



**Shenzhen CTA Testing Technology Co., Ltd.**  
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai  
Street, Bao'an District, Shenzhen, China

## TEST REPORT

### FCC Rules and Regulations Part 15 Subpart C (Section 15.209)

Report Reference No.....: CTA24061300601

FCC ID.....: 2A938-PNGB55NWW4

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Date of issue.....: Jul.06, 2024

**Representative Laboratory Name ..: Shenzhen CTA Testing Technology Co., Ltd.**

Address.....: Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,  
Fuhai Street, Bao'an District, Shenzhen, China

**Applicant's name ..: Jiangsu Austin Optronics Technology Co., Ltd.**

Address ..: Building 02, 1 KeChuang Road, Qixia District, Nanjing, China

**Test specification ..:**

Standard ..: FCC Rules and Regulations Part 15 Subpart C (Section 15.209)

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**Test item description ..: Wireless Charging Board**

Trade Mark ..: Pintura

Manufacturer ..: Jiangsu Austin Optronics Technology Co., Ltd.

Model/Type reference.....: PNGB55NWW4

List Model ..: PNGB55NWW3, PNGB55NWW2, PNGB55NWW1

Modulation Type ..: ASK

Operation Frequency.....: 110-205KHz

Ratings ..: Input: DC 19.5V/3.0A by Adapter

Wireless Output 1:15W(Max)

Wireless Output 2: 15W(Max)

Wireless Output 3: 15W(Max)

Wireless Output 4: 15W(Max)

Result.....: **PASS**

TEST REPORT

|                   |                |               |
|-------------------|----------------|---------------|
| Test Report No. : | CTA24061300601 | Jul.06, 2024  |
|                   |                | Date of issue |

Equipment under Test : Wireless Charging Board

Model /Type : PNGB55NWW4

Listed Models : PNGB55NWW3, PNGB55NWW2, PNGB55NWW1

**Applicant** : **Jiangsu Austin Optronics Technology Co., Ltd.**

Address : Building 02, 1 KeChuang Road, Qixia District, Nanjing, China

**Manufacturer** **Jiangsu Austin Optronics Technology Co., Ltd.**

Address : Building 02, 1 KeChuang Road, Qixia District, Nanjing, China

|              |      |
|--------------|------|
| Test Result: | PASS |
|--------------|------|

The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

## Contents

|                                                         |           |
|---------------------------------------------------------|-----------|
| <b>1. TEST STANDARDS .....</b>                          | <b>4</b>  |
| <b>2. SUMMARY .....</b>                                 | <b>5</b>  |
| 2.1. General Remarks .....                              | 5         |
| 2.2. Product Description .....                          | 5         |
| 2.3. Equipment Under Test .....                         | 6         |
| 2.4. EUT Exercise Software .....                        | 7         |
| 2.5. Special Accessories .....                          | 7         |
| 2.6. External I/O Cable .....                           | 7         |
| 2.7. Modifications .....                                | 7         |
| <b>3. TEST ENVIRONMENT .....</b>                        | <b>8</b>  |
| 3.1. Address of the test laboratory .....               | 8         |
| 3.2. Test Facility .....                                | 8         |
| 3.3. Test Description .....                             | 8         |
| 3.4. Statement of the measurement uncertainty .....     | 8         |
| 3.5. Equipments Used during the Test .....              | 9         |
| <b>4. TEST CONDITIONS AND RESULTS .....</b>             | <b>10</b> |
| 4.1. AC Power Conducted Emission .....                  | 10        |
| 4.2. Radiated Emission .....                            | 13        |
| 4.3. Occupied Bandwidth .....                           | 18        |
| 4.4. Antenna Requirement .....                          | 19        |
| <b>5. TEST SETUP PHOTOS OF THE EUT .....</b>            | <b>20</b> |
| <b>6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT .....</b> | <b>22</b> |

## **1. TEST STANDARDS**

The tests were performed according to following standards:

[FCC Rules and Regulations Part 15 Subpart C \(Section 15.209\)](#): Radiated emission limits; general requirements.

[ANSI C63.10: 2020](#): American National Standard for Testing Unlicensed Wireless Devices

## 2. SUMMARY

### 2.1. General Remarks

|                                |   |              |
|--------------------------------|---|--------------|
| Date of receipt of test sample | : | Jun.05, 2024 |
|                                |   |              |
| Testing commenced on           | : | Jun.05, 2024 |
|                                |   |              |
| Testing concluded on           | : | Jul.05, 2024 |

### 2.2. Product Description

|                       |                                                                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:         | Wireless Charging Board                                                                                                                                    |
| Trade Mark:           | Pintura                                                                                                                                                    |
| Model/Type reference: | PNGB55NWW4                                                                                                                                                 |
| List Model:           | PNGB55NWW3, PNGB55NWW2, PNGB55NWW1                                                                                                                         |
| Model Declaration     | N/A                                                                                                                                                        |
| Power supply:         | Input: DC 19.5V/3.0A by Adapter<br>Wireless Output 1:15W(Max)<br>Wireless Output 2: 15W(Max)<br>Wireless Output 3: 15W(Max)<br>Wireless Output 4: 15W(Max) |
| Hardware Version      | N/A                                                                                                                                                        |
| Software Version      | N/A                                                                                                                                                        |
| WPT                   |                                                                                                                                                            |
| Frequency Range       | 110.0~205.0KHz                                                                                                                                             |
| Modulation Type       | ASK (Continuous Wave)                                                                                                                                      |
| Load Sensing          | Contact transmission                                                                                                                                       |
| Antenna Type          | Coil Antenna                                                                                                                                               |
| Antenna gain          | 0dBi                                                                                                                                                       |

## 2.3. Equipment Under Test

### Power supply system utilised

|                      |   |                                                                   |                                   |
|----------------------|---|-------------------------------------------------------------------|-----------------------------------|
| Power supply voltage | : | <input type="radio"/> 230V / 50 Hz                                | <input type="radio"/> 120V / 60Hz |
|                      |   | <input type="radio"/> 12 V DC                                     | <input type="radio"/> 24 V DC     |
|                      |   | <input checked="" type="radio"/> Other (specified in blank below) |                                   |

DC 19.5V

### Description of the test mode

| Operation Frequency each of channel |           |
|-------------------------------------|-----------|
| Channel                             | Frequency |
| 1                                   | 127.00KHz |

| Mode    | AC mode                                                                                                                                                                         |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode 1  | Wireless Charging 15W(Wireless Output 1)+<br>Wireless Charging 15W(Wireless Output 2)+<br>Wireless Charging 15W(Wireless Output 3)+<br>Wireless Charging 15W(Wireless Output 4) |
| Mode 2  | Wireless Charging 15W(Wireless Output 1)+<br>Wireless Charging 15W(Wireless Output 2)+<br>Wireless Charging 15W(Wireless Output 3)+                                             |
| Mode 3  | Wireless Charging 15W(Wireless Output 1)+<br>Wireless Charging 15W(Wireless Output 2)+<br>Wireless Charging 15W(Wireless Output 4)                                              |
| Mode 4  | Wireless Charging 15W(Wireless Output 1)+<br>Wireless Charging 15W(Wireless Output 3)+<br>Wireless Charging 15W(Wireless Output 4)                                              |
| Mode 5  | Wireless Charging 15W(Wireless Output 2)+<br>Wireless Charging 15W(Wireless Output 3)+<br>Wireless Charging 15W(Wireless Output 4)                                              |
| Mode 6  | Wireless Charging 15W(Wireless Output 1)+<br>Wireless Charging 15W(Wireless Output 2)+                                                                                          |
| Mode 7  | Wireless Charging 15W(Wireless Output 1)+<br>Wireless Charging 15W(Wireless Output 3)+                                                                                          |
| Mode 8  | Wireless Charging 15W(Wireless Output 1)+<br>Wireless Charging 15W(Wireless Output 4)                                                                                           |
| Mode 9  | Wireless Charging 15W(Wireless Output 2)+<br>Wireless Charging 15W(Wireless Output 3)+                                                                                          |
| Mode 10 | Wireless Charging 15W(Wireless Output 2)+<br>Wireless Charging 15W(Wireless Output 4)                                                                                           |
| Mode 11 | Wireless Charging 15W(Wireless Output 3)+<br>Wireless Charging 15W(Wireless Output 4)                                                                                           |
| Mode 12 | Wireless Charging 15W(Wireless Output 1)                                                                                                                                        |
| Mode 13 | Wireless Charging 15W(Wireless Output 2)                                                                                                                                        |
| Mode 14 | Wireless Charging 15W(Wireless Output 3)                                                                                                                                        |
| Mode 14 | Wireless Charging 15W(Wireless Output 4)                                                                                                                                        |

- Note :1.EUT has one Type-C port, The Type-C supports wireless charging in AC mode.  
 2. All the modes have been tested and recorded worst mode in the report(Mode 1).  
 3. All modes were tested for load states less than 1%, less than 50%, and less than 99%.

**2.4. EUT Exercise Software**

N/A

**2.5. Special Accessories**

| Manufacturer                                        | Description          | Model         | Serial Number | Certificate |
|-----------------------------------------------------|----------------------|---------------|---------------|-------------|
| Jiangsu Austin<br>Optronics Technology<br>Co., Ltd. | Pintura Display Unit | PNM101LEW3    | --            | SDOC        |
| Jiangsu Austin<br>Optronics Technology<br>Co., Ltd. | Pintura Display Unit | PNM133LEW3    | --            | SDOC        |
| Pin•tura                                            | Adapter              | GM60-195300-F | --            | SDOC        |

**2.6. External I/O Cable**

| I/O Port Description | Quantity | Cable                  |
|----------------------|----------|------------------------|
| DC IN Port           | 4        | 1.0M, Unscreened Cable |

**2.7. Modifications**

No modifications were implemented to meet testing criteria.

### 3. TEST ENVIRONMENT

#### 3.1. Address of the test laboratory

**Shenzhen CTA Testing Technology Co., Ltd.**

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

#### 3.2. Test Facility

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

**FCC-Registration No.: 517856 Designation Number: CN1318**

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

**A2LA-Lab Cert. No.: 6534.01**

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

#### 3.3. Test Description

| Description Of Test            | Result    |
|--------------------------------|-----------|
| Conducted Emissions Test       | Compliant |
| Radiated Emission Test         | Compliant |
| Occupied Bandwidth Measurement | Compliant |
| Antenna Requirement            | Compliant |

#### 3.4. Statement of the measurement uncertainty

| Measurement Uncertainty                               |   |             |
|-------------------------------------------------------|---|-------------|
| Conducted Emission Expanded Uncertainty               | = | 2.23dB, k=2 |
| Radiated emission expanded uncertainty(9kHz-30MHz)    | = | 3.08dB, k=2 |
| Radiated emission expanded uncertainty(30MHz-1000MHz) | = | 4.42dB, k=2 |
| Radiated emission expanded uncertainty(Above 1GHz)    | = | 4.06dB, k=2 |

