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TEST REPORT

This report is to supersede test report EBO2402062-E175

Applicant: Shenzhen Huayi Technology Co., Ltd.

Address of Applicant: 1# building 4thFloor Wanyelong Industrial Zone Yongteng Road

No.1 Tangtou community Shiyan Street Baoan District

Shenzhen China

Equipment Under Test (EUT)

Product Name: Hair straightener

Model No.: 007

Applicable standards: EN IEC 55014-1:2021

EN IEC 55014-2:2021

EN IEC 61000-3-2:2019+A1:2021

EN 61000-3-3:2013+A1:2019+A2:2021

Date of sample receipt: February 27, 2024

Date of Test: February 27, 2024 To March 6, 2024

Date of report issued: March 11, 2024

Test Result: PASS *

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.

Authorized Signature

Kevin Wang Laboratory Manager



^{*} In the configuration tested, the EUT complied with the standards specified above.



Shenzhen EBO Testing Center
Tel: +86-755-33126608
Email:ebo@ebotest.com Web:www.ebotest.com

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2 Version

Version No.	Date	Description
00	March 6, 2024	Original
01	March 11, 2024	New report (change Model and Address)

Prepared By:

Gary Wang

Project Engineer

Date:

Date:

March 11, 2024

Reviewed By:

Reviewer

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4 Test Summary

Test Item	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission	EN IEC 55014-1	CISPR 16-2-3	Table 9	PASS
Disturbance Power	EN IEC 55014-1	CISPR 16-2-2	Table 7	PASS
Discontinuous Interference	EN IEC 55014-1	EN IEC 55014-1	N/A	N/A
Conducted Emission	EN IEC 55014-1	CISPR 16-2-1	Table 5	PASS
Harmonic Emission	EN IEC 61000-3-2	EN IEC 61000-3-2	N/A	N/A
Flicker Emission	EN 61000-3-3	EN 61000-3-3	Clause 5 of EN 61000-3-3	PASS
Electrostatic discharges	EN IEC 55014-2	EN 61000-4-2	Contact ± 4 kV Air ± 8 kV	PASS
Radio-frequency electromagnetic fields	EN IEC 55014-2	EN 61000-4-3	3V/m 80%, 1kHz, AM	PASS
Electrical Fast Transients	EN IEC 55014-2	EN 61000-4- 4	AC±1.0kV	PASS
Surges	EN IEC 55014-2	EN 61000-4-5	1kV Line to Line 2kV Line to Ground	PASS
Injected currents	EN IEC 55014-2	EN 61000-4-6	3Vrms (emf), 80%, 1kHz Amp. Mod.	PASS
Voltage dips and short interruptions	EN IEC 55014-2	EN 61000-4-11	$0 \% U_{T}^{*}$ for 0.5per 40 % U_{T}^{*} for 10per 70 % U_{T}^{*} for 25per	PASS

Remark:

1. Pass: Comply with the essential requirements in the standard.

2. N/A: Not applicable.

3. UT: the nominal supply voltage; D.M: Differential Mode; C.M: Common Mode.

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5 General Information

5.1 Client Information

Applicant:	Shenzhen Huayi Technology Co., Ltd.	
Address of Applicant:	1# building 4thFloor Wanyelong Industrial Zone Yongteng Road No.1 Tangtou community Shiyan Street Baoan District Shenzhen China	
Manufacturer:	Shenzhen Huayi Technology Co., Ltd.	
Address of Manufacturer:	1# building 4thFloor Wanyelong Industrial Zone Yongteng Road No.1 Tangtou community Shiyan Street Baoan District Shenzhen China	

5.2 General Description of EUT

Product Name:	Hair straightener	
Model No.:	007	
Power supply:	DC 5V (Power by type-c port charging) or DC 3.7V, lithium battery	

5.3 Test mode

On mode	Keep the EUT in the operation status.
Charging mode	Keep the EUT in charging mode

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number
DELTA	ADAPTER	ADP-60ADT	N/A

5.5 Deviation from Standards

None.

5.6 Abnormalities from Standard Conditions

None.

