FCC 47 CFR Part 15 Subpart B

TEST REPORT

For

cat litter box

MODEL NUMBER: SH2804

REPORT NUMBER: E04A24010663F00201

ISSUE DATE: Feb. 2, 2024

Prepared for

Shenghui ElectronicTechnology (Guangdong) Co., Ltd.
Floor 2, Building B, No.50Shengye Road, Shebei Village,Huangjiang Town,Dongguan City,Guangdong Province

Prepared by

Guangdong Global Testing Technology Co., Ltd.

Room 101-105, 203-210, Building 1, No.2, Keji 8 Road, Songshan Lake Park, Dongguan city, Guangdong, People's Republic of China, 523808

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	Feb. 2, 2024	Initial Issue	

Summary of Test Results

Emission			
Standard	**Test Item**	**Limit**	**Result**
FCC 47 CFR Part 15 Subpart B	Conducted emissions	FCC Part 15.107	Pass
	Radiated emissions below 1GHz	FCC Part 15.109	Pass

*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
*The measurement result for the sample received is <Pass> according to <FCC 47 CFR Part 15 Subpart B> when <Accuracy Method> decision rule is applied.

CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Shenghui ElectronicTechnology (Guangdong) Co., Ltd.
Address:	Floor 2, Building B, No.50Shengye Road, Shebei Village,Huangjiang Town,Dongguan City,Guangdong Province

Manufacturer Information

Company Name:	Shenghui ElectronicTechnology (Guangdong) Co., Ltd.
Address:	Floor 2, Building B, No.50Shengye Road, Shebei Village,Huangjiang Town,Dongguan City,Guangdong Province

Factory Information

Company Name:	Shenghui ElectronicTechnology (Guangdong) Co., Ltd.
Address:	Floor 2, Building B, No.50Shengye Road, Shebei Village,Huangjiang Town,Dongguan City,Guangdong Province

EUT Information

Product Description:	cat litter box
Model:	SH2804
Sample Received Date:	Jan. 17, 2024
Sample Status:	Normal
Sample ID:	A24010663 001,A24010663 002,A24010663 006
Date of Tested:	Jan. 17, 2024 to Feb. 1, 2024

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC 47 CFR Part 15 Subpart B	**Pass**

Prepared By:

Jansen Lin

Project Engineer

Checked By:

Alan He

Laboratory Leader

Approved By:

Shawn Wen

Laboratory Manager

2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC 47 CFR Part 15 Subpart B

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 6947.01)** Guangdong Global Testing Technology Co., Ltd. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1343)** Guangdong Global Testing Technology Co., Ltd. has been recognized to perform compliance testing on equipment subject to Supplier's Declaration of Conformity (SDoC) and Certification rules **ISED (Company No.: 30714)** Guangdong Global Testing Technology Co., Ltd. has been registered and fully described in a report filed with ISED. The Company Number is 30714 and the test lab Conformity Assessment Body Identifier (CABID) is CN0148.

Note: All tests measurement facilities use to collect the measurement data are located at Room 101-105, 203-210, Building 1, No.2, Keji 8 Road, Songshan Lake Park, Dongguan city, Guangdong, People's Republic of China, 523808

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Measurement Frequency Range	K	U(dB)
Conducted emissions	0.009 MHz - 30 MHz	2	3.37
Radiated emissions below 1GHz	30 MHz -1 GHz	2	3.79
Note1: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.			

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name		cat litter box
Model		SH2804
EUT Classification		Class B
Ratings		cat litter box: Input:DC 5V Adapter: Input:100-240V~ 50/60Hz Output:DC 5V/1A
Power Supply	AC	120V/60Hz

5.2. TEST MODE

Test Mode	Description
M01	Operating(Maximum speed)+Adapter(A24010663 002)
M02	Operating(Maximum speed)+Adapter(A24010663 006)

5.3. SUPPORT UNITS FOR SYSTEM TEST

The EUT has been tested as an independent unit

6. MEASURING EQUIPMENT AND SOFTWARE USED

Test Equipment of Conducted emissions					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Shielding Room 1	CHENG YU	8*5*4	N/A	2022/10/29	2025/10/28
LISN	R&S	ENV216	102843	2023/9/18	2024/9/17
EMI Test Receiver	R&S	ESR3	102647	2023/9/18	2024/9/17
LISN	Schwarzbeck	NNLK 8129 RC	5046	2023/9/18	2024/9/17
8-Wire ISN CAT6	Schwarzbeck	NTFM 8158	#237	2023/9/18	2024/9/17
CURRENT PROBE	R&S	EZ-17	101602	2023/9/18	2024/9/17
EZ-EMC	Farad	Ver/EMC-con-3A1 1+	N/A	N/A	N/A

Test Equipment of Radiated emissions below 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Chamber	ETS	9*6*6	Q2146	2022/8/30	2025/8/29
Receiver	R&S	ESCI3	101409	2023/9/18	2024/9/17
Loop Antenna	ETS	6502	243668	2022/3/30	2025/3/30
Pre-Amplifier	HzEMC	HPA-9K0130	HYPA21001	2023/9/18	2024/9/17
Biconilog Antenna	Schwarzbeck	VULB 9168	1315	2022/10/10	2025/10/9
Biconilog Antenna	ETS	3142E	243646	2022/3/23	2025/3/22
EZ-EMC	Farad	Ver/FA-03A2 RE+	N/A	N/A	N/A

7. EMISSION TEST

7.1. CONDUCTED EMISSIONS

LIMITS

CFR 47 FCC Part15 Subpart B				
FREQUENCY (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46*
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

TEST PROCEDURE

1. The testing follows the guidelines in ANSI C63.4-2014.

2. The EUT was placed on the top of a rotating table 0.8 meters above the horizontal ground plane and being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

3. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

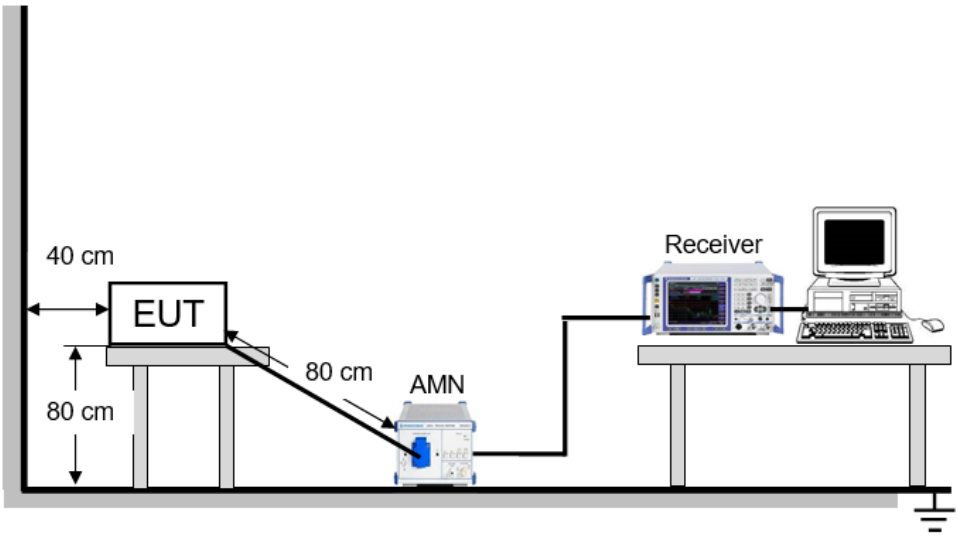
4. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

5. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.

