



MEDICAL DIRECTIVE—EMC TEST REPORT

For

Hair Removal System

Model: BM204, BM205, BM14, BM12S, BM101, BM212, BM18, BM18-1, BM18-2, BM051, BM03, BM052, BM053, BM054, BM055, BM056, BM057, BM058, BM059, BM060, BM061, BM062, BM063, BM064, BM065, BM066, BM067, BM068, BM069, BM070, IPLS1, IPLS2, IPLS3, IPLS4, IPLS5, IPLS6, IPLS7, IPLS8, IPLS9, IPLS10, IPLS11, IPLS12, IPLS13, IPLS14, IPLS15, DL108, DL109, DL110, DL111, DL112, DL113, DL114, DL115, DL116, DL117, DL118, DL119, DL120, DL121, DL122, DL123, DL124, DL125, DL126, DL127, DL128, DL129, DL130

Brand Name: NEWANGIE

Report No.: ENC2502191GZ62E1

Date of Issue: Feb. 24, 2025

Prepared For

Hebei Newangie Technology Co., Ltd.

Room 402, Building A-5, Guoxietang Industrial Park, No.509 Taihang South Street, Hi-Tech Zone, Shijiazhuang City, 050035 Hebei Province, P.R.China

Prepared By

East Notice Certification Service Co., Ltd.

1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town, Tianhe District, Guangzhou City, China

E-mail: enc@enc-lab.com

Web: www.enc-lab.com

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town, Tianhe District, Guangzhou City
E-mail: enc@enc-lab.com Http:// www.enc-lab.com

TABLE OF CONTENTS

VERIFICATION OF CONFORMITY.....	3
1. TEST SUMMARY	4
2. SYSTEM DESCRIPTION	5
3. PRODUCT INFORMATION.....	6
4. SUPPORT EQUIPMENT	7
5. TEST FACILITY.....	8
6. EN 60601-1-2 LINE CONDUCTED EMISSION TEST.....	9
6.1. TEST EQUIPMENT OF CONDUCTED EMISSION TEST	9
6.2. LIMITS OF LINE CONDUCTED EMISSION TEST	9
6.3. BLOCK DIAGRAM OF TEST SETUP	9
6.4. PROCEDURE OF LINE CONDUCTED EMISSION TEST	10
6.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	11
7. EN 60601-1-2 RADIATION EMISSION TEST.....	13
7.1. TEST EQUIPMENT OF RADIATION EMISSION TEST	13
7.2. LIMITS OF RADIATION EMISSION.....	13
7.3. BLOCK DIAGRAM OF TEST SETUP	13
7.4. TEST PROCEDURE	14
7.5. TEST RESULTS OF RADIATION EMISSION.....	15
8. EN IEC 61000-3-2 POWER HARMONICS TEST	17
8.1. TEST EQUIPMENT OF POWER HARMONICS TEST	17
8.2. BLOCK DIAGRAM OF TEST SETUP	17
8.3. LIMITS OF HARMONIC CURRENT	18
8.4. RESULT	19
9. EN 61000-3-3 VOLTAGE FLUCTUATION / FLICKER TEST	19
9.1. TEST EQUIPMENT OF VOLTAGE FLUCTUATION / FLICKER TEST	20
9.2. BLOCK DIAGRAM OF TEST SETUP	20
9.3. RESULT	21
10. IEC 61000-4-2 ESD IMMUNITY TEST	22
10.1. TEST EQUIPMENT OF ESD TEST.....	22
10.2. BLOCK DIAGRAM OF TEST SETUP.....	22
10.3. TEST PROCEDURE	22
10.4. PERFORMANCE & RESULT	23
11. IEC 61000-4-3 TEST	24

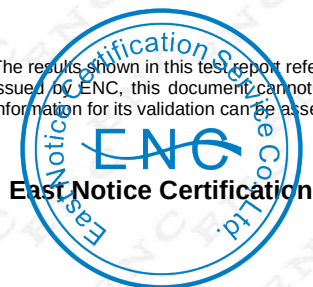
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.





11.1. TEST EQUIPMENT	24
11.2. BLOCK DIAGRAM OF TEST SETUP	24
11.3. TEST PROCEDURE	25
11.4. PERFORMANCE & RESULT	26
12. IEC 61000-4-4 TEST	27
12.1. TEST EQUIPMENT	27
12.2. BLOCK DIAGRAM OF TEST SETUP	27
12.3. TEST PROCEDURE	28
12.4. PERFORMANCE & RESULT	28
13. IEC 61000-4-5 SURGE IMMUNITY TEST	29
13.1. TEST EQUIPMENT OF SURGE TEST	29
13.2. BLOCK DIAGRAM OF TEST SETUP	29
13.3. TEST PROCEDURE	30
13.4. PERFORMANCE & RESULT	30
14. IEC 61000-4-6 TEST	31
14.1. TEST EQUIPMENT	31
14.2. BLOCK DIAGRAM OF TEST SETUP	31
14.3. TEST PROCEDURE	32
14.4. PERFORMANCE & RESULT	32
15. IEC 61000-4-8 TEST	33
15.1 TEST EQUIPMENT	33
15.2 BLOCK DIAGRAM OF TEST SETUP	33
15.3 TEST PROCEDURE	34
15.4 PERFORMANCE & RESULT	34
16. IEC 61000-4-11 TEST	35
16.1. TEST EQUIPMENT	35
16.2. BLOCK DIAGRAM OF TEST SETUP	35
16.3. TEST PROCEDURE	36
16.4. PERFORMANCE	36
APPENDIX 1	37
PHOTOGRAPH(S) OF EUT	37

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



VERIFICATION OF CONFORMITY

Equipment Under Test:	Hair Removal System
Model Number:	BM204, BM205, BM14, BM12S, BM101, BM212, BM18, BM18-1, BM18-2, BM051, BM03, BM052, BM053, BM054, BM055, BM056, BM057, BM058, BM059, BM060, BM061, BM062, BM063, BM064, BM065, BM066, BM067, BM068, BM069, BM070, IPLS1, IPLS2, IPLS3, IPLS4, IPLS5, IPLS6, IPLS7, IPLS8, IPLS9, IPLS10, IPLS11, IPLS12, IPLS13, IPLS14, IPLS15, DL108, DL109, DL110, DL111, DL112, DL113, DL114, DL115, DL116, DL117, DL118, DL119, DL120, DL121, DL122, DL123, DL124, DL125, DL126, DL127, DL128, DL129, DL130
Model Difference:	All models have same electrical structure as BM18, except for the different appearance and power.
Brand Name:	NEWANGIE
Applicant:	Hebei Newangie Technology Co., Ltd.
	Room 402, Building A-5, Guoxietang Industrial Park, No.509 Taihang South Street, Hi-Tech Zone, Shijiazhuang City, 050035 Hebei Province, P.R.China
Manufacturer:	Hebei Newangie Technology Co., Ltd.
	Room 402, Building A-5, Guoxietang Industrial Park, No.509 Taihang South Street, Hi-Tech Zone, Shijiazhuang City, 050035 Hebei Province, P.R.China
Type of Test:	MEDICAL DEVICE REGULATION-2017/745 (EU) for CE Marking
Technical Standards:	EN 60601-1-2:2015+A1:2021
File Number:	ENC2502191GZ62E1
Date of test:	Feb. 14, 2025 – Feb. 24, 2025
Deviation:	None
Condition of Test Sample:	Normal

The above equipment was tested by East Notice Certification Service Co., Ltd. for compliance with the requirements set forth in MEDICAL DEVICES: GENERATL Directive and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

Sample and Standards in accordance with ANSI C63.4 and CISPR 11 / EN 55011

Should any objections to the test reports occurred, should submit it to the Company within ten days since the issuing of the report, Fail to accept.

The test results of this report relate only to the tested Sample identified in this report.

Checked By Yemig
Yemig Feb. 24, 2025

Authorized By Ray Zhou
Ray Zhou Feb. 24, 2025

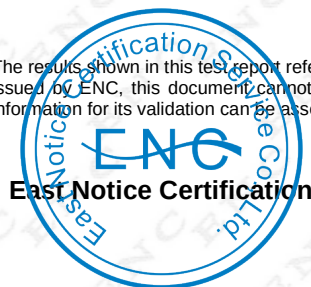
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

1. TEST SUMMARY

Test	Test Method	Complies Level	Result
Emission Tests			
Radiated Emission (3m semi-anechoic chamber) 30MHz to 1000MHz	CISPR 11	Group1, Class B	PASS
Conducted Emission on AC 150kHz to 30MHz	CISPR 11		PASS
Harmonic	EN IEC 61000-3-2: 2019+A2:2024		PASS
Flicker	EN 61000-3-3:2013 +A2:2021		PASS
Immunity Tests			
Immunity to electrostatic discharges $\pm 2\text{kV}$ $\pm 4\text{kV}$ $\pm 6\text{kV}$ $\pm 8\text{kV}$ $\pm 15\text{kV}$	IEC 61000-4-2:2008	Contact: $\pm 8\text{kV}$ Air: $\pm 2,4,6,8,15\text{kV}$	PASS
Immunity to RF electromagnetic fields 80MHz to 2700MHz 10V/m (rms) 380MHz to 390MHz 27V/m (rms) 430MHz to 470MHz 28V/m (rms) 704MHz to 787MHz 9V/m (rms) 800MHz to 960MHz 28V/m (rms) 1700MHz to 1990MHz 28V/m (rms) 2400MHz to 2570MHz 28V/m (rms) 5100MHz to 5800MHz 9V/m (rms)	IEC 61000-4-3:2020	10V/m, 80% Am at 1kHz PM at 18Hz FM ± 5 kHz deviation at 1kHz PM at 217 Hz PM at 18Hz PM at 217 Hz PM at 217 Hz PM at 217 Hz	PASS
Electrical Fast Transient Immunity	IEC 61000-4-4:2012	+2 kV for power supply lines +1 kV for input/output lines.	PASS
Surge Immunity	IEC 61000-4-5:2017	+1 kV differential mode +2 kV common mode	PASS
Conducted Disturbances Immunity	IEC 61000-4-6:2013	3 Vrms and 6 Vrms 150 kHz to 80 MHz	PASS
Power Frequency Magnetic Immunity	IEC 61000-4-8:2009	30 A/m - 50 or 60 Hz	PASS
Voltage Dips, Interruptions Immunity	IEC 61000-4-11:2020	<5 % UT (>95 % dip in UT) For 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	PASS

N/A: Indicates that the test is not applicable

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.





