

# FCC Test Report

Client Name : Shenzhen JHC Technology Development Co., LTD

Address : B Area, 3rd floor, A Block Junxiangda Building, N0.9  
Zhongshanyuan Road, Nanshan Distr., Shenzhen, China

Product Name : Industrial Touch Display

Date : May 25, 2022



## Shenzhen Anbotek Compliance Laboratory Limited



# Contents

|                                                 |    |
|-------------------------------------------------|----|
| 1. General Information .....                    | 4  |
| 1.1. Client Information .....                   | 4  |
| 1.2. Description of Device (EUT) .....          | 4  |
| 1.3. Auxiliary Equipment Used During Test ..... | 5  |
| 1.4. Description of Test Modes .....            | 6  |
| 1.5. Test Summary .....                         | 6  |
| 1.6. Test Equipment List .....                  | 6  |
| 1.7. Measurement Uncertainty .....              | 7  |
| 1.8. Description of Test Facility .....         | 7  |
| 2. Power Line Conducted Emission Test .....     | 8  |
| 2.1. Test Standard and Limit .....              | 8  |
| 2.2. Test Setup .....                           | 8  |
| 2.3. EUT Configuration on Measurement .....     | 8  |
| 2.4. Operating Condition of EUT .....           | 8  |
| 2.5. Test Procedure .....                       | 9  |
| 2.6. Test Results .....                         | 9  |
| 3. Radiated Emission Test .....                 | 14 |
| 3.1. Test Standard and Limit .....              | 14 |
| 3.2. Test Setup .....                           | 14 |
| 3.3. EUT Configuration on Measurement .....     | 15 |
| 3.4. Operating Condition of EUT .....           | 15 |
| 3.5. Test Procedure .....                       | 15 |
| 3.6. Test Results .....                         | 15 |
| APPENDIX I -- TEST SETUP PHOTOGRAPH .....       | 24 |
| APPENDIX II -- Photo documentation .....        | 25 |



# TEST REPORT

Applicant : Shenzhen JHC Technology Development Co., LTD

Manufacturer : Shenzhen JHC Technology Development Co., LTD

Product Name : Industrial Touch Display

Model No. : ALAD-101T-S001-G, ALAD-101T-S001, ALAD-101T-T001,  
ALAD-101T-T001-G, ALAD-101T(P)-S001, ALAD-101T(P)-S001-G,  
ALAD-101T(P)-T001, ALAD-101T(P)-T001-G

Trade Mark : JHCTECH

Rating(s) :  
Input: DC 12V 0.65A 7.80W

**Test Standard(s) : FCC Rules and Regulations Part 15 Subpart B: 2020**

**Test Method(s) : ANSI C63.4-2014**

The device described above is tested by Shenzhen Anbotech Compliance Laboratory Limited To determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class A limits both radiated and conducted emissions. The measurement results are contained in this test report and Shenzhen Anbotech Compliance Laboratory Limited Is assumed full responsibility for the accuracy and completeness of these measurements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Anbotech Compliance Laboratory Limited

Date of Receipt: May 16, 2022

Date of Test: May 16~May 25, 2022

Prepared By:

Yee Huang

(Yee Huang)

Approved & Authorized Signer:

KingKong Jin

(KingKong Jin)



# 1. General Information

## 1.1. Client Information

|              |   |                                                                                                          |
|--------------|---|----------------------------------------------------------------------------------------------------------|
| Applicant    | : | Shenzhen JHC Technology Development Co., LTD                                                             |
| Address      | : | B Area, 3rd floor, A Block Junxiangda Building, No.9 Zhongshanyuan Road, Nanshan Distr., Shenzhen, China |
| Manufacturer | : | Shenzhen JHC Technology Development Co., LTD                                                             |
| Address      | : | B Area, 3rd floor, A Block Junxiangda Building, No.9 Zhongshanyuan Road, Nanshan Distr., Shenzhen, China |
| Factory      | : | Shenzhen JHC Technology Development Co., LTD                                                             |
| Address      | : | B Area, 3rd floor, A Block Junxiangda Building, No.9 Zhongshanyuan Road, Nanshan Distr., Shenzhen, China |

## 1.2. Description of Device (EUT)

|                                                                                                                                      |   |                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name                                                                                                                         | : | Industrial Touch Display                                                                                                                                                                                                                                                     |
| Model No.                                                                                                                            | : | ALAD-101T-S001-G, ALAD-101T-S001, ALAD-101T-T001, ALAD-101T-T001-G, ALAD-101T(P)-S001, ALAD-101T(P)-S001-G, ALAD-101T(P)-T001, ALAD-101T(P)-T001-G<br>(Note: All samples are the same except the model number & CPU models, so we prepare "ALAD-101T-S001-G" for test only.) |
| Trade Mark                                                                                                                           | : | JHCTECH                                                                                                                                                                                                                                                                      |
| Test Power Supply                                                                                                                    | : | AC 120V, 60Hz                                                                                                                                                                                                                                                                |
| Test Sample No.                                                                                                                      | : | 1-1-1                                                                                                                                                                                                                                                                        |
| Product Description                                                                                                                  | : | Adapter: MODEL: KPL-060F-VI<br>INPUT: 100-240V~ 50/60Hz 1.7A.<br>OUTPUT: +12.0V==5.0A 60.0W                                                                                                                                                                                  |
| <b>Remark:</b> (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**

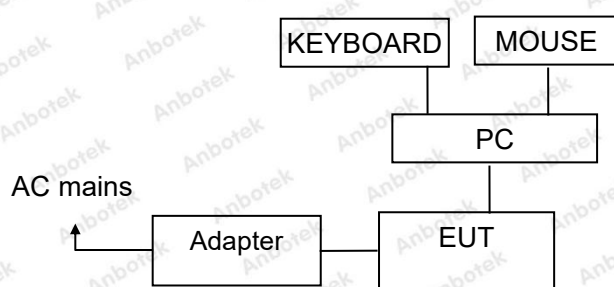
|          |   |                                                                                                                                          |
|----------|---|------------------------------------------------------------------------------------------------------------------------------------------|
| PC       | : | Manufacturer: DELL                                                                                                                       |
|          |   | M/N: Optiplex 3020 MT<br>S/N: CN-079V51-70163-4AD-089K-A00<br>Input Rating: AC 100-240V, 50-60Hz 5.4A<br>CE , FCC DOC, CCC               |
| KEYBOARD | : | Manufacturer: DELL                                                                                                                       |
|          |   | M/N: SK-8120<br>S/N: CN-0DJ365-71616-49J-0MVR-A00<br>Input Rating: DC 5V, 0.05A<br>CE, FCC, VCCI, KCC, TUV-GS<br>Cable: 1.8m, unshielded |
| MOUSE    | : | Manufacturer: DELL                                                                                                                       |
|          |   | M/N: MS111-T<br>S/N: CN-0KW2YH-71616-488-1CBJ<br>Input Rating: DC 5V, 0.1A<br>Cable: 1.8m, unshielded<br>CE, FCC, VCCI, KCC, TUV-GS      |



## 1.4. Description of Test Modes

| Pretest Modes | Descriptions |
|---------------|--------------|
| Mode 1        | HDMI Mode    |
| Mode 2        | VGA Mode     |

For Mode 1~Mode 2 Block Diagram of Test Setup



## 1.5. Test Summary

| Test Items                                             | Test Modes | Status |
|--------------------------------------------------------|------------|--------|
| Power Line Conducted Emission Test (150KHz To 30MHz)   | All Mode   | P      |
| Radiated Emission Test (30MHz To 6GHz)                 | All Mode   | P      |
| P) Indicates "PASS".<br>N) Indicates "Not applicable". |            |        |

## 1.6. Test Equipment List

Conducted Emission Measurement

| 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. 22, 2021 | 1 Year        |
| 2.   | Three Phase V-type<br>Artificial Power<br>Network | CYBERTEK                | EM5040DT  | E215040D<br>T001 | Jul 05, 2021  | 1 Year        |
| 3.   | EMI Test Receiver                                 | Rohde & Schwarz         | ESCI      | 100627           | Oct. 22, 2021 | 1 Year        |
| 4.   | RF Switching Unit                                 | Compliance<br>Direction | RSU-M2    | 38303            | Oct. 22, 2021 | 1 Year        |
| 5.   | Software Name<br>EZ-EMC                           | Ferrari Technology      | ANB-03A   | N/A              | N/A           | N/A           |



## Radiated Emission Measurement

| Item | Equipment                  | Manufacturer            | Model No.   | Serial No.    | Last Cal.     | Cal. Interval |
|------|----------------------------|-------------------------|-------------|---------------|---------------|---------------|
| 1.   | EMI Test Receiver          | Rohde & Schwarz         | ESR26       | 101481        | Oct. 22, 2021 | 1 Year        |
| 2.   | Bilog Broadband Antenna    | Schwarzbeck             | VULB9163    | VULB 9163-289 | Oct. 22, 2021 | 2 Year        |
| 3.   | Pre-amplifier              | SONOMA                  | 310N        | 186860        | Oct. 22, 2021 | 1 Year        |
| 4.   | Software Name EZ-EMC       | Ferrari Technology      | ANB-03A     | N/A           | N/A           | N/A           |
| 5.   | Preamplifier               | SKET Electronic         | BK1G18G30 D | KD17503       | Oct. 22, 2021 | 1 Year        |
| 6.   | Double Ridged Horn Antenna | Instruments corporation | GTH-0118    | 351600        | Oct. 22, 2021 | 2 Year        |

