**Shenzhen Global Test Service Co.,Ltd.**
No.7-101 and 8A-104,Building 7 and 8,DCC Cultural and Creative Garden No.98,Pingxin North Road,Shangmugu,Pinghu Street, Longgang District,Shenzhen,Guangdong,China

# TEST REPORT

## FCC Rules and Regulations Part 15 Subpart C (Section 15.209), ANSI C63.10

| | |
|---|---|
| **Report Reference No.....:** | **GTS20230825009-1-1** |
| **FCC ID.....:** | **2AIVCHSBSL13078-WY** |
| Compiled by ( position+printed name+signature)..: | File administrators Peter Xiao |
| Supervised by ( position+printed name+signature)..: | Test Engineer Evan Ouyang |
| Approved by ( position+printed name+signature)..: | Manager Jason Hu |
| Date of issue.....: | Sep.14, 2023 |
| **Representative Laboratory Name** .: | **Shenzhen Global Test Service Co.,Ltd.** |
| Address.....: | No.7-101 and 8A-104,Building 7 and 8,DCC Cultural and Creative Garden No.98,Pingxin North Road,Shangmugu,Pinghu Street,Longgang District,Shenzhen,Guangdong,China |
| **Applicant's name**.....: | **Hurkins** |
| Address .....: | 10-8, Biseul-ro 447-gil, Okpo-myeon, Dalseong-gun, Daegu, South Korea |
| **Test specification** .....**:** | |
| Standard .....: | FCC Rules and Regulations Part 15 Subpart C (Section 15.209), ANSI C63.10 |



| | |
|---|---|
| **Test item description .....:** | **SMUG V5 mug warmer** |
| Trade Mark .....: | Hurkins |
| Manufacturer .....: | Hurkins |
| Model/Type reference.....: | D-MS5 |
| List Model .....: | N/A |
| Modulation Type .....: | CW (Continuous Wave) |
| Operation Frequency.....: | 115-205KHz |
| Ratings .....: | Input: DC 12.0V/2.0A<br>Wireless Output: DC 5.0V/1.0A, 5W;<br>DC 9.0V/1.1A, 10W; DC 9.0V/1.6A, 15W;<br>Heating Output: DC 12.0V/2.0A, 24W; |
| Result.....: | **PASS** |

# T E S T  R E P O R T

| **Test Report No. :** | **GTS20230825009-1-1** | Sep.14, 2023<br>Date of issue |
|---|---|---|

| | | |
|---|---|---|
| Equipment under Test | : | SMUG V5 mug warmer |
| Model /Type | : | D-MS5 |
| Listed Models | : | N/A |
| **Applicant** | : | **Hurkins** |
| Address | : | 10-8, Biseul-ro 447-gil, Okpo-myeon, Dalseong-gun, Daegu, South Korea |
| **Manufacturer** | | **Hurkins** |
| Address | : | 10-8, Biseul-ro 447-gil, Okpo-myeon, Dalseong-gun, Daegu, South Korea |

| **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

# 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: American National Standard for Testing Unlicensed Wireless Devices

# 2. SUMMARY

## 2.1. General Remarks

| | | |
|---|---|---|
| Date of receipt of test sample | : | Aug.30, 2023 |
| | | |
| Testing commenced on | : | Aug.30, 2023 |
| | | |
| Testing concluded on | : | Sep.13, 2023 |

## 2.2. Product Description

| | |
|---|---|
| Product Name: | SMUG V5 mug warmer |
| Trade Mark: | Hurkins |
| Model/Type reference: | D-MS5 |
| List Model: | N/A |
| Model Declaration | N/A |
| Power supply: | Input: DC 12.0V/2.0A<br>Wireless Output: DC 5.0V/1.0A, 5W;<br>DC 9.0V/1.1A, 10W; DC 9.0V/1.6A, 15W;<br>Heating Output: DC 12.0V/2.0A, 24W; |
| Hardware version | N/A |
| Software version | N/A |
| Sample ID | GTS20230825009-1-1# |
| WPT | |
| Operation frequency | 115-205KHz |
| Modulation Type | CW (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 | : | ○ | 230V / 50 Hz | ○ | 120V / 60Hz |
| | | ● | 12 V DC | ○ | 24 V DC |
| | | ○ | Other (specified in blank below) | | |

DC 12.0V

### Description of the test mode

| Operation Frequency each of channel | |
|---|---|
| Channel | Frequency |
| 1 | 159.12KHz |

| Mode | Mode1 |
|---|---|
| Mode 1 | Wireless Charging 15W |
| Mode 2 | Wireless Charging 10W |
| Mode 3 | Wireless Charging 5W |

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 |
|---|---|---|---|---|
| Shenzhen good-she technology Co.,Ltd. | Adapter | GS-W2SA0929B | -- | SDOC |

## 2.6. External I/O Cable

| I/O Port Description | Quantity | Cable |
|---|---|---|
| DC IN Port | 1 | 1.2M, Unscreened Cable |

## 2.7. Modifications

No modifications were implemented to meet testing criteria.

# 3. TEST ENVIRONMENT

## 3.1. Address of the test laboratory

**Shenzhen Global Test Service Co.,Ltd.**
No.7-101 and 8A-104,Building 7 and 8,DCC Cultural and Creative Garden No.98,Pingxin North Road,Shangmugu,Pinghu Street,Longgang District,Shenzhen,Guangdong,China

## 3.2. Test Facility

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

CNAS (No. CNAS L8169)
Shenzhen Global Test Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2019 General Requirements) for the Competence of Testing and Calibration Laboratories.
A2LA (Certificate No. 4758.01)
Shenzhen Global Test Service Co., Ltd. has been assessed by the American Association for Laboratory Accreditation (A2LA). Certificate No. 4758.01.
Industry Canada Registration Number. is 24189.
FCC Designation Number is CN1234.
FCC Registered Test Site Number is165725.
CAB identifier is CN0082.

