EMC Test Report

Applicant	:	**Jiangmen Yueling Electric Appliance Co., Ltd**
Address	:	**5th Floor, Building 3, No. 4, Miaogangfang, Tangxi, Hetang Town, Pengjiang District, Jiangmen City, Guangdong,China**
Product Name	:	**The air fryer**
Report Date	:	**Jun. 12, 2023**

Shenzhen Anbotek Compliance Laboratory Limited

Contents

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TEST REPORT

Applicant	:	Jiangmen Yueling Electric Appliance Co., Ltd
Manufacturer	:	Jiangmen Yueling Electric Appliance Co., Ltd
Product Name	:	The air fryer
Test Model No.	:	L-5061
Reference Model No.		L-5060, L-5060S, L-5061S
Trade Mark	:	N.A.
Rating(s)	:	220-240V~ 50/60Hz 1350W
Test Standard(s)	:	**EN IEC 55014-1: 2021; EN IEC 61000-3-2: 2019+A1:2021; EN 61000-3-3: 2013+A1:2019+A2:2021; EN IEC 55014-2: 2021; (IEC 61000-4-2; IEC 61000-4-3; IEC 61000-4-4; IEC 61000-4-5; IEC 61000-4-6; IEC 61000-4-11)**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the EN IEC 55014-1, EN IEC 61000-3-2, EN 61000-3-3, EN IEC 55014-2 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt: May 24, 2023

Date of Test: May 24~Jun. 05, 2023

Prepared By: (We Zeng)

Approved & Authorized Signer: (KingKong Jin)

1. General Information

1.1. Client Information

Applicant	:	Jiangmen Yueling Electric Appliance Co., Ltd
Address	:	5th Floor, Building 3, No. 4, Miaogangfang, Tangxi, Hetang Town, Pengjiang District, Jiangmen City, Guangdong,China
Manufacturer	:	Jiangmen Yueling Electric Appliance Co., Ltd
Address	:	5th Floor, Building 3, No. 4, Miaogangfang, Tangxi, Hetang Town, Pengjiang District, Jiangmen City, Guangdong,China
Factory	:	Jiangmen Yueling Electric Appliance Co., Ltd
Address	:	No.2, Lane 3, Miaogangfang, Tangxi, Zhongxing 1st Road, Hetang Town, Pengjiang District, Jiangmen City, Guangdong, China

1.2. Description of Device (EUT)

Product Name	:	The air fryer
Test Model No.	:	L-5061
Reference Model No.	:	L-5060, L-5060S, L-5061S (Note: All samples are the same except the model number & appearance, so we prepare “L-5061” for test only.)
Trade Mark	:	N.A.
Test Power Supply	:	AC 230V, 50Hz
Test Sample No.	:	1-1-1
Product Description	:	N/A
Remark: (1) For a more detailed features description, please refer to the manufacturer’s specifications or the User’s Manual.		

1.3. Product Type

☐ Category I: equipment containing no electronic control circuitry
☒ Category II: mains operated equipment containing electronic control circuitry with no clock frequency higher than 15 MHz
☐ Category III: battery operated equipment not included in Category I
☐ Category IV: mains operated equipment containing electronic control circuitry with a highest clock frequency greater than 15 MHz but lower than or equal to 200 MHz
☐ Category V: mains operated equipment containing electronic control circuitry with a highest clock frequency greater than 200 MHz

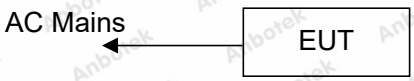
1.4. Auxiliary Equipment Used During Test

N/A		

1.5. Description of Test Mode

Pretest Mode	Description
Mode 1	On

For Mode 1 Block Diagram of Test Setup



1.6. Test Summary

Test Items	Test Mode	Status
Power Line Conducted Emission Test	Mode 1	P
Asymmetric Mode Conducted Emission at Telecom Port	/	N
Magnetic Field Inducted Current	/	N
Disturbance Power (30MHz-300MHz)	/	N
Magnetic Field Strength (9KHz-30MHz)	/	N
Radiated Emission Test (Below 1 GHz)	Mode 1	P
Radiated Emission Test (Above 1GHz)	/	N
Harmonic Current Test	Mode 1	P
Voltage Fluctuations & Flicker Test	Mode 1	P
Electrostatic Discharge Immunity Test	Mode 1	P
Electrical Fast Transient/Burst Immunity Test	Mode 1	P
Surge Immunity Test	Mode 1	P
Injected Currents	Mode 1	P
Voltage Dips and Interruptions Immunity Test	Mode 1	P
P) Indicates “PASS”. F) Indicates “Fail”. N) Indicates “Not applicable”.		

1.7. Test Equipment List

☒ Power Line Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Oct. 23, 2022	1 Year
2.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul. 05, 2022	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 13, 2022	1 Year
4.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2022	1 Year
5.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

☐ Asymmetric Mode Conducted Emission at Telecom Port

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ISN	Schwarzbeck	NTFM 8158	#172	Oct. 13, 2022	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 13, 2022	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2022	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A
5.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul. 05, 2022	1 Year

☐ Magnetic Field Inducted Current

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 13, 2022	1 Year
2.	Triple-Loop Antenna(2M)	EVERFINE	LLA-2	905003	Oct. 23, 2022	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2022	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

☐ Disturbance Power (30MHz-300MHz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Absorbing Clamp	TESEQ	MDS 21B	58885	Oct. 23, 2022	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 13, 2022	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2022	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

☐ Magnetic Field Strength (9KHz-30MHz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 13, 2022	1 Year
2.	Pre-amplifier	Schwarzbeck	BBV-9745	9745-075	Oct. 23, 2022	1 Year
3.	Loop Antenna (9K-30M)	Schwarzbeck	FMZB1519B	00053	Oct. 23, 2022	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	EMEC-3A1	N/A	N/A	N/A

☒ Radiated Emission Test (Below 1 GHz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESPI7	101340	Feb. 22, 2023	1 Year
2.	Pre-amplifier	Emtrace	RP01A	00517	Feb. 22, 2023	1 Year
3.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	01471	Feb. 25, 2023	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

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☐ Radiated Emission Test (Above 1GHz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 23, 2022	1 Year
2.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Oct. 23, 2022	1 Year
3.	Pre-amplifier	SONOMA	310N	186860	Oct. 23, 2022	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A
5.	EMI Preamplifier	SKET Electronic	LNPA-0118G-45	SKET-PA-002	Oct. 13, 2022	1 Year
6.	Double Ridged Horn Antenna	SCHWARZBECK	BBHA 9120D	02555	Oct. 16, 2022	3 Year

☒ Harmonic Current and Flicker Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Programmable AC Power source	IVYTECH	APS-5005A	632734	Oct. 23, 2022	1 Year
2.	Harmonic and Flicker Analyzer	EMC-PARTNER	HMONICS 1000-1P	164	Oct. 23, 2022	1 Year
3.	Harmonics-1000	N/A	Ed.3.0+4.0	N.A	N/A	N/A

☒ Electrostatic Discharge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Simulators	emtest	ESD NX30.1	11936	Mar. 17, 2023	1 Year

☒ Electrical Fast Transient/Burst Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Surge Generator	TESEQ	NSG 3060	1480	Oct. 23, 2022	1 Year
2.	CDN	TESEQ	CDN 3061	1408	Oct. 23, 2022	1 Year
3.	EFT-Clamp	PRIMA	EFT-Clamp	/	Oct. 13, 2022	1 Year

☒ Surge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Combined Wave Lightning Surge Simulator	3Ctest	CCS600	ES3771702	Jul. 05, 2022	1 Year
2.	Three Phase Power Coupling Network	3Ctest	SEPN69100T	ES0801757	Jul. 05, 2022	1 Year
3.	Telecom port surge generator	PMI	TW101	190411	Apr. 20, 2023	1 Year

☒ Injected Currents Susceptibility Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	C/S Conducted Immunity Test System	FRANKONIA	CIT-10	126A1196/2012	Oct. 23, 2022	1 Year
2.	CDN	FRANKONIA	CDN - M2+M3	A2210178/2012	Oct. 23, 2022	1 Year
3.	6dB Attenuator	FRANKONIA	DAM 26W	1172202	Oct. 23, 2022	1 Year
4.	CIT-10	FRANKONIA	Version1.1.7	N/A	N/A	N/A
5.	EM-Clamp	FRANKONIA	EMCL-20	18101728-0103	Apr. 20, 2023	1 Year

☒ Voltage Dips and Interruptions Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	CYCLE SAG Simulator	PRIMA	DRP61011AG	PR12046234	Oct. 23, 2022	1 Year

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1.8. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, 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 No. 184111.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.
1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128

1.9. EMS 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 to persist after the test.

If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

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.

2. Power Line Conducted Emission Test

2.1. Test Standard and Limit

Test Standard:	EN IEC 55014-1

☒ **General Limits (Mains ports -Disturbance voltage)**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.5	66~56	59~46
0.5 ~ 5.0	56	46
5.0~ 30	60	50

Remark:
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

☐ **Disturbance voltage limits for the AC mains port of equipment with active IPT functions (Appliances which are 100 V rated and without an earth connection)**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.009 ~ 0.05	122	-
0.05 ~ 0.15	102~92	-
0.15 ~ 0.50	72~62	62~52
0.50 ~ 5.00	56	46
5.00 ~30.00	60	50

Remark:
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases linearly with the logarithm of the frequency in the range 0.05MHz to 0.50MHz.

☐ **Disturbance voltage limits for the AC mains port of equipment with active IPT functions (All other appliances)**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.009 ~ 0.05	110	-
0.05 ~ 0.15	90~80	-
0.15 ~ 0.50	66~56	56~46
0.50 ~ 5.00	56	46
5.00 ~30.00	60	50
Remark: (1) The lower limit shall apply at the transition frequencies. (2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

☐ **General Limits (Auxiliary ports -Disturbance voltage)**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.5	80	70
0.5 ~ 30	74	64
Remark: The lower limit shall apply at the transition frequencies.		

☐ **General Limits (Auxiliary ports -Disturbance current)**

Frequency (MHz)	Limits (dBμA)	
	Quasi-peak Level	Average Level
0.15 ~ 0.5	40~30	30~20
0.5 ~ 30	30	20
Remark: (1) The lower limit shall apply at the transition frequencies. (2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

☐ **Limits for the mains port of motor operated tools (P≤700W -Disturbance voltage)**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.35	66~59	59~49
0.35 ~ 5.0	59	49
5.0~ 30	64	54

Remark:
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
(3)P=rated power of the motor only.

☐ **Limits for the mains port of motor operated tools (700W＜P≤1000W -Disturbance voltage)**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.35	70~63	63~53
0.35 ~ 5.0	63	53
5.0~ 30	68	58

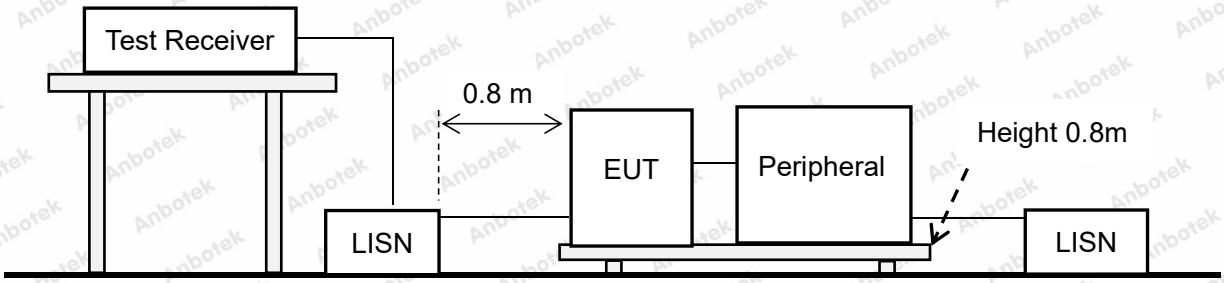
Remark:
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
(3)P=rated power of the motor only.

☐ **Limits for the mains port of motor operated tools (P＞1000W -Disturbance voltage)**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.35	76~69	69~59
0.35 ~ 5.0	69	59
5.0~ 30	74	64

Remark:
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
(3)P=rated power of the motor only.

2.2. Test Setup



2.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane, and the back of the EUT is 0.4 m away from the vertical ground reference plane, and at least 0.8 m from any other metal surface or ground plane. The floor-standing EUT is placed on an insulating support 0.8 m above the horizontal ground reference plate, at least 0.8 m away from other metal objects.

Connect EUT to the power mains through an LISN. Where the mains cable supplied by the manufacturer is longer than 1 m, the excess should be folded at the center into a bundle no longer than 0.4 m, so that its length is shortened to 1 m. All the peripherals are connecting to the other LISN（Handheld devices shall be tested with a simulated hand）.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest disturbance with respect to the limit was found by investigating disturbances at a number of significant frequencies. The probable frequency of maximum disturbance had been found and that the associated cable and EUT configuration and mode of operation had been identified.

Set the test-receiver to quasi peak detect function and average detect function, and to measure the conducted emissions values.

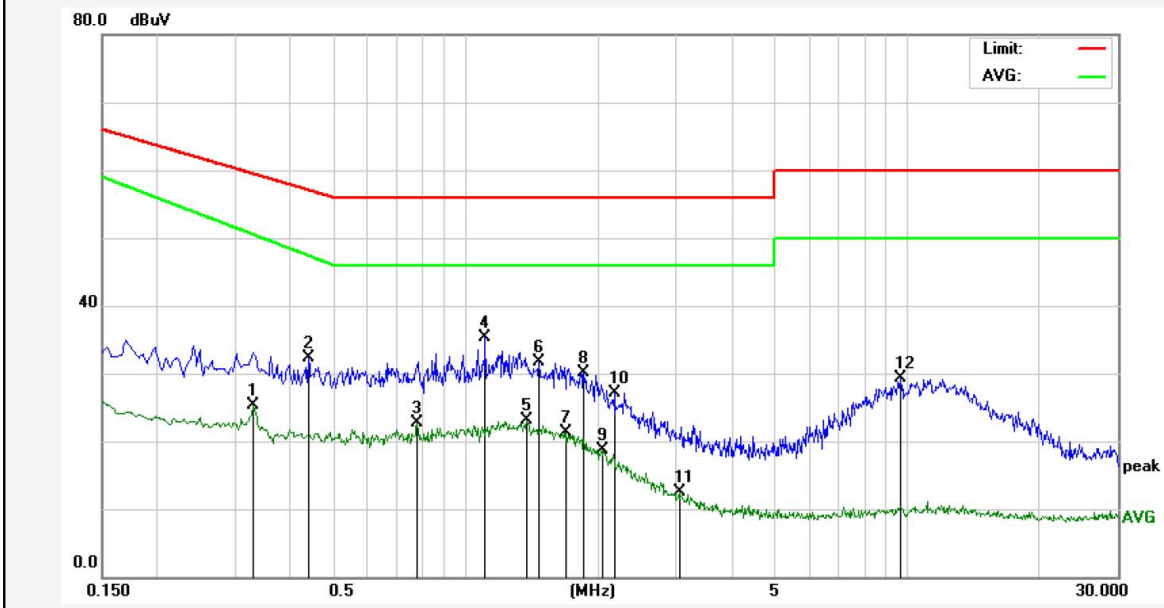
2.4. Test Results

PASS

The test curves are shown in the following pages.

Power Line Conducted Test Data

Test Site: 1# Shielded Room
Test Specification: AC 230V, 50Hz
Comment: Live Line
Temp.: 28℃ Hum.: 51%

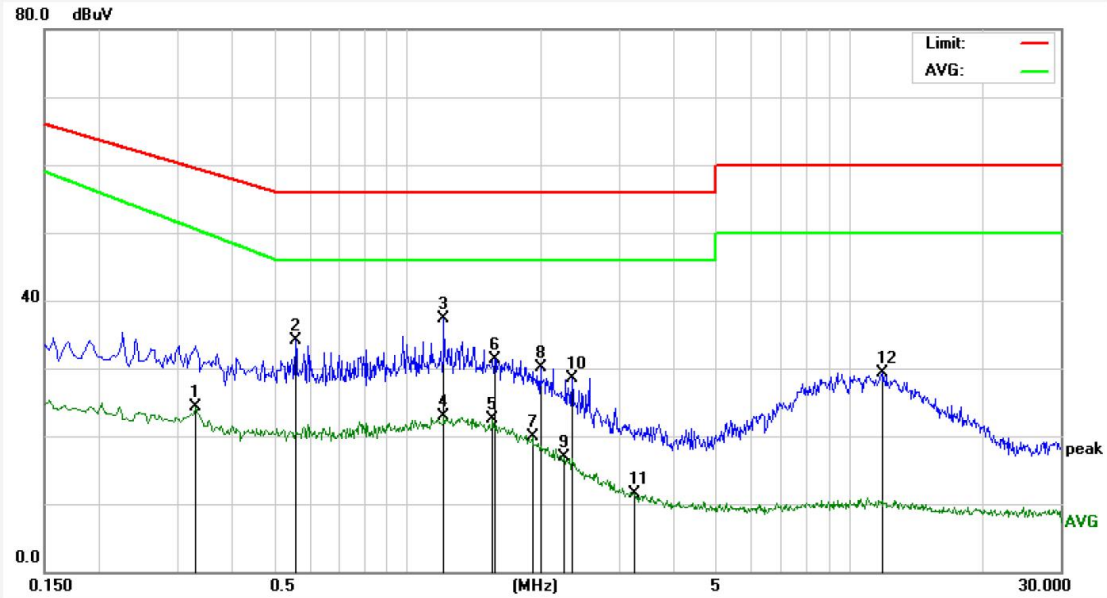


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.3300	15.53	9.83	25.36	50.48	-25.12	AVG	
2	0.4420	22.46	9.83	32.29	57.02	-24.73	QP	
3	0.7780	12.74	9.87	22.61	46.00	-23.39	AVG	
4	1.1060	25.41	9.86	35.27	56.00	-20.73	QP	
5	1.3779	13.28	9.86	23.14	46.00	-22.86	AVG	
6	1.4700	21.77	9.86	31.63	56.00	-24.37	QP	
7	1.6900	11.52	9.85	21.37	46.00	-24.63	AVG	
8	1.8500	20.25	9.85	30.10	56.00	-25.90	QP	
9	2.0340	8.80	9.85	18.65	46.00	-27.35	AVG	
10	2.1780	17.31	9.85	27.16	56.00	-28.84	QP	
11	3.0460	2.62	9.85	12.47	46.00	-33.53	AVG	
12	9.6540	19.28	9.96	29.24	60.00	-30.76	QP	

Note: Result = Reading + Factor Over Limit = Result - Limit

Power Line Conducted Test Data

Test Site: 1# Shielded Room
Test Specification: AC 230V, 50Hz
Comment: Neutral Line
Temp.: 28℃ Hum.: 51%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.3300	14.46	9.83	24.29	50.48	-26.19	AVG	
2	0.5580	24.32	9.86	34.18	56.00	-21.82	QP	
3	1.2059	27.48	9.85	37.33	56.00	-18.67	QP	
4	1.2059	12.97	9.85	22.82	46.00	-23.18	AVG	
5	1.5580	12.74	9.85	22.59	46.00	-23.41	AVG	
6	1.5740	21.55	9.85	31.40	56.00	-24.60	QP	
7	1.9100	10.09	9.85	19.94	46.00	-26.06	AVG	
8	1.9940	20.17	9.85	30.02	56.00	-25.98	QP	
9	2.2500	6.96	9.85	16.81	46.00	-29.19	AVG	
10	2.3500	18.74	9.85	28.59	56.00	-27.41	QP	
11	3.2659	1.73	9.85	11.58	46.00	-34.42	AVG	
12	11.8139	19.23	10.04	29.27	60.00	-30.73	QP	

Note: Result = Reading + Factor Over Limit = Result - Limit

3. Asymmetric Mode Conducted Emission at Telecom Port

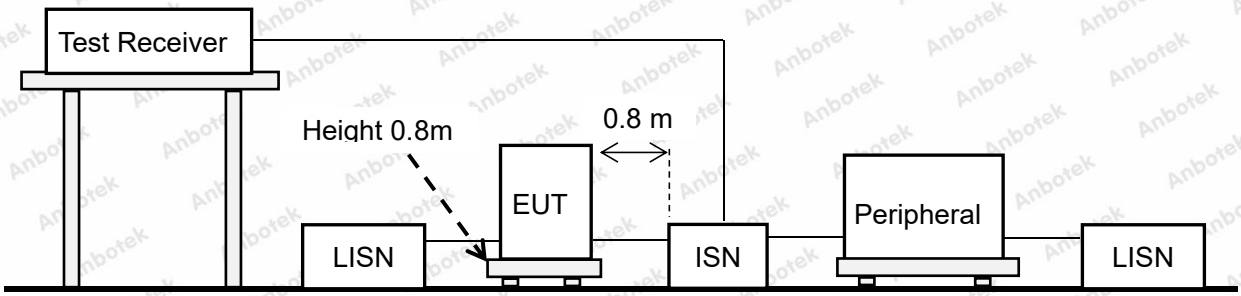
3.1. Test Standard and Limit

Test Standard	EN IEC 55014-1

Limits for asymmetric mode conducted emissions

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	84.0 ~ 74.0 *	74.0 ~ 64.0 *
0.50 ~ 30.00	74.0	64.0
Remark: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

3.2. Test Setup



3.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane, and the back of the EUT is 0.4 m away from the vertical ground reference plane, and at least 0.8 m from any other metal surface or ground plane. The floor-standing EUT is placed on an insulating support 0.8 m above the horizontal ground reference plane, at least 0.8 m away from other metal objects.

Connect EUT to the power mains through an LISN. Where the mains cable supplied by the manufacturer is longer than 1 m, the excess should be folded at the center into a bundle no longer than 0.4 m, so that its length is shortened to 1 m. All the peripherals are connecting to the other LISN.

The EUT was connected to the peripheral equipment through the ISN and linked in normal condition.

Set the test-receiver to quasi peak detect function and average detect function, and to measure the asymmetric mode conducted emission values.

3.4. Test Results

Not applicable.

4. Magnetic field induced current

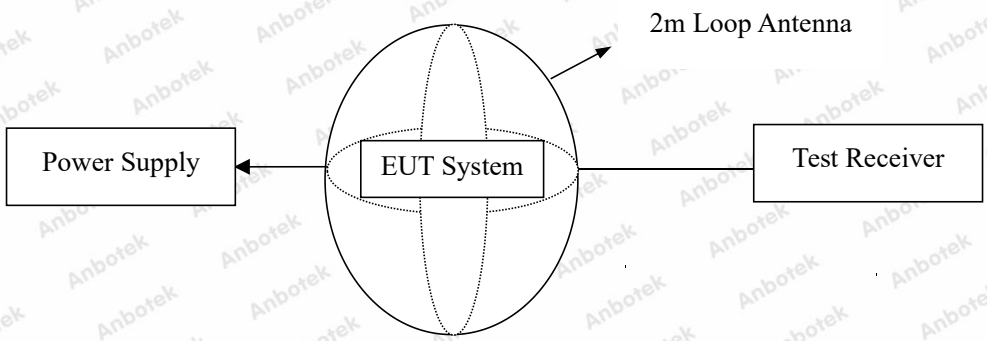
4.1. Test Standard and Limit

Test Standard	EN IEC 55014-1

Limits for the magnetic field induced current

Frequency (MHz)	Limits (dBμA)	
	Quasi-peak Level(Horizontal)	Quasi-peak Level(Vertical)
0.009 ~ 0.070	88	106
0.070 ~ 0.150	88~ 58 *	106~ 76 *
0.150~30.000	58~ 22 *	76~ 40 *
Remark: The limit decreases linearly with the logarithm of the frequency in the range 0.070MHz to 30.000MHz.		

4.2. Test Setup



4.3. Test Procedure

Place the test sample in the center of the three loop antenna so that each edge point of the test sample is more than 20cm away from the inner edge of the antenna. If this requirement cannot be met, please use the radiation method for testing.

Connect the tested equipment to the corresponding power supply, and connect all auxiliary equipment to the tested equipment.

4.4. Test Results

Not applicable.

5. Disturbance Power(30MHz-300MHz)

5.1. Test Standard and Limit

Test Standard	EN IEC 55014-1

☐ **Disturbance power limits (General)**

Frequency (MHz)	Limits (dBpW)	
	Quasi-peak Level	Average Level
30 ~ 300	45~55	35~45
Remark: (1) Increasing linearly with the frequency. (2)P=rated power of the motor only.		

☐ **Disturbance power limits (P≤700W)**

Frequency (MHz)	Limits (dBpW)	
	Quasi-peak Level	Average Level
30 ~ 300	45~55	35~45
Remark: (1) Increasing linearly with the frequency. (2)P=rated power of the motor only.		