## 1.7. Measurement Uncertainty

|                         |   |                          |
|-------------------------|---|--------------------------|
| Radiation Uncertainty   | : | Ur = 3.9 dB (Horizontal) |
|                         |   | Ur = 3.8 dB (Vertical)   |
| Conduction Uncertainty  | : | Uc = 3.4 dB              |
| Disturbance Uncertainty | : | Ud = 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.518128

## 2. Power Line Conducted Emission Test

### 2.1. Test Standard and Limit

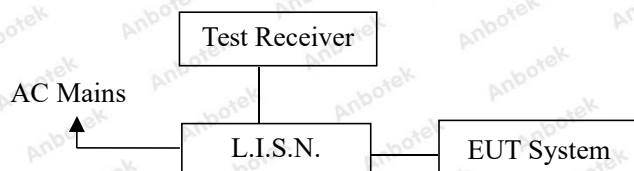
|               |                       |
|---------------|-----------------------|
| Test Standard | FCC Part 15 Subpart B |
|---------------|-----------------------|

Power Line Conducted Emission Measurement Limits (FCC Part 15 Class A)

| Test Limit | Frequency<br>(MHz) | At mains terminals (dBμV) |               |
|------------|--------------------|---------------------------|---------------|
|            |                    | Quasi-peak Level          | Average Level |
|            | 0.15 ~ 0.50        | 79 *                      | 66 *          |
|            | 0.50 ~ 30.00       | 73                        | 60            |

**Remark:** (1) The lower limit shall apply at the transition frequencies.  
(2) \* Decreasing linearly with logarithm of frequency.

### 2.2. Test Setup



### 2.3. EUT Configuration on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

### 2.4. Operating Condition of EUT

2.4.1. Setup the EUT as shown in Section 2.2.

2.4.2. Turn on the power of all equipments.

2.4.3. Let the EUT work in test mode and measure it.



## 2.5. 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 C63.4-2014 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9KHz.

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

All the test results are listed in Section 2.6.

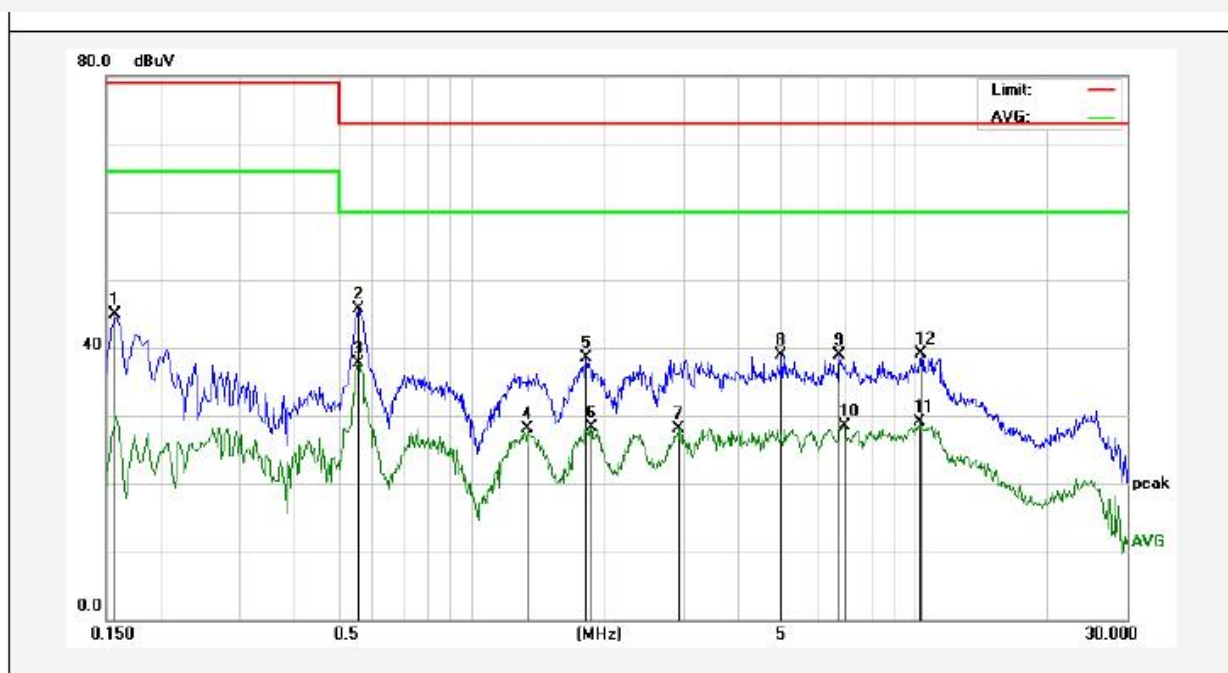
## 2.6. Test Results

### PASS

The test curves are shown in the following pages.

## Conducted Emission Test Data

Test Mode: HDMI Mode  
 Test Site: 1# Shielded Room  
 Test Specification: AC 120V, 60Hz  
 Comment: Live Line  
 Temp.: 23.9°C Hum.: 47%

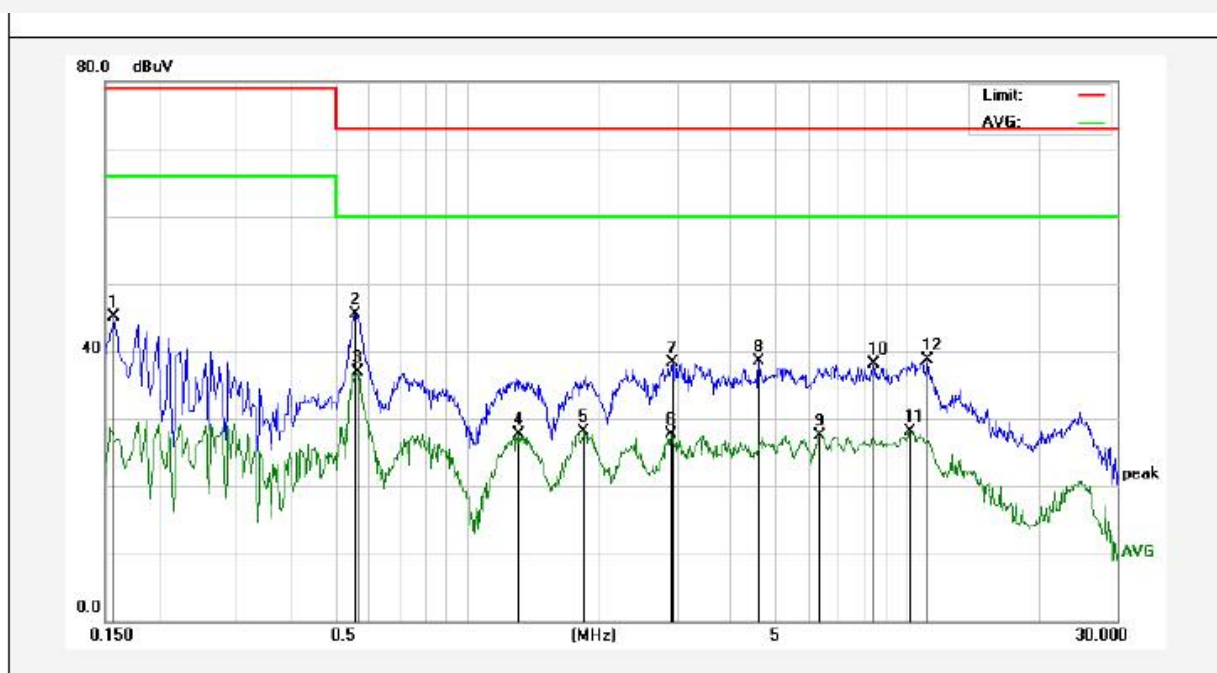


| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit (dBuV) | Over Limit (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|--------------|-----------------|----------|--------|
| 1   | 0.1580      | 44.78          | 0.12        | 44.90         | 79.00        | -34.10          | QP       |        |
| 2   | 0.5580      | 45.51          | 0.15        | 45.66         | 73.00        | -27.34          | QP       |        |
| 3   | 0.5580      | 37.58          | 0.15        | 37.73         | 60.00        | -22.27          | AVG      |        |
| 4   | 1.3380      | 27.90          | 0.14        | 28.04         | 60.00        | -31.96          | AVG      |        |
| 5   | 1.8180      | 38.28          | 0.13        | 38.41         | 73.00        | -34.59          | QP       |        |
| 6   | 1.8620      | 28.25          | 0.12        | 28.37         | 60.00        | -31.63          | AVG      |        |
| 7   | 2.9219      | 27.98          | 0.12        | 28.10         | 60.00        | -31.90          | AVG      |        |
| 8   | 4.9897      | 38.77          | 0.11        | 38.88         | 73.00        | -34.12          | QP       |        |
| 9   | 6.7659      | 38.72          | 0.11        | 38.83         | 73.00        | -34.17          | QP       |        |
| 10  | 6.9179      | 28.43          | 0.11        | 28.54         | 60.00        | -31.46          | AVG      |        |
| 11  | 10.2416     | 28.89          | 0.12        | 29.01         | 60.00        | -30.99          | AVG      |        |
| 12  | 10.2939     | 38.91          | 0.12        | 39.03         | 73.00        | -33.97          | QP       |        |

