FCC TEST REPORT

Report Reference No.....:	ZKT-241115L15564E
Date of issue.....:	Oct. 24, 2024
Total number of pages.....	20
Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address.....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industral Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name.....**:**	**Shenzhen Jufu Energy Technology Co. , Ltd.**
Address.....:	Plant No. 5 Foxda Industrial Park, No. 4 Lanjing North Road, Zhukeng Community, Longtian Street, Pingshan District, Shenzhen
Test specification:	
Standards.....:	47CFR Part 15 Subpart B ANSI C63.4:2014
Test procedure.....:	N/A
Non-standard test method……..:	N/A
Test Report Form No.....:	--
Test Report Form(s) Originator.....:	ZKT Testing
Master TRF.....:	Dated: 2017-06

This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of ZKT Test.

Test item description.....**:**	**Little Fuzzy Series Magnetic Wireless Charger**
Trade Mark.....:	/
Manufacturer.....**:**	**Shenzhen Jufu Energy Technology Co. , Ltd.** Plant No. 5 Foxda Industrial Park, No. 4 Lanjing North Road, Zhukeng Community, Longtian Street, Pingshan District, Shenzhen
Model/Type reference..... :	FU7 FU8
Ratings.....:	Input: 5 V⎓3 A, 9 V⎓2 A Output: 5 V⎓3 A, 9 V⎓2.22 A, 12 V⎓1.67 A Wireless charging: 5 W, 7.5 W, 10 W,15 W Total output: 5 V⎓2 A 3.87 V⎓ powered by battery

Testing procedure and testing location:

Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address.....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industral Avenue, Fuhai Street, Bao'an District, Shenzhen,China
Date of Test.....:	Oct. 14, 2024 - Oct. 24, 2024
Tested by (name + signature).....:	Jim Liu Jim Liu
Reviewer (name + signature).....:	Tom Zou Tom Zou
Approved (name + signature).....:	Lake Xie Lake Xie

TABLE OF CONTENT

1.GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT:	Little Fuzzy Series Magnetic Wireless Charger
Model Number:	FU7
Model Difference:	FU7 is the test model, while other models are derivative models. These models are the same on the circuit, with only different model names. Therefore, the test data of FU7 can represent the remaining models.
Power Supply:	Input: 5 V⎓3 A, 9 V⎓2 A Output: 5 V⎓3 A, 9 V⎓2.22 A, 12 V⎓1.67 A Wireless charging: 5 W, 7.5 W, 10 W,15 W Total output: 5 V⎓2 A 3.87 V⎓ powered by battery
Highest Frequency Generated:	Below 108 MHz

1.2. Other Accessory Device List and Details

Description	Manufacturer	Model	Note
Wireless charging load	YBZ	EESON	AE
AC Adapter	HUAWEI	HW-200500C00	AE
Dummy Load	Dongguan Plit Technology Co., Ltd	BX7	AE

1.3. Test Uncertainty

Conducted Emission Uncertainty : ±1.82 dB

Radiated Emission Uncertainty : ±2.51 dB

1.4. Test Mode

Pretest mode	Mode 1: Charging mode(USB Type-C 5 V⎓3 A) Mode 2: Discharging mode(USB Type-C 12 V⎓1.67 A) Mode 3: Discharging mode(USB Type-C 5 V⎓3 A) Mode 4: Discharging mode(Wireless charging 15 W) Mode 5: Discharging mode(Wireless charging + USB Type-C 5 V⎓2 A) Mode 5: Discharging mode(Wireless charging 5 W) + Charging mode(USB Type-C 5 V⎓3 A)		
Worst-case Test mode	Conducted Emission		Mode 5
	Radiated Emission	Below 1 GHz	Mode 5
		Above 1 GHz	N/A

* Only the worst-case data is represented in the report.

2.TEST INSTRUMENT USED

Conducted emissions Test

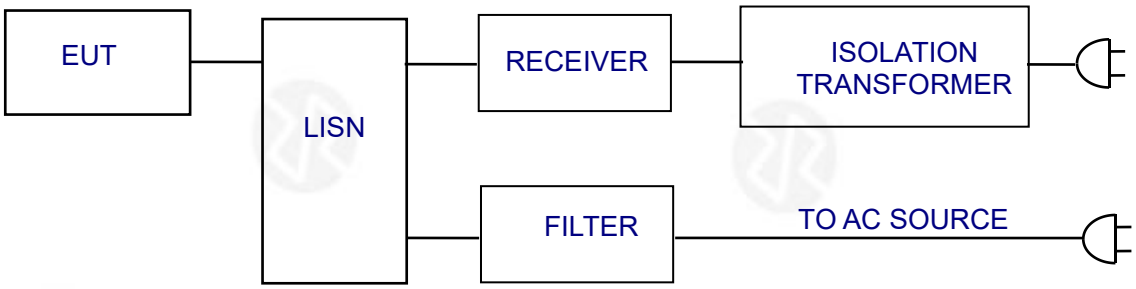
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Nov. 14, 2023	Nov. 13, 2024
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Nov. 02, 2023	Nov. 01, 2024
3	Test Cable	N/A	C-01	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
4	Test Cable	N/A	C-02	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
5	Test Cable	N/A	C-03	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
6	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Nov. 02, 2023	Nov. 01, 2024
9	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation emissions& Radio Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Nov. 02, 2023	Nov. 01, 2024
2	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	N/A	N/A	Nov. 13, 2023	Nov. 12, 2024
3	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Nov. 13, 2023	Nov. 12, 2024
4	Loop Antenna	TESEQ	HLA6121	58357	N/A	Nov. 16, 2023	Nov. 15, 2024
5	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Nov. 02, 2023	Nov. 01, 2024
6	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Nov. 02, 2023	Nov. 01, 2024
7	Test Cable	N/A	R-01	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
8	Test Cable	N/A	R-02	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
9	ESG Signal Generator	Agilent	E4421B	N/A	B.03.84	Nov. 02, 2023	Nov. 01, 2024
10	Signal Generator	Agilent	N5182A	N/A	A.01.87	Nov. 02, 2023	Nov. 01, 2024
11	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\
12	Turntable	MF	MF-7802BS	N/A	N/A	\	\
13	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\