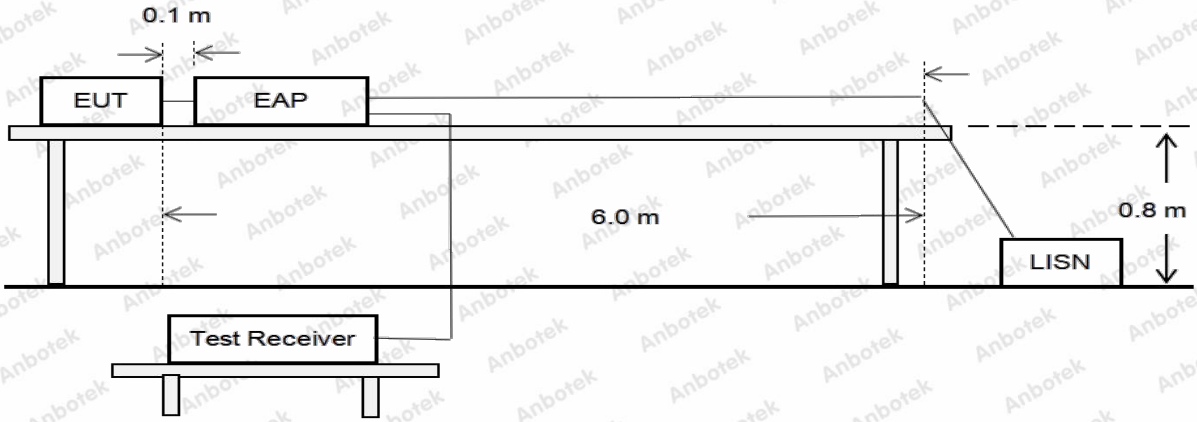
☐ **Disturbance power limits (700W＜P≤1000W)**

Frequency (MHz)	Limits (dBpW)	
	Quasi-peak Level	Average Level
30 ~ 300	49~59	39~49
Remark: (1) Increasing linearly with the frequency. (2)P=rated power of the motor only.		

☐ **Disturbance power limits (P＞1000W)**

Frequency (MHz)	Limits (dBpW)	
	Quasi-peak Level	Average Level
30 ~ 300	55~65	45~55
Remark: (1) Increasing linearly with the frequency. (2)P=rated power of the motor only.		

5.2. Test Setup



5.3. Test Procedure

The tabletop EUT is placed on a non-conductive workbench 0.8 m above the horizontal ground reference plane. The back of the EUT is 0.4 m away from the vertical ground reference plane and at least 0.8 m away from any other metal surface or ground plane. The floor EUT is placed on an insulated support 0.1 m above the horizontal ground reference plate, at least 0.8 m away from other metal objects.

The cable to be tested shall be clamped with electromagnetic absorption pliers, and the sample shall be placed 10cm away from the electromagnetic absorption pliers. The length of the tested cable shall be more than 6m. If the length is less than 6m, it shall be extended.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest disturbance with respect to the limit was found by investigating disturbances at a number of significant frequencies. The probable frequency of maximum disturbance had been found and that the associated cable and EUT configuration and mode of operation had been identified.

Set the test-receiver to quasi peak detect function and average detect function, and to measure the conducted emissions values.

5.4. Test Results

Not applicable.

6. Magnetic field strength (9KHz-30MHz)

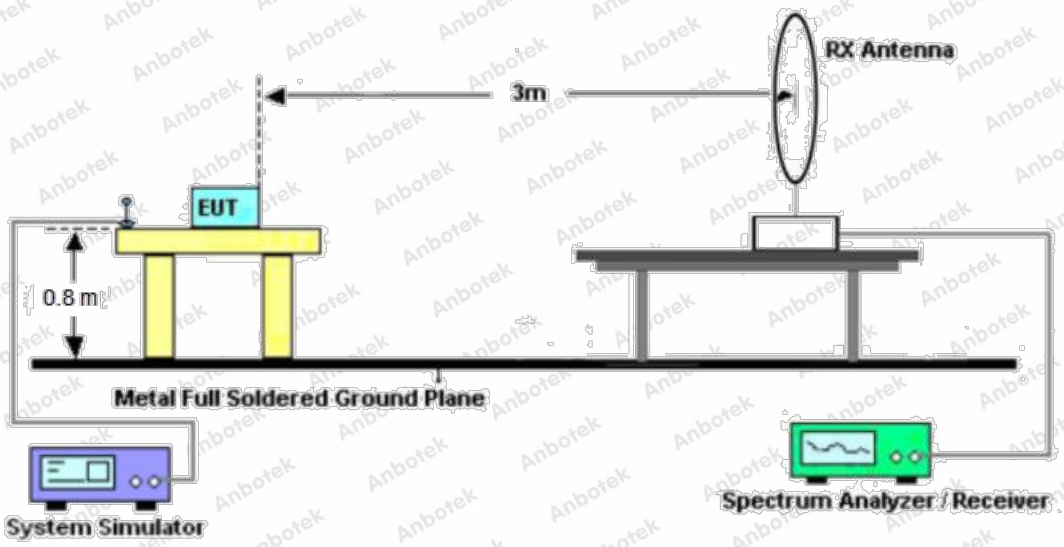
6.1. Test Standard and Limit

Test Standard	EN IEC 55014-1

Magnetic field st rength limits

Frequency (MHz)	Limits at 3m distance (dBμA/m)
	Quasi-peak Level
0.009 ~ 0.070	69
0.070 ~ 0.150	69~ 39 *
0.150~4.000	39~ 3 *
4.000~30.000	3
Remark: The limit decreases linearly with the logarithm of the frequency in the range 0.070MHz to 4.000MHz.	

6.2. Test Setup



6.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane. The floor-standing EUT is placed on an insulating support 0.8 m above the horizontal ground reference plane.

The EUT shall be vertically above the center of the turntable, the antenna shall be 3M away from the center of the turntable, and the lower edge of the antenna shall be more than 1m away from the horizontal reference ground plane.

The turntable can rotate 360 degree to determine the position of the maximum emission level.

In the test frequency range of 0.009mhz-0.15mhz, the analytical bandwidth of the receiver is set to 200Hz, and in the test frequency range of 0.15mhz-30mhz, the analytical bandwidth of the receiver is set to 9KHz.

6.4. Test Results

Not applicable.

7. Radiated Emission Test (Below 1 GHz)

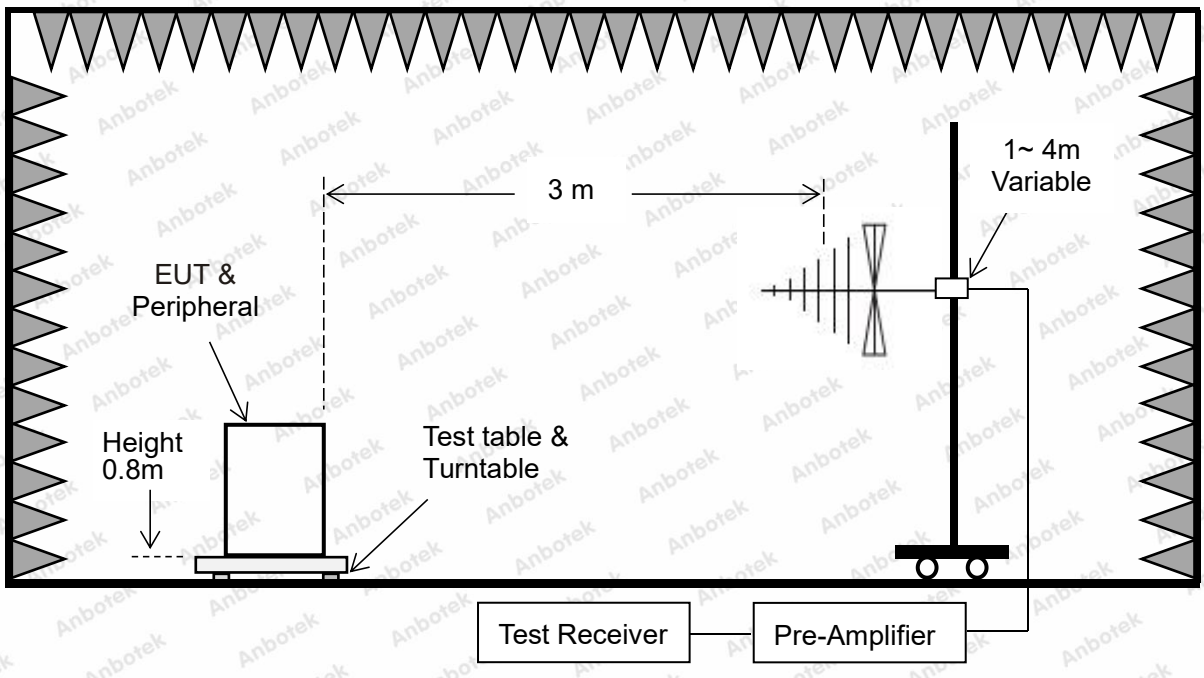
7.1. Test Standard and Limit

Test Standard	EN IEC 55014-1

Limit for radiated emissions at frequencies up to 1 GHz

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)
30 ~ 230	3	40
230 ~ 1000	3	47
Remark: The lower limit shall apply at the transition frequencies.		

7.2. Test Setup



7.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane. The floor-standing EUT is placed on an insulating support 0.8 m above the horizontal ground reference plane.

The EUT was set 3 m away from the receiving antenna that was mounted on a non-conductive mast. The antenna can move up and down between 1 to 4 m to find out the maximum emission level.

The turntable can rotate 360 degree to determine the position of the maximum emission level.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest emission with respect to the limit was found by investigating emissions at a number of significant frequencies. The probable frequency of maximum emission had been found and that the associated cable and EUT configuration and mode of operation had been identified.

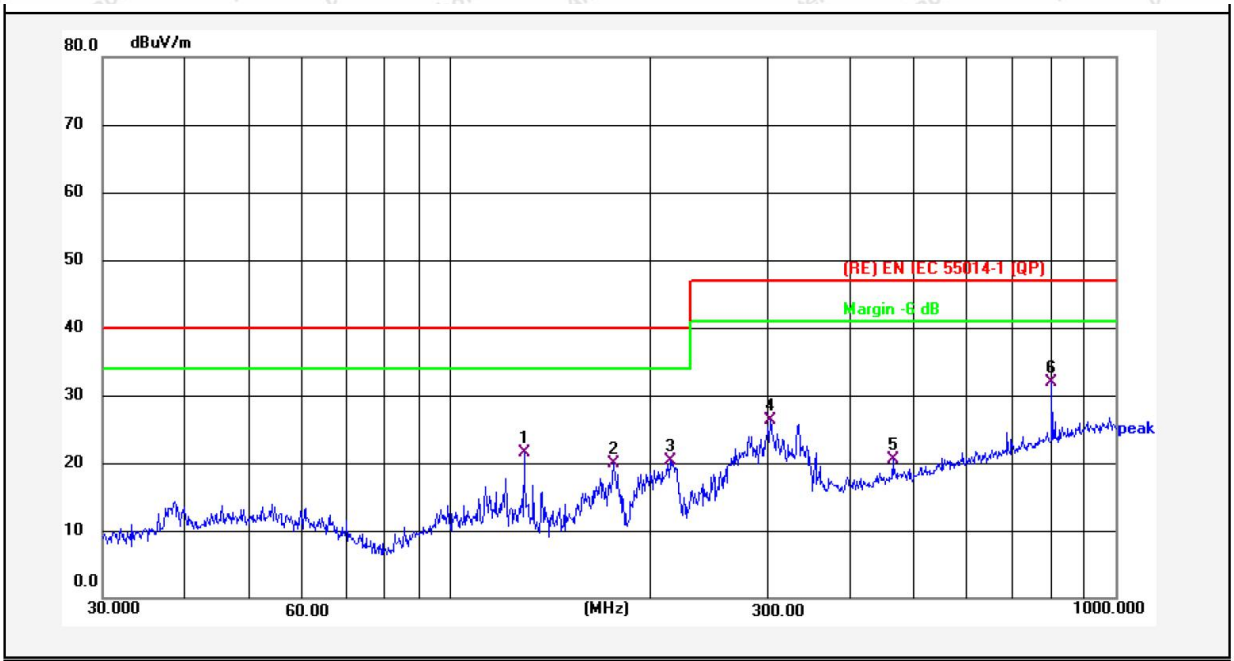
The bandwidth of the Receiver is set at 120 kHz.

7.4. Test Results

PASS

The test curves are shown in the following pages.

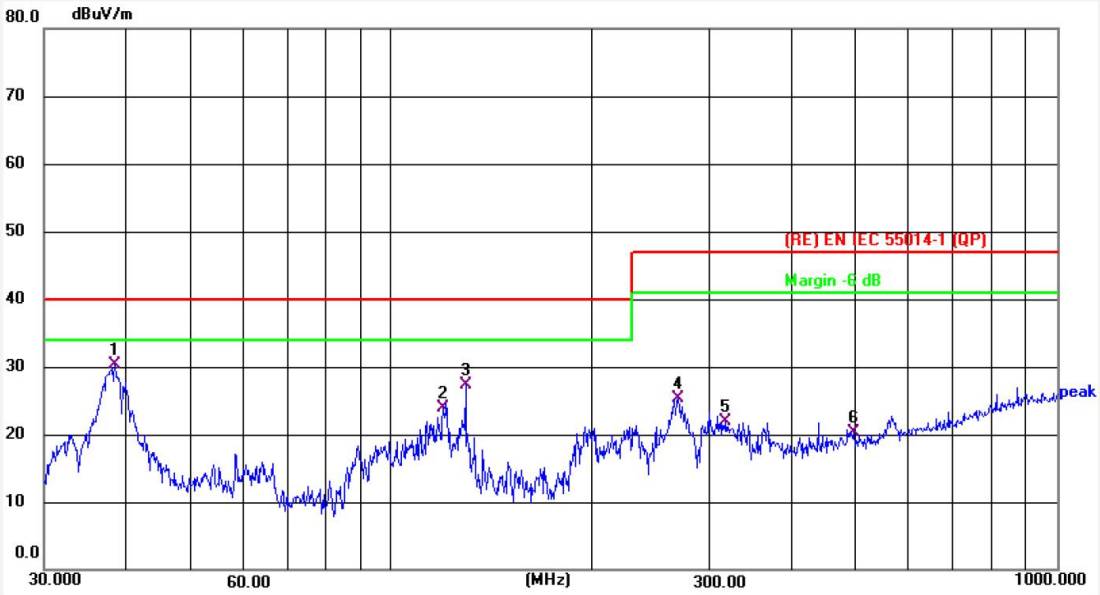
Test item:	Radiation Test	Polarization:	Horizontal
Standard:	(RE)EN IEC 55014-1	Power Source:	AC 230V, 50Hz
Frequency Range:	30MHz ~ 1000MHz	Temp.(℃)/Hum.(%RH):	22.5(℃)/48%RH
Distance:	3m		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	129.3543	46.32	-24.86	21.46	40.00	-18.54	QP			
2	176.0370	43.79	-23.86	19.93	40.00	-20.07	QP			
3	214.3263	42.04	-21.81	20.23	40.00	-19.77	QP			
4	303.4107	46.28	-20.05	26.23	47.00	-20.77	QP			
5	463.5631	36.58	-16.07	20.51	47.00	-26.49	QP			
6	803.5454	42.04	-10.13	31.91	47.00	-15.09	QP			

Note: Result= Reading + Factor Over Limit=Result-Limit

Test item:	Radiation Test	Polarization:	Vertical
Standard:	(RE)EN IEC 55014-1	Power Source:	AC 230V, 50Hz
Frequency Range:	30MHz ~ 1000MHz	Temp.(℃)/Hum.(%RH):	22.5(℃)/48%RH
Distance:	3m		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	38.4135	53.38	-23.05	30.33	40.00	-9.67	QP			
2	119.6457	47.50	-23.50	24.00	40.00	-16.00	QP			
3	129.2976	52.19	-24.85	27.34	40.00	-12.66	QP			
4	270.1379	46.20	-20.87	25.33	47.00	-21.67	QP			
5	318.3981	41.56	-19.69	21.87	47.00	-25.13	QP			
6	495.0657	36.05	-15.72	20.33	47.00	-26.67	QP			

Note: Result= Reading + Factor Over Limit=Result-Limit

8. Radiated Emission Test (Above 1GHz)

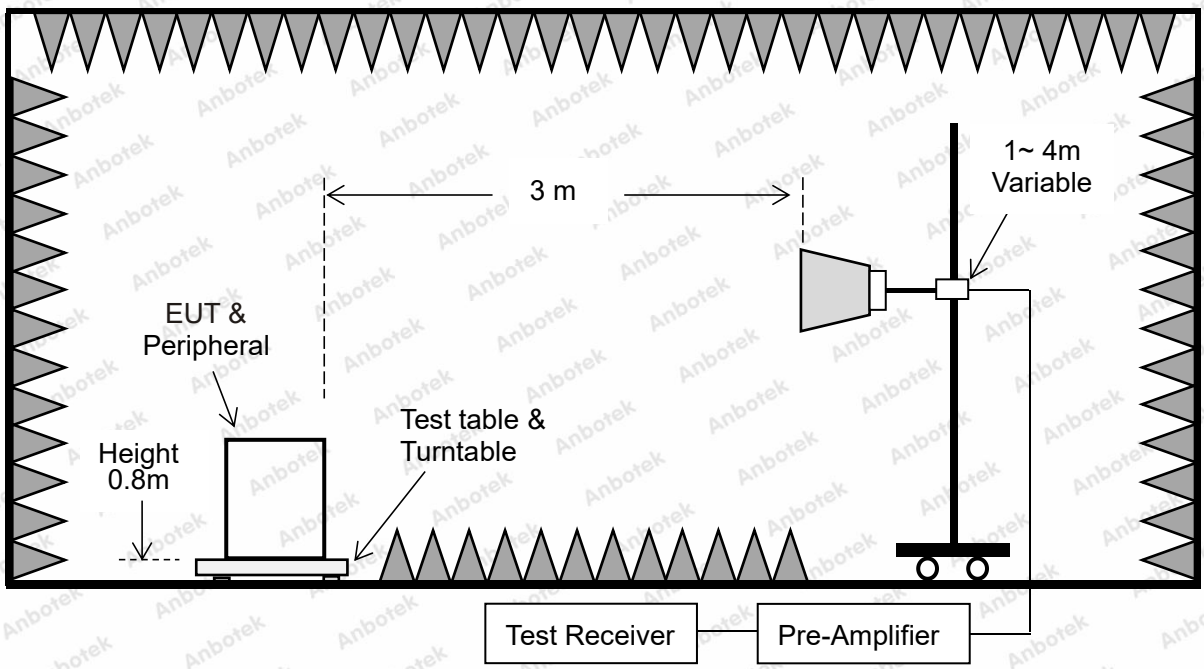
8.1. Test Standard and Limit

Test Standard	EN IEC 55014-1

Limit for radiated emissions at frequencies above 1 GHz

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)	
		Peak	Average
1000 ~ 3000	3	70	50
3000 ~ 6000	3	74	54
Remark: The lower limit shall apply at the transition frequencies.			

8.2. Test Setup



8.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane. The floor-standing EUT is placed on an insulating support 0.8 m above the horizontal ground reference plane.

The EUT was set 3 m away from the receiving antenna that was mounted on a non-conductive mast. The antenna can move up and down between 1 to 4 m to find out the maximum emission level.

The turntable can rotate 360 degree to determine the position of the maximum emission level.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest emission with respect to the limit was found by investigating emissions at a number of significant frequencies. The probable frequency of maximum emission had been found and that the associated cable and EUT configuration and mode of operation had been identified.

The test receiver is set to peak and average detects function.

The bandwidth of the test receiver is set at 1MHz.

8.4. Test Results

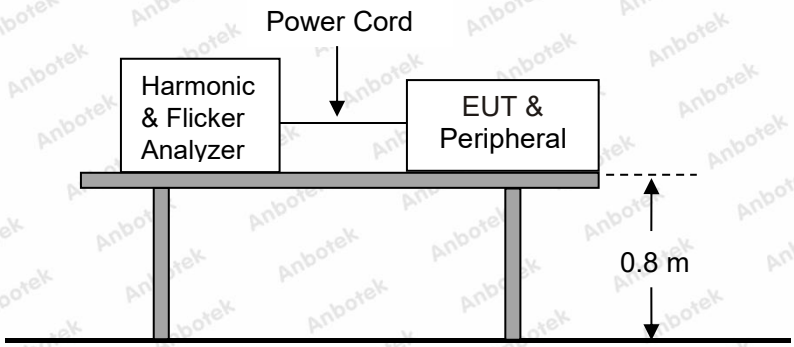
Not applicable.

9. Harmonic Current Test

9.1. Test Standard

Test Standard:	EN IEC 61000-3-2

9.2. Test Setup



9.3. Test Procedure

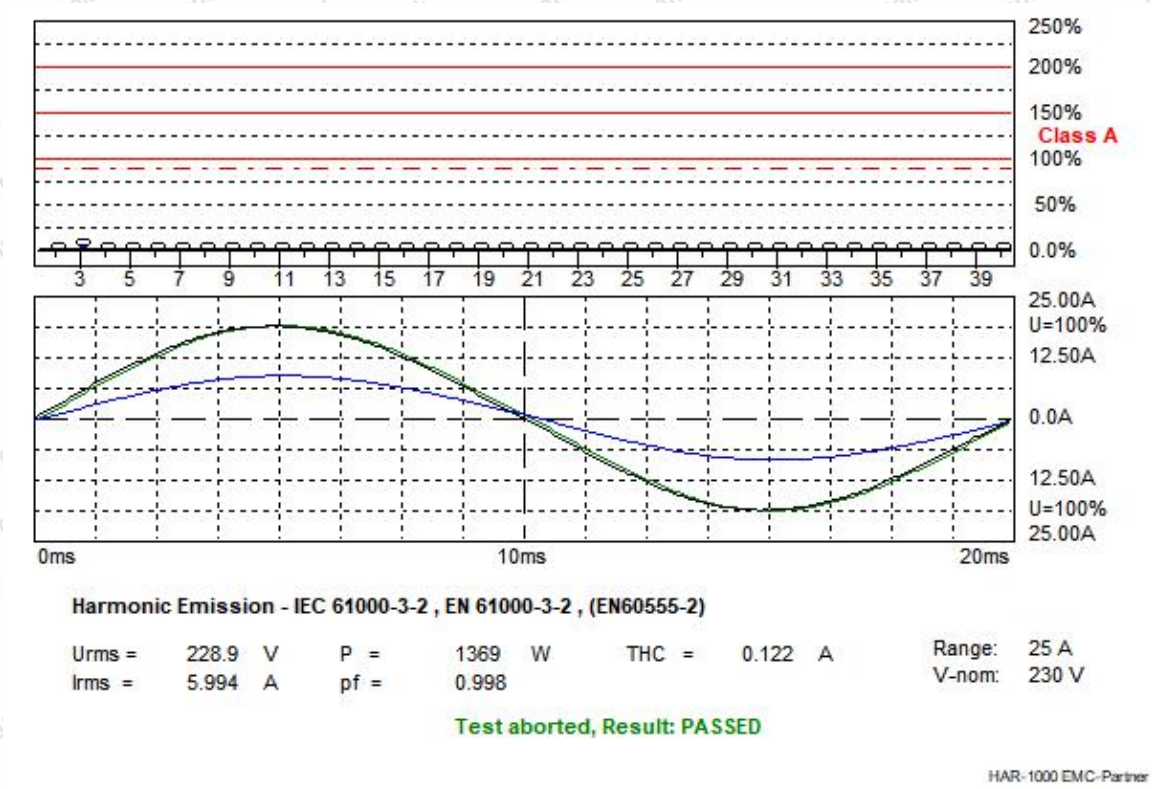
The table-top EUT is placed on the top of a wooden table 0.8 m above the ground (0.8 m for the floor-standing EUT) and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the necessary for the EUT to be exercised.

9.4. Test Results

PASS

The test curves are shown in the following pages.