### 3.5. Equipments Used during the Test

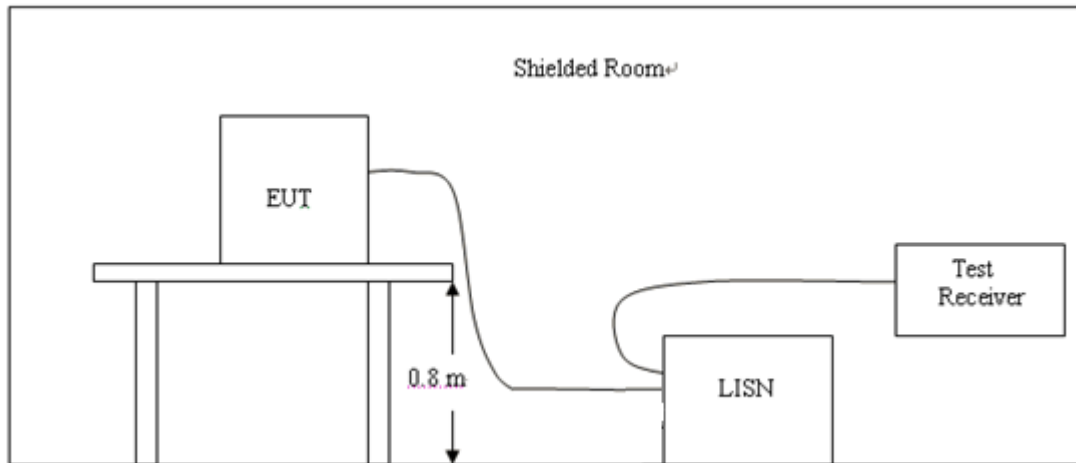
| Test Equipment                 | Manufacturer                                  | Model No.   | Equipment No. | Calibration Date | Calibration Due Date |
|--------------------------------|-----------------------------------------------|-------------|---------------|------------------|----------------------|
| LISN                           | R&S                                           | ENV216      | CTA-308       | 2023/08/02       | 2024/08/01           |
| LISN                           | R&S                                           | ENV216      | CTA-314       | 2023/08/02       | 2024/08/01           |
| EMI Test Receiver              | R&S                                           | ESPI        | CTA-307       | 2023/08/02       | 2024/08/01           |
| EMI Test Receiver              | R&S                                           | ESCI        | CTA-306       | 2023/08/02       | 2024/08/01           |
| Spectrum Analyzer              | Agilent                                       | N9020A      | CTA-301       | 2023/08/02       | 2024/08/01           |
| Spectrum Analyzer              | R&S                                           | FSP         | CTA-337       | 2023/08/02       | 2024/08/01           |
| Vector Signal generator        | Agilent                                       | N5182A      | CTA-305       | 2023/08/02       | 2024/08/01           |
| Analog Signal Generator        | R&S                                           | SML03       | CTA-304       | 2023/08/02       | 2024/08/01           |
| Universal Radio Communication  | CMW500                                        | R&S         | CTA-302       | 2023/08/02       | 2024/08/01           |
| Temperature and humidity meter | Chigo                                         | ZG-7020     | CTA-326       | 2023/08/02       | 2024/08/01           |
| Ultra-Broadband Antenna        | Schwarzbeck                                   | VULB9163    | CTA-310       | 2023/10/17       | 2024/10/16           |
| Horn Antenna                   | Schwarzbeck                                   | BBHA 9120D  | CTA-309       | 2023/10/13       | 2024/10/12           |
| Loop Antenna                   | Zhinan                                        | ZN30900C    | CTA-311       | 2023/10/17       | 2024/10/16           |
| Horn Antenna                   | Beijing Hangwei Dayang                        | OBH100400   | CTA-336       | 2021/08/07       | 2024/08/06           |
| Antenna Tower                  | Suzhou Keletuo electronic Technology Co., LTD | BK-*AT-BS   | N/A           | N/A              | N/A                  |
| Amplifier                      | Schwarzbeck                                   | BBV 9745    | CTA-312       | 2023/08/02       | 2024/08/01           |
| Amplifier                      | Taiwan chengyi                                | EMC051845B  | CTA-313       | 2023/08/02       | 2024/08/01           |
| Directional coupler            | NARDA                                         | 4226-10     | CTA-303       | 2023/08/02       | 2024/08/01           |
| High-Pass Filter               | XingBo                                        | XBLBQ-GTA18 | CTA-402       | 2023/08/02       | 2024/08/01           |
| High-Pass Filter               | XingBo                                        | XBLBQ-GTA27 | CTA-403       | 2023/08/02       | 2024/08/01           |
| Automated filter bank          | Tonscend                                      | JS0806-F    | CTA-404       | 2023/08/02       | 2024/08/01           |
| Power Sensor                   | Agilent                                       | U2021XA     | CTA-405       | 2023/08/02       | 2024/08/01           |
| Amplifier                      | Schwarzbeck                                   | BBV9719     | CTA-406       | 2023/08/02       | 2024/08/01           |

The calibration interval is 1 year.

## 4. TEST CONDITIONS AND RESULTS

### 4.1. AC Power Conducted Emission

#### TEST CONFIGURATION



#### TEST PROCEDURE

- 1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
- 2, Support equipment, if needed, was placed as per ANSI C63.10.
- 3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4, The EUT received DC 12V power, the adapter received AC120V/60Hz or AC 240V/50Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5, All support equipments received AC power from a second LISN, if any.
- 6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

#### AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

| Frequency range (MHz) | Limit (dBuV) |           |
|-----------------------|--------------|-----------|
|                       | Quasi-peak   | Average   |
| 0.15-0.5              | 66 to 56*    | 56 to 46* |
| 0.5-5                 | 56           | 46        |
| 5-30                  | 60           | 50        |

\* Decreases with the logarithm of the frequency.

#### DISTURBANCE Calculation

The AC mains conducted disturbance is calculated by adding the 10dB Pulse Limiter and Cable Factor and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$CD \text{ (dBuV)} = RA \text{ (dBuV)} + PL \text{ (dB)} + CL \text{ (dB)}$$

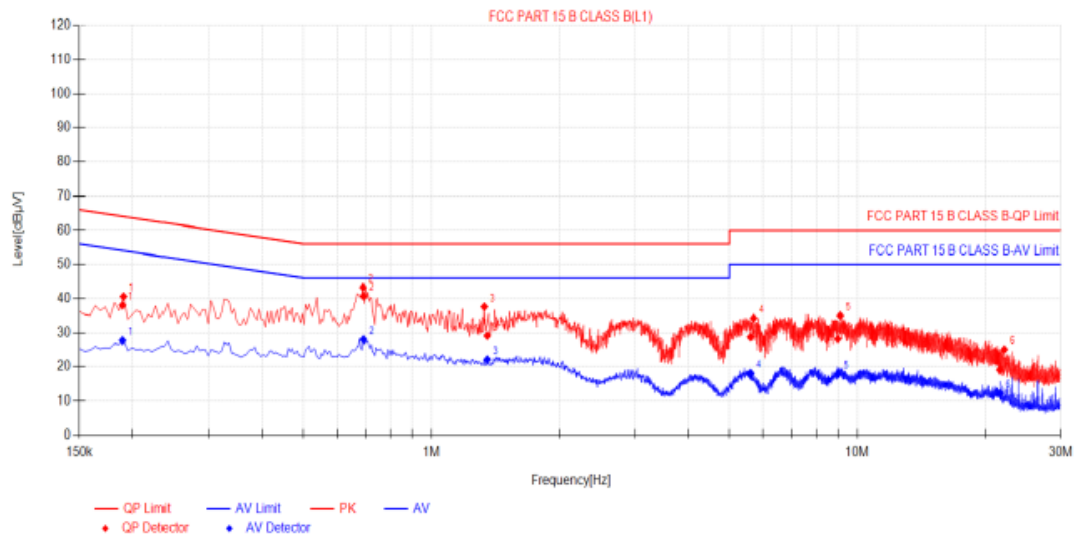
|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Where CD = Conducted Disturbance | CL = Cable Attenuation Factor (Cable Loss) |
| RA = Reading Amplitude           | PL = 10 dB Pulse Limiter Factor            |

**TEST RESULTS**

1. Both 120 VAC, 60 Hz and 240 VAC, 50 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:

|               |             |                |     |
|---------------|-------------|----------------|-----|
| Temperature   | 25°C        | Humidity       | 60% |
| Test Engineer | Lushan Kong | Configurations | WPT |

|               |              |              |   |
|---------------|--------------|--------------|---|
| Power supply: | AC 120V/60Hz | Polarization | L |
|---------------|--------------|--------------|---|

**Test Graph****Final Data List**

| NO. | Freq. [MHz] | Factor [dB] | QP Reading [dBμV] | QP Value [dBμV] | QP Limit [dBμV] | QP Margin [dB] | AV Reading [dBμV] | AV Value [dBμV] | AV Limit [dBμV] | AV Margin [dB] | Verdict |
|-----|-------------|-------------|-------------------|-----------------|-----------------|----------------|-------------------|-----------------|-----------------|----------------|---------|
| 1   | 0.1895      | 10.50       | 27.52             | 38.02           | 64.06           | 26.04          | 17.22             | 27.72           | 54.06           | 26.34          | PASS    |
| 2   | 0.8917      | 10.50       | 30.21             | 40.71           | 56.00           | 15.29          | 17.50             | 28.00           | 48.00           | 18.00          | PASS    |
| 3   | 1.3504      | 10.50       | 18.60             | 29.10           | 56.00           | 26.90          | 11.65             | 22.15           | 48.00           | 23.85          | PASS    |
| 4   | 5.6066      | 10.50       | 18.18             | 28.68           | 60.00           | 31.32          | 7.60              | 18.10           | 50.00           | 31.90          | PASS    |
| 5   | 8.9893      | 10.50       | 17.65             | 28.15           | 60.00           | 31.85          | 7.43              | 17.93           | 50.00           | 32.07          | PASS    |
| 6   | 21.5881     | 10.50       | 8.57              | 19.07           | 60.00           | 40.93          | 1.77              | 12.27           | 50.00           | 37.73          | PASS    |

Note:1). QP Value (dBμV) = QP Reading (dBμV) + Factor (dB)

2). Factor (dB) = insertion loss of LISN (dB) + Cable loss (dB)

3). QPMargin (dB) = QP Limit (dBμV) - QP Value (dBμV)

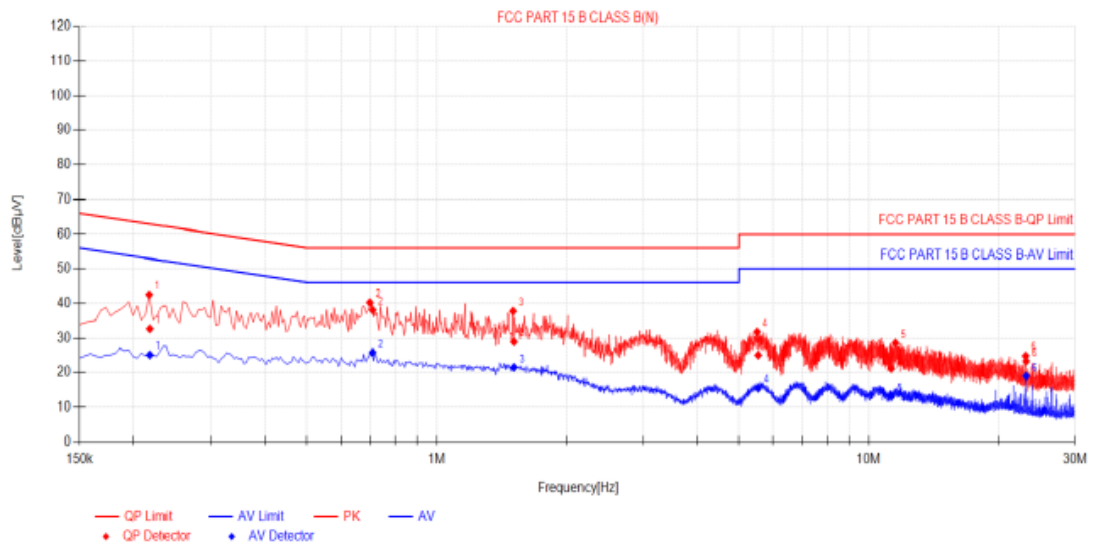
4). AVMargin (dB) = AV Limit (dBμV) - AV Value (dBμV)

Power supply:

AC 120V/60Hz

Polarization

N

**Test Graph****Final Data List**

| NO. | Freq. [MHz] | Factor [dB] | QP Reading[dB μV] | QP Value [dBμV] | QP Limit [dBμV] | QP Margin [dB] | AV Reading [dBμV] | AV Value [dBμV] | AV Limit [dBμV] | AV Margin [dB] | Verdict |
|-----|-------------|-------------|-------------------|-----------------|-----------------|----------------|-------------------|-----------------|-----------------|----------------|---------|
| 1   | 0.2182      | 10.50       | 22.18             | 32.68           | 62.89           | 30.21          | 14.67             | 25.17           | 52.89           | 27.72          | PASS    |
| 2   | 0.7095      | 10.50       | 27.56             | 38.06           | 56.00           | 17.94          | 15.33             | 25.83           | 46.00           | 20.17          | PASS    |
| 3   | 1.5069      | 10.50       | 18.42             | 28.92           | 56.00           | 27.08          | 11.00             | 21.50           | 46.00           | 24.50          | PASS    |
| 4   | 5.5426      | 10.50       | 14.59             | 25.09           | 60.00           | 34.91          | 5.03              | 15.53           | 50.00           | 34.47          | PASS    |
| 5   | 11.2715     | 10.50       | 10.65             | 21.15           | 60.00           | 38.85          | 2.70              | 13.20           | 50.00           | 36.80          | PASS    |
| 6   | 23.1285     | 10.50       | 12.79             | 23.29           | 60.00           | 36.71          | 8.48              | 18.98           | 50.00           | 31.02          | PASS    |