3.CONDUCTED EMISSION TEST

3.1. Block Diagram Of Test Setup



3.2. Test Standard

FCC PART 15 B

3.3. Power Line Conducted Emission Limit

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

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

3.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.
3.5.2 Turn on the power of all equipments.
3.5.3 Let the EUT work in test modes and test it.

3.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **FCC PART 15 B** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

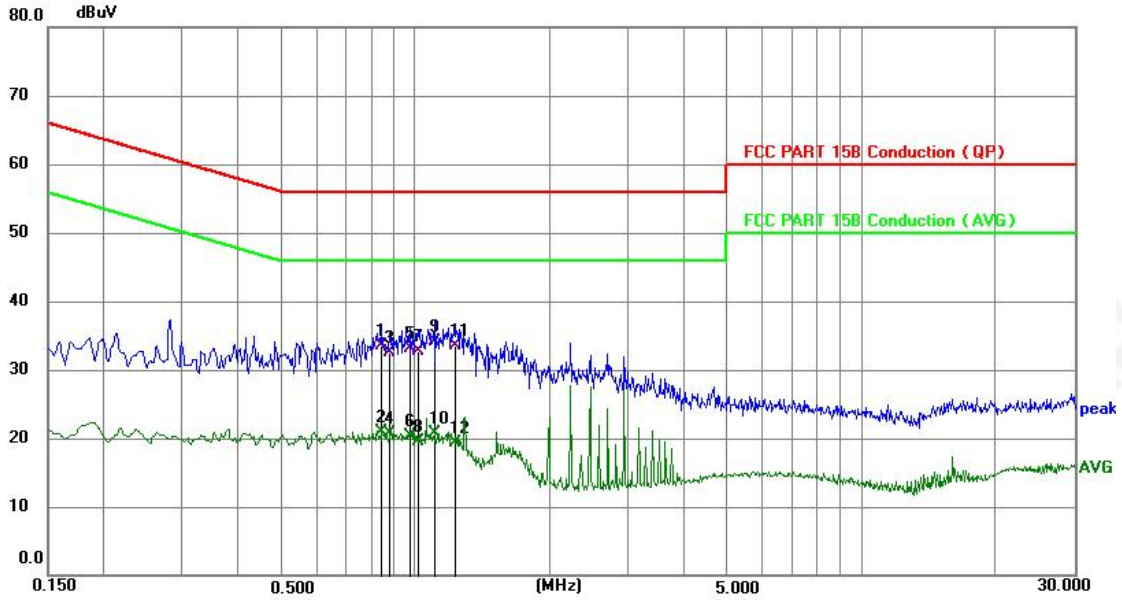
The frequency range from 150 KHz to 30 MHz is investigated.

3.7. Test Result

PASS

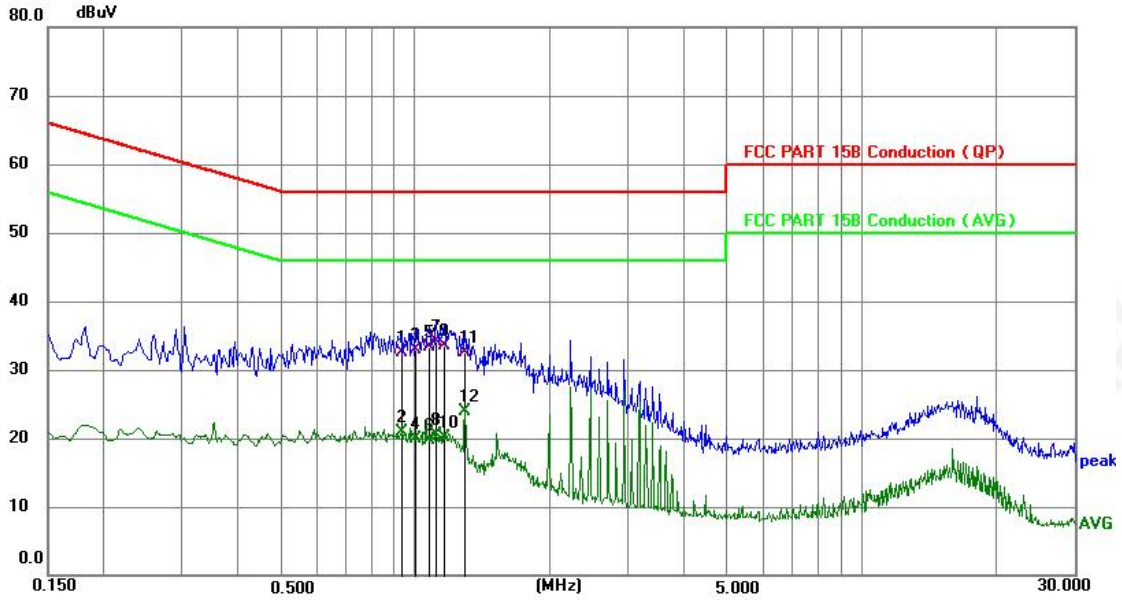
Please refer to the following page.

