

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 Anbotech Compliance Laboratory Limited



Contents

1. General Information.....	4
1.1. Client Information.....	4
1.2. Description of Device (EUT).....	4
1.3. Auxiliary Equipment Used During Test.....	5
1.4. Description of Test Mode.....	5
1.5. Test Summary.....	5
1.6. Test Equipment List.....	5
1.7. Description of Test Facility.....	6
2. Power Line Conducted Emission Test.....	8
2.1. Test Standard and Limit.....	8
2.2. Test Setup.....	8
2.3. EUT Configuration on Measurement.....	8
2.4. Operating Condition of EUT.....	8
2.5. Test Procedure.....	9
2.6. Test Results.....	9
3. Radiated Emission Test.....	12
3.1. Test Standard and Limit.....	12
3.2. Test Setup.....	13
3.3. EUT Configuration on Measurement.....	14
3.4. Operating Condition of EUT.....	14
3.5. Test Procedure.....	14
3.6. Test Results.....	14
APPENDIX I -- TEST SETUP PHOTOGRAPH.....	18
APPENDIX II -- EXTERNAL PHOTOGRAPH.....	20
APPENDIX III -- INTERNAL PHOTOGRAPH.....	27

TEST REPORT

Applicant : Stage10 GmbH
Manufacturer : PETMI (SUQIAN) Electronics Technology Co., Ltd.
Product Name : PetTec Plush Pet Toy Trout
Model No. : 15965, 16028, 16029, 16030, 16031
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 Anbotech 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 Anbotech 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 Anbotech 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.	:	15965, 16028, 16029, 16030, 16031 (Note: All samples are the same except the model number & appearance, so we prepare "15965" 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

AC mains

EUT

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.

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:

Shenzhen Anbotek Compliance Laboratory Limited

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

Tel: (86) 755-26066440 Fax: (86) 755-26014772 Email: service@anbotek.com

Code: AB-EMC-04-a



Hotline

400-003-0500

www.anbotek.com

FCC-Registration No.: 184111

Shenzhen Anbotech 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 Anbotech 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 Anbotech 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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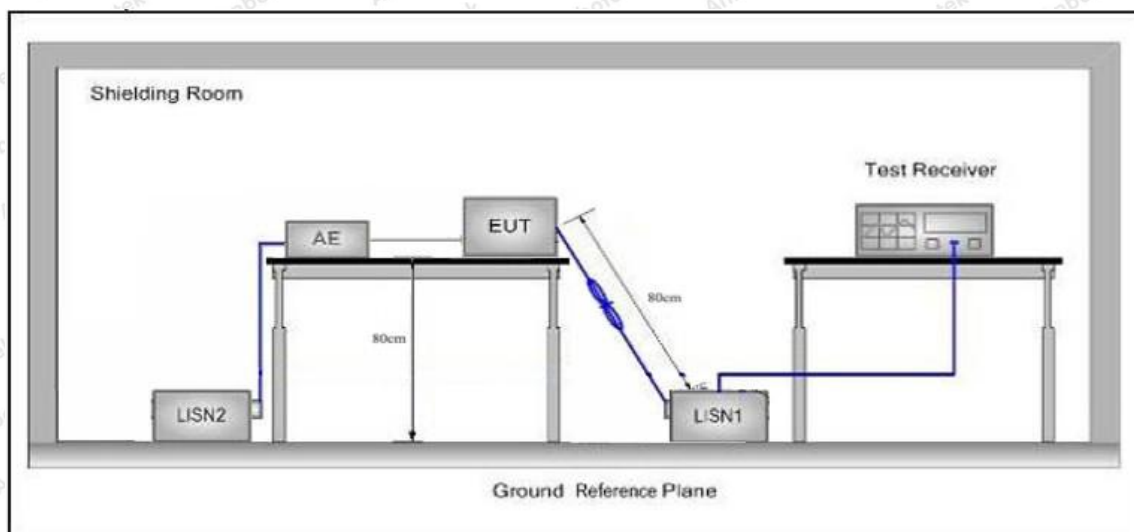
Power Line Conducted Emission Measurement Limits (FCC Part 15 Class B)