Note: Result=Reading+Factor Over Limit=Result-Limit

**Conducted Emission Test Data**

Test Mode: HDMI Mode  
Test Site: 1# Shielded Room  
Test Specification: AC 120V, 60Hz  
Comment: Neutral Line  
Temp.: 23.9°C Hum.: 47%



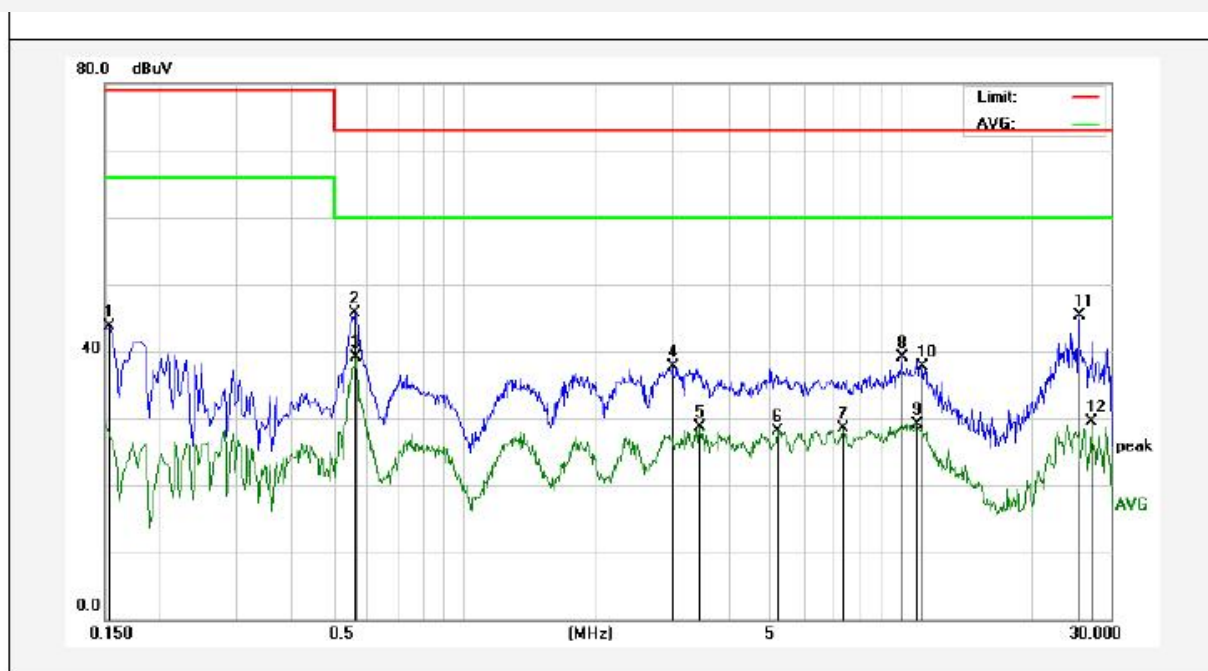
| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit (dBuV) | Over Limit (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|--------------|-----------------|----------|--------|
| 1   | 0.1580      | 44.95          | 0.12        | 45.07         | 79.00        | -33.93          | QP       |        |
| 2   | 0.5580      | 45.43          | 0.15        | 45.58         | 73.00        | -27.42          | QP       |        |
| 3   | 0.5657      | 36.84          | 0.15        | 36.99         | 60.00        | -23.01          | AVG      |        |
| 4   | 1.3140      | 27.60          | 0.14        | 27.74         | 60.00        | -32.26          | AVG      |        |
| 5   | 1.8460      | 27.97          | 0.12        | 28.09         | 60.00        | -31.91          | AVG      |        |
| 6   | 2.9020      | 27.57          | 0.12        | 27.69         | 60.00        | -32.31          | AVG      |        |
| 7   | 2.9219      | 38.28          | 0.12        | 38.40         | 73.00        | -34.60          | QP       |        |
| 8   | 4.6059      | 38.30          | 0.11        | 38.41         | 73.00        | -34.59          | QP       |        |
| 9   | 6.3338      | 27.48          | 0.11        | 27.59         | 60.00        | -32.41          | AVG      |        |
| 10  | 8.3779      | 37.97          | 0.12        | 38.09         | 73.00        | -34.91          | QP       |        |
| 11  | 10.1737     | 28.05          | 0.12        | 28.17         | 60.00        | -31.83          | AVG      |        |
| 12  | 11.1379     | 38.62          | 0.13        | 38.75         | 73.00        | -34.25          | QP       |        |

Note: Result=Reading+Factor Over Limit=Result-Limit



## Conducted Emission Test Data

Test Mode: VGA Mode  
Test Site: 1# Shielded Room  
Test Specification: AC 120V, 60Hz  
Comment: Live Line  
Temp.: 23.9°C Hum.: 47%

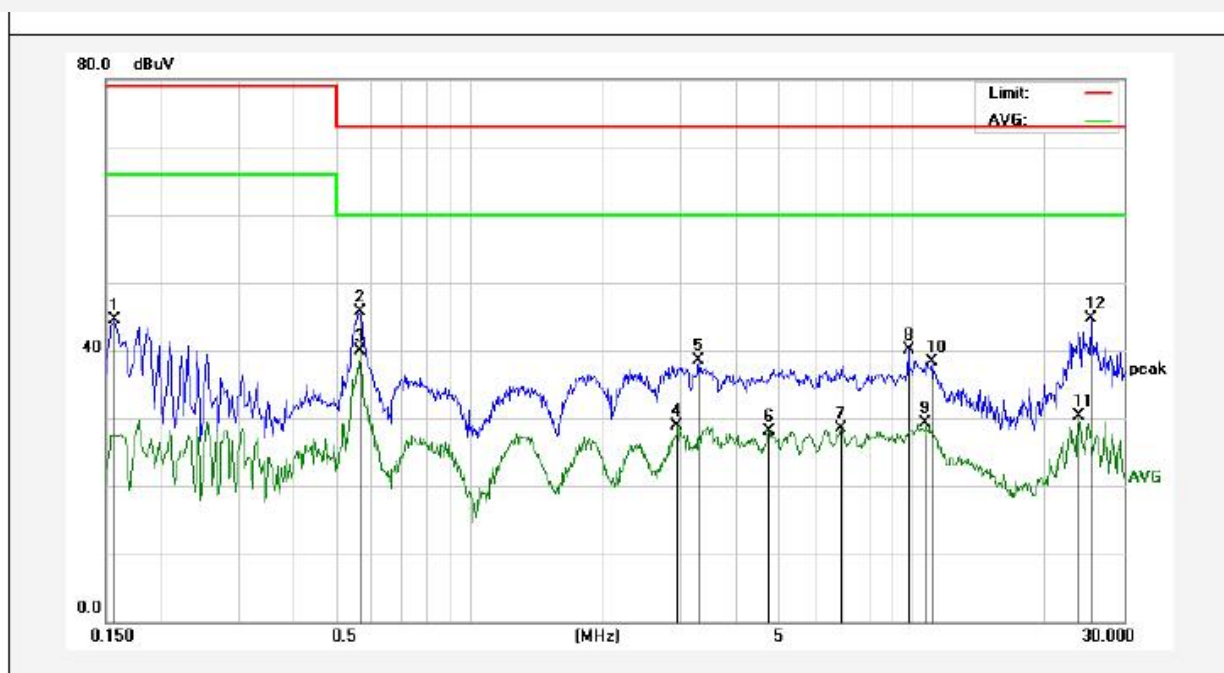


| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit (dBuV) | Over Limit (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|--------------|-----------------|----------|--------|
| 1   | 0.1539      | 43.50          | 0.12        | 43.62         | 79.00        | -35.38          | QP       |        |
| 2   | 0.5620      | 45.49          | 0.15        | 45.64         | 73.00        | -27.36          | QP       |        |
| 3   | 0.5657      | 39.04          | 0.15        | 39.19         | 60.00        | -20.81          | AVG      |        |
| 4   | 2.9820      | 37.67          | 0.12        | 37.79         | 73.00        | -35.21          | QP       |        |
| 5   | 3.4380      | 28.58          | 0.12        | 28.70         | 60.00        | -31.30          | AVG      |        |
| 6   | 5.1859      | 28.05          | 0.11        | 28.16         | 60.00        | -31.84          | AVG      |        |
| 7   | 7.3578      | 28.36          | 0.11        | 28.47         | 60.00        | -31.53          | AVG      |        |
| 8   | 9.9938      | 39.05          | 0.12        | 39.17         | 73.00        | -33.83          | QP       |        |
| 9   | 10.8215     | 29.05          | 0.13        | 29.18         | 60.00        | -30.82          | AVG      |        |
| 10  | 11.1539     | 37.57          | 0.13        | 37.70         | 73.00        | -35.30          | QP       |        |
| 11  | 25.3260     | 45.09          | 0.18        | 45.27         | 73.00        | -27.73          | QP       |        |
| 12  | 27.0017     | 29.20          | 0.25        | 29.45         | 60.00        | -30.55          | AVG      |        |

Note: Result=Reading+Factor Over Limit=Result-Limit

**Conducted Emission Test Data**

Test Mode: VGA Mode  
Test Site: 1# Shielded Room  
Test Specification: AC 120V, 60Hz  
Comment: Neutral Line  
Temp.: 23.9°C Hum.: 47%