Harmonic Current Test Result Summary (Run time)



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2)

Urms =	228.9	V	P =	1369	W	THC =	0.122	A	Range: 25 A
Irms =	5.994	A	pf =	0.998					V-nom: 230 V

Test aborted, Result: PASSED

HAR-1000 EMC-Partner

Full Bar : Actual Values
Empty Bar : Maximum Values
Blue : Current , Green : Voltage , Red : Failed

Harmonic Current Test Result Summary (Run time)

Urms =	228.9V	Freq =	50.000	Range:	25 A
Irms =	5.994A	Ipk =	8.679A	cf =	1.448
P =	1369W	S =	1372VA	pf =	0.998
THDi =	2.10 %	THDu =	2.40 %	Class A	

Test - Time : 3min (100 %)

Test aborted, Result: PASSED

Order	Freq. Status	Iavg	Iavg%L	Irms	Irms%	Irms%L	Imax	Imax%L	Limit
	[Hz]	[A]	[%]	[A]	[%]	[%]	[A]	[%]	[A]
1	50	5.6766		5.9845	99.847		5.9845		
2	100	0.0000	0.0000	0.0076	0.1273	0.7064	0.0092	0.8477	1.0800
3	150	0.1225	5.3253	0.1190	1.9857	5.1747	0.1297	5.6391	2.3000
4	200	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	0.3549	0.4300
5	250	0.0000	0.0000	0.0137	0.2291	1.2046	0.0214	1.8739	1.1400
6	300	0.0000	0.0000	0.0076	0.1273	2.5431	0.0076	2.5431	0.3000
7	350	0.0000	0.0000	0.0153	0.2546	1.9817	0.0137	1.7835	0.7700
8	400	0.0000	0.0000	0.0015	0.0255	0.6634	0.0031	1.3269	0.2300
9	450	0.0000	0.0000	0.0137	0.2291	3.4332	0.0168	4.1962	0.4000
10	500	0.0000	0.0000	0.0015	0.0255	0.8293	0.0031	1.6586	0.1840
11	550	0.0000	0.0000	0.0092	0.1527	2.7743	0.0092	2.7743	0.3300
12	600	0.0000	0.0000	0.0015	0.0255	0.9951	0.0031	1.9903	0.1533
13	650	0.0000	0.0000	0.0031	0.0509	1.4532	0.0046	2.1798	0.2100
14	700	0.0000	0.0000	0.0015	0.0255	1.1610	0.0031	2.3220	0.1314
15	750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.0173	0.1500
16	800	0.0000	0.0000	0.0015	0.0255	1.3269	0.0015	1.3269	0.1150
17	850	0.0000	0.0000	0.0015	0.0255	1.1529	0.0031	2.3058	0.1324
18	900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.4927	0.1022
19	950	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.2885	0.1184
20	1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.6586	0.0920
21	1050	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.4242	0.1071
22	1100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.8244	0.0836
23	1150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.5598	0.0978
24	1200	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.9903	0.0767
25	1250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.6954	0.0900
26	1300	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	2.1561	0.0708
27	1350	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.8311	0.0833
28	1400	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	2.3220	0.0657
29	1450	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	1.9667	0.0776
30	1500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0015	2.4878	0.0613
31	1550	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0726
32	1600	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0575
33	1650	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0682
34	1700	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0541
35	1750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0643
36	1800	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0511
37	1850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0608
38	1900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0484
39	1950	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0577
40	2000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0460

Address:1/F.,Building D,Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.
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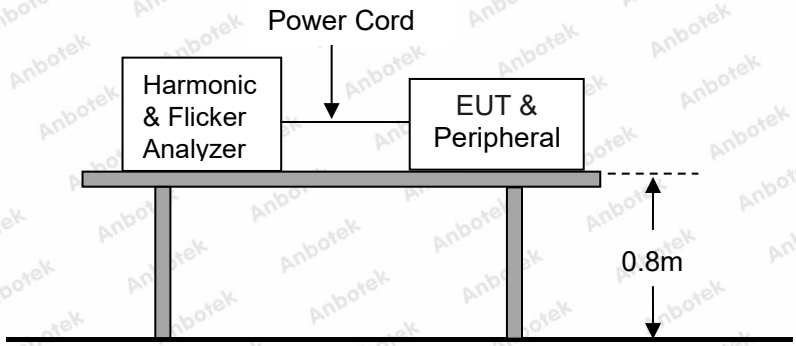
Hotline 400-003-0500
www.anbotek.com.cn

10. Voltage Fluctuations & Flicker Test

10.1. Test Standard

Test Standard:	EN 61000-3-3

10.2. Test Setup



10.3. Test Procedure

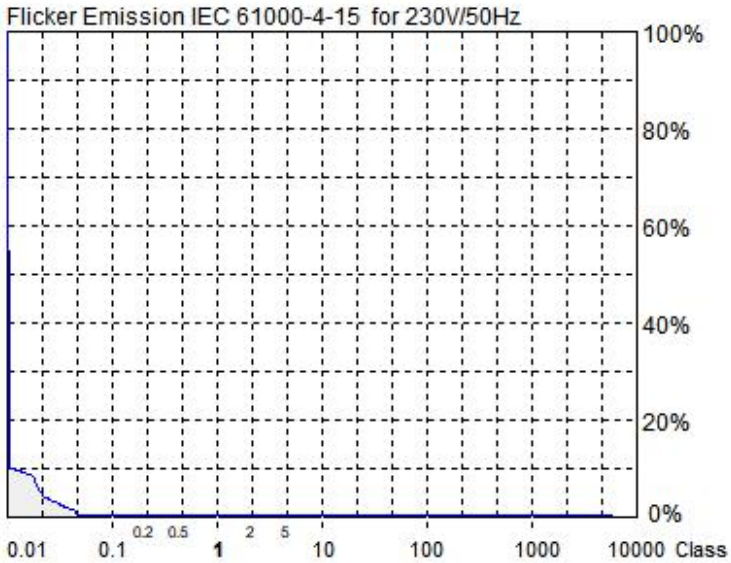
The table-top EUT is placed on the top of a wooden table 0.8 m above the ground (0.8 m for the floor-standing EUT) and operated to produce the most unfavorable sequence of voltage changes under normal conditions during the flicker measurement. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.

10.4. Test Results

PASS

The test curves are shown in the following pages.

Flicker Test Summary (Run time)



Actual Flicker (Fli):	**0.02**
Short-term Flicker (Pst):	**0.10**
Limit (Pst):	1.00
Long-term Flicker (Plt):	**0.00**
Limit (Plt):	0.65
Maximum Relative Volt. Change (dmax):	**0.01%**
Limit (dmax):	4.00%
Relative Steady-state Voltage Change (dc):	**0.08%**
Limit (dc):	3.30%
Tmax 3.30% (dt):	**0.00ms**
Limit (dt>Lim):	500ms

Flicker Emission - IEC 61000-3-3 , EN 61000-3-3

Urms =	229.1	V	P =	1376	W
Irms =	6.006	A	pf =	1.000	

Range: 25 A
V-nom: 230 V

Test aborted, Result: PASSED

HAR-1000 EMC-Partner

Full Bar : Actual Values
Empty Bar : Maximum Values
Circles : Average Values
Blue : Current , Green : Voltage , Red : Failed

Urms =	**229.1V**	**Freq =**	**50.000**	**Range:**	**25 A**
Irms =	**6.006A**	**Ipk =**	**8.752A**	**cf =**	**1.457**
P =	**1376W**	**S =**	**1376VA**	**pf =**	**1.000**

Test - Time : 10 x 1min = 10min (100 %)

LIN (Line Impedance Network) : No LIN

Limits :	**Plt :**	**0.65**	**Pst :**	**1.00**	
		dmax :	**4.00 %**	**dc :**	**3.30 %**
		dtLim:	**3.30 %**	**dt>Lim:**	**500ms**

Test aborted, Result: PASSED

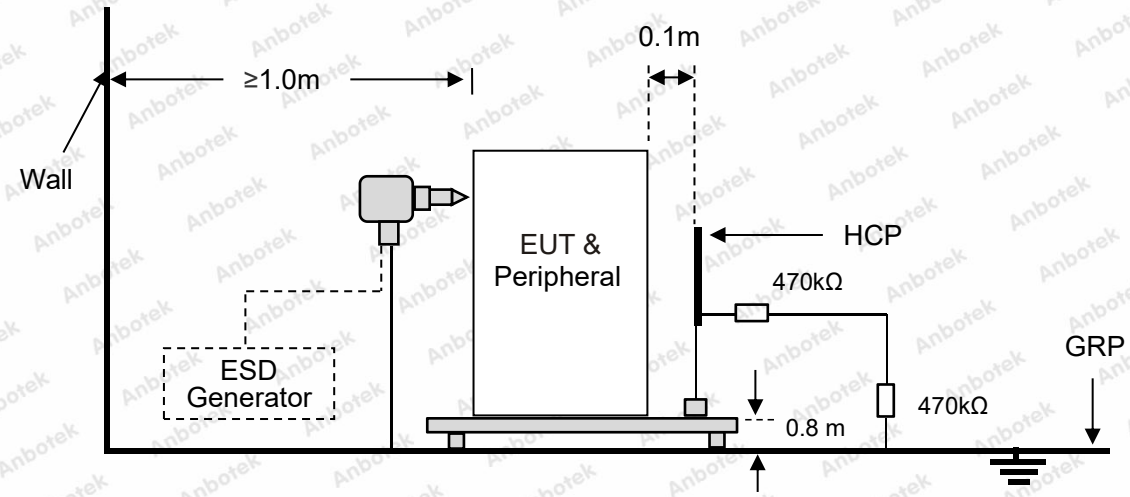
	dmax [%]	dc [%]	dt>Lim [ms]
1	0.000	0.000	0.000

11. Electrostatic Discharge Immunity Test

11.1. Test Specification

Test Standard :	EN IEC 55014-2	
Basic standard :	IEC 61000-4-2: 2008	
Performance criteria:	B	
Test Level :	± 8kV (Air Discharge)	± 4kV (Contact Discharge)

11.2. Test Setup



11.3. Test Procedure

a. In the case of air discharge testing, the climatic conditions shall be within the following ranges:
- Ambient temperature: 15°C to 35°C;
- Relative humidity: 30% to 60%;
- Atmospheric pressure: 86 kPa (860 mbar) to 106 kPa (1060 mbar)

b. In the case of contact discharges, the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

c. In the case of painted surface covering a conducting substrate, the following procedure shall be adopted: - If the coating is not declared to be an insulating coating by the equipment manufacturer, then the pointed tip of the generator shall penetrate the coating so as to make contact with the conducting substrate. - Coating declared as insulating by the manufacturer shall only be submitted to the air discharge. - The contact discharge test shall not be applied to such surfaces.

d. In the case of air discharges, the round discharge tip of the discharge electrode shall be approached as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator (discharge electrode) shall be removed from the EUT. The generator is then retriggered for a new single discharge. This procedure shall be repeated until the discharges are completed. In the case of an air discharge test, the discharge switch, which is used for contact discharge, shall be closed.

e. The test voltage shall be increased from the minimum to the selected test severity level, in order to determine any threshold of failure. The final test level should not exceed the product specification value in order to avoid damage to the equipment.

f. The test shall be performed with both air discharge and contact discharge. The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied. For the time interval between successive single discharges an initial value of 1 s is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.

g. Ensure that the applied charge on the EUT has been dis-charged before next ESD pulse.

11.4. Test Results

PASS

Please refer to the following page.

Electrostatic Discharge Test Results

Test Result:	☒ Pass ☐ Fail	Temperature:	23.3℃
Power Supply:	AC 230V, 50Hz	Humidity:	50%

Location		Kind A-Air Discharge C-Contact Discharge	Result
Air discharge: ±2.0 kV, ±4.0 kV, ±8.0 kV		Contact discharge: ±4.0 kV	
Slot	4 points	A	☒A ☐B ☐C
Light	4 points	A	☒A ☐B ☐C
Button	4 points	A	☒A ☐B ☐C
Screen	4 points	A	☒A ☐B ☐C
HCP	4 points	C	☒A ☐B ☐C
VCP of the front	4 points	C	☒A ☐B ☐C
VCP of the rear	4 points	C	☒A ☐B ☐C
VCP of the left	4 points	C	☒A ☐B ☐C
VCP of the right	4 points	C	☒A ☐B ☐C
Note: N/A			

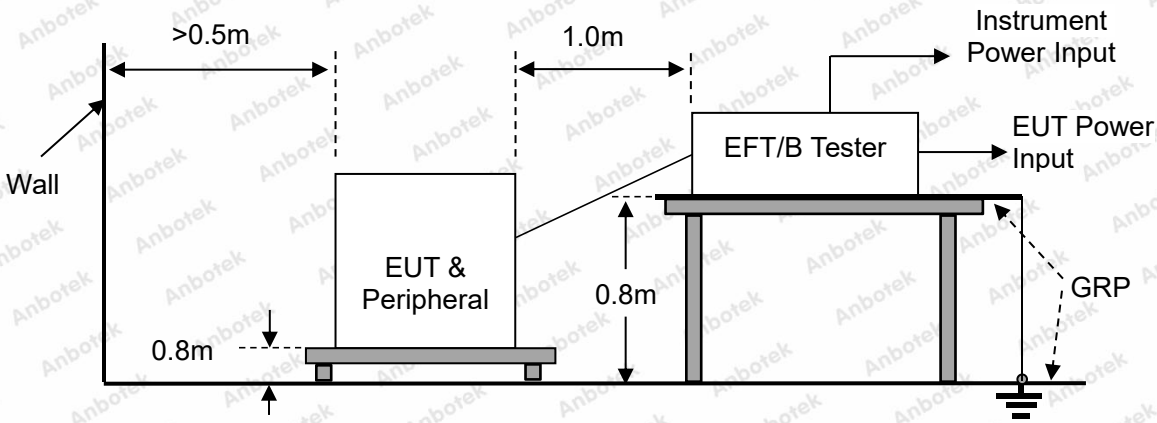
12. Electrical Fast Transient/Burst Immunity Test

12.1. Test Specification

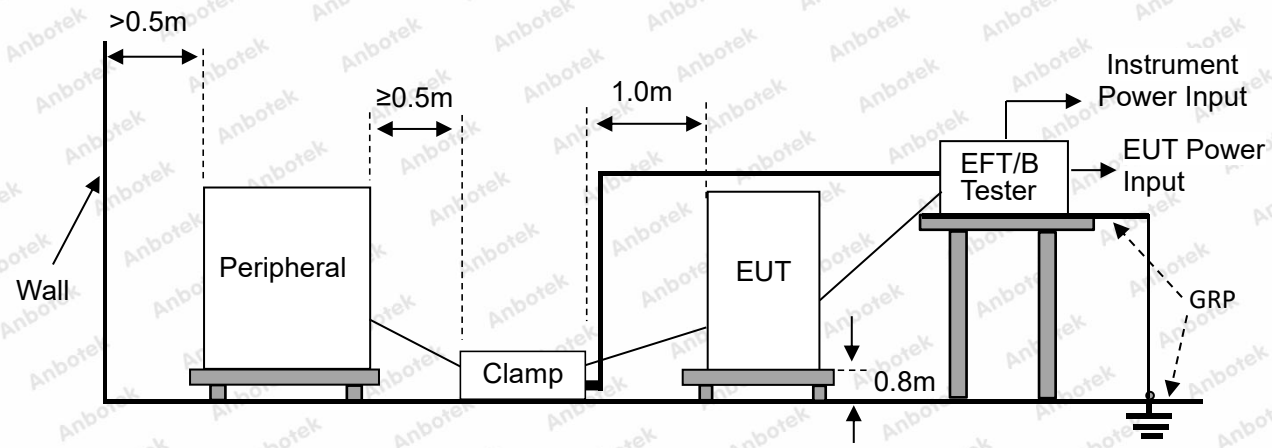
Test Standard:	EN IEC 55014-2
Basic standard:	IEC 61000-4-4: 2012
Performance criteria:	B
Test Level:	☒ 1 kV, AC mains power ports
	☐ 0.5 kV, DC network power ports
	☐ 0.5 kV, Signal ports,control ports,wired network ports

12.2. Test Setup

AC mains power ports and DC network power ports:



Analogue/digital data ports:



12.3. Test Procedure

The table-top EUT is placed on a table that is 0.8 m height, a ground reference plane is placed on the table, and uses 0.1 m insulation between the EUT and ground reference plane. The floor-standing EUT is placed on a ground reference plane and insulated from it by an insulating support with a thickness of 0.1 m. This reference ground plane shall project beyond the EUT by at least 0.8 m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5 m.

All cables to the EUT shall be placed on the insulation support 0.1 m above the ground reference plane. Cables not subject to electrical fast transients shall be routed as far as possible from the cable under test to minimize the coupling between the cables.

12.4. Test Results

PASS

Please refer to the following page.

Address:1/F.,Building D,Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.
Tel:(86) 0755-26066440 Fax:(86) 0755-26014772 Email:service@anbotek.com
Hotline
400-003-0500
www.anbotek.com.cn

Electrical Fast Transient/Burst Test Results

Test Result:	☒ Pass ☐ Fail	Temperature:	23.6℃
Power Supply:	AC 230V, 50Hz	Humidity:	50%

Ports	Polarity	Inject Time(s)	Test Voltage (kV)	Result
☒AC mains power ports	±	120 s	1.0 kV	☒A ☐B ☐C
☐DC network power ports	±	120 s	0.5 kV	☐A ☐B ☐C
☐Signal ports,control ports,wired network ports	±	120 s	0.5 kV	☐A ☐B ☐C

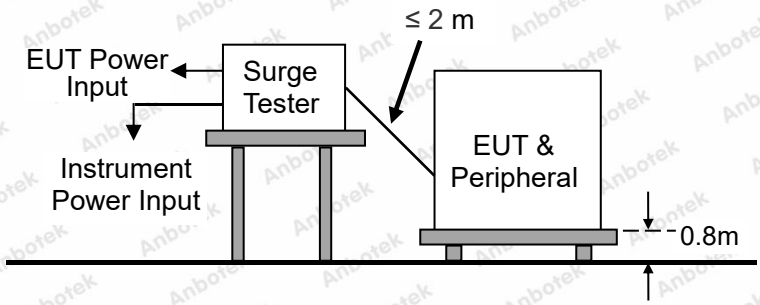
Note: N/A

13. Surge Immunity Test

13.1. Test Specification

Test Standard:		EN IEC 55014-2
Basic standard:		IEC 61000-4-5: 2014+A1:2017
Test level	AC power port:	☒ 1 kV, Line to Line, Criterion B
		☒ 2kV, Line to Ground, Criterion B
	DC power port:	☐ 0.5kV, Line to Ground, Criterion B
	Shielded port or Line:	☐ 0.5kV, Shield to Ground, Criterion B
	Unshielded port or Line:	☐ 0.5kV, Line to Ground, Criterion B
Number of surges		5 (for each combination of parameters)
Repetition rate		1 minute / time
Polarity:		Positive / Negative
Phase angle:		90°, 270°

13.2. Test Setup



13.3. Test Procedure

Table-top EUT is placed on a table of 0.8 m heights above a metal ground reference plane. Floor standing EUT is placed on a ground reference plane and insulated from it by an insulating support with a thickness of 0.8 m. The length of the power cord between the EUT and the coupling/decoupling network is not more than 2 m, and the length of the interconnection line between the EUT and the coupling/decoupling network is not more than 2 m. The tests were done at repetition rate 1 per minute.

13.4. Test Results

PASS

Please refer to the following page.

Surge Immunity Test Results

Test Result:	☒ Pass ☐ Fail	Temperature :	23.6℃
Power Supply :	AC 230V, 50Hz	Humidity :	50%

Location	Polarity	Phase Angle	Number of Pulse	Pulse Voltage (kV)	Result
☒ AC power port (Waveform: 1.2 us / 50 us (8 us / 20us))					
L-N	+	☐0° ☒90° ☐180° ☐270°	5	0.5, 1kV	☒A ☐B ☐C
	-	☐0° ☐90° ☐180° ☒270°	5	0.5, 1kV	☒A ☐B ☐C
L-GND	+	☐0° ☒90° ☐180° ☐270°	5	0.5, 1, 2kV	☒A ☐B ☐C
	-	☐0° ☐90° ☐180° ☒270°	5	0.5, 1, 2kV	☒A ☐B ☐C
N-GND	+	☐0° ☒90° ☐180° ☐270°	5	0.5, 1, 2kV	☒A ☐B ☐C
	-	☐0° ☐90° ☐180° ☒270°	5	0.5, 1, 2kV	☒A ☐B ☐C
☐ DC network power ports (Waveform: 1.2 us / 50 us (8 us / 20us))					
Line to ground	+	/	5	0.5kV	☐A ☐B ☐C
	-	/	5	0.5kV	☐A ☐B ☐C
☐ Unshielded ports or lines (Waveform: 1.2 us / 50 us (8 us / 20us))					
Lines to ground	+	/	5	0.5kV	☐A ☐B ☐C
	-	/	5	0.5kV	☐A ☐B ☐C
☐ Shielded ports or lines (Waveform: 1.2 us / 50 us (8 us / 20us))					
Shield to ground	+	/	5	0.5kV	☐A ☐B ☐C
	-	/	5	0.5kV	☐A ☐B ☐C
Note: N/A					

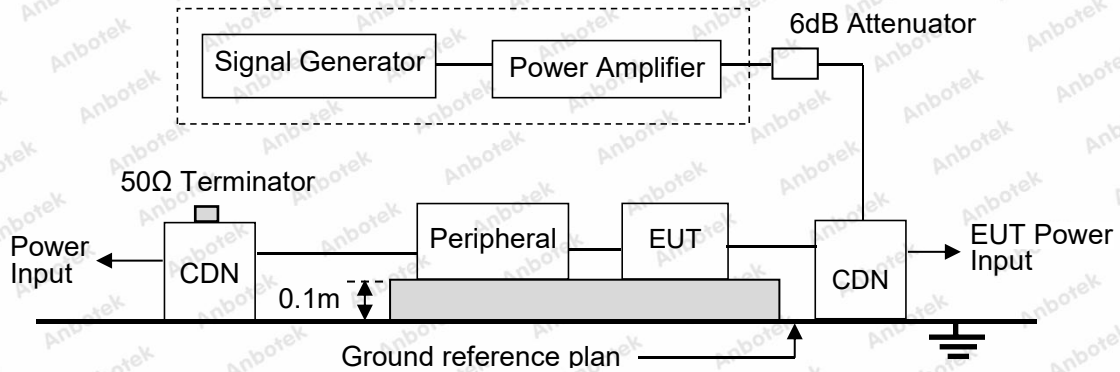
14. Injected Currents Susceptibility Test

14.1. Test Specification

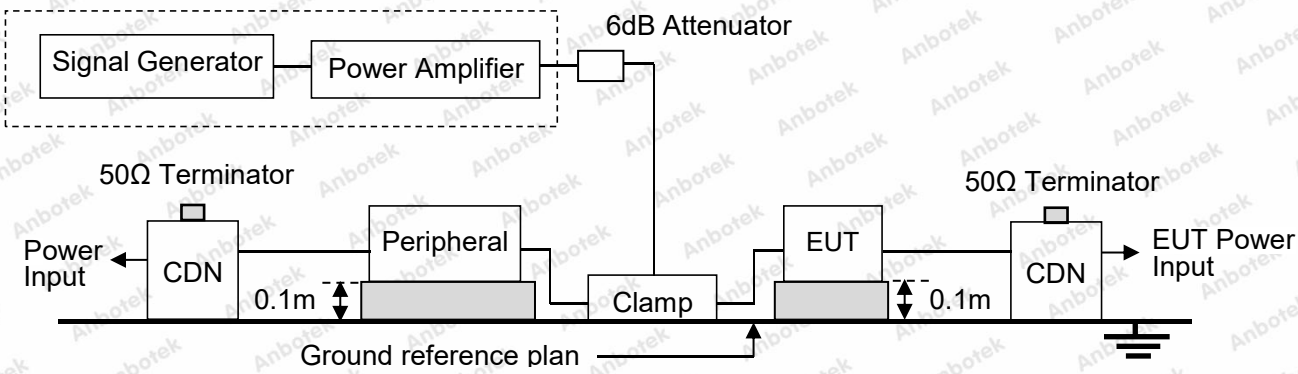
Test Standard:	EN IEC 55014-2
Basic standard:	IEC 61000-4-6: 2013
Performance criteria:	A
Frequency range:	0.15MHz-230MHz
Test level:	☒ AC power ports: 3V/m(rms, unmodulated)
	☐ DC Power Ports: 1V/m(rms, unmodulated)
	☐ Signal ports,control ports,wired network ports: 1V/m(rms, unmodulated)
Modulation:	AM 80%, 1kHz sine-wave
Frequency Step:	1% of fundamental

14.2. Test Setup

CDN injection:



Clamp injection:



14.3. Test Procedure

a. The EUT and peripheral are placed on an insulating support of 0.1 m height above a ground reference plan. The distance between EUT and CDN is 0.1 m to 0.3 m. All cables exiting the EUT are supported at a height of at least 30 mm above the ground reference plan.

b. The frequency range is swept from 150 kHz to 80MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. The frequency range is swept incrementally. The step size was 1% of fundamental from 0.15MHz to 80MHz.

c. The dwell time at each frequency isn't less than the time necessary for the EUT to be able to respond.

14.4. Test Results

PASS

Please refer to the following page.

Injected Currents Susceptibility Test Results

Test Result:	☒ Pass ☐ Fail	Temperature:	23.6℃
Power Supply:	AC 230V, 50Hz	Humidity:	50%

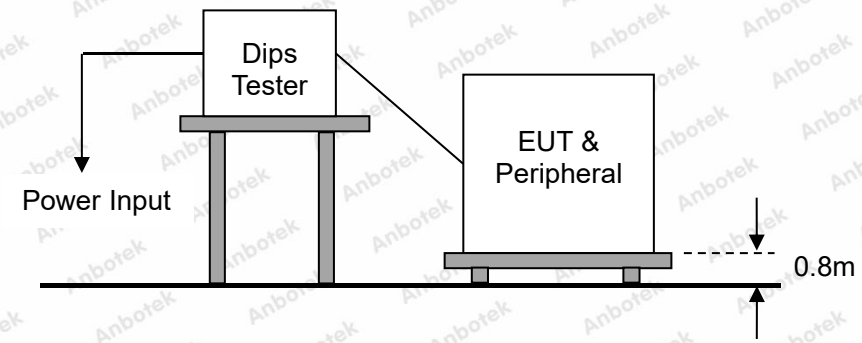
Frequency Range (MHz)	Injected Position	Strength (Un-modulated)	Result
0.15 ~ 230	☒AC Mains	3V	☒A ☐B ☐C
0.15 ~ 230	☐DC Line	1V	☐A ☐B ☐C
0.15 ~ 230	☐Signal Line	1V	☐A ☐B ☐C

15. Voltage Dips and Interruptions Immunity Test

15.1. Test Specification

Test Standard:	EN IEC 55014-2
Basic standard:	IEC 61000-4-11: 2020
Test level:	☒ 0%, 0.5 period, Criterion C
	☒ 40%, 10 periods for 50Hz, Criteria C
	☐ 40%, 12 periods for 60Hz, Criteria C
	☒ 70%, 25 periods for 50Hz, Criteria C
	☐ 70%, 30 periods for 60Hz, Criteria C

15.2. Test Setup



15.3. Test Procedure

a. Where the equipment has a rated voltage the following shall apply:
- If the voltage range does not exceed 20% of the lower voltage specified for the rated voltage range, a single voltage within that range may be specified as a basis for test level specification.
- In all other cases, the test procedure shall be applied for both the lowest and highest voltages declared in the voltage range.
b. Test Conditions
- Select operated voltage and frequency of EUT - Test of interval: 10 sec.
- Level and duration: Sequence of 3 dips/interrupts.
- Voltage rise (and fall) time: 1.5 μs.
c. Changes to occur at 0 degree crossover point of the voltage waveform.

15.4. Test Results

PASS

Please refer to the following page.

