMI Test Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz. During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range  | IF B/W |
|------------------|--------|
| 150 kHz – 30 MHz | 9 kHz  |

### 4.3 Test Equipment List

| Manufacturer | Description       | Model     | Serial Number | Test use                            |
|--------------|-------------------|-----------|---------------|-------------------------------------|
| R&S          | EMI Test Receiver | ESPI3     | 100173        | <input checked="" type="checkbox"/> |
| TESQ         | V-network         | NSLK 8127 | 8127-902      | <input checked="" type="checkbox"/> |

### 4.4 Test Limit

| Frequency Range   | Limit             |                |
|-------------------|-------------------|----------------|
|                   | Quasi-peak (dBμV) | Average (dBμV) |
| 0.15MHz – 0.50MHz | 66-56             | 56-46          |
| 0.50MHz – 5MHz    | 56                | 46             |
| 5MHz – 30MHz      | 60                | 50             |

## 4.5 Test Procedure

EUT was connected to the outlet of the LISN.  
The LISN was bounded to ground.

Measurement was carried out in a stable mode of operation, which means with a stable light output.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance using all installation combination.

All data was recorded in the Quasi-peak and average detection mode.

### Factor & Margin Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 3dB means the emission is 3 dB below the limit. The equation for margin calculation is as follows:

Q-peak Level / Average Level = Reading + Factor

Margin = QP Limit –Q-peak Level or Margin = AV Limit –Average Level

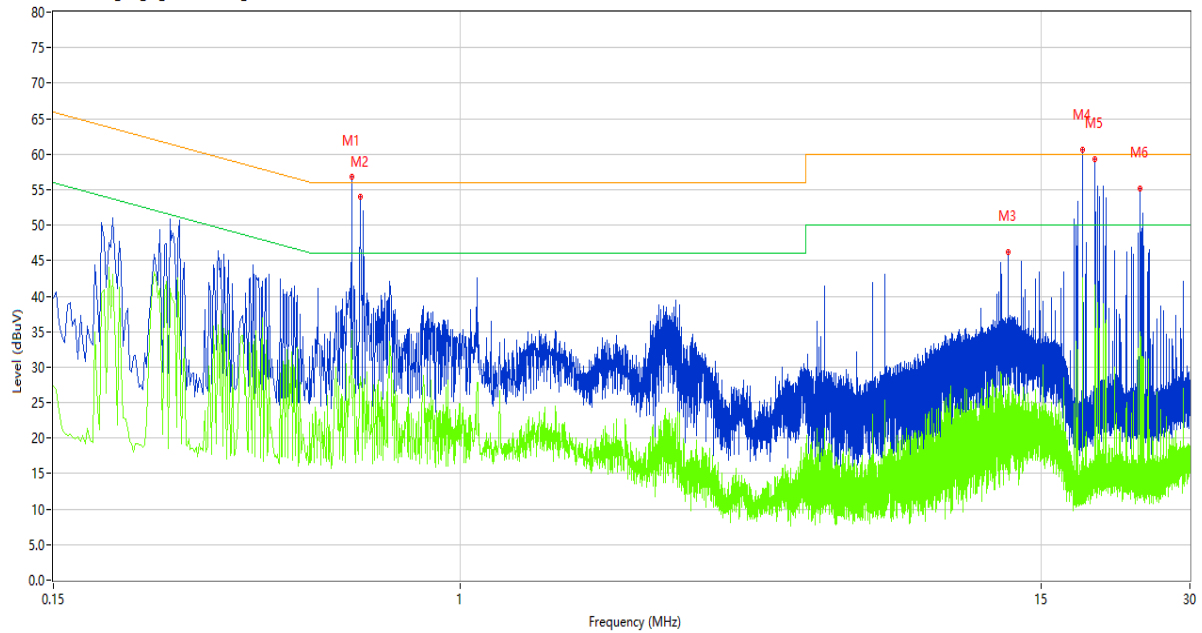
Note : Margin just showing the least value of QP and AV

| Frequency<br>(MHz) | Peak Level<br>(dBuV) | Q-peak Level<br>(dBuV) | Average<br>Level (dBuV) | Factor (dB) | QP Limit<br>(dBuV) | AV Limit<br>(dBuV) | Margin (dB) | Line | Verdict |
|--------------------|----------------------|------------------------|-------------------------|-------------|--------------------|--------------------|-------------|------|---------|
|--------------------|----------------------|------------------------|-------------------------|-------------|--------------------|--------------------|-------------|------|---------|

## 4.6 Test Record

110V AC port:

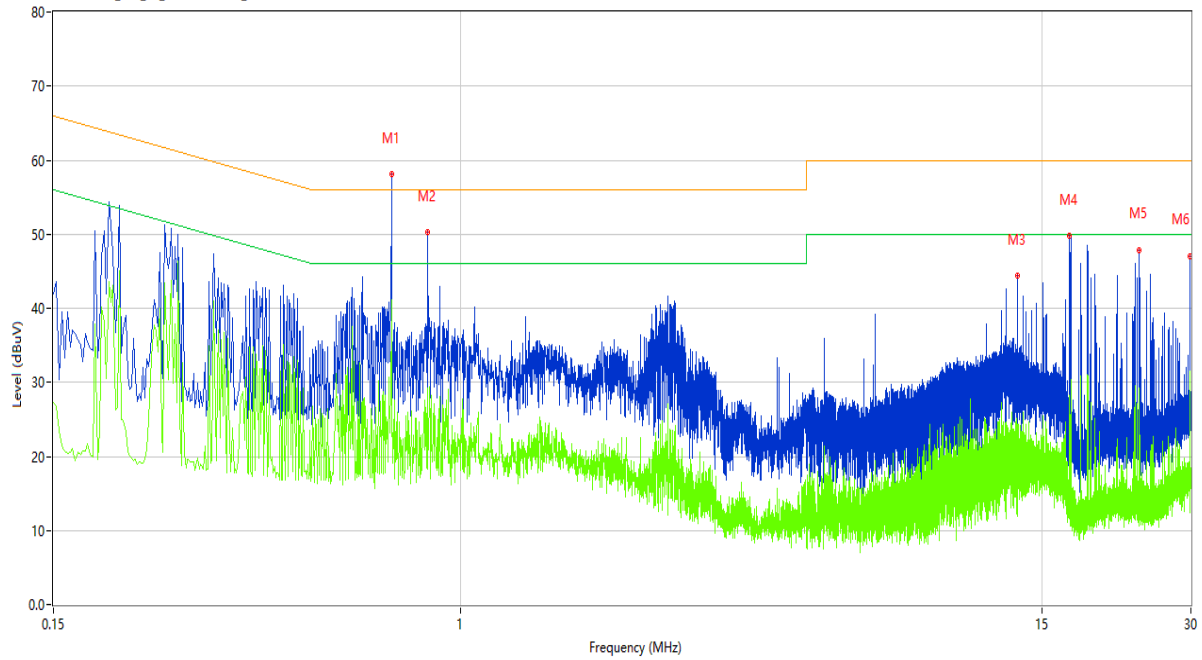
C Emission Test case\_FCC\_CE\_FCC PART 15B\_Class B