2. SYSTEM DESCRIPTION

EUT Test Procedure:

1. Connect EUT and peripheral devices if need.
2. Power on the EUT, the EUT begins to work.
3. Make sure the EUT operates normally during the test.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



East Notice Certification

1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town, Tianhe District, Guangzhou City
E-mail: enc@enc-lab.com [Http:// www.enc-lab.com](http://www.enc-lab.com)



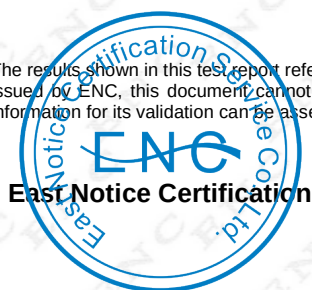
3. PRODUCT INFORMATION

Housing Type : Metal & Plastic
Rated Voltage : 100-240V~, 50/60Hz
Rated Power : 3000W
Protection Class : Class I

I/O Port Information (☒Applicable ☐Not Applicable)

I/O Port of EUT			
I/O Port Type	Q'TY	Cable	Tested with
AC input port	1	1.5 m unshielded	1

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town, Tianhe District, Guangzhou City
E-mail: enc@enc-lab.com [Http:// www.enc-lab.com](http://www.enc-lab.com)



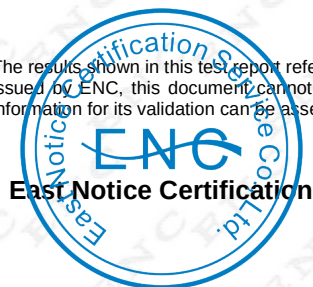
4. SUPPORT EQUIPMENT

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
--	--	--	--	--	--

****Note:** All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.





5. TEST FACILITY

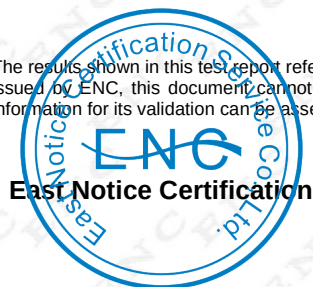
Location: 1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town, Tianhe District, Guangzhou City, China

Description: There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4 and CISPR 11/EN 55011 requirements.

Site Filing: The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.

Instrument Tolerance: All measuring equipment is in accord with ANSI C63.4 and CISPR 32 requirements that meet industry regulatory agency and accreditation agency requirement.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town, Tianhe District, Guangzhou City
E-mail: enc@enc-lab.com [Http:// www.enc-lab.com](http://www.enc-lab.com)

6. EN 60601-1-2 LINE CONDUCTED EMISSION TEST

6.1. TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
EMI Test Receiver	ROHDE & SCHWARZ	ESCI	1166.5950.03	24/01/2025	25/01/2026
LISN	ROHDE & SCHWARZ	ESH2-Z5	860014/010	24/01/2025	25/01/2026
Limitator	ROHDE & SCHWARZ	ESH3-Z2	1004008	24/01/2025	25/01/2026
The Impedance Stability Network ISN	FISCHER CUSTOM COMMUNICATIONS, INC.	F-071115-1057-1-09	112299	24/01/2025	25/01/2026
Software	ROHDE & SCHWARZ	ES-K1 V1.71	/	N/A	N/A

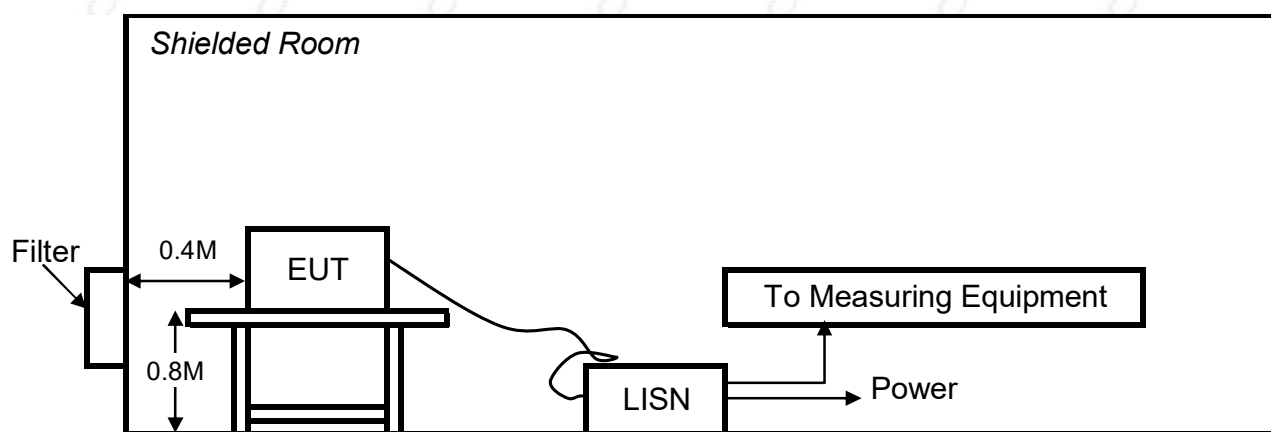
6.2. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBμV)	Average(dBμV)
150kHz-500kHz	66-56	56-46
500kHz-5MHz	56	46
5MHz-30MHz	60	50

****Note:** 1. The lower limit shall apply at the transition frequency.

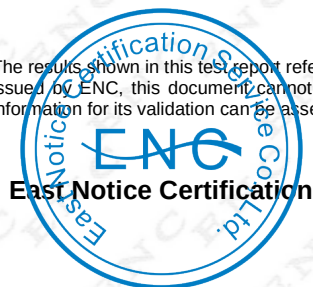
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

6.3. BLOCK DIAGRAM OF TEST SETUP



A: Powered through filter

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



6.4. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When 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 EN 60601-1-2 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per EN 60601-1-2.
- 3) All I/O cables were positioned to simulate typical actual usage as per EN 60601-1-2
- 4) The EUT received AC230V/50Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5) All support equipments received power from a second LISN supplying power of AC 230V/50Hz, if any.
- 6) 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.
- 7) Analyzer / Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- 10) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

Frequency Range Investigated			
Mode of operation	Date	Report No.	Worst Mode
Normal	Feb. 24, 2025	ENC2502191GZ62E1	☒

The test data of the worst case condition(s) was reported on the Summary Data page.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



