



FCC TEST REPORT

FCC ID: 2A7X4-XSY340

Applicant: SHENZHEN XINSIYUAN ELECTRONIC TECHNOLOGY CO.,LTD

Address: 4th Floor, Building A, No. 207, Xingye2nd Road, Fenghuang Community, FuyongTown, Baoan District, Shenzhen

Manufacturer: SHENZHEN XINSIYUAN ELECTRONIC TECHNOLOGY CO.,LTD

Address: 4th Floor, Building A, No. 207, Xingye2nd Road, Fenghuang Community, FuyongTown, Baoan District, Shenzhen

EUT: Radio

Trade Mark: N/A

Model Number: XSY340

Date of Receipt: Nov. 17, 2023

Test Date: Nov. 17, 2023 - Nov. 29, 2023

Date of Report: Nov. 29, 2023

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Applicable Standards: FCC Part 15 Subpart B
ANSI C63.4:2014

Test Result: Pass

Report Number: DL-20231129031E

Prepared (Test Engineer): Alisa Song

Reviewer (Supervisor): Jack Bu

Approved (Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



TABLE OF CONTENT

	Page
Test Report Declaration	
1. VERSION.....	3
2. TEST SUMMARY.....	3
3. GENERAL INFORMATION.....	4
4. TEST INSTRUMENT USED.....	5
5. CONDUCTED EMISSION TEST.....	6
6. RADIATION EMISSION TEST.....	10
7. SETUP PHOTOGRAPHS.....	16
8. EUT PHOTOGRAPHS.....	18

**1. VERSION**

Version No.	Date	Description
00	Nov. 29, 2023	Original

2. TEST SUMMARY

EMC Emission				
Standard	Test Item	Limit	Result	Remark
FCC PART 15 B	Conducted Emission at power ports	Class B	PASS	
	Radiated Emission below 1GHz	Class B	PASS	
	Radiated Emission above 1GHz	Class B	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

Test lab: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

FCC Test Firm Registration Number: 854456

Designation Number: CN1307

IC Registered No.: 27485

CAB ID.: CN0118



3. GENERAL INFORMATION

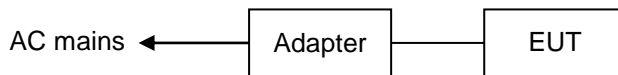
3.1 Description of Device (EUT)

EUT: Radio
Trade Mark: N/A
Model Number: XSY340
Test Model: XSY340
Model difference: N/A
Power Supply: DC 5V from charger
Battery: 3.7V
AM: 520~1710 KHz
Frequency range: FM: 87~108 MHz
WB: 162.400~162.550 MHz
Working Frequency: Above 108MHz

3.2 Tested System Details

None.

3.3 Block Diagram of Test Set-up



3.4 Test Mode Description

Mode1.	FM+Light Mode	Mode2.	AM+Light Mode
Mode3.	WB+Light Mode	Mode4.	FM+USB Output Mode
Mode5.	AM+USB Output Mode	Mode6.	WB+USB Output Mode
Mode7.	Charging Mode		

3.5 Test Auxiliary Equipment

Adapter (Provide by test lab):
Manufacturer: HAIWEI
Model: HW-0501000E
I/P: AC 100-240V 50/60Hz
O/P: DC 5V 1A

3.6 Test Uncertainty

Conducted Emission Uncertainty : ± 2.56 dB
Radiated Emission Uncertainty(<1G) : ± 3.65 dB
Radiated Emission Uncertainty (>1G) ± 4.89 dB

**4. TEST INSTRUMENT USED****For Conducted Emission Test (843 Shielded Room)**

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Sep. 20, 2022	Sep. 19, 2025
EMI Receiver	R&S	ESR	101421	Nov. 04, 2023	Nov. 03, 2024
LISN	R&S	ENV216	102417	Nov. 04, 2023	Nov. 03, 2024
Clamp	COM-POWER	CLA-050	431071	Nov. 04, 2023	Nov. 03, 2024
3-Loop Antenna	DAZE	ZN30401	13021	Nov. 04, 2023	Nov. 03, 2024
ISN T8	Schwarzbeck	NTFM 8158	101135	Nov. 04, 2023	Nov. 03, 2024
ISN T5	Schwarzbeck	NTFM 8158	101136	Nov. 04, 2023	Nov. 03, 2024
843 Cable 1#	ChengYu	CE Cable	001	Nov. 04, 2023	Nov. 03, 2024
843 Cable 1#	ChengYu	CE Cable	002	Nov. 04, 2023	Nov. 03, 2024

For Radiated Emission Test (966 chamber)

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
966 Chamber	ChengYu	966 Room	966	Sep. 20, 2022	Sep. 19, 2025
Spectrum Analyzer	Agilent	E4408B	MY50140780	Nov. 04, 2023	Nov. 03, 2024
EMI Receiver	R&S	ESRP7	101393	Nov. 04, 2023	Nov. 03, 2024
Amplifier	Schwarzbeck	BBV9743B	00153	Nov. 04, 2023	Nov. 03, 2024
Amplifier	EMEC	EM01G8GA	00270	Nov. 04, 2023	Nov. 03, 2024
Broadband Trilog Antenna	Schwarzbeck	VULB9162	00306	Nov. 04, 2023	Nov. 03, 2024
Horn Antenna	Schwarzbeck	BBHA9120D	02139	Nov. 04, 2023	Nov. 03, 2024
966 Cable 1#	ChengYu	966	004	Nov. 04, 2023	Nov. 03, 2024
966 Cable 2#	ChengYu	966	003	Nov. 04, 2023	Nov. 03, 2024