5.7 Monitoring of EUT for All Immunity Test

Visual:	Monitor the EUT operating status.	
Audio:	N/A	

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6 **Test Instruments list**

Rad	Radiated Emission:						
ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	N/A	N/A	
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A	
3	EMI Test Receiver	ROHDE & SCHWARZ	ESRP	GTS602	Mar. 17 2023	Mar. 16 2024	
4	BiConiLog Antenna	SCHWARZBECK	VULB 9168	GTS606	Mar. 17 2023	Mar. 16 2024	
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 21 2023	June. 20 2024	
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 21 2023	June. 20 2024	
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
8	Coaxial Cable	GTS	N/A	GTS213	June. 21 2023	June. 20 2024	
9	Coaxial Cable	GTS	N/A	GTS211	June. 21 2023	June. 20 2024	
10	Coaxial cable	GTS	N/A	GTS210	June. 21 2023	June. 20 2024	
11	Coaxial Cable	GTS	N/A	GTS212	June. 21 2023	June. 20 2024	
12	Amplifier(100kHz-3GHz)	N/A	LNA 0920N	GTS605	Mar. 17 2023	Mar. 16 2024	
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 21 2023	June. 20 2024	
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 21 2023	June. 20 2024	
15	Band filter	Amindeon	82346	GTS219	June. 21 2023	June. 20 2024	
16	Power Meter	Anritsu	ML2495A	GTS540	June. 21 2023	June. 20 2024	
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 21 2023	June. 20 2024	
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 21 2023	June. 20 2024	
19	Splitter	Agilent	11636B	GTS237	June. 21 2023	June. 20 2024	
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 21 2023	June. 20 2024	
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 6 2023	Oct. 5 2024	
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 6 2023	Oct. 5 2024	
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 6 2023	Oct. 5 2024	
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 21 2023	June. 20 2024	

Con	Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.14 2022	May.13 2025	
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 21 2023	June. 20 2024	
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 21 2023	June. 20 2024	
4	ENV216 2-L-V- NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 21 2023	June. 20 2024	
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A	
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
7	Thermo meter	KTJ	TA328	GTS233	June. 21 2023	June. 20 2024	
8	Absorbing clamp	Elektronik- Feinmechanik	MDS21	GTS229	June. 21 2023	June. 20 2024	



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9 ISN SCHWARZBECK NTFM 8158 GTS565 June. 21 202	3 June. 20 2024
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ESC	ESD						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	ESD Simulator	KIKUSUI	KES4021A	GTS242	June. 21 2023	June. 20 2024	
2	Thermo meter	KTJ	TA328	GTS243	June. 21 2023	June. 20 2024	

Con	Conducted Immunity									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)				
1	Signal Generator	ROHDE & SCHWARZ	SMB 100A	GTS553	June. 21 2023	June. 20 2024				
2	CDN	LionCEL	CDN-M3-16	GTS554	June. 21 2023	June. 20 2024				
3	CDN	CYBERTEK	EM 5070	GTS559	June. 21 2023	June. 20 2024				
4	Power amplifier	rflight	NTWPA-00010475	GTS555	June. 21 2023	June. 20 2024				
5	ATT	SUNWAVE	SJ-50-06DB	GTS556	June. 21 2023	June. 20 2024				
6	Clamp	SCHAFFNER	KEMZ 801	GTS558	June. 21 2023	June. 20 2024				

Har	Harmonic/ Flicker									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)				
1	Power Analyzer H/F	EMTEST	DPA500	GTS235	June. 21 2023	June. 20 2024				
2	AC POWER SUPPLY	EMTEST	ACS500	GTS236	June. 21 2023	June. 20 2024				
3	Thermo meter	KTJ	TA328	GTS256	June. 21 2023	June. 20 2024				

EFT, S	EFT, Surge, Voltage dips and Interruption									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date	Cal.Due date				
				•	(mm-dd-yy)	(mm-dd-yy)				
1	EMTEST system	EMTEST	UCS500N	GTS239	June. 21 2023	June. 20 2024				
2	Clamp	EMTEST	HFK	GTS557	June. 21 2023	June. 20 2024				
3	Thermo meter	KTJ	TA328	GTS238	June. 21 2023	June. 20 2024				

