Shenzhen CTL Testing Technology Co., Ltd.
Tel: +86-755-89486194 E-mail: ctl@ctl-lab.com

TEST REPORT

FCC PART 15 SUBPART C

Report Reference No..... :	**CTL2412033011-WF**
Compiled by (position+printed name+signature)	Happy Guo (File administrators)
Supervised by (position+printed name+signature)	Jack Wang (Test Engineer)
Approved by (position+printed name+signature)	Ivan Xie (Manager)

Applicant's name ..... :	**ShenZhen YaWell intelligent Technology Co.,Ltd.**
Address of applicant..... :	A402, Wuhan University, Shenzhen Research Institute, No. 6 Yuexing 2nd Road, Gaoxin District Yuehai Street, Nanshan District, Shenzhen, China
Test Firm..... :	**Shenzhen CTL Testing Technology Co., Ltd.**
Address..... :	Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road, Nanshan District, Shenzhen, China 518055
Test specification ..... :	
Standard ..... :	FCC Part 15C
Master TRF..... :	Dated 2011-01
Test item description .....:	Wireless charging
FCC ID..... :	**2AOM3R10**
Trade Mark..... :	N/A
Model/Type reference ..... :	R10
List Model(s) ..... :	N/A
Transmit Frequency ..... :	808.37KHz
Antenna type..... :	Coil Antenna
Date of receipt of test item ..... :	Nov. 21, 2024
Date of Test Date..... :	Nov. 21, 2024-Feb. 13, 2025
Date of Issue..... :	Feb. 14, 2025
Result..... :	**Pass**

TEST REPORT

Test Report No. :	CTL2412033011-WF	Feb. 14, 2025 Date of issue

Equipment under Test	:	Wireless charging
Sample No	:	CTL2412033011
Type / Model(s)	:	R10
Listed Models	:	N/A
Applicant	:	**ShenZhen YaWell intelligent Technology Co.,Ltd.**
Address	:	A402, Wuhan University, Shenzhen Research Institute, No. 6 Yuexing 2nd Road, Gaoxin District Yuehai Street, Nanshan District, Shenzhen, China
Manufacturer	:	**ShenZhen YaWell intelligent Technology Co.,Ltd.**
Address	:	A402, Wuhan University, Shenzhen Research Institute, No. 6 Yuexing 2nd Road, Gaoxin District Yuehai Street, Nanshan District, Shenzhen, China

Test result	Pass *

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.207,15.209, 15.215(c)

ANSI C63.10: 2013

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Nov. 21, 2024
Testing commenced on	:	Nov. 21, 2024
Testing concluded on	:	Feb. 13, 2025

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage	:	Input: 5V

2.3. Auxiliary test equipment information

2.4.

Manufacturer	Description	Model	Serial Number
HUAWEI TECHNOLOGIES CO.LTD	Adapter	HW-200200CP1	---
ShenZhen YaWell intelligent Technology Co.,Ltd.	Smart Ring	R10	---

2.5. Short description of the Equipment under Test (EUT)

Clock wireless charger work frequency range 808.37 KHz.

For more details, refer to the user's manual of the EUT.

Serial number: R10

EUT operation mode

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting mode for testing.

2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: 2AOM3R10 fileing to comply with FCC Part 15, Subpart C Rules.

2.7. Modifications

No modifications were implemented to meet testing criteria.

2.8. Summary of Test Results

The EUT is night light with wireless charger, The test summary of the EUT listed as below:

	Test Standards	Test Result
Electric Field Radiated Emissions	FCC Part 15 C (Section15.209)	PASS
20dB Bandwidth/99% Bandwidth	FCC Part 15 C (Section15.215(c))	PASS
Conducted Emissions	FCC Part 15 C (Section15.207)	PASS
47 CFR Part 15, Subpart C 15.203/15.247 (b)	Antenna Requirement	PASS

Remark: The measurement uncertainty is not included in the test result.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen CTL Testing Technology Co., Ltd.
Floor 1-A, Baisha Technology Park, No. 3011, Shahexi Road, Nanshan, Shenzhen 518055 China

There is one 3m semi-anechoic chamber and two line conducted labs for final test. The Test Sites meet the requirements in documents ANSI C63.4 and CISPR 32/EN 55032 requirements.

3.2. Test Facility

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

CNAS-Lab Code: L7497

Shenzhen CTL Testing Technology 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: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No. 4343.01

Shenzhen CTL Testing Technology Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

IC Registration No.: 9618B

CAB identifier: CN0041

The 3m alternate test site of Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements with Registration No.: 9618B.

FCC-Registration No.: 399832

Designation No.: CN1216

Shenzhen CTL Testing Technology Co., Ltd. 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 399832.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen CTL Testing Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CTL laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10dB	(1)
Radiated Emission	Above 1GHz	4.32dB	(1)
Conducted Disturbance	0.15~30MHz	3.20dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

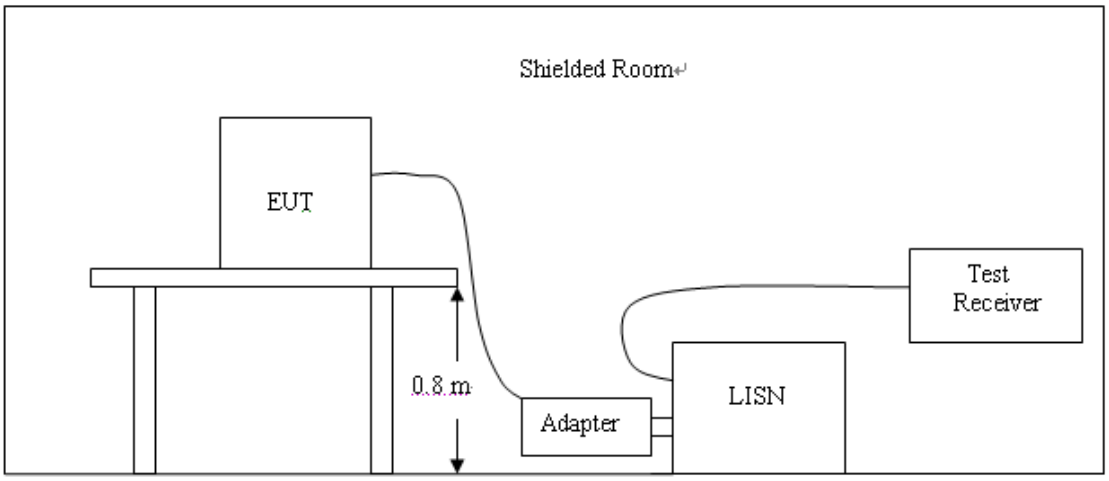
3.5. Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
LISN	R&S	ESH2-Z5	860014/010	2024/04/30	2025/04/29
Double cone logarithmic antenna	Schwarzbeck	VULB 9168	824	2023/02/13	2026/02/12
EMI Test Receiver	R&S	ESCI	1166.5950.03	2024/04/30	2025/04/29
Spectrum Analyzer	Keysight	N9020A	MY53420874	2024/05/01	2025/04/30
Active Loop Antenna	Da Ze	ZN30900A	/	2024/04/30	2025/04/29
Spectrum Analyzer	RS	FSP	1164.4391.38	2024/05/03	2025/05/02

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 C63.10:2013.
2 Support equipment, if needed, was placed as per ANSI C63.10:2013
3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2013
4 The EUT received DC5V power from the adapter, the adapter received AC120V/60Hz 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.
8 During the above scans, the emissions were maximized by cable manipulation.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

AC Power Conducted Emission Limit

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

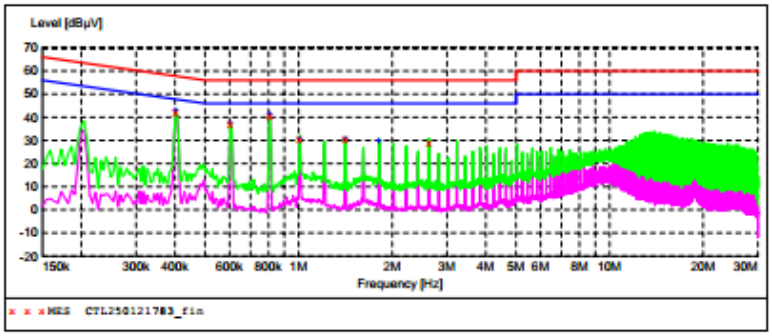
Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

TEST RESULTS

Line:	L

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL250121783_fin"

1/21/2025 4:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.402000	42.50	10.0	58	15.3	QP	L1	GND
0.604500	37.00	10.0	56	19.0	QP	L1	GND
0.807000	40.70	10.0	56	15.3	QP	L1	GND
1.009500	30.60	10.1	56	25.4	QP	L1	GND
1.414500	30.50	10.1	56	25.5	QP	L1	GND
2.625000	28.70	10.1	56	27.3	QP	L1	GND

