



TEST REPORT

Applicant	Shenzhen Waweis Technology Co., Ltd.
Address	Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen
Manufacturer	Shenzhen Waweis Technology Co., Ltd.
Address	Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen
Product Name:	White Noise Machine
Trade Mark:	N/A
Model Number:	WA-SA-01 WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05
Prepared By:	Shenzhen DL Testing Technology Co., Ltd.
Address:	101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Test Date:	Mar. 17, 2021 - Mar. 23, 2021
Date of Report:	Mar. 23, 2021
Report No.:	DL-20210322014R
Test Standard	IEC62321-1: 2013; IEC62321-3-1:2013; IEC62321-4:2013+A1:2017; IEC62321-5:2013; IEC62321-6:2015; IEC62321-7-1:2015 IEC62321-7-2:2017; IEC62321-8:2017
Comment	Based on the performed tests on submitted samples, the results of Pb, Cd, Hg, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by EU RoHS Directive 2011/65/EU and its amendment Directive EU 2015/863.

Prepared (Engineer):

Alisa Song

Approved (Manager):

Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

**1. VERSION**

Version No.	Date	Description
00	Mar. 23, 2021	Original

Tested Item and Limit:

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [for European Council Directive 2011/65/EU and its amendment Directive EU 2015/863]								
Name of Analytes	Detection Limit (mg/kg)				Wet Chemistry	Maximum Allowable Limit (mg/kg)		
	X-ray fluorescence (XRF)							
	Plastic	Metallic / glass / ceramic	Others					
Lead (Pb)	100	200	200	10		1000		
Cadmium (Cd)	50	50	50	10		100		
Mercury (Hg)	100	200	200	10		1000		
Chromium (Cr)	100	200	200	NA		NA		
Chromium VI (Cr VI)	NA	NA	NA	10		1000 / Negative		
Bromine (Br)	200	NA	200	NA		NA		
Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50		Sum 1000		
Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50		Sum 1000		

**List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [for European Council Directive 2011/65/EU and its amendment Directive EU 2015/863]**

Name of Analytes	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)	
	X-ray fluorescence (XRF)			Wet Chemistry		
	Plastic	Metallic / glass / ceramic	Others			
Dibutyl phthalate (DBP) Di-(2-ethyl hexyl) phthalate (DEHP) Benzyl butyl phthalate (BBP) Di-(iso-butyl) phthalate (DIBP)	NA	NA	NA	Each 50	Each 1000	

**Tested Sample/Part Description:**

Test Item(s)	Component Description(s)	Style
1.	White plastic	-
2.	White plastic	-
3.	White plastic	-
4.	Translucent white plastic	-
5.	Silver screw	-
6.	Black screw	-
7.	Black silicone	-
8.	Black sponge	-
9.	Speaker	-
10.	Internal wire	-
11.	Battery	-
12.	Accessories wire	-
13.	Internal wire	-
14.	White plastic socket	-
15.	White plastic socket	-
16.	Green PCB	-
17.	Green PCB	-
18.	White plastic socket	-
19.	White plastic socket	-
20.	Silver metal socket	-
21.	Black socket	-
22.	LED lights	-
23.	IC	-
24.	IC	-
25.	IC	-
26.	Silver Tin	-
27.	Capacitance	-
28.	Resistance	-
29.	LED lights	-
30.	Silicone button	-

**Test Results**

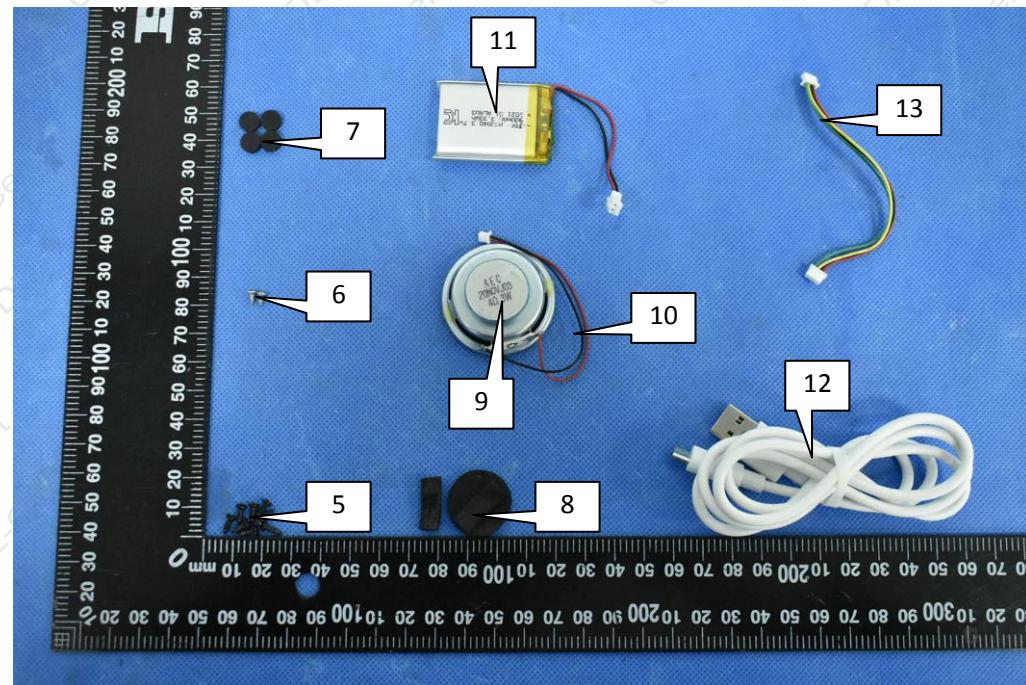
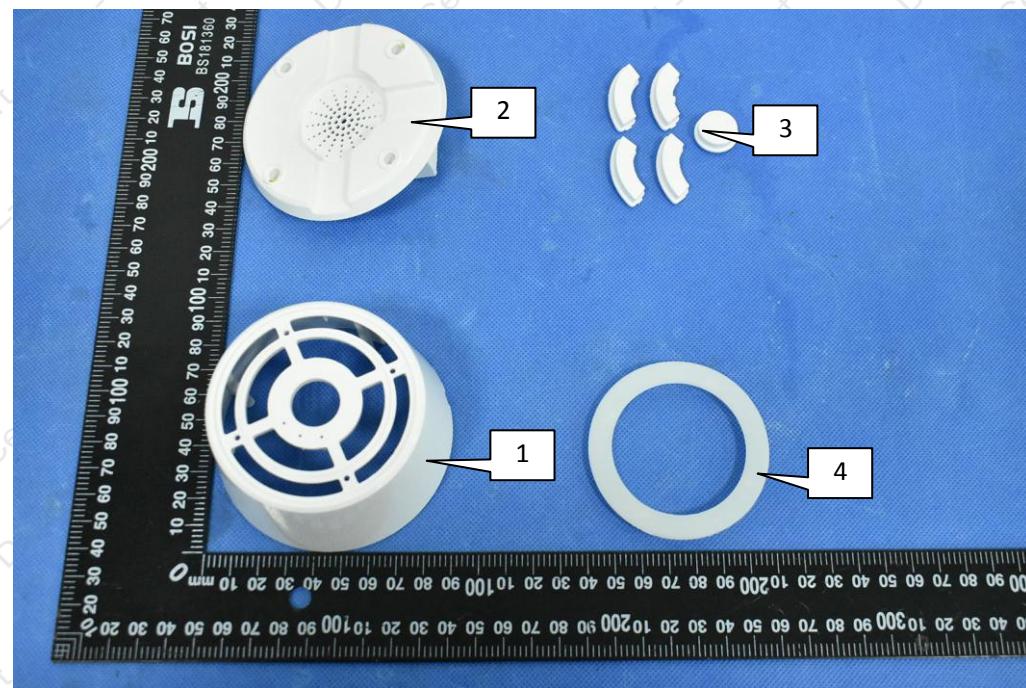
Test Item(s)	Test Partner mg/kg										Conclusion
	Pb	Cd	Hg	Cr VI	PBBs	PBDEs	DBP	DEHP	BBP	DIBP	
1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	—	—	—	—	PASS
6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	—	—	—	—	PASS
7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
9	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
11	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
13	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
15	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
16	N.D.	N.D.	N.D.	N.D.	N.D.	119	N.D.	N.D.	N.D.	N.D.	PASS
17	N.D.	N.D.	N.D.	N.D.	N.D.	118	N.D.	N.D.	N.D.	N.D.	PASS
18	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
19	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
20	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
21	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
22	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
23	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
24	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
25	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS

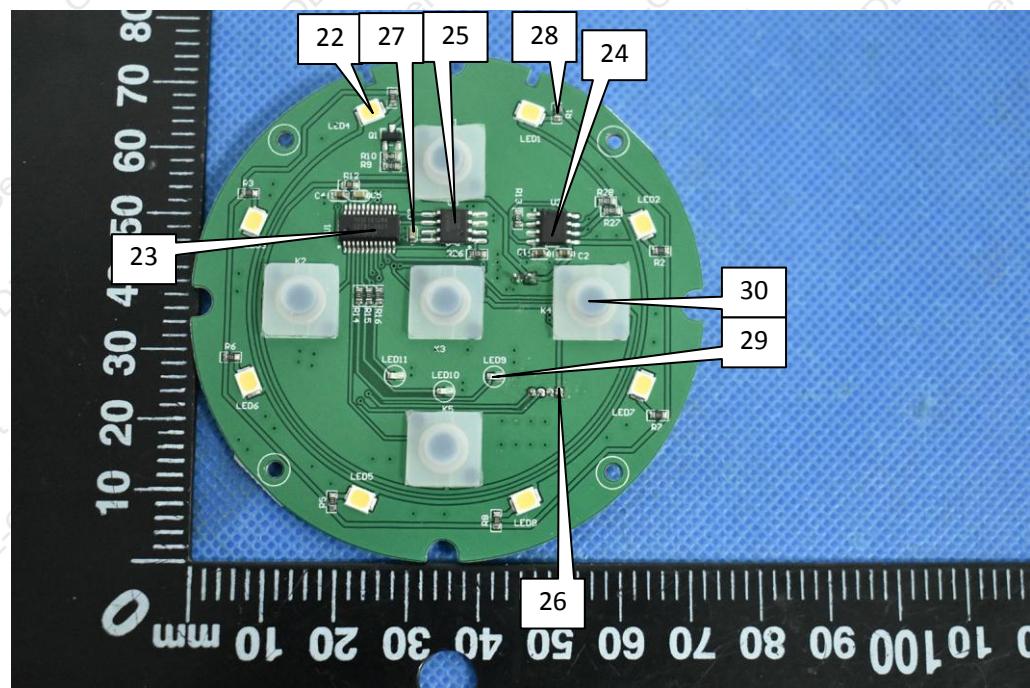
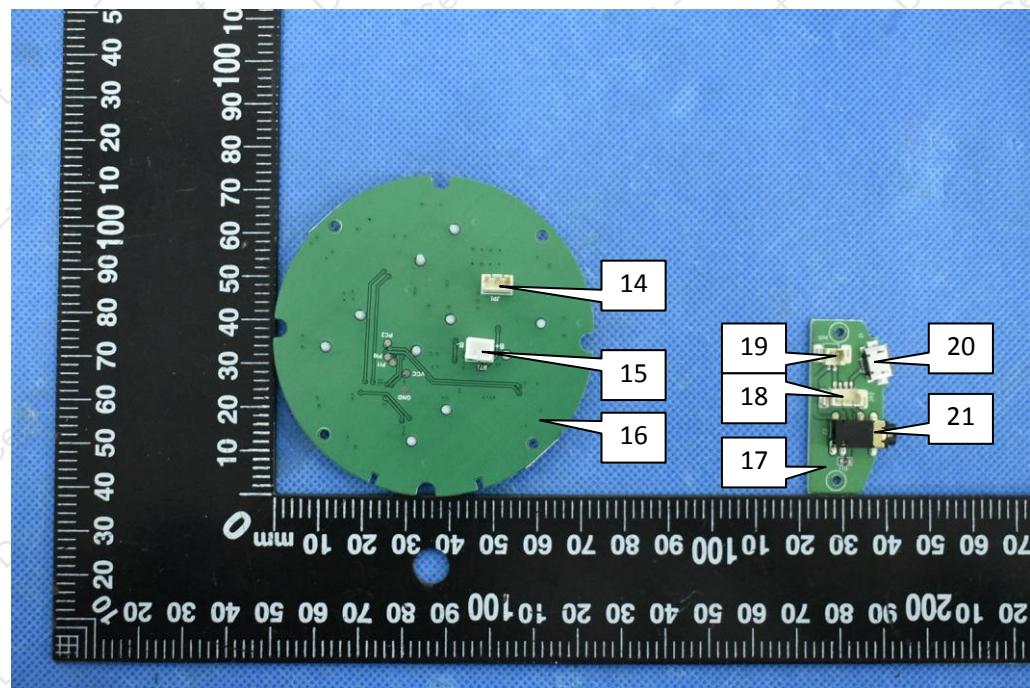


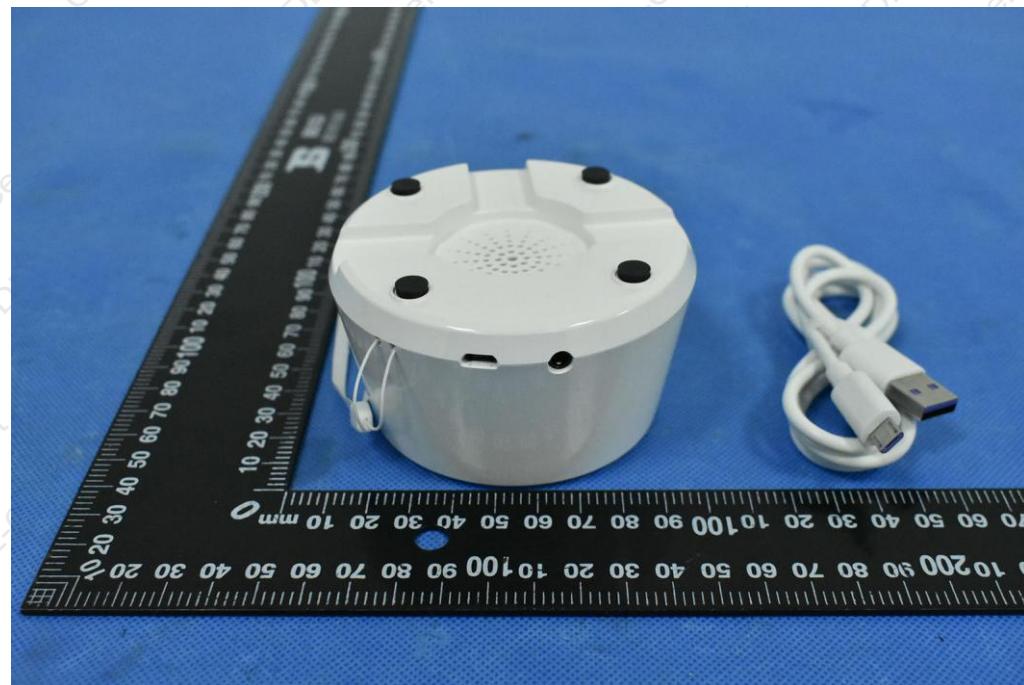
Test Item(s)	Test Partner mg/kg										Conclusion
	Pb	Cd	Hg	Cr VI	PBBs	PBDEs	DBP	DEHP	BBP	DIBP	
26	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
27	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
28	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
29	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS
30	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	PASS

NOTE:

- (1) mg/kg = ppm=parts per million
- (2) N.D. = not detected (<MDL)
- (3) MDL=Method Detection Limit
- (4) “—”=Not regulated

**EUT PHOTOGRAPHS**





***** END OF REPORT *****



Certificate of Conformity

Certificate Number: DL-20210322014C

Applicant: Shenzhen Waweis Technology Co., Ltd.

Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Manufacturer: Shenzhen Waweis Technology Co., Ltd.

Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Product: White Noise Machine

Model No.: WA-SA-01

WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05

Test Standard: IEC62321-1:2013

IEC62321-3-1:2013; IEC62321-4:2013+A1:2017;

IEC62321-5:2013; IEC62321-6:2015; IEC62321-7-1:2015

IEC62321-7-2:2017; IEC62321-8:2017

The EUT described above has been consolidated by us and found in compliance with the council RoHS directive 2011/65/EU its amendment Directive EU 2015/863. It is possible to use RoHS marking to demonstrate the compliance with this RoHS Directive. It is only valid in connection with the test report number: DL-20210322014R.

RoHS



This certificate of conformity is based on a single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole product and relevant. Without the written approval, It is not permitted to use the test lab's logo.

Shenzhen DL Testing Technology Co., Ltd.

101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Web: www.dl-cert.com E-mail: Service@dl-cert.com Tel: 400-688-3552





TEST REPORT

Applicant: Shenzhen Waweis Technology Co., Ltd.

Address: Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Manufacturer: Shenzhen Waweis Technology Co., Ltd.

Address: Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

EUT: White Noise Machine

Trade Mark: N/A

Model Number: WA-SA-01
WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05

Date of Receipt: Mar. 17, 2021

Test Date: Mar. 17, 2021 - Mar. 23, 2021

Date of Report: Mar. 23, 2021

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Applicable Standards: FCC PART 15 B
ANSI C63.4:2014

Test Result: Pass

Report Number: DL-20210322013E

Prepared (Engineer): Alisa Song

Reviewer (Supervisor): Jack Bu

Approved (Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



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**1. VERSION**

Version No.	Date	Description
00	Mar. 23, 2021	Original

2. TEST SUMMARY

EMC Emission				
Standard	Test Item	Limit	Result	Remark
FCC PART 15 B	Conducted Emission at power ports	Class B	PASS	
	Radiated Emission below 1GHz	Class B	PASS	
	Radiated Emission above 1GHz	Class B	N/A	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

(2) Test Facility: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China



3. GENERAL INFORMATION

3.1 Description of Device (EUT)

EUT: White Noise Machine

Trade Mark: N/A

Model Number: WA-SA-01
WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05

Test Model: WA-SA-01

Model difference: The product's different for model number and appearance color.

Power Supply: DC 5V from charger
DC 3.7V from battery

Working Frequency: Below 15MHz

3.2 Tested System Details

None.

