

FCC Test Report

Client Name : Stage10 GmbH

Address : Torstr. 49, 10119 Berlin Germany

Product Name : PetTec Plush Pet Toy Trout

Date : Jun. 01, 2021

Shenzhen Anbotek Compliance Laboratory Limited



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TEST REPORT

Applicant : Stage10 GmbH
Manufacturer : PETMI (SUQIAN) Electronics Technology Co., Ltd.
Product Name : PetTec Plush Pet Toy Trout
Model No. : 15966, 16027, 16032, 16033
Trade Mark : PetTec
Rating(s) : Input: DC 5V, 500mA (with DC 3.7V,500 mAh Battery inside)

Test Standard(s) : FCC Rules and Regulations Part 15 Subpart B
Test Method(s) : ANSI C63.4-2014

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited To determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full responsibility for the accuracy and completeness of these measurements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited

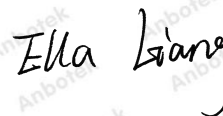
Date of Receipt

Feb. 23, 2021

Date of Test

Feb. 23~May 08, 2021

Prepared By



(Engineer /Ella Liang)

Approved & Authorized Signer



(Manager / Kingkong Jin)

1. General Information

1.1. Client Information

Applicant	:	Stage10 GmbH
Address	:	Torstr. 49, 10119 Berlin Germany
Manufacturer	:	PETMI (SUQIAN) Electronics Technology Co., Ltd.
Address	:	Building A1, East Area of Smart Home Appliance Industrial Park, Suqian City, Jiangsu Province, China.
Factory	:	PETMI (SUQIAN) Electronics Technology Co., Ltd.
Address	:	Building A1, East Area of Smart Home Appliance Industrial Park, Suqian City, Jiangsu Province, China.

1.2. Description of Device (EUT)

Product Name	:	PetTec Plush Pet Toy Trout	
Model No.	:	15966, 16027, 16032, 16033 (Note: All samples are the same except the model number & appearance, so we prepare "15966" for test only.)	
Trade Mark	:	PetTec	
Test Power Supply	:	AC 120V, 60Hz for adapter/ AC 240V, 60Hz for adapter/ DC 3.7V Battery inside	
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)	
Product Description	:	Adapter:	N/A
Remark: (1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.			

1.3. Auxiliary Equipment Used During Test

N/A

1.4. Description of Test Mode

Pretest Mode	Description
Mode 1	Charge Mode
Mode 2	On Mode

For Mode 1-2 Block Diagram of Test Setup



1.5. Test Summary

Standard Section	Test Items	Test Mode	Status
15.107	Power Line Conducted Emission Test (150KHz To 30MHz)	Mode 1-2	P
15.109	Radiated Emission Test (30MHz To 6000MHz)	Mode 1-2	P
P) Indicates "PASS". N) Indicates "Not applicable".			

1.6. Test Equipment List

Conducted Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Oct. 26, 2020	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 26, 2020	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 26, 2020	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 26, 2020	1 Year
2.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Nov. 02, 2020	1 Year
3.	Pre-amplifier	SONOMA	310N	186860	Oct. 26, 2020	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A
5.	Preamplifier	SKET Electronic	BK1G18G30 D	KD17503	Oct. 26, 2020	1 Year
6.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Nov. 02, 2020	1 Year

1.7. Measurement Uncertainty

Radiation Uncertainty	:	Ur = 3.9 dB (Horizontal)
		Ur = 3.8 dB (Vertical)
Conduction Uncertainty	:	Uc = 3.4 dB

1.8. Description of Test Facility

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

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, 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 No. 184111, September 30, 2020.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A, September 30, 2020.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128

2. Power Line Conducted Emission Test

2.1. Test Standard and Limit

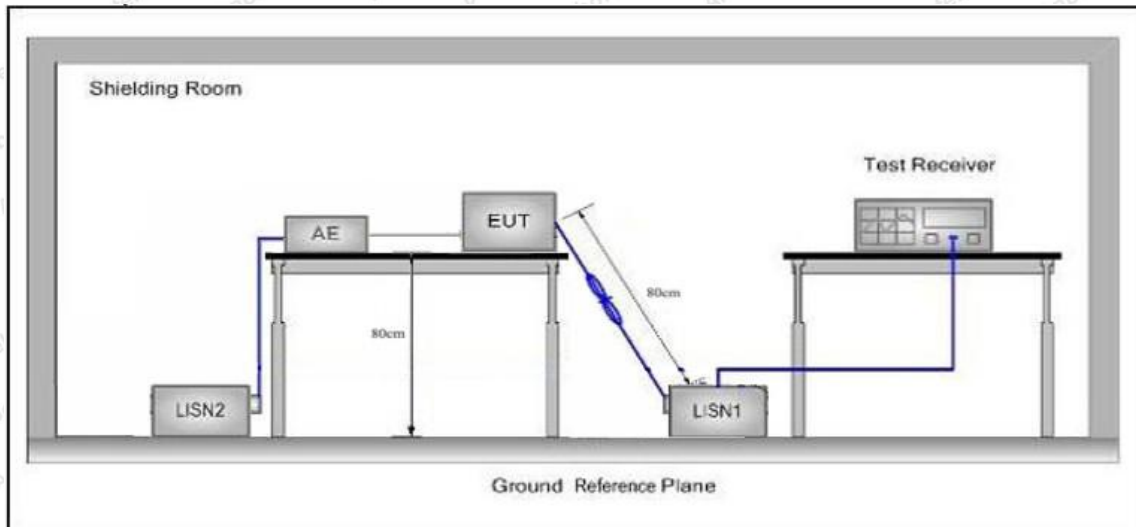
Test Standard	FCC Part 15 Subpart B
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Power Line Conducted Emission Measurement Limits (FCC Part 15 Class B)

Test Limit	Frequency (MHz)	At mains terminals (dB μ V)	
		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

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

2.2. Test Setup



2.3. EUT Configuration on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

2.4. Operating Condition of EUT

- 2.4.1. Setup the EUT as shown in Section 2.2.
- 2.4.2. Turn on the power of all equipments.
- 2.4.3. Let the EUT work in test mode and measure it.

