Flux Compliance Service Laboratory.

Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 http://www.fcs-lab.com

Certificate of Conformity

Certificate No.	: FCSR20221117201
Product	: Q11 lint remover
Brand Name	: N/A
Model Name	: Q11
Series Model	: N/A
Holder	: Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	: Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Manufacturer	: Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	: Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Report No.	: FCS202211172E01
Applied Standards	: EN IEC 55014-1:2021
	EN IEC 55014-2:2021
	EN IEC 61000-3-2:2019/A1:2021
	EN 61000-3-3:2013/A2:2021

The applicant of the certificate is authorized to use this certificate in connection with EC declaration of conformity to the Directive. The certificate is only applicable to the equipments described above. The submitted sample of the above product has been tested according with Standard(s) used for showing compliance with the essential requirements in the specified directive(s): **2014/30/EU Directive**

CE

Approved by: Jack Wang

Nov 29.2022

Jack Wang/Technical Director

Flux Compliance Service Laboratory.

Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial,
Song shan lake Dongguan Tel: 769-27280901 http://www.fcs-lab.com

ATTESTATION OF CONFORMITY

Certificate No.	: FCSR20221117202
Product	: Q11 lint remover
Brand Name	: N/A
Model(s) No.	: Q11
Series Model	: N/A
Holder	: Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	: Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Manufacturer	: Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	: Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Report No.	: FCS202211172E02

This product has been tested according to the following standard:
United States FCC Part 15 Subpart B and ANSI C63.4-2014;

This device has been tested and found to comply with the stated standard(s), which is(are) Required by the Federal Communications Committee, The test results are indicated in the test report are applicable only to the test sample identified in the report.

Approved by: Jack Wang

Nov 29. 2022

Jack Wang/Technical Director

FCC Test Report

Report No: FCS202211172E02

Issued for

Applicant:	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address:	Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Product Name:	Q11 lint remover
Brand Name:	N/A
Model Name:	Q11
Series Model:	N/A
Test Standard:	FCC Part 15 SUBPART B

TEST RESULT CERTIFICATION

Applicant's Name	:	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	:	Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Manufacture's Name	:	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	:	Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng

Product Description

Product Name	:	Q11 lint remover
Brand Name	:	N/A
Model Name	:	Q11
Series Model	:	N/A
Test Standards	:	FCC Part15 Subpart B
Test Procedure	:	ANSI C63.4-2014

This device described above has been tested by FCS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
This report shall not be reproduced except in full, without the written approval of FCS, this document may be altered or revised by FCS, personal only, and shall be noted in the revision of the document..

Date of Test	:	
Date (s) of performance of tests.	:	Nov 24. 2022 ~Nov 29. 2022
Date of Issue	:	Nov 29. 2022
Test Result	:	Pass

Tested by : Sam Wang
(Sam Wang)

Reviewed by : Duke Qian
(Duke Qian)

Approved by : Jack Wang
(Jack Wang)

Table of Contents **Page**

Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	Nov 29. 2022	FCS202211172E02	N/A	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Rules and Regulations Part 15 Subpart B AND ANSI C63.4-2014.			
No.	Test Item	Result	Remark
1	Conducted Emission	PASS	--
2	Radiated Emission	PASS	--

1.1 TESTING LABORATORY

Company Name:	Flux Compliance Service Laboratory
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
Laboray Accreditations	
FCC Test Firm Registration Number: 514908 CNAS Number： L15566 Designation number：CN0127 A2LA accreditation number：5545.01 ISED Number：25801	

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ±U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	±4.13 dB
2	Conducted Emission (150KHz-30MHz)	±4.74 dB
3	All emissions,radiated(<1G) 30MHz-1000MHz	±5.2 dB
4	All emissions,radiated(>1G) 1000MHz -3000MHz	±4.66 dB
5	All emissions,radiated(<1G) 3000MHz -6000MHz	±5.31 dB

1.3 EQUIPMENTS LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESRP 3	FCS-E001	2022.01.28	2023.01.27
Signal Analyzer	R&S	FSV40-N	FCS-E012	2022.01.28	2023.01.27
Active loop Antenna	ZHINAN	ZN30900C	FCS-E013	2022.01.28	2023.01.27
Bilog Antenna	SCHWARZBECK	VULB 9168	FCS-E002	2022.01.28	2023.01.27
Horn Antenna	SCHWARZBECK	BBHA 9120D	FCS-E003	2022.01.28	2023.01.27
SHF-EHF Horn Antenna (18GHz-40GHz)	A-INFO	LB-180400-KF	FCS-E018	2022.01.28	2023.01.27
Pre-Amplifier(20MHz-3GHz)	EMCI	EM330N	FCS-E004	2022.01.28	2023.01.27
Pre-Amplifier (1GHz-18GHz)	N/A	TSAMP-0518SE	FCS-E014	2022.01.28	2023.01.27
Temperature & Humidity	HTC-1	victor	FCS-E005	2022.01.28	2023.01.27
Testing Software	EZ-EMC(Ver.STSLAB 03A1 RE)				

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	FCS-E020	2022.01.28	2023.01.27
LISN	R&S	ENV216	FCS-E007	2022.01.28	2023.01.27
LISN	ETS	3810/2NM	FCS-E009	2022.01.28	2023.01.27
Temperature & Humidity	HTC-1	victor	FCS-E008	2022.01.28	2023.01.27
Testing Software	EZ-EMC(Ver.EMC-CON 3A1.1)				

Test Equipment Calibration

All of the test equipment is effective use and calibration certification institution, GRGT, the address is 163 tianhe district in huangpu road xiping cloud road .Guangzhou,China

2. GENERAL INFORMATION

2.1 General Description Of The EUT

Product Name	Q11 lint remover
Trade Name	N/A
Model Name	Q11
Series Mode	N/A
Model Difference	N/A
Power Supply	DC 5V⎓1A 4W
Battery	DC 3.7V
Hardware version number	V1.0
Software version number	V1.0

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.1 DESCRIPTION OF THE TEST MODES

To investigate the maximum EUT 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	full load

Note: The test modes were carried out for all operation modes. Only worst case will be show in this report.

3. CONDUCTED EMISSION MEASUREMENT

3.1 Power Line Conducted Emission Limits

Operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

FREQUENCY (MHz)	Conducted Emissionlimit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	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

3.2 Test Procedure

a. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4.

b. Support equipment, if needed, was placed as per ANSI C63.4.

c. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

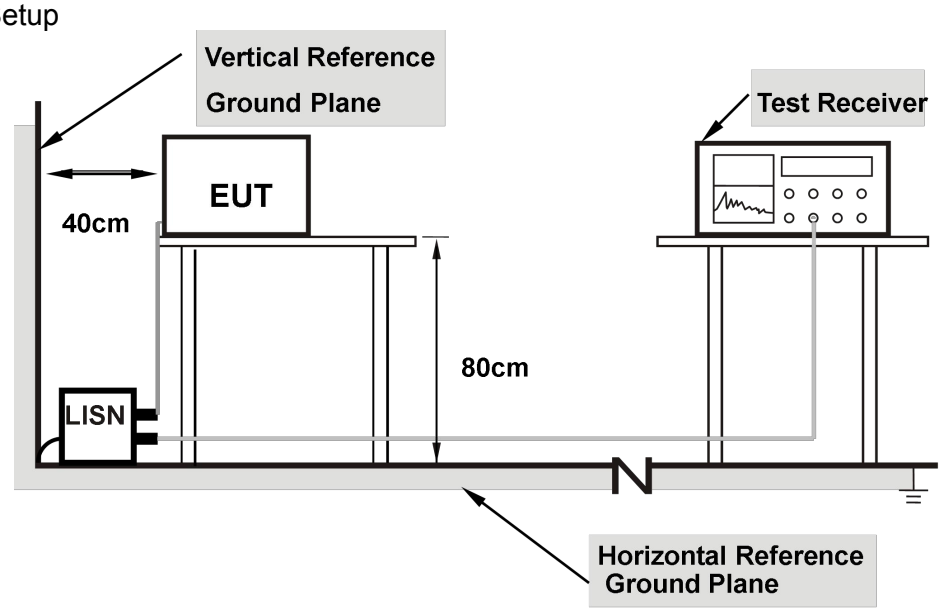
d. If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.

e. All support equipments received AC power from a second LISN, if any.

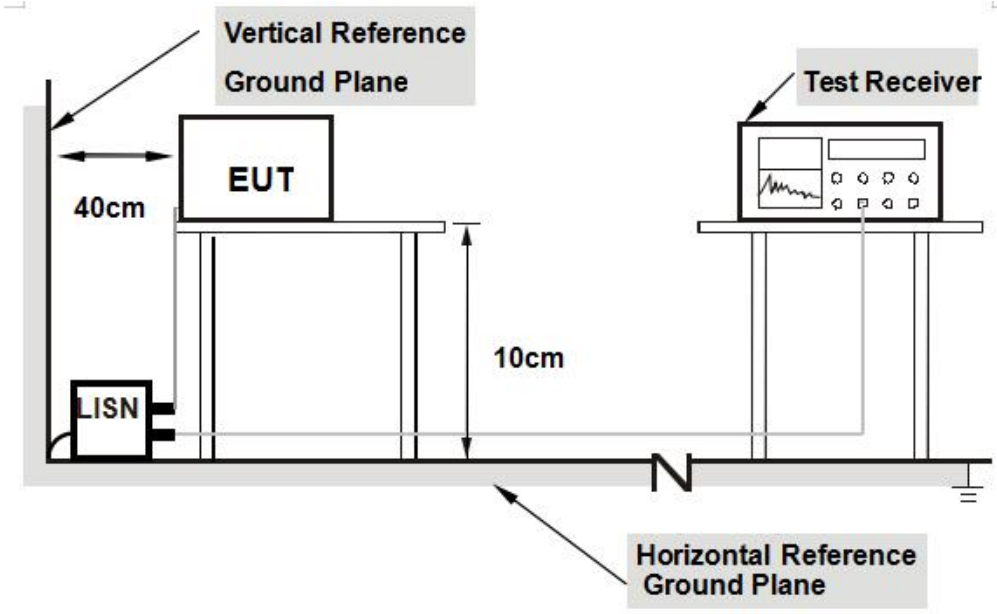
f. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.

g. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes. and the test data has been listed in 3.4

3.3 Test Setup



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

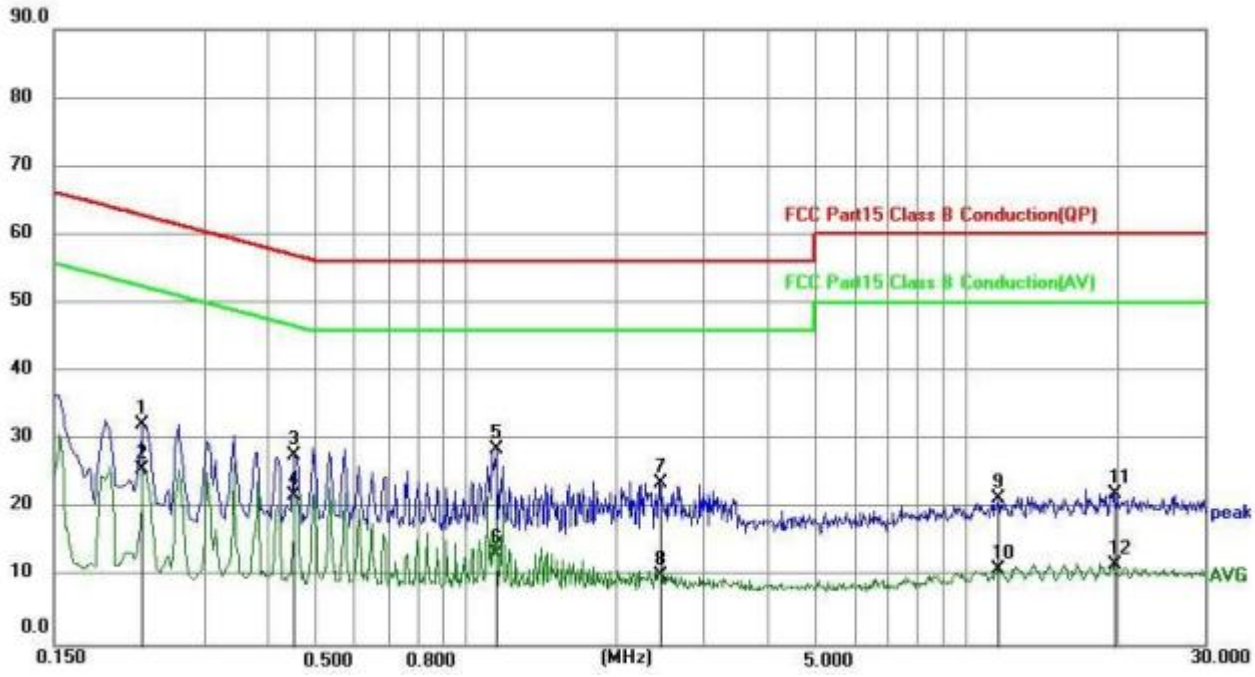


Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 10 cm from EUT and at least 10 cm from other units and other metal planes support. units.

3.4 Test Result

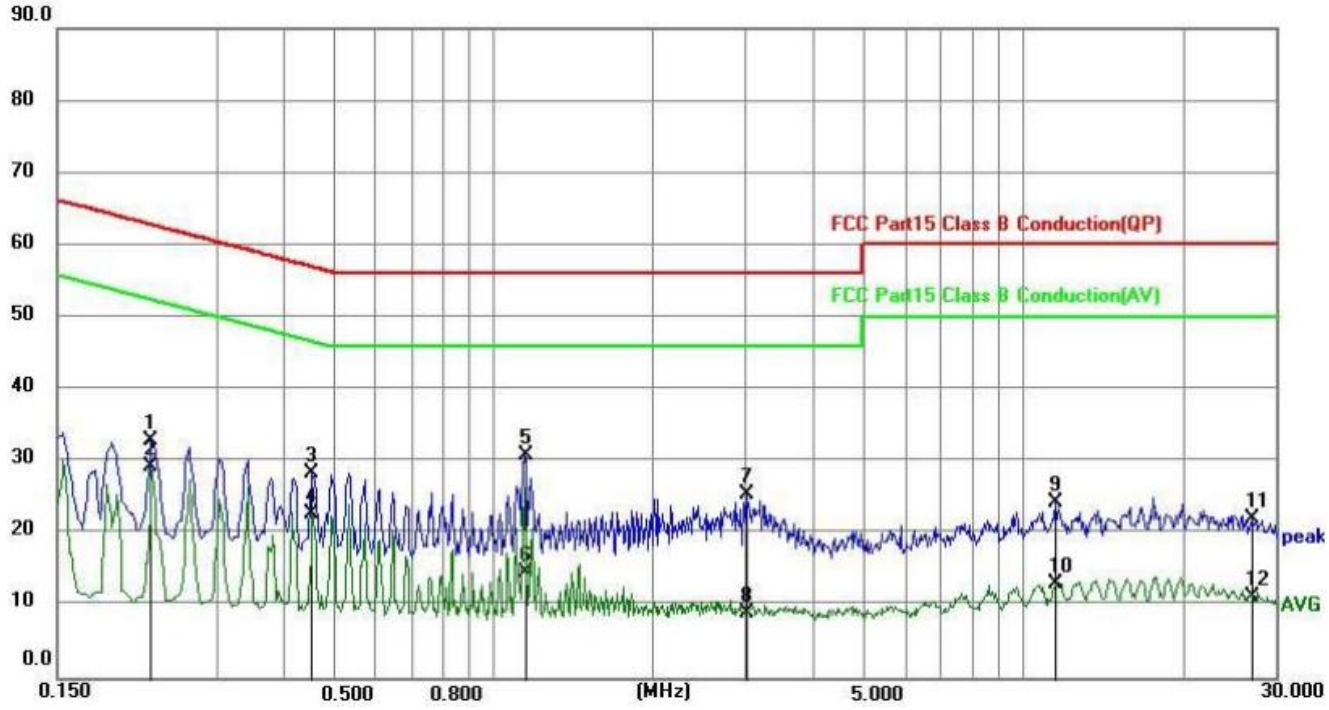
Temperature:	23.5℃	Relative Humidity:	59%
Phase:	L	Test Mode:	Mode 1
Test Voltage:	DC 5V		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2265	22.84	9.53	32.37	62.58	30.21	QP
2	0.2265	16.16	9.53	25.69	52.58	26.89	AVG
3	0.4560	18.15	9.56	27.71	56.77	29.06	QP
4	0.4560	12.28	9.56	21.84	46.77	24.93	AVG
5	1.1490	19.20	9.57	28.77	56.00	27.23	QP
6	1.1490	3.74	9.57	13.31	46.00	32.69	AVG
7	2.4450	14.07	9.58	23.65	56.00	32.35	QP
8	2.4450	0.61	9.58	10.19	46.00	35.81	AVG
9	11.6700	11.78	9.66	21.44	60.00	38.56	QP
10	11.6700	1.40	9.66	11.06	50.00	38.94	AVG
11	19.8330	12.44	9.75	22.19	60.00	37.81	QP
12	19.8330	2.01	9.75	11.76	50.00	38.24	AVG



Temperature:	23.5℃	Relative Humidity:	59%
Phase:	N	Test Mode:	Mode 1
Test Voltage:	DC 5V		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2265	23.54	9.53	33.07	62.58	29.51	QP
2	0.2265	19.75	9.53	29.28	52.58	23.30	AVG
3	0.4560	18.97	9.56	28.53	56.77	28.24	QP
4	0.4560	13.39	9.56	22.95	46.77	23.82	AVG
5	1.1445	21.40	9.57	30.97	56.00	25.03	QP
6	1.1445	5.17	9.57	14.74	46.00	31.26	AVG
7	3.0120	15.94	9.60	25.54	56.00	30.46	QP
8	3.0120	-0.38	9.60	9.22	46.00	36.78	AVG
9	11.5395	14.70	9.80	24.50	60.00	35.50	QP
10	11.5395	3.26	9.80	13.06	50.00	36.94	AVG
11	27.0195	12.20	9.85	22.05	60.00	37.95	QP
12	27.0195	1.58	9.85	11.43	50.00	38.57	AVG



4. RADIATED EMISSION MEASUREMENT

4.1 Radiated Emission Limits

LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	PK=1MHz / 1MHz, AV=1 MHz /10 Hz

4.2 Test Procedure

a. The EUT is placed on a turntable, which is 0.8m above ground plane.

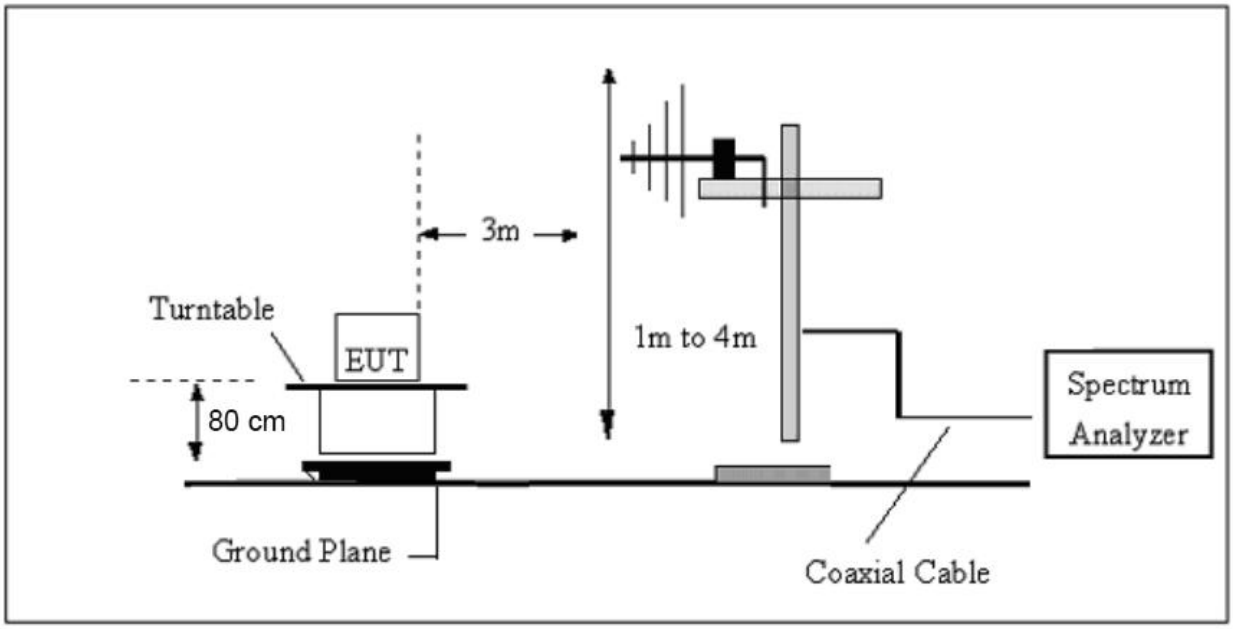
b. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

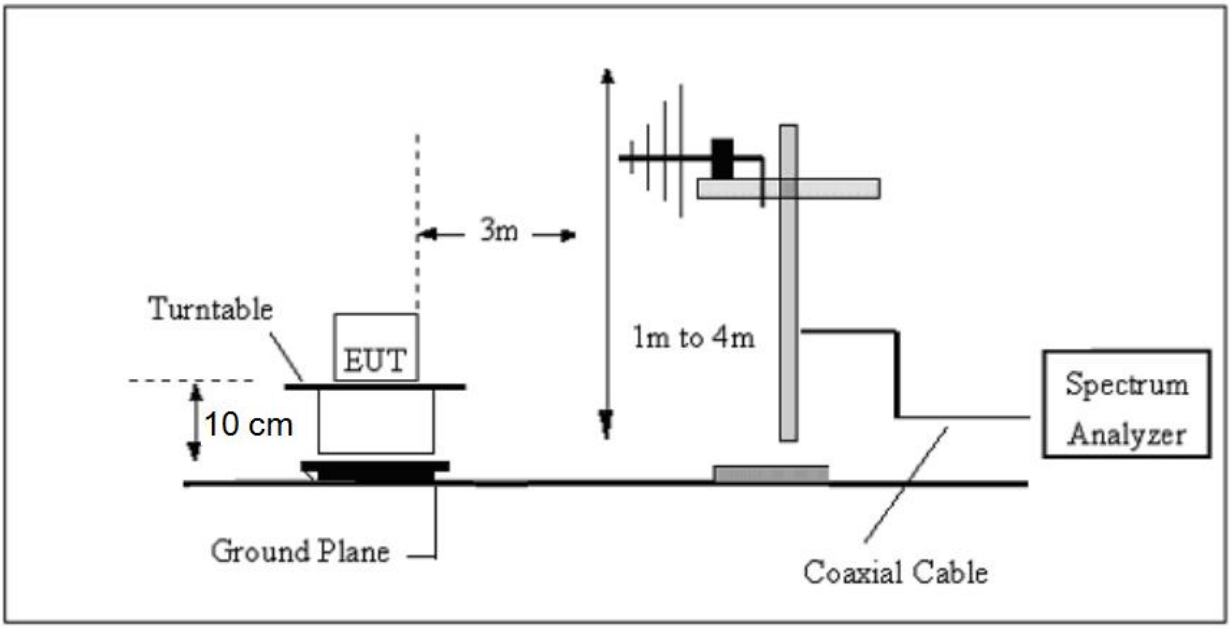
c. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.

d. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.

e. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical

4.3 Test setup



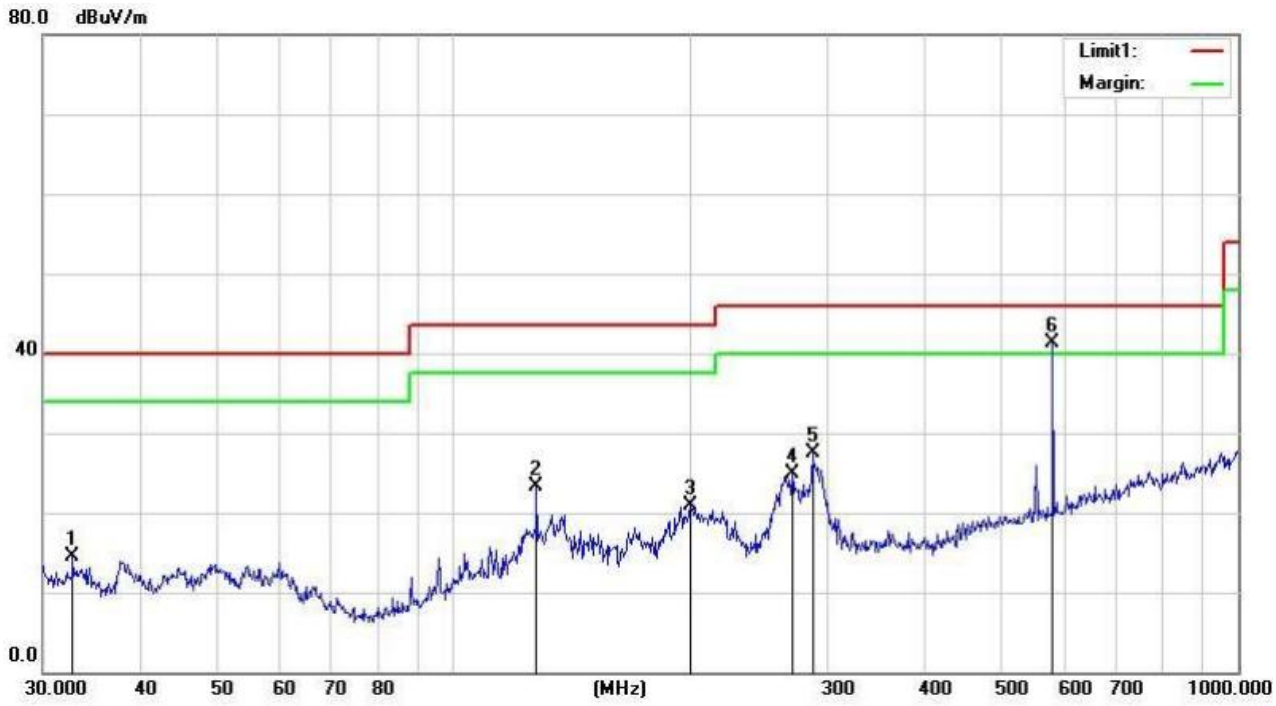


4.4 Test Results

Temperature:	23.5℃	Relative Humidity:	59%
Test Voltage:	DC 5V	Phase:	Horizontal
Test Mode:	Mode 1		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	32.7486	31.28	-16.73	14.55	40.00	-25.45	QP
2	127.6645	43.90	-20.54	23.36	43.50	-20.14	QP
3	200.6881	36.41	-15.48	20.93	43.50	-22.57	QP
4	270.3748	39.46	-14.64	24.82	46.00	-21.18	QP
5	286.9823	41.59	-14.12	27.47	46.00	-18.53	QP
6	580.7026	49.95	-8.61	41.34	46.00	-4.66	QP

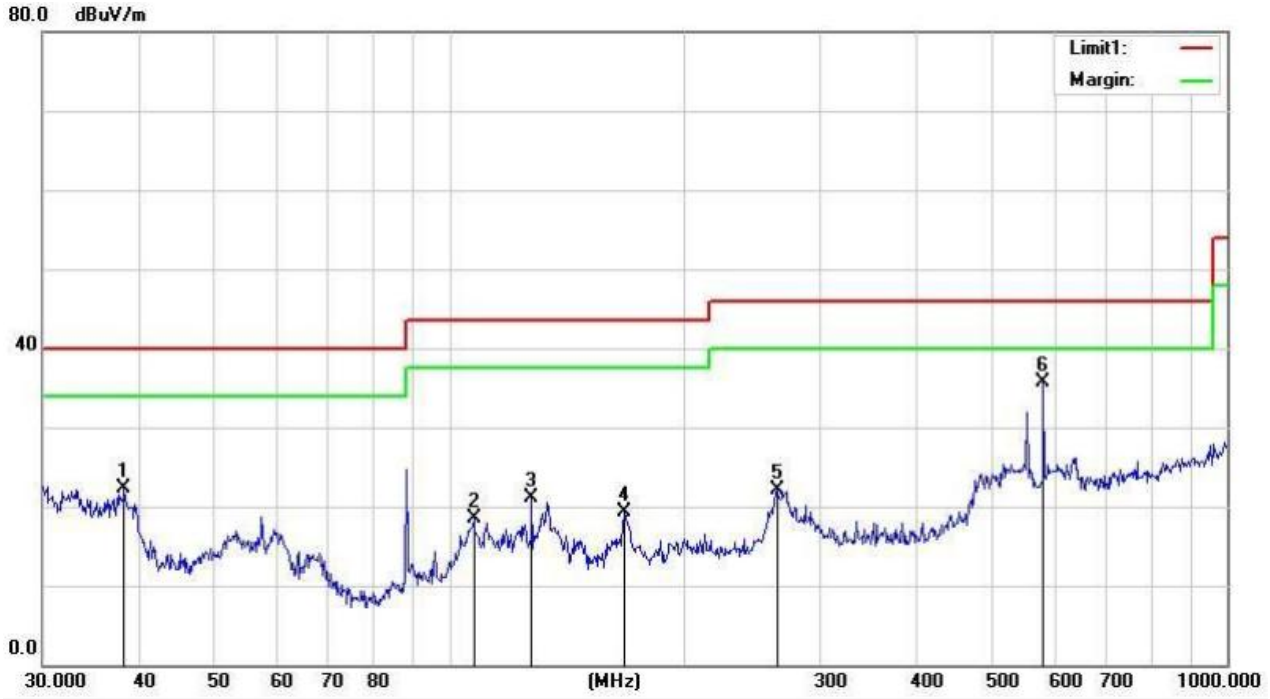
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.5℃	Relative Humidity:	59%
Test Voltage:	DC 5V	Phase:	Vertical
Test Mode:	Mode 1		

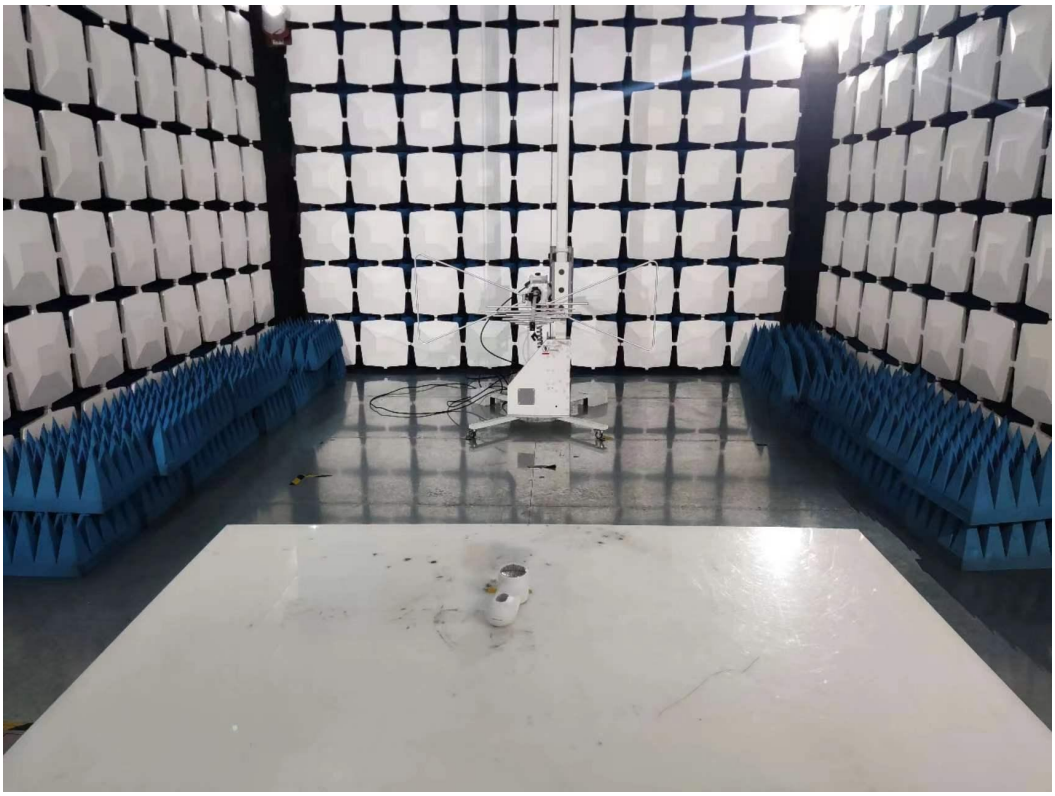
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	38.2120	39.44	-17.20	22.24	40.00	-17.76	QP
2	107.5101	35.70	-17.13	18.57	43.50	-24.93	QP
3	127.6645	41.62	-20.54	21.08	43.50	-22.42	QP
4	167.8243	38.16	-18.90	19.26	43.50	-24.24	QP
5	263.8190	36.90	-14.85	22.05	46.00	-23.95	QP
6	580.7026	44.28	-8.65	35.63	46.00	-10.37	QP

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



5. TEST SETUP

RE



CE

APPENDIX 1

Supplementary information for the User manual, labeling requirements

1. Devices subject to FCC part 15 Subpart B must be labelled with the following statement. The label can be affixed at any space external to the product except the battery door or detachable parts.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2)this device must accept any Interference received, including interference that may cause undesired operation.

2. In addition, for a Class B digital device or peripheral, the instructions furnished the user shall include the following statement, placed in a prominent location in the text of the manual:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with The instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -- Reorient or relocate the receiving antenna. -- Increase the separation between the equipment and receiver. -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -- Consult the dealer or an experienced radio/TV technician for help.
Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the use's authority to operate the equipment.

Note: If shielded cables or other specialized accessories are necessary for the unit to achieve compliance, a statement similar to the following should be added:

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

APPENDIX 2-PHOTOGRAPHS OF THE EUT

Photo 1

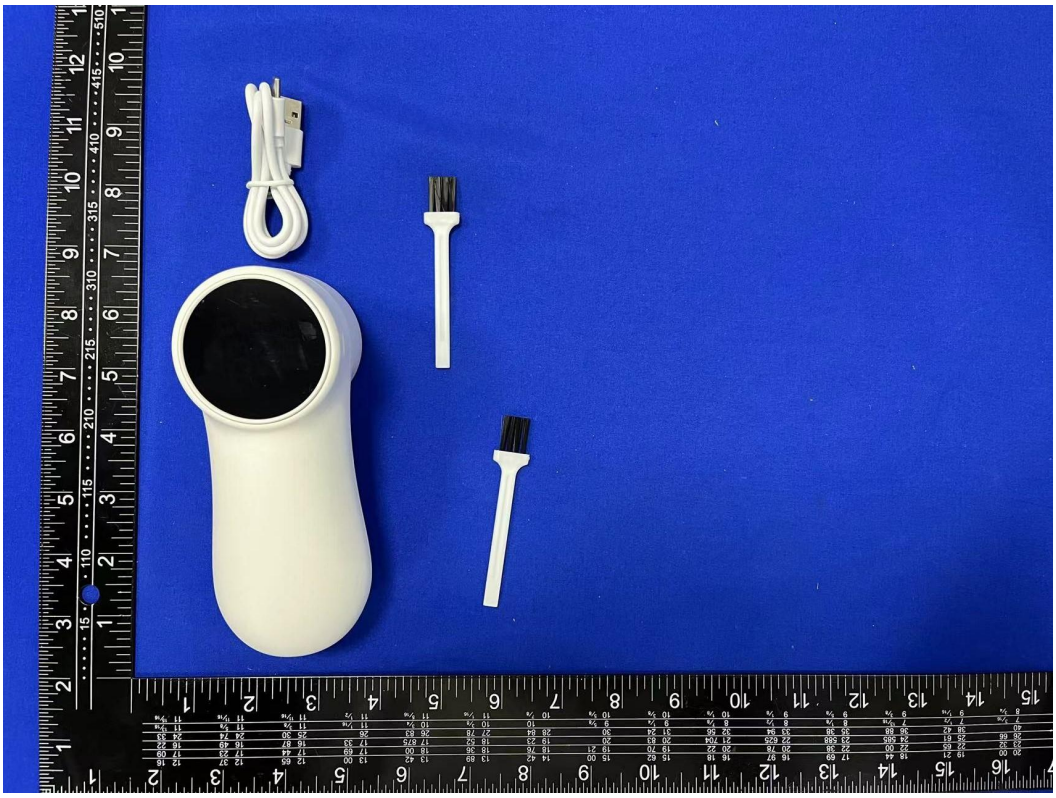


Photo 2

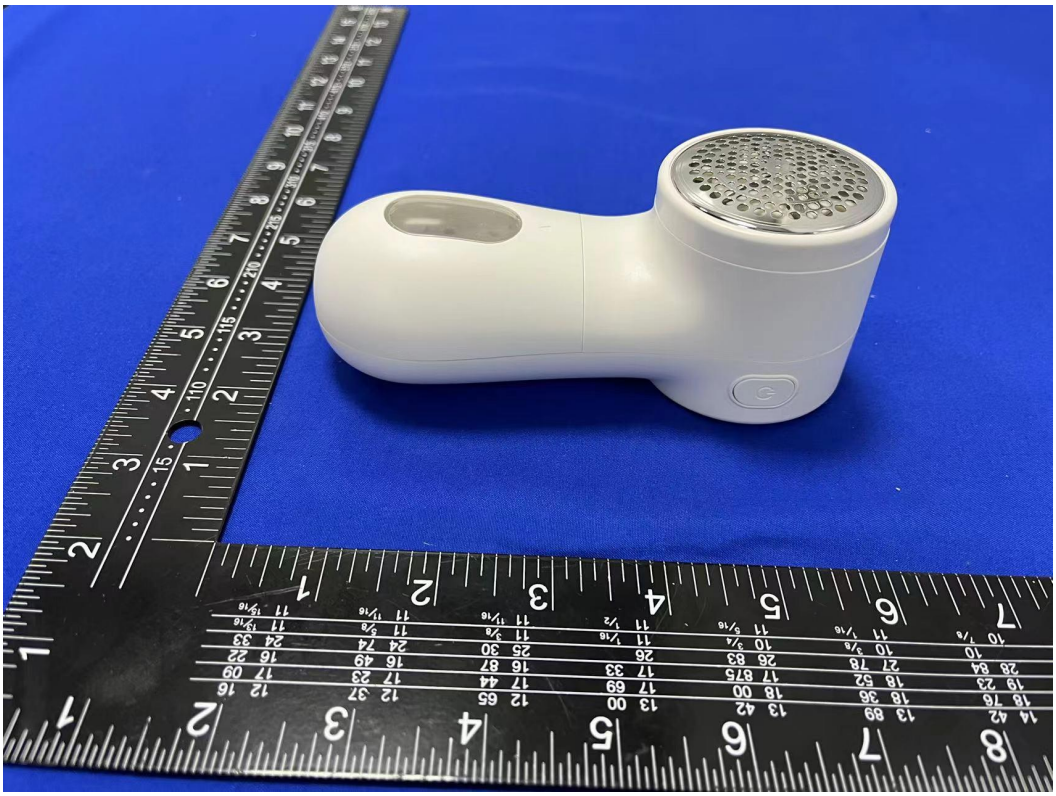


Photo 3

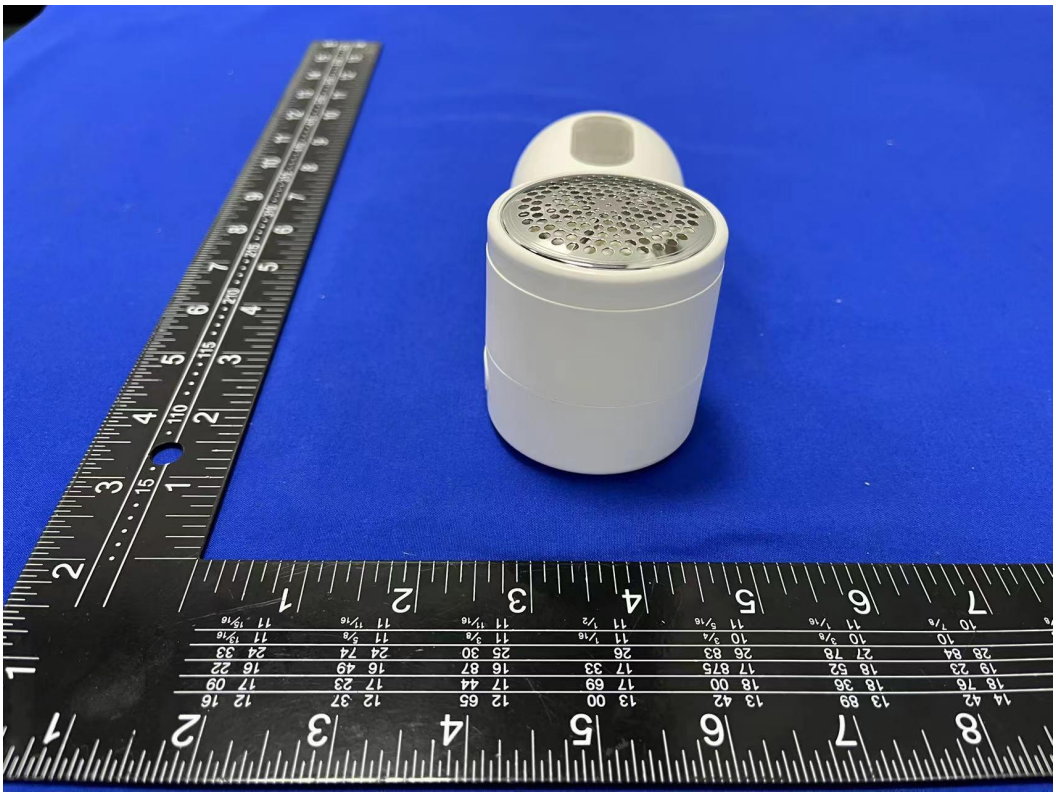


Photo 4

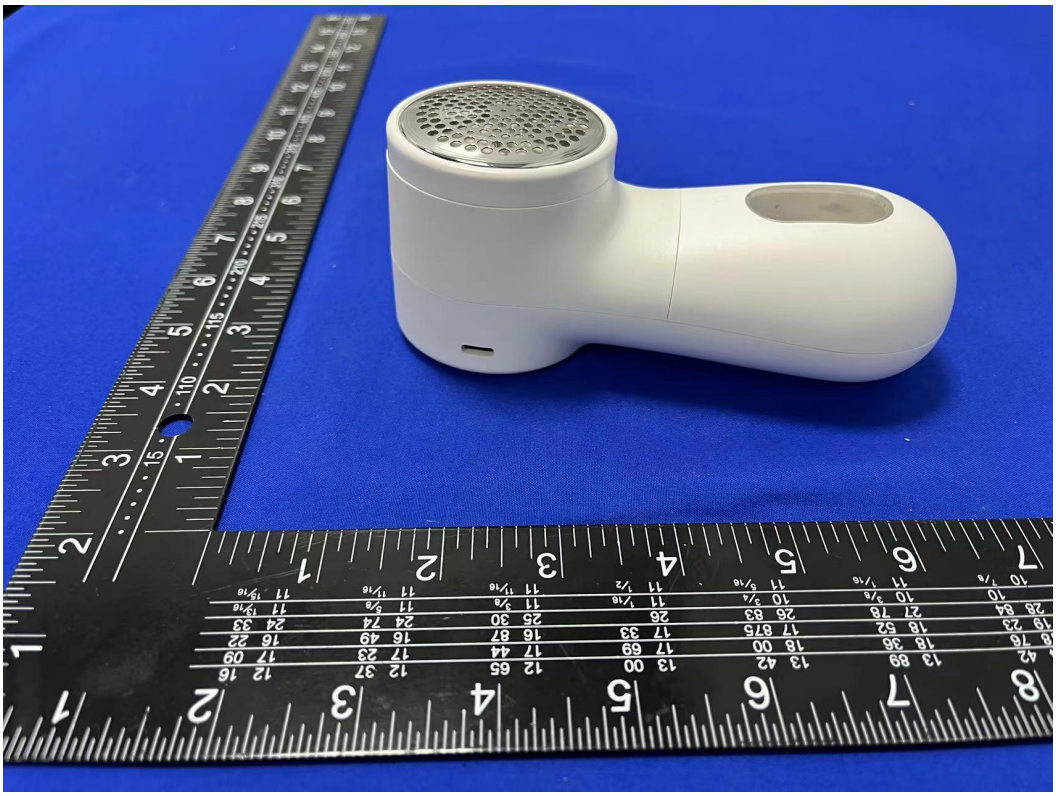


Photo 5

Photo 6

Photo 7

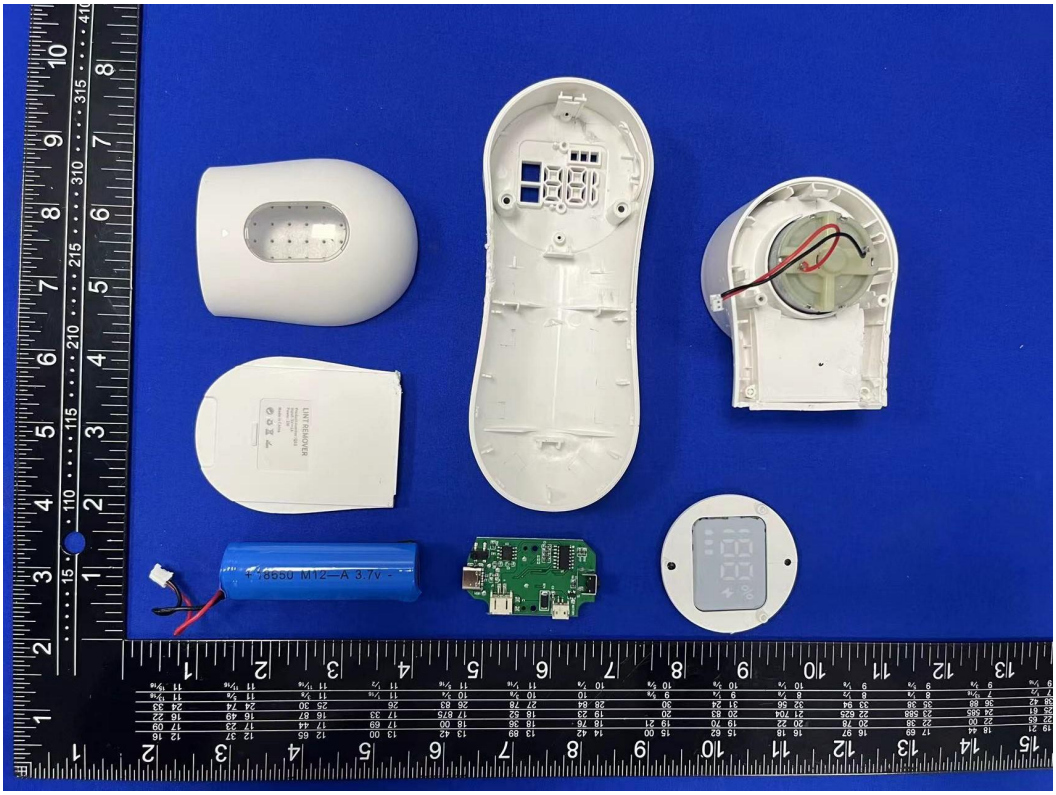


Photo 8

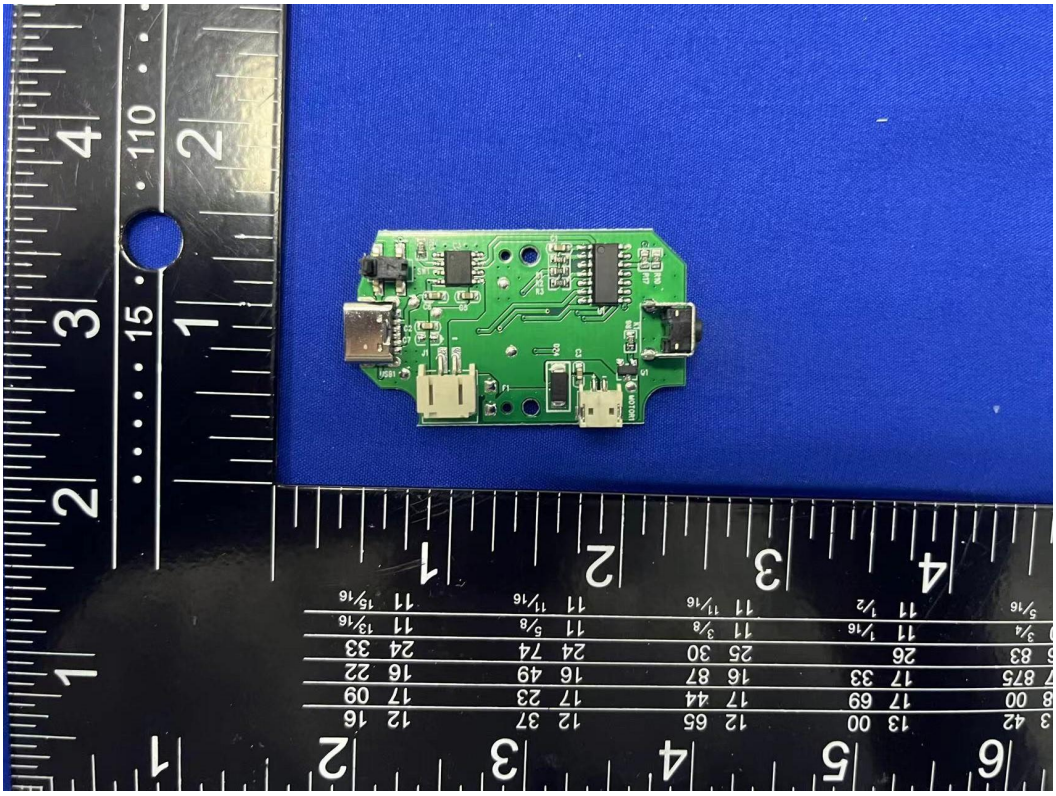


Photo 9

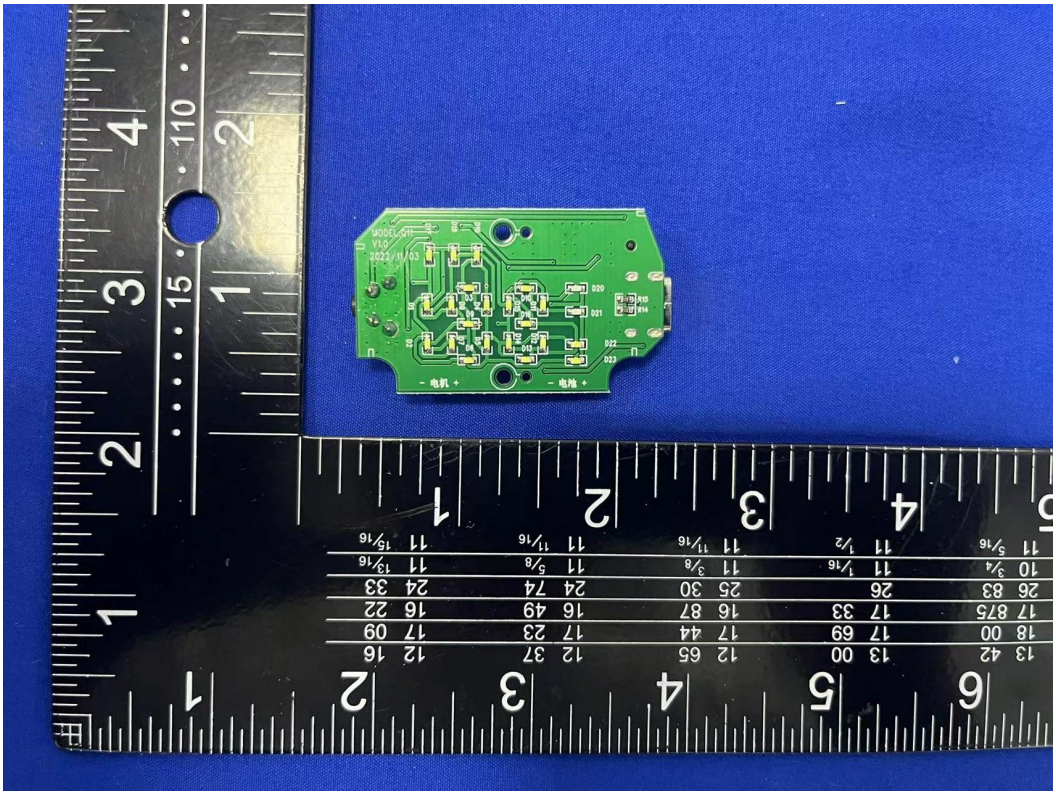
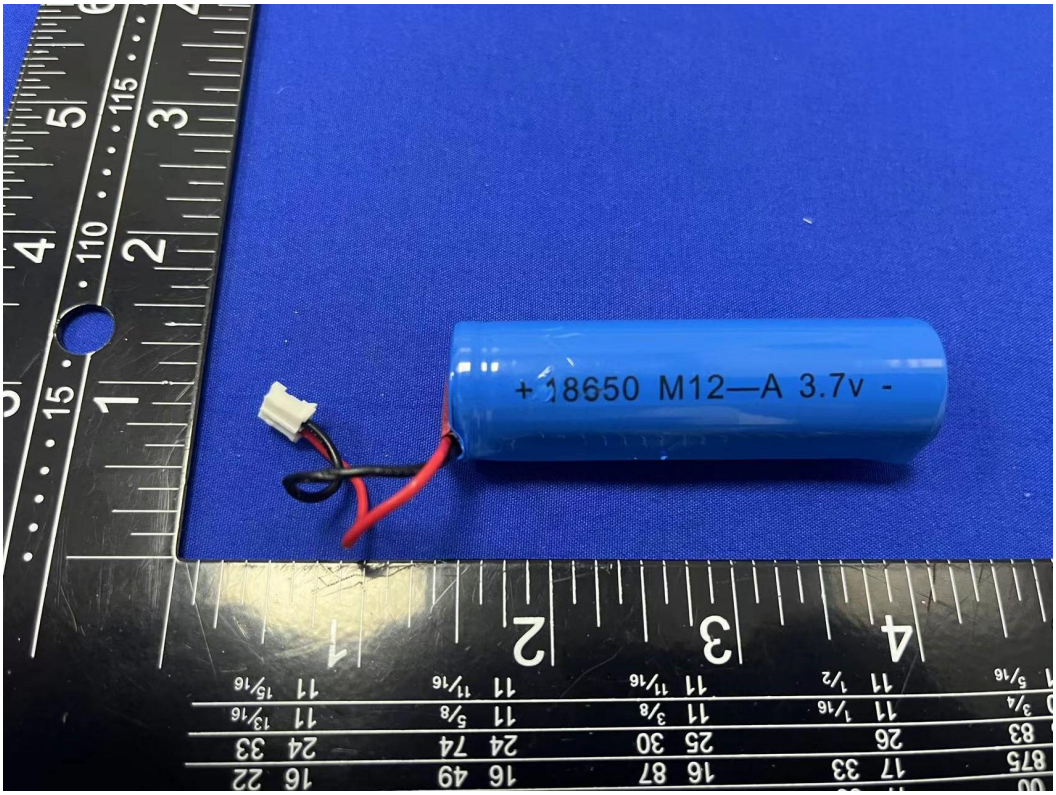


Photo 10



※※※※※END OF THE REPORT※※※※

TEST REPORT

Report No: FCS202211172H01

Issued for

Applicant:	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address:	Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Product Name:	Q11 lint remover
Brand Name:	N/A
Model Name:	Q11
Series Model:	N/A
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

TEST RESULT CERTIFICATION

Applicant's Name	:	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address:		Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Manufacture's Name	:	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address:		Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng

Product Description

Product Name	:	Q11 lint remover
Brand Name	:	N/A
Model Name:		Q11
Series Model	:	N/A
Test Method:	:	Please refer to the table below
Test Result:	:	Please refer to the table below

TEST REQUESTED	CONCLUSION	REMARK
European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	-
Phthalates Content – European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendments up to EU No. 2015/ 863 Annex II	PASS	-

Date of Test :		
Date (s) of performance of tests		Nov 24. 2022 ~Nov 29. 2022
Date of Issue	:	Nov 29. 2022
Test Result	:	Pass

Signed for and on behalf of Flux Compliance Service Laboratory

Jack Wang

Approved by:_____

Nov 29. 2022

Jack Wang/ Technical Director

Test Result：

RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU

No.	Sample Description	Test item	XRF Result	ChemicalTest (mg/kg)	Conclusion
1	white plastic	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	BL	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	N.D.	
2	green metal	Pb	BL	--	N.D
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
3	gray plastics	Pb	BL	--	N.D
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	BL	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	N.D.	
4	Black foam cotton	Pb	BL	--	N.D
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	BL	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	N.D.	
5	Label	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	BL	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	N.D.	

6	Transparency film	Pb	BL	--	N.D
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	BL	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	N.D.	
7	Silver metal sheet	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
8	White plastic	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	BL	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	N.D.	
9	Black plastic	Pb	BL	--	N.D
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	BL	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	N.D.	
10	Silver metal shell	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
11	Screw	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	

12	Taping	Pb	BL	--	N.D
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
13	Wire	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
14	Plastic	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
15	Screw	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
16	PCB	Pb	BL	--	Pass
		Cd	BL	--	
		Hg	BL	--	
		Cr(Cr(VI)	BL	--	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	

1. It is the result on total Br while test item on restricted substances in PBBs/PBDEs.It is the result on total Cr while test item on restricted substances is Cr(VI).
2. Screening test by XRF spectroscopy
XRF screening limits in mg/kg for regulated elements according to IEC62321:2013 Ed.1 Sec.6
& AnnesD.

Element	Polymer Material	Metallic Material	Composite Material
Pb	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤500-3σ≤X＜1500+3σ≤OL
Cd	BL≤70-3σ≤X＜130+3σ≤OL	BL≤70-3σ≤X＜130+3σ≤OL	LOD＜X＜150+3σ≤OL
Hg	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤500-3σ≤X＜1500+3σ≤OL
Cr	BL≤700-3σ＜X	BL≤700-3σ＜X	BL≤500-3σ＜X
Br	BL≤300-3σ＜X	--	BL≤250-3σ＜X

XRF detection limits in mg/kg for regulated elements in various material

Element	Polymer Material	Metallic Material	Composite Material
Pb	10	50	50
Cd	10	50	50
Hg	10	50	50
Cr	10	50	50
Br	10	50	50

Note： -BL = Under the XRF screening limit

-OL = Furture chemical test will be conducted while result is above the screening

-X =The symbol"X"marks the region where further investingation in necessary

-3σ=The reproducibility of analytical instruments

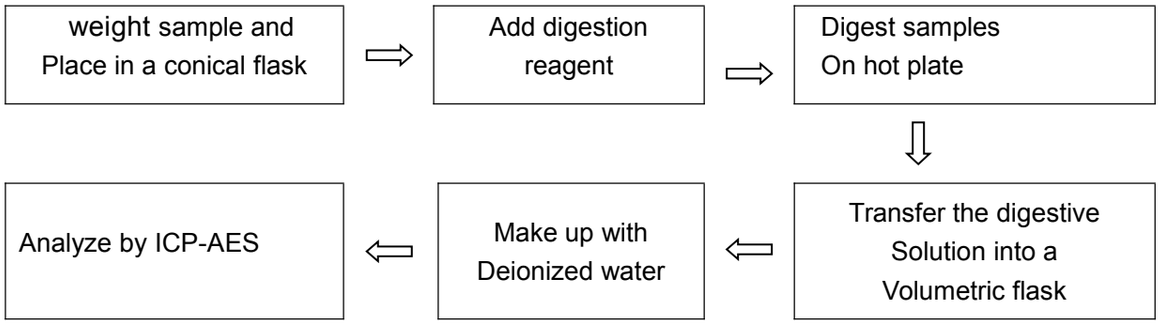
-LOD=Detection limit

3. Wet chemical test

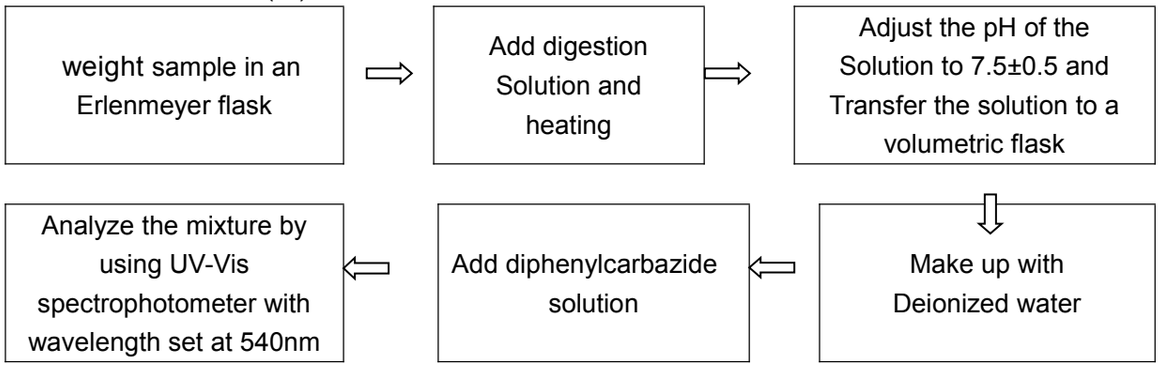
Test Item(s)	Test Method	Test Equipment	MDL
Pb	IEC62321-5:2013	ICP-AES	2
Cd	IEC62321-5:2013	ICP-AES	2
Hg	IEC62321-4:2013	ICP-AES	2
Cr(VI)	IEC62321-7-1:2015 IEC62321-7-2:2017	UV-Vis	2
PBB	IEC62321-6:2015	GC-MS	5
PBDE	IEC62321-6:2015	GC-MS	5
Dibutyl Phthalate(DBP)	IEC62321-8:2017	GC-MS	30
Benzylbutyl Phthalate (BBP)	IEC62321-8:2017	GC-MS	30
Di-(2-ethylhexyl) Phthalate(DEHP)	IEC62321-8:2017	GC-MS	30
Diisobutyl phthalate (DIBP)	IEC62321-8:2017	GC-MS	30

Test Process:

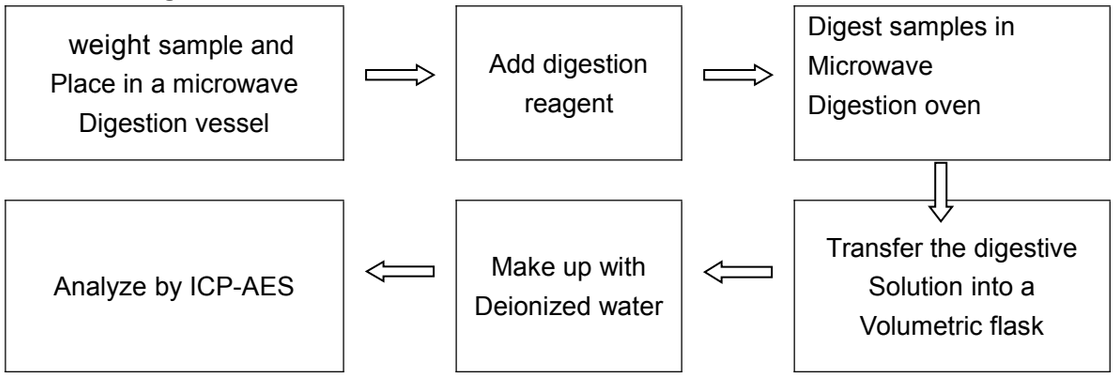
1. Test for Cd/Pb Content



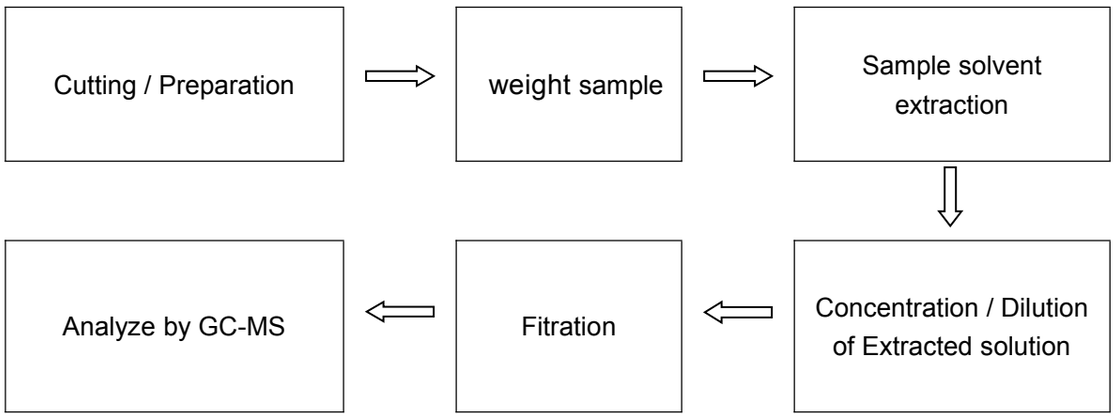
2. Test for Chromium(VI)Content



3. Test for Hg Contents



4. Test for PBBs/PBDES/DBP/BBP/DEHP/DIBP



Note: - mg/kg= ppm=0.0001%

-ND=Not Detected(<MDL)

- MDL = Method Detection Limit

-- = No Testing

-Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm^2 sample

-*=According to 2011/65/EU Annex,point 6-Lead as an alloying element is steel containing up to 0.35% lead by weight, aluminum containing up to 0.4% lead by weight and as a copper alloy, containing up to 4% lead by weight can be exempted.

Sample photo:

Photo 1

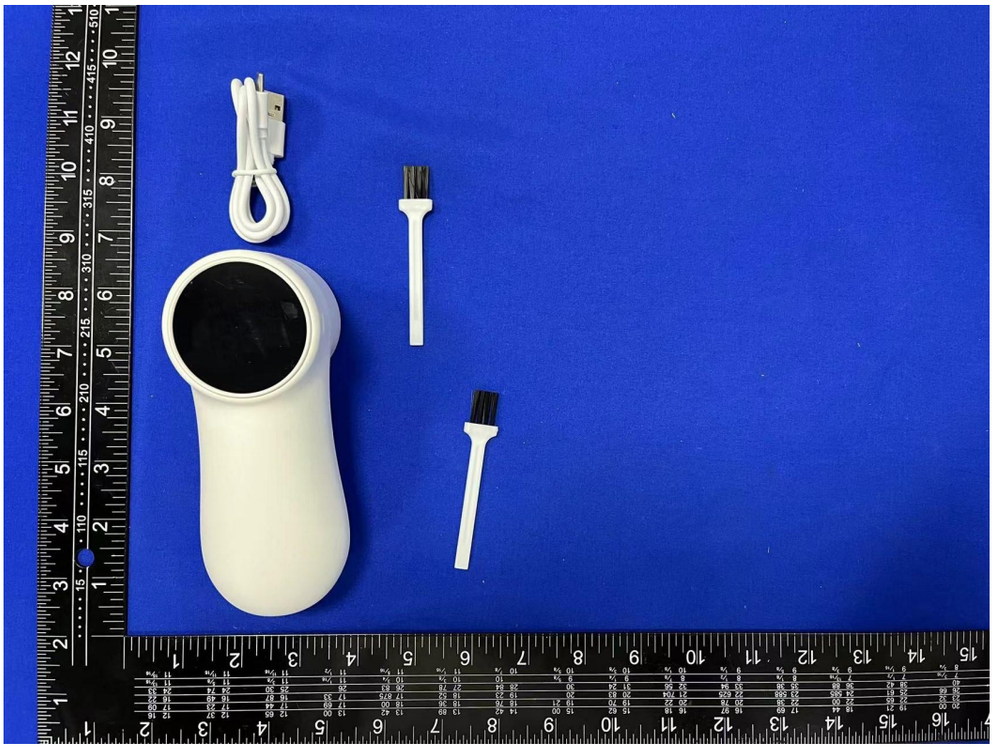


Photo 2

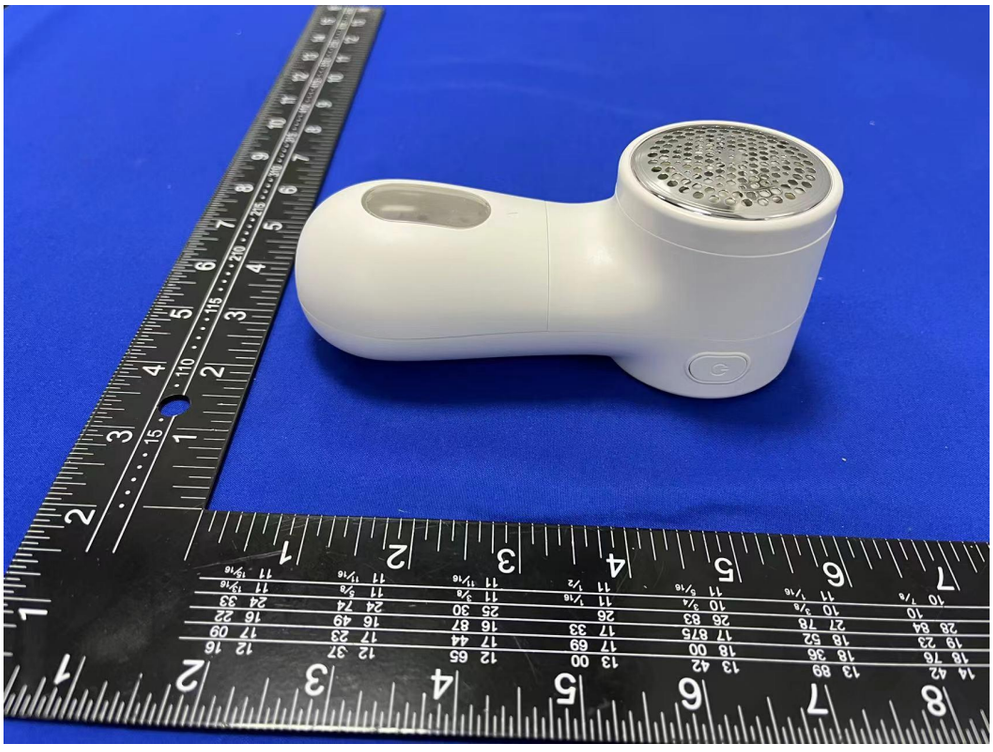


Photo 3

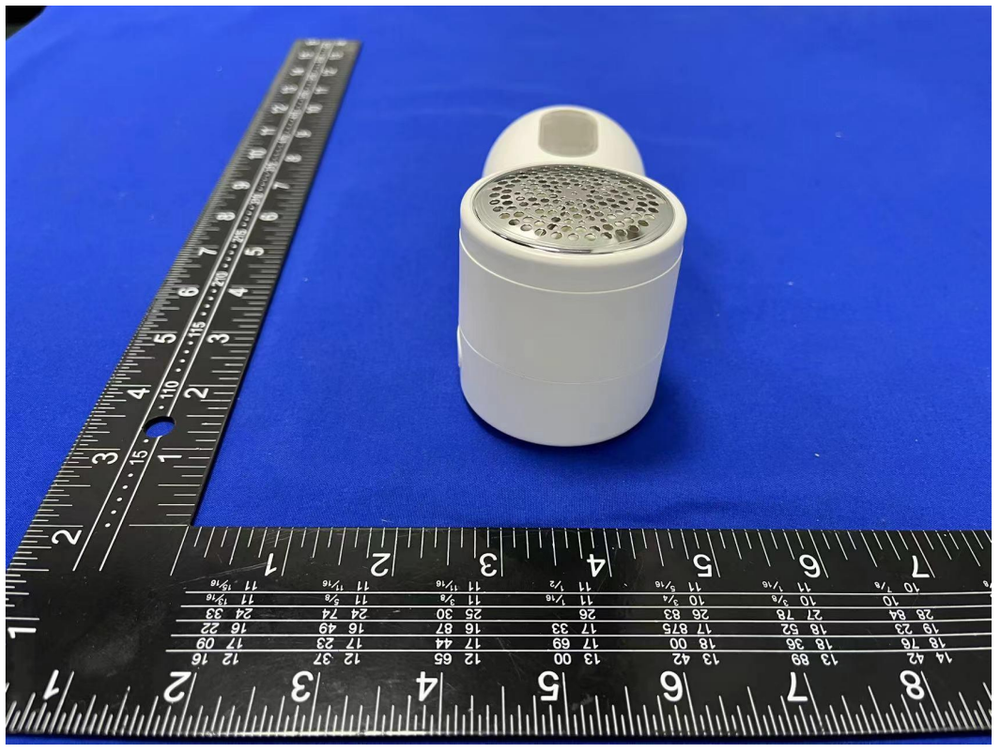


Photo 4

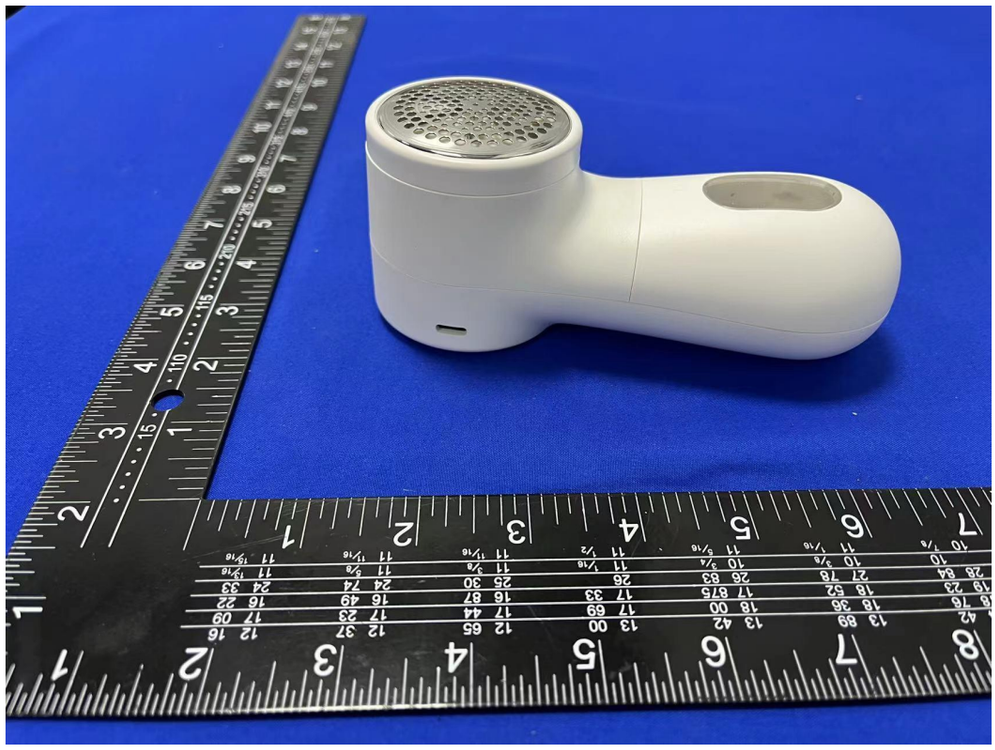


Photo 5

Photo 6

Photo 7

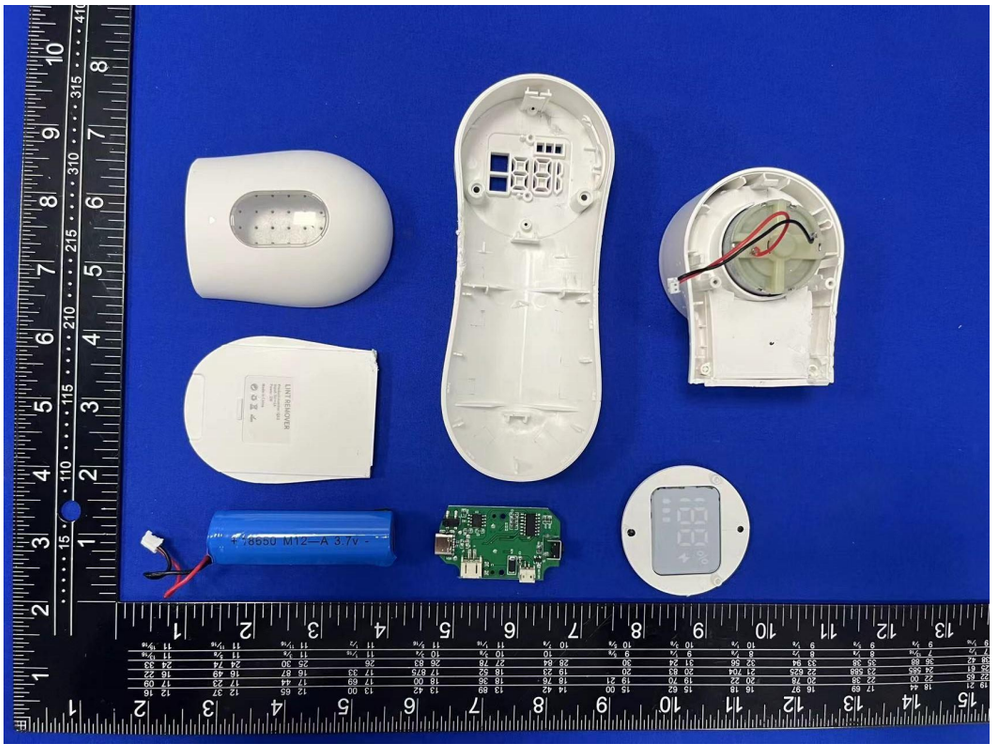


Photo 8

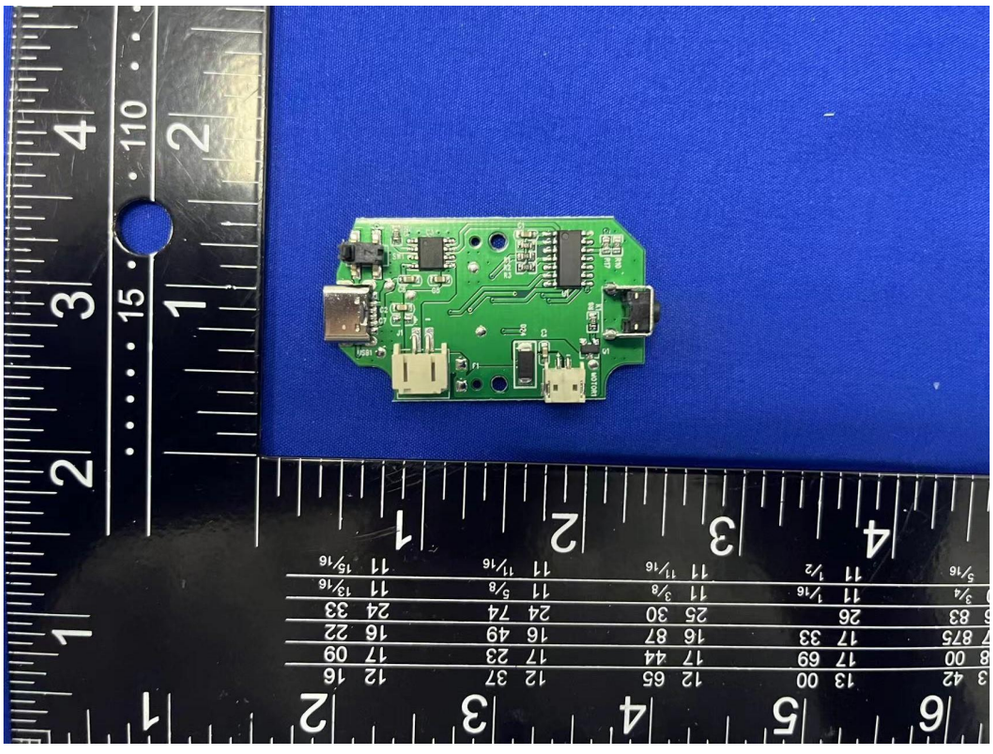


Photo 9

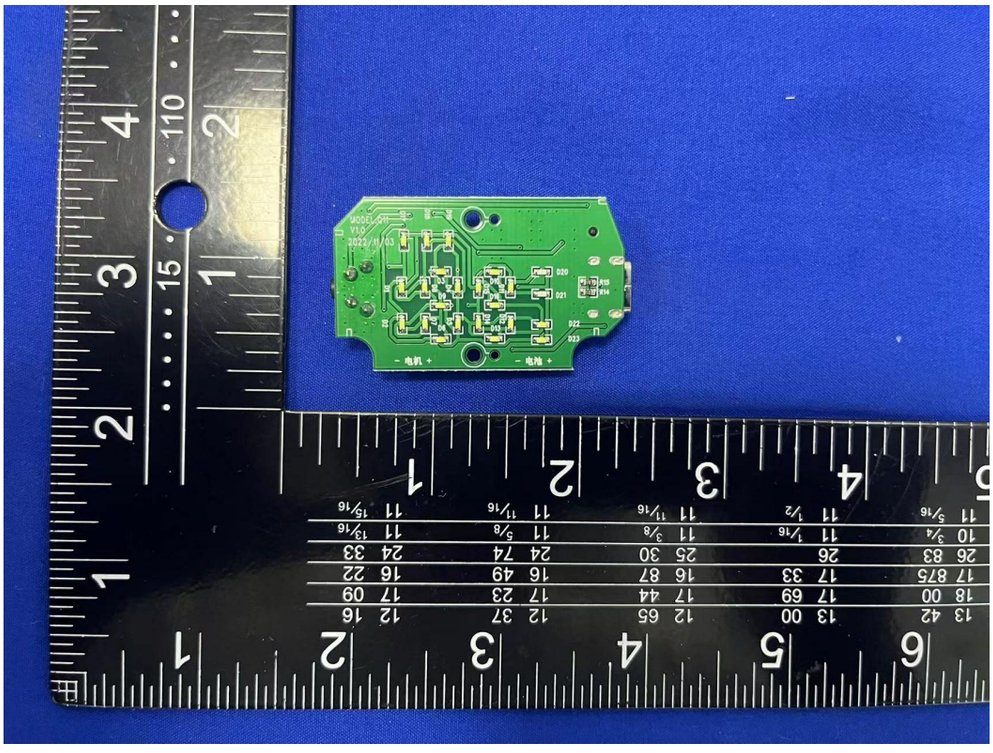
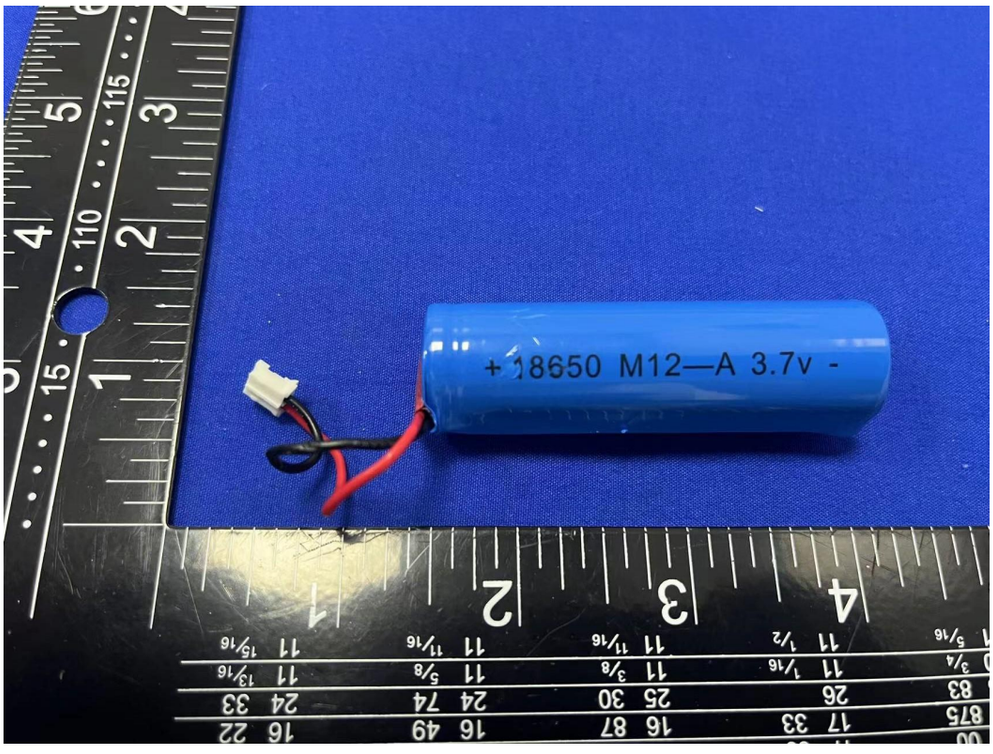


Photo 10



※※※※※END OF THE REPORT※※※※※

Flux Compliance Service Laboratory.

Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan

Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com

Certificate of Conformity

Certificate No.	: FCSR20221117203
Product	: Q11 lint remover
Brand Name	: N/A
Model(s) No.	: Q11
Series Model	: N/A
Holder	: Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	: Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Manufacturer	: Shenzhenshi Maijindian Kejiyouxiangongsi.
Address	: Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Report No.	: FCS202211172H01
Applied Standards	: The test results comply with the limits of RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU.

The applicant of the certificate is authorized to use this certificate in connection with EC declaration of conformity to the Directive. The certificate is only applicable to the equipments described above. The submitted sample of the above product has been tested according with Standard(s) used for showing compliance with the essential requirements in the specified directive(s):(EU) 2015/8632015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU

RoHS

Approved by: Jack Wang

Nov 29. 2022

Jack Wang/Technical Director

EMC TEST REPORT

Report No: FCS202211172E01

Applicant:	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address:	Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ Sanmingongyeyuanchangfang Bdong erceng
Product Name:	Q11 lint remover
Brand Name:	N/A
Model Name:	Q11
Series Model:	N/A
Test Standard:	EN IEC 55014-1:2021 EN IEC 55014-2-2021 EN IEC 61000-3-2:2019/A1:2021 EN 61000-3-3:2013/A2:2021
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

TEST RESULT CERTIFICATION

Applicant's Name..... :	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address..... :	Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng
Manufacture's Name..... :	Shenzhenshi Maijindian Kejiyouxiangongsi.
Address..... :	Shenzhenshi Baoanqu Shiyanjiedao Shuitianshequ SanmingongyeyuanchangfangBdong erceng

Product Description

Product Name..... :	Q11 lint remover
Brand Name .....:	N/A
Model Name..... :	Q11
Series Model.....:	N/A
Test Standards.....:	EN IEC 55014-1:2021 EN IEC 55014-2-2021 EN IEC 61000-3-2:2019/A1:2021 EN 61000-3-3:2013/A2:2021

This device described above has been tested by FCS, and the test results show that the equipment under test (EUT) is in compliance with the 2014/30/EU EMC Directive requirements. And it is applicable only to the tested sample identified in the report.
This report shall not be reproduced except in full, without the written approval of FCS, this document may be altered or revised by FCS, personal only, and shall be noted in the revision of the document.

Date of Test.....:

Date (s) of performance of tests. :	Nov 24. 2022 ~Nov 29. 2022
Date of Issue.....:	Nov 29. 2022
Test Result..... :	Pass

Testing Engineer : Sam Wang
(Sam Wang)

Technical Manager : Duke Qian
(Duke Qian)

Authorized Signatory : Jack Wang
(Jack Wang)

TABLE OF CONTENTS

Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	Nov 29. 2022	FCS202211172E01	N/A	Initial Issue

1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
EN IEC 55014-1:2021	Conducted Emissions From The AC Mains Power Ports	Class B	PASS	
	Conducted Emissions From Asymmetric Mode	Class B	N/A	
	Conducted Differential Voltage Emissions	Class B	N/A	
	Radiated Emissions	Class B	PASS	
EN IEC 61000-3-2:2019/A1:2021	Harmonic Current Emission	Class A	PASS	
EN 61000-3-3:2013/A2:2021	Voltage Fluctuations & Flicker	------	PASS	
EMC Immunity				
Section EN IEC 55014-2-2021	Test Item	Performance Criteria	Judgment	Remark
EN 61000-4-2:2009	Electrostatic Discharge	B	PASS	
EN IEC 61000-4-3:2020	RF Electromagnetic Field	A	PASS	
EN 61000-4-4:2012	Fast Transients	B	N/A	
EN 61000-4-5:2014/A1:2017	Surges	B	N/A	
EN 61000-4-6:2014	Radio-frequency Common Mode / Conducted Susceptibility	A	N/A	
EN 61000-4-8:2010	Power Frequency Magnetic Field	A	N/A	
EN 61000-4-11:2004/A1:2017	Volt. Interruptions Volt. Dips	B / C / C	N/A	

Note: "N/A" denotes test is not applicable in this Test Report

1.1 TEST FACTORY

Company Name:	Flux Compliance Service Laboratory
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
Laboray Accreditations	
FCC Test Firm Registration Number: 514908 CNAS Number： L15566 Designation number：CN0127 A2LA accreditation number：5545.01 ISED Number：25801	

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately**95** %.

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
FCSC01	ANSI	9KHz ~ 150KHz	3.18	
		150 KHz ~ 30MHz	2.70	

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
FCSC02	ANSI	9KHz ~ 30MHz	2.50	
		30MHz ~ 200MHz	3.43	
		200MHz ~ 1000MHz	3.57	
		1GHz ~ 6 GHz	4.13	

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Q11 lint remover
Brand Name	N/A
Model Name	Q11
Series Name	N/A
Product Differences	N/A
Power Supply	DC 5V⎓1A 4W
Battery	DC 3.7V
Hardware version number	V1.0
Software version number	V1.0

2.2 DESCRIPTION OF THE TEST MODES

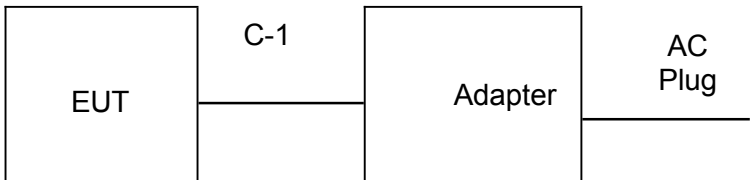
To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration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

Pretest Mode	Description
Mode 1	full load

Note: The test modes were carried out for all operation modes. Only worst case will be show in this report.

2.3 DESCRIPTION OF THE TEST SETUP

Mode 1:



2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Accessories equipment

Mode 1:

Item	Equipment	Mfr/Brand	Model/Type No.
E-1	Adapter	HUAWEI	HW-050450C01

Auxiliary equipment

Mode 2:

Item	Equipment	Mfr/Brand	Model/Type No.
N/A	N/A	N/A	N/A

Cable

Mode 1:

Item	Type	Shielded Type	Ferrite Core	Length
C-1	N/A	N/A	N/A	N/A

Mode 2:

Item	Type	Shielded Type	Ferrite Core	Length
N/A	N/A	N/A	N/A	N/A

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

(3) “YES” means “shielded” “with core”; “NO” means “unshielded” “without core”.