6. LISN at least 80 cm from nearest part of EUT chassis.

7. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

TEST SETUP



TEST ENVIRONMENT

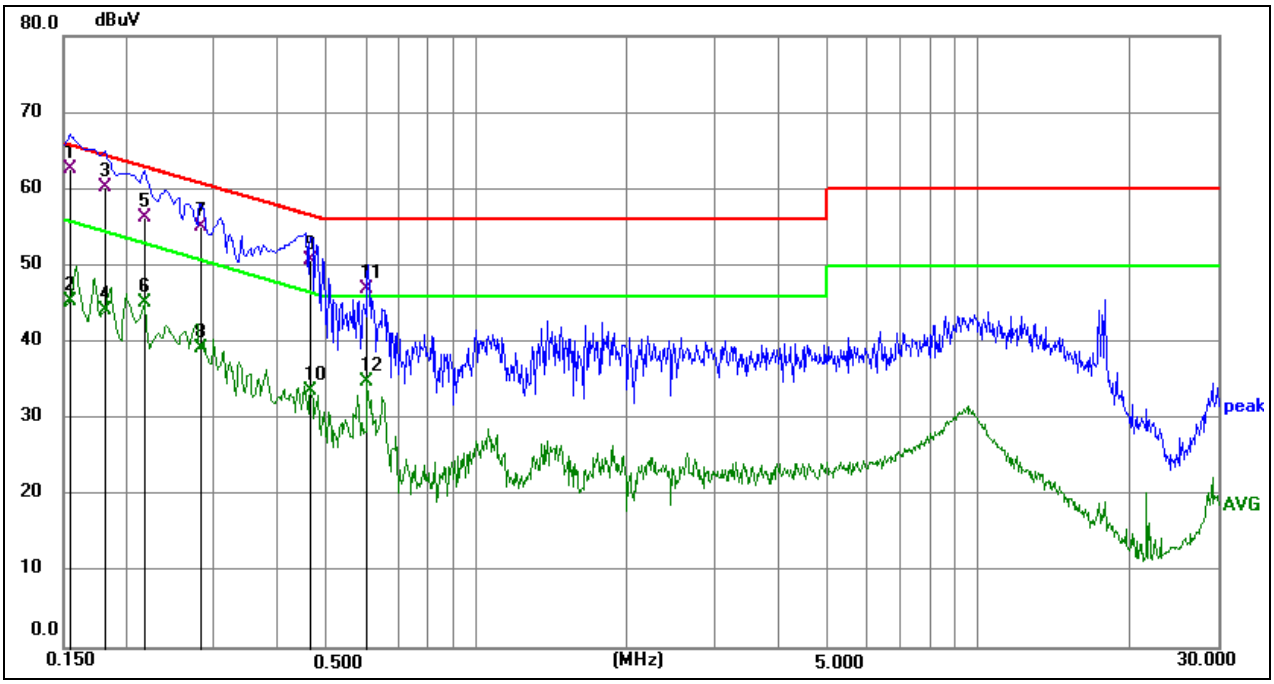
Temperature	20.2℃	Relative Humidity	50%
Atmosphere Pressure	101.5kPa		

TEST MODE

Pre-test Mode:	M01 ~ M02
Final Test Mode:	M01, M02

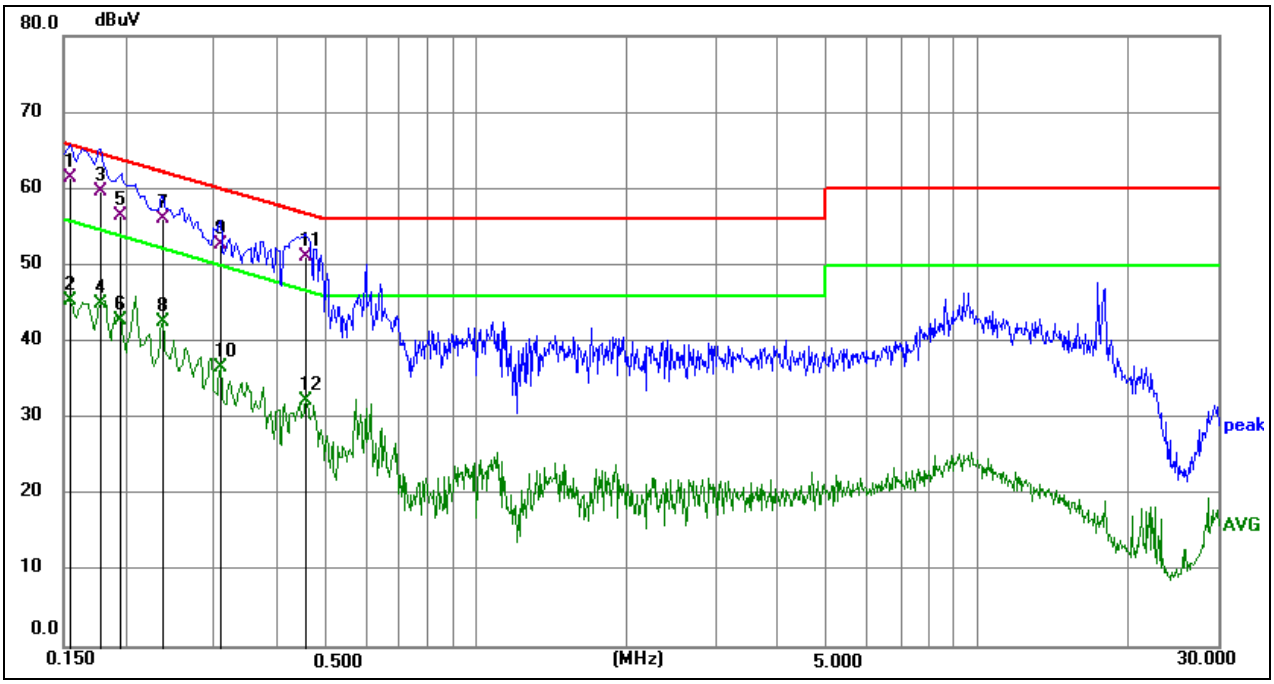
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



Phase: N	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1545	52.71	9.99	62.70	65.75	-3.05	QP
2	0.1545	35.46	9.99	45.45	55.75	-10.30	AVG
3	0.1815	50.36	9.94	60.30	64.42	-4.12	QP
4	0.1815	34.23	9.94	44.17	54.42	-10.25	AVG
5	0.2175	46.37	9.93	56.30	62.91	-6.61	QP
6	0.2175	35.23	9.93	45.16	52.91	-7.75	AVG
7	0.2805	45.20	9.89	55.09	60.80	-5.71	QP
8	0.2805	29.23	9.89	39.12	50.80	-11.68	AVG
9	0.4650	40.71	9.97	50.68	56.60	-5.92	QP
10	0.4650	23.69	9.97	33.66	46.60	-12.94	AVG
11	0.6045	37.00	10.00	47.00	56.00	-9.00	QP
12	0.6045	24.80	10.00	34.80	46.00	-11.20	AVG



Phase: L1	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1545	51.60	9.90	61.50	65.75	-4.25	QP
2	0.1545	35.55	9.90	45.45	55.75	-10.30	AVG
3	0.1770	49.68	9.92	59.60	64.63	-5.03	QP
4	0.1770	35.11	9.92	45.03	54.63	-9.60	AVG
5	0.1949	46.56	9.94	56.50	63.83	-7.33	QP
6	0.1949	32.79	9.94	42.73	53.83	-11.10	AVG
7	0.2355	46.16	9.84	56.00	62.25	-6.25	QP
8	0.2355	32.78	9.84	42.62	52.25	-9.63	AVG
9	0.3075	42.81	9.87	52.68	60.04	-7.36	QP
10	0.3075	26.79	9.87	36.66	50.04	-13.38	AVG
11	0.4560	41.23	9.83	51.06	56.77	-5.71	QP
12	0.4560	22.52	9.83	32.35	46.77	-14.42	AVG

Remark: Result = Reading +Correct (Insertion Loss + Cable Loss + Attenuator Factor)
Margin = Result - Limit

7.2. RADIATED EMISSIONS BELOW 1GHZ

LIMITS

Below 1 GHz

CFR 47 FCC Part 15 Subpart B		
Frequency (MHz)	Class A	Class B
	Field strength (dBuV/m) (at 3 m)	Field strength (dBuV/m) (at 3 m)
30 - 88	49.5	40
88 - 216	53.9	43.5
216 - 960	56.9	46
Above 960	60	54

Test Frequency Range of Radiated Disturbance Measurement

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5^{th} harmonic of the highest frequency or 40 GHz, whichever is lower

NOTE:

(1) The limit for radiated test was performed according to FCC Part 15, Subpart B;
(2) The tighter limit applies at the band edges;
(3) Emission level (dBuV/m) = 20log Emission level (uV/m),
3m Emission level = 10 m Emission level + 20log(10 m/3 m);

TEST PROCEDURE

Below 1 GHz and above 30 MHz

The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak and QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.4-2014.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp was used

for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

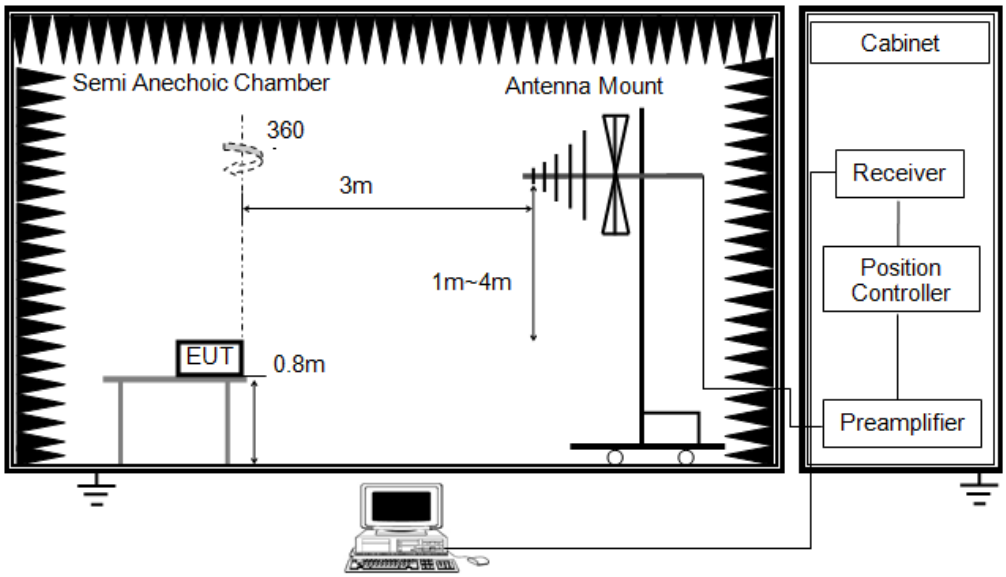
5. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

6. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.

7. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

8. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

TEST SETUP



TEST ENVIRONMENT

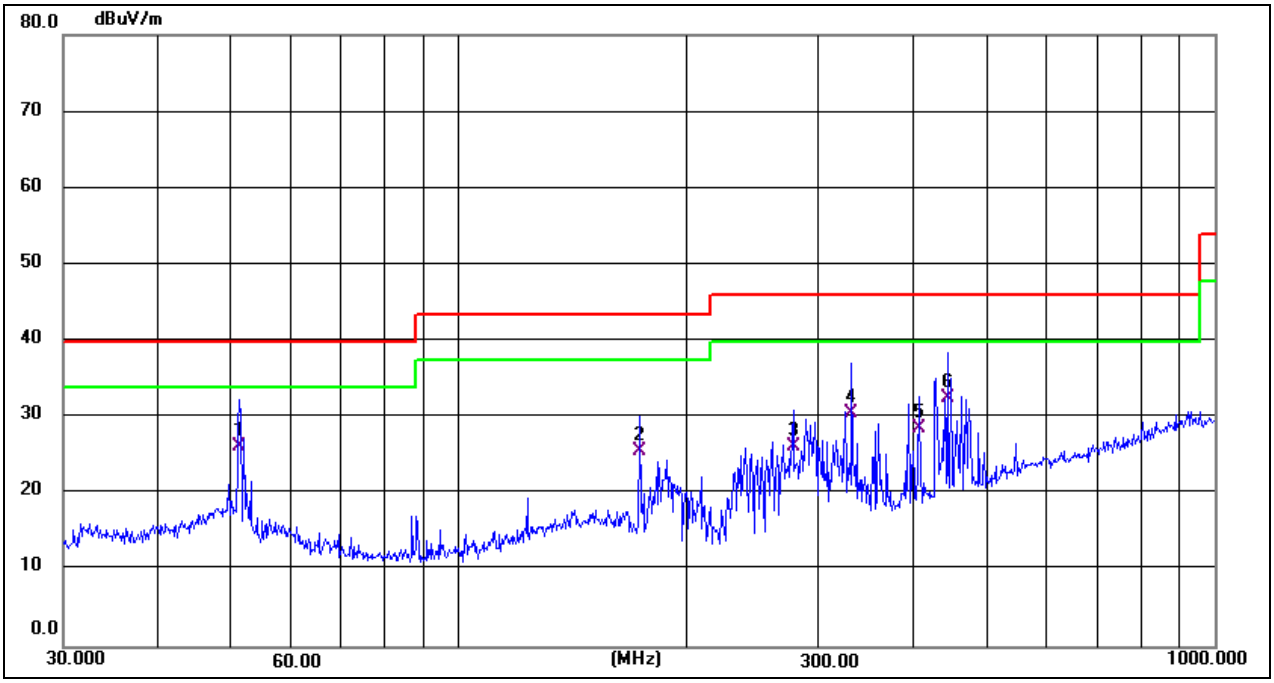
Temperature	24.7℃	Relative Humidity	53%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M02
Final Test Mode:	M01, M02

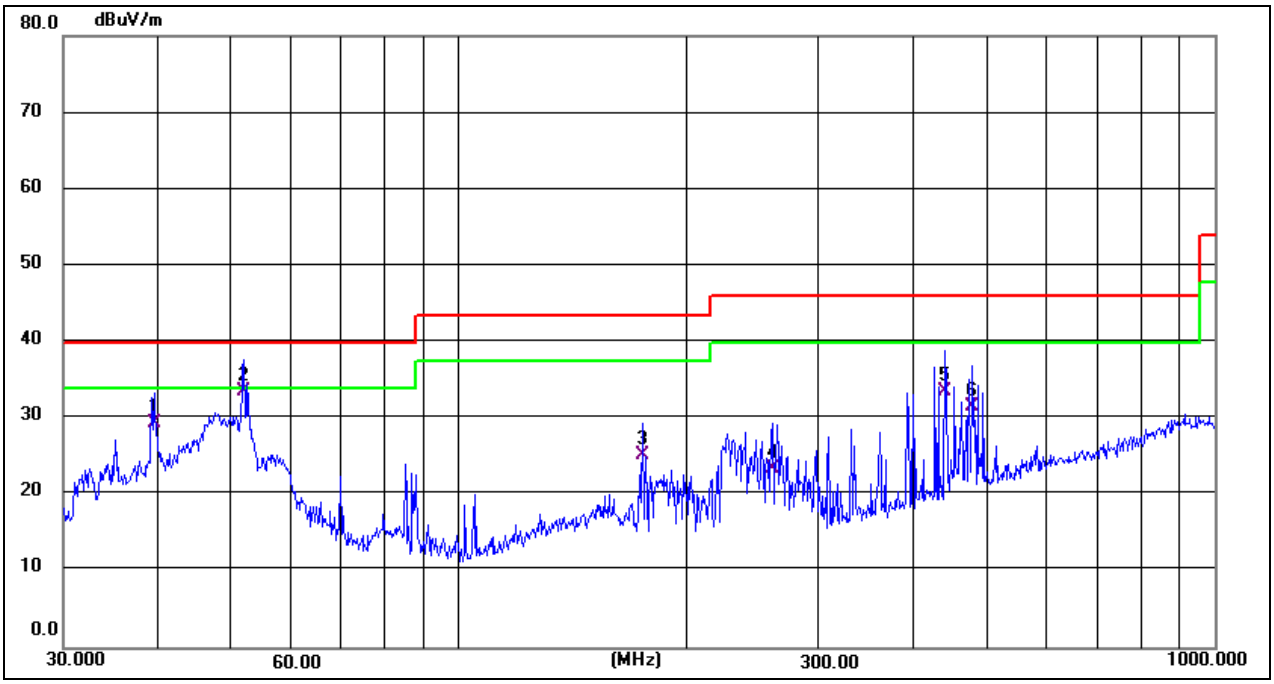
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



Antenna::Horizontal	Mode: M02

No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measure-Ment (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	51.3005	38.53	-12.29	26.24	40.00	-13.76	QP	
2	173.8135	38.93	-13.33	25.60	43.50	-17.90	QP	
3	277.0935	39.50	-13.30	26.20	46.00	-19.80	QP	
4	331.3546	42.32	-11.73	30.59	46.00	-15.41	QP	
5	406.0880	38.37	-9.70	28.67	46.00	-17.33	QP	
6 *	443.2943	41.40	-8.76	32.64	46.00	-13.36	QP	