3.3 Block Diagram of Test Set-up



3.4 Test Mode Description

Mode1. On Mode
Mode3. Charging+On Mode

Mode2. Charging Mode

3.5 Test Auxiliary Equipment

Adapter (Provide by test lab):

Manufacturer: HAIWEI

Model: HW-0501000E

I/P: AC 100-240V 50/60Hz

O/P: DC 5V 1A

3.6 Test Uncertainty

Conducted Emission Uncertainty : $\pm 2.56\text{dB}$

Radiated Emission Uncertainty : $\pm 3.24\text{dB}$

**4. TEST INSTRUMENT USED****For Conducted Emission Test (843 Shielded Room)**

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Nov. 25, 2019	Nov. 24, 2022
EMI Receiver	R&S	ESR	101421	Dec. 07, 2020	Dec. 06, 2021
LISN	R&S	ENV216	102417	Dec. 07, 2020	Dec. 06, 2021
Clamp	COM-POWER	CLA-050	431071	Dec. 05, 2020	Dec. 04, 2021
3-Loop Antenna	DAZE	ZN30401	13021	Dec. 07, 2020	Dec. 06, 2021
ISN T8	Schwarzbeck	NTFM 8158	101135	Dec. 07, 2020	Dec. 06, 2021
ISN T5	Schwarzbeck	NTFM 8158	101136	Dec. 07, 2020	Dec. 06, 2021
843 Cable 1#	ChengYu	CE Cable	001	Dec. 07, 2020	Dec. 06, 2021
843 Cable 1#	ChengYu	CE Cable	002	Dec. 07, 2020	Dec. 06, 2021

For Radiated Emission Test (966 chamber)

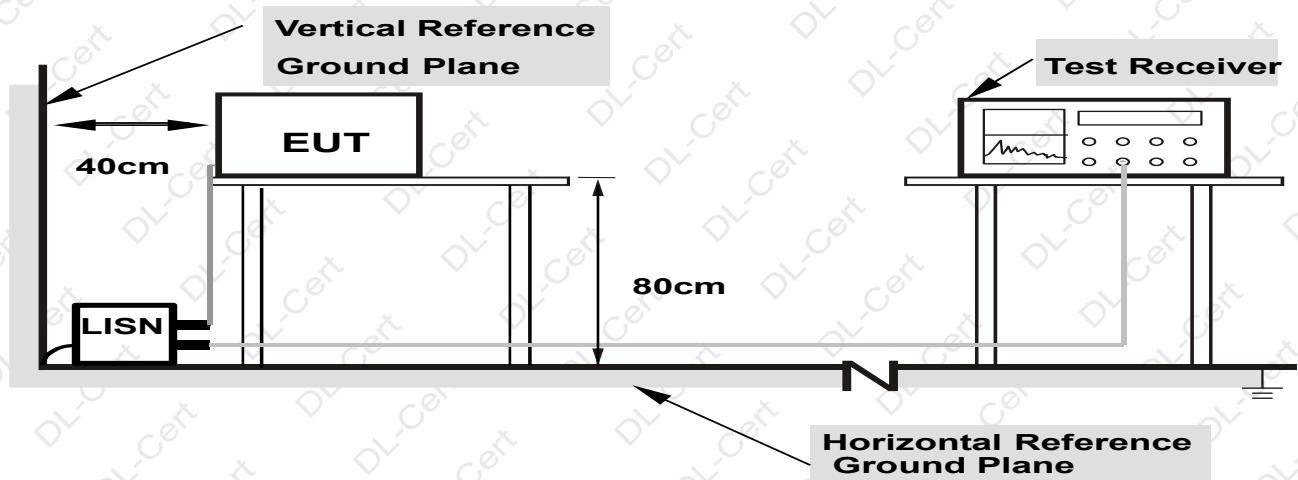
Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
966 Chamber	ChengYu	966 Room	966	Nov. 25, 2019	Nov. 24, 2022
Spectrum Analyzer	Agilent	E4408B	MY50140780	Dec. 07, 2020	Dec. 06, 2021
EMI Receiver	R&S	ESRP7	101393	Dec. 07, 2020	Dec. 06, 2021
Amplifier	Schwarzbeck	BBV9743B	00153	Dec. 07, 2020	Dec. 06, 2021
Amplifier	EMEC	EM01G8GA	00270	Dec. 07, 2020	Dec. 06, 2021
Broadband Trilog Antenna	Schwarzbeck	VULB9162	00306	Nov. 28, 2020	Nov. 27, 2021
Horn Antenna	Schwarzbeck	BBHA9120D	02139	Nov. 28, 2020	Nov. 27, 2021
966 Cable 1#	ChengYu	966	004	Dec. 07, 2020	Dec. 06, 2021
966 Cable 2#	ChengYu	966	003	Dec. 07, 2020	Dec. 06, 2021



5. CONDUCTED EMISSION TEST

5.1 Block Diagram of Test Setup

For Mains Terminals Test



**Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes**

5.2 Test Standard and Limit

FCC PART 15 B

Frequency MHz	Limits dB(μ V)	
	Quasi-peak Level	Average Level
0.15~0.50	66 ~ 56*	55 ~ 46*
0.50~5.00	56	46
5.00~30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

5.3 EUT Configuration on Test

The following equipment's are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

5.4 Operating Condition of EUT

5.4.1 Setup the EUT and simulators as shown in Section 5.1.

5.4.2 Turn on the power of all equipments.

5.4.3 Let the EUT work in test modes and test it.



5.5 Test Procedure

The EUT is put on the table and connected to the AC mains through a Artificial Mains Network (AMN) or ISN. This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **ANSI C63.4** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESR) is set at 10KHz.

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

We pretest all mode, the result only show the worst mode's data.

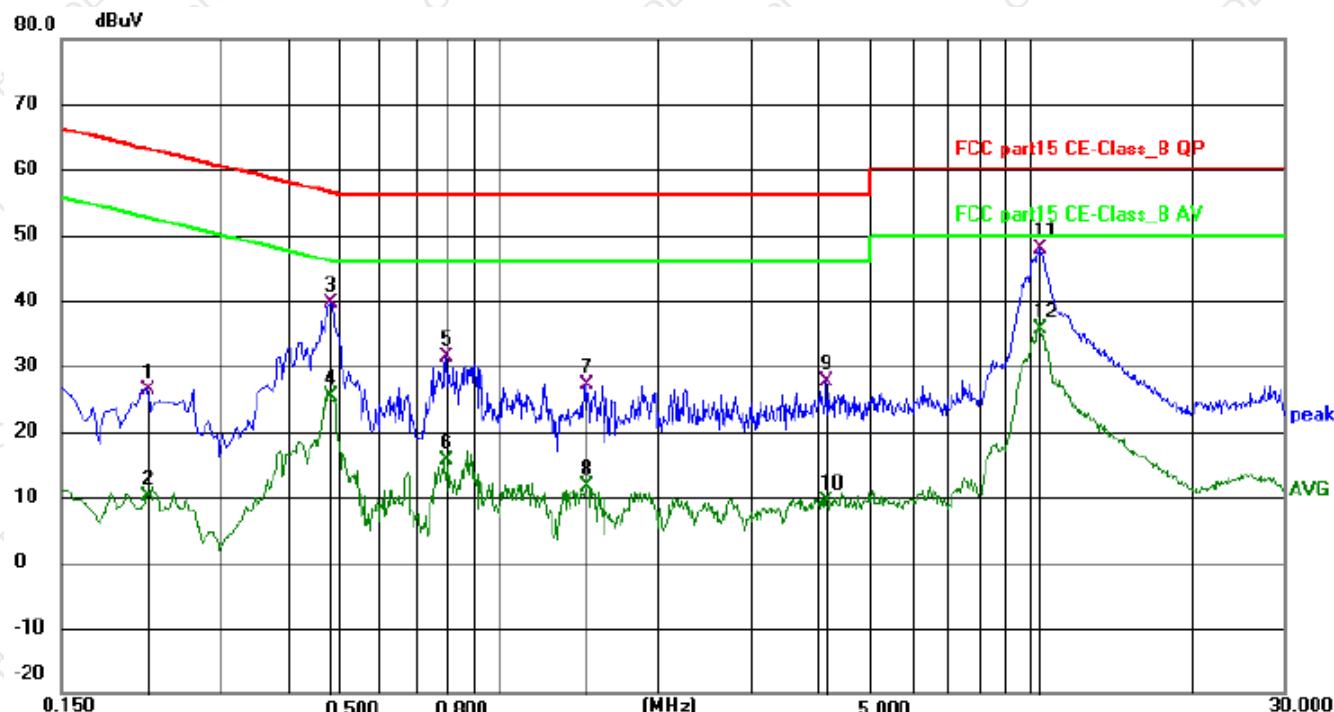
5.6 Test Result

PASS

Please refer to the following page.



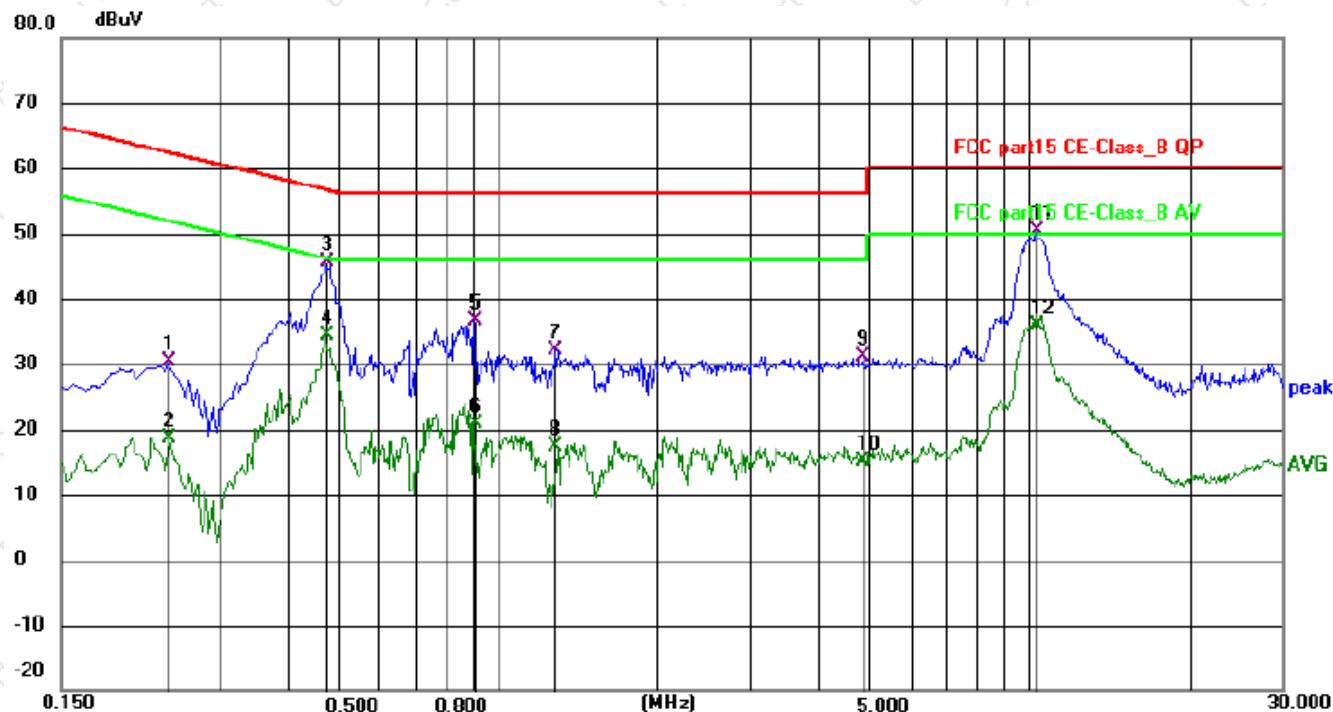
Conducted Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase:	Line
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 3



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2175	16.95	9.52	26.47	62.91	36.44	QP	P	
2	0.2175	0.70	9.52	10.22	52.91	42.69	AVG	P	
3	0.4830	30.43	9.26	39.69	56.29	16.60	QP	P	
4	0.4830	16.15	9.26	25.41	46.29	20.88	AVG	P	
5	0.7934	21.85	9.56	31.41	56.00	24.59	QP	P	
6	0.7934	6.10	9.56	15.66	46.00	30.34	AVG	P	
7	1.4683	17.19	10.03	27.22	56.00	28.78	QP	P	
8	1.4683	1.71	10.03	11.74	46.00	34.26	AVG	P	
9	4.1235	17.45	10.08	27.53	56.00	28.47	QP	P	
10	4.1235	-0.82	10.08	9.26	46.00	36.74	AVG	P	
11 *	10.4730	37.52	10.34	47.86	60.00	12.14	QP	P	
12	10.4730	25.28	10.34	35.62	50.00	14.38	AVG	P	



Conducted Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase:	Neutral
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 3



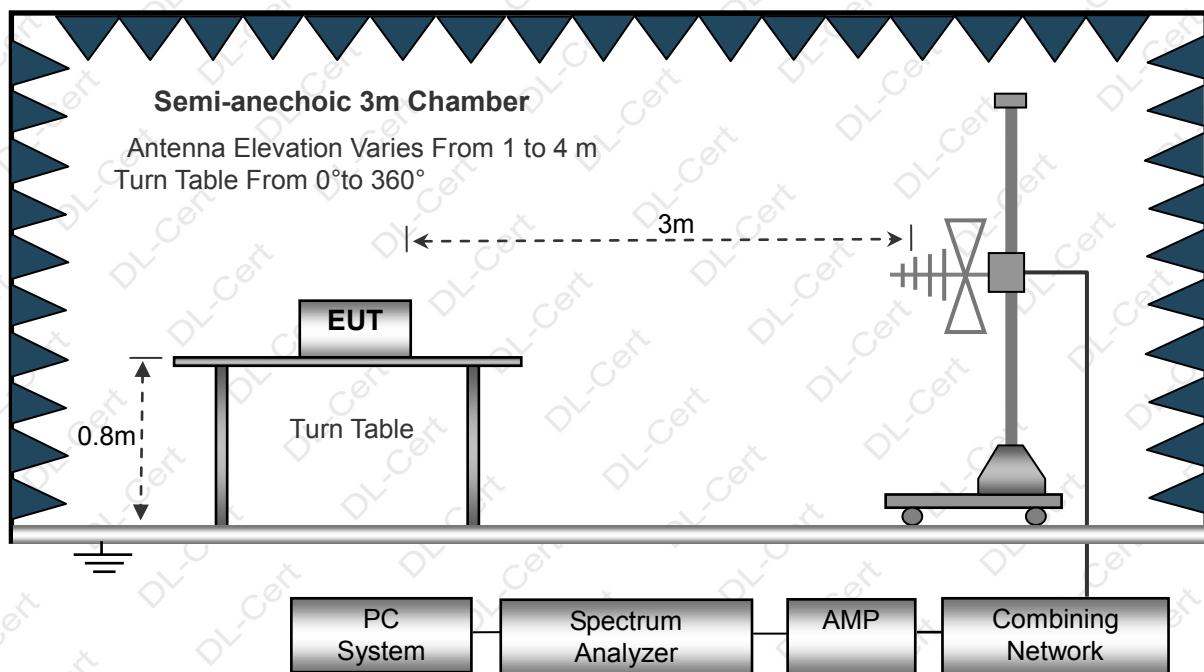
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2400	21.32	9.04	30.36	62.10	31.74	QP	P	
2	0.2400	9.61	9.04	18.65	52.10	33.45	AVG	P	
3	0.4740	36.10	9.43	45.53	56.44	10.91	QP	P	
4	0.4740	24.86	9.43	34.29	46.44	12.15	AVG	P	
5	0.9014	26.91	9.69	36.60	56.00	19.40	QP	P	
6	0.9014	11.14	9.69	20.83	46.00	25.17	AVG	P	
7	1.2839	22.19	10.01	32.20	56.00	23.80	QP	P	
8	1.2839	7.30	10.01	17.31	46.00	28.69	AVG	P	
9	4.8659	20.82	10.25	31.07	56.00	24.93	QP	P	
10	4.8659	4.98	10.25	15.23	46.00	30.77	AVG	P	
11 *	10.3065	39.74	10.52	50.26	60.00	9.74	QP	P	
12	10.3065	25.24	10.52	35.76	50.00	14.24	AVG	P	



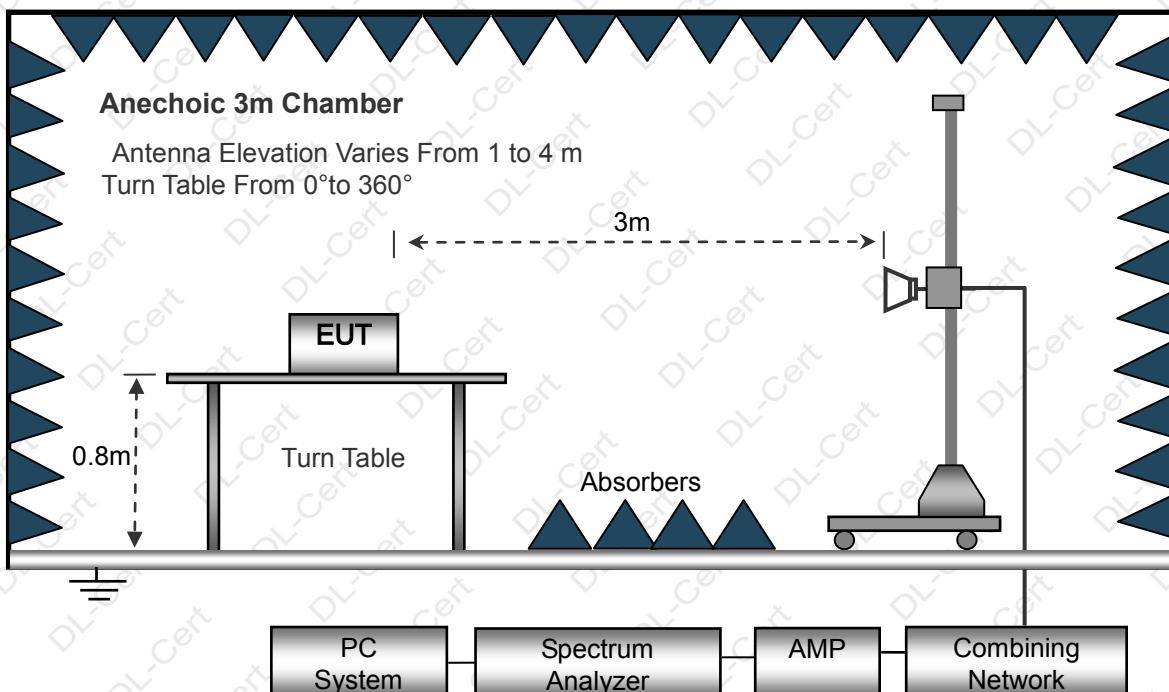
6. RADIATION EMISSION TEST

6.1 Block Diagram of Test Setup

Below 1GHz



Above 1GHz



6.2 Test Standard and Limit

FCC PART 15 B

**Below 1GHz**

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Above 1GHz

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μ V/m)	Detector
1000~3000	3	76.0	PEAK
1000~3000	3	56.0	AVERAGE
3000~6000	3	80.0	PEAK
3000~6000	3	60.0	AVERAGE

Remark:

- (1) The smaller limit shall apply at the cross point between two frequency bands.
- (2) Distance refers to the distance in meters between the measuring instrument, antenna and the closed point of any part of the device or system.