Conducted Emission At The Mains Terminals Test Data			
Temperature:	23.3℃	Relative Humidity:	54%
Pressure:	1012hPa	Phase :	Live
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 5



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.8430	23.38	10.05	33.43	56.00	-22.57	QP	P	
2	0.8430	10.95	10.05	21.00	46.00	-25.00	AVG	P	
3	0.8790	22.39	10.05	32.44	56.00	-23.56	QP	P	
4	0.8790	10.64	10.05	20.69	46.00	-25.31	AVG	P	
5	0.9690	23.14	10.06	33.20	56.00	-22.80	QP	P	
6	0.9690	10.17	10.06	20.23	46.00	-25.77	AVG	P	
7	1.0140	22.67	10.06	32.73	56.00	-23.27	QP	P	
8	1.0140	9.43	10.06	19.49	46.00	-26.51	AVG	P	
9 *	1.1040	23.98	10.06	34.04	56.00	-21.96	QP	P	
10	1.1040	10.59	10.06	20.65	46.00	-25.35	AVG	P	
11	1.2300	23.42	10.06	33.48	56.00	-22.52	QP	P	
12	1.2300	9.25	10.06	19.31	46.00	-26.69	AVG	P	

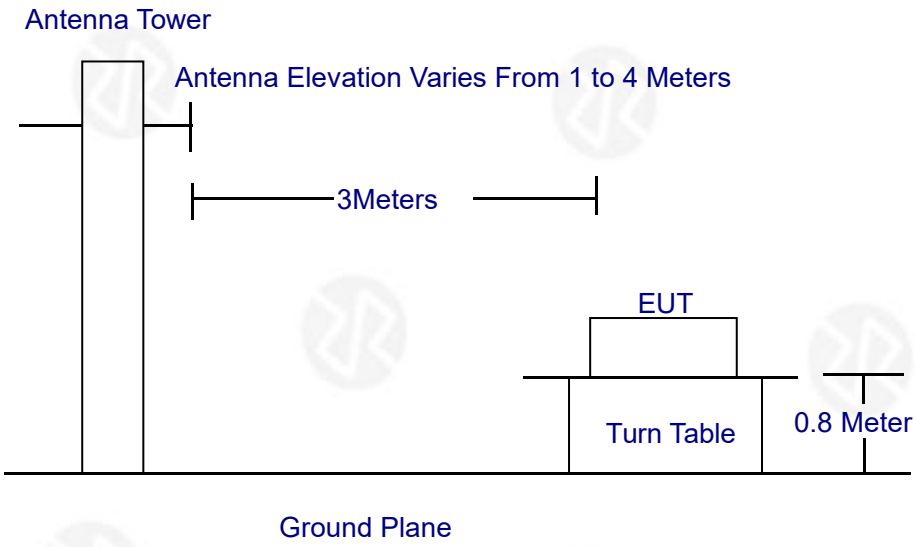
Conducted Emission At The Mains Terminals Test Data			
Temperature:	23.3℃	Relative Humidity:	54%
Pressure:	1012hPa	Phase :	Neutral
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 5



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.9330	22.53	10.05	32.58	56.00	-23.42	QP	P	
2	0.9330	10.92	10.05	20.97	46.00	-25.03	AVG	P	
3	1.0004	22.89	10.06	32.95	56.00	-23.05	QP	P	
4	1.0004	9.76	10.06	19.82	46.00	-26.18	AVG	P	
5	1.0725	23.20	10.06	33.26	56.00	-22.74	QP	P	
6	1.0725	9.66	10.06	19.72	46.00	-26.28	AVG	P	
7 *	1.1130	24.12	10.06	34.18	56.00	-21.82	QP	P	
8	1.1130	10.50	10.06	20.56	46.00	-25.44	AVG	P	
9	1.1625	23.43	10.06	33.49	56.00	-22.51	QP	P	
10	1.1625	10.06	10.06	20.12	46.00	-25.88	AVG	P	
11	1.2930	22.41	10.06	32.47	56.00	-23.53	QP	P	
12	1.2930	13.83	10.06	23.89	46.00	-22.11	AVG	P	

4.RADIATION EMISSION TEST

4.1. Block Diagram of Test Setup



4.2. Test Standard

FCC PART 15 B

4.3. Radiation Limit

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

4.4. EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test.
The configuration of EUT is the same as used in conducted emission test.
Please refer to Section 2.2.

4.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

4.6. Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to FCC PART 15 B on radiated emission test.
The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz
The frequency range from 30MHz to 1000MHz is checked.