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.602           | 56.82          | 10.15       | 56.00        | 0.82            | Peak     | L    | N/A     |
| 1*  | 0.602           | 35.76          | 10.15       | 56.00        | -20.24          | QP       | L    | Pass    |
| 1** | 0.602           | 35.08          | 10.15       | 46.00        | -10.92          | AV       | L    | Pass    |
| 2   | 0.628           | 54.01          | 10.15       | 56.00        | -1.99           | Peak     | L    | Pass    |
| 2*  | 0.628           | 42.85          | 10.15       | 56.00        | -13.15          | QP       | L    | Pass    |
| 2** | 0.628           | 28.59          | 10.15       | 46.00        | -17.41          | AV       | L    | Pass    |
| 3   | 12.866          | 46.23          | 10.46       | 60.00        | -13.77          | Peak     | L    | Pass    |
| 3*  | 12.866          | 32.08          | 10.46       | 60.00        | -27.92          | QP       | L    | Pass    |
| 3** | 12.866          | 28.42          | 10.46       | 50.00        | -21.58          | AV       | L    | Pass    |
| 4   | 18.178          | 65.50          | 10.49       | 60.00        | 5.50            | Peak     | L    | N/A     |
| 4*  | 18.178          | 45.32          | 10.49       | 60.00        | -14.68          | QP       | L    | Pass    |
| 4** | 18.178          | 42.51          | 10.49       | 50.00        | -7.49           | AV       | L    | Pass    |
| 5   | 19.218          | 48.16          | 10.44       | 60.00        | -11.84          | Peak     | L    | Pass    |
| 5*  | 19.218          | 30.20          | 10.44       | 60.00        | -29.80          | QP       | L    | Pass    |
| 5** | 19.218          | 41.53          | 10.44       | 50.00        | -8.47           | AV       | L    | Pass    |
| 6   | 23.804          | 55.60          | 10.52       | 60.00        | -4.40           | Peak     | L    | Pass    |
| 6*  | 23.804          | 34.62          | 10.52       | 60.00        | -25.38          | QP       | L    | Pass    |
| 6** | 23.804          | 34.98          | 10.52       | 50.00        | -15.02          | AV       | L    | Pass    |



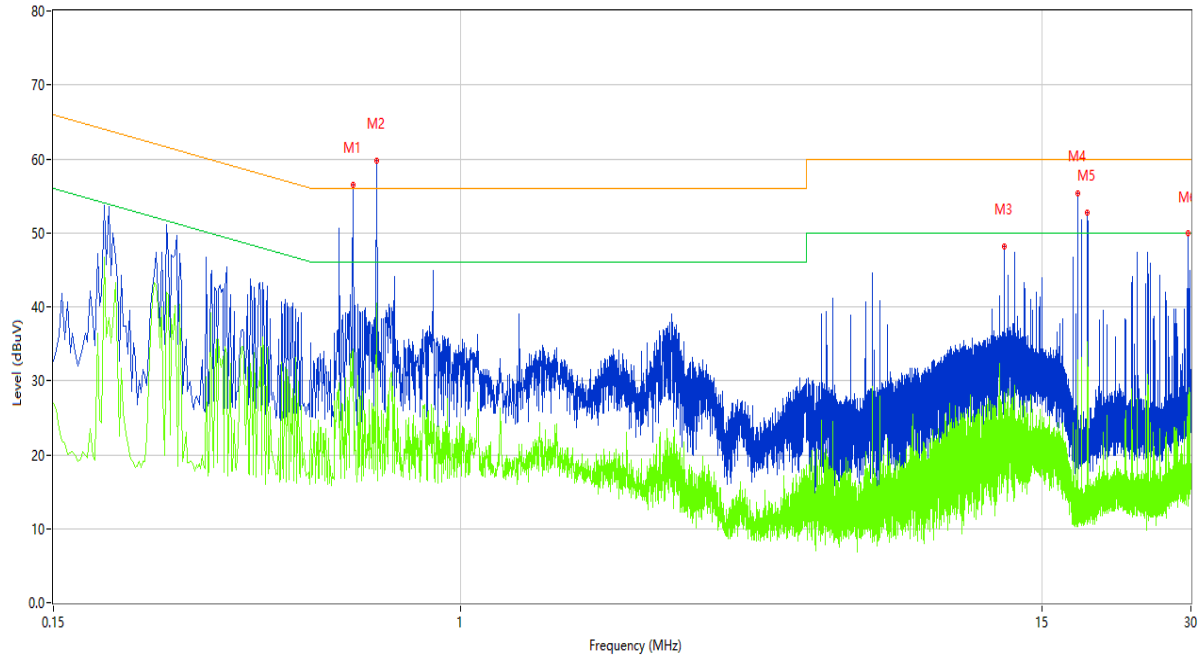
CEmission Test case\_FCC\_CE\_FCC PART 15B\_Class B



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.724           | 69.39          | 10.15       | 56.00        | 13.39           | Peak     | N    | N/A     |
| 1*  | 0.724           | 48.57          | 10.15       | 56.00        | -7.43           | QP       | N    | Pass    |
| 1** | 0.724           | 41.13          | 10.15       | 46.00        | -4.87           | AV       | N    | Pass    |
| 2   | 0.858           | 54.21          | 10.15       | 56.00        | -1.79           | Peak     | N    | Pass    |
| 2*  | 0.858           | 36.20          | 10.15       | 56.00        | -19.80          | QP       | N    | Pass    |
| 2** | 0.858           | 29.25          | 10.15       | 46.00        | -16.75          | AV       | N    | Pass    |
| 3   | 13.370          | 42.98          | 10.45       | 60.00        | -17.02          | Peak     | N    | Pass    |
| 3*  | 13.370          | 30.19          | 10.45       | 60.00        | -29.81          | QP       | N    | Pass    |
| 3** | 13.370          | 24.37          | 10.45       | 50.00        | -25.63          | AV       | N    | Pass    |
| 4   | 17.028          | 50.61          | 10.44       | 60.00        | -9.39           | Peak     | N    | Pass    |
| 4*  | 17.028          | 31.52          | 10.44       | 60.00        | -28.48          | QP       | N    | Pass    |
| 4** | 17.028          | 28.30          | 10.44       | 50.00        | -21.70          | AV       | N    | Pass    |
| 5   | 23.534          | 55.10          | 10.49       | 60.00        | -4.90           | Peak     | N    | Pass    |
| 5*  | 23.534          | 32.92          | 10.49       | 60.00        | -27.08          | QP       | N    | Pass    |
| 5** | 23.534          | 29.22          | 10.49       | 50.00        | -20.78          | AV       | N    | Pass    |
| 6   | 29.926          | 45.39          | 10.68       | 60.00        | -14.61          | Peak     | N    | Pass    |
| 6*  | 29.926          | 26.70          | 10.68       | 60.00        | -33.30          | QP       | N    | Pass    |
| 6** | 29.926          | 31.51          | 10.68       | 50.00        | -18.49          | AV       | N    | Pass    |

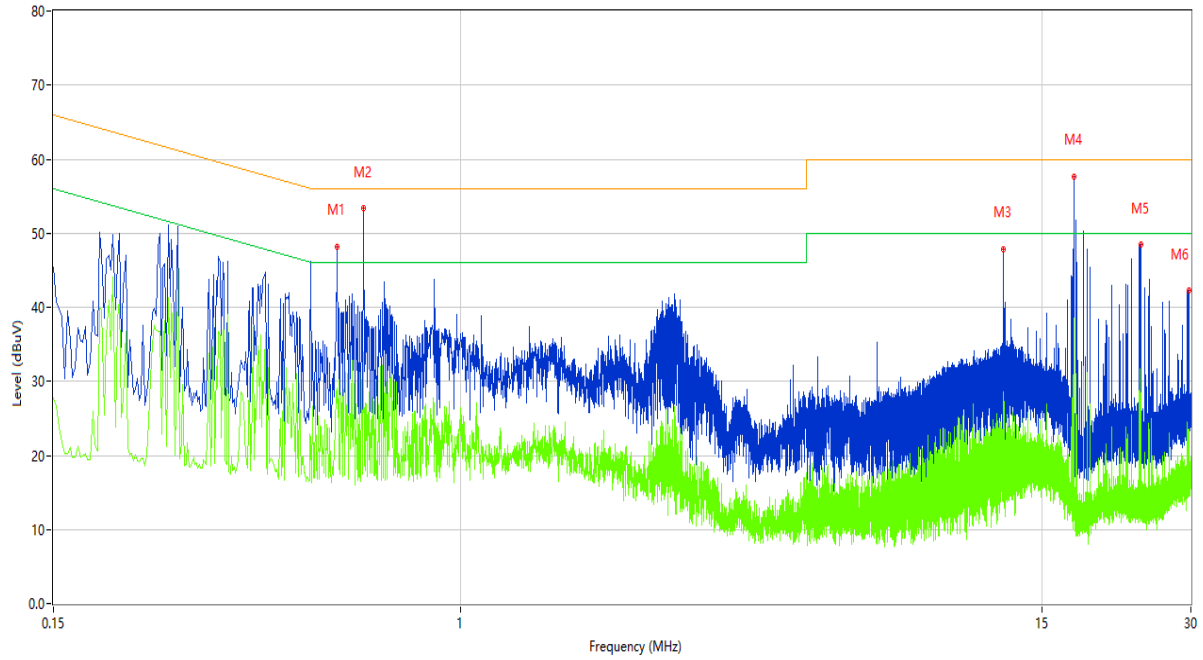
## 220V AC port:

CEmission Test case\_FCC\_CE\_FCC PART 15B\_Class B



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.606           | 60.18          | 10.15       | 56.00        | 4.18            | Peak     | L    | N/A     |
| 1*  | 0.606           | 41.86          | 10.15       | 56.00        | -14.14          | QP       | L    | Pass    |
| 1** | 0.606           | 34.31          | 10.15       | 46.00        | -11.69          | AV       | L    | Pass    |
| 2   | 0.676           | 66.02          | 10.15       | 56.00        | 10.02           | Peak     | L    | N/A     |
| 2*  | 0.676           | 46.48          | 10.15       | 56.00        | -9.52           | QP       | L    | Pass    |
| 2** | 0.676           | 40.46          | 10.15       | 46.00        | -5.54           | AV       | L    | Pass    |
| 3   | 12.556          | 47.77          | 10.46       | 60.00        | -12.23          | Peak     | L    | Pass    |
| 3*  | 12.556          | 33.80          | 10.46       | 60.00        | -26.20          | QP       | L    | Pass    |
| 3** | 12.556          | 28.38          | 10.46       | 50.00        | -21.62          | AV       | L    | Pass    |
| 4   | 17.750          | 54.85          | 10.48       | 60.00        | -5.15           | Peak     | L    | Pass    |
| 4*  | 17.750          | 37.60          | 10.48       | 60.00        | -22.40          | QP       | L    | Pass    |
| 4** | 17.750          | 32.79          | 10.48       | 50.00        | -17.21          | AV       | L    | Pass    |
| 5   | 18.486          | 52.97          | 10.47       | 60.00        | -7.03           | Peak     | L    | Pass    |
| 5*  | 18.486          | 34.67          | 10.47       | 60.00        | -25.33          | QP       | L    | Pass    |
| 5** | 18.486          | 35.28          | 10.47       | 50.00        | -14.72          | AV       | L    | Pass    |
| 6   | 29.560          | 47.30          | 10.66       | 60.00        | -12.70          | Peak     | L    | Pass    |
| 6*  | 29.560          | 32.06          | 10.66       | 60.00        | -27.94          | QP       | L    | Pass    |
| 6** | 29.560          | 28.01          | 10.66       | 50.00        | -21.99          | AV       | L    | Pass    |

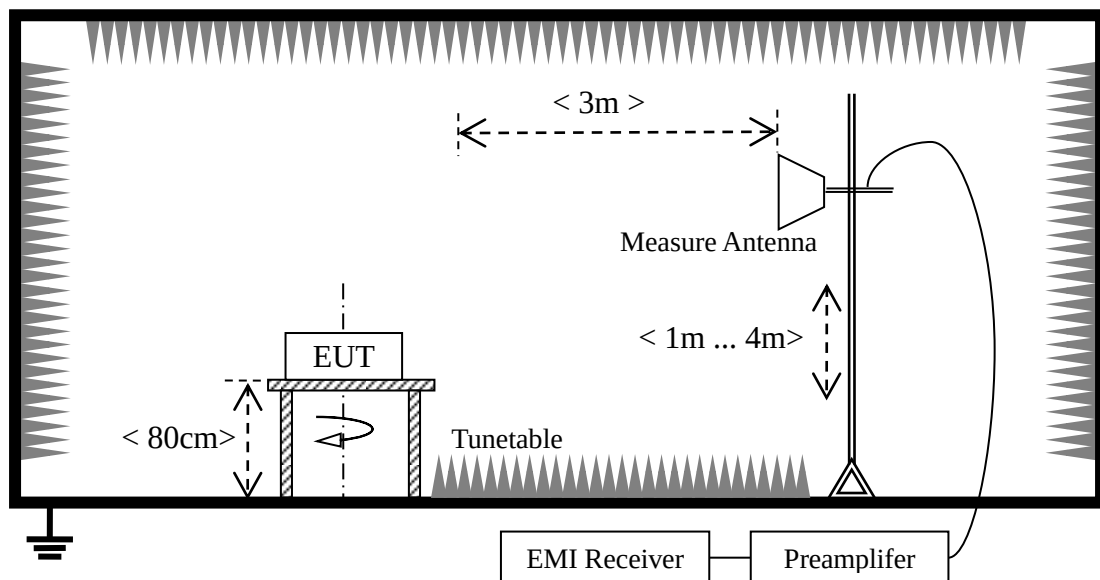
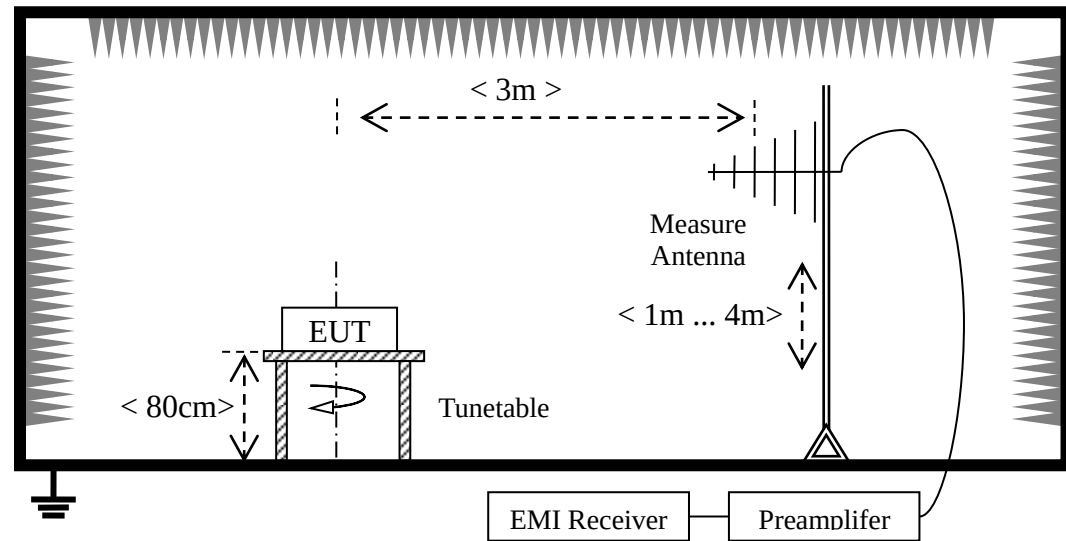
CEmission Test case\_FCC\_CE\_FCC PART 15B\_Class B



| No. | Frequency (MHz) | Results (dBUV) | Factor (dB) | Limit (dBUV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.562           | 52.94          | 10.15       | 56.00        | -3.06           | Peak     | N    | Pass    |
| 1*  | 0.562           | 36.99          | 10.15       | 56.00        | -19.01          | QP       | N    | Pass    |
| 1** | 0.562           | 29.04          | 10.15       | 46.00        | -16.96          | AV       | N    | Pass    |
| 2   | 0.636           | 63.40          | 10.15       | 56.00        | 7.40            | Peak     | N    | N/A     |
| 2*  | 0.636           | 40.75          | 10.15       | 56.00        | -15.25          | QP       | N    | Pass    |
| 2** | 0.636           | 33.93          | 10.15       | 46.00        | -12.07          | AV       | N    | Pass    |
| 3   | 12.536          | 47.56          | 10.46       | 60.00        | -12.44          | Peak     | N    | Pass    |
| 3*  | 12.536          | 31.75          | 10.46       | 60.00        | -28.25          | QP       | N    | Pass    |
| 3** | 12.536          | 28.58          | 10.46       | 50.00        | -21.42          | AV       | N    | Pass    |
| 4   | 17.434          | 54.65          | 10.46       | 60.00        | -5.35           | Peak     | N    | Pass    |
| 4*  | 17.434          | 37.68          | 10.46       | 60.00        | -22.32          | QP       | N    | Pass    |
| 4** | 17.434          | 38.53          | 10.46       | 50.00        | -11.47          | AV       | N    | Pass    |
| 5   | 23.818          | 50.65          | 10.52       | 60.00        | -9.35           | Peak     | N    | Pass    |
| 5*  | 23.818          | 31.39          | 10.52       | 60.00        | -28.61          | QP       | N    | Pass    |
| 5** | 23.818          | 24.97          | 10.52       | 50.00        | -25.03          | AV       | N    | Pass    |
| 6   | 29.692          | 47.53          | 10.67       | 60.00        | -12.47          | Peak     | N    | Pass    |
| 6*  | 29.692          | 33.70          | 10.67       | 60.00        | -26.30          | QP       | N    | Pass    |
| 6** | 29.692          | 23.44          | 10.67       | 50.00        | -26.56          | AV       | N    | Pass    |