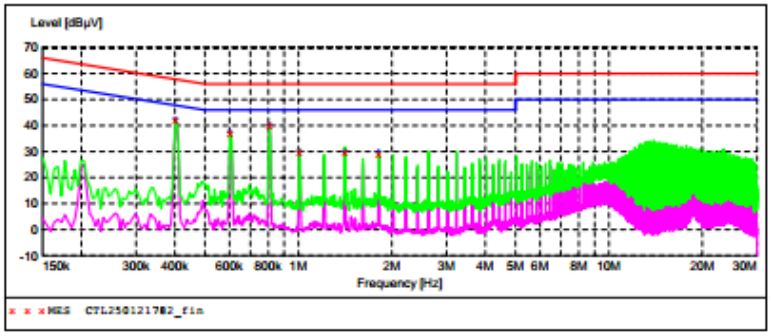
MEASUREMENT RESULT: "CTL250121783_fin2"

1/21/2025 4:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.402000	42.70	10.0	48	5.1	AV	L1	GND
0.604500	37.20	10.0	46	8.8	AV	L1	GND
0.807000	41.00	10.0	46	5.0	AV	L1	GND
1.009500	30.60	10.1	46	15.4	AV	L1	GND
1.414500	30.40	10.1	46	15.6	AV	L1	GND
1.815000	29.40	10.1	46	16.6	AV	L1	GND

Line:	N

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL250121782_fin"

1/21/2025 4:22PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.402000	42.10	10.0	58	15.7	QP	N	GND
0.604500	36.90	10.0	56	19.1	QP	N	GND
0.807000	40.20	10.0	56	15.8	QP	N	GND
1.009500	29.90	10.1	56	26.1	QP	N	GND
1.414500	29.90	10.1	56	26.1	QP	N	GND
1.815000	29.40	10.1	56	26.6	QP	N	GND

MEASUREMENT RESULT: "CTL250121782_fin2"

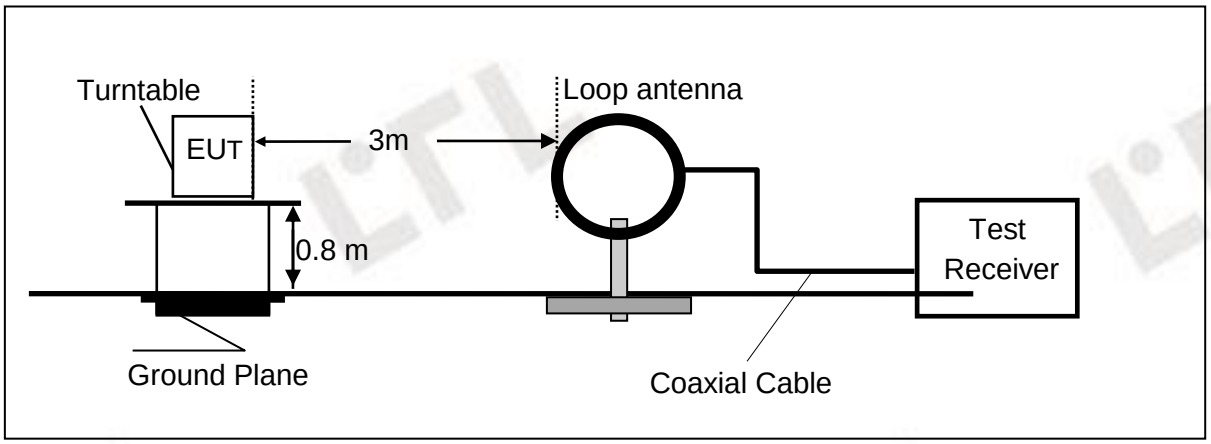
1/21/2025 4:22PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.402000	42.40	10.0	48	5.4	AV	N	GND
0.604500	37.10	10.0	46	8.9	AV	N	GND
0.807000	40.40	10.0	46	5.6	AV	N	GND
1.009500	30.00	10.1	46	16.0	AV	N	GND
1.414500	30.10	10.1	46	15.9	AV	N	GND
1.815000	29.50	10.1	46	16.5	AV	N	GND

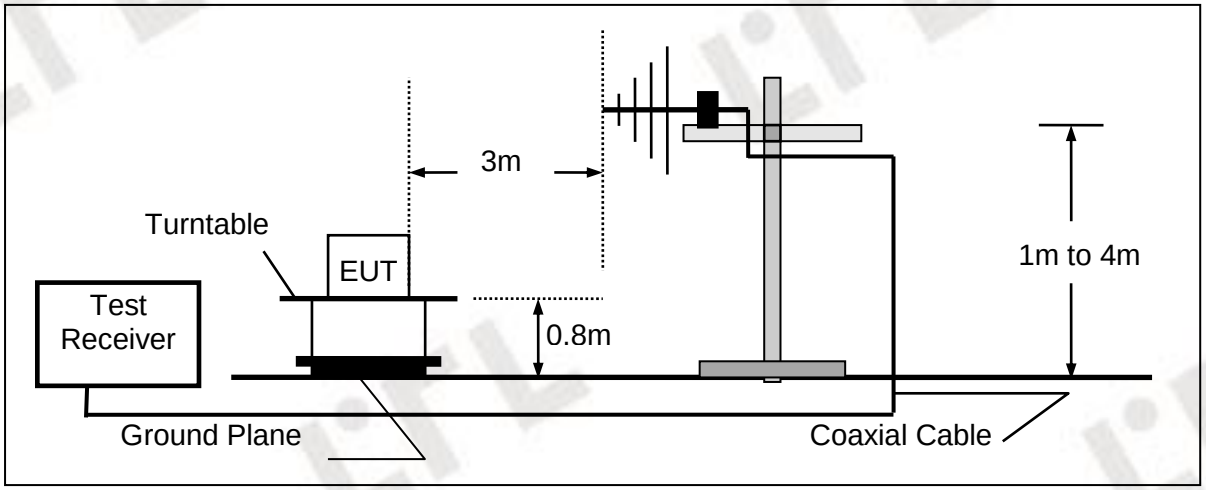
4.2. Radiated Emission

TEST CONFIGURATION

Radiated Emission Test Set-Up
Frequency range 9KHz – 30MHz



Frequency range 30MHz – 1000MHz



TEST PROCEDURE

1 The EUT was placed on a turn table which is 0.8m above ground plane.
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.

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	

For example

Frequency (MHz)	FS (dBμV/m)	RA (dBμV/m)	AF (dB)	CL (dB)	AG (dB)	Transd (dB)
300.00	40	58.1	12.2	1.6	31.90	-18.1

Transd=AF +CL-AG

RADIATION LIMIT

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

9k~30MHz:

Frequency Range (MHz)	E-field Strength Limit @ 30m (mV/m)	E-field Strength Limit @ 3m (dBμV/m)
0.009-0.490	2400/F(kHz)	129-94
0.490-1.705	24000/F(kHz)	74-63
1.705-30	30	70
Note: Where the limits have been defined at one distance, and a signal level measured at another, the limits have been extrapolated using the following formula: $\text{Extrapolation(dB)} = 40\log_{10}(\text{Measurement Distance}/\text{Specification Distance})$		

Note:
(1) The tighter limit shall apply at the edge between two frequency bands.
(2) dBuV/m = 20*log(uV/m)

30M~1GHz:

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

Note:
(1) The tighter limit shall apply at the edge between two frequency bands.
(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

TEST RESULTS
WORST-CASE RADIATED EMISSION BELOW 30 MHz

Coplanar

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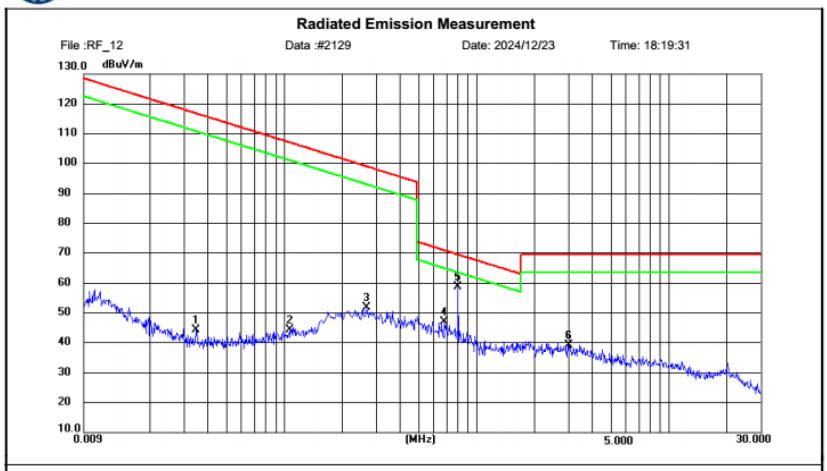

Site LAB Chamber 2
Limit: FCC Part 15 9K-30MHZ-2
EUT:
M/N: R10
Mode: 808.37KHz
Note: Shenzhen Yawell Intelligent Technology Co.,Ltd