6.3 EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test.

Please refer to Section 5.3.

6.4 Operating Condition of EUT

Same as conducted emission test, which is listed in Section 5.4 except the test set up replaced as Section 6.2.

6.5 Test Procedure

- 1) The radiated emissions test was conducted in a semi-anechoic chamber.
- 2) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
- 3) Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT.
- 4) The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization.
- 5) The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz.
- 6) The frequency range from 30MHz to 1000MHz is checked.
- 7) We pretest all mode, the result only show the worst mode's data.

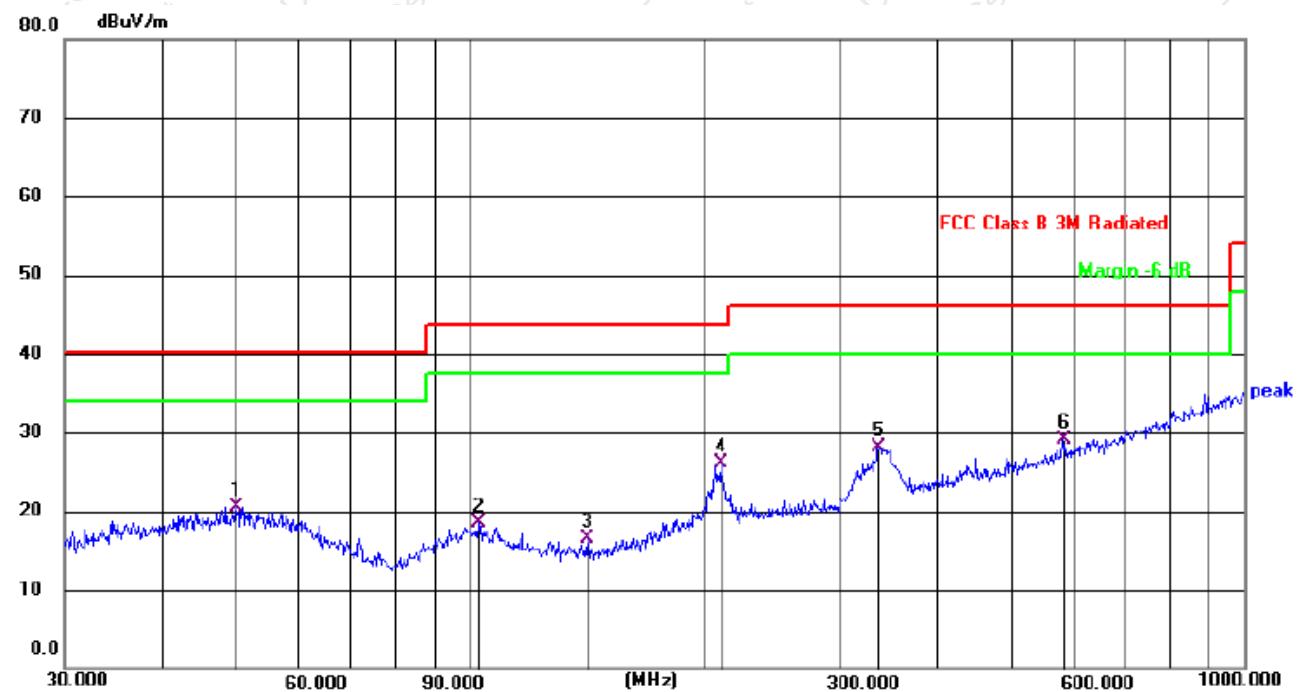
6.6 Test Result

PASS

Please refer to the following page.



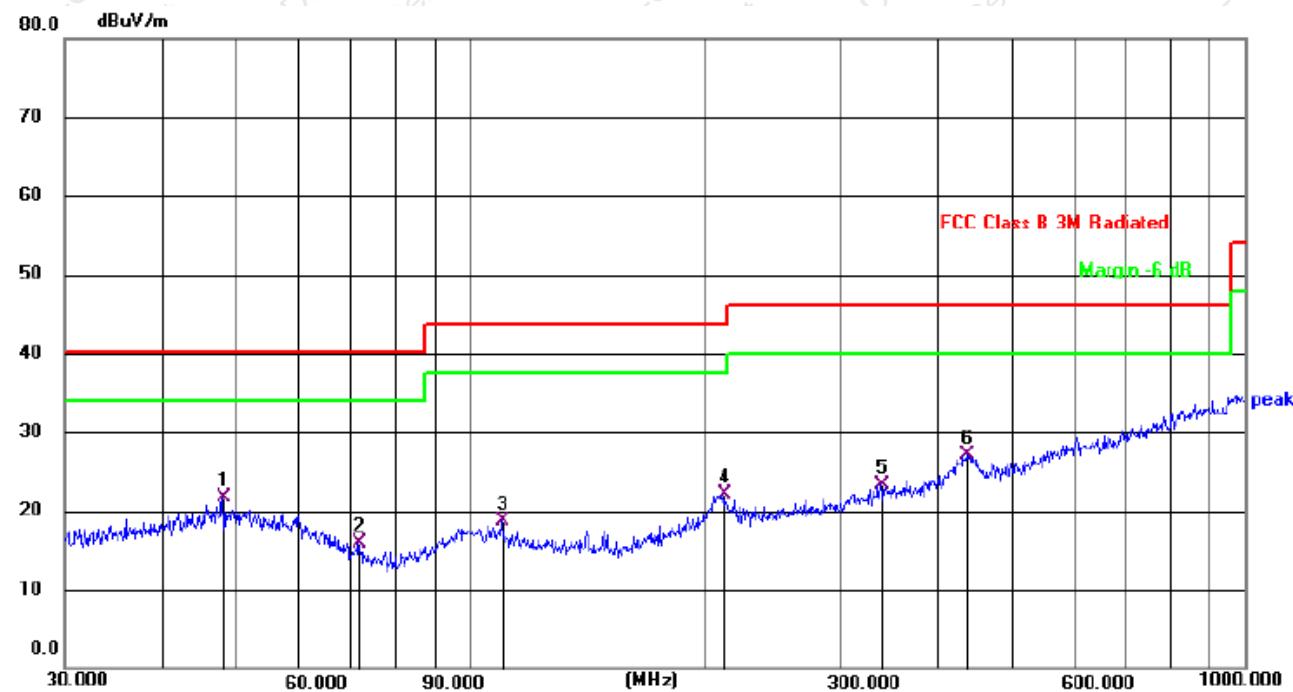
Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Test Mode:	Mode 1



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Comment
			Level	Factor	ment			
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		50.0566	34.14	-13.57	20.57	40.00	19.43	QP
2		102.7192	34.44	-16.03	18.41	43.50	25.09	QP
3		141.8262	35.17	-18.60	16.57	43.50	26.93	QP
4		210.7860	41.38	-15.30	26.08	43.50	17.42	QP
5		336.0352	40.16	-12.13	28.03	46.00	17.97	QP
6	*	582.7425	36.10	-7.08	29.02	46.00	16.98	QP

**Radiation Emission Test Data**

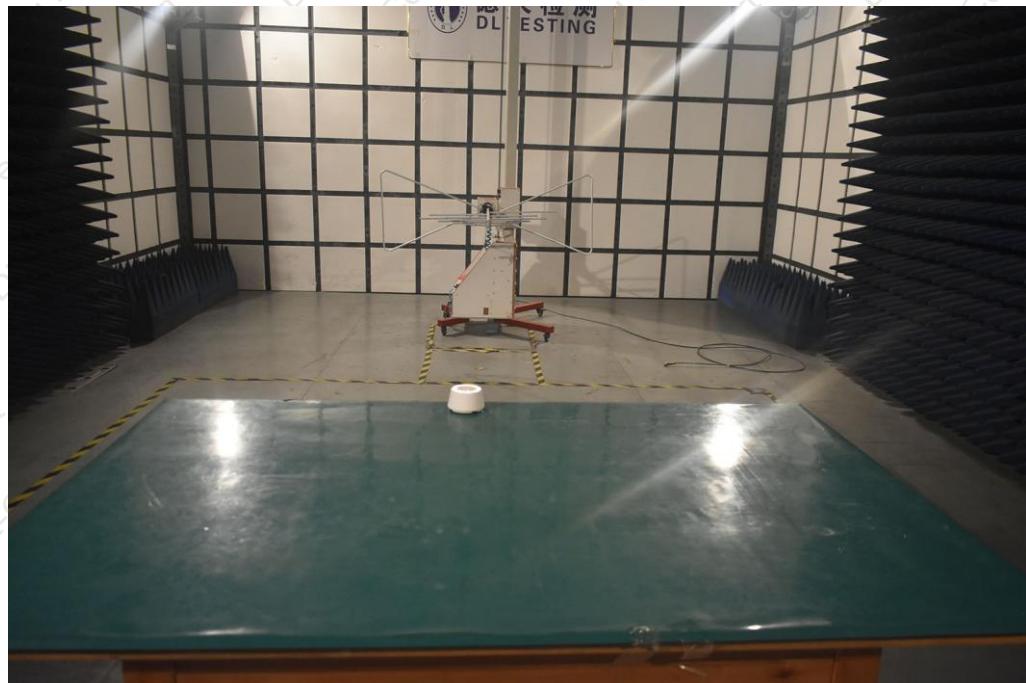
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 1



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Comment
			Level					
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	47.9940	35.57	-13.78	21.79	40.00	18.21	QP
2		71.8320	34.18	-18.26	15.92	40.00	24.08	QP
3		109.7960	35.44	-16.75	18.69	43.50	24.81	QP
4		212.2695	37.44	-15.26	22.18	43.50	21.32	QP
5		338.4001	35.45	-12.07	23.38	46.00	22.62	QP
6		437.1199	36.92	-9.91	27.01	46.00	18.99	QP

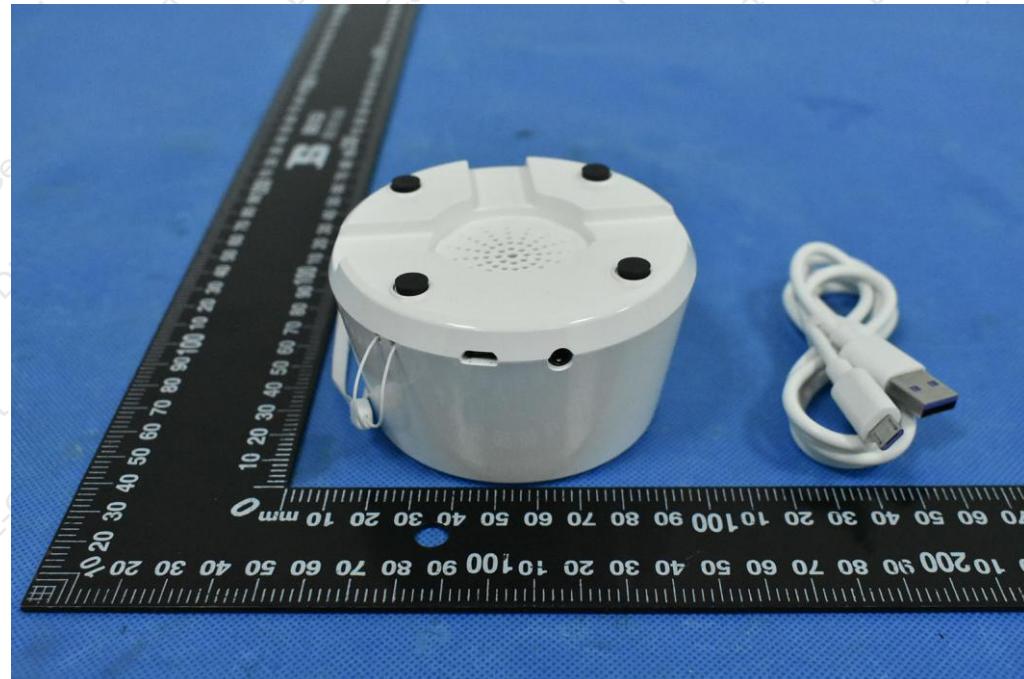


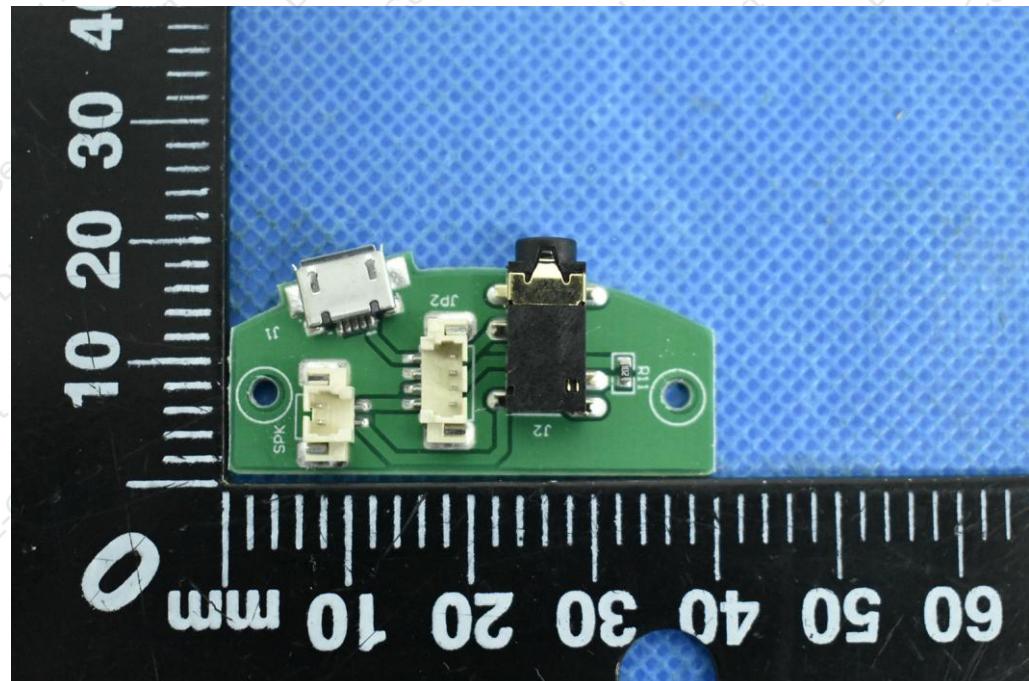
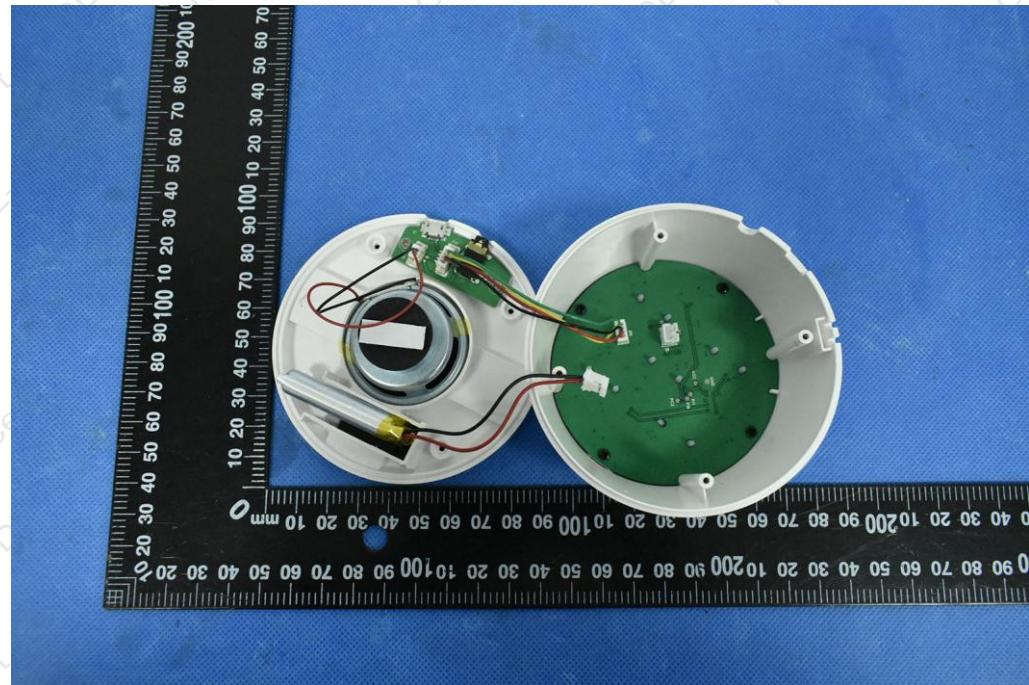
7. SETUP PHOTOGRAPHS