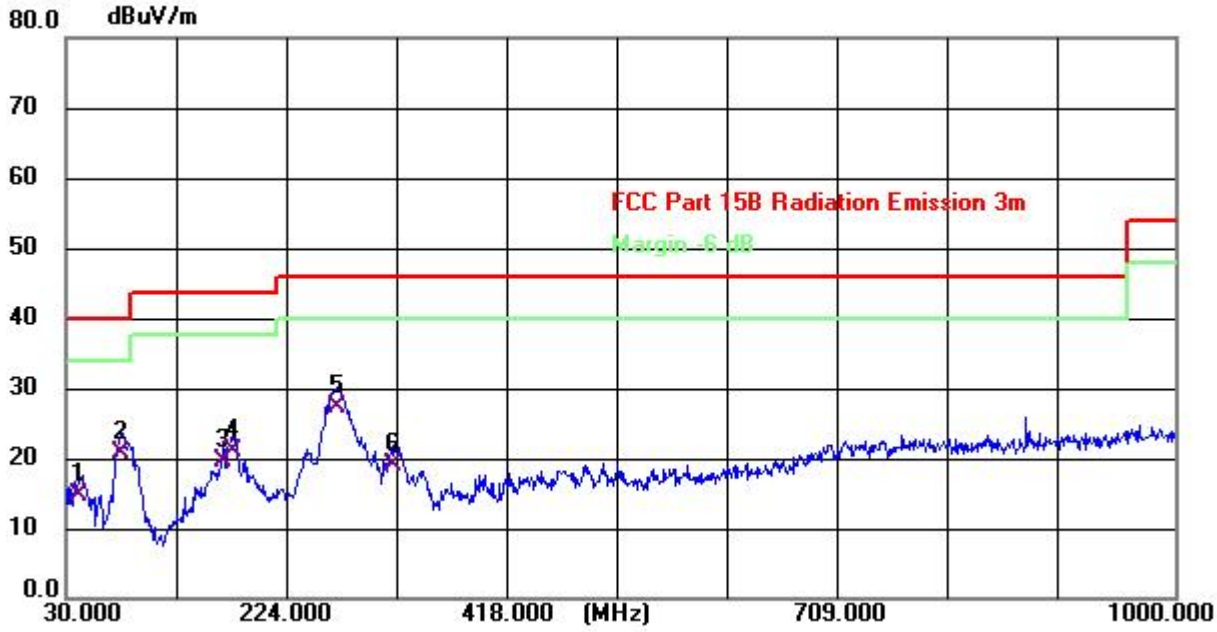
The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.

4.7. Test Result

PASS

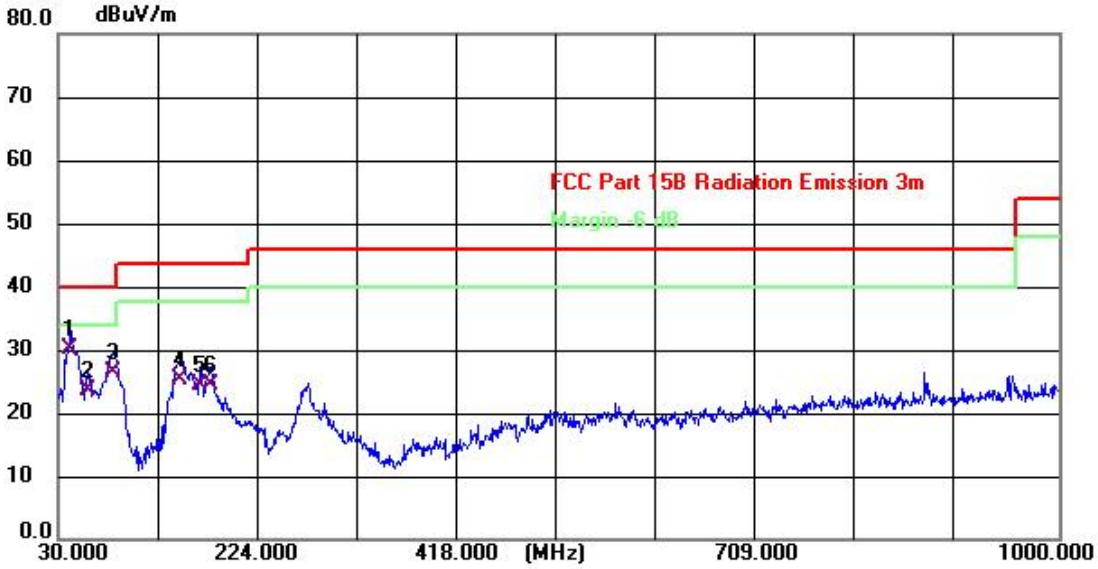
Please refer to the following page.

Radiation Emission Test Data			
Temperature:	26.1℃	Relative Humidity:	52%
Pressure:	1012hPa	Phase :	Horizontal
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4



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	41.640	27.93	-13.28	14.65	40.00	-25.35	QP			P	
2	78.500	38.17	-17.57	20.60	40.00	-19.40	QP			P	
3	167.740	38.06	-18.50	19.56	43.50	-23.94	QP			P	
4	175.500	39.31	-18.45	20.86	43.50	-22.64	QP			P	
5 *	267.650	43.29	-16.01	27.28	46.00	-18.72	QP			P	
6	317.120	33.49	-14.53	18.96	46.00	-27.04	QP			P	

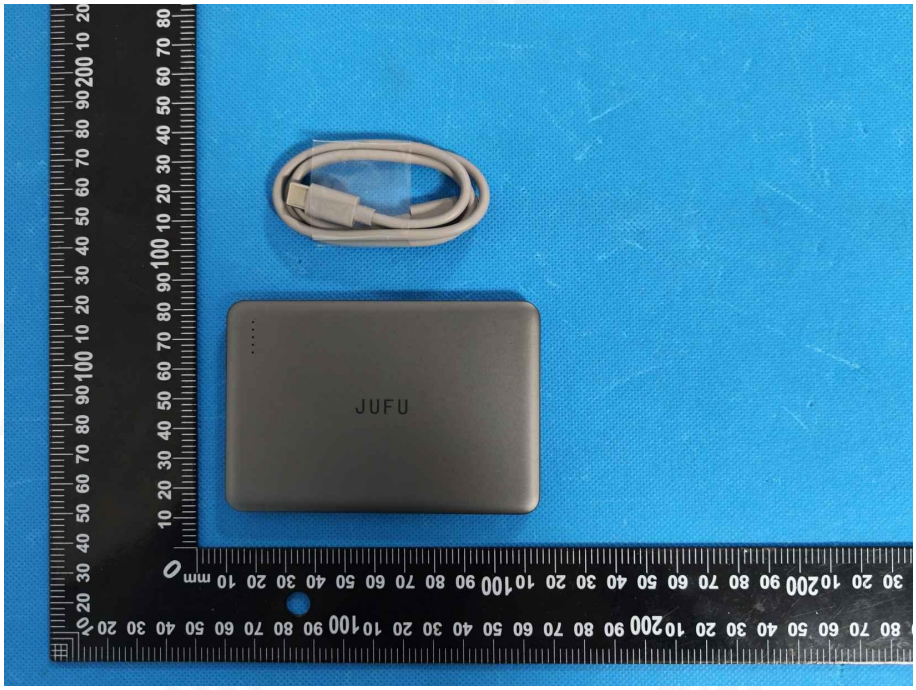
Radiation Emission Test Data			
Temperature:	26.1℃	Relative Humidity:	52%
Pressure:	1012hPa	Phase :	Vertical
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4