Note:1). QP Value (dBμV) = QP Reading (dBμV) + Factor (dB)

2). Factor (dB) = insertion loss of LISN (dB) + Cable loss (dB)

3). QPMargin(dB) = QP Limit (dBμV) - QP Value (dBμV)

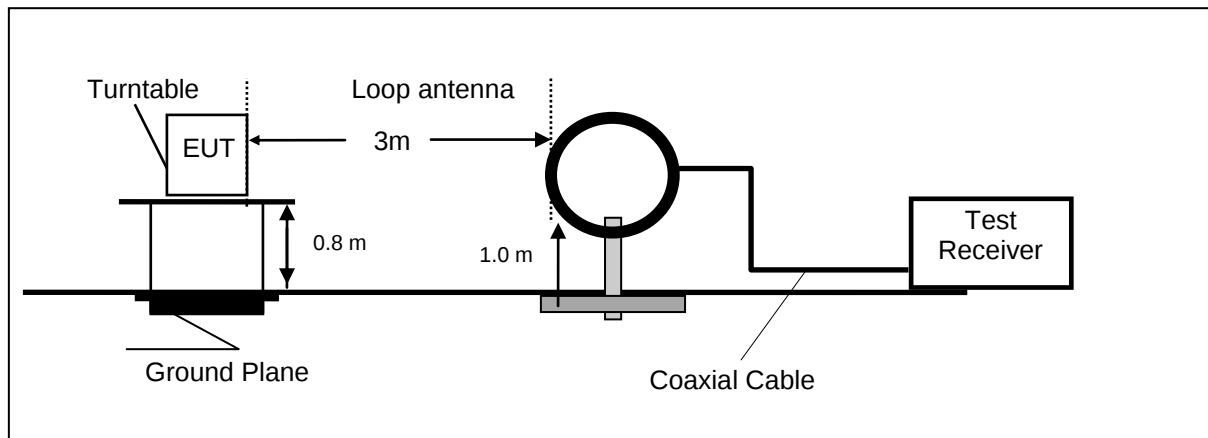
4). AVMargin(dB) = AV Limit (dBμV) - AV Value (dBμV)

Note: All the modes have been tested and recorded worst mode in the report.

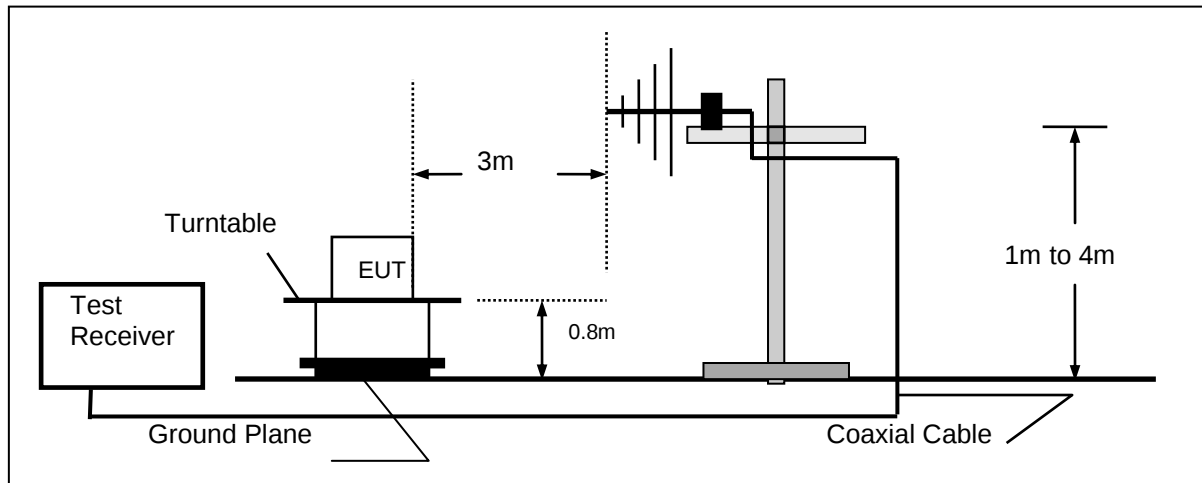
## 4.2. Radiated Emission

### TEST CONFIGURATION

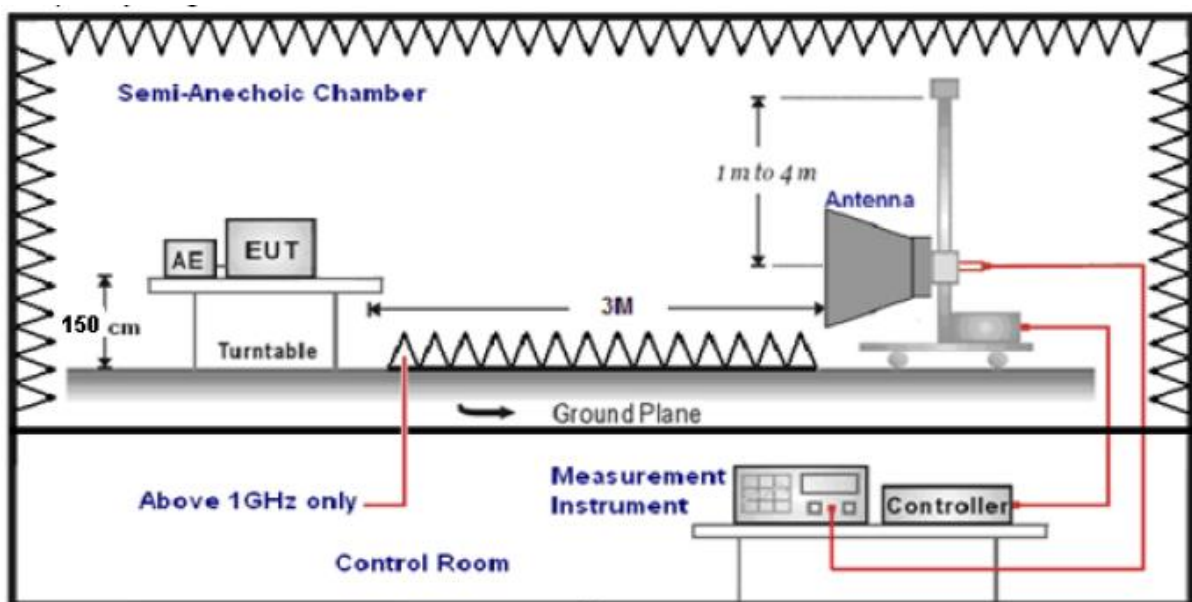
Frequency range 9 KHz – 30MHz



Frequency range 30MHz – 1000MHz



Frequency range above 1GHz-25GHz



**TEST PROCEDURE**

- 1.The EUT was placed on a turn table which is 12mm above ground plane when testing frequency range 9 KHz –25GHz.
- 2.Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT.
- 3.And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 4.Repeat above procedures until all frequency measurements have been completed.
- 5.The EUT minimum operation frequency was 32.768KHz and maximum operation frequency was 205KHz.so radiated emission test frequency band from 9KHz to 1GHz.
- 6.The distance between test antenna and EUT as following table states:

| Test Frequency range | Test Antenna Type          | Test Distance |
|----------------------|----------------------------|---------------|
| 9KHz-30MHz           | Active Loop Antenna        | 3             |
| 30MHz-1GHz           | Ultra-Broadband Antenna    | 3             |
| 1GHz-18GHz           | Double Ridged Horn Antenna | 3             |
| 18GHz-25GHz          | Horn Antenna               | 1             |

- 7.Setting test receiver/spectrum as following table states:

| Test Frequency range | Test Receiver/Spectrum Setting                                                                            | Detector |
|----------------------|-----------------------------------------------------------------------------------------------------------|----------|
| 9KHz-150KHz          | RBW=200Hz/VBW=3KHz,Sweep time=Auto                                                                        | QP       |
| 150KHz-30MHz         | RBW=9KHz/VBW=100KHz,Sweep time=Auto                                                                       | QP       |
| 30MHz-1GHz           | RBW=120KHz/VBW=1000KHz,Sweep time=Auto                                                                    | QP       |
| 1GHz-40GHz           | Peak Value: RBW=1MHz/VBW=3MHz,<br>Sweep time=Auto<br>Average Value: RBW=1MHz/VBW=10Hz,<br>Sweep time=Auto | Peak     |

**Field Strength Calculation**

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

|                           |                                            |
|---------------------------|--------------------------------------------|
| Where FS = Field Strength | CL = Cable Attenuation Factor (Cable Loss) |
| RA = Reading Amplitude    | AG = Amplifier Gain                        |
| AF = Antenna Factor       |                                            |

$$\text{Transd}=AF +CL-AG$$

**RADIATION LIMIT**

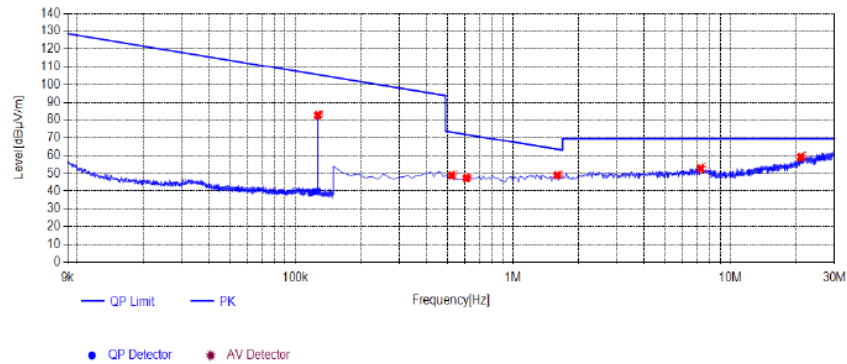
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.

The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos.

| Frequency (MHz) | Distance (Meters) | Radiated (dBµV/m)                          | Radiated (µV/m)       |
|-----------------|-------------------|--------------------------------------------|-----------------------|
| 0.009-0.49      | 3                 | $20\log(2400/F(\text{KHz}))+40\log(300/3)$ | $2400/F(\text{KHz})$  |
| 0.49-1.705      | 3                 | $20\log(24000/F(\text{KHz}))+40\log(30/3)$ | $24000/F(\text{KHz})$ |
| 1.705-30        | 3                 | $20\log(30)+40\log(30/3)$                  | 30                    |
| 30-88           | 3                 | 40.0                                       | 100                   |
| 88-216          | 3                 | 43.5                                       | 150                   |
| 216-960         | 3                 | 46.0                                       | 200                   |
| Above 960       | 3                 | 54.0                                       | 500                   |

**TEST RESULTS**

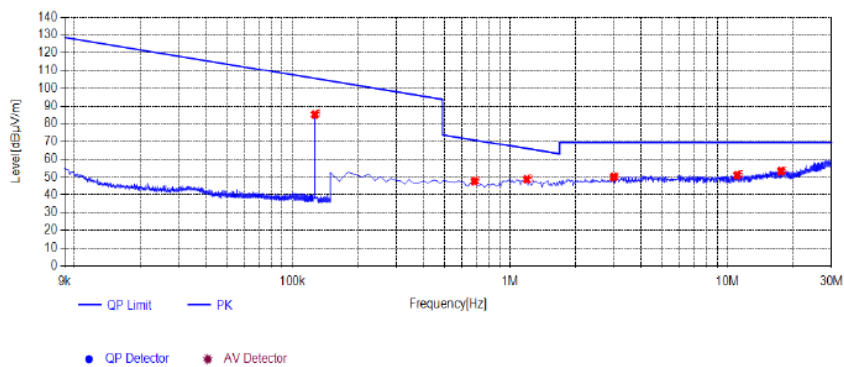
|               |             |                |     |
|---------------|-------------|----------------|-----|
| Temperature   | 25°C        | Humidity       | 58% |
| Test Engineer | Lushan Kong | Configurations | WPT |

