

FCC TEST REPORT

Client Name : MINISO Corporation

Address : Room 2501, No. 486 Heye Square, Kangwang Middle Road, Liwan District, Guangzhou, Guangdong, China

Product Name : RGB Wireless Charging Stand for Gaming

Date : Mar. 25, 2022



Shenzhen Anbotech Compliance Laboratory Limited



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TEST REPORT

Applicant : MINISO Corporation
Manufacturer : Dongguan China ETECH GROUPS CO.,LTD
Product Name : RGB Wireless Charging Stand for Gaming
Model No. : EWL-21151-A
Trade Mark : MINISO
Rating(s) : Input: DC 9V/2A, DC 5V/2A
Wireless output: 10W, 7.5W, 5W

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 Anbotech 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 Anbotech 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 Anbotech Compliance Laboratory Limited.

Date of Receipt

Nov. 25, 2021

Date of Test

Nov. 25, 2021~Feb. 25, 2022

Prepared By

Nian xiu Chen

(Nianxiu Chen)

Approved & Authorized Signer

Tom Chen

(Tom Chen)

1. General Information

1.1. Client Information

Applicant	:	MINISO Corporation
Address	:	Room 2501, No. 486 Heye Square, Kangwang Middle Road, Liwan District, Guangzhou, Guangdong, China
Manufacturer	:	Dongguan China ETECH GROUPS CO.,LTD
Address	:	Room 401&501, Building 6, No.2 Hong Jin Road, Hongmei Town, Dongguan City, Guangdong Province, China
Factory	:	Dongguan China ETECH GROUPS CO.,LTD
Address	:	Room 401&501, Building 6, No.2 Hong Jin Road, Hongmei Town, Dongguan City, Guangdong Province, China

1.2. Description of Device (EUT)

Product Name	:	RGB Wireless Charging Stand for Gaming
Model No.	:	EWL-21151-A
Trade Mark	:	MINISO
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)
	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

Adapter	:	M/N: A2013 Input: AC 100-240V, 0.7A, 50-60Hz Output: 3.6-5.5V---3A/ 6.5-9V---2A/ 9-12V---1.5A
Wireless charging load	:	Manufacturer: Shenzhen Ouju Technology Co., Ltd. M/N: CD2577 Power: 5W/7.5W/10W/15W Last Cal.: Oct. 26, 2021 Cal. Interval: 1 Year

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

For Conducted Emission	
Final Test Mode	Description
Mode 1	Wireless Charging Mode

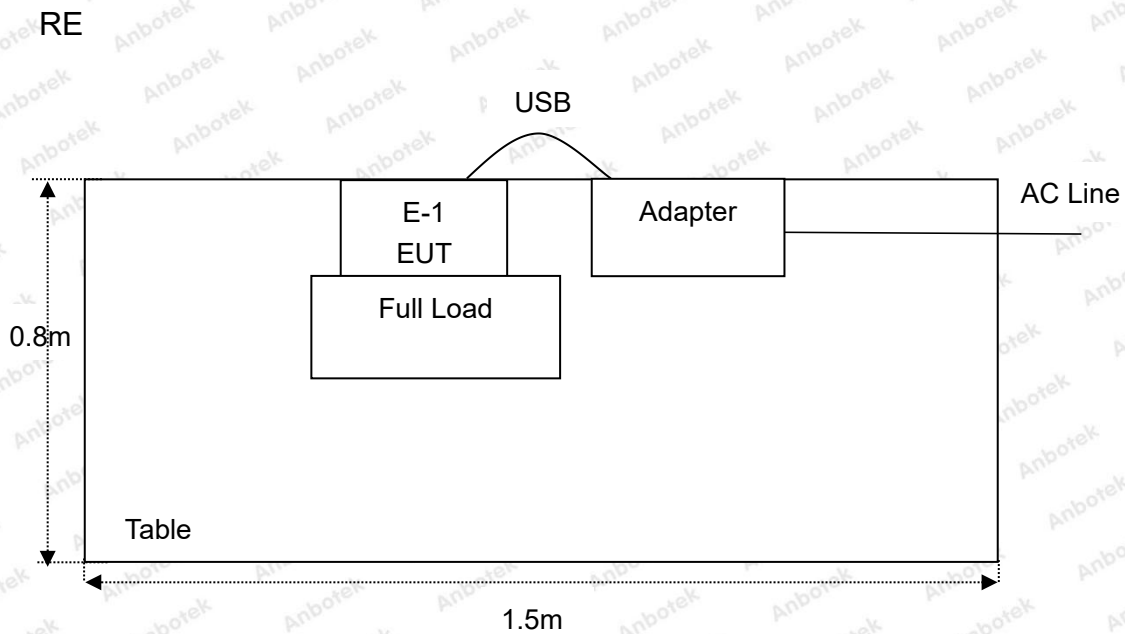
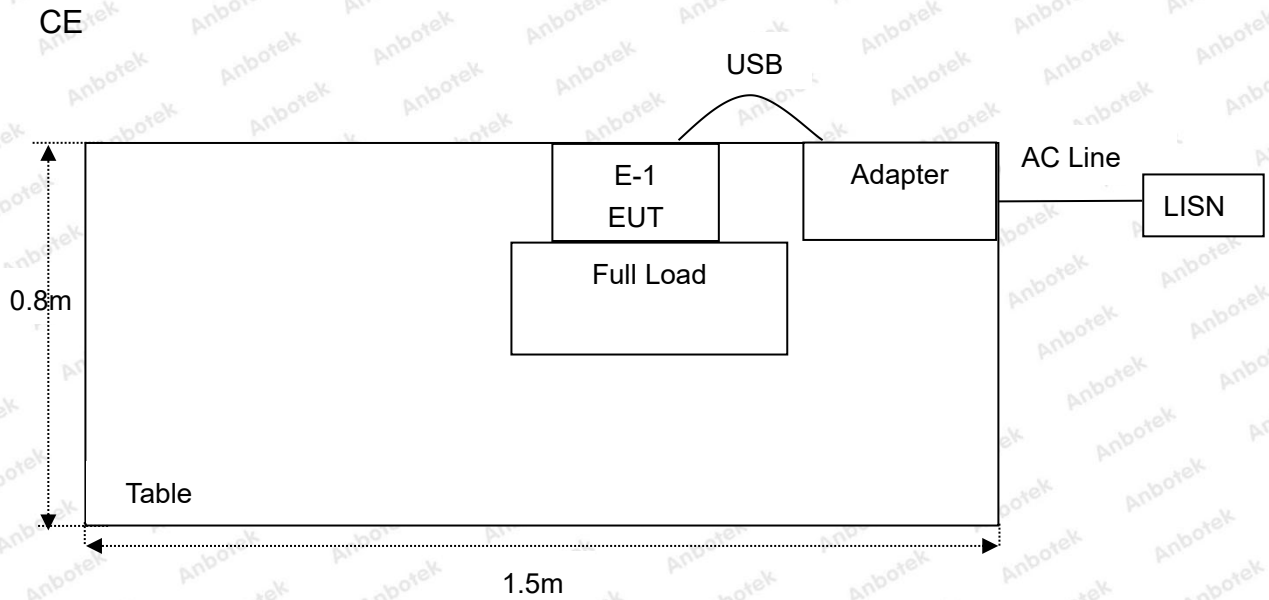
For Radiated Emission	
Final Test Mode	Description
Mode 1	Wireless Charging Mode

Note: (1)Test channel is 0.1285MHz.

(2) All the situation(full load, half load and empty load) has been tested,only the worst situation (full load 10W) was recorded in the report.



1.5. Description Of Test Setup



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 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.

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.