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

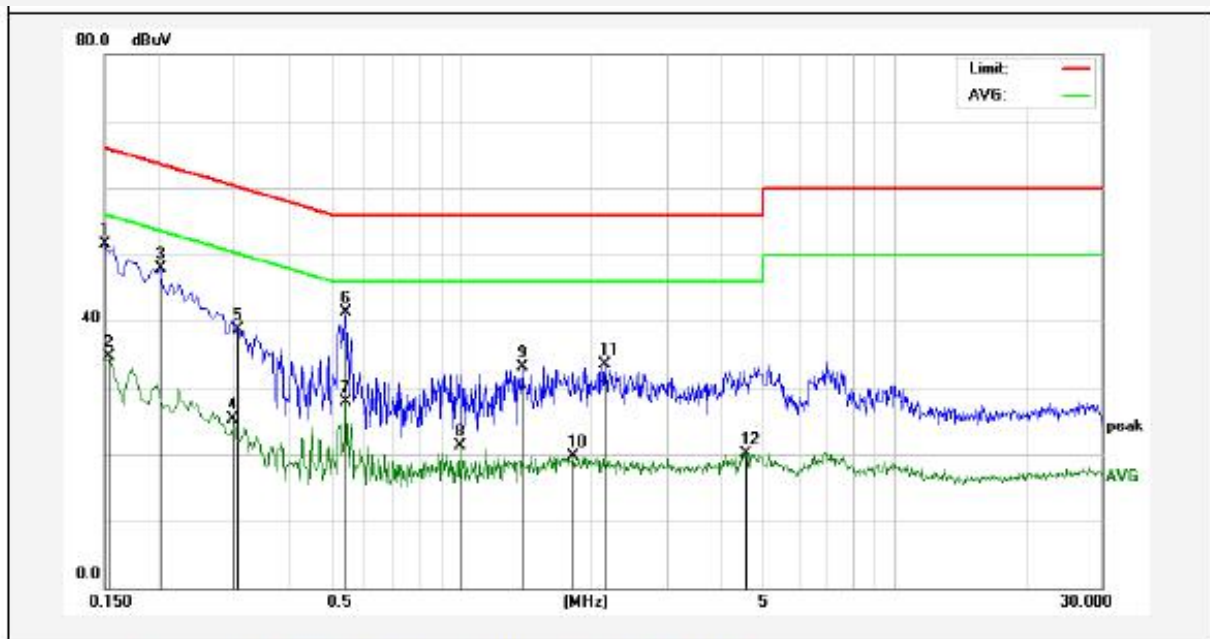
The test curves are shown in the following pages.