**For 9 KHz-30MHz****Coplanar****Test Graph****Suspected List**

| NO. | Frequency [MHz] | Reading [dBμV/m] | Factor [dB] | Result [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Polarity | Remark |
|-----|-----------------|------------------|-------------|-----------------|----------------|-------------|-------------|-----------|----------|----------|--------|
| 1   | 0.127           | 82.32            | 0.34        | 82.66           | 105.53         | 22.87       | 100         | 260       | PK       | Coplanar | PASS   |
| 2   | 0.5231          | 48.22            | 0.60        | 48.82           | 73.23          | 24.41       | 100         | 59        | PK       | Coplanar | PASS   |
| 3   | 0.6127          | 46.66            | 0.66        | 47.32           | 71.86          | 24.54       | 100         | 270       | PK       | Coplanar | PASS   |
| 4   | 1.5977          | 47.65            | 1.24        | 48.89           | 63.53          | 14.64       | 100         | 346       | PK       | Coplanar | PASS   |
| 5   | 7.2991          | 48.16            | 4.58        | 52.74           | 69.54          | 16.80       | 100         | 62        | PK       | Coplanar | PASS   |
| 6   | 21.0748         | 46.51            | 12.50       | 59.01           | 69.54          | 10.53       | 100         | 87        | PK       | Coplanar | PASS   |

Note: 1. Result (dBμV/m) = Reading(dBμV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

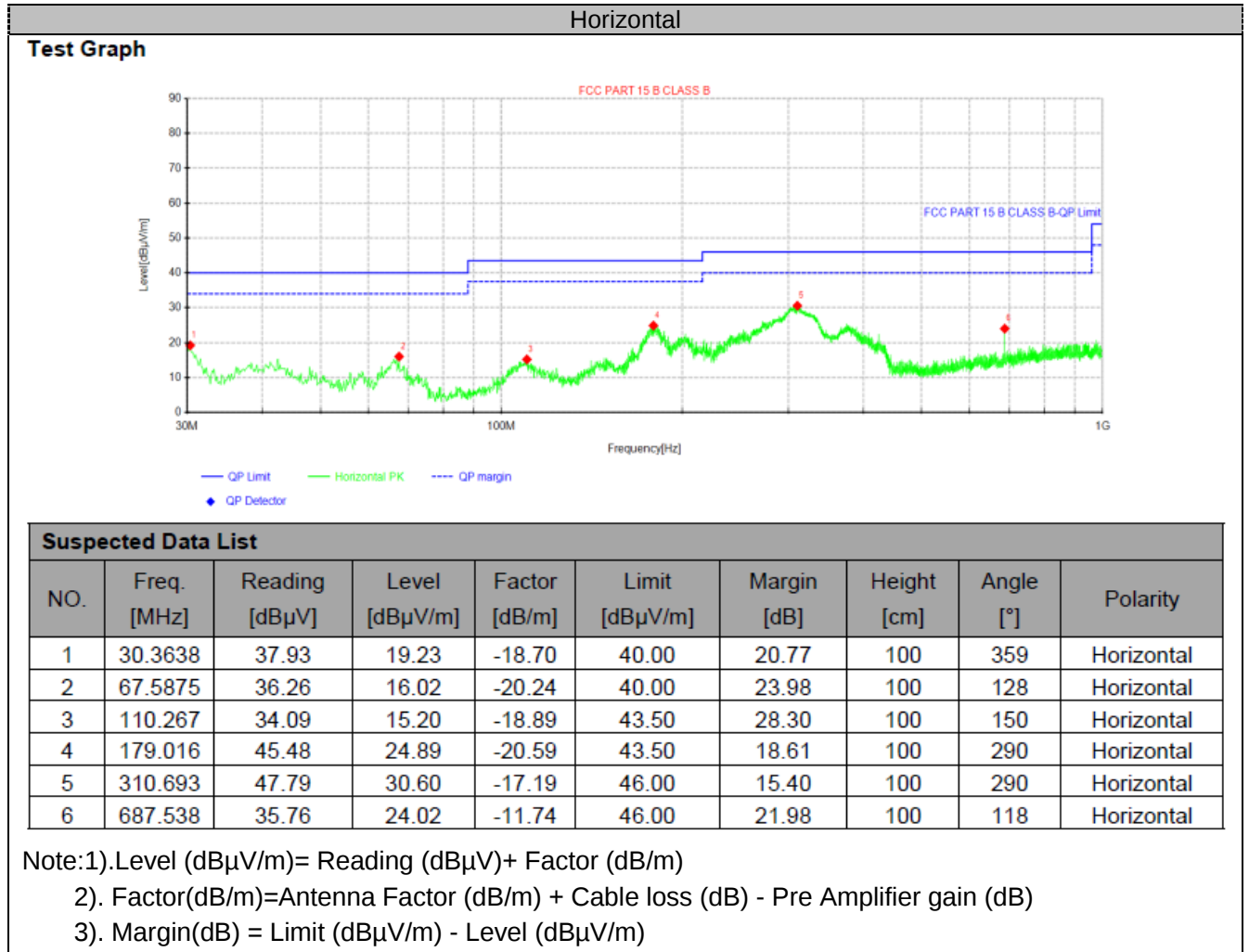
**Coaxial****Test Graph****Suspected List**

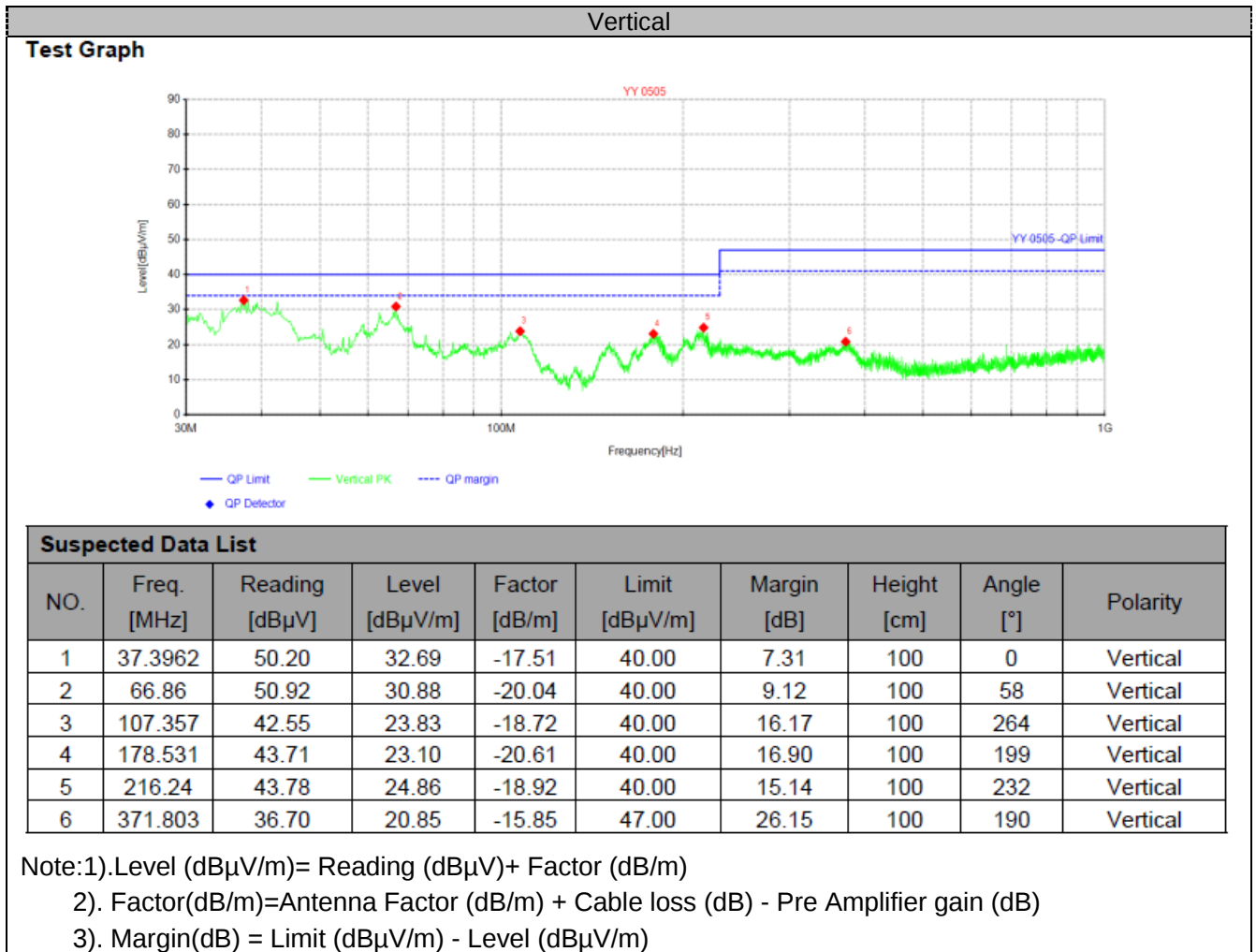
| NO. | Frequency [MHz] | Reading [dBμV/m] | Factor [dB] | Result [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Polarity | Remark |
|-----|-----------------|------------------|-------------|-----------------|----------------|-------------|-------------|-----------|----------|----------|--------|
| 1   | 0.127           | 84.79            | 0.34        | 85.13           | 105.53         | 20.40       | 100         | 108       | PK       | Coaxial  | PASS   |
| 2   | 0.6873          | 46.97            | 0.70        | 47.67           | 70.86          | 23.19       | 100         | 325       | PK       | Coaxial  | PASS   |
| 3   | 1.1948          | 47.78            | 1.00        | 48.78           | 66.06          | 17.28       | 100         | 140       | PK       | Coaxial  | PASS   |
| 4   | 3.0007          | 48.02            | 2.08        | 50.10           | 69.54          | 19.44       | 100         | 2         | PK       | Coaxial  | PASS   |
| 5   | 11.0751         | 44.33            | 6.76        | 51.09           | 69.54          | 18.45       | 100         | 2         | PK       | Coaxial  | PASS   |
| 6   | 17.6421         | 42.84            | 10.53       | 53.37           | 69.54          | 16.17       | 100         | 34        | PK       | Coaxial  | PASS   |

Note: 1. Result (dBμV/m) = Reading(dBμV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

For 30MHz-1GHz

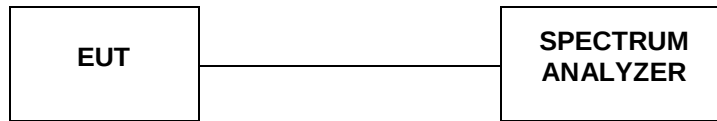




Note: All the modes have been tested and recorded worst mode in the report.

### 4.3. Occupied Bandwidth

#### TEST CONFIGURATION



#### TEST PROCEDURE

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that 20dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equip compliance with the 20dB attenuation specification may base on measurement at the intentional radiator's antenna output terminal unless the intentional radiator uses a permanently attached antenna, in which case compliance shall be demonstrated by measuring the radiated emissions.

