TEST REPORT

Report No.	CISRR241108056
Project No.	CISR241108056
FCC ID	2A7X4XSY320
Applicant	SHENZHEN XINSIYUAN ELECTRONIC TECHNOLOGY CO.,LTD
Address	4th Floor, Building A, No. 207, Xingye2nd Road, Fenghuang Community, FuyongTown, Baoan District, Shenzhen, China
Manufacturer	SHENZHEN XINSIYUAN ELECTRONIC TECHNOLOGY CO.,LTD
Address	4th Floor, Building A, No. 207, Xingye2nd Road, Fenghuang Community, FuyongTown, Baoan District, Shenzhen, China
Product Name	Multi-function emergency radio
Trade Mark	N/A
Model/Type reference	XSY320
Listed Model(s)	N/A
Standard	47 CFR Part 15, Subpart B
Test date	November 8, 2024 to November 13, 2024
Issue date	November 15, 2024
Test result	**Complied**

Edward Wang

Prepared by: Edward Wang

GenryLong

Approved By: Genry Long

The test results relate only to the tested samples.

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Contents

1. REPORT VERSION

Version No.	Issue date	Description
00	November 15, 2024	Original

2. TEST DESCRIPTION

No.	Test Item	Standard Requirement	Result
1	Conducted emissions on AC mains	15.107, Class B	Pass
2	Radiated emissions (Below 1GHz)	15.109, Class B	Pass

Note:

– The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Product Description

Main unit information:	
Product Name:	Multi-function emergency radio
Trade Mark:	N/A
Model No.:	XSY320
Listed Model(s):	N/A
Power supply:	DC 5V
Accessory unit information:	
Battery information:	3.7V

3.2. Modification of EUT

No modifications are made to the EUT during all test items.

3.3. Deviation from standards

None

3.4. Testing Site

Laboratory Name	Shenzhen Bangce Testing Technology Co., Ltd.
Laboratory Location	101, building 10, Yunli Intelligent Park, Shutianpu community, Matian Street, Guangming District, Shenzhen，Guangdong, China
Contact information	Tel: 86-755-2319 6848, email: service@cis-cn.net Website: http://www.cis-cn.net/
FCC registration number	736346
FCC designation number	CN1372

4. TEST CONFIGURATION

4.1. Descriptions of test mode

No	Test mode	Description
TM1	Working mode	Keep the EUT in normal operating mode with load.
TM2	Charging mode	Keep the EUT in Charging state
TM3	Charging+working mode	Keep the EUT in Charging and working state

4.2. Environmental conditions

Type	Requirement
Temperature:	15~35°C
Relative Humidity:	25~75%
Air Pressure:	860~1060mbar

4.3. Equipment Used during the Test

Conducted emissions on AC mains						
Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI7	100853	2024-01-08	2025-01-07
2	Artificial power network	Schwarzbeck	NSLK8127	8127-01096	2024-01-08	2025-01-07
3	8-wire Impedance Stabilization Network	Schwarzbeck	NTFM 8158	8158-00337	2024-01-08	2025-01-07
4	Artificial power network	Schwarzbeck	ENV216	/	2024-01-08	2025-01-07

Radiated emissions (Below 1GHz)						
Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI7	100853	2024-01-08	2025-01-07
2	Broadband antenna	schwarabeck	VULB9163	9163-1436	2024-01-08	2025-01-07
3	Amplifier	Tonscend	TAP9K3G40	AP23A8060270	2024-01-08	2025-01-07

5. TEST RESULTS

5.1. Emission Test Results (EMI)

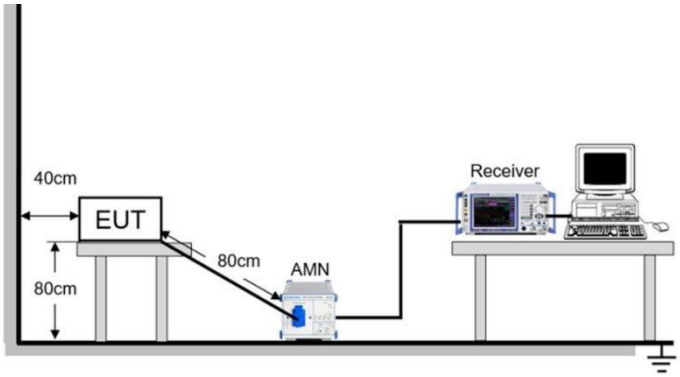
5.1.1. Conducted emissions on AC mains

Test Requirement:	15.107, Class B
Test Limit:	**Frequency of emission (MHz)** / **Conducted limit (dBμV)** — **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 Method:	ANSI C63.4-2014
Procedure:	1. The EUT was setup according to ANSI C63.4:2014 2. The EUT was placed on a plat form of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. 3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50ohm / 50uH coupling impedance for the measuring equipment. 4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) 5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor was individually connected through a LISN to the input power source. 6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. 7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.During the above scans, the emissions were maximized by cable manipulation.

5.1.1.1. E.U.T. Operation

Operating Environment:					
Temperature:	23.4 °C	Humidity:	55.3 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM2, TM3				
Final test mode:	All of the listed pre-test mode were tested, only the data of the worst mode (TM3) is recorded in the report				