2.5. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9KHz.

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

All the test results are listed in Section 2.6.

2.6. Test Results

PASS

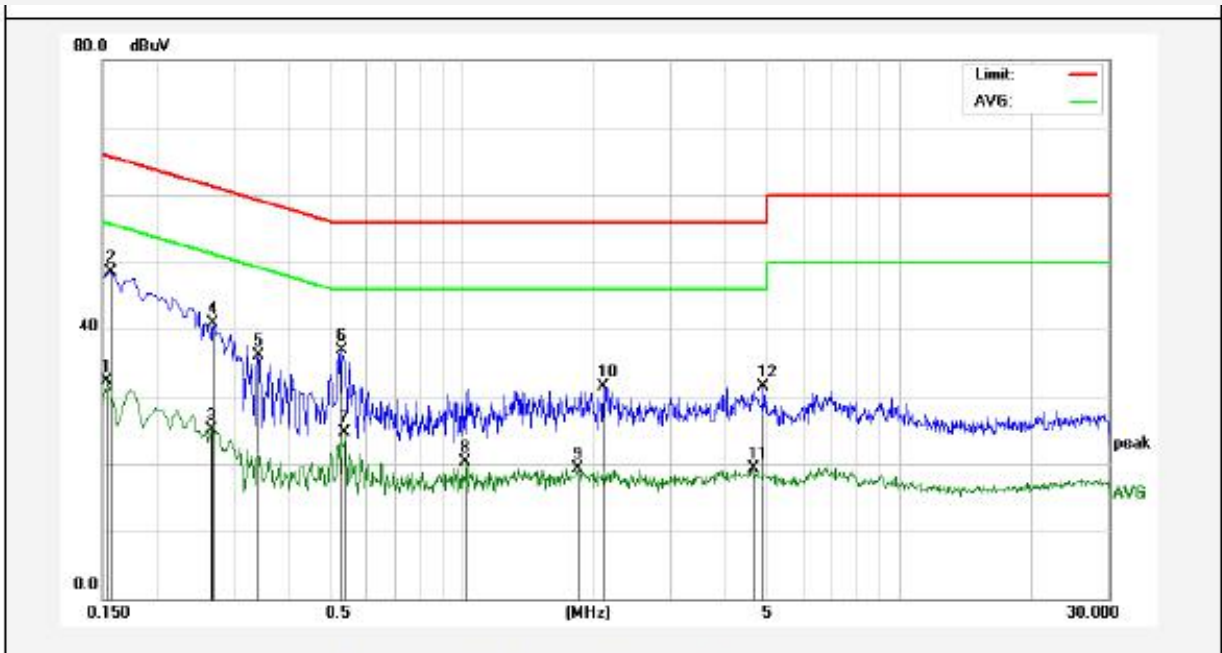
The test curves are shown in the following pages.

Only the worst case data was showed in the report, please to see the following pages



Conducted Emission Test Data

Test Site: 1# Shielded Room
 Operating Condition: Mode 1
 Test Specification: AC 120V 60Hz for adapter
 Comment: Live Line
 Tem.: 24.5°C Hum.: 49%

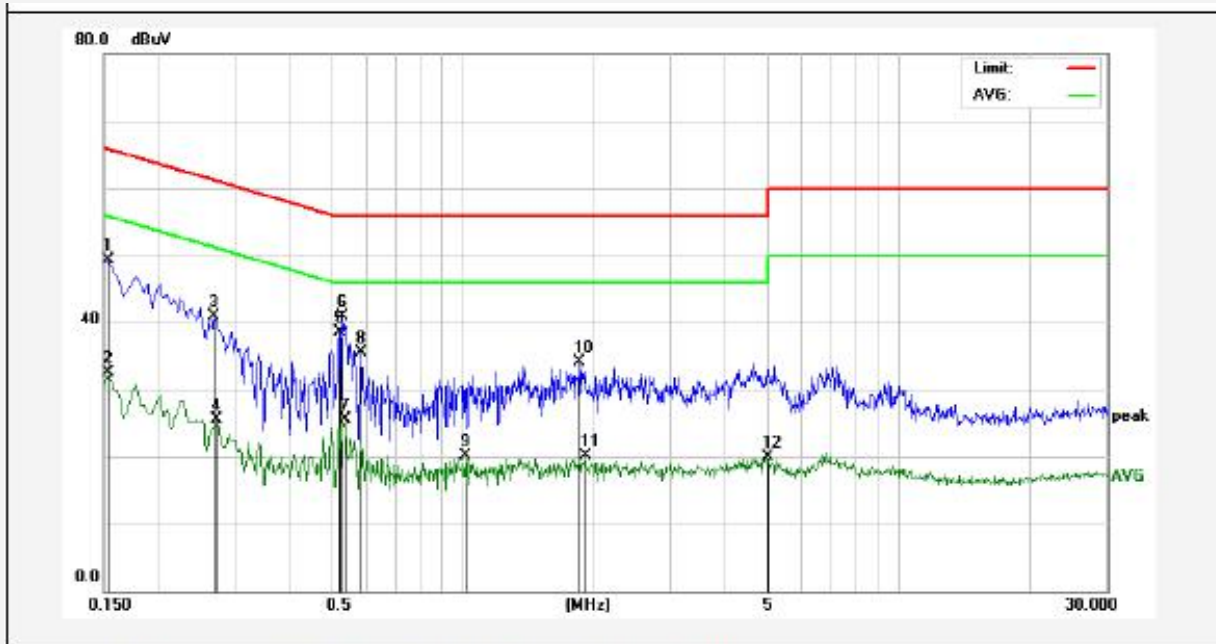


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1539	12.37	19.90	32.27	55.78	-23.51	AVG	
2	0.1580	28.69	19.90	48.59	65.56	-16.97	QP	
3	0.2660	5.26	19.89	25.15	51.24	-26.09	AVG	
4	0.2700	21.06	19.89	40.95	61.12	-20.17	QP	
5	0.3420	16.24	19.91	36.15	59.15	-23.00	QP	
6	0.5299	16.94	19.99	36.93	56.00	-19.07	QP	
7	0.5380	4.67	19.99	24.66	46.00	-21.34	AVG	
8	1.0180	0.26	20.12	20.38	46.00	-25.62	AVG	
9	1.8300	-0.76	20.14	19.38	46.00	-26.62	AVG	
10	2.1020	11.40	20.14	31.54	56.00	-24.46	QP	
11	4.6019	-0.81	20.20	19.39	46.00	-26.61	AVG	
12	4.8778	11.27	20.20	31.47	56.00	-24.53	QP	

