



中国认可
国际互认
检测
TESTING
CNAS L6478



TEST REPORT

Reference No...... : WTF26F02040578E
Applicant..... : Sunlu (Guangdong) Technology Co., Ltd.
Address..... : No. 162 Tanlong North Road, Tanzhou Town, Zhongshan City
Zhongshan, Guangdong, 528467, China_
Manufacturer : The same as above
Address..... : The same as above
Product Name..... : FilaDryer S4 pro
Model No...... : FilaDryer S4 pro
Test specification..... : EN IEC 55014-1:2021
EN IEC 55014-2:2021
EN IEC 61000-3-2:2019+A1:2021+A2:2024
EN 61000-3-3:2013+A1:2019+A2:2021
Date of Receipt sample : 2026-02-26
Date of Test : 2026-02-26 to 2026-03-06
Date of Issue..... : 2026-04-30
Test Report Form No...... : WEH-55014A-01C
Test Result..... : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

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Tested by:

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1 Test Summary

EMISSION				
Test Item	Test Standard		Class / Severity	Result
Mains Terminal Disturbance Voltage, 150kHz to 30MHz	EN IEC 55014-1:2021		Clause 4.3.3.6	Pass
Disturbance Power, 30MHz to 300MHz	EN IEC 55014-1:2021		Clause 4.3.4.4	N/A
Discontinuous Disturbance (Click)	EN IEC 55014-1:2021		Clause 4.4.2	Pass
Radiated Disturbance, 30MHz to 1000MHz	EN IEC 55014-1:2021		Clause 4.3.4.5	Pass
Harmonic Current Emission	EN IEC 61000-3-2:2019 +A1:2021+A2:2024		Class A	Pass
Voltage Fluctuation and Flicker	EN 61000-3-3:2013+A1:2019+A2:2021		Clause 5	Pass
IMMUNITY (EN IEC 55014-2:2021)				
Test Item	Test Method	Class / Severity	Performance Criteria	Result
Electrostatic Discharge(ESD)	IEC 61000-4-2:2008	±4 kV Contact ±8 kV Air	B	Pass
Radio-frequency electromagnetic fields (80MHz to 1GHz)	IEC 61000-4-3:2006 +A1:2007+A2:2010	3V/m, 80%, 1kHz, Amp. Mod.	A	N/A
Electrical Fast Transients (EFT)	IEC 61000-4-4:2012	AC ±1.0kV DC ±0.5kV	B	Pass
Surge	IEC 61000-4-5:2014 +A1:2017	±1kV D.M.† ±2kV C.M.‡	B	Pass
Injected Currents, 0.15MHz to 230MHz	IEC 61000-4-6:2013	3Vr.m.s.(emf), 80%, 1kHz Amp. Mod.	A	Pass
Voltage Dips and Interruptions	IEC 61000-4-11:2020	0 % U _T * for 0.5per	C	Pass
		40 % U _T * for 10per		Pass
		70 % U _T * for 25per		Pass

Remark:

- Pass Test item meets the requirement
- Fail Test item does not meet the requirement
- N/A Test case does not apply to the test object
- A.M Amplitude Modulation
- † Differential Mode
- ‡ Common Mode
- * U_T is the nominal supply voltage



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3 General Information

3.1 General Description of E.U.T.

Product Name : FilaDryer S4 pro
Model No. : FilaDryer S4 pro
Remark : ---

3.2 Details of E.U.T.

Technical Data : 220-240V~, 50/60Hz, 380W

3.3 Description of Support Units

The EUT has been tested as an independent unit. FilaDryer S4 pro is the test sample.
The DV,CLICK&RE tests were performed in the condition of AC 240V/50Hz input. The other tests were performed in the condition of AC 230V/50Hz input.

3.4 Standards Applicable for Testing

The tests were performed according to following standards:

EN IEC 55014-1:2021	Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus-Part 1:Emission
EN IEC 55014-2:2021	Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus-Part 2: Immunity Product Family Standard.
EN IEC 61000-3-2:2019 +A1:2021+A2:2024	Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase).
EN 61000-3-3:2013 +A1:2019+A2:2021	Electromagnetic compatibility (EMC) -- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.



3.5 Test Facility

The test facility has a test site registered with the following organizations:

- **ISED – Registration No.: 21895**

Waltek Testing Group (Foshan) Co., Ltd. has been registered and fully described in a report filed with the Innovation, Science and Economic Development Canada (ISED). The acceptance letter from the ISED is maintained in our files. Registration ISED number: 21895, March 12, 2019

- **FCC – Registration No.: 820106**

Waltek Testing Group (Foshan) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 820106, August 16, 2018

- **NVLAP – Lab Code: 600191-0**

Waltek Testing Group (Foshan) Co., Ltd. EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 600191-0.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

3.6 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test items:---

Lab information:---

3.7 Abnormalities from Standard Conditions

None.



4 Equipment Used during Test

☐ Mains Terminal Disturbance Voltage (Conducted Emission) 1#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	EMI Test Receiver	R&S	ESR3	102423	Valid
2.	LISN	R&S	ENV216	101343	Valid
3.	Cable 7	HUBER+SUHNER	CBL2-NN-6M	223NN624	Valid
4.	Switch	CD	RSU-A4 18G	RSUA4008	Valid
☒ Mains Terminal Disturbance Voltage (Conducted Emission) 2#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	EMI Test Receiver	R&S	ESCI	101178	Valid
2.	LISN	R&S	ENV216	101215	Valid
3.	Cable 22	Times Microwave Systems	LMR195UF-BMNM-5.00M	---	Valid
4.	Switch	ESE	RSU/M2	---	Valid
☐ Mains Terminal Disturbance Voltage (Conducted Emission) 3#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	EMI Test Receiver	R&S	ESR3	102842	Valid
2.	LISN	R&S	ENV216	101542	Valid
3.	Cable 12	YIHENG	LMR195UF-NMNM-2.5	---	Valid
4.	Manual RF Switch	Top Precision	SW-2	RSU0402	Valid
☒ Discontinuous Disturbance					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	Discontinues Disturbance Analyzer	TESEQ	DIA1512D	28302	Valid
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	Valid
☒ Radiated Disturbance (30MHz to 1GHz) 1#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	3m Semi-anechoic Chamber	CHANGCHUANG	9m×6m×6m	---	Valid
2.	EMI Test Receiver	R&S	ESR7	101566	Valid
3.	Trilog Broadband Antenna	SCHWARZBECK	VULB 9162	9162-117	Valid
4.	Cable 20	Times Microwave Systems	RG223-NMNM-10M	---	Valid
5.	Cable 21	Times Microwave Systems	RG223-NMNM-3M	---	Valid
☐ Radiated Disturbance (30MHz to 1GHz) 2#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	3m Semi-anechoic Chamber	YIHENG	9m×6m×6m	YH2021071801	Valid
2.	EMI Test Receiver	R&S	ESR7	102454	Valid
3.	Trilog Broadband	SCHWARZBECK	VULB 9163	01418	Valid



	Antenna				
4.	Cable 14	YIHENG	LMR240UF-NMSM-7.5	---	Valid
☒ Harmonics and Flicker Measuring System					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	Harmonics and Flicker Measuring System	YUANFANG	HFM-3000	V200	Valid
☒ ESD					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	ESD Simulator	TESEQ	NSG437	521	Valid
☒ EFT & Voltage Dips and Interruptions					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	EMS test system	TESEQ	NSG3040	1858	Valid
2.	Step transformer	TESEQ	INA6501	206	Valid
3.	Coupling clamp	TESEQ	CDN8014	31405	Valid
☒ Surge					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	Surge Simulator	TESEQ	NSG3060	1395	Valid
☒ Injected Currents					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	Conducted Immunity test system	TESEQ	NSG4070	45345	Valid
2.	CDN	TESEQ	CDN M016	31586	Valid
3.	EM Clamp	TESEQ	KEMZ801	32362	Valid
4.	6dB Attenuator	TESEQ	ATN6075	32122	Valid
☐ Radio-frequency Electromagnetic Fields					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	RF Power Amplifier	MICOTOP	MPA-80-1000-250	MPA2405139	Valid
2.	RF Power Amplifier	MICOTOP	MPA-1000-6000-100	MPA2405140	Valid
3.	Stacked double logarithmic periodic antenna	SCHWARZBECK	STLP9128E-SPECIAL	142	Valid
4.	Stacked double logarithmic periodic antenna	SCHWARZBECK	STLP 9149	476	Valid
5.	Analog signal generator	Agilent	N5181A	MY46240792	Valid
6.	Power meter	RS	NRP6A	101133	Valid

☐ : Not Used

☒ : Used



4.1 Software List

Description	Manufacturer	Model	Version
EMI Test Software (Conducted Disturbance 1#)	FARATRONIC	EZ-EMC	EMEC-3A1
EMI Test Software (Conducted Disturbance 2#)	FARATRONIC	EZ-CON	FARAD-3A1.1+
EMI Test Software (Conducted Disturbance 3#)	FARATRONIC	EZ-EMC	EMC-CON 3A1.1+
EMI Test Software (Radiated Disturbance 1#)	FARATRONIC	EZ-EMC	RA-03A1-2
EMI Test Software (Radiated Disturbance 2#)	FARATRONIC	EZ-EMC	RA-03A1-2
Harmonics and Flicker Test Software	YUANFANG	HFM-3000	V2.00.147
Radiated Immunity Test Software	Chinese EMC	EMS	V1.0.0.0
Click Test Software	SCHAFFNER	DIS9966	V2.5

4.2 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conducted Emission	150kHz~30MHz	±2.6dB	(1)
Radiated Disturbance	30MHz~1GHz	±4.5dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



4.3 Special Accessories and Auxiliary Equipment

Item	Equipment	Technical Data	Manufacturer	Model No.	Serial No.
1.	/	/	/	/	/

4.4 Decision Rule

Compliance or non-compliance with a disturbance limit shall be determined in the following manner.