Radia	Radiated Immunity								
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)			
1	Fully-Anechoic Chamber 2	Chang Zhou Zhong Shuo	854	SEM001-05	April. 08, 2023	April. 07, 2024			
2	Power Sensor	Rohde & Schwarz	NRP-Z91	SEM009-09	April. 08, 2023	April. 07, 2024			
3	Stacked LogPer Broadband Antenna (70MHz-10GHz)	Schwarzbeck	STLP 9129	SEM003-25	N/A	N/A			
4	Signal Generator (9kHz-6GHz)	Rohde & Schwarz	SMB100A	SEM006-11	April. 08, 2023	April. 07, 2024			
5	Broadband Amplifier (80MHz-1GHz)	Rohde & Schwarz	BBA150-BC250	SEM005-12	Sep. 20 2023	Sep. 19 2024			
6	Broadband Amplifier(800MHz- 3GHz)	Rohde & Schwarz	BBA150-D110	SEM005-13	April. 08, 2023	April. 07, 2024			
7	Broadband Amplifier(2.5GHz-	Rohde & Schwarz	BBA150-E60	SEM005-16	April. 08, 2023	April. 07, 2024			



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	6GHz)					
8	Measurement Software	Rohde & Schwarz	EMC32 V9.25.00	N/A	N/A	N/A

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Ge	General used equipment:										
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)					
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 21 2023	June. 20 2024					
2	Barometer	ChangChun	DYM3	GTS255	June. 21 2023	June. 20 2024					

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7 Emission Test Results

7.1 Radiated Emission

Test Descriptions and	EN 150 550	1 1 1						
Test Requirement:	EN IEC 550							
Test Method:	CISPR 16-2-							
Test Frequency Range:		30MHz to 1GHz						
Test site:	Measuremer		3m		I	1		
Receiver setup:							Value	
	30MHz-1G	30MHz-1GHz Quasi-peak 100KHz 300KHz Quasi-p						
Limit:	Free	quency	L	_imit (dBμV	/m @3m))	Value	
	30MHz-230MHz 40.00 Quasi-pea					Quasi-peak		
	230M	Hz-1GHz		47.0	0		Quasi-peak	
Test setup:	Antenna Tower Antenna Tower Antenna Tower Ground Reference Plane Test Receiver Test Receiver Test Receiver							
Test Procedure:	 The radiated emissions test was conducted in a semi-anechoic chamber. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation. Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT. The frequencies of maximum emission were determined in the final radiated 							
	emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization.							
Test environment:	Temp.:	25 °C	Humid	.: 52%	6 Pr	ess.:	1 012mbar	
Measurement Record:					Unc	ertainty	/: ± 4.50dB	
Test Instruments:	Refer to sec	tion 6 for de	tails					
Test mode:	Refer to sec	tion 5.3 for	details					
Test results:	Pass							



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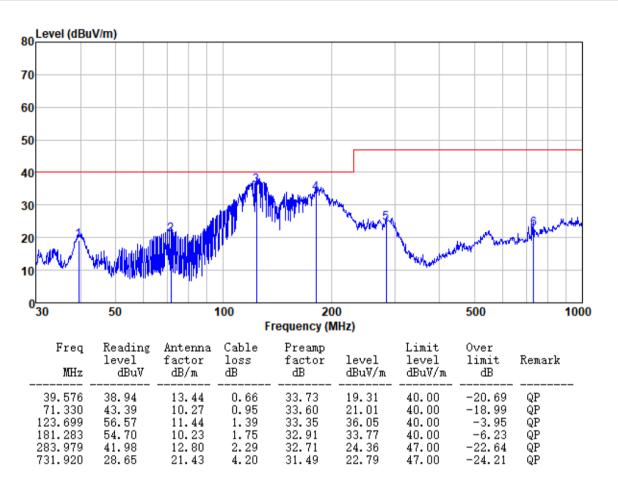
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Measurement Data







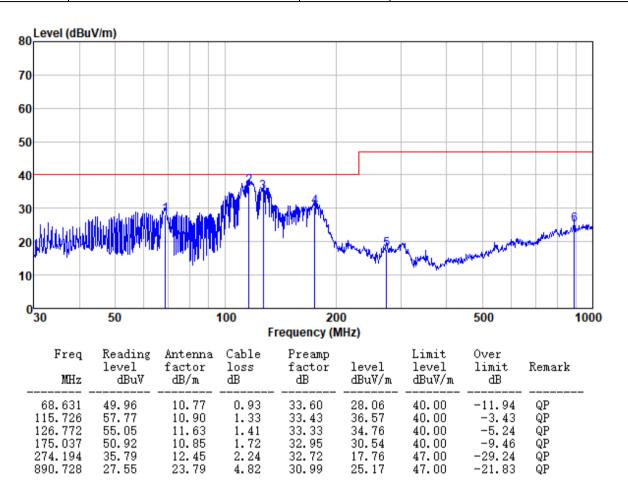
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Test mode: On+Charging mode Polarization: Vertical