## 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

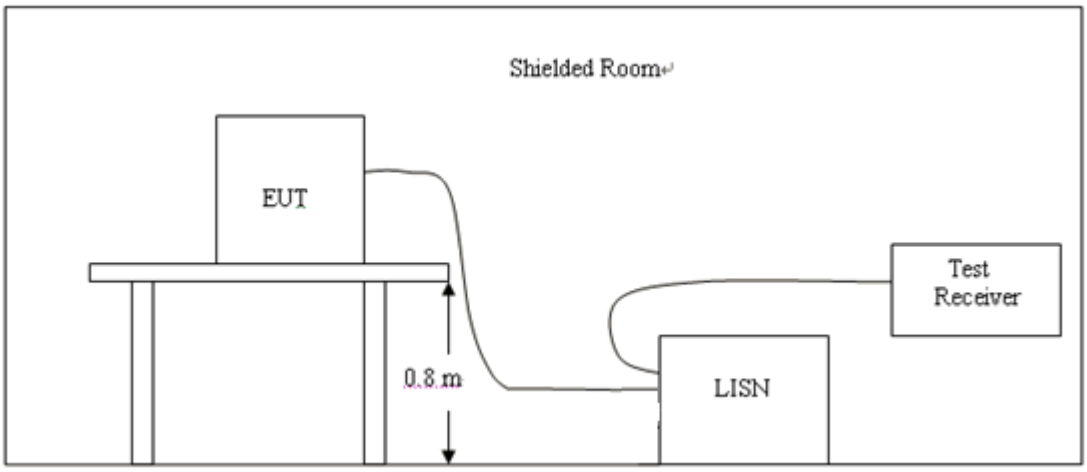
| Test Equipment | Manufacturer | Model No. | Serial No. | Calibration Date | Calibration Due Date |
|---|---|---|---|---|---|
| LISN | CYBERTEK | EM5040A | E1850400105 | 2023/07/13 | 2024/07/12 |
| LISN | R&S | ESH2-Z5 | 893606/008 | 2023/07/13 | 2024/07/12 |
| EMI Test Receiver | R&S | ESPI3 | 101841-cd | 2023/07/13 | 2024/07/12 |
| EMI Test Receiver | R&S | ESCI7 | 101102 | 2023/09/08 | 2024/09/07 |
| Spectrum Analyzer | Agilent | N9020A | MY48010425 | 2023/09/08 | 2024/09/07 |
| Spectrum Analyzer | R&S | FSV40 | 100019 | 2023/07/13 | 2024/07/12 |
| Vector Signal generator | Agilent | N5181A | MY49060502 | 2023/07/13 | 2024/07/12 |
| Signal generator | Agilent | N5182A | 3610AO1069 | 2023/09/08 | 2024/09/07 |
| Climate Chamber | ESPEC | EL-10KA | A20120523 | 2023/09/08 | 2024/09/07 |
| Controller | EM Electronics | Controller EM 1000 | N/A | N/A | N/A |
| Horn Antenna | Schwarzbeck | BBHA 9120D | 01622 | 2023/09/08 | 2024/09/07 |
| Active Loop Antenna | Beijing Da Ze Technology Co.,Ltd. | ZN30900C | 15006 | 2023/09/08 | 2024/09/07 |
| Bilog Antenna | Schwarzbeck | VULB9163 | 000976 | 2023/07/13 | 2024/07/12 |
| Broadband Horn Antenna | SCHWARZBECK | BBHA 9170 | 791 | 2023/09/08 | 2024/09/07 |
| Amplifier | Schwarzbeck | BBV 9743 | #202 | 2023/07/13 | 2024/07/12 |
| Amplifier | Schwarzbeck | BBV9179 | 9719-025 | 2023/07/13 | 2024/07/12 |
| Amplifier | EMCI | EMC051845B | 980355 | 2023/07/13 | 2024/07/12 |
| Temperature/Humidity Meter | Gangxing | CTH-608 | 02 | 2023/07/13 | 2024/07/12 |
| High-Pass Filter | K&L | 9SH10-2700/X12750-O/O | KL142031 | 2023/07/13 | 2024/07/12 |
| High-Pass Filter | K&L | 41H10-1375/U12750-O/O | KL142032 | 2023/07/13 | 2024/07/12 |
| RF Cable(below 1GHz) | HUBER+SUHNER | RG214 | RE01 | 2023/07/13 | 2024/07/12 |
| RF Cable(above 1GHz) | HUBER+SUHNER | RG214 | RE02 | 2023/07/13 | 2024/07/12 |
| Data acquisition card | Agilent | U2531A | TW53323507 | 2023/07/13 | 2024/07/12 |
| Power Sensor | Agilent | U2021XA | MY5365004 | 2023/07/13 | 2024/07/12 |
| Test Control Unit | Tonscend | JS0806-1 | 178060067 | 2023/07/13 | 2024/07/12 |
| Automated filter bank | Tonscend | JS0806-F | 19F8060177 | 2023/07/13 | 2024/07/12 |
| EMI Test Software | Tonscend | JS1120-1 | Ver 2.6.8.0518 | / | / |
| EMI Test Software | Tonscend | JS1120-3 | Ver 2.5.77.0418 | / | / |
| EMI Test Software | Tonscend | JS32-CE | Ver 2.5 | / | / |
| EMI Test Software | Tonscend | JS32-RE | Ver 2.5.1.8 | / | / |

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, If a EUT received DC power from the USB Port of adapter, the adapter adapter received 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. | | |

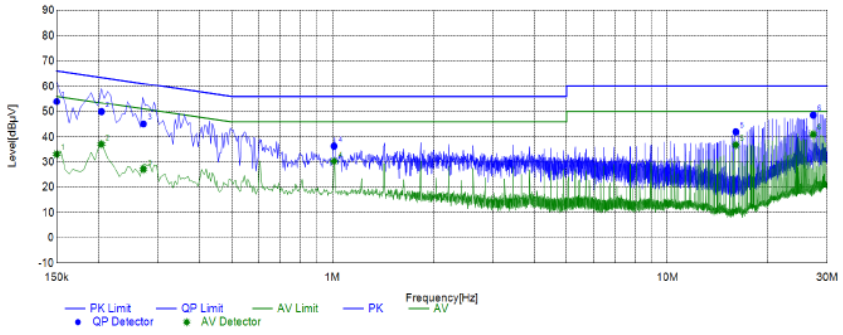
**TEST RESULTS**

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

| Temperature | 23.6℃ | Humidity | 55.3% |
|---|---|---|---|
| Test Engineer | Evan Ouyang | Configurations | WPT |

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

**Test Graph**




**Final Data List**

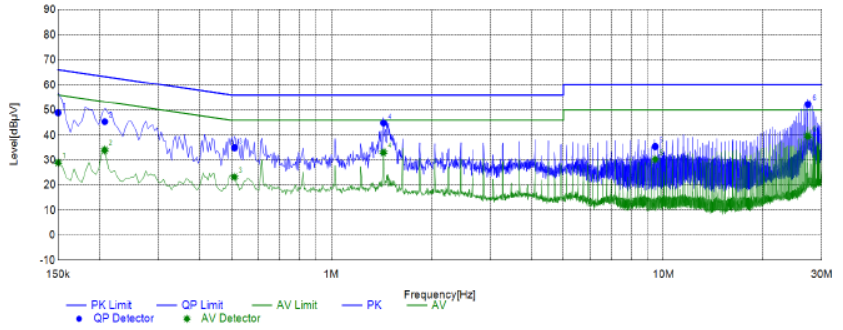
| NO. | Frequency | QP Reading | AVG. Reading | Factor | QP Result | AVG. Result | QP Limit | AVG. Limit | QP Margin | AVG. Margin | Line | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.1503 | 43.99 | 23.19 | 9.96 | 53.95 | 33.15 | 65.99 | 55.99 | 12.04 | 22.84 | L1 | PASS |
| 2 | 0.2044 | 40.16 | 27.23 | 9.80 | 49.96 | 37.03 | 63.43 | 53.43 | 13.47 | 16.40 | L1 | PASS |
| 3 | 0.2727 | 35.39 | 17.49 | 9.72 | 45.11 | 27.21 | 61.03 | 51.03 | 15.92 | 23.82 | L1 | PASS |
| 4 | 1.0120 | 26.57 | 20.70 | 9.67 | 36.24 | 30.37 | 56.00 | 46.00 | 19.76 | 15.63 | L1 | PASS |
| 5 | 16.0080 | 32.81 | 27.62 | 9.13 | 41.94 | 36.75 | 60.00 | 50.00 | 18.06 | 13.25 | L1 | PASS |
| 6 | 27.2987 | 39.36 | 31.75 | 9.25 | 48.61 | 41.00 | 60.00 | 50.00 | 11.39 | 9.00 | L1 | PASS |