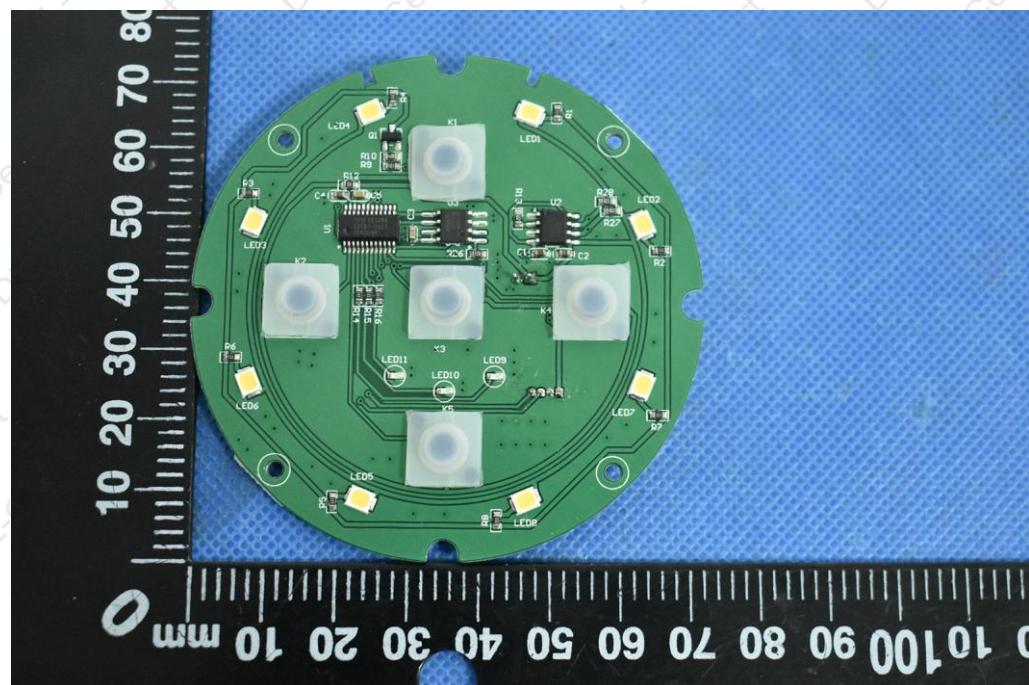
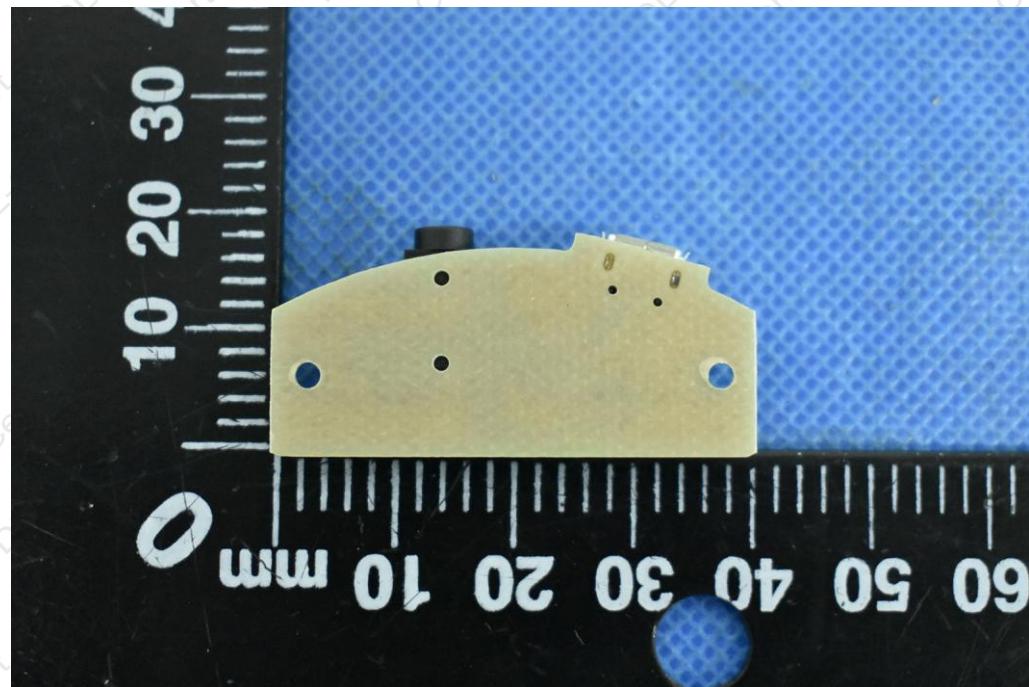


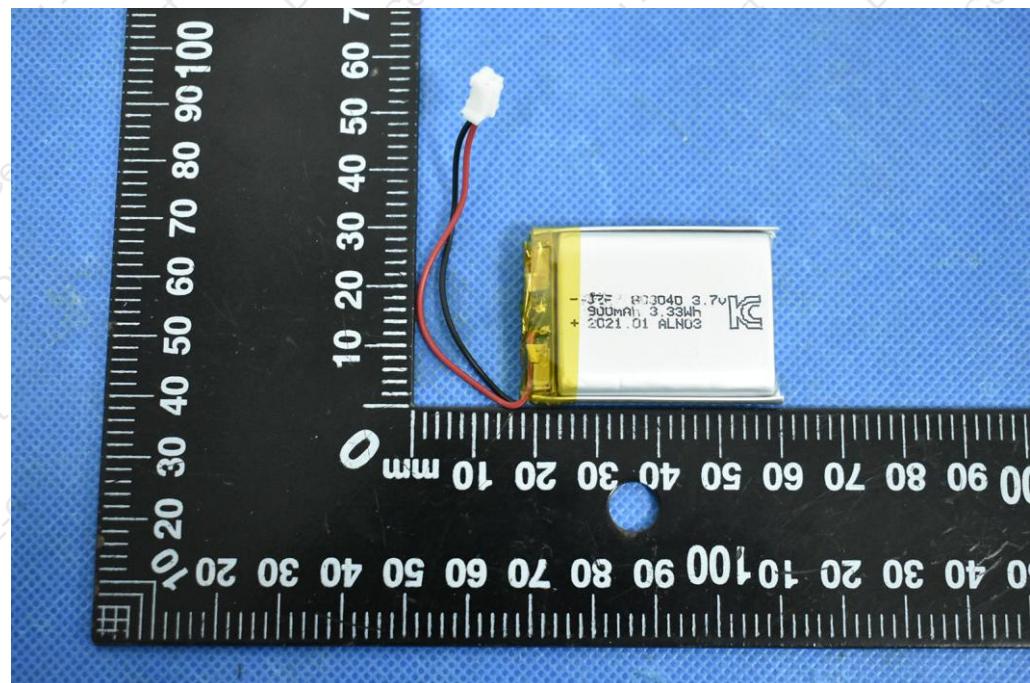
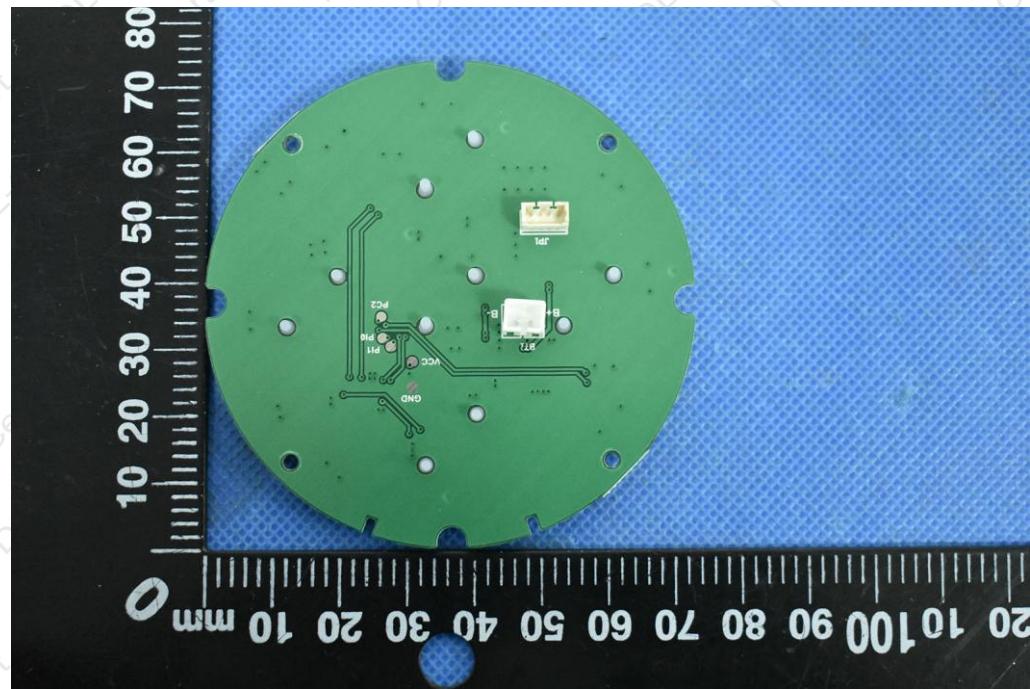


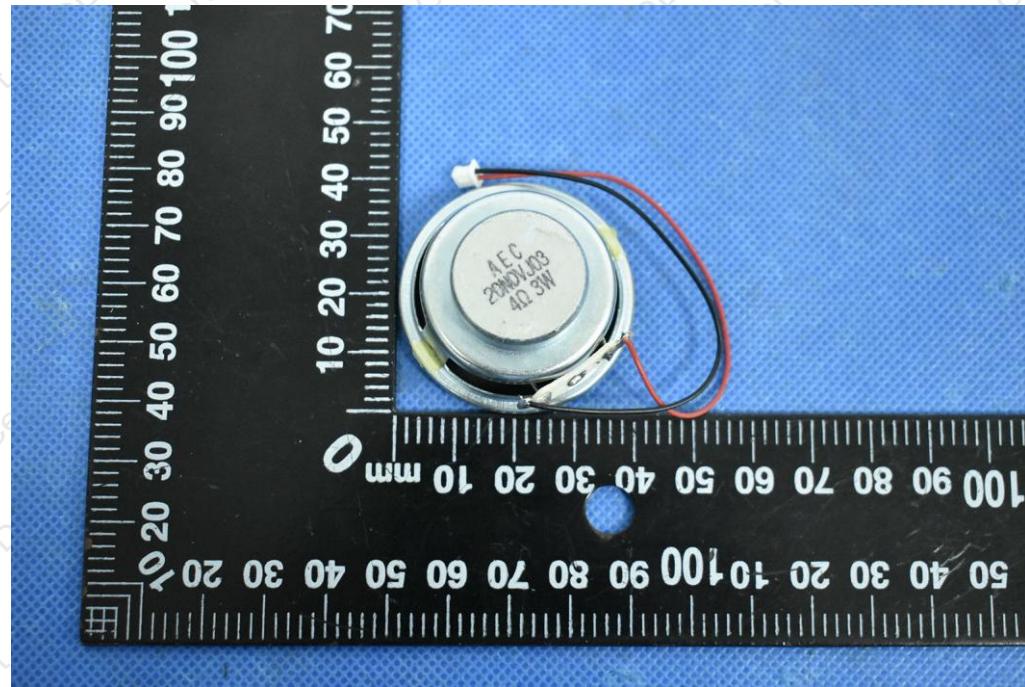
8. EUT PHOTOGRAPHS











***** END OF REPORT *****



Supplier's Declaration of Conformity

Certificate Number: DL-20210322013C

Applicant: Shenzhen Waweis Technology Co., Ltd.

Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Manufacturer: Shenzhen Waweis Technology Co., Ltd.

Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Product: White Noise Machine

Model No.: WA-SA-01

WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05

Test Standard: FCC PART 15 B
ANSI C63.4:2014

This certificate is part of the full test report(s) and should be read in conjunction with it. The referred Test report(s) show that the product complies with standard(s) recognized as giving presumption of compliance with the essential requirements in the specified FCC standard. It is only valid in connection with the test report number: DL-20210322013E.



This certificate of conformity is based on a single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole product and relevant. Without the written approval, It is not permitted to use the test lab's logo.

Shenzhen DL Testing Technology Co., Ltd.
101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Web: www.dll-cert.com E-mail: Service@dl-cert.com Tel: 400-688-3552





TEST REPORT

Applicant: Shenzhen Waweis Technology Co., Ltd.

Address: Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Manufacturer: Shenzhen Waweis Technology Co., Ltd.

Address: Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

EUT: White Noise Machine

Trade Mark: N/A

Model Number: WA-SA-01
WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05

Date of Receipt: Mar. 17, 2021

Test Date: Mar. 17, 2021 - Mar. 23, 2021

Date of Report: Mar. 23, 2021

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Applicable Standards: EN 55032:2015+A11:2020
EN IEC 61000-3-2:2019+A1:2020, EN 61000-3-3:2013+A1:2019
EN 55035:2017/A11:2020
EN 61000-4-2:2009, EN IEC 61000-4-3:2020, EN 61000-4-4:2012,
EN 61000-4-5:2014+A1:2017, EN 61000-4-6:2014/AC:2015,
EN 61000-4-8:2010, EN IEC 61000-4-11:2020

Test Result: Pass

Report Number: DL-20210322012E

Prepared (Engineer):

Alisa Song

Reviewer (Supervisor):

Jack Bu

Approved (Manager):

Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

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**1. VERSION**

Version No.	Date	Description
00	Mar. 23, 2021	Original

2. TEST SUMMARY

EMC Emission				
Standard	Test Item	Limit	Result	Remark
EN 55032	Conducted Emission at power ports	Class B	PASS	
	Conducted Emission at LAN port	Class B	N/A	
	Radiated Emission below 1GHz	Class B	PASS	
	Radiated Emission above 1GHz	Class B	N/A	
EN 61000-3-2	Harmonic Current Emission	Class A or D	N/A ^{NOTE (2)}	
EN 61000-3-3	Voltage Fluctuations & Flicker	-----	N/A	
EMC Immunity				
Section EN 55035	Test Item	Performance Criteria	Result	Remark
EN 61000-4-2	Electrostatic Discharge	B	PASS	
EN 61000-4-3	RF electromagnetic field	A	PASS	
EN 61000-4-4	Fast transients	B	N/A	
EN 61000-4-5	Surges	B	N/A	
EN 61000-4-6	Injected Current	A	N/A	
EN 61000-4-8	Power Frequency Magnetic Field	A	PASS	
EN 61000-4-11	Volt. Interruptions Volt. Dips	B / C / C ^{NOTE (3)}	N/A	

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report

(2) The power consumption of EUT is less than 75W and no Limits apply.

(3) Voltage dip: 100% reduction – Performance Criteria B

Voltage dip: 30% reduction – Performance Criteria C

Voltage Interruption: 100% Interruption – Performance Criteria C

(4) Test Facility: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China



3. GENERAL INFORMATION

3.1 Description of Device (EUT)

EUT: White Noise Machine

Trade Mark: N/A

Model Number: WA-SA-01
WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05

Test Model: WA-SA-01

Model difference: The product's different for model number and appearance color.

Power Supply: DC 5V from charger
DC 3.7V from battery

Working Frequency: Below 108MHz

3.2 Tested System Details

None.

3.3 Block Diagram of Test Set-up



3.4 Test Mode Description

Mode1. On Mode
Mode3. Charging+On Mode

Mode2. Charging Mode

3.5 Test Auxiliary Equipment

Adapter (Provide by test lab):
Manufacturer: HAIWEI
Model: HW-0501000E
I/P: AC 100-240V 50/60Hz
O/P: DC 5V 1A

3.6 Test Uncertainty

Conducted Emission Uncertainty : $\pm 2.56\text{dB}$

Radiated Emission Uncertainty : $\pm 3.24\text{dB}$

**4. TEST INSTRUMENT USED****For Conducted Emission Test (843 Shielded Room)**

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Nov. 25, 2019	Nov. 24, 2022
EMI Receiver	R&S	ESR	101421	Dec. 07, 2020	Dec. 06, 2021
LISN	R&S	ENV216	102417	Dec. 07, 2020	Dec. 06, 2021
Clamp	COM-POWER	CLA-050	431071	Dec. 05, 2020	Dec. 04, 2021
3-Loop Antenna	DAZE	ZN30401	13021	Dec. 07, 2020	Dec. 06, 2021
ISN T8	Schwarzbeck	NTFM 8158	101135	Dec. 07, 2020	Dec. 06, 2021
ISN T5	Schwarzbeck	NTFM 8158	101136	Dec. 07, 2020	Dec. 06, 2021
843 Cable 1#	ChengYu	CE Cable	001	Dec. 07, 2020	Dec. 06, 2021
843 Cable 1#	ChengYu	CE Cable	002	Dec. 07, 2020	Dec. 06, 2021

For Radiated Emission Test (966 chamber)

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
966 Chamber	ChengYu	966 Room	966	Nov. 25, 2019	Nov. 24, 2022
Spectrum Analyzer	Agilent	E4408B	MY50140780	Dec. 07, 2020	Dec. 06, 2021
EMI Receiver	R&S	ESRP7	101393	Dec. 07, 2020	Dec. 06, 2021
Amplifier	Schwarzbeck	BBV9743B	00153	Dec. 07, 2020	Dec. 06, 2021
Amplifier	EMEC	EM01G8GA	00270	Dec. 07, 2020	Dec. 06, 2021
Broadband Trilog Antenna	Schwarzbeck	VULB9162	00306	Nov. 28, 2020	Nov. 27, 2021
Horn Antenna	Schwarzbeck	BBHA9120D	02139	Nov. 28, 2020	Nov. 27, 2021
966 Cable 1#	ChengYu	966	004	Dec. 07, 2020	Dec. 06, 2021
966 Cable 2#	ChengYu	966	003	Dec. 07, 2020	Dec. 06, 2021

For Harmonic & Flicker Test (EMS --- site)

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
Harmonics, Flicker & power Analyser	LAPLACE INSTRUMENTS	AC2000A	311370	Dec. 07, 2020	Dec. 06, 2021
AC Power Supply	MToni	HPF5010	633659	Dec. 07, 2020	Dec. 06, 2021

For Electrostatic Discharge Immunity Test (EMS --- site)

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
ESD Tester	SCHLODER	SESD 230	17352	Dec. 05, 2020	Dec. 04, 2021

**For RF Field Strength Susceptibility Test (Keyway --- site)**

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
Signal Generator	HP	8648A	3625U00573	Sep. 26, 2020	Sep. 26, 2021
Amplifier	A&R	500A100	17034	Sep. 26, 2020	Sep. 26, 2021
Amplifier	A&R	100W/1000M1	17028	Sep. 26, 2020	Sep. 26, 2021
Audio Analyzer (20Hz~1GHz)	Panasonic	2023B	202301/428	Sep. 26, 2020	Sep. 26, 2021
Isotropic Field Probe	A&R	FP2000	16755	Sep. 26, 2020	Sep. 26, 2021
Antenna	EMCO	3108	9507-2534	Sep. 26, 2020	Sep. 26, 2021
Log-periodic Antenna	A&R	AT1080	16812	Sep. 26, 2020	Sep. 26, 2021

For EFT /B, Surge, Voltage Dips Interruptions Test (EMS --- site)

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
Transient Comprehensive Immunity Test System	Graphtec	HVIP16T+HCO MPACT 5	192501+192202	Dec. 07, 2020	Dec. 06, 2021
Coupling Clamp	HTEC	001	0001	Dec. 07, 2020	Dec. 06, 2021

For Injected Currents Susceptibility Test (EMS --- site)

Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
C/S Test System	LIONCEL	RIS-6091-85	0191101	Dec. 07, 2020	Dec. 06, 2021
CDN	LIONCEL	CDN-M2-16	0191001	Dec. 07, 2020	Dec. 06, 2021
CDN	LIONCEL	CDN-M3-16	0191002	Dec. 07, 2020	Dec. 06, 2021
Injection Clamp	Frankonia	EMCL-20	18101728-0108	Dec. 05, 2020	Dec. 04, 2021

For Magnetic Field Immunity Test (EMS --- site)

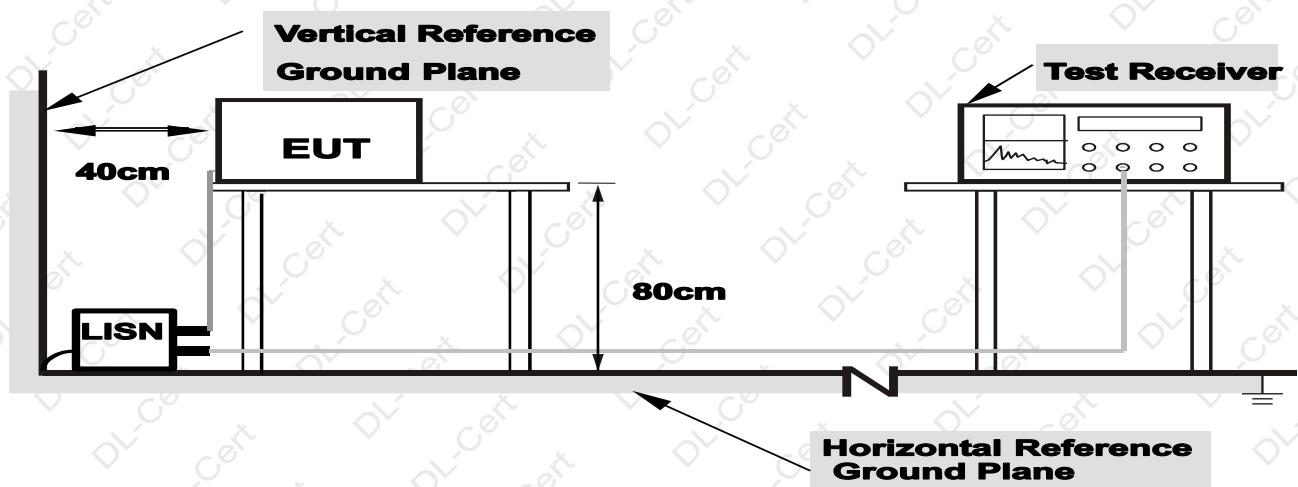
Equipment	Manufacturer	Model	Serial	Last Cal.	Next Cal.
Magnetic field Test System	LIONCEL	PMF-801C-C/ PMF-801C-T	190401	Dec. 07, 2020	Dec. 06, 2021



5. CONDUCTED EMISSION TEST

5.1 Block Diagram of Test Setup

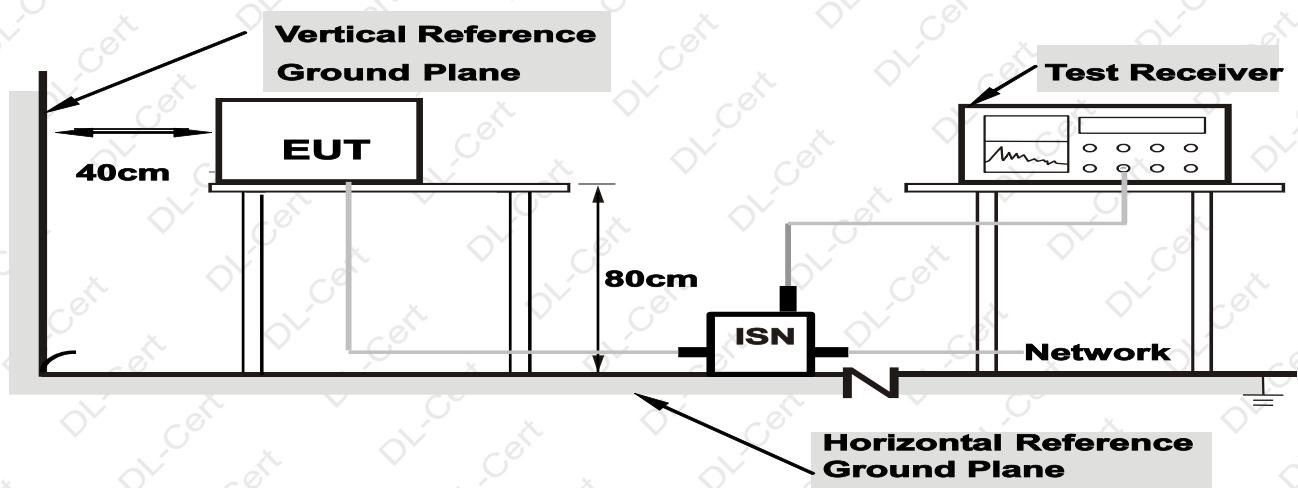
For Mains Terminals Test



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

For Telecom Port Test



Note: 1. Support units were connected to second LISN.

2. Both of ISNs are 80 cm from EUT and at least 80 cm from other units and other metal planes



5.2 Test Standard and Limit

EN 55032

For Mains Terminals Test			For Telecom Port Test		
Frequency MHz	Limits dB(μ V)		Frequency MHz	Limits dB(μ V)	
	Quasi-peak Level	Average Level		Quasi-peak Level	Average Level
0.15~0.50	66 ~ 56*	55 ~ 46*	0.15~0.50	84 ~ 74*	74 ~ 64*
0.50~5.00	56	46	0.50~30.00	74	64
5.00~30.00	60	50	/	/	/

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

5.3 EUT Configuration on Test

The following equipment's are installed on conducted emission test to meet EN 55032 requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

5.4 Operating Condition of EUT

- 5.4.1 Setup the EUT and simulators as shown in Section 5.1.
- 5.4.2 Turn on the power of all equipments.
- 5.4.3 Let the EUT work in test modes and test it.

5.5 Test Procedure

The EUT is put on the table and connected to the AC mains through a Artificial Mains Network (AMN) or ISN. This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **EN 55032** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESR) is set at 10KHz.

The frequency ranges from 150kHz to 30MHz is investigated.

We pretest all mode, the result only show the worst mode's data.

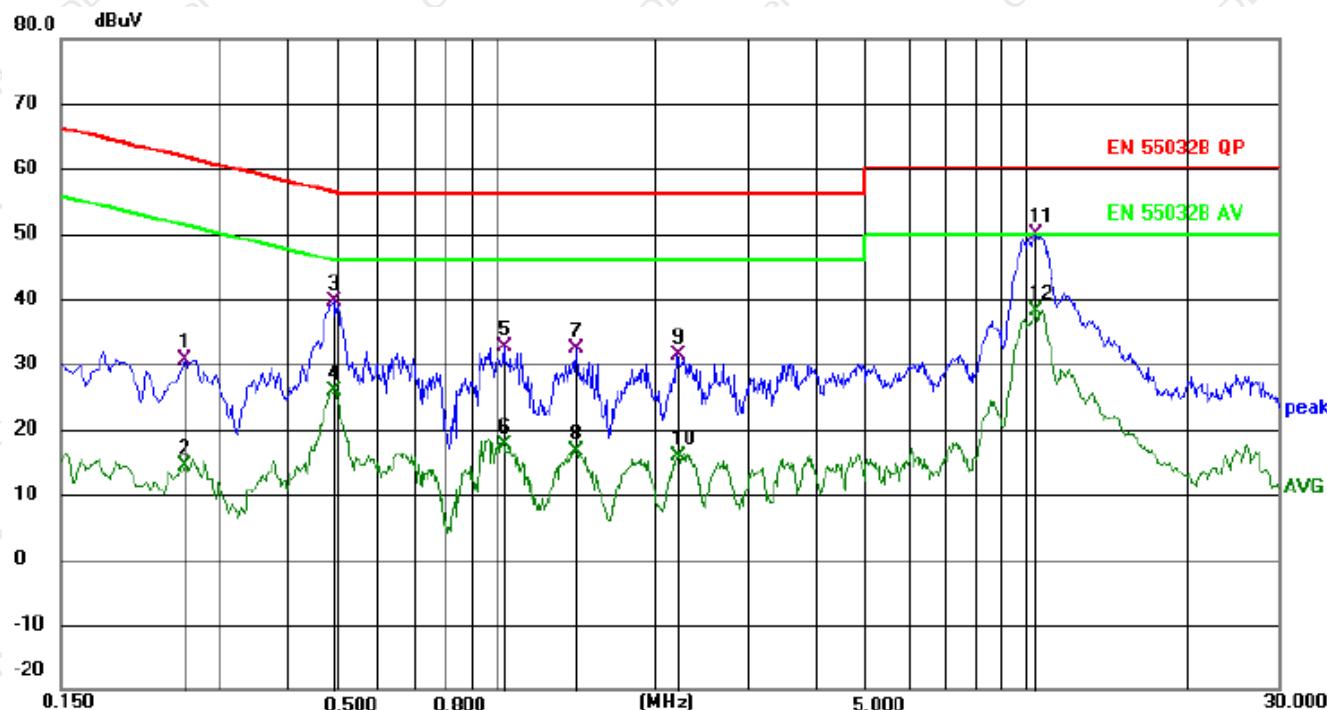
5.6 Test Result

PASS

Please refer to the following page.



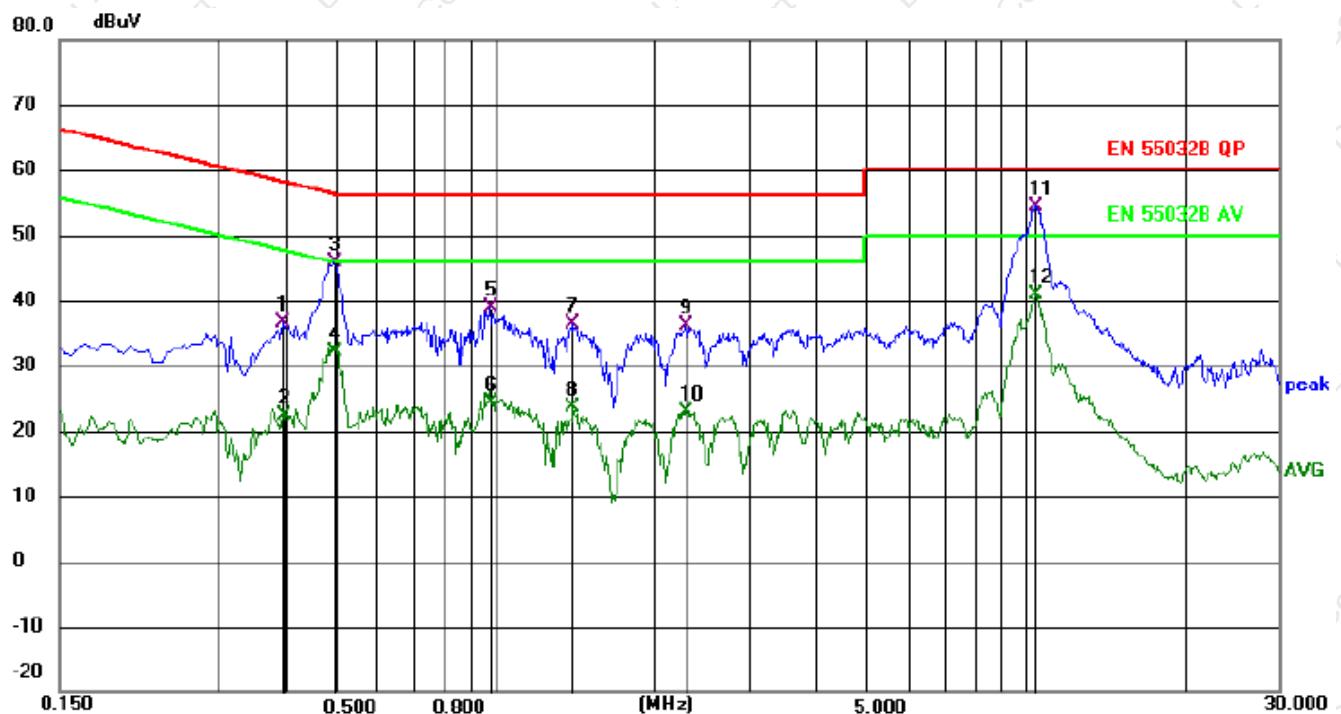
Conducted Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase:	Line
Test Voltage:	AC 230V/50Hz	Test Mode:	Mode 3



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2580	21.34	9.39	30.73	61.50	30.77	QP	P	
2	0.2580	5.06	9.39	14.45	51.50	37.05	AVG	P	
3	0.4920	30.42	9.27	39.69	56.13	16.44	QP	P	
4	0.4920	16.53	9.27	25.80	46.13	20.33	AVG	P	
5	1.0363	22.84	9.78	32.62	56.00	23.38	QP	P	
6	1.0363	7.92	9.78	17.70	46.00	28.30	AVG	P	
7	1.4144	22.38	10.00	32.38	56.00	23.62	QP	P	
8	1.4144	6.65	10.00	16.65	46.00	29.35	AVG	P	
9	2.1929	21.32	10.09	31.41	56.00	24.59	QP	P	
10	2.1929	5.73	10.09	15.82	46.00	30.18	AVG	P	
11 *	10.3830	39.59	10.34	49.93	60.00	10.07	QP	P	
12	10.3830	27.67	10.34	38.01	50.00	11.99	AVG	P	



Conducted Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase:	Neutral
Test Voltage:	AC 230V/50Hz	Test Mode:	Mode 3

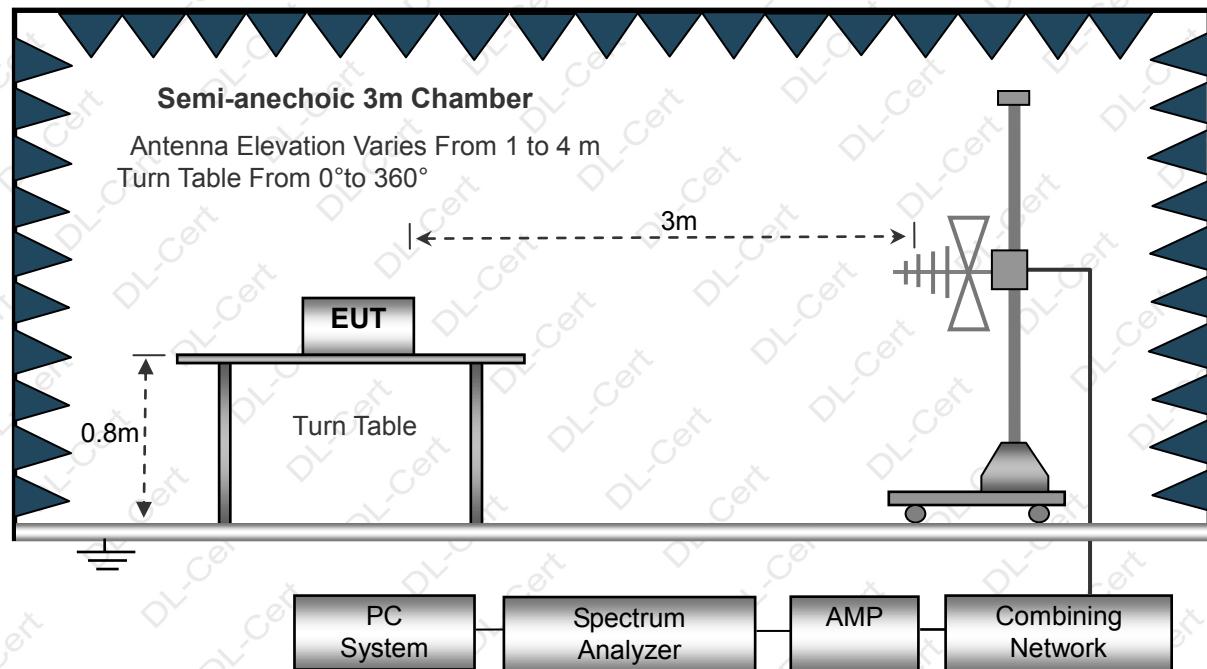


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.3975	27.19	9.33	36.52	57.91	21.39	QP	P	
2	0.3976	13.16	9.33	22.49	47.90	25.41	AVG	P	
3	0.4965	36.38	9.46	45.84	56.06	10.22	QP	P	
4	0.4965	22.57	9.46	32.03	46.06	14.03	AVG	P	
5	0.9779	28.92	9.84	38.76	56.00	17.24	QP	P	
6	0.9779	14.50	9.84	24.34	46.00	21.66	AVG	P	
7	1.3964	26.42	10.06	36.48	56.00	19.52	QP	P	
8	1.3964	13.63	10.06	23.69	46.00	22.31	AVG	P	
9	2.2739	25.78	10.30	36.08	56.00	19.92	QP	P	
10	2.2739	12.56	10.30	22.86	46.00	23.14	AVG	P	
11 *	10.4190	43.93	10.52	54.45	60.00	5.55	QP	P	
12	10.4190	30.45	10.52	40.97	50.00	9.03	AVG	P	

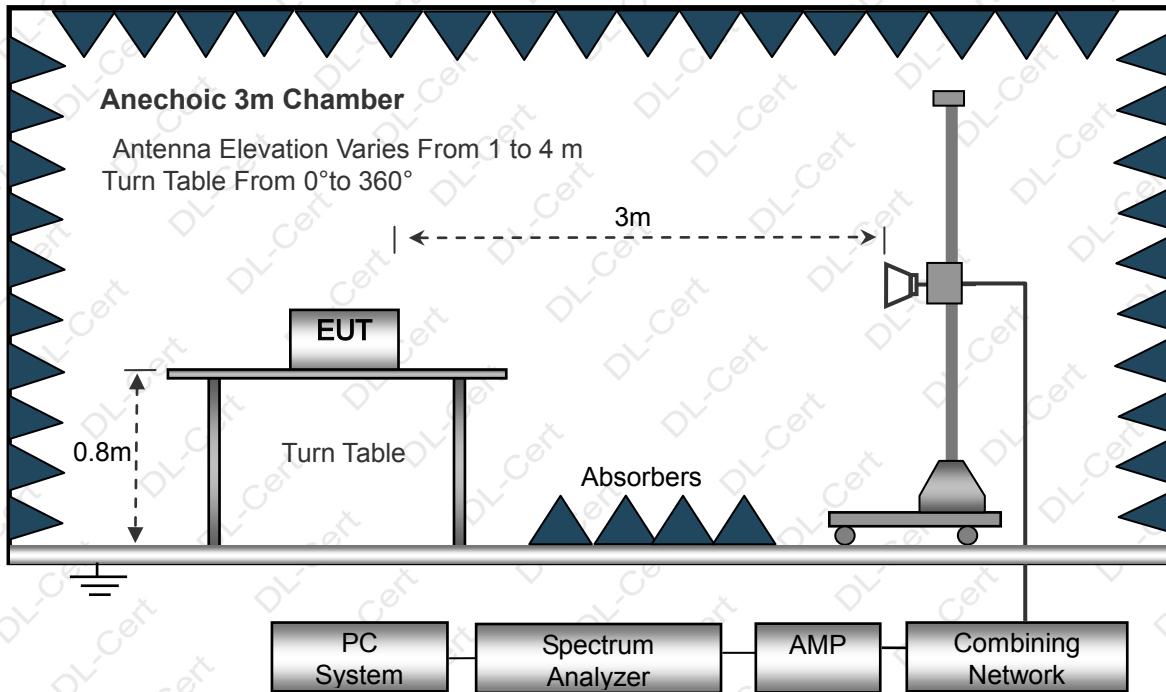
6. RADIATION EMISSION TEST

6.1 Block Diagram of Test Setup

Below 1GHz



Above 1GHz



6.2 Test Standard and Limit

EN 55032



Below 1GHz

Equipment type	Distance (Meters)	Frequency MHz	Limit values dB(μ V/m) Quasi-peak
FM receivers	3	≤1 000	Fundamental 60
		30 to 230	Harmonics 52
		230 to 300	Harmonics 52
		300 to 1 000	Harmonics 56
		30 to 230	40
		230 to 1 000	47
Other			

Above 1GHz

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μ V/m)	Detector
1000~3000	3	76.0	PEAK
1000~3000	3	56.0	AVERAGE
3000~6000	3	80.0	PEAK
3000~6000	3	60.0	AVERAGE

Remark:

- (1) The smaller limit shall apply at the cross point between two frequency bands.
- (2) Distance refers to the distance in meters between the measuring instrument, antenna and the closed point of any part of the device or system.