If U_{LAB} is less than or equal to U_{cispr} , then

- Compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- Non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{LAB} is greater than U_{cispr} , then

- Compliance is deemed to occur if no measured disturbance level, increased by $(U_{LAB} - U_{cispr})$, exceeds the disturbance limit;
- Non-compliance is deemed to occur if any measured disturbance level, increased by $(U_{LAB} - U_{cispr})$, exceeds the disturbance limit.

WALTEK



5 Emission Test Results

5.1 Mains Terminals Disturbance Voltage, 150kHz to 30MHz

Test Requirement.....	: EN IEC 55014-1
Test Method.....	: EN IEC 55014-1
Test Result.....	: Pass
Frequency Range.....	: 150kHz to 30MHz
Class/Severity.....	: Table 5 of EN IEC 55014-1

5.1.1 E.U.T. Operation

Operating Environment:

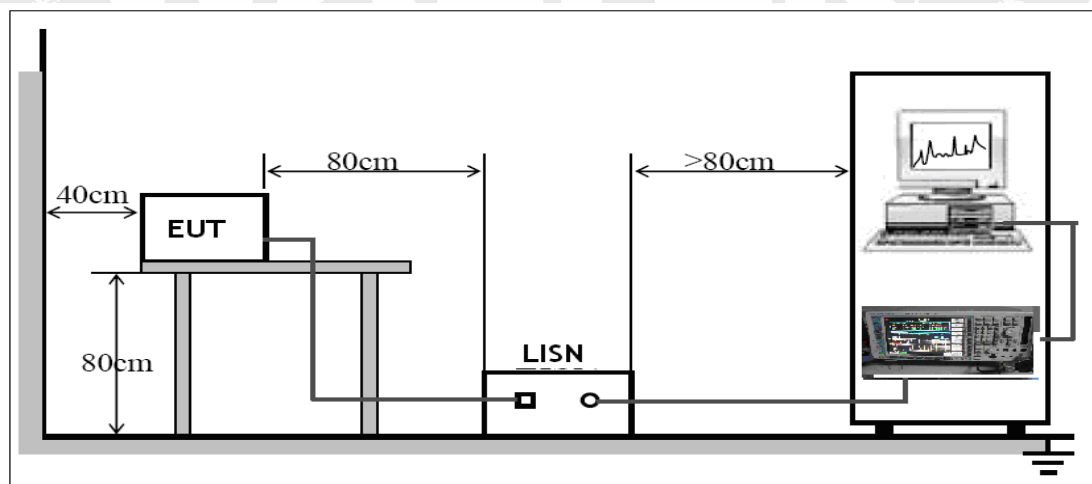
Temperature	: 20.8°C
Humidity.....	: 49.3%RH
Atmospheric Pressure	: 101.2kPa

EUT Operation:

Input Voltage	: AC 240V/50Hz
Operating Mode.....	: PLA mode

5.1.2 Block Diagram of Test Setup

The Mains Terminals Disturbance Voltage tests were performed in accordance with the EN IEC 55014-1.



5.1.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.



5.1.4 Corrected Amplitude & Margin Calculation

The Corrected factor is calculated by adding LISN VDF(Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

$$\text{Measurement} = \text{Reading Level} + \text{Correct Factor}$$

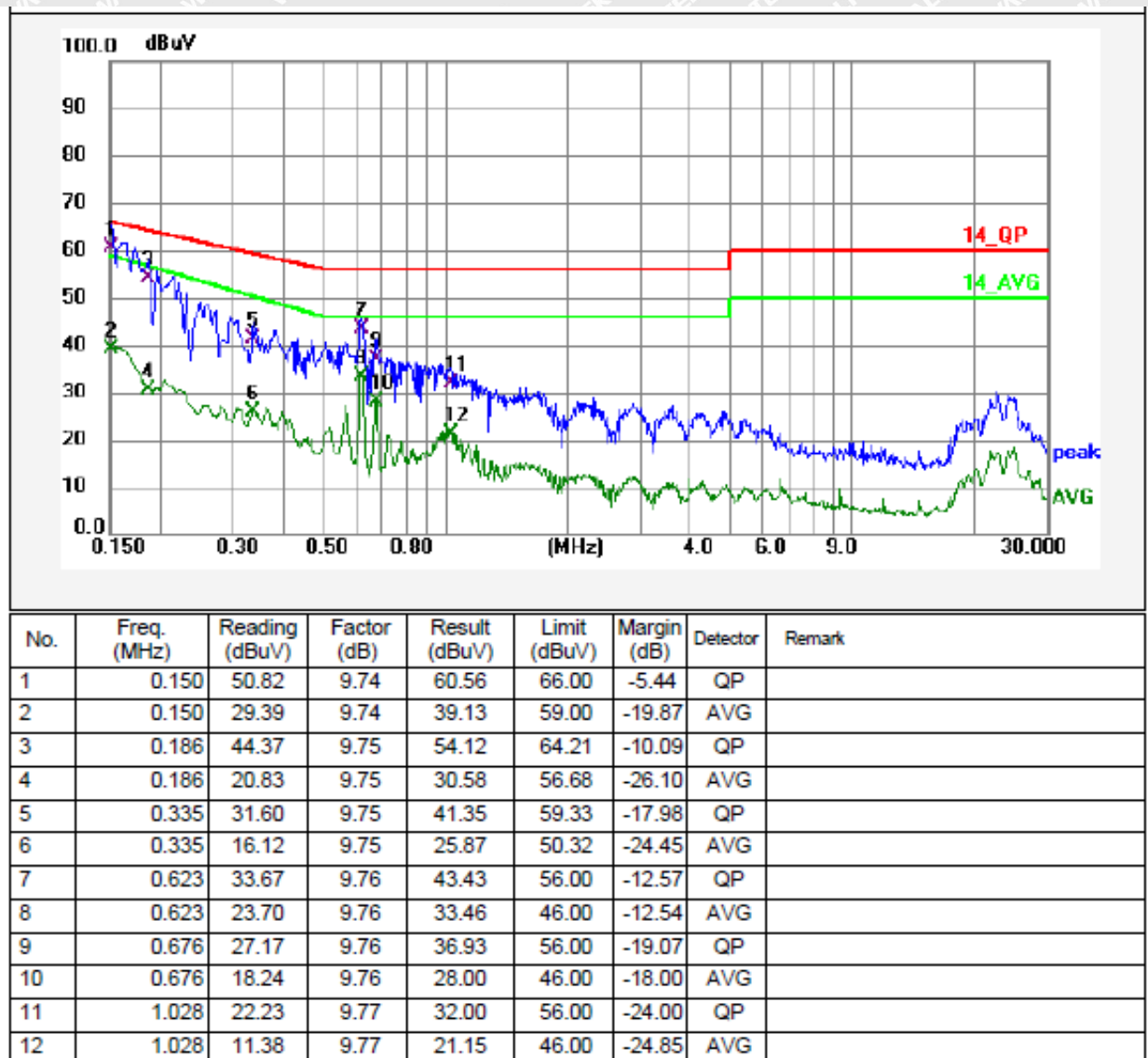
$$\text{Correct Factor} = \text{LISN VDF} + \text{Cable Loss}$$