6.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

EUT : Hair Removal System

Power : AC 230V

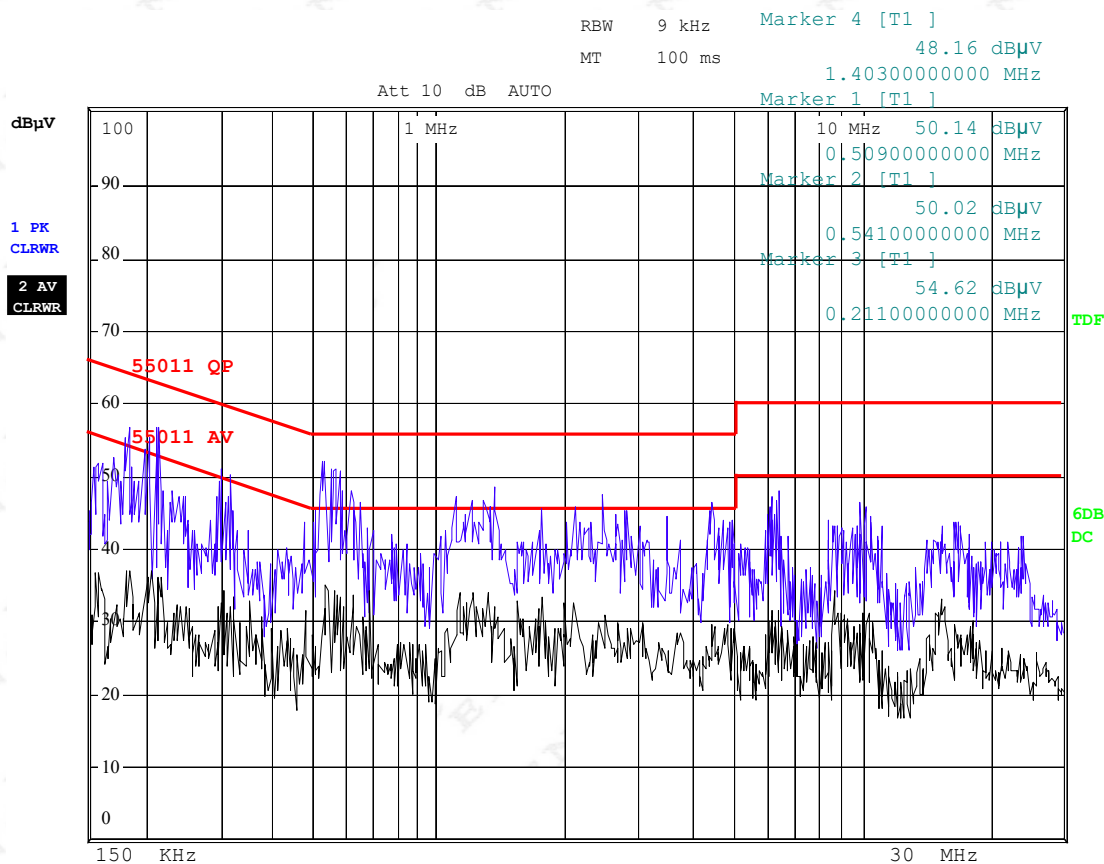
M/N : BM18

Temperature : 25°C

Mode : Normal, L

Humidity : 51%

Test Result of Line Conducted Emission Test-Line Line



RESULT: PASS

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

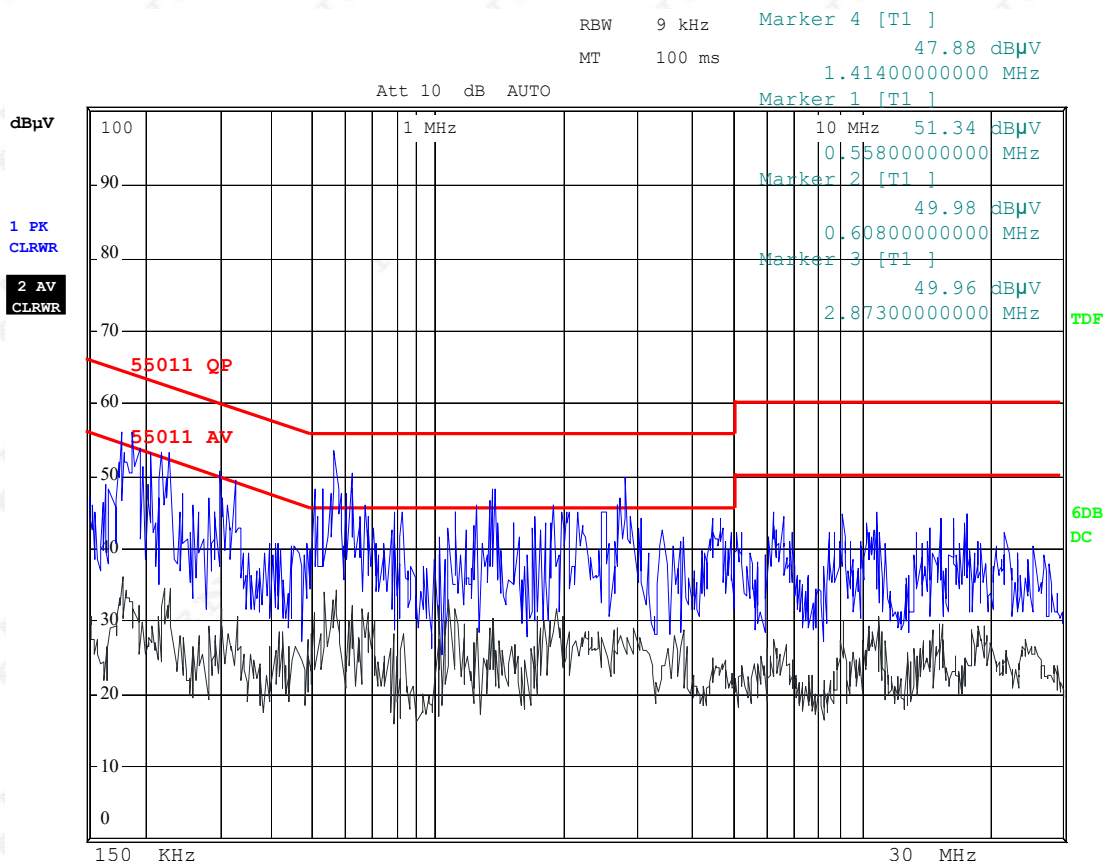




EUT : Hair Removal System
M/N : BM18
Mode : Normal, N

Power : AC 230V
Temperature : 25°C
Humidity : 51%

Test Result of Line Conducted Emission Test-Neutral Line



RESULT: PASS

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



7. EN 60601-1-2 RADIATION EMISSION TEST

7.1. TEST EQUIPMENT OF RADIATION EMISSION TEST

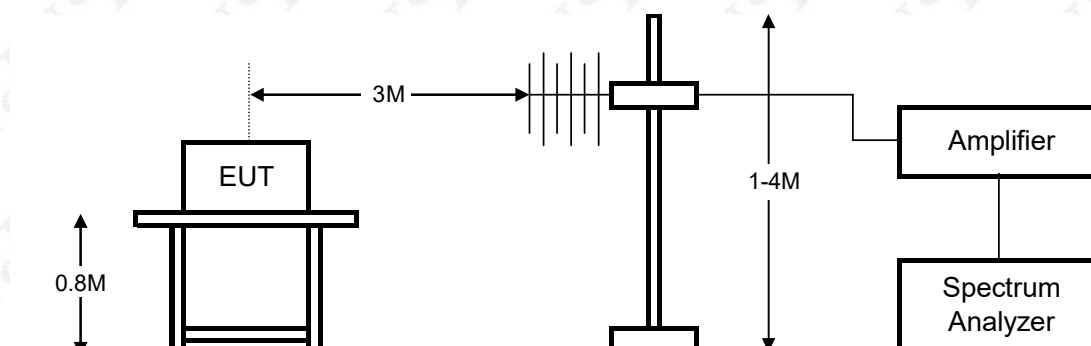
Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
EMI Test Receiver	ROHDE & SCHWARZ	ESCI	1166.5950.03	24/01/2025	25/01/2026
LISN	ROHDE & SCHWARZ	ESH2-Z5	860014/010	24/01/2025	25/01/2026
Limitator	ROHDE & SCHWARZ	ESH3-Z2	1004008	24/01/2025	25/01/2026
The Impedance Stability Network ISN	FISCHER CUSTOM COMMUNICATIONS, INC.	F-071115-1057-1-09	112299	24/01/2025	25/01/2026
Software	ROHDE & SCHWARZ	ES-K1 V1.71	/	N/A	N/A

7.2. LIMITS OF RADIATION EMISSION

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m Q.P.)
30-230	3	40.00
230-1000	3	47.00

****Note:** The lower limit shall apply at the transition frequency.

7.3. BLOCK DIAGRAM OF TEST SETUP



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

7.4. TEST PROCEDURE

The magnetic component shall be measured by means of a loop antenna as described in EN 60601-1-2. The lighting equipment shall be placed in the centre of the antenna, and the position is not critical.

The test object was operated at its upper limit of its rated voltage and its rated frequency. The induced current in the loop antenna is measured by means of a current probe (1V/A) and the CISPR measuring receiver. By means of a coaxial switch the three field directions can be measured in sequence. Each value shall fulfill the requirements given.

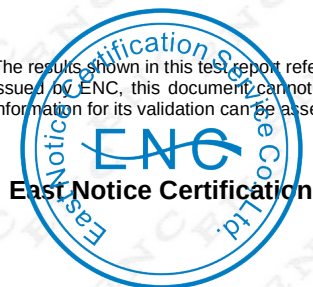
The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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.

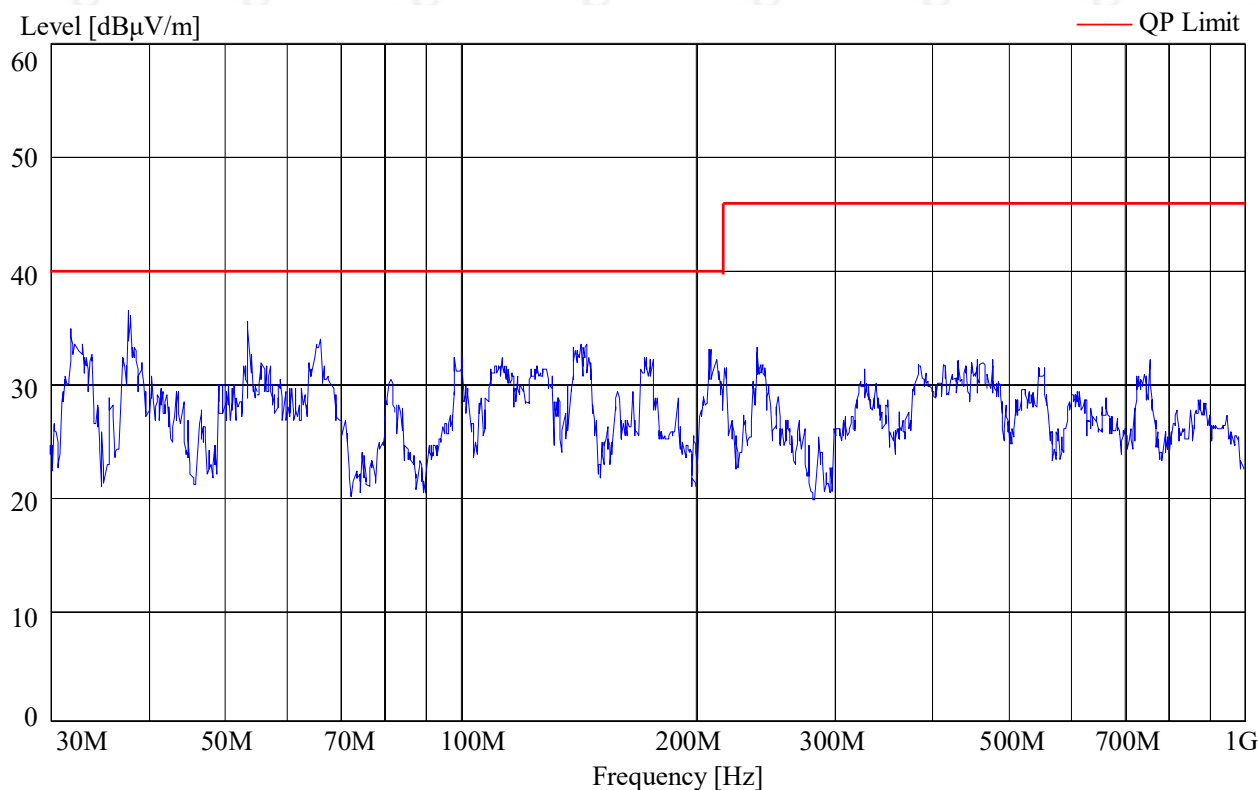
For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



