TEST REPORT

Applicant	NINGBO REALWAY ELECTRICAL CO., LTD.
Address	NO.38, XIANGQIAO ROAD, LANGXIA, YUYAO, NINGBO, CHINA.

Manufacturer or Supplier	NINGBO REALWAY ELECTRICAL CO., LTD.
Address	NO.38, XIANGQIAO ROAD, LANGXIA, YUYAO, NINGBO, CHINA.
Product	Dehumidifier
Brand Name	N/A
Model	DH500A
Additional Models & Model Difference	DH100A, DH100B, DH100C, etc.; see item 1.1
Date of tests	Mar. 28, 2023 ~ Apr. 13, 2023

The submitted sample of the above equipment has been tested according to the requirements of the following standards:

☒ **EN IEC 55014-1:2021**	☒ **BS EN IEC 55014-1:2021**
☒ **EN IEC 55014-2:2021**	☒ **BS EN IEC 55014-2:2021**
☒ **EN IEC 61000-3-2:2019+A1:2021**	☒ **BS EN IEC 61000-3-2:2019+A1:2021**
☒ **EN 61000-3-3:2013+A2:2021**	☒ **BS EN 61000-3-3:2013+A2:2021**

CONCLUSION: The submitted sample was found to <u>COMPLY</u> with the test requirement

Tested by JJ Lin Project Engineer / EMC Department	Approved by Madison Luo Assistant Manager / EMC Department
	Date: May 04, 2023

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

No. 96, Guantai Road (Houjie Section), Houjie Town, Dongguan City, Guangdong Province. 523942. People's Republic of China.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
CE2303WDG0219	Original release	May 04, 2023

1 GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Dehumidifier
MODEL NO.	DH500A
ADDITIONAL MODELS	DH100A, DH100B, DH100C, DH100D, DH200A, DH200B, DH200C, DH200D, DH300A, DH300B, DH300C,DH300D，DH400A,DH400B,DH400C,DH400D, DH500B, DH500C, DH500D, DH500E,DH500F,DH500G,DH500H,DH500I, DH650A, DH650B, DH650C, DH650D,DH700A, DH700B, DH700C,DH700D, DH800A,DH800B,DH800C,DH800D，DH900A,DH900B,DH900C,DH900D，DH1000A, DH1000B, DH1000C, DH1000D,DH1100A,DH1100B, DH1100C, DH1100D，DH1200A, DH1200B, DH1200C, DH1200D，DH1300A,DH1300B,DH1300C,DH1300D,DH1400A,DH1400B, DH1400C,DH1400D,DH1500A, DH1500B,DH1500C, DH1500D,DH1600A,DH1600B,DH1600C,DH1600D, DH1800A,DH1800B,DH1800C,DH1800D,DH2000A,DH2000B, DH2000C,DH2000D,DH2000E, DH2000F,DH2000G,DH2000H, DH2000I,DH2200A, DH2200B, DH2200C,DH2200D, DH2500A,DH2500B,DH2500C,DH2500D,DH3000A,DH3000B, Dh3000C,DH3000D,Real10A,Real10B,Real10C,Real10D, Real10E, Real12A,Real12B,Real12C,Real12D,Real12E
POWER SUPPLY	DC 9V from adapter input AC 100-240V 50/60Hz
GROUP / CATEGORY	Category II
THE HIGHEST OPERATING FREQUENCY	Below 15MHz
CABLE SUPPLIED	AC Line: UNSHIELDED, NON-DETACHABLE, 1.5m

Notes:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. Please refer to the EUT photo document (Reference No.: 2303WDG0219) for detailed product photo.

5. The EUT is powered by the following two adapters, with different plugs:

ADAPTER ONE	
BRAND:	---
MODEL:	GQ24-090250-AG
INPUT:	AC 100-240V 50/60Hz 1.0A MAX
OUTPUT:	DC 9V 2.5A 22.5W
DC LINE	UNSHIELDED, NON-DETACHABLE, 1.5m

ADAPTER TWO	
BRAND:	---
MODEL:	GQ24-090250-AB
INPUT:	AC 100-240V 50/60Hz 1.0A MAX
OUTPUT:	DC 9V 2.5A 22.5W
DC LINE	UNSHIELDED, NON-DETACHABLE, 1.5m

1.2 DESCRIPTION OF TEST MODES

The EUT were tested under the following modes, the final worst mode was marked in boldface and recorded in this report.

CONDUCTED EMISSION TEST:

Description of Test Mode	Test Voltage
Normal Working	**DC 9V from adapter input AC 230 50Hz**
	DC 9V from adapter input AC 120V 60Hz

HARMONICS AND FLICKER TESTS:

Description of Test Mode	Test Voltage
Normal Working	**DC 9V from adapter input AC 230 50Hz**

RADIATED EMISSION TEST:

Description of Test Mode	Test Voltage
Normal Working	**DC 9V from adapter input AC 230 50Hz**
	DC 9V from adapter input AC 120V 60Hz

IMMUNITY TESTS:

Description of Test Mode	Test Voltage
Normal Working	**DC 9V from adapter input AC 230 50Hz**
	DC 9V from adapter input AC 120V 60Hz

1.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit without any other necessary accessories or support units.

