




TEST REPORT

FCC ID..... :	2BCUX-V1171	
Test Report No..... :	TCT231218E018	
Date of issue..... :	Jan. 10, 2024	
Testing laboratory	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	Shen Zhen Shi Ai Mei Ke Ke Ji You Xian Gong Si	
Address..... :	Room 1615, Building C, Huangdu Plaza, No.3008 Yitian Road, Huanggang Community, Futian Street, Futian District, Shenzhen 518000 China	
Manufacturer's name ... :	Dong guan Utopia-Originality Technology Co., Ltd	
Address..... :	NO.2, moushan Road, Chan'an Town, Dongguan City, Guangdong Province, China	
Standard(s)	FCC CFR Title 47 Part 15 Subpart C	
Product Name..... :	Portable Charger	
Trade Mark	VEGER	
Model/Type reference..... :	V1171	
Rating(s)..... :	Rechargeable Li-ion Battery DC 3.85V	
Date of receipt of test item	Dec. 18, 2023	
Date (s) of performance of test..... :	Dec. 18, 2023 - Jan. 10, 2024	
Tested by (+signature) ... :	Yannie ZHONG	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	



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1. General Product Information

1.1. EUT description

Product Name.....:	Portable Charger
Model/Type reference.....:	V1171
Sample Number.....:	TCT231218E018-0101
Operation Frequency	326.92~339.90kHz
Modulation Technology	Load modulation
Max. Wireless Output Power:	2.5W
Antenna Type.....:	Inductive loop coil Antenna
Rating(s).....:	Rechargeable Li-ion Battery DC 3.85V

1.2. Model(s) list

None.

2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Spurious Emission	§15.209(a)(f)	PASS

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.

3. General Information

3.1. Test environment and mode

Operating Environment:		
Condition	Conducted Emission	Radiated Emission
Temperature:	23.9 °C	24.1 °C
Humidity:	54 % RH	54 % RH
Atmospheric Pressure:	1010 mbar	1010 mbar
Test Mode:		
AC mode	Keep the EUT in three different wireless output modes (99% load, 50% load,1% load).	
Internal Battery Mode	Keep the EUT in three different wireless output modes (99% load, 50% load,1% load).	
<p>The sample was placed 0.8m for the measurement below above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case(Z axis) are shown in Test Results of the following pages.</p>		

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
Adapter	WC065A11JH	J121083BA1003016	/	OnePlus
Apple Watch	A1757	GGFX909MHDX9	/	Apple

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4. Facilities and Accreditations

4.1. Facilities

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

- FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4.3. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB

5. Test Results and Measurement Data

5.1. Antenna requirement

Standard requirement:

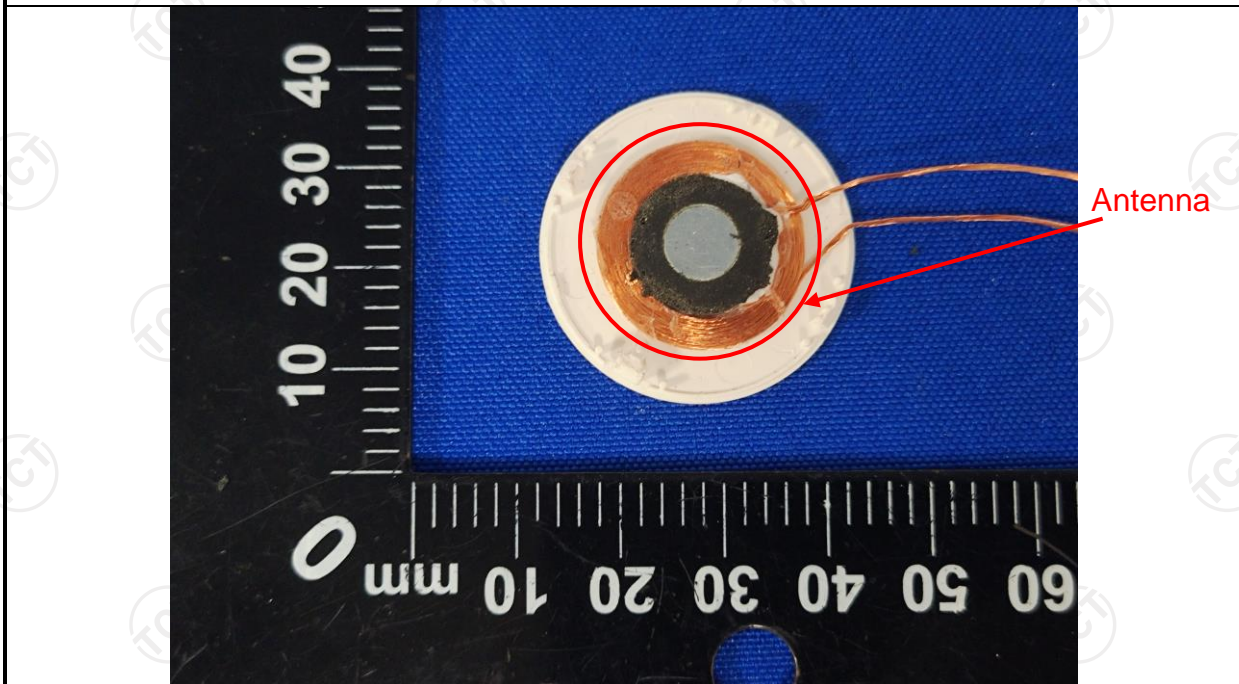
FCC Part15 C Section 15.203

15.203 requirement:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

E.U.T Antenna:

The antennas are inductive loop coil antenna which permanently attached.



5.2. Conducted Emission

5.2.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.207														
Test Method:	ANSI C63.10:2013														
Frequency Range:	150 kHz to 30 MHz														
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto														
Limits:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table>	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
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													
Test Setup:	<p><i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>														
Test Mode:	AC mode(The battery of the Apple watch is less than 1%)														
Test Procedure:	<ol style="list-style-type: none"> The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement. 														
Test Result:	PASS														