7.5. TEST RESULTS OF RADIATION EMISSION

Radiated Emission Measurement



Site: Site 3M

Limit: EN 55011 Class B 3M Radiation

Temperature: 25°C

EUT: Hair Removal System

M/N: BM18

Mode: Normal

Note:

Polarization: Vertical

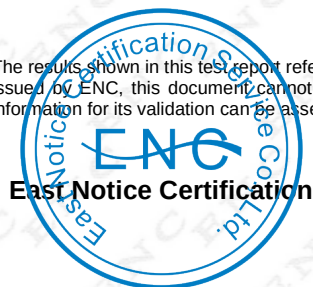
Power: AC 230V 50Hz

Humidity: 51%

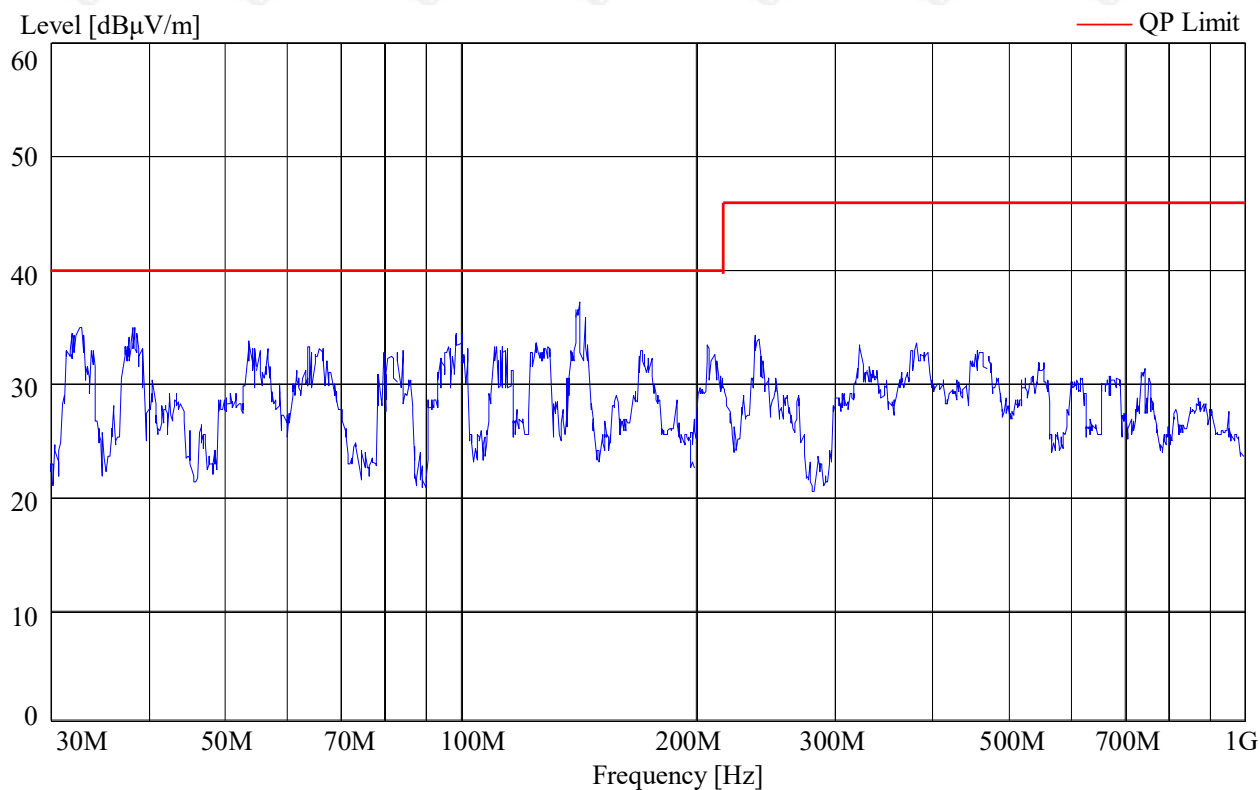
No.Mk.	Freq.	Reading	Correct	Measure-				Antenna	Table
		Level	Factor	ment	Limit	Over		Height	Degree
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	31.843	32.58	0.15	32.73	40.00	-7.27	peak		
2 *	37.530	34.16	0.16	34.32	40.00	-5.68	peak		
3	52.298	33.79	0.17	33.96	40.00	-6.04	peak		
4	64.582	32.14	0.18	32.32	40.00	-7.68	peak		

RESULT: PASS

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



Radiated Emission Measurement



Site: Site 3M

Limit: EN 55011 Class B 3M Radiation

Temperature: 25°C

EUT: Hair Removal System

M/N: BM18

Mode: Normal

Note:

Polarization: Horizontal

Power: AC 230V 50Hz

Humidity: 51%

No.Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measure- ment dBμV/m	Limit dBμV/m	Over dB	Detector	Antenna Height cm	Table Degree degree
1	32.434	32.56	0.15	32.71	40.00	-7.29	peak		
2	37.296	32.74	0.16	32.90	40.00	-7.10	peak		
3	53.027	31.29	0.17	31.46	40.00	-8.54	peak		
4 *	147.235	35.22	0.22	35.44	40.00	-4.56	peak		

RESULT: PASS

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



8. EN IEC 61000-3-2 POWER HARMONICS TEST

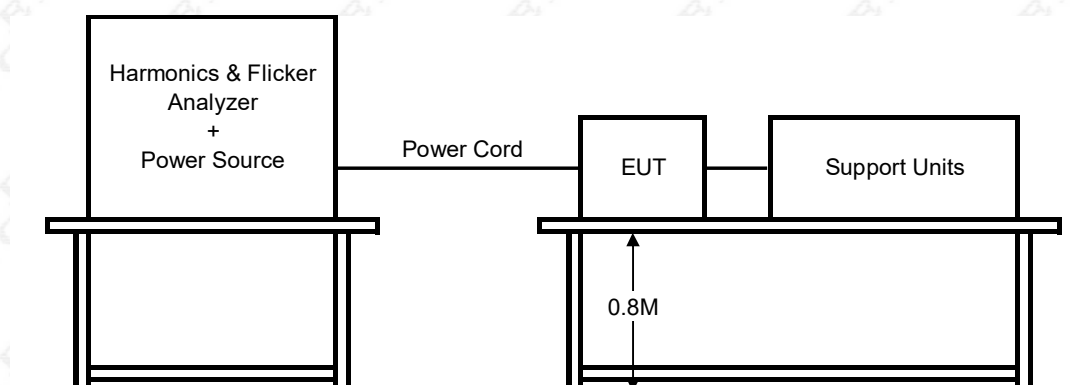
POWER HARMONICS MEASUREMENT

Port	: AC mains
Basic Standard	: EN IEC 61000-3-2:2019+A2:2024
Limits	: CLASS A
Tester	: Sam Liu
Temperature	: 25°C
Humidity	: 51%

8.1. TEST EQUIPMENT OF POWER HARMONICS TEST

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
Purified Power	California instruments	HFS500	54513	24/01/2025	25/01/2026
Harmonic And Flicker Analyzer	EM TEST	DPA503S1	1143	24/01/2025	25/01/2026
Software	EM TEST	DPA	1.24.12	N/A	N/A

8.2. BLOCK DIAGRAM OF TEST SETUP



Note:

1. The EUT was tested with the equipment configured to its rated current.
2. The measurements were carried out under steady conditions. When a piece of EUT is brought into operation or is taken out of operation, manually or automatically, harmonic currents and power are not taken into account at first 10s following the switching event. EUT shall not be in standby mode for more than 10% of any observation period.
3. Harmonics of the fundamental current were measured using a digital power meter with an analogue output and frequency analyser which was integrated in the harmonic & flicker test system.

For each harmonic order, measure the 1,5 s smoothed r.m.s. harmonic current in each DFT time window and calculate the arithmetic average of the measured values from the DFT time windows, over the entire observation period. Each harmonic order, all 1.5 s smoothed r.m.s. harmonic current values and the average values for the individual harmonic currents, taken over the entire test observation period shall be less than or equal to the applicable limits.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

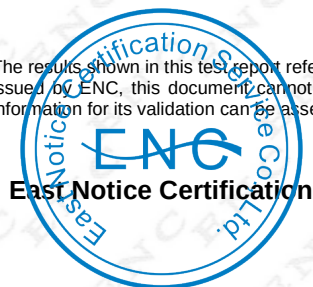
8.3. LIMITS OF HARMONIC CURRENT

Limits for Class A Equipment	
Harmonics Order n	Max. permissible harmonic current (A)
Odd harmonics	
3	2.3
5	1.14
7	0.77
9	0.40
11	0.33
13	0.21
$15 \leq n \leq 39$	$0.15 \times 15/n$
Even harmonics	
2	1.08
4	0.43
6	0.30
$8 \leq n \leq 40$	$0.23 \times 8/n$

NOTE:

1. According to section 5 of EN IEC 61000-3-2:2019+A2:2024, the EUT is Class A equipment.
2. The above limits are for all applications having an active input power > 75W.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



8.4. RESULT

Test Specification

Test Frequency:	50Hz	Test Voltage:	230Vac
Waveform:	Sine	Test Time:	2.5min
Classification:	Class A	Test result:	Pass