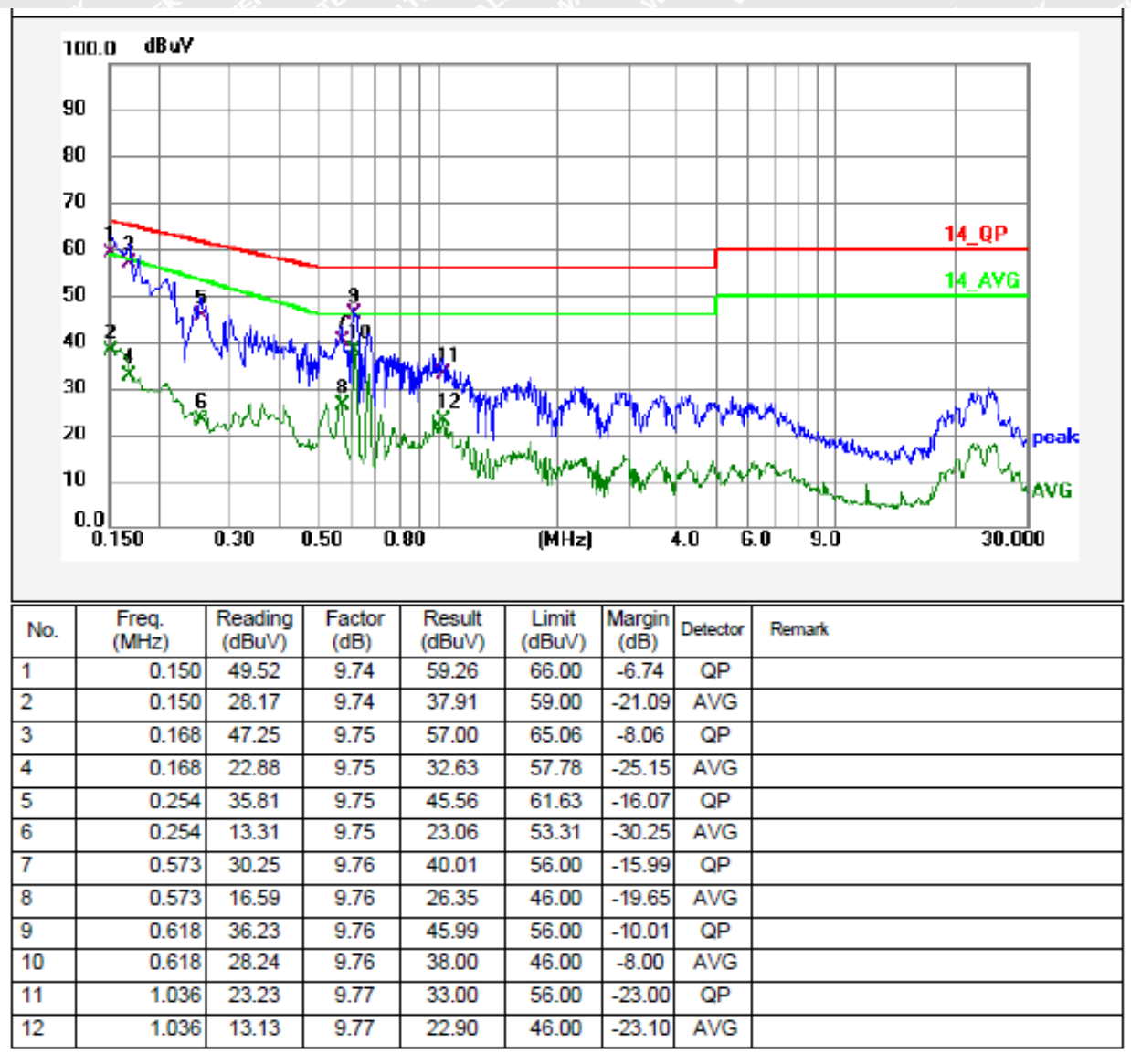
The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Measurement} - \text{Limit}$$

5.1.5 Mains Terminals Disturbance Voltage Test Data

Live Line



**Neutral Line**



5.2 Discontinuous Disturbance (Click)

Test Requirement..... : EN IEC 55014-1
Test Method..... : EN IEC 55014-1
Test Result..... : Pass
Frequency Range..... : 150kHz to 30MHz
Class/Severity..... : Annex C of EN IEC 55014-1

5.2.1 E.U.T. Operation

Operating Environment:

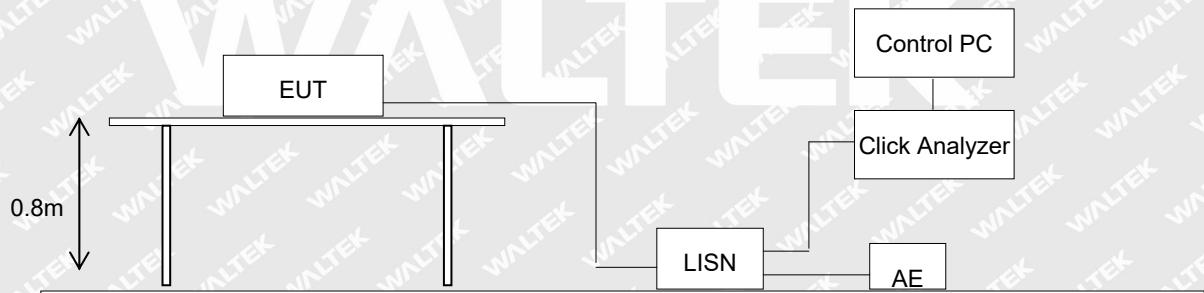
Temperature : 23.7°C
Humidity..... : 53.0%RH
Atmospheric Pressure : 100.8kPa

EUT Operation :

Input Voltage : AC 240V/50Hz
Operating Mode..... : Heating mode

5.2.2 Block Diagram of Setup

The discontinuous disturbance test was performed in accordance with EN IEC 55014-1.



5.2.3 Measurement Data

If none of the caused clicks has a duration longer than 20ms, 90% of the caused clicks have a duration less than 10ms, and the click rate is not more than 5, then the product is deemed to comply with the click requirements of EN IEC 55014-1. See Clause 5.4.3.4 of EN IEC 55014-1 for further details.



5.2.4 Discontinuous Disturbance(Click) Test Results

Run A Observation time T1= 120 mins 0 secs

Frequency	150kHz	500kHz	1.4MHz	30MHz
Limit value (L)(dBuV)	66	56	56	60
Short clicks	0	0	0	0
Long clicks	0	0	0	0
Total (short + long) n	0	0	0	0
Click rate	0.00	0.00	0.00	0.00
Continuous Interference (max)	0.00sec	0.00sec	0.00sec	0.00sec

Switching operations: s= ---

Click rate formula: $N = n / T1$

Click rate used in calculating Run B limit : N1= --- N2= --- (used for 0.5MHz to 30MHz)

Run B Observation time T2= N/A

Frequency	150kHz	500kHz	1.4MHz	30MHz
Limit value (L)(dBuV) $L_q = L + 20 \log 30/N$ (max L + 44)	---	---	---	---
Short clicks	---	---	---	---
Long clicks	---	---	---	---
Total (short + long) n	---	---	---	---
Limit = RunA/4	---	---	---	---

Remark:

- 1) The click rate N shall be determined at 150kHz for the frequency range 150kHz to 500kHz and at 500kHz for the frequency 500kHz to 30MHz ;
- 2) During RUN A, the click rate is not more than 5 and there is no long click. RUN B is unnecessary;



5.3 Radiated Disturbance, 30MHz to 1GHz

Test Requirement.....	: EN IEC 55014-1
Test Method.....	: EN IEC 55014-1
Test Result.....	: Pass
Frequency Range.....	: 30MHz to 1GHz
Class/Severity.....	: Table 9 of EN IEC 55014-1

5.3.1 E.U.T. Operation

Operating Environment:

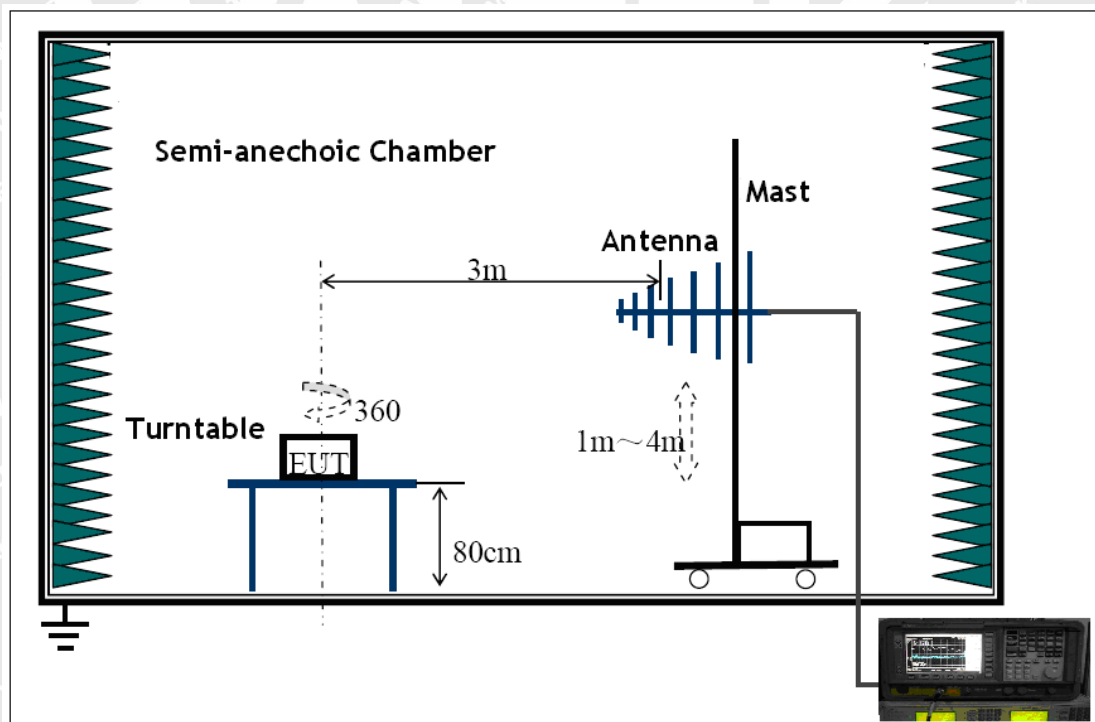
Temperature	: 22.4°C
Humidity.....	: 51.3%RH
Atmospheric Pressure.....	: 101.2kPa

EUT Operation:

Input Voltage	: AC 240V/50Hz
Operating Mode.....	: PLA mode

5.3.2 Block Diagram of Test Setup

The Radiated Disturbance test was performed in the 3m Semi- Anechoic Chamber test site and accordance with CISPR16-2-3.