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

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

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

**Test Graph**




**Final Data List**

| NO. | Frequency | QP Reading | AVG. Reading | Factor | QP Result | AVG. Result | QP Limit | AVG. Limit | QP Margin | AVG. Margin | Line | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.1503 | 39.16 | 19.17 | 9.79 | 48.95 | 28.96 | 65.98 | 55.98 | 17.03 | 27.02 | N | PASS |
| 2 | 0.2075 | 35.56 | 24.22 | 9.79 | 45.35 | 34.01 | 63.30 | 53.30 | 17.95 | 19.29 | N | PASS |
| 3 | 0.5107 | 25.24 | 13.61 | 9.68 | 34.92 | 23.29 | 56.00 | 46.00 | 21.08 | 22.71 | N | PASS |
| 4 | 1.4370 | 35.11 | 23.40 | 9.68 | 44.79 | 33.08 | 56.00 | 46.00 | 11.21 | 12.92 | N | PASS |
| 5 | 9.4485 | 25.71 | 20.61 | 9.67 | 35.38 | 30.28 | 60.00 | 50.00 | 24.62 | 19.72 | N | PASS |
| 6 | 27.3265 | 42.69 | 30.04 | 9.56 | 52.25 | 39.60 | 60.00 | 50.00 | 7.75 | 10.40 | N | PASS |

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

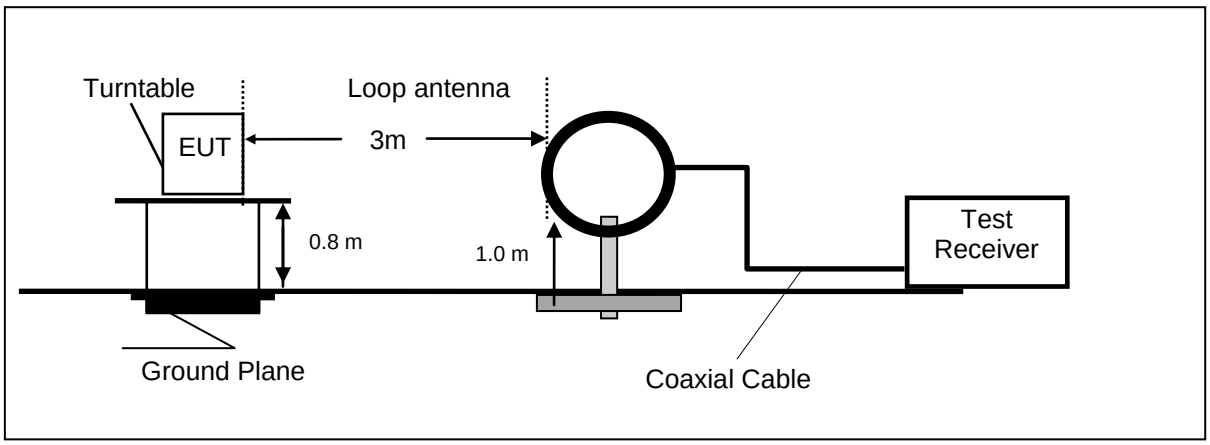
2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