5.1.1.2. Test Setup Diagram

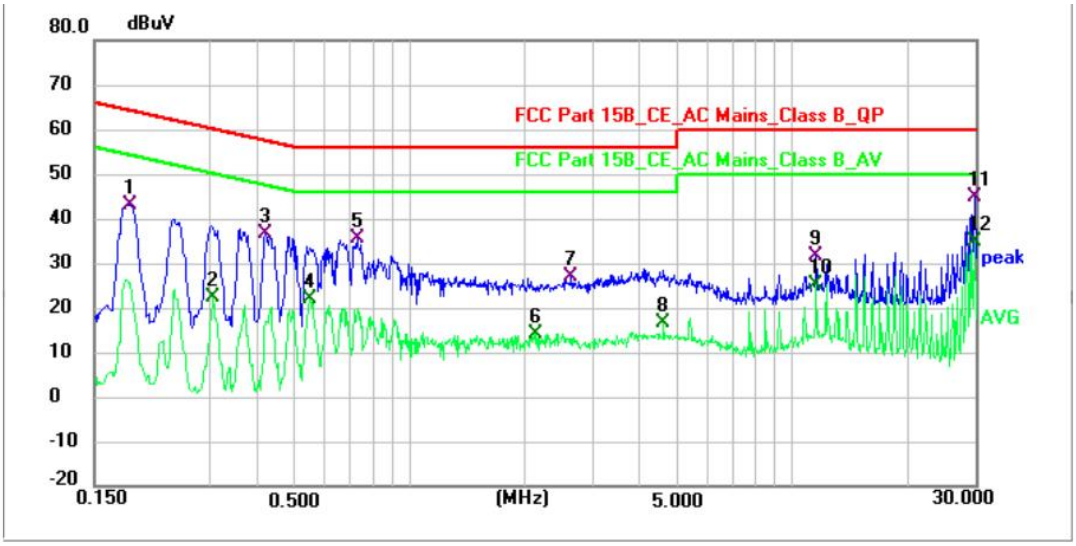


5.1.1.3. Test Result

Pass

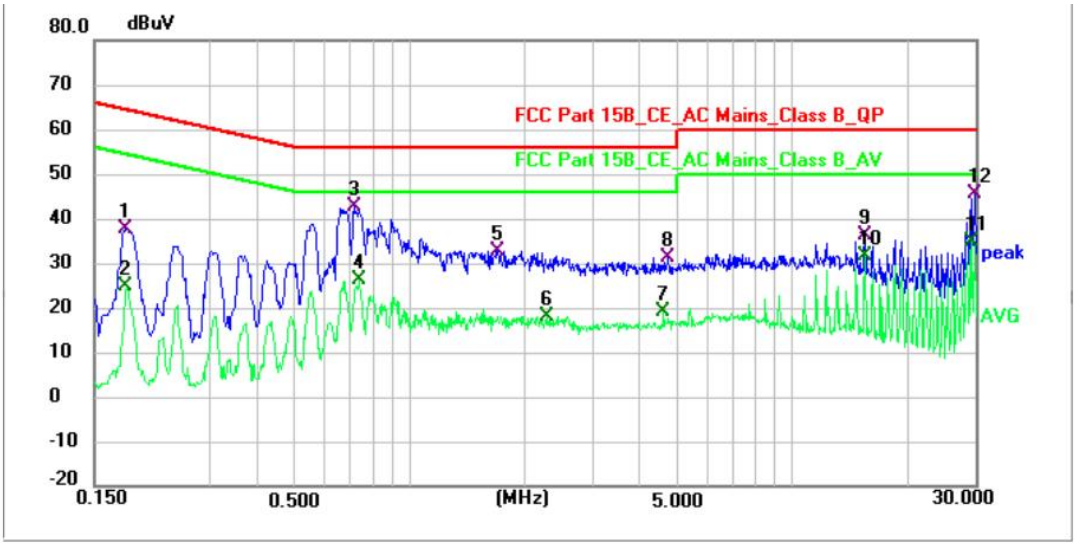
5.1.1.4. Test Data

TM3 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.186	42.72	0.31	43.03	64.21	-21.18	QP	P	
2	0.306	22.04	0.34	22.38	50.08	-27.70	AVG	P	
3	0.418	36.23	0.33	36.56	57.49	-20.93	QP	P	
4	0.550	21.62	0.38	22.00	46.00	-24.00	AVG	P	
5	0.730	35.14	0.41	35.55	56.00	-20.45	QP	P	
6	2.134	13.31	0.74	14.05	46.00	-31.95	AVG	P	
7	2.642	26.15	0.88	27.03	56.00	-28.97	QP	P	
8	4.618	15.02	1.61	16.63	46.00	-29.37	AVG	P	
9	11.542	27.25	4.41	31.66	60.00	-28.34	QP	P	
10	11.542	20.91	4.41	25.32	50.00	-24.68	AVG	P	
11 *	29.950	40.22	4.71	44.93	60.00	-15.07	QP	P	
12	29.950	30.22	4.71	34.93	50.00	-15.07	AVG	P	

TM3 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.182	37.38	0.32	37.70	64.40	-26.70	QP	P	
2	0.182	24.59	0.32	24.91	54.40	-29.49	AVG	P	
3 *	0.718	42.15	0.40	42.55	56.00	-13.45	QP	P	
4	0.742	25.71	0.41	26.12	46.00	-19.88	AVG	P	
5	1.706	31.98	0.62	32.60	56.00	-23.40	QP	P	
6	2.286	17.40	0.79	18.19	46.00	-27.81	AVG	P	
7	4.618	17.54	1.63	19.17	46.00	-26.83	AVG	P	
8	4.726	29.62	1.68	31.30	56.00	-24.70	QP	P	
9	15.394	30.47	5.73	36.20	60.00	-23.80	QP	P	
10	15.394	26.04	5.73	31.77	50.00	-18.23	AVG	P	
11	29.250	30.12	4.87	34.99	50.00	-15.01	AVG	P	
12	29.962	40.87	4.77	45.64	60.00	-14.36	QP	P	

Note:
Level= Read Level+ Cable Loss+ LISN Factor

5.1.2. Radiated emissions (Below 1GHz)

Test Requirement:	15.109, Class B
Test Limit:	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

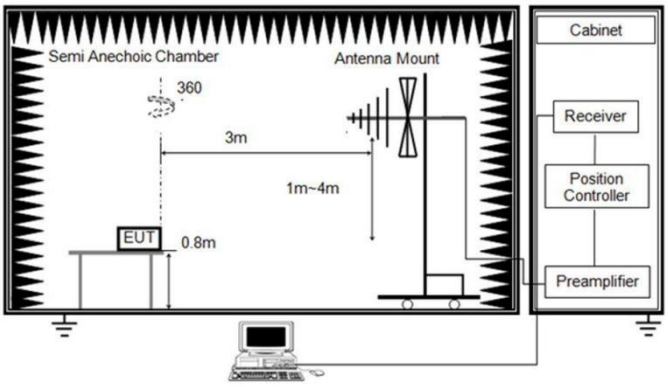
Frequency of emission (MHz)	Field strength @3m		Field strength @10m	
	(uV/m)	(dBuV/m)	(uV/m)	(dBuV/m)
30 – 88	100	40	30	29.5
88 – 216	150	43.5	45	33.1
216 – 960	200	46	60	35.6
Above 960	500	54	150	43.5

Test Method:	ANSI C63.4-2014
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

5.1.2.1. E.U.T. Operation

Operating Environment:					
Temperature:	23.1 °C	Humidity:	56.3 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1, TM2, TM3				
Final test mode:	All of the listed pre-test mode were tested, only the data of the worst mode (TM3) is recorded in the report				