Polarization: Coplanar
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0346	24.94	19.39	44.33	116.82	72.49	peak	P	
2	0.1074	22.67	21.57	44.24	106.98	62.74	peak	P	
3	0.2670	28.70	23.17	51.87	99.07	47.20	peak	P	
4	0.6765	27.05	19.98	47.03	71.00	23.97	peak	P	
5	0.8083	40.17	18.52	58.69	69.56	10.87	peak	P	
6	3.0345	21.16	18.19	39.35	69.54	30.19	peak	P	

Coaxial

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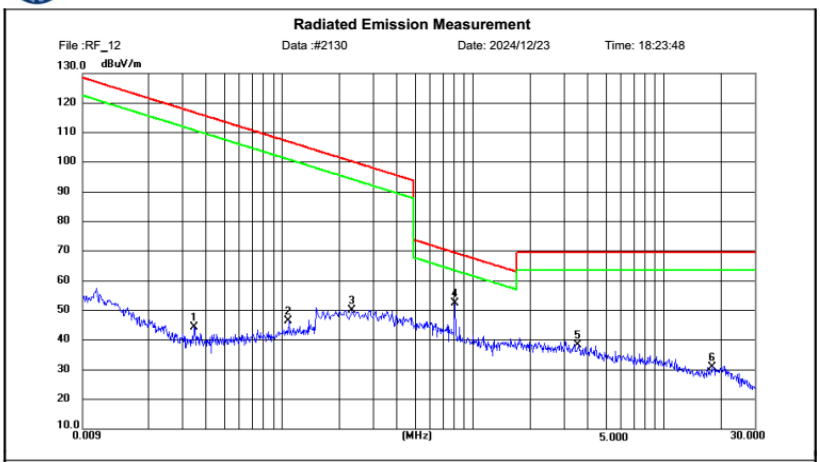
Tel: +86-755-89486194



Site LAB Chamber 2
(C)
Limit: FCC Part 15 9K-30MHZ-2
EUT:
M/N: R10
Mode: 808.37KHz
Note: Shenzhen Yawell Intelligent Technology Co.,Ltd

Polarization: Coaxial
Power:
Distance: 3m

Temperature: 25
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0346	25.02	19.39	44.41	116.82	72.41	peak	P	
2	0.1079	24.90	21.58	46.48	106.94	60.46	peak	P	
3	0.2310	27.28	22.81	50.09	100.33	50.24	peak	P	
4	0.8083	34.15	18.44	52.59	69.49	16.90	peak	P	
5	3.5700	20.46	17.97	38.43	69.54	31.11	peak	P	
6	18.0555	10.79	20.21	31.00	69.54	38.54	peak	P	

Radiated Emission Test Data 30-1000MHz:

Horizontal

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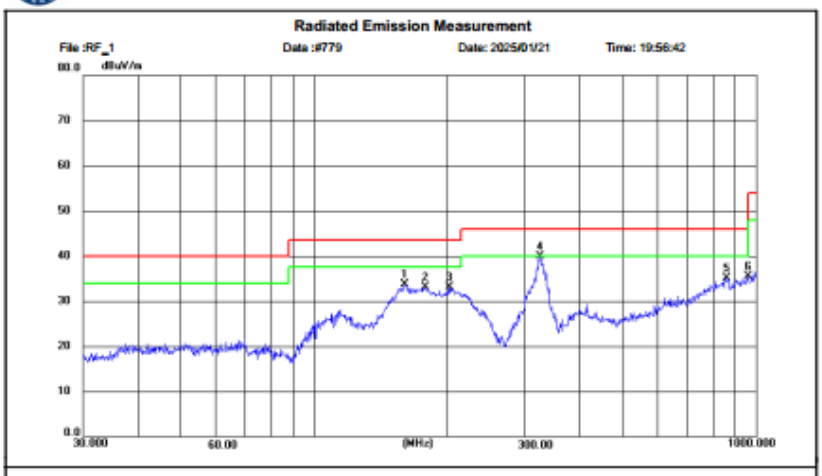

Site LAB Chamber 2
Limit: FCC Part15 RE-Class C_30-1000MHz
EUT:
M/N: R10
Mode: 808.37KHz
Note: Shenzhen Yawell Intelligent Technology Co.,Ltd

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	160.5566	19.54	14.20	33.74	43.50	9.76	peak	100	190	P	
2	178.5234	20.21	12.98	33.19	43.50	10.31	peak	100	22	P	
3	202.1890	21.15	11.91	33.06	43.50	10.44	peak	100	22	P	
4	325.1680	24.12	15.69	39.81	46.00	6.19	peak	100	117	P	
5	857.0246	7.70	27.45	35.15	46.00	10.85	peak	100	166	P	
6	959.2146	7.18	28.41	35.59	46.00	10.41	peak	100	129	P	

Vertical

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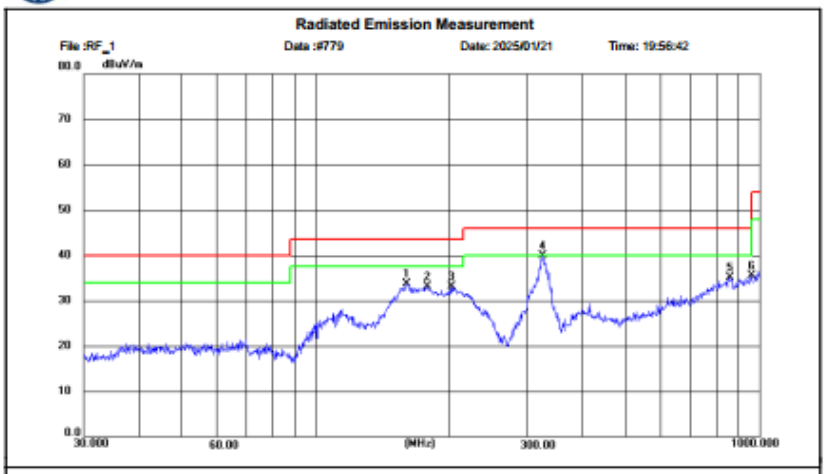


Site LAB Chamber 2
Limit: FCC Part15 RE-Class C_30-1000MHz
EUT:
M/N: R10
Mode: 808.37KHz
Note: Shenzhen Yawell Intelligent Technology Co.,Ltd

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	160.5566	19.54	14.20	33.74	43.50	9.76	peak	100	190	P	
2	178.5234	20.21	12.98	33.19	43.50	10.31	peak	100	22	P	
3	202.1890	21.15	11.91	33.06	43.50	10.44	peak	100	22	P	
4	325.1680	24.12	15.69	39.81	46.00	6.19	peak	100	117	P	
5	857.0246	7.70	27.45	35.15	46.00	10.85	peak	100	166	P	
6	959.2146	7.18	28.41	35.59	46.00	10.41	peak	100	129	P	

4.3. Antenna Requirement

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.

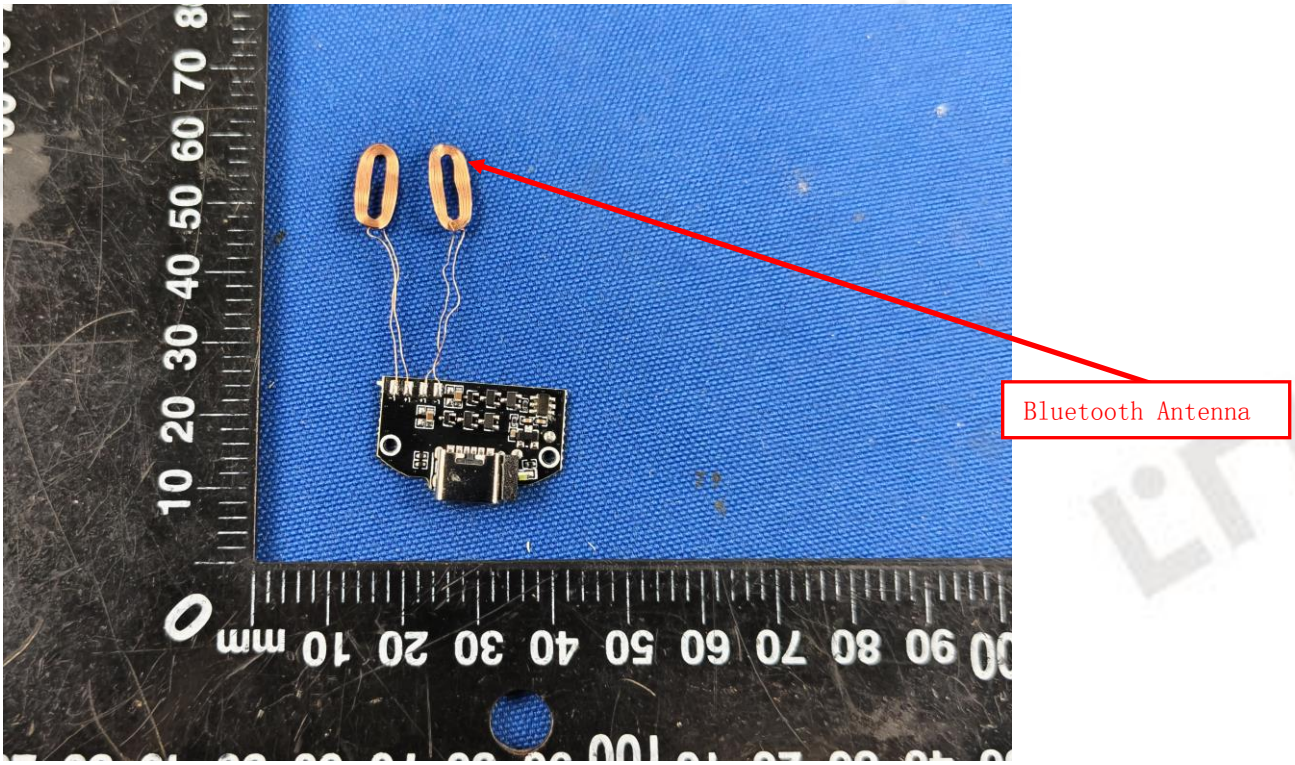
And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Refer to statement below for compliance