Note: Result=Reading+Factor Over Limit=Result-Limit

Conducted Emission Test Data

Test Site: 1# Shielded Room
 Operating Condition: Mode 1
 Test Specification: AC 120V 60Hz for adapter
 Comment: Neutral Line
 Tem.: 24.5°C Hum.: 49%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1539	29.34	19.90	49.24	65.78	-16.54	QP	
2	0.1539	12.59	19.90	32.49	55.78	-23.29	AVG	
3	0.2700	20.97	19.89	40.86	61.12	-20.26	QP	
4	0.2740	5.54	19.89	25.43	50.99	-25.56	AVG	
5	0.5220	18.56	19.99	38.55	56.00	-17.45	QP	
6	0.5299	20.93	19.99	40.92	56.00	-15.08	QP	
7	0.5380	5.61	19.99	25.60	46.00	-20.40	AVG	
8	0.5860	15.41	20.01	35.42	56.00	-20.58	QP	
9	1.0180	-0.03	20.12	20.09	46.00	-25.91	AVG	
10	1.8500	13.89	20.14	34.03	56.00	-21.97	QP	
11	1.9140	0.03	20.14	20.17	46.00	-25.83	AVG	
12	4.9980	-0.37	20.21	19.84	46.00	-26.16	AVG	

Note: Result=Reading+Factor Over Limit=Result-Limit

3. Radiated Emission Test

3.1. Test Standard and Limit

Test Standard	FCC Part 15 Subpart B
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Radiated Emission Test Limit (Subpart B Class B)

	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)	
Test Limit	0.009MHz~0.490MHz	2400/F(kHz)	-	-	300	
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30	
	1.705MHz-30MHz	30	-	-	30	
	30MHz~88MHz	100	40.0	Quasi-peak	3	
	88MHz~216MHz	150	43.5	Quasi-peak	3	
	216MHz~960MHz	200	46.0	Quasi-peak	3	
	Above 960MHzHz		500	54.0	Average	3
			-	74.0	Peak	3

Remark:

- (1) The lower limit shall apply at the transition frequency.
- (2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