1.4 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

EMISSION			
Standard	**Test Type**	**Result**	**Remark**
EN IEC 55014-1:2021 BS EN IEC 55014-1:2021	Conducted Test	PASS	Meets Limits Minimum passing margin is -3.24dB at 0.15400MHz
	Radiated Test (30MHz~1GHz)	PASS	Meets Limits Minimum passing margin is -4.79dB at 151.25MHz
EN IEC 61000-3-2:2019 +A1:2021 BS EN IEC 61000-3-2: 2019 +A1:2021	Harmonic current emissions	PASS	Meets the requirements
EN 61000-3-3:2013 +A2:2021 BS EN 61000-3-3:2013 +A2:2021	Voltage fluctuations & flicker	PASS	Meets the requirements

IMMUNITY EN IEC 55014-2:2021, BS EN IEC 55014-2:2021			
Standard	**Test Type**	**Result**	**Remark**
IEC 61000-4-2:2008 ED. 2.0	Electrostatic discharge immunity test	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-4:2012 ED. 3.0	Electrical fast transient / burst immunity test.	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-5:2017 ED. 3.1	Surge immunity test	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-6:2013 ED. 4.0	Immunity to conducted disturbances, induced by radio-frequency fields	PASS	Meets the requirements of Performance Criterion A
IEC61000-4-11:2017 ED. 2.1	Voltage dips, short interruptions and voltage variations immunity tests	PASS	Meets the requirements of Voltage dips and interruption: 0% U_T – 0.5 period, Performance Criterion A 40% U_T – 10 period, Performance Criterion A 70% U_T – 25 period, A

2 EMISSION TEST

2.1 TERMINAL CONTINUOUS DISTURBANCE VOLTAGE EMISSION MEASUREMENT

2.1.1 TEST INSTRUMENTS

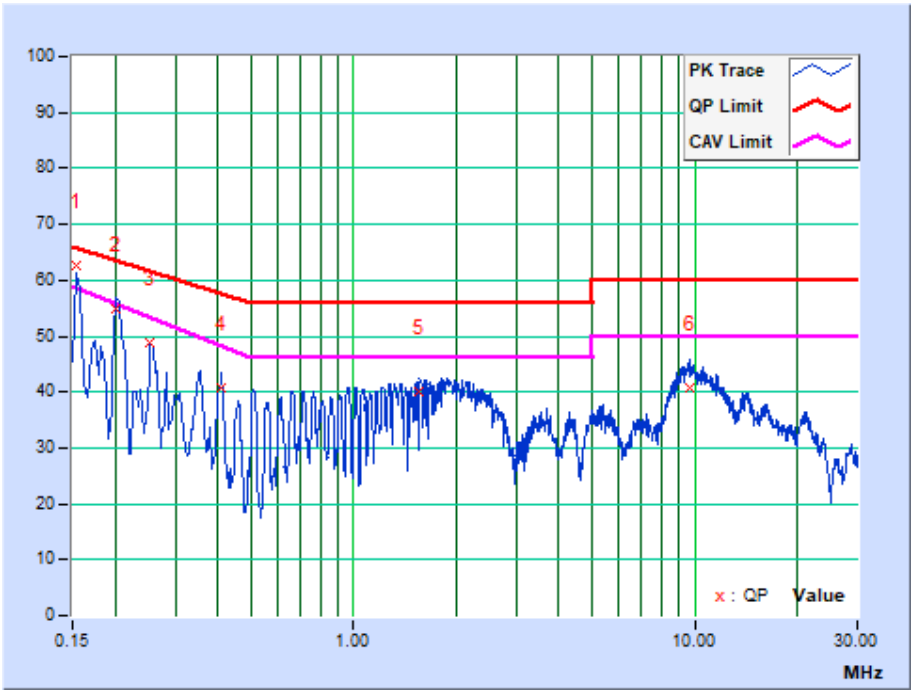
Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	100666	Jun. 14, 23
Artificial Mains Network	Rohde&Schwarz	ENV216	102477	Jun. 19, 23
Artificial Mains Network	SCHWARZBECK	NSLK 8127	8127713	Apr. 02, 24
V-LISN (CISPR 25)	SCHWARZBECK	NNBM 8124	8124 07019	Apr. 02, 24
V-LISN (CISPR 25)	SCHWARZBECK	NNBM 8124	8124 07015	Apr. 02, 24
Capacitive Voltage Probe	Rohde&Schwarz	CVP 9222	9222-044	Aug. 29, 23
Voltage Probe	SCHWARZBECK	TK 9421	9421-0332	Jun. 23, 23
Current Probe	Rohde&Schwarz	EZ-17	0816.2063.02	Apr. 19, 24
ISN	Rohde&Schwarz	ENY81-CA6	101928	Jun. 14, 23
ISN	TESEQ	ISN T800	34373	Jan. 11, 24
Coaxial RF Cable	COMMATE	CFD300-NL	5D-001	Oct. 24, 23
Shielding Room	Burgeon	5m*4m*3m	D3040008DG-1	Jul. 22, 24
Test software	ADT	ADT_Cond_V7.3.7	N/A	N/A

NOTES:
1. The test was performed in shielded room 543.
2. Peak and average detector quick scan are showed on the graph and final quasi-peak and average detector data are measured, the worst-case is recorded in the following graph and table.
3. Frequency range scanned: 150kHz to 30MHz.
4. Only emissions significantly above equipment noise floor are reported.
5. Uncertainty: ±2.67dB at a level of confidence of 95%.
6. The calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
7. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