6.3 EUT Configuration on Test

The EN 55032 regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 5.3.

6.4 Operating Condition of EUT

Same as conducted emission test, which is listed in Section 5.4 except the test set up replaced as Section 6.2.

6.5 Test Procedure

- 1) The radiated emissions test was conducted in a semi-anechoic chamber.
- 2) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
- 3) Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT.
- 4) The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization.
- 5) The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz.
- 6) The frequency range from 30MHz to 1000MHz is checked.
- 7) We pretest all mode, the result only show the worst mode's data.

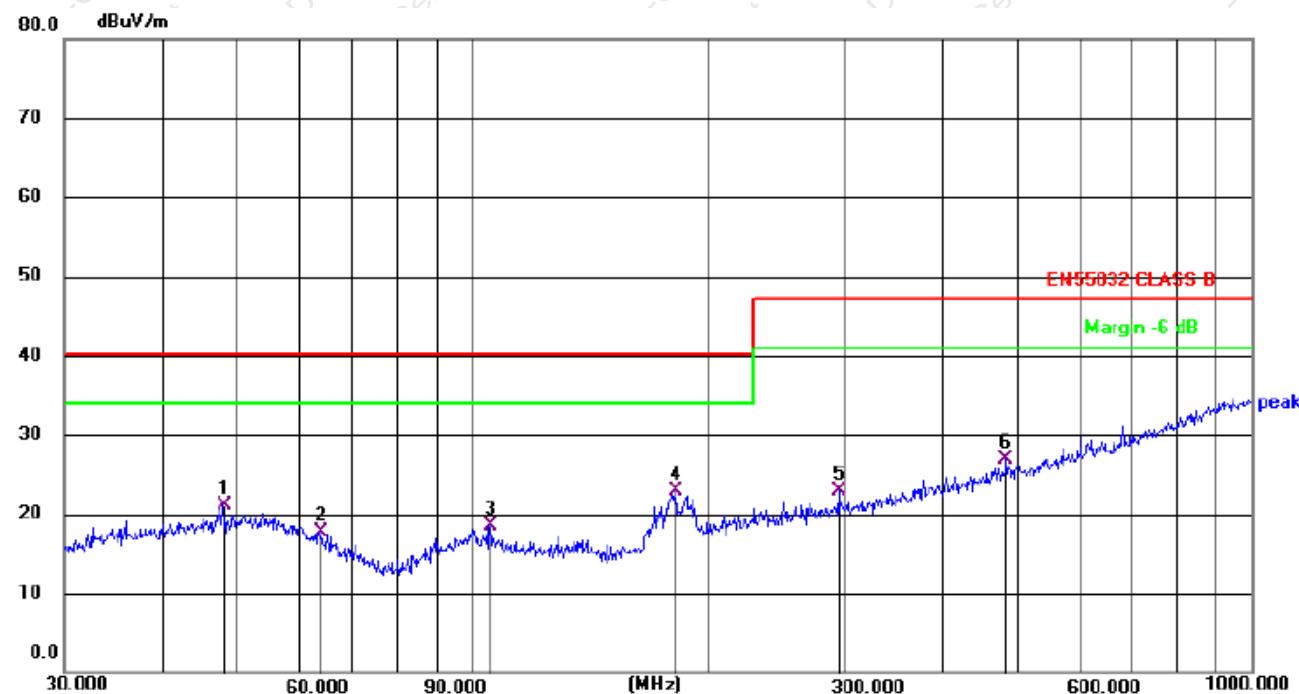
6.6 Test Result

PASS

Please refer to the following page.



Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Horizontal
Test Voltage:	AC 230V/50Hz	Test Mode:	Mode 2



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dB/m	dB		
1	47.9940	34.82	-13.78	21.04	40.00	18.96	QP		
2	64.2074	33.85	-16.08	17.77	40.00	22.23	QP		
3	105.2718	34.83	-16.28	18.55	40.00	21.45	QP		
4	* 182.5592	39.98	-17.03	22.95	40.00	17.05	QP		
5	295.1469	36.10	-13.10	23.00	47.00	24.00	QP		
6	483.9094	36.07	-9.07	27.00	47.00	20.00	QP		



Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Polarization:	Vertical
Test Voltage:	AC 230V/50Hz	Test Mode:	Mode 2

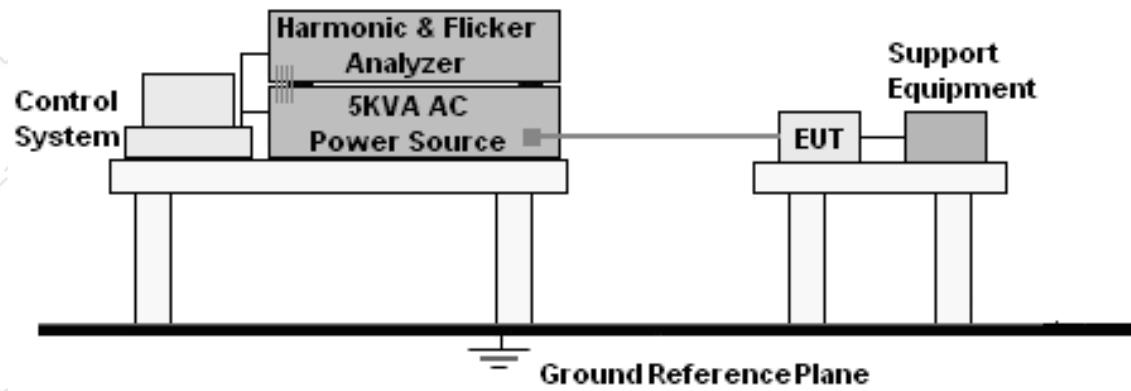


No. Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit	Margin	Comment
		dBuV	dB	dBuV/m	dB/m	dB	
1	45.6948	35.71	-14.03	21.68	40.00	18.32	QP
2	62.4314	34.16	-15.51	18.65	40.00	21.35	QP
3	98.1419	35.09	-16.09	19.00	40.00	21.00	QP
4	139.8508	42.34	-18.52	23.82	40.00	16.18	QP
5 *	181.2834	47.08	-17.13	29.95	40.00	10.05	QP
6	440.1963	34.08	-9.86	24.22	47.00	22.78	QP



7. HARMONIC CURRENT EMISSION TEST

7.1 Block Diagram of Test Setup



7.2 Test Standard

EN 61000-3-2

7.3 Operating Condition of EUT

Setup the EUT as shown in Section 5.1.

Turn on the power of all equipment.

Let the EUT work in test mode and test it.

7.4 Test Procedure

The power cord of the EUT is connected to the output of the test system. Turn on the power of the EUT and use the test system to test the harmonic current level.

7.5 Test Results

The EUT is powered by DC, no requirements for this item.



8. VOLTAGE FLUCTUATIONS & FLICKER TEST

8.1 Block Diagram of Test Setup

Same as Section 7.1.

8.2 Test Standard

EN 61000-3-3

8.3 Operating Condition of EUT

Same as Section 7.3. The power cord of the EUT is connected to the output of the test system. Turn on the power of the EUT and use the test system to test the harmonic current level.

Flicker Test Limit

Test items	Limits
Pst	1.0
dc	3.3%
Tmax	4.0%
dt	Not exceed 3.3% for 500ms

8.4 Test Procedure

The power cord of the EUT is connected to the output of the test system. Turn on the power of the EUT and use the test system to test the harmonic current level.

8.5 Test Results

The EUT is powered by DC, no requirements for this item.



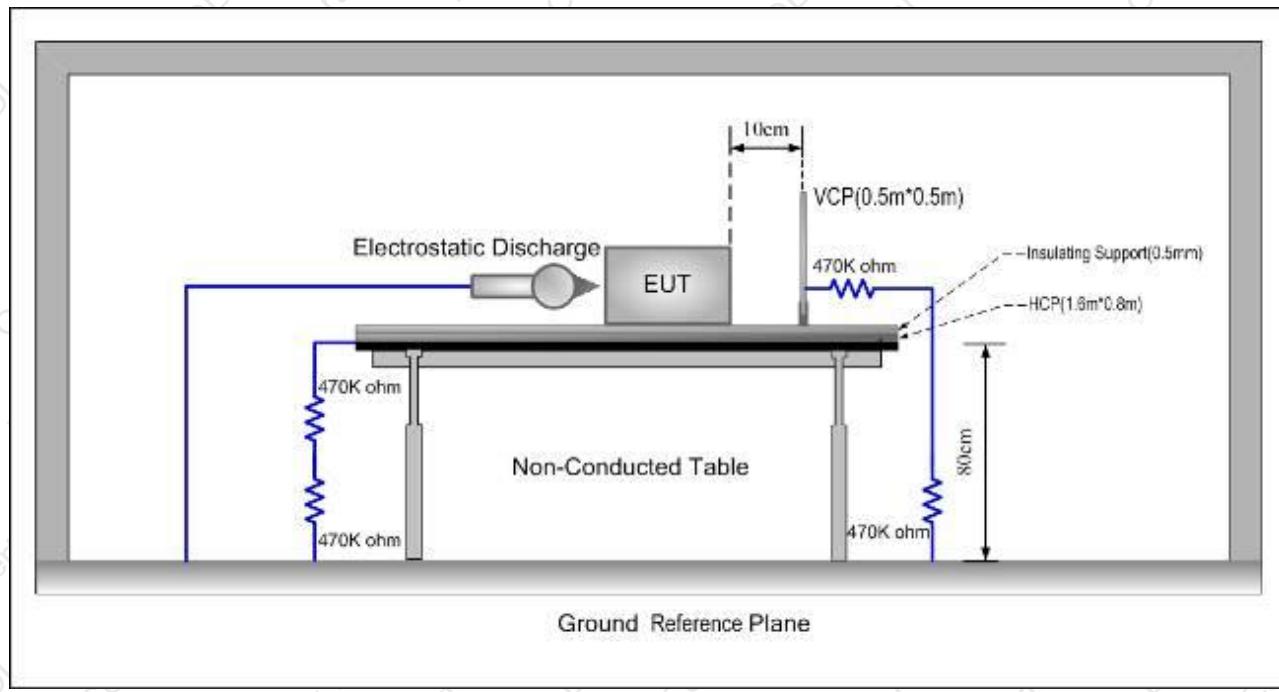
9. IMMUNITY TEST OF GENERAL THE PERFORMANCE CRITERIA

Product Standard	EN 55035
CRITERION A	<p>The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.</p>
CRITERION B	<p>During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test.</p> <p>After the test, the equipment shall continue to operate as intended without operator intervention; no degradation of performance or loss of function is allowed, below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.</p> <p>If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.</p>
CRITERION C	<p>Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. A reboot or re-start operation is allowed.</p> <p>Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.</p>



10. ELECTROSTATIC DISCHARGE IMMUNITY TEST

10.1 Block Diagram of Test Setup



10.2 Test Standard

EN 55035, EN 61000-4-2

10.3 Severity Levels and Performance Criterion

Severity Level: 3 / Air Discharge: $\pm 8\text{KV}$

Level: 2 / Contact Discharge: $\pm 4\text{KV}$

Performance criterion : B

10.4 Test Procedure

- a. Electrostatic discharges were applied only to those points and surfaces of the Product that are accessible to users during normal operation.
- b. The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.
- c. The time interval between two successive single discharges was at least 1 second.
- d. The ESD generator was held perpendicularly to the surface to which the discharge was applied and the return cable was at least 0.2 meters from the Product.
- e. Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.
- f. Air discharges were applied with the round discharge tip of the discharge electrode approaching the Product as fast as possible (without causing mechanical damage) to touch the Product. After each discharge, the ESD generator was removed from the Product and re-triggered for a new single discharge. The test was repeated until all discharges were complete.
- g. At least ten single discharges (in the most sensitive polarity) were applied to the Horizontal Coupling Plane at points on each side of the Product. The ESD generator was positioned vertically at a distance of 0.1 meters from the Product with the discharge electrode touching the HCP.



h. At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the Vertical Coupling Plane in sufficiently different positions that the four faces of the Product were completely illuminated. The VCP (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the Product.

10.5 Test Results

PASS

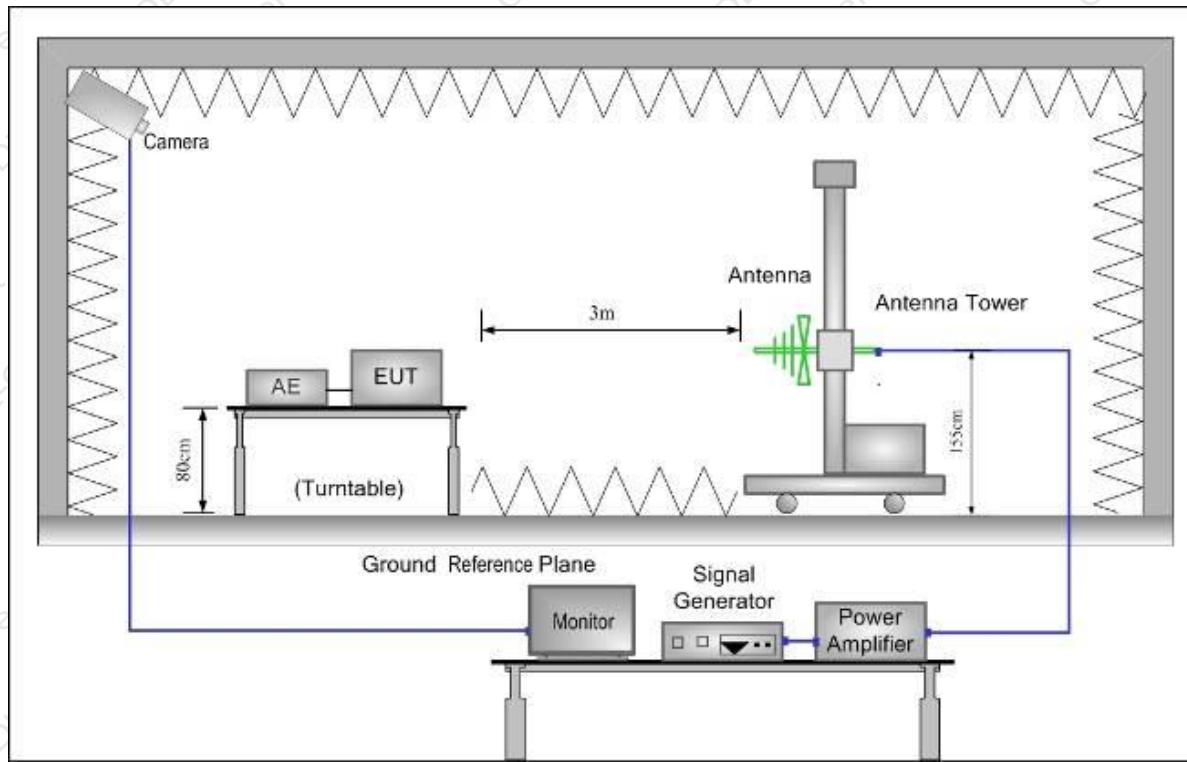
Please refer to the following page.

Electrostatic Discharge Test Data					
Temperature:		25.1°C		Humidity: 55%	
Power Supply:		AC 230V/50Hz DC 3.7V		Test Mode: Mode 1/2/3	
Discharge Method	Discharge Position	Voltage (\pm kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Result
Contact Discharge	Conductive Surfaces	4	25	B	Pass
	Indirect Discharge HCP	4	25	B	Pass
	Indirect Discharge VCP	4	25	B	Pass
Air Discharge	Slots, Apertures, and Insulating Surfaces	8	10	B	Pass

Note: N/A

11. RF FIELD STRENGTH SUSCEPTIBILITY TEST

11.1 Block Diagram of Test Setup



11.2 Test Standard

EN 55035, EN 61000-4-3

11.3 Severity Levels and Performance Criterion

Severity Level 2, 3V / m

Performance criterion: A

11.4 Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. EUT is set 3 meter away from the transmitting antenna which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna are set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually.

All the scanning conditions are as follows:

Condition of Test	Remarks
Fielded Strength	3 V/m (Severity Level 2)
Radiated Signal	Modulated
Scanning Frequency	80 – 6000 MHz
Dwell time of radiated	0.0015 decade/s
Waiting Time	1 Sec.