3.2. Test Setup

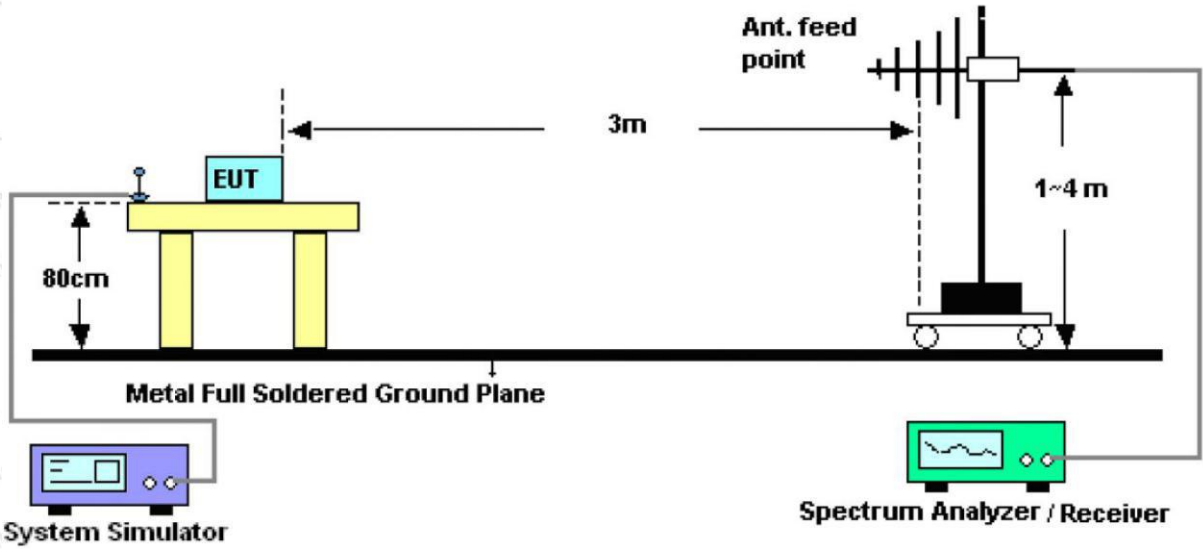


Figure 1. 30MHz to 1GHz

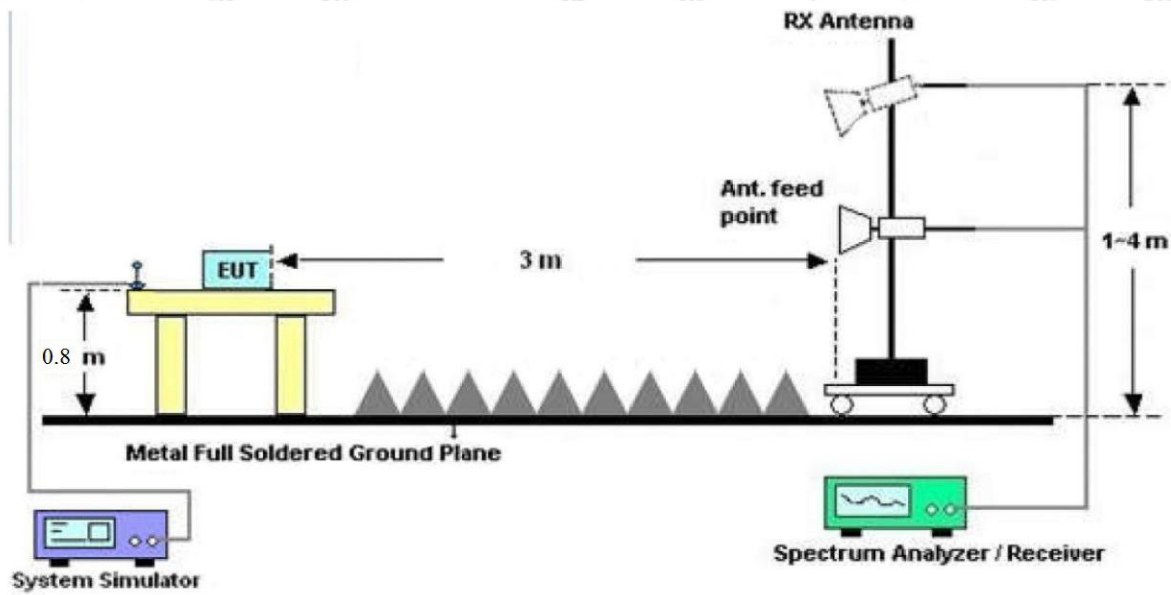


Figure 2. Above 1 GHz

3.3. EUT Configuration on Measurement

The following equipments are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

3.4. Operating Condition of EUT

3.4.1. Setup the EUT as shown in Section 3.2.

3.4.2. Turn on the power of all equipments.

3.4.3. Let the EUT work in test mode and measure it.

3.5. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (Trilog Broadband Antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

The bandwidth of the EMI test receiver (ESCI) is set at 120kHz.

The frequency range from 30MHz to 6000MHz is checked.

The test results are listed in Section 3.6.

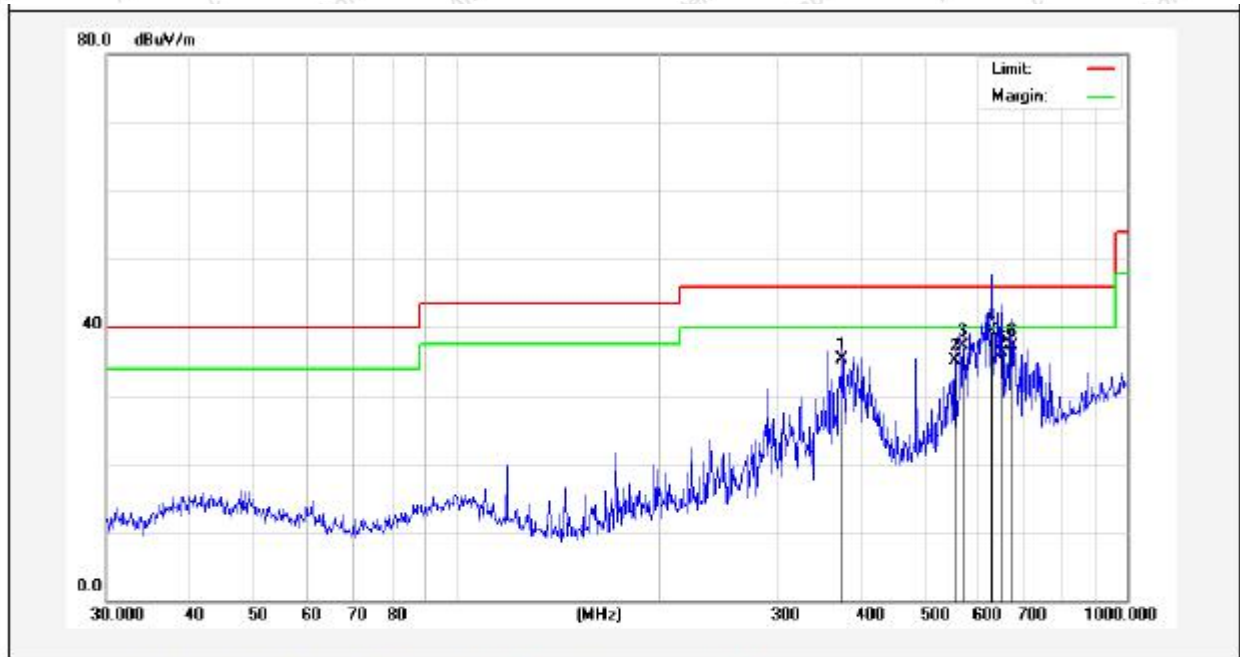
3.6. Test Results

PASS

The test curves are shown in the following pages.

Only the worst case data was showed in the report, please to see the following pages.