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7.2 Conducted Emission

Test Requirement:	EN IEC 55014-1					
Test Method:	CISPR 16-2-1					
Test Frequency Range:	150kHz to 30MHz					
Class / Severity:	Class B					
Limit:	Frequency range (MHz)	L	imit (dBµV)		
	Frequency range (MHz) Quasi-peak Average					
	0.15-0.5 66 to 56* 59 to 46*					
	0.5-5 56 46					
	5-30 60 50					
	* Decreases with the	logarithm	of the frequence	cy.		
Test setup:	Ref	erence Pla	ne			
	AUX Equipment EUT EMI Receiver Remark: E U T Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m					
Test procedure:	line impedance sta 50ohm/50uH coup 2. The peripheral dev a LISN that provide termination. (Pleas	bilization ling imped rices are a es a 50oh	network(LISN). dance for the malso connected m/50uH couplin	the main power through a The provide a easuring equipment. to the main power through ing impedance with 50ohm gram of the test setup and		
	photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to EN55032 Class B on conducted measurement.					
Test environment:	Temp.: 24 °C	Humid.:	51%	Press.: 1012mbar		
Measurement Record:				Uncertainty: ±3.45dB		
Test Instruments:	Refer to section 6 for	details				
Test mode:	Refer to section 5.3 fo	or details.				
Test results:	Pass					



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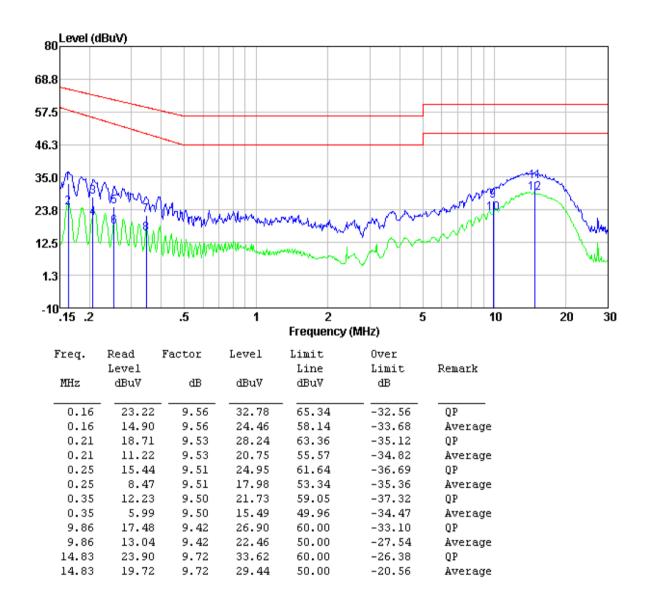
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Measurement Data

Test mode:	Charging mode	Phase Polarity:	Line:
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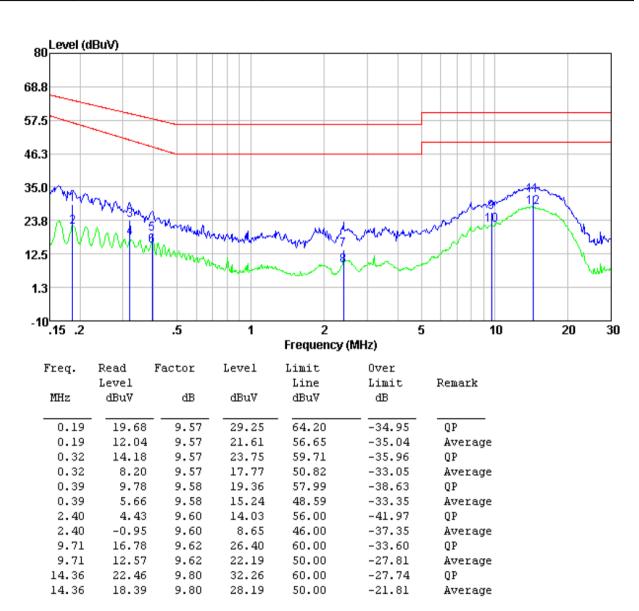


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Test mode: Charging mode Phase Polarity: Neutral:



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7.3 Disturbance Power

Test Requirement:	EN IEC 55014-1		
Test Method:	CISPR 16-2-2		
Test Frequency Range:	30MHz to 300MHz		
Receiver setup:	RBW=120kHz, VBW=300kHz		
Limit:	Frequency range (MHz)	Limit (dBpW)	
	Trequency range (MT12)	Quasi-peak Aver	age
	30 to 300	45 to 55 a 35 to	
	a Increasing linearly with the f	requency.	
Test setup:	Cable extented to > 6m Slide Bar	Absorbing Clamp FUT To EMI Receiver	
Test environment:	Temp.: 25 °C Humid.:	50% Press.: 1 01	2mbar
Measurement Record:		Uncertainty: ±	3.68dB
Test Instruments:	Refer to section 6 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		



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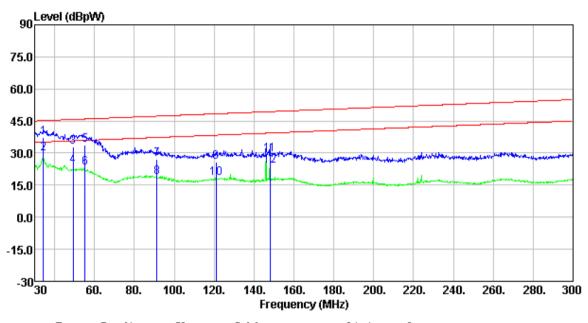
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Measurement Data

Test mode: Charging mode Test Line: DC line



Freq	Reading	CLamp	Cable		Limit	0ver	
	level	factor	loss	Level	level	limit	Remark
MHz	\mathtt{dBpW}	dΒ	dB	dBp₩	\mathtt{dBpW}	dB	
34.32	6.10	24.27	7.07	37.44	45.17	-7.73	QP
34.32	-1.40	24.27	7.07	29.94	35.17	-5.23	Average
49.44	2.83	22.82	7.07	32.72	45.73	-13.01	QP
49.44	-5.82	22.82	7.07	24.07	35.73	-11.66	Average
55.38	3.80	22.85	7.15	33.80	45.95	-12.15	QP
55.38	-6.99	22.85	7.15	23.01	35.95	-12.94	Average
91.29	-3.26	22.99	7.60	27.33	47.28	-19.95	QP
91.29	-11.85	22.99	7.60	18.74	37.28	-18.54	Average
120.99	-3.82	22.04	7.72	25.94	48.38	-22.44	QP
120.99	-11.71	22.04	7.72	18.05	38.38	-20.33	Average
147.99	0.81	20.70	7.94	29.45	49.38	-19.93	QP
147.99	-4.58	20.70	7.94	24.06	39.38	-15.32	Average

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7.4 Harmonics Test Results

Test Requirement:	EN IEC 61000-3-2	
Test Method:	N/A: See Remark Below	
Remark	There is no need for Harmonics test to be performed on this prod (rated power is less than 75W) in accordance with EN IEC 61000-3-2	
	For further details, please refer to Clause 7, Note 1 of EN IEC 61000-3-2 which states:	
	"For the following categories of equipment limits are not specified in this edition of the standard.	
	Note 1: Equipment with a rated power of 75W or less, other than lighting equipment."	

7.5 Flicker Test Result

Test Requirement:	EN 61000-3-3				
Test Method:	EN 61000-3-3				
Class/Severity:	Clause 5 of EN 61000-3-3				
Measurement Time:	10 min				
Detector:	As per EN 61000-3-3				
Test environment:	Temp.: 24°C Humid.: 51% Press.: 1 012mbar				
Test Instruments:	Refer to section 6 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Pass				

Measurement Data

	EUT values	Limit	Result
Pst	0.045	1.00	PASS
Plt	0.035	0.65	PASS
Dc[%]	0.000	3.30	PASS
Dmax[%]	0.049	4.00	PASS
Dt [s]	0.000	0.50	PASS

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8 Immunity Test Results

8.1 Performance Criteria Description in EN IEC 55014-2

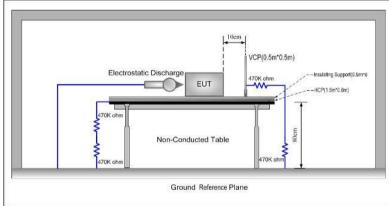
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Criterion A:	The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus 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.