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

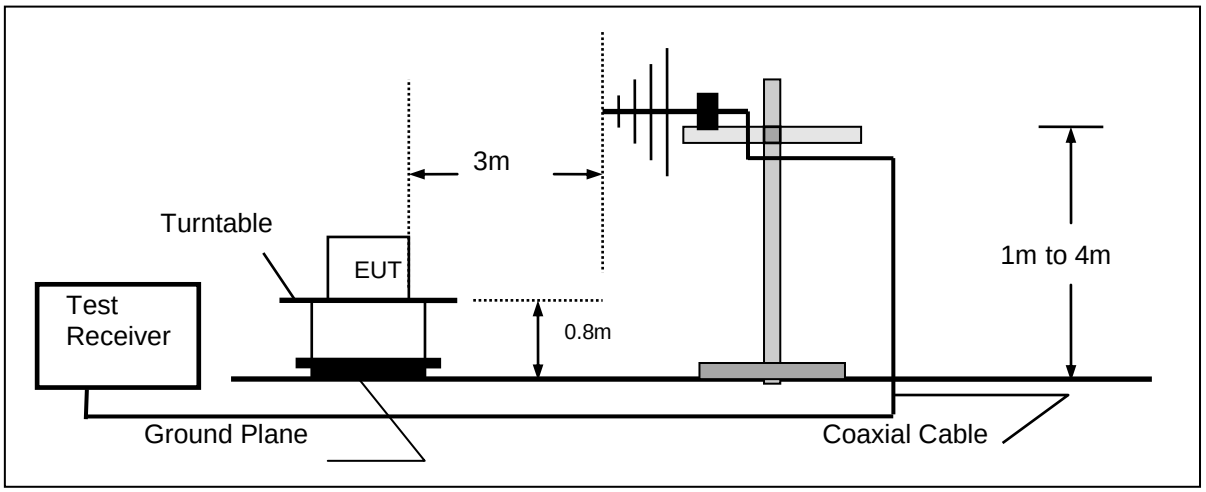
## 4.2. Radiated Emission

**TEST CONFIGURATION**

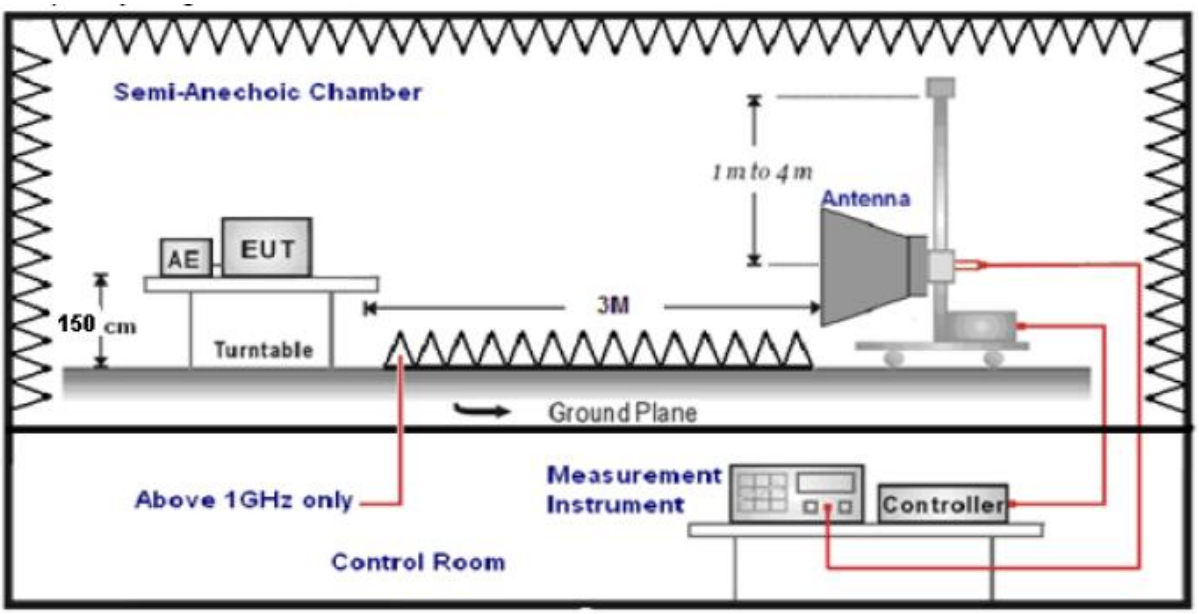
Frequency range 9 KHz – 30MHz




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 Anternna | 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 | |

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 the100kHz 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 | 20log(2400/F(KHz))+40log(300/3) | 2400/F(KHz) |
| 0.49-1.705 | 3 | 20log(24000/F(KHz))+ 40log(30/3) | 24000/F(KHz) |
| 1.705-30 | 3 | 20log(30)+ 40log(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 |

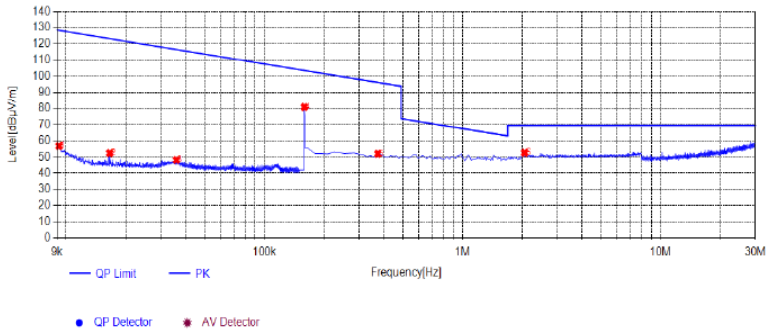
## TEST RESULTS

| Temperature | 23.6℃ | Humidity | 55.3% |
|---|---|---|---|
| Test Engineer | Evan Ouyang | Configurations | WPT |

**For 9 KHz-30MHz**

### Concentric

**Test Graph**




Suspected List

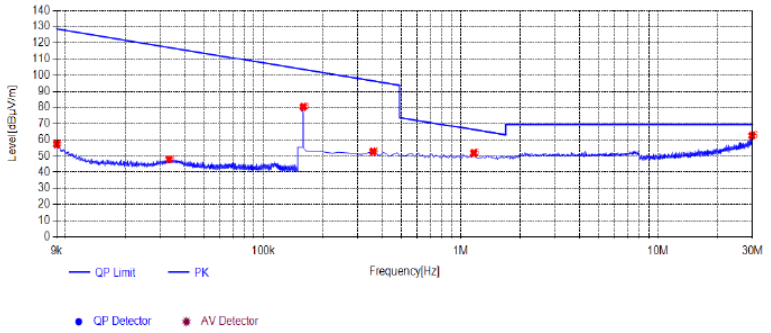
| NO. | Frequency [MHz] | Reading [dBµV/m] | Factor [dB] | Result [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Polarity | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.0092 | 56.74 | 0.10 | 56.84 | 128.35 | 71.51 | 100 | 68 | QP | | PASS |
| 2 | 0.0166 | 52.39 | 0.11 | 52.50 | 123.19 | 70.69 | 100 | 254 | QP | | PASS |
| 3 | 0.036 | 48.04 | 0.15 | 48.19 | 116.49 | 68.30 | 100 | 88 | QP | | PASS |
| 4 | 0.1592 | 80.58 | 0.35 | 80.93 | 103.57 | 22.64 | 100 | 360 | QP | | PASS |
| 5 | 0.3739 | 51.63 | 0.44 | 52.07 | 96.15 | 44.08 | 100 | 357 | QP | | PASS |
| 6 | 2.0604 | 51.60 | 1.13 | 52.73 | 69.54 | 16.81 | 100 | 249 | QP | | 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).

### 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 | 0.009 | 57.21 | 0.10 | 57.31 | 128.49 | 71.18 | 100 | 311 | QP | | PASS |
| 2 | 0.0334 | 47.76 | 0.14 | 47.90 | 117.14 | 69.24 | 100 | 231 | QP | | PASS |
| 3 | 0.1594 | 79.95 | 0.35 | 80.30 | 103.55 | 23.25 | 100 | 12 | QP | | PASS |
| 4 | 0.359 | 52.35 | 0.44 | 52.79 | 96.50 | 43.71 | 100 | 355 | QP | | PASS |
| 5 | 1.1649 | 51.07 | 0.77 | 51.84 | 66.28 | 14.44 | 100 | 34 | QP | | PASS |
| 6 | 29.8806 | 50.52 | 12.01 | 62.53 | 69.54 | 7.01 | 100 | 355 | QP | | PASS |

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

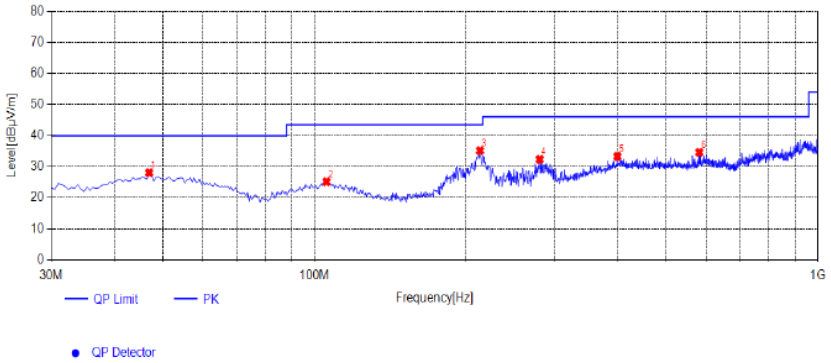
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