5.1.2.2. Test Setup Diagram



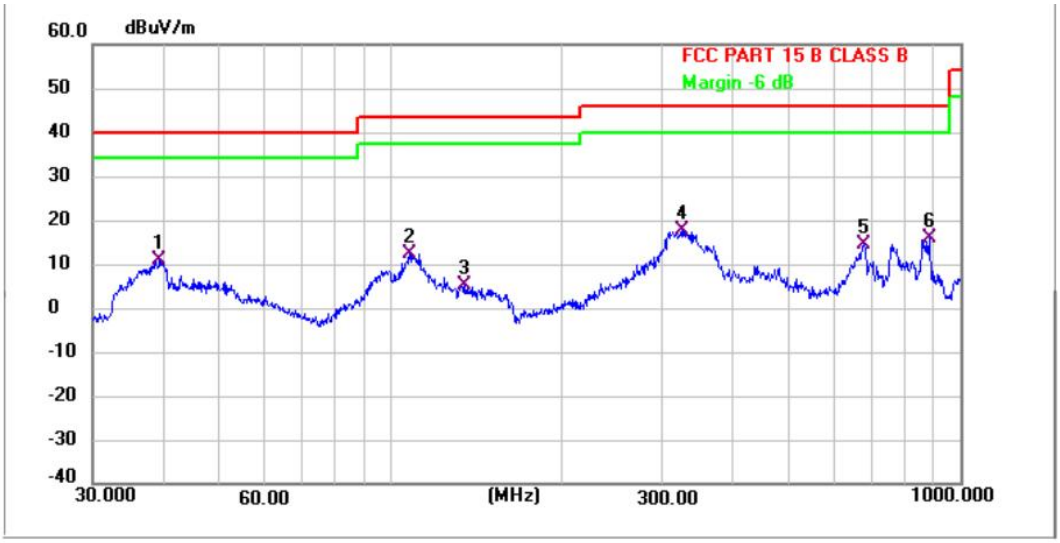
Below 1 GHz and above 30 MHz

5.1.2.3. Test Result

Pass

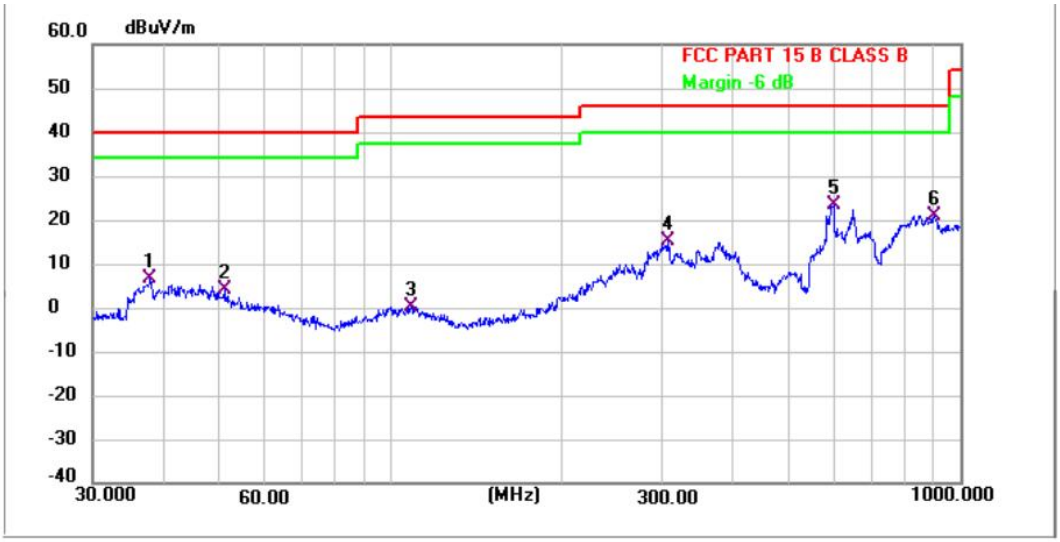
5.1.2.4. Test Data

TM3 / Polarization: Horizontal



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	39.299	41.89	-30.91	10.98	40.00	-29.02	QP	100	117	P	
2	108.267	42.77	-30.58	12.19	43.50	-31.31	QP	100	124	P	
3	135.032	39.32	-34.17	5.15	43.50	-38.35	QP	100	360	P	
4 *	324.456	44.44	-26.60	17.84	46.00	-28.16	QP	100	291	P	
5	677.580	31.76	-17.45	14.31	46.00	-31.69	QP	100	212	P	
6	881.407	31.10	-15.13	15.97	46.00	-30.03	QP	100	69	P	

TM3 / Polarization: Vertical

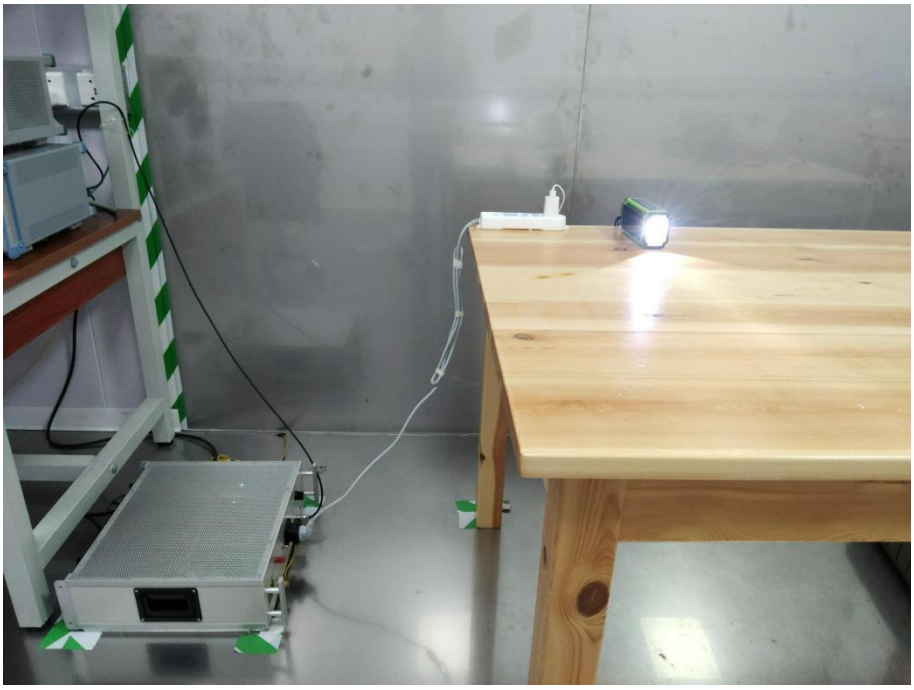


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	37.812	37.89	-31.25	6.64	40.00	-33.36	QP	100	85	P	
2	51.121	33.56	-29.37	4.19	40.00	-35.81	QP	100	37	P	
3	108.647	30.82	-30.56	0.26	43.50	-43.24	QP	100	99	P	
4	307.831	42.08	-27.00	15.08	46.00	-30.92	QP	100	186	P	
5 *	599.321	42.50	-19.19	23.31	46.00	-22.69	QP	100	99	P	
6	900.147	35.71	-14.69	21.02	46.00	-24.98	QP	100	226	P	