2.1.2 TEST RESULTS

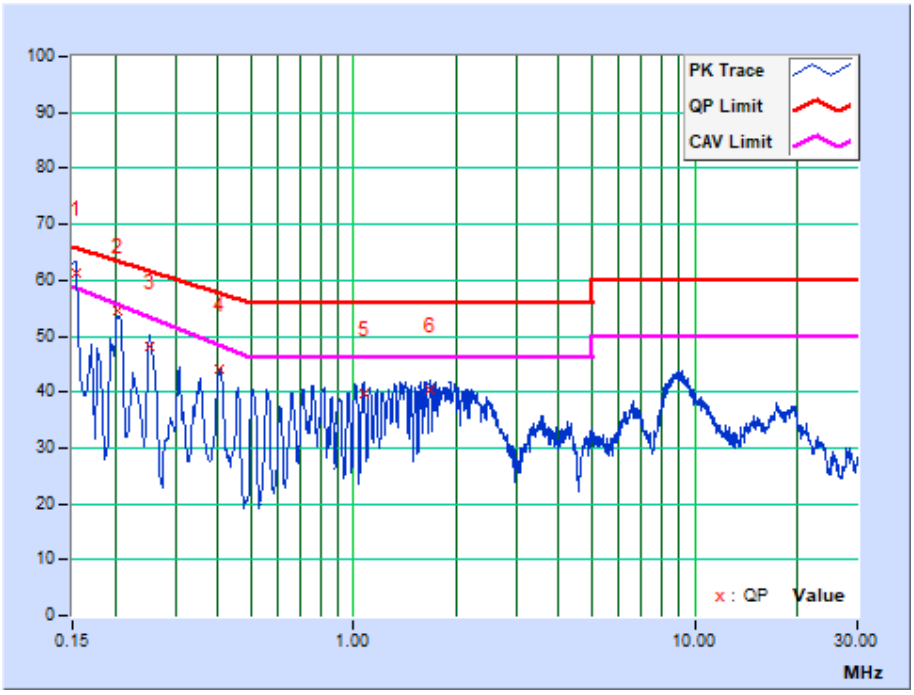
TEST MODE	See section 1.2	**6DB BANDWIDTH**	9 kHz
TEST VOLTAGE	See section 1.2	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 66%RH	**TESTED BY**	Bob

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.15400**	**9.87**	**52.67**	**41.63**	**62.54**	**51.50**	**65.78**	**58.72**	**-3.24**	**-7.22**
2	0.20201	9.87	45.03	34.03	54.90	43.90	63.53	55.79	-8.63	-11.89
3	0.25405	9.88	38.79	30.78	48.67	40.66	61.62	53.31	-12.96	-12.66
4	0.41000	9.90	30.75	25.72	40.65	35.62	57.65	48.14	-17.00	-12.52
5	1.56200	9.93	30.08	19.98	40.01	29.91	56.00	46.00	-15.99	-16.09
6	9.64200	10.66	30.18	24.17	40.84	34.83	60.00	50.00	-19.16	-15.17



TEST MODE	See section 1.2	**\6DB BANDWIDTH**	9 kHz
TEST VOLTAGE	See section 1.2	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 66%RH	**TESTED BY**	Bob

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	9.87	51.56	40.40	61.43	50.27	65.78	58.72	-4.35	-8.45
2	0.20415	9.86	44.64	33.49	54.50	43.35	63.44	55.67	-8.94	-12.32
3	0.25405	9.88	38.36	28.57	48.24	38.45	61.62	53.31	-13.39	-14.86
4	0.40605	9.90	34.31	32.60	44.21	42.50	57.73	48.25	-13.52	-5.75
5	1.07346	9.90	29.88	22.25	39.78	32.15	56.00	46.00	-16.22	-13.85
6	1.68200	9.96	30.46	24.42	40.42	34.38	56.00	46.00	-15.58	-11.62



2.2 RADIATED EMISSION MEASUREMENT

2.2.1 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESU8	100184	Jun. 14, 23
Bilog Antenna	SCHWARZBECK	VULB 9168	01263	Oct. 23, 23
Pre-Amplifier	SCHWARZBECK	BBV 9745	00242	Apr. 05, 24
3m Semi-anechoic Chamber	ETS-Lindgren	9m*6m*6m	D3040004DG-1	Aug. 02, 24
Coaxial RF Cable	Joinfront	JFAA6-NMNM-8000	2100033742	Oct. 24, 23
Coaxial RF Cable	Joinfront	JFAA6-NMNM-2000	2100033742	Oct. 24, 23
Coaxial RF Cable	Joinfront	JFAA6-NMNM-1500	2100033742	Oct. 24, 23
Test software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A

NOTES: 1. The test was performed in 966 Chamber-2.

2. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.