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB) | Result (dBuV) | Limit (dBuV) | Over Limit (dB) | Detector | Remark |
|-----|-------------|----------------|-------------|---------------|--------------|-----------------|----------|--------|
| 1   | 0.1580      | 44.45          | 0.12        | 44.57         | 79.00        | -34.43          | QP       |        |
| 2   | 0.5657      | 45.55          | 0.15        | 45.70         | 73.00        | -27.30          | QP       |        |
| 3   | 0.5657      | 39.77          | 0.15        | 39.92         | 60.00        | -20.08          | AVG      |        |
| 4   | 2.9420      | 28.74          | 0.12        | 28.86         | 60.00        | -31.14          | AVG      |        |
| 5   | 3.2860      | 38.32          | 0.12        | 38.44         | 73.00        | -34.56          | QP       |        |
| 6   | 4.7298      | 28.04          | 0.11        | 28.15         | 60.00        | -31.85          | AVG      |        |
| 7   | 6.8898      | 28.30          | 0.11        | 28.41         | 60.00        | -31.59          | AVG      |        |
| 8   | 9.7858      | 39.94          | 0.12        | 40.06         | 73.00        | -32.94          | QP       |        |
| 9   | 10.6776     | 29.24          | 0.13        | 29.37         | 60.00        | -30.63          | AVG      |        |
| 10  | 11.0539     | 38.08          | 0.13        | 38.21         | 73.00        | -34.79          | QP       |        |
| 11  | 23.6780     | 30.12          | 0.18        | 30.30         | 60.00        | -29.70          | AVG      |        |
| 12  | 25.1900     | 44.50          | 0.18        | 44.68         | 73.00        | -28.32          | QP       |        |

**Note:** Result=Reading+Factor Over Limit=Result-Limit

### 3. Radiated Emission Test

#### 3.1. Test Standard and Limit

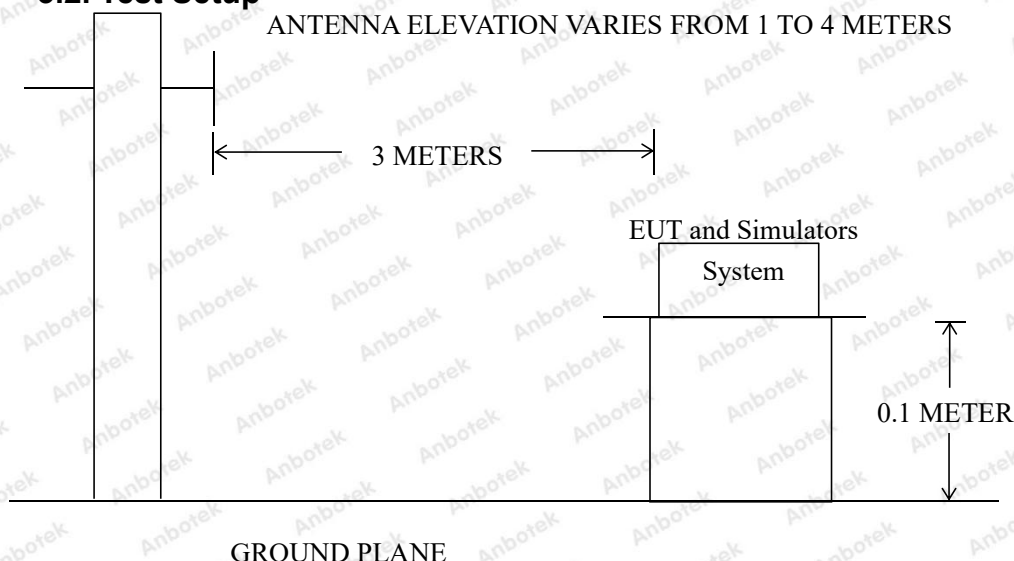
|               |                       |
|---------------|-----------------------|
| Test Standard | FCC Part 15 Subpart B |
|---------------|-----------------------|

#### Radiated Emission Test Limit (Subpart B Class A)

| 30~1000 MHz |                    |                      |                          |                  |
|-------------|--------------------|----------------------|--------------------------|------------------|
| Test Limit  | Frequency<br>(MHz) | DISTANCE<br>(Meters) | FIELD STRENGTHS<br>LIMIT |                  |
|             |                    |                      | μV/m                     | (dBμV/m)         |
|             | 30 ~ 88            | 3                    | 300                      | 49.5             |
|             | 88 ~ 216           | 3                    | 500                      | 54.0             |
|             | 216 ~ 960          | 3                    | 700                      | 56.9             |
|             | 960 ~ 1000         | 3                    | 1000                     | 60.0             |
| 1~6 GHz     |                    |                      |                          |                  |
| Test Limit  | Frequency<br>(GHz) | DISTANCE<br>(Meters) | FIELD STRENGTHS<br>LIMIT |                  |
|             |                    |                      | Average<br>(μV/m)        | Peak<br>(dBμV/m) |
|             | 1 ~ 6              | 3                    | 59.5                     | 79.5             |

**Remark:** (1) Emission level (dB)μV = 20 log Emission level μV/m  
 (2) The smaller limit shall apply at the cross point between two frequency bands.  
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.  
 (4)  $3M \text{ Limit} = 10M \text{ Limit} + k$      $k = 20 \log(D1/D2) = 10$   
 $3M \text{ Limit} = 10M \text{ Limit} + 10$   
 (D1= 10M    D2=3M)

#### 3.2. Test Setup





### 3.3. EUT Configuration on Measurement

The following equipments are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 3.4. Operating Condition of EUT

3.4.1. Setup the EUT as shown in Section 3.2.

3.4.2. Turn on the power of all equipments.

3.4.3. Let the EUT work in test mode and measure it.

### 3.5. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.1 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (Trilog Broadband Antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.

The test receiver/spectrum was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.

Note:

The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak/ Average detection at frequency above 1GHz.

The frequency range from 30MHz to 6GHz is checked.

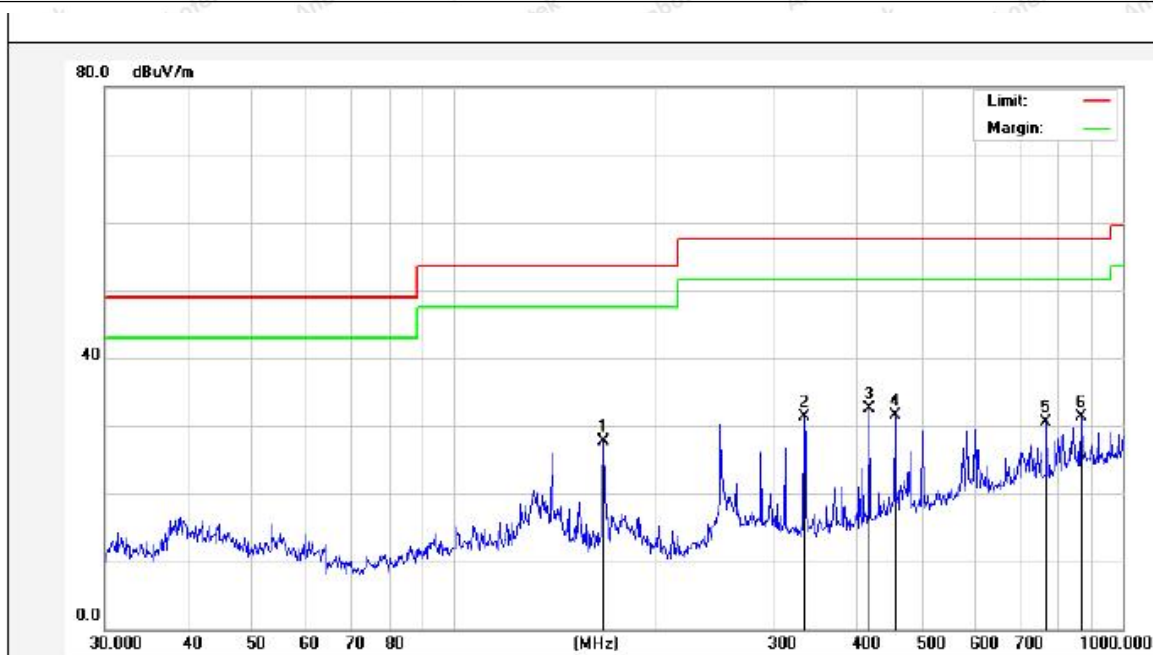
The test results are listed in Section 3.6.

### 3.6. Test Results

**PASS**

The test curves are shown in the following pages.