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The maximum gain of antenna was 0dBi



4.4. 20dB Bandwidth/99% Bandwidth

Limit

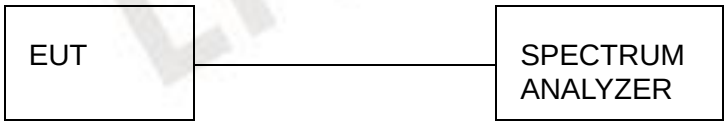
The 20dB bandwidth shall be less than 80% of the permitted frequency band.

Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with1KHz RBW and 3KHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

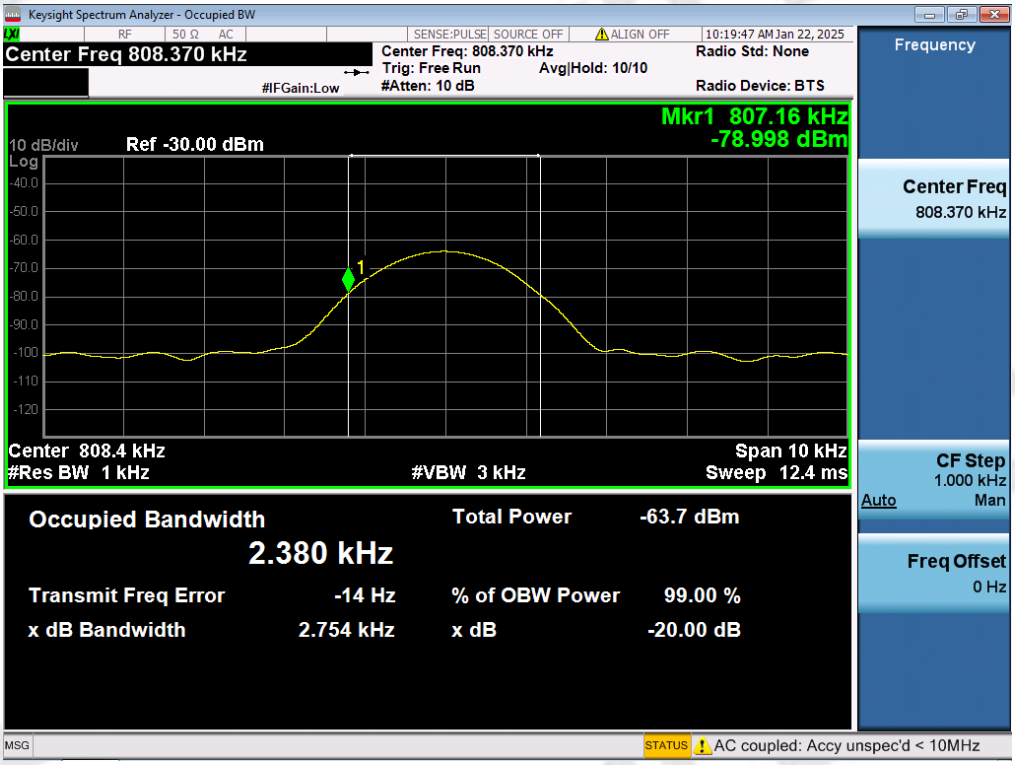
Test Configuration



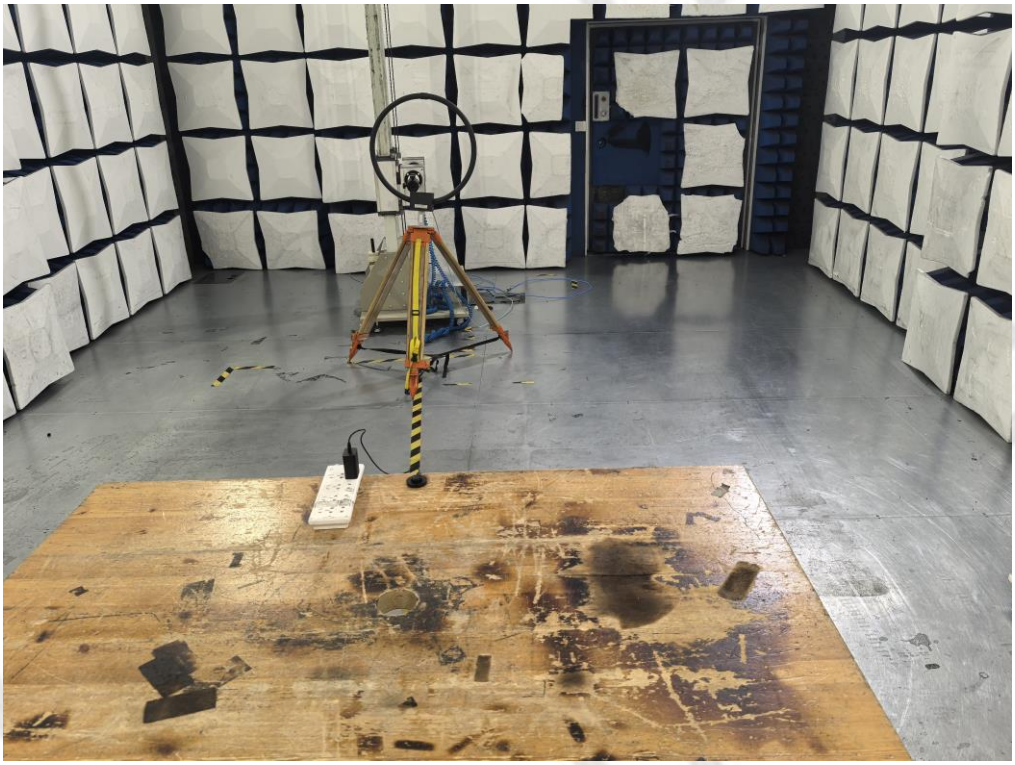
Test Results

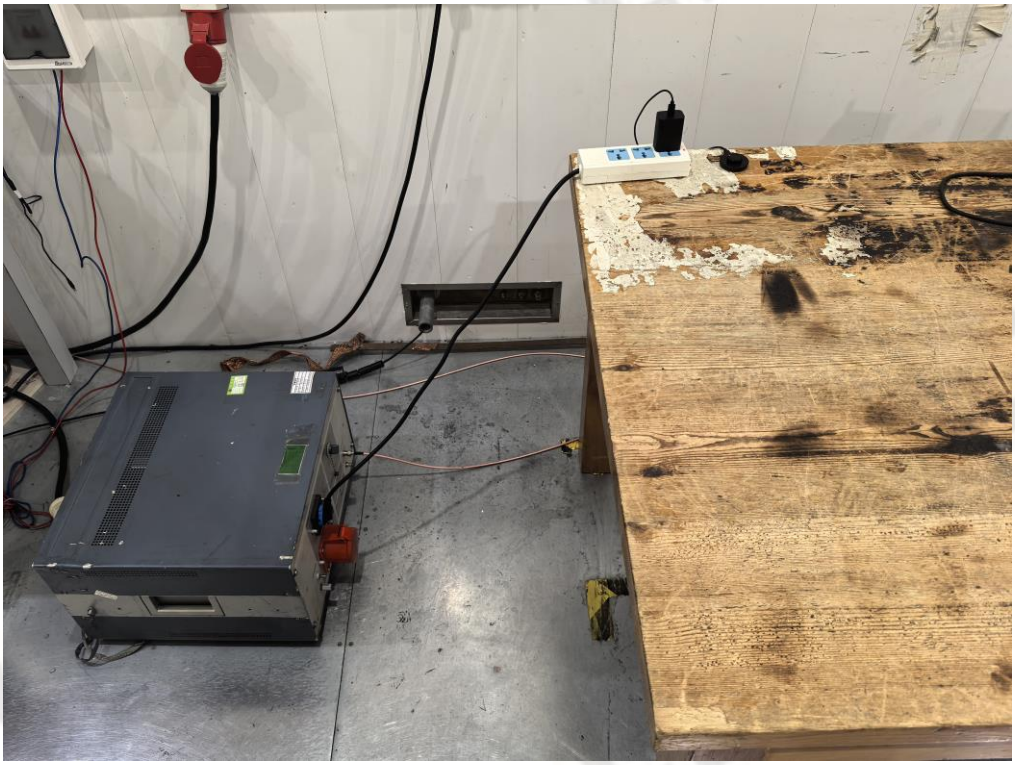
Frequency(MHz)	20dB bandwidth(kHz)	99% OBW(kHz)	Result
0.80837	2.754	2.380	Pass