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.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

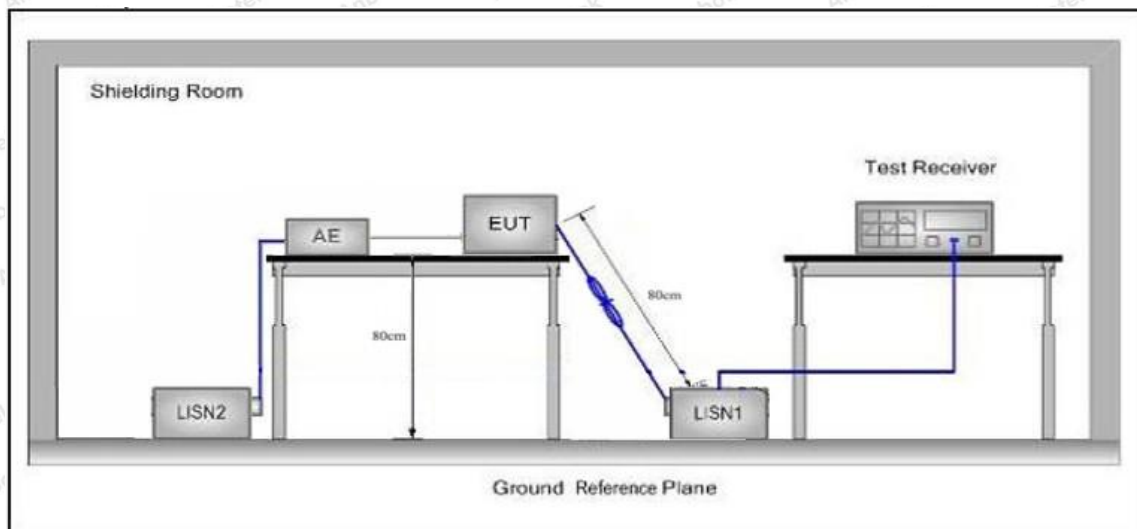
3. Conducted Emission Test

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

Shenzhen Anbotech Compliance Laboratory Limited

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

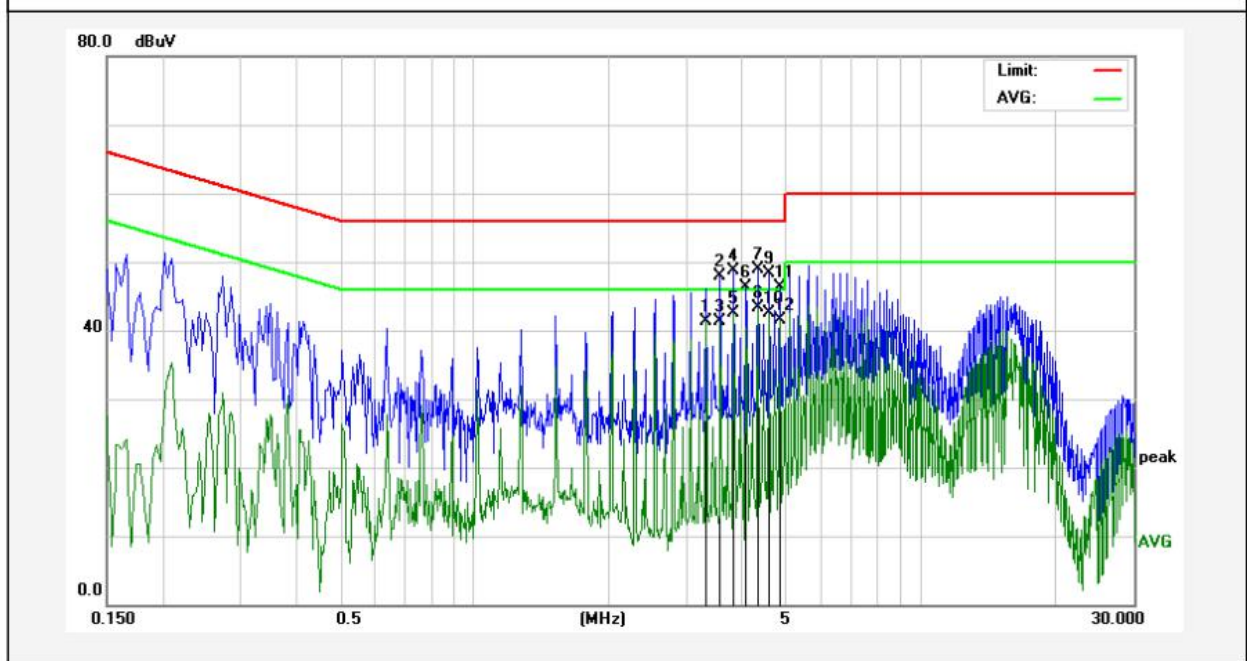
Tel: (86) 755-26066440 Fax: (86) 755-26014772 Email: service@anbotech.com

Code: AB-RF-05-a

Hotline
400-003-0500
www.anbotech.com

Conducted Emission Test Data

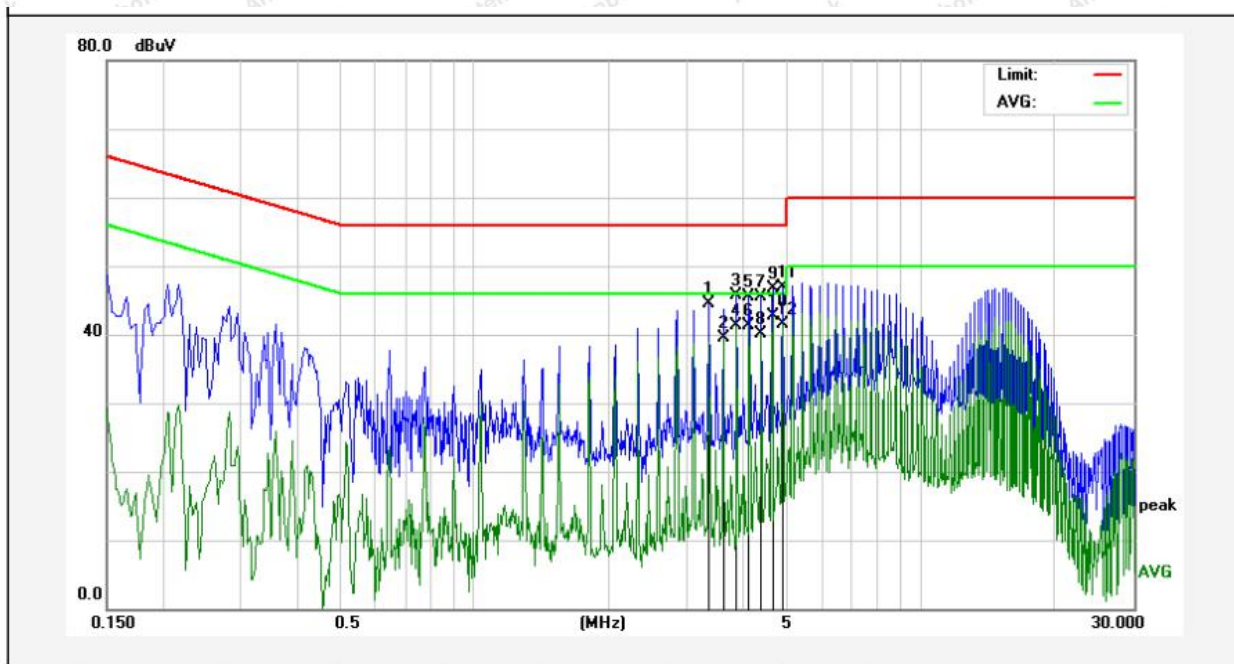
Test Site: 1# Shielded Room
Operating Condition: Mode 1
Test Specification: AC 240V, 60Hz for adapter
Comment: Live Line
Tem.: 22.4°C Hum.: 47%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	3.3060	41.15	0.12	41.27	46.00	-4.73	AVG	
2	3.5580	47.76	0.12	47.88	56.00	-8.12	QP	
3	3.5580	41.22	0.12	41.34	46.00	-4.66	AVG	
4	3.8140	48.49	0.12	48.61	56.00	-7.39	QP	
5	3.8140	42.38	0.12	42.50	46.00	-3.50	AVG	
6	4.0700	46.21	0.11	46.32	56.00	-9.68	QP	
7	4.3220	48.78	0.11	48.89	56.00	-7.11	QP	
8	4.3220	43.28	0.11	43.39	46.00	-2.61	AVG	
9	4.5739	48.12	0.11	48.23	56.00	-7.77	QP	
10	4.5739	42.43	0.11	42.54	46.00	-3.46	AVG	
11	4.8300	46.15	0.11	46.26	56.00	-9.74	QP	
12	4.8300	41.48	0.11	41.59	46.00	-4.41	AVG	