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%

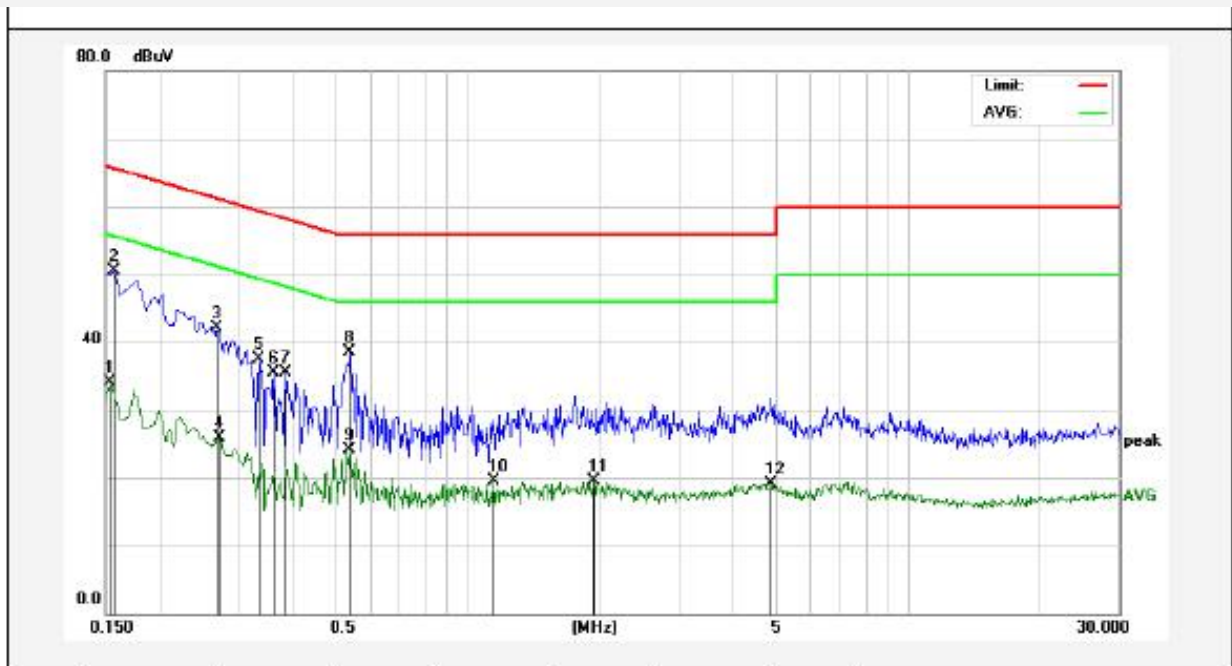


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1500	31.59	19.90	51.49	65.99	-14.50	QP	
2	0.1539	14.86	19.90	34.76	55.78	-21.02	AVG	
3	0.2020	28.01	19.90	47.91	63.52	-15.61	QP	
4	0.2980	5.49	19.89	25.38	50.30	-24.92	AVG	
5	0.3060	18.82	19.89	38.71	60.08	-21.37	QP	
6	0.5420	21.35	19.99	41.34	56.00	-14.66	QP	
7	0.5420	7.88	19.99	27.87	46.00	-18.13	AVG	
8	0.9900	1.28	20.12	21.40	46.00	-24.60	AVG	
9	1.3820	12.93	20.13	33.06	56.00	-22.94	QP	
10	1.8140	-0.36	20.14	19.78	46.00	-26.22	AVG	
11	2.1540	13.30	20.14	33.44	56.00	-22.56	QP	
12	4.5340	-0.07	20.19	20.12	46.00	-25.88	AVG	

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	14.17	19.90	34.07	55.78	-21.71	AVG	
2	0.1580	30.53	19.90	50.43	65.56	-15.13	QP	
3	0.2700	22.20	19.89	42.09	61.12	-19.03	QP	
4	0.2740	5.94	19.89	25.83	50.99	-25.16	AVG	
5	0.3339	17.69	19.91	37.60	59.35	-21.75	QP	
6	0.3620	15.52	19.92	35.44	58.68	-23.24	QP	
7	0.3860	15.48	19.93	35.41	58.15	-22.74	QP	
8	0.5380	18.43	19.99	38.42	56.00	-17.58	QP	
9	0.5380	4.12	19.99	24.11	46.00	-21.89	AVG	
10	1.1420	-0.70	20.12	19.42	46.00	-26.58	AVG	
11	1.9340	-0.62	20.14	19.52	46.00	-26.48	AVG	
12	4.8980	-1.03	20.20	19.17	46.00	-26.83	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