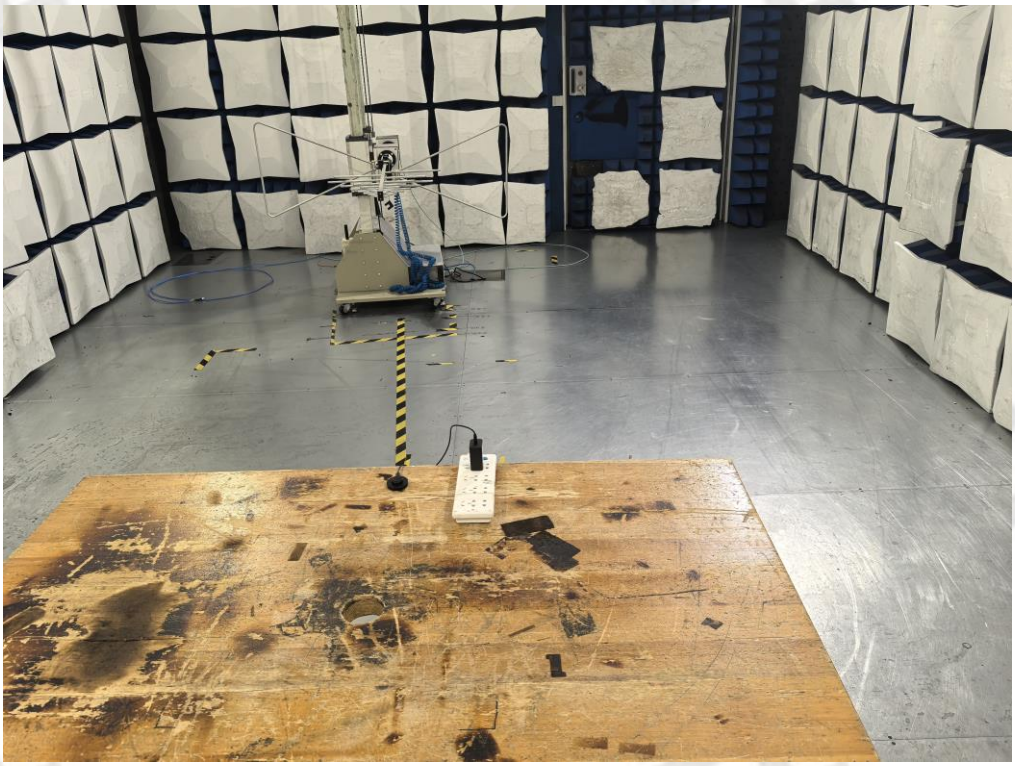
808.37 kHz


Keysight Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:PULSE SOURCE OFF ALIGN OFF 10:19:47 AM Jan 22, 2025
Center Freq 808.370 kHz
Center Freq: 808.370 kHz
Trig: Free Run Avg|Hold: 10/10
#IFGain:Low #Atten: 10 dB
Radio Std: None
Radio Device: BTS
Frequency
Mkr1 807.16 kHz
-78.998 dBm
10 dB/div Ref -30.00 dBm
Log
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
-120
Center 808.4 kHz
#Res BW 1 kHz
#VBW 3 kHz
Span 10 kHz
Sweep 12.4 ms
Occupied Bandwidth
2.380 kHz
Total Power -63.7 dBm
Transmit Freq Error -14 Hz
% of OBW Power 99.00 %
x dB Bandwidth 2.754 kHz
x dB -20.00 dB
Center Freq
808.370 kHz
CF Step
1.000 kHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS
AC coupled: Accy unspec'd < 10MHz