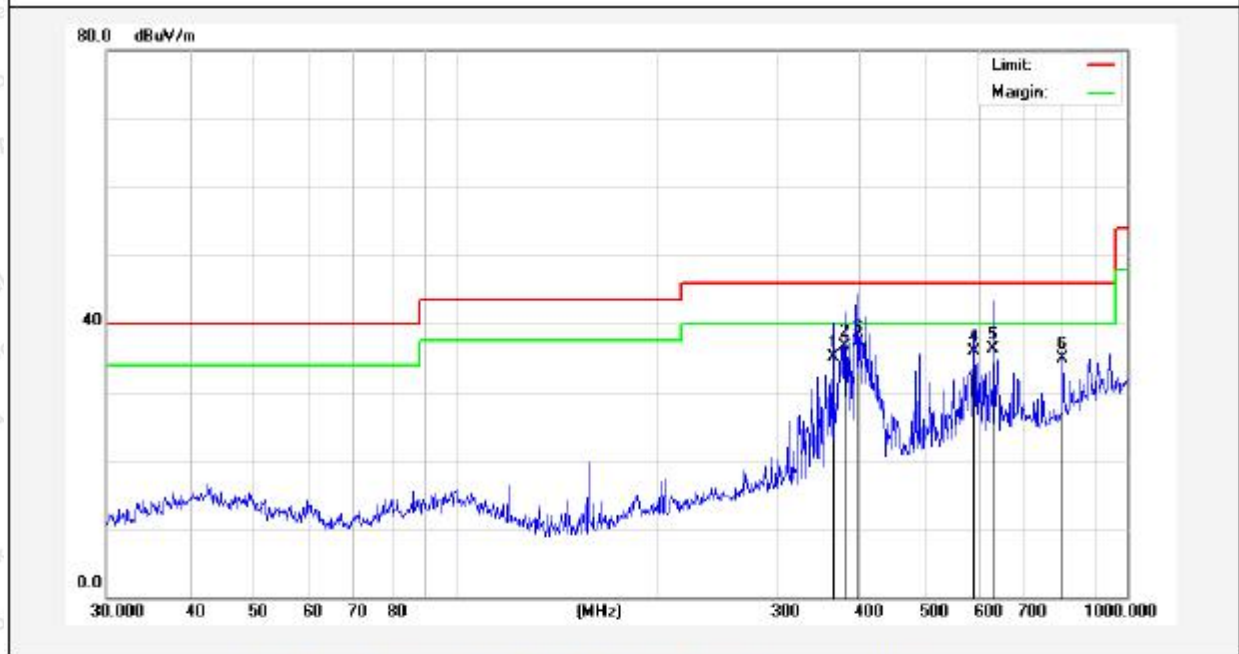
Test item: Radiation Test **Polarization:** Horizontal
Standard: (RE)FCC Part 15 Subpart B **Power Source:** DC 3.7V
Test Mode: Mode 2 **Temp.(°C)/Hum.(%RH):** 24.4°C/47%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	375.9385	48.24	-12.99	35.25	46.00	-10.75	QP	100	0	
2	552.8832	43.09	-7.96	35.13	46.00	-10.87	QP	100	360	
3	568.6127	44.92	-7.56	37.36	46.00	-8.64	QP	100	0	
4	627.2738	46.39	-6.79	39.60	46.00	-6.40	QP	100	360	
5	651.9417	43.03	-6.79	36.24	46.00	-9.76	QP	100	0	
6	672.8444	43.83	-6.44	37.39	46.00	-8.61	QP	100	360	

Note: **Result=Reading+Factor** **Over Limit=Result-Limit**

Test item: Radiation Test **Polarization:** Vertical
Standard: (RE)FCC Part 15 Subpart B **Power Source:** DC 3.7V
Test Mode: Mode 2 **Temp.(°C)/Hum.(%RH):** 24.4°C/47%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	364.2595	46.81	-11.78	35.03	46.00	-10.97	QP	100	0	
2	378.5843	48.27	-11.59	36.68	46.00	-9.32	QP	100	360	
3	396.2415	48.67	-11.33	37.34	46.00	-8.66	QP	100	0	
4	590.9737	42.91	-6.97	35.94	46.00	-10.06	QP	100	360	
5	631.6884	43.16	-6.80	36.36	46.00	-9.64	QP	100	0	
6	801.7863	39.04	-4.13	34.91	46.00	-11.09	QP	100	360	

Note: **Result=Reading+Factor Over Limit=Result-Limit**

Test Results (1GHz~6GHz)

Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Detector
1505.76	53.32	-3.11	50.22	74.00	-23.78	H	PEAK
1834.31	54.38	-3.07	51.31	74.00	-22.69	H	PEAK
2291.83	51.78	-3.70	48.08	74.00	-25.92	H	PEAK
3988.25	54.34	-4.46	49.89	74.00	-24.11	H	PEAK
4392.42	49.21	-5.14	44.07	74.00	-29.93	H	PEAK
5106.16	54.65	-5.93	48.72	74.00	-25.28	H	PEAK
1505.76	42.49	-3.11	39.38	54.00	-14.62	H	AVG
1834.31	41.34	-3.07	38.27	54.00	-15.73	H	AVG
2291.83	41.77	-3.70	38.08	54.00	-15.92	H	AVG
3988.25	40.44	-4.46	35.99	54.00	-18.01	H	AVG
4392.42	44.07	-5.14	38.93	54.00	-15.07	H	AVG
5106.16	37.21	-5.93	31.28	54.00	-22.72	H	AVG
1497.34	48.10	-2.44	45.66	74.00	-28.34	V	PEAK
1941.07	53.58	-2.49	51.08	74.00	-22.92	V	PEAK
1921.95	46.74	-4.27	42.47	74.00	-31.53	V	PEAK
4109.03	45.60	-4.60	41.00	74.00	-33.00	V	PEAK
4604.36	49.10	-4.59	44.50	74.00	-29.50	V	PEAK
4896.91	54.57	-5.63	48.94	74.00	-25.06	V	PEAK
1497.34	37.61	-2.44	35.17	54.00	-18.83	V	AVG
1941.07	39.02	-2.49	36.53	54.00	-17.47	V	AVG
1921.95	40.50	-4.27	36.22	54.00	-17.78	V	AVG
4109.03	46.29	-4.60	41.68	54.00	-12.32	V	AVG
4604.36	40.86	-4.59	36.27	54.00	-17.73	V	AVG
4896.91	41.71	-5.63	36.08	54.00	-17.92	V	AVG

Remark:

1. Level = Receiver Read level + Antenna Factor

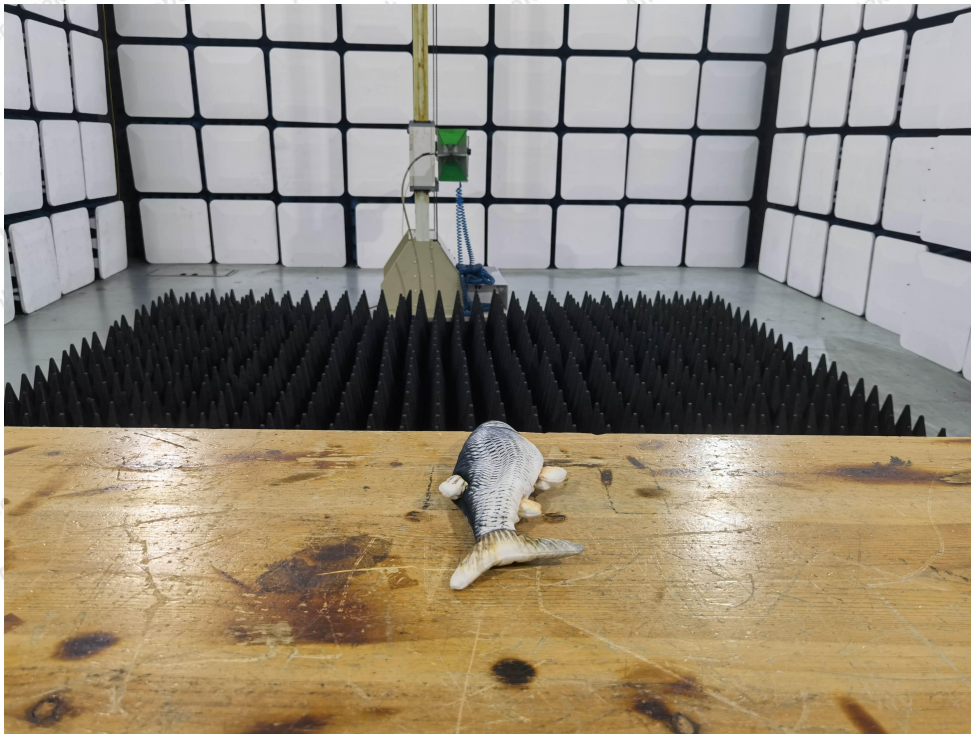
APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Conducted Emission Test