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8.2 Electrostatic Discharge

Test Requirement:	EN IEC 55014-2	
Test Method:	EN 61000-4-2	
Discharge Voltage:	Contact Discharge: ±4kV	
	Air Discharge: ±8kV	
	HCP/VCP:±4kV	
Polarity:	Positive & Negative	
Number of Discharge:	Minimum 10 times at each test point.	
Discharge Mode:	Single Discharge	
Discharge Period:	1 second minimum	
Performance Criterion:	В	
Tost sature		

Test setup:



Test Procedure:

Air discharge:

The test was applied on non-conductive surfaces of EUT. The round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT. After each discharge, the discharge electrode was removed from the EUT. The generator was re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure was repeated until all the air discharge completed

2. Contact Discharge:

The test was applied on conductive surfaces of EUT. the generator was re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. the tip of the discharge electrode was touch the EUT before the discharge switch was operated.

3. Indirect discharge for horizontal coupling plane

At least 10 single discharges shall be applied at the front edge of each HCP opposite the centre point of each unit of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

Consideration should be given to exposing all sides of the EUT.

4. Indirect discharge for vertical coupling plane

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	At least 10 single discharges were applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, was placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges were applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.				
Test environment:	Temp.: 24 °C Humid.: 51% Press.:1012mbar				
Test mode:	Refer to section 6 for details				
Test Instruments:	Refer to section 5.3 for details				
Test results:	Pass				

Measurement Record:							
Toot mainta:	I: N/A						
Test points:	II: Seams, DC port, Co	I: Seams, DC port, Control key, Display panel					
Direct discharge							
Discharge			Observations				
Voltage (KV)	Type of discharge	Test points	(Performance Criterion)	Result			
± 4	Contact	I	N/A	N/A			
± 8	Air	II	A	Pass			
Indirect discharge	_		-				
Discharge	Type of discharge	Toot points	Observation	Result			
Voltage (KV)	Type of discharge	Test points	Performance	Result			
. 4	HCP-Bottom/Top/	Edge of the UCD	Α	Pass			
± 4	Front/Back/Left/Right	Edge of the HCP	A	Pass			
1.4	VCP-Front/Back	Center of the VCP	Α	Doos			
± 4	/Left/Right	Center of the VCP	A	Pass			

Remark:

A: No degradation in performance of the EUT was observed.

N/A: not applicable

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8.3 Radio-frequency electromagnetic fields

Test Requirement:	EN IEC 55014-2				
Test Method:	EN 61000-4-3				
Frequency range:	80MHz to 1GHz				
Test Level:	3V/m				
Modulation:	80%, 1kHz Amplitude Modulation				
Performance Criterion:	Criteria B				
Test setup:	Citeria D				
rest setup.	Camera Antenna Tower Ground Reference Plane Generator Amplifier Amplifier				
Test Procedure:	For table-top equipment, the EUT was placed in the chamber on a non-conductive table 0.8m high. For arrangement of floor-standing equipment, the EUT was mounted on a non-conductive support 0.1m above the supporting plane. For human body-mounted equipment, the EUT may be tested in the same manner as table top items.				
	2. If possible, a minimum of 1 m of cable is exposed to the electromagnetic field. Excess length of cables interconnecting units of the EUT shall be bundled low-inductively in the approximate center of the cable to form a bundle 30 cm to 40 cm in length.				
	3. The EUT was initially placed with one face coincident with the calibration plane. The EUT face being illuminated was contained within the UFA (Uniform Field Area).				
	4. The frequency ranges to be considered were swept with the signal modulated and pausing to adjust the RF signal level or to switch oscillators and antennas as necessary. Were the frequency range was swept incrementally, the step size was not exceed 1 % of the preceding frequency value.				
	5. The dwell time of the amplitude modulated carrier at each frequency was not be less than the time necessary for the EUT to be exercised and to respond, and was not less than 0,5 s.				
	6. The test normally was performed with the generating antenna facing each side of the EUT.				
EDO LI ET LI L	7. The polarization of the field generated by each antenna necessitates				

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	testing each selected side twice, once with the antenna positioned vertically and again with the antenna positioned horizontally.					
	8. The EUT was performed in a configuration to actual installation conditions, a video camera and/or a audio monitor were used to monitor the performance of the EUT.					
Test environment:	Temp.: 25°C Humid.: 52% Press.: 1 012mbar					
Test Instruments:	Refer to section 6 for details					
Test mode:	Refer to section 5.3 for details					

Measurement Record:

Test results:

Frequency	Level	Modulation	Antenna Polarization	EUT Face	Observations (Performance Criterion)
			V	Front	А
			Н	Front	А
			V		А
		Н	Rear	А	
		1 kHz, 80 % Amp. Mod, 1% increment, dwell time=3seconds	V	Left Right Top Bottom	А
00 MH= 4 CH=	2 1//		Н		А
80 MHz-1 GHz	3 V/m		V		А
			Н		А
			V		А
			Н		А
			V		А
			Н		А

Remarks:

A: No degradation in the performance of the E.U.T. was observed.