Voltage Dips and Interruptions Test Results

Test Result:	☒ Pass ☐ Fail	Temperature :	23.6℃
Power Supply :	AC 230V, 50Hz	Humidity :	50%
Test Level % UT	Voltage Dips & Short Interruptions % UT	Duration (in periods)	Result
0	100	0.5P	☒A ☐B ☐C
40	60	☒10P ☐12P	☒A ☐B ☐C
70	30	☒25P ☐30P	☒A ☐B ☐C
Note: N/A			

APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Power Line Conducted Emission Test

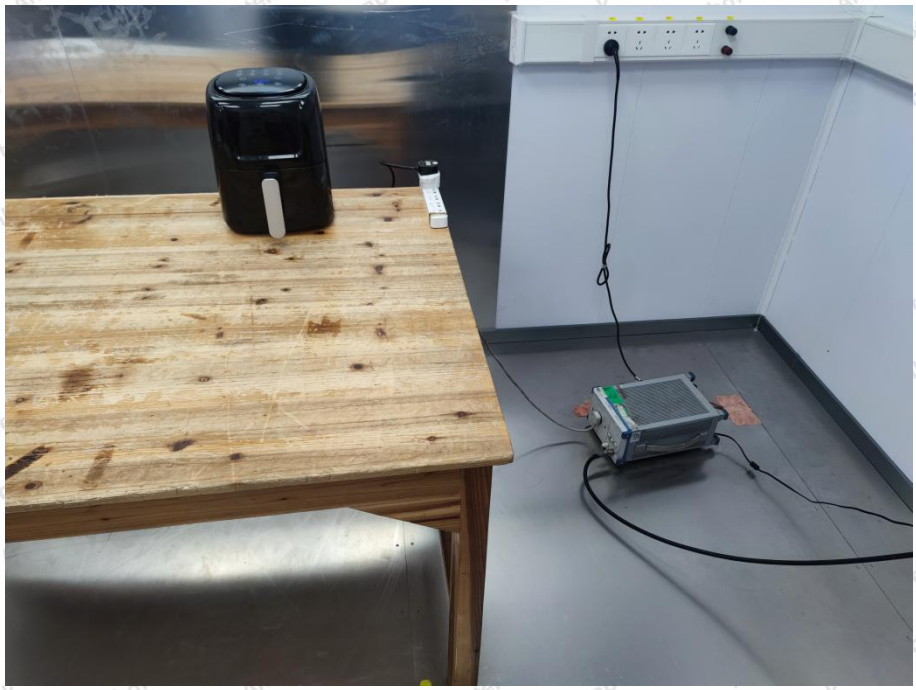


Photo of Radiated Emission Test (Below 1 GHz)

Photo of Harmonic Current And Flicker Test

Photo of Electrostatic Discharge Immunity Test

Photo of Electrical Fast Transient/Burst Immunity Test

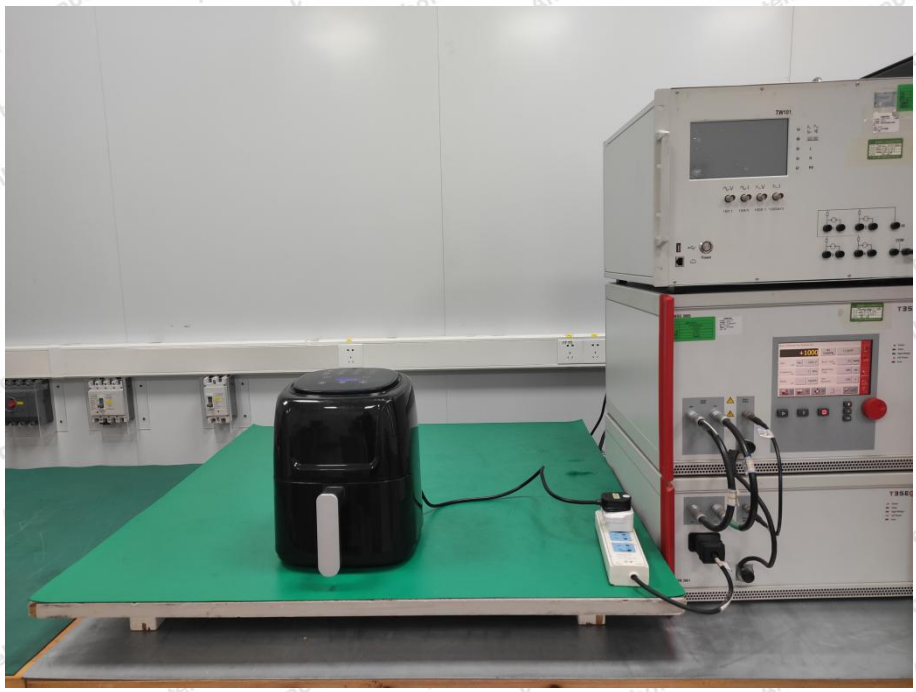


Photo of Surge Immunity Test

Photo of Injected Currents Susceptibility Test

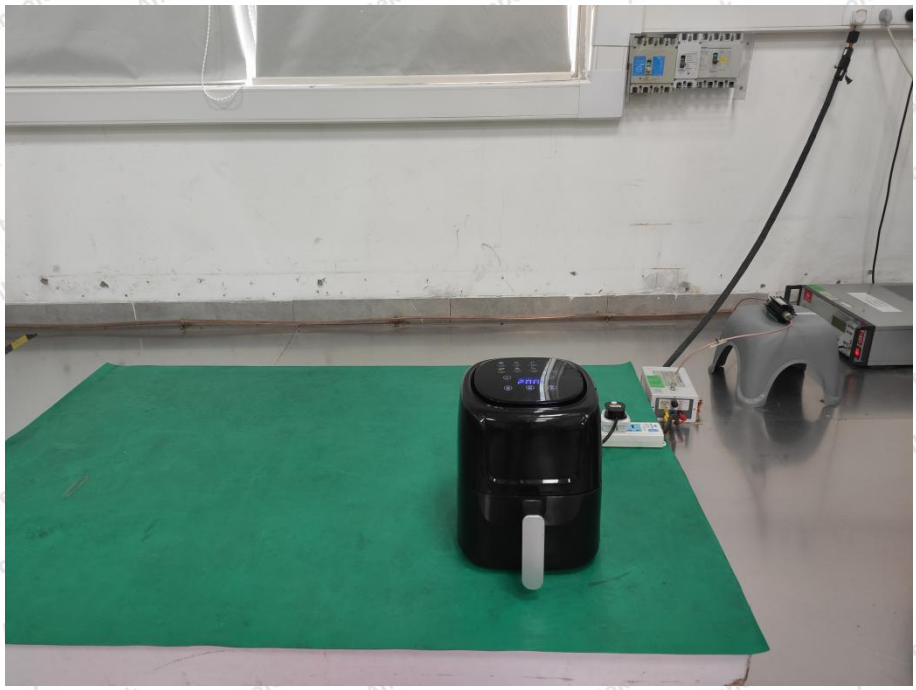
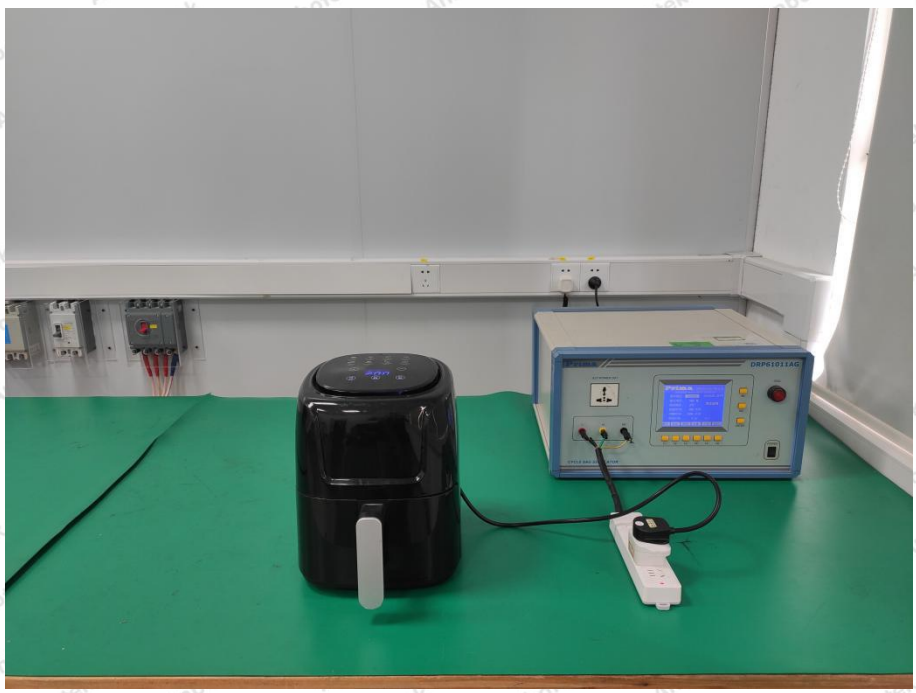


Photo of Voltage Dips and Interruptions Immunity Test



APPENDIX II -- Photo documentation

Photo 1 L-5061 Front	

Photo 2 L-5061 Rear	

Photo 3
L-5061
Top

Photo 4
L-5061
Bottom

Photo 5 L-5061 Side	

Photo 6 L-5061 Side	

Photo 7 L-5061 Overall	

Photo 8 L-5061 Part	

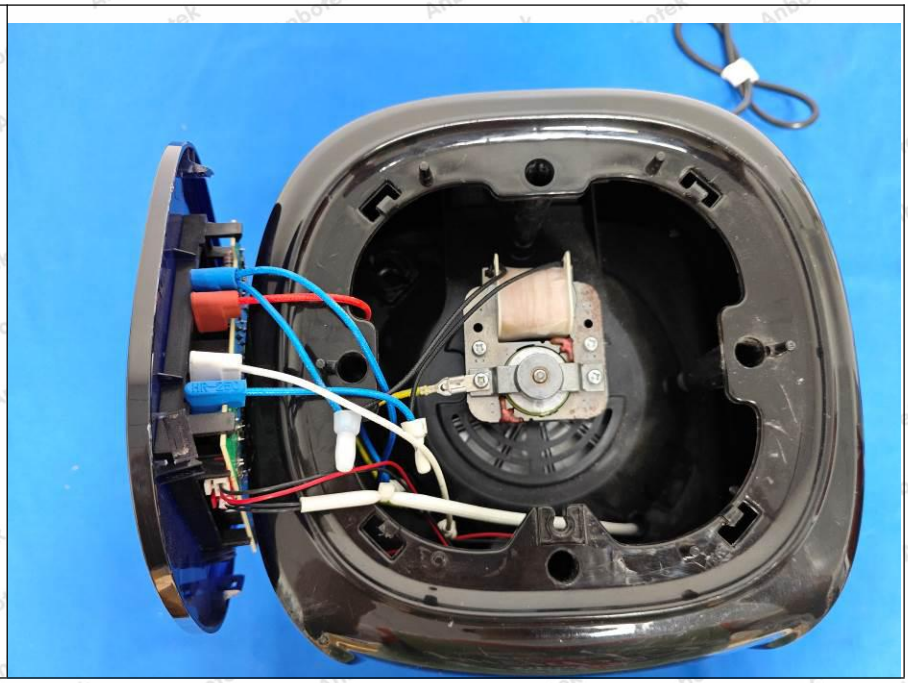
Photo 9 L-5061 Internal	

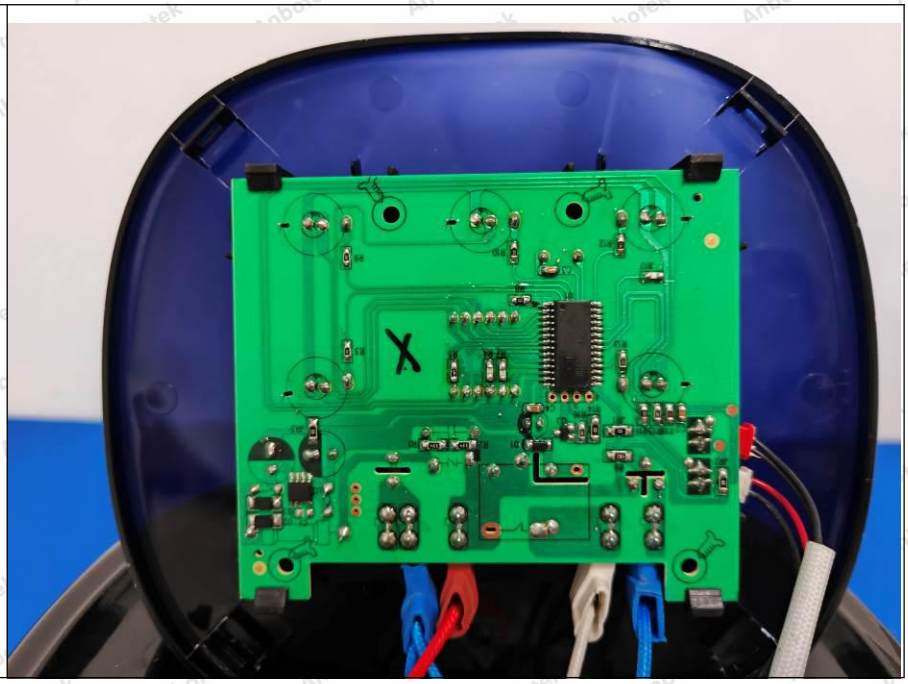
Photo 10 L-5061 Internal	

Photo 11 L-5061 Internal	

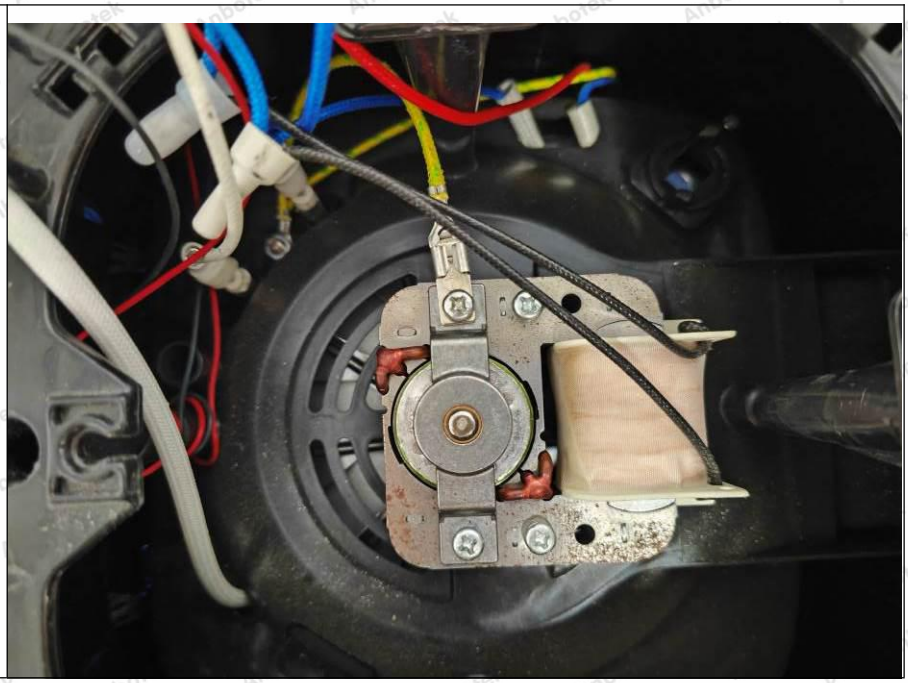
Photo 12 L-5061 Internal	

Photo 13 L-5061 Internal	

Photo 14 L-5061S	

Photo 15
L-5060

Photo 16
L-5060S

CE Label

1. The CE conformity marking must consist of the initials 'CE' taking the following form:

   If the CE marking is reduced or enlarged, the proportions given in the above graduated drawing must be respected.

2. The CE marking must have a height of at least 5 mm except where this is not possible on account of the nature of the apparatus.

3. The CE marking must be affixed to the product or to its data plate. Additionally it must be affixed to the packaging, if any, and to the accompanying documents.

4. The CE marking must be affixed visibly, legibly and indelibly.

   It must have the same height as the initials 'CE'.

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

CERTIFICATE

Anbotek
Product Safety

CERTIFICATE

Of Conformity
Low Voltage Directive 2014/35/EU

Registration No.: AT18250SC300381

Report No.: 18250SC30038101

Applicant	:	**Jiangmen Yueling Electric Appliance Co., Ltd** 5th Floor, Building 3, No. 4, Miaogangfang, Tangxi, Hetang Town, Pengjiang District, Jiangmen City, Guangdong, China		
Product Identification	:	**The air fryer**		
		Model No.	:	**L-5061S, L-5060, L-5060S, L-5061**
		Trade Mark	:	**N.A.**
		Rating	:	**AC220-240V~, 50-60Hz, 1350W**
Test Standards	:	**EN 60335-1:2012+A11:2014+A13:2017+A1:2019 +A14:2019+A2:2019+A15:2021** **EN 60335-2-9:2003+A1:2004+A2:2006+A12:2007 +A13:2010** **EN 62233:2008**		

The certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical report and documentation are at the applicant's disposal. This is to certify that the tested sample is in conformity with Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits. The certificate does not imply assessment of the series-production of the product. The applicant of the certificate is authorized to use this certificate in connection with EU declaration of conformity specified in Article 15 and Annex IV of the Directive.

Jun. 09, 2023
Date

Shenzhen Anbotek Compliance Laboratory Limited * Approved *
Anbotek Product Safety

Certified by

Jeff Zhu

CE **The CE Marking may only be used if all relevant and effective EU Directives are complied with** CE

Shenzhen Anbotek Compliance Laboratory Limited
1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128
Tel: (86)755-26066440 Fax: (86)755-26014772
Http://www.anbotek.com Email:service@anbotek.com

CERTIFICATE

Anbotek
Product Safety

CERTIFICATE

Of Conformity
EU Council Directive 2014/30/EU
Electromagnetic Compatibility

Registration No.: AT18250EC300504

Report No.: 18250EC30050401

Applicant: Jiangmen Yueling Electric Appliance Co., Ltd

5th Floor, Building 3, No. 4, Miaogangfang, Tangxi, Hetang Town, Pengjiang District, Jiangmen City，Guangdong,China

Product: The air fryer

Identification:

Test Model No.:	L-5061
Reference Model No.:	L-5060, L-5060S, L-5061S
Trade Mark:	N.A.
Rating:	220-240V~ 50/60Hz 1350W

Test Standards:
EN IEC 55014-1: 2021
EN IEC 61000-3-2: 2019+A1:2021
EN 61000-3-3: 2013+A1:2019+A2:2021
EN IEC 55014-2: 2021

The certificate of conformity is based on an evaluation of a sample of the above-mentioned product. Technical report and documentation are at the applicant's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex II of Council Directive 2014/30/EU, in its latest amended version, referred to EMC Directive. The certificate does not imply assessment of the production and does not permit the use of Lab's logo. The applicant of the certificate is authorized to use this certificate in connection with EU declaration of conformity to Article 15 of the Directive.

Shenzhen Anbotek Compliance Laboratory Limited * Approved *

Jun. 12, 2023
Date

Certified by
KingKong Jin

CE

The CE Marking may only be used if all relevant and effective EU Directives are complied with

CE

Shenzhen Anbotek Compliance Laboratory Limited
1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128
Tel: (86)755-26066440 Fax: (86)755-26014772
Http://www.anbotek.com Email: service@anbotek.com

Report No.: 18250SC30038101

Test Report

Applicant	:	**Jiangmen Yueling Electric Appliance Co., Ltd**
Address	:	**5th Floor, Building 3, No. 4, Miaogangfang, Tangxi, Hetang Town, Pengjiang District, Jiangmen City, Guangdong, China**
Product Name	:	**The air fryer**
Report Date	:	**Jun. 09, 2023**

Shenzhen Anbotek Compliance Laboratory Limited

TEST REPORT
IEC 60335-2-9
Safety of household and similar electrical appliances
Part 2: Particular requirements for grills, toasters and similar cooking appliances

Report Number.....:	18250SC30038101
Date of issue.....:	Jun. 09, 2023
Total number of pages	144 pages
Name of Testing Laboratory preparing the Report .....:	Shenzhen Anbotek Compliance Laboratory Limited
Applicant's name .....:	Jiangmen Yueling Electric Appliance Co., Ltd
Address.....:	5th Floor, Building 3, No. 4, Miaogangfang, Tangxi, Hetang Town, Pengjiang District, Jiangmen City, Guangdong, China
Test specification:	
Standard .....:	IEC 60335-2-9:2019 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2010, AMD1:2013, COR1:2014, AMD2:2016, COR1:2016
Test procedure .....:	Type test
Non-standard test method .....:	N/A

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing Testing Laboratory.

Tested by (name, function, signature):	**James Zhang** **Project Engineer**	James Zhang
Approved by (name, function, signature):	**Jeff Zhu** **Project Manager**	Jeff Zhu

Test item description .....:	The air fryer
Trade Mark.....:	N.A.
Manufacturer.....:	Jiangmen Yueling Electric Appliance Co., Ltd
Model/Type reference.....:	L-5061S, L-5060, L-5060S, L-5061
Ratings.....:	AC220-240V~, 50-60Hz, 1350W

List of Attachments

Attachment 1: EU difference

Attachment 2: Photo documentation

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
EN 60335-1:2012+A11:2014+A13:2017+A1:2019 +A14:2019+A2:2019+A15:2021 EN 60335-2-9:2003+A1:2004+A2:2006+A12:2007 +A13:2010 EN 62233:2008 The samples submitted were found to comply with above standards.	Shenzhen Anbotek Compliance Laboratory Limited 1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128

Copy of mark plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

The air fryer			
Mode	L-5061S	Rated Voltage	220V-240V~
Rated Power	1350W	Rated Frequency	50-60Hz
Jiangmen Yueling Electric Appliance Co., Ltd			

The air fryer			
Mode	L-5061	Rated Voltage	220V-240V~
Rated Power	1350W	Rated Frequency	50-60Hz
Jiangmen Yueling Electric Appliance Co., Ltd			

The air fryer			
Mode	L-5060	Rated Voltage	220V-240V~
Rated Power	1350W	Rated Frequency	50-60Hz
Jiangmen Yueling Electric Appliance Co., Ltd			

The air fryer			
Mode	L-5060S	Rated Voltage	220V-240V~
Rated Power	1350W	Rated Frequency	50-60Hz
Jiangmen Yueling Electric Appliance Co., Ltd			

Test item particulars .....:	
Classification of installation and use .....:	Portable appliances
Supply Connection.....:	Type Y
.....:	
Possible test case verdicts:	
- test case does not apply to the test object .....:	N (N.A.)
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing .....:	
Date of receipt of test item.....:	May. 25, 2023
Date (s) of performance of tests.....:	May. 25, 2023 to Jun. 05, 2023
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☐ comma / ☒ point is used as the decimal separator.**	
Name and address of factory (ies).....:	Jiangmen Yueling Electric Appliance Co., Ltd No.2, Lane 3, Miaogangfang, Tangxi, Zhongxing 1st Road, Hetang Town, Pengjiang District, Jiangmen City, Guangdong, China

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		--
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.	A.C.	P
5.2	See Note (IEC 60335-2-9)		--
5.3	If it is evident from the construction of the appliance that the test of one function will produce more favourable results than another, this function is not tested. (IEC 60335-2-9)		N
5.6	If two or more cooking functions can be performed simultaneously, they are tested at the same time. (IEC 60335-2-9)		N
5.101	Induction hotplates are operated as specified for motor-operated appliances. Other appliances are tested as specified for heating appliances, even if they incorporate motors (IEC 60335-2-9)		P
	In appliances that incorporate induction hotplates in addition to other heating elements, the induction hotplates are operated simultaneously and supplied separately (IEC 60335-2-9)		N
6	CLASSIFICATION		--
6.1	Protection against electric shock: Class 0, 0I, I, II, III .... :	Class I	P
6.2	Protection against harmful ingress of water		N
	Appliances intended for outdoor use shall be at least IPX4 (IEC 60335-2-9)		N
7	MARKING AND INSTRUCTIONS		--
7.1	Rated voltage or voltage range (V) .... :	220-240V	P
	Symbol for nature of supply, or .... :	~	P
	Rated frequency (Hz) .... :	50-60Hz	P
	Rated power input (W), or .... :	1350W	P
	Rated current (A) .... :		N
	Manufacturer's or responsible vendor's name, trademark or identification mark..... ..... :	Jiangmen Yueling Electric Appliance Co., Ltd	P
	Model or type reference .... :	See page 3	P
	Symbol IEC 60417-5172, for class II appliances		N
	IP number, other than IPX0..... ..... :		N
	Symbol IEC 60417-5180, for class III appliances, unless		N
	the appliance is operated by batteries only		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		N
	The rated power input or rated current of induction hotplates shall also be marked..... (IEC 60335-2-9)		N
	Appliances intended to be partially immersed in water for cleaning shall be marked with the maximum level of immersion and the substance of the following: Do not immerse beyond this level (IEC 60335-2-9)	Not for such use	N
	If cookers, portable ovens and rotary grills have accessible metal surfaces, other than working surfaces, that have a temperature rise exceeding 90 K during the test of Clause 11, they shall be marked with symbol IEC 60417-5041(2002-10), the rules of ISO 3864-1 applying except for the specified colours, or with the substance of the following: Hot surface ..... (IEC 60335-2-9)		P
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage		N
7.2	Warning for stationary appliances for multiple supply		N
	Warning placed in vicinity of terminal cover		N
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		P
	Different rated values marked with the values separated by an oblique stroke		N
7.4	Appliances adjustable for different rated voltages or rated frequencies, the voltage or the frequencies setting is clearly discernible		N
	Requirement met if frequent changes are not required and the rated voltage to which the appliance is to be adjusted is determined from a wiring diagram		N
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N
	the power input is related to the arithmetic mean value of the rated voltage range		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		P
	Symbol for class II appliances placed unlikely to be confused with other marking		N
	Units of physical quantities and their symbols according to international standardized system		P
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N
	correct mode of connection is obvious		N
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		--
	- marking of terminals exclusively for the neutral conductor (letter N)		N
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking of functional earthing terminals (symbol IEC 60417-5018)		N
	- marking not placed on removable parts		N
7.9	Marking or placing of switches which may cause a hazard		P
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means .... :	Figures and letters were used, see photo documentation for details	P
	This applies also to switches which are part of a control		P
	If figures are used, the off position indicated by the figure 0		N
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N
7.11	Indication for direction of adjustment of controls		P
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	The instructions state that:		--