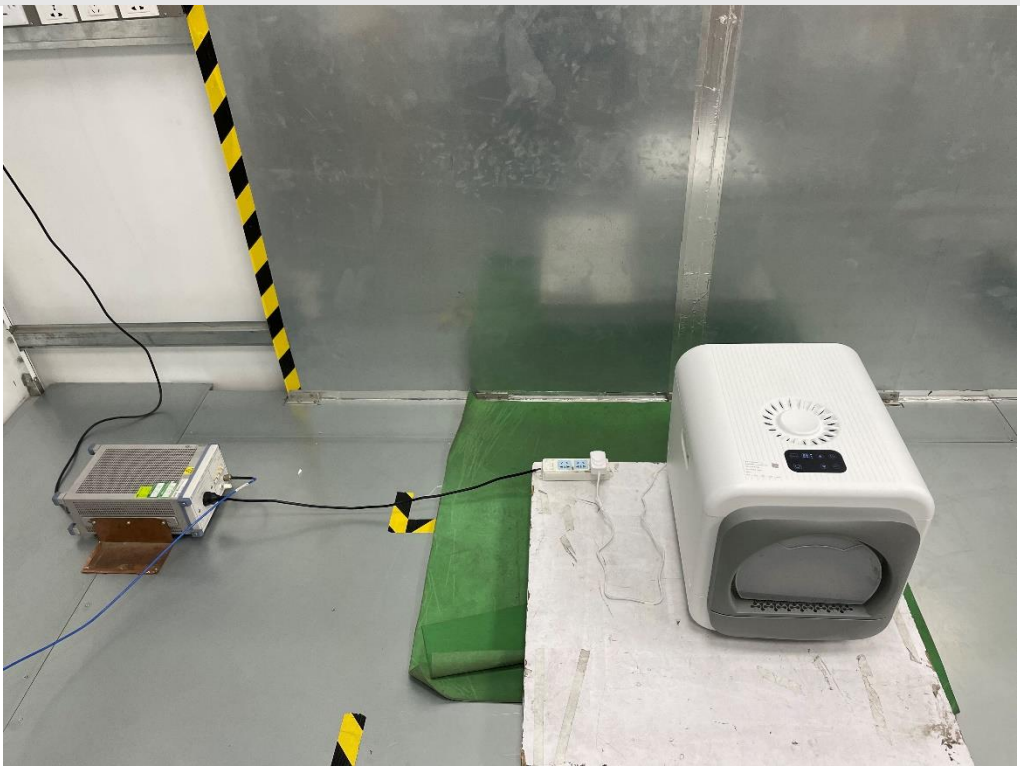
Antenna::Vertical	Mode: M02

No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measure-Ment (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	39.5757	42.61	-13.11	29.50	40.00	-10.50	QP	
2 *	52.0251	46.02	-12.41	33.61	40.00	-6.39	QP	
3	175.0368	38.86	-13.56	25.30	43.50	-18.20	QP	
4	260.1444	37.28	-13.80	23.48	46.00	-22.52	QP	
5	440.1963	42.44	-8.84	33.60	46.00	-12.40	QP	
6	478.8456	39.39	-7.85	31.54	46.00	-14.46	QP	

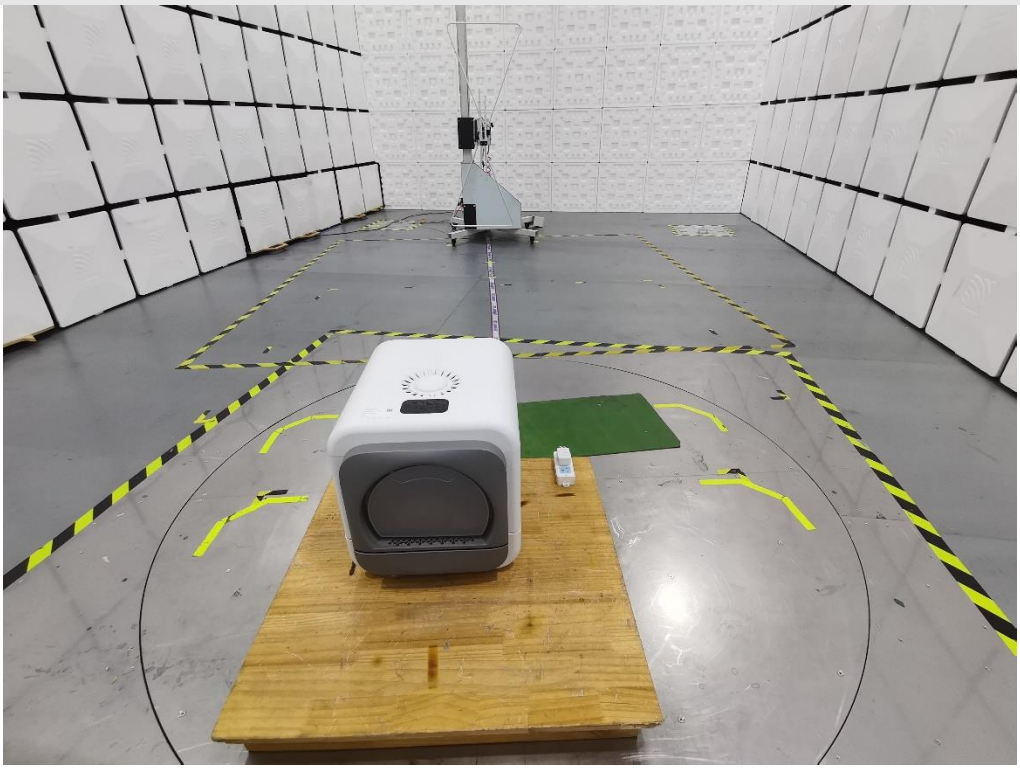
Remark: 1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