5.3.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for Horizontal & Vertical polarisation. Quasi-peak measurements were performed if peak emissions were within 6dB of the limit line.



5.3.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Corr. Factor}$$

$$\text{Corr. Factor} = \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

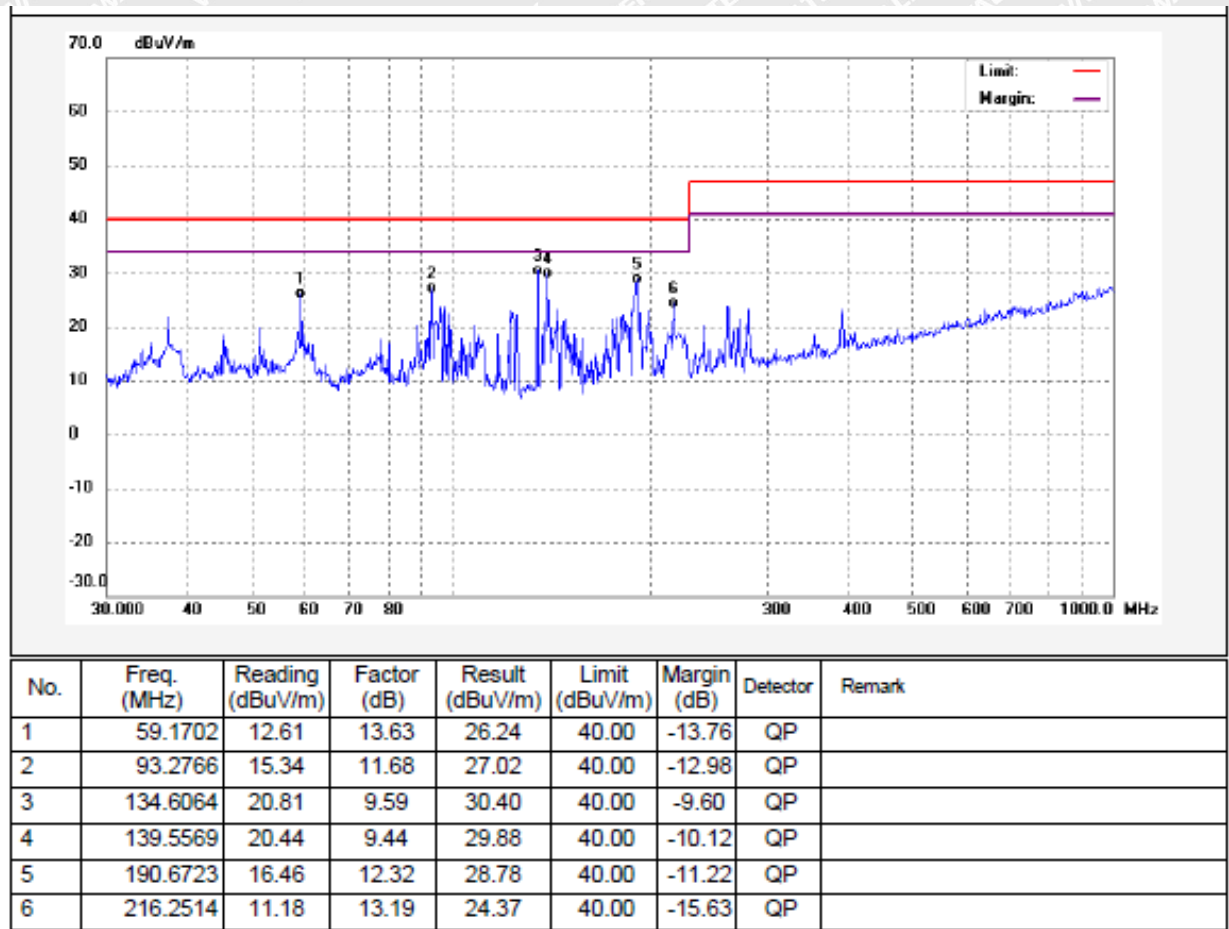
The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit.

The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

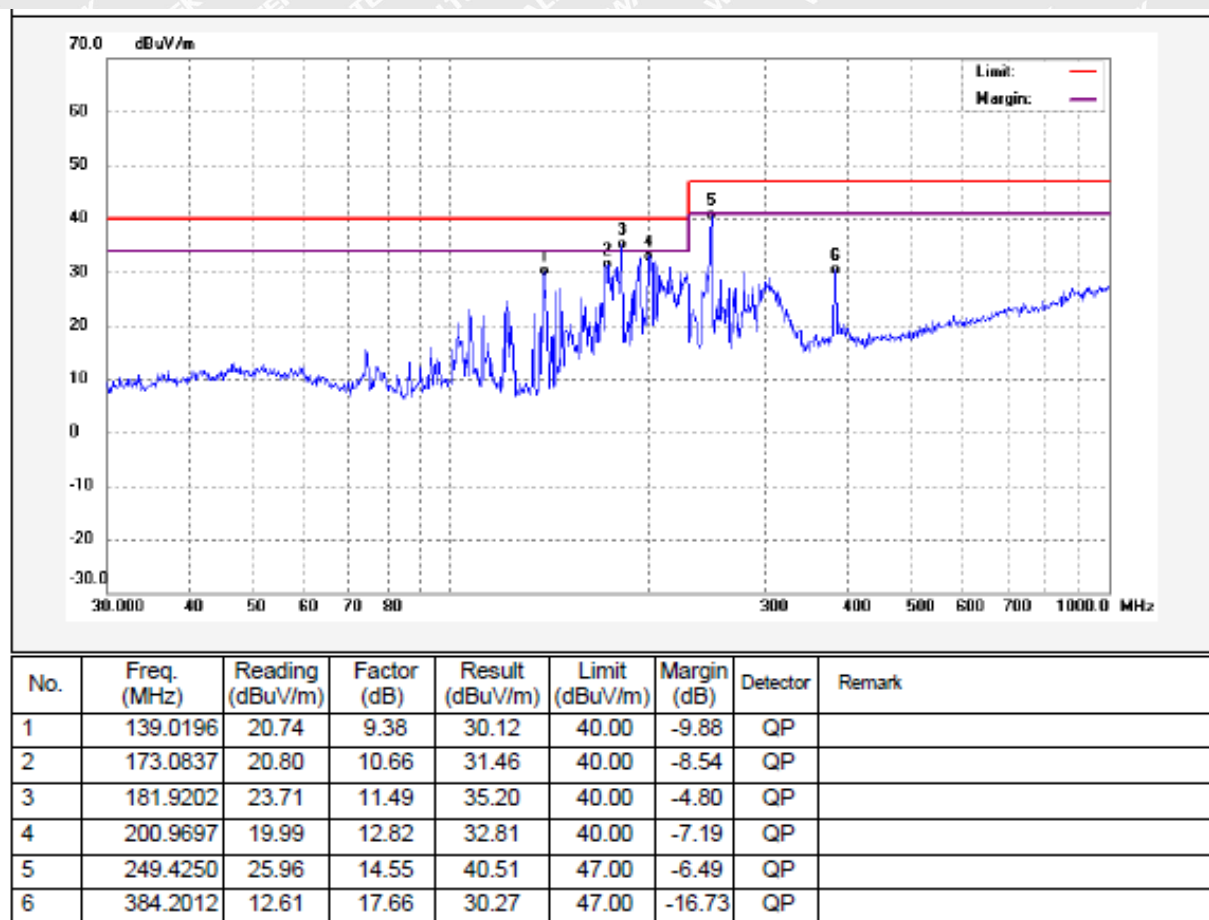
5.3.5 Radiated Disturbance Test Data

Vertical Polarization





Horizontal Polarization





5.4 Harmonics Current Emission

Test Requirement..... : EN IEC 61000-3-2

Test Method..... : EN IEC 61000-3-2

Test Result..... : Pass

Class/Severity..... : Class A

5.4.1 E.U.T. Operation

Operating Environment:

Temperature : 23.8°C

Humidity..... : 49.7%RH

Barometric Pressure..... : 101.2kPa

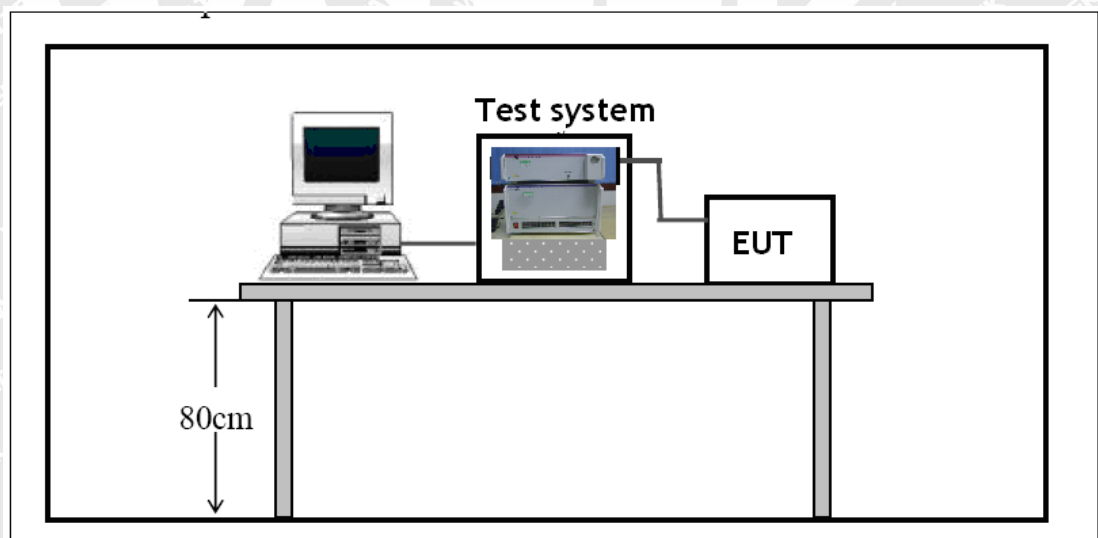
EUT Operation:

Input Voltage : AC 230V/50Hz

Operating Mode..... : Working mode

5.4.2 Block Diagram of Setup

The Harmonics Current Emission test was performed in accordance with the EN IEC 61000-3-2.





5.4.3 Harmonic Current Emission Test Data

Harmonics Test Report_IEC 61000-3-2 Ed. 5.2 (2024)

Tester : Barry Li

Operating Mode : Working mode

Test Type : Class A_IEC 61000-3-2 Ed. 5.2 (2024)

Test Date : 2026-03-05 Start Time : 19:10:03

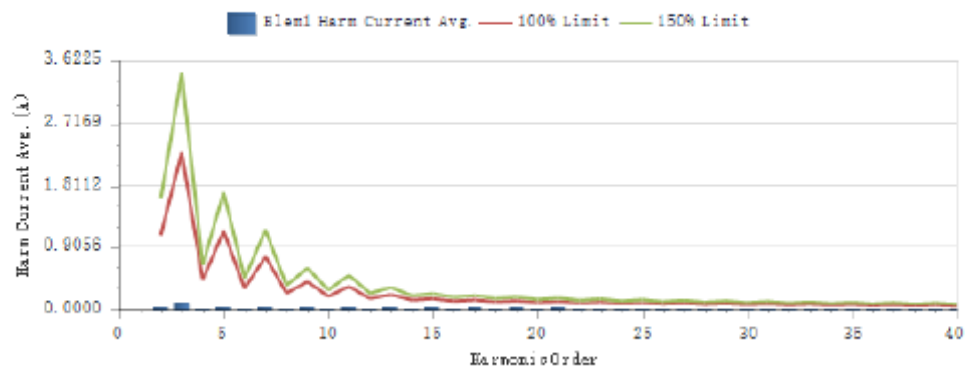
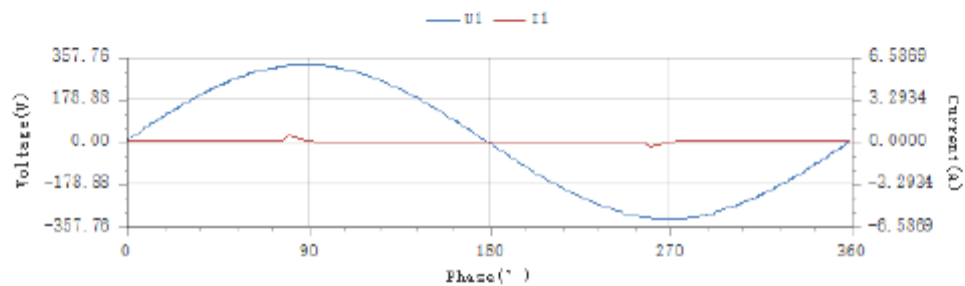
End Time : 19:12:33

Test Voltage : 230.00V

Comments :

Customer :

Result : Pass





Current Test Record

Tester : Barry Li

Operating Mode : Working mode

Test Type : Class A_IEC 61000-3-2 Ed. 5.2 (2024)

Test Date : 2026-03-05 Start Time : 19:10:03

End Time : 19:12:33

Test Voltage : 230.00V

Comments :

Customer :

Result : Pass

Total Current Harmonic and Some Odd Harmonic Parameters

THC(A)	0.2691	THD(%)	30.66	POHC(A)	0.0219	POHC Limit(A)	0.2514
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Maximum Value of Relevant Parameter During Test Period

Urms(V)	230.26	Freq(Hz)	49.999
Irms(A)	2.3563	Ipeak(A)	10.6390
I(A)	1.1772	ICF	129.7846
P(W)	383.36	A	0.8081

Individual Harmonics and Limit Judgment

Order(n)	Harmonics Current Avg.(A)	100% Limit(A)	Limit Percent(%)	Harmonics Current Max.(A)	150% Limit(A)	Limit Percent(%)	Result
2	0.0154	1.0800	1.42	0.0700	1.6200	4.32	Pass
3	0.0741	2.3000	3.22	0.1528	3.4500	4.43	Pass
4	0.0099	0.4300	2.30	0.0302	0.6450	4.68	Pass
5	0.0273	1.1400	2.39	0.0374	1.7100	2.19	Pass
6	0.0041	0.3000	N/A	0.0122	0.4500	N/A	Pass
7	0.0285	0.7700	3.44	0.0302	1.1550	2.62	Pass
8	0.0024	0.2300	N/A	0.0070	0.3450	N/A	Pass
9	0.0233	0.4000	5.81	0.0239	0.6000	3.98	Pass
10	0.0016	0.1840	N/A	0.0046	0.2760	N/A	Pass
11	0.0220	0.3300	6.65	0.0226	0.4950	4.56	Pass
12	0.0010	0.1533	N/A	0.0028	0.2300	N/A	Pass
13	0.0199	0.2100	9.50	0.0201	0.3150	6.39	Pass
14	0.0010	0.1314	N/A	0.0028	0.1971	N/A	Pass
15	0.0180	0.1500	11.98	0.0181	0.2250	8.04	Pass
16	0.0005	0.1150	N/A	0.0014	0.1725	N/A	Pass
17	0.0160	0.1324	12.06	0.0160	0.1985	8.08	Pass
18	0.0008	0.1022	N/A	0.0019	0.1533	N/A	Pass
19	0.0138	0.1164	11.68	0.0139	0.1776	N/A	Pass
20	0.0004	0.0920	N/A	0.0009	0.1380	N/A	Pass
21	0.0119	0.1071	11.10	0.0120	0.1607	N/A	Pass
22	0.0006	0.0836	N/A	0.0014	0.1255	N/A	Pass
23	0.0100	0.0978	10.18	0.0100	0.1467	N/A	Pass
24	0.0004	0.0767	N/A	0.0009	0.1150	N/A	Pass
25	0.0083	0.0900	9.20	0.0083	0.1350	N/A	Pass
26	0.0004	0.0708	N/A	0.0009	0.1062	N/A	Pass
27	0.0068	0.0833	8.21	0.0069	0.1250	N/A	Pass
28	0.0004	0.0657	N/A	0.0010	0.0986	N/A	Pass
29	0.0056	0.0776	7.28	0.0057	0.1164	N/A	Pass
30	0.0003	0.0613	N/A	0.0006	0.0920	N/A	Pass
31	0.0049	0.0726	N/A	0.0050	0.1089	N/A	Pass
32	0.0004	0.0575	N/A	0.0009	0.0863	N/A	Pass
33	0.0044	0.0682	N/A	0.0045	0.1023	N/A	Pass
34	0.0002	0.0541	N/A	0.0005	0.0812	N/A	Pass
35	0.0042	0.0643	N/A	0.0042	0.0964	N/A	Pass
36	0.0004	0.0511	N/A	0.0008	0.0767	N/A	Pass
37	0.0041	0.0608	N/A	0.0041	0.0912	N/A	Pass
38	0.0003	0.0494	N/A	0.0005	0.0726	N/A	Pass
39	0.0040	0.0577	N/A	0.0040	0.0865	N/A	Pass
40	0.0003	0.0460	N/A	0.0006	0.0690	N/A	Pass