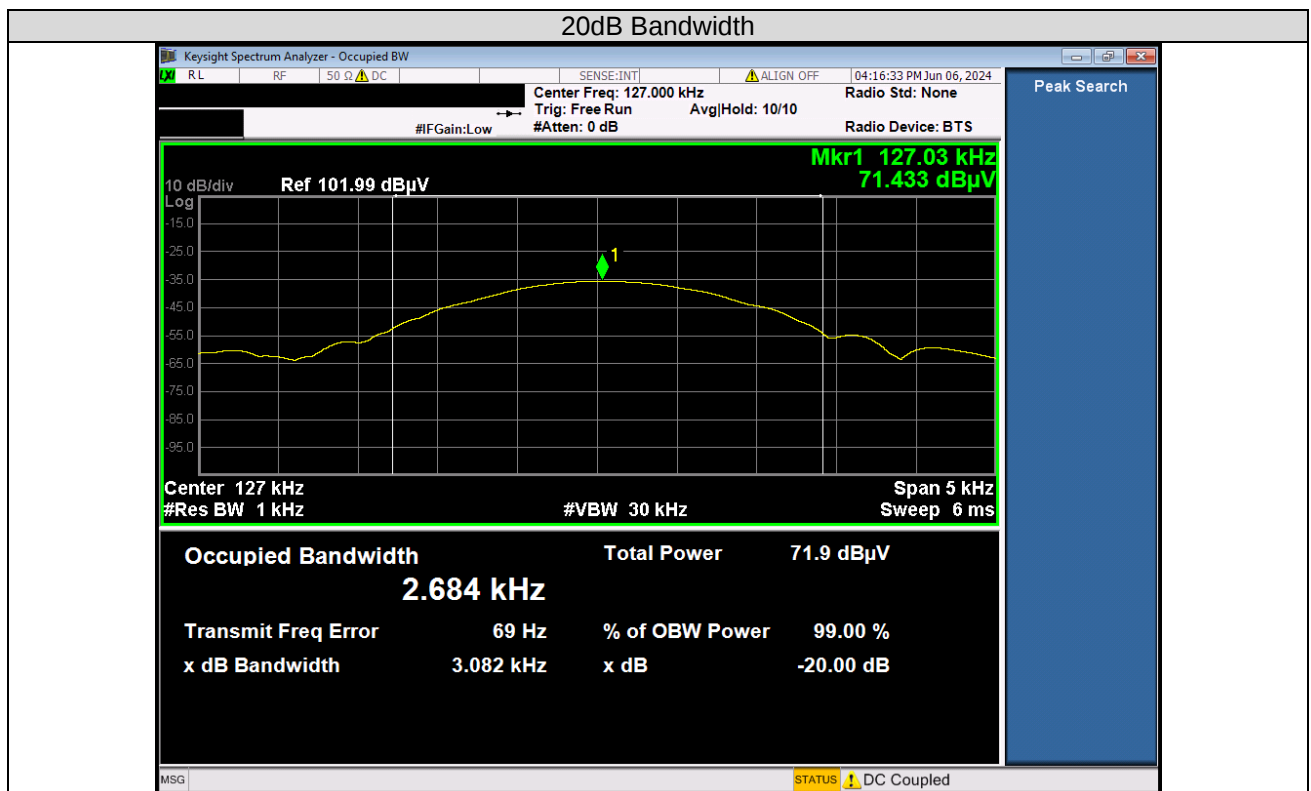
#### LIMIT

/

#### TEST RESULTS

|               |             |                |       |
|---------------|-------------|----------------|-------|
| Temperature   | 24.5°C      | Humidity       | 53.9% |
| Test Engineer | Lushan Kong | Configurations | WPT   |

| Mode    | Freq (KHz) | 20dB Bandwidth (KHz) | Limit (kHz) | Conclusion |
|---------|------------|----------------------|-------------|------------|
| Tx Mode | 127.00     | 3.082                | /           | PASS       |



#### **4.4. Antenna Requirement**

##### **Standard Applicable**

##### **Standard Applicable**

For intentional device, according to FCC 47 CFR Section 15.203, 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.

##### **Antenna Information**

The antenna used in this product is a Coil Antenna, The directional gains of antenna used for transmitting is 0dBi.

Reference to the **Internal photos**.