APPENDIX: PHOTOGRAPHS OF TEST CONFIGURATION

Conducted emissions

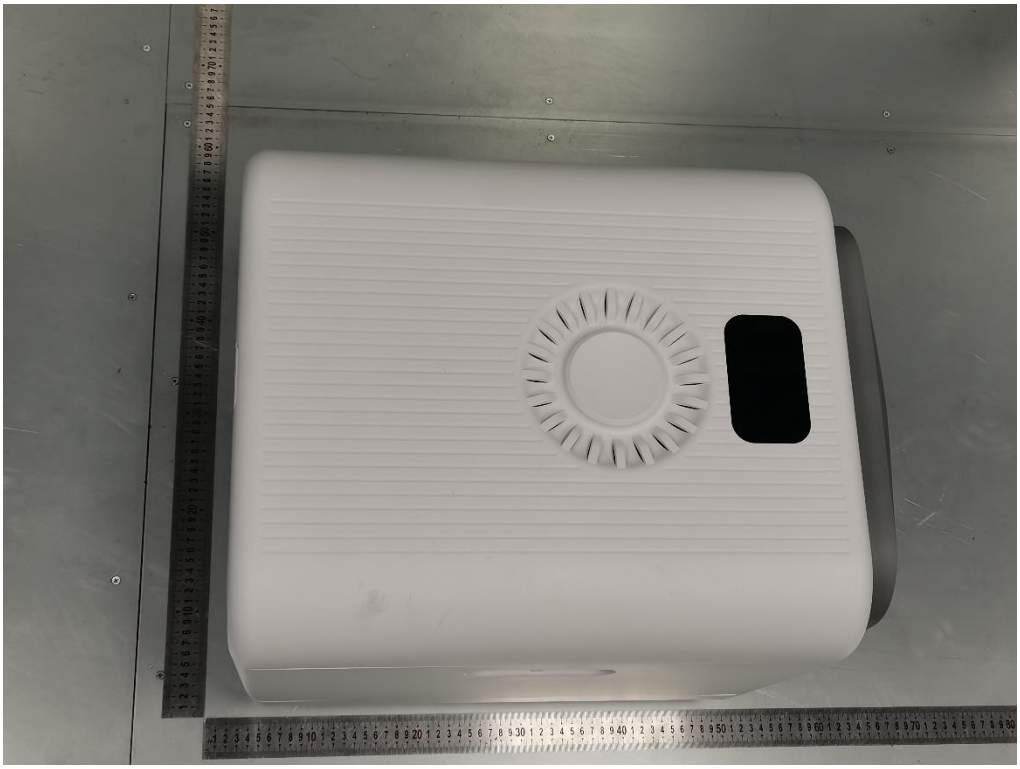


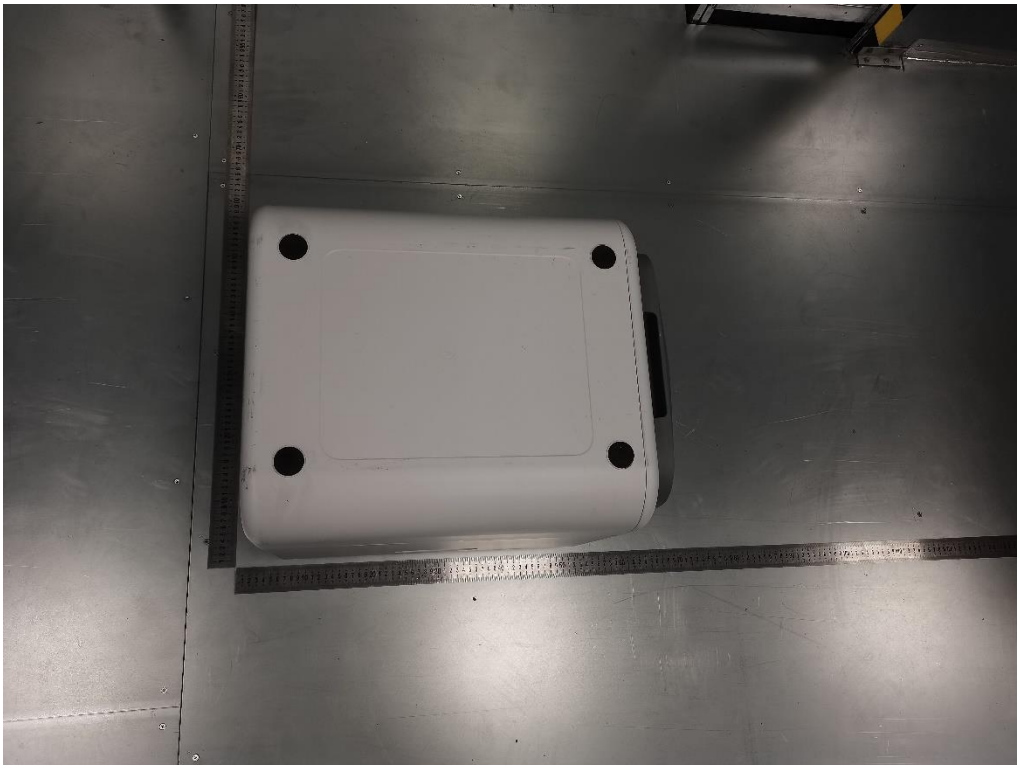
Radiated emissions below 1GHz

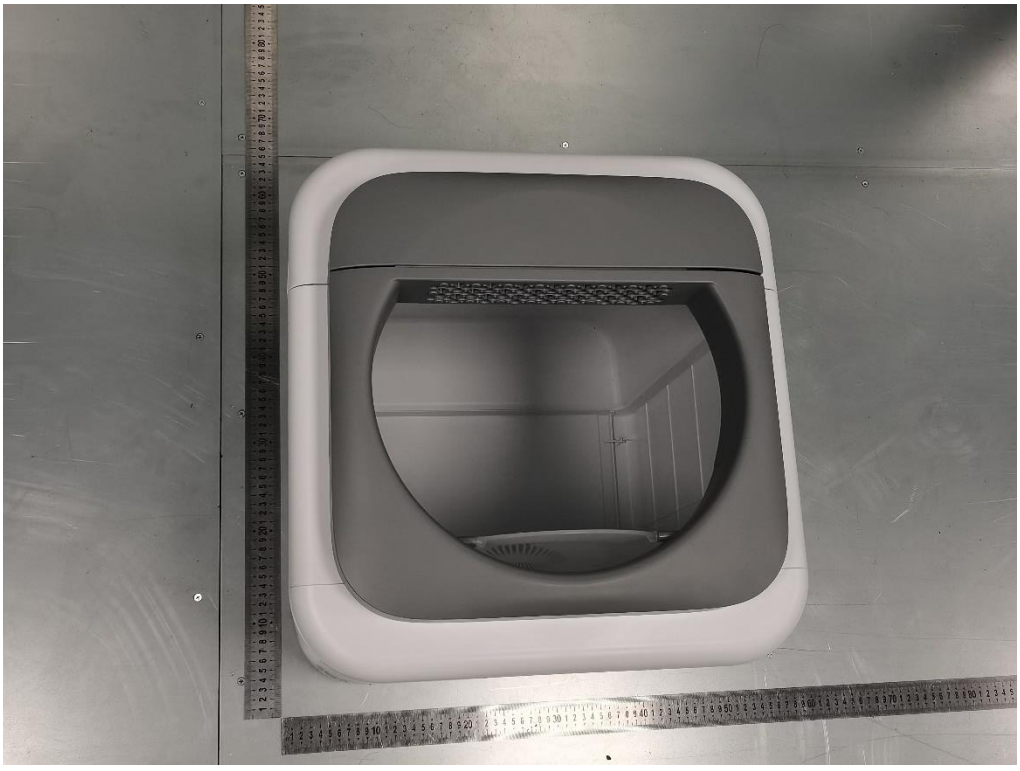