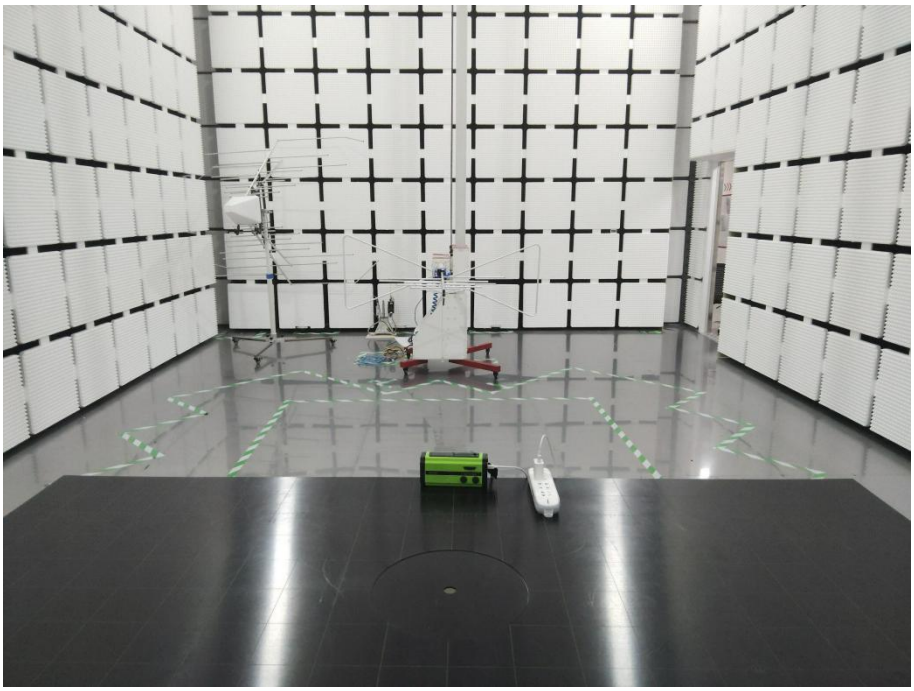
Note:
1) Level= Reading + Factor; Factor =Antenna Factor+ Cable Loss- Preamp Factor
2) Margin = Limit – Level

6. TEST SETUP PHOTOS

Conducted emissions on AC mains

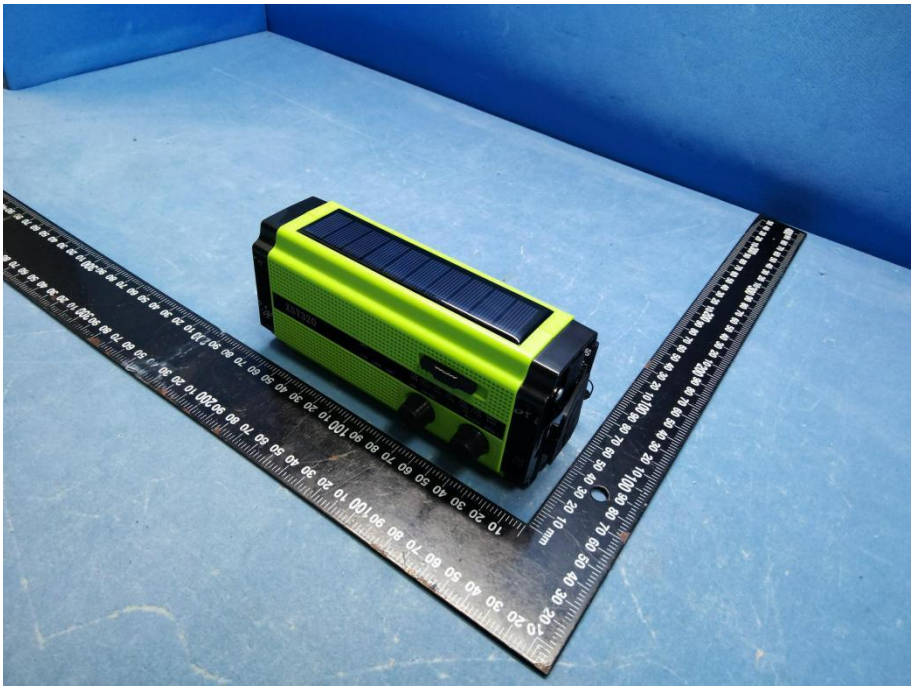


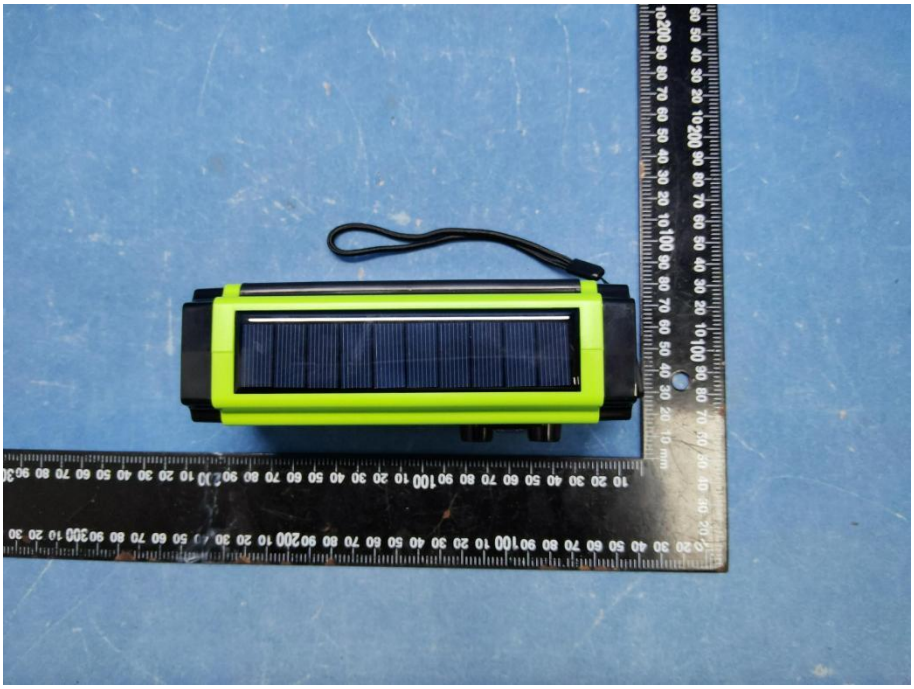
Radiated emissions (Below 1GHz)