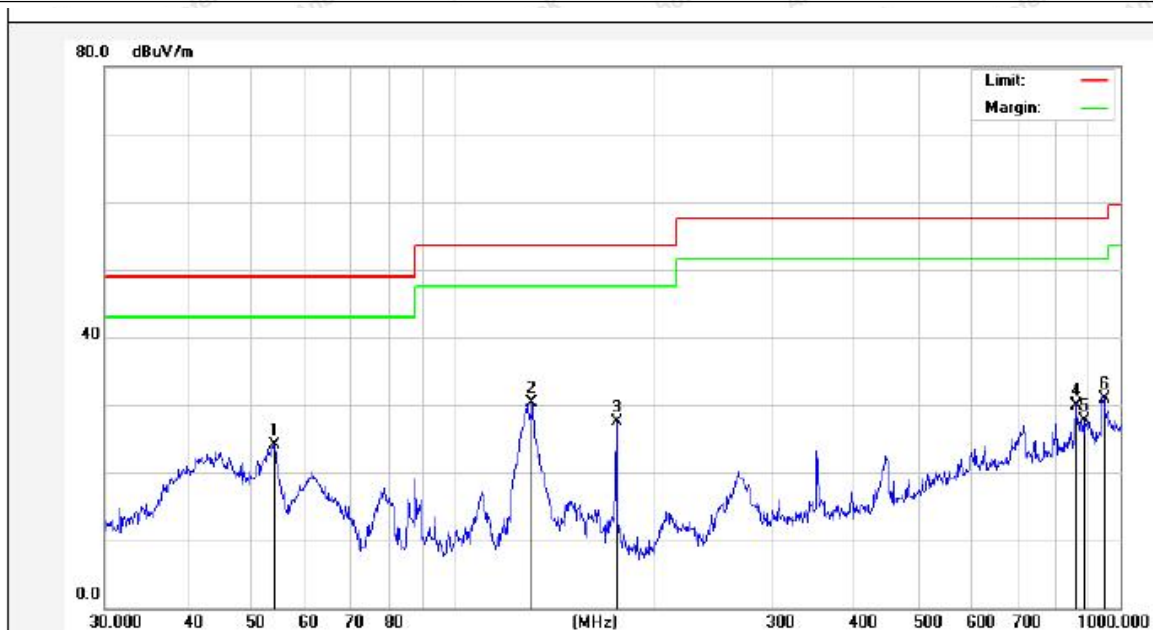


**Test item:** Radiation Test**Polarization:****Horizontal****Standard:** (RE)FCC Part 15 Subpart B(Class A)  
30~1000MHz**Power Source:** AC 120V, 60Hz**Distance:** 3m**Temp.(°C)/Hum.(%RH):** 24.1( °C)/48%RH**Test Mode:** HDMI Mode

| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 167.2368    | 51.44          | -23.71        | 27.73           | 53.50          | -25.77          | QP       |             |              |        |
| 2   | 333.6867    | 47.61          | -16.38        | 31.23           | 57.50          | -26.27          | QP       |             |              |        |
| 3   | 417.6411    | 48.45          | -15.90        | 32.55           | 57.50          | -24.95          | QP       |             |              |        |
| 4   | 455.9058    | 46.72          | -15.28        | 31.44           | 57.50          | -26.06          | QP       |             |              |        |
| 5   | 768.7481    | 39.28          | -8.87         | 30.41           | 57.50          | -27.09          | QP       |             |              |        |
| 6   | 866.0879    | 38.44          | -7.08         | 31.36           | 57.50          | -26.14          | QP       |             |              |        |

**Note:** Result=Reading+Factor Over Limit=Result-Limit

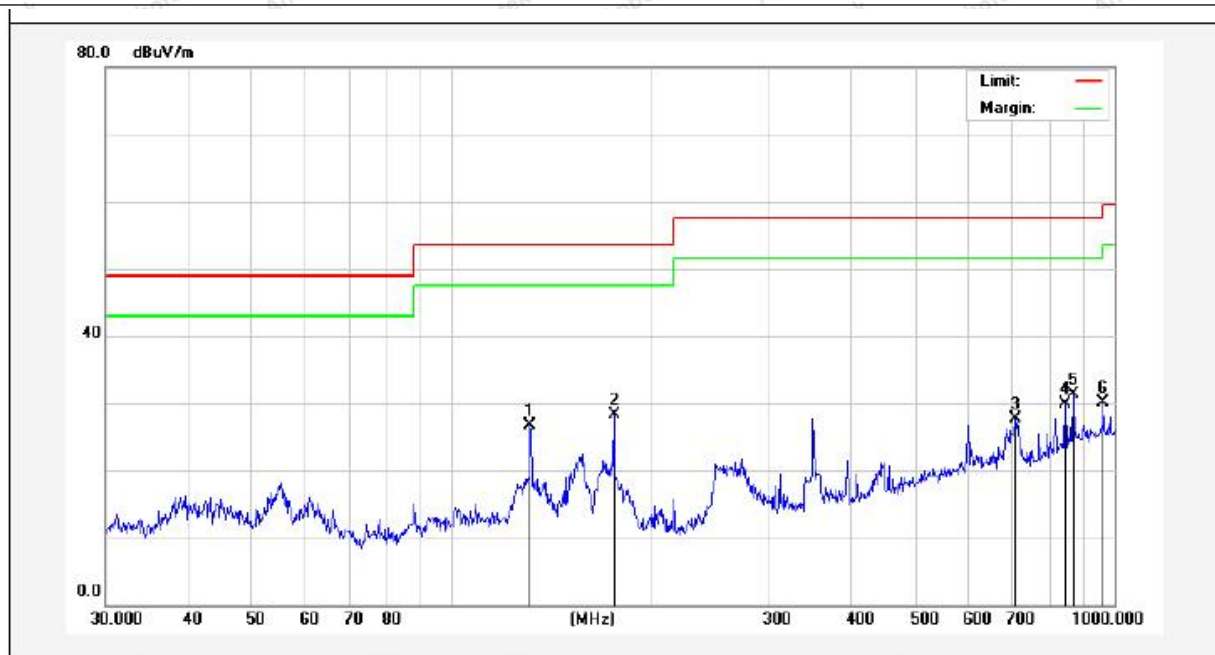


**Test item:** Radiation Test**Polarization:****Vertical****Standard:** (RE)FCC Part 15 Subpart B(Class A)  
30~1000MHz**Power Source:** AC 120V, 60Hz**Distance:** 3m**Temp.(°C)/Hum.(%RH):** 24.1( °C)/48%RH**Test Mode:** HDMI Mode

| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 53.8818     | 41.38          | -17.21        | 24.17           | 49.00          | -24.83          | QP       |             |              |        |
| 2   | 131.2965    | 51.83          | -21.56        | 30.27           | 53.50          | -23.23          | QP       |             |              |        |
| 3   | 175.6516    | 48.34          | -20.83        | 27.51           | 53.50          | -25.99          | QP       |             |              |        |
| 4   | 857.0247    | 37.15          | -7.30         | 29.85           | 57.50          | -27.65          | QP       |             |              |        |
| 5   | 884.5029    | 34.40          | -6.62         | 27.78           | 57.50          | -29.72          | QP       |             |              |        |
| 6   | 945.4399    | 36.69          | -5.69         | 31.00           | 57.50          | -26.50          | QP       |             |              |        |

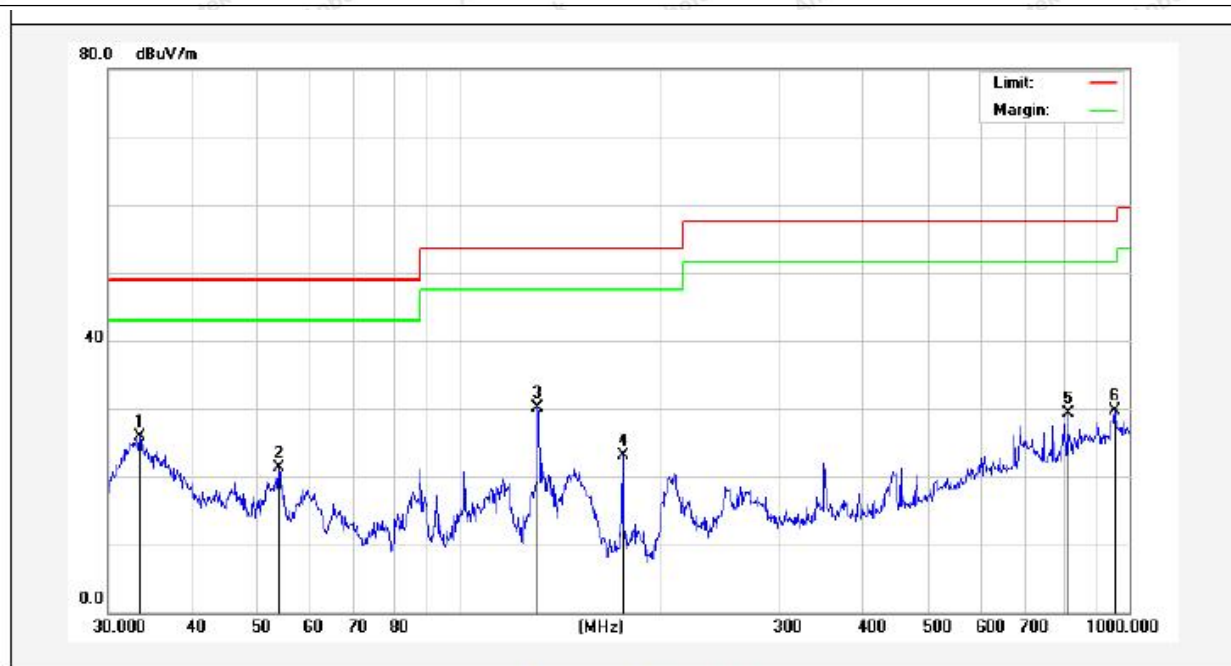
**Note:** Result=Reading+Factor Over Limit=Result-Limit