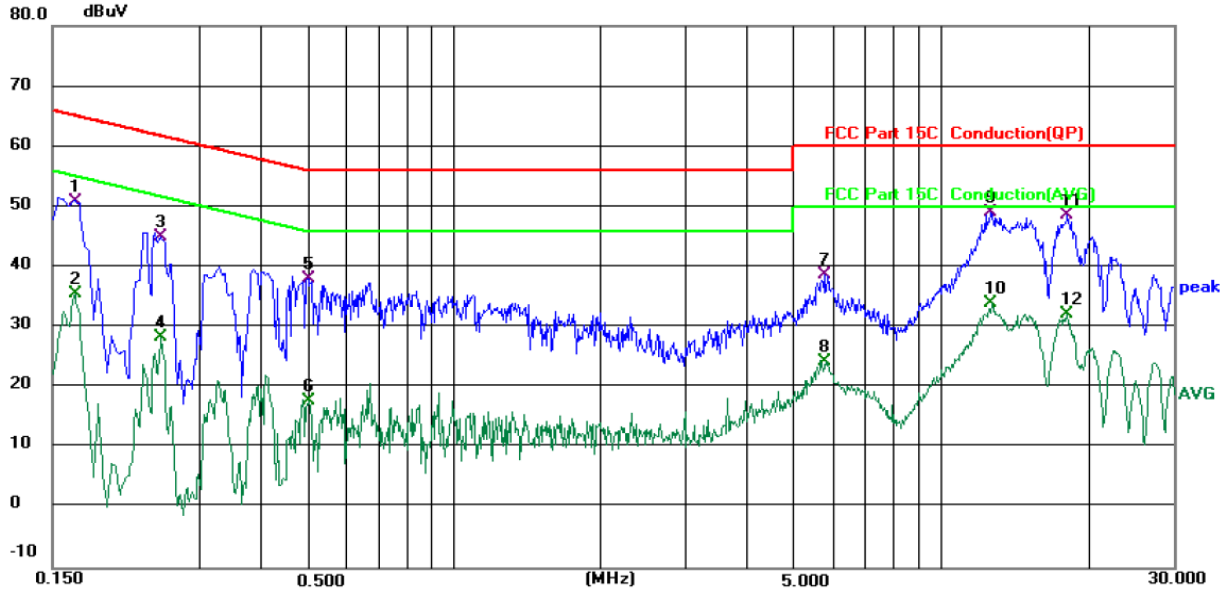
5.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)				
Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI3	100898	Jun. 29, 2024
Line Impedance Stabilisation Newtork(LISN)	Schwarzbeck	NSLK 8126	8126453	Feb. 20, 2024
Line-5	TCT	CE-05	/	Jul. 03, 2024
EMI Test Software	Shurple Technology	EZ-EMC	/	/

5.2.3. Test data

Please refer to following diagram for individual

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room

Phase: L1

Temperature: 23.9 (°C)

Humidity: 54 %

Limit: FCC Part 15C Conduction(QP)

Power: DC 12 V(Adapter Input AC 120 V/60 Hz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1660	40.73	10.13	50.86	65.16	-14.30	QP	
2		0.1660	25.34	10.13	35.47	55.16	-19.69	AVG	
3		0.2500	35.10	9.95	45.05	61.76	-16.71	QP	
4		0.2500	18.46	9.95	28.41	51.76	-23.35	AVG	
5		0.5020	28.67	9.46	38.13	56.00	-17.87	QP	
6		0.5020	8.26	9.46	17.72	46.00	-28.28	AVG	
7		5.7900	28.71	10.10	38.81	60.00	-21.19	QP	
8		5.7900	14.31	10.10	24.41	50.00	-25.59	AVG	
9	*	12.6059	38.83	10.16	48.99	60.00	-11.01	QP	
10		12.6059	23.84	10.16	34.00	50.00	-16.00	AVG	
11		18.1700	38.34	10.22	48.56	60.00	-11.44	QP	
12		18.1700	21.91	10.22	32.13	50.00	-17.87	AVG	

Note:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

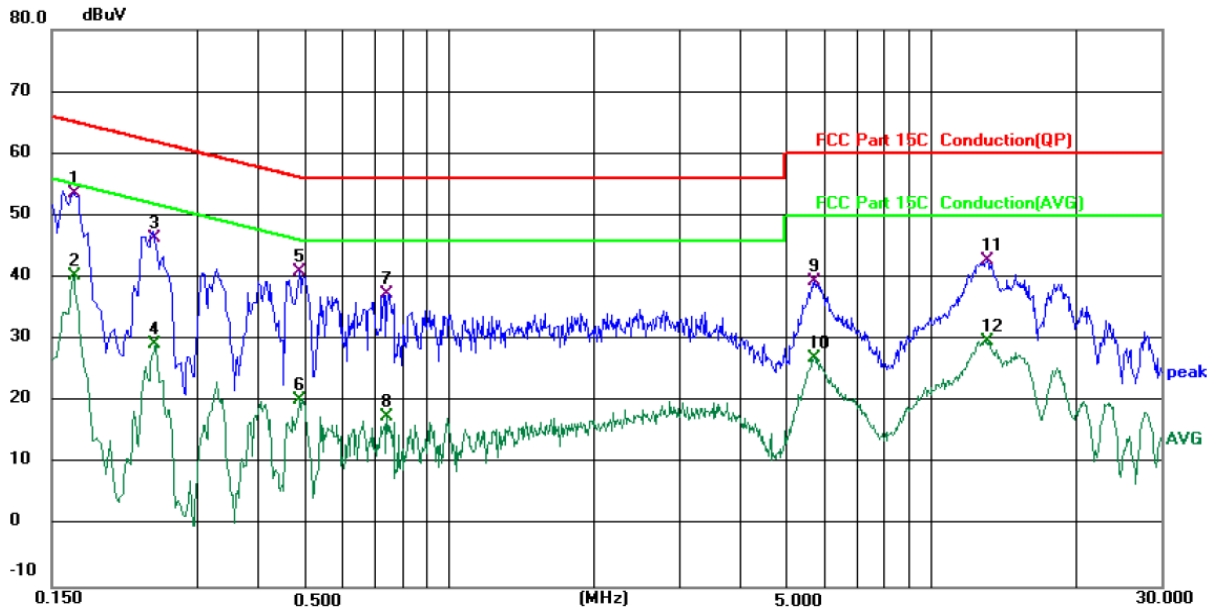
Margin (dB) = Measurement (dBuV) – Limits (dBuV)

Q.P. =Quasi-Peak

AVG =average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz

Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room

Phase: **N**

Temperature: 23.9 (°C)

Humidity: 54 %

Limit: FCC Part 15C Conduction(QP)

Power: DC 12 V(Adapter Input AC 120 V/60 Hz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1660	43.47	10.11	53.58	65.16	-11.58	QP	
2		0.1660	30.22	10.11	40.33	55.16	-14.83	AVG	
3		0.2442	36.47	9.95	46.42	61.95	-15.53	QP	
4		0.2442	19.21	9.95	29.16	51.95	-22.79	AVG	
5		0.4900	31.46	9.47	40.93	56.17	-15.24	QP	
6		0.4900	10.86	9.47	20.33	46.17	-25.84	AVG	
7		0.7459	28.04	9.22	37.26	56.00	-18.74	QP	
8		0.7459	8.29	9.22	17.51	46.00	-28.49	AVG	
9		5.7339	29.27	10.12	39.39	60.00	-20.61	QP	
10		5.7339	16.93	10.12	27.05	50.00	-22.95	AVG	
11		13.1100	32.58	10.23	42.81	60.00	-17.19	QP	
12		13.1100	19.57	10.23	29.80	50.00	-20.20	AVG	