**For 30MHz-1GHz**

**AC mode:**

## Horizontal

**Test Graph**



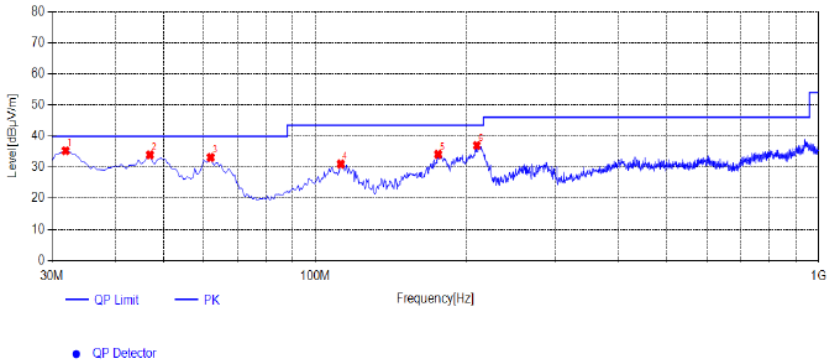

| Suspected List | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | Frequency [MHz] | Reading [dBµV/m] | Factor [dB] | Result [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Polarity | Remark |
| 1 | 46.975 | 39.01 | -10.93 | 28.08 | 40.00 | 11.92 | 100 | 14 | PK | Horizonta | PASS |
| 2 | 105.66 | 37.21 | -12.11 | 25.10 | 43.50 | 18.40 | 100 | 54 | PK | Horizonta | PASS |
| 3 | 213.33 | 47.42 | -12.31 | 35.11 | 43.50 | 8.39 | 100 | 294 | PK | Horizonta | PASS |
| 4 | 280.26 | 42.64 | -10.30 | 32.34 | 46.00 | 13.66 | 100 | 60 | PK | Horizonta | PASS |
| 5 | 400.055 | 37.11 | -3.84 | 33.27 | 46.00 | 12.73 | 100 | 275 | PK | Horizonta | PASS |
| 6 | 581.93 | 35.62 | -1.05 | 34.57 | 46.00 | 11.43 | 100 | 8 | PK | Horizonta | 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).

## Vertical

**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 | 31.94 | 50.23 | -14.97 | 35.26 | 40.00 | 4.74 | 100 | 24 | PK | Vertical | PASS |
| 2 | 46.975 | 44.90 | -10.93 | 33.97 | 40.00 | 6.03 | 100 | 43 | PK | Vertical | PASS |
| 3 | 62.01 | 46.22 | -13.07 | 33.15 | 40.00 | 6.85 | 100 | 110 | PK | Vertical | PASS |
| 4 | 112.45 | 43.90 | -12.86 | 31.04 | 43.50 | 12.46 | 100 | 73 | PK | Vertical | PASS |
| 5 | 175.5 | 48.36 | -14.24 | 34.12 | 43.50 | 9.38 | 100 | 186 | PK | Vertical | PASS |
| 6 | 209.45 | 49.05 | -12.10 | 36.95 | 43.50 | 6.55 | 100 | 103 | PK | Vertical | PASS |

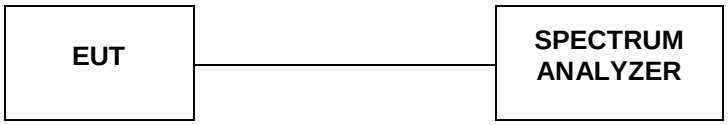
Note: 1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

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

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.deomonstrated by measuring the radiated emissions.

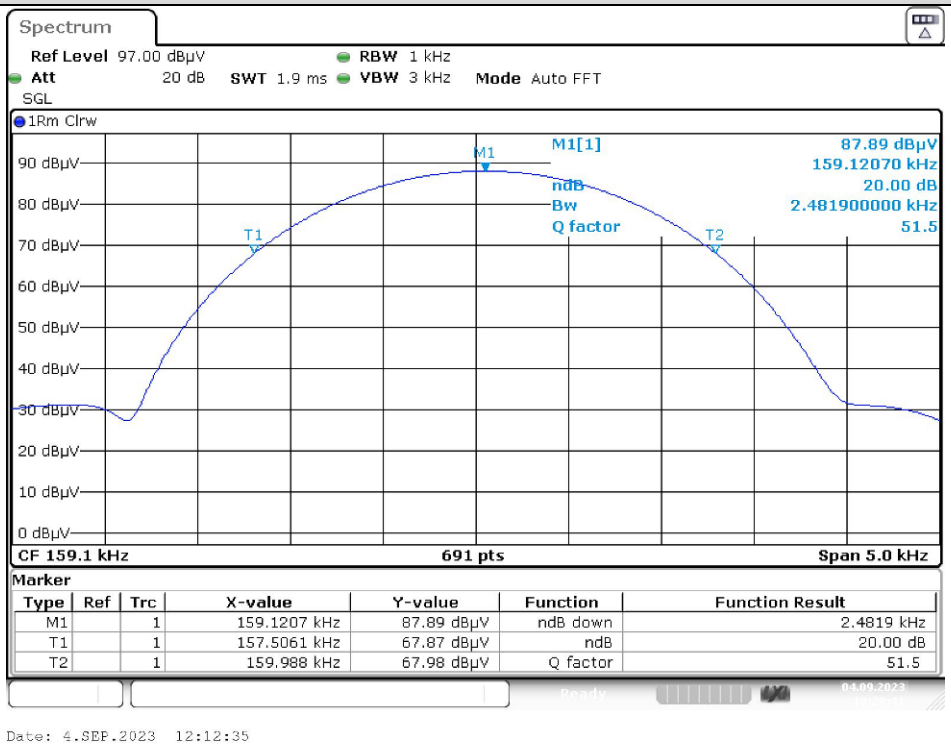
**LIMIT**

**TEST RESULTS**

| Temperature | 24.5℃ | Humidity | 53.9% |
|---|---|---|---|
| Test Engineer | Evan Ouyang | Configurations | WPT |

| Mode | Freq (KHz) | 20dB Bandwidth (KHz) | Limit (kHz) | Conclusion |
|---|---|---|---|---|
| Tx Mode | 127.7 | 2.48 | / | PASS |