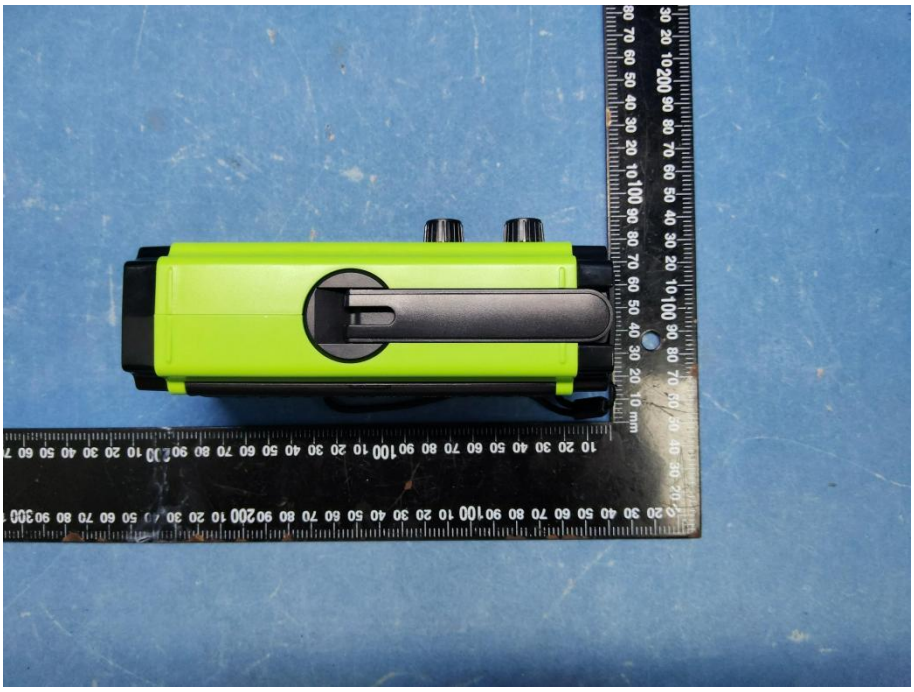


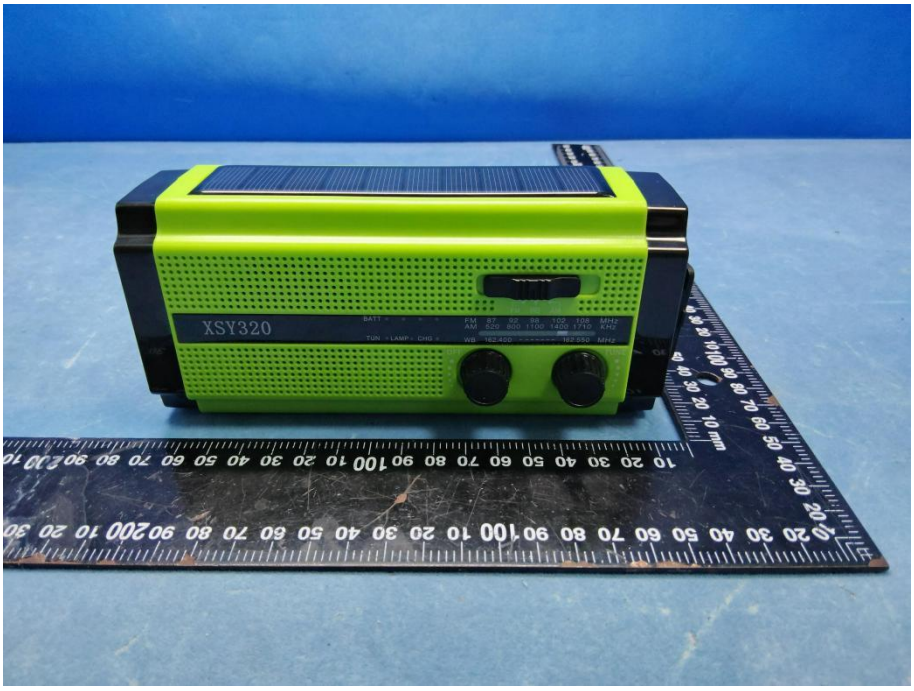
7. EXTERNAL AND INTERNAL PHOTOS

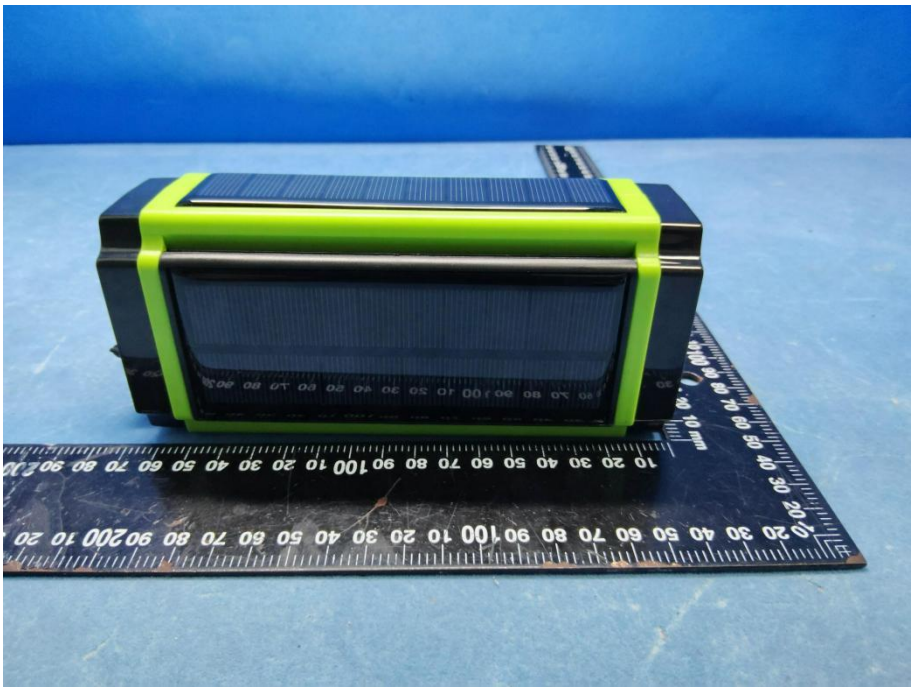
7.1. External Photos

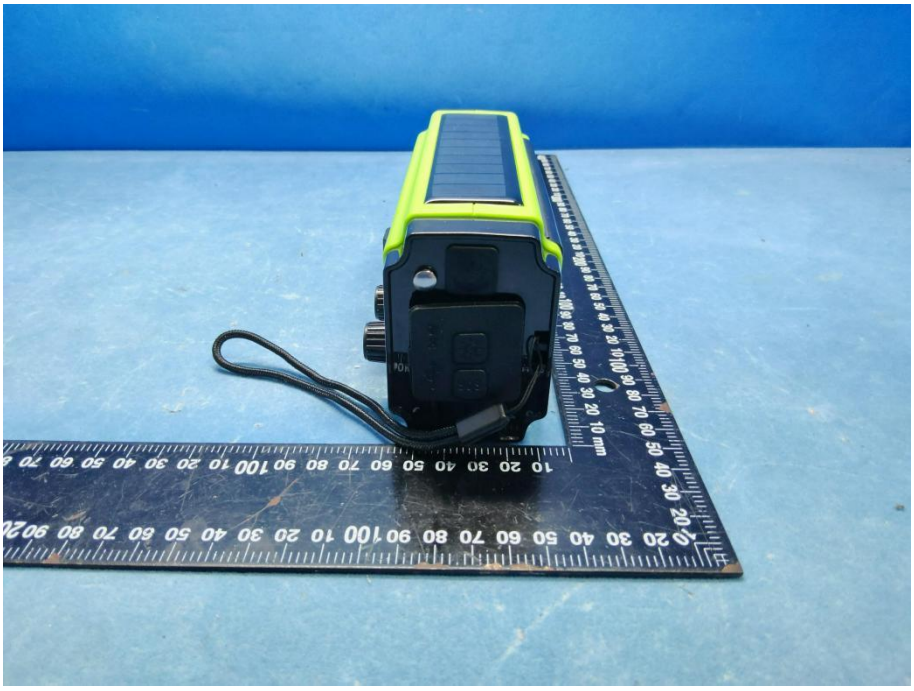


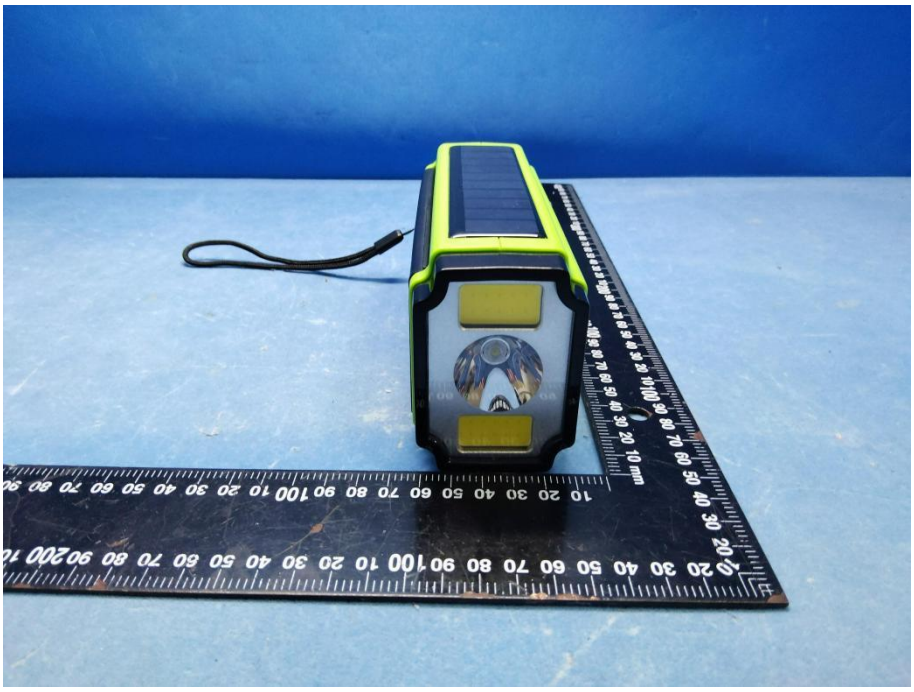