Conducted Emission Test Data

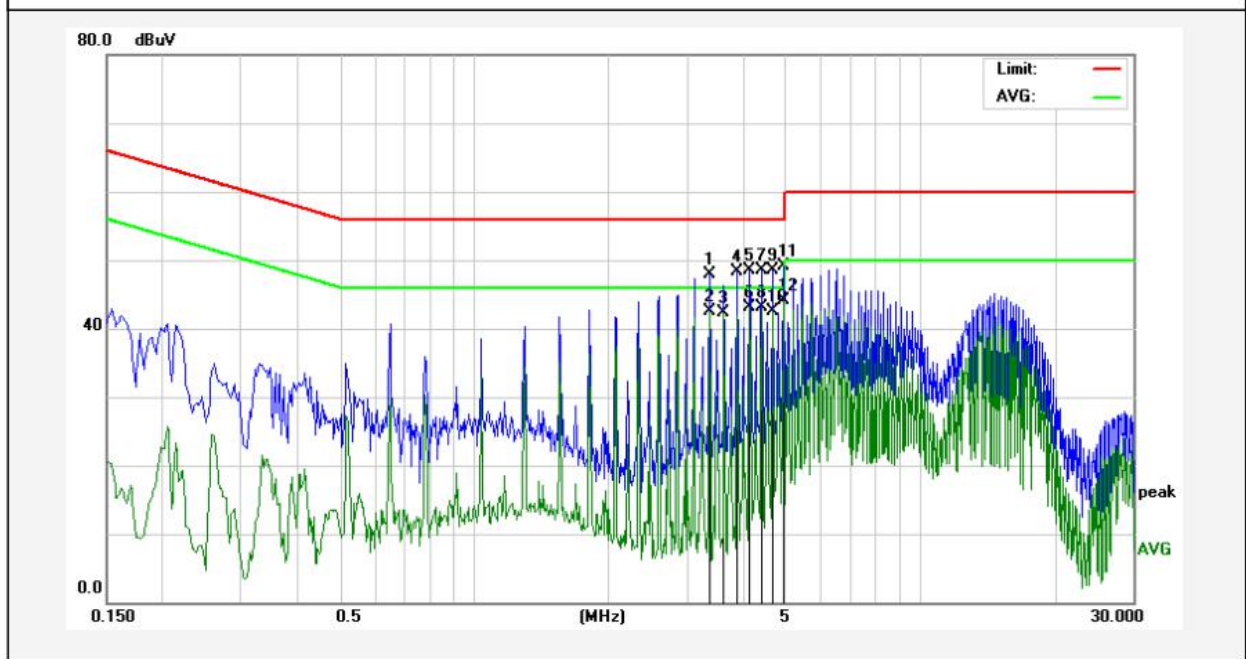
Test Site: 1# Shielded Room
Operating Condition: Mode 1
Test Specification: AC 240V, 60Hz for adapter
Comment: Neutral Line
Tem.: 22.4°C Hum.: 47%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	3.3580	44.38	0.12	44.50	56.00	-11.50	QP	
2	3.6180	39.40	0.12	39.52	46.00	-6.48	AVG	
3	3.8740	45.54	0.12	45.66	56.00	-10.34	QP	
4	3.8740	41.17	0.12	41.29	46.00	-4.71	AVG	
5	4.1340	45.49	0.11	45.60	56.00	-10.40	QP	
6	4.1340	41.27	0.11	41.38	46.00	-4.62	AVG	
7	4.3900	45.49	0.11	45.60	56.00	-10.40	QP	
8	4.3900	40.06	0.11	40.17	46.00	-5.83	AVG	
9	4.6500	46.62	0.11	46.73	56.00	-9.27	QP	
10	4.6500	42.53	0.11	42.64	46.00	-3.36	AVG	
11	4.9060	46.70	0.11	46.81	56.00	-9.19	QP	
12	4.9060	41.43	0.11	41.54	46.00	-4.46	AVG	

Conducted Emission Test Data

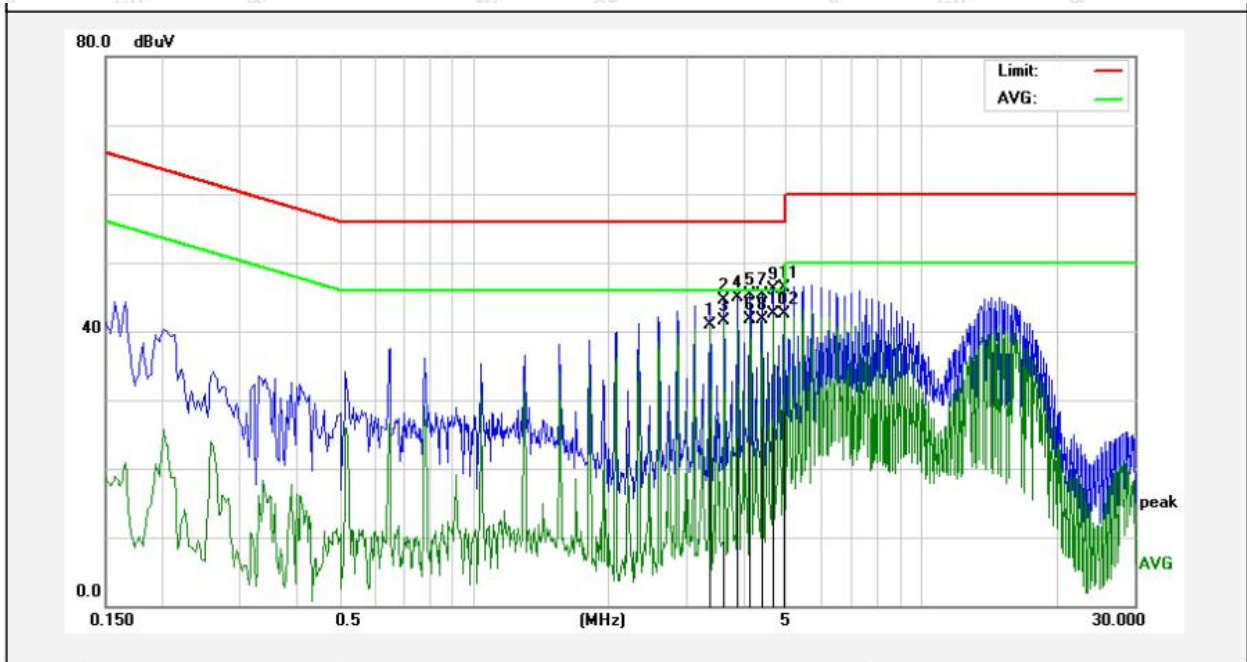
Test Site: 1# Shielded Room
 Operating Condition: Mode 1
 Test Specification: AC 120V, 60Hz for adapter
 Comment: Live Line
 Tem.: 22.4°C Hum.: 47%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	3.3740	47.79	0.12	47.91	56.00	-8.09	QP	
2	3.3740	42.29	0.12	42.41	46.00	-3.59	AVG	
3	3.6340	42.24	0.12	42.36	46.00	-3.64	AVG	
4	3.8940	48.24	0.12	48.36	56.00	-7.64	QP	
5	4.1540	48.47	0.11	48.58	56.00	-7.42	QP	
6	4.1540	42.94	0.11	43.05	46.00	-2.95	AVG	
7	4.4140	48.47	0.11	48.58	56.00	-7.42	QP	
8	4.4140	42.90	0.11	43.01	46.00	-2.99	AVG	
9	4.6700	48.30	0.11	48.41	56.00	-7.59	QP	
10	4.6700	42.39	0.11	42.50	46.00	-3.50	AVG	
11	4.9300	49.05	0.11	49.16	56.00	-6.84	QP	
12	4.9300	44.08	0.11	44.19	46.00	-1.81	AVG	

Conducted Emission Test Data

Test Site: 1# Shielded Room
 Operating Condition: Mode 1
 Test Specification: AC 120V, 60Hz for adapter
 Comment: Neutral Line
 Tem.: 22.4°C Hum.: 47%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	3.3740	40.76	0.12	40.88	46.00	-5.12	AVG	
2	3.6340	44.44	0.12	44.56	56.00	-11.44	QP	
3	3.6340	41.32	0.12	41.44	46.00	-4.56	AVG	
4	3.8940	44.83	0.12	44.95	56.00	-11.05	QP	
5	4.1540	45.10	0.11	45.21	56.00	-10.79	QP	
6	4.1540	41.52	0.11	41.63	46.00	-4.37	AVG	
7	4.4100	45.20	0.11	45.31	56.00	-10.69	QP	
8	4.4100	41.56	0.11	41.67	46.00	-4.33	AVG	
9	4.6700	45.99	0.11	46.10	56.00	-9.90	QP	
10	4.6700	42.34	0.11	42.45	46.00	-3.55	AVG	
11	4.9300	46.22	0.11	46.33	56.00	-9.67	QP	
12	4.9300	42.36	0.11	42.47	46.00	-3.53	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