Harmonic current results

Hn	Harms(max) [A]	Limit [%]	Limit[A]	Result
1	13.514			
2	0.066	6.145	1.080	PASS
3	0.434	18.882	2.300	PASS
4	0.063	14.622	0.430	PASS
5	0.256	22.469	1.140	PASS
6	0.052	17.465	0.300	PASS
7	0.225	29.184	0.770	PASS
8	0.041	17.718	0.230	PASS
9	0.068	16.883	0.400	PASS
10	0.033	17.718	0.184	PASS
11	0.029	8.821	0.330	PASS
12	0.022	14.459	0.153	PASS
13	0.021	9.980	0.210	PASS
14	0.019	14.221	0.131	PASS
15	0.021	13.972	0.150	PASS
16	0.014	12.149	0.115	PASS
17	0.015	11.467	0.132	PASS
18	0.014	13.698	0.102	PASS
19	0.013	10.854	0.118	PASS
20	0.008	8.859	0.092	PASS
21	0.012	10.881	0.107	PASS
22	0.008	9.703	0.084	PASS
23	0.009	9.505	0.098	PASS
24	0.005	6.048	0.077	PASS
25	0.009	10.349	0.090	PASS
26	0.005	6.560	0.071	PASS
27	0.008	9.820	0.083	PASS
28	0.005	7.056	0.066	PASS
29	0.008	10.449	0.078	PASS
30	0.002	3.817	0.061	PASS
31	0.008	11.165	0.073	PASS
32	0.002	4.015	0.058	PASS
33	0.005	6.849	0.068	PASS
34	0.002	4.312	0.054	PASS
35	0.005	7.277	0.064	PASS
36	0.002	4.566	0.051	PASS
37	0.003	5.726	0.061	PASS
38	0.002	4.851	0.048	PASS
39	0.002	4.015	0.058	PASS
40	0.001	2.531	0.046	PASS

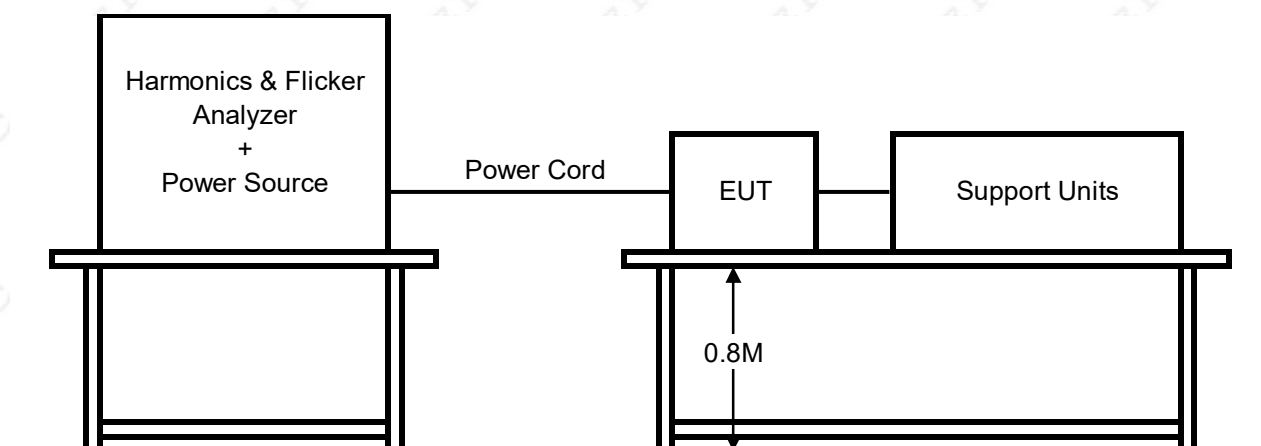
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

9. EN 61000-3-3 VOLTAGE FLUCTUATION / FLICKER TEST
VOLTAGE FLUCTUATION/FLICKER MEASUREMENT

Port : AC mains
Basic Standard : EN 61000-3-3:2013+A2:2021
Limits : §5 of IEC 61000-3-3
Tester : Sam Liu
Temperature : 25°C
Humidity : 51%

9.1. TEST EQUIPMENT OF VOLTAGE FLUCTUATION / FLICKER TEST

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
Purified Power	California instruments	HFS500	54513	24/01/2025	25/01/2026
Harmonic And Flicker Analyzer	EM TEST	DPA503S1	1143	24/01/2025	25/01/2026
Software	EM TEST	DPA	1.24.12	N/A	N/A

9.2. BLOCK DIAGRAM OF TEST SETUP

Note:

- The test supply voltage (open-circuit voltage) was the rated voltage of the EUT. The test voltage was maintained within $\pm 2\%$ of the nominal value. The frequency was 50 Hz $\pm 0.5\%$.
- The voltage fluctuations and flicker were measured at the supply terminals of the EUT.
- The observation period, T_p , for the assessment of flicker values by flicker measurement, flicker simulation, or analytical method was:
 - for P_{st} , $T_p = 10$ min;
 - for P_{lt} , $T_p = 2$ h.

The observation period included that part of the whole operation cycle in which the EUT produces the most unfavourable sequence of voltage changes.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



9.3. RESULT

Flicker Test Summary per EN/IEC 61000-3-3 (Run time)

EUT: Hair Removal System

Tested by: Sam Liu

Test category: All parameters (European limits)

Test Margin: 100

Test date: 2025-02-20

Start time: 10:32:16

End time: 10:42:16

Test duration (min): 10

Comment: On

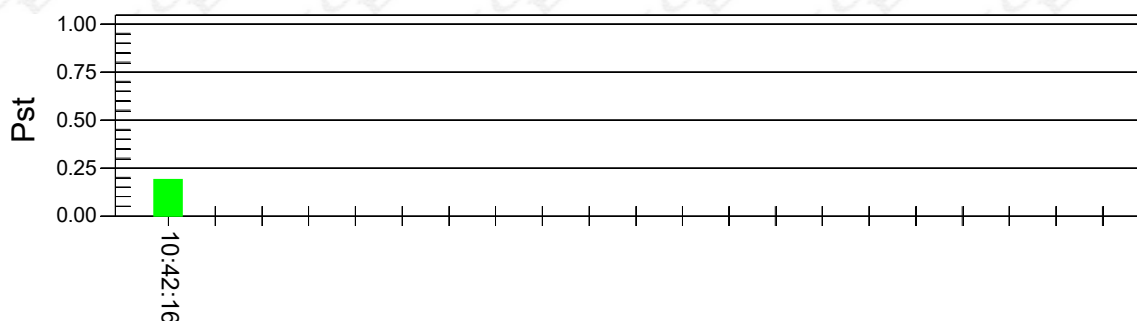
Customer: Hebei Newangie Technology Co., Ltd.

Test Result: Pass

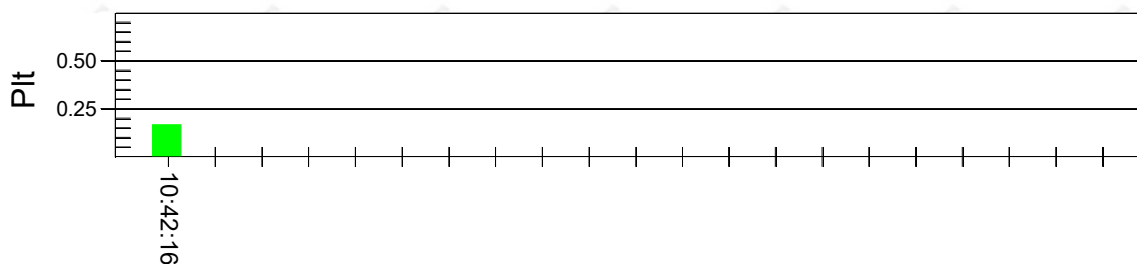
Source qualification: OK

Pst and limit line

European Limits



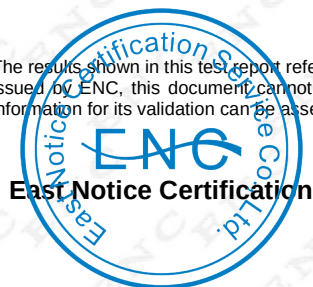
Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.1			
Highest dt(%):	-0.18	Test limit (%):	3.30	Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	-0.10	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.197	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.175	Test limit:	0.650	Pass

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



10. IEC 61000-4-2 ESD IMMUNITY TEST

ELECTROSTATIC DISCHARGE (ESD) IMMUNITY TEST

Port : Enclosure
Basic Standard : IEC 61000-4-2:2008
Test Level : ± 2 kV; ± 4 kV; ± 6 kV; ± 8 kV; ± 15 kV (Air Discharge)
 ± 8 kV (Contact Discharge)

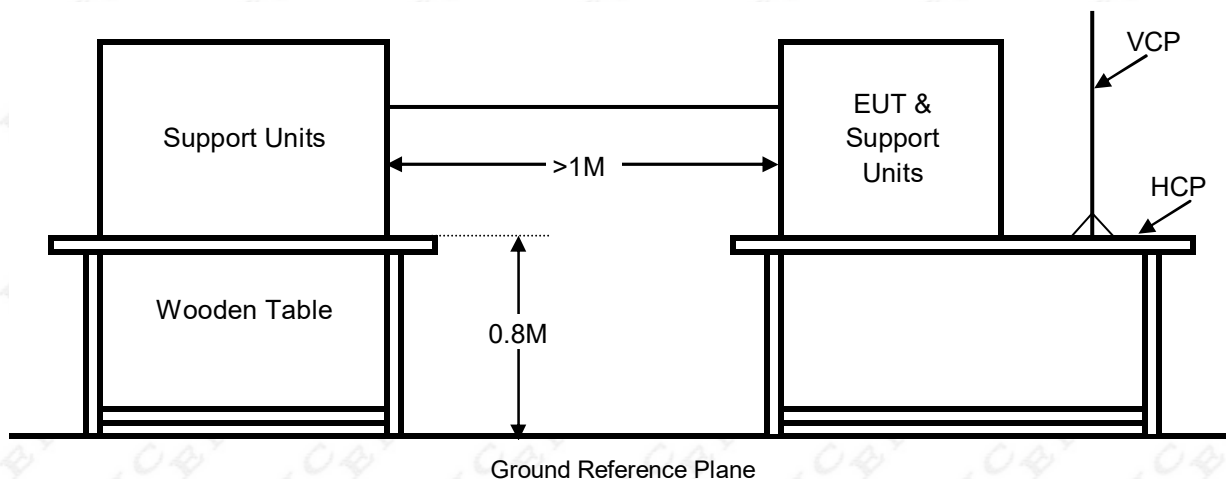
Standard require : B
Tester : Sam Liu
Temperature : 25°C
Humidity : 51%

10.1. TEST EQUIPMENT OF ESD TEST

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
ESD Simulator	EM-Test	EST883	N/A	24/01/2025	25/01/2026

10.2. BLOCK DIAGRAM OF TEST SETUP

(The 470 k ohm resistors are installed per standard requirement)



10.3. TEST PROCEDURE

The EUT was located 0.1 m minimum from all side of the HCP.