20dB Bandwidth



## 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

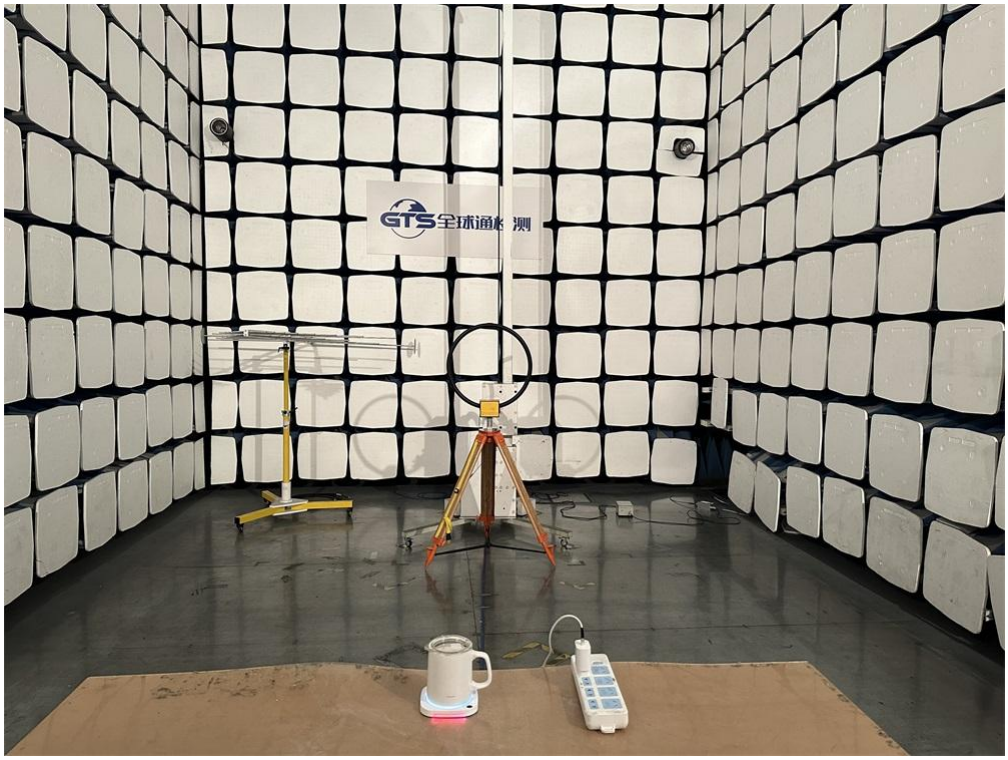


Fig. 1

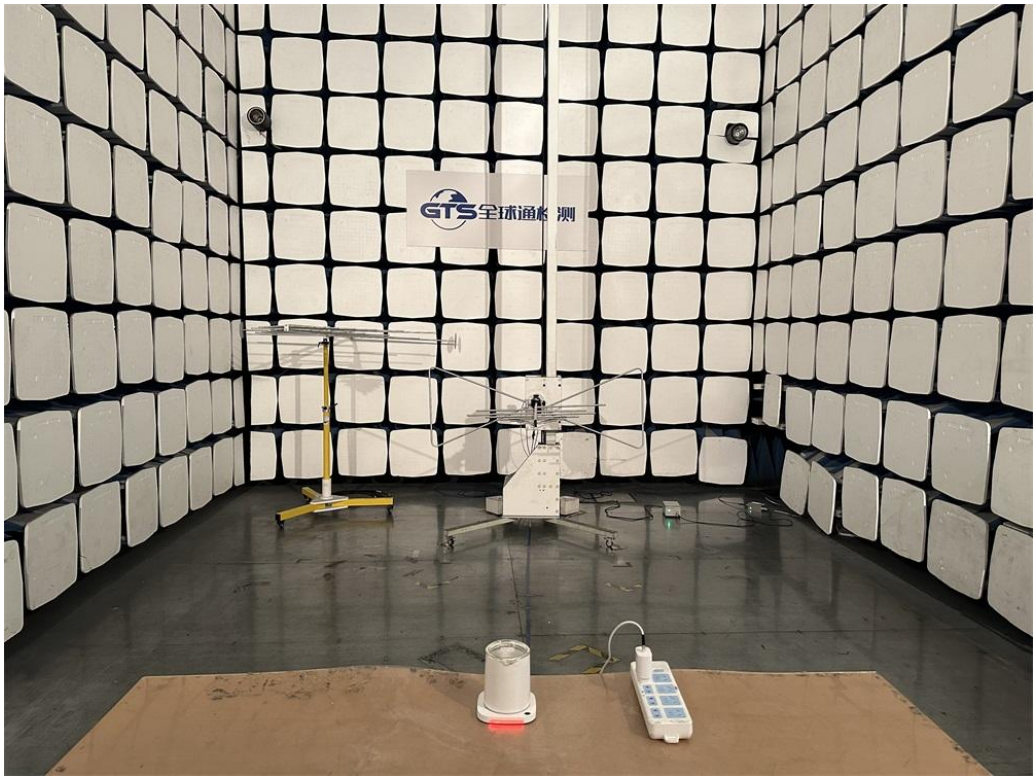


Fig. 2