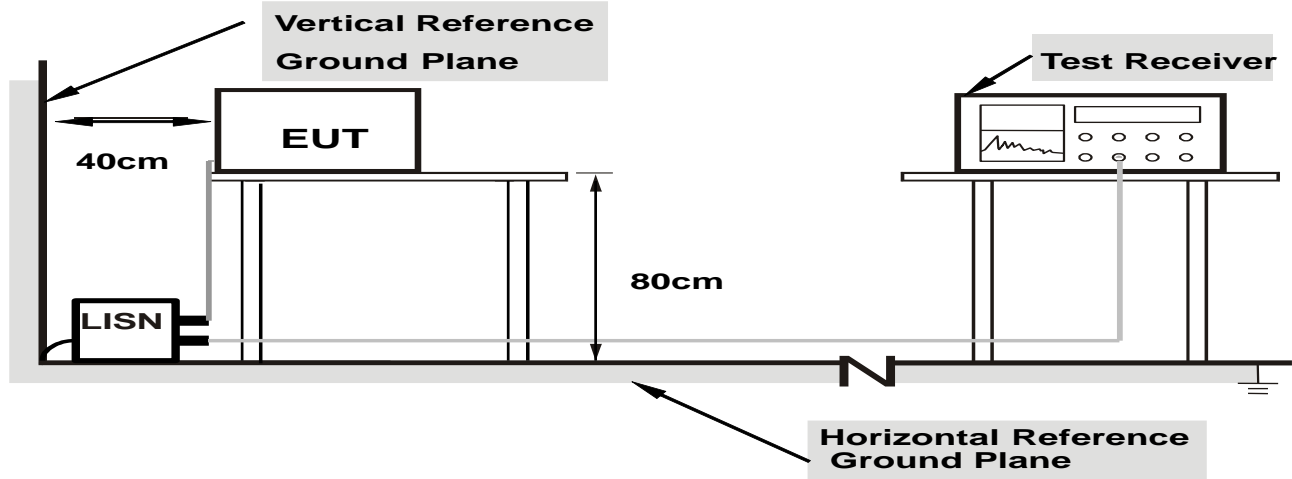
Other

Name	Manufacturer	Model	Software version
EMC Conduction Test System	FALA	EZ_EMCC	EMC-CON 3A1.1
EMC radiation test system	FALA	EZ_EMCC	FA-03A2
RF test system	MAIWEI	MTS8310	2.0.0.0
RF communication test system	MAIWEI	MTS8200	2.0.0.0

5. CONDUCTED EMISSION TEST

5.1 Block Diagram of Test Setup

For Mains Terminals Test



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

5.2 Test Standard and Limit

FCC PART 15 B

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15~0.50	66 ~ 56*	55 ~ 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.

5.3 EUT Configuration on Test

The following equipment's 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.

5.4 Operating Condition of EUT

- 5.4.1 Setup the EUT and simulators as shown in Section 5.1.
- 5.4.2 Turn on the power of all equipments.
- 5.4.3 Let the EUT work in test modes and test it.



5.5 Test Procedure

The EUT is put on the table and connected to the AC mains through a Artificial Mains Network (AMN) or ISN. 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 **ANSI C63.4** regulations during conducted emission test.

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

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

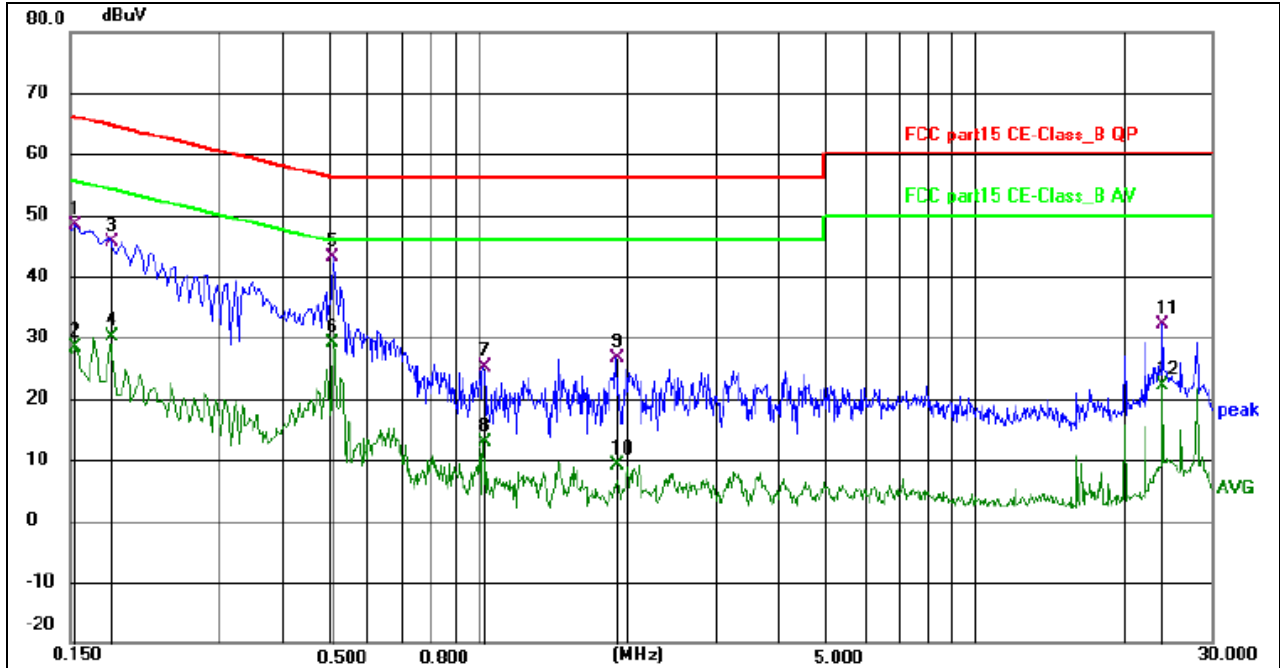
We pretest AC 120V and AC 230V, the worst voltage was AC 120V and the data recording in the report.

5.6 Test Result



All modes have been tested, and the report only shows the results of the worst mode7.

Temperature:	25 C°	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 7



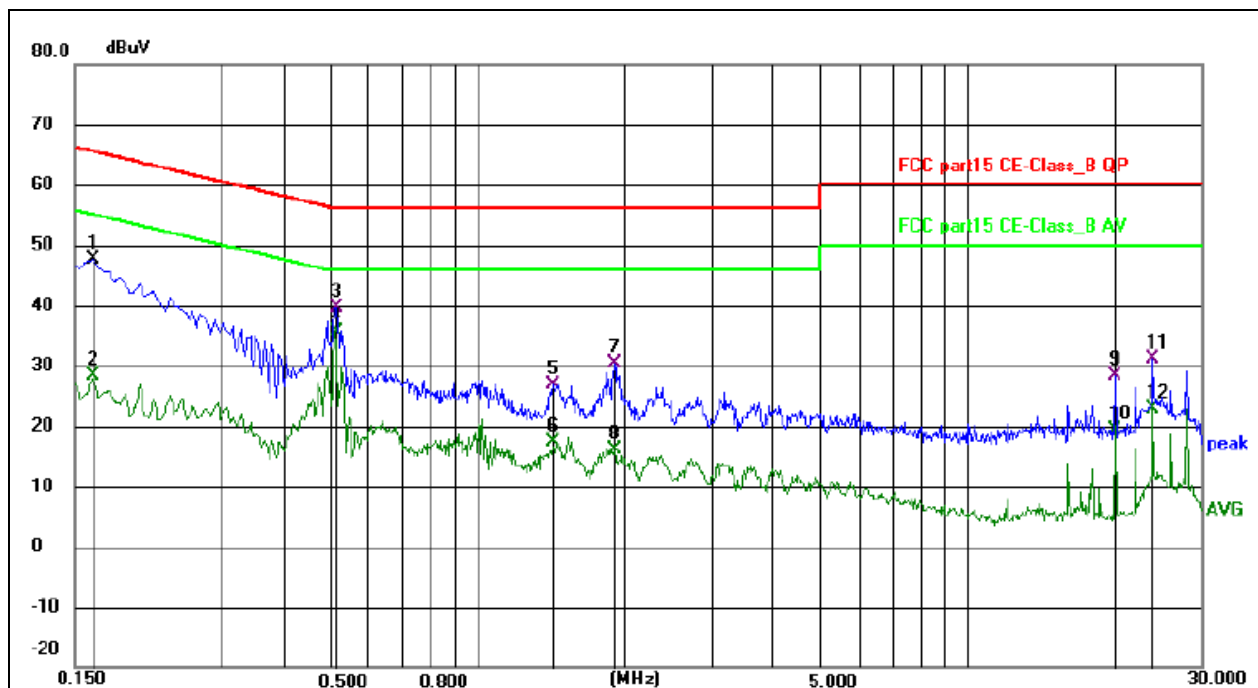
Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1544	37.90	10.41	48.31	65.76	17.45	QP	P	
2	0.1544	17.99	10.41	28.40	55.76	27.36	AVG	P	
3	0.1815	35.71	9.85	45.56	64.42	18.86	QP	P	
4	0.1815	20.17	9.85	30.02	54.42	24.40	AVG	P	
5 *	0.5100	33.85	9.19	43.04	56.00	12.96	QP	P	
6	0.5100	19.99	9.19	29.18	46.00	16.82	AVG	P	
7	1.0229	15.92	9.29	25.21	56.00	30.79	QP	P	
8	1.0229	3.54	9.29	12.83	46.00	33.17	AVG	P	
9	1.8914	16.89	9.81	26.70	56.00	29.30	QP	P	
10	1.8914	-0.72	9.81	9.09	46.00	36.91	AVG	P	
11	24.0090	20.96	11.16	32.12	60.00	27.88	QP	P	
12	24.0090	10.94	11.16	22.10	50.00	27.90	AVG	P	