2.5 MEASUREMENT INSTRUMENTS LIST

2.5.1 CONDUCTED TEST SITE

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2022.01.28	2023.01.27
LISN	R&S	ENV216	101242	2022.01.28	2023.01.27
LISN	ETS	3810/2NM	00023625	2022.01.28	2023.01.27
Absorbing Clamp	R&S	MDS-21	100668	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
CE Cable	N/A	C01	N/A	2022.01.28	2023.01.27
Temperature & Humidity	Mieo	HH660	N/A	2022.01.28	2023.01.27
Testing Software	EZ-EMC(Ver.03A1 CE)				

2.5.2 RADIATED TEST SITE

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2022.01.28	2023.01.27
Bi-log Antenna	TESEQ	CBL6111D	34678	2022.01.28	2023.01.27
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1343	2022.01.28	2023.01.27
Pre-amplifier(1G-18G)	SKET	LNPA-01018G-45	SK2018080901	2022.01.28	2023.01.27
Pre-amplifier(0.1M-3GHz)	EM	EM330	060665	2022.01.28	2023.01.27
Spectrum Analyzer	Agilent	N9020A	MY49100060	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
RE Cable (9K-1G)	N/A	R01	N/A	2022.01.28	2023.01.27
RE Cable (1G-18G)	N/A	R02	N/A	2022.01.28	2023.01.27
Temperature & Humidity	Mieo	HH660	N/A	2022.01.28	2023.01.27
Testing Software	EZ-EMC(Ver. 03A1 RE)				

2.5.3 HARMONICS AND FLICKER

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Harmonic Voltage & Flicker	LAPLACE	AC 2000A	311217	2022.01.28	2023.01.27
AC Power Source	MTONI	PHF-5010	631169	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
Temperature & Humidity	Mieo	HH660	N/A	2022.01.28	2023.01.27

Testing Software	HA-PC Link Version 3.03

2.5.4 ESD

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Electrostatic Discharge Simulator	KZKUSUI	KES4021	LB003568	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
Temperature & Humidity	N/A	WS1066	N/A	2022.01.28	2023.01.27

2.5.5 SURGE, EFT/BURST, VOLTAGE INTERRUPTION/DIPS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Surger Generator	HTEC	HCWG 10	152101	2022.01.28	2023.01.27
Surger Generator	HTEC	TC0MB4	152104	2022.01.28	2023.01.27
VOLTAGE DIPS & INTERRUPTIONS Generator	HTEC	HPFS 161P	143803	2022.01.28	2023.01.27
EFT/B Generator	HTEC	HEFT 51	143801	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
Temperature & Humidity	Mieo	HH660	N/A	2022.01.28	2023.01.27

2.5.6 RS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Power Meter	Agilent	E4419B	QB4331226	2022.01.28	2023.01.27
Power Sensor	Hp	E9300A	US39210170	2022.01.28	2023.01.27
Power Sensor	Hp	E9300A	US39210476	2022.01.28	2023.01.27
Signal Generator	Agilent	N5181A	MY56144718	2022.01.28	2023.01.27
Power Amplifier	MICOTOP	MPA-80-1000-250	MPA1711489	2022.01.28	2023.01.27
Power Amplifier	MICOTOP	MPA-1000-3000-75	MPA1711488	2022.01.28	2023.01.27
Power Amplifier	MICOTOP	MPA-3000-6000-50	MPA1711490	2022.01.28	2023.01.27
RS Test Antenna (80-1GHz)	SCHWARZBECK	VULP 9118E	000999	2022.01.28	2023.01.27
RS Test Antenna (1G-10GHz)	SCHWARZBECK	STLP 9149	000648	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMU200	109200	2022.01.28	2023.01.27

Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
Audio Analyzer	R&S	UPL	100689	2022.01.28	2023.01.27
Audio Breakthrough Shielding Box	SKET	SB_ABT/C35	N/A	2022.01.28	2023.01.27
Ear Simulator	SKET	AE_ABT/C35	N/A	2022.01.28	2023.01.27
Mouth Simulator	SKET	AM_ABT/C35	N/A	2022.01.28	2023.01.27
1KHz Standard Source	SKET	MSC_ABT/C35	N/A	2022.01.28	2023.01.27
Field Probe	Narda	EP601	611WX80261	2022.01.28	2023.01.27
Temperature & Humidity	Mieo	HH660	N/A	2022.01.28	2023.01.27
Testing Software	EMC-S V1.2.0.90				

2.5.7 INJECTION CURRENT

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
CS	SCHLODER	CDG-6000-25	126A1280/2014	2022.01.28	2023.01.27
CDN	SCHLODER	CDN-M2+3	A2210275/2014	2022.01.28	2023.01.27
EM Clamp	SCHLODER	EMCL-20	132A1283	2022.01.28	2023.01.27
Attenuator	Nemtest	ATT-6DB-100	A100W224	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMU200	109200	2022.01.28	2023.01.27
Audio Analyzer	R&S	UPL	100689	2022.01.28	2023.01.27
Audio Breakthrough Shielding Box	SKET	SB_ABT/C35	N/A	2022.01.28	2023.01.27
Ear Simulator	SKET	AE_ABT/C35	N/A	2022.01.28	2023.01.27
Mouth Simulator	SKET	AM_ABT/C35	N/A	2022.01.28	2023.01.27
1KHz Standard Source	SKET	MSC_ABT/C35	N/A	2022.01.28	2023.01.27
Temperature & Humidity	Mieo	HH660	N/A	2022.01.28	2023.01.27

2.5.8 PFMF

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
MF Generator	HTEC	HMFG-COMB	143903	2022.01.28	2023.01.27
Magnetic Field Coil	HTEC	HCOIL 100	143808	2022.01.28	2023.01.27
Universal Radio Communication Tester	R&S	CMW500	117239	2022.01.28	2023.01.27
Temperature & Humidity	Mieo	HH660	N/A	2022.01.28	2023.01.27

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 REQUIREMENTS FOR CONDUCTED EMISSIONS FROM THE AC MAINS POWER PORTS OF THE CLASS A EQUIPMENT

FREQUENCY (MHz)	Coupling device	Detector type / bandwidth	Class A limits dB(μV)
0.15 - 0.5	AMN	Quasi Peak / 9 kHz	79
0.50 - 30			63
0.15 - 0.5	AMN	Average / 9 kHz	66
0.50 - 30			60

3.1.2 REQUIREMENTS FOR CONDUCTED EMISSIONS FROM THE AC MAINS POWER PORTS OF THE CLASS B EQUIPMENT

FREQUENCY (MHz)	Coupling device	Detector type / bandwidth	Class B limits dB(μV)
0.15 - 0.5	AMN	Quasi Peak / 9 kHz	66 - 56*
0.50 - 5			56
5 - 30			60
0.15 - 0.5	AMN	Average / 9 kHz	56 - 46*
0.50 - 5			46
5 - 30			50

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.

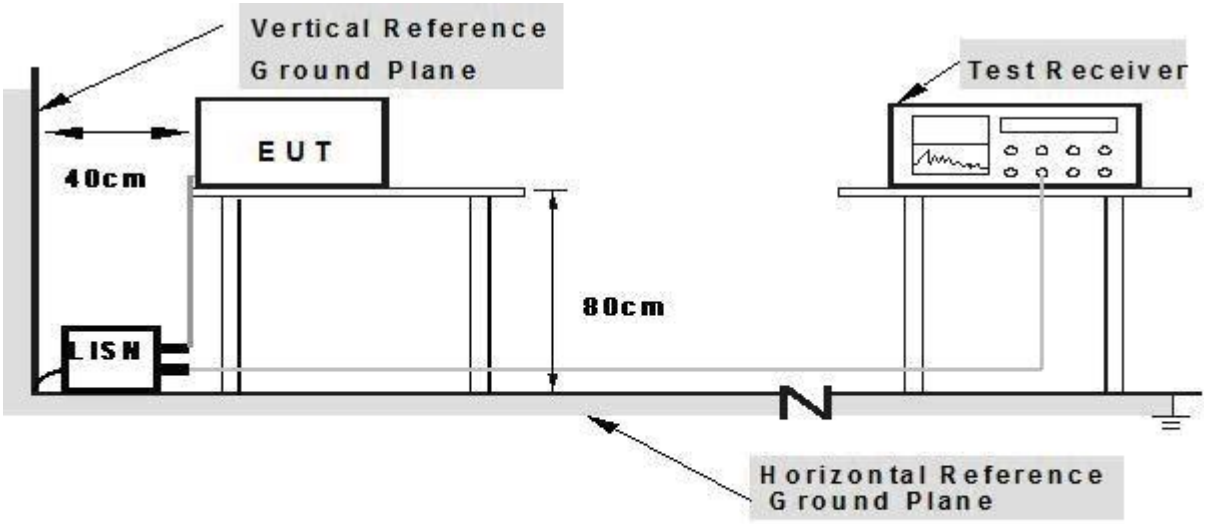
The following table is the setting of the receiver

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

3.1.3 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT 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.
b. 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.
c. 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.
d. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.4 TEST SETUP



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

3.1.5 EUT OPERATING CONDITIONS

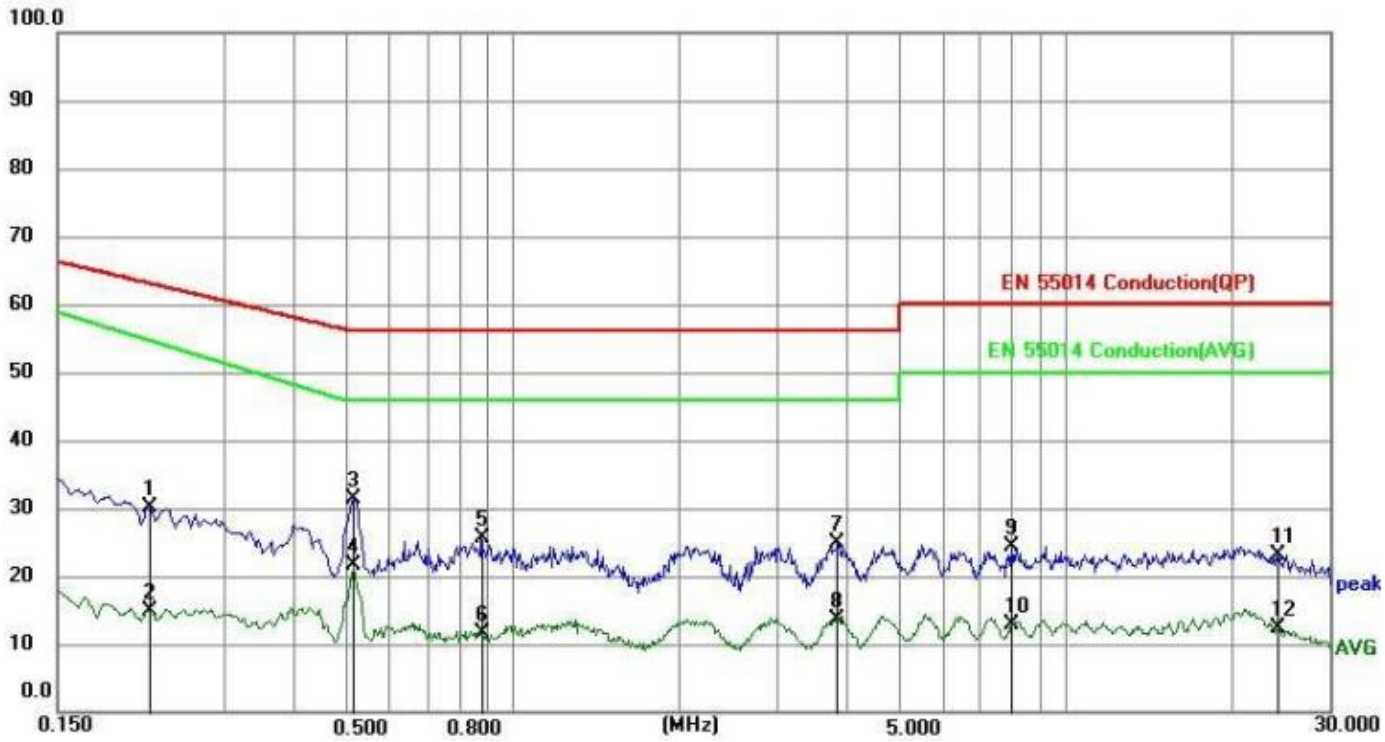
The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

3.1.6 TEST RESULTS

Temperature:	25.3℃	Relative Humidity:	62%
Phase:	L	Test Mode:	Mode 1
Test Voltage:	DC 5V		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2220	20.00	10.07	30.07	62.74	32.67	QP
2	0.2220	4.85	10.07	14.92	54.77	39.85	AVG
3	0.5144	21.39	10.02	31.41	56.00	24.59	QP
4	0.5144	11.49	10.02	21.51	46.00	24.49	AVG
5	0.8790	15.55	9.99	25.54	56.00	30.46	QP
6	0.8790	1.64	9.99	11.63	46.00	34.37	AVG
7	3.8760	15.04	9.91	24.95	56.00	31.05	QP
8	3.8760	3.73	9.91	13.64	46.00	32.36	AVG
9	8.0070	14.68	9.82	24.50	60.00	35.50	QP
10	8.0070	2.96	9.82	12.78	50.00	37.22	AVG
11	24.1485	13.33	9.92	23.25	60.00	36.75	QP
12	24.1485	2.38	9.92	12.30	50.00	37.70	AVG

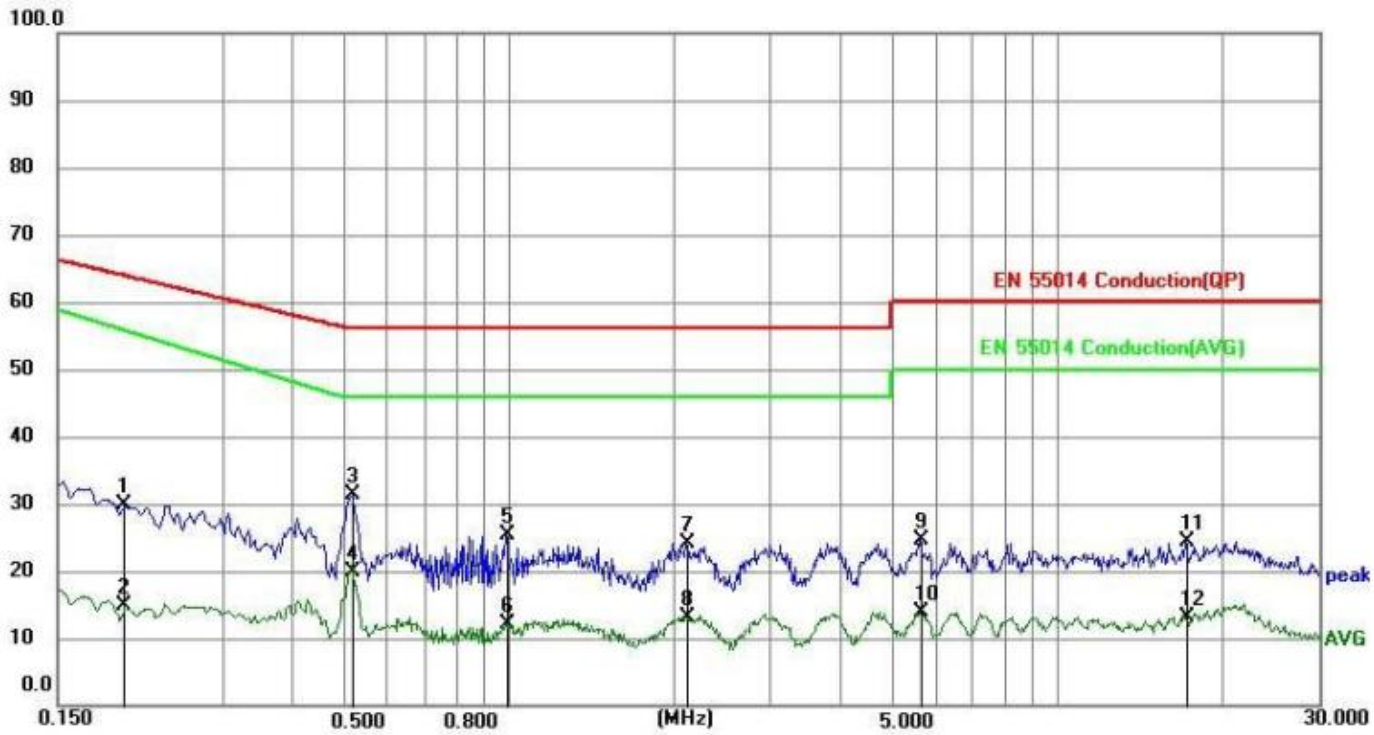
Remark:
1. All readings are Quasi-Peak and Average values.



Temperature:	25.3℃	Relative Humidity:	62%
Phase:	N	Test Mode:	Mode 1
Test Voltage:	DC 5V		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1995	19.80	10.05	29.85	63.63	33.78	QP
2	0.1995	4.91	10.05	14.96	55.92	40.96	AVG
3	0.5190	21.44	10.01	31.45	56.00	24.55	QP
4	0.5190	9.90	10.01	19.91	46.00	26.09	AVG
5	0.9870	15.34	9.99	25.33	56.00	30.67	QP
6	0.9870	2.18	9.99	12.17	46.00	33.83	AVG
7	2.1030	14.09	9.96	24.05	56.00	31.95	QP
8	2.1030	3.28	9.96	13.24	46.00	32.76	AVG
9	5.6175	14.69	9.86	24.55	60.00	35.45	QP
10	5.6175	4.11	9.86	13.97	50.00	36.03	AVG
11	17.1150	14.53	9.90	24.43	60.00	35.57	QP
12	17.1150	3.30	9.90	13.20	50.00	36.80	AVG

Remark:
1. All readings are Quasi-Peak and Average values.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF THE RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Distance （m）	Detector type/ bandwidth	Class A dBuV/m	Class B dBuV/m
30 - 230	3	Quasi peak/ 120 kHz	50	40
230 - 1000	3	Quasi peak/ 120 kHz	57	47
1000 - 3000	3	Peak /1 MHz	76	70
3000 - 6000	3	Peak /1 MHz	80	74
1000 - 3000	3	AV/1 MHz	56	50
3000 - 6000	3	AV/1 MHz	60	54

Notes:

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

(2) Emission level (dBuV/m) = 20log Emission level (uV/m).

3.2.2 TEST PROCEDURE

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from 1 meter to 4 meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.3 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz

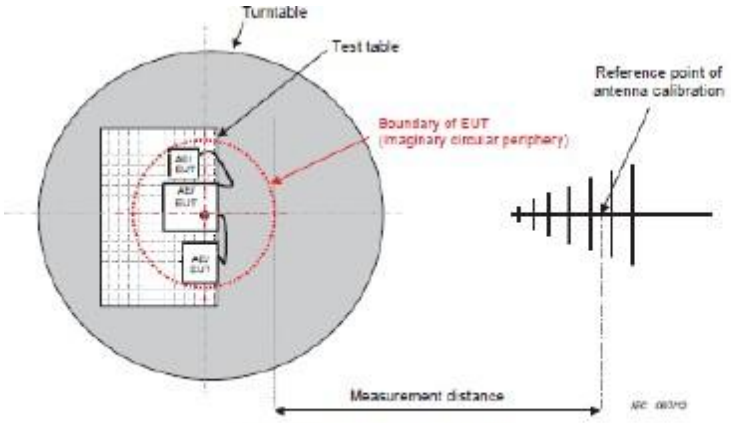


Figure C.1 – Measurement distance

(B) Radiated Emission Test Set-Up Frequency Above 1GHz

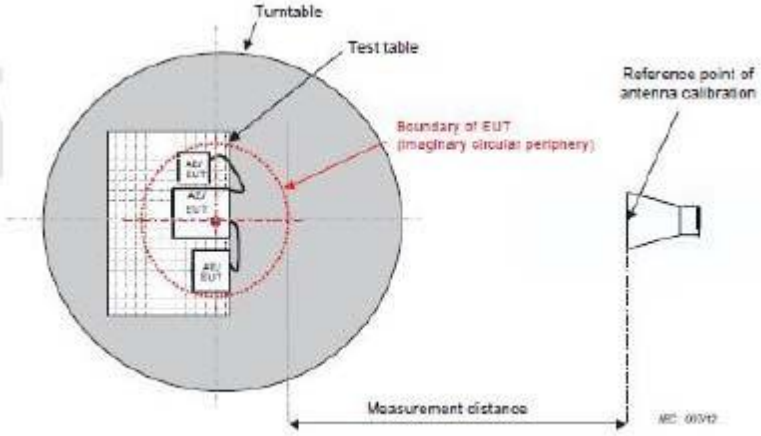


Figure C.1 – Measurement distance

3.2.4 EUT OPERATING CONDITIONS

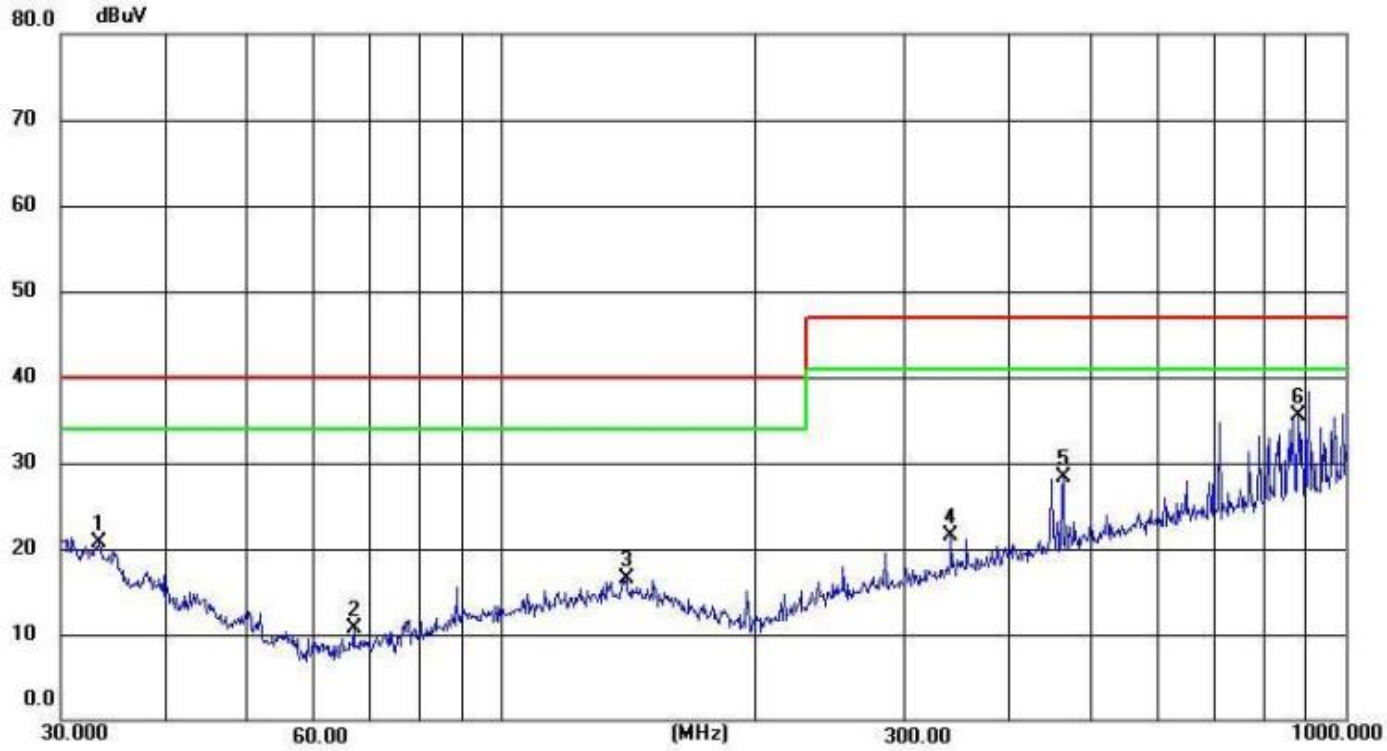
The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

3.2.5 TEST RESULTS

Temperature:	24.4℃	Relative Humidity:	51%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	DC 5V		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.3279	30.24	-9.57	20.67	40.00	-19.33	QP
2	66.7325	31.28	-20.51	10.77	40.00	-29.23	QP
3	140.3421	48.74	-32.26	16.48	40.00	-23.52	QP
4	340.7817	53.63	-32.06	21.57	47.00	-25.43	QP
5	462.3455	60.25	-31.94	28.31	47.00	-18.69	QP
6	878.3214	66.86	-31.42	35.44	47.00	-11.56	QP