## 5. 47 CFR Part 15B & ICES-003 § RADIATED EMISSION(ANSI C63.4)

### 5.1 Test System Diagram



## 5.2 EMI Test Setup

The system was investigated from 30 MHz to 6000 MHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

| Frequency Range  | RBW     | Video B/W | IF B/W | Detector |
|------------------|---------|-----------|--------|----------|
| 30MHz – 1000 MHz | 120 kHz | 300 kHz   | 120kHz | QP       |
| 1000MHz-6000MHz  | 1MHz    | 3MHz/10Hz | /      | PK/AV    |

## 5.3 Test Equipment List

| Manufacturer | Description       | Model     | Serial Number | Test use |
|--------------|-------------------|-----------|---------------|----------|
| R&S          | EMI Test Receiver | ESR7      | 101911        | ☒        |
| Schwarzbeck  | Antenna           | VULB9163  | 9163-1037     | ☒        |
| Schwarzbeck  | Horn Antenna      | BBHA9120D | 9120D-1775    | ☒        |

## 5.4 Test Limit

| Frequency Range  | Limit(3m distance) |
|------------------|--------------------|
|                  | Quasi-peak         |
| 30MHz – 88MHz    | 40 dB $\mu$ V/m    |
| 88MHz – 216MHz   | 43.5 dB $\mu$ V/m  |
| 216 MHz -960 MHz | 46 dB $\mu$ V/m    |
| Above 960MHz     | 54 dB $\mu$ V/m    |

## 5.5 Test Procedure

For the radiated emissions test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode.

### Factor & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Reading. The basic equation is as follows:

Peak Level / Q-peak Level /Average Level = Reading + Antenna Factor + Cable Loss - Amplifier Gain

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 3 dB means the emission is 3 dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{QP Limit} - \text{Q-peak Level} \text{ or } \text{Margin} = \text{AV Limit} - \text{Average Level}$$

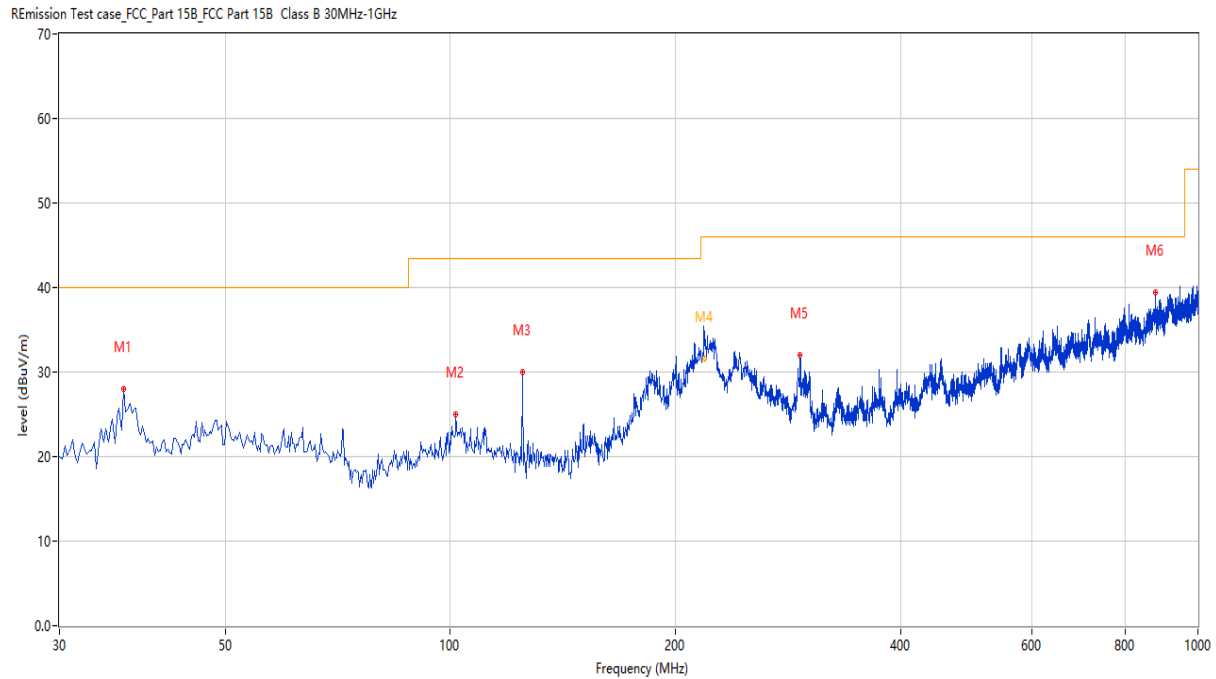
Note : Margin just showing the least value of QP and AV

| Frequency<br>(MHz) | Peak Level<br>(dBuV/m) | Q-peak<br>Level<br>(dBuV/m) | Average<br>Level<br>(dBuV/m) | Factor<br>(dB) | PK Limit<br>(dBuV/m) | QP Limit<br>(dBuV/m) | AV Limit<br>(dBuV/m) | Margin<br>(dB) | Table<br>(o) | Height<br>(cm) | ANT | Verdict |
|--------------------|------------------------|-----------------------------|------------------------------|----------------|----------------------|----------------------|----------------------|----------------|--------------|----------------|-----|---------|
|--------------------|------------------------|-----------------------------|------------------------------|----------------|----------------------|----------------------|----------------------|----------------|--------------|----------------|-----|---------|

## 5.6 Test Record

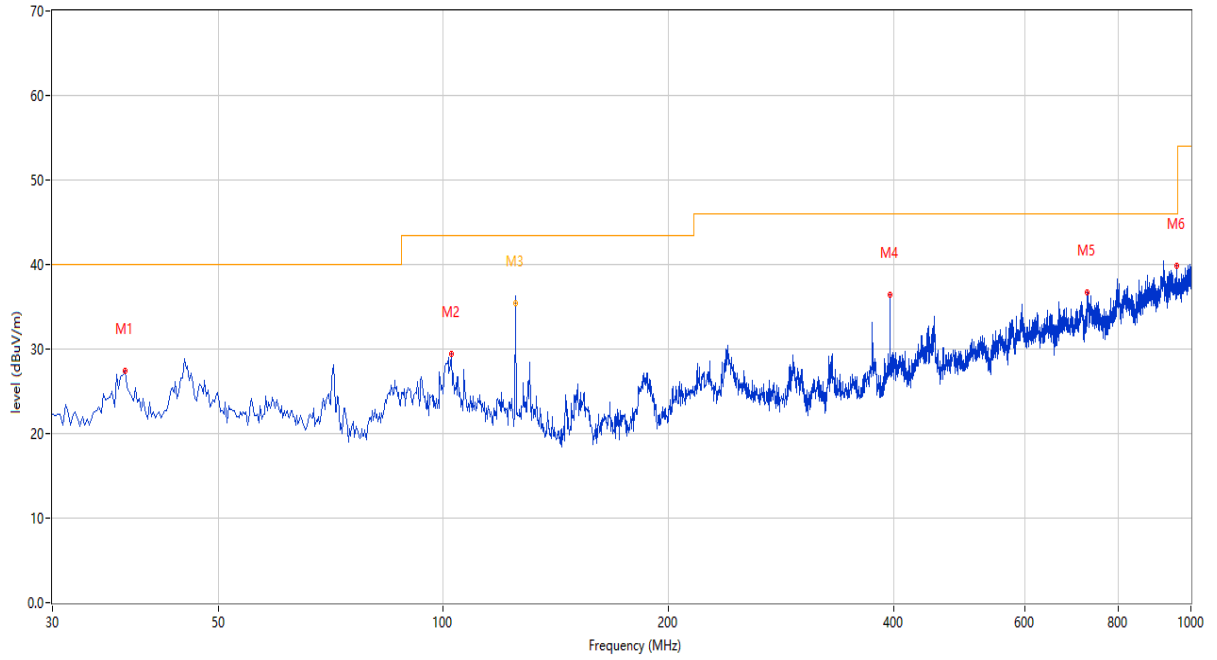
110V AC port:

30M-1GHz



| No. | Frequency<br>(MHz) | Results<br>(dBuV/m) | Factor<br>(dB) | Limit<br>(dBuV/m) | Over Limit<br>(dB) | Detector | Table<br>(Degree) | Height<br>(cm) | Antenna    | Verdict |
|-----|--------------------|---------------------|----------------|-------------------|--------------------|----------|-------------------|----------------|------------|---------|
| 1   | 36.546             | 28.01               | -26.58         | 40.0              | -11.99             | Peak     | 326.90            | 100            | Horizontal | Pass    |
| 2   | 101.762            | 25.04               | -26.69         | 43.5              | -18.46             | Peak     | 313.50            | 100            | Horizontal | Pass    |
| 3   | 124.794            | 29.98               | -28.76         | 43.5              | -13.52             | Peak     | 118.90            | 100            | Horizontal | Pass    |
| 4   | 218.558            | 39.22               | -26.43         | 46.0              | -6.78              | Peak     | 127.50            | 100            | Horizontal | Pass    |
| 4*  | 218.558            | 31.63               | -26.43         | 46.0              | -14.37             | QP       | 127.50            | 100            | Horizontal | Pass    |
| 5   | 293.774            | 32.06               | -23.65         | 46.0              | -13.94             | Peak     | 175.10            | 100            | Horizontal | Pass    |
| 6   | 877.083            | 39.39               | -11.90         | 46.0              | -6.61              | Peak     | 360.00            | 100            | Horizontal | Pass    |

REmission Test case\_FCC\_Part 15B\_FCC Part 15B Class B 30MHz-1GHz

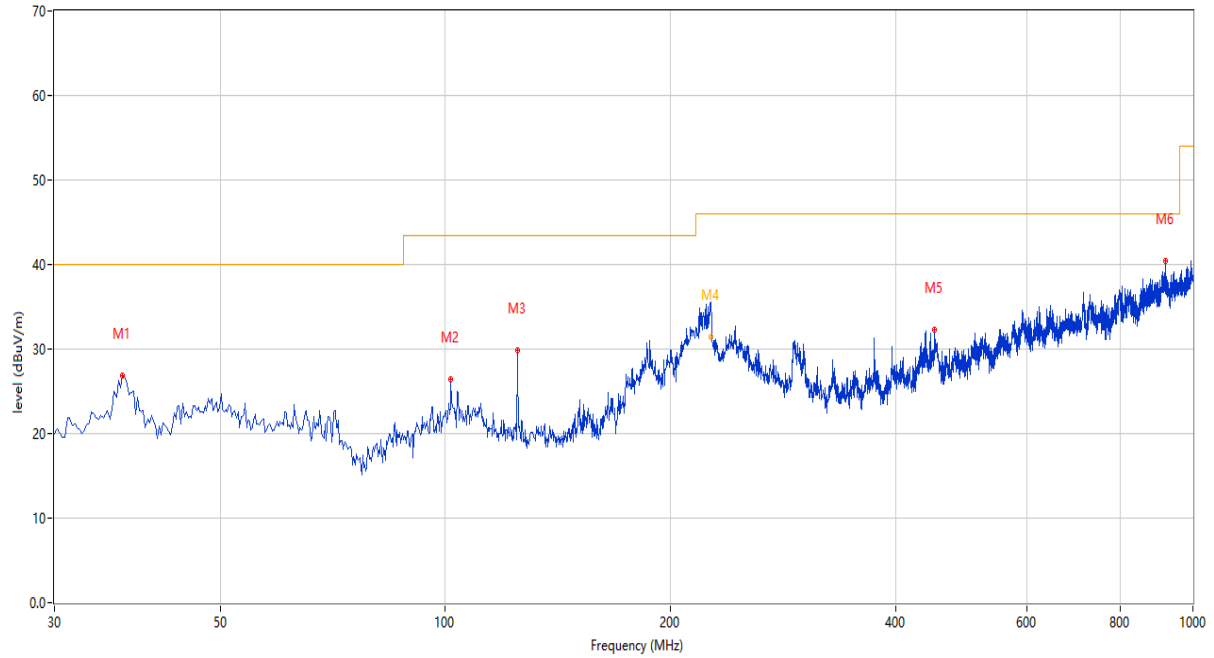


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 37.516          | 27.46            | -26.45      | 40.0           | -12.54          | Peak     | 179.90         | 100         | Vertical | Pass    |
| 2   | 102.489         | 29.46            | -26.75      | 43.5           | -14.04          | Peak     | 300.50         | 100         | Vertical | Pass    |
| 3   | 125.003         | 37.55            | -28.76      | 43.5           | -5.95           | Peak     | 240.60         | 100         | Vertical | Pass    |
| 3*  | 125.003         | 35.42            | -28.76      | 43.5           | -8.08           | QP       | 240.60         | 100         | Vertical | Pass    |
| 4   | 395.841         | 36.44            | -21.20      | 46.0           | -9.56           | Peak     | 305.00         | 100         | Vertical | Pass    |
| 5   | 726.286         | 36.67            | -14.77      | 46.0           | -9.33           | Peak     | 0.70           | 100         | Vertical | Pass    |
| 6   | 957.816         | 39.81            | -10.73      | 46.0           | -6.19           | Peak     | 305.00         | 100         | Vertical | Pass    |

220V AC port:

30M-1GHz

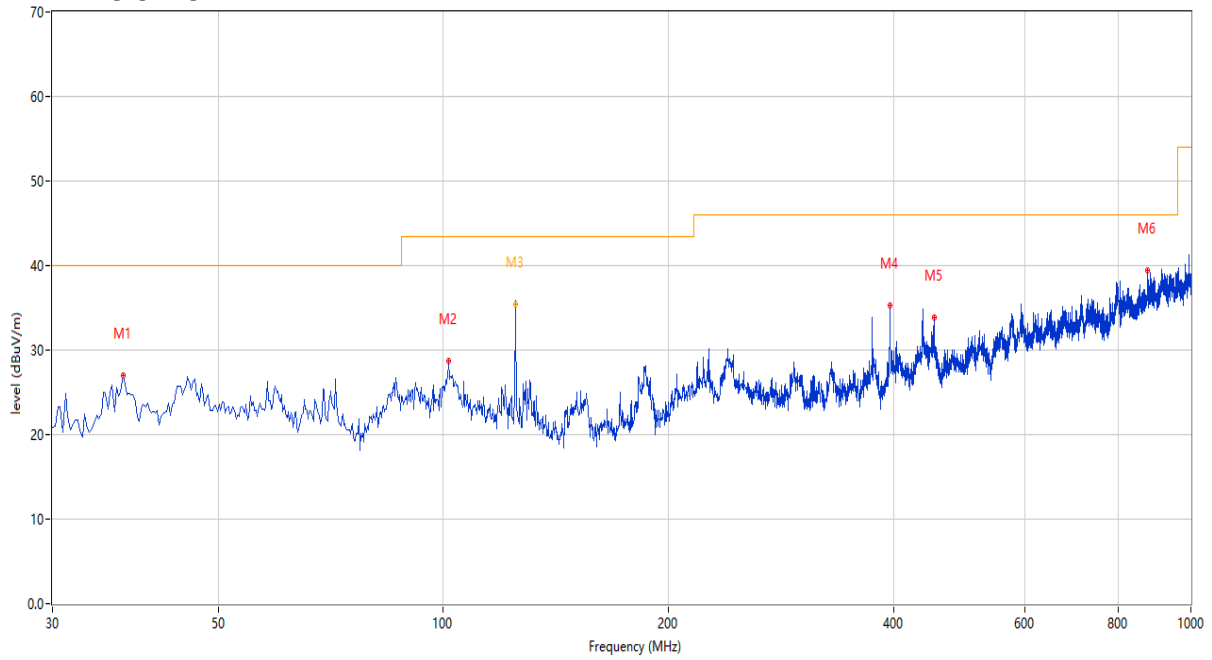
REmission Test case\_FCC\_Part 15B\_FCC Part 15B Class B 30MHz-1GHz