Passed

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8.4 Electrical Fast Transients

Test Requirement:	EN IEC 55014-2				
Test Method:	EN 61000-4-4				
Test Level:	1.0kV on AC port				
Polarity:	Positive & Negative				
Repetition Frequency:	5kHz				
Burst Duration:	15ms				
Burst Period:	300ms				
Test Duration:	2 minute per level & polarity				
Performance Criterion:	В				
Test setup:	EMC Tester EUT Non-conducted table Socm Socm Social Paris				
	Ground Reference Plane				
Test Procedure:	 The EUT and its simulators were placed on the ground reference plane and were insulated from it by a wood support 0.1m + 0.01m thick. The ground reference plane was 1m*1m metallic sheet with 0.65mm minimum thickness. This reference ground plane was project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane was more than 0.5m. 				
	3. All cables to the EUT was placed on the wood support, cables not subject to EFT/B was routed as far as possible from the cable under test to minimize the coupling between the cables.				
	 The length of the signal and power lines between the coupling device and the EUT is 0.5m 				
	The EUT is connected to the power mains through a coupling device that directly couples the EFT/B interference signal.				
	Each of the Line and Neutral conductors is impressed with burst noise for 2 minutes.				
Test environment:	Temp.: 26 °C Humid.: 54% Press.: 1012mbar				
Test Instruments:	Refer to section 6 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Pass				



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Measurement Record:

Lead under Test	Level (kV)	Coupling Direct/Clamp	Observations (Performance Criterion)	Result
L	+/- 1kV	Direct	А	Pass
N	+/- 1kV	Direct	А	Pass
L-N	+/- 1kV	Direct	А	Pass

Remark:

A: No degradation in the performance of the E.U.T. was observed.

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8.5 Surges

Test Requirement:	EN IEC 55014-2					
Test Method:	EN 61000-4-5					
Test Level:	1kV line to line					
	2kV line to earth					
Polarity:	Positive & Negative					
Generator source	2Ω (line-line coupling) 12Ω (line-earth coupling) Rise time=1.2us, Duration time=50us; Test Interval: 60s between each surge; 5 positive, 5 negative at 90°, 270°.					
impedance:						
Test signal specification:						
No. of surges:						
Performance Criterion:	В					
Test setup:	Non-conducted table Socm Socm Ground Reference Plane Ground Reference Plane					
Test Procedure:	 For line-to-line coupling mode, provide a 1kV 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points, and for active line / neutral lines to ground are same except test level is 2kV. At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are applied during test. Different phase angles are done individually. Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test. 					
Test environment:	Temp.: 26 °C Humid.: 53% Press.: 1012mbar					
Test Instruments:	Refer to section 6 for details Refer to section 5.3 for details					
Test mode:						
Test results:	Pass					



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Measurement Record:

Location	Level(kV)	Pulse No	Surge Interval	Phase(deg)	Observations (Performance Criterion)
L-N	+ 1 kV	5	60s	90	А
L-N	- 1 kV	5	60s	270	А

Remark:

A: No degradation in the performance of the E.U.T. was observed.

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8.6 Injected Currents test

Test Requirement: EN IEC 55014-2 Test Method: EN 61000-4-6 Frequency range: 0.15MHz to 80MHz						
	EN IEC 55014-2 EN 61000-4-6					
Frequency range: 0.15MHZ to 80MHZ						
	3V rms on AC Ports (unmodulated emf into 150Ω)					
Modulation: 80%, 1kHz Amplitude Modulation						
Performance Criterion: Criteria A	Criteria A					
Shielding Room Signal Generator Power Amplifier Fixed Pad Non-conducted Table CND 10cm Ground Reference Plane Ground Reference Plane						
 Test Procedure: The EUT are placed on an insulating support 0.1m high about ground reference plane. CDN (coupling and decoupling developed on the ground plane about 0.3m from EUT. Cables CDN and EUT are as short as possible, and their height ab ground reference plane shall be between 30 and 50 mm (with possible). The disturbance signal described below is injected to EUT CDN. 	vice) is between ove the rhere through					
climatic conditions after power on.						
Test environment: Temp.: 24 °C Humid.: 51% Press.: 1012ml	oar					
Test Instruments: Refer to section 6 for details	Refer to section 6 for details					
Test mode: Refer to section 5.3 for details	Refer to section 5.3 for details					
Test results: Passed	Passed					