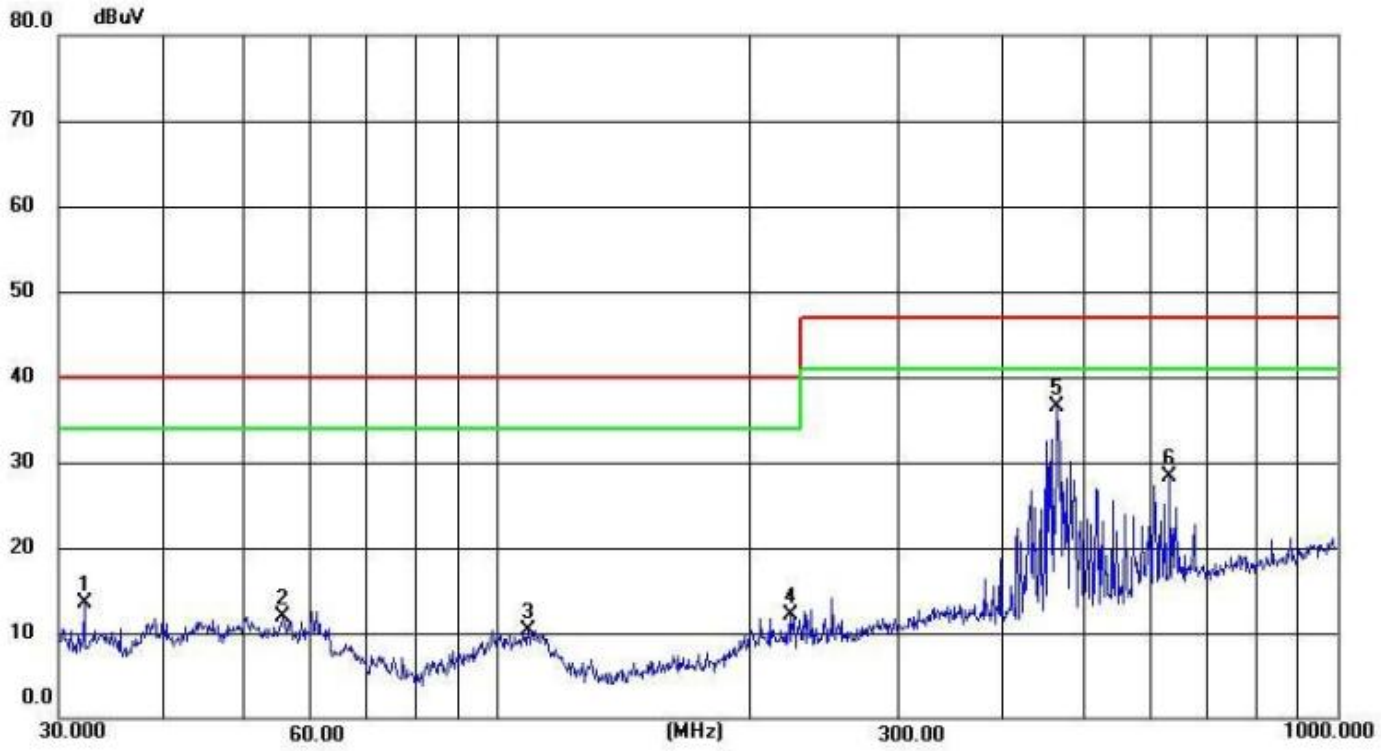
Remark:
1. All readings are Quasi-Peak.
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain



Temperature:	24.4℃	Relative Humidity:	51%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	DC 5V		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	32.1795	33.70	-20.23	13.47	40.00	-26.53	QP
2	55.4147	30.70	-18.72	11.98	40.00	-28.02	QP
3	108.6470	42.64	-32.29	10.35	40.00	-29.65	QP
4	223.7334	44.37	-32.18	12.19	40.00	-27.81	QP
5	463.9696	68.54	-31.94	36.60	47.00	-10.40	QP
6	631.6884	59.93	-31.72	28.21	47.00	-18.79	QP

Remark:
1. All readings are Quasi-Peak.
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain



3.3 HARMONICS CURRENT

3.3.1 LIMITS OF THE HARMONICS CURRENT

IEC 555-2					
Table - I			Table - II		
Equipment Category	Harmonic Order n	Max. Permissible Harmonic Current (in Ampers)	Equipment Category	Harmonic Order n	Max. Permissible Harmonic Current (in Ampers)
Non Portable Tools or TV Receivers	Odd Harmonics		TV Receivers	Odd Harmonics	
	3	2.30		3	0.80
	5	1.14		5	0.60
	7	0.77		7	0.45
	9	0.40		9	0.30
	11	0.33		11	0.17
	13	0.21		13	0.12
	15≤n≤39	0.15 · 15/n		15≤n≤39	0.10 · 15/n
	Even Harmonics			Even Harmonics	
	2	1.08		2	0.30
	4	0.43		4	0.15
	8	0.30			
	8≤n≤40	0.23 · 8/n		DC	0.05

EN 61000-3-2/IEC 61000-3-2					
Equipment Category	Max. Permissible Harmonic Current (in Ampers)	Equipment Category	Harmonic Order n	Max. Permissible Harmonic Current (in A)	(mA/w)
Class A	Same as Limits Specified in 4-2.1, Table - I, but only odd harmonics required	Class D	3	2.30	3.4
			5	1.14	1.9
			7	0.77	1.0
			9	0.40	0.5
			11	0.33	0.35
			13≤n≤39	see Table I	3.85/n
			only odd harmonics required		

3.3.2 TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions.

b. The classification of EUT is according to section 5 of EN 61000-3-2. The EUT is classified as follows:

Class A: Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.

Class B: Portable tools. Portable tools.; Arc welding equipment which is not professional equipment.

Class C: Lighting equipment.

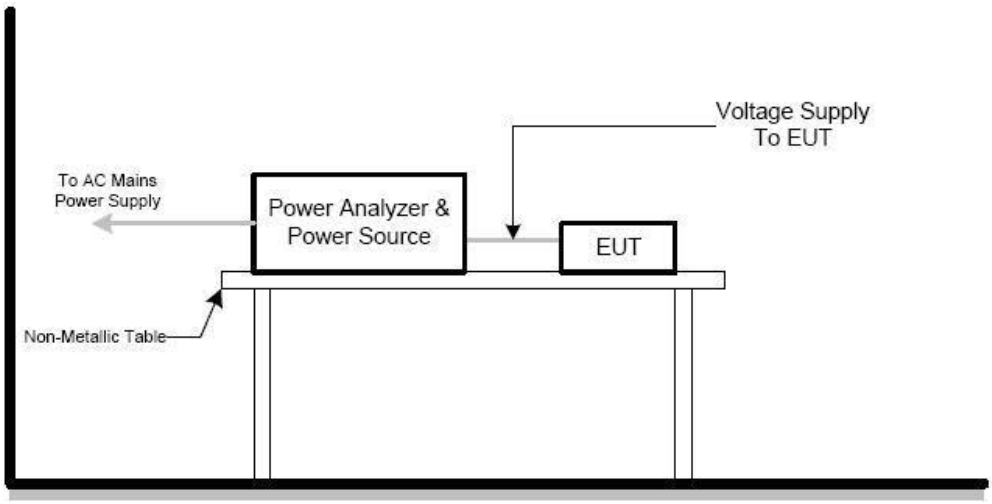
Class D: Equipment having a specified power less than or equal to 600W of the following types: Personal computers and personal computer monitors and television receivers.

c. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

3.3.3 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

3.3.4 TEST SETUP



3.4 VOLTAGE FLUCTUATION AND FLICKERS

3.4.1 LIMITS OF THE VOLTAGE FLUCTUATION AND FLICKERS

Tests	Measurement Value	Limit	Descriptions
	IEC555-3	IEC/EN 61000-3-3	
P_{st}	≤ 1.0,Tp= 10 min.	≤ 1.0,Tp= 10 min.	Short Term Flicker Indicator
P_{lt}	N/A	≤0.65,Tp=2 hr.	Long Term Flicker Indicator
$T_{dt(s)}$	≤ 3%	≤ 3.3%	Relative Steady-State V-Chang
d_{max}(%)	≤ 4%	≤ 4%	Maximum Relative V-Chang
d_c(%)	N/A	≤ 3.3% for > 500ms	Relative V-change Characteristic

3.4.2 TEST PROCEDURE

a. Fluctuation and Flickers Test:

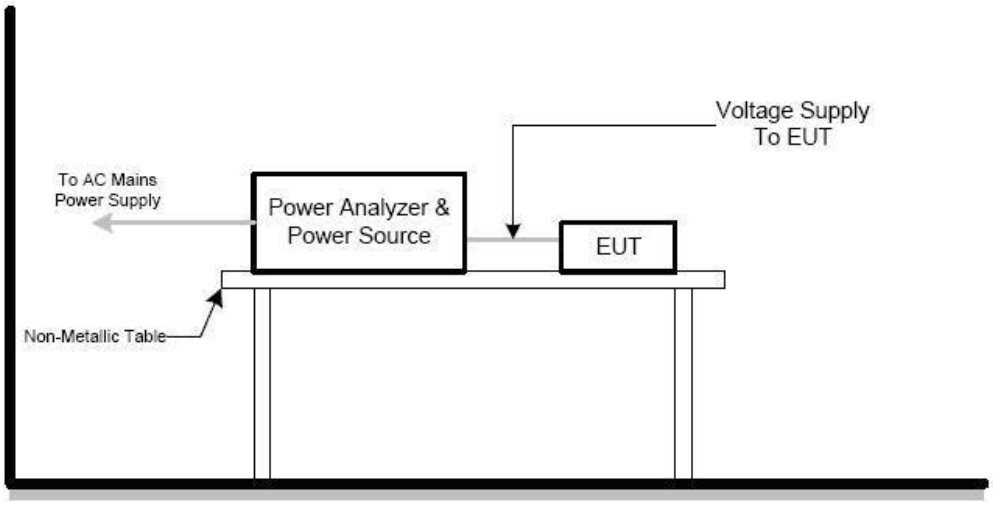
Tests was performed according to the Test Conditions/Assessment of Voltage Fluctuations specified in Clause 5.0/6.0 of IEC555-3 and/or Clause 6.0/4.0 of IEC/EN 61000-3-3 depend on which standard adopted for compliance measurement.

b. All types of voltage fluctuation in this report are assessed by direct measurement using flicker-meter.

3.4.3 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

3.4.4 TEST SETUP



3.4.5 TEST RESULTS

Temperature:	23.9 ℃	Relative Humidity:	54%
Test Voltage:	DC 5V(Adapter output)		

Test Parameter	Measurement Value	Limit	Remarks
P_{st}	0.00	1.0	Pass
P_{lt}	--	0.65	--
$T_{dt(s)}$	0.00	0.5	Pass
d_{max}(%)	0.00%	4%	Pass
d_c(%)	0.00%	3.3%	Pass

4. EMC IMMUNITY TEST

4.1 STANDARD COMPLIANCE/SERVRITY LEVEL/CRITERIA

Tests Standard No.	TEST SPECIFICATION	Test Mode Test Ports	Perform. Criteria
1. ESD IEC/EN 61000-4-2	8KV air discharge 4KV contact discharge	Direct Mode	B
	4KV HCP discharge 4KV VCP discharge	Indirect Mode	B
2. RS IEC/EN 61000-4-3	80 MHz - 1000 MHz,1800MHz,2600MHz,3500MHz,5000MHz, 1000Hz, 80%, AM modulated	Enclosure	A
3. EFT/Burst IEC/EN 61000-4-4	5/50ns Tr/Th 5KHz Repetition Freq.	Power Supply Port	B
	5/50ns Tr/Th 5KHz Repetition Freq.	CTL/Signal Data Line Port	B
4. Surges IEC/EN 61000-4-5	1.2/50(8/20) Tr/Th us	L-N	B
	1.2/50(8/20) Tr/Th us	L-PE N-PE	B
5. Injected Current IEC/EN 61000-4-6	0.15 MHz to 80 MHz, 1000Hz 80％, AM Modulated 150Ω source impedance	CTL/Signal Port	A
	0.15 MHz to 80 MHz, 1000Hz 80％, AM Modulated 150Ω source impedance	AC Power Port	A
	0.15 MHz to 80 MHz, 1000Hz 80％, AM Modulated 150Ω source impedance	DC Power Port	A
6. Power Frequency Magnetic Field IEC/EN 61000-4-8	50 Hz,	Enclosure	A
7. Volt. Interruptions Volt. Dips IEC/EN 61000-4-11	Voltage dip 100% Voltage dip 30% Interruption 100%	AC Power Port	B C C

4.2 GENERAL PERFORMANCE CRITERIA

According to **EN 55014** standard, the general performance criteria as following:

Criterion A	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.
Criterion B	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. 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. 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.
Criterion C	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. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

4.2.1 GENERAL PERFORMANCE CRITERIA TEST SETUP

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the following during the testing.

4.3 ELECTROSTATIC DISCHARGE IMMUNITY TEST (ESD)

4.3.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Required Performance:	B
Discharge Voltage:	Air Discharge：2KV/4KV/8KV (Direct) Contact Discharge：2KV/4KV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 200 times in total 20 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

4.3.2 TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manners:

a. Electrostatic discharges were applied only to those points and surfaces of the EUT that are accessible to users during normal operation
The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.

The time interval between two successive single discharges was at least 1 second.

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 EUT.

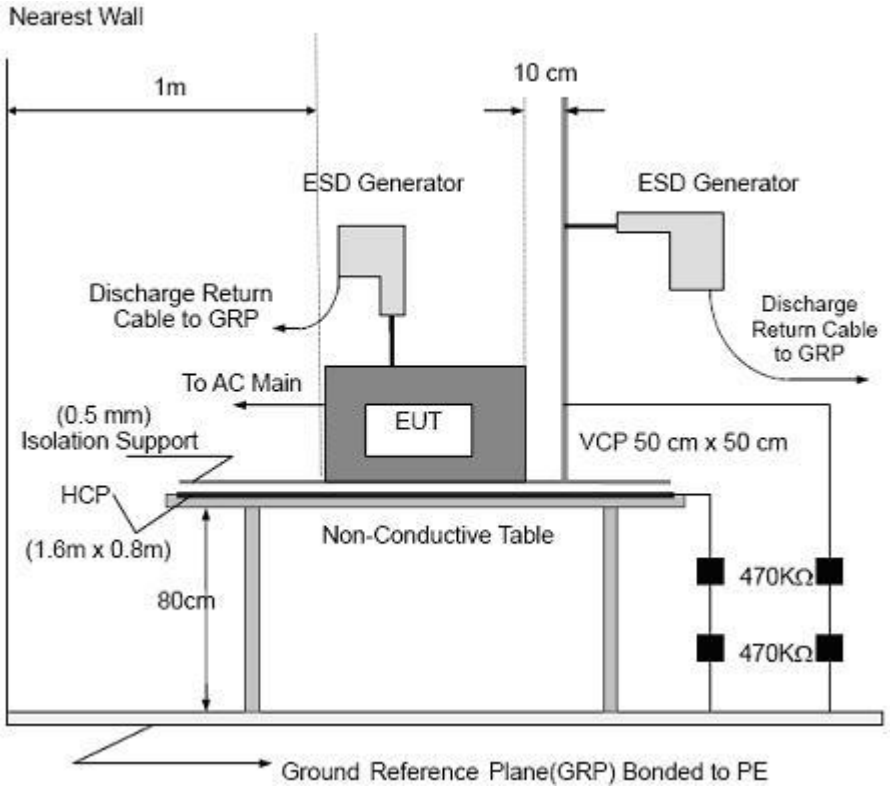
Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.

Air discharges were applied with the round discharge tip of the discharge electrode approaching the EUT as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator was removed from the EUT and re-triggered for a new single discharge. The test was repeated until all discharges were complete.

Vertical Coupling Plane (VCP):
The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
Horizontal Coupling Plane (HCP):
The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.

b. Air discharges at insulation surfaces of the EUT.
It was at least ten single discharges with positive and negative at the same selected point.

4.3.3 TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940kΩ total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of0.8-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1 meter thickness. The GRP was consisted of a sheet of aluminum that is at least 0.25mm thick, and extended at least 0.5 meters from the EUT on all sides.

4.3.4 TEST RESULTS

Temperature:	23.9℃	Relative Humidity:	56%
Pressure:	1020.1hPa	Test Voltage:	DC 5V
Test Mode:	Mode1		

Discharge Level	Polarity	Test Points	Contact Discharge	Air Discharge	Criterion	Test Result
4	+/-	VCP/HCP	NOTE	N/A	B	PASS
2,4	+/-	Green Dot	Note	N/A	B	PASS
2,4,8	+/-	Red Dot	N/A	NOTE	B	PASS

Note: The EUT function was correct during the test.
Red Dot —Air Discharged
Green Dot —Contact Discharged

4.4 RADIATED, RADIO-FREQUENCY, ELECTROMAGNETIC FIELD IMMUNITY TEST (RS)

4.4.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance:	A
Frequency Range:	80 MHz - 6000 MHz
Field Strength:	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3 m
Antenna Height:	1.5 m
Dwell Time:	1.5x 10^{-3} decade/s

4.4.2 TEST PROCEDURE

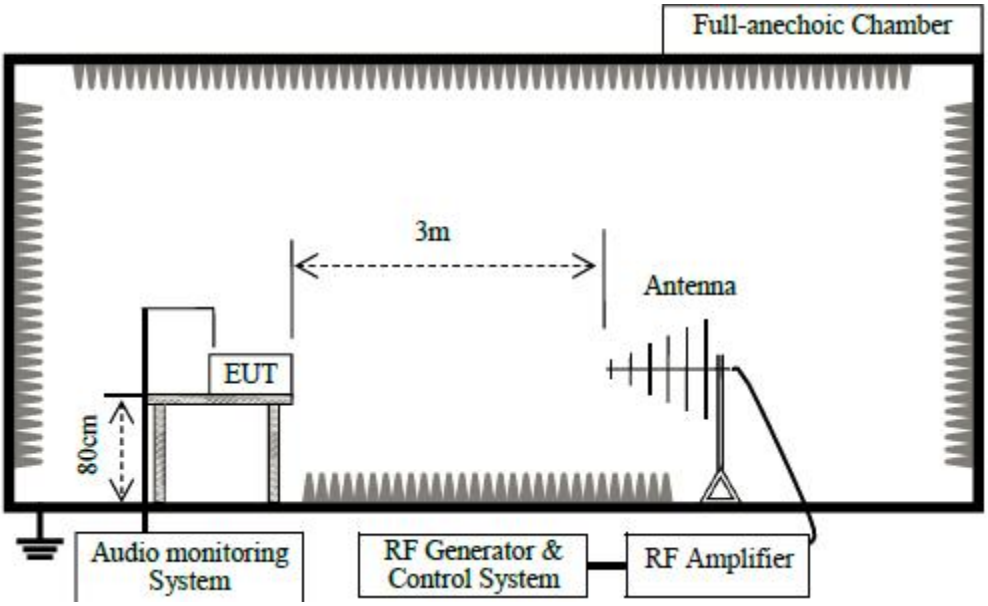
a. The testing was performed in a fully anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.

b. The frequency range is swept from 80 MHz to 1000 MHz, 1800 MHz, 2600 MHz, 3500 MHz, 5000 MHz, with the signal 80% amplitude modulated with a 1kHz sine-wave. The rate of sweep did not exceed 1.5 x 10^{-3} decade/s, where the frequency range is swept incrementally, the step size was 1% of preceding frequency value.

c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.

e. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

4.4.3 TEST SETUP



Note:

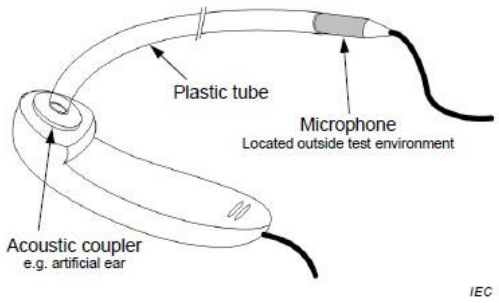
TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

For Audio output function use below setting



NOTE 1 The microphone is connected via the cable to a suitable amplifier.

NOTE 2 This setup is suitable for radiated immunity testing. See G.6.3

Figure G.5 – Example test setup for on-ear acoustic measurements, microphone located away from earpiece transducer

4.4.4TEST RESULTS

Temperature:	23.9℃	Relative Humidity:	54%
Test Voltage:	DC 5V	Test Mode:	Mode1

Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Perform. Criteria	Results	Judgment
80MHz - 6000MHz	H / V	3 V/m (rms) AM Modulated 1000Hz, 80%	Front	A	A	PASS
			Rear			
			Left			
			Right			
			Rear			
			Left			
			Right			

For the acoustic level of the demodulated audio limits

Frequency(MHz)	dB(SPL)
80 to 1 000	75

Note: According to EN 55014: 2017, Annex A, A.2 Applicability, the EUT belongs to Group 2. And then according to EN 55014: 2017, Annex A, A.4Modified test levels and performance criteria, Table A.2 – Modified test levels for performance criterion A for the broadcast reception function, no test requirements apply to this EUT.

4.5 ELECTRICAL FAST TRANSIENT (EFT)

4.5.1 TEST SPECIFICATION

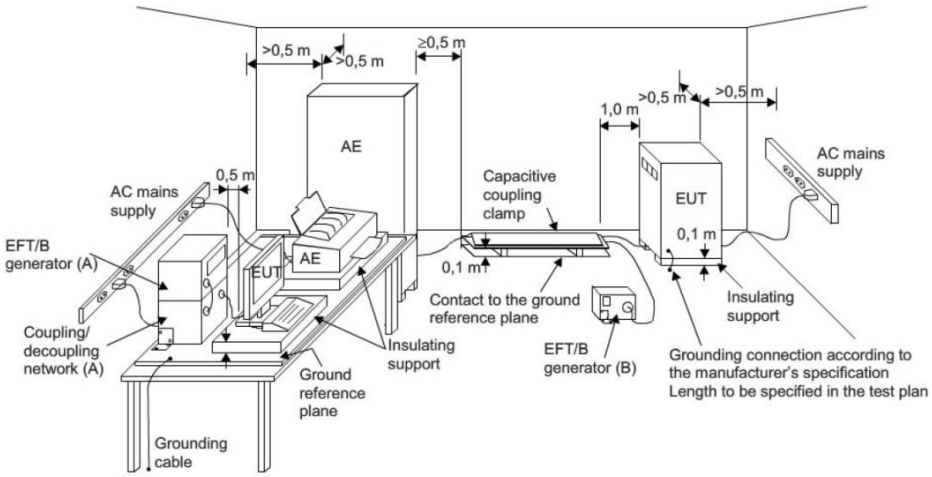
Basic Standard:	IEC/EN 61000-4-4
Required Performance:	B
Test Voltage:	Power Line：1 KV Signal/Control Line：0.5 KV DC network power port:0.5KV
Polarity:	Positive & Negative
Impulse Frequency:	5 kHz
Impulse Wave shape :	5/50 ns
Burst Duration:	15ms
Burst Period:	300ms
Test Duration:	Not less than 1 min.