Temperature:	25 C°	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 7



Remark:

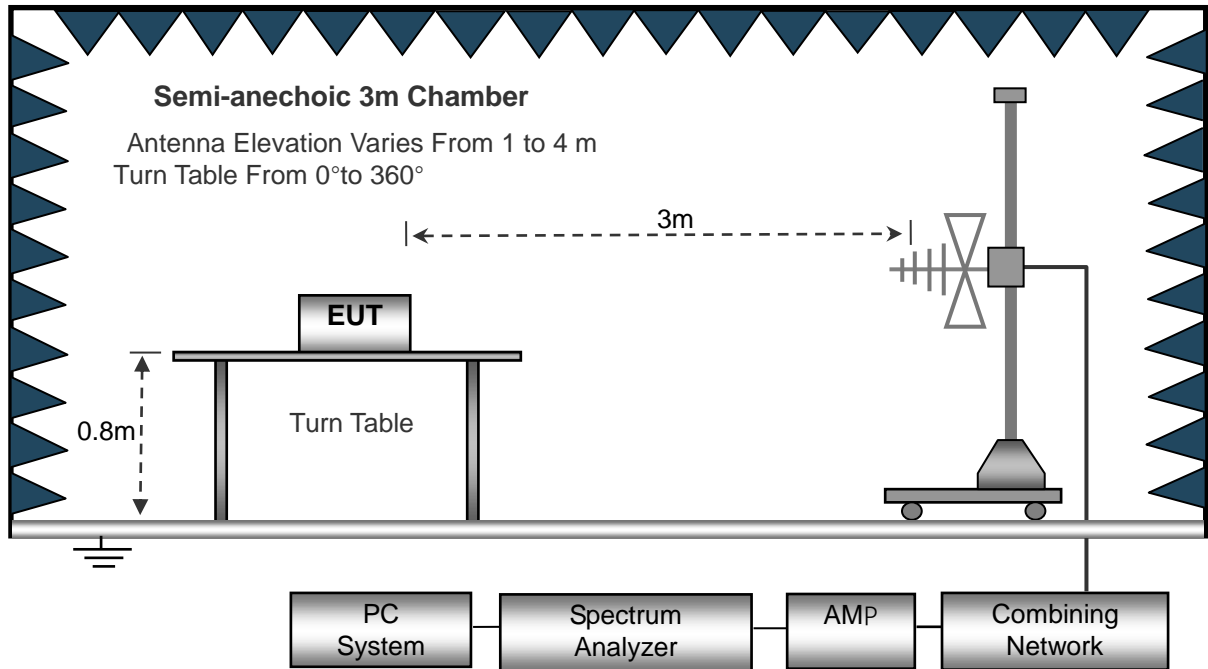
Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1635	37.65	9.94	47.59	65.28	17.69	QP	P	
2	0.1635	18.43	9.94	28.37	55.28	26.91	AVG	P	
3	0.5144	30.29	9.36	39.65	56.00	16.35	QP	P	
4 *	0.5154	26.36	9.36	35.72	46.00	10.28	AVG	P	
5	1.4234	17.31	9.59	26.90	56.00	29.10	QP	P	
6	1.4234	7.74	9.59	17.33	46.00	28.67	AVG	P	
7	1.9004	20.46	9.80	30.26	56.00	25.74	QP	P	
8	1.9004	6.45	9.80	16.25	46.00	29.75	AVG	P	
9	20.0085	17.99	10.42	28.41	60.00	31.59	QP	P	
10	20.0085	8.90	10.42	19.32	50.00	30.68	AVG	P	
11	24.0090	19.84	11.17	31.01	60.00	28.99	QP	P	
12	24.0090	11.68	11.17	22.85	50.00	27.15	AVG	P	