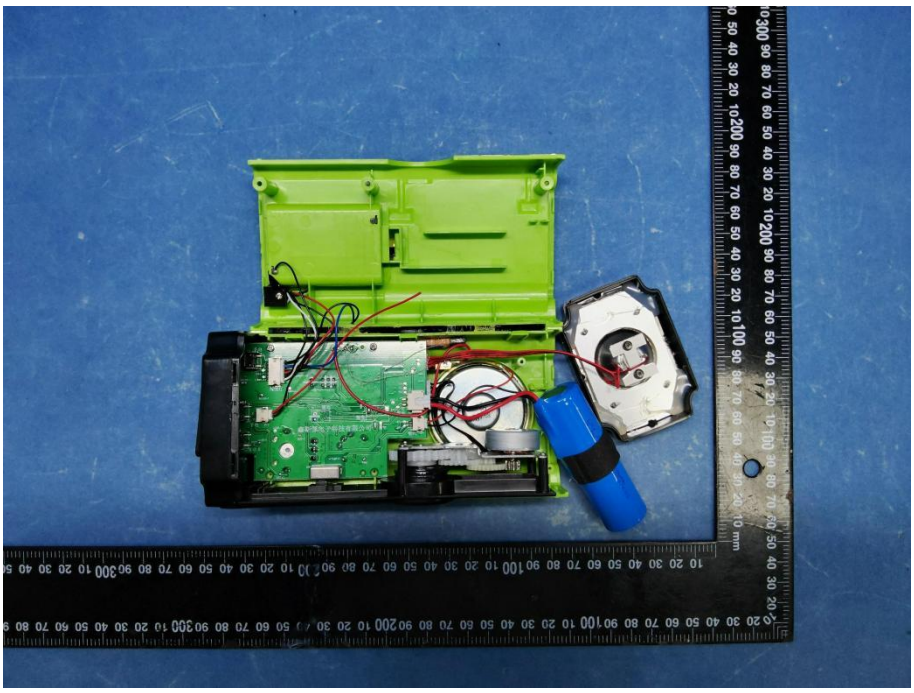

XSY320

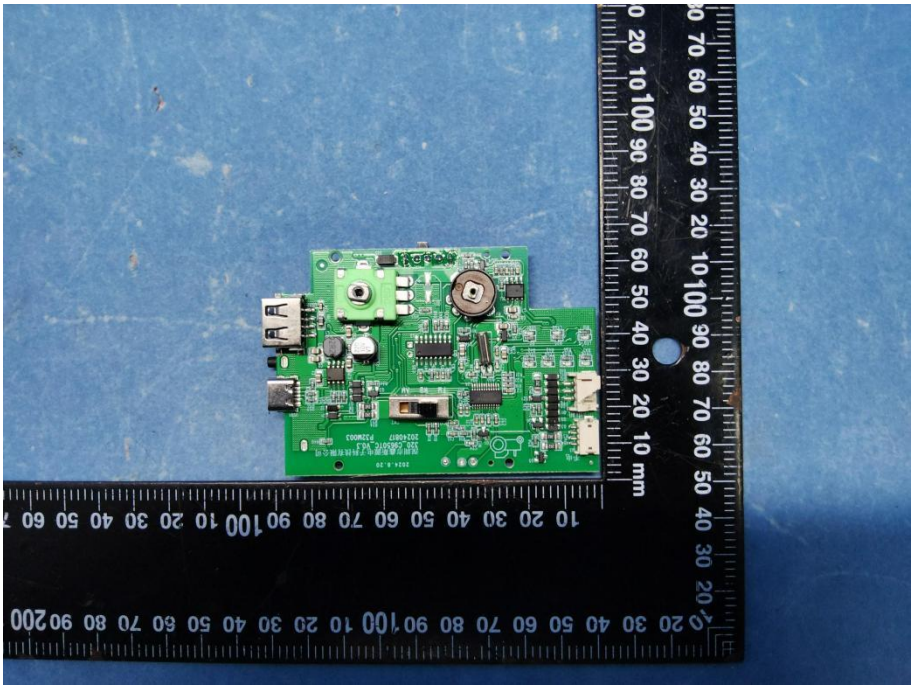


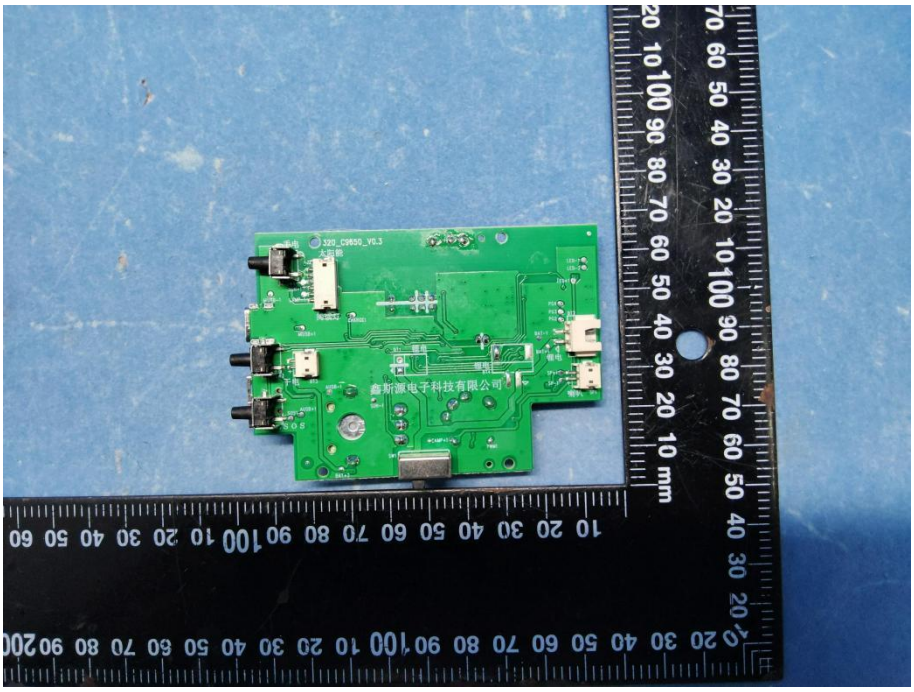


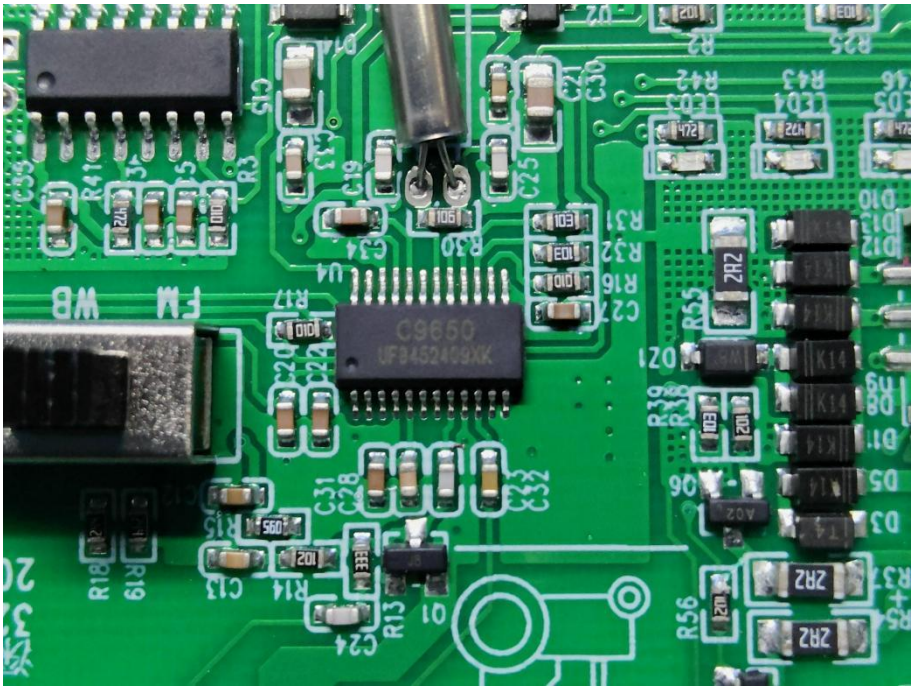


7.2. Internal Photos