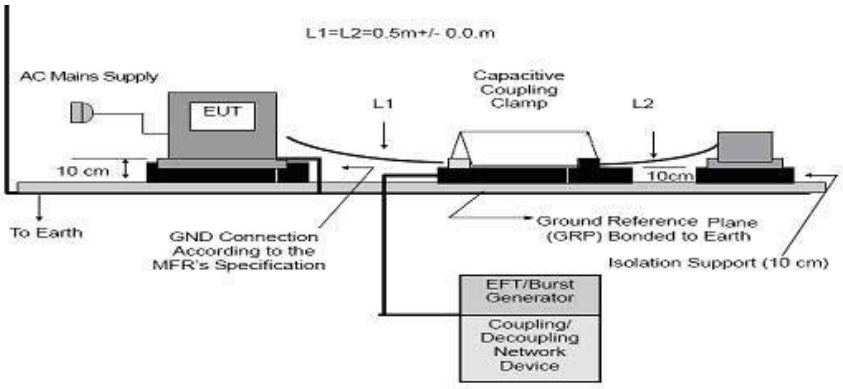
4.5.2 TEST PROCEDURE

The EUT and support equipment, are placed on a table that is 0.8 meter&0.1 meter above a metal ground plane measured 1m*1m min .
The ground reference plane shall be a metallic sheet (copper or aluminum) of 0. 25 mm minimum thickness; other metallic materials may be used, but they shall have at least 0.65 mm minimum thickness.
The other condition need as following manners:

c. The length of power cord between the coupling device and the EUT should not exceed 1 meter.
d. Both positive and negative polarity discharges were applied.
e. The duration time of each test sequential was 1 minute

4.5.3 TEST SETUP





Note:

TABLE-TOP EQUIPMENT

Table-top equipment and equipment normally mounted on ceilings or walls as well as built-in equipment shall be tested with the EUT located (0.1 ± 0.01) m above the ground reference plane.
Testing of large table-top equipment or multiple systems can be performed on the floor; maintaining the same distances as for the test setup of table-top equipment.
The test generator and the coupling/decoupling network shall be bonded to the ground reference plane.
The ground reference plane shall be a metallic sheet (copper or aluminum) of 0. 25mm minimum thickness; other metallic materials may be used , but they shall have at least 0.65 mm minimum thickness.
The minimum size of the ground reference plane is 0.8m x 1m The actual size depends on the dimensions of the EUT.
The ground reference plane shall project beyond the EUT by at least 0.1m on all sides.
The ground reference plane shall be connected to the earth (PE) for safety reasons.
The EUT shall be arranged and connected to satisfy its functional requirements, according to the equipment installation specifications.
The minimum distance between the EUT and all other conductive structures (including the generator, AE and the walls of a shielded room), except the ground reference plane, shall be more than 0.5m.
AII cables to The EUT shall be placed on The insulation support 0.1m above The ground reference plane. Cables not subject to electrical fast transients shall be routed as far as possible from the cable under test to minimize the coupling between the cables.
The EUT shall be connected to the earth system in accordance with the manufacturer's installation specifications; no additional earth connections are allowed.
The connection impedance of the coupling/decoupling network earth cables to the ground reference plane and all connectors shall provide a low inductance
Either a direct coupling network or a capacitive clamp shall be used for the application of the test voltages. The test voltages shall be coupled to all of the EUT ports in turn including those between two units of equipment involved in the test, unless the length of the interconnecting cable makes it impossible to test.

FLOOR-STANDING EQUIPMENT

When using the coupling clamp, the minimum distance between the coupling plates and all other conductive surfaces (including the generator), except the ground reference plane beneath the coupling clamp and beneath the EUT, shall be at least 0.5m.
The distance between any coupling devices and the EUT shall be (0.5 - 0/+0.1) m for tabletop equipment testing, and (1.0 ± 0.1) m for floor standing equipment, unless otherwise specified in product standards. When it is not physically possible to apply the distances mentioned above, other distances can be used and shall be recorded in the test report.
The cable between the EUT and the coupling device, if detachable, shall be as short as possible to comply with the requirements of this clause. If the manufacturer provides a cable exceeding the distance between the coupling device and the point of only of the EUT, the excess length of this cable shall be bundled and situated at a distance of 0,1m above the ground reference plane. When a capacitive clamp is used as a coupling device, the excess cable length shall be bundled at the AE side.
Parts of the EUT with interconnecting cables of a length less than 3m, which are not tested, shall be placed on the insulating support. The parts of the EUT shall have a distance of 0,5m between them. Excess cable length shall be bundled.

4.5.4 TEST RESULTS

Temperature:	23.9℃	Relative Humidity:	54%
Test Voltage:	N/A	Test Mode:	N/A

Coupling Line		Test level	Perform. Criteria	Results	Judgment
AC line	L	N/A	B	N/A	N/A
	N	N/A		N/A	N/A
	PE	N/A		N/A	N/A
	L+N	N/A		N/A	N/A
	L+PE	N/A		N/A	N/A
	N+PE	N/A		N/A	N/A
	L+N+PE	N/A		N/A	N/A
DC network power port Line		N/A		N/A	N/A
Signal Line		N/A		N/A	N/A

Note: 1) N/A - denotes test is not applicable in this test report.

4.6 SURGE TESTING

4.6.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-5
Required Performance:	B
Wave-Shape:	Combination Wave 1.2/50us Open Circuit Voltage
Test Voltage:	Power line ~ line to line: 1 KV line to ground: 2KV Telecommunication line: 0.5KV DC network power port:0.5KV
Surge Input/Output:	L-N, L-PE, N-PE
Generator Source:	(L-N)2 ohm between networks
Impedance:	(L-PE, N-PE)12 ohm between network and ground
Polarity:	Positive/Negative
Phase Angle:	0°/90°/180°/270°
Pulse Repetition Rate:	1 time / min. (maximum)
Number of Tests:	5 positive and 5 negative at selected points

4.6.2 TEST PROCEDURE

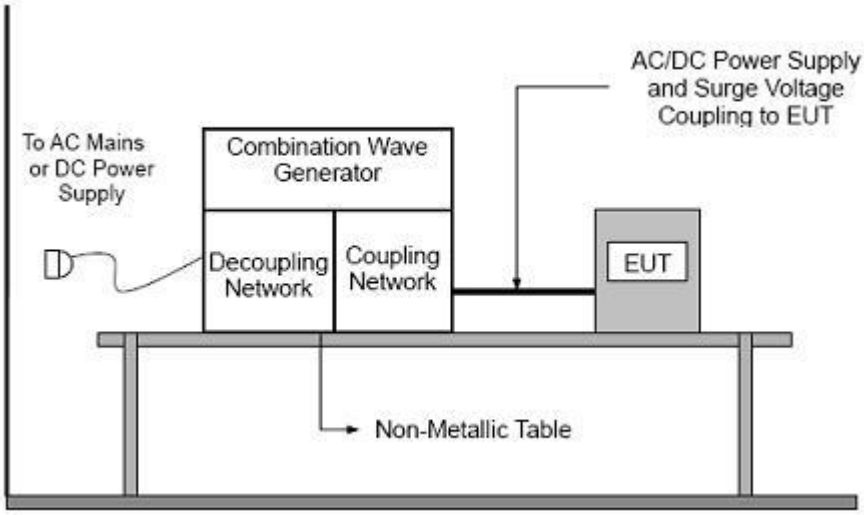
a. For EUT power supply:

b. The surge is to be applied to the EUT power supply terminals via the capacitive coupling network. Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave. The power cord between the EUT and the coupling/decoupling networks shall be 2meters in length (or shorter).

c. For test applied to unshielded unsymmetrically operated interconnection lines of EUT:

d. The surge is applied to the lines via the capacitive coupling. The coupling /decoupling networks shall not influence the specified functional conditions of the EUT. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).

4.6.3 TEST SETUP



4.6.4 TEST RESULTS

Temperature:	23.9℃	Relative Humidity:	54%
Test Voltage:	N/A	Test Mode:	N/A

Coupling Line		Test level	Perform. Criteria	Results	Judgment
AC line	L-N	N/A	B	N/A	N/A
	L-PE	N/A		N/A	N/A
	N-PE	N/A		N/A	N/A
DC network power port		N/A		N/A	N/A
Signal Line		N/A		N/A	N/A

Note: 1) N/A - denotes test is not applicable in this test report.

4.7 CONDUCTED RADIO FREQUENCY DISTURBANCES (CS)

4.7.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-6
Required Performance:	A
Frequency Range:	0.15 MHz - 80 MHz
Field Strength:	0.15 MHz - 80 MHz, 3V.
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Dwell Time:	1.5x 10^{-3} decade/s

4.7.2 TEST PROCEDURE

The EUT shall be tested within its intended operating and climatic conditions.

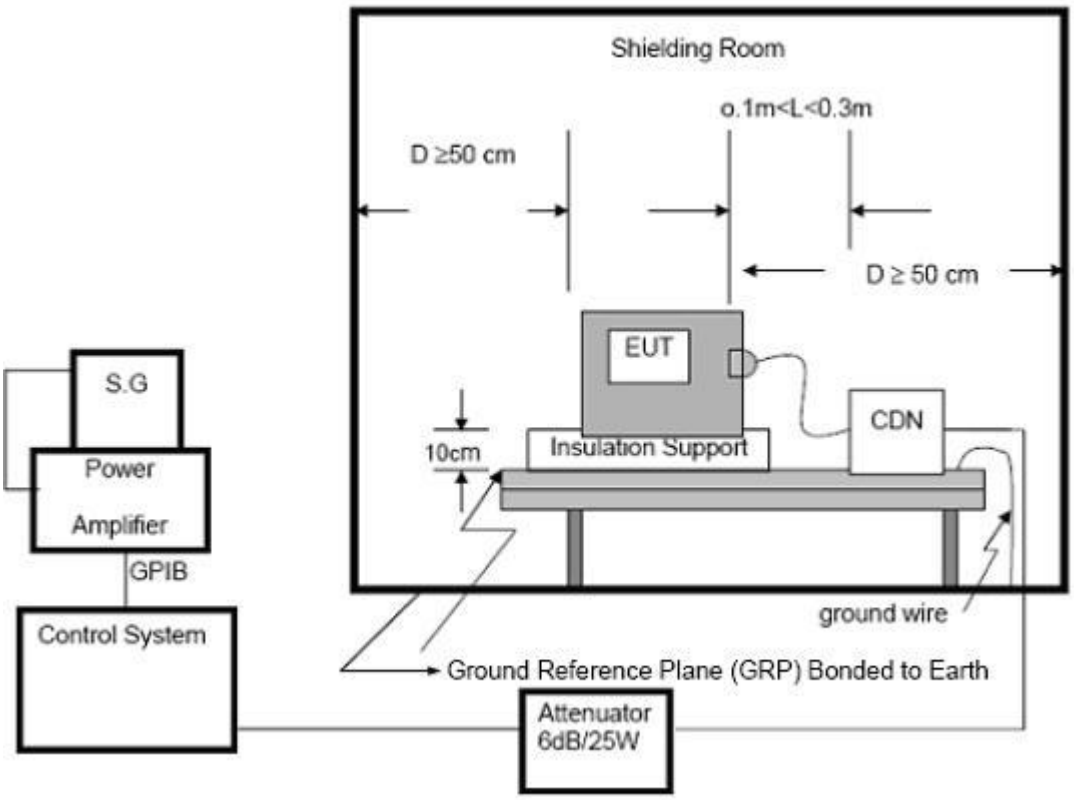
The test shell performed with the test generator connected to each of the coupling and decoupling devices in turn, while the other non-excited RF input ports of the coupling devices are terminated by a 50-ohm load resistor.

The frequency range was swept from 150 kHz to 80 MHz using the signal level established during the setting process and with a disturbance signal of 80 % amplitude. The signal was modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or the switch coupling devices as necessary. The sweep rate was 1.5 x 10^{-3} decades/s. Where the frequency range is swept incrementally, the step size was 1 % of preceding frequency value from 150 kHz to 80 MHz

The dwell time at each frequency was less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies such as clock frequency (ies) and harmonics or frequencies of dominant interest, was analyzed separately.

Attempts was made to fully exercise the EUT during testing, and to fully interrogate all exercise modes selected for susceptibility.

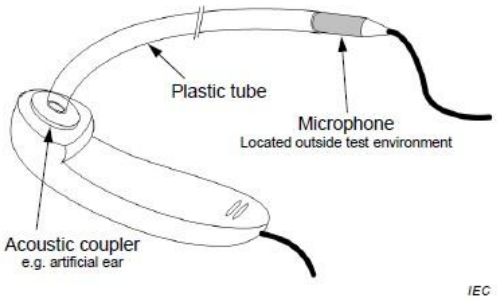
4.7.3 TEST SETUP



NOTE:
FLOOR-STANDING EQUIPMENT

The equipment to be tested is placed on an insulating support of 0.1 meters height above a ground reference plane. All relevant cables shall be provided with the appropriate coupling and decoupling devices at a distance between 0.1 meters and 0.3 meters from the projected geometry of the EUT on the ground reference plane.

For Audio output function use below setting



NOTE 1 The microphone is connected via the cable to a suitable amplifier.

NOTE 2 This setup is suitable for radiated immunity testing. See G.6.3

Figure G.5 – Example test setup for on-ear acoustic measurements, microphone located away from earpiece transducer

4.7.4 TEST RESULTS

Temperature:	23.9℃	Relative Humidity:	54%
Test Voltage:	N/A	Test Mode:	N/A

Test Ports (Mode)	Freq. Range MHz)	Field Strength	Perform. Criteria	Results	Judgment
Input/ Output AC. Power Port	0.15 –80 MHZ	3V(rms) AM Modulated 1000Hz, 80%	N/A	N/A	N/A
Input/ Output DC. Power Port	0.15 –80 MHZ	3V(rms) AM Modulated 1000Hz, 80%	N/A	N/A	N/A
Signal Line	0.15 –80 MHZ	3V(rms) AM Modulated 1000Hz, 80%	N/A	N/A	N/A

Note: 1) N/A - denotes test is not applicable in this test report.

Note: According to EN 55014: 2017, Annex A, A.2 Applicability, the EUT belongs to Group 2. And then according to EN 55014: 2017, Annex A, A.4Modified test levels and performance criteria, Table A.2 – Modified test levels for performance criterion A for the broadcast reception function, no test requirements apply to this EUT.

4.8 POWER FREQUENCY MAGNETIC FIELD TESTING

4.8.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-8
Required Performance:	B
Frequency Range:	50Hz
Field Strength:	1 A/m
Observation Time:	1 minute
Inductance Coil:	Rectangular type, 1mx1m

4.8.2 TEST PROCEDURE

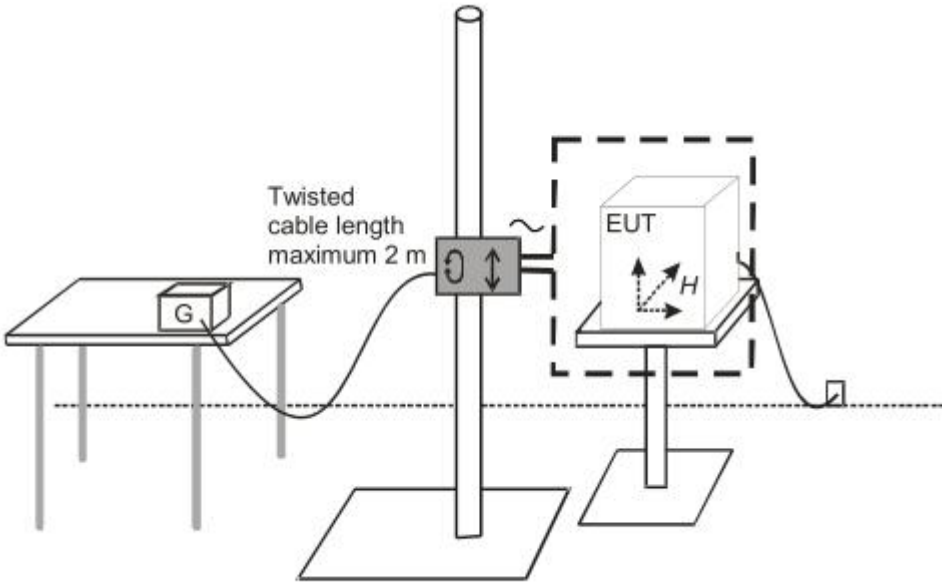
The EUT and support equipment, are placed on a table that is 0.8 meter&0.1 meter above a metal ground plane measured 1m*1m min.

The other condition need as following manners:

a. The equipment cabinets shall be connected to the safety earth directly on the GRP via the earth terminal of the EUT.

b. The cables supplied or recommended by the equipment manufacturer shall be used. 1 meter of all cables used shall be exposed to the magnetic field.

4.8.3 TEST SETUP



Note:
TABLE-TOP EQUIPMENT

The equipment shall be subjected to the test magnetic field by using the induction coil of standard dimension (1 m x 1 m). The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

FLOOR-STANDING EQUIPMENT

The equipment shall be subjected to the test magnetic field by using induction coils of suitable dimensions. The test shall be repeated by moving and shifting the induction coils, in order to test the whole volume of the EUT for each orthogonal direction. The test shall be repeated with the coil shifted to different positions along the side of the EUT, in steps corresponding to 50 % of the shortest side of the coil. The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

4.8.4 TEST RESULTS

Temperature:	23.9℃	Relative Humidity:	54%
Test Voltage:	N/A	Test Mode:	N/A

Test Mode	Test Level	inductive coil	Duration (s)	Perform Criteria	Results	Judgment
Enclosure	3A/m	X	60s	B	N/A	N/A
Enclosure	3A/m	Y	60s	B	N/A	N/A
Enclosure	3A/m	Z	60s	B	N/A	N/A

Note：N/A does not apply to this test item

4.9 VOLTAGE INTERRUPTION/DIPS TESTING (DIPS)

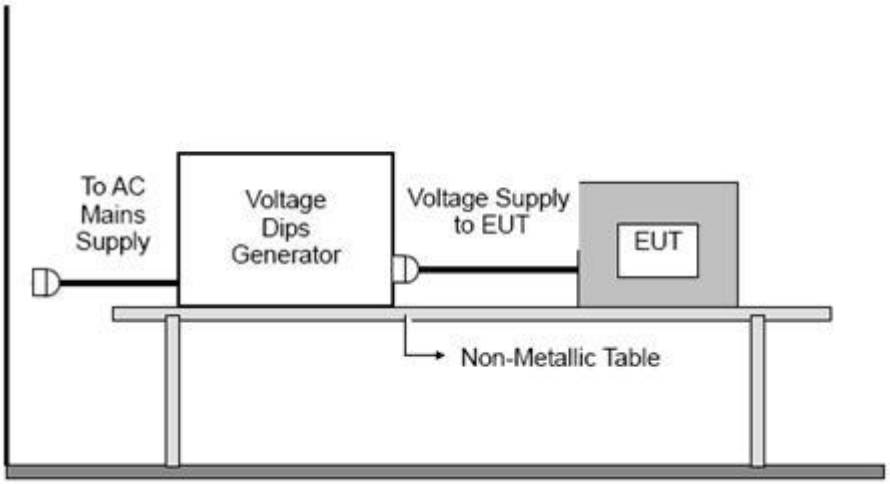
4.9.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-11
Required Performance:	B (For 100% Voltage Dips, 0.5 Cycle) B (For 100% Voltage Dips, 1 Cycle) C (For 30% Voltage Dips, 25 Cycles) C (For 100% Voltage Interruptions, 250 Cycles)
Test Duration Time:	Minimum three test events in sequence
Interval between Event:	Minimum ten seconds
Phase Angle:	0°/45°/90°/135°/180°/225°/270°/315°/360°
Test Cycle:	3 times

4.9.2 TEST PROCEDURE

The EUT shall be tested for each selected combination of test levels and duration with a sequence of three dips/interruptions with intervals of 10 s minimum (between each test event). Each representative mode of operation shall be tested. Abrupt changes in supply voltage shall occur at zero crossings of the voltage waveform.

4.9.3 TEST SETUP



4.9.4 TEST RESULTS

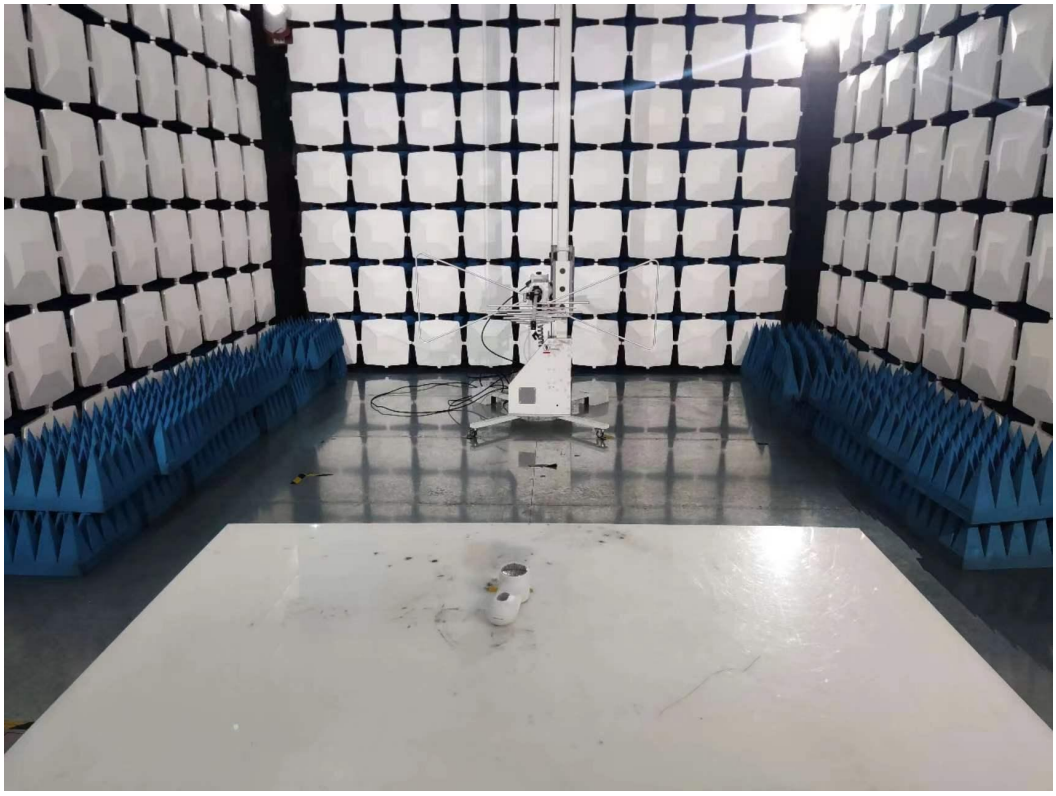
Temperature:	23.9℃	Relative Humidity:	54%
Test Voltage:	N/A	Test Mode:	N/A

Voltage Reduction	Duration (cycle)	Perform Criteria	Results	Judgment
Voltage dip 100%	0.5	B	N/A	N/A
Voltage dip 100%	1	B	N/A	N/A
Voltage dip 30%	25	C	N/A	N/A
Voltage interruptions	250	C	N/A	N/A