## 5. Test Setup Photos of the EUT

Photo of Radiated Emissions Measurement



Fig. 1

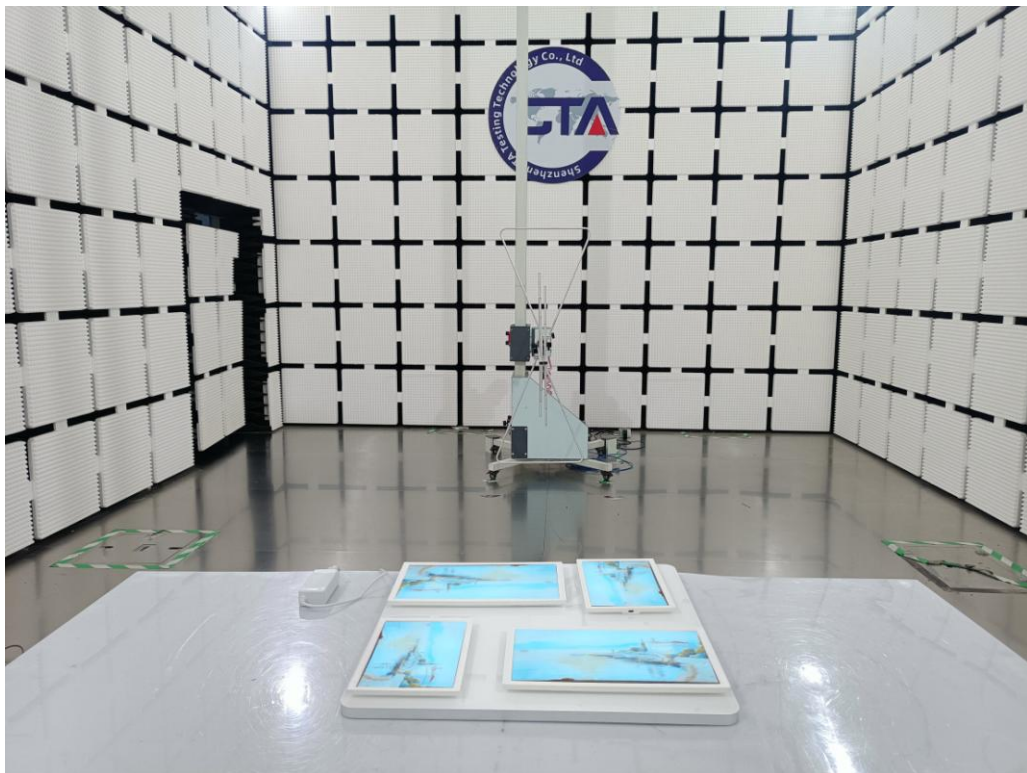


Fig. 2

Photo of Conducted Emissions Measurement



Fig. 3

## 6. External and Internal Photos of the EUT

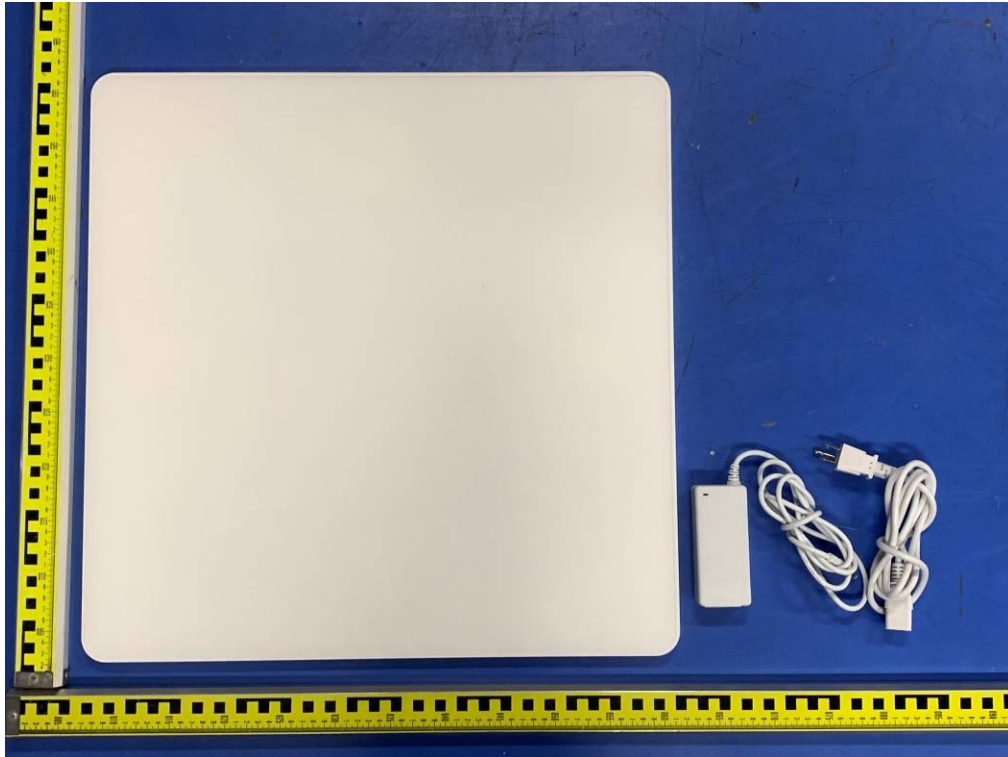


Fig. 1



Fig. 2

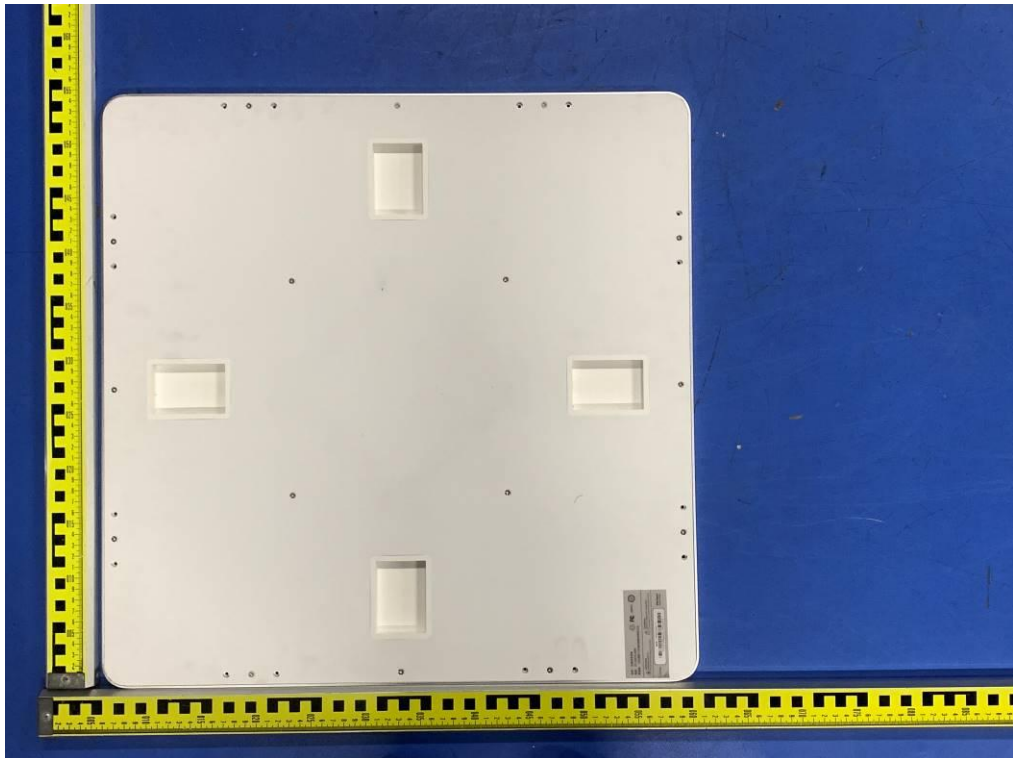


Fig. 3

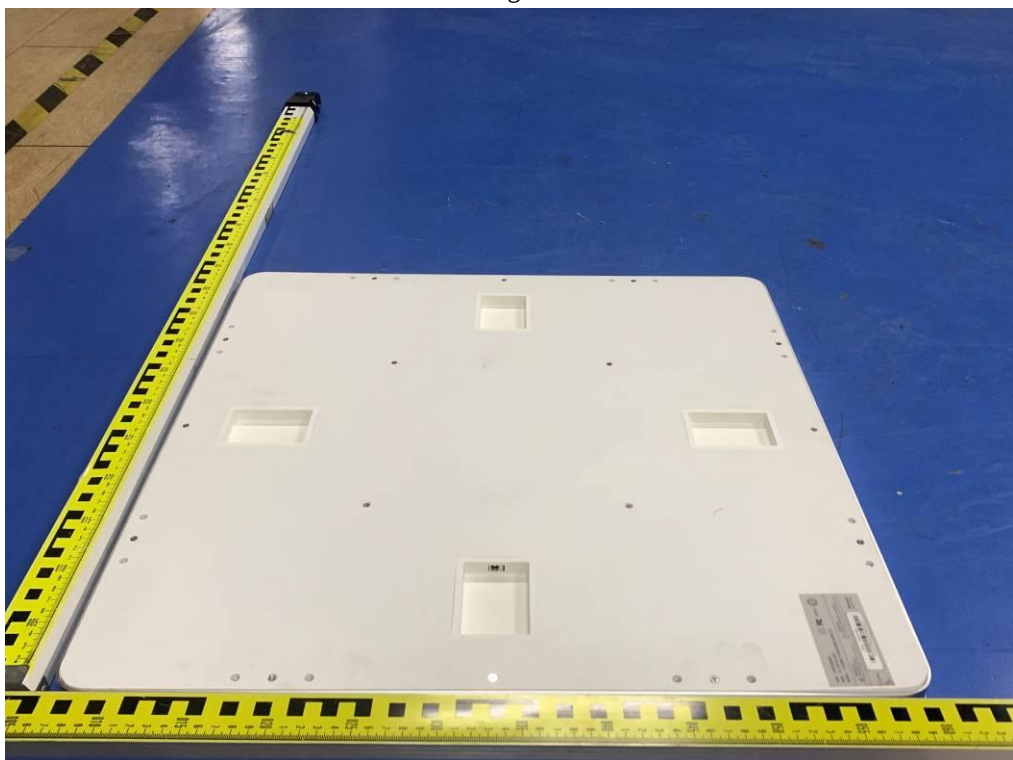