Voltage Test Record

Tester : Barry Li

Operating Mode : Working mode

Test Type : Class A_IEC 61000-3-2 Ed. 5.2 (2024)

Test Date : 2026-03-05

Start Time : 19:10:03

End Time : 19:12:33

Test Voltage : 230.00V

Comments :

Customer :

Result : Pass

Voltage Relevant Parameter During Test Period and Judgment

Item	Nominal Value	Measured Value	Error Value	Allowable Error Value	Result
U _{ms} (V)	230.00	229.14	0.86	±2.0%	Pass
Frequency(Hz)	50.000	49.998	0.002	±0.5%	Pass

Individual Harmonics Voltage and Limit Judgment

Order(n)	U _k (V)	U _{hdf} (%)	Limit(%)	Result
1	229.892	100.004	—	Pass
2	0.026	0.012	0.200	Pass
3	0.029	0.013	0.900	Pass
4	0.003	0.001	0.200	Pass
5	0.008	0.004	0.400	Pass
6	0.005	0.002	0.200	Pass
7	0.004	0.002	0.300	Pass
8	0.006	0.003	0.200	Pass
9	0.012	0.005	0.200	Pass
10	0.012	0.005	0.200	Pass
11	0.005	0.002	0.100	Pass
12	0.012	0.005	0.100	Pass
13	0.018	0.008	0.100	Pass
14	0.006	0.003	0.100	Pass
15	0.007	0.003	0.100	Pass
16	0.003	0.001	0.100	Pass
17	0.015	0.007	0.100	Pass
18	0.002	0.001	0.100	Pass
19	0.014	0.006	0.100	Pass
20	0.002	0.001	0.100	Pass
21	0.018	0.008	0.100	Pass
22	0.002	0.001	0.100	Pass
23	0.018	0.008	0.100	Pass
24	0.002	0.001	0.100	Pass
25	0.016	0.007	0.100	Pass
26	0.002	0.001	0.100	Pass
27	0.021	0.009	0.100	Pass
28	0.002	0.001	0.100	Pass
29	0.019	0.008	0.100	Pass
30	0.002	0.001	0.100	Pass
31	0.019	0.008	0.100	Pass
32	0.002	0.001	0.100	Pass
33	0.016	0.007	0.100	Pass
34	0.002	0.001	0.100	Pass
35	0.017	0.008	0.100	Pass
36	0.003	0.001	0.100	Pass
37	0.016	0.007	0.100	Pass
38	0.002	0.001	0.100	Pass
39	0.017	0.007	0.100	Pass
40	0.002	0.001	0.100	Pass



5.5 Voltage Fluctuation and Flicker

Test Requirement : EN 61000-3-3

Test Method..... : EN 61000-3-3

Test Result : Pass

5.5.1 E.U.T. Operation

Operating Environment:

Temperature : 23.5°C

Humidity..... : 46.9%RH

Barometric Pressure..... : 101.1kPa

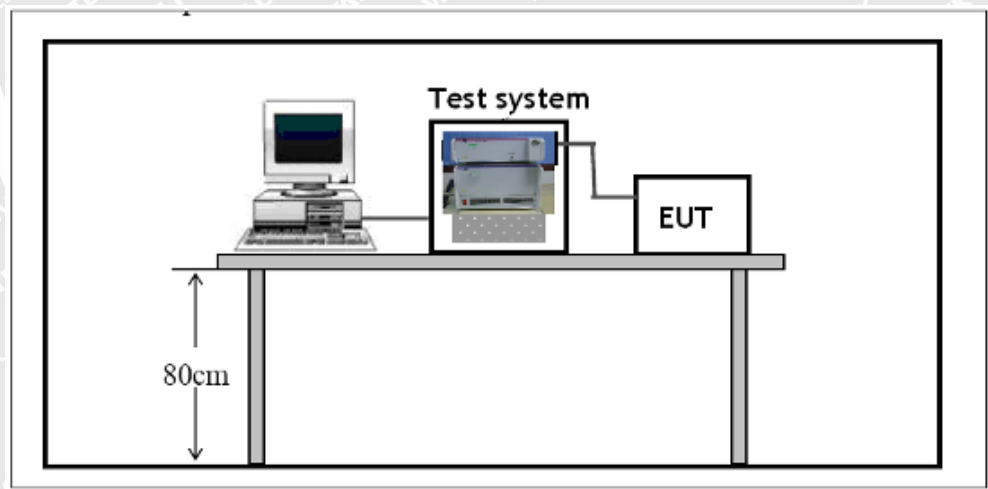
EUT Operation:

Input Voltage : AC 230V/50Hz

Operating Mode..... : Working mode

5.5.2 Block Diagram of Setup

The Voltage Fluctuation and Flicker test was performed in accordance with the EN 61000-3-3.



5.5.3 Voltage Fluctuation and Flicker Test Data

Parameter	Pst	Plt	Tmax ms	dc %	dmax %
Limit	1	0.65	500	3.3	4
FilaDryer S4 pro	0.021	/	0.00	0.00	0.00



6 Immunity Test Results

6.1 Performance Criteria

Performance criterion A: The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. 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 from what the user may reasonably expect from the apparatus if used as intended.

Performance criterion B: The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.

Performance criterion C: Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

For further details, please refer to EN IEC 55014-2.

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6.2 Electrostatic Discharge (ESD)

Test Requirement..... : EN IEC 55014-2

Test Method..... : IEC 61000-4-2

Test Result..... : Pass

Discharge Impedance..... : 330 Ω / 150pF

Discharge Voltage..... : Air Discharge: $\pm 8\text{kV}$
Contact Discharge: $\pm 4\text{kV}$
HCP & VCP: $\pm 4\text{kV}$

Polarity..... : Positive & Negative

Number of Discharge..... : Minimum 10 times at each test point

Discharge Mode..... : Single Discharge

Discharge Period..... : 1 second minimum

6.2.1 E.U.T. Operation

Operating Environment:

Temperature..... : 21.4°C

Humidity..... : 51.4%RH

Barometric Pressure..... : 101.7kPa

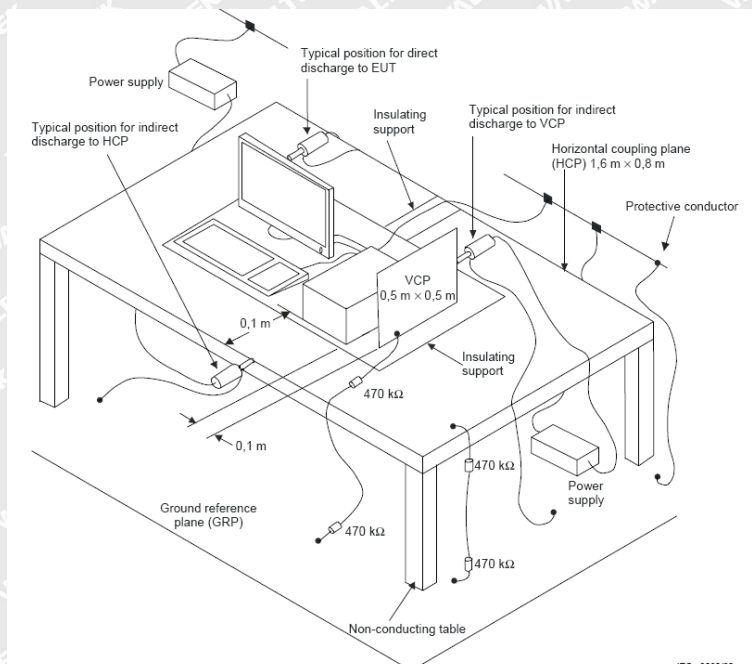
EUT Operation:

Input Voltage..... : AC 230V/50Hz

Operating Mode..... : On mode

6.2.2 Block Diagram of Setup

The ESD test was performed in accordance with the IEC 61000-4-2.