Photo of Radiation Emission Test



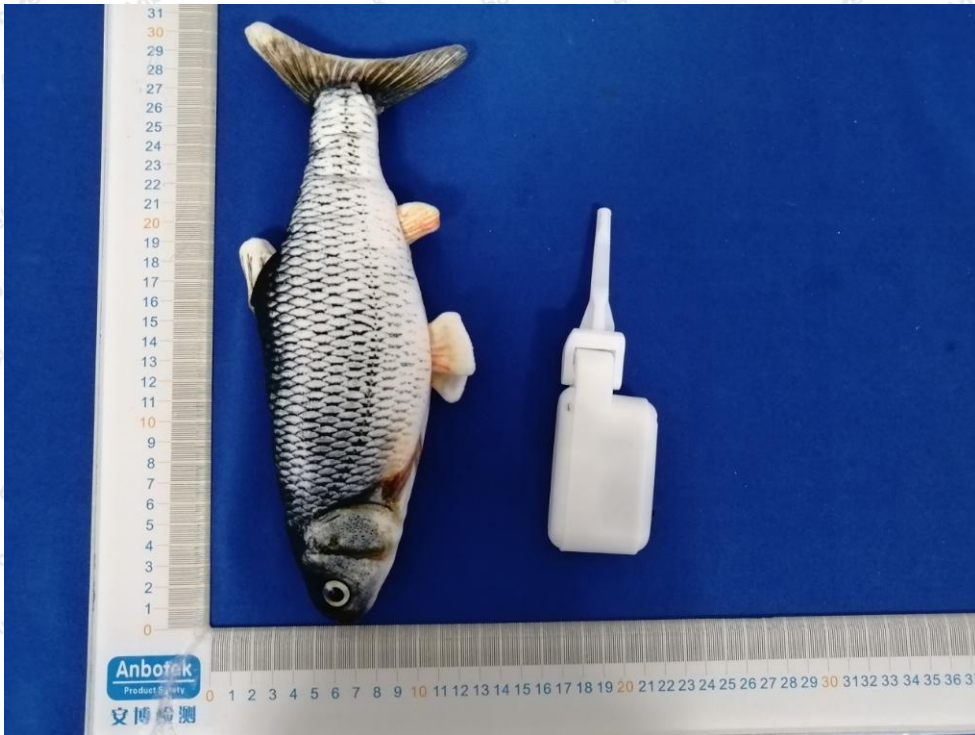


APPENDIX II -- EXTERNAL PHOTOGRAPH



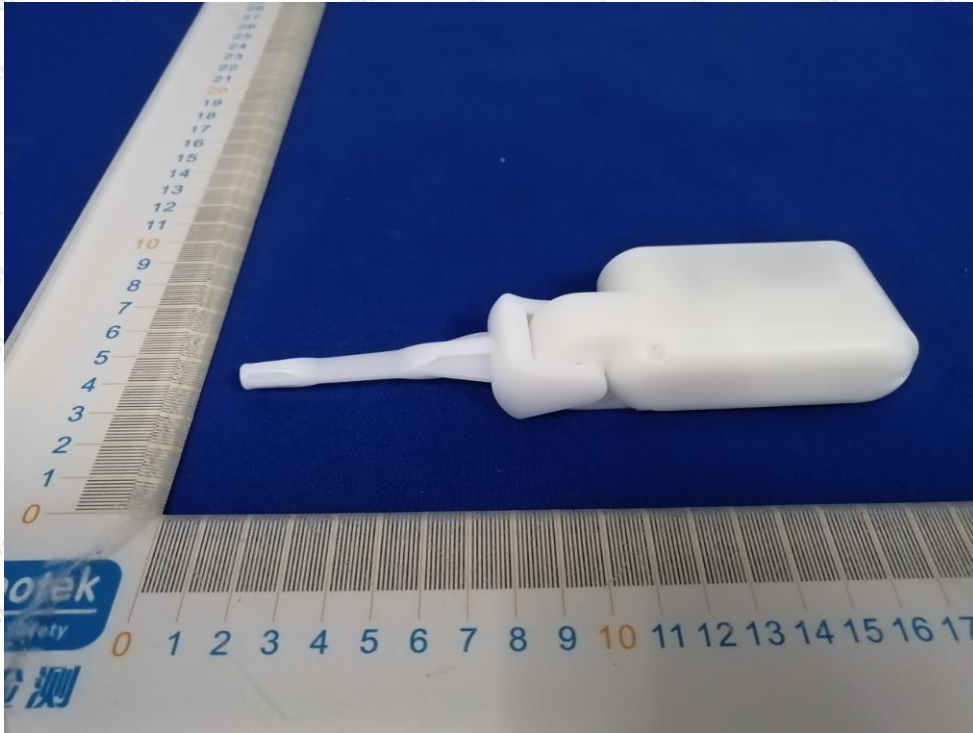




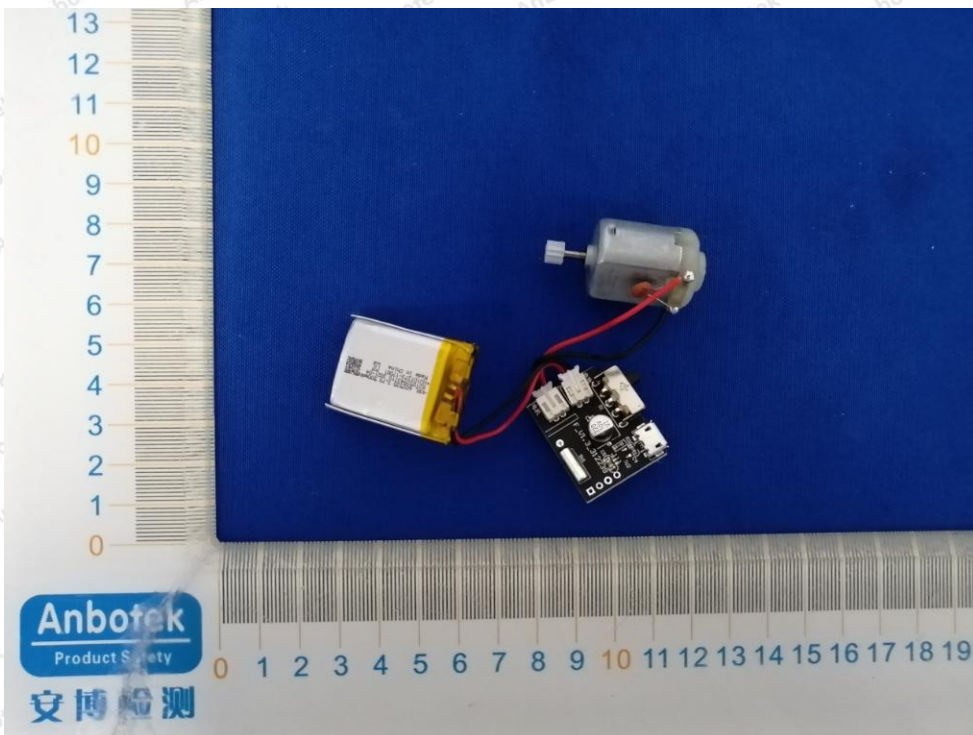
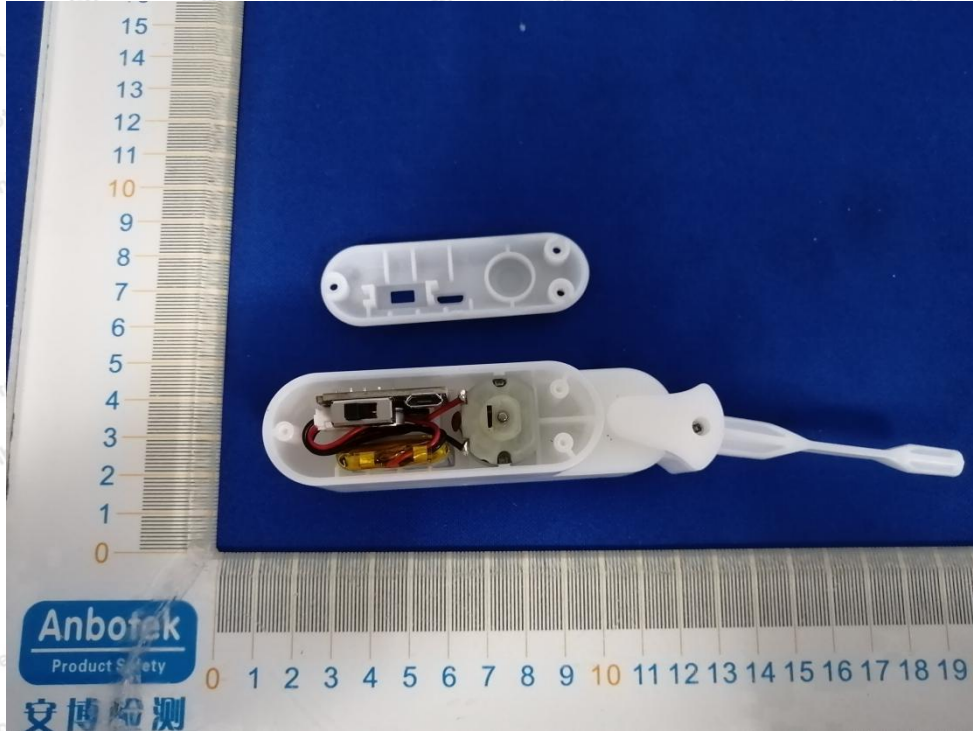