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction		P
	- children being supervised not to play with the appliance		P
	For a part of class III construction supplied from a detachable power supply unit, the instructions state that the appliance is only to be used with the unit provided		N
	Instructions for class III appliances state that it must only be supplied at SELV, unless		N
	it is a battery-operated appliance, the battery being charged outside the appliance		N
	For appliances for altitudes exceeding 2000 m, the maximum altitude is stated..... ..... :	Not exceed 2000m	N
	The instructions for appliances incorporating a functional earth states that the appliance incorporates an earth connection for functional purposes only		N
	Appliance with inlet and intended to be immersed for cleaning, instruction sheet including in substance: .....(IEC 60335-2-9)		--
	- remove connector before cleaning		N
	- dry appliance inlet before re-use		N
	The instructions for use for appliances intended to be used with a connector incorporating a thermostat shall state that only the appropriate connector must be used (IEC 60335-2-9)		N
	Instructions for appliances for outdoor use (IEC 60335-2-9):		--
	-The appliance is suitable for outdoor use		N
	-The supply cord should be regularly examined for signs of damage, and if the cord is damages, the appliance must not be used		N
	-The appliance must be supplied through a residual current device (RDC) having a rated residual operating current not exceeding 30mA		N
	-The appliance is to be connected to a socket-outlet having an earthing contact (class I)		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If symbol IEC 60417-5041 (2002-10) is marked on appliances, its meaning shall be explained (IEC 60335-2-9)		P
	The instructions shall state that the appliances are not intended to be operated by means of an external timer or separate remote-control system (IEC 60335-2-9)		N
	Instructions for use		P
	For oven: The temperature of the door or the outer surface may be high when the appliance is operating .....(IEC 60335-2-9)		N
	For toaster: Bread may burn. Therefore toasters must not be used near or below curtains and other combustible materials. They must be watched ....(IEC 60335-2-9)		N
	For barbecue: WARNING: Charcoal or similar combustible fuels must not be used with this appliance. ..... (IEC 60335-2-9)		N
	For barbecue: Maximum quantity of water to be poured into the appliance.....(IEC 60335-2-9)		N
	If top surface of a hotplate is of glass-ceramic or similar material and protects live parts, warning : If the surface is cracked, switch off the appliance to avoid the possibility of electric shock (IEC 60335-2-9)		N
	For induction hotplates: Metallic objects such as knives, forks, spoons and lids not be placed on the hotplate since they can get hot ...(IEC 60335-2-9).		N
	For breadmakers: maximum quantities of flour and raising agent that may be used ....(IEC 60335-2-9)		N
	The instructions for candy floss appliances shall state the maximum quantities of sugar and other ingredients that may be used. .....(IEC 60335-2-9)		N
	The instructions shall include the substance of the following: (IEC 60335-2-9)		--
	This appliances is intended to be used in household and similar applications such as: -staff kitchen areas in shops, offices and others working environments; -farm houses; -by clients in hotels, motels and other residential type environments; -bed and breakfast type environments.		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Note 101: If the manufacturer wants to limit the use of the appliance to less than above, this must be clearly stated in the instructions. .(IEC 60335-2-9)		P
7.12.1	Sufficient details for installation supplied		P
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		N
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		N
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected		N
7.12.4	Instructions for built-in appliances:		N
	- dimensions of space		N
	- dimensions and position of supporting and fixing		N
	- minimum distances between parts and surrounding structure		N
	- minimum dimensions of ventilating openings and arrangement		N
	- connection to supply mains and interconnection of separate components		N
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N
	a switch complying with 24.3		N
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard		N
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
7.12.8	Instructions for appliances connected to the water mains:		N
	- max. inlet water pressure (Pa) .... :		N
	- min. inlet water pressure, if necessary (Pa)..... :		N
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N
7.13	Instructions and other texts in an official language	English	P
7.14	Marking clearly legible and durable, rubbing test as specified		P
	The height of the triangle used with symbol IEC 60417-5041(DB:2002-10) shall be at least ~~12~~ 20 mm (IEC 60335-2-9)		P
7.15	Markings on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		P
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
	The symbol IEC 60417-5018 placed next to the symbol IEC 60417-5172 or IEC 60417-5180		N
	The marking specified for hot surfaces shall be visible when the appliance is operated as in normal used including when actuating any switch, adjusting any control or opening a lid or door. It shall not be placed on a hot functional surface (IEC 60335-2-9)		N
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		--
8.1	Adequate protection against accidental contact with live parts		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
	For toasters having a crumb tray : use of test probe 41 of IEC 61032 : no contact through crumb tray with live parts that are disconnected by double pole switch using (IEC 60335-2-9)		N
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements		N
8.1.4	Accessible part not considered live if:		N
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V		N
	- safety extra-low d.c. voltage: not exceeding 42.4 V		N
	- or separated from live parts by protective impedance		N
	If protective impedance: d.c. current not exceeding 2 mA, and		N
	a.c. peak value not exceeding 0.7 mA		N
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 μF		N
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC		N
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		--
	- built-in appliances		N
	- fixed appliances		N
	- appliances delivered in separate units		N
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
9	STARTING OF MOTOR-OPERATED APPLIANCES		N
	Requirements and tests are specified in part 2 when necessary		N
10	POWER INPUT AND CURRENT		--
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1..... :	(see appended table)	P
	If the power input varies throughout the operating cycle and the maximum value of the power input exceeds, by a factor greater than two, the arithmetic mean value of the power input occurring during a representative period, the power input is the maximum value that is exceeded for more than 10 % of the representative period		N
	Otherwise the power input is the arithmetic mean value		N
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N
	the rated power input is related to the arithmetic mean value		P
	Power input of induction hotplates measured separately and the tolerances for motor-operated appliances apply. (IEC 60335-2-9)		N
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2..... :	(see appended table)	N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period		N
	Otherwise the current is the arithmetic mean value		N
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N
	the rated current is related to the arithmetic mean value of the range		N
	Current input of induction hotplates measured separately and the tolerances for motor-operated appliances apply (IEC 60335-2-9)		N
11	HEATING		--
11.1	No excessive temperatures in normal use		P
	Compliance for toasters is also checked by the test of 11. 101 (IEC 60335-2-9)		N
	Compliance for ovens, rotary grills and cookers is also checked by the test of 11.102. (IEC 60335-2-9)		N
	Compliance for contact grills, waffle irons, radiant grills, raclette grills, barbecues, candy floss appliances and hot plates, is also checked by the test of 11.103. (IEC 60335-2-9)		N
	Compliance for breadmakers, pop-corn makers, and food dehydrators is also checked by the test of 11.104. (IEC 60335-2-9)		N
	Compliance for roasters is also checked by the test of 11.105. (IEC 60335-2-9)		N
11.2	The appliance is held, placed or fixed in position as described ..... :		P
	Radiant grills and raclette grills that are loaded from the front, rotary grills, ovens, breadmakers, cookers and hotplates are placed with their backs as near as possible to one of the walls of the test corner and away from the other wall ..... (IEC 60335-2-9)		N
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	the windings are non-uniform or it is difficult to make the necessary connections		P
	For flat surfaces, temperature rises are measured using the probe of Figure 105. The probe is applied with a force of 4 N ± 1 N to the surface in such a way that the best possible contact between the probe and the surface is ensured. (IEC 60335-2-9)		N
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) .... :		P
	If the temperature rise limits are exceeded in appliances incorporating motors, transformers or electronic circuits, and if the power input is lower than the rated power input, the test is repeated with the appliance supplied at 1,06 times rated voltage ..... (IEC 60335-2-9)		N
	Breadmakers are operated as specified for combined appliances. ..... (IEC 60335-2-9)		N
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V) ..... :		N
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V) ..... :		N
11.7	Tests carried out in compliance with the paragraphs N° 1 to 11 (IEC 60335-2-9)		--
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 ..... :	(see appended table)	P
	If the temperature rise of a motor winding exceeds the value of table 3, or		N
	if there is doubt with regard to classification of insulation,		N
	tests of Annex C are carried out		N
	Sealing compound does not flow out		N
	Protective devices do not operate, except		N
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N
	For radiant grills, rotary grills, raclette grills, hotplates and cookers, instead of 65 K, the temperature rise of the wall of the test corner shall not exceed 75 K. (IEC 60335-2-9)		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	When an appliance connector incorporates a thermostat, the temperature rise limit for the pins of the inlet does not apply (IEC 60335-2-9)		N
	The temperature rise limits of motors, transformers, components of electronic circuit and parts directly influenced by them may be exceeded when the appliance is operated at 1,15 times rated power input (IEC 60335-2-9)		N
	Cheese used in sandwich toasting attachments doesn't flow into places where it can give rise to a hazard, such as reducing clearances or creepage distances below the values specified in Clause 29 (IEC 60335-2-9).		N
	The temperature rise limits for touch controls also include all surfaces within 5 mm of the touch controls, regardless of their shape. (IEC 60335-2-9)		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
11.101	Toasters are placed as specified in 11.2 and are operated for three cycles at rated power under normal operation (IEC 60335-2-9).		N
	During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102 (IEC 60335-2-9).		N
11.102	Ovens, rotary grills and cookers are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation (IEC 60335-2-9)		N
	Appliances are operated until steady conditions are established or for 60 min, whichever is shorter. During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N
	Ovens having settings higher than 240 °C are also operated at the maximum setting until steady conditions are established or for 60 min, whichever is shorter. The temperature rise limits of Table 102 for top surfaces and door surfaces are increased by 10 K.		N
11.103	Contact grills, waffle irons, radiant grills, raclette grills, barbecues, candy floss appliances and hot plates are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation. (IEC 60335-2-9) During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N
11.104	Breadmakers, pop-corn makers and food dehydrators are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation. (IEC 60335-2-9) During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N
11.105	Roasters are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation. (IEC 60335-2-9) During the test, the temperature rise of surfaces shall not exceed the values specified inTable 102.		N
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		--
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times the rated power input (W)..... :		P
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V)..... :		N
	Protective impedance and radio interference filters disconnected before carrying out the tests		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	grill incorporated in oven, oven or grill operated most unfavourable (IEC 60335-2-9).		N
	Induction wok hotplates are operated with the wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9).		N
13.2	For class 0, class II and class III appliances and class II constructions, leakage current measured by means of the circuit described in figure 4 of IEC 60990	Class II constructions	P
	For class 0I and class I appliances, a low impedance ammeter may be used	Class I appliance	N
	Leakage current measurements ..... :	(see appended table)	P
	If earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn connected to earthed metal not exceeding 0,75 mA (IEC 60335-2-9)		N
	If no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn not exceeding 0,25 mA (IEC 60335-2-9)		N
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4 ..... :	(see appended table)	P
	test voltage of 1000V if earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N
	test voltage of 3000 V if no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		--
	Appliances withstand the transient over-voltages to which they may be subjected		N
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6 ..... :	(see appended table)	N
	No flashover during the test, unless		N
	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
15	MOISTURE RESISTANCE		--
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance		N
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		N
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529 ..... :		N
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N
	Built-in appliances installed according to the instructions		N
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances with type X attachment fitted with a flexible cord as described		N
	Detachable parts subjected to the relevant treatment with the main part		N
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N
15.2	Spillage of liquid does not affect the electrical insulation		N
	Spillage solution comprising water containing approximately 1 % NaCl and 0,6 % rinsing agent		N
	Appliances with type X attachment fitted with a flexible cord as described		N
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N
	Detachable parts are removed		N
	Overfilling test with additional amount of the solution, over a period of 1 min (l)		N
	Overfilling test; quantity : as specified in IEC 60335-2-9		N
	Ovens: 0.5l (IEC 60335-2-9)		N
	Hotplates and cookers : 0.5l ,15s (IEC 60335-2-9)		N
	For induction wok hotplates, the test is performed using the wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9)		N
	Hotplates incorporate a thermal control : 0.02l (IEC 60335-2-9)		N
	Hotplates having ventilating opening : 0.2l (IEC 60335-2-9)		N
	Other appliances : 0.1l/100cm² 1min (IEC 60335-2-9)		N
	The appliance withstands the electric strength test of 16.3		N
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29		N
15.3	Appliances proof against humid conditions	93% R.H., 25℃	P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		N
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		N
	Humidity test for 48 h in a humidity cabinet		P
	Reassembly of those parts that may have been removed		N
	The appliance withstands the tests of clause 16		P
15.101	Appliances to be immersed in water for cleaning sufficiently protected against effects of immersion (IEC 60335-2-9)		N
	Testing conditions and scheduling as specified		N
	No trace of water on insulation which can result in reduction of creepage distances and clearance below values specified in 29		N
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		--
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N
	Tests carried out at room temperature and not connected to the supply		P
	For hotplates, the tests are carried out with a vessel as specified for normal operation placed on each cooking zone (IEC 60335-2-9).		N
	Induction wok hotplates are operated with the wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9).		N
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V)..... :		P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by √3 (V)..... :		N
	Leakage current measurements ..... :	(see appended table)	P
	Limit values doubled if:		--
	- all controls have an off position in all poles, or		N
	- the appliance has no control other than a thermal cut-out, or		N
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- the appliance has radio interference filters		N
	With the radio interference filters disconnected, the leakage current do not exceed limits specified .... :	(see appended table)	N
	If earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn connected to earthed metal not exceeding 0,75 mA (IEC 60335-2-9)		N
	If no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn not exceeding 0,25 mA (IEC 60335-2-9)		N
16.3	Electric strength tests according to table 7 ..... :	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified ..... :		N
	test voltage of 1250 V if earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate. (IEC 60335-2-9)		N
	test voltage of 3000 V if no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate. (IEC 60335-2-9)		N
	No breakdown during the tests		P
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		--
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use ..... :		N
	Appliance supplied with 1.06 or 0.94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V)..... :		N
	Basic insulation is not short-circuited		N
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		N
	Temperature of the winding not exceeding the value specified in table 8		N
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N
18	ENDURANCE		--

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Requirements and tests are specified in part 2 when necessary		N
19	ABNORMAL OPERATION		--
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe ..... :	(see appended table)	P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		P
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		P
	if applicable, to the test of 19.5		P
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		P
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		P
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		P
	until steady conditions are established		N
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		P
	Tests of 19.4 and 19.5 are only applicable to: -breadmakers, contact grills, food dehydrators - ovens, roasters, hotplates, cookers, rotary grills if they incorporate a timer or if their instructions indicate a cooking operation longer than 1h (IEC 60335-2-9)		P
	Toasters are subjected to the tests 19.101 and 19.102 (IEC 60335-2-9)		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	However, induction wok hotplates are not subjected to the test of 19.104. (IEC 60335-2-9)		N
	Induction hotplates are subjected to the tests 19.103 and 19.104 (IEC 60335-2-9)		N
19.2	Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0.85 times rated power input (W) ..... :		P
	Radiant grills, raclette grills that are loaded from the front , rotary grills, ovens, hotplates and cookers are placed as near as possible to the walls of the test corner ..... (IEC 60335-2-9)		N
	They are tested empty with lids open or closed whichever is the more unfavourable ..... (IEC 60335-2-9)		P
	Hotplates are operated without a vessel and with the controls adjusted to the highest setting (IEC 60335-2-9)		N
	Induction hotplates are operated under conditions of clause 11 but with empty vessels, controls adjusted to the highest setting (IEC 60335-2-9)		N
	Cookers are only tested with the heating unit that results in the most unfavourable conditions, their controls adjusted to the highest setting. However ovens are operated if they do not have an indicating lamp to show when they are switched on, controls adjusted to the highest setting (IEC 60335-2-9)		N
	Induction wok hotplates are operated with an empty wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9)		N
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W) ..... :		P
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		P
	Air-circulating fans of food dehydrators disconnected (IEC 60335-2-9)		N
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		P
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures (V)..... :		N
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or		N
	locking moving parts of other appliances		P
	Locked rotor, capacitors open-circuited one at a time		N
	Test repeated with capacitors short-circuited one at a time, unless		N
	capacitor is of class P2 of IEC 60252-1		N
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed..... :		P
	An electronic timer or programmer that operates to ensure compliance with the test before the maximum period under the conditions of Clause 11 is reached, is a protective electronic circuit		P
	Other appliances supplied with rated voltage for a period as specified ..... :		P
	Winding temperatures not exceeding values specified in table 8..... :	(see appended table)	P
19.8	Multi-phase motors operated at rated voltage with one phase disconnected		N
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Motor-operated and combined appliances for which 30.2.3 is applicable and that use overload protective devices relying on electronic circuits to protect the motor windings, are also subjected to the test		N
	Winding temperatures not exceeding values as specified ..... :	(see appended table)	P
19.10	Series motor operated at 1.3 times rated voltage for 1 min (V)..... :		N
	During the test, parts not being ejected from the appliance		N
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless		P
	they comply with the conditions specified in 19.11.1		P
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		P
	restarting does not result in a hazard		N
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		P
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		N
	During and after each test the following is checked:		N
	- the temperature of the windings do not exceed the values specified in table 8		P
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		---
	- the base material of the printed circuit board withstands the test of Annex E		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		--
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified		P
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit		P
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		--
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless		P
	they comply with IEC 60384-14		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits		P
	This fault condition is not applied between the two circuits of an optocoupler		N
	e) failure of triacs in the diode mode		P
	f) failure of microprocessors and integrated circuits		P
	g) failure of an electronic power switching device		N
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		P
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to g) of 19.11.2		P
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		N
	a device that can be placed in the stand-by mode,		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode		P
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, the tests being carried out after the protective electronic circuit has operated, except that		N
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		N
	Surge protective devices disconnected, unless		P
	They incorporate spark gaps		N
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		P
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		P
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		P
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test ~~level 3 or 4~~ as specified		P
	An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode		P
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling		P
	Earthed heating elements in class I appliances disconnected		P
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		P
19.11.4.6	Appliances having a rated current not exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-11		P
	Appliances having a rated current exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-34		N
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate		P
	The appliance continues to operate normally, or		P
	requires a manual operation to restart		N
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A)..... :		P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9..... :		P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		P
	- basic insulation (V)..... :		P
	- supplementary insulation (V)..... :		P
	- reinforced insulation (V)..... :		P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		--
	- do not become operational, or		N
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		--
	- the lid or door does not move automatically to an open position when the interlock is released, and		N
	- the appliance does not start after the cycle in which the interlock was released		N
	During the test of 19.102 any flame or smoke from the bread are ignored (IEC 60335-2-9)		N
	Temperature rise of the windings of induction hotplates not exceeding the values specified in 19.7 (IEC 60335-2-9)		N
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited		N
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time		N
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		N
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		N
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied		N
19.101	Toasters operated at rated power input and under normal operation, but without bread, for six cycles of operation, test repeated 500 times (IEC 60335-2-9)		N
	The mechanism operates satisfactorily and no sustained arcing occurs. (IEC 60335-2-9)		N
19.102	Toasters: test with the ejector mechanism locked (IEC 60335-2-9)		N
19.103	Induction hotplates operated with the specified steel disk placed on the centre of the cooking zone (IEC 60335-2-9)		N
19.104	Induction hotplates operated with thermal controls short-circuited or rendered inoperative in turn: The temperature rise of the oil shall not exceed 270 K (IEC 60335-2-9).		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
19.105	Induction hotplates operated with thermal controls short-circuited or rendered inoperative in turn: The temperature rise of the oil shall not exceed 270 K (IEC 60335-2-9).		N
19.106	Pop-corn makers: operated under conditions of clause 11 for a period of 5 min but with the popcorn outlet blocked by means of a grid with a mesh size small enough to keep the popcorn from being ejected from the appliance (IEC 60335-2-9)		N
20	STABILITY AND MECHANICAL HAZARDS		--
20.1	Appliances having adequate stability		P
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		P
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable, and		P
	have adequate mechanical strength		P
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure		N
	Not possible to touch dangerous moving parts with the test probe described		N
20.101	Oven with horizontal hinged door: successful tilting test in conditions as specified, if relevant (weight of 3,5 kg) (IEC 60335-2-9).		N
21	MECHANICAL STRENGTH		--
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N
	If necessary, repetition of groups of three blows on a new sample		N
	For appliances intended for outdoor use, the impact energy is 0.7J (IEC 60335-2-9)		N
	Appliances incorporates visibly glowing heating elements located at the top of the oven and accessible to the test probe 41 of IEC 61032 (IEC 60335-2-9)		N
	For hotplates with surfaces of glass-ceramic or similar, three blows applied to parts surfaces not exposed to the test of 21.101, impact energy 0,70J ± 0,05 J. (IEC 60335-2-9).		N
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		P
21.101	Surfaces of hotplates of glass-ceramic or similar material withstand the stresses liable to occur in normal use, under test conditions as specified (IEC 60335-2-9).		N
	Induction wok hotplates are tested with a wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. The wok pan is filled with sand or shot so that the total mass, including the mass of the wok pan, is equal to 1,8 kg ± 0,01 kg. (IEC 60335-2-9)		N
	After the tests, surface of hotplate not broken).		N
	Withstand dielectric strength test of 16.3		N
22	CONSTRUCTION		--
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		--
	- a supply cord fitted with a plug, or		N
	- a switch complying with 24.3, or		N
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		N
	- an appliance inlet		N
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N
22.3	Appliance provided with pins: no undue strain on socket-outlets		N
	Applied torque not exceeding 0.25 Nm		N
	Pull force of 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless		N
	rotating does not impair compliance with this standard		N
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance equal to or greater than 0,1μF, the appliance being disconnected from the supply at the instant of voltage peak		P
	If compliance relies on the operation of an electronic circuit, the electromagnetic phenomena tests of 19.11.4.3 and 19.11.4.4 are applied		N
	The discharge test is then repeated three times, voltage not exceeding 34 V (V) ..... :	16V	P
	Voltage not exceeding 34 V (V) ..... :		N
22.6	Electrical insulation not affected by condensing water or leaking liquid		P
	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	In case of doubt, test as described		N
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		P
	the substance has adequate insulating properties		N
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N
	- a non-self-resetting thermal cut-out is required by the standard, and		N
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N
	they are voltage maintained		N
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		N
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		N
	Tests as described		N
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		P
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		N
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N
	Cord reel tested with 6000 operations, as specified		N
	Electric strength test of 16.3, voltage of 1000 V applied		N
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N
	constructed to prevent inappropriate replacement		N
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N
	material used is non-corrosive, non-hygroscopic and non-combustible		N
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		P
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported		N
	Heating elements constructed or supported so they are unlikely to become displaced in normal use. (IEC 60335-2-9)		N
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		N
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		N
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N
	Insulating Ceramic and similar porous material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts, or		N
	unearthed metal parts separated from live parts by basic insulation only		N
	Electrodes not used for heating liquids		N
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		N
	the reinforced insulation consists of at least 3 layers		N
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N
	the reinforced insulation consists of at least 3 layers		N
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		P
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N
	This requirement does not apply to handles, levers and knobs on stationary appliances and cordless appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N
	they are separated from live parts by double or reinforced insulation		N
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N
	the capacitors comply with 22.42		N
22.38	Capacitors not connected between the contacts of a thermal cut-out		N
22.39	Lamp holders used only for the connection of lamps		N
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N
22.41	No components, other than lamps, containing mercury		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.42	Protective impedance consisting of at least two separate components		P
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N
	Resistors checked by the test of 14.1 a) in IEC 60065		N
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		P
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		N
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		N
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		N
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N
	No leakage from any part, including any inlet water hose		N
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N
	the appliance switches off automatically or can operate continuously without hazard		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N
	There is a visual indication showing that the appliance is adjusted for remote operation		N
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		N
	- continuously, or		N
	- automatically, or		N
	- remotely		N
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts have at least double insulation or reinforced insulation between live parts and the functionally earthed parts		N
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N
22.55	Devices operated to stop the intended function of the appliance, if any, are be distinguished from other manual devices by means of shape, size, surface texture or position ..... :		N
	The requirement concerning position does not preclude use of a push on push off switch		N
	An indication when the device has been operated is given by:		--
	– tactile feedback from the actuator or from the appliance, or		N
	– reduction in heat output; or		N
	– audible and visible feedback		N
22.56	Detachable power supply part provided with the part of class III construction		N
22.57	The properties of non-metallic materials do not degrade from exposure to UV-C radiation, as specified in Annex T		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	This requirement does not apply to glass, ceramics or similar materials		N
22.101	Radiant grills: no timer that is intended to delay the operation of a heating element, (IEC 60335-2-9)		N
	Unless having a thermostat and being incorporated in an oven or other compartment, (IEC 60335-2-9)		N
	Hotplates shall not incorporate a timer that is intended to delay the operation of a heating element. (IEC 60335-2-9)		N
22.102	Barbecue shall not be provided with bare heating elements (IEC 60335-2-9)		N
	Oven: heating elements with bare conductors at the top only (IEC 60335-2-9)		N
22.103	Oven vents constructed so that moisture or grease cannot reduce the clearances and creepage distances. (IEC 60335-2-9)		N
22.104	Ovens constructed so that shelves can easily slide in the supports and do not fall out of position when the sides are displaced as much as possible. (IEC 60335-2-9)		N
22.105	Appliances have not openings on the underside that would allow small items to penetrate and touch live parts. (IEC 60335-2-9)		P
	Distance measured between the supporting surface and live parts through openings (IEC 60335-2-9)		P
	Distance requested as specified:(IEC 60335-2-9)		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.106	Grills and barbecues constructed so that their heating elements are fixed in position or prevented from operating when they are not in their normal position of use. (IEC 60335-2-9)		N
22.107	Hotplate constructed so that heating elements are prevented from rotating about a vertical axis and are adequately supported in all positions of adjustment of their supports. (IEC 60335-2-9)		N
22.108	Hotplate constructed so that inadvertent operation of touch controls is unlikely if this could give rise to a hazardous situation due to spillage of liquids or damp cloth placed on the control panel, and complies with test as specified ... (IEC 60335-2-9)		N
22.109	Hotplate incorporating touch controls constructed so that at least two manual operations are requested to switch on a heating element but only one to switch it off..... (IEC 60335-2-9)		N
22.110	Induction hotplates constructed so that they can only be operated with a suitable vessel placed on the cooking zone. ..... (IEC 60335-2-9)		N
	Temperature rise of iron not exceeding 35K..... .....(IEC 60335-2-9)		N
22.111	Heating element in breadmakers located so they are not exposed to dough that they may rise over the edge of the dough container during normal use of the appliance ....(IEC 60335-2-9)		N
22.112	Reconnection of the power supply to a breadmaker after an interruption shall not result in a fire due to an extended heating period.....(IEC 60335-2-9)		N
	All batteries are removed and the breadmaker is supplied at rated voltage and operated in heating mode without load .....(IEC 60335-2-9)		N
	The appliance shall eventually require a manual operation to restart it .....(IEC 60335-2-9)		N
22.113	Toasters having an ejector mechanism shall be constructed so that they switch off automatically after the normal toasting time even if the ejector mechanism is blocked by the bread. (IEC 60335-2-9)		N
22.114	Heating elements in candy floss appliances shall be located so that they are not exposed to sugar during normal use of the appliance. (IEC 60335-2-9)		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.115	For appliances incorporating a hotplate with at least one heating unit controlled by an electronic circuit, safety shall not be impaired in the event of a fault in the electronic circuit. (IEC 60335-2-9)		N
23	INTERNAL WIRING		--
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well-rounded or provided with bushings		N
	Wiring effectively prevented from coming into contact with moving parts		P
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges		N
	Beads inside flexible metal conduits contained within an insulating sleeve		N
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		N
	Flexible metallic tubes not causing damage to insulation of conductors		N
	Open-coil springs not used		N
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N
	No damage after 10 000 flexings for conductors flexed during normal use, or		N
	100 flexings for conductors flexed during user maintenance		N
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		N
	Not more than 10% of the strands of any conductor broken, and		N
	not more than 30% for wiring supplying circuits that consume no more than 15W		N
	Appliance with 2 stop positions: 10000 flexings made with moving part fully opened (IEC 60335-2-9)		N
23.4	Bare internal wiring sufficiently rigid and fixed		N
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		N
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
	For class II construction, the requirements for supplementary insulation and reinforced insulation apply,		N
	except that the sheath of a cord complying with IEC 60227 or IEC 60245 may provide supplementary insulation.		N
	A single layer of internal wiring insulation does not provide reinforced insulation		N
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or		P
	be such that it can only be removed by breaking or cutting		N
23.7	The colour combination green/yellow only used for earthing conductors		N
23.8	Aluminium wires not used for internal wiring		P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		N
	the contact pressure is provided by spring terminals		N
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N
24	COMPONENTS		--
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components ..... :	(see appended table)	P
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		P
	Relays tested as part of the appliance, or		N
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	The requirements of Clause 29 apply between live parts of components and accessible parts of the appliance		N
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard		N
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections		P
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2		P
	Components that have been previously tested to comply with the resistance to fire requirements in the IEC standard for the relevant component need not be retested provided the specified conditions are met		P
	If these conditions are not satisfied, the component is tested as part of the appliance.		P
	Power electronic converter circuits not required to comply with IEC 62477-1, they are tested as part of the appliance		N
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		N
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14		N
	If the capacitors have to be tested, they are tested according to Annex F		N
24.1.2	Transformers in associated switch mode power supplies comply with Annex BB of IEC 61558-2-16		N
	Safety isolating transformers complying with IEC 61558-2-6		N
	If they have to be tested, they are tested according to Annex G		N
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000		N
	If they have to be tested, they are tested according to Annex H		N
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N
	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N
	Switches controlling heating elements of hotplates subjected to 30 000 cycles of operation(IEC 60335-2-9)		N
	Switches controlling heating elements of ~~hotplates~~ toaster subjected to 50000 cycles of operation (IEC 60335-2-9)		N
24.1.4	Automatic controls complying with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		--
	- thermostats: 10 000		P
	- temperature limiters: 1 000		N
	- self-resetting thermal cut-outs: 300		N
	- voltage maintained non-self-resetting thermal cut-outs: 1 000		N
	- other non-self-resetting thermal cut-outs: 30		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- timers: 3 000		N
	- energy regulators for automatic action (IEC 60335-2-9): 100 000		N
	- energy regulators for manual action (IEC 60335-2-9): 10 000		N
	Self-resetting thermal cut-outs for heating elements of glass-ceramic hotplates (IEC 60335-2-9) 100 000		N
	Self-resetting thermal cut-outs for other hotplates (IEC 60335-2-9) 10 000		N
	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited		N
	Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D		N
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N
	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9		N
24.1.5	Appliance couplers complying with IEC 60320-1		N
	However, for class II appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N
	Interconnection couplers complying with IEC 60320-2-2		N
	Appliance couplers incorporating thermostats, thermal cut-outs or fuses comply with IEC 60320-1, with exceptions specified in IEC 60335-9 (IEC 60335-2-9)		N
	Not applicable to conditions as specified (IEC 60335-2-9)		N
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N
24.1.8	The relevant standard for thermal links is IEC 60691		N
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		N
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance..... :		N
24.2	Appliances not fitted with:		---
	- switches or automatic controls in flexible cords		P
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		N
	- thermal cut-outs that can be reset by soldering, unless		N
	the solder has a melding point of at least 230 ˚C		N
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		N
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N
	In addition, the motors comply with the requirements of Annex I		N
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N
	They are supplied with the appliance		N
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		N
	One or more of the following conditions are to be met:		N
	- the capacitors are of class P2 according to IEC 60252-1		N
	- the capacitors are housed within a metallic or ceramic enclosure		N
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E		N
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N
24.101	Thermostats and energy regulators incorporating an off position: off position maintained under test conditions (IEC 60335-2-9)		N
	Thermostats and energy regulators incorporating an off position : no breakdown after application of 500V across the contacts not switch on as a result of variations in ambient temperature (IEC 60335-2-9)		N
24.102	Thermal cut-outs incorporated in food dehydrators in order to comply with 19.4 are non-self-resetting (IEC 60335-2-9)		N
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		--