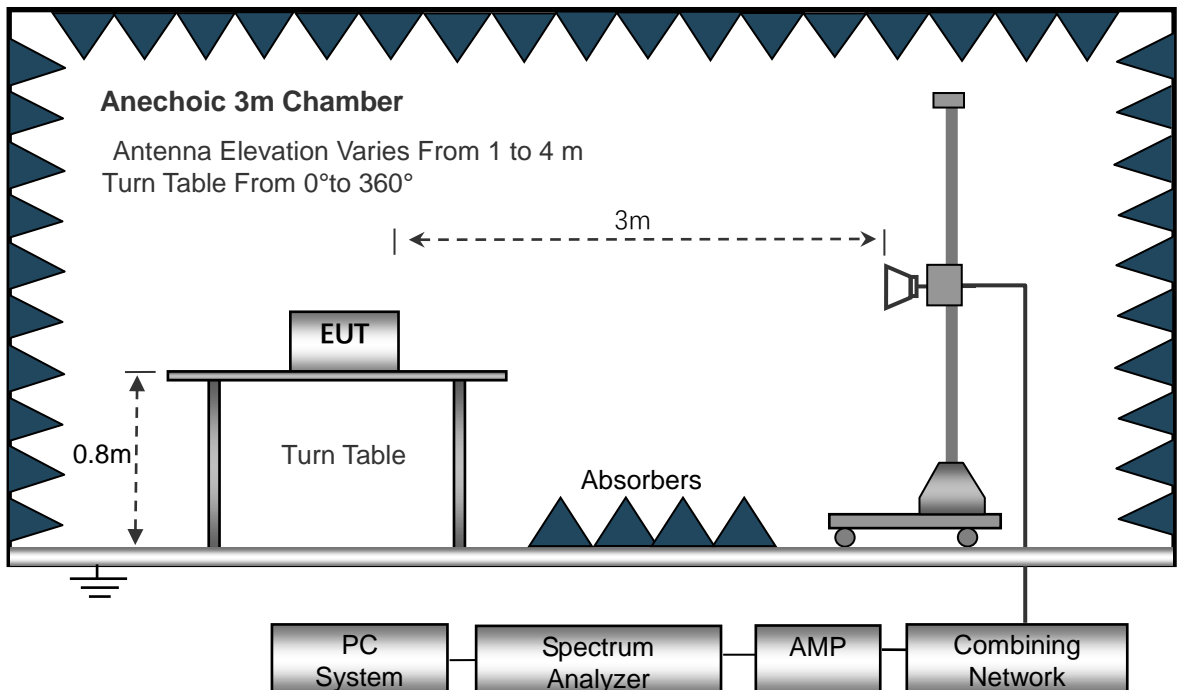
6. RADIATION EMISSION TEST

6.1 Block Diagram of Test Setup

Below 1GHz



Above 1GHz



6.2 Test Standard and Limit

FCC PART 15 B



Below 1GHz

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Above 1GHz

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μ V)/m	Detector
Above 1000	3	74.0	PEAK
	3	54.0	AVERAGE

Remark:

- (1) The smaller limit shall apply at the cross point between two frequency bands.
- (2) Distance refers to the distance in meters between the measuring instrument, antenna and the closed point of any part of the device or system.

6.3 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 5.3.

6.4 Operating Condition of EUT

Same as conducted emission test, which is listed in Section 5.4 except the test set up replaced as Section 6.2.

6.5 Test Procedure

- 1) The radiated emissions test was conducted in a semi-anechoic chamber.
- 2) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
- 3) Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT.
- 4) The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization.
- 5) The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz.
- 6) The frequency range from 30MHz to 1000MHz, 1000MHz to 6000MHz is checked.
- 7) The peak emission below the average's limit, so the average's result no recoring.

6.6 Test Result

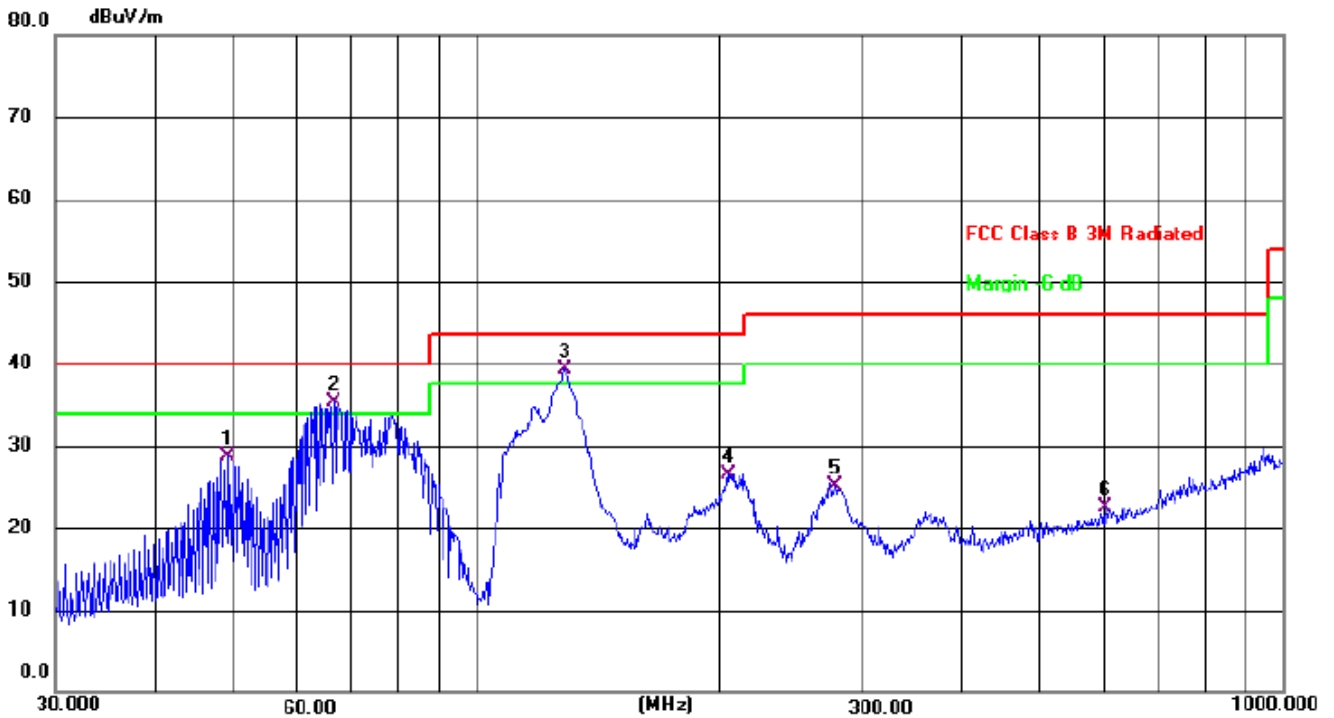
PASS

Please refer to the following page.



All modes have been tested, and the report only shows the results of the worst mode4.

Radiation Emission Test Data			
Temperature:	24.5°C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Test Mode:	Mode 4



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Margin dB	Detector
1		49.1865	42.02	-13.26	28.76	40.00	-11.24	QP
2	!	66.4989	49.69	-14.44	35.25	40.00	-4.75	QP
3	*	128.5629	56.25	-16.88	39.37	43.50	-4.13	QP
4		204.9551	41.10	-14.53	26.57	43.50	-16.93	QP
5		278.0668	37.04	-12.00	25.04	46.00	-20.96	QP
6		601.4265	28.68	-6.08	22.60	46.00	-23.40	QP

