FCC TEST REPORT

Client Name	:	HYPER PRODUCTS INC
Address	:	930 Auburn Court, Fremont, CA 94538, USA
Product Name	:	4-IN-1 MAGNETIC WIRELESS CHARGER
Date	:	Dec. 30, 2021

Shenzhen Anbotek Compliance Laboratory Limited

Contents

TEST REPORT

Applicant	:	HYPER PRODUCTS INC
Manufacturer	:	HYPER PRODUCTS INC
Product Name	:	4-IN-1 MAGNETIC WIRELESS CHARGER
Model No.	:	HJ499Q, HJ499QM
Trade Mark	:	HYPER
Rating(s)	:	Type-C input: 5V⎓3A, 9V⎓3A,12V⎓3A, 15V⎓3A DC input: 5V⎓3A, 9V⎓3A, 12V⎓3A, 15V⎓3A Output1: 5W/7.5W/10W/15W Output2: 5W/7.5W/10W/15W Output For Airpods /Pro: 5W Output For Apple Watch: 5W Total power: 35W
Test Standard(s)	:	**FCC Part15 Subpart C, Paragraph 15.209**
Test Method(s)	:	**ANSI C63.10: 2020**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

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

Date of Receipt Nov. 02, 2021

Date of Test Nov. 02~ Dec. 23, 2021

Prepared By

(Ella Liang)

Approved & Authorized Signer

(Kingkong Jin)

1. General Information

1.1. Client Information

Applicant	:	HYPER PRODUCTS INC
Address	:	930 Auburn Court, Fremont, CA 94538, USA
Manufacturer	:	HYPER PRODUCTS INC
Address	:	930 Auburn Court, Fremont, CA 94538, USA
Factory		HYPER PRODUCTS INC
Address		930 Auburn Court, Fremont, CA 94538, USA

1.2. Description of Device (EUT)

Product Name	:	4-IN-1 MAGNETIC WIRELESS CHARGER	
Model No.	:	HJ499Q, HJ499QM (Note: All samples are the same except the model number, so we prepare "HJ499Q" for test only.)	
Trade Mark	:	⁺⁺ HYPER	
Test Power Supply	:	AC 120V, 60Hz for adapter/AC 240V, 60Hz for adapter	
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)	
Product Description	:	Operation Frequency:	110.1-205KHz
		Modulation Type:	FSK
		Antenna Type:	Inductive loop coil Antenna
		Antenna Gain(Peak):	0 dBi (Provided by customer)
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

Adapter	:	M/N: AD651P Input:100-240V-1.5A,50-60Hz Output: 5V3A, 9V3A, 10V5A, 12V3A, 15V3A, 20V3.25A
Wireless charging load	:	Manufacturer: Shenzhen Ouju Technology Co., Ltd. M/N: CD2531 Power: 5W/7.5W/10W/15W Last Cal.: Oct. 26, 2020 Cal. Interval: 1 Year
Wireless charging load		Manufacturer: Shenzhen Ouju Technology Co., Ltd. M/N: CD2577 Power: 5W/7.5W/10W/15W Last Cal.: Oct. 26, 2020 Cal. Interval: 1 Year
Wireless charging load		Manufacturer: Gopod Group Holding Limited. M/N: DTE324EM Power: 5W/7.5W/10W/15W Last Cal.: Oct. 30, 2020 Cal. Interval: 1 Year
Apple Watch	:	M/N: WR-50M

1.4. Description of Test Modes

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Wireless Charging Mode(Typc-C input)
Mode 2	Wireless Charging Mode(DC input)

For Conducted Emission	
Final Test Mode	Description
Mode 1	Wireless Charging Mode(Typc-C input)
Mode 2	Wireless Charging Mode(DC input)

For Radiated Emission	
Final Test Mode	Description
Mode 1	Wireless Charging Mode(Typc-C input)
Mode 2	Wireless Charging Mode(DC input)

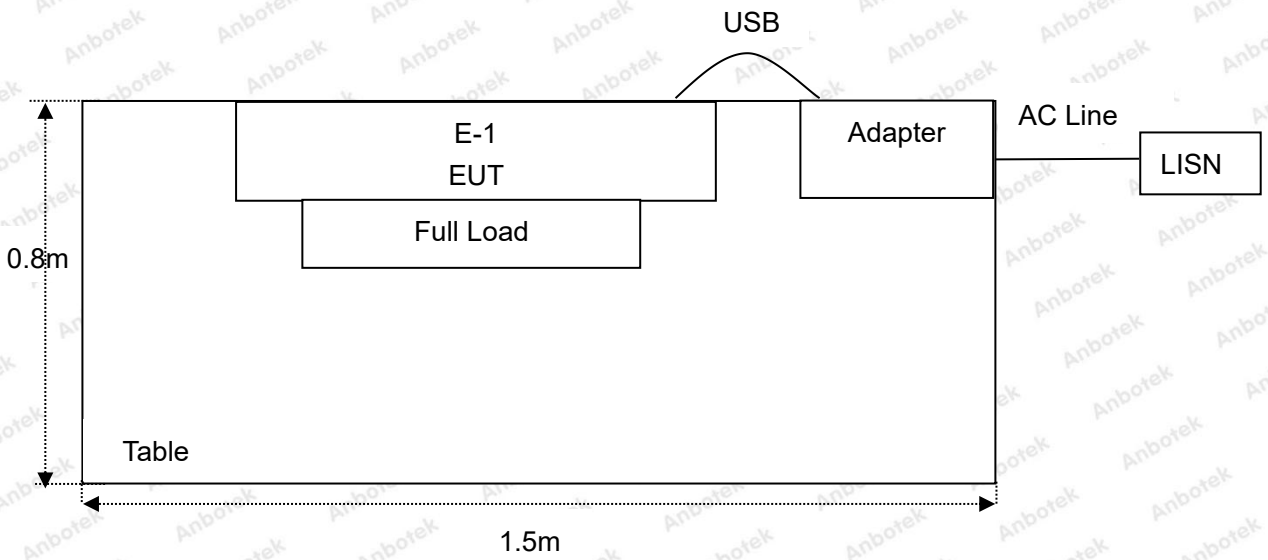
Note: (1)Test channel is 0.1101MHz.

(2) All the situation(full load, half load and empty load) has been tested,only the worst situation (full load) was recorded in the report.

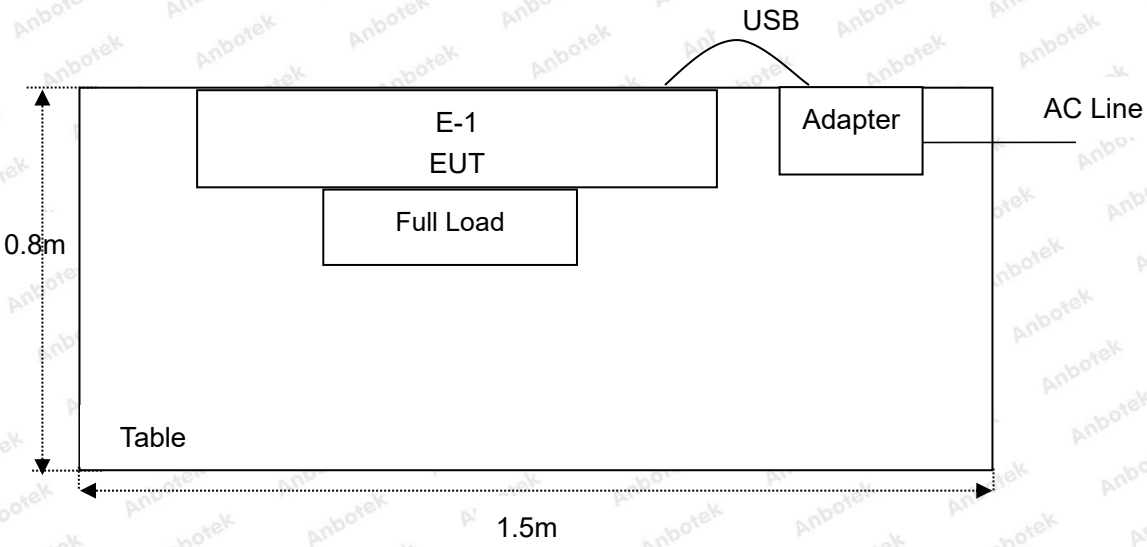
(3) The device has ANT0 & ANT1 & ANT2 & ANT3, the total power of ANT0+ANT1+ANT2+ANT3 working at the same time is 35W (maximum). During the test, The ANT0, ANT1, ANT2, ANT3 and ANT0+ANT1+ANT2+ANT3 were tested separately, only the worst case (ANT0+ANT1+ANT2+ANT3: 35W (maximum)) is recorded in the report.

1.5. Description Of Test Setup

CE



RE



1.6. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul 05, 2021	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 22, 2021	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 22, 2021	1 Year
4.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2021	1 Year
5.	MAX Spectrum Analysis	Agilent	N9020A	MY51170037	Oct. 22, 2021	1 Year
6.	Preamplifier	SKET Electronic	BK1G18G30D	KD17503	Oct. 22, 2021	1 Year
7.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Oct. 22, 2021	2 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Oct. 22, 2021	2 Year
9.	Loop Antenna	Schwarzbeck	FMZB1519B	00053	Oct. 22, 2021	2 Year
10.	Horn Antenna	A-INFO	LB-180400-KF	J211060628	Oct. 22, 2021	2 Year
11.	Pre-amplifier	SONOMA	310N	186860	Oct. 22, 2021	1 Year
12.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
13.	RF Test Control System	YIHENG	YH3000	2017430	Oct. 22, 2021	1 Year
14.	Power Sensor	DAER	RPR3006W	15I00041SN045	Oct. 22, 2021	1 Year
15.	Power Sensor	DAER	RPR3006W	15I00041SN046	Oct. 22, 2021	1 Year
16.	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY53280032	Oct. 22, 2021	1 Year
17.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Oct. 22, 2021	1 Year
18.	Signal Generator	Agilent	E4421B	MY41000743	Oct. 22, 2021	1 Year
19.	DC Power Supply	IVYTECH	IV3605	1804D360510	Oct. 22, 2021	1 Year
20.	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	Oct. 22, 2021	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.