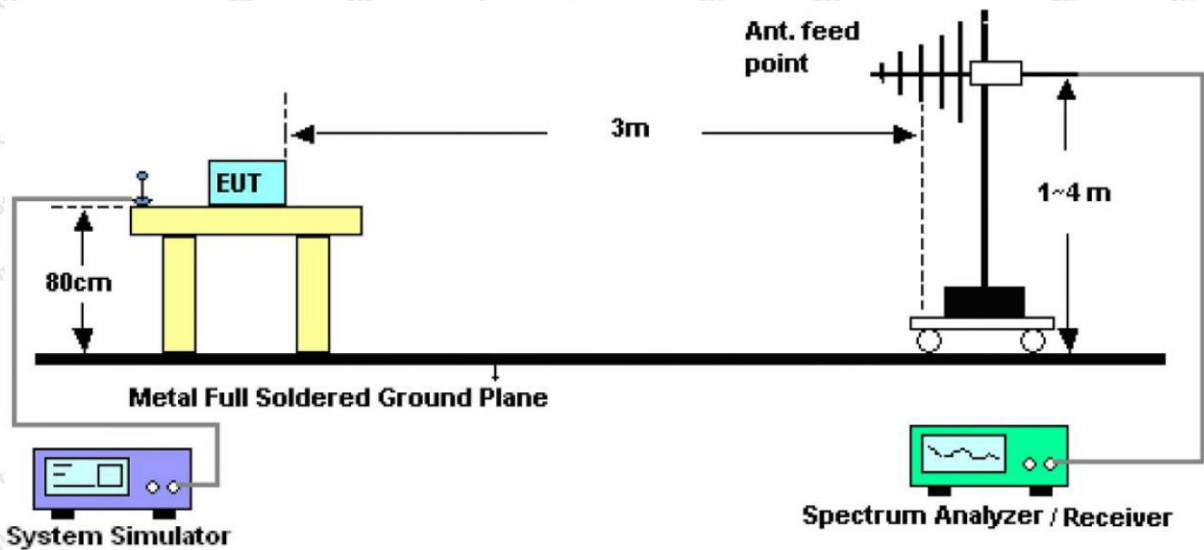


Figure 1. 30MHz to 1GHz

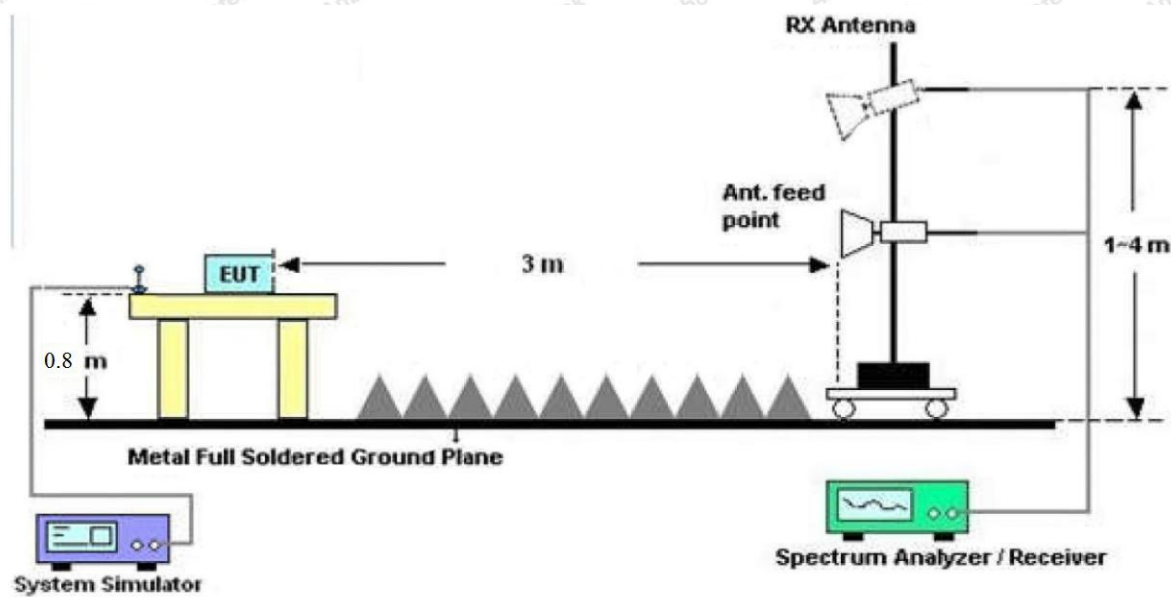


Figure 2. Above 1 GHz

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	50.09	-12.99	37.10	46.00	-8.90	QP	100	0	
2	595.1329	42.49	-6.87	35.62	46.00	-10.38	QP	100	360	
3	636.1340	41.80	-6.80	34.80	46.00	-11.20	QP	100	0	
4	854.0247	34.68	-3.06	31.62	46.00	-14.38	QP	100	360	
5	884.5029	34.03	-2.16	31.87	46.00	-14.13	QP	100	0	
6	919.2866	33.65	-1.36	32.29	46.00	-13.71	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	385.2805	48.57	-11.49	37.08	46.00	-8.92	QP	100	0	
2	400.4319	46.89	-11.27	35.62	46.00	-10.38	QP	100	360	
3	539.4775	43.07	-8.15	34.92	46.00	-11.08	QP	100	0	
4	590.9737	43.90	-6.97	36.93	46.00	-9.07	QP	100	360	
5	618.5369	42.29	-6.76	35.53	46.00	-10.47	QP	100	0	
6	711.6734	42.79	-5.82	36.97	46.00	-9.03	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
1628.71	52.60	-3.06	49.54	74.00	-24.46	H	PEAK
2139.31	51.90	-2.71	49.19	74.00	-24.81	H	PEAK
2031.16	46.47	-4.36	42.11	74.00	-31.89	H	PEAK
4126.40	54.88	-4.60	50.28	74.00	-23.72	H	PEAK