3. Negative sign (–) in the margin column signify levels below the limit.

4. Frequency range scanned: 30MHz to 1000MHz.

5. Only emissions significantly above equipment noise floor are reported.

6. Uncertainty: ±4.76 dB at a level of confidence of 95%.

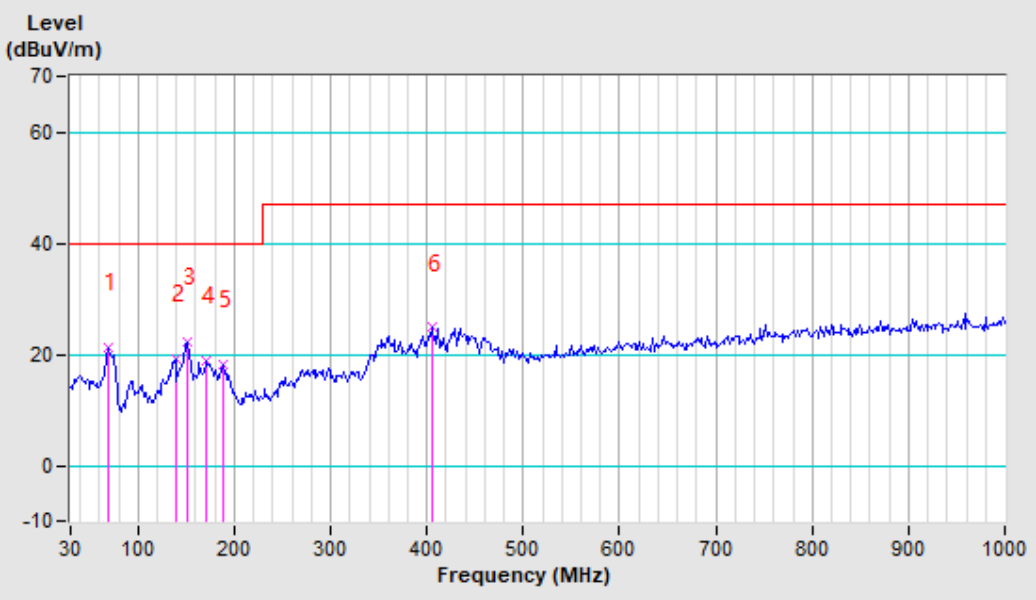
7. The calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

8. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

2.2.2 TEST RESULTS

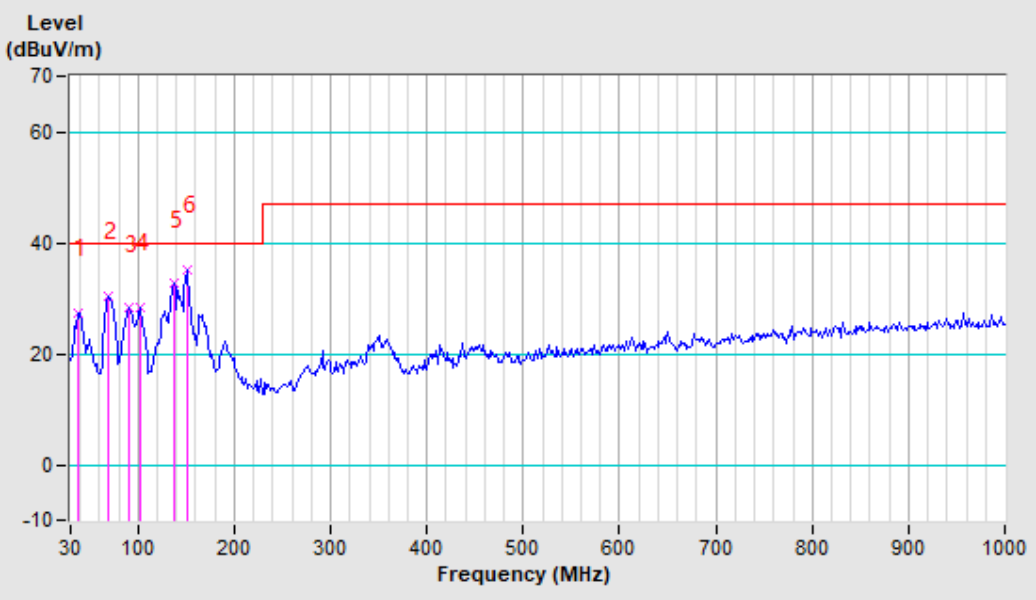
TEST MODE	See section 1.2	**FREQUENCY RANGE**	30-1000 MHz
TEST VOLTAGE	See section 1.2	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 56% RH	**TESTED BY**: Rollins	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	68.86	-13.74	34.89	21.15	40.00	-18.85	268	1
2	138.81	-12.52	31.68	19.16	40.00	-20.84	117	290
3	151.25	-12.21	34.40	22.19	40.00	-17.81	127	182
4	171.46	-12.88	31.76	18.88	40.00	-21.12	254	174
5	188.56	-14.38	32.50	18.12	40.00	-21.88	279	20
6	404.63	-10.00	34.75	24.75	47.00	-22.25	161	115



TEST MODE	See section 1.2	**FREQUENCY RANGE**	30-1000 MHz
TEST VOLTAGE	See section 1.2	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 56% RH	**TESTED BY**: Rollins	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	37.77	-12.36	39.78	27.42	40.00	-12.58	299	47
2	68.86	-13.74	44.21	30.47	40.00	-9.53	295	327
3	90.62	-17.56	45.72	28.16	40.00	-11.84	165	142
4	101.51	-16.26	44.57	28.31	40.00	-11.69	161	91
5	137.26	-12.70	45.30	32.60	40.00	-7.40	257	224
6	**151.25**	**-12.21**	**47.42**	**35.21**	**40.00**	**-4.79**	**122**	**182**



2.3 HARMONICS CURRENT MEASUREMENT

2.3.1 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
3kVA AC Power Source	California Instruments	3001 iX	54140	Jan. 11, 24
Harmonic/Flicker Test System	California Instruments	PACS-1	1319A01862	Jan. 11, 24
Test Software	California Instruments	CTS 4 – V4.29.0	N/A	N/A

NOTE: 1. The test was performed in EMS Room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

2.3.2 TEST RESULT

The limits are not specified for equipment with a rated power of 75W or less (other than lighting equipment).The EUT is not required to meet this test item as its power consumption is lower than 75W.