**Test item:** Radiation Test**Polarization:****Horizontal****Standard:** (RE)FCC Part 15 Subpart B(Class A)  
30~1000MHz**Power Source:****AC 120V, 60Hz****Distance:** 3m**Temp.(°C)/Hum.(%RH):** 24.1( °C)/48%RH**Test Mode:** VGA Mode

| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 131.2965    | 49.28          | -22.57        | 26.71           | 53.50          | -26.79          | QP       |             |              |        |
| 2   | 175.6516    | 51.62          | -23.36        | 28.26           | 53.50          | -25.24          | QP       |             |              |        |
| 3   | 709.1823    | 37.56          | -9.79         | 27.77           | 57.50          | -29.73          | QP       |             |              |        |
| 4   | 842.1296    | 37.52          | -7.61         | 29.91           | 57.50          | -27.59          | QP       |             |              |        |
| 5   | 866.0879    | 38.37          | -7.08         | 31.29           | 57.50          | -26.21          | QP       |             |              |        |
| 6   | 962.1623    | 35.51          | -5.44         | 30.07           | 59.50          | -29.43          | QP       |             |              |        |

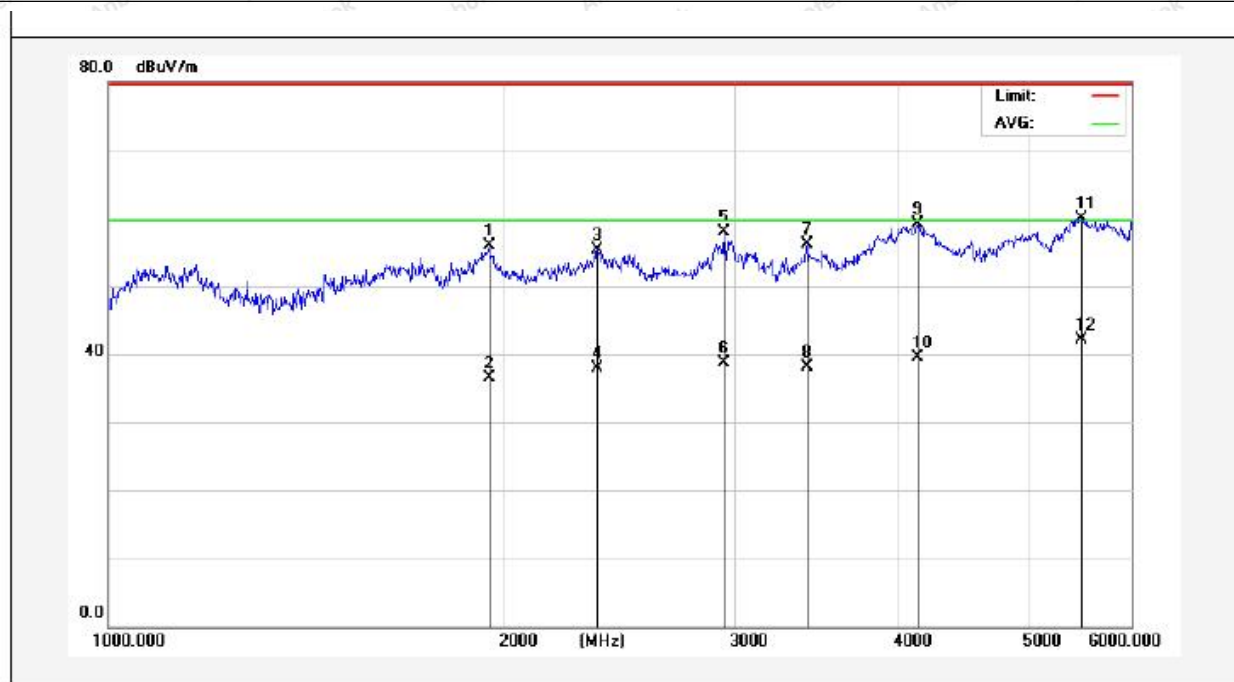
**Note:** Result=Reading+Factor Over Limit=Result-Limit

**Test item:** Radiation Test**Polarization:****Vertical****Standard:** (RE)FCC Part 15 Subpart B(Class A)  
30~1000MHz**Power Source:** AC 120V, 60Hz**Distance:** 3m**Temp.(°C)/Hum.(%RH):** 24.1( °C)/48%RH**Test Mode:** VGA Mode

| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 33.4449     | 43.30          | -17.40        | 25.90           | 49.00          | -23.10          | QP       |             |              |        |
| 2   | 53.8818     | 38.51          | -17.21        | 21.30           | 49.00          | -27.70          | QP       |             |              |        |
| 3   | 131.2965    | 51.72          | -21.56        | 30.16           | 53.50          | -23.34          | QP       |             |              |        |
| 4   | 175.6516    | 43.94          | -20.83        | 23.11           | 53.50          | -30.39          | QP       |             |              |        |
| 5   | 810.2654    | 37.33          | -8.11         | 29.22           | 57.50          | -28.28          | QP       |             |              |        |
| 6   | 952.0937    | 35.32          | -5.61         | 29.71           | 57.50          | -27.79          | QP       |             |              |        |

**Note:** Result=Reading+Factor Over Limit=Result-Limit



**Test item:** Radiation Test**Polarization:****Horizontal****Standard:** (RE)FCC Part 15 Subpart B(Class A)  
1~6GHz**Power Source:****AC 120V, 60Hz****Distance:** 3m**Temp.(°C)/Hum.(%RH):** 24.1( °C)/48%RH**Test Mode:** HDMI Mode

| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 1947.477    | 47.27          | 8.55          | 55.82           | 79.50          | -23.68          | peak     |             |              |        |
| 2   | 1947.477    | 27.92          | 8.55          | 36.47           | 59.50          | -23.03          | AVG      |             |              |        |
| 3   | 2354.812    | 45.70          | 9.67          | 55.37           | 79.50          | -24.13          | peak     |             |              |        |
| 4   | 2354.812    | 28.32          | 9.67          | 37.99           | 59.50          | -21.51          | AVG      |             |              |        |
| 5   | 2940.675    | 46.38          | 11.58         | 57.96           | 79.50          | -21.54          | peak     |             |              |        |
| 6   | 2940.675    | 27.06          | 11.58         | 38.64           | 59.50          | -20.86          | AVG      |             |              |        |
| 7   | 3399.987    | 43.77          | 12.28         | 56.05           | 79.50          | -23.45          | peak     |             |              |        |
| 8   | 3399.987    | 25.92          | 12.28         | 38.20           | 59.50          | -21.30          | AVG      |             |              |        |
| 9   | 4125.890    | 45.93          | 13.19         | 59.12           | 79.50          | -20.38          | peak     |             |              |        |
| 10  | 4125.890    | 26.29          | 13.19         | 39.48           | 59.50          | -20.02          | AVG      |             |              |        |
| 11  | 5495.685    | 43.11          | 16.75         | 59.86           | 79.50          | -19.64          | peak     |             |              |        |
| 12  | 5495.685    | 25.33          | 16.75         | 42.08           | 59.50          | -17.42          | AVG      |             |              |        |

**Note:** Result=Reading+Factor Over Limit=Result-Limit



Test item: Radiation Test

Polarization:

Vertical

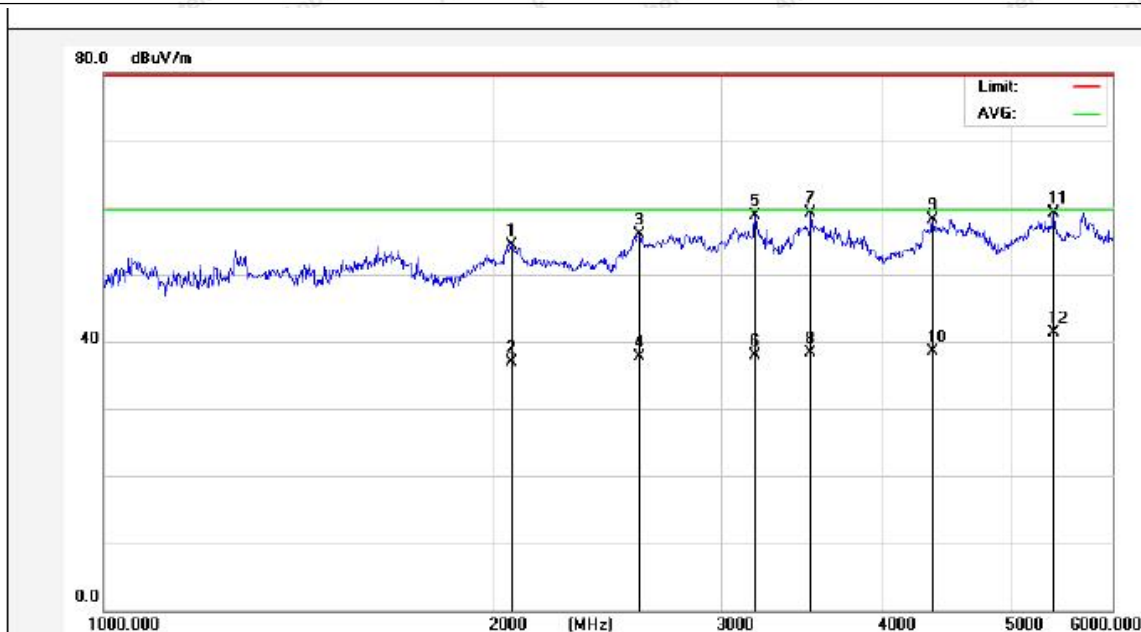
Standard: (RE)FCC Part 15 Subpart B(Class A)  
1~6GHz