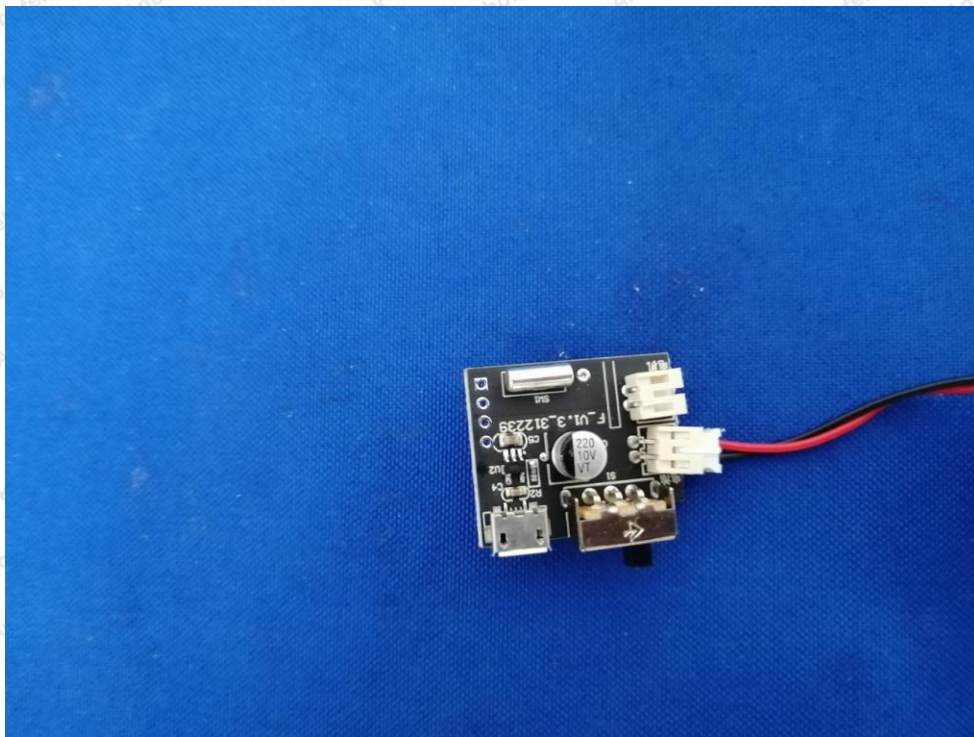
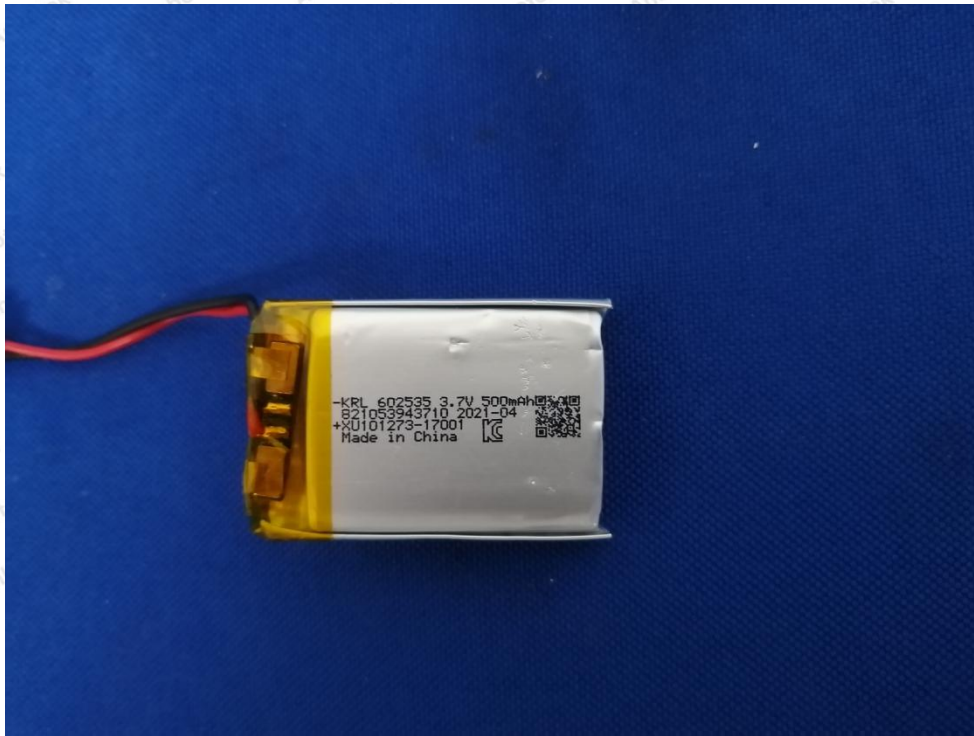


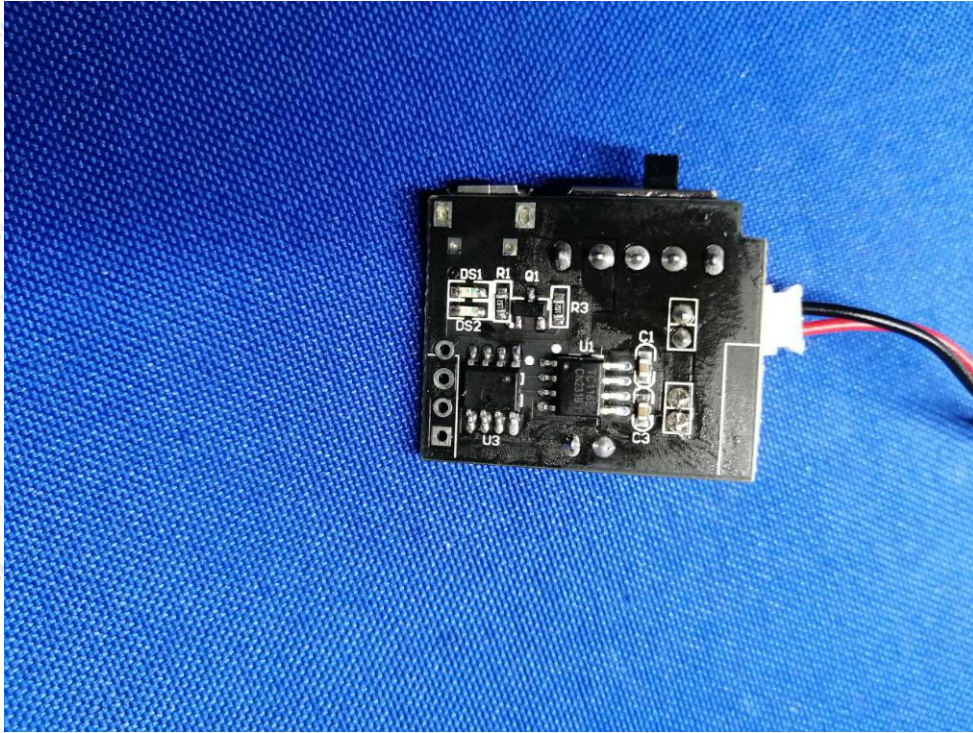




APPENDIX III -- INTERNAL PHOTOGRAPH







----- End of Report -----