Fig. 4

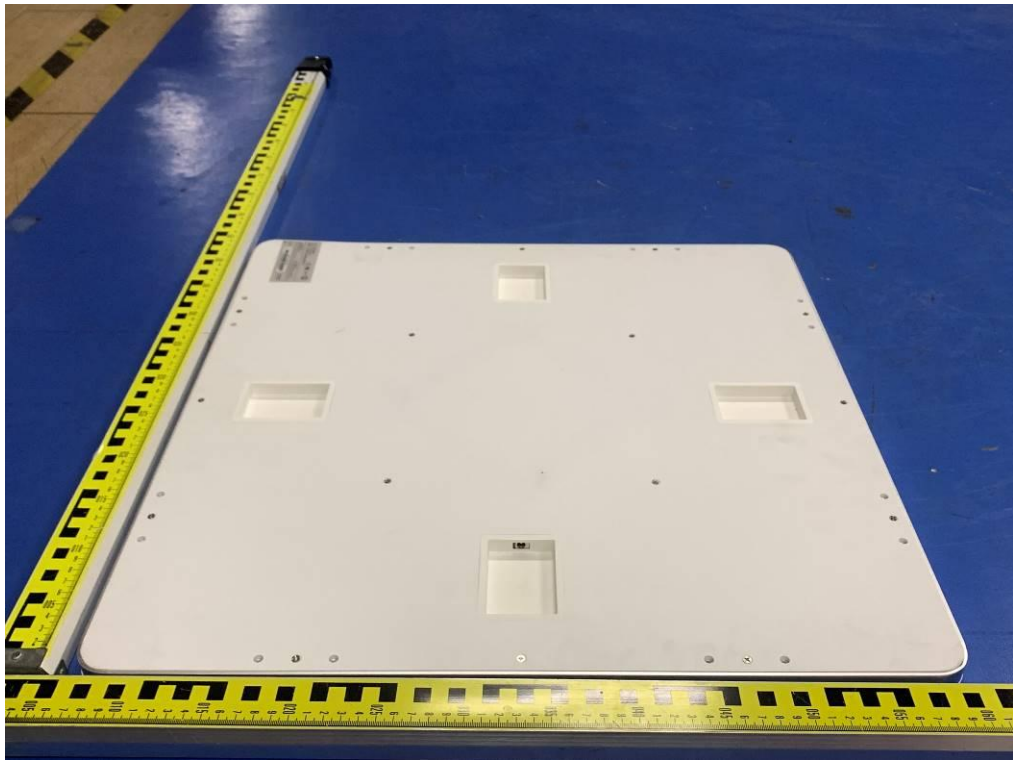


Fig. 5

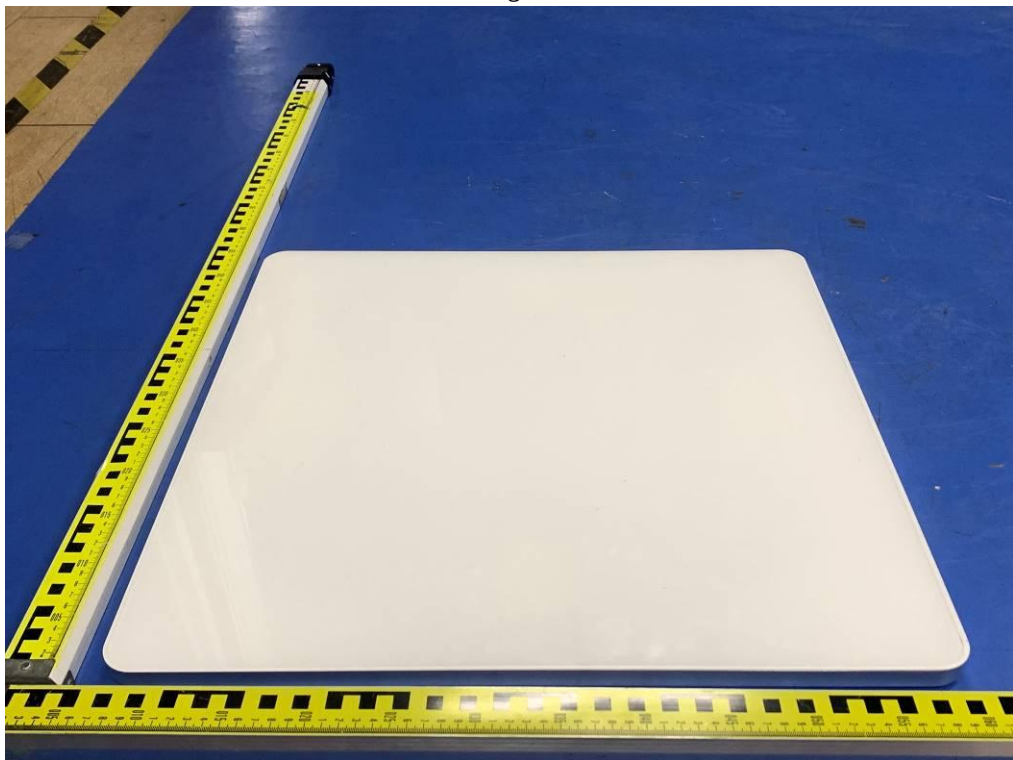


Fig. 6

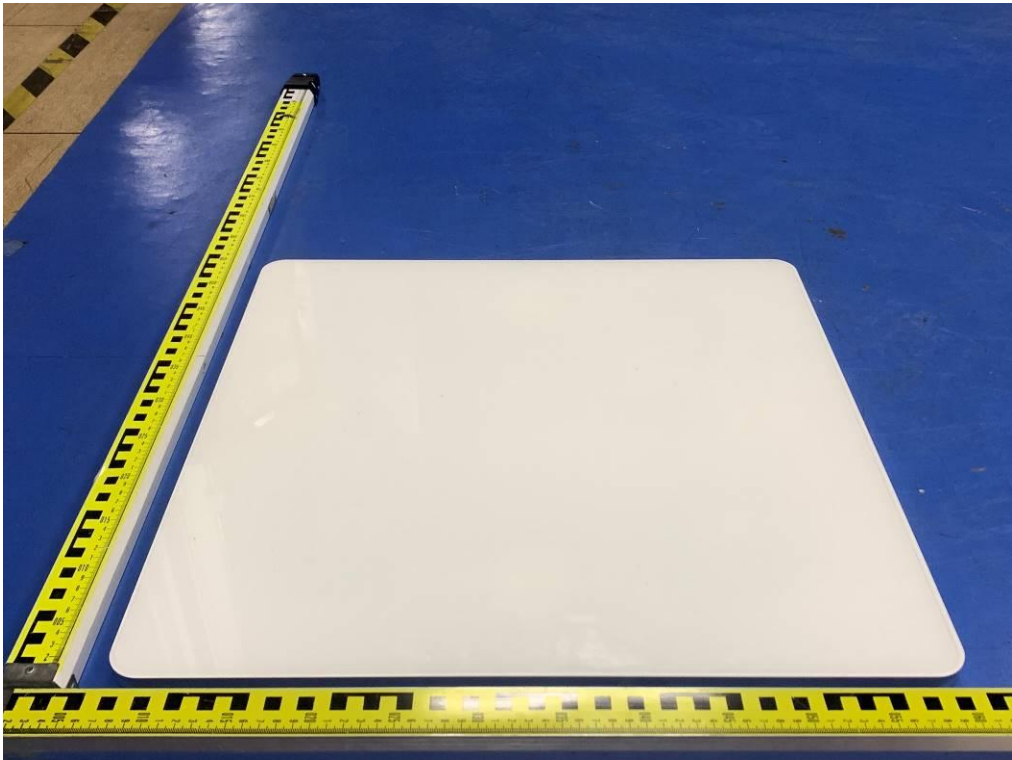


Fig. 7

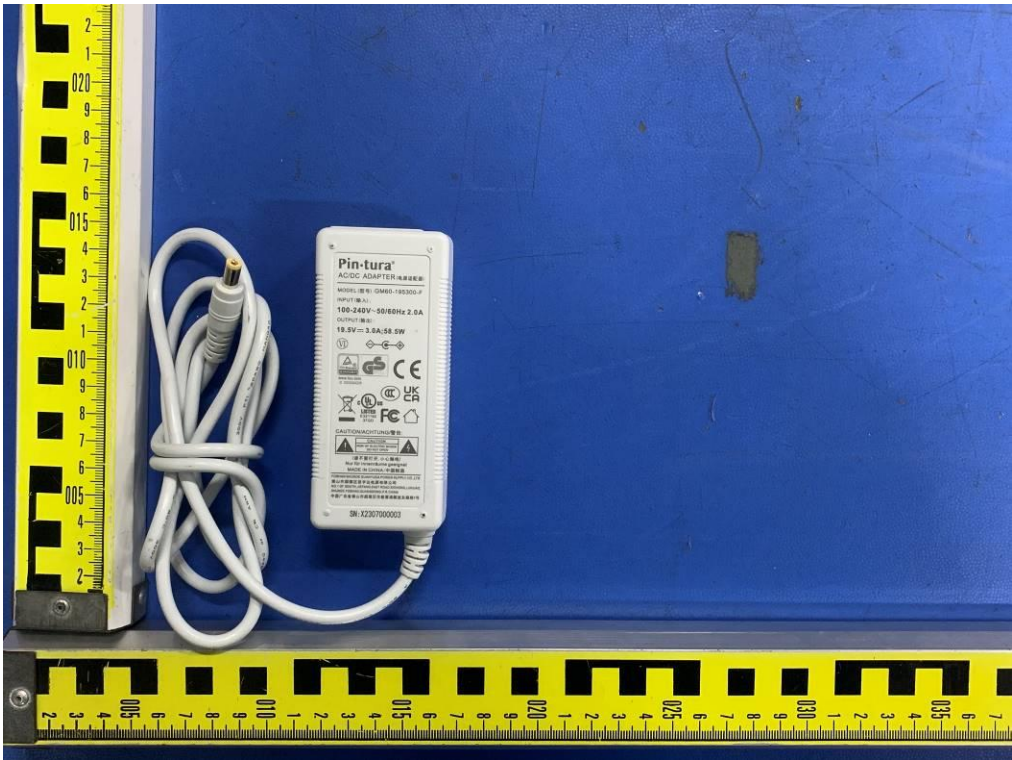


Fig. 8

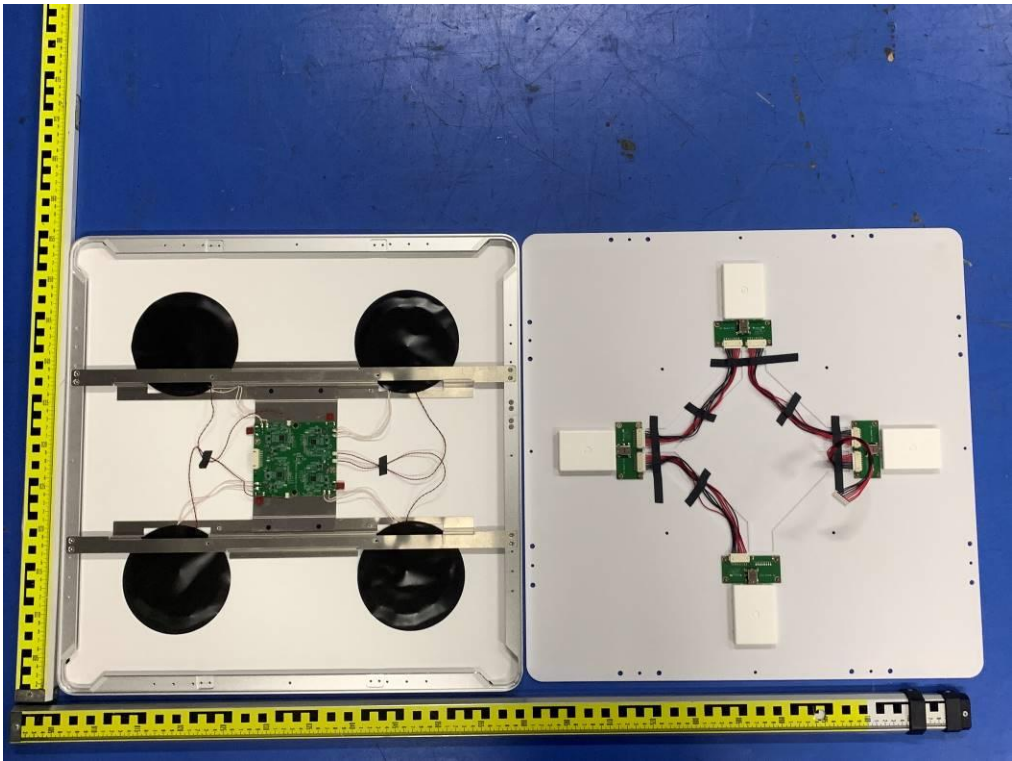


Fig. 9

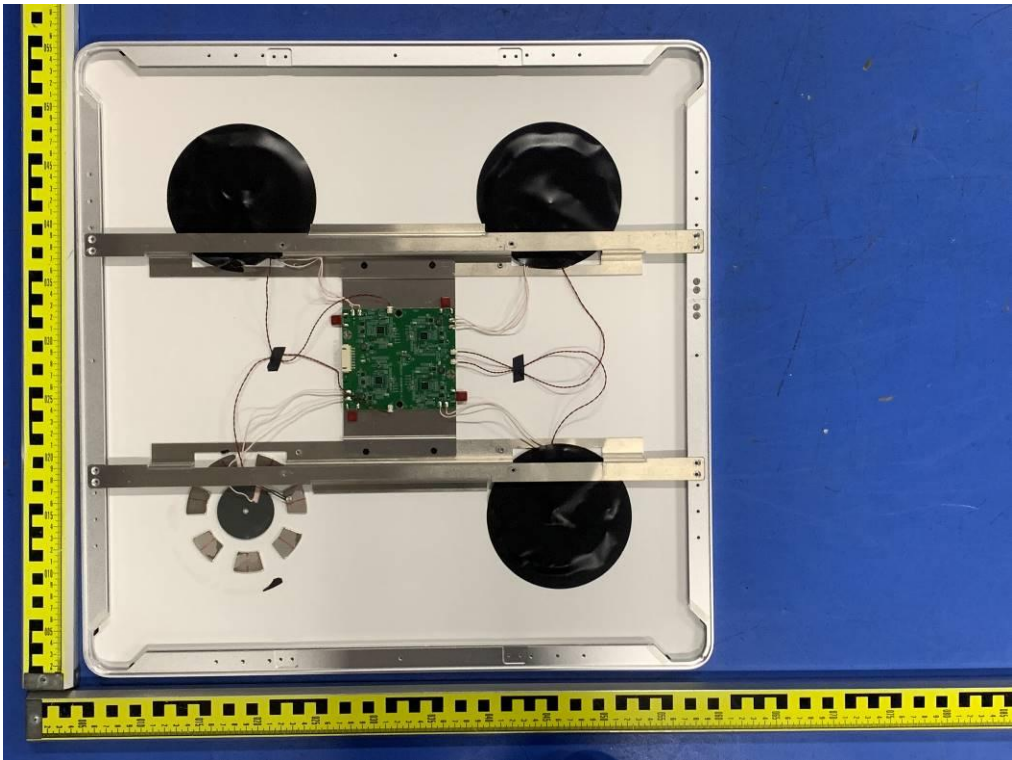


Fig. 10

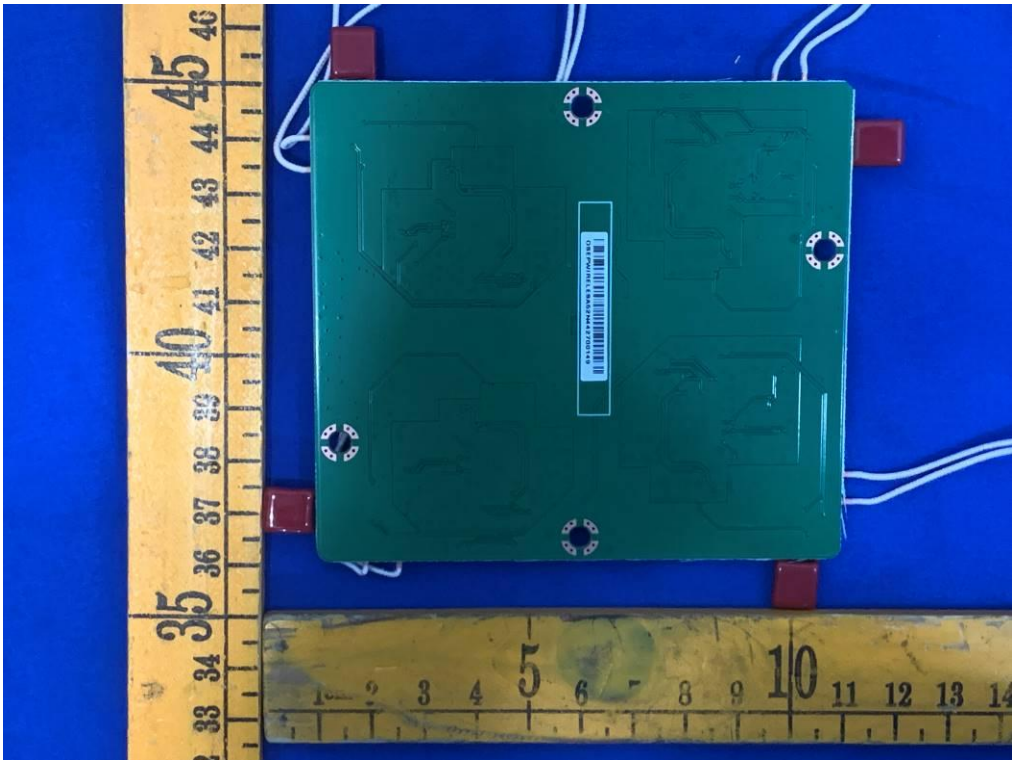


Fig. 11