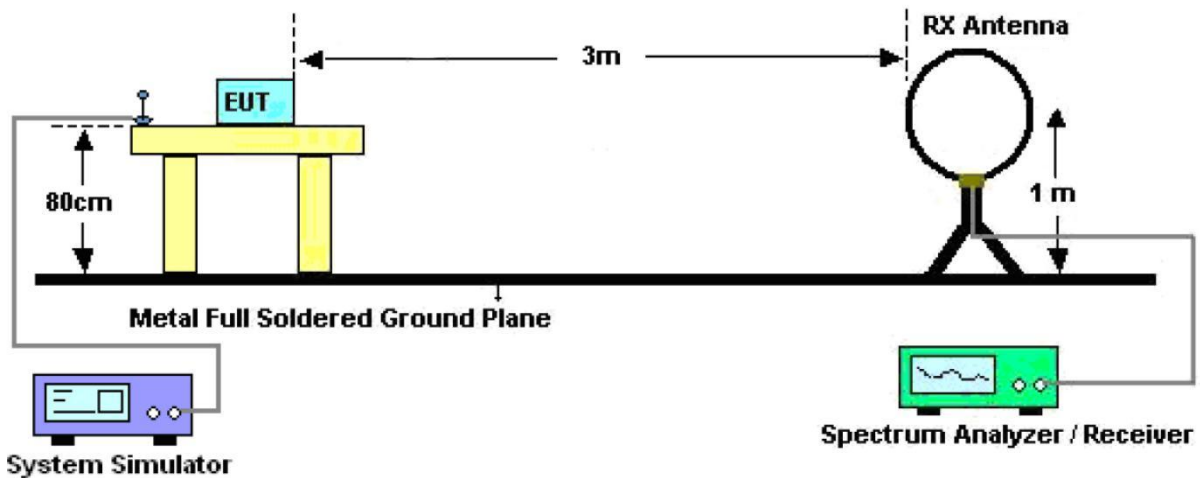


Figure 1. Below 30MHz

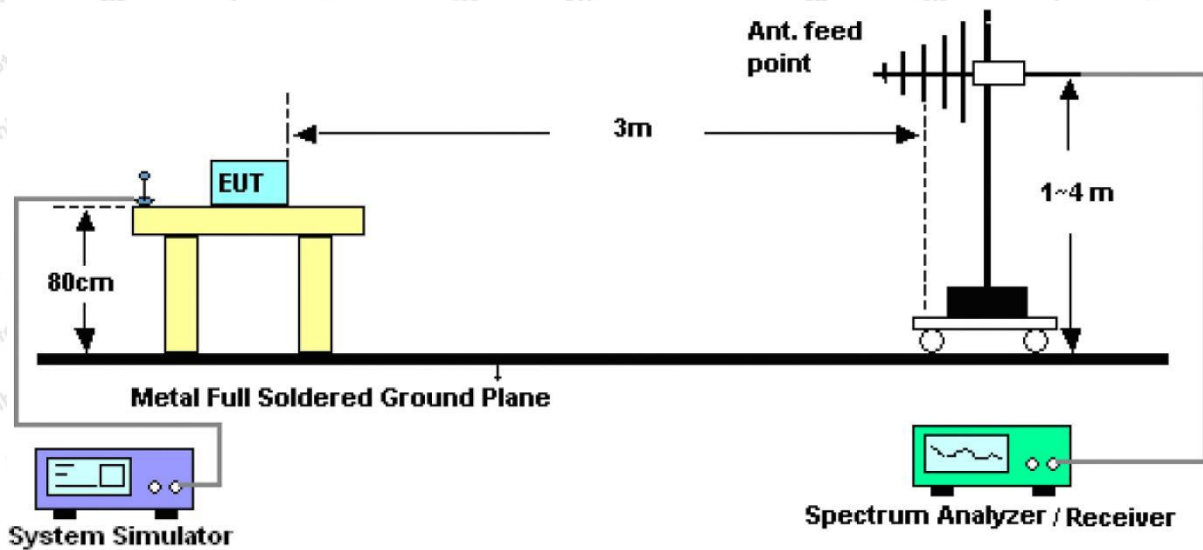


Figure 2. 30MHz to 1GHz

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

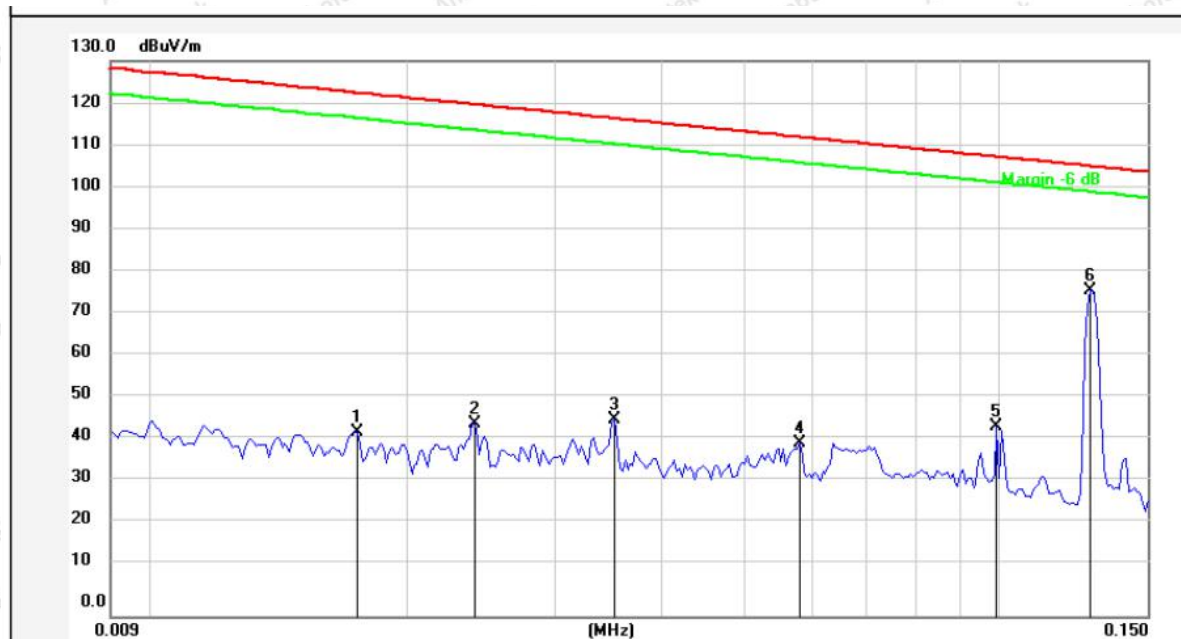
PASS

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

Test Results

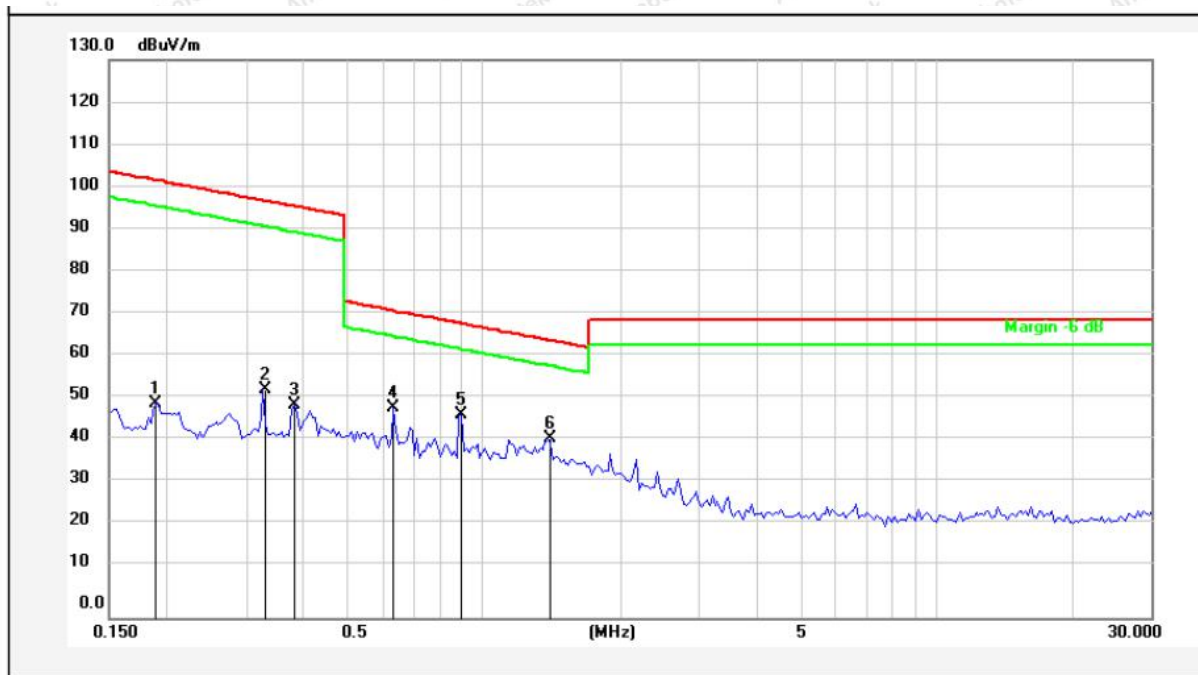
(Between 9KHz – 30MHz)