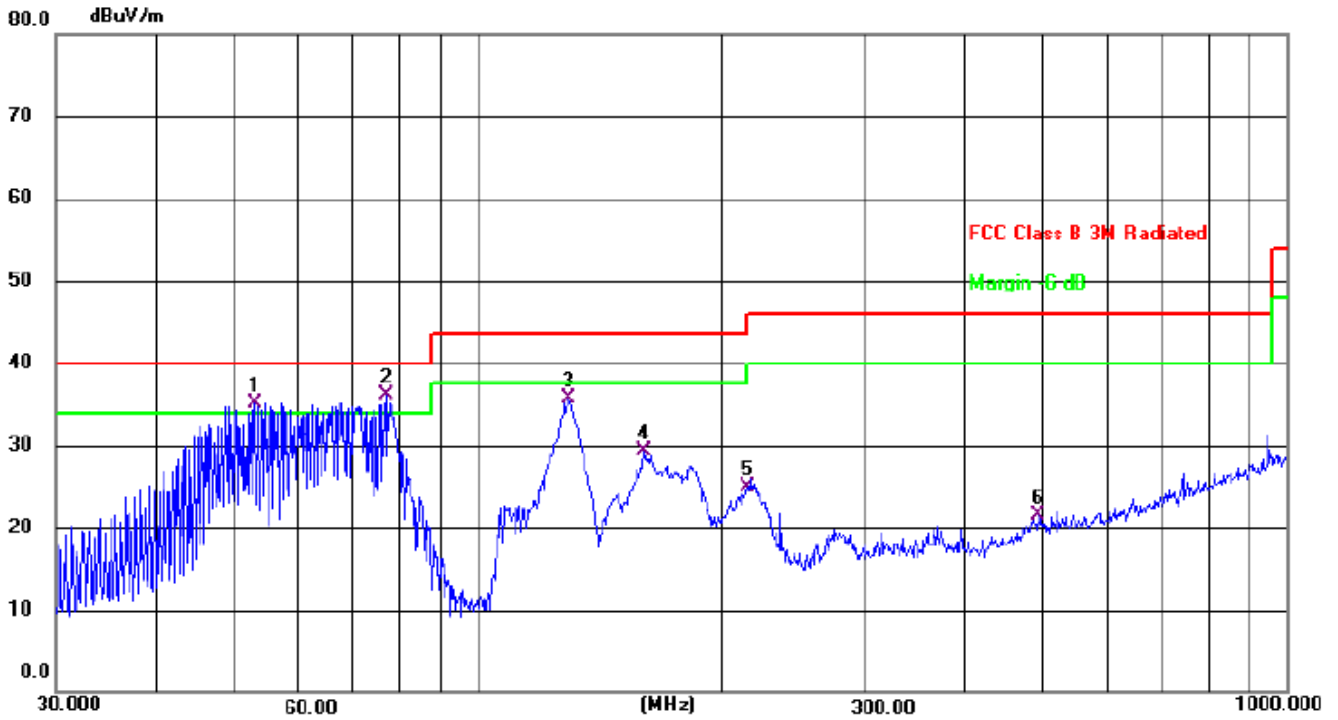
Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Measurement Level = Reading Level + Correct Factor; Margin = Measurement Level- Limit ;



Radiation Emission Test Data			
Temperature:	24.5°C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Test Mode:	Mode 4



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Margin dB	Detector
1	!	52.9453	48.15	-13.06	35.09	40.00	-4.91	QP
2	*	77.0505	52.98	-16.91	36.07	40.00	-3.93	QP
3		129.0145	52.56	-16.90	35.66	43.50	-7.84	QP
4		160.3456	46.47	-17.18	29.29	43.50	-14.21	QP
5		215.2678	38.96	-14.12	24.84	43.50	-18.66	QP
6		492.4685	29.16	-7.71	21.45	46.00	-24.55	QP

Remark:

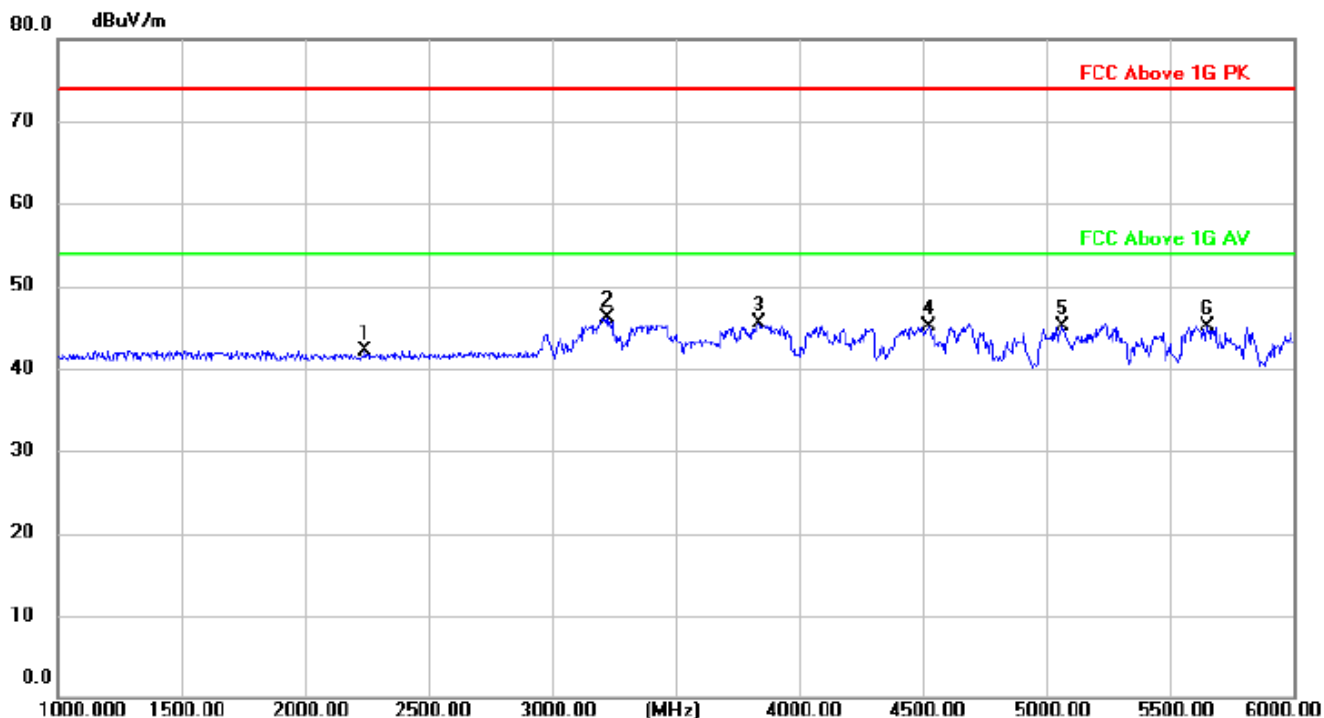
Correct Factor = Cable loss + Antenna factor – Preamplifier;

Measurement Level = Reading Level + Correct Factor; Margin = Measurement Level- Limit



All modes have been tested, and the report only shows the results of the worst mode1.