4475.15	50.31	-4.93	45.38	74.00	-28.62	H	PEAK
4995.72	49.02	-6.18	42.83	74.00	-31.17	H	PEAK
1628.71	39.35	-3.06	36.29	54.00	-17.71	H	AVG
2139.31	45.14	-2.71	42.43	54.00	-11.57	H	AVG
2031.16	41.85	-4.36	37.49	54.00	-16.51	H	AVG
4126.40	41.72	-4.60	37.11	54.00	-16.89	H	AVG
4475.15	42.82	-4.93	37.89	54.00	-16.11	H	AVG
4995.72	40.35	-6.18	34.17	54.00	-19.83	H	AVG
1432.98	54.81	-2.48	52.33	74.00	-21.67	V	PEAK
1910.01	51.28	-2.90	48.38	74.00	-25.62	V	PEAK
2152.88	50.26	-4.50	45.76	74.00	-28.24	V	PEAK
4113.13	53.44	-4.70	48.74	74.00	-25.26	V	PEAK
4338.31	50.09	-4.46	45.63	74.00	-28.37	V	PEAK
5082.94	52.59	-6.00	46.59	74.00	-27.41	V	PEAK
1432.98	39.03	-2.48	36.55	54.00	-17.45	V	AVG
1910.01	40.71	-2.90	37.81	54.00	-16.19	V	AVG
2152.88	41.11	-4.50	36.61	54.00	-17.39	V	AVG
4113.13	44.68	-4.70	39.97	54.00	-14.03	V	AVG
4338.31	37.97	-4.46	33.52	54.00	-20.48	V	AVG
5082.94	41.67	-6.00	35.67	54.00	-18.33	V	AVG

Remark:

1. Level = Receiver Read level + Antenna Factor



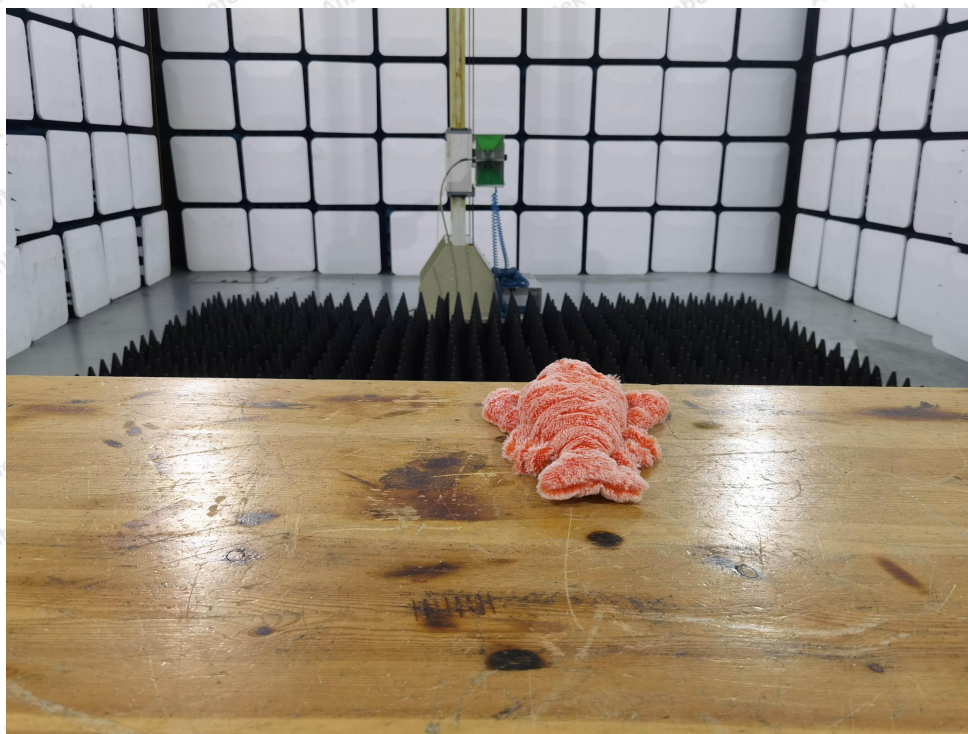
APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Conducted Emission Test