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 *	41.640	43.48	-13.28	30.20	40.00	-9.80	QP			P	
2	58.130	39.59	-16.15	23.44	40.00	-16.56	QP			P	
3	83.350	44.46	-17.90	26.56	40.00	-13.44	QP			P	
4	148.340	43.88	-18.66	25.22	43.50	-18.28	QP			P	
5	167.740	42.88	-18.50	24.38	43.50	-19.12	QP			P	
6	177.440	42.81	-18.44	24.37	43.50	-19.13	QP			P	

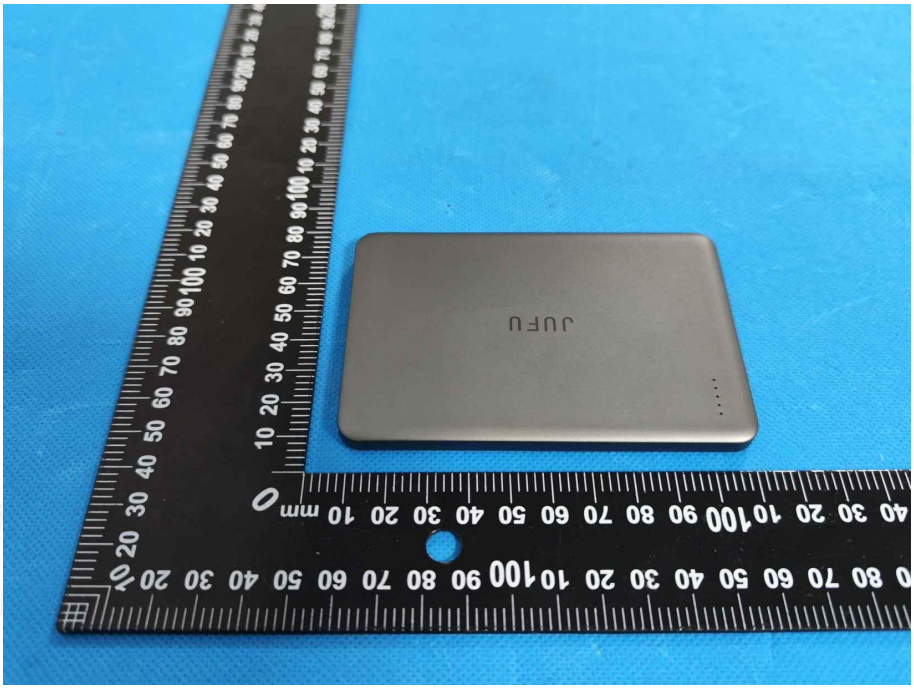
5.EUT PHOTOGRAPHS

EUT Photo 1

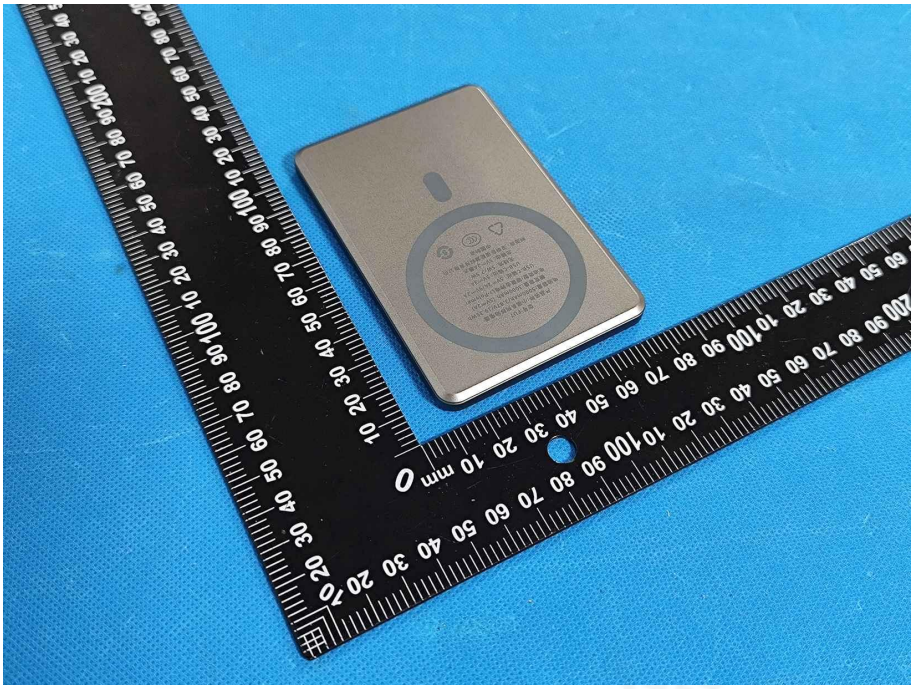


EUT Photo 2

EUT Photo 3

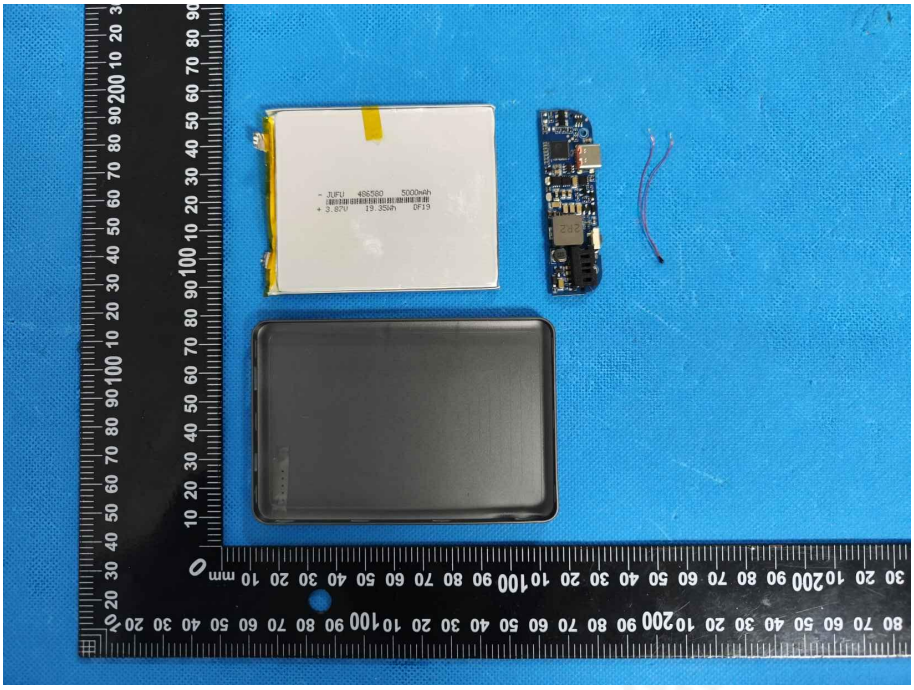