Radiation Emission Test Data			
Temperature:	24.5°C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Test Mode:	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2245.000	80.20	-38.13	42.07	74.00	-31.93	peak
2 *	3225.000	82.70	-36.54	46.16	74.00	-27.84	peak
3	3835.000	82.45	-37.00	45.45	74.00	-28.55	peak
4	4525.000	81.48	-36.32	45.16	74.00	-28.84	peak
5	5060.000	80.60	-35.50	45.10	74.00	-28.90	peak
6	5650.000	80.39	-35.23	45.16	74.00	-28.84	peak

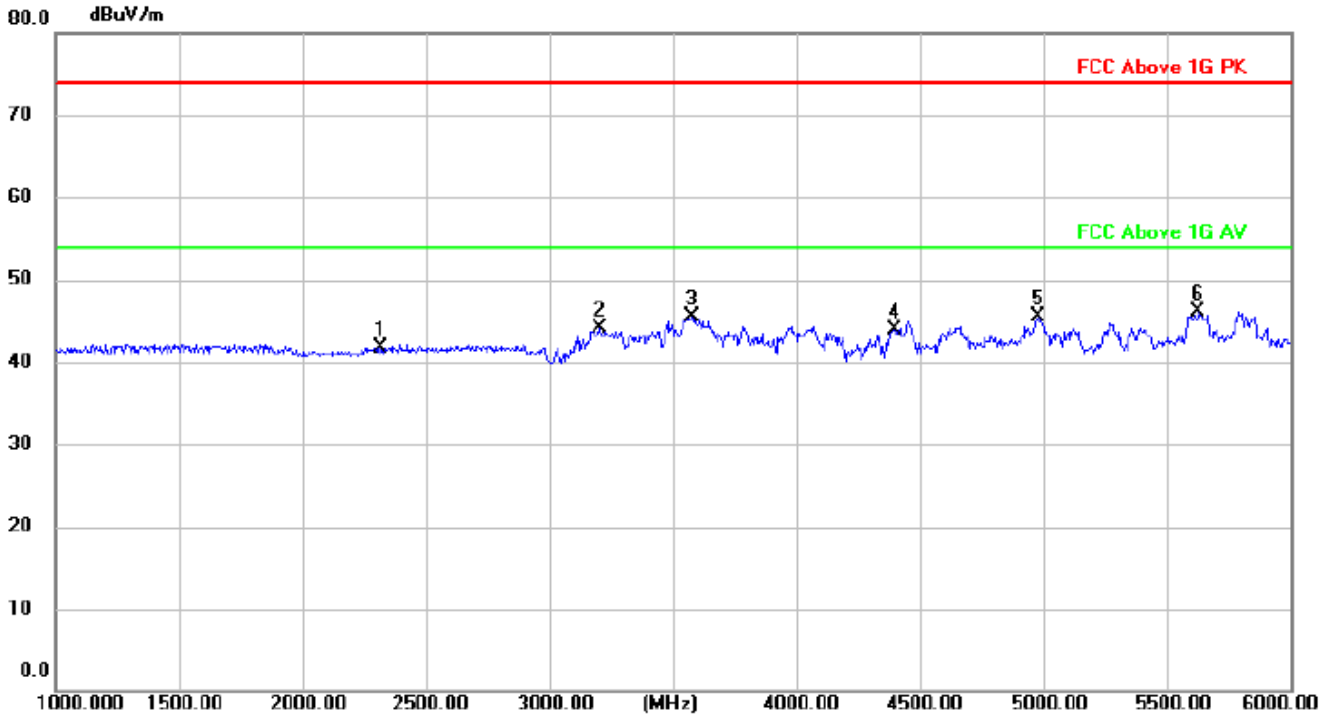
Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Measurement Level = Reading Level + Correct Factor; Margin = Measurement Level- Limit ;



Radiation Emission Test Data			
Temperature:	24.5°C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Test Mode:	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2315.000	79.84	-38.05	41.79	74.00	-32.21	peak
2	3200.000	80.67	-36.55	44.12	74.00	-29.88	peak
3	3575.000	81.98	-36.55	45.43	74.00	-28.57	peak
4	4395.000	80.53	-36.56	43.97	74.00	-30.03	peak
5	4975.000	81.08	-35.58	45.50	74.00	-28.50	peak
6 *	5625.000	81.39	-35.23	46.16	74.00	-27.84	peak

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Measurement Level = Reading Level + Correct Factor; Margin = Measurement Level- Limit