For further details, please refer to Clause 7 of EN IEC 61000-3-2:2019+A1:2021

2.4 VOLTAGE FLUCTUATION AND FLICKER MEASUREMENT

2.4.1 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
3kVA AC Power Source	California Instruments	3001 iX	54140	Jan. 11, 24
Harmonic/Flicker Test System	California Instruments	PACS-1	1319A01862	Jan. 11, 24
Test Software	California Instruments	CTS 4 – V4.29.0	N/A	N/A

NOTE: 1. The test was performed in EMS Room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

2.4.2 TEST RESULTS

TEST MODE	See section 1.2		
FUNDAMENTAL VOLTAGE	229.76Vrms	**OBSERVATION PERIOD (Tp)**	10 minutes
ENVIRONMENTAL CONDITIONS	23deg. C, 55%RH	**TESTED BY**	Ming Bai

TEST PARAMETER	MEASUREMENT VALUE	LIMIT	REMARKS
P_{st}	0.194	1.000	Pass
P_{lt}	0.085	0.650	Pass
$T_{d(t)}$ (ms)	0	500.0	Pass
d_{max} (%)	0.00	4.00	Pass
dc (%)	0.00	3.30	Pass

NOTES: (1) P_{st} means short-term flicker indicator.
(2) $T_{d(t)}$ means maximum time that d(t) exceeds 3.3%
(3) d_{max} means maximum relative voltage change.
(4) dc means relative steady-state voltage change.

3 IMMUNITY TEST

3.1 GENERAL PERFORMANCE CRITERIA DESCRIPTION

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.
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.
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.

3.2 ELECTROSTATIC DISCHARGE IMMUNITY TEST (ESD)

3.2.1 TEST SPECIFICATION

Basic Standard:	IEC 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Discharge Voltage:	Air Discharge : 8 kV (Direct) Contact Discharge : 4 kV (Direct & Indirect)
Polarity:	Positive & Negative
Number of Discharge:	20 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
ESD Generator	TESEQ	NSG 437	603	Feb. 09, 24
Test Software	TESEQ	V03.03	N/A	N/A

NOTES: 1. The test was performed in ESD Room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

3.2.3 TEST RESULTS

TEST MODE	See section 1.2	TEST VOLTAGE	See section 1.2
ENVIRONMENTAL CONDITIONS	22.5deg. C, 47.3% RH, 100.2kPa	TESTED BY: zhoulin Peng	

Direct Discharge Application				
Test Level (kV)	Polarity	Test Point	Test Result of Contact Discharge	Test Result of Air Discharge
4	+/-	All metal Parts	N/A	N/A
8	+/-	All Non-metal Parts	N/A	A

Indirect Discharge Application				
Discharge Level (kV)	Polarity	Test Point	Test Result of HCP	Test Result of VCP
4	+/-	HCP	A	N/A
4	+/-	VCP	N/A	A

NOTE: A: There was no change compared with initial operation during the test.

ESD TEST POINT

(O- Direct Contact Discharge; -Air Discharge)

3.3 ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST (EFT)

3.3.1 TEST SPECIFICATION

Basic Standard:	IEC 61000-4-4
Test Voltage:	Power Line : 1 kV
Polarity:	Positive & Negative
Impulse Frequency:	5 kHz
Impulse Waveshape :	5/50 ns
Burst Duration:	15 ms
Burst Period:	300 ms
Test Duration:	2 minutes

3.3.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
CM-TELCD Telecom Coupler/De-coupler	Thermo Fisher SCIENTIFIC	CM-TELCD	1112216	Apr. 02, 24
Capacitor Clamp	Thermo Fisher SCIENTIFIC	CCL-A	1112111	Jun. 14, 23
Test Software	Thermo Fisher SCIENTIFIC	CE ware32	V4.1	N/A
EFT Tester	HAEFELY	PEFT4010	150546	Jan. 11, 24
EFT Coupling Clamp	HAEFELY	IP4A	150407	Jan. 11, 24
Test Software	HAEFELY	SWPE4010 1.22	N/A	N/A

NOTES: 1. The test was performed in EMS Room 1.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

3.3.3 TEST RESULTS

TEST MODE	See section 1.2	TEST VOLTAGE	See section 1.2
ENVIRONMENTAL CONDITIONS	24.1deg. C, 50.7% RH	TESTED BY: Ming Bai	

Pulse Voltage	1.0 kV		___ kV		___ kV		___ kV	
Pulse Polarity	+	-	+	-	+	-	+	-
L	A	A	/	/	/	/	/	/
N	A	A	/	/	/	/	/	/
L-N	A	A	/	/	/	/	/	/

NOTE: A: There was no change compared with initial operation during the test.