Standard: FCC PART15 C _3m **Power Source:** AC 120V, 60Hz for adapter
Test item: Radiation Test **Temp.(C)/Hum.(%RH):** 24.2°C/57%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	0.0175	22.95	20.15	43.10	122.57	-79.47	AV			
2	0.0240	24.76	20.38	45.14	119.84	-74.70	AV			
3	0.0352	25.54	20.48	46.02	116.53	-70.51	AV			
4	0.0582	20.26	20.36	40.62	112.19	-71.57	AV			
5	0.0995	23.97	20.29	44.26	107.56	-63.30	AV			
6	0.1285	55.93	20.34	76.27	105.37	-29.10	AV			





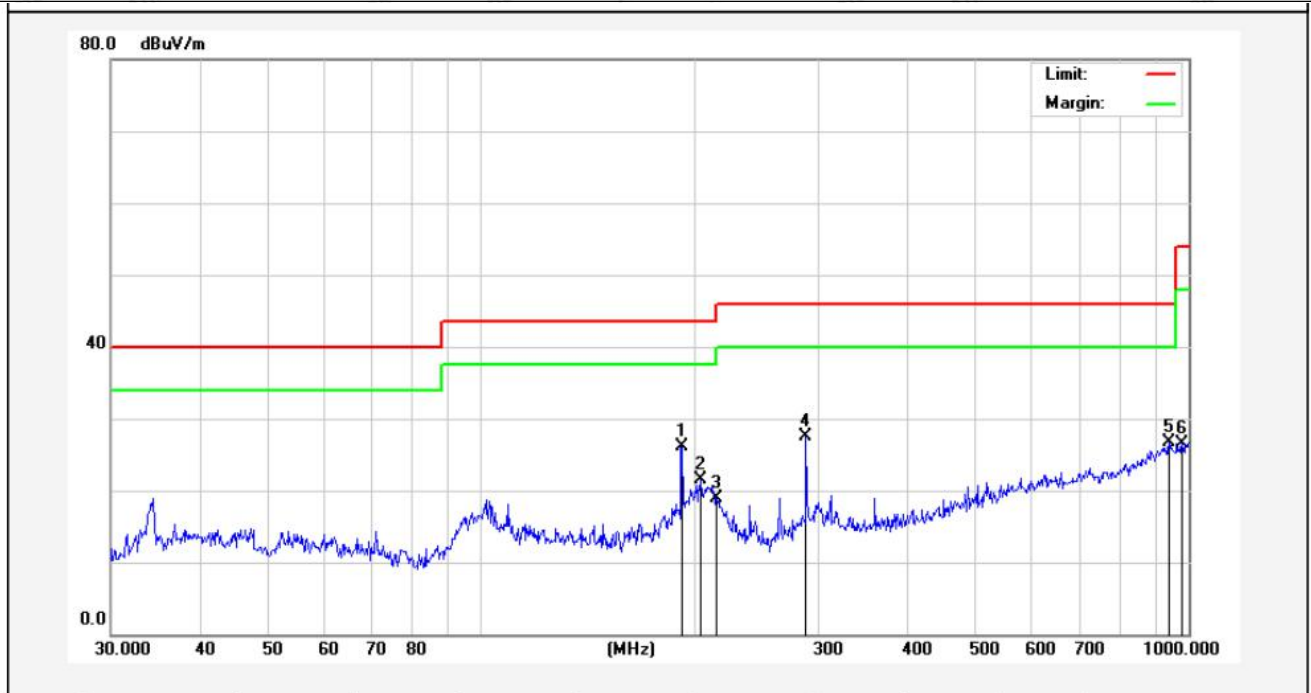
No.	Freq. (MHz)	Reading (dBuV)	Factor ()	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	0.1905	29.48	20.32	49.80	101.96	-52.16	AV			
2	0.3284	32.94	20.29	53.23	97.25	-44.02	AV			
3	0.3850	29.17	20.28	49.45	95.88	-46.43	AV			
4	0.6378	28.70	20.27	48.97	71.52	-22.55	QP			
5	0.9008	26.88	20.26	47.14	68.53	-21.39	QP			
6	1.3962	21.40	20.27	41.67	64.73	-23.06	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.

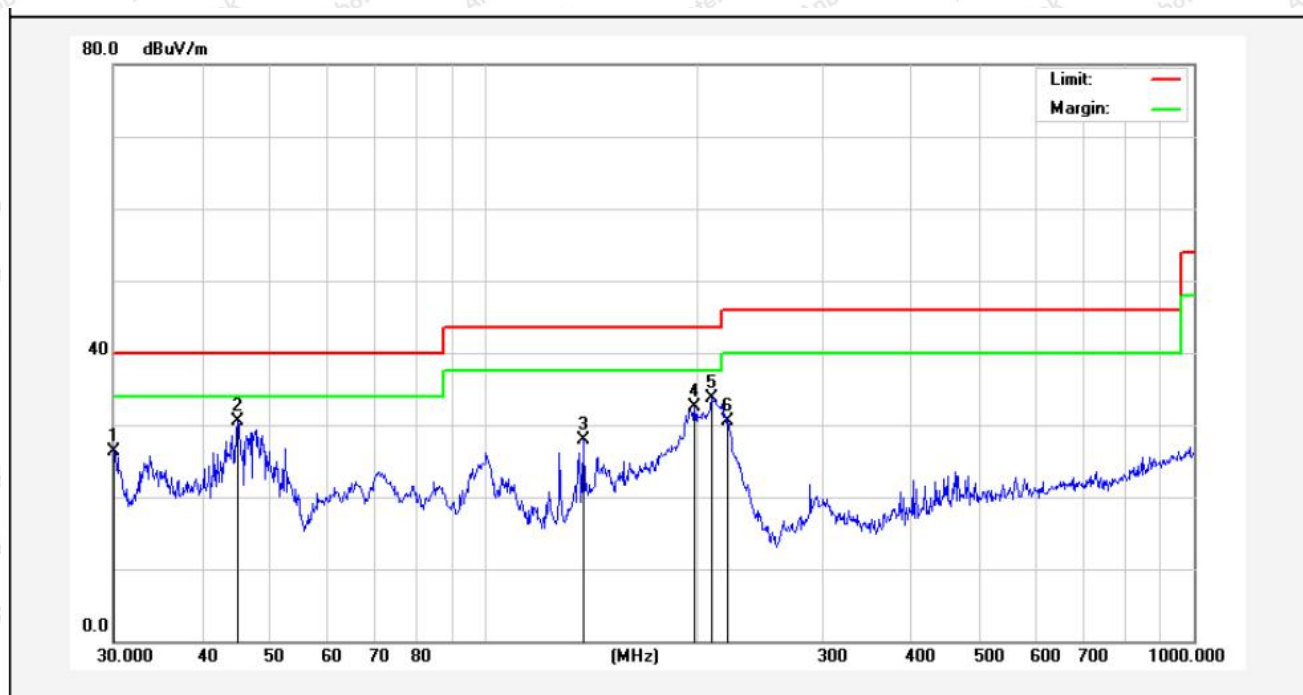


(Between 30MHz –1000 MHz)

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):	23.4℃/50%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	192.4186	48.71	-22.65	26.06	43.50	-17.44	QP			
2	204.2377	43.67	-22.26	21.41	43.50	-22.09	QP			
3	215.2678	41.01	-22.08	18.93	43.50	-24.57	QP			
4	287.9904	45.69	-18.20	27.49	46.00	-18.51	QP			
5	938.8326	32.46	-5.77	26.69	46.00	-19.31	QP			
6	979.1804	31.62	-5.14	26.48	54.00	-27.52	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):****23.4℃/50%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	30.1054	44.32	-17.95	26.37	40.00	-13.63	QP			
2	44.9006	45.46	-15.04	30.42	40.00	-9.58	QP			
3	137.9028	49.90	-22.04	27.86	43.50	-15.64	QP			
4	197.8928	52.18	-19.76	32.42	43.50	-11.08	QP			
5	209.3129	53.09	-19.34	33.75	43.50	-9.75	QP			
6	220.6171	49.40	-18.95	30.45	46.00	-15.55	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.