6.2.3 Direct Discharge Test Results

Observations:

Test points:

1. All Exposed Surface & Seams;
2. All metallic part

Direct Discharge			Test Results	
Applied Voltage (kV)	Performance Criterion	Test Point	Contact Discharge	Air Discharge
±8	B	1	N/A	Pass*
±4	B	2	Pass*	N/A

Remark:

- * During the test no deviation was detected to the selected operation mode(s)

6.2.4 Indirect Discharge Test Results

Observations:

Test points:

1. All sides.

Indirect Discharge			Test Results	
Applied Voltage (kV)	Performance Criterion	Test Point	Horizontal Coupling	Vertical Coupling
±4	B	1	Pass*	Pass*

Remark:

- * During the test no deviation was detected to the selected operation mode(s)



6.3 Electrical Fast Transients (EFT)

Test Requirement	: EN IEC 55014-2
Test Method	: IEC 61000-4-4
Test Result	: Pass
Test Level	: 1.0kV on AC Mains
Polarity	: Positive & Negative
Repetition Frequency	: 5kHz
Burst Duration	: 15 ms $\pm$ 20 % at 5 kHz
Test Duration	: 2 minutes per level & polarity

6.3.1 E.U.T. Operation

Operating Environment:

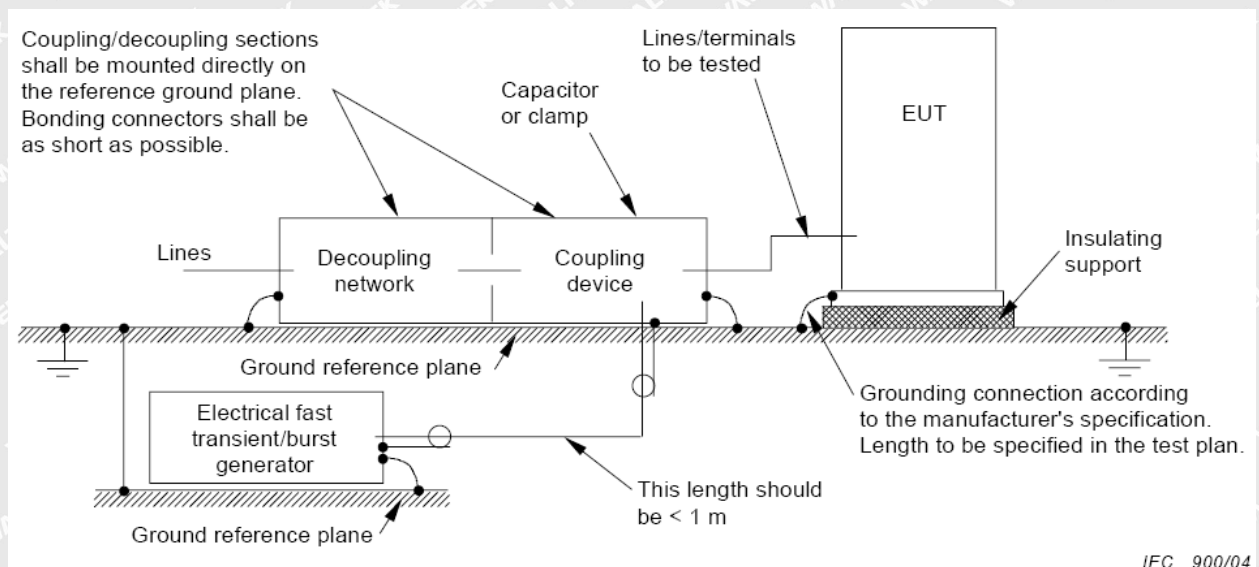
Temperature	: 24.3°C
Humidity	: 58.0%RH
Barometric Pressure	: 101.4kPa

EUT Operation:

Input Voltage	: AC 230V/50Hz
Operating Mode	: On mode

6.3.2 Block Diagram of Setup

The Electrical Fast Transients Immunity test was performed in accordance with the IEC 61000-4-4.





6.3.3 Test Results

Test Port	Test Level(kV)	Performance Criterion	Result
Line-Neutral	± 1.0	B	Pass*

Remark:

- * During the + 1kV test, the lamp was flickered, it could be recovered automatically after test.
During the - 1kV test no deviation was detected to the selected operation mode(s)

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6.4 Surge

Test Requirement.....	: EN IEC 55014-2
Test Method.....	: IEC 61000-4-5
Test Result.....	: Pass
Test level.....	: $\pm 1\text{kV}$ Live to Neutral, $\pm 2\text{kV}$ Live to PE and Neutral to PE
Interval.....	: 60s between each surge
No. of surges.....	: 5 positive at 90° , 5 negative at 270° .

6.4.1 E.U.T. Operation

Operating Environment:

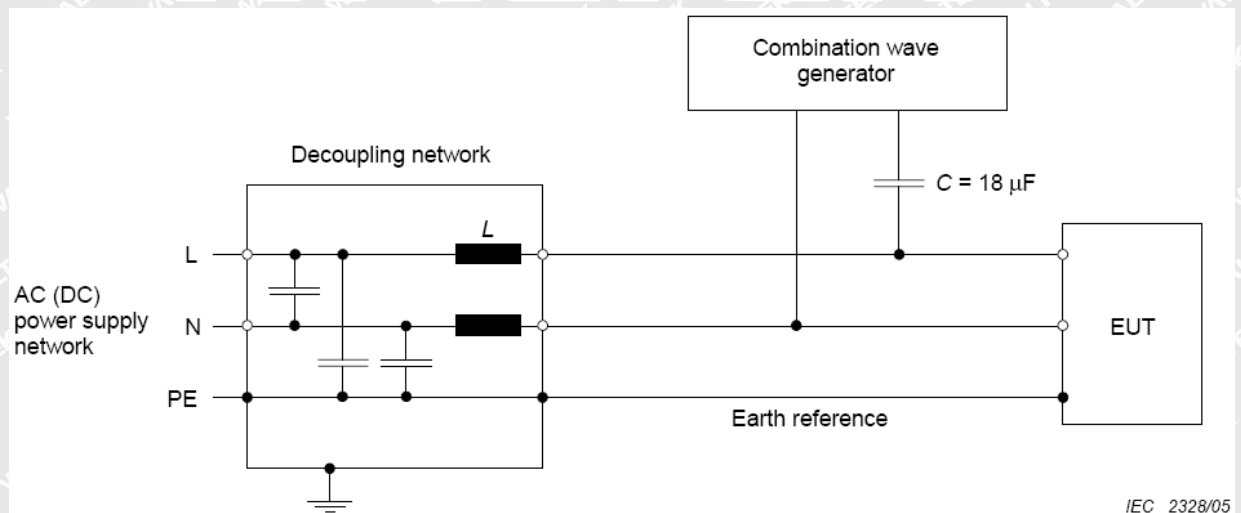
Temperature.....	: 21.9°C
Humidity.....	: $51.4\%\text{RH}$
Barometric Pressure.....	: 101.6kPa

EUT Operation:

Input Voltage.....	: AC 230V/50Hz
Operating Mode.....	: On mode

6.4.2 Block Diagram of Setup

The Surge Immunity test was performed in accordance with the IEC 61000-4-5.





6.4.3 Test Results

Test Port	Applied Voltage (kV)	Performance criterion	Result
Between Phase And Phase	± 1	B	N/A
Between Live And Neutral	± 1	B	Pass*
Between Live And Earth	± 2	B	N/A
Between Neutral And Earth	± 2	B	N/A

Remark:

* During the test no deviation was detected to the selected operation mode(s)

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6.5 Injected Currents Immunity, 0.15MHz to 230MHz

Test Requirement.....	: EN IEC 55014-2
Test Method	: IEC 61000-4-6
Test Result	: Pass
Frequency Range	: 0.15MHz to 230MHz
Test level	: 3V r.m.s. (unmodulated emf into 150 Ω)
Modulation	: 80%, 1kHz Amplitude Modulation.

6.5.1 E.U.T. Operation

Operating Environment:

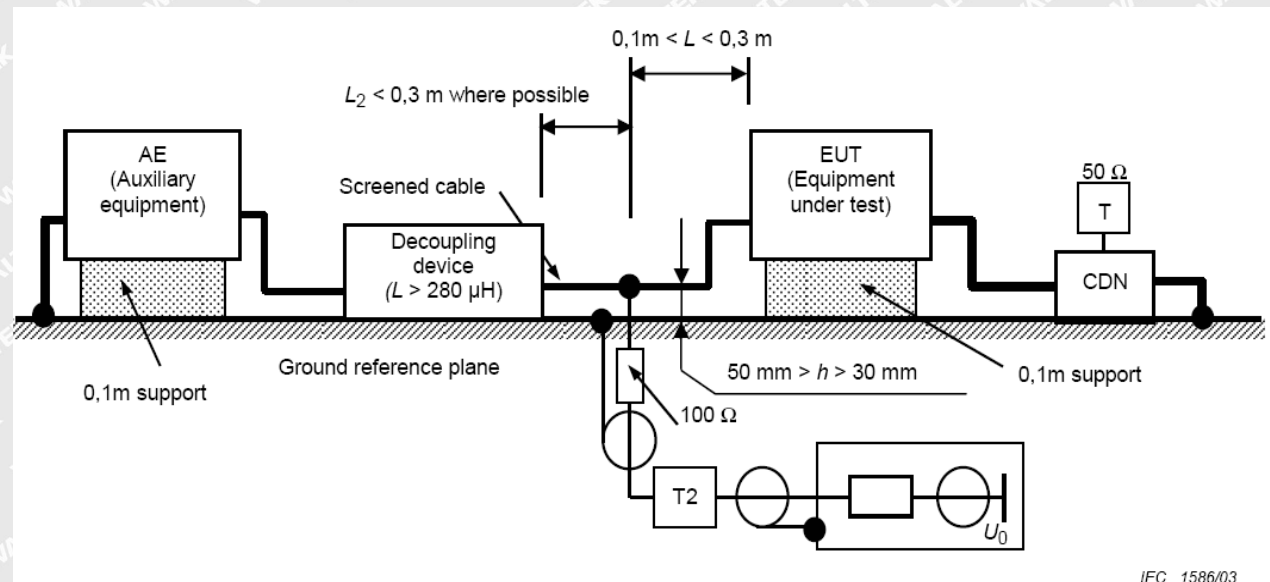
Temperature	: 24.4°C
Humidity	: 56.8%RH
Barometric Pressure.....	: 101.4kPa

EUT Operation:

Input Voltage	: AC 230V/50Hz
Operating Mode.....	: On mode

6.5.2 Block Diagram of Setup

The Injected Currents Immunity test was performed in accordance with the IEC 61000-4-6.