Note:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

Margin (dB) = Measurement (dBuV) – Limits (dBuV)

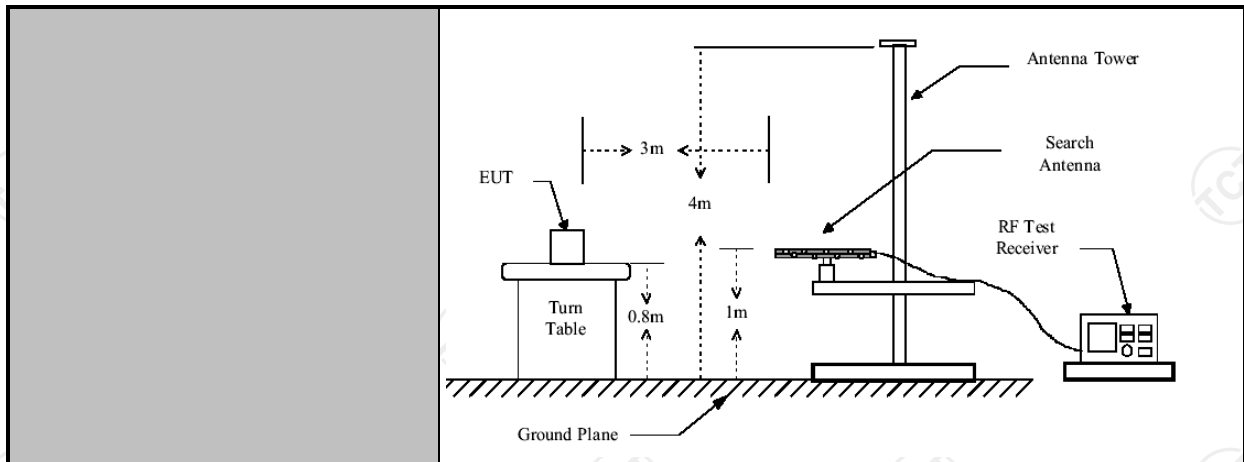
Q.P. =Quasi-Peak AVG =average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz

5.3. Radiated Spurious Emission Measurement

5.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10: 2013				
Frequency Range:	9 kHz to 25 GHz				
Measurement Distance:	3 m				
Antenna Polarization:	Horizontal & Vertical				
Operation mode:	Refer to item 3.1				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
Limit:	Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)		
	0.009-0.490	2400/F(KHz)	300		
	0.490-1.705	24000/F(KHz)	30		
	1.705-30	30	30		
	30-88	100	3		
	88-216	150	3		
	216-960	200	3		
	Above 960	500	3		
Test setup:	For radiated emissions below 30MHz				
	<p>30MHz to 1GHz</p>				



Test Procedure:

1. For the radiated emission test below 1GHz:
The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.
2. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
3. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
4. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=120 kHz for $f < 1$ GHz; VBW \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.

For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Test mode:

Refer to section 3.1 for details

Test results:

PASS

5.3.2. Test Instruments

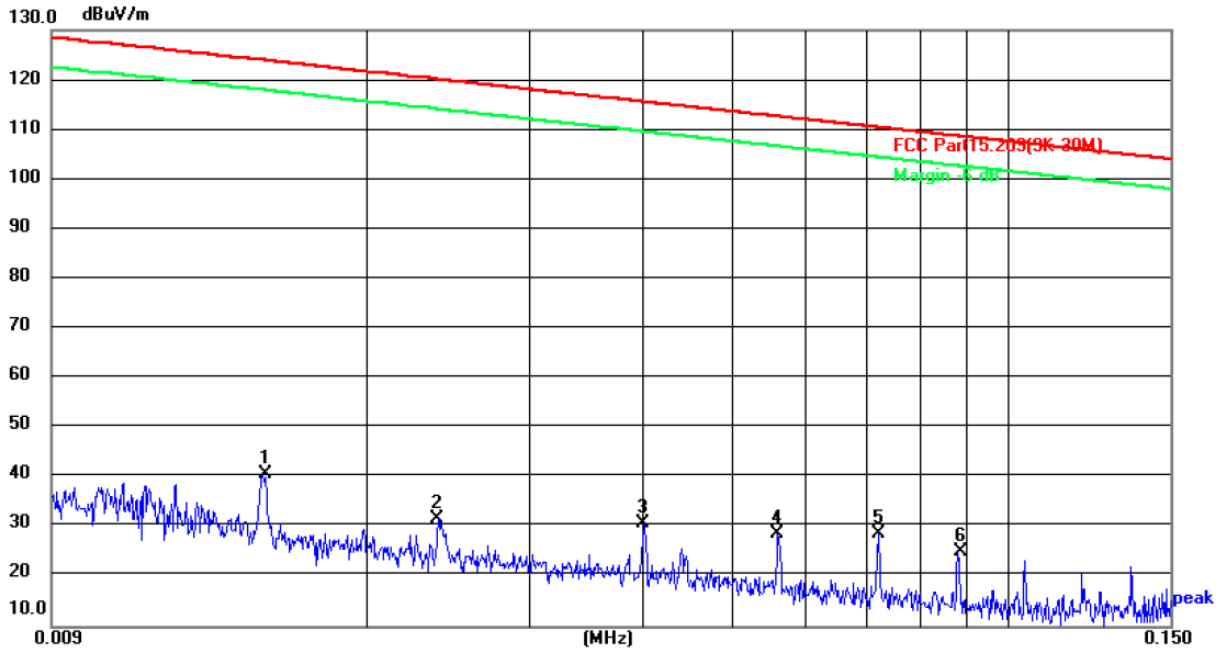
Radiated Emission Test Site (966)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESIB7	100197	Jun. 29, 2024
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 29, 2024
Pre-amplifier	HP	8447D	2727A05017	Jun. 27, 2024
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jul. 02, 2024
Broadband Antenna	Schwarzbeck	VULB9163	340	Jul. 01, 2024
Antenna Mast	Keleto	RE-AM	/	/
Coaxial cable	SKET	RC-18G-N-M	/	Feb. 24, 2024
EMI Test Software	Shurple Technology	EZ-EMC	/	/