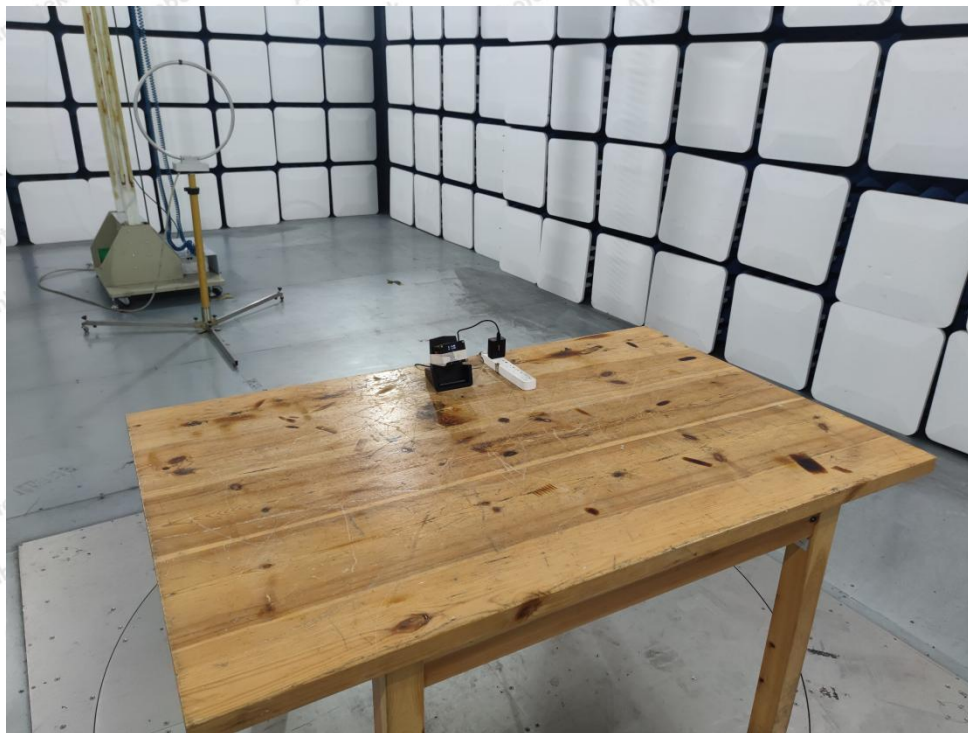
APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Conducted Emission Measurement

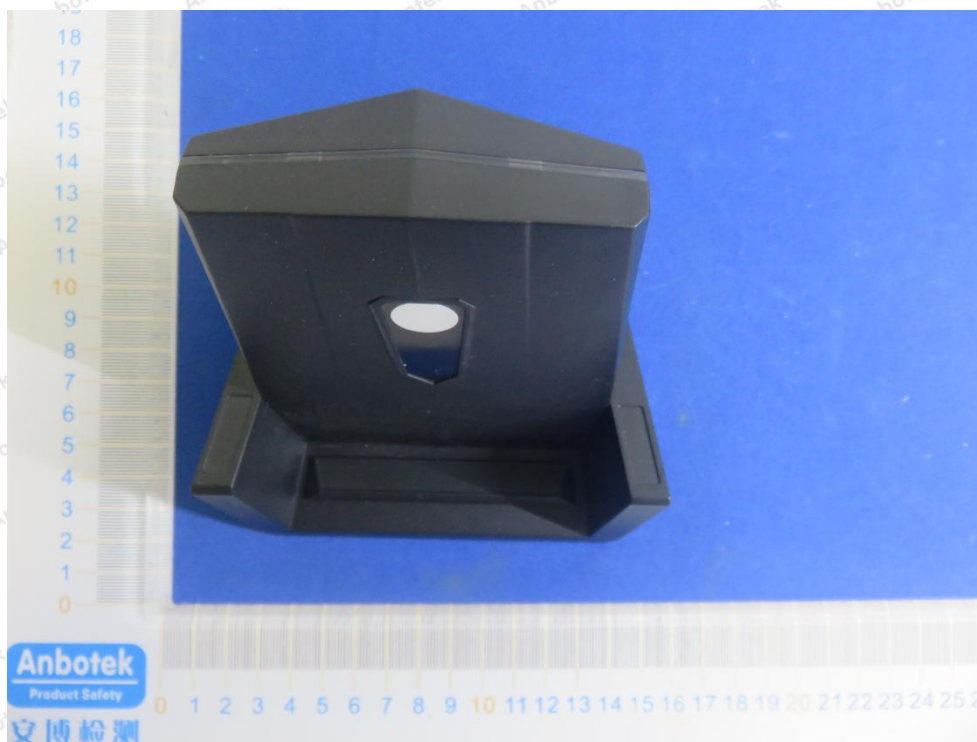


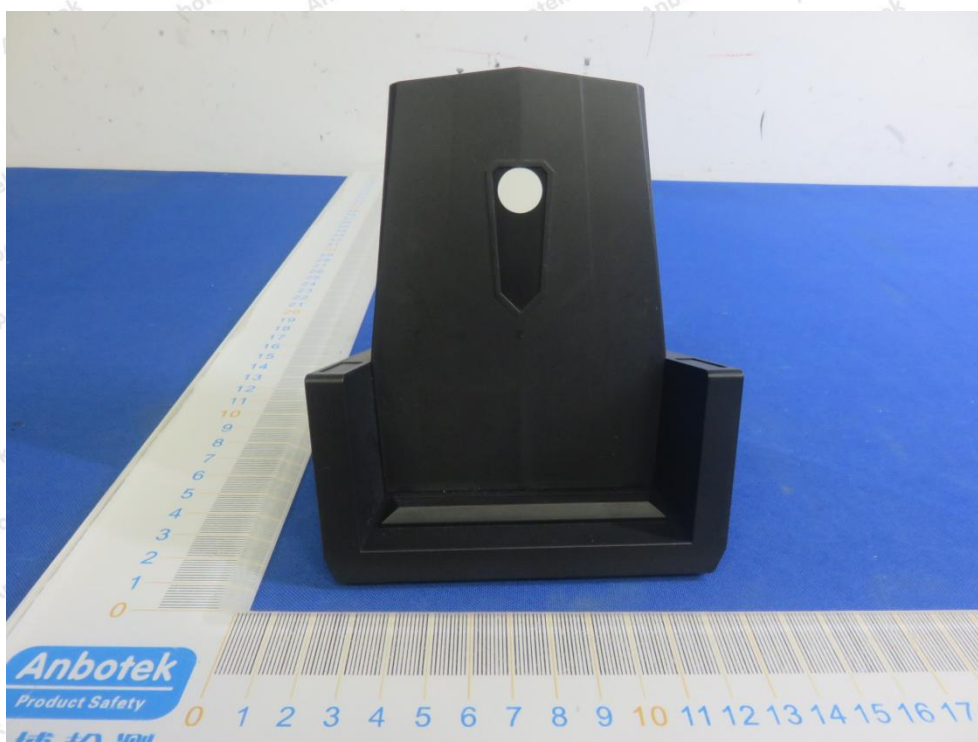
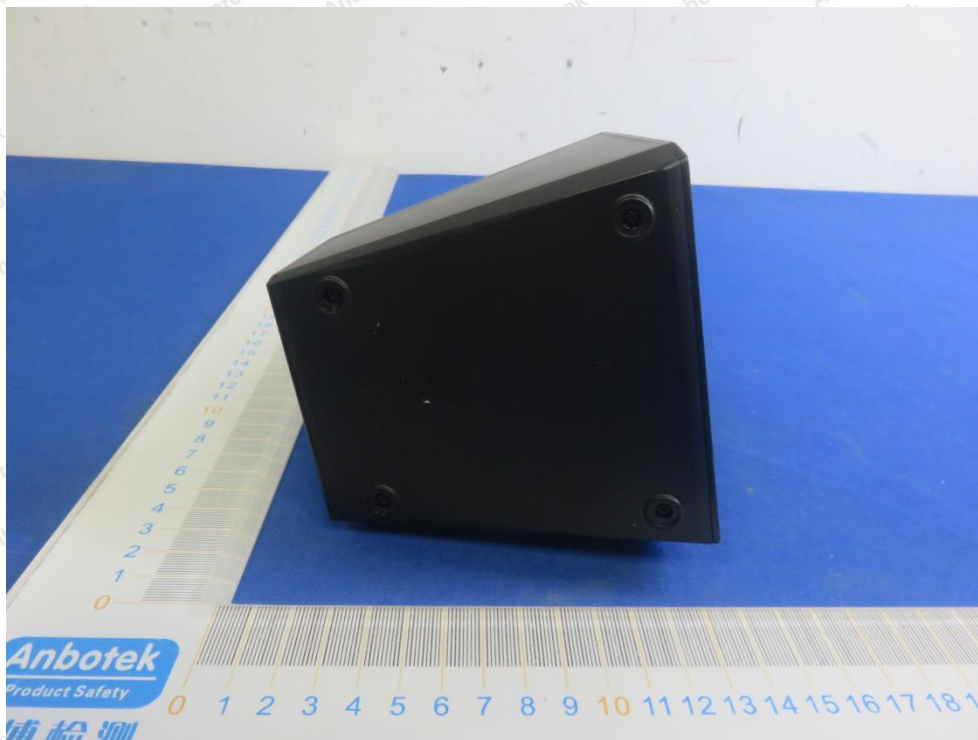
Photo of Radiation Emission Test