3.4 SURGE IMMUNITY TEST

3.4.1 TEST SPECIFICATION

Basic Standard:	IEC 61000-4-5
Wave-Shape:	Combination Wave 1.2/50 us Open Circuit Voltage 8 /20 us Short Circuit Current
Test Voltage:	Power Line : 1kV
Surge Input/Output:	L-N
Generator Source Impedance:	2 ohm between networks
Polarity:	Positive/Negative
Phase Angle:	90°/270°
Pulse Repetition Rate:	1 time / 60 Sec.
Number of Tests:	5 positive and 5 negative at selected points

3.4.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
CM-TELCD Telecom Coupler/De-coupler	Thermo Fisher SCIENTIFIC	CM-TELCD	1112216	Apr. 02, 24
I/O Line Coupler/De-coupler	Thermo Fisher SCIENTIFIC	CM-I/OCD	1112214	Apr. 02, 24
Test Software	Thermo Fisher SCIENTIFIC	CE ware32	V4.1	N/A

NOTES: 1. The test was performed in EMS Room 1.

2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA

3. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

3.4.3 TEST RESULTS

TEST MODE	See section 1.2	TEST VOLTAGE	See section 1.2
ENVIRONMENTAL CONDITIONS	24.1deg. C, 50.7% RH	TESTED BY: Ming Bai	

AC Power port：

\Phase angle \ Test result \Voltage (kV) \ Test point\ Polarity			0°	90°	180°	270°		DC Power Port
1	L-N	+	/	A	/	/	/	/
		-	/	/	/	A	/	/

NOTE: A: There was no change compared with initial operation during the test.

3.5 IMMUNITY TO CONDUCTED DISTURBANCES INDUCED BY RF FIELDS (CS)

3.5.1 TEST SPECIFICATION

Basic Standard:	IEC 61000-4-6
Frequency Range:	0.15 MHz - 230 MHz
Field Strength:	3 $V_{r.m.s.}$
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Coupled Cable:	Power Mains
Coupling Device:	CDN-M2(2wires)

3.5.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
Signal Generator	Rohde&Schwarz	SMC 100A	107350	Apr. 02, 24
Power Meter	Rohde&Schwarz	NRX	103107	Apr. 02, 24
Power Sensor	Rohde&Schwarz	NRP6A	103356	Apr. 02, 24
CDN	TESEQ	CDN M016	59949	Jun. 19, 23
CDN	COM-POWER	T2E	581001	Jan. 11, 24
CDN	COM-POWER	M325E	521114	Jan. 11, 24
CDN	TESEQ	CDN T800	59708	Jun. 14, 23
6dB 150Watt Attenuator	GUBO	N-CA100W06-3G	210712	Apr. 05, 24
Power Amplifier	PRANA	N-DR 290	2105-2867	N/A
Electromagnetic Injection Clamp	AMETEK	KEMZ801A	59633	Apr. 18, 24
Audio analyzer	Rohde&Schwarz	UPV	100508	Apr. 02, 24
Conditioning Amplifier	B&K	2690-W-013	3009832	Feb. 23, 24
EAR SIMULATOR	B&K	4192-L-001	3192610	Jan. 24, 24
Test Software	Tonscend	TS+	4.0.0.0	N/A

NOTES: 1. The test was performed in CS test room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

3.5.3 TEST RESULTS

TEST MODE	See section 1.2	TEST VOLTAGE	See section 1.2
ENVIRONMENTAL CONDITIONS	24.5deg. C, 50.7% RH	**TESTED BY:** Ming Bai	

Voltage (V)	Test Frequency Note#1 (MHz)	Tested Line	Injection Method.	Test Result	Remark
3	0.15-230	AC Line	CDN-M2	A	Pass

Note#1: Tested Israel SII Frequencies 0.2,0.53,1,1.5,7.1,13.56,21,27.12,40.68,65,68 MHz

NOTE: A: There was no change compared with initial operation during the test.

3.6 VOLTAGE DIP/SHORT INTERRUPTIONS/VOLTAGE VARIATIONS (DIP) IMMUNITY TEST

3.6.1 TEST SPECIFICATION

Basic Standard:	IEC 61000-4-11
Test Duration Time:	Three test events in sequence
Interval between Event:	10 seconds
Phase Angle:	0° & 180°
Test Cycle:	3 times

3.6.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
3kVA AC Power Source	California Instruments	3001 iX	54140	Jan. 11, 24
Harmonic/Flicker Test System	California Instruments	PACS-1	1319A01862	Jan. 11, 24

NOTES: 1. The test was performed in EMS Room 2.

2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3. Test site: No. 122, Houjie Avenue West Houjie Town, Dongguan City Guangdong Province, 523960, People's Republic of China.

3.6.3 TEST RESULTS

TEST MODE	See section 1.2	TEST VOLTAGE	See section 1.2
ENVIRONMENTAL CONDITIONS	24.7deg. C, 51.7% RH	TESTED BY: Ming Bai	