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.

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.518102

2. Summary of Test Results

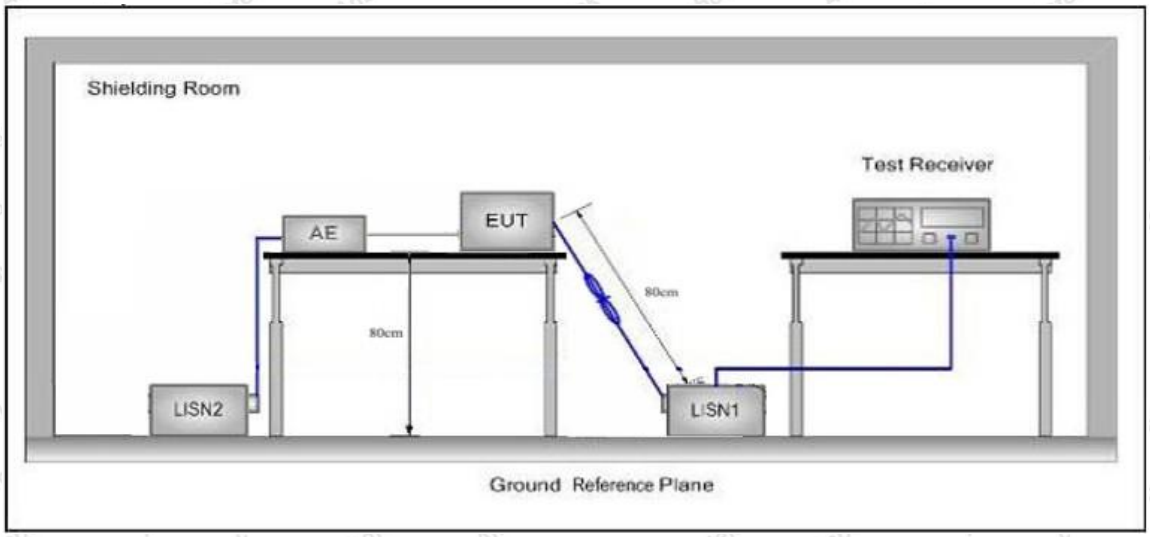
Standard Section	Test Item	Result
FCC Part 15, Paragraph 15.207	Conducted Emission Test	PASS
FCC Part 15, Paragraph 15.209(a)(f)	Spurious Emission	PASS
Part 15.203	Antenna Requirement	PASS

3. Conducted Emission Test

3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.207		
Test Limit	Frequency	Maximum RF Line Voltage (dBuV)	
		Quasi-peak Level	Average Level
	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
	500kHz~5MHz	56	46
	5MHz~30MHz	60	50
Remark: (1) *Decreasing linearly with logarithm of the frequency. (2) The lower limit shall apply at the transition frequency.			

3.2. Test Setup



3.3. 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 C63.10-2020 on Conducted Emission Measurement.

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

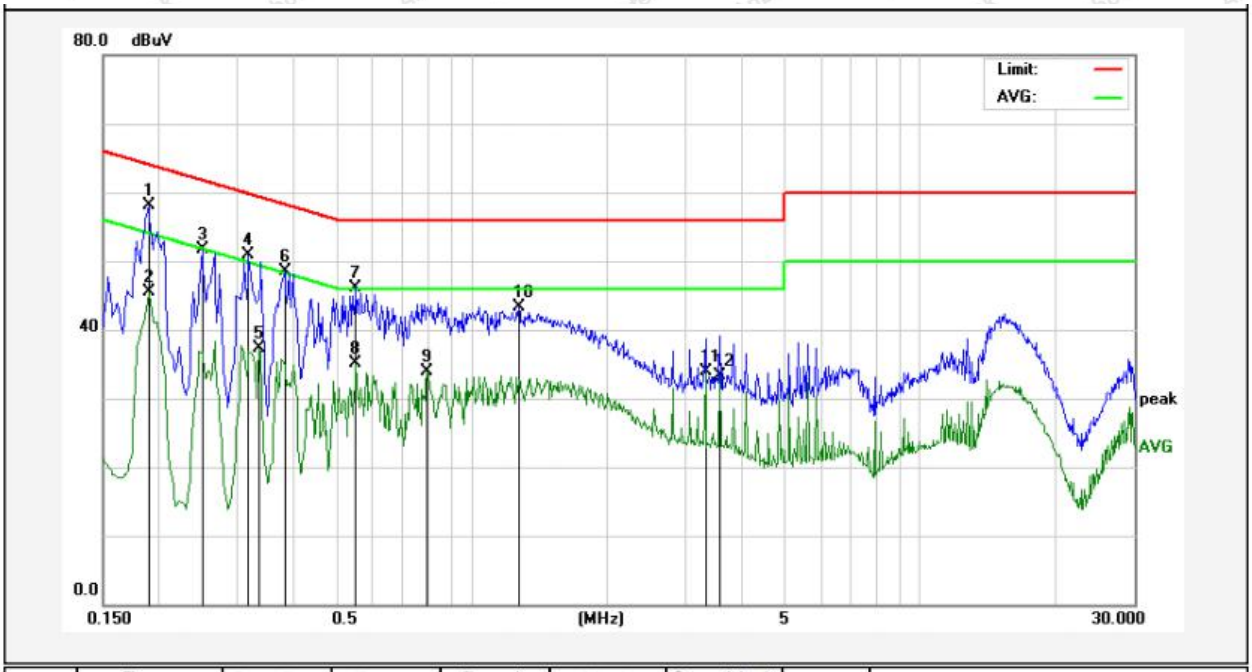
The frequency range from 150kHz to 30MHz is checked.

3.4. Test Data

Please to see the following pages

Conducted Emission Test Data

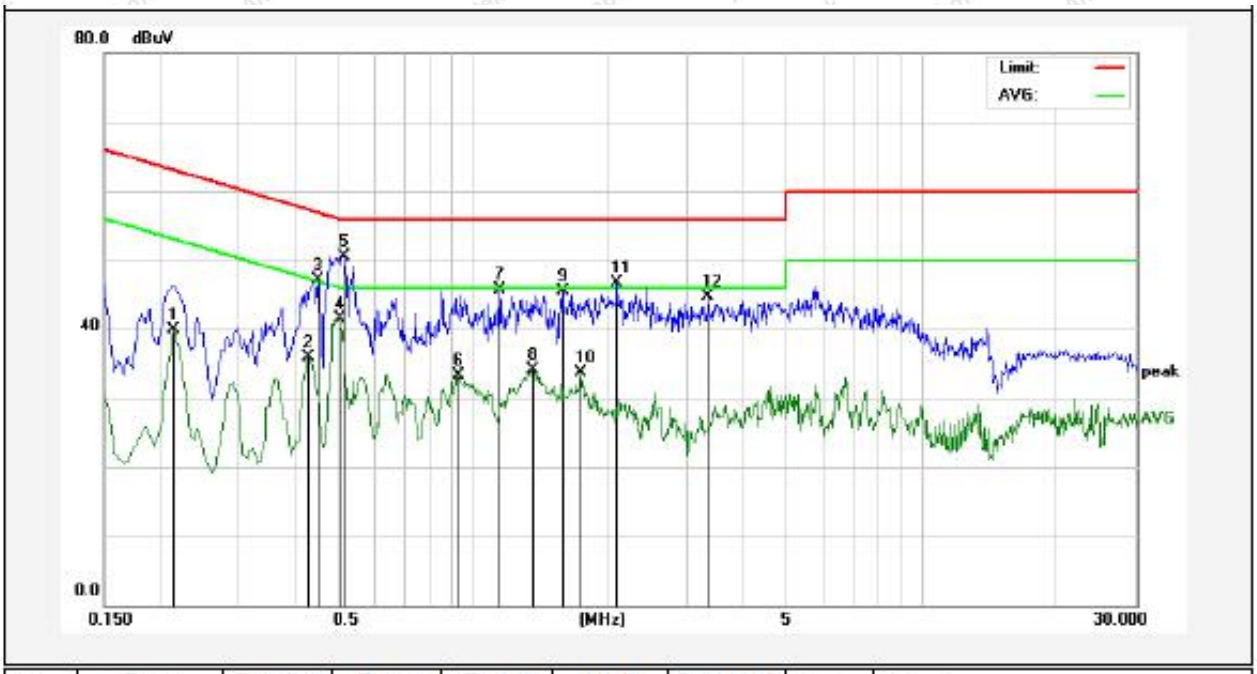
Test Site: 1# Shielded Room
Operating Condition: Mode 1
Test Specification: AC 240V, 60Hz for adapter
Comment: Live Line
Tem.: 24.1℃ Hum.: 48%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1900	57.91	0.12	58.03	64.03	-6.00	peak	
2	0.1900	45.45	0.12	45.57	54.03	-8.46	AVG	
3	0.2500	51.65	0.12	51.77	61.75	-9.98	peak	
4	0.3180	50.75	0.13	50.88	59.76	-8.88	peak	
5	0.3339	37.21	0.12	37.33	49.35	-12.02	AVG	
6	0.3820	48.47	0.11	48.58	58.23	-9.65	peak	
7	0.5500	46.05	0.15	46.20	56.00	-9.80	peak	
8	0.5500	35.01	0.15	35.16	46.00	-10.84	AVG	
9	0.7940	33.68	0.15	33.83	46.00	-12.17	AVG	
10	1.2740	43.23	0.14	43.37	56.00	-12.63	peak	
11	3.3140	33.71	0.12	33.83	46.00	-12.17	AVG	
12	3.5700	33.22	0.12	33.34	46.00	-12.66	AVG	