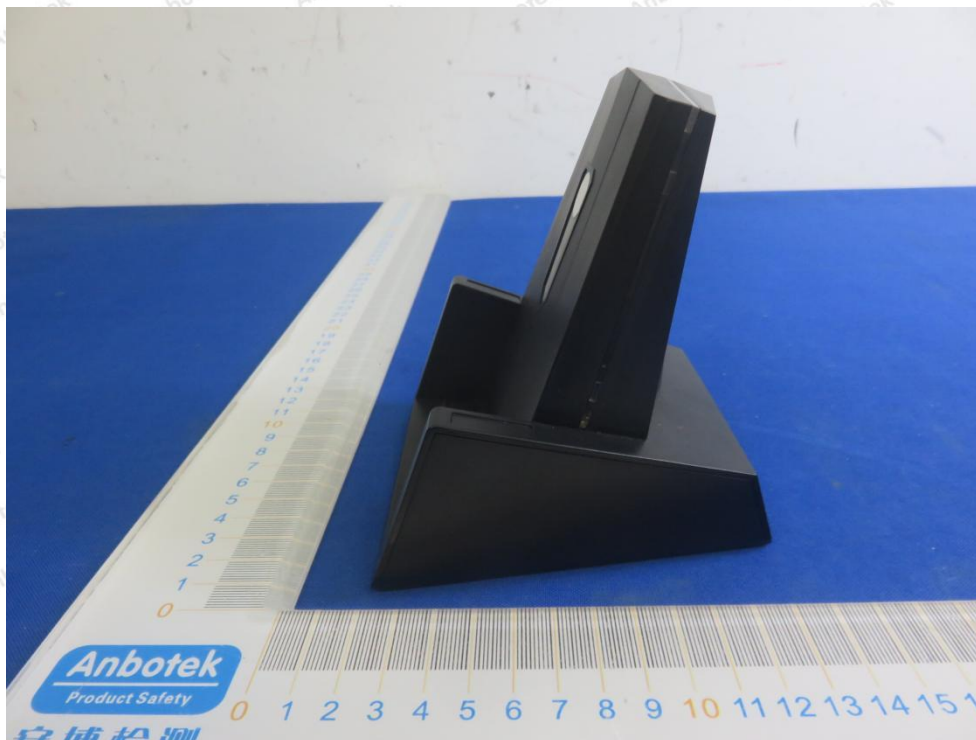


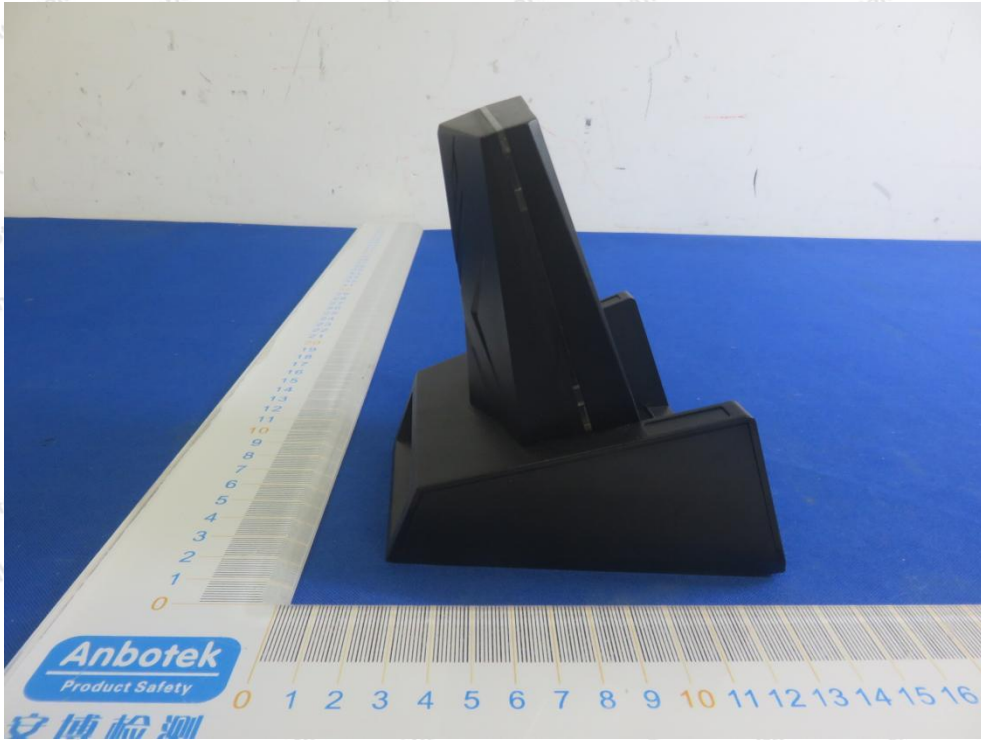


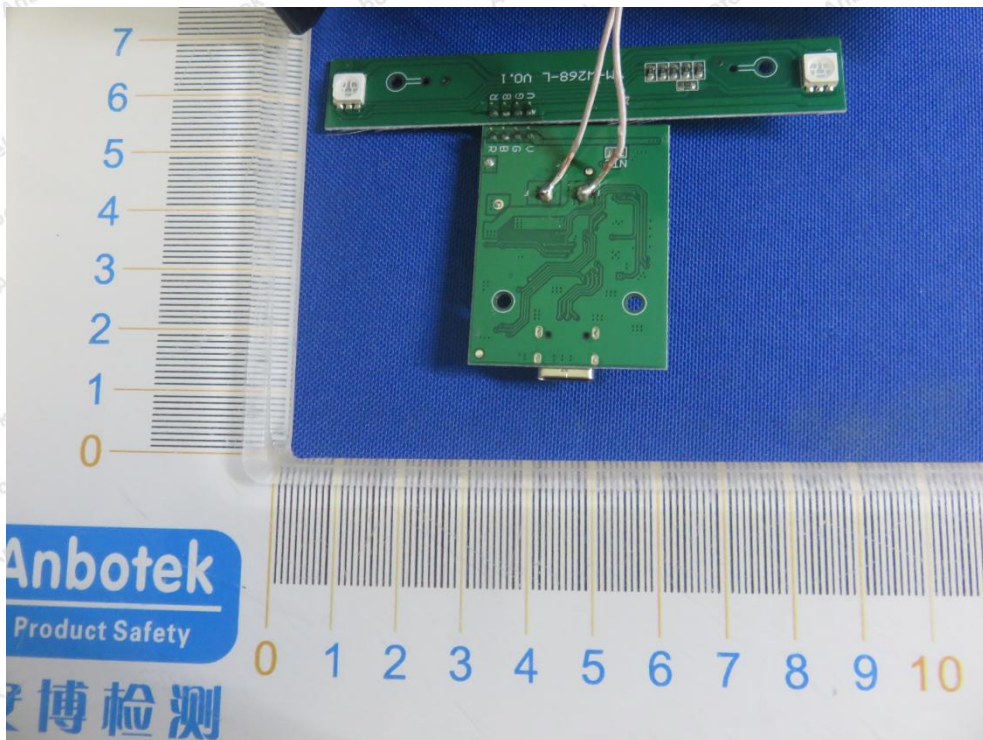
APPENDIX II -- EXTERNAL PHOTOGRAPH

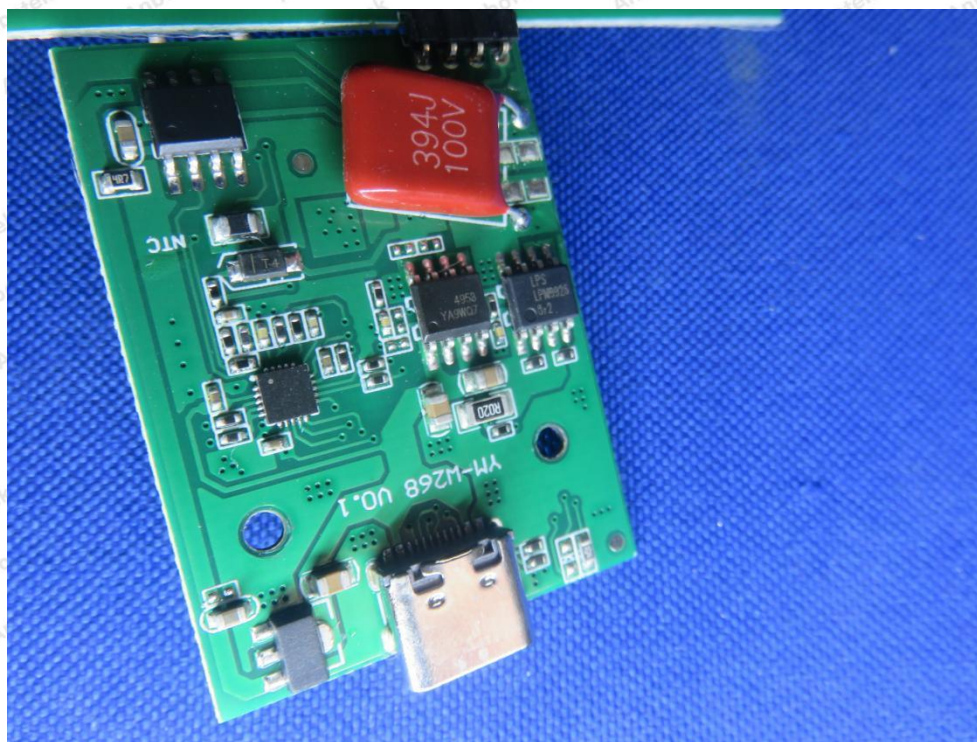