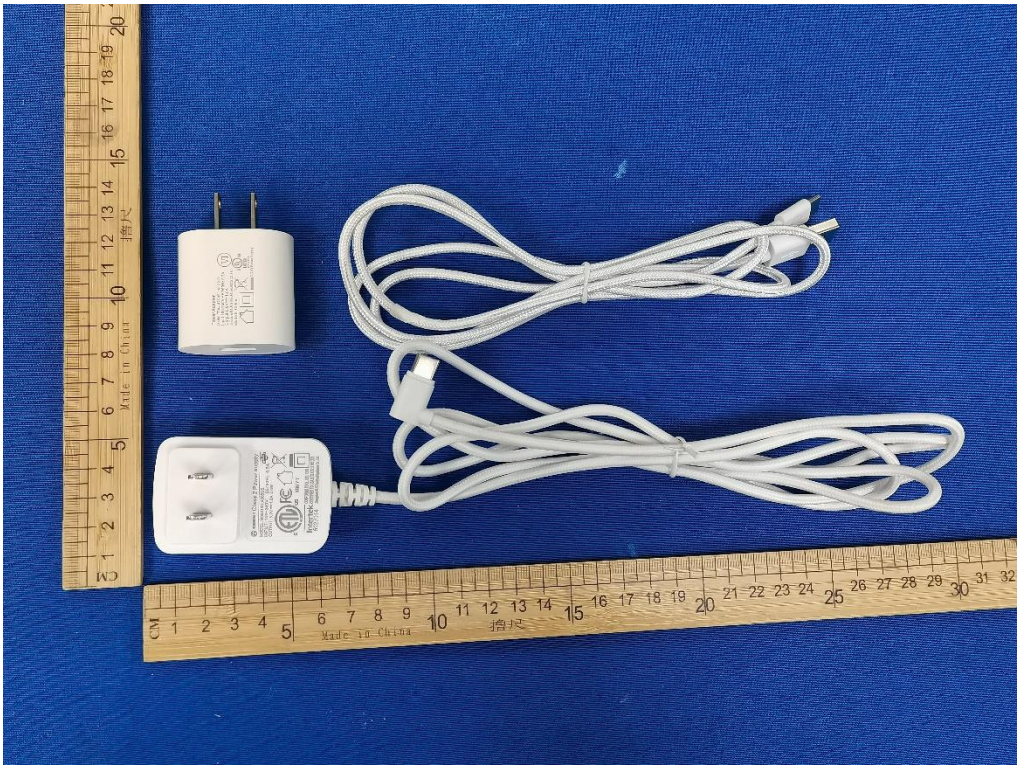
APPENDIX: PHOTOGRAPHS OF THE EUT

External



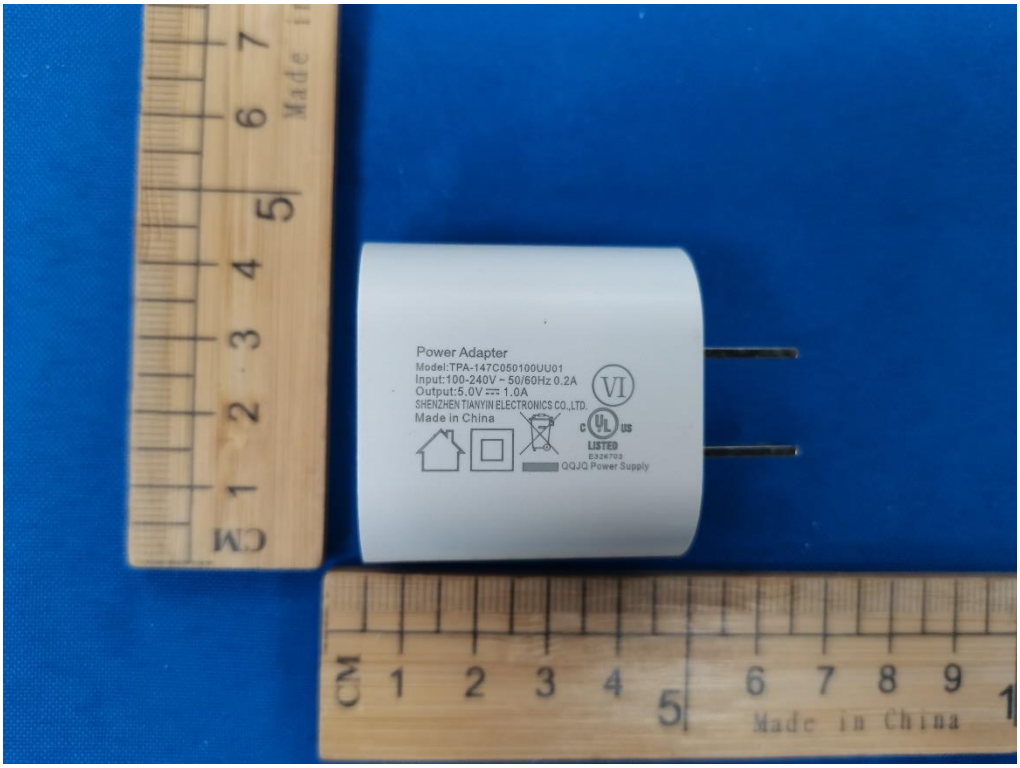


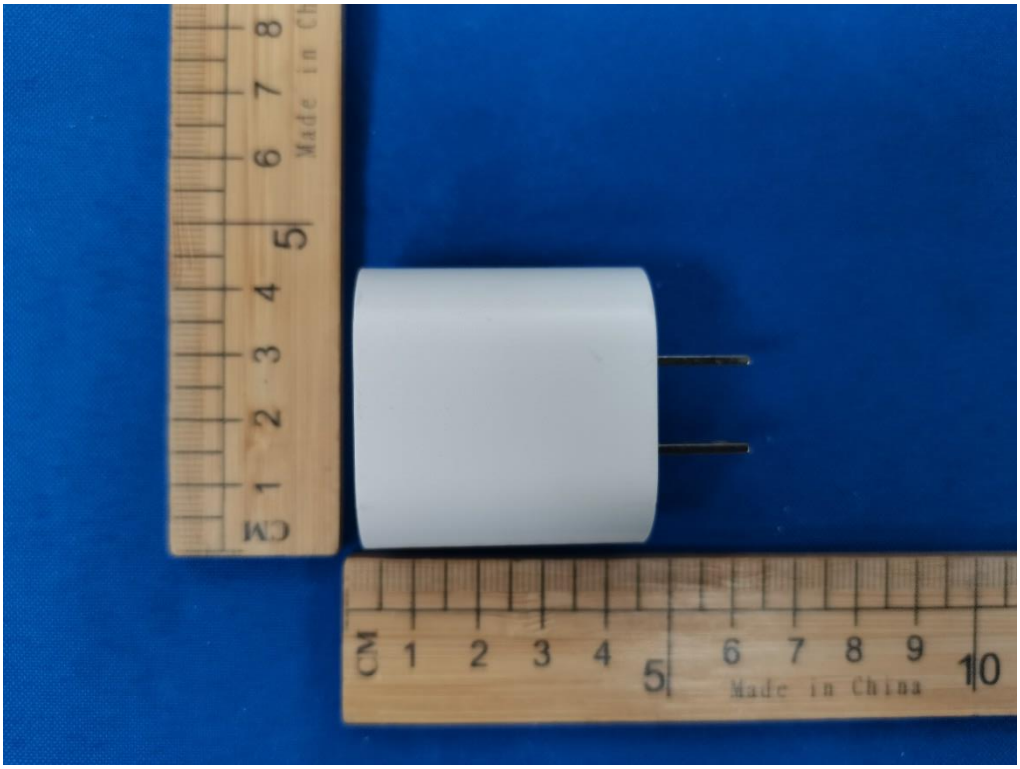




A24010663 002:

A24010663 006:

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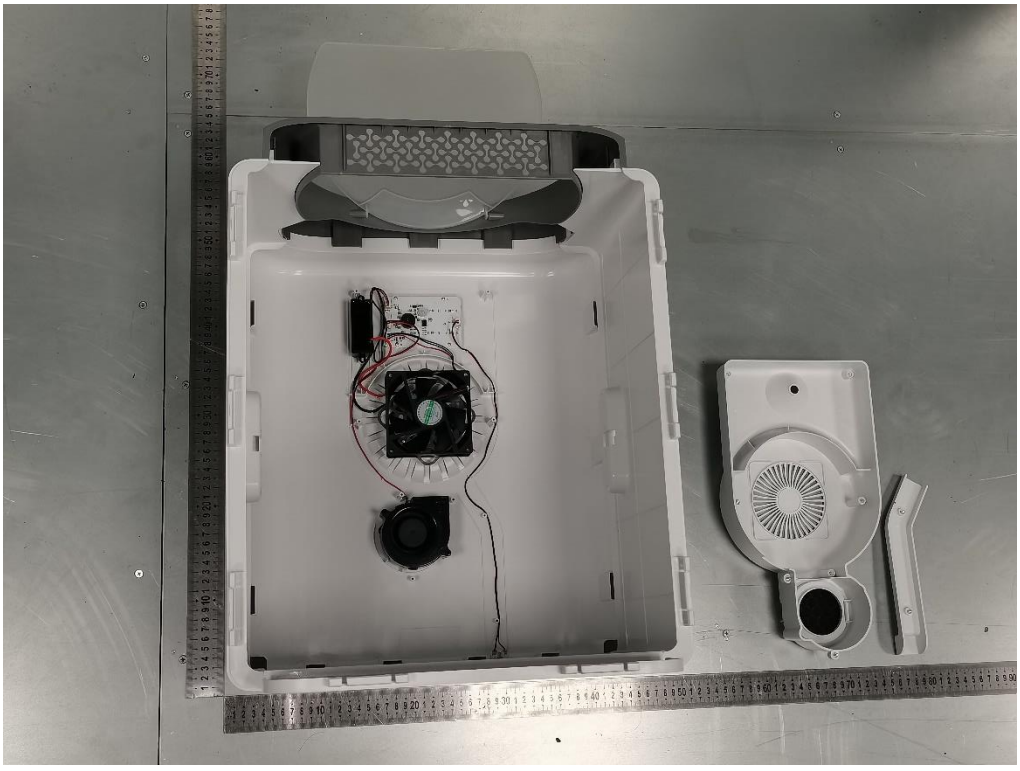
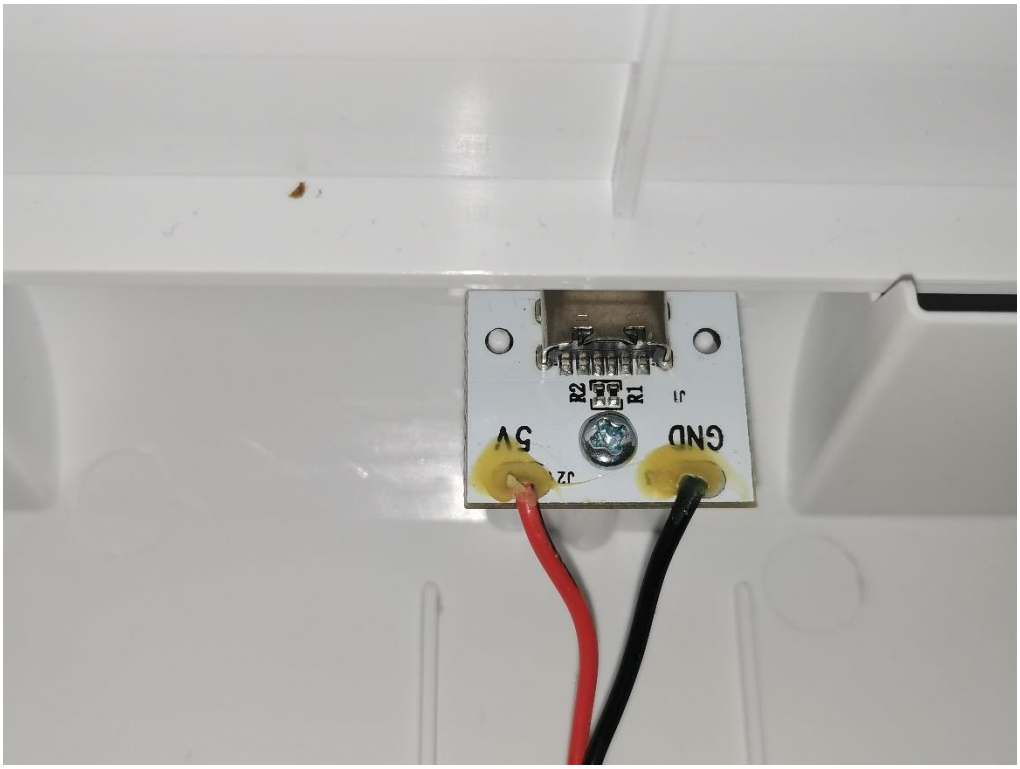
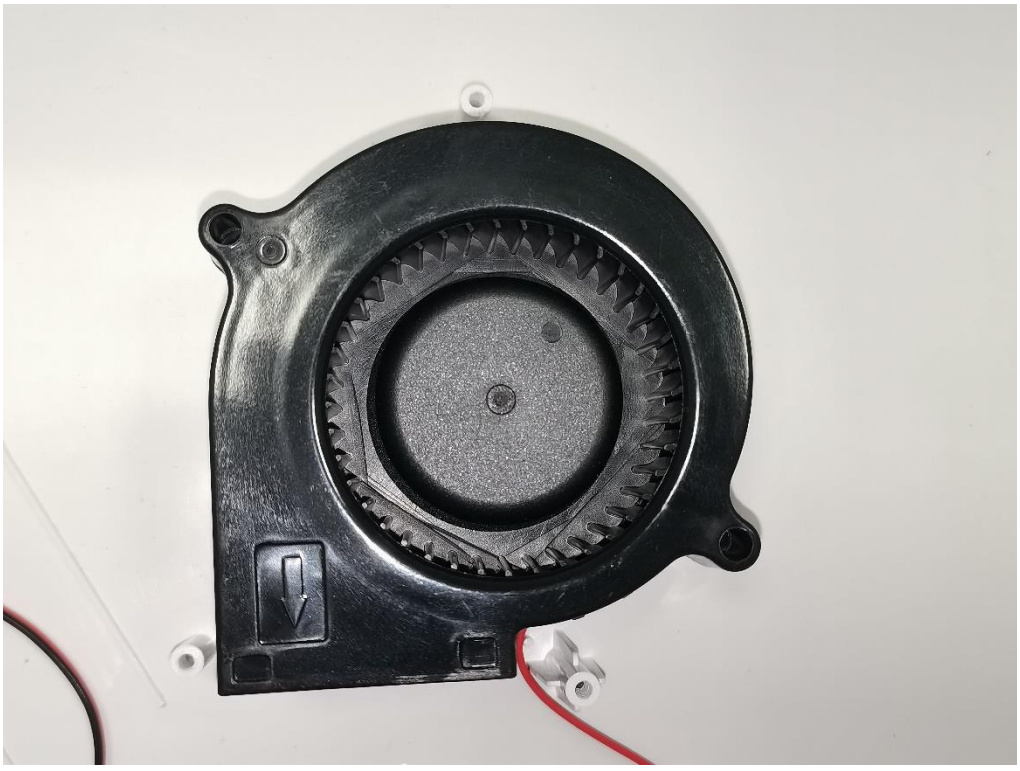
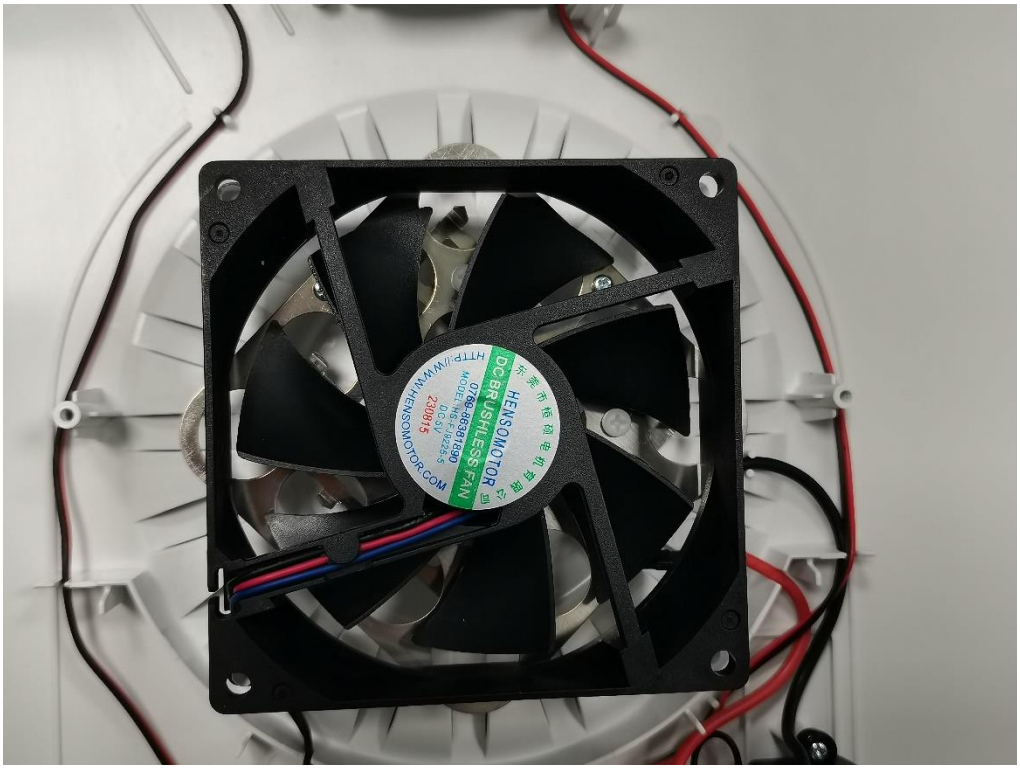
CM
1 2 3 4 5 6 7 8 9 10
Made in China