5.3.3. Test Data

Please refer to following diagram for individual
9KHz-30MHz

9KHz-150KHz:

coaxial



Site: #3 3m Anechoic Chamber

Polarization: **Coaxial**

Temperature: 23.9(°C)

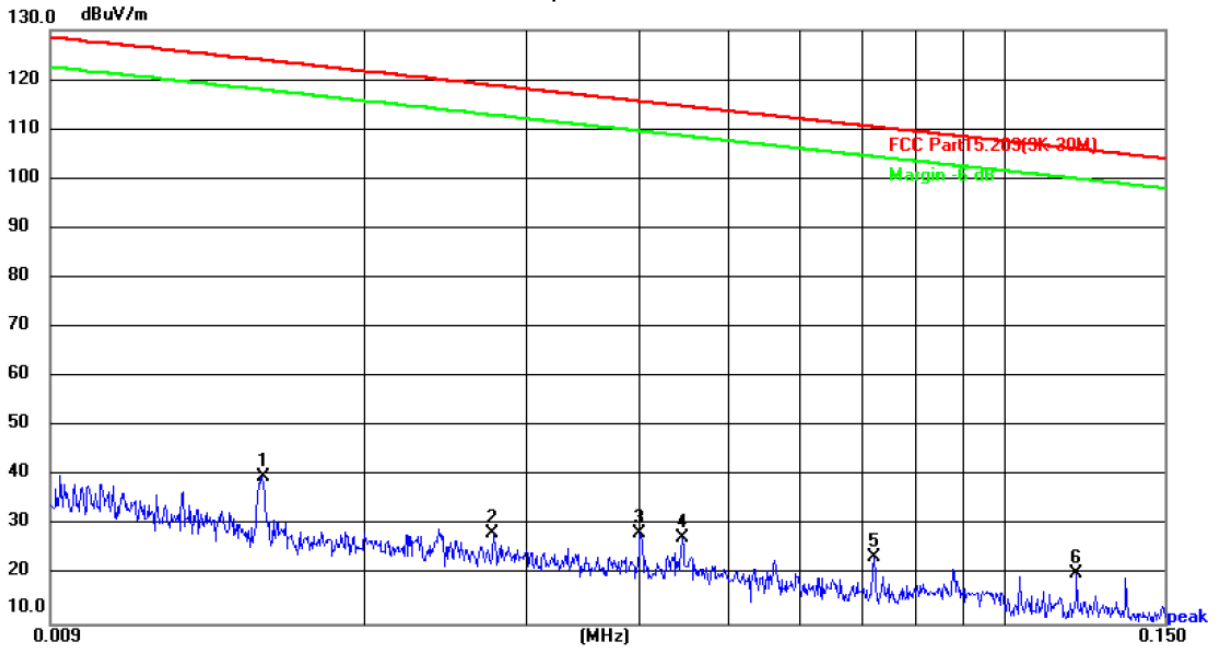
Humidity: 43 %

Limit: FCC Part15.209(9K-30M)

Power:DC 3.85 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0153	19.99	20.62	40.61	123.91	-83.30	peak	P	
2	0.0238	11.14	20.49	31.63	120.07	-88.44	peak	P	
3	0.0400	10.31	20.45	30.76	115.56	-84.80	peak	P	
4	0.0560	8.27	20.62	28.89	112.64	-83.75	peak	P	
5 *	0.0719	7.89	20.89	28.78	110.47	-81.69	peak	P	
6	0.0880	4.42	20.81	25.23	108.71	-83.48	peak	P	

Coplanar



Site: #3 3m Anechoic Chamber

Polarization: **Coplanar**

Temperature: 23.9(°C)

Humidity: 43 %

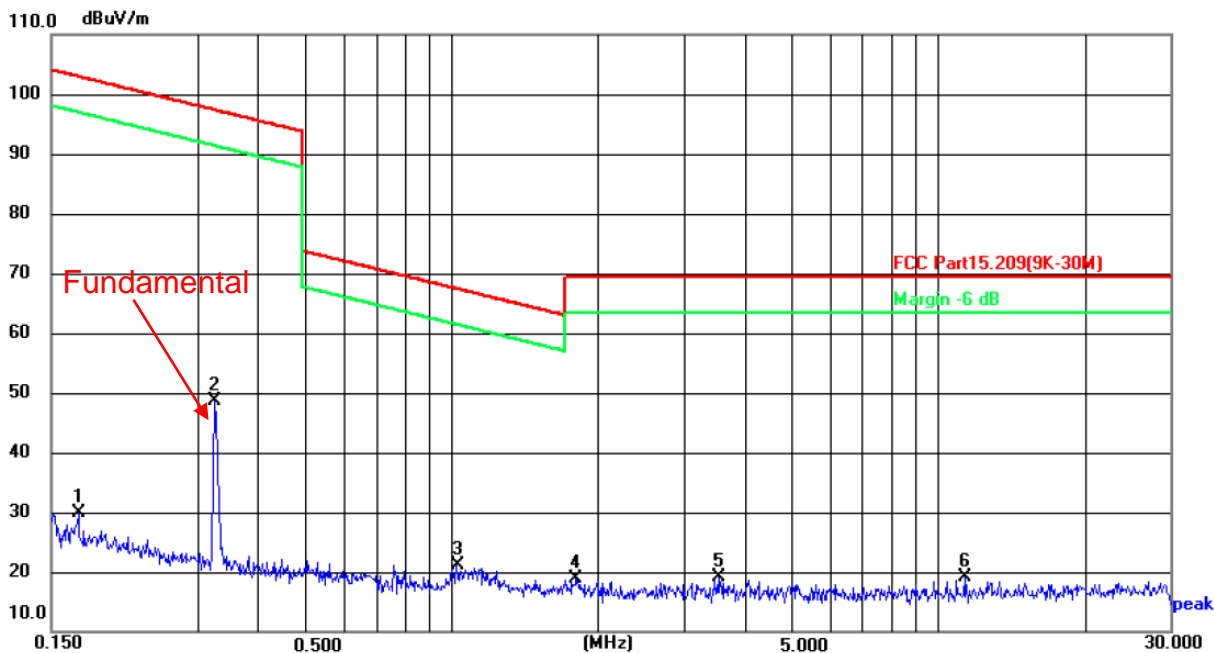
Limit: FCC Part15.209(9K-30M)

Power:DC 3.85 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	0.0152	19.33	20.62	39.95	123.97	-84.02	peak	P	
2	0.0275	8.10	20.43	28.53	118.82	-90.29	peak	P	
3	0.0400	7.92	20.45	28.37	115.56	-87.19	peak	P	
4	0.0444	7.12	20.47	27.59	114.66	-87.07	peak	P	
5	0.0719	2.81	20.89	23.70	110.47	-86.77	peak	P	
6	0.1200	0.14	20.35	20.49	106.02	-85.53	peak	P	