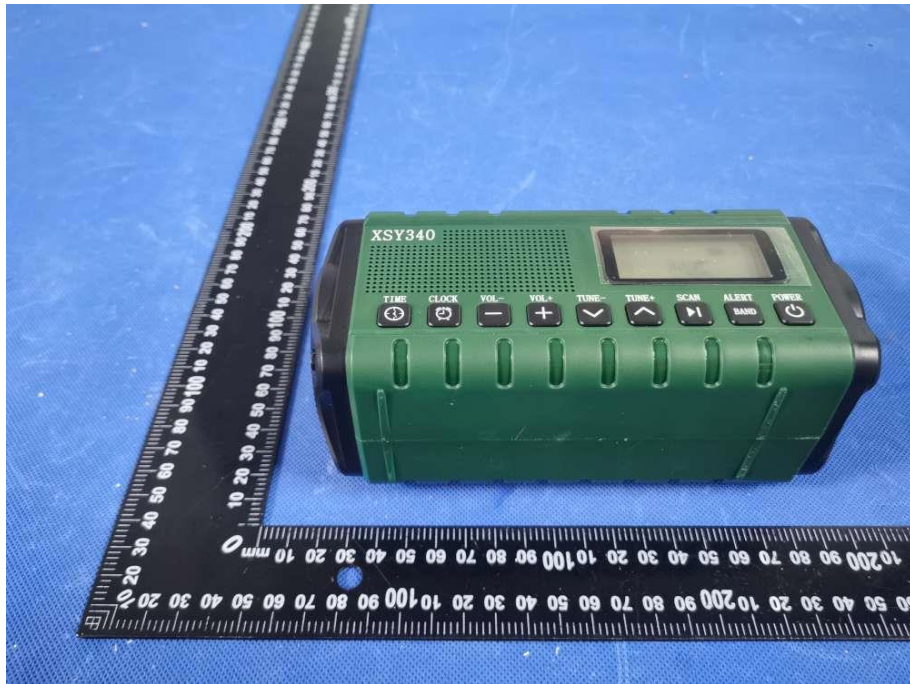
7. SETUP PHOTOGRAPHS



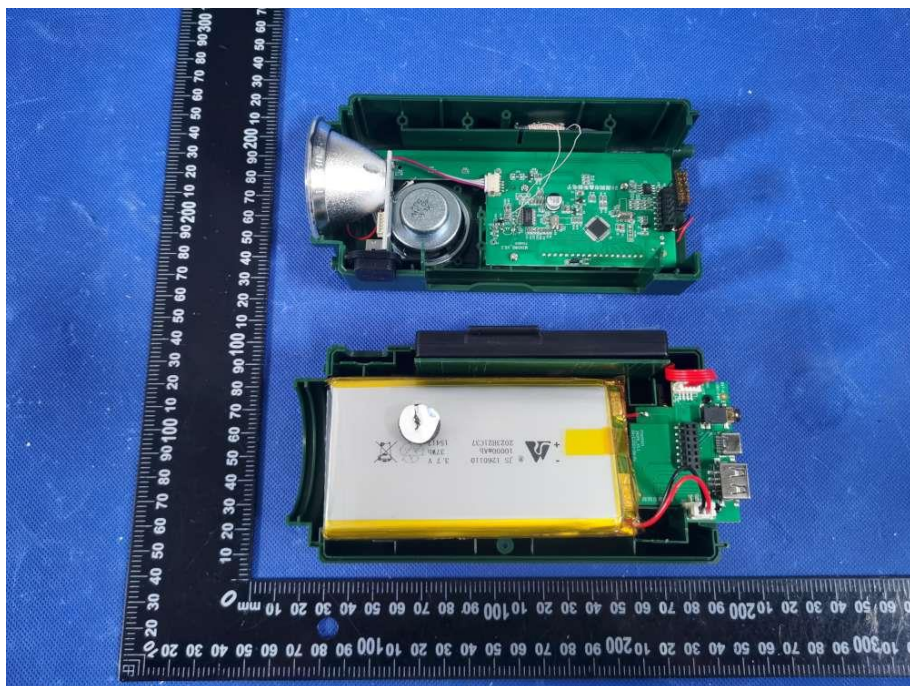


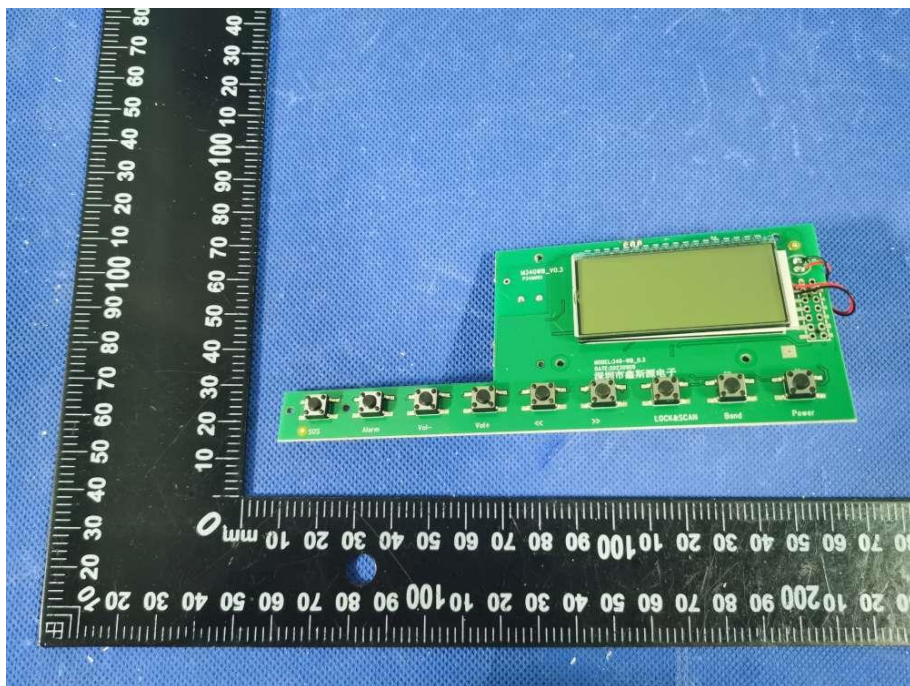
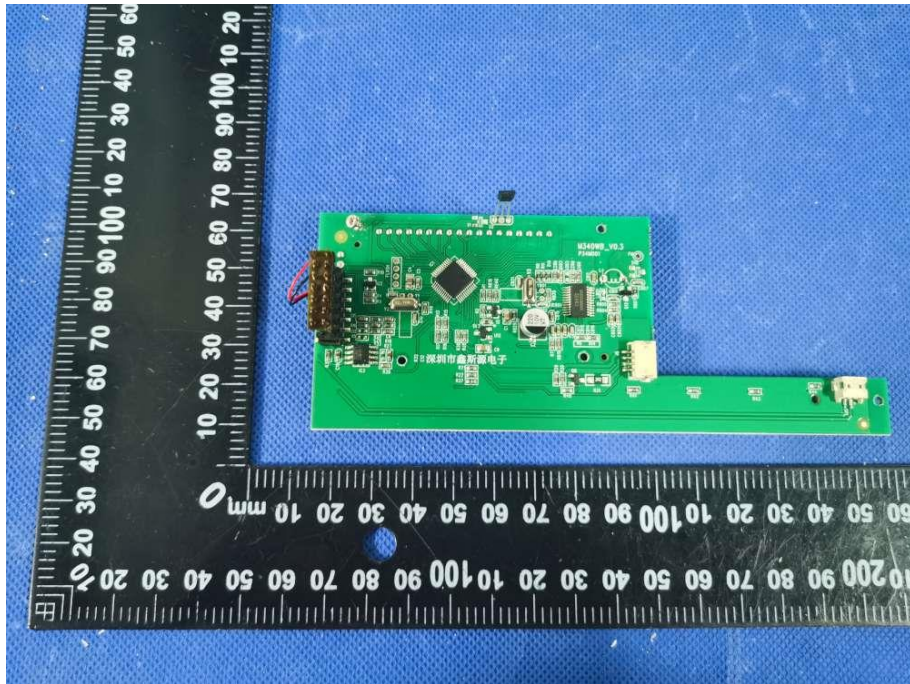
8. EUT PHOTOGRAPHS