5. Test Setup Photos of the EUT

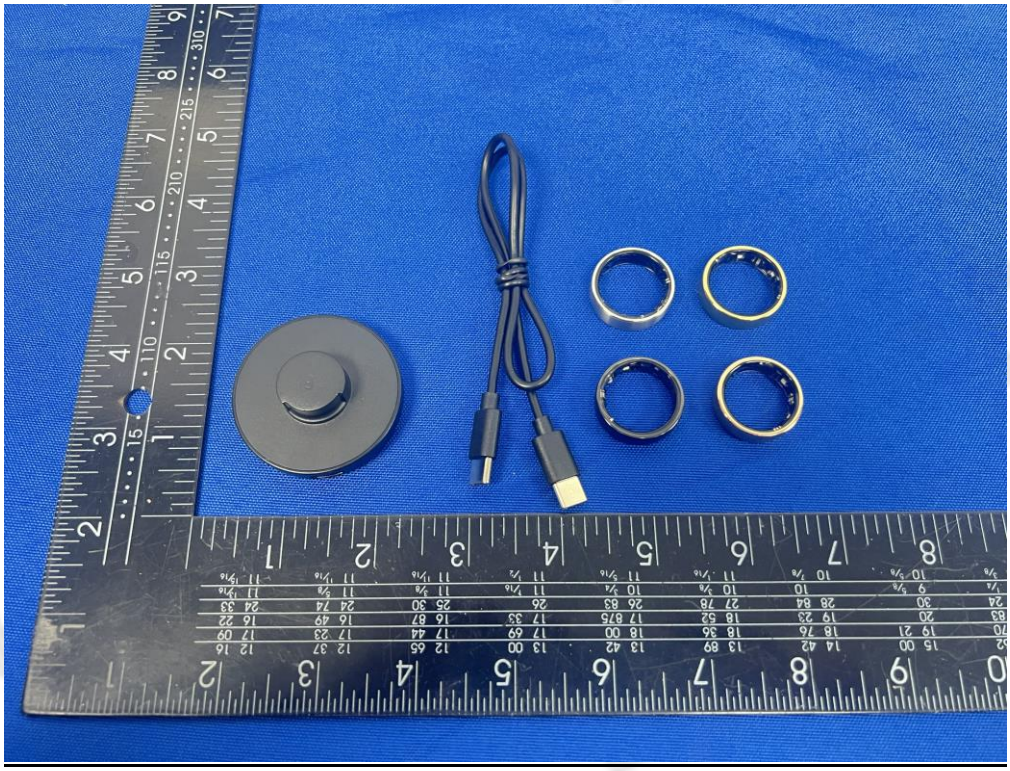


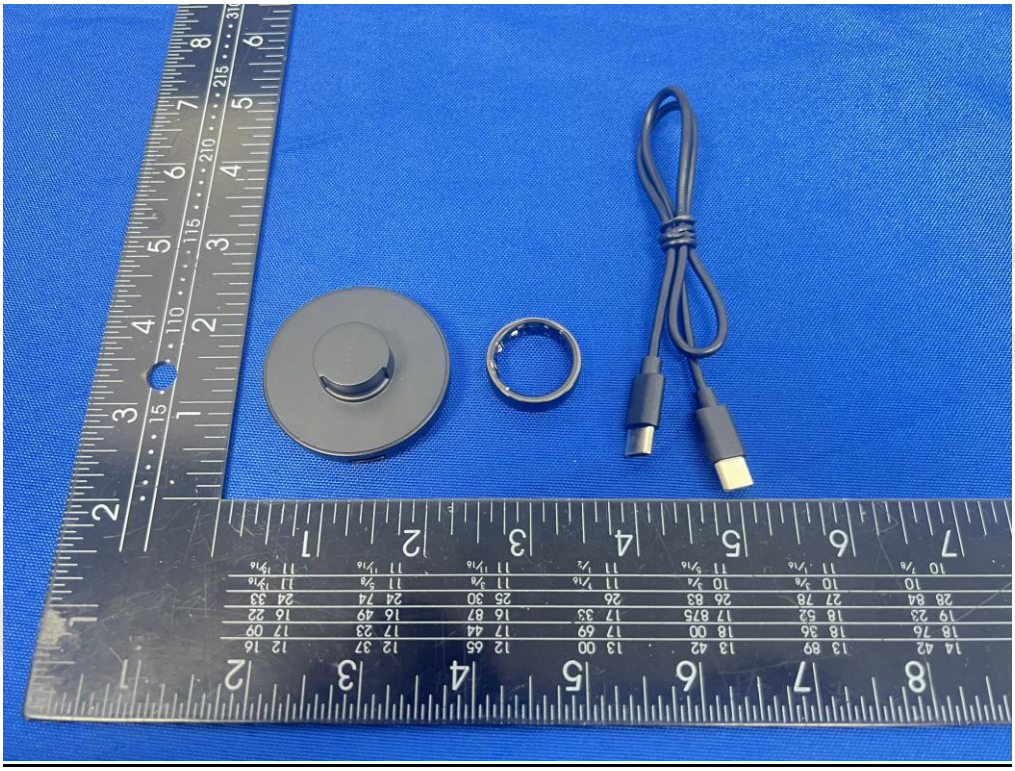


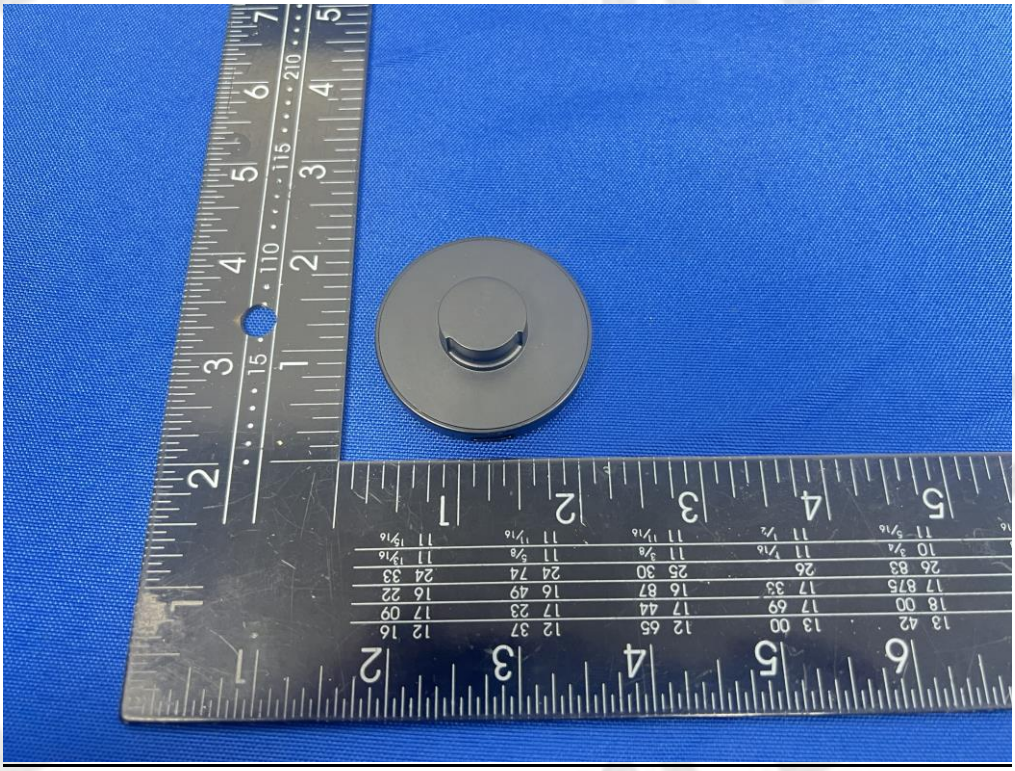


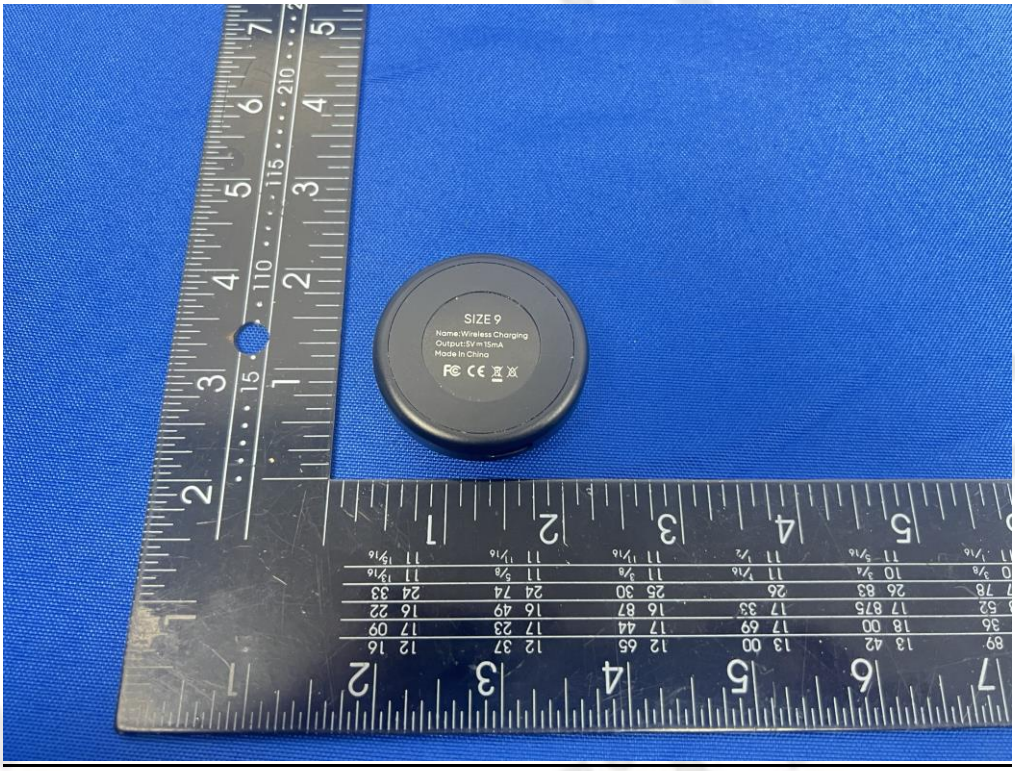
6. External and Internal Photos of the EUT