Photo of Radiation Emission Test





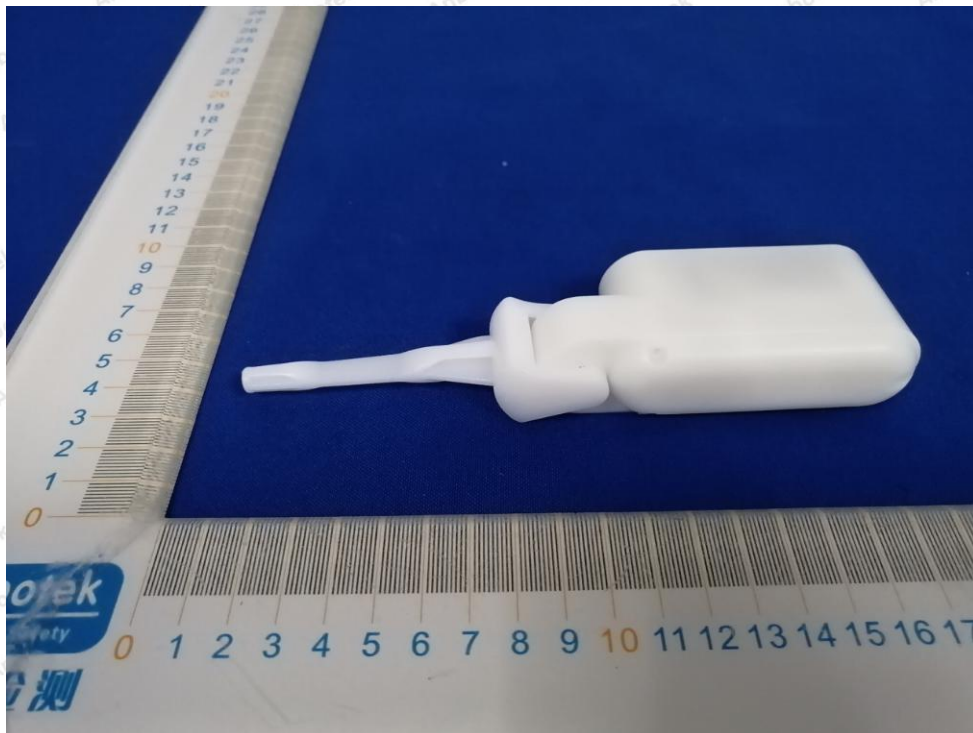
APPENDIX II -- EXTERNAL PHOTOGRAPH