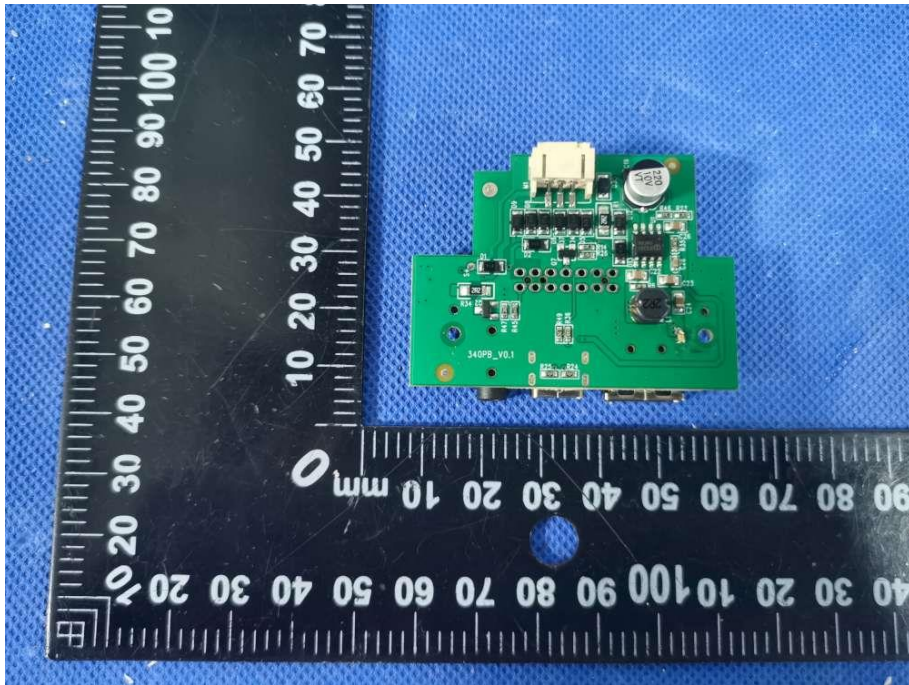
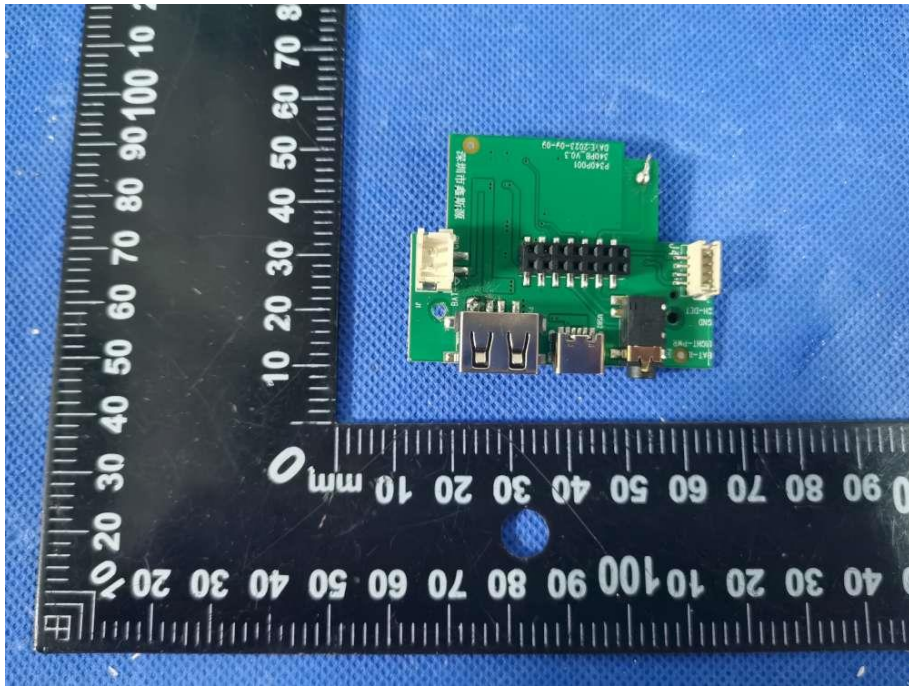


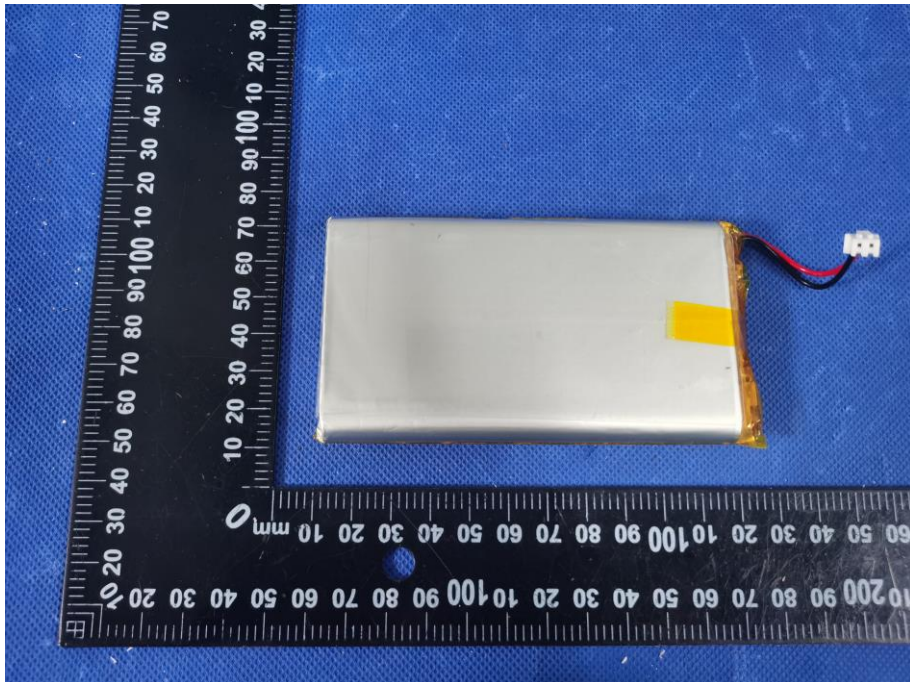
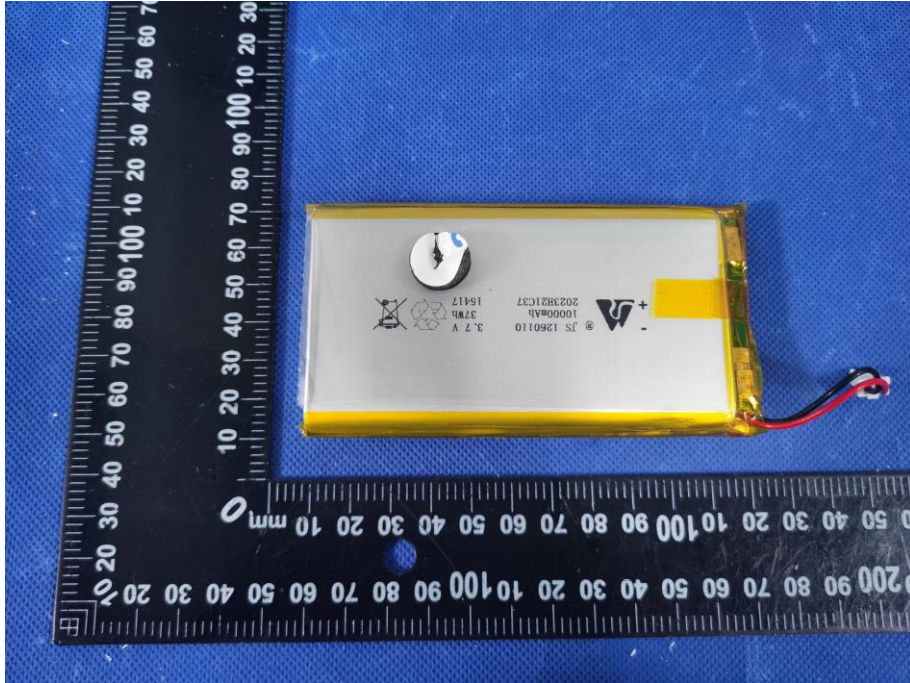












***** END OF REPORT *****