EUT Photo 4

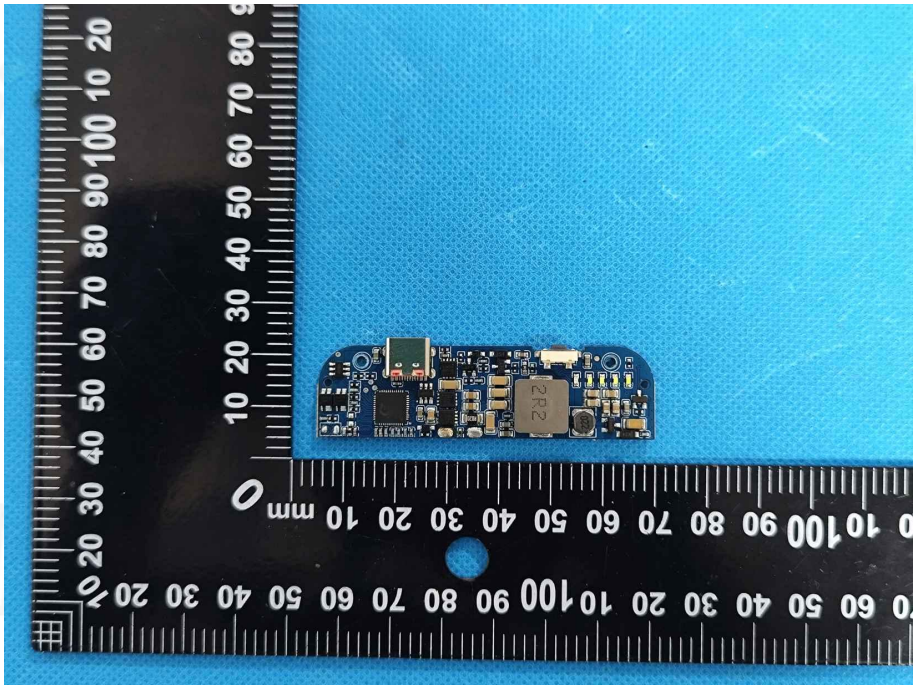


EUT Photo 5

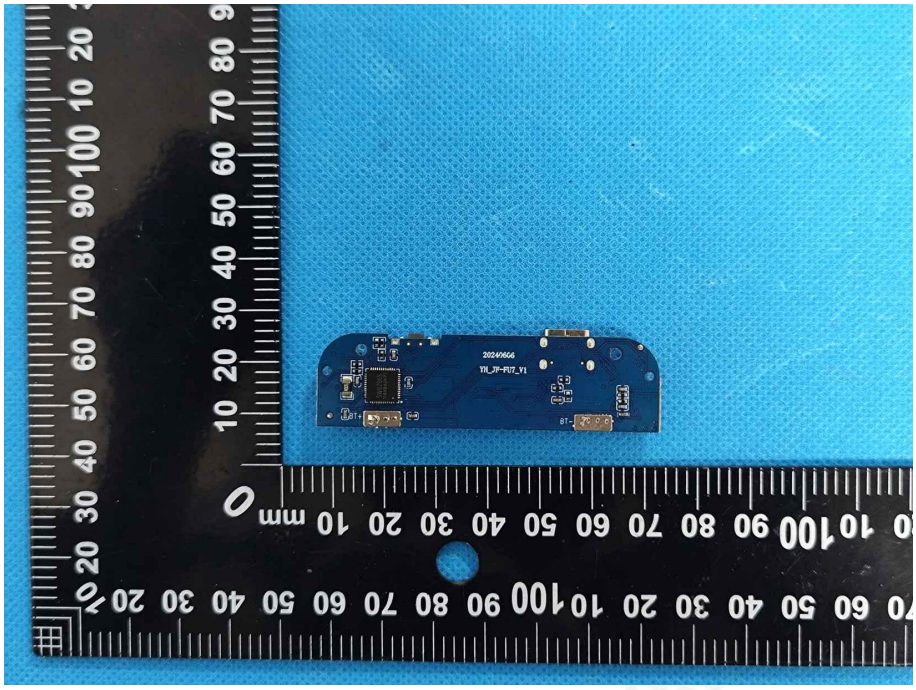
EUT Photo 6



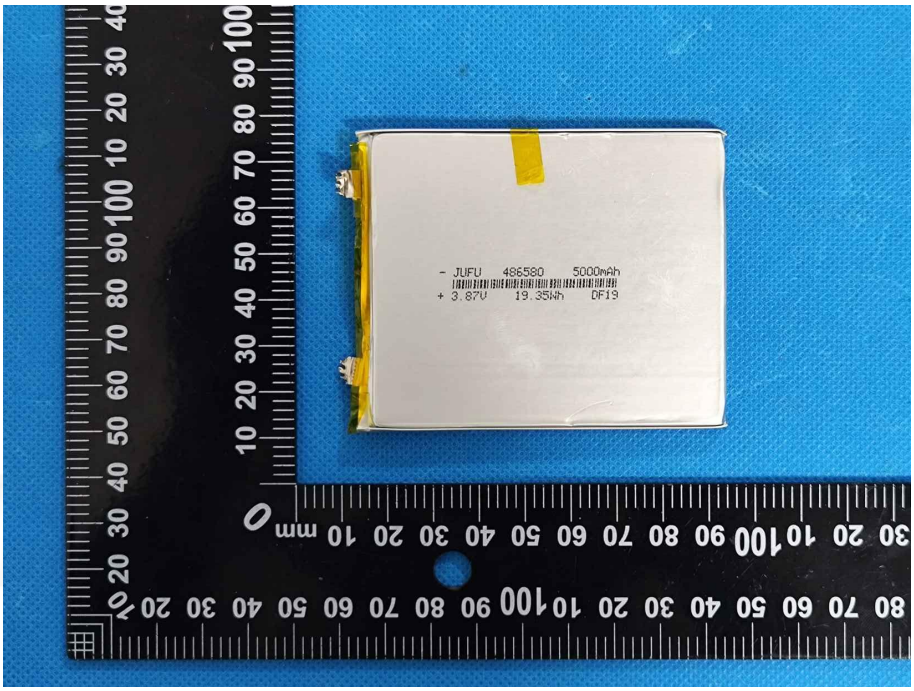
EUT Photo 7



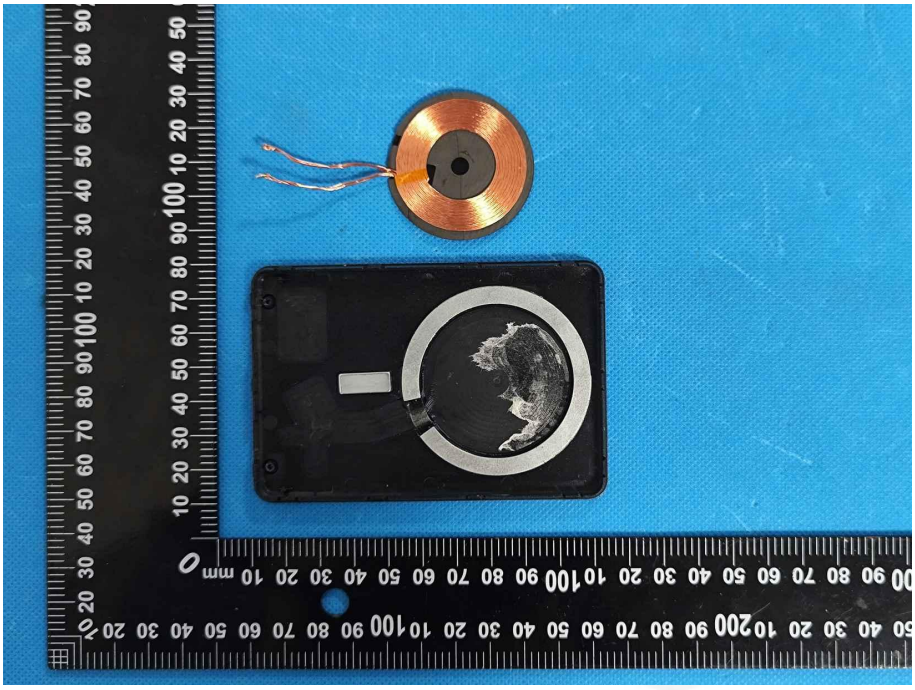
EUT Photo 8



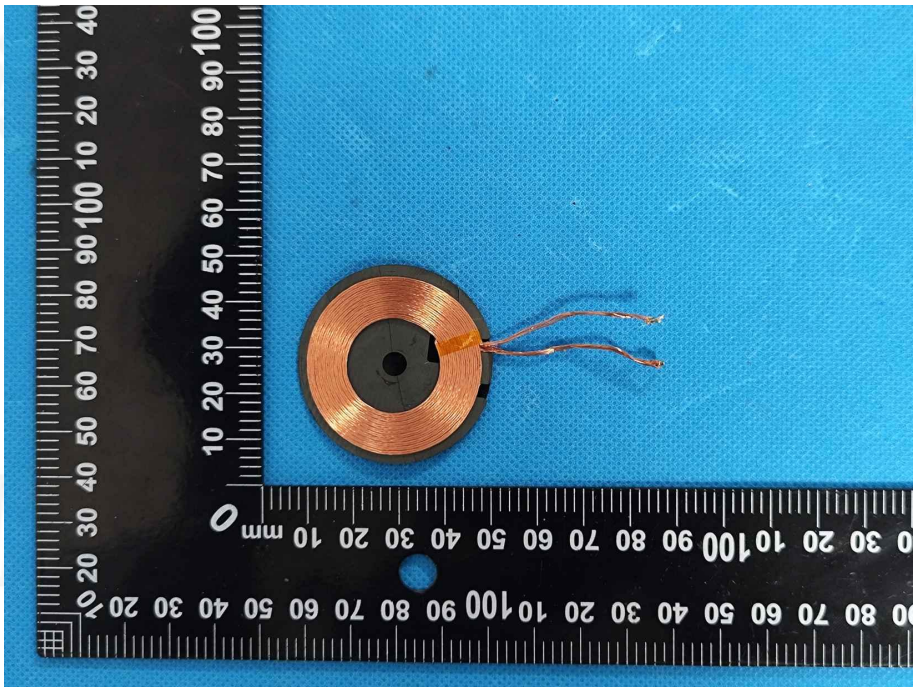