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 37.031          | 26.92            | -26.52      | 40.0           | -13.08          | Peak     | 2.40           | 100         | Horizontal | Pass    |
| 2   | 101.762         | 26.42            | -26.69      | 43.5           | -17.08          | Peak     | 150.40         | 100         | Horizontal | Pass    |
| 3   | 124.794         | 29.82            | -28.76      | 43.5           | -13.68          | Peak     | 189.10         | 100         | Horizontal | Pass    |
| 4   | 226.383         | 36.52            | -25.79      | 46.0           | -9.48           | Peak     | 197.70         | 108         | Horizontal | Pass    |
| 4*  | 226.383         | 31.41            | -25.79      | 46.0           | -14.59          | QP       | 197.70         | 108         | Horizontal | Pass    |
| 5   | 451.602         | 32.24            | -19.97      | 46.0           | -13.76          | Peak     | 280.70         | 100         | Horizontal | Pass    |
| 6   | 919.995         | 40.42            | -10.40      | 46.0           | -5.58           | Peak     | 271.70         | 100         | Horizontal | Pass    |



REmission Test case\_FCC\_Part 15B\_FCC Part 15B Class B 30MHz-1GHz

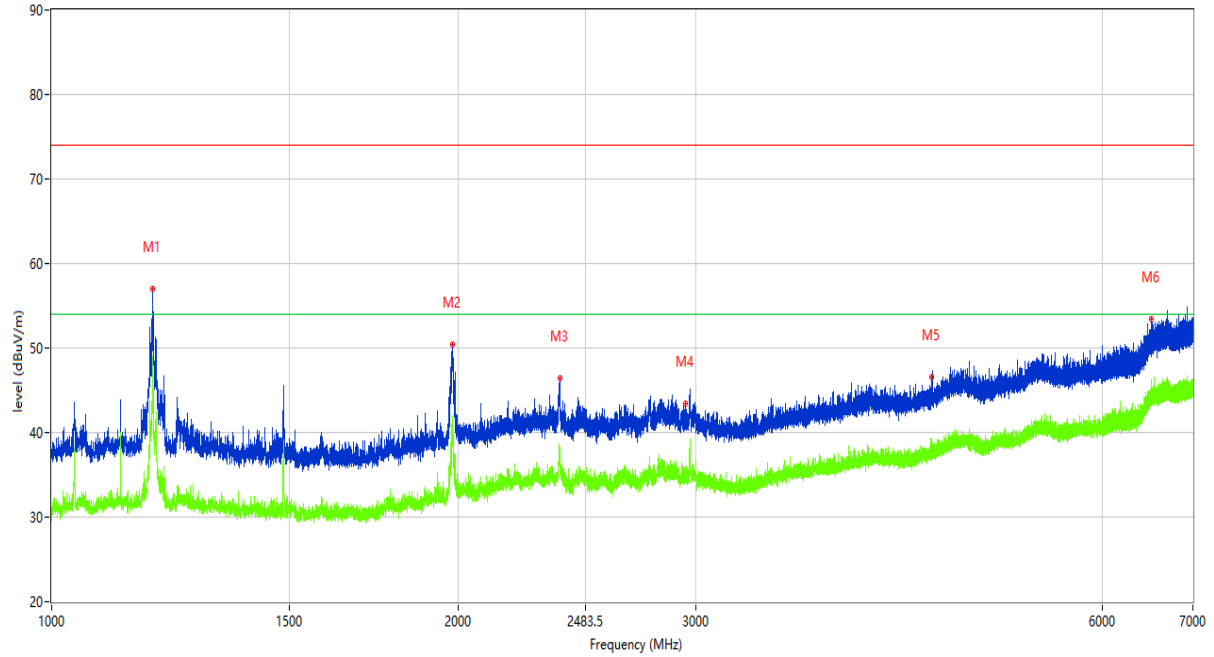


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 37.273          | 27.02            | -26.48      | 40.0           | -12.98          | Peak     | 248.80         | 100         | Vertical | Pass    |
| 2   | 101.762         | 28.78            | -26.69      | 43.5           | -14.72          | Peak     | 348.50         | 100         | Vertical | Pass    |
| 3   | 125.003         | 37.64            | -28.76      | 43.5           | -5.86           | Peak     | 214.20         | 100         | Vertical | Pass    |
| 3*  | 125.003         | 35.36            | -28.76      | 43.5           | -8.14           | QP       | 214.20         | 100         | Vertical | Pass    |
| 4   | 395.841         | 35.23            | -21.20      | 46.0           | -10.77          | Peak     | 305.70         | 100         | Vertical | Pass    |
| 5   | 454.026         | 33.87            | -19.44      | 46.0           | -12.13          | Peak     | 114.40         | 100         | Vertical | Pass    |
| 6   | 874.901         | 39.47            | -11.99      | 46.0           | -6.53           | Peak     | 360.50         | 100         | Vertical | Pass    |

110V AC port:

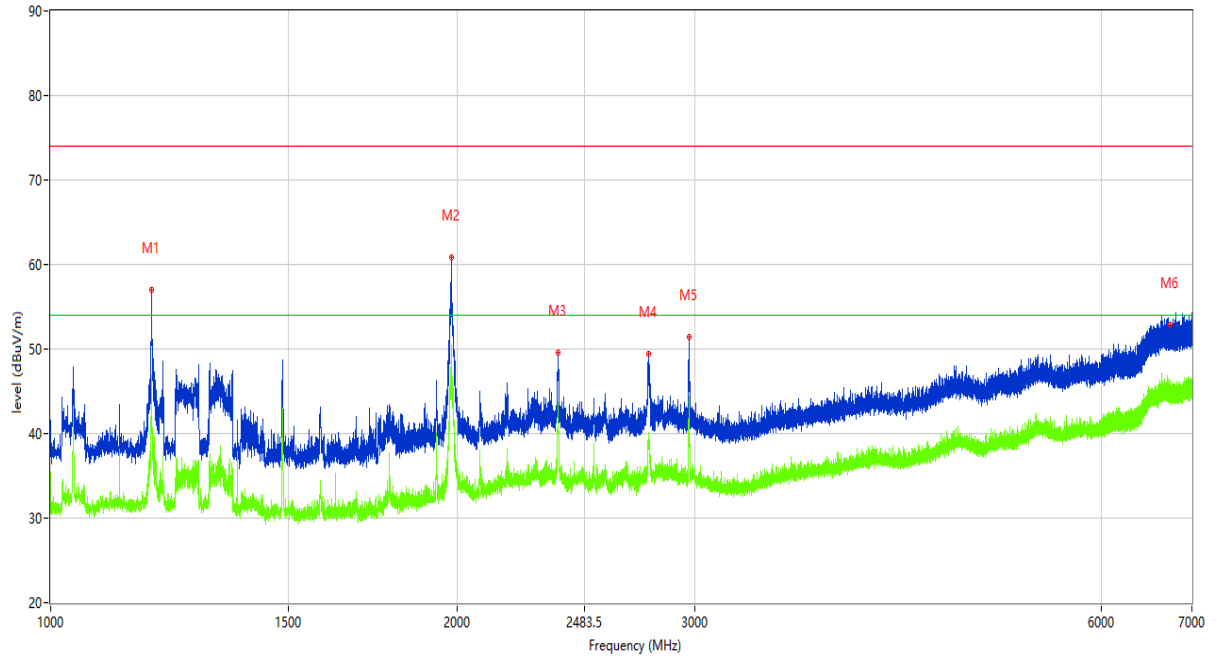
1G-7GHz

REmission Test case\_FCC\_Part 15B\_FCC Part 15B Class B 1GHz-7GHz



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 1187.727        | 56.98            | -7.12       | 74.0           | -17.02          | Peak     | 219.60         | 100         | Horizontal | Pass    |
| 1** | 1187.727        | 48.97            | -7.12       | 54.0           | -5.03           | AV       | 219.60         | 100         | Horizontal | Pass    |
| 2   | 1980.127        | 50.44            | -6.41       | 74.0           | -23.56          | Peak     | 122.90         | 100         | Horizontal | Pass    |
| 2** | 1980.127        | 41.16            | -6.41       | 54.0           | -12.84          | AV       | 122.90         | 100         | Horizontal | Pass    |
| 3   | 2377.578        | 46.37            | -3.85       | 74.0           | -27.63          | Peak     | 162.70         | 100         | Horizontal | Pass    |
| 3** | 2377.578        | 38.30            | -3.85       | 54.0           | -15.70          | AV       | 162.70         | 100         | Horizontal | Pass    |
| 4   | 2948.006        | 43.46            | -2.39       | 74.0           | -30.54          | Peak     | 305.20         | 100         | Horizontal | Pass    |
| 4** | 2948.006        | 35.26            | -2.39       | 54.0           | -18.74          | AV       | 305.20         | 100         | Horizontal | Pass    |
| 5   | 4480.690        | 46.51            | 0.68        | 74.0           | -27.49          | Peak     | 210.50         | 100         | Horizontal | Pass    |
| 5** | 4480.690        | 37.30            | 0.68        | 54.0           | -16.70          | AV       | 210.50         | 100         | Horizontal | Pass    |
| 6   | 6526.434        | 53.49            | 5.22        | 74.0           | -20.51          | Peak     | 229.40         | 100         | Horizontal | Pass    |
| 6** | 6526.434        | 44.75            | 5.22        | 54.0           | -9.25           | AV       | 229.40         | 100         | Horizontal | Pass    |

REmission Test case\_FCC\_Part 15B\_FCC Part 15B Class B 1GHz-7GHz

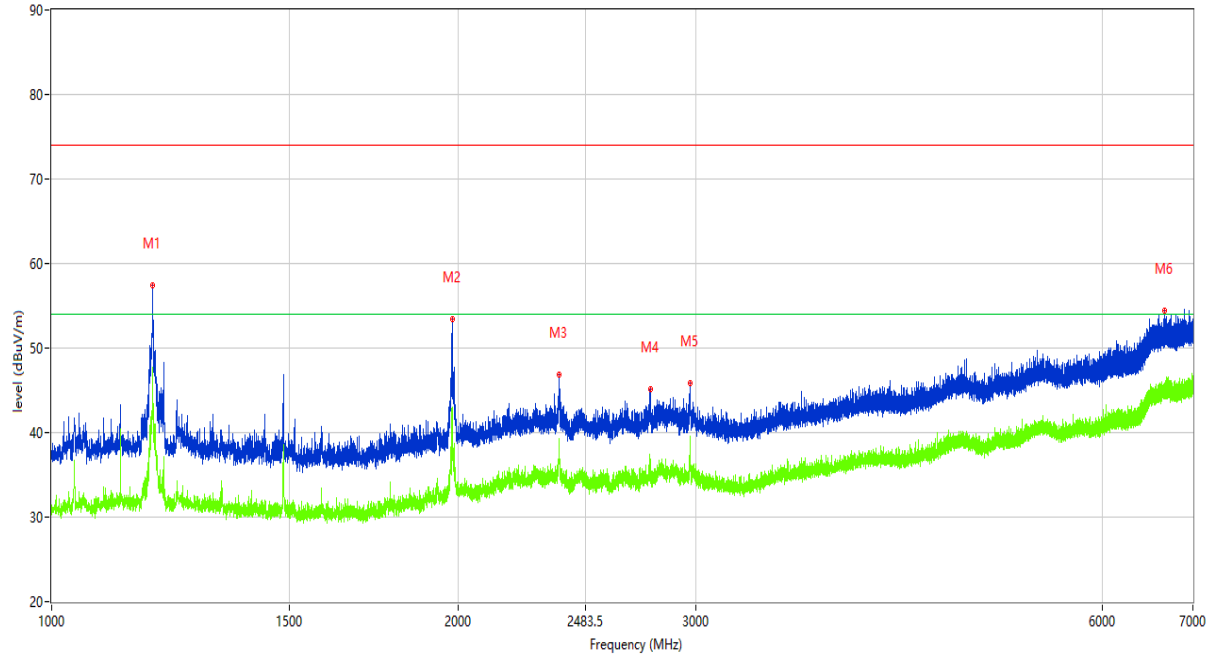


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 1187.727        | 56.99            | -7.12       | 74.0           | -17.01          | Peak     | 318.20         | 100         | Vertical | Pass    |
| 1** | 1187.727        | 45.62            | -7.12       | 54.0           | -8.38           | AV       | 318.20         | 100         | Vertical | Pass    |
| 2   | 1980.627        | 60.85            | -6.39       | 74.0           | -13.15          | Peak     | 264.30         | 100         | Vertical | Pass    |
| 2** | 1980.627        | 50.40            | -6.39       | 54.0           | -3.60           | AV       | 264.30         | 100         | Vertical | Pass    |
| 3   | 2376.578        | 49.59            | -3.87       | 74.0           | -24.41          | Peak     | 31.60          | 100         | Vertical | Pass    |
| 3** | 2376.578        | 41.71            | -3.87       | 54.0           | -12.29          | AV       | 31.60          | 100         | Vertical | Pass    |
| 4   | 2771.279        | 49.49            | -3.40       | 74.0           | -24.51          | Peak     | 264.30         | 100         | Vertical | Pass    |
| 4** | 2771.279        | 39.84            | -3.40       | 54.0           | -14.16          | AV       | 264.30         | 100         | Vertical | Pass    |
| 5   | 2969.754        | 51.36            | -2.30       | 74.0           | -22.64          | Peak     | 313.80         | 100         | Vertical | Pass    |
| 5** | 2969.754        | 42.91            | -2.30       | 54.0           | -11.09          | AV       | 313.80         | 100         | Vertical | Pass    |
| 6   | 6747.532        | 52.88            | 5.84        | 74.0           | -21.12          | Peak     | 280.70         | 100         | Vertical | Pass    |
| 6** | 6747.532        | 44.91            | 5.84        | 54.0           | -9.09           | AV       | 280.70         | 100         | Vertical | Pass    |

220V AC port:

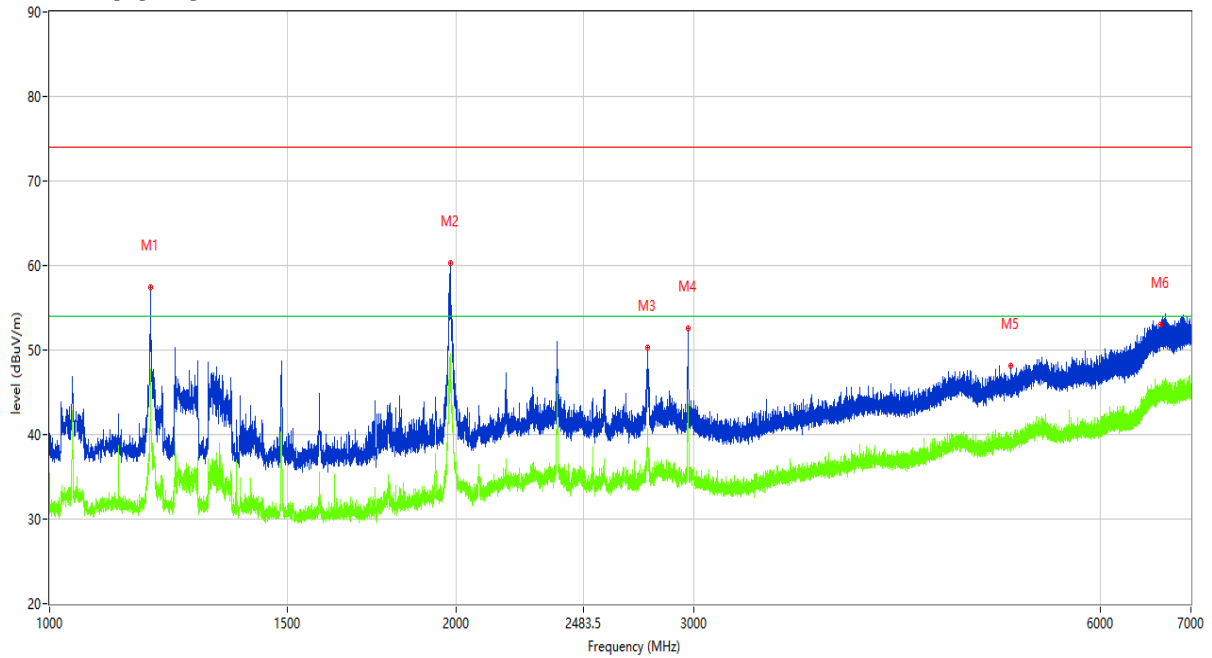
1G-7GHz

REmission Test case\_FCC\_Part 15B\_FCC Part 15B Class B 1GHz-7GHz



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 1187.977        | 57.39            | -7.12       | 74.0           | -16.61          | Peak     | 344.00         | 100         | Horizontal | Pass    |
| 1** | 1187.977        | 47.63            | -7.12       | 54.0           | -6.37           | AV       | 344.00         | 100         | Horizontal | Pass    |
| 2   | 1979.878        | 53.40            | -6.41       | 74.0           | -20.60          | Peak     | 105.80         | 100         | Horizontal | Pass    |
| 2** | 1979.878        | 43.02            | -6.41       | 54.0           | -10.98          | AV       | 105.80         | 100         | Horizontal | Pass    |
| 3   | 2375.078        | 46.82            | -3.89       | 74.0           | -27.18          | Peak     | 164.30         | 100         | Horizontal | Pass    |
| 3** | 2375.078        | 38.34            | -3.89       | 54.0           | -15.66          | AV       | 164.30         | 100         | Horizontal | Pass    |
| 4   | 2777.278        | 45.19            | -3.37       | 74.0           | -28.81          | Peak     | 146.00         | 100         | Horizontal | Pass    |
| 4** | 2777.278        | 36.87            | -3.37       | 54.0           | -17.13          | AV       | 146.00         | 100         | Horizontal | Pass    |
| 5   | 2969.754        | 45.90            | -2.30       | 74.0           | -28.10          | Peak     | 258.40         | 100         | Horizontal | Pass    |
| 5** | 2969.754        | 38.88            | -2.30       | 54.0           | -15.12          | AV       | 258.40         | 100         | Horizontal | Pass    |
| 6   | 6669.041        | 54.41            | 5.77        | 74.0           | -19.59          | Peak     | 129.40         | 100         | Horizontal | Pass    |
| 6** | 6669.041        | 45.82            | 5.77        | 54.0           | -8.18           | AV       | 129.40         | 100         | Horizontal | Pass    |

REmission Test case\_FCC\_Part 15B\_FCC Part 15B Class B 1GHz-7GHz



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 1187.727        | 57.43            | -7.12       | 74.0           | -16.57          | Peak     | 331.00         | 100         | Horizontal | Pass    |
| 1** | 1187.727        | 47.71            | -7.12       | 54.0           | -6.29           | AV       | 331.00         | 100         | Horizontal | Pass    |
| 2   | 1979.378        | 60.33            | -6.41       | 74.0           | -13.67          | Peak     | 281.50         | 100         | Horizontal | Pass    |
| 2** | 1979.378        | 49.44            | -6.41       | 54.0           | -4.56           | AV       | 281.50         | 100         | Horizontal | Pass    |
| 3   | 2772.778        | 50.26            | -3.39       | 74.0           | -23.74          | Peak     | 123.80         | 100         | Horizontal | Pass    |
| 3** | 2772.778        | 39.93            | -3.39       | 54.0           | -14.07          | AV       | 123.80         | 100         | Horizontal | Pass    |
| 4   | 2969.254        | 52.60            | -2.29       | 74.0           | -21.40          | Peak     | 331.00         | 100         | Horizontal | Pass    |
| 4** | 2969.254        | 42.82            | -2.29       | 54.0           | -11.18          | AV       | 331.00         | 100         | Horizontal | Pass    |
| 5   | 5152.231        | 48.11            | 1.71        | 74.0           | -25.89          | Peak     | 358.70         | 100         | Horizontal | Pass    |
| 5** | 5152.231        | 39.14            | 1.71        | 54.0           | -14.86          | AV       | 358.70         | 100         | Horizontal | Pass    |
| 6   | 6646.294        | 52.95            | 5.55        | 74.0           | -21.05          | Peak     | 250.30         | 100         | Horizontal | Pass    |
| 6** | 6646.294        | 45.06            | 5.55        | 54.0           | -8.94           | AV       | 250.30         | 100         | Horizontal | Pass    |

## EXHIBIT A - EUT PHOTOGRAPHS

Front Side

EUT – All View

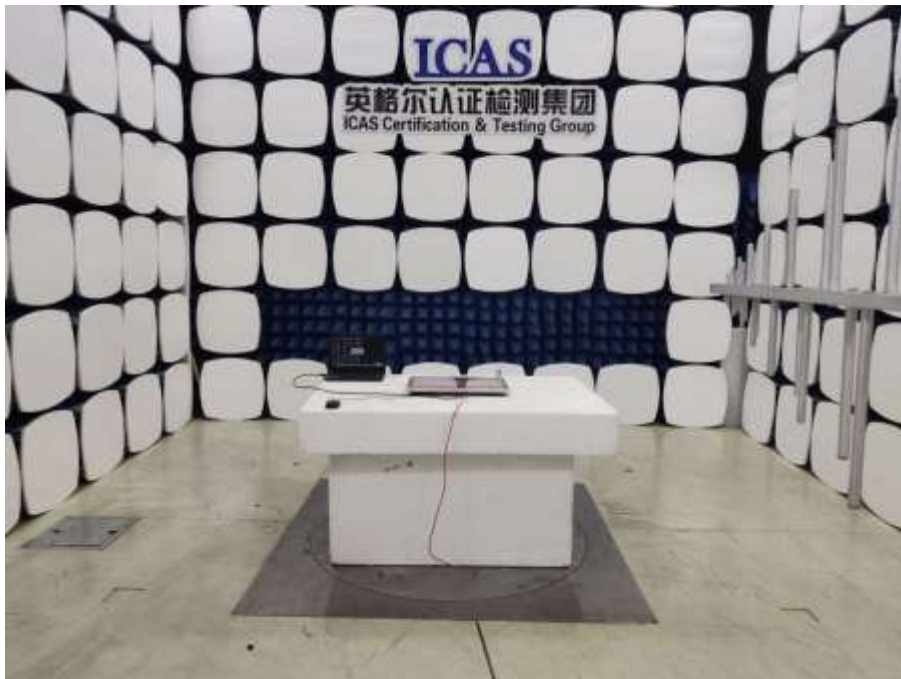


## TEST SETUP – PHOTO

### CE TEST



### RE TEST Below 1GHz



**RE TEST Above 1GHz**



**END OF REPORT**