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		--
	- supply cord fitted with a plug, the current rating and voltage rating of the plug being not less than the corresponding ratings of its associated appliance		P
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or		N
	- pins for insertion into socket-outlets		N
	Appliances incorporating an appliance inlet other than those standardized in IEC 60320-1,shall be supplied with a cord set (IEC 60335-2-9)		N
25.2	Appliance not provided with more than one means of connection to the supply mains		P
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N
25.3	Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains:		N
	- a set of terminals allowing the connection of a flexible cord		N
	- a fitted supply cord		N
	- a set of supply leads accommodated in a suitable compartment		N
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N
	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm)..... :		N
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29		N
25.5	Method for assembling the supply cord to the appliance:		--
	- type X attachment		N
	- type Y attachment		P
	- type Z attachment, if allowed in relevant part 2		N
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		N
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		--
	- rubber sheathed (at least 60245 IEC 53)		N
	- polychloroprene sheathed (at least 60245 IEC 57)		N
	- polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11		--
	• light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg		N
	• ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances		P
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		--
	• heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg		N
	• heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances		N
	Supply cords for class III appliances adequately insulated		N
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	-supply cord of appliances intended for outdoor use shall be polychloroprene sheathed (IEC 60335-2-9)		N
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm²) ..... :		P
25.9	Supply cords not in contact with sharp points or edges		P
25.10	Supply cord of class I appliances have a green/yellow core for earthing		N
	In multi-phase appliances, the colour of the neutral conductor of the supply cord is blue.		N
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless		N
	the contact pressure is provided by spring terminals		N
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure		N
25.13	Inlet openings so constructed as to prevent damage to the supply cord		N
	If it is not evident that the supply cord can be introduced without risk of damage, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is		N
	class 0, or		N
	a class III appliance not containing live parts		N
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N
	Flexing test, as described:		N
	- applied force (N)..... :		N
	- number of flexings..... :		N
	The test does not result in:		N
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N
	- breakage of more than 10% of the strands of any conductor		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- separation of the conductor from its terminal		N
	- loosening of any cord guard		N
	- damage to the cord or the cord guard		N
	- broken strands piercing the insulation and becoming accessible		N
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord:		--
	- fixed appliances: pull 100 N; torque (not on automatic cord reel) (Nm)..... :		N
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm)..... :	100 N, 0,35 Nm	P
	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm)..... :	100 N, 0,35 Nm	P
	Cord not damaged and max. 2 mm displacement of the cord	Less than 2mm	P
25.16	Cord anchorages for type X attachments constructed and located so that:		N
	- replacement of the cord is easily possible		N
	- it is clear how the relief from strain and the prevention of twisting are obtained		N
	- they are suitable for different types of supply cord		N
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N
	they are separated from accessible metal parts by supplementary insulation		N
	- the cord is not clamped by a metal screw which bears directly on the cord		N
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N
	it is part of a specially prepared cord		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N
	failure of the insulation of the cord does not make accessible metal parts live		N
	- for class II appliances they are of insulating material, or		N
	if of metal, they are insulated from accessible metal parts by supplementary insulation		N
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals		N
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	Type Y	P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	Constructed so that the cord can only be fitted with the aid of a tool		N
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N
	Tying the cord into a knot or tying the cord with string not used		N
25.20	The insulated conductors of the supply cord for type Y and Z attachment additionally insulated from accessible metal parts	Type Y	P
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		N
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N
25.22	Appliance inlets:		N
	- live parts not accessible during insertion or removal		N
	Requirement not applicable to appliance inlets complying with IEC 60320-1		N
	- connector can be inserted without difficulty		N
	- the appliance is not supported by the connector		N
	- not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless		N
	the supply cord is unlikely to touch such metal parts		N
25.23	Interconnection cords comply with the requirements for the supply cord, except that:		N
	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11		N
	- the thickness of the insulation may be reduced		N
	If necessary, electric strength test of 16.3		N
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected		N
25.25	Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet.		N
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N
26	TERMINALS FOR EXTERNAL CONDUCTORS		--
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		P
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		N
	the connections are soldered		N
	Screws and nuts not used to fix any other component, except		N
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		N
	Terminals fixed so that when the clamping means is tightened or loosened:		N
	- the terminal does not become loose		N
	- internal wiring is not subjected to stress		N
	- neither clearances nor creepage distances are reduced below the values in clause 29		N
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm) ..... :		N
	No deep or sharp indentations of the conductors		N
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened		N
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N
	Stranded conductor test, 8 mm insulation removed		N
	No contact between live parts and accessible metal parts and,		N
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm²)..... :		N
	If a specially prepared cord is used, terminals need only be suitable for that cord		N
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N
26.9	Terminals of the pillar type constructed and located as specified		N
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		N
	conductors ends fitted with means suitable for screw terminals		P
	Pull test of 5 N to the connection		N
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used		P
	For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		N
27	PROVISION FOR EARTHING		--
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet	Class I appliance	P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P
	Class 0, II and III appliances have no provision for protective earthing		N
	Class II appliances and class III appliances can incorporate an earth for functional purposes		N
	Safety extra-low voltage circuits not earthed, unless		N
	protective extra-low voltage circuits		N
	No earthing via flexible metal tubes, coiled springs and cord anchorage (IEC 60335-2-9)		N
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm², and		N
	do not provide earthing continuity between different parts of the appliance, and		N
	conductors cannot be loosened without the aid of a tool		N
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		N
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		P
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		P
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		N
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		N
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω) ..... :	66mΩ	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		P
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		P
28	SCREWS AND CONNECTIONS		--

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		P
	Diameter of screws of insulating material min. 3 mm		N
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity		P
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		N
	For screws and nuts; torque-test as specified in table 14..... :	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless		P
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material		N
	This requirement does not apply to electrical connections in circuits of appliances for which:		--
	• 30.2.2 is applicable and that carry a current not exceeding 0,5 A		N
	• 30.2.3 is applicable and that carry a current not exceeding 0,2 A		N
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		--
	- in normal use,		N
	- during user maintenance,		N
	- when replacing a supply cord having a type X attachment, or		N
	- during installation		N
	At least two screws being used for each connection providing earthing continuity, unless		N
	the screw forms a thread having a length of at least half the diameter of the screw		N
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		N
	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or		N
	if an alternative earthing circuit is provided		N
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion		N
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		--
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies:		N
	The microenvironment is pollution degree 1 under type 1 protection		N
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N
	These values apply to functional, basic, supplementary and reinforced insulation ..... :		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless ..... :	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		N
	For appliances intended for use at altitudes exceeding 2 000 m, the clearances in Table 16 is increased according to the relevant multiplier values in Table A.2 of IEC 60664-1		N
	Impulse voltage test is not applicable:		--
	- when the microenvironment is pollution degree 3, or		N
	- for basic insulation of class 0 and class 01 appliances		N
	- to appliances intended for use at altitudes exceeding 2 000 m		N
	Appliances are in overvoltage category II		N
	A force of 2 N is applied to bare conductors, other than heating elements		N
	A force of 30 N is applied to accessible surfaces		N
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable..... :	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		N
	Lacquered conductors of windings considered to be bare conductors		N
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16:	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage ..... :	(see appended table)	P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		N
29.1.4	Clearances for functional insulation are the largest values determined from:		N
	- table 16 based on the rated impulse voltage ..... :	(see appended table)	N
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N
	the microenvironment is pollution degree 3, or		N
	the distances can be affected by wear, distortion, movement of the parts or during assembly		N
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		N
	Lacquered conductors of windings considered to be bare conductors		N
	However, clearances at crossover points are not measured		N
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		N
	- table 16 based on the rated impulse voltage ..... :		N
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N
	If clearances for basic insulation are selected from Clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		N
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree ..... :	(see appended table)	P
	Pollution degree 2 applies, unless		P
	- precautions taken to protect the insulation; pollution degree 1		N
	- insulation subjected to conductive pollution; pollution degree 3		N
	A force of 2 N is applied to bare conductors, other than heating elements		N
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		N
	Pollution degree 3 applies, unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance (IEC 60335-2-9)		N
29.2.1	Creepage distances of basic insulation not less than specified in table 17..... :	(see appended table)	P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17 ..... :		N
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 ..... :		N
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable ..... :		N
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable ..... :		N
29.2.4	Creepage distances of functional insulation not less than specified in table 18 ..... :	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18 ..... :		N
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		N
	Compliance checked:		N
	- by measurement, in accordance with 29.3.1, or		N
	- by an electric strength test in accordance with 29.3.2, or		N
	-for insulation, other than single layer internal wiring insulation by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		N
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N
	Requirement not applied to the sheath of a visibly glowing heating element that is inaccessible to test probe 41 of IEC 61032 (IEC 60335-2-9)		N
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N
	Supplementary insulation consist of at least 2 layers		N
	Reinforced insulation consist of at least 3 layers		N
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N
	the electric strength test of 16.3		N
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19..... :		N
30	RESISTANCE TO HEAT AND FIRE		--
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	parts of thermoplastic material providing supplementary or reinforced insulation		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C)..... :	(see appended table)	P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Parts supporting live parts tested at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C)..... :	(see appended table)	P
	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C) ..... :	(see appended table)	P
	Temperature rises occurring during the test of 19.102 are not taken into account (IEC 60335-2-9)		N
30.2	Parts of non-metallic material resistant to ignition and spread of fire		P
	This requirement does not apply to:		--
	parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or		N
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		P
	Compliance checked by the test of 30.2.1, and in addition:		P
	- for attended appliances, 30.2.2 applies		N
	- for unattended appliances, 30.2.3 applies		P
	For appliances for remote operation, 30.2.3 applies		N
	For base material of printed circuit boards, 30.2.4 applies		P
	For breadmakers, food dehydrators, 30.2.3 applies (IEC 60335-2-9)		N
	For hotplates 30.2.3 applies (IEC 60335-2-9)		N
	For cookers, ovens, roasters, rotary grills if they incorporate a timer or if their instructions indicate a cooking operation longer than 1h , 30.2.3 applies (IEC 60335-2-9)		P
	For other appliances, 30.2.2 applies (IEC 60335-2-9)		N
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or		N
	the material is classified at least HB40 according to IEC 60695-11-10		N
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N
30.2.2	Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and		N
	parts of non-metallic material within a distance of 3mm of such connections,		N
	subjected to the glow-wire test of IEC 60695-2-11		N
	The test severity is:		--
	- 750 °C, for connections carrying a current exceeding 0,5 A during normal operation		N
	- 650 °C, for other connections		N
	Glow-wire applied to an interposed shielding material, if relevant		N
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least:		N
	- 750 °C, for connections carrying a current exceeding 0,5 A during normal operation		N
	- 650 °C, for other connections		N
	The glow-wire test is also not carried out on small parts. These parts are to:		N
	- comprise material having a glow-wire flammability index of at least 750 °C, or 650 °C as appropriate, or		N
	- comply with the needle-flame test of Annex E, or		N
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10 ..... :		N
	Glow-wire test not applicable to conditions as specified ..... :		N
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P
	The tests are not applicable to conditions as specified ..... :		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and		P
	parts of non-metallic material, other than small parts, within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C		P
	Glow-wire applied to an interposed shielding material, if relevant		P
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C		N
30.2.3.2	Parts of non-metallic material supporting connections, and		P
	parts of non-metallic material within a distance of 3mm,		P
	subjected to glow-wire test of IEC 60695-2-11		N
	The test severity is:		N
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		P
	- 650 °C, for other connections		P
	Glow-wire applied to an interposed shielding material, if relevant		P
	However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications:		N
	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N
	• 775 °C, for connections carrying a current exceeding 0,2 A during normal operation		N
	• 675 °C, for other connections		N
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:		N
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		N
	- 650 °C, for other connections		N
	The glow-wire test is also not carried out on small parts. These parts are to:		N
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N
	- comply with the needle-flame test of Annex E, or		N
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N
	The consequential needle-flame test of Annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		N
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		N
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N
	- small parts for which the needle-flame test of Annex E was applied, or		N
	- small parts for which a material classification of V-0 or V-1 was applied		N
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		N
	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N
	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or		N
	- parts shielded by a flame barrier that meets the needle-flame test of Annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of Annex E		N
	Test not applicable to conditions as specified..... :		N
31	RESISTANCE TO RUSTING		--
	Relevant ferrous parts adequately protected against rusting		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliances intended for outdoor use, compliance is checked by the salt mist test, Kb of IEC 60068-2-52, severity 2 applicable (IEC 60335-2-9)		N
	Before the test, enclosures having a coating are scratched by means of hardened steel pin (IEC 60335-2-9)		N
	After the test, the appliance shall not have deteriorated to such an extent that compliance with this standard, in particular with Clauses 8 and 27, is impaired (IEC 60335-2-9)		N
	After the test, the coating shall not be broken and shall not have loosened from the surface (IEC 60335-2-9)		N
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		--
	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use		P
	Compliance is checked by the limits or tests specified in part 2, if relevant		N
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		--
	Description of routine tests to be carried out by the manufacturer		P
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES THAT ARE RECHARGED IN THE APPLIANCE		--
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N
	This annex does not apply to battery chargers		N
	Three forms of construction covered:		N
	a) Appliance supplied directly from the supply mains or a renewable energy source, the battery charging circuitry and other supply unit circuitry incorporated within the appliance		N
	b) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the part of the appliance containing the battery		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	c) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the detachable supply unit		N
3.1.9	Appliance operated under the following conditions:		N
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N
	- if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N
	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006		N
	Appliances intending to be supplied from a detachable supply unit marked with symbol IEC 60417-6181 and its type reference along with symbol ISO 7000-0790 (2004-01), or		N
	use only with <model designation> supply unit ... :		N
7.6	Symbols 60417-5005 and IEC 60417-5006		N
7.12	The instructions give information regarding charging		N
	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N
	Details about how to remove batteries containing materials hazardous to the environment given		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliances intending to be supplied from a detachable supply unit for the purposes of recharging the battery, the type reference of the detachable supply unit is stated along with the following:		N
	WARNING: For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance		N
	If the symbol for detachable supply unit is used, its meaning is explained		N
7.15	Markings placed on the part of the appliance connected to the supply mains		N
	The type reference of the detachable supply unit is placed in close proximity to the symbol		N
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment		N
	If the appliance can be operated without batteries, double or reinforced insulation required		N
11.7	The battery is charged for the period stated in the instructions or 24 h ..... :		N
11.8	Temperature rise of the battery surface does not exceed the limit in the battery manufacturer's specification; measured (K); limit (K) ..... :		N
	If no limit specified, the temperature rise does not exceed 20 K; measured (K) ..... :		N
19.1	Appliances subjected to tests of 19.B.101, 19.B.102 and 19.B.103		N
19.10	Not applicable		N
19.B.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N
19.B.102	For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged,		N
19.B.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N
19.13	The battery does not rupture or ignite		N
21.B.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being:		N
	- 100, if the mass of the part does not exceed 250 g (g) ..... :		N
	- 50, if the mass of the part exceeds 250 g ..... :		N
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts		N
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N
	For other parts, 30.2.2 applies		N
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		--
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N
	The value of *p* in Table C.1 is 2000 (IEC 60335-2-9)		N
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		--
	Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard		N
	Test conditions as specified		N
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		--
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		N
7	Severities		N
	The duration of application of the test flame is 30 s ± 1 s		N
9	Test procedure		N
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
9.2	The first paragraph does not apply		N
	If possible, the flame is applied at least 10 mm from a corner		N
9.3	The test is carried out on one specimen		N
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N
11	Evaluation of test results		N
	The duration of burning not exceeding 30 s		N
	However, for printed circuit boards, the duration of burning not exceeding 15 s		N
F	ANNEX F (NORMATIVE) CAPACITORS		--
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		N
1.5	Terms and definitions		N
1.5.3	Class X capacitors tested according to subclass X2		N
1.5.4	This subclause is applicable		N
1.6	Marking		N
	Items a) and b) are applicable		N
3.4	Approval testing		N
3.4.3.2	Table 3 is applicable as described		N
4.1	Visual examination and check of dimensions		N
	This subclause is applicable		N
4.2	Electrical tests		N
4.2.1	This subclause is applicable		N
4.2.5	This subclause is applicable		N
4.2.5.2	Only table 11 is applicable		N
	Values for test A apply		N
	However, for capacitors in heating appliances the values for test B or C apply		N
4.12	Damp heat, steady state		N
	This subclause is applicable		N
	Only insulation resistance and voltage proof are checked		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
4.13	Impulse voltage		N
	This subclause is applicable		N
4.14	Endurance		N
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable		N
4.14.7	Only insulation resistance and voltage proof are checked		N
	No visible damage		N
4.17	Passive flammability test		N
	This subclause is applicable		N
4.18	Active flammability test		N
	This subclause is applicable		N
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		--
	The following modifications to this standard are applicable for safety isolating transformers:		N
7	Marking and instructions		N
7.1	Transformers for specific use marked with:		N
	-name, trademark or identification mark of the manufacturer or responsible vendor ..... :		N
	-model or type reference ..... :		N
17	Overload protection of transformers and associated circuits		N
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N
22	Construction		N
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N
29	Clearances, creepage distances and solid insulation		N
29.1, 29.2, 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N
	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances		N
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	For safety isolating transformers subjected to periodic voltages with a frequency exceeding 30 kHz, the clearances, creepage distances and solid insulation values specified in IEC 60664-4 are applicable, if greater than the values specified in items 2a, 2c and 3 in table 13 of IEC 61558-1		N
H	ANNEX H (NORMATIVE) SWITCHES		--
	Switches comply with the following clauses of IEC 61058-1, as modified below:		N
	The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N
	Before being tested, switches are operated 20 times without load		N
8	Marking and documentation		N
	Switches are not required to be marked		N
	However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N
13	Mechanism		N
	The tests may be carried out on a separate sample		N
15	Insulation resistance and dielectric strength		N
15.1	Not applicable		N
15.2	Not applicable		N
15.3	Applicable for full disconnection and micro-disconnection		N
17	Endurance		N
	Compliance is checked on three separate appliances or switches		N
	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless		N
	otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335 ..... :		N
	Switches for operation under no load and which can be operated only by a tool, and		N
	switches operated by hand that are interlocked so that they cannot be operated under load,		N
	are not subjected to the tests		N
	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1		N
	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K)..... :		N
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		N
	This Clause 20 is applicable to clearances across full disconnection and micro-disconnection and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24		N
	It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24		N
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		--
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		N
8	Protection against access to live parts		N
8.1	Metal parts of the motor are considered to be bare live parts		N
11	Heating		N
11.3	The temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N
11.8	The temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N
16	Leakage current and electric strength		N
16.3	Insulation between live parts of the motor and its other metal parts is not subjected to the test		N
19	Abnormal operation		N
19.1	The tests of 19.7 to 19.9 are not carried out		N
19.I.101	Appliance operated at rated voltage with each of the following fault conditions:		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N
	- short circuit of each diode of the rectifier		N
	- open circuit of the supply to the motor		N
	- open circuit of any parallel resistor, the motor being in operation		N
	Only one fault simulated at a time, the tests carried out consecutively		N
22	Construction		N
22.I.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N
	Compliance checked by the tests specified for double and reinforced insulation		N
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		--
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		N
5.7	Conditioning of the test specimens		N
	When production samples are used, three samples of the printed circuit board are tested		N
5.7.1	Cold		N
	The test is carried out at -25 °C		N
5.7.3	Rapid change of temperature		N
	Severity 1 is specified		N
5.9	Additional tests		N
	This subclause is not applicable		N
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		--
	The information on overvoltage categories is extracted from IEC 60664-1		N
	Overvoltage category is a numeral defining a transient overvoltage condition		N
	Equipment of overvoltage category IV is for use at the origin of the installation		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		N
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		--
	Information for the determination of clearances and creepage distances		P
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		--
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		--
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		--
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		--
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		P
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		--
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		P
7	Test apparatus		--
7.3	Test solutions		P
	Test solution A is used		P
10	Determination of proof tracking index (PTI)		--
10.1	Procedure		P
	The proof voltage is 100V, 175V, 400V or 600V.. :		P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N
10.2	Report		--
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		P
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		--
	Description of tests for determination of resistance to heat and fire		P
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		--
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WDaE		N
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WdaE, if liable to be connected to a supply mains that excludes the protective earthing conductor		N
5.7	The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
7.1	The appliance marked with the letters WDaE		N
7.12	The instructions state that the appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA		N
	The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries		N
11.8	The values of Table 3 are reduced by 15 K		N
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N
15.3	The value of t is 37 °C		N
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):		N
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		N
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		--
	Description of tests for appliances incorporating electronic circuits		N
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		--
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex		N
R.1	Programmable electronic circuits using software		N
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 constructed so that the software does not impair compliance with the requirements of this standard		N
R.2	Requirements for the architecture		N
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety-related segments of the software		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:		N
	- single channel with periodic self-test and monitoring		N
	- dual channel (homogenous) with comparison		N
	- dual channel (diverse) with comparison		N
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures:		N
	- single channel with functional test		N
	- single channel with periodic self-test		N
	- dual channel without comparison		N
R.2.2	Measures to control faults/errors		N
R.2.2.1	When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area		N
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison		N
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths		N
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate		N
R.2.2.5	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, detection of a fault/error occur before compliance with clause 19 and 22.115 is impaired (IEC 60335-2-9)		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
R.2.2.6	The software is referenced to relevant parts of the operating sequence and the associated hardware functions		N
R.2.2.7	Labels used for memory locations are unique		N
R.2.2.8	The software is protected from user alteration of safety-related segments and data		N
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 and 22.115 is impaired (IEC 60335-2-9)		N
R.3	Measures to avoid errors		N
R.3.1	General		N
	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the following measures to avoid systematic fault in the software are applied		N
	Software that incorporates measures used to control the fault/error conditions specified in table R.2 is inherently acceptable for software required to control the fault/error conditions specified in table R.1		N
R.3.2	Specification		N
R.3.2.1	Software safety requirements:	Software Id:	N
	The specification of the software safety requirements includes the descriptions listed		N
R.3.2.2	Software architecture		N
R.3.2.2.1	The specification of the software architecture includes the aspects listed - techniques and measures to control software faults/errors (refer to R.2.2); - interactions between hardware and software; - partitioning into modules and their allocation to the specified safety functions; - hierarchy and call structure of the modules (control flow); - interrupt handling; - data flow and restrictions on data access; - architecture and storage of data; - time-based dependencies of sequences and data	Document ref. No:	N
R.3.2.2.2	The architecture specification is validated against the specification of the software safety requirements by static analysis		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
R.3.2.3	Module design and coding		N
R.3.2.3.1	Based on the architecture design, software is suitably refined into modules		N
	Software module design and coding is implemented in a way that is traceable to the software architecture and requirements		N
R.3.2.3.2	Software code is structured		N
R.3.2.3.3	Coded software is validated against the module specification by static analysis		N
	The module specification is validated against the architecture specification by static analysis		N
R.3.3.3	Software validation		N
	The software is validated with reference to the requirements of the software safety requirements specification		N
	Compliance is checked by simulation of:		N
	- input signals present during normal operation		N
	- anticipated occurrences		N
	- undesired conditions requiring system action		N
S	ANNEX S (NORMATIVE) BATTERY OPERATED APPLIANCES POWERED BY BATTERIES THAT ARE NON-RECHARGEABLE OR NOT RECHARGED IN THE APPLIANCE		--
	The following modifications to this standard are applicable for battery-operated appliances where the batteries are either non-rechargeable (primary batteries), or		N
	rechargeable batteries (secondary batteries) that are not recharged in the appliance		N
5.8.1	If the supply terminals for the connection of the battery have no indication of polarity, the more unfavourable polarity is applied		N
5.S.101	Appliances intended for use with a battery box are tested with the battery box supplied with the appliance or with the battery box recommended in the instructions		N
5.S.102	Appliances are tested as motor-operated appliances.		N
7.1	Appliances marked with the battery voltage (V) and the polarity of the terminals, unless..... ..... :		N
	the polarity is irrelevant		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances also marked with:		--
	– name, trade mark or identification mark of the manufacturer or responsible vendor..... ..... :		N
	– model or type reference .... :		N
	– IP number according to degree of protection against ingress of water, other than IPX0 .. .. :		N
	– type reference of battery or batteries .... :		N
	If relevant, the positive terminal is indicated by the symbol IEC 60417-5005 and the negative terminal by the symbol IEC 60417-5006		N
	If appliances use more than one battery, they are marked to indicate correct polarity connection of the batteries		N
7.6	Additional symbols		N
7.12	The instructions contain the following, as applicable:		--
	– the types of batteries that may be used .. .. :		N
	– how to remove and insert the batteries		N
	– non-rechargeable batteries are not to be recharged		N
	– rechargeable batteries are to be removed from the appliance before being charged		N
	– different types of batteries or new and used batteries are not to be mixed		N
	– batteries are to be inserted with the correct polarity		N
	– exhausted batteries are to be removed from the appliance and safely disposed of		N
	– if the appliance is to be stored unused for a long period, the batteries are removed		N
	– the supply terminals are not to be short-circuited		N
11.5	Appliances are supplied with the most unfavourable supply voltage between		--
	– 0,55 and 1,0 times the battery voltage, if the appliance can be used with non-rechargeable batteries		N
	– 0,75 and 1,0 times battery voltage, if the appliance is designed for use with rechargeable batteries only		N
	The values specified in Table S.101 for the internal resistance per cell of the battery is taken into account		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
19.1	The tests are carried out with the battery fully charged unless otherwise specified		N
19.13	The battery does not rupture or ignite		N
19.S.101	Appliances are supplied with the voltage specified in 11.5. The supply terminals having an indication of polarity are connected to the opposite polarity, unless		N
	such a connection is unlikely to occur due to the construction of the appliance		N
19.S.102	For appliances with provision for multiple batteries, one or more of the batteries are reversed and the appliance is operated, if reversal of batteries is allowed by the construction		N
25.5	The flexible leads or flexible cord used to connect an external battery or battery box in is connected to the appliance by a type X attachment		N
25.13	This requirement is not applicable to the flexible leads or flexible cord connecting external batteries or a battery box with an appliance		N
25.S.101	Appliances have suitable means for connection of the battery. If the type of battery is marked on the appliance, the means of connection is suitable for this type of battery		N
26.5	Terminal devices in an appliance for the connection of the flexible leads or flexible cord connecting an external battery or battery box are so located or shielded that there is no risk of accidental connection between supply terminals		N
30.2.3.2	There is no battery in the area of the vertical cylinder used for the consequential needle flame test, unless		N
	the battery is shielded by a barrier that meets the needle flame test of Annex E, or		N
	that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N
T	**ANNEX T (NORMATIVE) UV-C RADIATION EFFECT ON NON-METALLIC MATERIALS**		--
	Requirements for non-metallic materials subject to direct or reflected UV-C radiation exposure and whose mechanical and electrical properties are relied upon for compliance with the		N
	Does not apply to glass, ceramic and similar materials		N