Power Source: AC 120V, 60Hz

Distance: 3m

Temp.(°C)/Hum.(%RH): 24.1( °C)/48%RH

Test Mode: HDMI Mode



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 2066.100    | 45.21          | 9.13          | 54.34           | 79.50          | -25.16          | peak     |             |              |        |
| 2   | 2066.100    | 27.82          | 9.13          | 36.95           | 59.50          | -22.55          | AVG      |             |              |        |
| 3   | 2589.395    | 45.62          | 10.27         | 55.89           | 79.50          | -23.61          | peak     |             |              |        |
| 4   | 2589.395    | 27.38          | 10.27         | 37.65           | 59.50          | -21.85          | AVG      |             |              |        |
| 5   | 3181.894    | 46.63          | 12.02         | 58.65           | 79.50          | -20.85          | peak     |             |              |        |
| 6   | 3181.894    | 25.86          | 12.02         | 37.88           | 59.50          | -21.62          | AVG      |             |              |        |
| 7   | 3511.430    | 46.74          | 12.40         | 59.14           | 79.50          | -20.36          | peak     |             |              |        |
| 8   | 3511.430    | 25.85          | 12.40         | 38.25           | 59.50          | -21.25          | AVG      |             |              |        |
| 9   | 4361.545    | 44.06          | 14.12         | 58.18           | 79.50          | -21.32          | peak     |             |              |        |
| 10  | 4361.545    | 24.48          | 14.12         | 38.60           | 59.50          | -20.90          | AVG      |             |              |        |
| 11  | 5407.773    | 42.58          | 16.56         | 59.14           | 79.50          | -20.36          | peak     |             |              |        |
| 12  | 5407.773    | 24.81          | 16.56         | 41.37           | 59.50          | -18.13          | AVG      |             |              |        |

Note: Result=Reading+Factor Over Limit=Result-Limit

**Test item:** Radiation Test **Polarization:** Horizontal  
**Standard:** (RE)FCC Part 15 Subpart B(Class A) **Power Source:** AC 120V, 60Hz  
**Distance:** 3m **Temp.(°C)/Hum.(%RH):** 24.1( °C)/48%RH  
**Test Mode:** VGA Mode

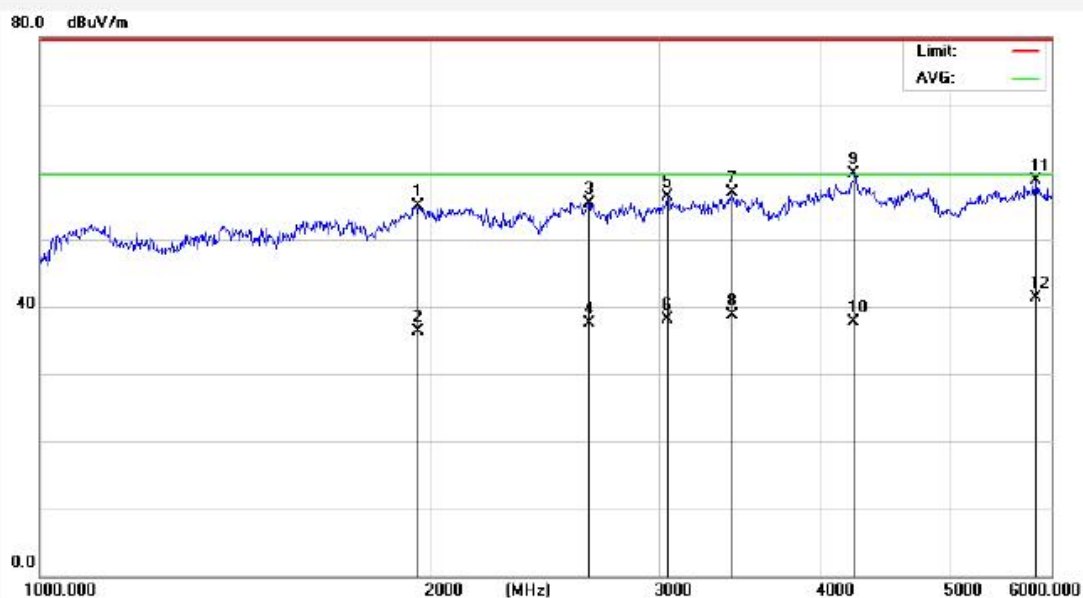


| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 2816.900    | 43.92          | 11.12         | 55.04           | 79.50          | -24.46          | peak     |             |              |        |
| 2   | 2816.900    | 25.09          | 11.12         | 36.21           | 59.50          | -23.29          | AVG      |             |              |        |
| 3   | 3170.512    | 44.44          | 12.00         | 56.44           | 79.50          | -23.06          | peak     |             |              |        |
| 4   | 3170.512    | 25.69          | 12.00         | 37.69           | 59.50          | -21.81          | AVG      |             |              |        |
| 5   | 3555.749    | 44.46          | 12.43         | 56.89           | 79.50          | -22.61          | peak     |             |              |        |
| 6   | 3555.749    | 25.41          | 12.43         | 37.84           | 59.50          | -21.66          | AVG      |             |              |        |
| 7   | 4307.182    | 44.59          | 13.91         | 58.50           | 79.50          | -21.00          | peak     |             |              |        |
| 8   | 4307.182    | 24.55          | 13.91         | 38.46           | 59.50          | -21.04          | AVG      |             |              |        |
| 9   | 4594.166    | 44.31          | 14.85         | 59.16           | 79.50          | -20.34          | peak     |             |              |        |
| 10  | 4594.166    | 24.38          | 14.85         | 39.23           | 59.50          | -20.27          | AVG      |             |              |        |
| 11  | 5378.783    | 42.96          | 16.49         | 59.45           | 79.50          | -20.05          | peak     |             |              |        |
| 12  | 5378.783    | 25.43          | 16.49         | 41.92           | 59.50          | -17.58          | AVG      |             |              |        |

**Note:** Result=Reading+Factor Over Limit=Result-Limit



**Test item:** Radiation Test **Polarization:** Vertical  
**Standard:** (RE)FCC Part 15 Subpart B(Class A) **Power Source:** AC 120V, 60Hz  
**Distance:** 3m **Temp.(°C)/Hum.(%RH):** 24.1( °C)/48%RH  
**Test Mode:** VGA Mode



| No. | Freq. (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Detector | Height (cm) | degree (deg) | Remark |
|-----|-------------|----------------|---------------|-----------------|----------------|-----------------|----------|-------------|--------------|--------|
| 1   | 1954.468    | 46.29          | 8.61          | 54.90           | 79.50          | -24.60          | peak     |             |              |        |
| 2   | 1954.468    | 27.79          | 8.61          | 36.40           | 59.50          | -23.10          | AVG      |             |              |        |
| 3   | 2645.673    | 44.91          | 10.48         | 55.39           | 79.50          | -24.11          | peak     |             |              |        |
| 4   | 2645.673    | 27.06          | 10.48         | 37.54           | 59.50          | -21.96          | AVG      |             |              |        |
| 5   | 3042.509    | 44.49          | 11.86         | 56.35           | 79.50          | -23.15          | peak     |             |              |        |
| 6   | 3042.509    | 26.28          | 11.86         | 38.14           | 59.50          | -21.36          | AVG      |             |              |        |
| 7   | 3406.085    | 44.54          | 12.29         | 56.83           | 79.50          | -22.67          | peak     |             |              |        |
| 8   | 3406.085    | 26.37          | 12.29         | 38.66           | 59.50          | -20.84          | AVG      |             |              |        |
| 9   | 4230.695    | 46.09          | 13.60         | 59.69           | 79.50          | -19.81          | peak     |             |              |        |
| 10  | 4230.695    | 24.09          | 13.60         | 37.69           | 59.50          | -21.81          | AVG      |             |              |        |
| 11  | 5840.889    | 41.71          | 17.06         | 58.77           | 79.50          | -20.73          | peak     |             |              |        |
| 12  | 5840.889    | 24.19          | 17.06         | 41.25           | 59.50          | -18.25          | AVG      |             |              |        |