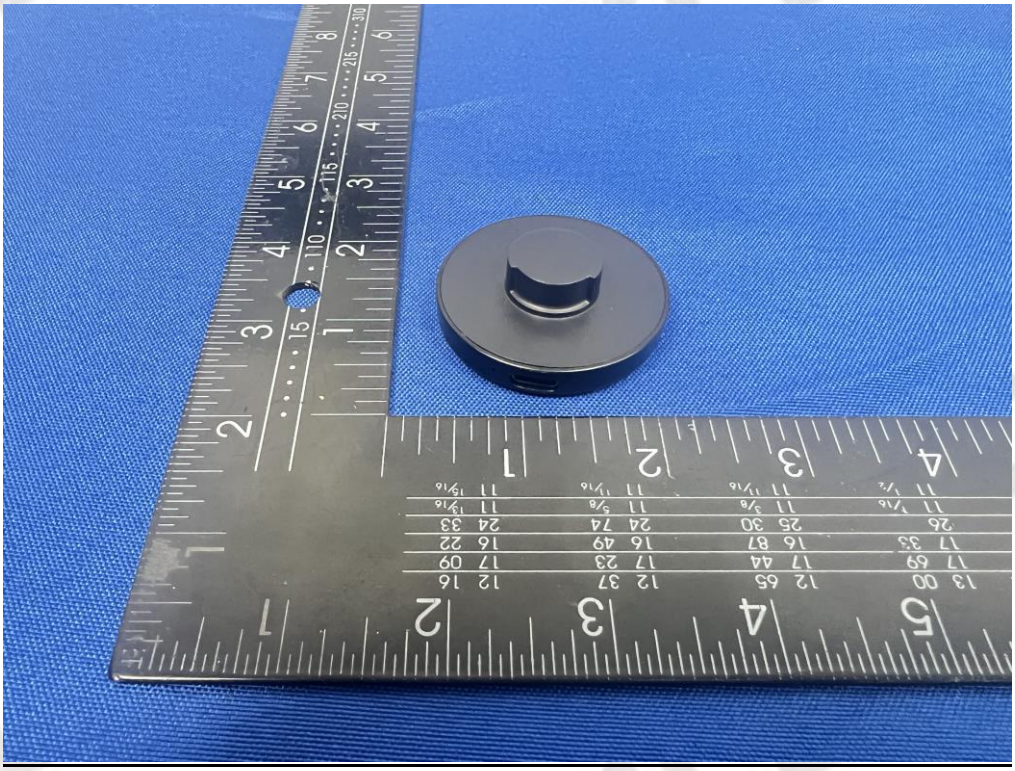
External photos

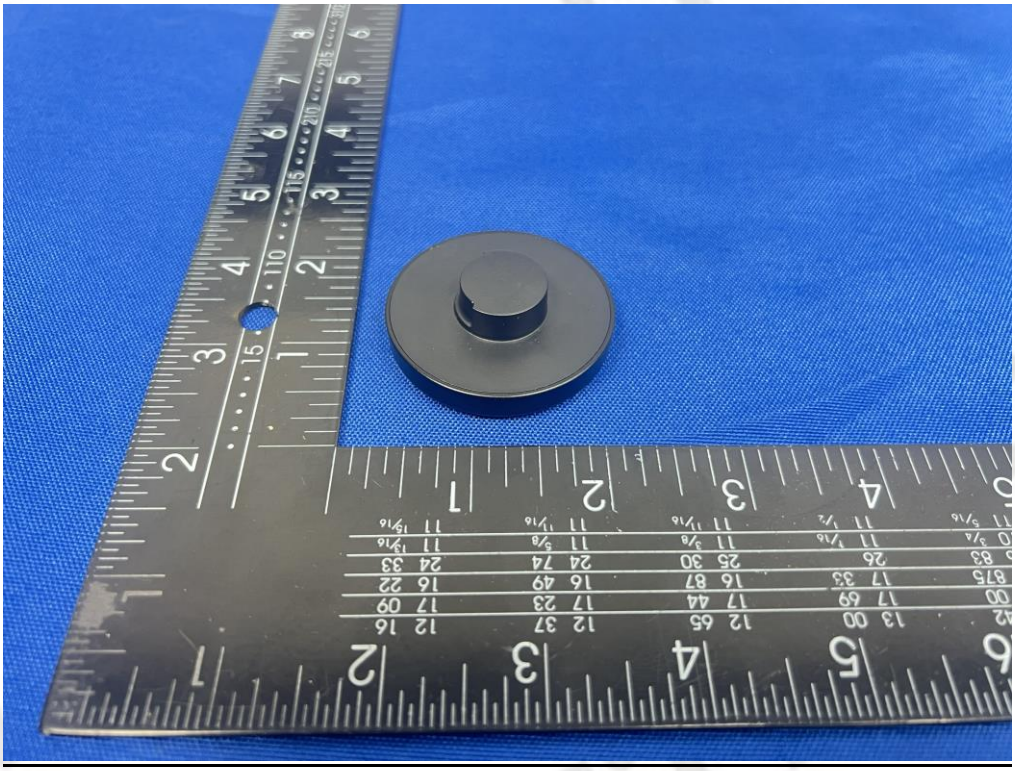


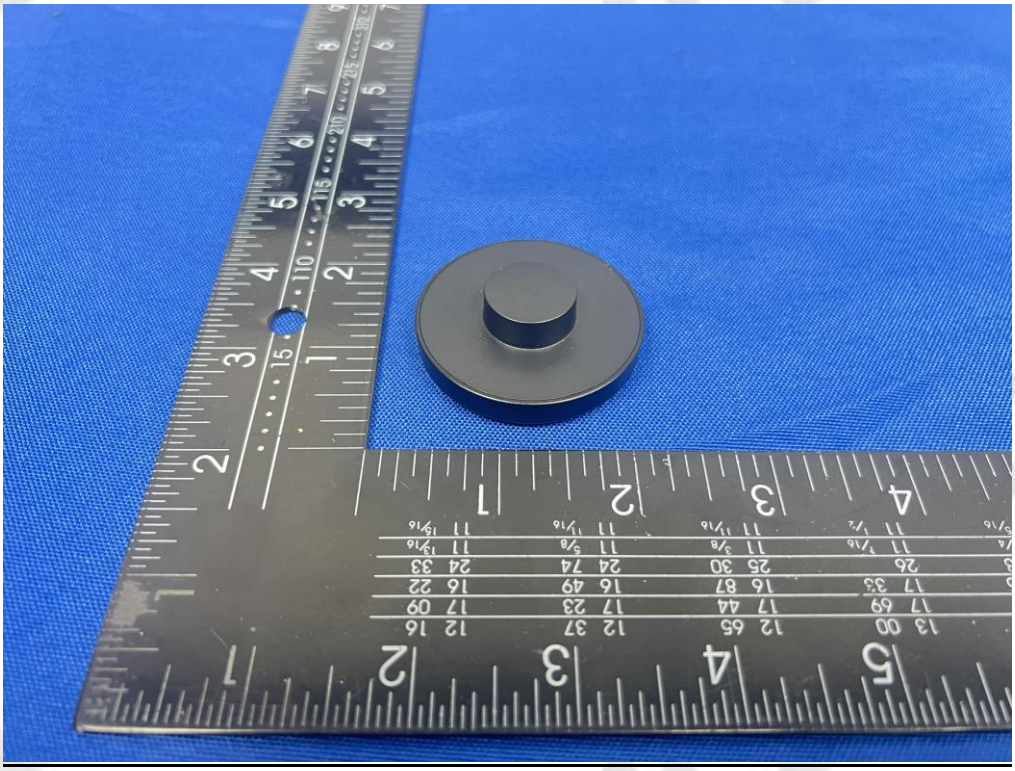


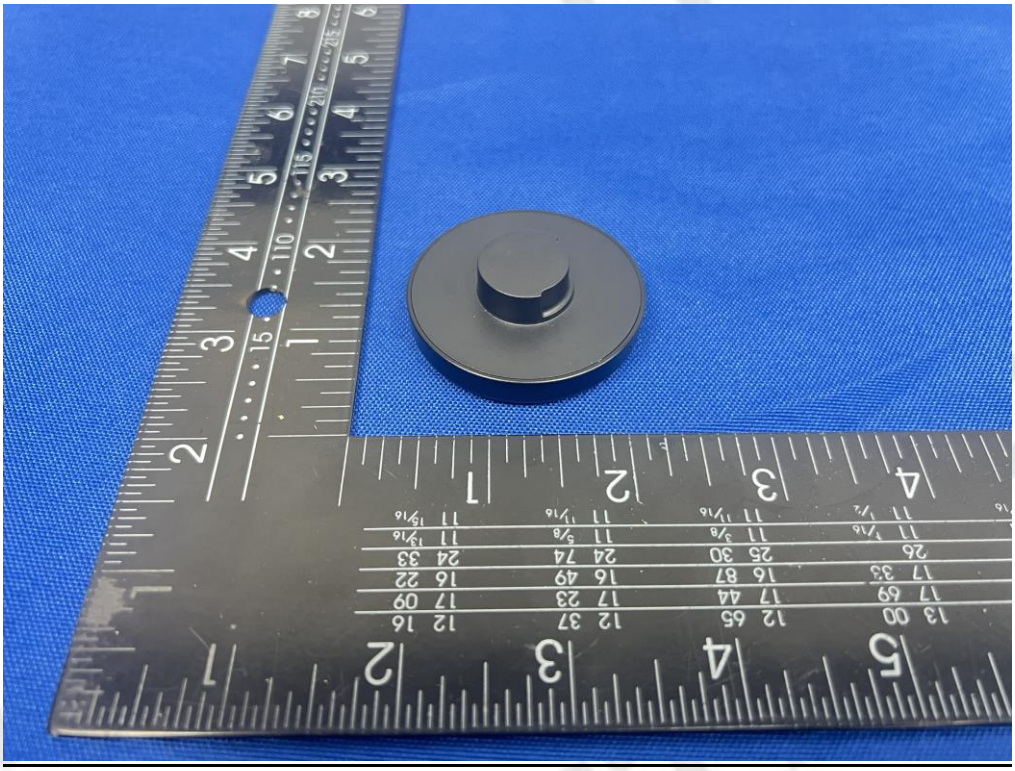



SIZE 9
Name:Wireless Charging
Output:5V⎓15mA
Made in China