The support units were located 1 m minimum away from the EUT.

EUT worked with resistance load, and make sure EUT worked normally.

Activates the communication function if the EUT with such port(s).

As per the requirement of EN 60601-1-2: Contact discharge is the preferred test method. 20 discharges (10 with positive and 10 negative polarity) shall be applied on each accessible metal part of the enclosure. In case of a non-conductive enclosure, discharges shall be applied on the horizontal or vertical coupling planes as specified in IEC 61000-4-2.

Air discharges shall be used where contact discharges cannot be applied.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

The following test condition was followed during the tests.

Note: As per the A2 to IEC 61000-4-2, a bleed resistor cable is connected between the EUT and HCP during the test.

The electrostatic discharges were applied as follows:

Discharge type	Discharge Level (kV)		Number of Discharges Per Location (Each Polarity)	Result (Pass/Fail)
	Positive	Negative		
Air – Direct	2,4,8,15	2,4,8,15	10	Pass
Contact – Direct	8	8	10	Pass
Contact – Indirect	8	8	10	Pass
Discharge location	All external locations accessible by hand, Horizontal plate (HCP) Vertical coupling plate (VCP)			

10.4. PERFORMANCE & RESULT

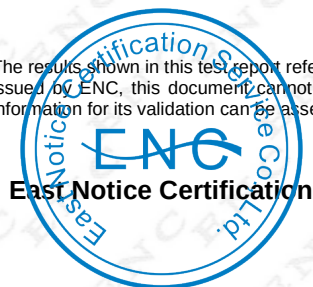
☐ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.

☒ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.

☐ Criteria C: Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

☒ **PASS**
☐ **FAIL**

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

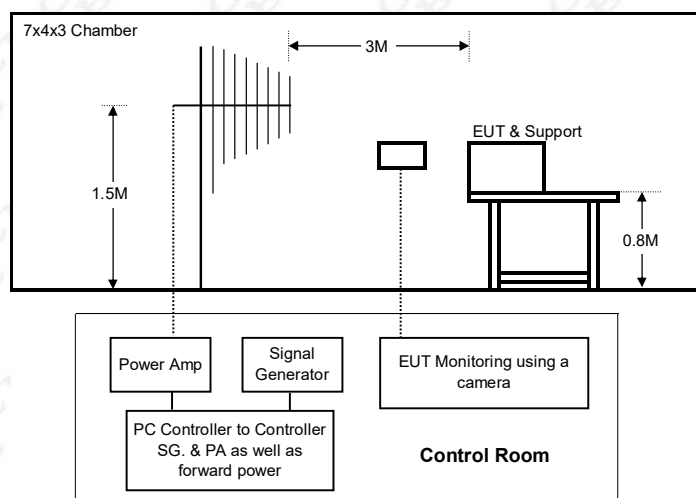


**11. IEC 61000-4-3 TEST
RADIATED ELECTROMAGNETIC FIELD IMMUNITY TEST**

Port	: Enclosure
Basic Standard	: IEC 61000-4-3:2020
Frequency range	: 80 MHz to 2700 MHz
Field strength	: 10 V/m
EUT - antenna separation	: 3 m
Modulation	: AM: 80 %; sinusoidal 1K Hz
Frequency step	: 1 % with 3 s dwell time
Antenna polarisation	: Horizontal & vertical
Communications Equipment Frequency	: Tabulated Results for Proximity Fields From RF Wireless Communications Equipment
Standard require	: B
Tester	: Sam Liu
Temperature	: 25°C
Humidity	: 51%

11.1. TEST EQUIPMENT

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
Signal generator	Agilent	N5181A	4906012	24/01/2025	25/01/2026
Power Amplifier	MicoTop	MPA-80-1000-250	751000	24/01/2025	25/01/2026
Power Amplifier	MicoTop	MPA-1000	1906282	24/01/2025	25/01/2026
Power Meter	Agilent	E4419B	4331787	24/01/2025	25/01/2026
Test Antenna- Bi-Log	Schwarzbeck	VULB 9118 E	4911	24/01/2025	25/01/2026
Horn Antenna	Sunol Sciences	DRH-118	A062013	24/01/2025	25/01/2026
Power transmitter	HP	8481A	2349A	24/01/2025	25/01/2026

11.2. BLOCK DIAGRAM OF TEST SETUP

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

11.3. TEST PROCEDURE

The EUT is turned on during the test and the results of the maximum susceptible results are recorded.

EUT and its auxiliary instrument are placed on a turntable which is 0.8 meter above ground. Transmitting antenna mounted on an antenna mast is set 3 meter away from the EUT. During the test, each of the four sides of EUT will face the transmitting antenna with the turntable cycled. Both horizontal and vertical polarization of the antenna are set on test and measured individually.

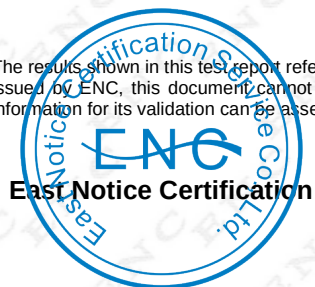
In order to judge the performance of the EUT, a set of monitor system is used.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

Recording the test result in following table.

Test frequency (MHz)	Band (MHz)	Service	Modulation	Maximum power (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
385	380 –390	TETRA 400	Pulse modulation 18 Hz	1.8	0.3	27
450	430 - 470	GMRS 460, FRS 460	FM $\pm$ 5 kHz deviation 1 kHz sine	2	0.3	28
710	704 - 787	LTE Band 13, 17	Pulse modulation 217 Hz	0.2	0.3	9
745						
780						
810	800 - 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz	2	0.3	28
870						
930						
1720	1 700 – 1 990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation 217 Hz	2	0.3	28
1845						
1970						
2450	2 400 - 2 570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217 Hz	2	0.3	28
5240	5 100 - 5 800	WLAN 802.11 a/n	Pulse modulation 217 Hz	0.2	0.3	9
5500						
5785						

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

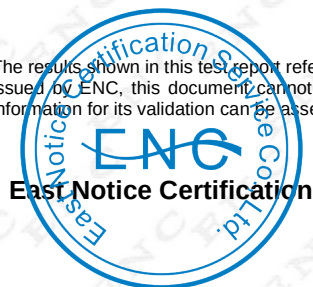


11.4. PERFORMANCE & RESULT

- ☐ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.
- ☒ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.
- ☐ Criteria C: Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

☒ **PASS**☐ **FAIL**

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

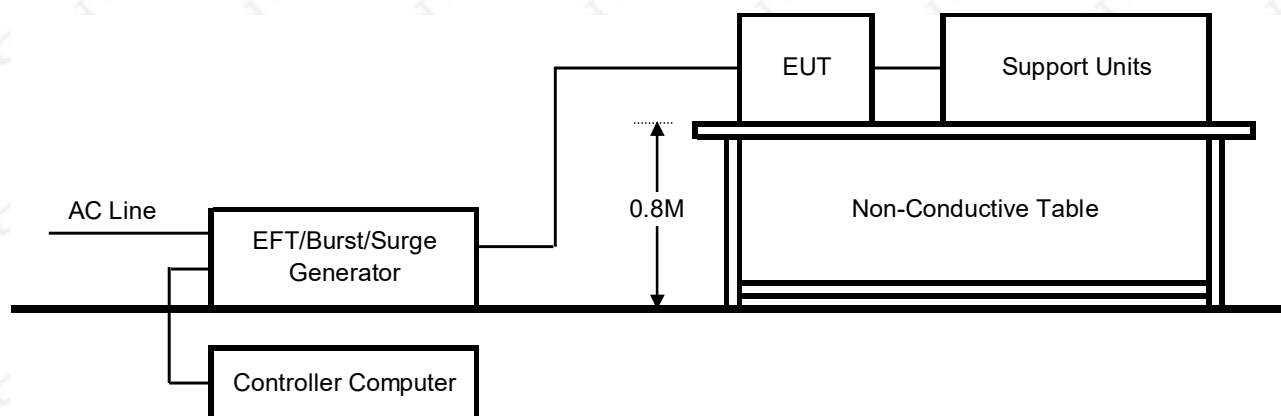


12. IEC 61000-4-4 TEST**ELECTRICAL FAST TRANSIENTS/BURST IMMUNITY TEST**

Port	: On Power Supply Lines
Basic Standard	: IEC 61000-4-4:2012
Test Level	: +/- 2kV for Power Supply Lines
Standard require	: B
Tester	: Sam Liu
Temperature	: 25°C
Humidity	: 51%

12.1. TEST EQUIPMENT

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
Ultra Compact Simulator	EM-Test	UCS500M	0500-19	24/01/2025	25/01/2026
3-Phase Coupling Network	EM-Test	CNI503 S5/16A	0606-01	24/01/2025	25/01/2026
Test Software	EM-Test	ISM IEC	V1.2.6	N/A	N/A

12.2. BLOCK DIAGRAM OF TEST SETUP

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

12.3. TEST PROCEDURE

The EUT and support units were located on a wooden table 0.8m away from ground reference plane.