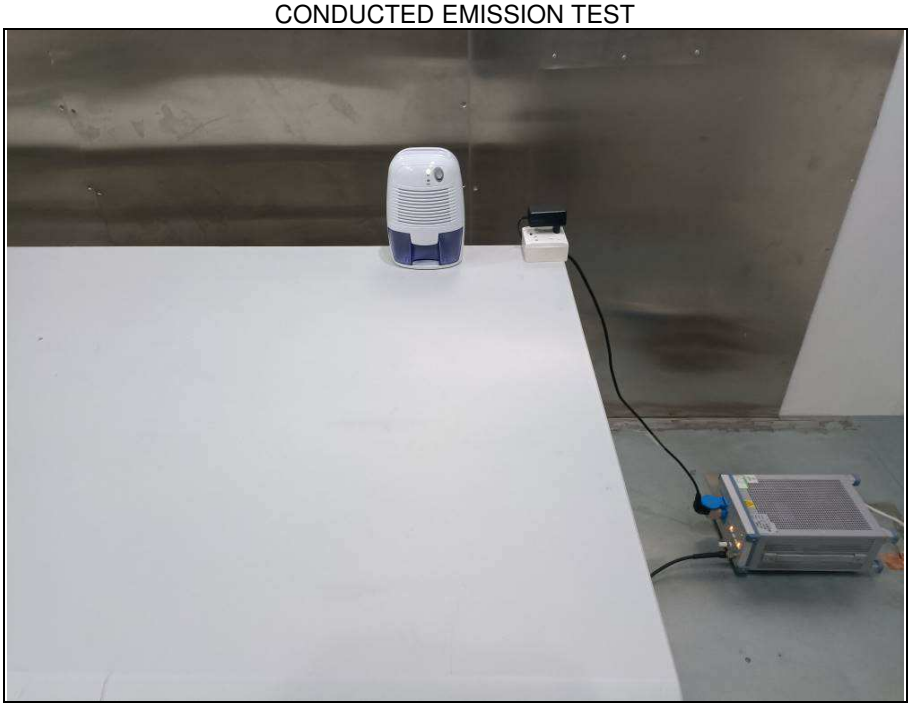
Ut : 230 Vac 50 Hz	Durations		Event interval (sec)	Total events (time)	Test result
Voltage dips (%)	(period)	(ms)			
0	0.5	10	10	3	A
40	10	200	10	3	A
70	25	500	10	3	A

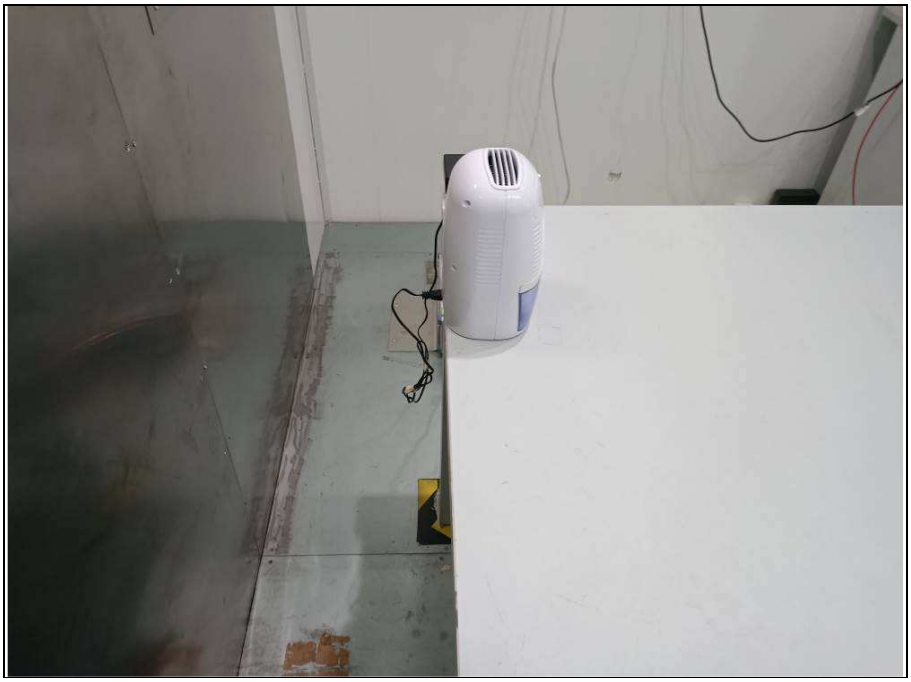
Ut : 120 Vac 60 Hz	Durations		Event interval (sec)	Total events (time)	Test result
Voltage dips (%)	(period)	(ms)			
0	0.5	10	10	3	A
40	10	200	10	3	A
70	25	500	10	3	A

NOTE: A: There was no change compared with initial operation during the test.