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

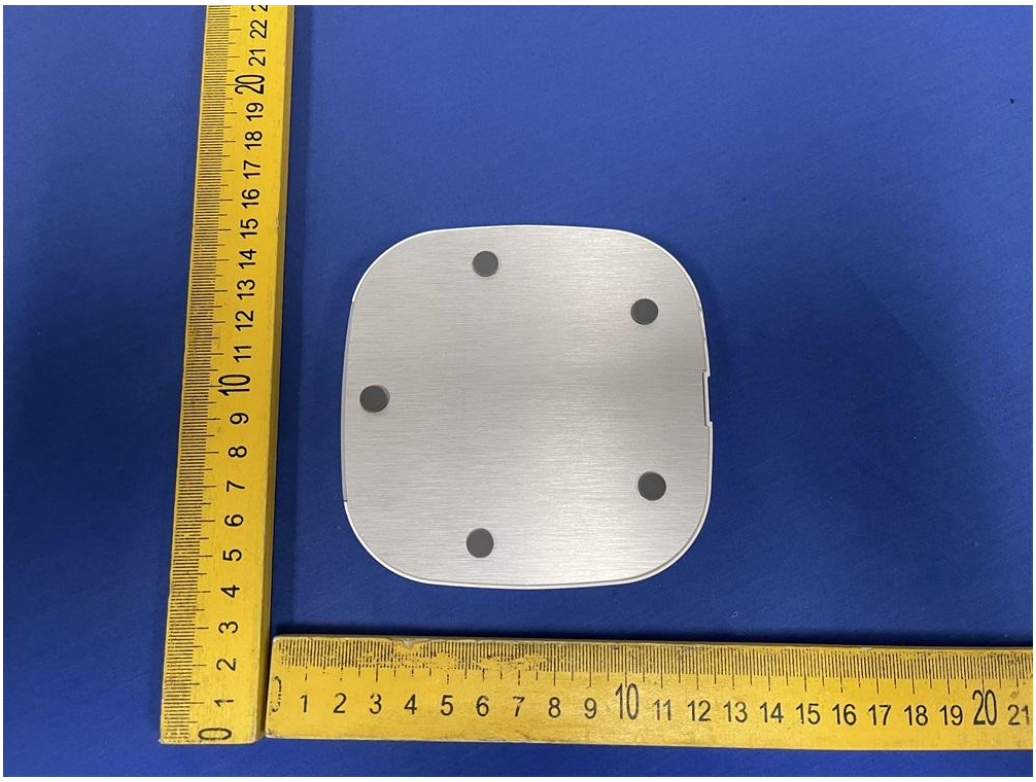


Fig. 9

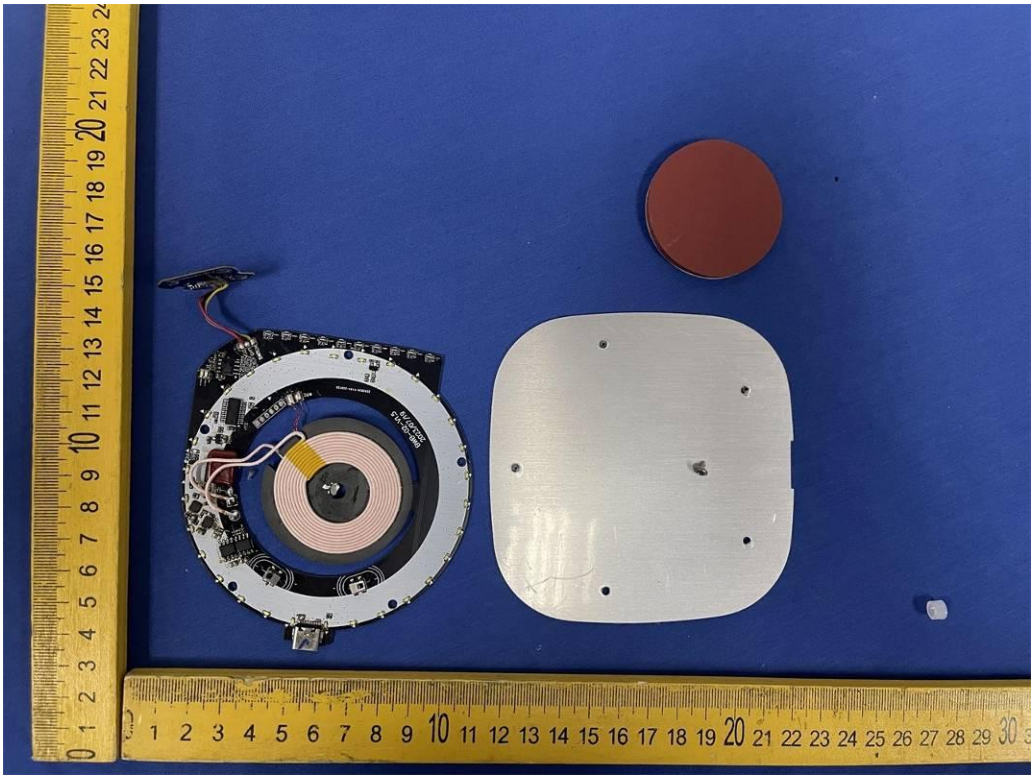


Fig. 10

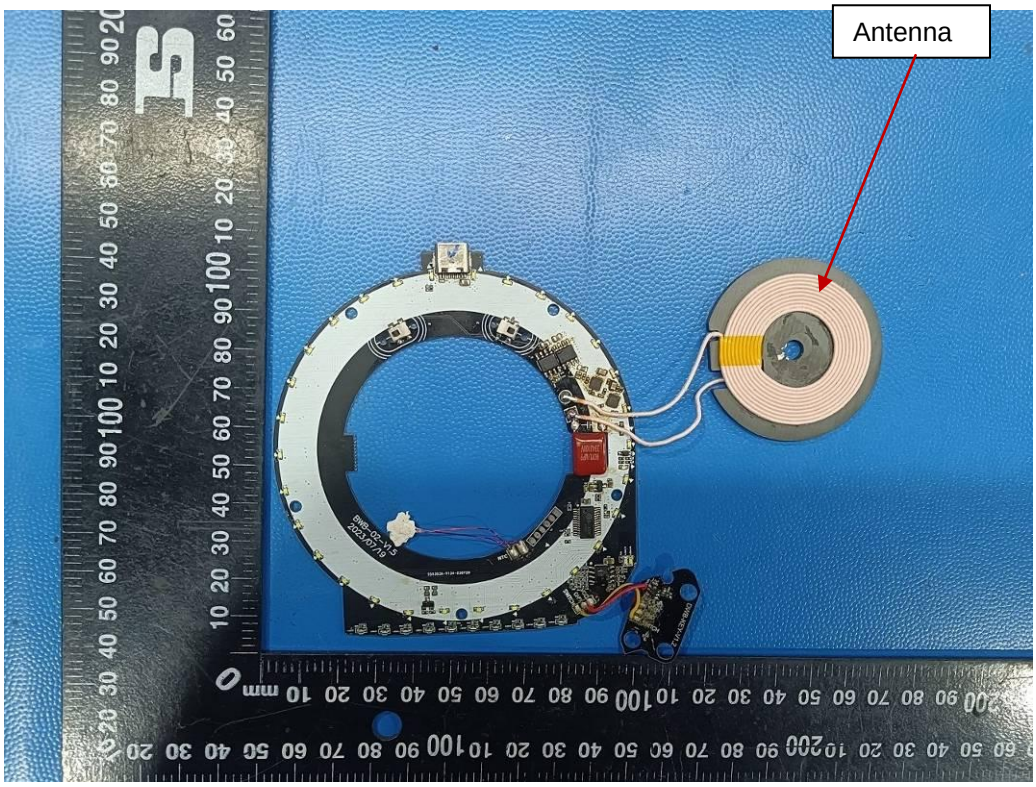



Fig. 11