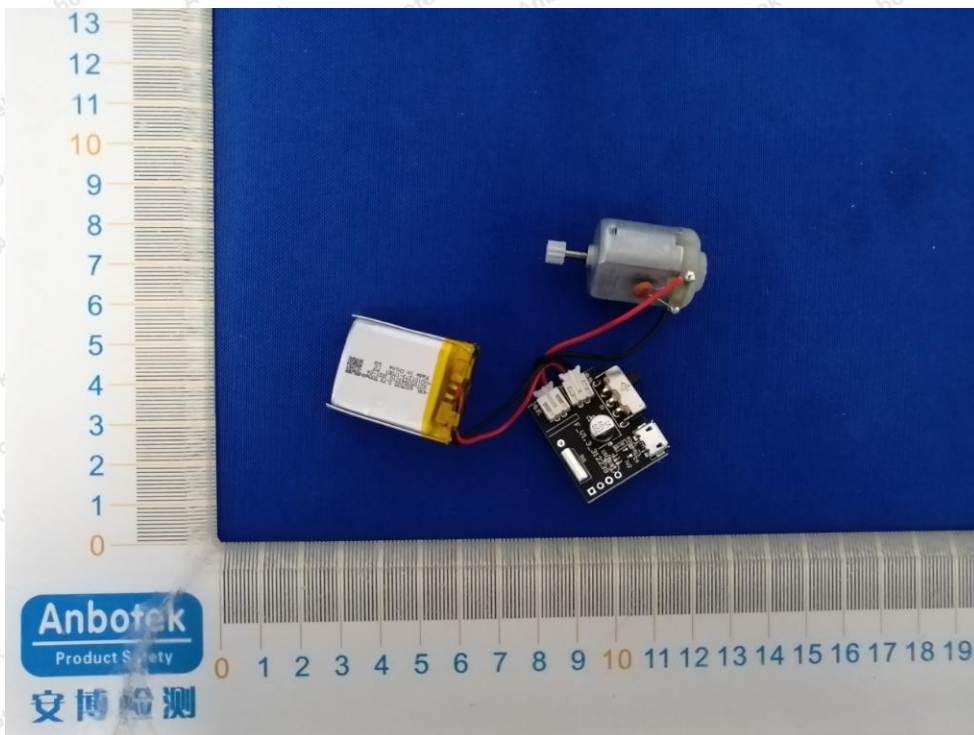


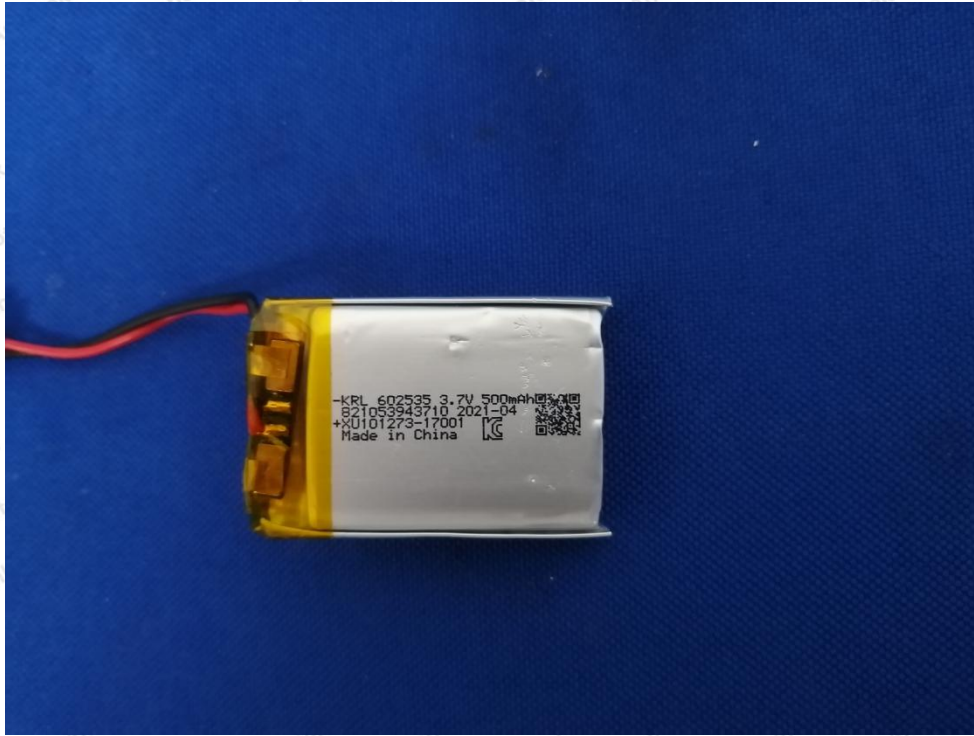
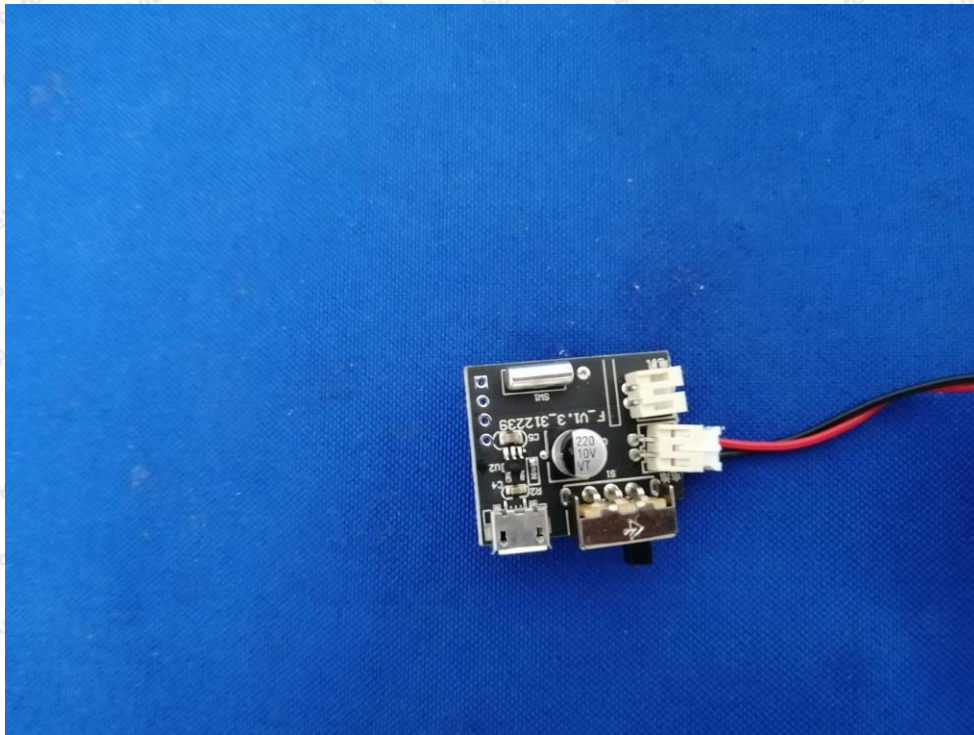