150KHz-30MHz:

coaxial



Site: #3 3m Anechoic Chamber

Polarization: **Coaxial**

Temperature: 23.9(°C)

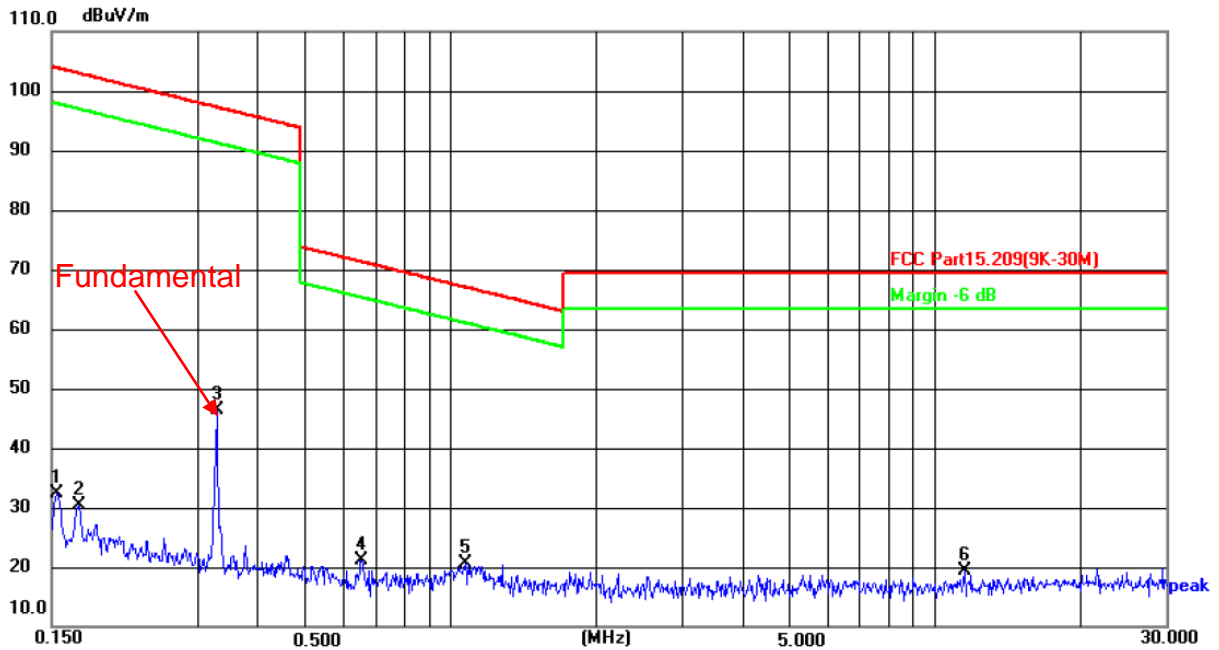
Humidity: 43 %

Limit: FCC Part15.209(9K-30M)

Power:DC 3.85 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.1708	9.39	20.41	29.80	102.95	-73.15	peak	P	
2	0.3256	28.14	20.45	48.59	97.35	-48.76	peak	P	
3 *	1.0244	0.41	20.60	21.01	67.41	-46.40	peak	P	
4	1.8019	-1.85	20.64	18.79	69.50	-50.71	peak	P	
5	3.5390	-1.54	20.65	19.11	69.50	-50.39	peak	P	
6	11.3589	-23.67	42.78	19.11	69.50	-50.39	peak	P	

coplanar



Site: #3 3m Anechoic Chamber

Polarization: **Coplanar**

Temperature: 23.9(°C)

Humidity: 43 %

Limit: FCC Part15.209(9K-30M)

Power:DC 3.85 V

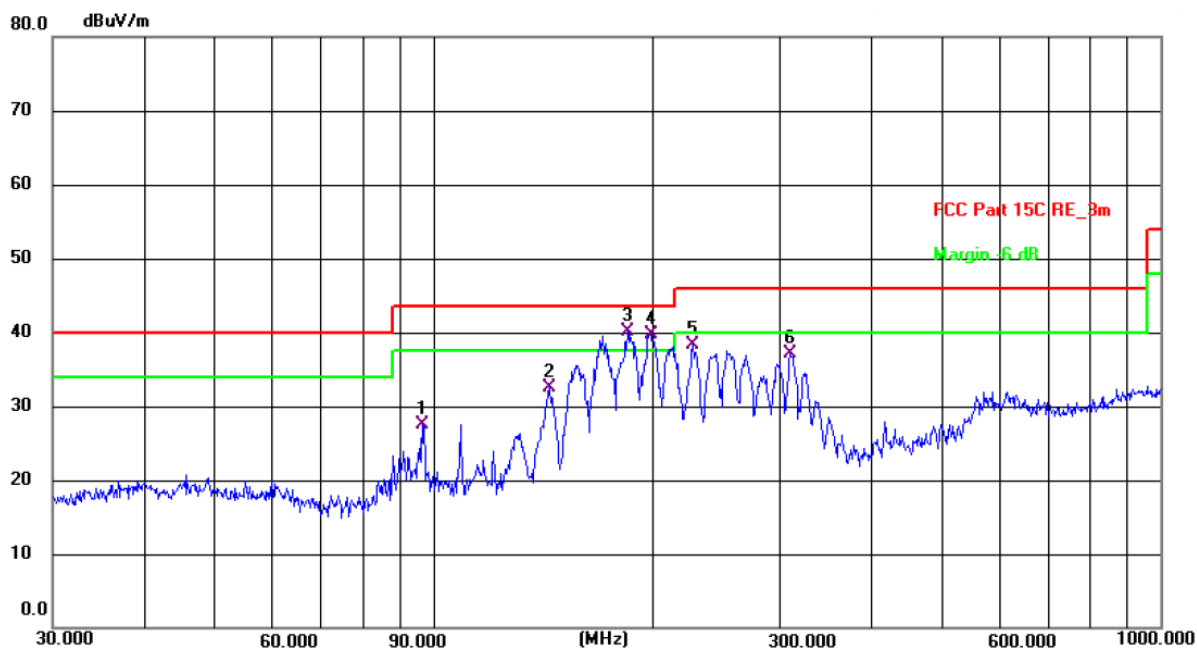
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.1544	12.03	20.40	32.43	103.83	-71.40	peak	P	
2	0.1706	10.01	20.41	30.42	102.96	-72.54	peak	P	
3	0.3294	25.99	20.45	46.44	97.25	-50.81	peak	P	
4	0.6560	0.59	20.53	21.12	71.27	-50.15	peak	P	
5 *	1.0704	-0.01	20.60	20.59	67.03	-46.44	peak	P	
6	11.5288	-23.74	43.05	19.31	69.50	-50.19	peak	P	

Note:

1. Both AC mode and Internal Battery Mode have been tested, only the worse mode (Internal Battery Mode which is the battery of the Apple watch is less than 1%) reported.