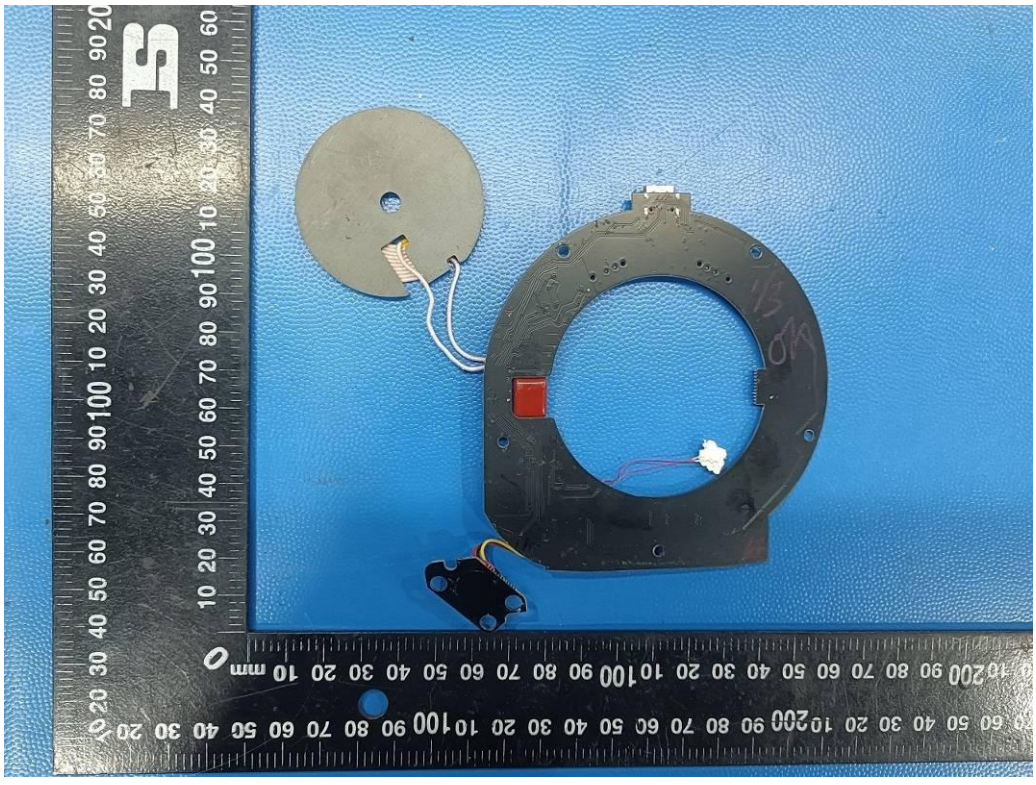


Fig. 12

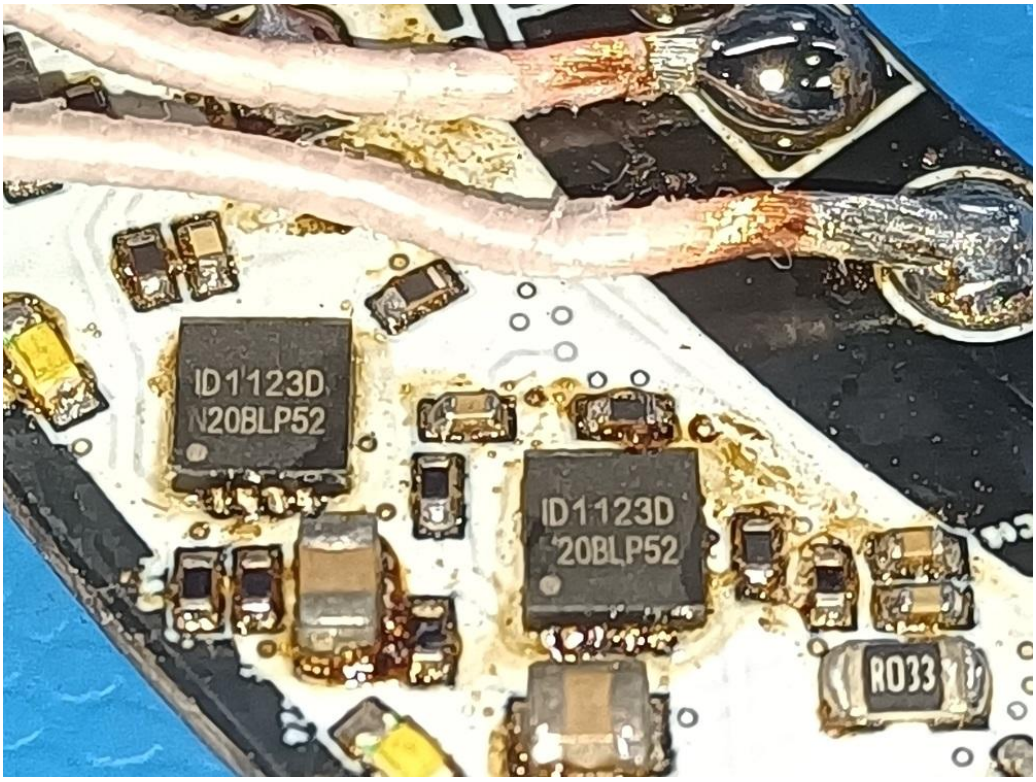



Fig. 13

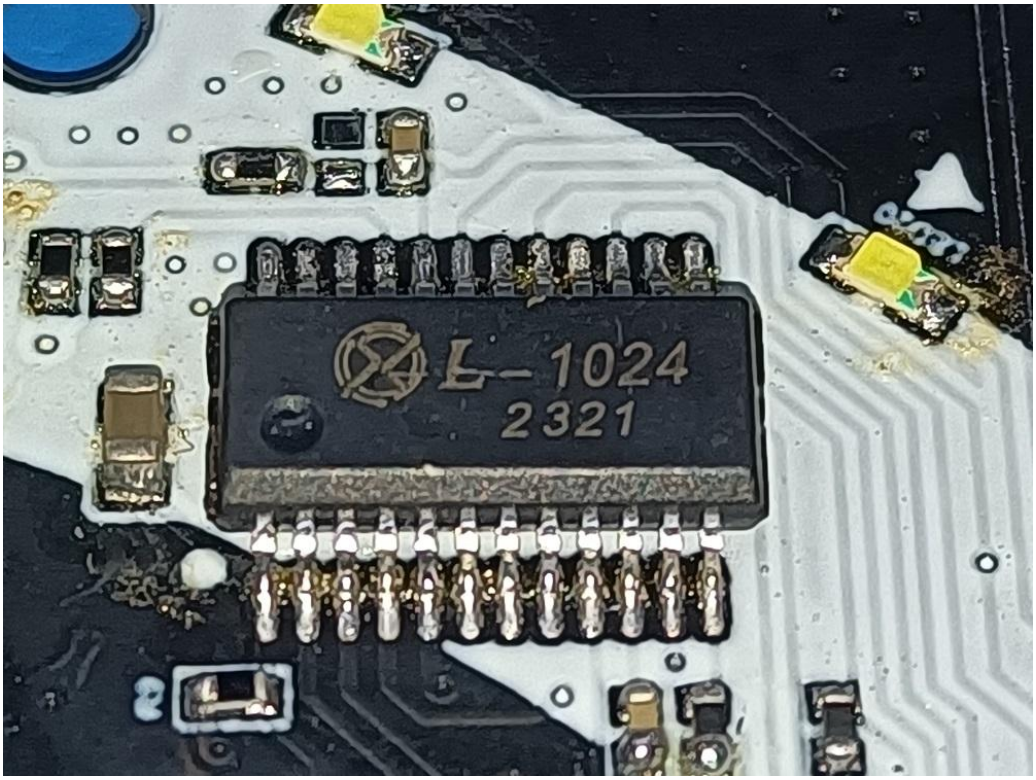



Fig. 14

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