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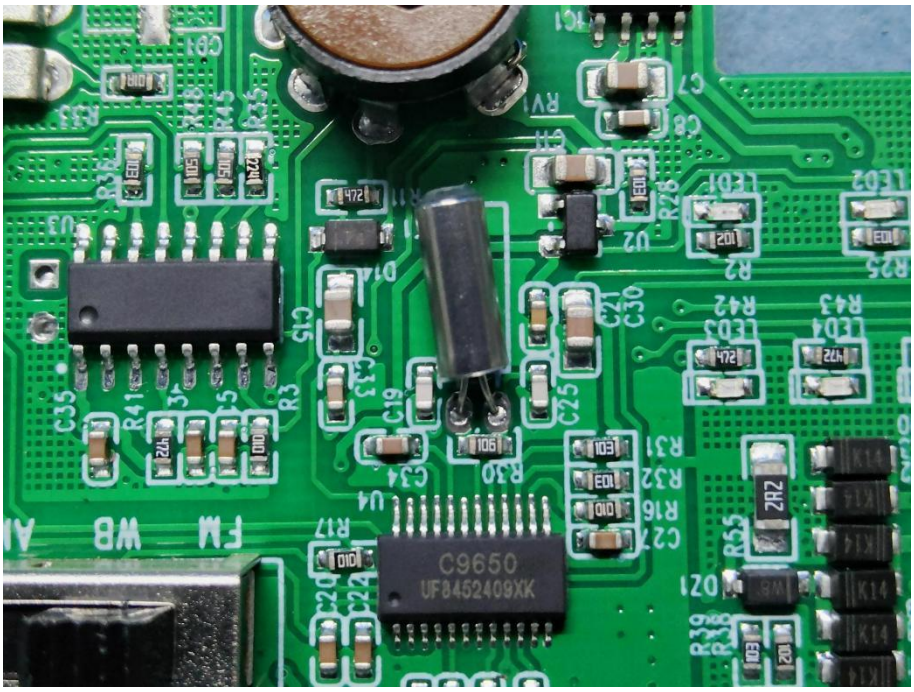
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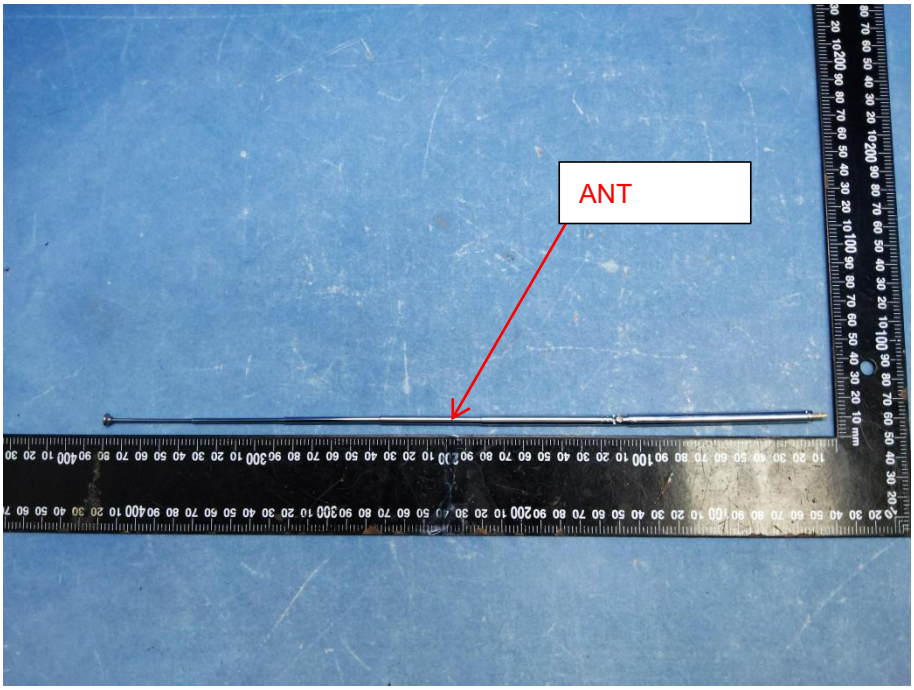
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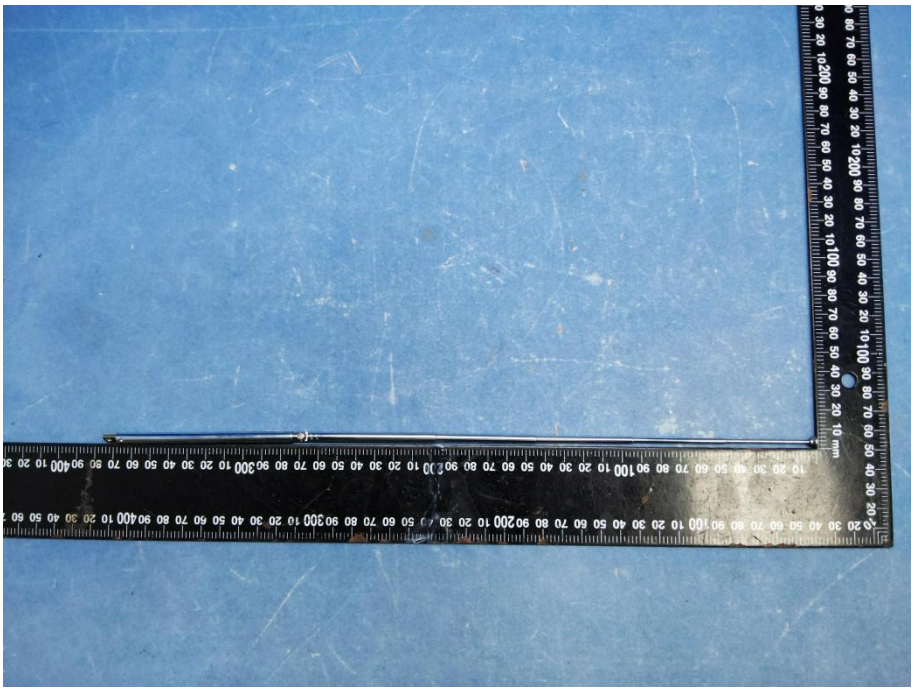