30MHz-1GHz

Horizontal:



Site #2 3m Anechoic Chamber

Polarization: **Horizontal**

Temperature: 24.1(C)

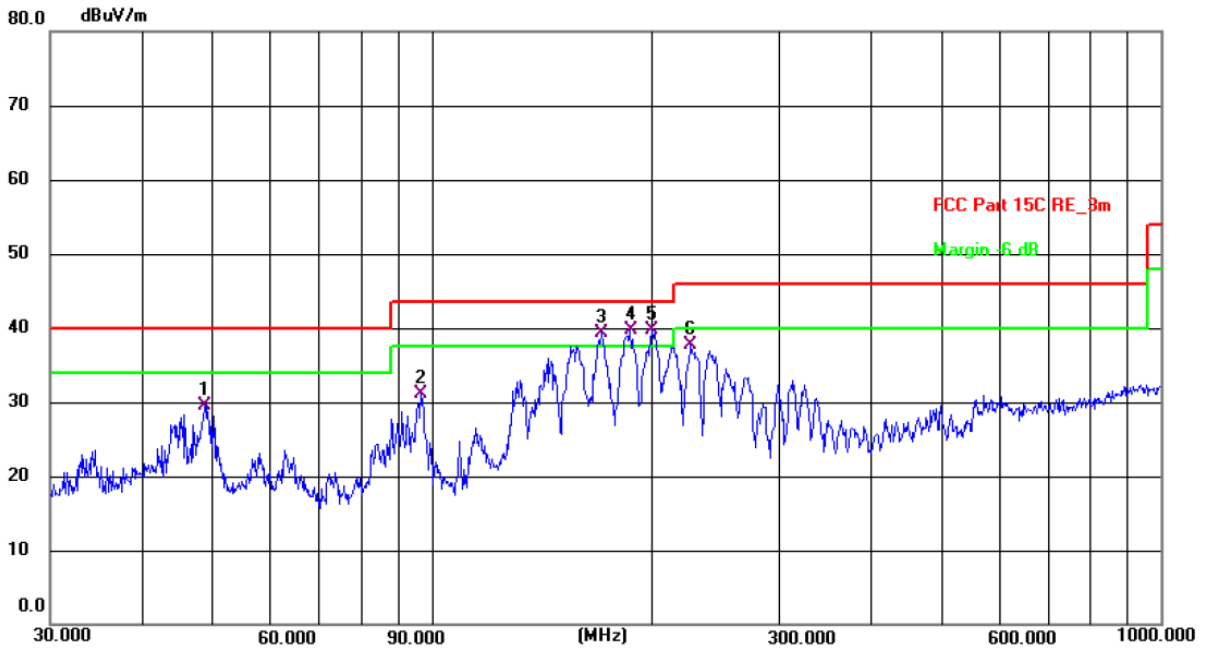
Humidity: 54 %

Limit: FCC Part 15C RE_3m

Power: DC 12 V(Adapter Input AC 120 V/60 Hz)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	96.7749	16.78	10.68	27.46	43.50	-16.04	QP	P	
2	144.3343	18.00	14.59	32.59	43.50	-10.91	QP	P	
3 *	185.1374	28.30	11.80	40.10	43.50	-3.40	QP	P	
4 !	199.2855	28.67	10.95	39.62	43.50	-3.88	QP	P	
5	227.6904	25.90	12.48	38.38	46.00	-7.62	QP	P	
6	309.9977	22.06	15.02	37.08	46.00	-8.92	QP	P	

Vertical:



Site #2 3m Anechoic Chamber Polarization: **Vertical** Temperature: 24.1(C) Humidity: 54 %

Limit: FCC Part 15C RE_3m Power: DC 12 V(Adapter Input AC 120 V/60 Hz)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	48.8427	15.87	13.67	29.54	40.00	-10.46	QP	P	
2	96.7749	20.50	10.68	31.18	43.50	-12.32	QP	P	
3 !	170.7923	25.18	14.05	39.23	43.50	-4.27	QP	P	
4 *	187.0955	28.14	11.61	39.75	43.50	-3.75	QP	P	
5 !	200.6879	28.74	10.96	39.70	43.50	-3.80	QP	P	
6	226.8934	25.23	12.43	37.66	46.00	-8.34	QP	P	

Note:

1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
2. Both AC mode and Internal Battery Mode have been tested, only the worse mode (AC mode which is the battery of the Apple watch is less than 1%) reported.