**Note:** Result=Reading+Factor Over Limit=Result-Limit



## APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Power Line Conducted Emission Test



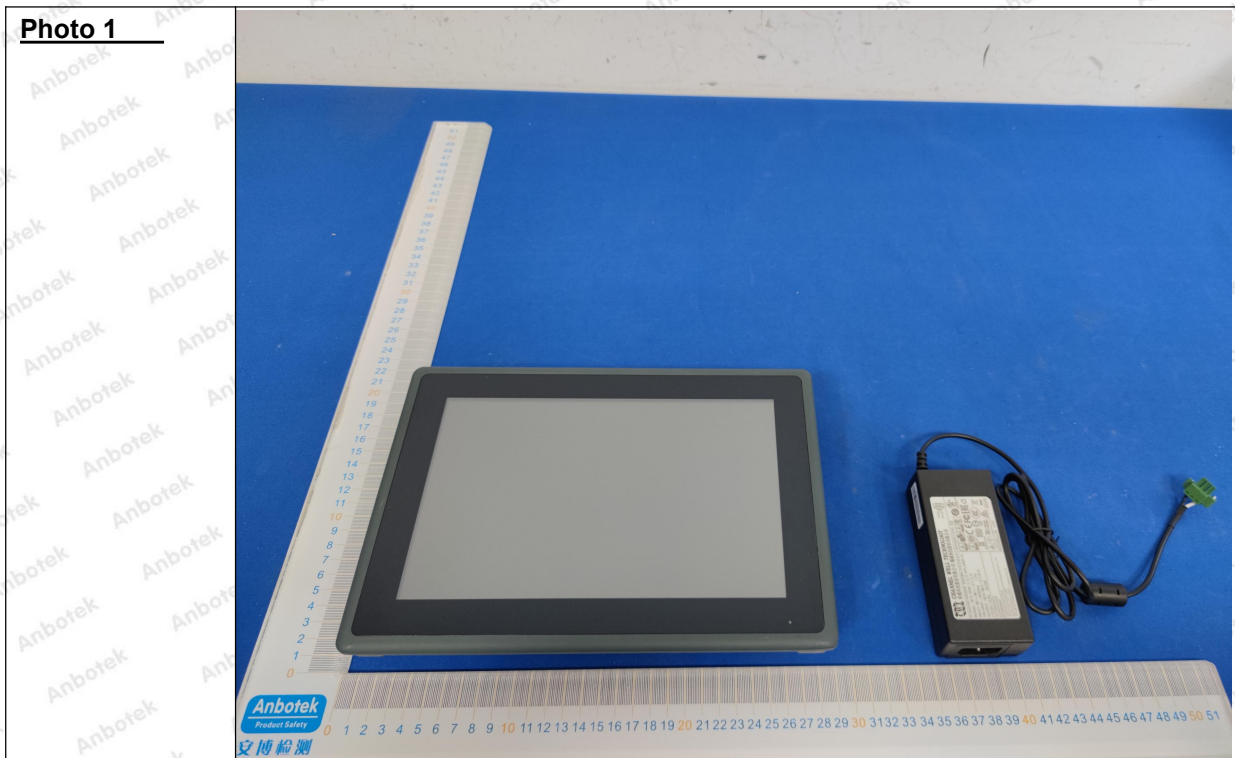
Photo of Radiated Emission Test





## APPENDIX II -- Photo documentation

**Photo 1**



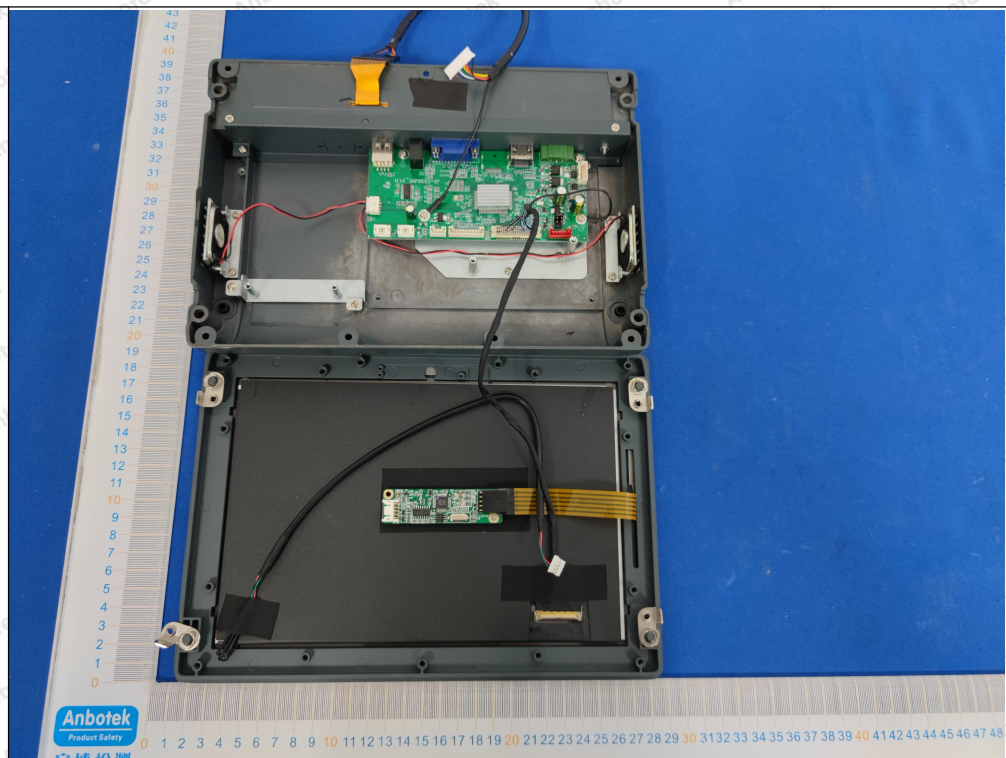
**Photo 2**



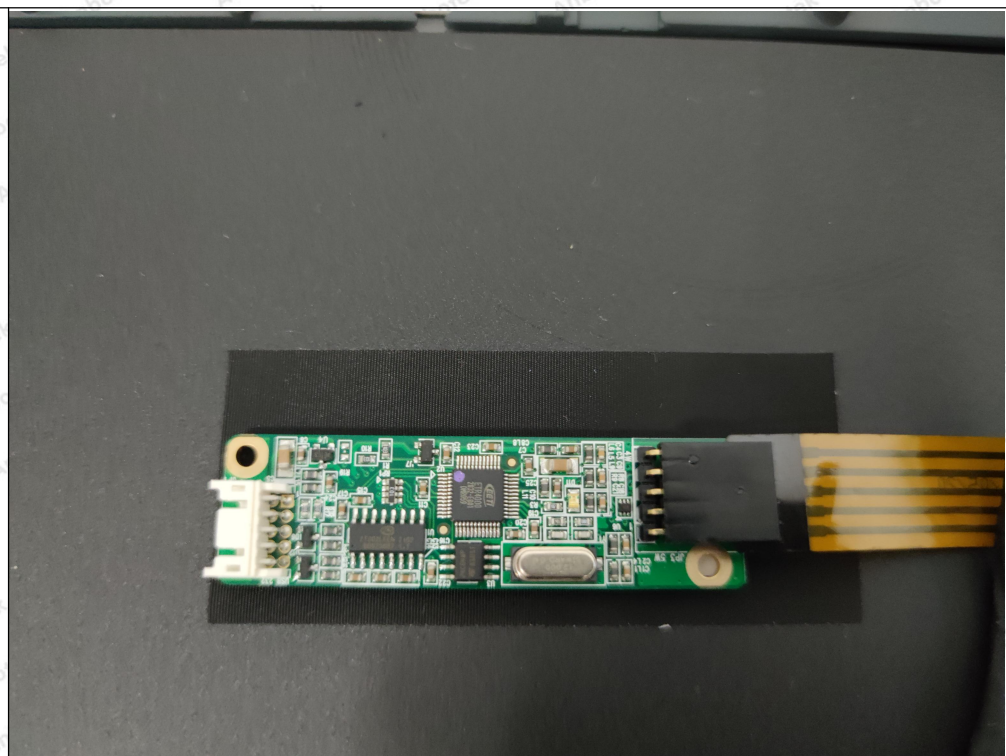
**Photo 3****Photo 4**

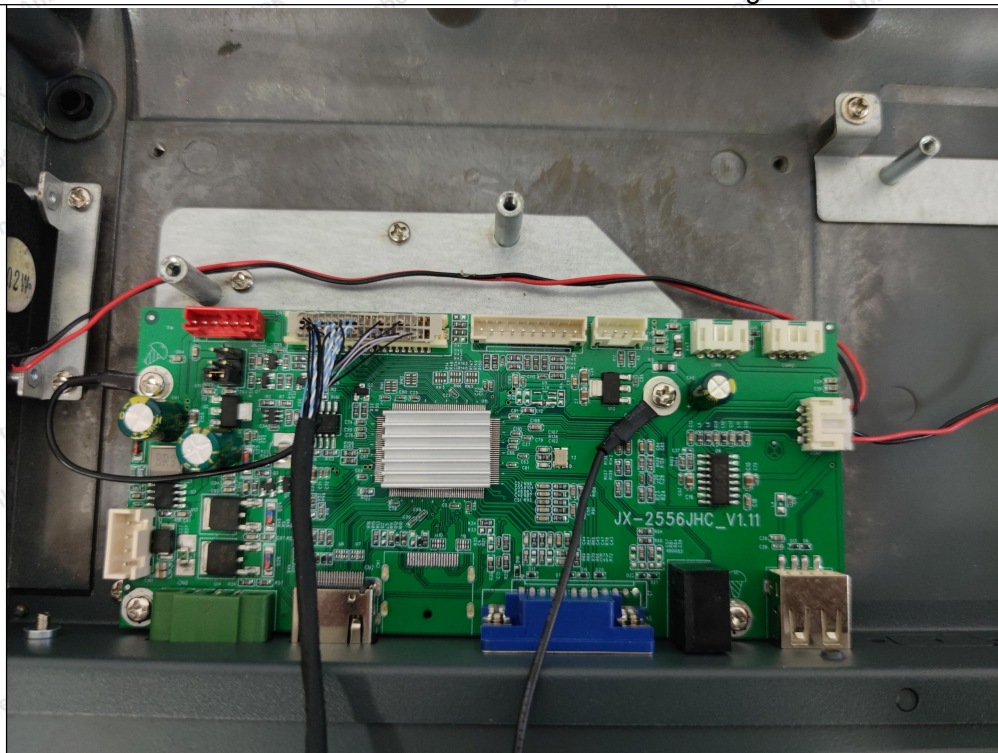


**Photo 5**



**Photo 6**



**Photo 7**

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