6.5.3 Test Results

Frequency	Line	Test Level	Modulation	Step Size	Dwell Time	Performance Criterion	Result
0.15MHz to 230MHz	2 Wire AC Supply Cables	3Vr.m.s.	80%, 1kHz Amp. Mod.	1%	1s	A	Pass*

Remark:

* During the test no deviation was detected to the selected operation mode(s)

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6.6 Voltage Dips and Interruptions

Test Requirement.....	: EN IEC 55014-2
Test Method.....	: IEC 61000-4-11
Test Result.....	: Pass
Test Level(Voltage reduction) :	0% & 40% & 70 % of U_T (Supply Voltage)
No. of Dips / Interruptions.....	: 1 per Level at 20ms intervals

6.6.1 E.U.T. Operation

Operating Environment:

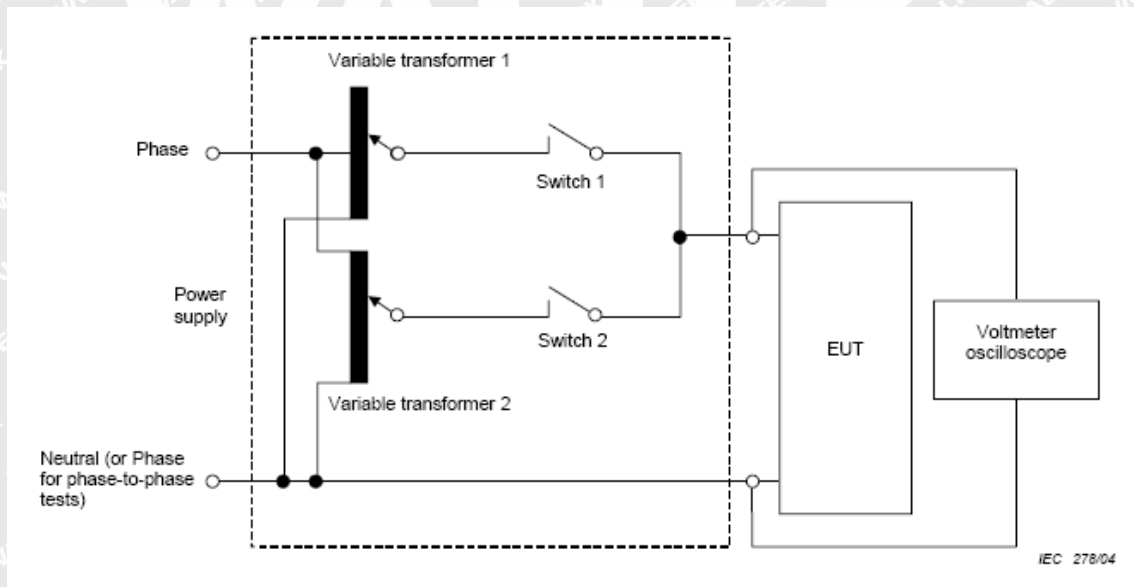
Temperature	: 24.3°C
Humidity	: 57.3%RH
Barometric Pressure.....	: 101.4kPa

EUT Operation:

Input Voltage	: AC 230V/50Hz
Operating Mode.....	: On mode

6.6.2 Block Diagram of Setup

The Voltage Dips and Interruptions Immunity test was performed in accordance with the IEC 61000-4-11.





6.6.3 Test Results

Test Level in %U _T	Performance criterion	50Hz		60Hz	
		Duration	Result	Duration	Result
0	C	0.5	Pass*	0.5	N/A
40	C	10	Pass*	12	N/A
70	C	25	Pass*	30	N/A

Remark:

* During the test no deviation was detected to the selected operation mode(s)

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7 Photographs – Test Setup

7.1 Photograph – Mains Terminal Disturbance Voltage Test Setup



7.2 Photograph – Discontinuous Disturbance (Click) Test Setup





7.3 Photograph – Radiated Disturbance Test Setup, 30MHz to 1GHz

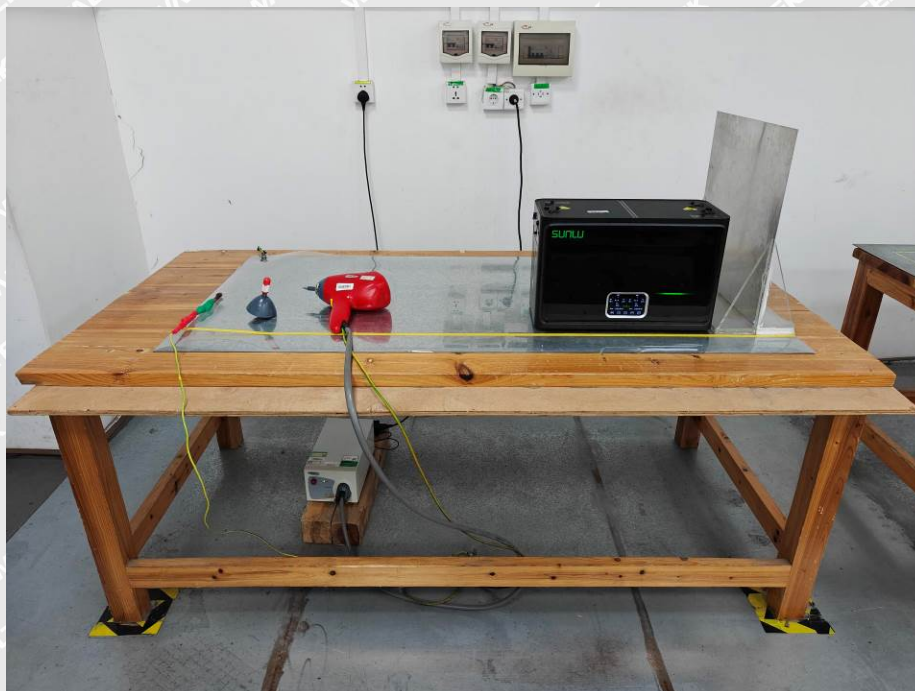


7.4 Photograph – Harmonic Current and Voltage Fluctuation and Flicker Test Setup

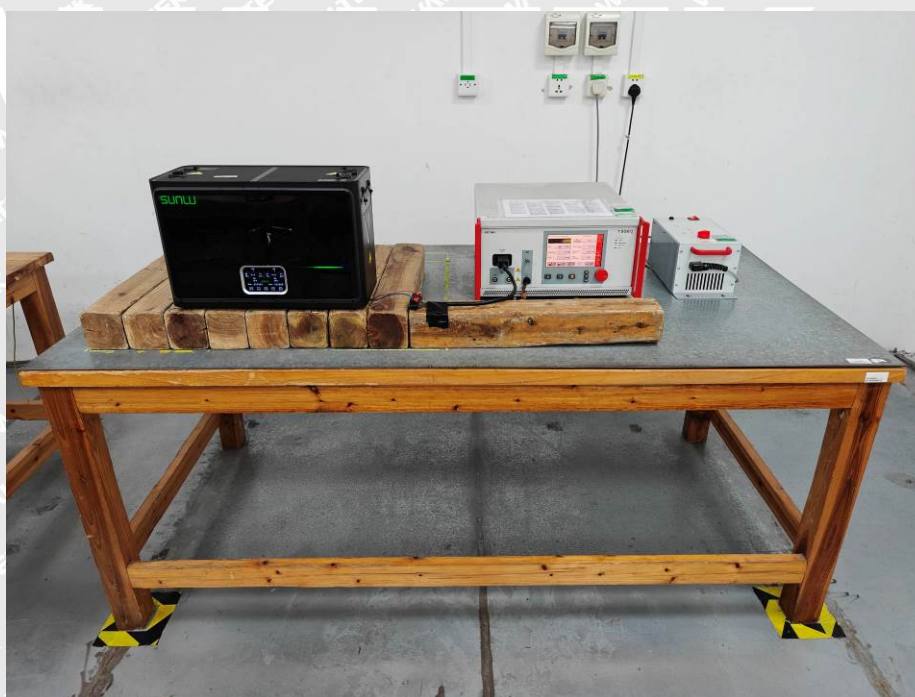




7.5 Photograph – ESD Immunity Test Setup



7.6 Photograph – EFT Immunity Test Setup





7.7 Photograph – Surge Immunity Test Setup



7.8 Photograph – Injected Currents Immunity Test Setup





7.9 Photograph – Voltage Dips and Interruptions Immunity Test Setup



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8 Photographs – Constructional Details

8.1 EUT – Front View



8.2 EUT – Back View



===== End of Report =====