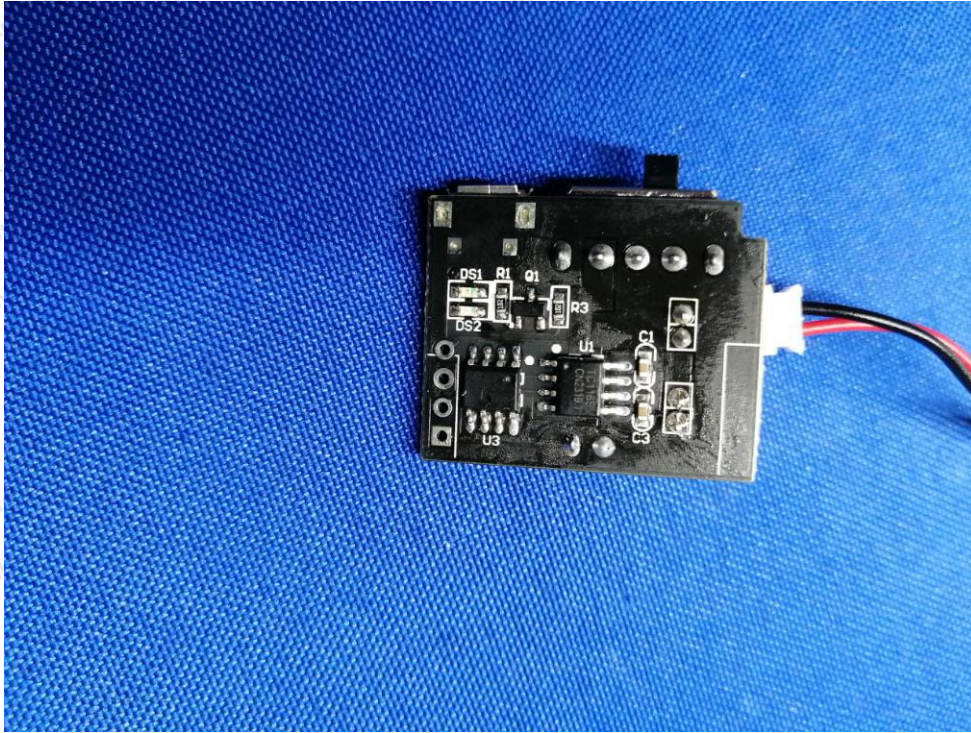






APPENDIX III -- INTERNAL PHOTOGRAPH





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