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Tested as specified in ISO 4892-1 and ISO 4892-2, with the following modifications:		N
	Modifications to ISO 4892-1:		N
5.1.6	The UV-C emitter is a low pressure mercury lamp with a quartz envelope having a continuous spectral irradiance of 10 W/m2 at 254 nm		N
	Subclause 5.1.6.1 and Table 1 are not applicable		N
5.2.4	The black-panel temperature shall be 63 °C +/- 3 °C		N
5.3.1	Humidification of the chamber air is specified in part 2 when necessary		N
9	This clause is not applicable		N
	Modifications to ISO 4892-2:		N
7.1	At least three test specimens are tested		N
	Ten samples of internal wiring is tested		N
7.2	The specimens are attached to the specimen holders such that they are not subject to any stress		N
7.3	Apparatus prepared as specified		N
	The test specimens and, if used, the irradiance-measuring instrument are exposed for 1 000 h		N
7.4	If used, a radiometer is mounted and calibrated such that it measures the irradiance at the exposed surface of the test specimen		N
7.5	Material properties and test methods for parts providing mechanical support or impact resistance as specified in Table T.1		N
	Material properties and test method for electrical insulation of internal wiring as specified in Table T.2		N
8	This clause is not applicable		N

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	Δ P	Required Δ P	Remark
AC230V, 50Hz	1350W	1285W	-4.8%	+5%, -10%	P
AC230V, 60Hz	1350W	1309W	-3.1%	+5%, -10%	P
Supplementary information:					

10.2	TABLE: Current deviation				N
Current deviation of/at:	I rated (A)	I measured (A)	Δ I	Required Δ I	Remark
Supplementary information:					

11.8	TABLE: Heating test		P
	Test wattage (W) ..... :	1.15x 1350=1552.5W	—
	Ambient, t1 (°C) ..... :	24.0	—
	Ambient, t2 (°C) ..... :	24.1	—

Thermocouple locations	Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)
Supply cord insulation	19.6	50
Test corner	12.2	65
Fan motor winding / Motor bobbin	77.5	115(Class 155)/Clause 30.1
Internal enclosure	50.4	Clause 30.1
Motor lead wire	61.7	155(T180-25)
Internal wire	52.1	155(T180-25)
NTC lead wire	64.6	175(T200-25)
Ribbon cable	43.4	55(T80-25)
Ambient of non-self-resetting thermal cut-out	81.7	For reference
Centre of container	159.0	For reference
PCB	3.5	120
X2 capacitor	43.3	60(T85-25)
Varistor	45.5	60(T85-25)
Relay	45.8	60(T85-25)
Control panel	10.8	Clause 30.1
Plastic enclosure (hottest point, inside)	38.9	Clause 30.1
Top cover	30.3	Clause 30.1

Bottom cover	23.6	Clause 30.1
Ambient of Biased-off switch	43.7	100(T125-25)
Air outlet grille	64.3	Clause 30.1
Handle of container	14.6	60
Supplementary information:		

11.8	TABLE: Heating test, resistance method					P
	Test voltage (V) ..... :		254.4			—
	Ambient, t1 (°C) ..... :		24.4			—
	Ambient, t2 (°C) ..... :		24.3			—
Temperature rise of winding	R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class	
Fan motor winding	282.6	350.3	62.3	115	Class 155	
Supplementary information:						

13.2	TABLE: Leakage current		P
	Heating appliances: 1.15 x rated input (W) ..... :	1.15x 1350=1552.5W	—
	Motor-operated and combined appliances: 1.06 x rated voltage (V) ..... :	--	—
Leakage current between	I (mA)	Max. allowed I (mA)	
Live part and accessible plastic parts	0.01	0.25	
Live part and earthed metal parts	0.01	0.75	
Supplementary information:			

13.3	TABLE: Dielectric strength		P
Test voltage applied between:	Test potential applied (V)	Breakdown / flashover (Yes/No)	
Live part and earthed metal parts	1250	No	
Live part and accessible plastic parts	3000	No	
Supplementary information:			

14	TABLE: Transient overvoltages					N
Clearance between:	Cl (mm)	Required Cl (mm)	Rated impulse voltage (V)	Impulse test voltage (V)	Flashover (Yes/No)	
Supplementary information:						

16.2	TABLE: Leakage current		P
	Single phase appliances: 1.06 x rated voltage (V) ..... :	240x1.06=254.4V	—
	Three phase appliances 1.06 x rated voltage divided by √3 (V) ..... :	--	—

Leakage current between	I (mA)	Max. allowed I (mA)
Live part and accessible plastic parts	0.01	0.25
Live part and earthed metal parts	0.01	0.75
Supplementary information:		

16.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
Live part and earthed metal parts		1250	No
Live part and accessible plastic parts		3000	No
Supply cord and accessible metal parts		1250	No
Supplementary information:			

19	Abnormal operation conditions						P
Operational characteristics			YES/NO	Operational conditions			
Are there electronic circuits to control the appliance operation?			--				
Are there “off” or “stand-by” position?			--				
The unintended operation of the appliance results in dangerous malfunction?			--				
Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result
19.2				N.A			P
19.3							P
19.4							P
19.5							P
19.6				N.A			N
19.7	Lock motor						P
19.8							N
19.9							P
19.10							N
19.11.2							P

19.11.4.8							P
19.10X							N
Supplementary information:							

19.7	TABLE: Abnormal operation, locked rotor/moving parts					P
	Test voltage (V)..... :	240				—
	Ambient, t1 (°C)..... :	23.6				—
	Ambient, t2 (°C)..... :	22.2				—
Temperature of winding		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
Fan motor winding		288.6	371.2	--	97.5	240
Supplementary information:						

19.9	TABLE: Abnormal operation, running overload					P
	Test voltage (V)..... :	240				—
	Ambient, t1 (°C)..... :	23.2				—
	Ambient, t2 (°C)..... :	23.0				—
Temperature of winding		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
Fan motor winding		150.9	193.1	--	81.2	200
Supplementary information:						

19.13	TABLE: Abnormal operation, temperature rises			P
Thermocouple locations	Max. temperature rise measured, Δ T (K)			Max. temperature rise limit, Δ T (K)
	19.2	19.3	19.4	
Supply cord insulation	16.0	18.9	25.6	150
Test comer	8.3	11.3	13.6	150
Plastic enclosure	44.5	49.1	57.7	Clause 30.1
Top cover	39.2	44.9	51.2	Clause 30.1
Bottom cover	17.9	22.9	36.2	Clause 30.1
Internal enclosure	76.8	84.8	106.1	Clause 30.1
Air outlet grille	110.2	115.0	97.5	Clause 30.1
Fan motor winding	--	--	101.5℃	240℃(class 155)
Supplementary information:				

21.1	TABLE: Impact resistance	P

Impacts per surface	Surface tested	Impact energy (Nm)	Comments
3	Plastic enclosure	0.5	P
3	Top cover	0.5	P
3	Air outlet grille	0.5	P
Supplementary information:			

24.1	TABLE: Critical components information				P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Plug	Ching Cheng Wire Material Co Ltd	EL-210	13A 250V~	BS1363	KM39096
Alt	DONGGUAN KUNZE ELECTRONICS CO LTD	KE-302	10A 250V	UL1691	UL E330321
Alt	Foshan Shunde Tianju Electrical Appliance Ind. Co., Ltd.	TJ-03	16A 250V~	DIN VDE 0620-2-1	VDE 40007971
Alt	United Nations University Yip's Electrical (Shenzhen) Co., Ltd.	9518	13A 250V~	BS1362	ASTA 1300
Alt	United Nations University Yip's Electrical (Shenzhen) Co., Ltd.	9518	13A 250V~	SS145 :Part 1:2010	141881-12
Alt	FOSHAN ANDEN INDUSTRIAL CO LTD	DL203	13A 250V~	MS 589-1:2011	PC003697
Alt	Goldland Lnternational Pte Ltd	A168	13A 250V～	BS1363	070638-12
Alt	Foshan Anden Industry Co..Lltd	DL-013	13A 250V～	BS1363	KM 69826
Alt	Zhongshan City Xiangmeng Electric Co..Lltd	XM-013	13A 250V～	BS1363	4307540.01

Alt	Zhongshan Guzhen Tengxiang Wires & Cables Factory,	GZ-2S-D	250VAC 16A	IEC 60227-5	VDE 40024879
Alt	Jiangmen Brothers Wire & Cable Co., Ltd	XD-88	250VAC 13A	BS 1363-1	ASTA : 1410
Alt	Jiangmen Brothers Wire & Cable Co., Ltd	XD-302	250VAC 16A	KC60884-1(2015-07)	SU04269-20002
Alt	Jiangmen Brothers Wire & Cable Co., Ltd	XD-302	250VAC 16A	DIN VED 0620-2-1 IEC 60884-1	VDE40052402
Alt	GUANGDONG HUASHENG ELECTRICAL APPLIANCES CO., LTD.	CT-109	10A 250V	CEI 23-50 - II Ed. 2007 + V1:2008 + V2:2011	CA02.02637
Alt	JIANGMEN BROTHERS WIRE & CABLE CO., LTD.	XD-305	10A 250V	ABNT NBR NM 60884-1:2010	TÜV 23.0316
Alt	Foshan Shunde Tianju Electrical Appliance Ind. Co., Ltd.	TJ-009、TJ-007	10A 250V~	GB/T1002; GB/T2099.1; IEC 60884-1	20030102010 30478
Alt	ZHONGSHAN CITY WEIFENG ELECTRIC APPLIANCE CO.,LTD	WF-310B	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20130102016 10851
Alt	Zhongshan ChuangHong Cable Manufacturer Co., Ltd.	T3-10	10A 250V	GB/T1002; GB/T2099.1; IEC 60884-1	20040102011 14879
Alt	Zhongshan Guanling Hardware Electrical Appliance Co., Ltd.	GL-10	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20080102012 98357
Alt	Zhongshan Qiangli Electrical Factory Co., Ltd.	QL-026	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20140102017 46171

Alt	YUYAO SENHAO CABLE CO.,LTD	PSB-10D	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20140102017 41041
Alt	Foshan Shunde Ronggui Junhui Wire & Cable Factory	T3-10	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20030102010 36334
Alt	Guangdong Yongneng Cable Co., Ltd.	SP03	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20020102010 07987
Alt	ZHONGSHAN NANTOU YAOSHI RONGGUANG HARDWARE & ELECTRICAL APPLIANCE ACCESSORIES FACTORY	GM-310	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20110102014 90726
Alt	ZHONGSHAN GUANGXIONG ELECTRIC MANUFACTORY CO.,LTD	PSB-10	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20080102013 13352
Alt	FOSHAN SHUNDE PENGLONG ELECTRIC APPLIANCE INDUSTRY CO.,LTD	PL3-10	10A 250V~	GB/T1002; GB/T2099.1; IEC 60884-1	20040102011 20627
Alt	ZHONGSHAN GUZHEN TENGXIANG ELECTRICAL WIRE & CABLE FACTORY	TX-02	10A 250V～	GB/T1002; GB/T2099.1; IEC 60884-1	20040102011 03563
Power cord	Foshan Shunde Tianju Electrical Appliance Ind. Co., Ltd.	H05VV-F H03VV-F	3×0.75mm	EN50525-2-11	VDE400075 40
Alt	Sinofair (Hong Kong) Ltd.	H05VV-F H03VV-F	3×0.75mm2	IEC 60227-5	VDE125483
Alt	Zhongshan Xiaolan Xinghui Electric Manufacturing Factory	H05VV-F H03VV-F	3×0.75mm2	IEC 60227-5	VDE400361 10

Alt	Zhongshan Guzhen Tengxiang Wires & Cables Factory,	H05VV-F	3×0.75mm²	IEC 60227-5	VDE 30017286
Alt	Jiangmen Brothers Wire & Cable Co., Ltd	H05VV-F	3×0.75mm²	IEC 60227-5	ASTA : 22631
Alt	Jiangmen Brothers Wire & Cable Co.,Ltd.	H05VVH2-F	3x0.75mm²	IEC 60227-5	TUV23.0320
Alt	Jiangmen Brothers Wire & Cable Co.,Ltd.	H05VV-F	3x0.75mm²	IEC 60227-5	TÜV 23.0321
Alt	Guangdong Hongshanchuan Electronic Technology Co..Ltd.	H05VV-F	3x0.75mm²	DIN EN 50525-2-11	VDE40037206
Alt	Jiangmeng Brothers Wire & Cable Co., Ltd.	H05VV-F	3x0.75mm²	SU01191-19002	NSW28169
Alt	Zhongshan Guzhen Tengxiang Electrical Wire & Cable Factory	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20030101050 28236
Alt	Foshan Shunde Tianju Electrical Appliance Ind. Co., Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20030101050 30537
Alt	ZHONGSHAN CITY WEIFENG ELECTRIC APPLIANCE CO.,LTD	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20080101052 90053
Alt	Zhongshan ChuangHong Cable Manufacturer Co., Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20040101051 15237
Alt	Zhongshan Guanling Hardware Electrical Appliance Co., Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20090101053 19223
Alt	Zhongshan Qiangli Electrical Factory Co., Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20130101055 94604

Alt	YUYAO SENHAO CABLE CO.,LTD	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60245-4	20140101056 93712
Alt	Foshan Shunde Ronggui Junhui Wire & Cable Factory	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60245-4	20090101053 22801
Alt	Guangdong Yongneng Cable Co., Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20020101050 25809
Alt	Zhongshan Nantou JiuPai Electric Wire Factory	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20180101050 40163
Alt	ZHONGSHAN GUANGXIONG ELECTRIC MANUFACTORY CO.,LTD	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20080101053 17799
Alt	FOSHAN SHUNDE PENGLONG ELECTRIC APPLIANCE INDUSTRY CO.,LTD	60227 IEC 53(RVV) 300/500V	3×0.75mm2	GB/T 5013.4 IEC 60227-5	20040101051 20827 Tested With Appliance
Alt	Zhongshan Guzhen Tengxiang Electrical Wire & Cable Factory	60227 IEC 53(RVV) 300/500V	3×0.75mm2	GB/T 5013.4 IEC 60227-5	20030101050 28236
Alt	Guangdong Detong Electric Wire & Cable Co., Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm2	GB/T5023.5-2008/IEC60227-5:2003	20170101050 29413
Alt	ZHONGSHAN CITY MEIJING ELECTRIC APPLIANCE CO.,LTD	60227 IEC 53(RVV) 300/500V	3×0.75mm2	GB/T5023.5-2008/IEC60227-5:2003	20080101053 05132
Alt	Zhongshan Xufeng Electric Technology Co.,Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm2	GB/T5023.5-2008/IEC60227-5:2003	20210101053 76700

Sub-miniature fuse-links	Dongguan Chevron Electronic Technology Co., Ltd.	SET	T3.15A 250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	CQC2019010207174851
Alt	DONGGUAN REOMAX ELECTRONICS TECHNOLOGY CO., LTD.	SET	T3.15AL a.c. 250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	CQC20012237230
Alt	Xucheng Electronics (Shenzhen) Co., Ltd.	5TE	T3.15A250V T5A250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	2020970207000073
Alt	Honghu Bluelight Electronic Co., Ltd.	L5CT	T10AH250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	CQC2011010207487490
Alt	Shenzhen Lanson Electronics Co.,Ltd.	SMT	T3.15A250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	2020970207000101
Alt	Dongguan Better Electronics Technology Co., Ltd.	932	T3.15AL250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	2020970207000039
Alt	Dongguan Better Electronics Technology Co., Ltd.	331	F6.3AL250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	2020970207000043

Alt	Dongguan Better Electronics Technology Co., Ltd.	332	T6.3AL250V	GB9364.1 IEC60127-2	: 202097020700044
Relay	Sanyou Corporation Limited	SRD-S-112DM	7A 250VAC	GB/T21711.1-2008 IEC61810-1 IEC 60730-1	CQC02001002126
Alt	Ningbo City Zhenhai Sheng Haiwei Electronic Company Ltd	JQC-3FF	7A 250VAC	GB/T21711.1-2008 IEC61810-1 IEC 60730-1	CQC07001019643
Alt	Ningbo Boyue Electronics Co., Ltd.	HT3F	10A 250VAC	GB/T21711.1-2008 IEC61810-1 IEC 60730-1	CQC17002175984
Alt	ZHEJIANG HKE RELAY CO.，LTD	HRS4H-S-DC12V	10A 250VAC	GB/T21711.1-2008 IEC61810-1 IEC 60730-1	CQC08002027614
Alt	XIAMEN HONGFA ELECTROACOUSTIC CO.,LTD	HF115F(JQX-115F)	16A 250VAC	GB/T21711.1-2008 IEC61810-1 IEC 60730-1	CQC08002028130
Alt	WangRong Electronics (Shenzhen) Co., Ltd	RB-112DMF5	277VAC,16A 12VDC	GB/T21711.1-2008 IEC61810-1 IEC 60730-1	CQC12002086471
Alt	Sanyou Corporation Limited	SRD、SRDV	10A 250VAC	GB/T21711.1-2008 IEC61810-1 IEC 60730-1	CQC02001002126
Alt	SHENGZHEN GOLDEN ELECTRICAL APPLIANCES CO., LTD	GH-1A-5L	10A 250V	GB/T 9364.3-2018; GB/T9364.1-2015 IEC60127-1 IEC60127-3	CQC09002028357
Alt	Zhongshan HongZhiTai Electric Appliances Co,.Ltd	C801-1A-5L	10A 277VAC	GB/T 21711.1-2008 IEC60127-1 IEC60127-3	CQC16002148424