A 1.0 meter long power cord was attached to EUT during the test.

The length of communication cable between communication port and clamp was keeping within 1 meter.

EUT worked with resistance load, and make sure EUT worked normally.

Related peripherals work during the test.

Recording the test result as shown in following table.

Test conditions:

Repetition Frequency: 100 kHz

Tr/Th: 5/50ns

Burst Duration: 15ms

Burst Period: 300ms

Inject Line	Voltage kV	Inject Method	Result (Pass/Fail)
L	+ /- 0.5/1	Direct	Pass
N	+ /- 0.5/1	Direct	Pass
PE	+ /- 0.5/1	Direct	Pass
L+N	+ /- 0.5/1	Direct	Pass
N+PE	+ /- 0.5/1	Direct	Pass
L+N+PE	+ /- 0.5/1	Direct	Pass

12.4. PERFORMANCE & RESULT

☐ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.

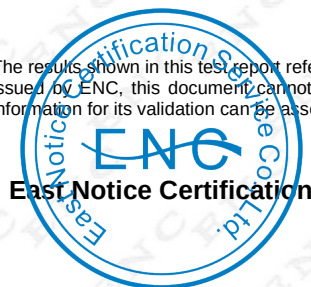
☒ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.

☐ Criteria C: Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

☒ **PASS**

☐ **FAIL**

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



13. IEC 61000-4-5 SURGE IMMUNITY TEST
SURGE IMMUNITY TEST

Port : On Power Supply Lines

Basic Standard : IEC 61000-4-5:2017

Requirements : 0.5kV & 1kV (Pulse amplitude-Power line sym.: Source impedance: $2\Omega + 18\mu\text{F}$)
0.5kV & 1kV & 2kV (Pulse amplitude-Power line unsym.: Source impedance: $2\Omega + 9\mu\text{F}$)

Standard require : B

Tester : Sam Liu

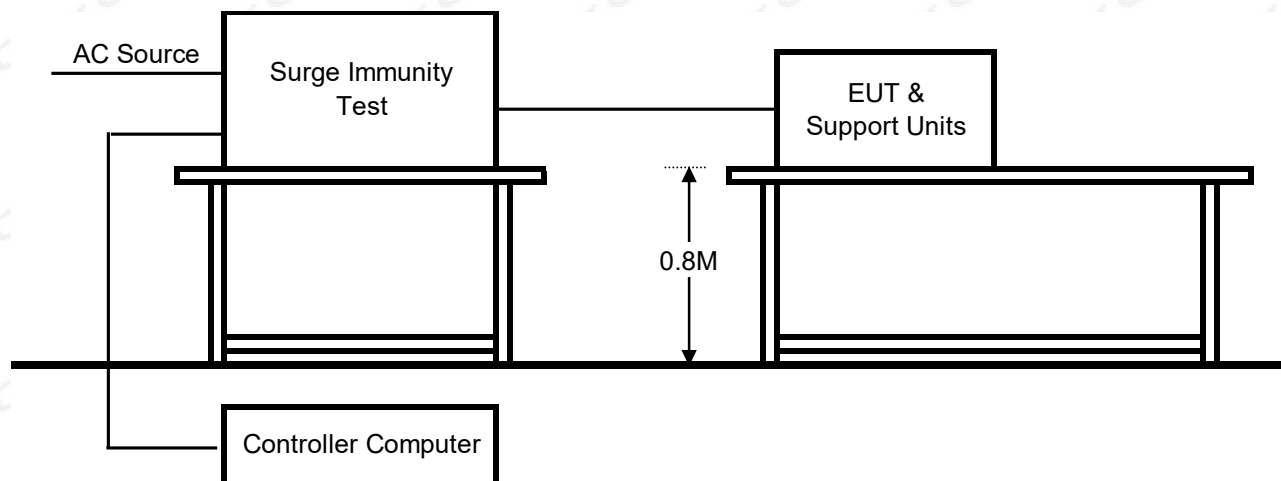
Temperature : 20°C

Humidity : 51%

Note: equipment and systems shall comply with the requirements of clause 8.9 of EN 60601-1-2:2015+A1:2021 at immunity test levels of $\pm 0.5\text{KV}$, $\pm 1\text{KV}$ and $\pm 2\text{KV}$ for a.c. power line(s) to earth and $\pm 0.5\text{KV}$ and $\pm 1\text{KV}$ for a.c. power line(s) to line(s)

13.1. TEST EQUIPMENT OF SURGE TEST

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
Ultra Compact Simulator	EM-Test	UCS500M	0500-19	24/01/2025	25/01/2026
3-Phase Coupling Network	EM-Test	CNI503 S5/16A	0606-01	24/01/2025	25/01/2026
Test Software	EM-Test	ISM IEC	V1.1.2	N/A	N/A

13.2. BLOCK DIAGRAM OF TEST SETUP

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

13.3. TEST PROCEDURE

The EUT is turned on during the test and the results of the maximum susceptible results are recorded.

In this test, the 1.2/50 μ s & 8/20 μ s surge generator must be used for AC power ports. The voltage for line to earth coupling mode is twice of that for line to line. At least 5 positive and 5 negative (polarity) surge signal with a maximum 1/min repetition rate are injected to AC power lines from 4 different phase angles (0°, 90°, 180°, 270°) during the test.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

Test conditions:

Voltage Waveform : 1.2 μ s/50 μ s
 Current Waveform : 8 μ s/20 μ s
 Polarity : Positive/Negative
 Phase angle : 0°, 90°, 180°, 270°
 Number of Test : 5

Coupling Line	Voltage (kV)	Polarity	Coupling Method	Result (Pass/Fail)
L-N	0.5 & 1	Positive	Capacitive	Pass
L-N	0.5 & 1	Negative	Capacitive	Pass
L-PE	0.5 & 1 & 2	Positive	Capacitive	Pass
L-PE	0.5 & 1 & 2	Negative	Capacitive	Pass
N-PE	0.5 & 1 & 2	Positive	Capacitive	Pass
N-PE	0.5 & 1 & 2	Negative	Capacitive	Pass

13.4. PERFORMANCE & RESULT

☐ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.

☒ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.

☐ Criteria C: Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

☒ **PASS**☐ **FAIL**

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



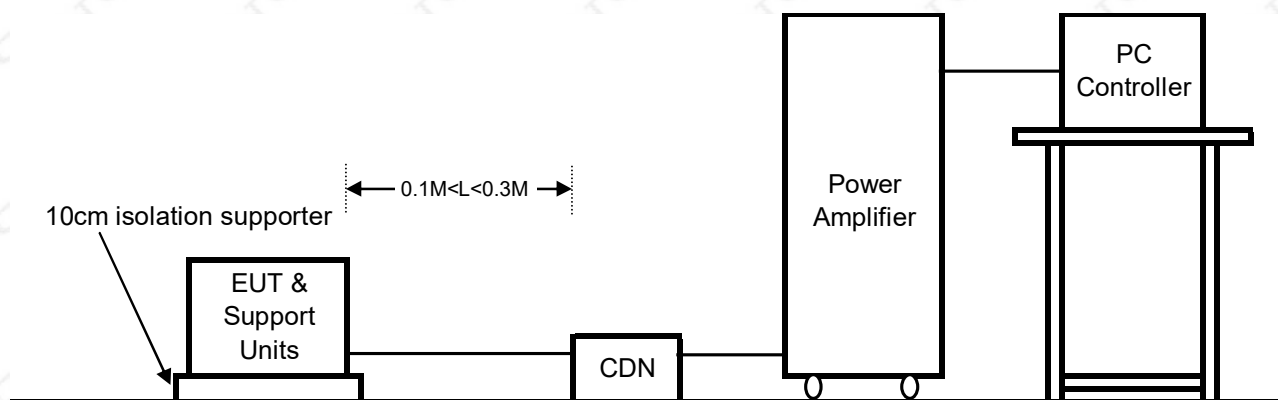
14. IEC 61000-4-6 TEST**IEC 61000-4-6 IMMUNITY TO CONDUCTED DISTURBANCES, INDUCED BY RADIO-FREQUENCY FIELD**

Port	: Power Supply Lines
Basic Standard	: IEC 61000-4-6:2013
Frequency range	: 0.15 MHz to 80 MHz
Requirements	: 3V & 6V with 80% AM. 1 kHz Modulation
Standard require	: B
Tester	: Sam Liu
Temperature	: 20°C
Humidity	: 51%

Note: equipment and systems shall comply with the requirements of clause 8.9 of EN 60601-1-2:2015+A1:2021 at immunity test levels of 3Vrms and 6Vrms over the frequency range beginning at the start frequency and extending to 80 MHz.

14.1. TEST EQUIPMENT

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
Ultra Compact Simulator	EM TEST	UCS500M6	202304/060	24/01/2025	25/01/2026
Motor Driven Voltage Transformer	EM TEST	MV2616	302205	24/01/2025	25/01/2026
Current Transformer	EM TEST	MC2630	302389	24/01/2025	25/01/2026
Magnetic Coil	EM TEST	MS100	0010230A	24/01/2025	25/01/2026
Test Software	EM TEST	ISM IEC	V1.1.7	N/A	N/A

14.2. BLOCK DIAGRAM OF TEST SETUP

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

14.3. TEST PROCEDURE

The EUT and support units were located at a ground reference plane with the interposition of a 0.1 m thickness insulating support and the CDN was located on GRP directly.