Note：N/A does not apply to this test item

APPENDIX 1- TEST SETUP

RE



CE

ESD

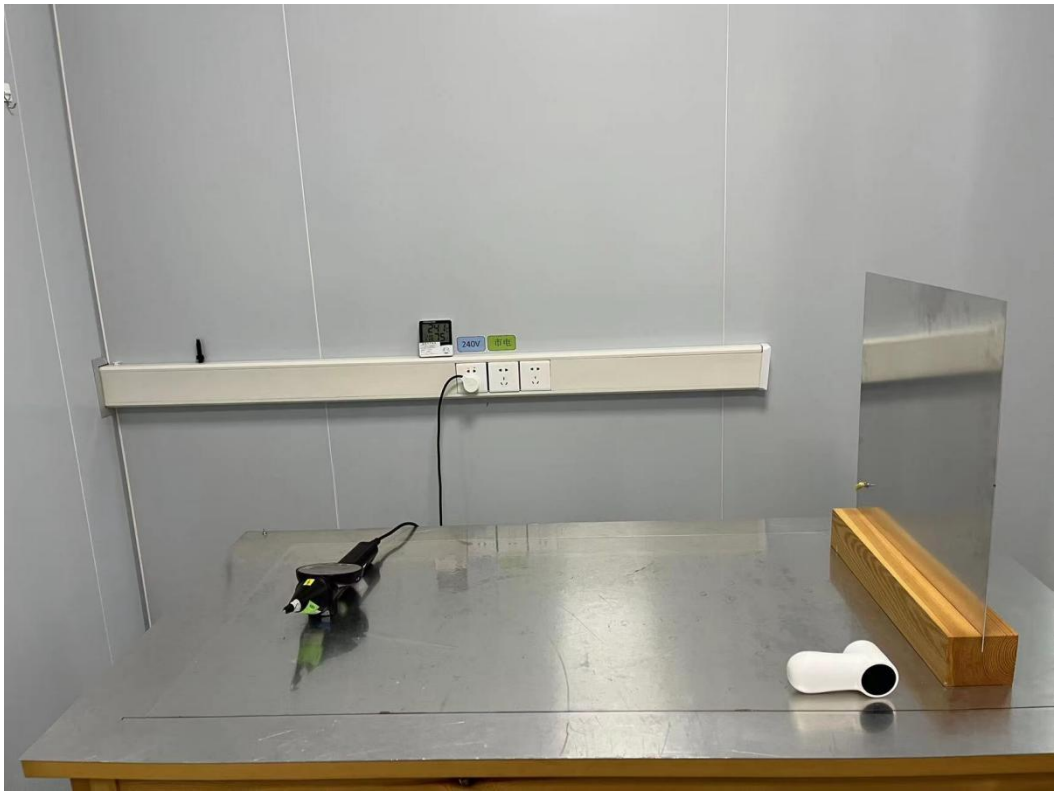


Photo 1

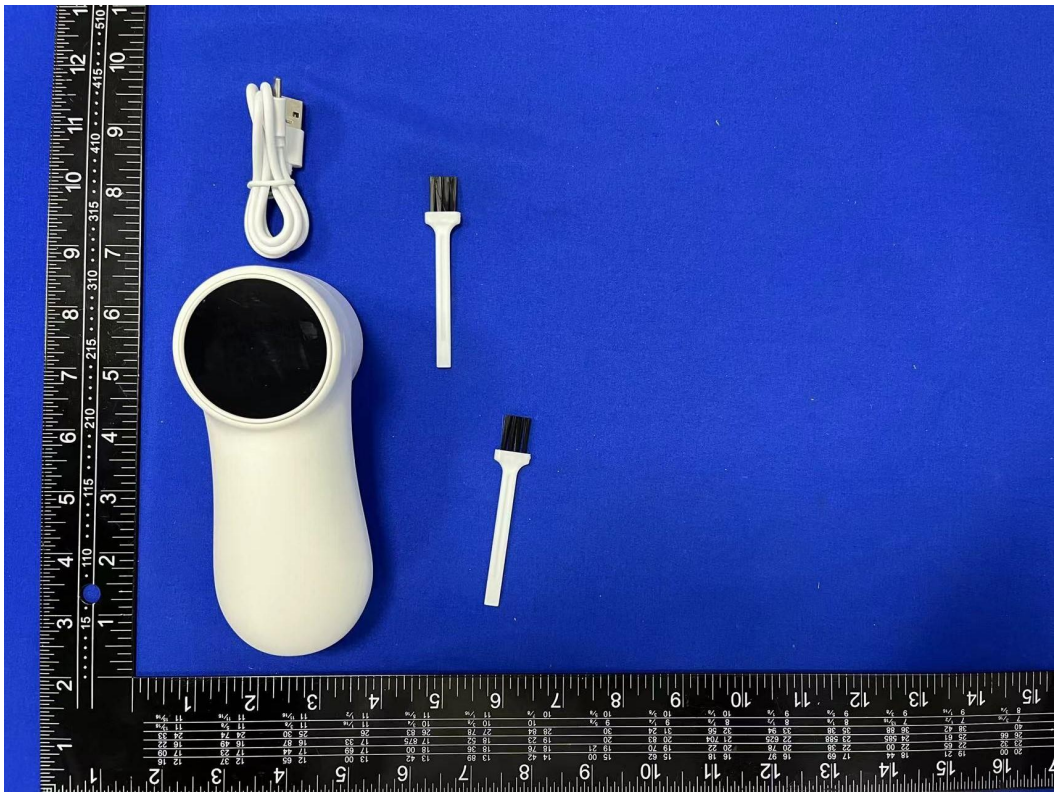


Photo 2

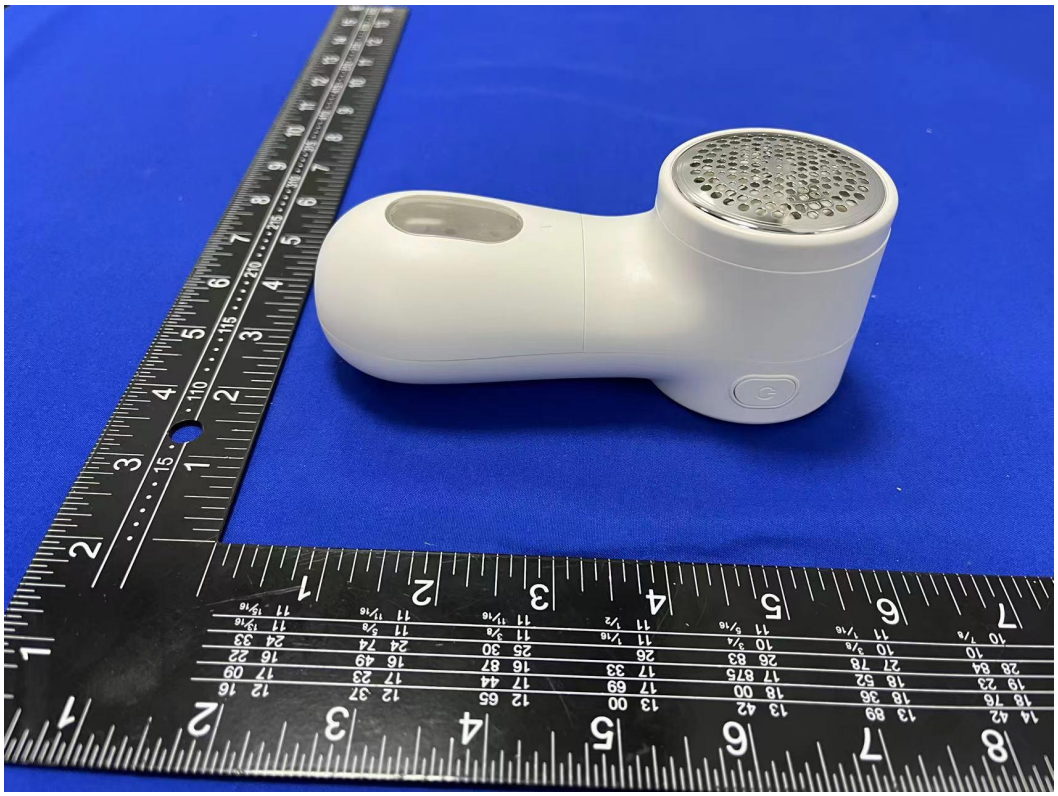


Photo 3

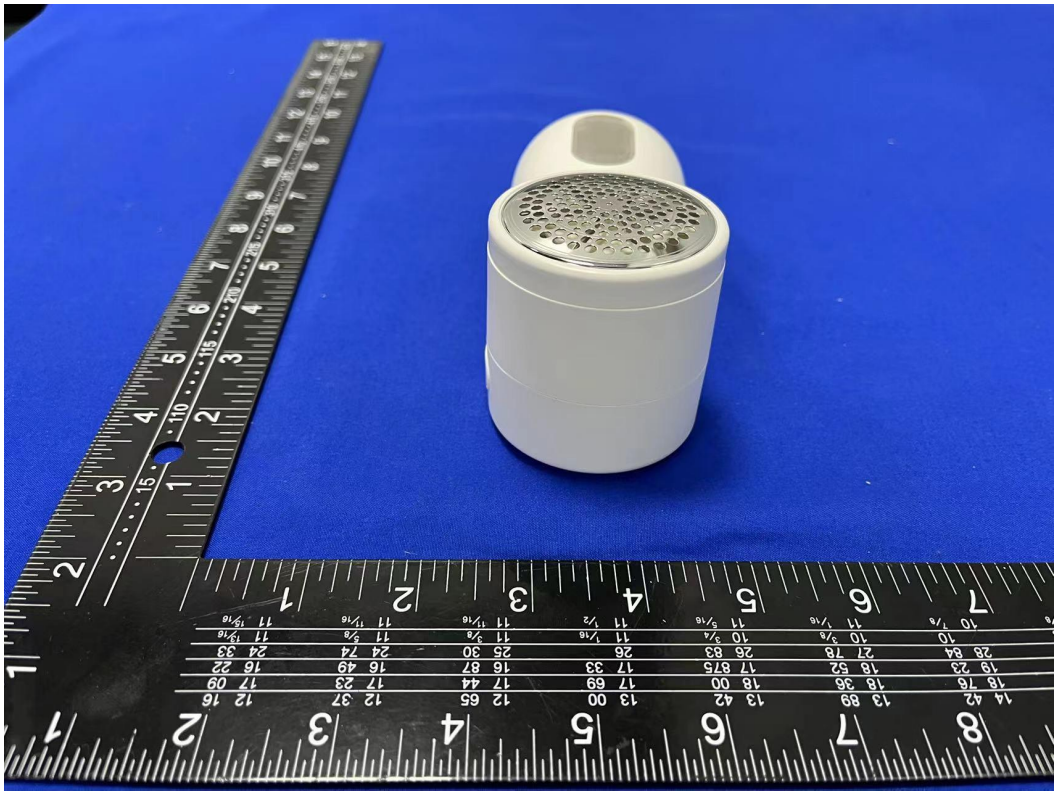


Photo 4

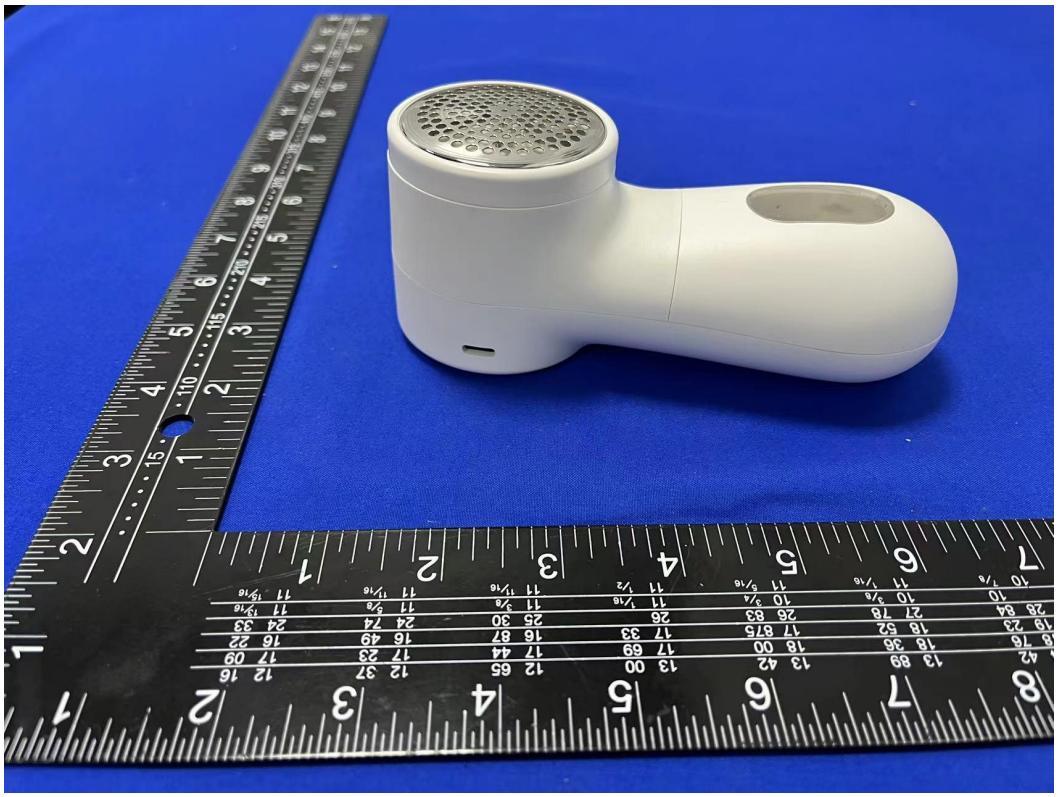


Photo 5

Photo 6

Photo 7

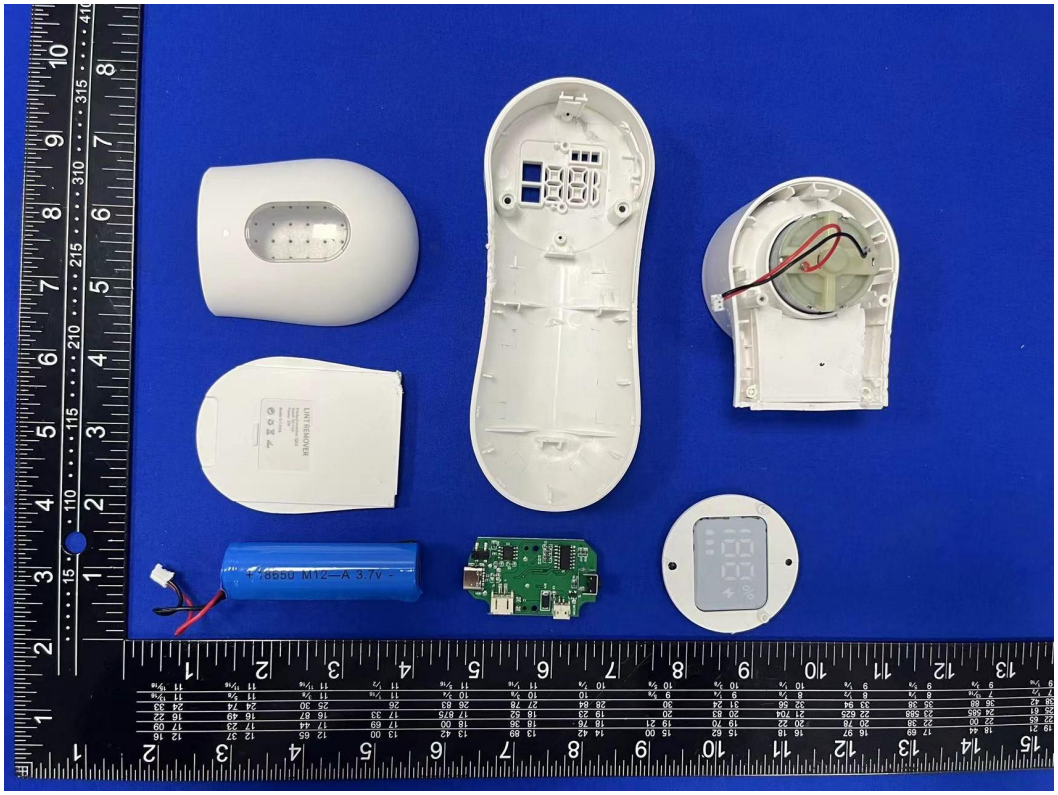


Photo 8

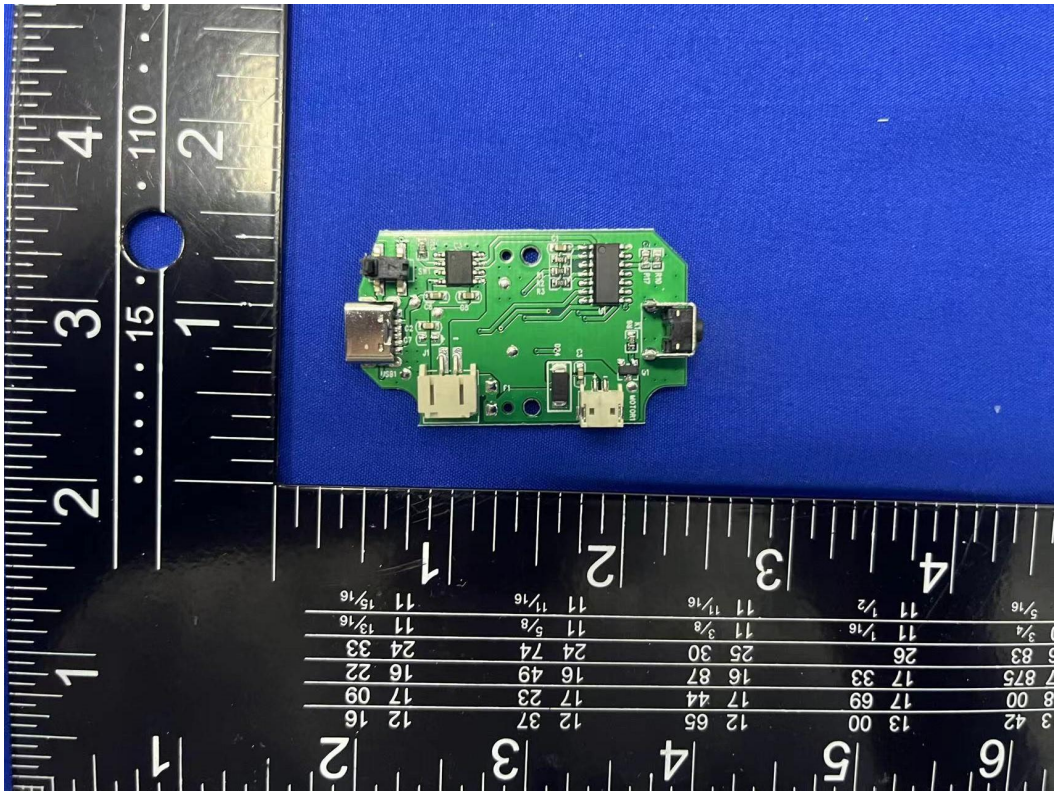


Photo 9

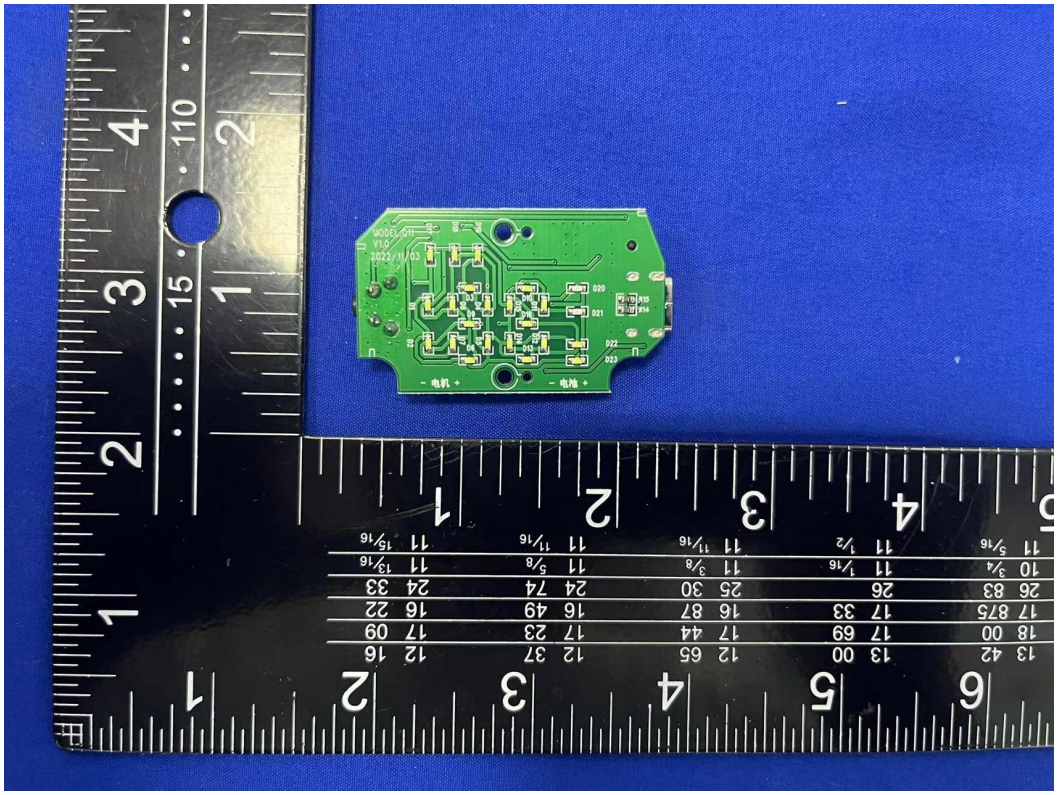
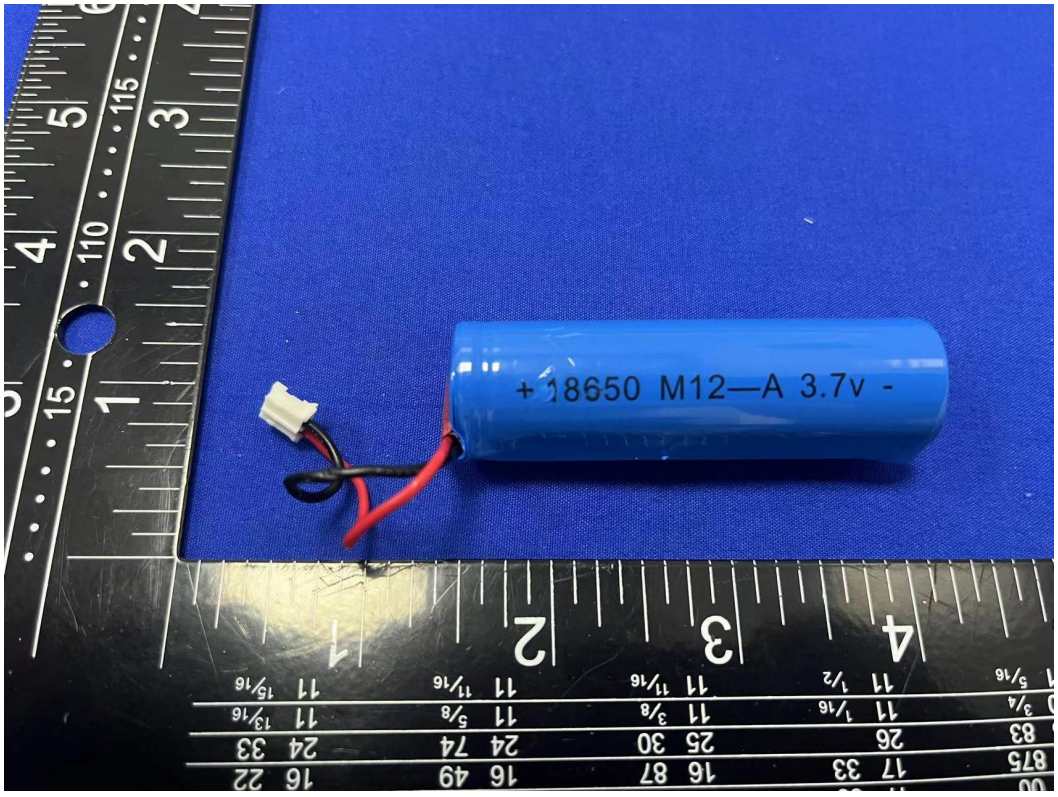


Photo 10



※※※※※END OF THE REPORT※※※※※