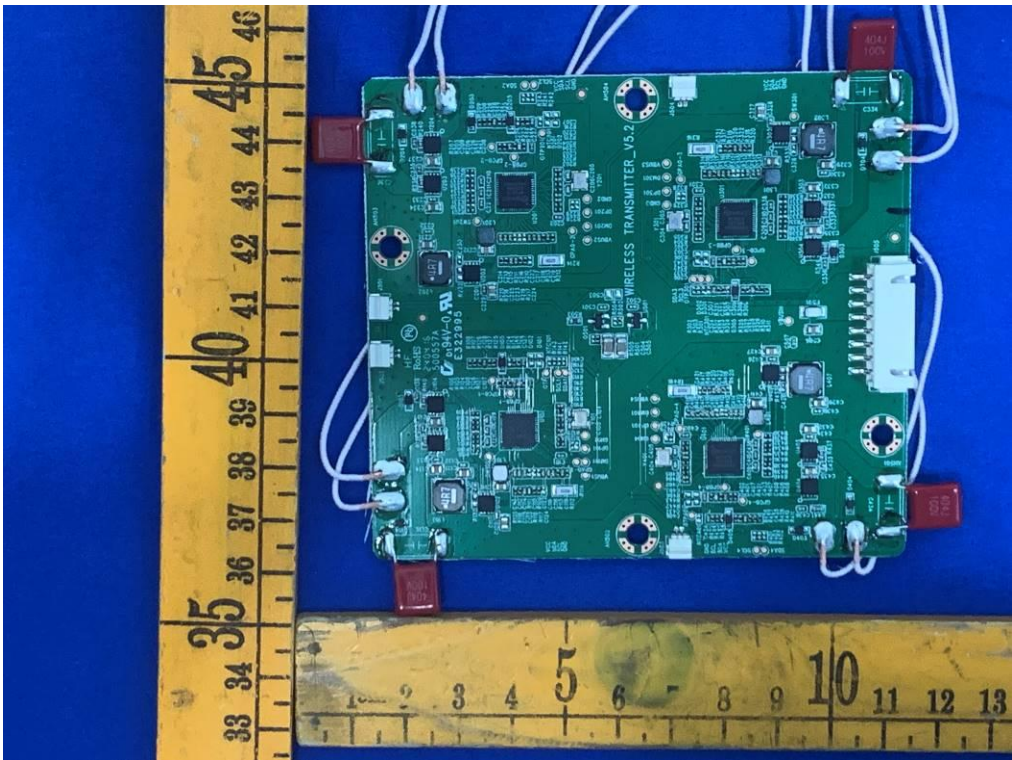


Fig. 12



Fig. 13

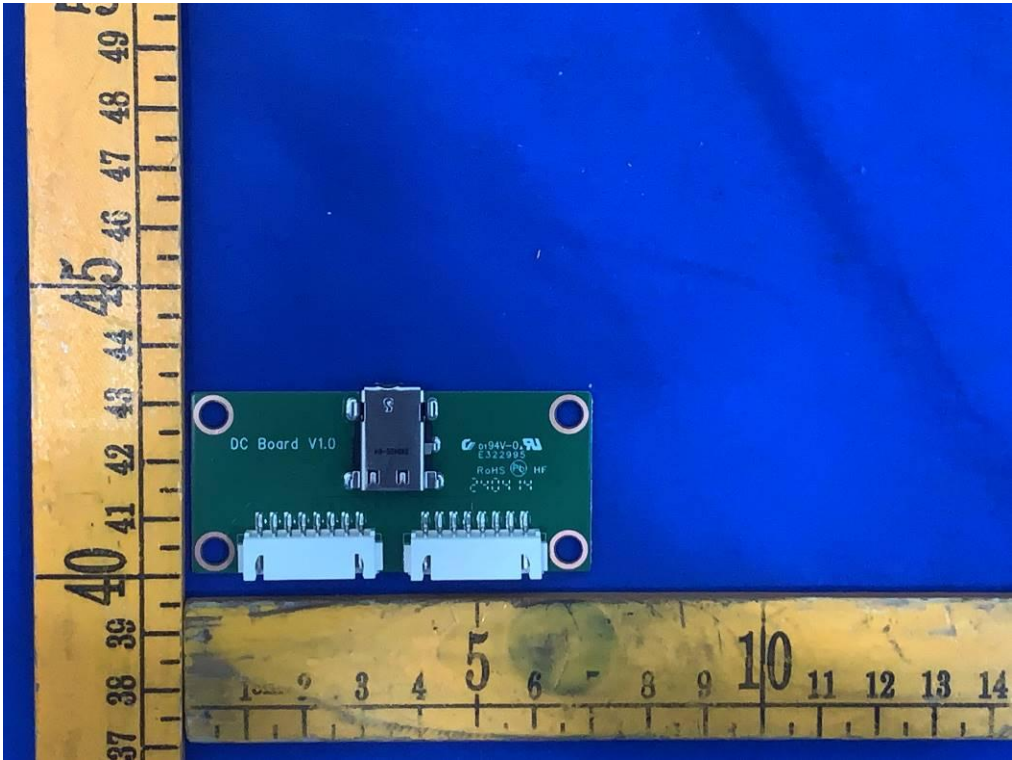


Fig. 14

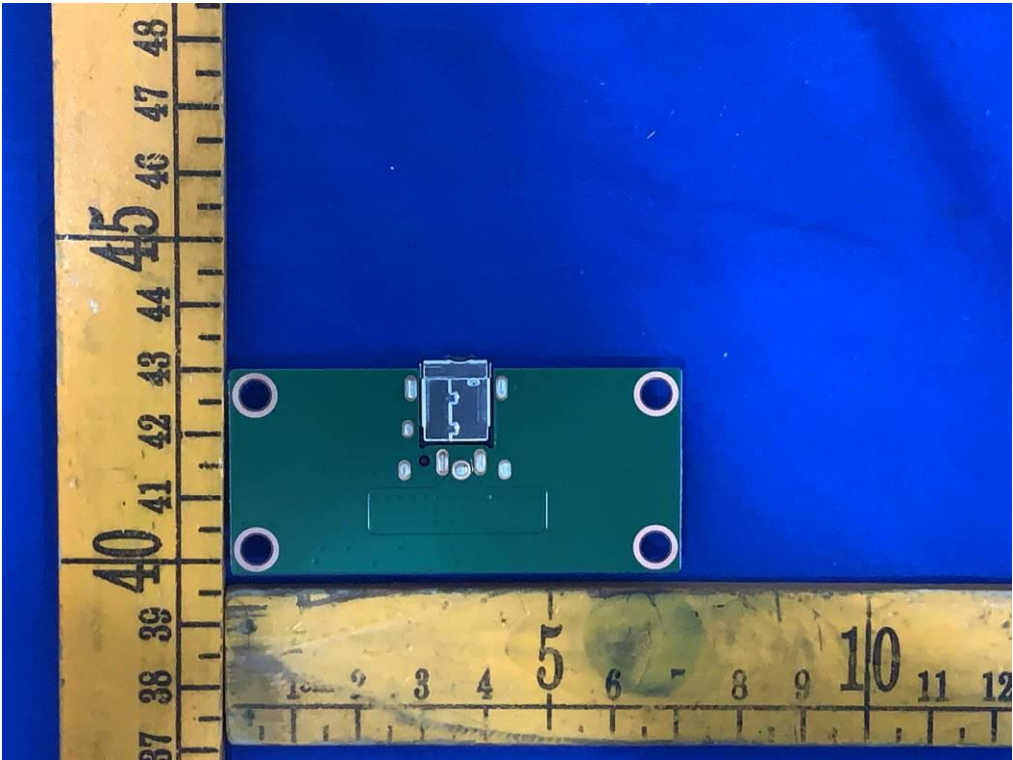


Fig. 15

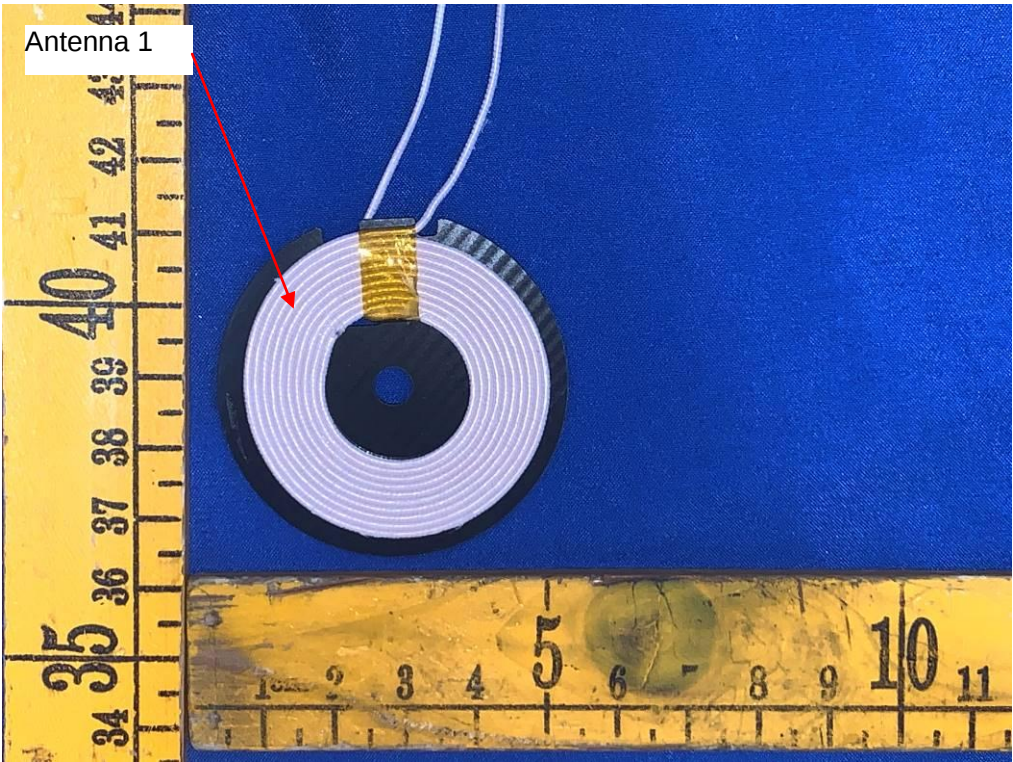


Fig. 16

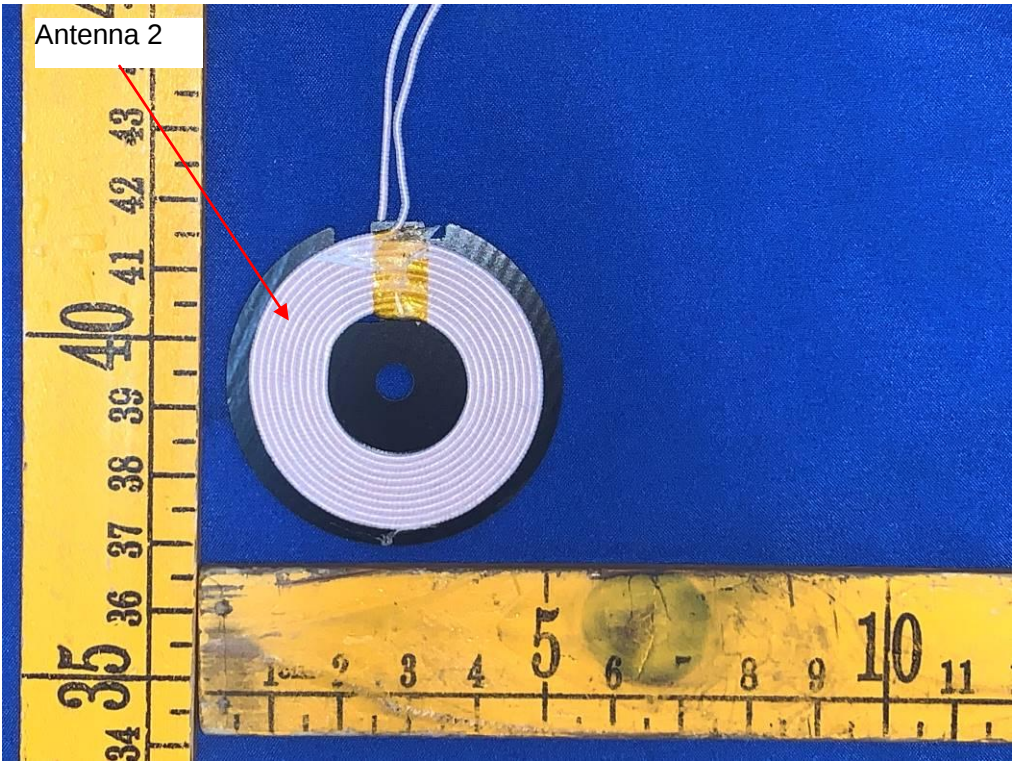


Fig. 17

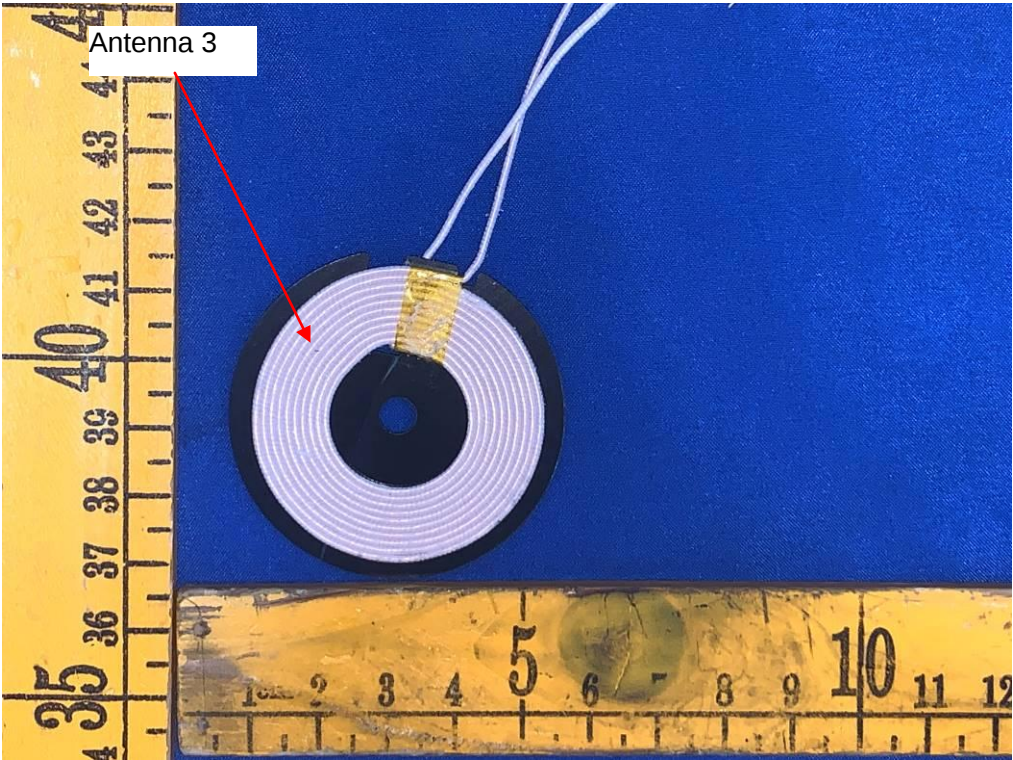


Fig. 18

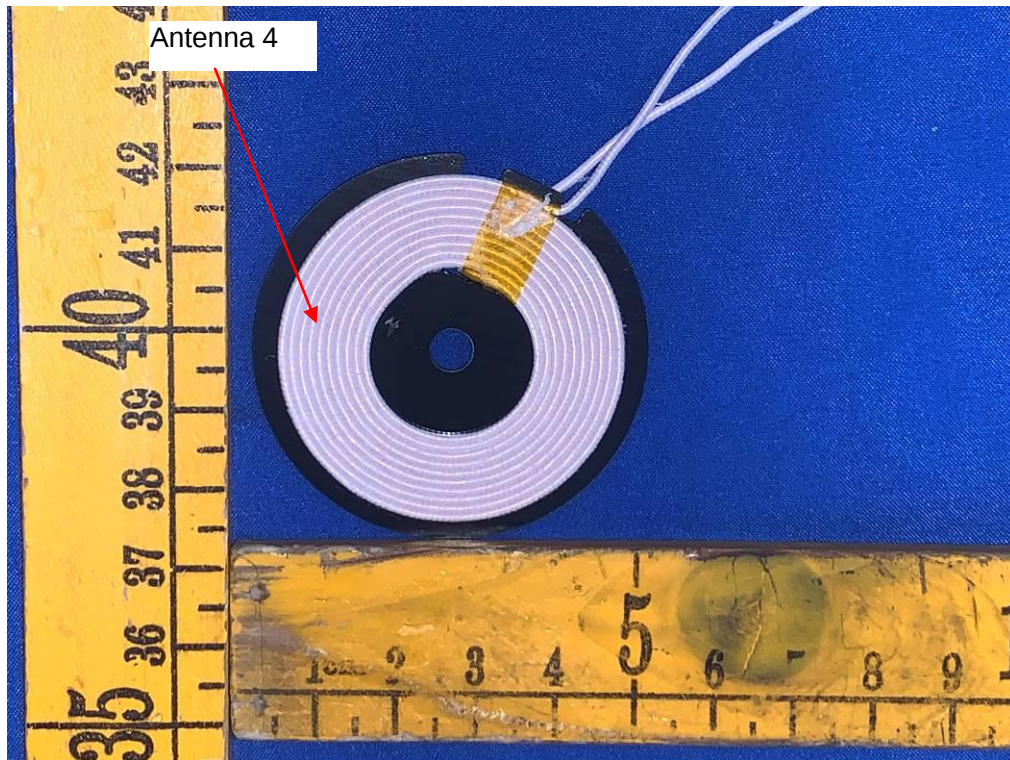


Fig. 19

.....End of Report.....