11.5 Test Results

PASS

Please refer to the following page.

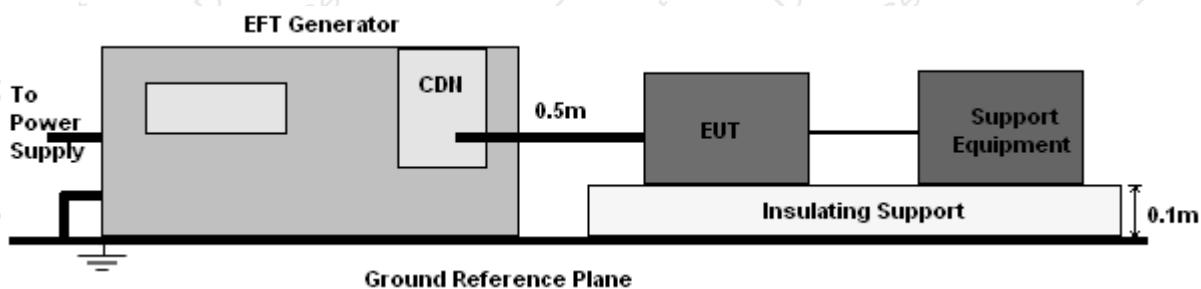
R/S Test Data				
Temperature:	25.1 °C		Humidity:	55%
Power Supply :	AC 230V/50Hz DC 3.7V		Test Mode:	Mode 1/2/3
Criterion:	A		Steps	1 %
Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Result
80 – 1000	Front, Right, Back, Left	3	A	Pass
1800				
2600				
3500				
5000				

Note: N/A

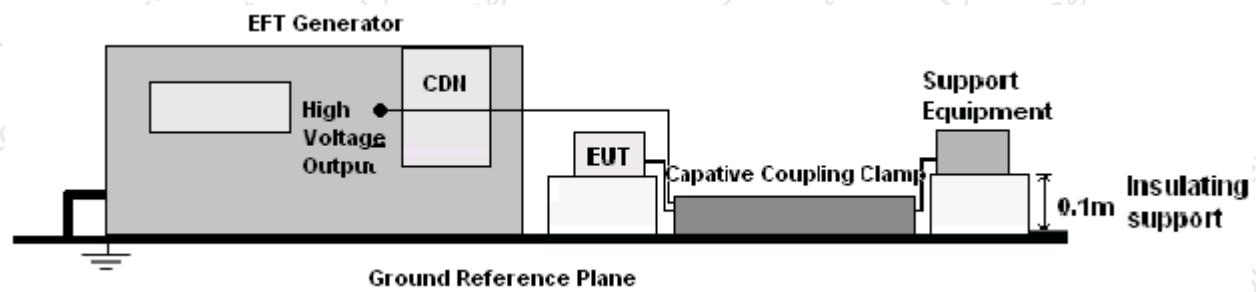
12. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

12.1 Block Diagram of EUT Test Setup

For input a.c. / d.c. power port:



For signal lines and control lines:



12.2 Test Standard

EN 55035, EN 61000-4-4

12.3 Severity Levels and Performance Criterion

Severity Level 2 at 1kV, Pulse Rise time & Duration: 5 nS / 50 nS

Performance criterion: B

12.4 Test Procedure

EUT shall be placed 0.8m high above the ground reference plane which is a min.1m*1m metallic sheet with 0.65mm minimum thickness. This reference ground plane shall project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5m

For input and output AC power ports:

The EUT is connected to the power mains by using a coupling device which couples the EFT interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 2 minutes.

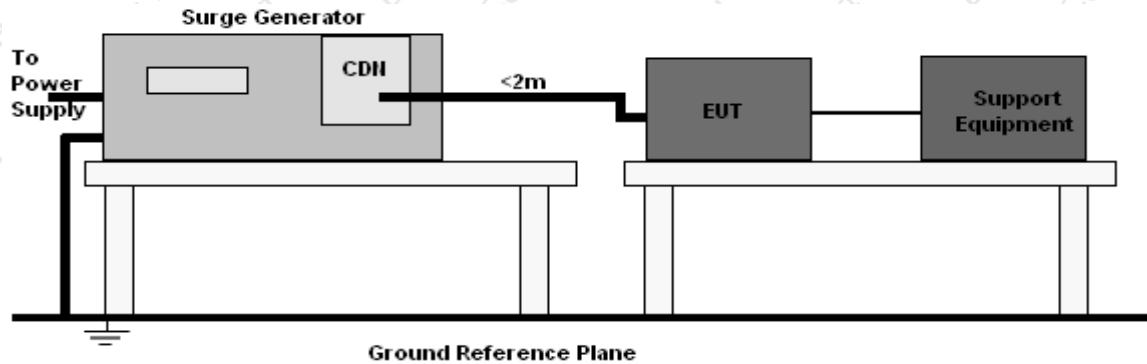
12.5 Test Results

The EUT is powered by DC, no requirements for this item.



13. SURGE TEST

13.1 Block Diagram of EUT Test Setup



13.2 Test Standard

EN 55035, EN61000-4-5

13.3 Severity Levels and Performance Criterion

Severity Level: Line to Line, Level 2 at 1KV;

Severity Level: Line to Earth, Level 3 at 2KV.

Performance criterion: B

13.4 Test Procedure

- 1) Set up the EUT and test generator as shown on section 11.1
- 2) For line to line coupling mode, provide a 1KV 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points.
- 3) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
- 4) Different phase angles are done individually.
- 5) Repeat procedure 2) to 4) except the open-circuit test voltage change from 1KV to 2KV for line to earth coupling mode test.
- 6) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

13.5 Test Result

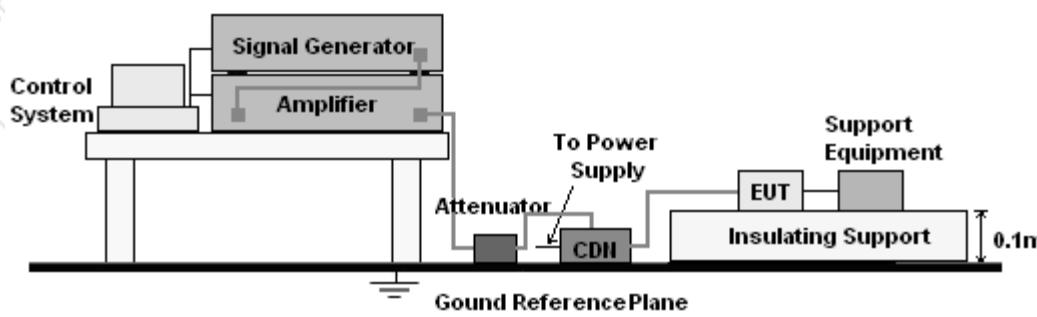
The EUT is powered by DC, no requirements for this item.



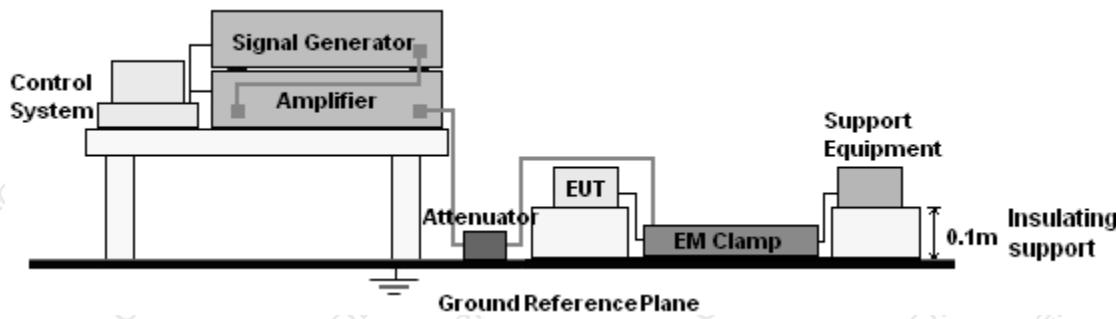
14. INJECTED CURRENTS SUSCEPTIBILITY TEST

14.1 Block Diagram of EUT Test Setup

For input a.c. / d.c. power port:



For signal lines and control lines:



14.2 Test Standard

EN 55035, EN61000-4-6

14.3 Severity Levels and Performance Criterion

Severity Level 2: 3V(rms), 150KHz ~ 80MHz

Performance criterion: A

14.4 Test Procedure

- 1) Set up the EUT, CDN and test generator as shown on section 12.1
- 2) Let EUT work in test mode and measure.
- 3) The EUT and supporting equipment are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane at above 0.1-0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).
- 4) The disturbance signal described below is injected to EUT through CDN.
- 5) The EUT operates within its operational mode(s) under intended climatic conditions after power on.
- 6) The frequency range is swept from 150KHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1KHz sine wave
- 7) The rate of sweep shall not exceed 1.5×10^{-3} decades/s. Where the frequency is swept



incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.

8) Recording the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

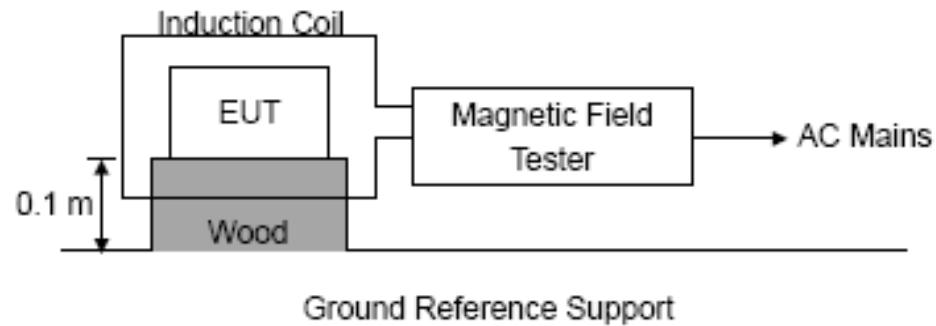
14.5 Test Result

The EUT is powered by DC, no requirements for this item.



15. MAGNETIC FIELD IMMUNITY TEST

15.1 Block Diagram of EUT Test Setup



15.2 Test Standard

EN 55035, EN61000-4-8

15.3 Severity Levels and Performance Criterion

Severity Level 1: 1A/m

Performance criterion: B

15.4 Test Procedure

The EUT shall be subjected to the test magnetic field by using the induction coil of standard dimensions (1m*1m) and shown in Section 13.1. The induction coil shall then be rotated by 90° in order to expose the EUT to the test field with different orientations.

15.5 Test Result

PASS

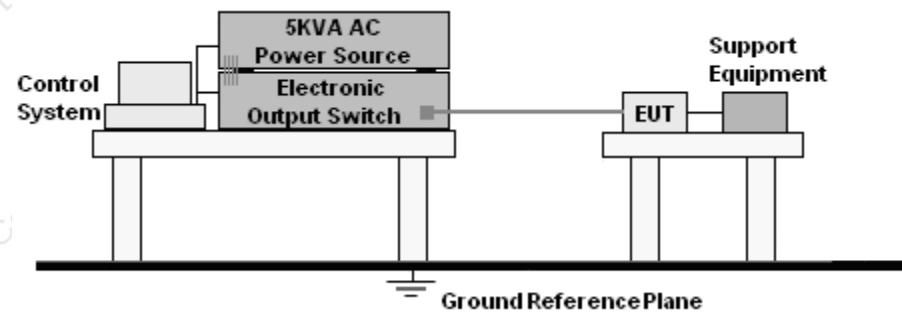
Please refer to the following page.

MS Test Data					
Temperature:	24.5°C		Humidity:	53%	
Power Supply :	AC 230V/50Hz DC 3.7V		Test Mode:	Mode 1/2/3	
Environmental Phenomena	Test specification	Units	Coil Orientation	Performance Criterion	Result
Magnetic Field	1	A/m	X	A	PASS
			Y	A	PASS
			Z	A	PASS
Note: N/A					



16. VOLTAGE DIPS AND INTERRUPTIONS TEST

16.1 Block Diagram of EUT Test Setup



16.2 Test Standard

EN 55035, EN61000-4-11

16.3 Severity Levels and Performance Criterion

Input and Output AC Power Ports.

- Voltage Dips.
- Voltage Interruptions.

Environmental Phenomena	Test Specification	Units	Performance Criterion
Voltage Dips	>95 0.5	% Reduction period	B
	30 25	% Reduction period	C
Voltage Interruptions	>95 250	% Reduction period	C

16.4 Test Procedure

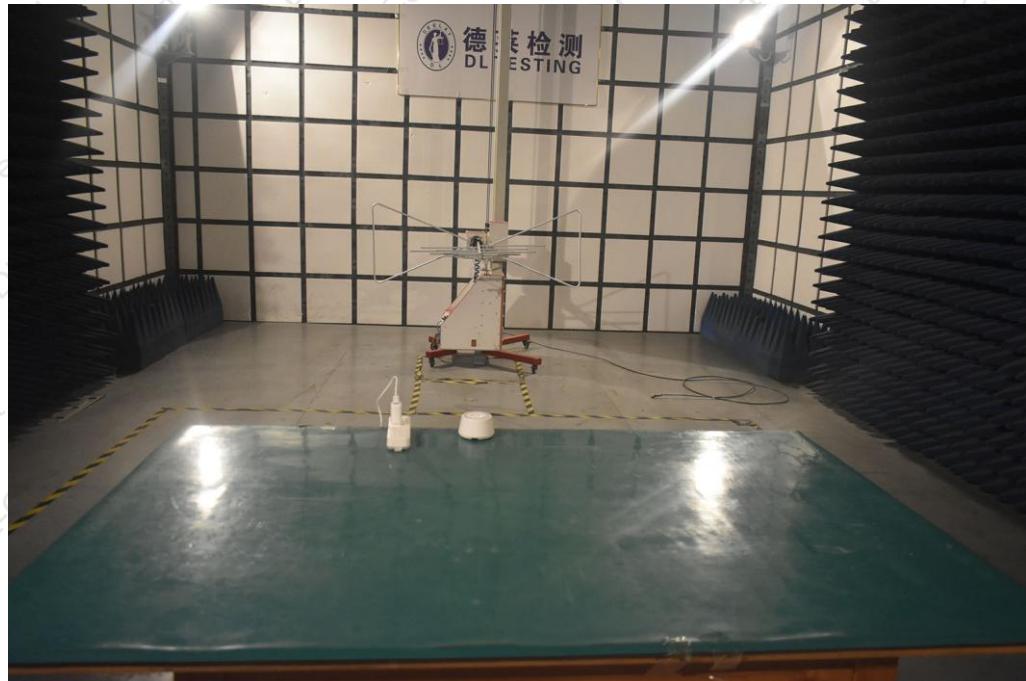
- 1) Set up the EUT and test generator as shown on section 14.1
- 2) The interruption is introduced at selected phase angles with specified duration. There is a 3mins minimum interval between each test event.
- 3) After each test a full functional check is performed before the next test.
- 4) Repeat procedures 2 & 3 for voltage dips, only the level and duration is changed.
- 5) Record any degradation of performance.

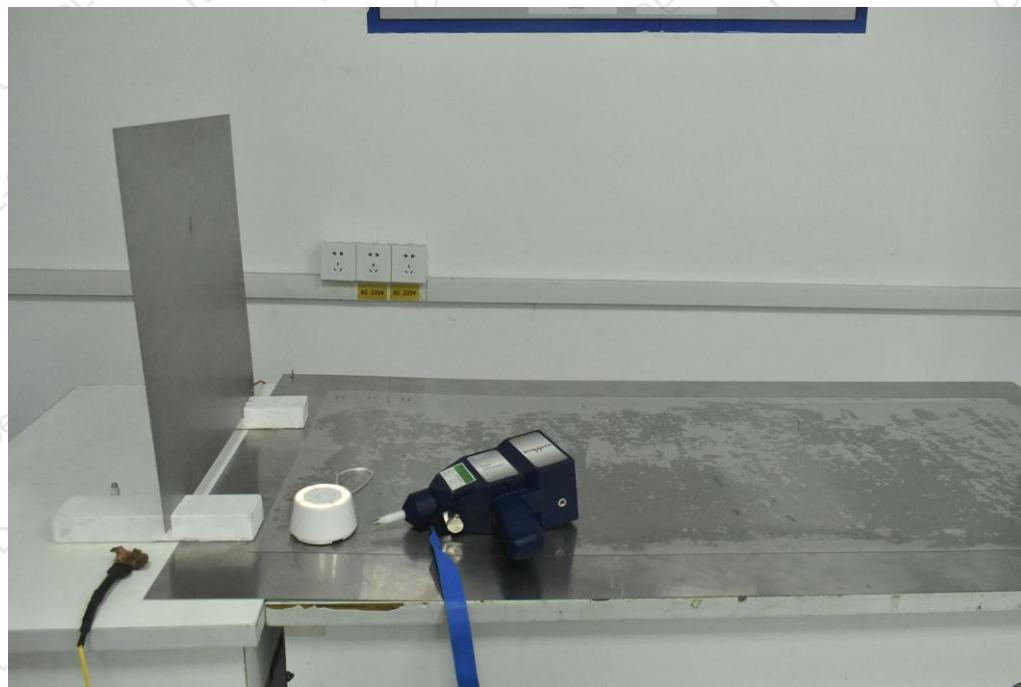
16.5 Test Result

The EUT is powered by DC, no requirements for this item.