Conducted Emission Test Data

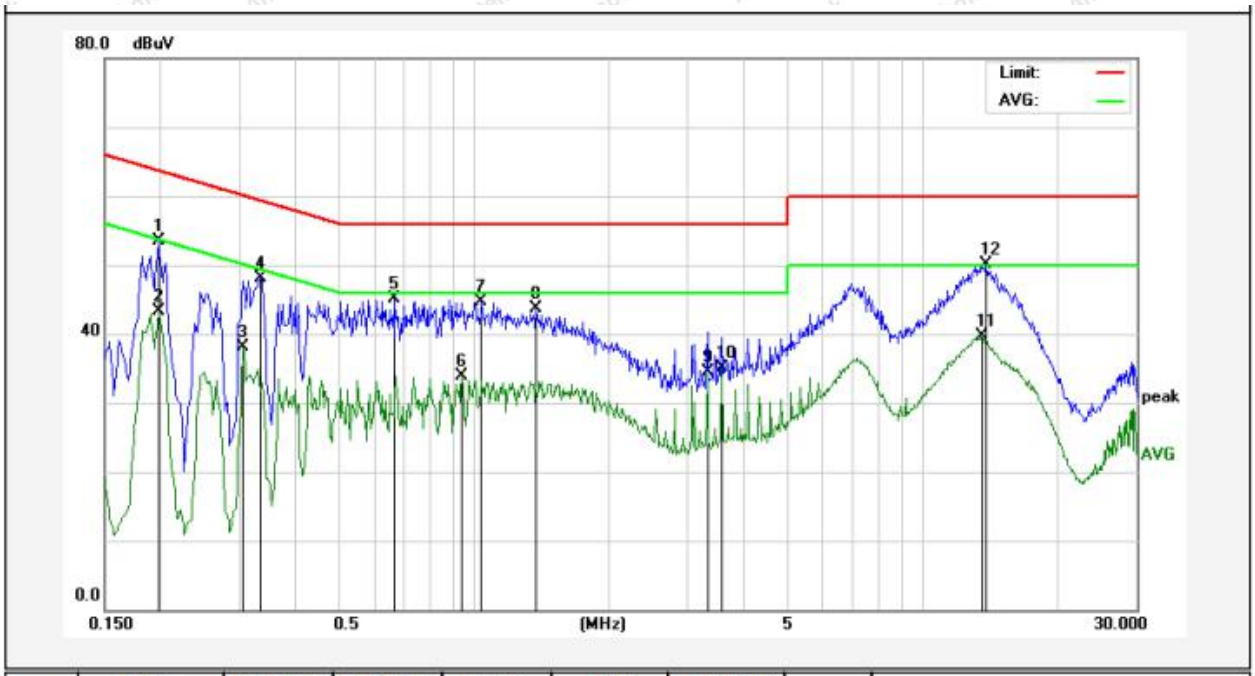
Test Site: 1# Shielded Room
Operating Condition: Mode 1
Test Specification: AC 240V, 60Hz for adapter
Comment: Neutral Line
Tem.: 24.1℃ Hum.: 48%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.2139	20.01	19.90	39.91	53.05	-13.14	AVG	
2	0.4299	15.98	19.95	35.93	47.25	-11.32	AVG	
3	0.4500	27.16	19.96	47.12	56.87	-9.75	QP	
4	0.5020	21.58	19.98	41.56	46.00	-4.44	AVG	
5	0.5140	30.61	19.98	50.59	56.00	-5.41	QP	
6	0.9260	13.24	20.10	33.34	46.00	-12.66	AVG	
7	1.1459	25.54	20.12	45.66	56.00	-10.34	QP	
8	1.3540	13.97	20.13	34.10	46.00	-11.90	AVG	
9	1.5780	25.38	20.13	45.51	56.00	-10.49	QP	
10	1.7419	13.57	20.13	33.70	46.00	-12.30	AVG	
11	2.0979	26.55	20.14	46.69	56.00	-9.31	QP	
12	3.3340	24.46	20.17	44.63	56.00	-11.37	QP	

Conducted Emission Test Data

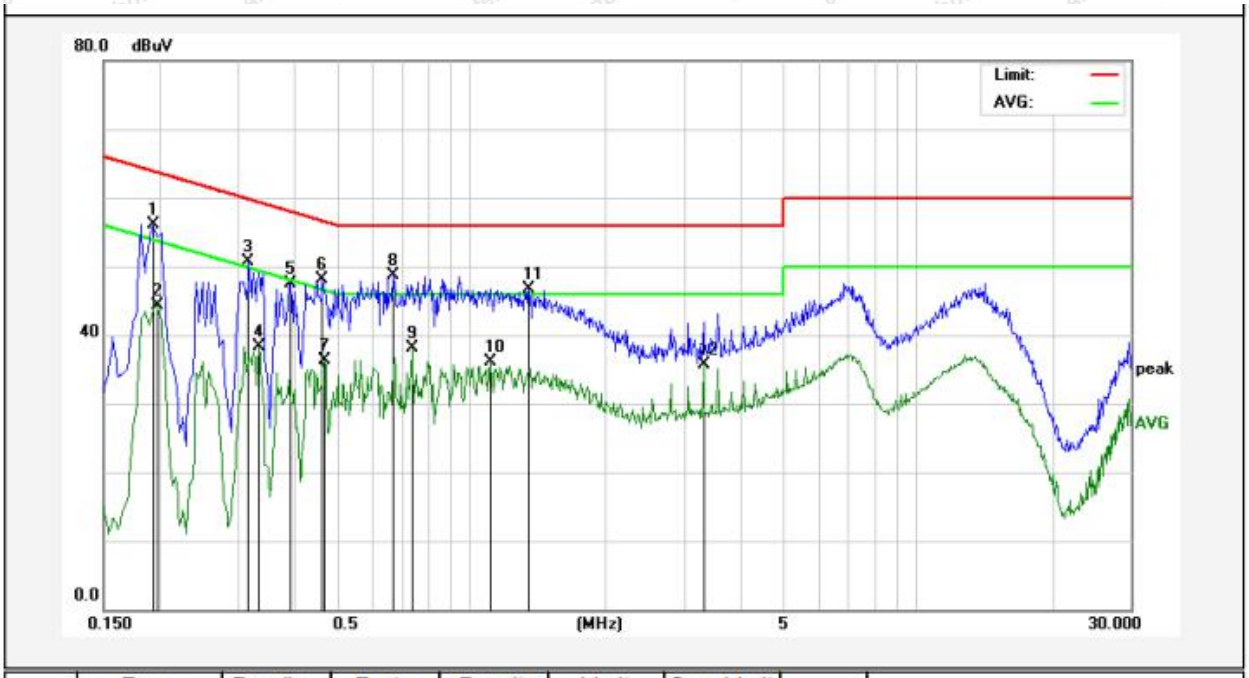
Test Site: 1# Shielded Room
Operating Condition: Mode 1
Test Specification: AC 120V, 60Hz for adapter
Comment: Live Line
Tem.: 24.1℃ Hum.: 48%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1980	53.37	0.12	53.49	63.69	-10.20	peak	
2	0.1980	43.28	0.12	43.40	53.69	-10.29	AVG	
3	0.3060	37.99	0.13	38.12	50.08	-11.96	AVG	
4	0.3339	48.08	0.12	48.20	59.35	-11.15	peak	
5	0.6660	44.95	0.15	45.10	56.00	-10.90	peak	
6	0.9420	33.79	0.15	33.94	46.00	-12.06	AVG	
7	1.0420	44.57	0.15	44.72	56.00	-11.28	peak	
8	1.3779	43.52	0.14	43.66	56.00	-12.34	peak	
9	3.3140	34.35	0.12	34.47	46.00	-11.53	AVG	
10	3.5700	34.89	0.12	35.01	46.00	-10.99	AVG	
11	13.5100	39.57	0.16	39.73	50.00	-10.27	AVG	
12	13.9100	49.90	0.16	50.06	60.00	-9.94	peak	

Conducted Emission Test Data

Test Site: 1# Shielded Room
Operating Condition: Mode 1
Test Specification: AC 120V, 60Hz for adapter
Comment: Neutral Line
Tem.: 24.1℃ Hum.: 48%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1940	56.08	0.12	56.20	63.86	-7.66	peak	
2	0.1980	44.21	0.12	44.33	53.69	-9.36	AVG	
3	0.3180	50.57	0.13	50.70	59.76	-9.06	peak	
4	0.3339	38.24	0.12	38.36	49.35	-10.99	AVG	
5	0.3940	47.38	0.11	47.49	57.98	-10.49	peak	
6	0.4660	47.94	0.14	48.08	56.58	-8.50	peak	
7	0.4700	36.09	0.14	36.23	46.51	-10.28	AVG	
8	0.6700	48.62	0.15	48.77	56.00	-7.23	peak	
9	0.7380	37.93	0.15	38.08	46.00	-7.92	AVG	
10	1.1019	36.05	0.15	36.20	46.00	-9.80	AVG	
11	1.3460	46.52	0.14	46.66	56.00	-9.34	peak	
12	3.3140	35.50	0.12	35.62	46.00	-10.38	AVG	

4. Radiation Spurious Emission

4.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.209 and 15.205				
Test Limit	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	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
	960MHz~1000MHz	500	54.0	Quasi-peak	3
	Above 1000MHz	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.