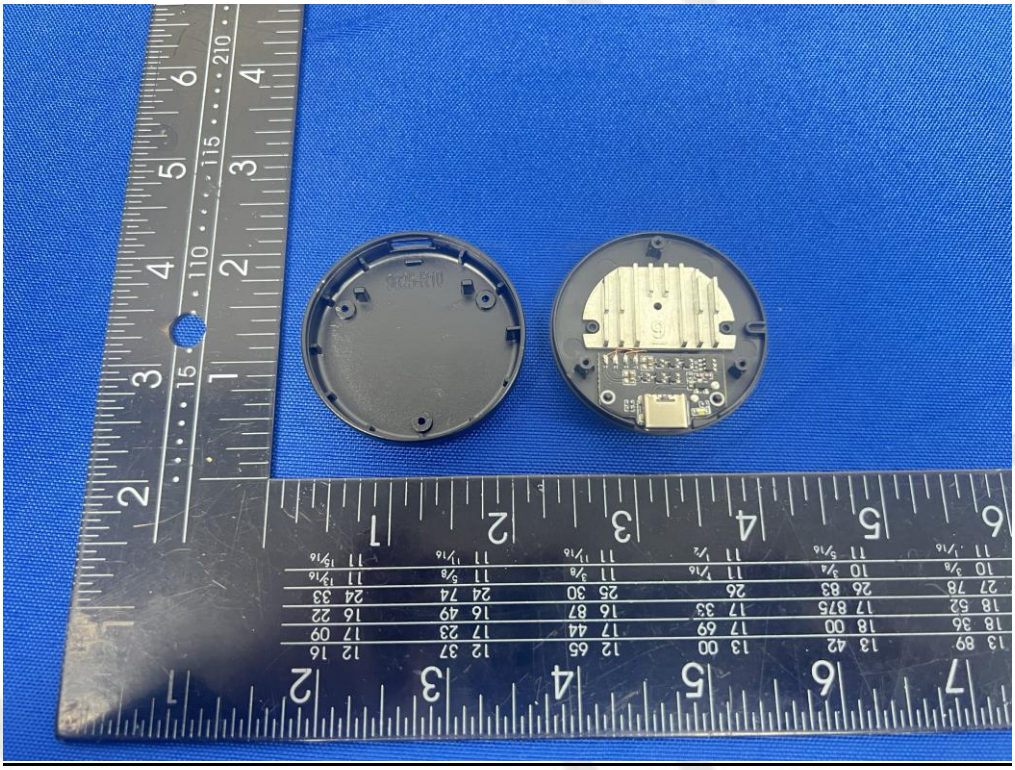


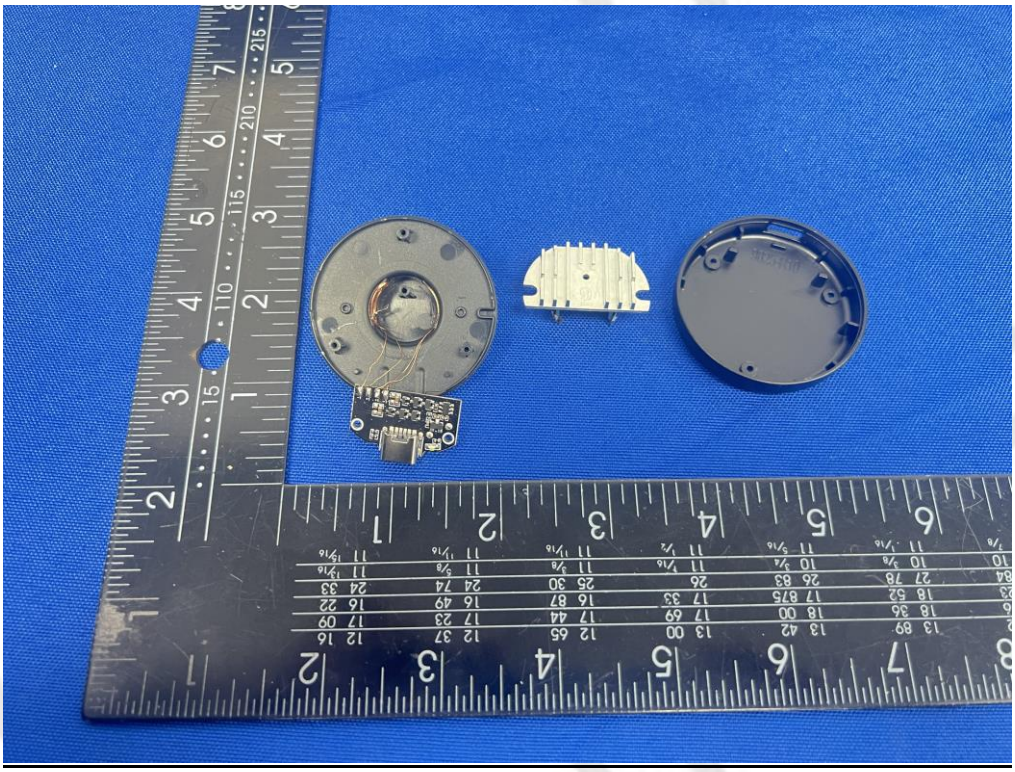


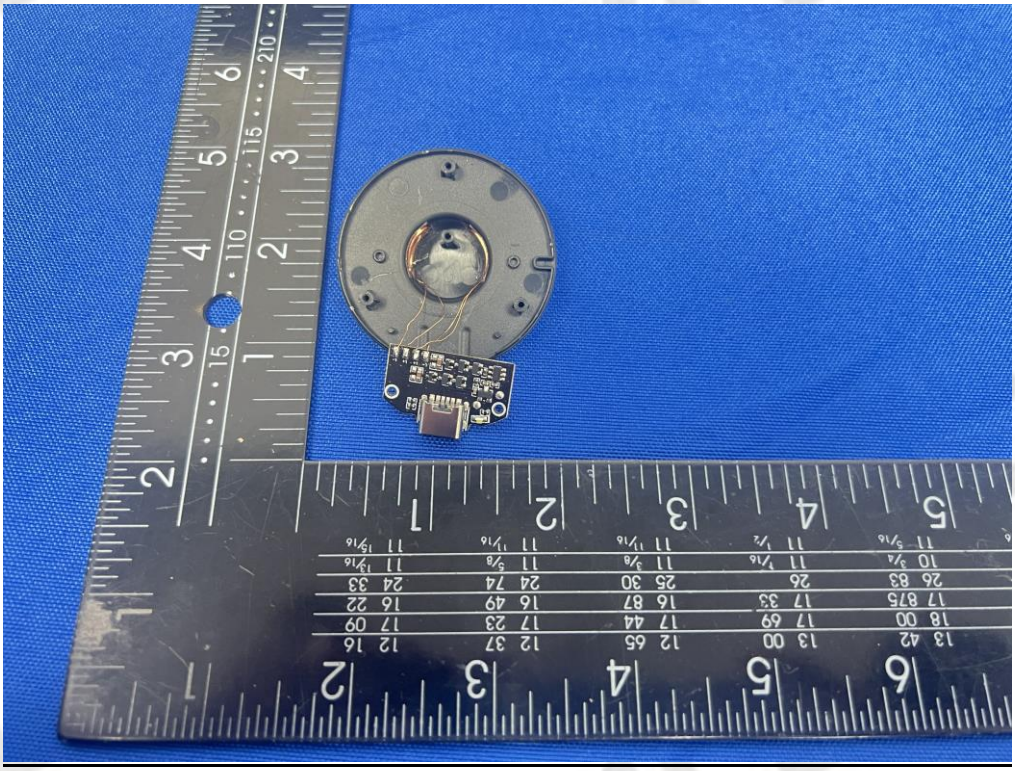


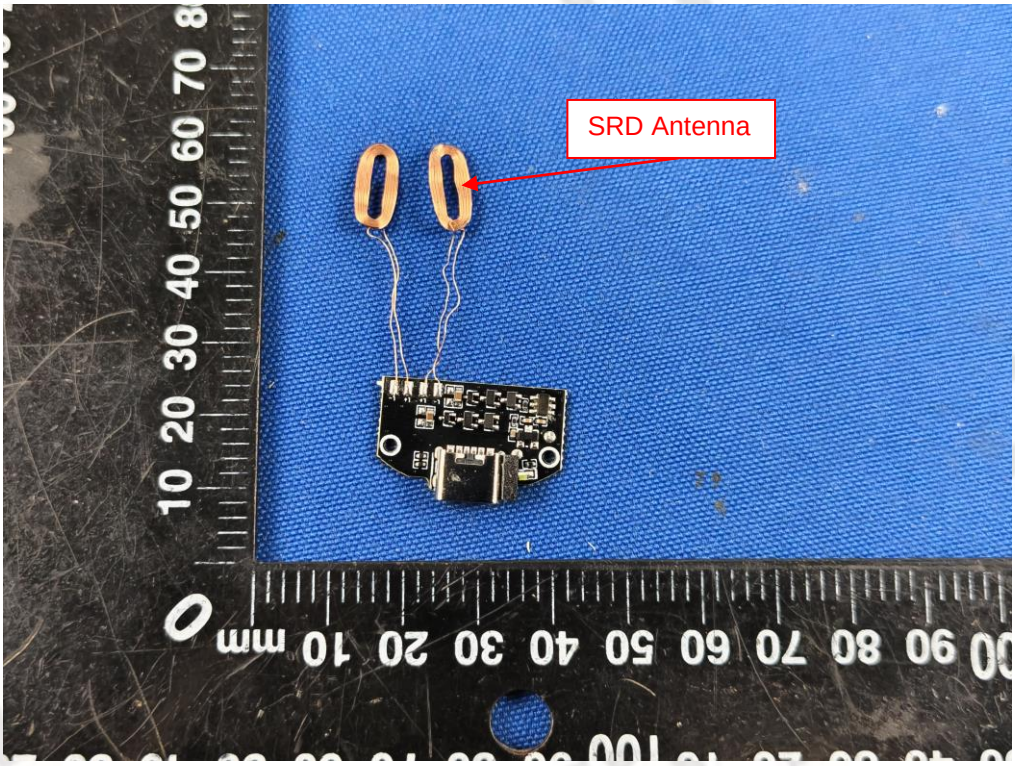


Internal photos









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