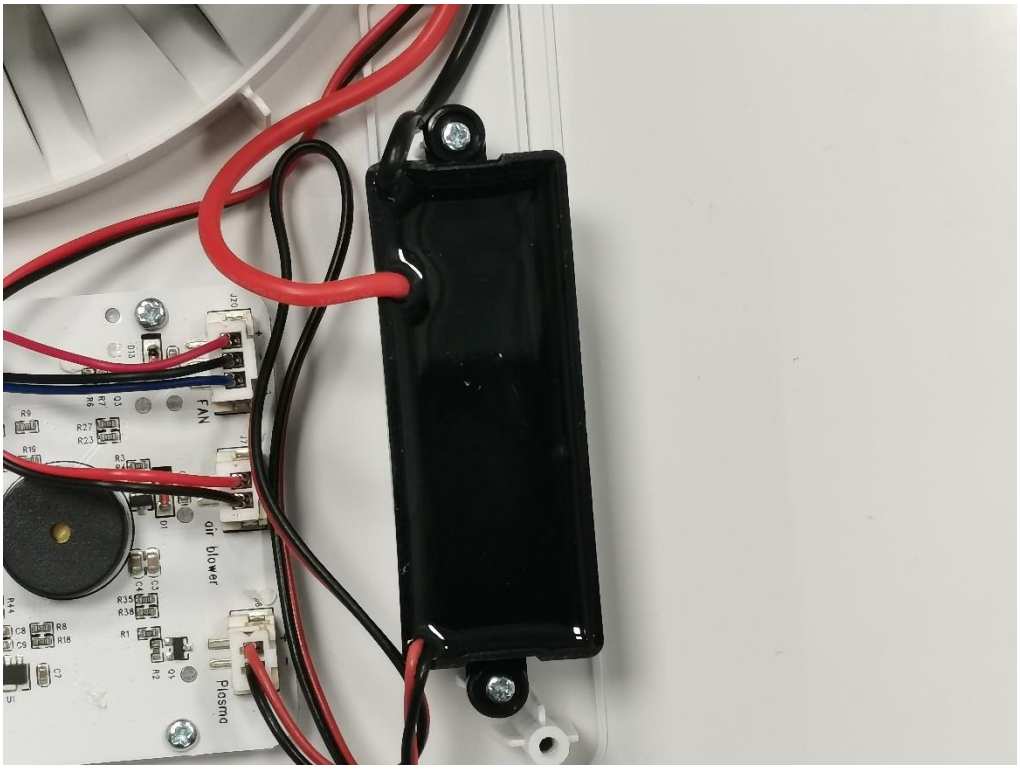
Internal



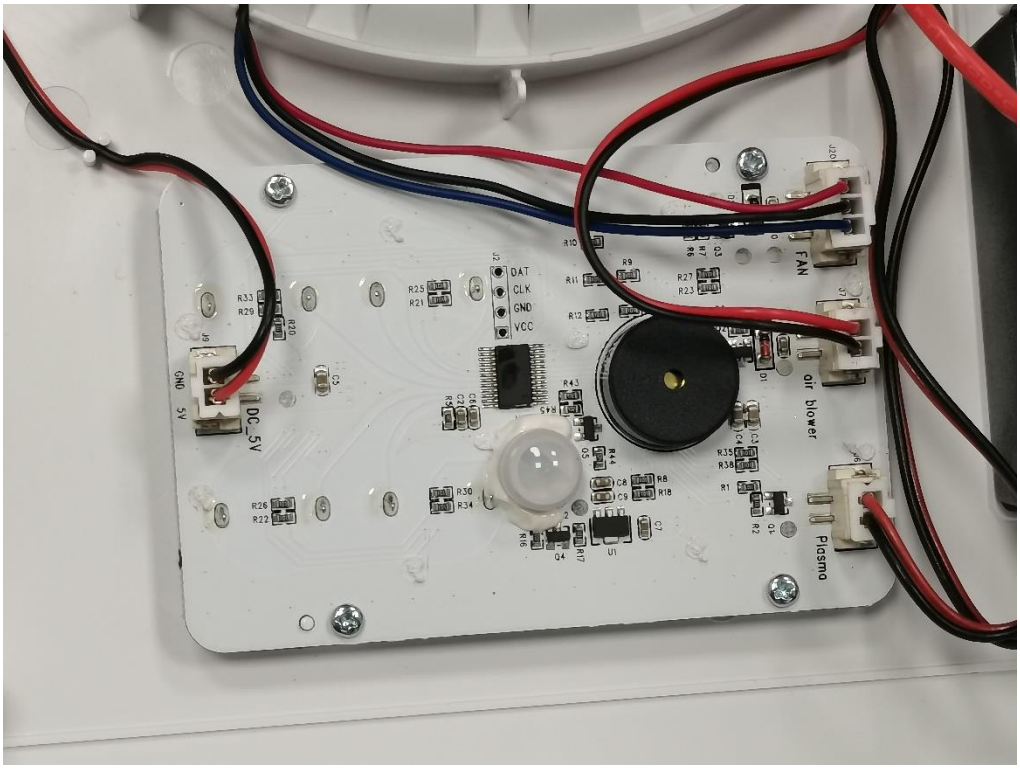

5V
GND
R2
R1
J1




DC BRUSHLESS FAN
HENSOMOTOR
HTTP://WWW.HENSOMOTOR.COM


FAN
air blower
Plasma


Plasma Generator
DC5V<1W
Red"+" Black"-"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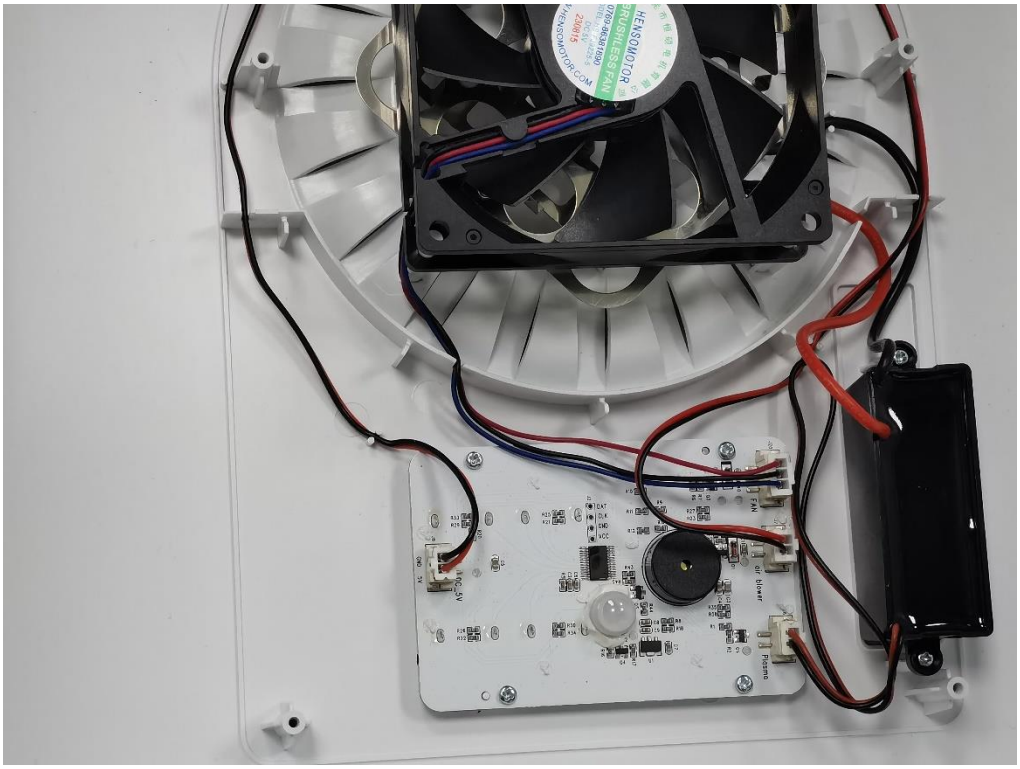
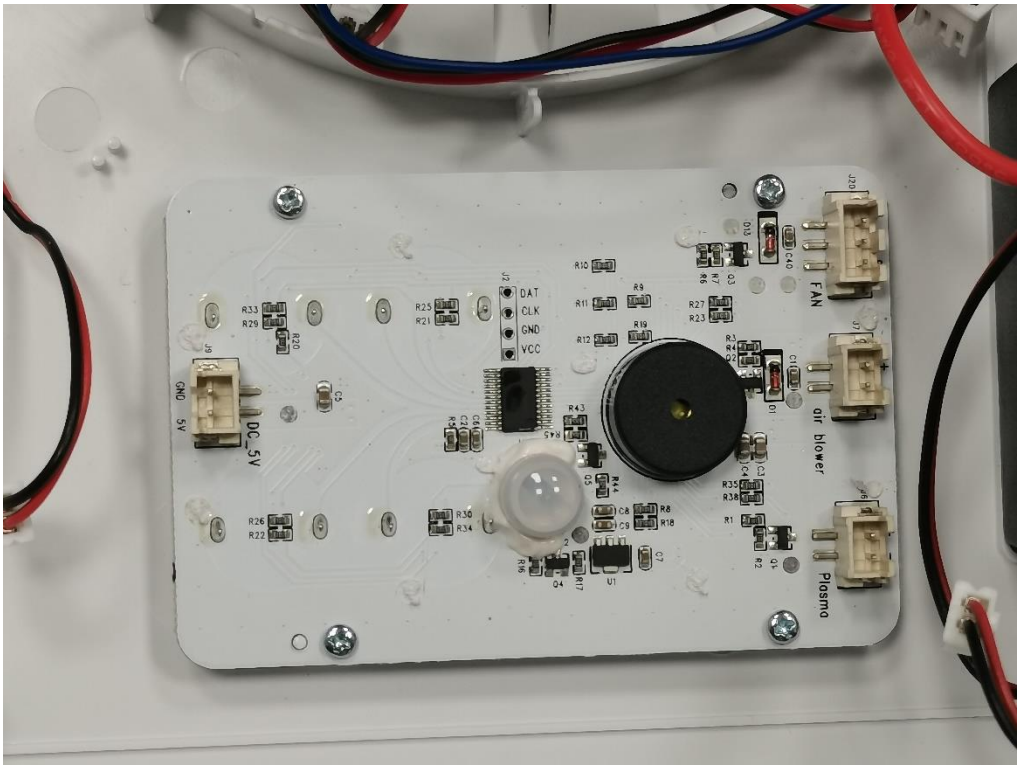
CLK
GND
VCC
FAN
air blower
Plasma
DC_5V
GND
5V


HENGMOTOR
BRUSHLESS FAN
FAN
air blower
Plasma
DC_5V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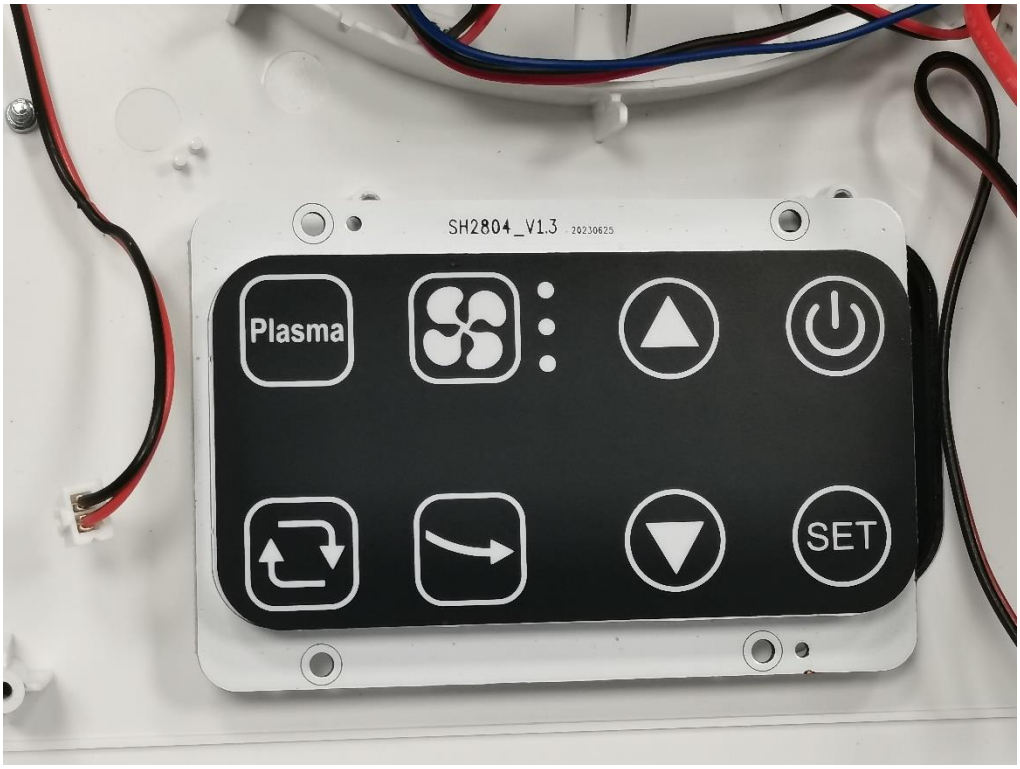
VCC
GND
5V
DC_5V
FAN
air blower
Plasma



END OF REPORT