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Measurement Record:

	Frequency	Injected Position	Test Level	Modulation	Step Size	Dwell Time	Observations (Performance Criterion)
	150kHz to 80MHz	AC Main	3Vrms	80%, 1kHz Amp. Mod.	1%	2s	Α

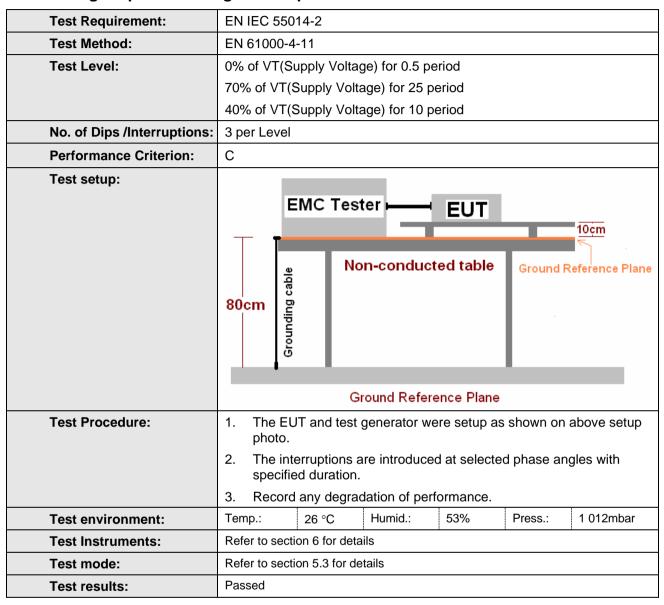
Remark:

A: No loss of function was observed.

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8.7 Voltage Dips and Voltage Interruptions





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Measurement Record:

Test Level % U _T	Duration (Periods)	Phase angle	No. of drop out	Time between dropout	Observations (Performance Criterion)	Result
0	0.5	0°, 90°, 180°, 270°	3	10s	Α	Pass
70	25	0°, 90°, 180°, 270°	3	10s	В	Pass
40	10	0°, 90°, 180°, 270°	3	10s	В	Pass

Remark:

A: No degradation in performance of the EUT was observed.

B: During the test, the screen from the display will have some flickers, after the experiment, the function can automatically return to normal

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9 Photographs of the EUT





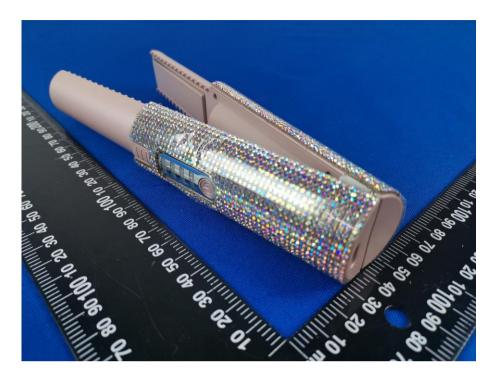


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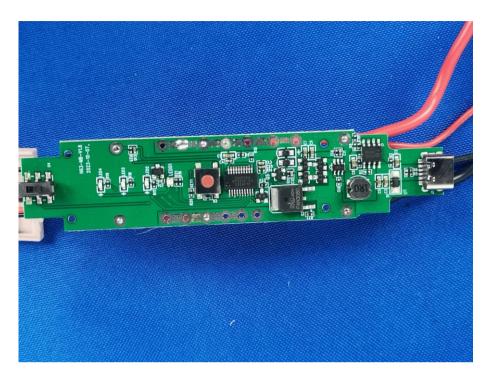


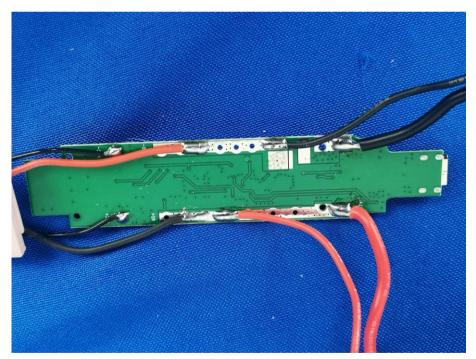
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