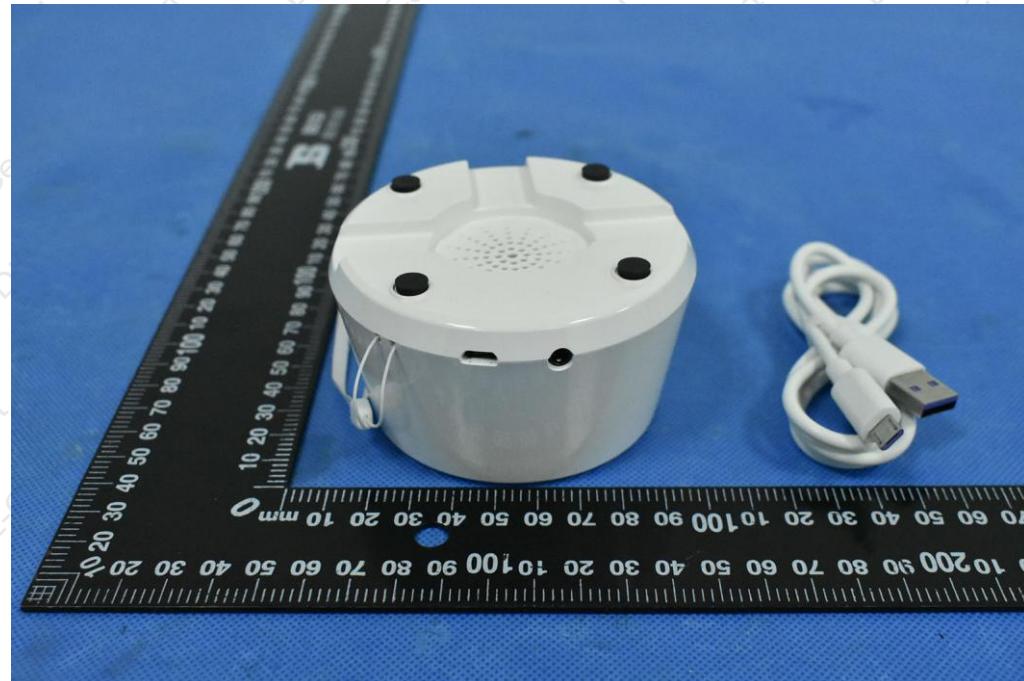
17. SETUP PHOTOGRAPHS

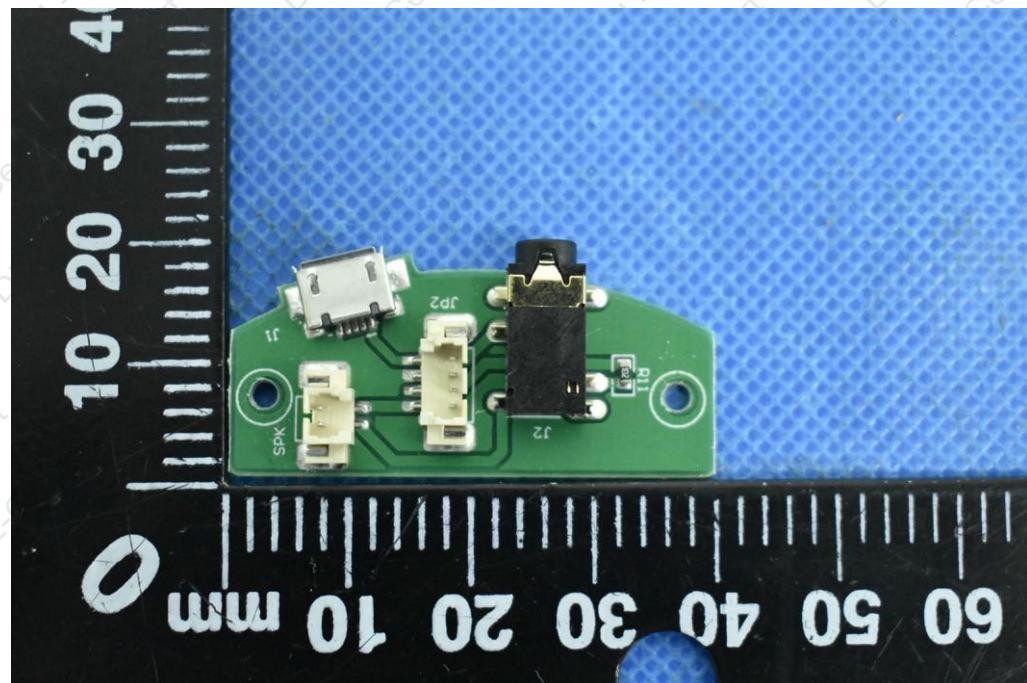
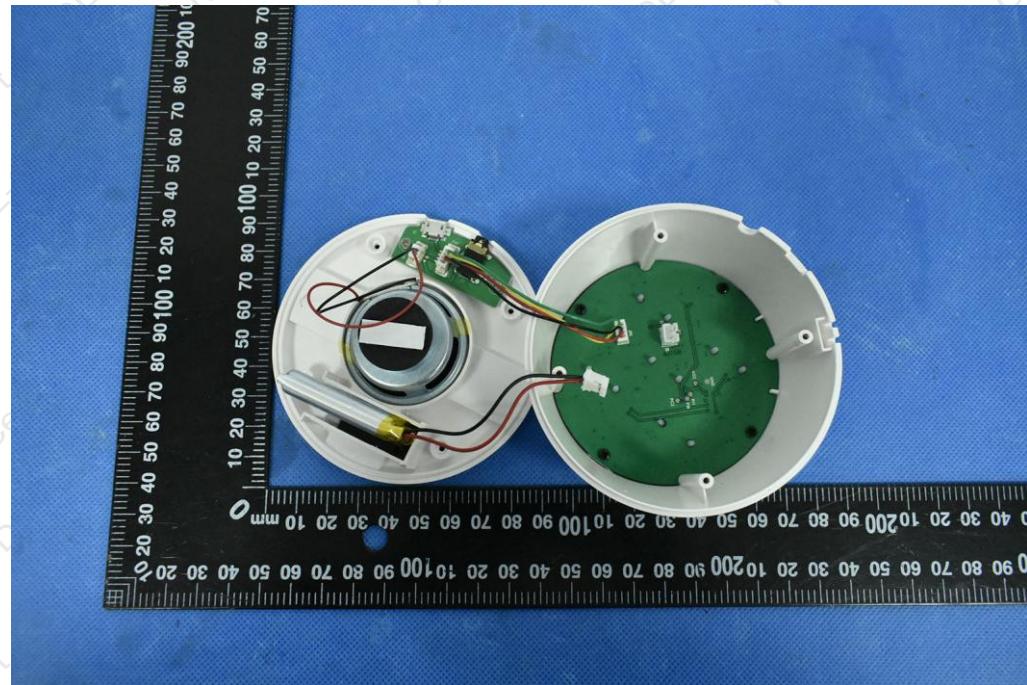


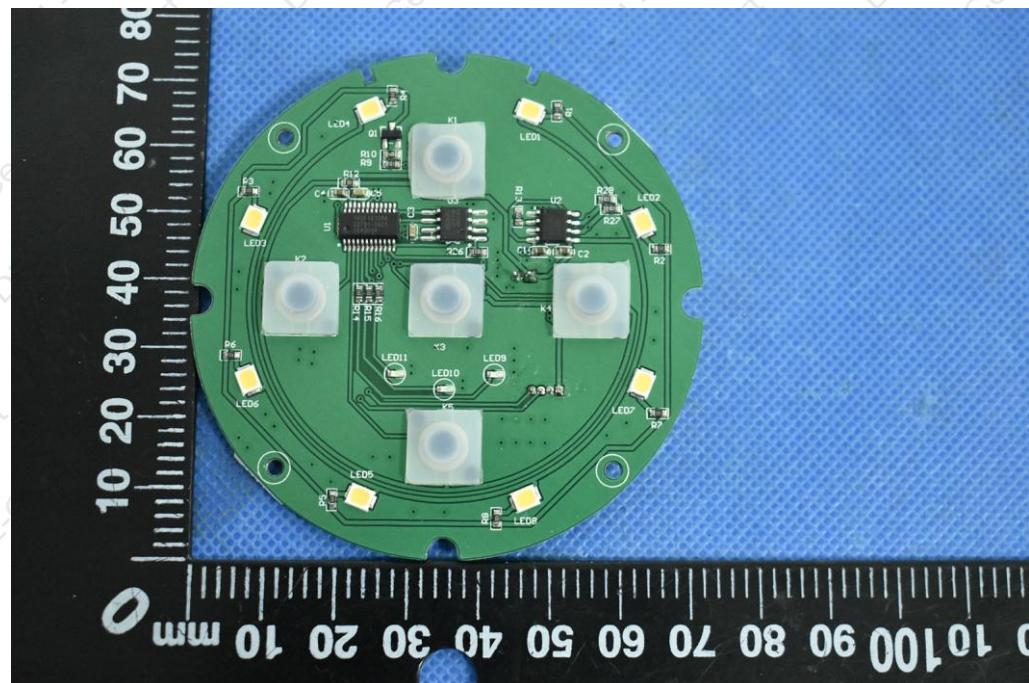
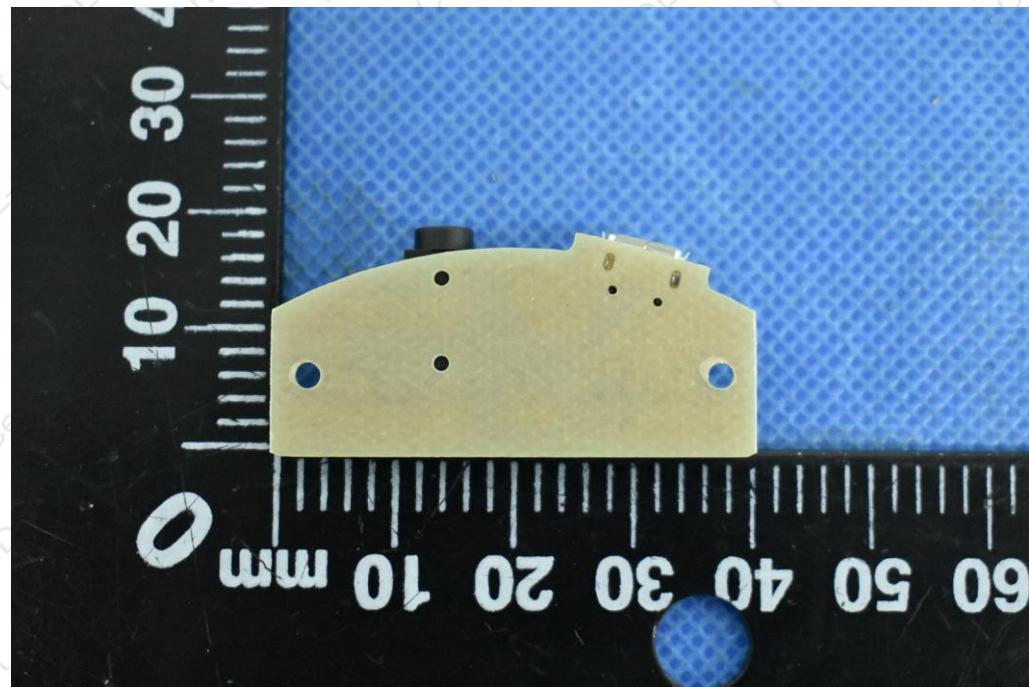


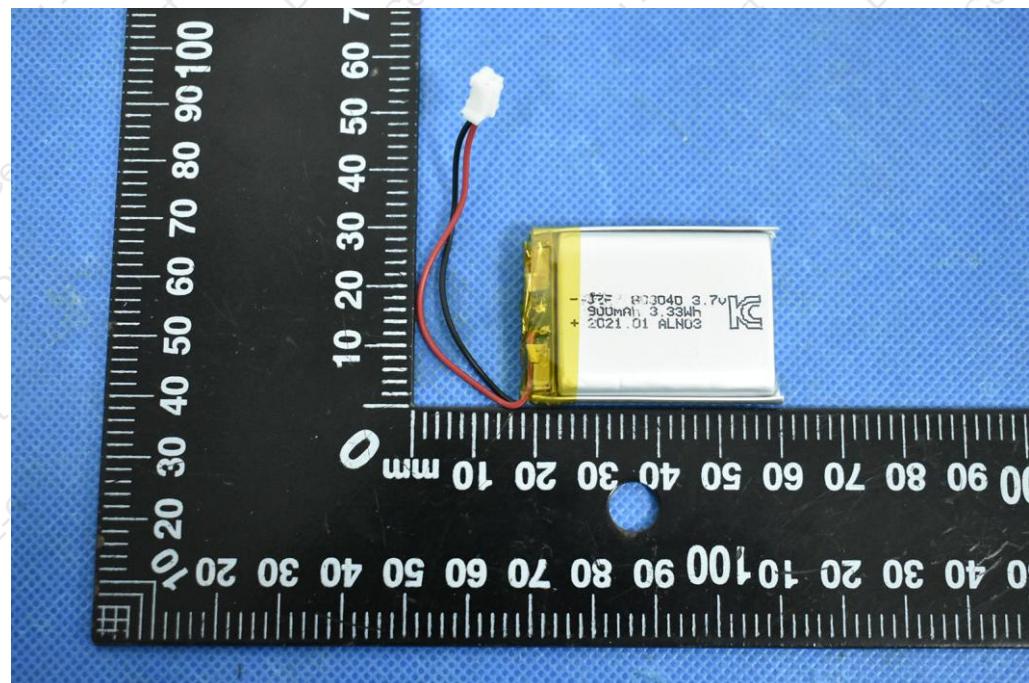
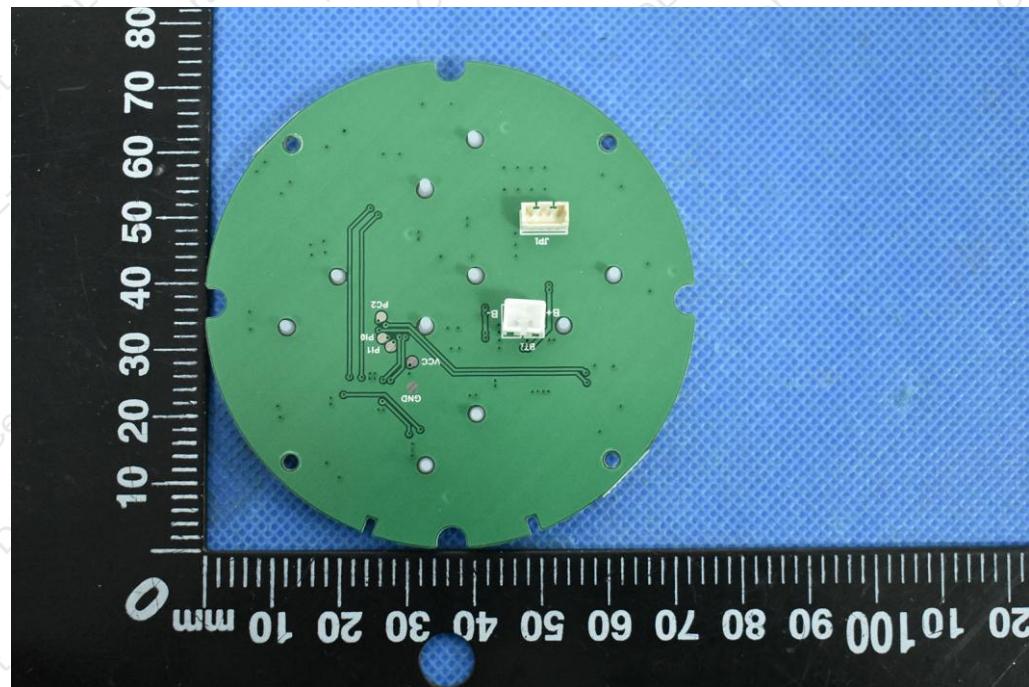


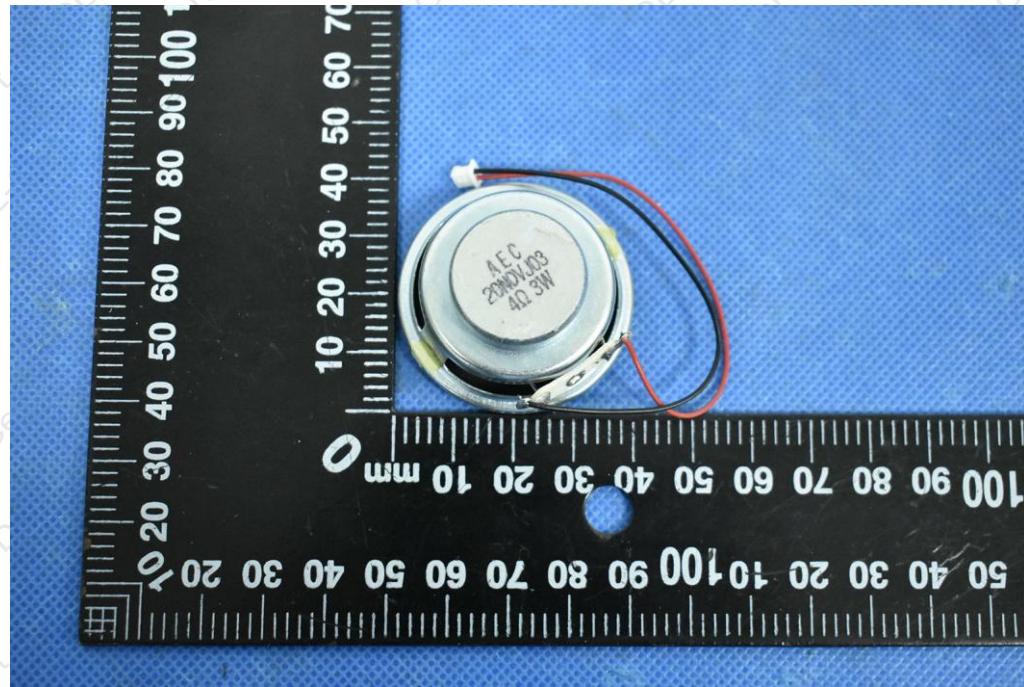
18. EUT PHOTOGRAPHS











***** END OF REPORT *****



Certificate of Conformity

Certificate Number: DL-20210322012C

Applicant: Shenzhen Waweis Technology Co., Ltd.
Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Manufacturer: Shenzhen Waweis Technology Co., Ltd.
Room 201 of A Building, Room 201 and 101 of C Building, No.24-1 Longxing Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

Product: White Noise Machine

Model No.: WA-SA-01
WA-SA-02, WA-SA-03, WA-SA-04, WA-SA-05

Test Standard: EN 55032:2015+A11:2020
EN IEC 61000-3-2:2019+A1:2020, EN 61000-3-3:2013+A1:2019
EN 55035:2017/A11:2020
EN 61000-4-2:2009, EN IEC 61000-4-3:2020, EN 61000-4-4:2012,
EN 61000-4-5:2014+A1:2017, EN 61000-4-6:2014/AC:2015,
EN 61000-4-8:2010, EN IEC 61000-4-11:2020

The EUT described above has been tested by us with the listed standards and found in compliance with the council EMC directive 2014/30/EU. It is possible to use CE marking to demonstrate the compliance with this EMC Directive. It is only valid in connection with the test report number: DL-20210322012E.

CE



This certificate of conformity is based on a single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole product and relevant. Without the written approval, It is not permitted to use the test lab's logo.

Shenzhen DL Testing Technology Co., Ltd.
101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

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