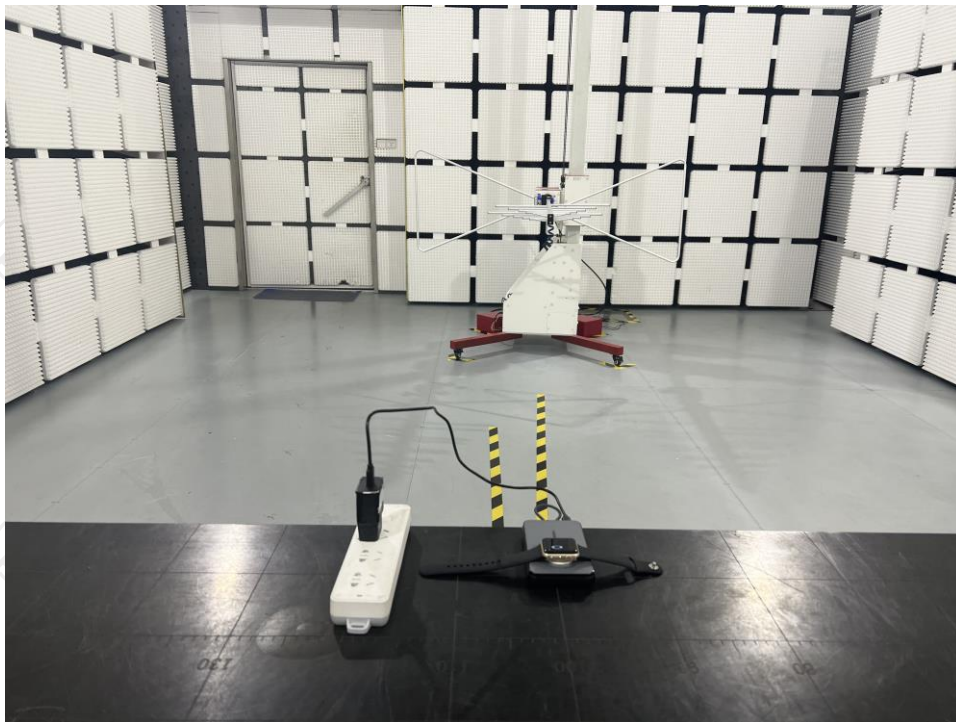
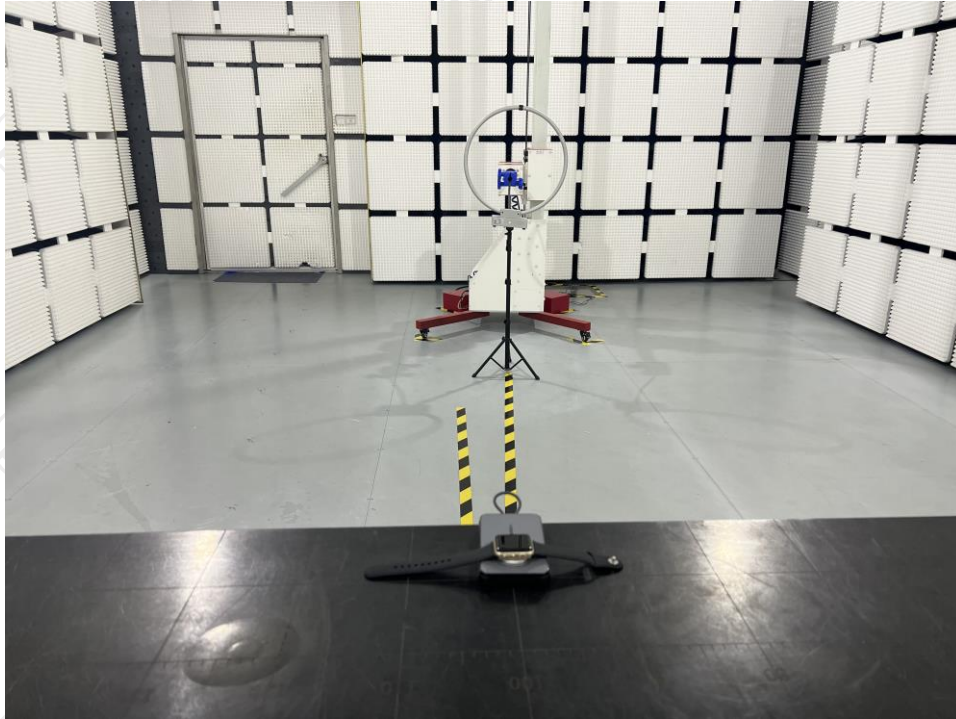


Appendix A: Photographs of Test Setup

Product: Portable Charger

Model: V1171

Radiated Emission



Conducted Emission



Appendix B: Photographs of EUT
Product: Portable Charger
Model: V1171
External Photos