EUT Photo 9



EUT Photo 10

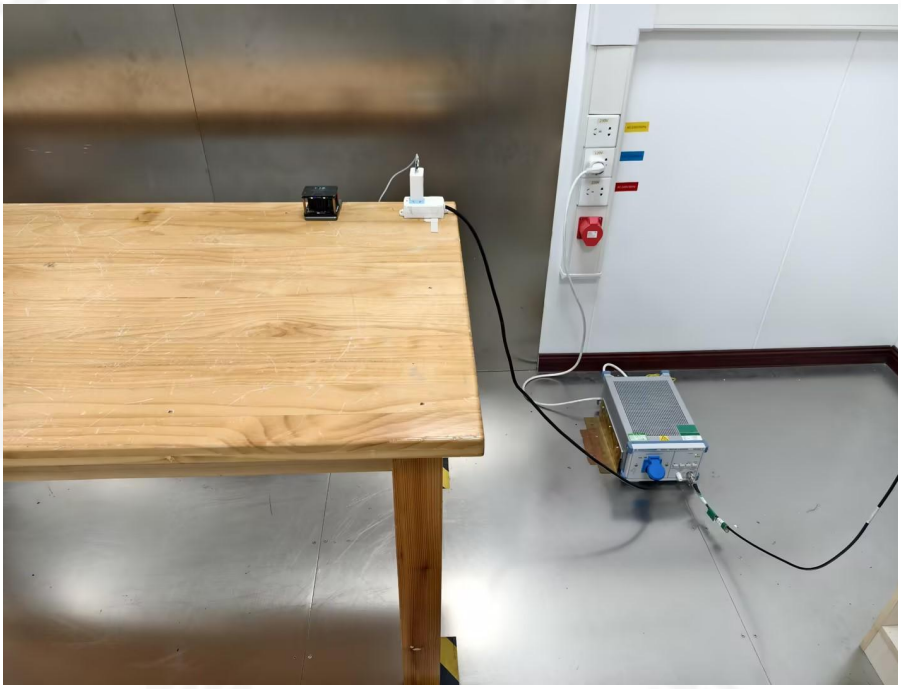


EUT Photo 11



6.TEST SETUP PHOTOGRAPHS

CE



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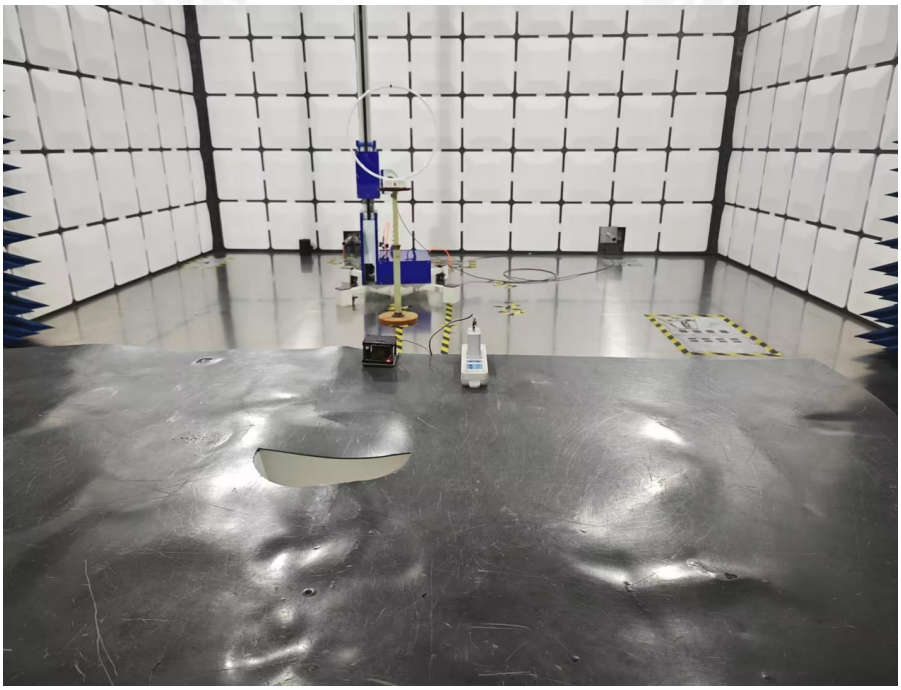

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