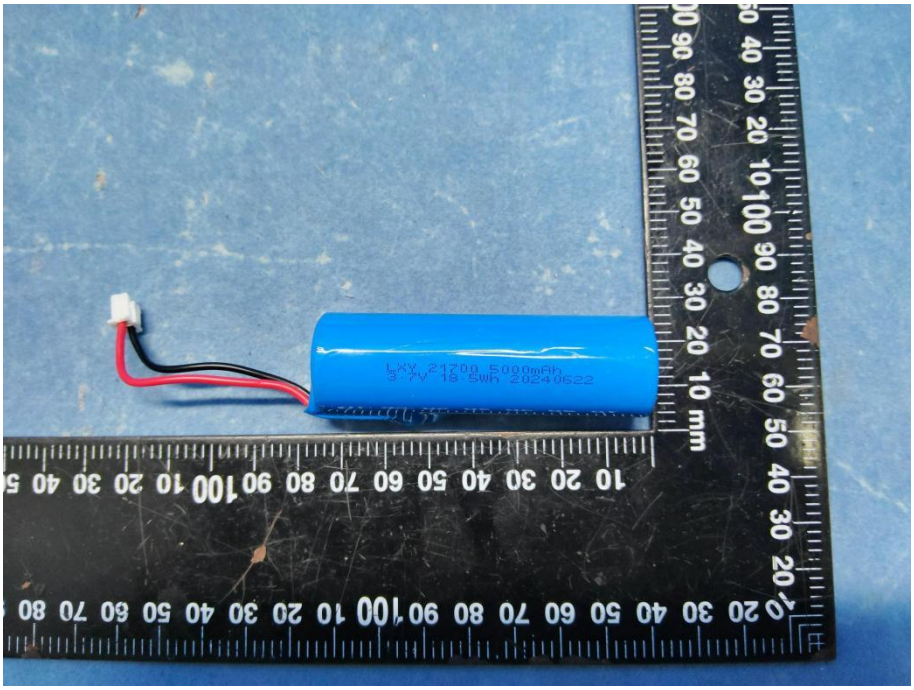
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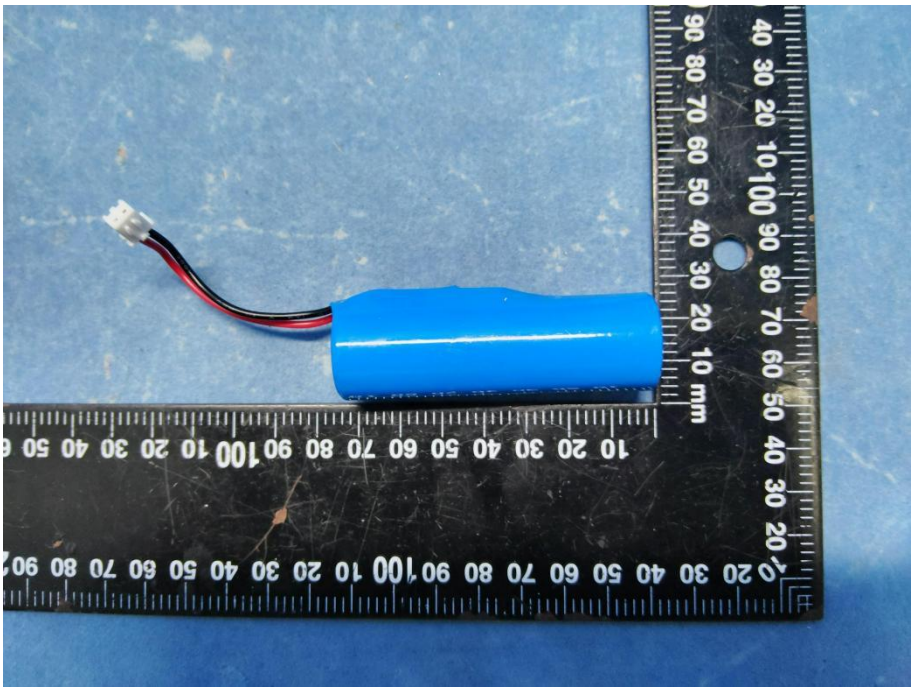

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