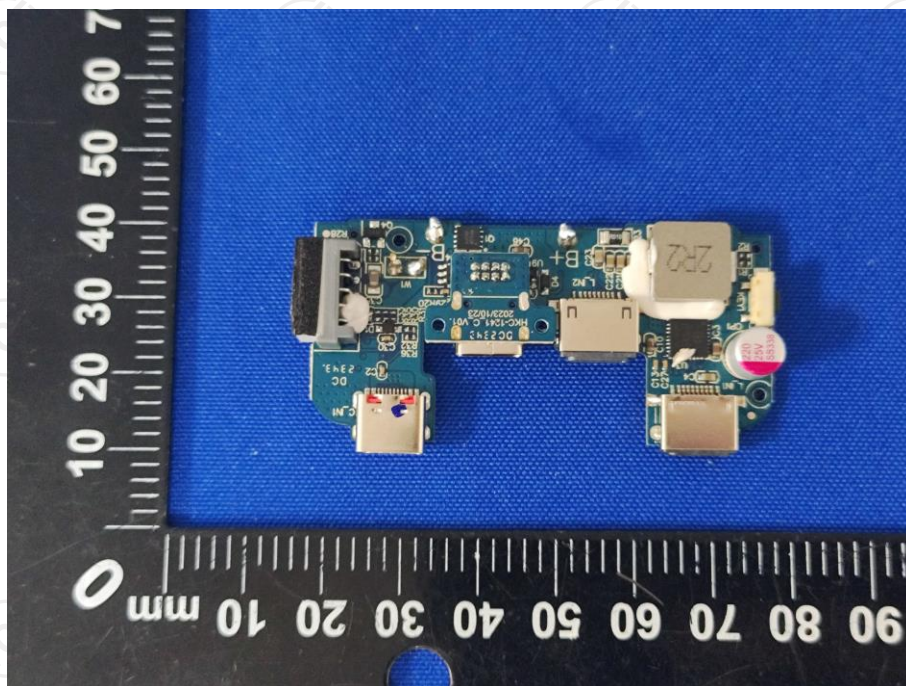


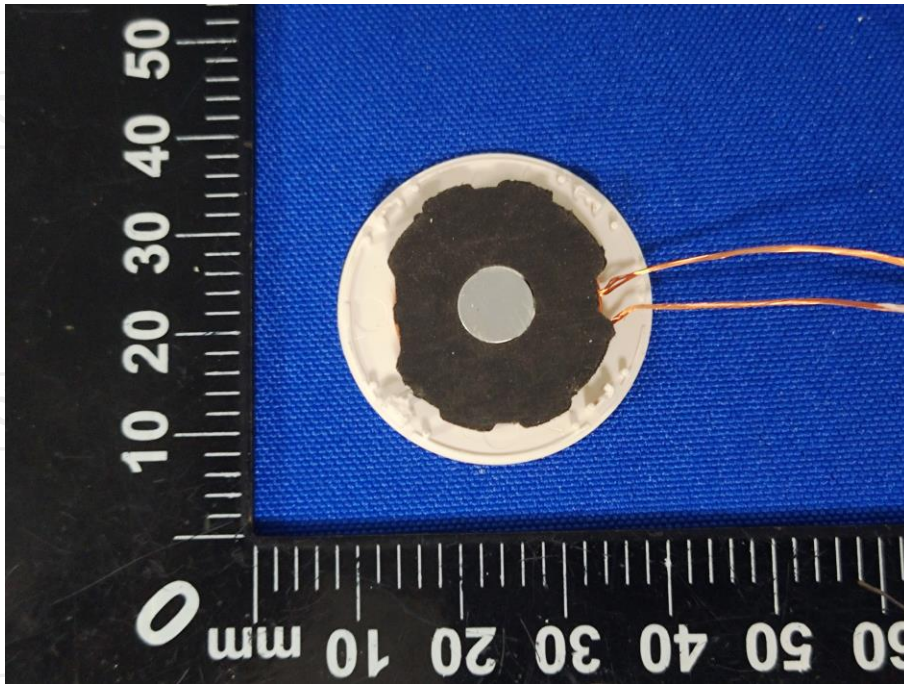
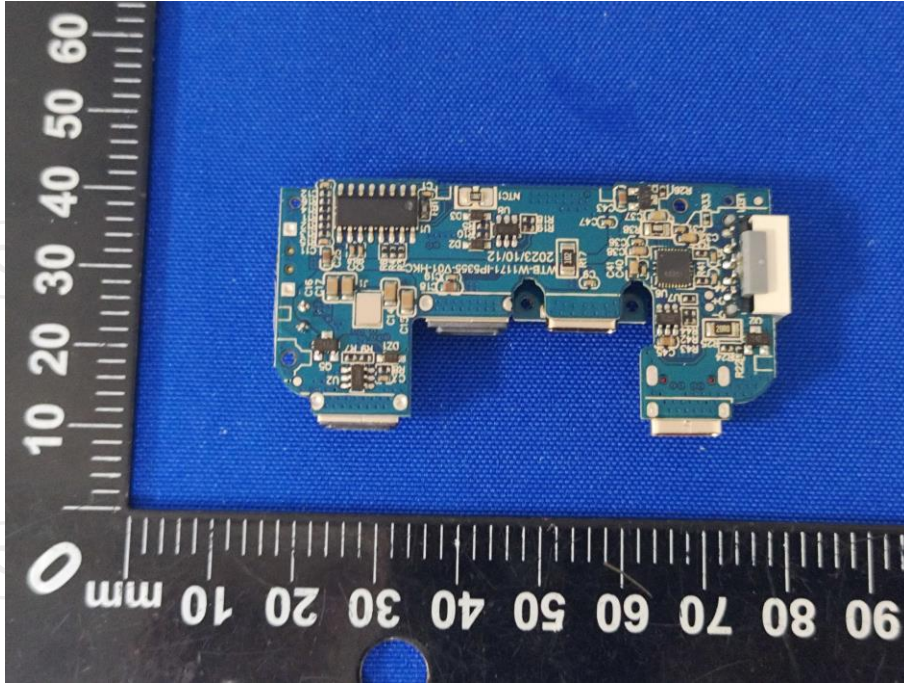


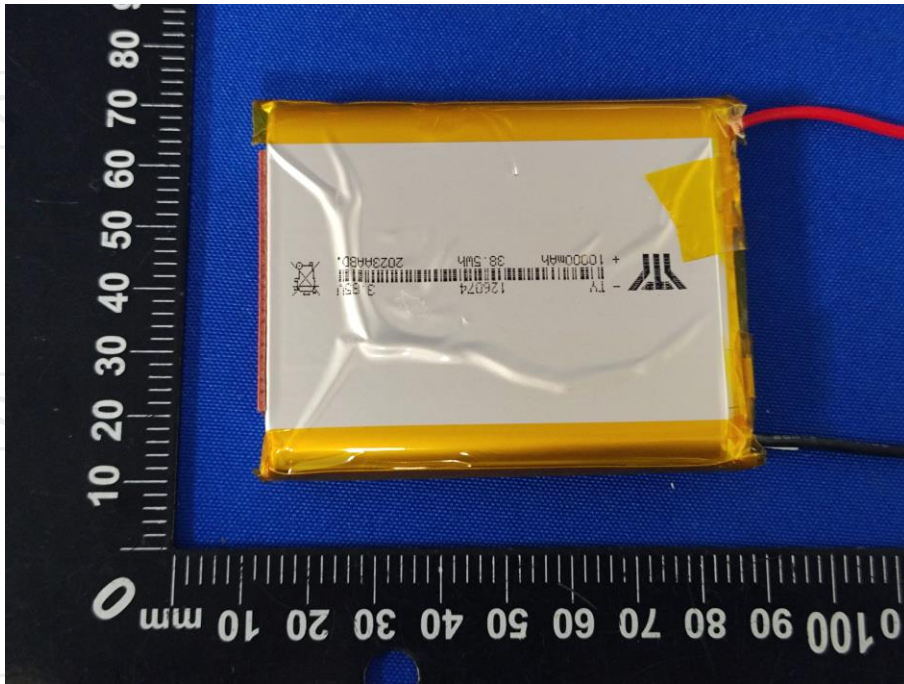
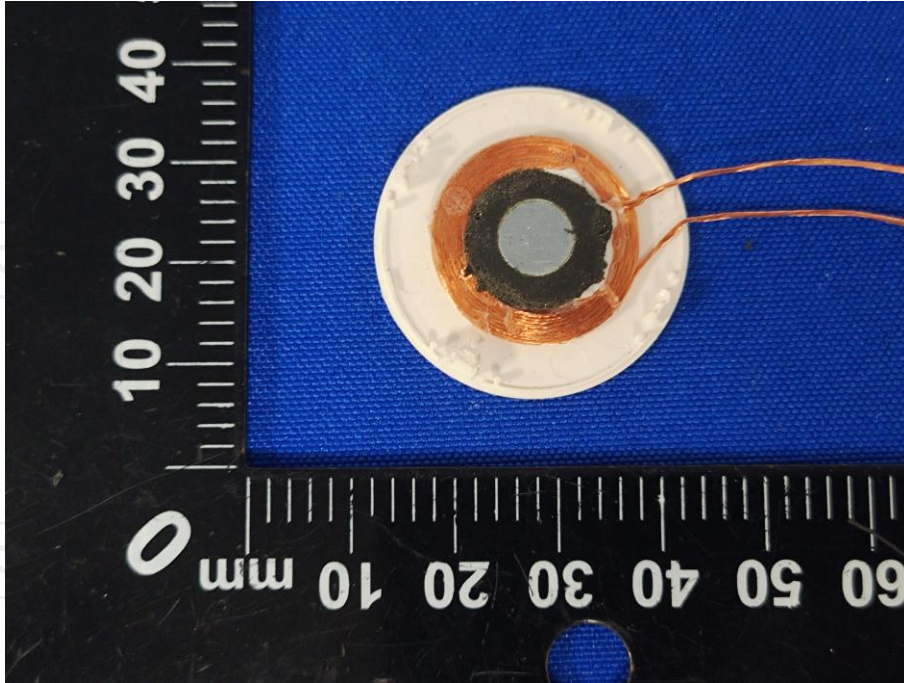




Product: Portable Charger
Model: V1171
Internal Photos







*****END OF REPORT*****