4.2. Test Setup

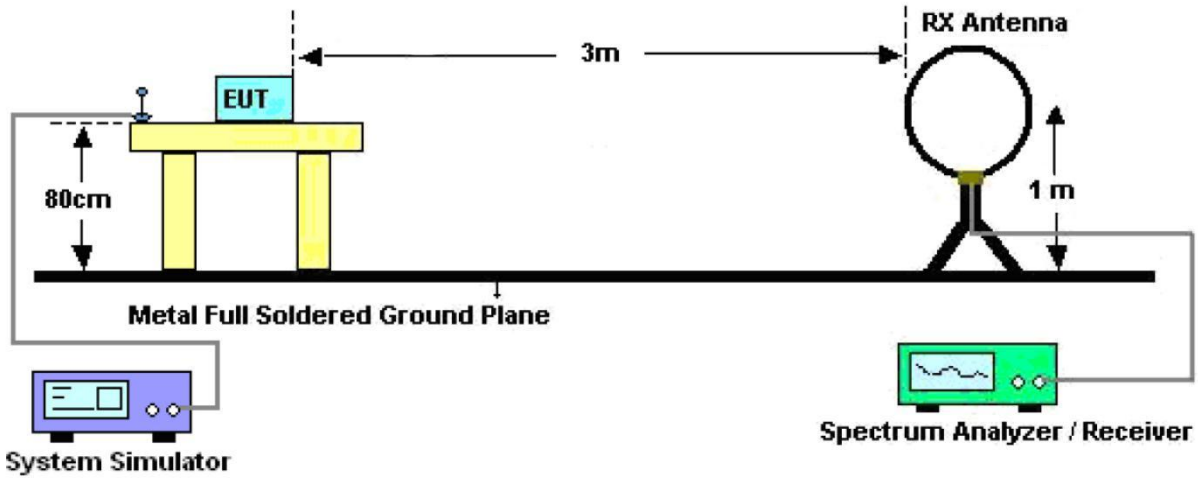


Figure 1. Below 30MHz

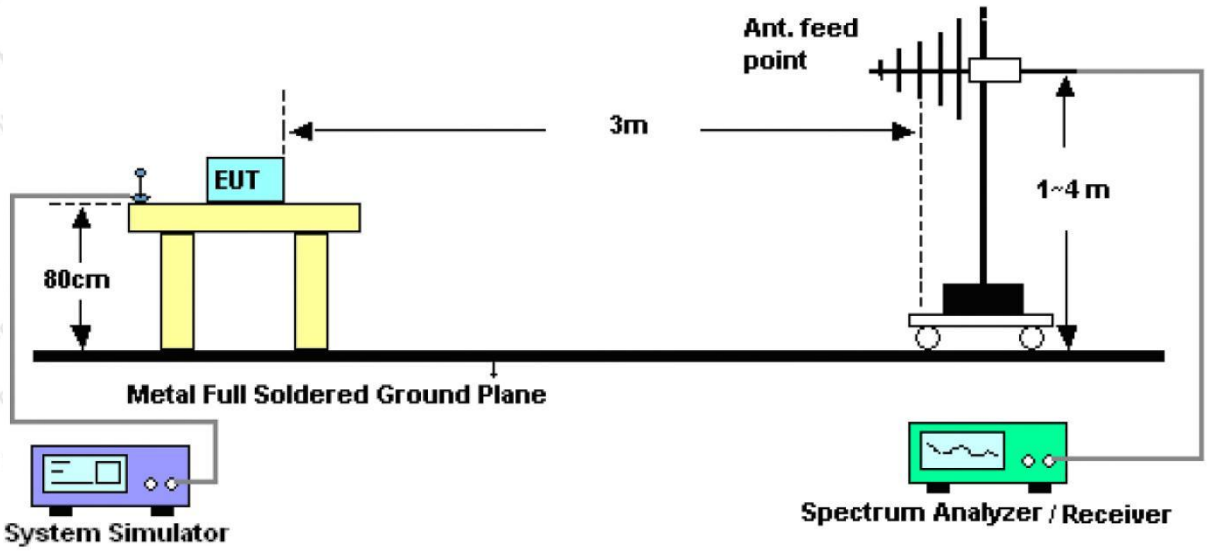


Figure 2. 30MHz to 1GHz

4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane.
The turn 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 which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9*6*6 Chamber. The device is evaluated in xyz orientation.

For 9kHz to 150kHz, Set the spectrum analyzer as:
RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:
RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:
RBW = 100kHz, VBW =300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

4.4. Test Data

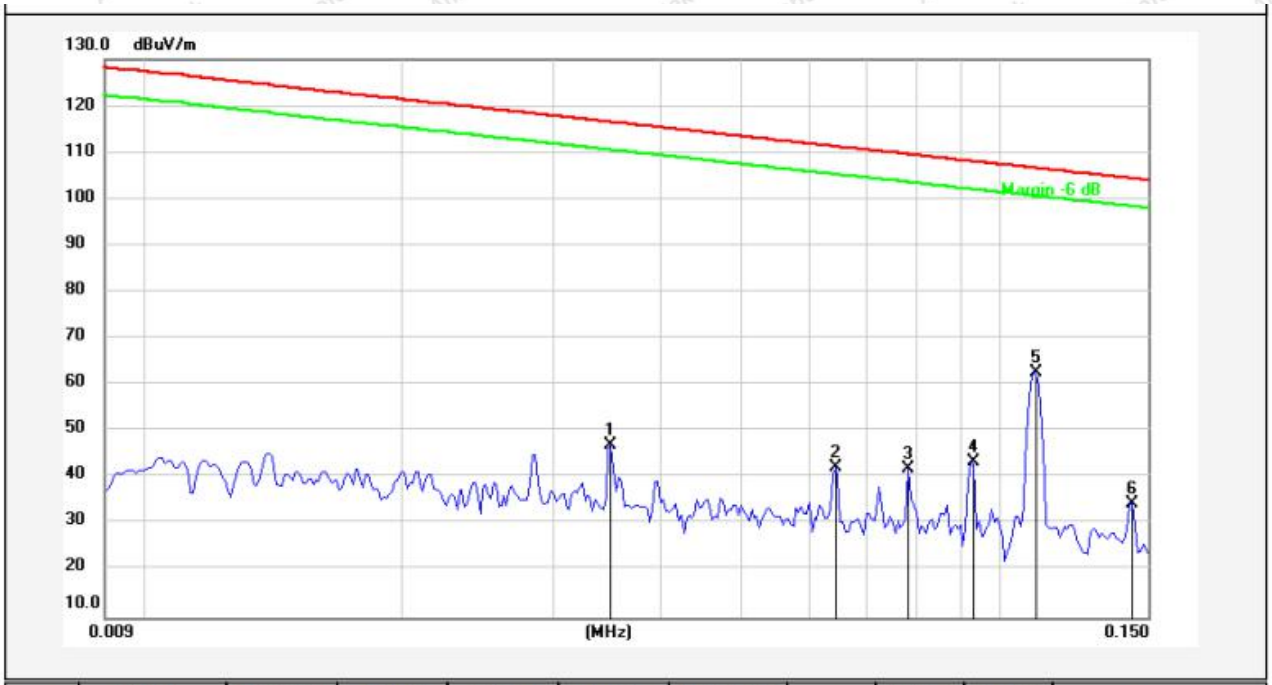
PASS

Note: The data is in TX mode, and this is the worst mode.

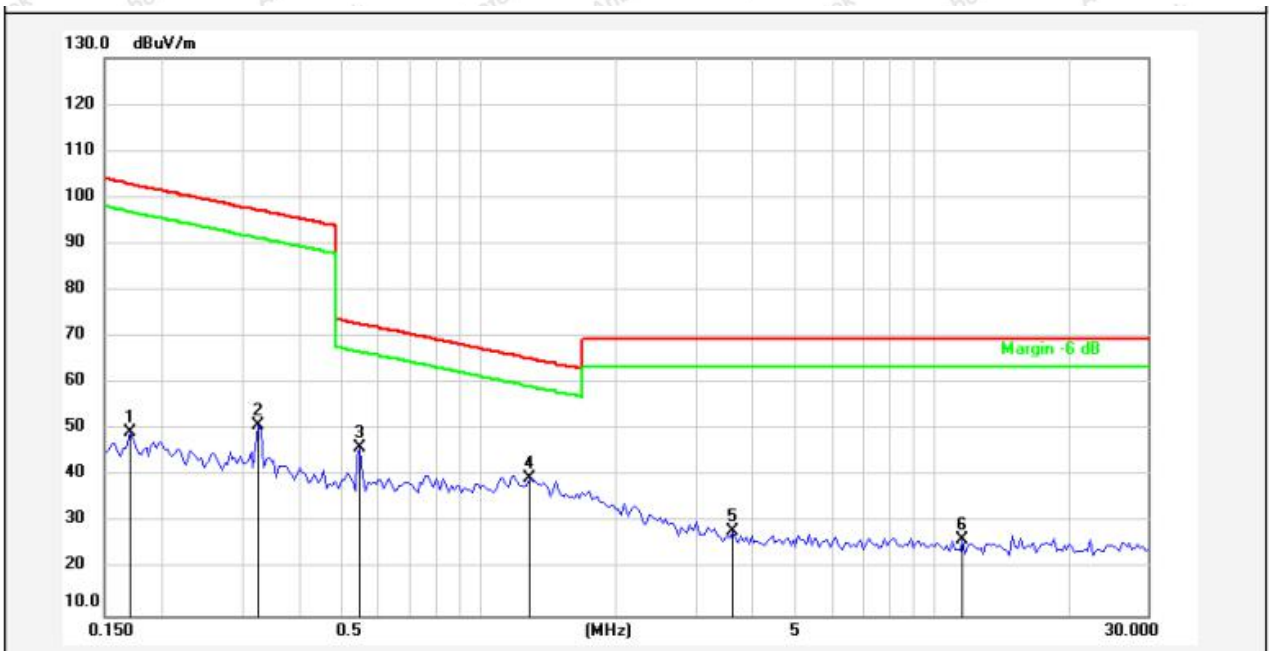
Test Results

(Between 9KHz – 30MHz)

Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**22.4℃/49%RH**
Test Mode:	**Mode 1**	**Distance:**	**3m**



No.	Freq. (MHz)	Reading (dBuV)	Factor ()	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	0.0352	26.67	20.48	47.15	116.53	-69.38	AV			
2	0.0645	21.80	20.38	42.18	111.30	-69.12	AV			
3	0.0785	21.58	20.36	41.94	109.61	-67.67	AV			
4	0.0930	23.04	20.32	43.36	108.15	-64.79	AV			
5	0.1101	42.24	20.28	62.52	106.69	-44.17	AV			
6	0.1428	14.06	20.33	34.39	104.44	-70.05	AV			

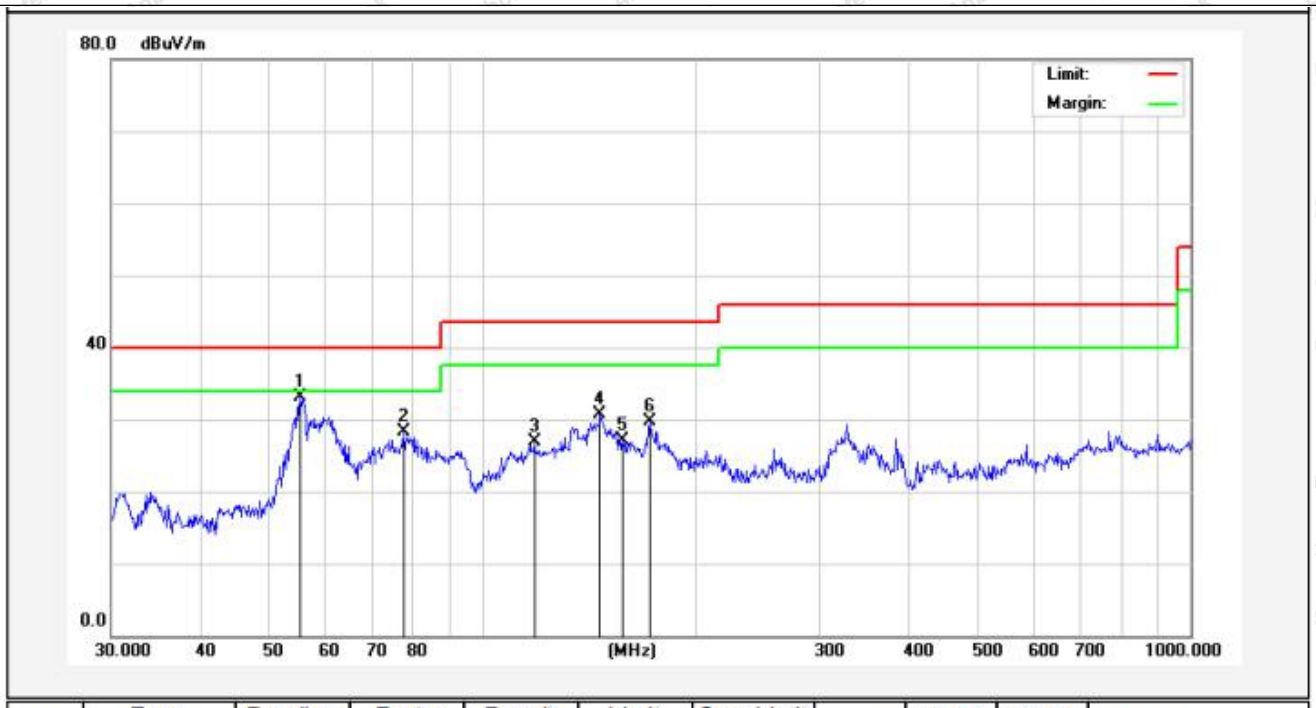


No.	Freq. (MHz)	Reading (dBuV)	Factor ()	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	0.1712	29.14	20.32	49.46	102.88	-53.42	AV			
2	0.3277	30.66	20.29	50.95	97.27	-46.32	AV			
3	0.5493	25.89	20.27	46.16	72.81	-26.65	QP			
4	1.2994	19.41	20.26	39.67	65.35	-25.68	QP			
5	3.6514	7.94	20.34	28.28	69.50	-41.22	QP			
6	11.7135	5.94	20.52	26.46	69.50	-43.04	QP			

Remark： According to FCC PART 15.209 (d), the emission limits for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, Radiated emission limits in these three bands are based on measurements employing an average detector.

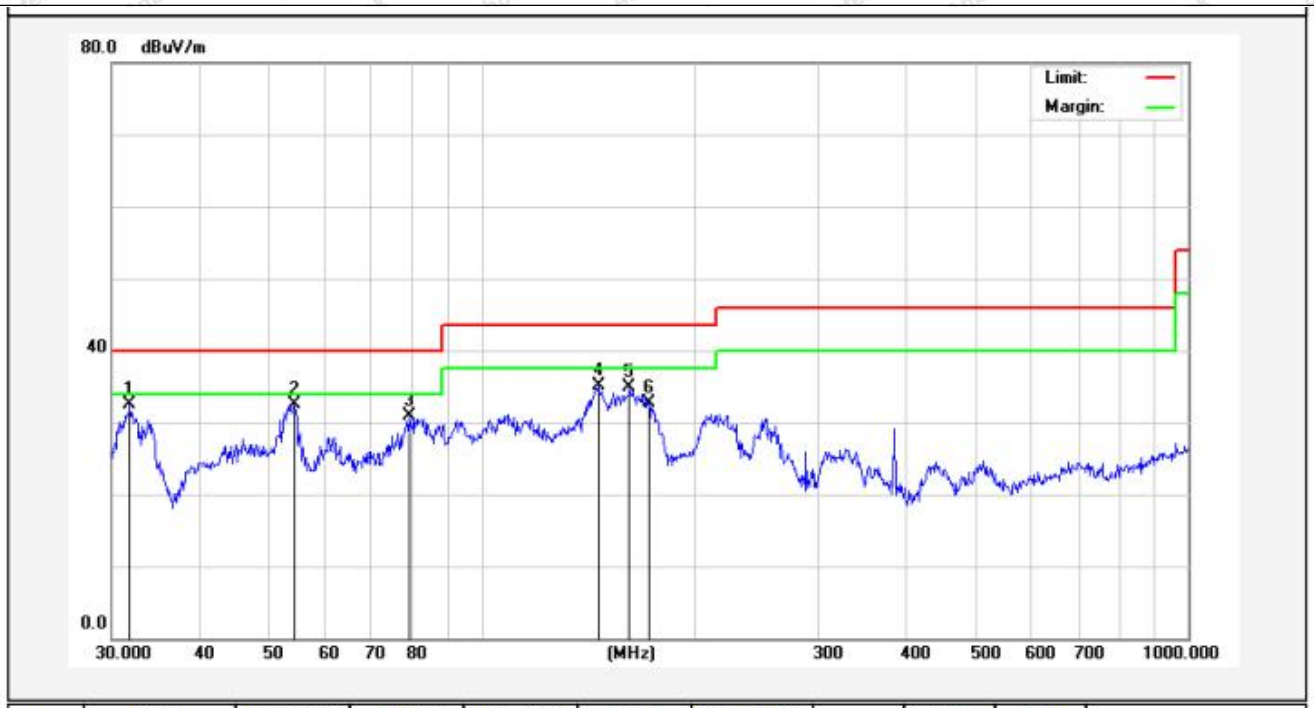
(Between 30MHz –1000 MHz)

Standard:	**FCC PART15 C _3m**	**Polarization:**	**Horizontal**
Test item:	**Radiation Test**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test Mode:	**Mode 1**	**Temp.(C)/Hum.(%RH):**	**24.3℃/46%RH**
Distance:	**3m**		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	55.4147	50.76	-17.62	33.14	40.00	-6.86	QP			
2	77.5926	50.97	-22.70	28.27	40.00	-11.73	QP			
3	118.6012	50.65	-23.84	26.81	43.50	-16.69	QP			
4	146.8874	53.56	-22.92	30.64	43.50	-12.86	QP			
5	158.1123	50.86	-23.80	27.06	43.50	-16.44	QP			
6	172.5988	53.15	-23.50	29.65	43.50	-13.85	QP			

Standard:	**FCC PART15 C _3m**	**Polarization:**	**Vertical**
Test item:	**Radiation Test**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test Mode:	**Mode 1**	**Temp.(C)/Hum.(%RH):**	**24.3℃/46%RH**
Distance:	**3m**		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	31.8427	50.19	-17.66	32.53	40.00	-7.47	QP			
2	54.4515	49.89	-17.42	32.47	40.00	-7.53	QP			
3	79.2425	50.27	-19.40	30.87	40.00	-9.13	QP			
4	146.3735	57.20	-22.13	35.07	43.50	-8.43	QP			
5	162.0414	56.40	-21.55	34.85	43.50	-8.65	QP			
6	172.5988	53.77	-20.99	32.78	43.50	-10.72	QP			

5. Antenna Requirement

5.1. Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203
Requirement	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

5.2. Antenna Connected Construction

The antenna is a Inductive loop coil Antenna which permanently attached, and the best case gain of the antenna is 0 dBi. It complies with the standard requirement.

APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Conducted Emission Measurement

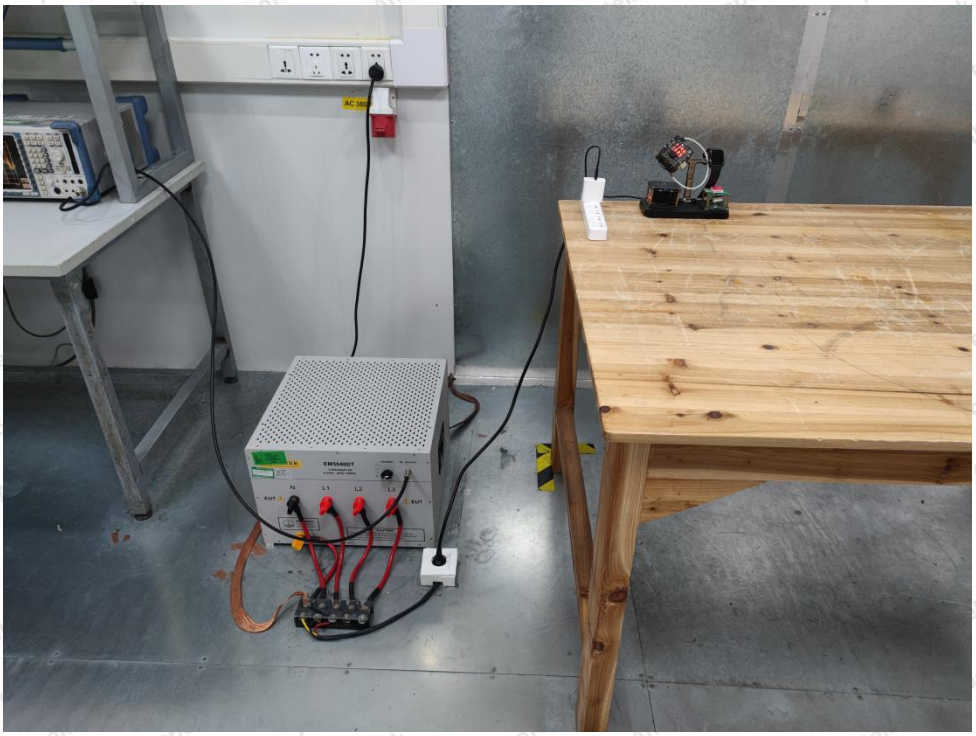
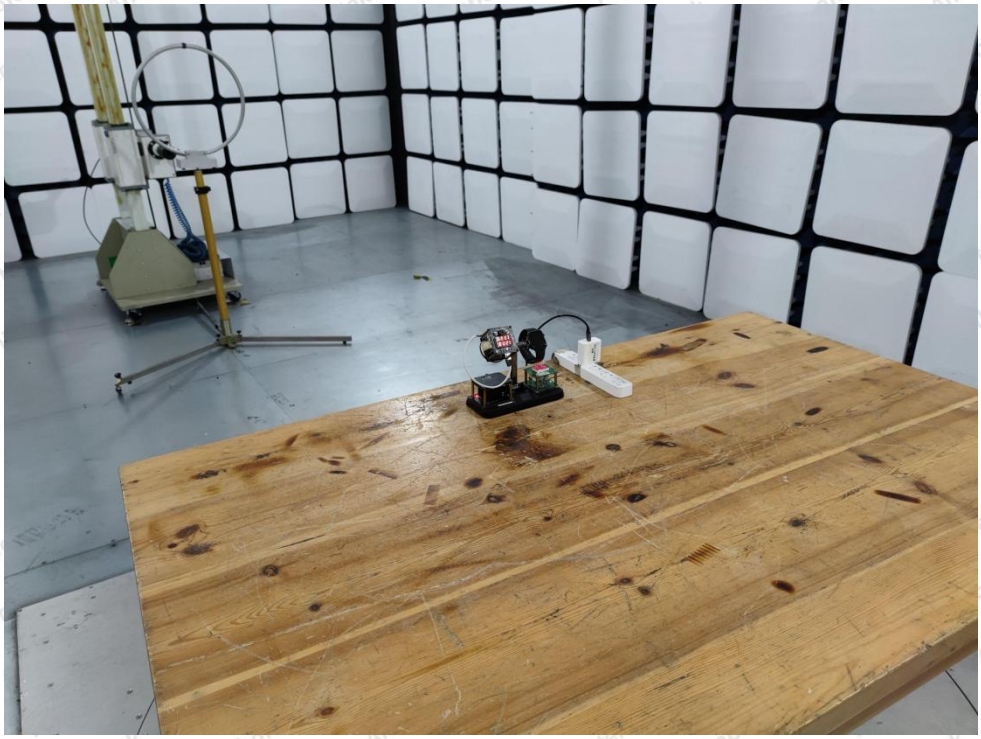
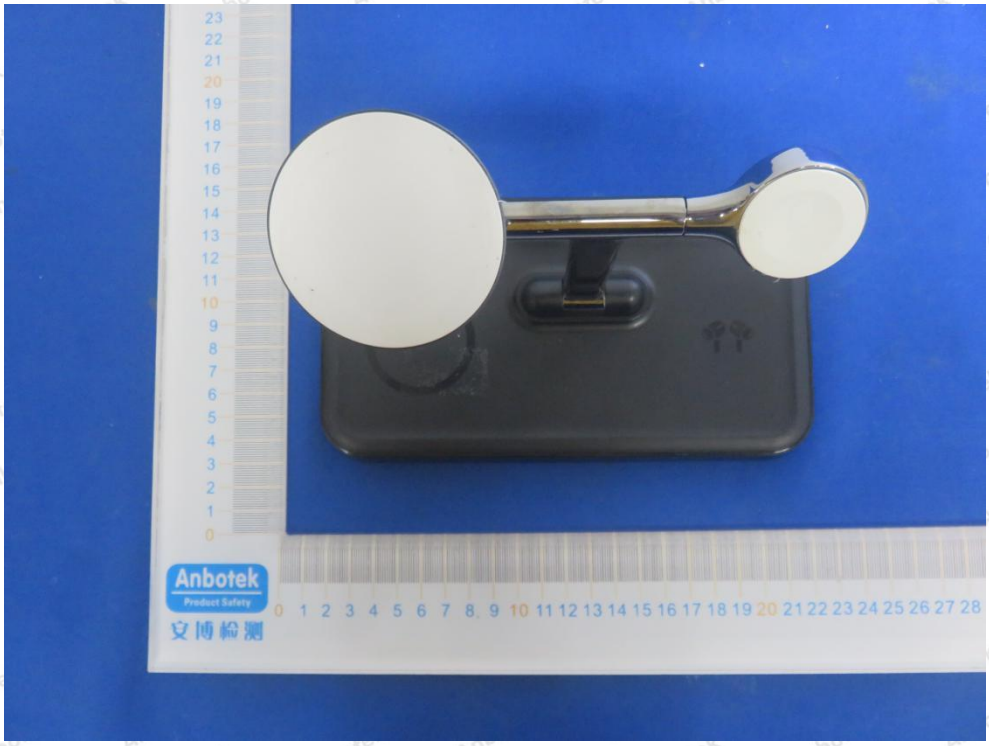
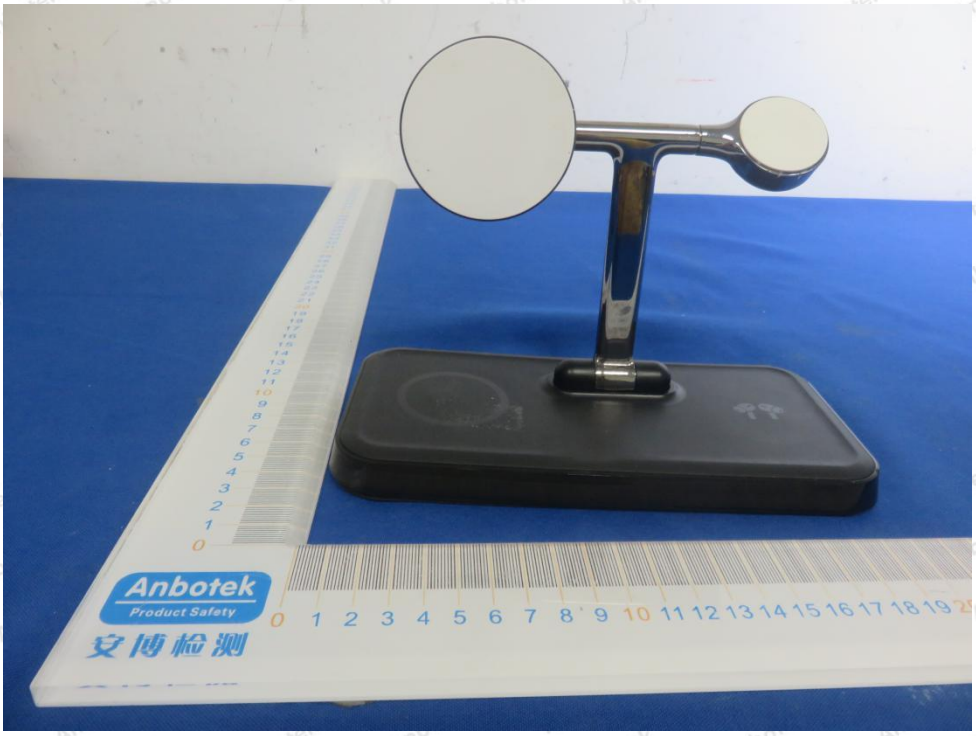