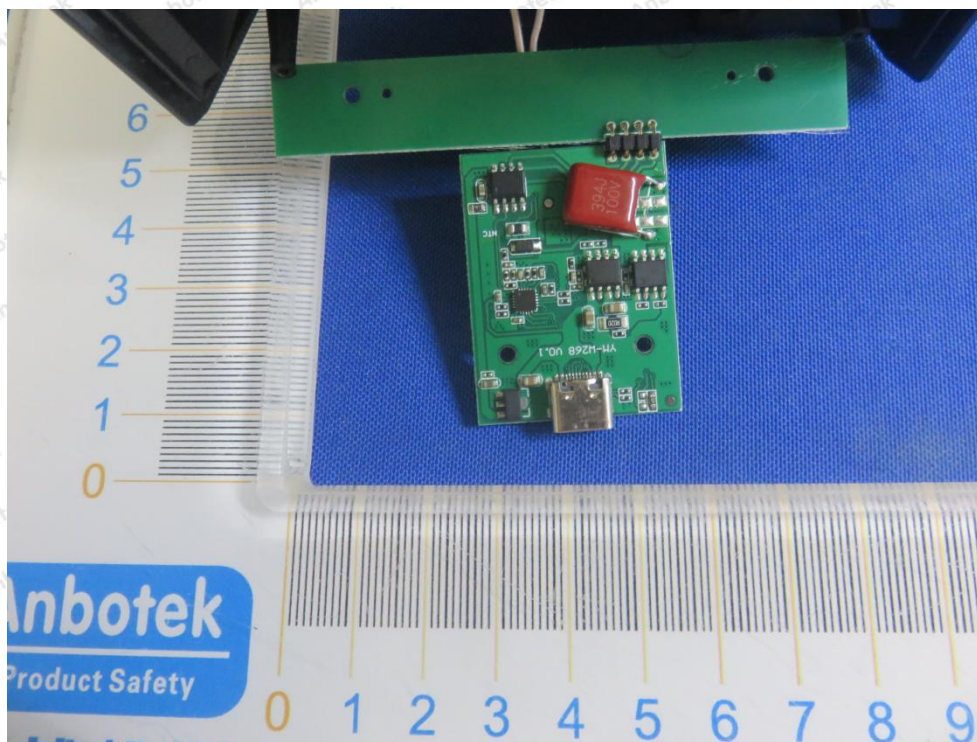


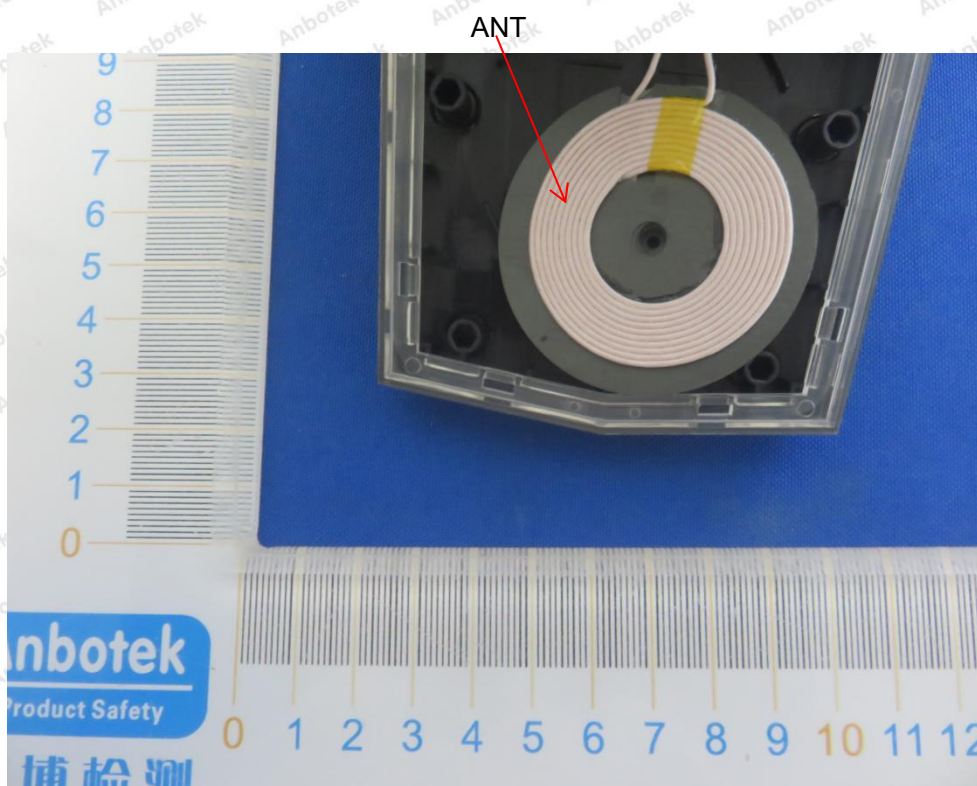






APPENDIX III -- INTERNAL PHOTOGRAPH





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