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

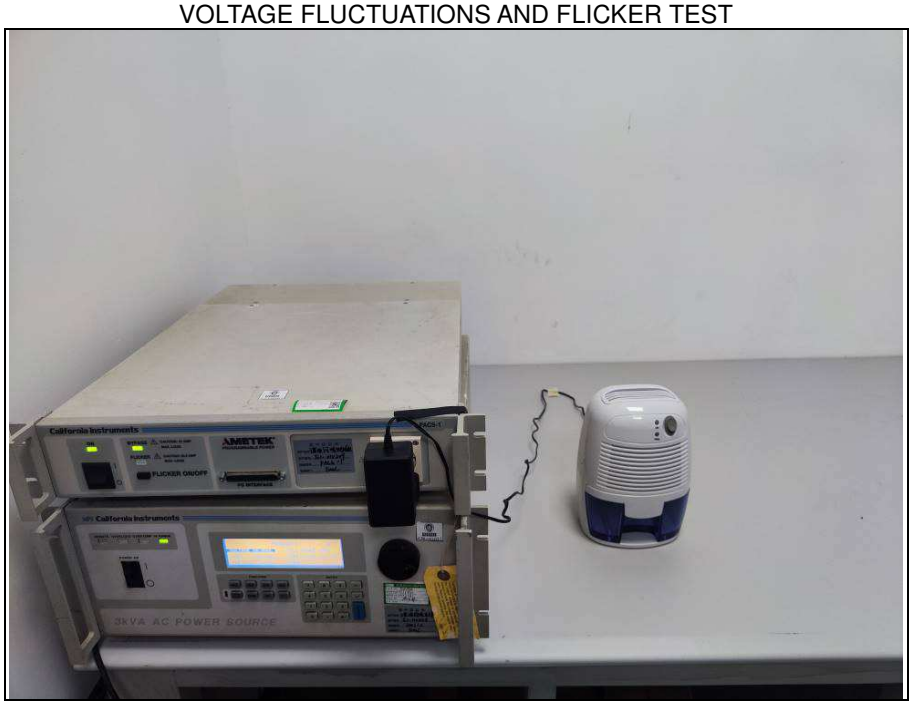
CONDUCTED EMISSION TEST





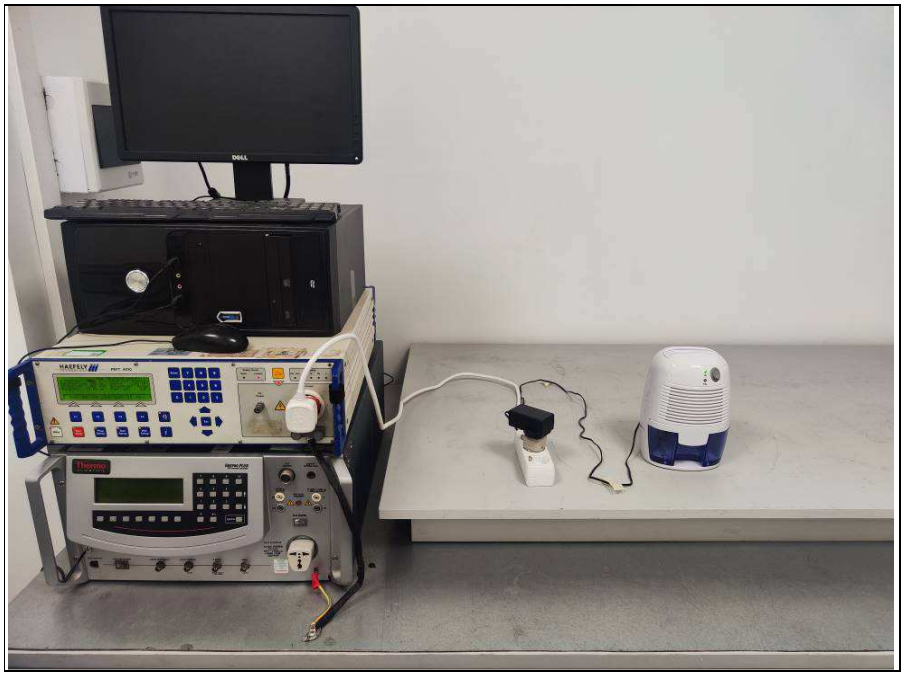
RADIATED EMISSION TEST

VOLTAGE FLUCTUATIONS AND FLICKER TEST

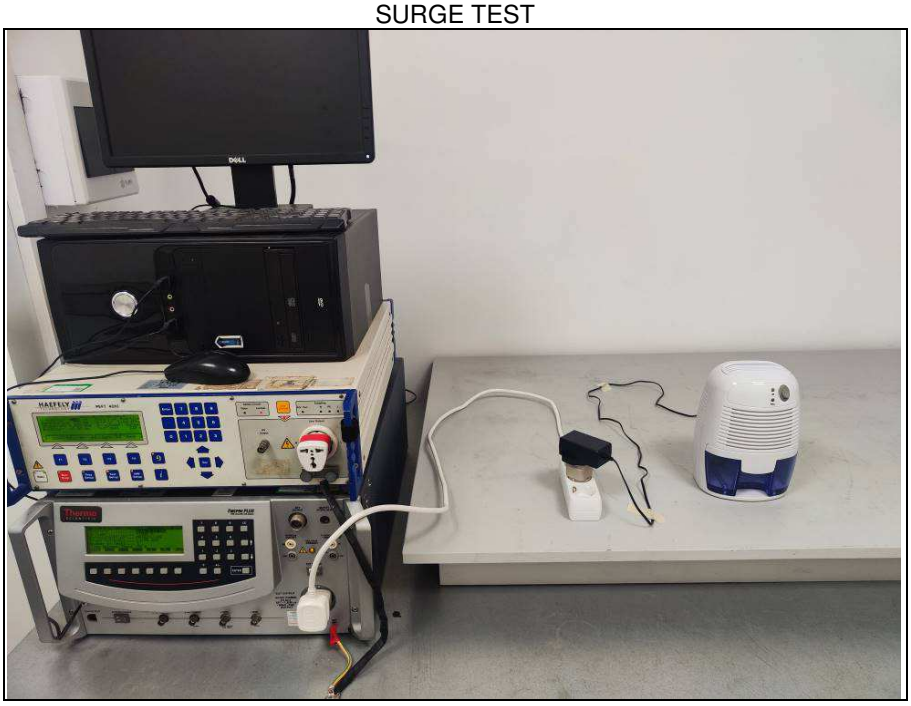


ESD TEST

EFT TESTS



SURGE TEST



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CS TEST

VOLTAGE DIPS AND INTERRUPTIONS TEST

5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

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