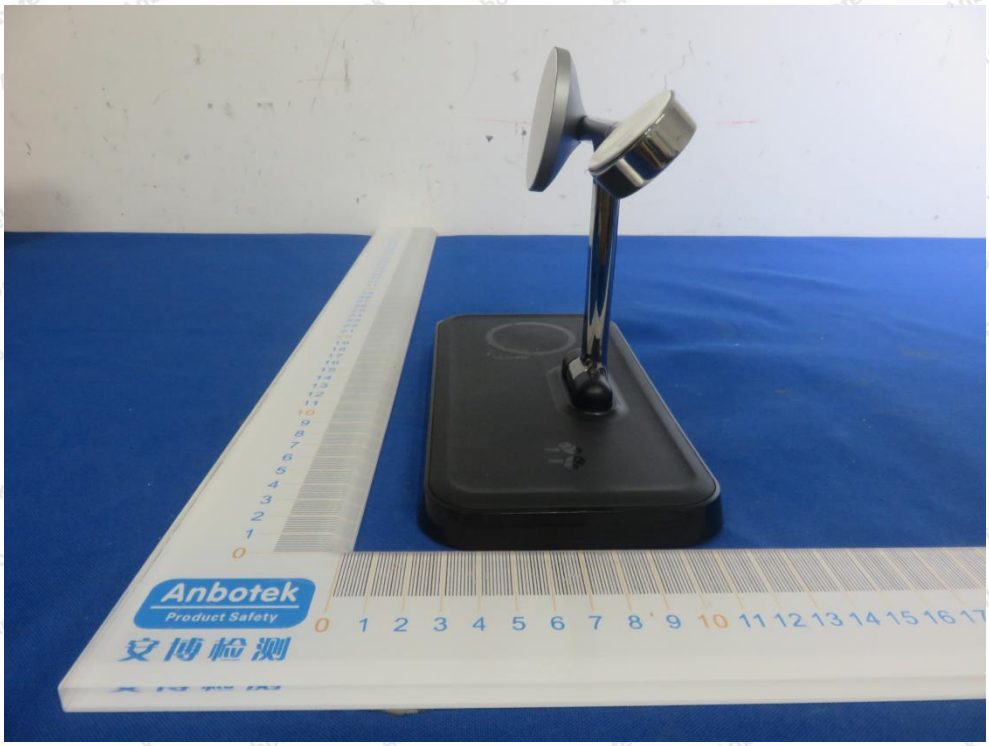
Photo of Radiation Emission Test



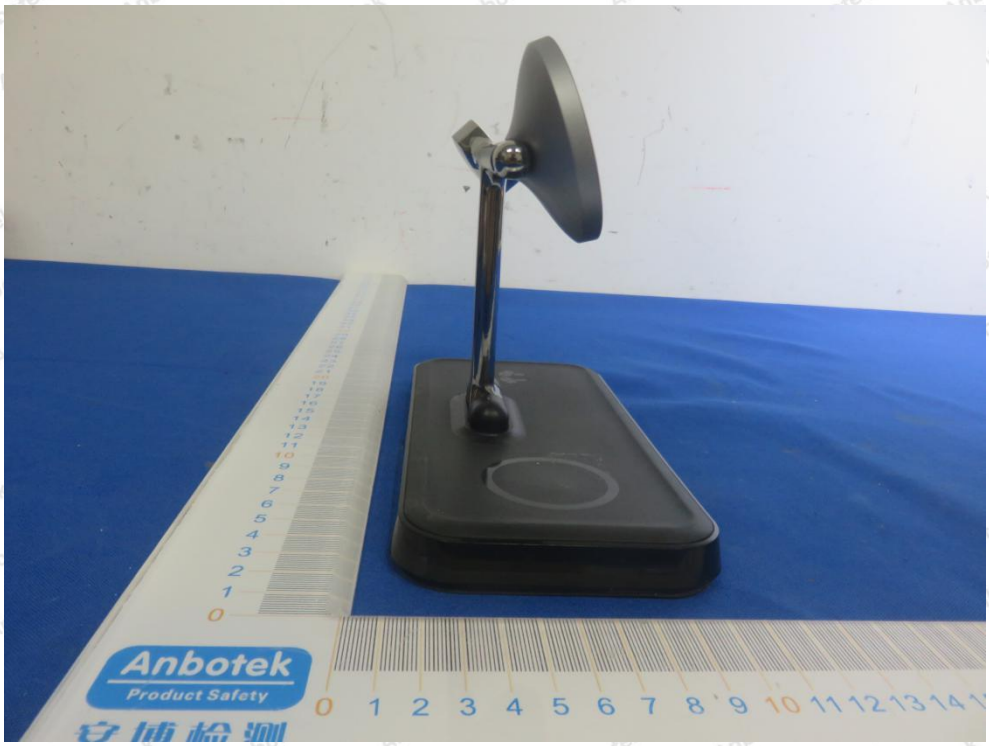
APPENDIX II -- EXTERNAL PHOTOGRAPH



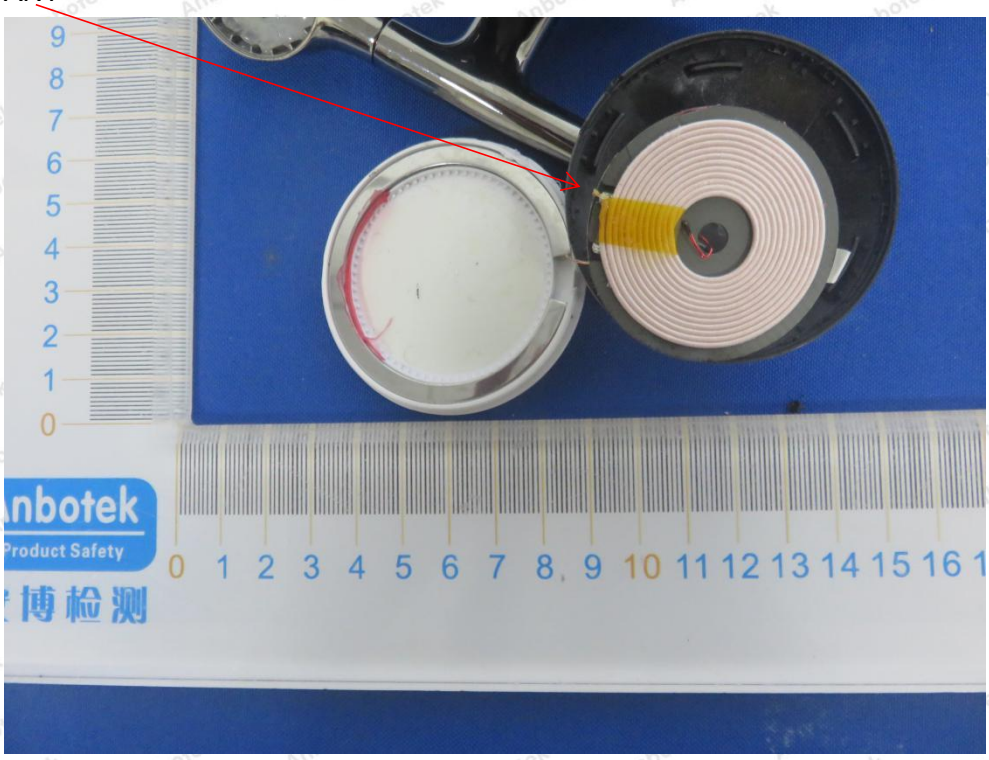

Anbotek
Product Safety
安博检测


Anbotek
Product Safety
安博检测


Anbotek
Product Safety


Anbotek
Product Safety

APPENDIX III -- INTERNAL PHOTOGRAPH



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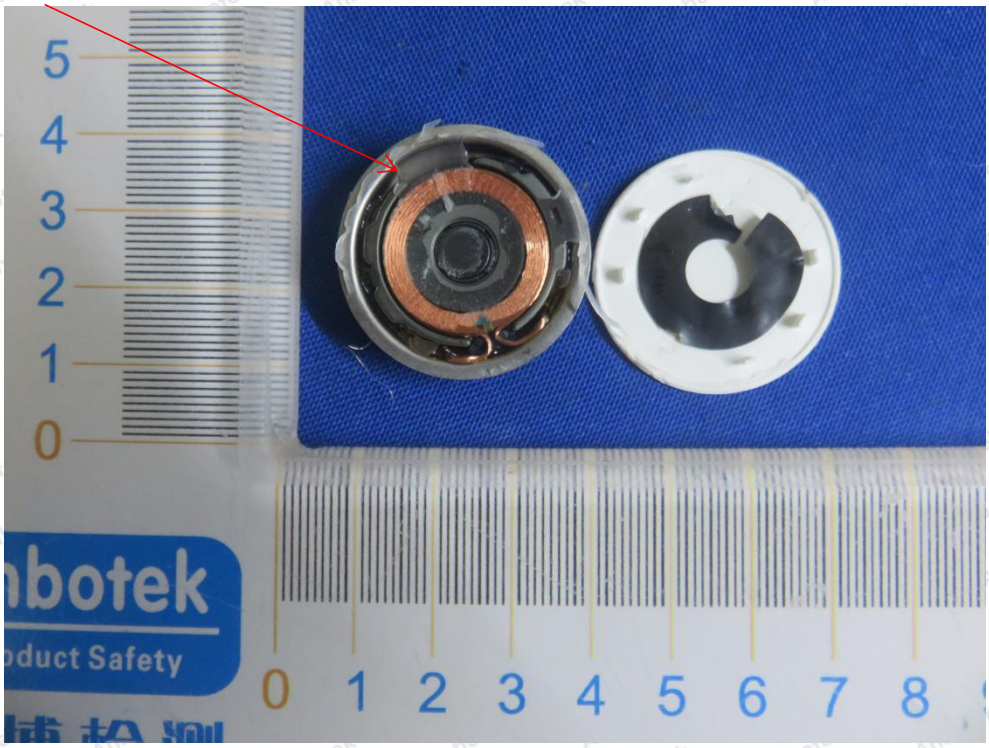