EUT worked with resistance load, and make sure EUT worked normally.

Related peripherals work during the test.

Setting the testing parameters of CS test software per IEC 61000-4-6.

Recording the test result in following table.

Test conditions:

Frequency Step: 1% of fundamental

Dwell Time: 3 sec

Range (MHz)	Strength	Modulation	Result (Pass/Fail)
6.765 MHz to 6.795 MHz	3V 6V	AM	Pass
13.553MHz to 13.567 MHz			
26.957 MHz to 27.283 MHz			
40.66 MHz to 40.70 MHz			
1.8 MHz to 2.0 MHz			
3.5 MHz to 4.0 MHz			
5.3 MHz to 5.4 MHz			
7 MHz to 7.3 MHz			
10.1 MHz to 10.15 MHz			
14 MHz to 14.2 MHz			
18.07 MHz to 18.17 MHz			
21 MHz to 21.4 MHz			
24.89 MHz to 24.99 MHz			
28 MHz to 29.7 MHz			
50 MHz to 54 MHz			

14.4. PERFORMANCE & RESULT

☐ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.

☒ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.

☐ Criteria C: Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

☒ **PASS**
☐ **FAIL**

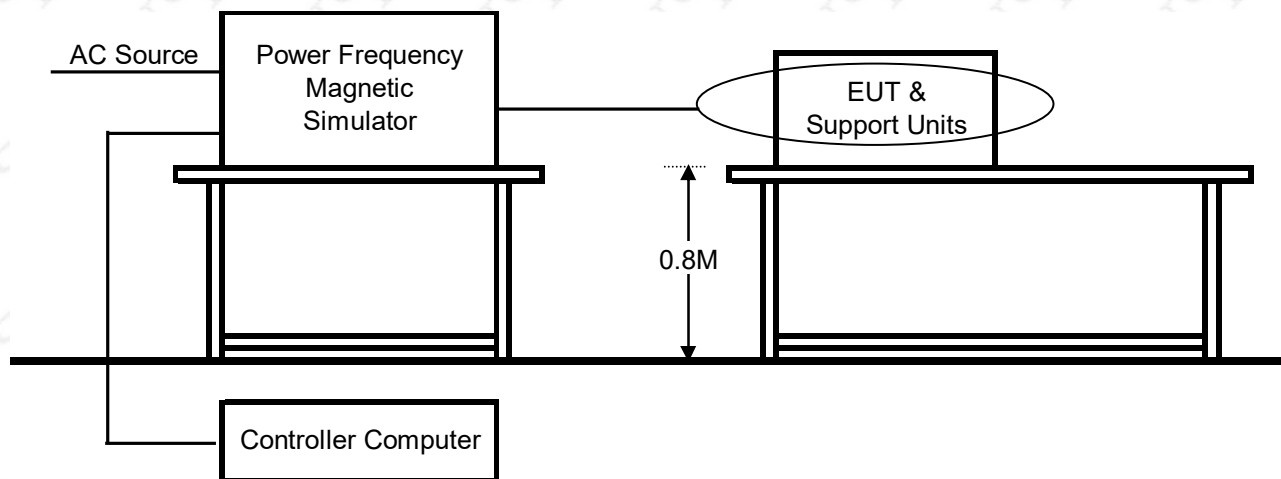
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

15. IEC 61000-4-8 TEST**POWER FREQUENCY MAGNETIC IMMUNITY**

Port	: Enclosure
Basic Standard	: IEC 61000-4-8:2009
Requirements	: 50Hz and 60Hz, 30A/m
Standard require	: B
Tester	: Sam Liu
Temperature	: 25°C
Humidity	: 51%

15.1 TEST EQUIPMENT

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Ultra Compact Simulator	EM TEST	UCS500M6	202304	24/01/2025	25/01/2026
Motor Driven Voltage Transformer	EM TEST	MV2616	302205	24/01/2025	25/01/2026
Current Transformer	EM TEST	MC2630	302389	24/01/2025	25/01/2026
Magnetic Coil	EM TEST	MS100	010230A	24/01/2025	25/01/2026
Test Software	EM TEST	ISM IEC	/	N/A	N/A

15.2 BLOCK DIAGRAM OF TEST SETUP

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

15.3 TEST PROCEDURE

The EUT shall be subjected to the test magnetic field by using the induction coil of standard dimensions (1m x1m). The induction coil shall then be rotated by 90° in order to expose the EUT to the test field with different orientations.

Test Conditions:

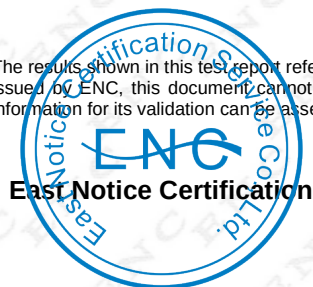
Frequency	Polarity	Level	Observation	Meet Performance Criteria
50 Hz and 60Hz	X	30A/m	Normal	B
50 Hz and 60Hz	Y	30A/m	Normal	B
50 Hz and 60Hz	Z	30A/m	Normal	B

15.4 PERFORMANCE & RESULT

- ☐ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.
- ☒ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.
- ☐ Criteria C: Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

☒ **PASS** ☐ **FAIL**

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



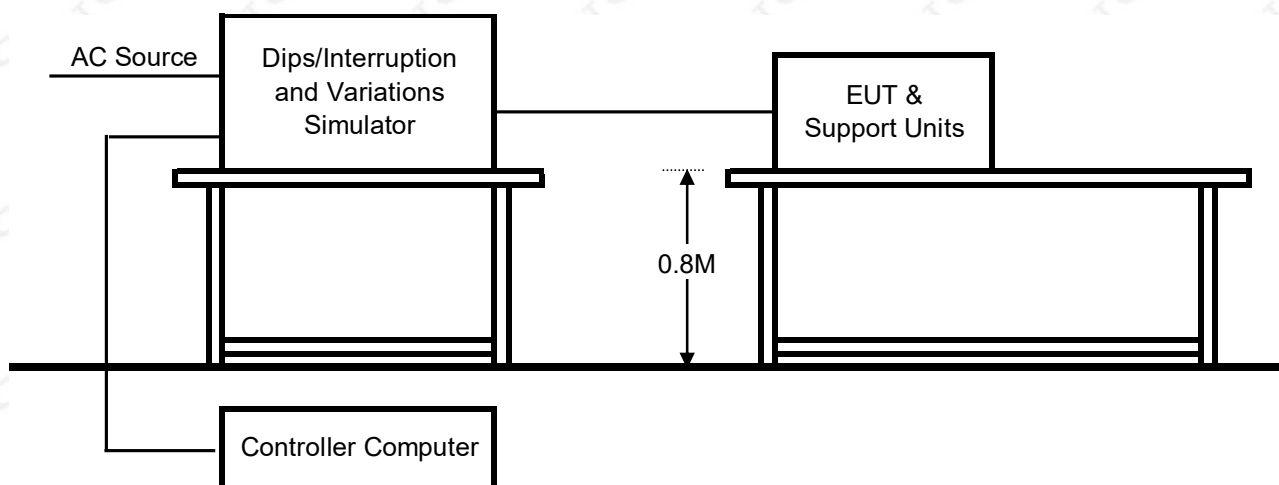
16. IEC 61000-4-11 TEST**VOLTAGE DIPS, SHORT INTERRUPTIONS AND VOLTAGE VARIATIONS IMMUNITY TEST**

Port	: Power Supply Lines
Basic Standard	: IEC 61000-4-11:2020
Requirements	: 0, 45, 90, 135, 180, 225, 270, 315 degrees
Standard require	: Min. 10 sec.
Test Interval:	: Sam Liu
Temperature	: 25°C
Humidity	: 51%

Voltage Dips % UT	Cycles	Sync Angle (degrees)
>95	0.5*	0,45,90,135,180,225,270,315
>95	1	0
30	25 (50Hz); 30 (60Hz)	0
Voltage Interruption % UT	Cycles	Sync Angle [degrees]
>95	250 (50Hz),300 (60Hz)	0

16.1. TEST EQUIPMENT

Description	Manufacturer	Model	Identifier	Last Cal.	Cal. Due
Purified Power Source	CALIFORNIA INSTRUMENTS	HFS500	54513	24/01/2025	25/01/2026
Test Software	EM TEST	CNV504S1	N/A	24/01/2025	25/01/2026

16.2. BLOCK DIAGRAM OF TEST SETUP

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.

16.3. TEST PROCEDURE

The EUT and support units were located on a wooden table, 0.8 m away from ground floor. EUT worked with resistance load, and make sure EUT worked normally.

Setting the parameter of tests and then perform the test software of test simulator.

Conditions changes to occur at 0 degree crossover point of the voltage waveform.

Recording the test result in test record form.

Test conditions:

The duration with a sequence of three dips/interruptions with interval of 10 s minimum
(Between each test event)

Voltage Dips:

Voltage Dips	Test Level % U_T	Reduction (%)	Observation	Meet Performance Criteria
>95	0.5*	0,45,90,135,180,225,270,315	Normal	B
>95	1	0	Normal	C
30	25 (50Hz); 30 (60Hz)	0	Normal	C

Voltage Interruptions:

Voltage Dips	Test Level % U_T	Reduction (%)	Observation	Meet Performance Criteria
>95	250 (50Hz), 300 (60Hz)	0	Normal	C

16.4. PERFORMANCE

☐ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.

☐ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.

☒ Criteria C: Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

☒ **PASS**☐ **FAIL**

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.



APPENDIX 1
PHOTOGRAPH(S) OF EUT



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

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by ENC, this document cannot be reproduced except in full with our prior written permission. The document is available on request and the brief information for its validation can be assessable and confirmed at <http://www.enc-lab.com>.