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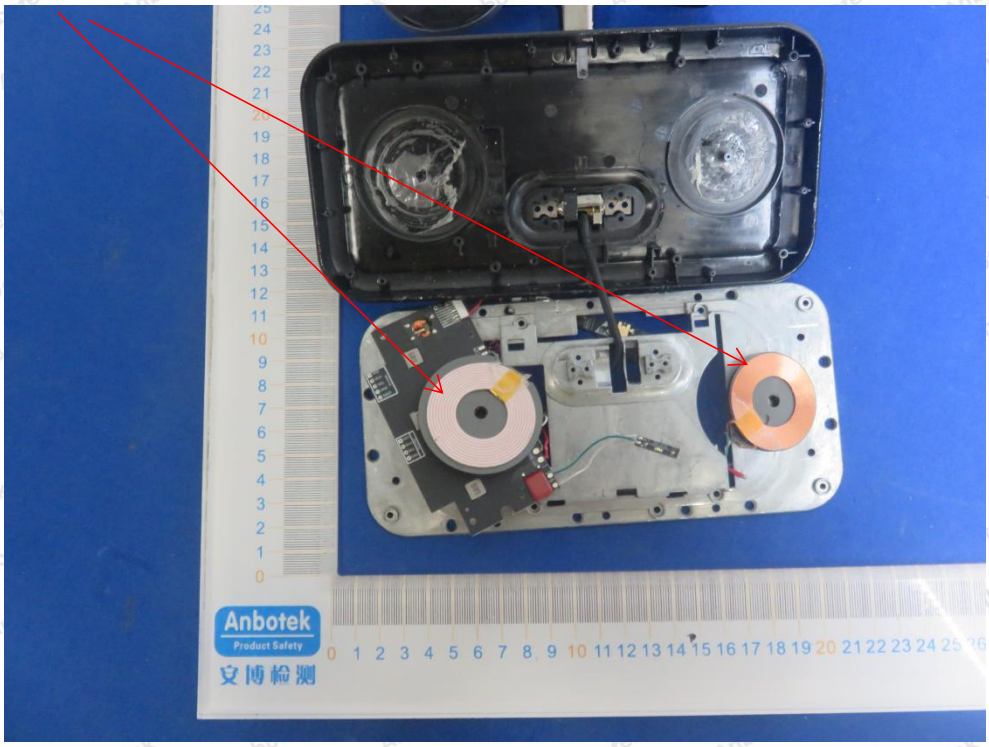

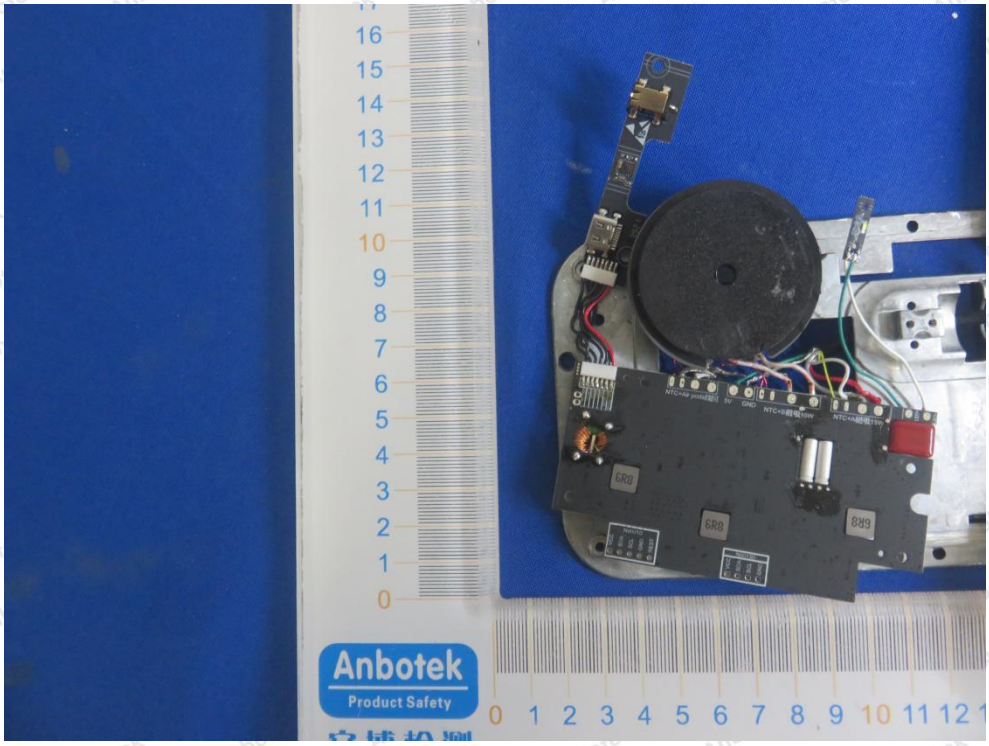
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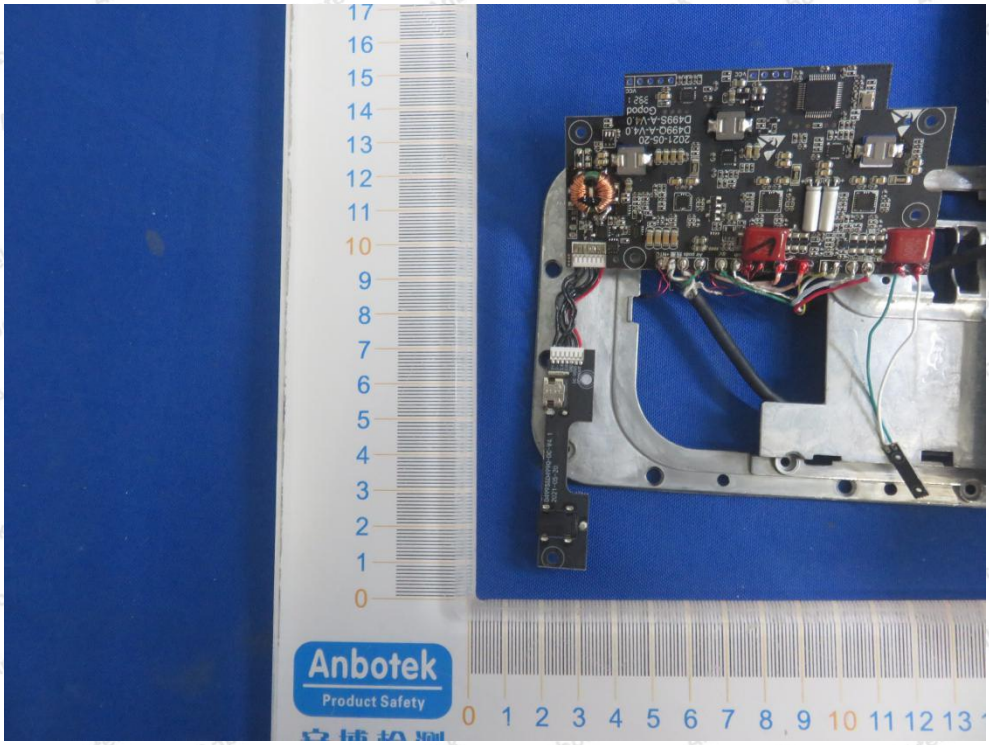
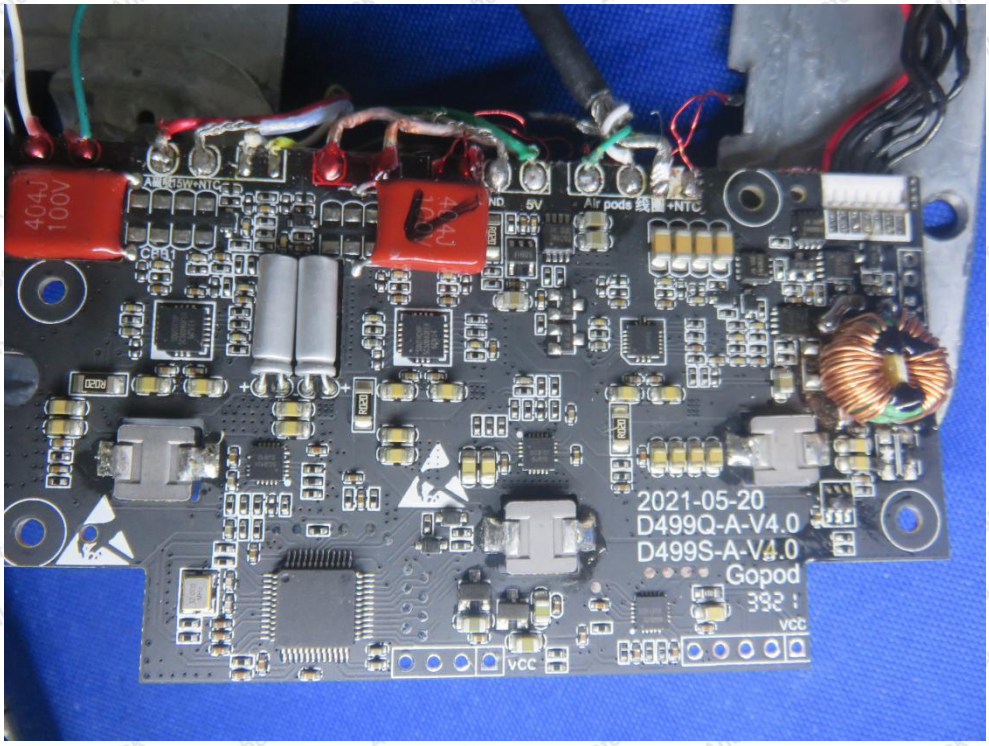
Product Safety


Anbotek
Product Safety



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