Alt	SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO,.LTD.	GH-1A-5L	10A 277VAC	GB/T 21711.1-2008 IEC60127-1 IEC60127-3	CQC17002173709
Alt	SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO,.LTD.	GH-1A-5L	12A 250VAC、10A 250VAC	GB/T 21711.1-2008 IEC60127-1 IEC60127-3	CQC14002105590
Micro Switch	LECI ELECTRONICS CO., LTD.	MS801	16A 250VAC μ 1E4 T125	EN IEC 61058-1:2018 EN 60158-1-1:2016	TUV R 502829460002
Alt	LECI ELECTRONICS CO., LTD.	PS102、PS102B	6(4)A 250V T105	IEC/EN 61058-1 ANSI/UL 61058-1	TUV R 50282216
Alt	YUEQING SIYING ELECTRONICS CO.,LTD.	MS1	10A/20A 250VAC T85	EN 61058-1:2002+A2 IEC 61058-1	TUV R 50379654
Alt	LECI Electronics Co., Ltd.	MS801	16A 250VAC μ 1E4 T85	GB/T15092.1-2010 EN 60158-1	CQC05002013690
Alt	DongNan Electronics Co.,LTD	KW3A	16(4)A 250V T105	GB/T15092.1-2010 EN 60158-1	CQC04002011514
Alt	DONGNAN ELECTRONICS CO.,LTD	MS10-16	16(4)A 125VAC/250V T105	GB/T15092.1-2010 EN 60158-1	CQC10002048742
Alt	Guangdong Hushun Electric Appliance Co., Ltd.	LXW-16-2-3	16A 250V T125	GB/T15092.1-2010 EN 60158-1	CQC05002014897
Alt	Yueqing Luster Electronics Co., Ltd	KAP-01-2	15A 250VAC T85/55	GB/T15092.1-2010 EN 60158-1	CQC10002047027
Alt	Guangdong Yushun Electric Appliance Ltd	KW-16	16A 250V T125	GB/T15092.1-2010 EN 60158-1	CQC10002044165
Alt	Tongde Electronics Electric Appliances Co., Ltd.	KW-16	16A 250VAC T105	GB/T15092.1-2010 EN 60158-1	CQC10002051289

Alt	Foshan Shunde Shuda Electric Appliance Co., Ltd	KW-16	16A 125/250VA 50/60Hz T125 3E4	GB/T15092.1-2010 EN 60158-1	CQC16002152789
Alt	Foshan Shunde Shuda Electric Appliance Co., Ltd	KW-5	10.1(4)A 125/250VAC 10(4)A 125/250VAC 10A 125/250VAC 50/60Hz T125 3E4	GB/T15092.1-2010 EN 60158-1	CQC16002152788
Alt	Yueqing City Siying Electronic Co.,Ltd.	MS1	16(8)A 250VAC, 16(4)A 250VAC T105 5E4；10A 250VAC T105 5E4	GB/T15092.1-2010 EN 60158-1	CQC17002167721
Motor	Guangdong Shunde Honglong Electric Industrial Co., Ltd.	SP6013-502	220V 3.5W Class H	GB/T12350-2009 IEC 60335-1 IEC 60335-2-9	Self-declaration code: 2020980401001167 Tested With Appliance
Alt	Zhongshan Yongba Electric Technology Co., Ltd.	YB63-14	3.5W 220V~ 50Hz H	GB/T12350-2009 IEC 60335-1 IEC 60335-2-9	Self-declaration code: 2023000401000244
Alt	Foshan Shunde District Yiping Motor Co., Ltd	YPG-30	3W 220V~ 50Hz H	GB/T12350-2009 IEC 60335-1 IEC 60335-2-9	Self-declaration code: 2022000401000036
Thermal Links	ZHONG SHAN SHENG PING THERMAL PROTECTORS CO.,LTD	RY172	Tf:172℃ 10A 250V～	GB9816.1 IEC 60691	Self-declaration code: 2020980205000151
Electrical Heater Tube	Foshan Shunde YouShun Electric Co., Ltd.	YS	220V～1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC12002071203 Tested With Appliance
Alt	ZhongShan jin Zhong Electrical Technology Limited	RGQ	220V～ 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC17002163494 Tested With Appliance
Alt	Shunde Foshan yaojia Electric Appliances Co., Ltd	YJ	220V～1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC12002079916 Tested With Appliance

Alt	Shunde Foshan yaojia Electric Appliances Co., Ltd	RGQ	220V-240VAC 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC14002106728 Tested With Appliance
Alt	Foshan City Shunde District DONGNIKE Electric Appliance Co.,LTD	RGQ	220V-240VAC 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC17002184522 Tested With Appliance
Alt	Foshan Shunde Jinhan Electric Technology Co. Ltd.	JH	220V-240VAC 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC16002143155 Tested With Appliance
Alt	Yuhua Electric Appliances Limited Company Zhaoqin	RGQ	220V～1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC16002140766 Tested With Appliance
Alt	Zhongshan JINZHEN Electrical Co., Ltd.	JZB	220V～ 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC16002153094 Tested With Appliance
Alt	QINGYUAN XINGMAO ELECTRICAL CO.,LTD	XM	220-240VAC 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC11002061765 Tested With Appliance
Alt	Zhongshan Wensheng Electric Co., Ltd.	WS	220VAC-240VAC 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC20002274858 Tested With Appliance
Alt	Zhongshan Angtale Electric Appliance Co., Ltd.	RGQ	220-240VAC 50Hz 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC15002137337 Tested With Appliance
Alt	Foshan Shunde JinHuiShun Electric Heating Material Co.,Ltd	KLD	220VAC-240VAC 50Hz 、1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC10002050972 Tested With Appliance
Alt	Zhongshan Qire Electrical Appliance Co.,Ltd.	QK	1350W 220V~	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC18002199927 Tested With Appliance
Alt	Zhongshan Kanglida Electric Co., Ltd.	KLD	1350W 220V~	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC19002235807 Tested With Appliance

Alt	zhongshan ketian five metals products CO.,Ltd	KT	1350W 220-240V~	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC17002161761 Tested With Appliance
Alt	Foshan City GaoMing GaoSheng Aluminum Co.,Ltd.	GS	1350W 220-240V~	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC21002290064 Tested With Appliance
Alt	Zhongshan Jinmeitong Electrical Appliance Co., Ltd.	JMT	1350W 220V～	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC20002271366
Alt	ZHONGSHAN CITY JINFA ELECTRICAL APPLIANCE FACTORY	JF	1350W 220V～	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC16002141389
Lamp holder	Zhongshan Yingda Electric Co., Ltd.	YD901A	250V 2A T250	IEC 60335-1 IEC 60335-2-9	Tested With Appliance
internal wiring	Zhongshan Bozhan Electrical Appliance Accessories Co., Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2013010104637942
Alt	ZHONGSHAN SAN JIN ELECTRIC APPLIANCE CO., LTD.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2013010104633878
Alt	Foshan Shunde Zhenglang Metal Ware Electric Apparatus Co., Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2009010104348928
Alt	Jiangyin Tianqi Silicone Rubber Products Co., Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2003010104099695

Alt	Zhongshan Hualan Electronic Co.,Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2007010104236471
Alt	SHENZHEN MYSUN INSULATION MATERIALS CO., LTD	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2008010104308753
Alt	Jiangyinshi Tiancheng Electronic & Electric Wire Co., Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2010010104405656
Alt	Shenzhen Qifurui Electronics Co., Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2002010104000754
Alt	Zhongshan PingWang electric appliance co., LTD	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2016010104843246
Alt	GUANGDONG YONGRUI CABLE TECHNOLOGY CO., LTD	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2016010104894820
Alt	Dongguan Nistar Transmitting Technology Co.,Inc.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2010010104410561
Alt	Jiangyin Tianqi Silicone Rubber Products Co., Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	2003010104099695

Alt	Jiangyin Zhijun Appliance Electric Cable and Wire Co.,Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20050101041 44267
Alt	ZHONGSHAN CITY MINGLIANG WIRE CO LTD	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20170101049 40612
Alt	Zhongshan Kaiyi Cable Technology Co. Ltd..	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20190101042 67689
Alt	ZHONGSHAN SEN TE WIRE & CABLE CO LTD	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20180101040 91786
Alt	Zhongshan City Dingxiang Electrical Appliance Co., Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20140101047 05971
Alt	Dongfeng town, zhongshan city of bo Yao electrical appliance factory	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20200102042 89936
Alt	Jiangyin Shengde Special Wire & Cable Co.,Ltd	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20030101040 99654
Alt	Zhongshan Kaiyi Cable Technology Co. Ltd..	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20190101042 67689

Alt	Zhongshan Boyu Wire Co.Ltd.	60245 IEC 03(YG) 300/500V	0.5mm2、0.75mm2 、1.0mm2 、1.5mm2 180℃	GB/T5013.3-2008 IEC60245-3 IEC 60335-1 IEC 60335-2-9	20180101040 87918 Tested With Appliance
Alt	GUANGDONG YONG RUI CABLE TECHNOLOGY CO LTD	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E204893 Tested With Appliance
Alt	GUANGZHOU JINYING SPECIAL WIRE FACTORY	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E192725 Tested With Appliance
Alt	ZHONGSHAN CITY MINGLIANG WIRE CO LTD	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E476592 Tested With Appliance
Alt	ZHONGSHAN Pinwang Electric CO LTD	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E516112 Tested With Appliance
Alt	Zhongshan City Boyu Wire Co Ltd	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E314089 Tested With Appliance
Alt	FOSHAN CITY SHUNDE ZHENGLANG METALWARE ELECTRIC APPARATUS CO LTD	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E313243 Tested With Appliance
Alt	Zhongshan Hongyao Wire Co., Ltd.	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E517661 Tested With Appliance
Alt	Zhongshan City Dingxiang Electrical Co Ltd	3122 1332	300V 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E354487 Tested With Appliance

Alt	HONG SHUN WIRE & CABLE FLUOROPLASTICS FACTORY	3122 1332	300V 200℃ 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E238396 Tested with appliance
Alt	DONGGUAN RI ZHAN HIGH TEMPERATURE WIRE CO LTD	3122 1332	300V 200℃ 16AWG, 18AWG ,20AWG, 22AWG	IEC 60335-1 IEC 60335-2-9	UL E353571 Tested with appliance
Alt	NIZING ELECTRIC CO., LTD	1332 3122	200℃ 300V 26AWG 22AWG 20AWG 18AWG 16AWG	IEC 60335-1 IEC 60335-2-9	UL E215834 Tested with appliance
Alt	Zhongshan City Dingxiang Electrical Appliance Co., Ltd.	E-200/TX/FEP 300V	0.5mm²、0.75 mm²、1.0 mm²	CQC1111.31-2020;GB/T38296-2019	CQC160111520 00 Tested With Appliance
Alt	FOSHAN CITY ZHENG GUAN FLUORPLASTICS WIRE FACTORY	1332 3122	200℃ 300V 26AWG 22AWG 20AWG 18AWG 16AWG	IEC 60335-1 IEC 60335-2-9	UL E307535 Tested with appliance
Alt	NIZING ELECTRIC CO., LTD	60245 IEC 03 (YG) 300V/500V	0.5mm2、0.75mm2、1.0mm2	GB/T5013.3-2008/IEC60245-3:1994	2003010104075377
X2 Capacitor	Foshan Piner electronic co., LTD	MKP：X2	0.1μF275V	GB/T6346.14 IEC 60384-14	CQC16001146732
Alt	Tenta Electric Industrial Co. Ltd.	MEX	AC 275V, 0,1uF, T100	IEC/EN 60384-14:2013+A1	VDE 119119
Alt	Carli Electronics Co., Ltd.	MPX	AC275V, 0,1uF, T100	IEC/EN 60384-14:2013+A1	VDE 40008520
Alt	Guangdong FengmingElectronic Tech. Co., Ltd.	MKP-X2	AC 275V, 0,1uF, T105	IEC/EN 60384-14:2013+A1	VDE 40025702
Alt	Dain Electronic Co., Ltd.	MPX/MEX	AC 275V, 0,1uF, T110	IEC/EN 60384-14:2013+A1	VDE 40018798

Alt	FOSHAN SHUNDE CG ELECTRONIC INDUSTRY CO.,LTD	MKP-X2	0.1uF 275V	GB/T6346.14 IEC 60384-14	CQC03001004434
Alt	Guangdong Fengming Electronic Tech.Co.,Ltd.	MKP-X2	0.1uF 275V/305V/310V AC	GB/T6346.14 IEC 60384-14	CQC04001010677
Alt	Foshan Shunde Da Hua Electric Co.,Ltd.	HD MKP	275VAC X2 0.1μF	GB/T6346.14 IEC 60384-14	CQC05001013146
Alt	Shenzhen Tenta Electrical Appliance Co.,Ltd.	MEX	0.1μF 275VA	GB/T6346.14 IEC 60384-14	CQC03001003039
Alt	Dain Electronics Co., Ltd	MPX	0.1μF 275VAC	GB/T6346.14 IEC 60384-14	CQC03001007500
Alt	SINHUA ELECTRONICS(HUZHOU)CO.,LTD.	MPX	0.1uF X2 275VAC	GB/T6346.14 IEC 60384-14	CQC08001026858
Alt	Shenzhen Sincerity Technology Co., Ltd	MPX/MKP	0.1uF 275VAC	GB/T6346.14 IEC 60384-14	CQC09001035778
Alt	Guangdong JURCC electronics co., LTD.	MPX/MKP	X2 310VAC 0.1μF	GB/T6346.14 IEC 60384-14	CQC12001069051
Varistor	Guangdong Hongzhi Electronic Technology Co., Ltd.	HEL	10D471K	GB/T10193-1997;GB/T10194-1997;GB4943.1-2011;GB8898-2011 IEC61051-1 IEC61051-2	CQC04001010846
Alt	Hongzhi Enterprises Ltd.	HEL	10D471K	IEC61051-1 IEC61051-2 EN61051-1	VDE40037512
Alt	Huizhou Songlongxindian Electronics Technology Co., Ltd	VDR	10D471K	IEC61051-1 IEC61051-2 EN61051-1	VDE40040037

Closed-end connector	Heavy Power Co., Ltd.	CE2 、CE5	PA66	GB/T 5169 IEC 60335-1 IEC 60335-2-9	CQC12134080869 Tested With Appliance
Alt	SHENZHEN HONGYU ELECTRICAL CO.,LTD.	CE2	PA6	GB/T 5169 IEC 60335-1 IEC 60335-2-9	CQC11134059224 Tested With Appliance
PCB	Guangdong Cengde Elextronicechnolo Tgy CO.,LTD	--	ZD-95(G)F、KB-3151C	IEC 60335-1 IEC 60335-2-9	CQC15134136681 Tested With Appliance
Alt	KINGBOARD(FO GA NG)PAPER LAMINATES CO.,LTD	--	KB3151C	IEC 60335-1 IEC 60335-2-9	CQC09001039855 Tested with appliance
Alt	Kingboard Laminates Holdings Limited	--	FR-1-KB- 3152, FR-1- KB-3151C	EN 60695-11-10 IEC 60335-1 IEC 60335-2-9	VDE 5722 Tested with appliance
Alt	Guangdong Cengde Elextronic Technology CO.,LTD	--	ZD-90F	EN 60695-11-10 IEC 60335-1 IEC 60335-2-9	CQC15134136681 Tested with appliance
Alt	Kingboard Laminates Holdings Limited	--	KB-5150、KB-5152 94V-0	IEC 60335-1 IEC 60335-2-9	UL E123995 Tested with appliance
plastic shell	SUPER DRAGON ENGINEERING PLASTICS CO., LTD.	--	FRPP420	IEC 60335-1 IEC 60335-2-9	CQC15134122195 Tested With Appliance
Alt	LG Chemical (Guangzhou) Engineering Plastics Co., Ltd	--	PP/LUPOL GP1000F	IEC 60335-1 IEC 60335-2-9	CQC12134069875 Tested With Appliance
Liner plastic	SUPER DRAGON ENGINEERING PLASTICS CO., LTD.	--	PBT	IEC 60335-1 IEC 60335-2-9	CQC14134111259
Alt	Guangdong Aldex Advanced Plastic CO.,LTD.	--	PBT-RG151	IEC 60335-1 IEC 60335-2-9	CQC15134129107

PVC sheat	SUPER DRAGON ENGINEERING PLASTICS CO., LTD.	--	HY-8750	IEC 60335-1 IEC 60335-2-9	CQC151341 23599
Alt	Yueqing Yifa Sheath Factory	--	YF110	IEC 60335-1 IEC 60335-2-9	CQC1313409 6754
Thermal fuse tube	Zhejiang ZUCH Technology Co., Ltd	--	HY-8750	IEC 60335-1 IEC 60335-2-9	CQC151341 23599
Alt	ShenZhen Wahchangwei Industrial Co.,Ltd	--	SGS-70	IEC 60335-1 IEC 60335-2-9	CQC1913423 5495
Heat shrinkable tube	Shenzhen Wall Nuclear Material Co., Ltd.	VW-1	RSFR 125°C 600V	IEC 60335-1 IEC 60335-2-9	CQC2013427 8543 Tested With Appliance
Alt	Hefei Fengxiang Heat Shrinkable Material Technology Co., Ltd.	--	EVA 5110J	IEC 60335-1 IEC 60335-2-9	CQC2013423 8251 Tested With Appliance
Alt	DONGGUAN SALIPT CO.,LTD	SALIPT S-901-600	Φ0.6-50mm	IEC 60335-1 IEC 60335-2-9	CQC2013426 9296 Tested With Appliance
Silicone tube	Zhongshan Fangdian electrical accessories Co., Ltd	187 Straight type, 250 Straight type, 187 Flag type, 250 Flag type	NC-Z150B white / red Blue	IEC 60335-1 IEC 60335-2-9	CQC2013427 2257 Tested withappliance
Plug	Zhongshan Guzhen Hongli Cable & Appliance Factory Co., Ltd.	HL-1B、HL-01	10A 250V~	GB/T1002; GB/T2099.1; IEC 60884-1	20050102011 43655
Alt	Zhongshan Guzheng Hongli Cable and Appliance Factory	HL-18	16A 250V~	IEC 60884-1	CN50402
Alt	Zhongshan Guzheng Hongli Cable & Appliance Factory	HL-9	16A 250V~	DIN VDE 0620-2-1	VDE4001379 1

Alt	Zhongshan Guzheng Hongli Cable & Appliance Factory	HL-17	13A 250V~	BS 1363-1	ASTA 882
Power cord	Zhongshan Guzhen Hongli Cable & Appliance Factory Co., Ltd.	60227 IEC 53(RVV) 300/500V	3×0.75mm	GB/T 5013.4 IEC 60227-5	20050101051 43656
Alt	ZHONGSHAN GUZHEN HONGLI CABLE & APPLIANCE FACTORY	60227 IEC 53(RVV) 300/500V	3×0.75mm	IEC 60227-5 IEC 60227-1 IEC 60227-2	CN51099
Alt	Zhongshan Guzhen Hongli Cable & Appliance Factory	H05VV-F	3×0.75mm²	DIN EN 50525-2-11	VDE 139259
Electrical Heater Tube	Zhaoqing Meisheng Electric heating Appliances Co., Ltd.	MS	220V-240VAC 50/60Hz 1350W	JB/T4088-2012 IEC 60335-1 IEC 60335-2-9	CQC2000226 9837
Supplementary information: 1) Provided evidence ensures the agreed level of compliance.					

28.1	TABLE: Threaded part torque test		P
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Screw for fixing earthing connection	3.88	II	1.2
Supplementary information:			

29.1	TABLE: Clearances		P
	Overvoltage category ....:	II	—

		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark
330	0,2* / 0,5 / 0,8**					
500	0,2* / 0,5 / 0,8**					
800	0,2* / 0,5 / 0,8**					
1 500	0,5 / 0,8** / 1,0***					
2 500	1,5 / 2,0***	X	X		X	P
4 000	3,0 / 3,5***			X		P

6 000	5,5 / 6,0***					
8 000	8,0 / 8,5***					
10 000	11,0 / 11,5***					

Supplementary information:

*) For tracks on printed circuit boards if pollution degree 1 and 2
**) For pollution degree 3
***) If the construction is affected by wear, distortion, movement of the parts or during assembly

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V)	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	B**	S**	R**	Verdict
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9		—	—	N
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—		—	N
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—		N
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		—	—	N
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	X	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	—	X	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	**8,0**	—	—	X	P
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N

>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N

Supplementary information:
*) Material group IIIb is allowed if the working voltage does not exceed 50 V
**) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V):	**Creepage distance (mm) Pollution degree**							
	1	**2**			**3**			
		Material group			**Material group**			
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**Verdict / Remark**
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	
250	0,42	1,0	1,4	2,0	2,5	2,8	**3,2**	P
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	

Supplementary information:
*) Material group IIIb is allowed if the working voltage does not exceed 50 V

30.1	TABLE: Ball Pressure Test of Thermoplastics		P
Allowed impression diameter (mm) .....:			—
Object/ Part No./ Material	**Manufacturer/ trademark**	**Test temperature (°C)**	**Impression diameter (mm)**

Fan motor bobbin	--	133	1.4
Plastic enclosure / bottom cover	--	133	1.8
Intemal enclosure / Air outlet grille	--	199	1.7
Top cover (plastic part)	--	115	.8
Control panel	--	125	1.3
Supplementary information:			

30.2	TABLE: Resistance to heat and fire - Glow wire tests							P
Object/ Part No./ Material	**Manufacturer / trademark**	**Glow wire test (GWT); (°C)**						**Verdict**
		550	**650**		**750**		**850**	
			te	**ti**	**te**	**ti**		
Plastic enclosure/ Bottom cover	--	X	--	--	--	--	--	P
Intemal enclosureAir outlet grille	--	X	--	--	--	--	--	P
Biased-off switch holder	--	--	--	--	0	0	X	P
Fan motor bobbin	--	--	--	--	0	0	X	P
PCB	--	--	--	--	0	0	X	P
Relay	--	--	--	--	0	0	X	P
Varistor	--	--	--	--	0	0	X	P
X2 capacitor	--		0	0	--	--	--	P
Control panel	--	X	--	--	--	--	--	P
Crimped connector	--	--	--	--	0	0	X	P
Tube cover	--	--	--	--	0	0	X	P
Connector on PCB	--	--	0	0	--	--	--	P
Top cover(plastic| part)	--	X	--	--	--	--	--	P

Object/ Part No./ Material	**Manufacturer / trademark**	**Glow-wire flammability index (GWFI), °C**				**GW ignition temp. (GWIT), °C**		**Verdict**
		550	**650**	**750**	**850**	**675**	**775**	

The test specimen passed the glow wire test (GWT) with no ignition [($t_e - t_i$) ≤ 2s] (Yes/No):	Yes
If no, then surrounding parts passed the needle-flame test of annex E (Yes/No) .....:	No
The test specimen passed the test by virtue of most of the flaming material being withdrawn with the glow-wire (Yes/No)?.....:	No
Ignition of the specified layer placed underneath the test specimen (Yes/No) .....:	No

Supplementary information:

- 550 °C GWT not relevant (or applicable) to parts of material classified at least HB40 or if relevant HBF
- The GWIT pre-selection option, the 850 °C GWFI pre-selection option, and the 850 °C GWT are not relevant (or applicable) for attended appliances

30.2/30.2.4	TABLE: Needle- flame test (NFT)				N
Object/ Part No./ Material	**Manufacturer/ trademark**	**Duration of application of test flame (ta); (s)**	**Ignition of specified layer Yes/No**	**Duration of burning (tb) (s)**	**Verdict**
Supplementary information: - NFT not relevant (or applicable) for Parts of material classified as V-0 or V-1 - NFT not relevant (or applicable) for Base material of PCBs classified as V-0 or if relevant VTM-0					

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 60335-1** **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** Household and similar electrical appliances – Safety – Part 1: GENERAL REQUIREMENTS			
Differences according to ..... :	EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019+A15:2021 EN 62233:2008		
Copyright © 2019 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	CENELEC COMMON MODIFICATIONS (EN)		--
6.1	Delete “class 0” and “class 01”		N
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N
7.12	The instructions include the substance of the following:		--
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test, except that		P
	appliances normally used on the floor and having a mass exceeding 40 kg are not tilted		N
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		P

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
8.1.3	Instead of test probe B, test probe 18 and test probe 13, for appliances other than those of class II, test probe 41 of IEC 61032 is applied with a force not exceeding 1 N to live parts of visibly glowing heating elements, all poles of which can be disconnected by a single switching action		N
8.2	Compliance is checked by inspection and by applying the test probes of EN 61032 in accordance with the conditions specified in 8.1.1		P
	Test probe B and probe 18 of EN 61032 are applied to built-in appliances and fixed appliances only after installation		N
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling		N
20.2	For appliances having dangerous moving parts, due to their working function, e.g. the needle of a sewing machine, tools of kitchen machines or the blade of an electrical knife, full protection is not possible for performing their intended use		P
	When using a test probe similar to test probe B of EN 61032, having a circular stop face and applied with a force of 5N, the accessories and detachable covers are removed		P
	When using test probe 18 it is applied with a force of 2,5N on the appliance fully assembled		P
22.12	Other parts intended to be detached during use, maintenance or cleaning (e.g. batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers		N
22.17	The requirement is not applicable to built-in appliances		N
24.1	Components comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply		P
	Motors are not required to comply with EN 60034-1, but tested as part of the appliance according to this standard		P
	Relays are tested as part of the appliance according to this standard		N
	Relays may be alternatively tested to EN 60730-1 and the additional requirements in EN 60335-1		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance		P
	Components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		N
	Components that have not been tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard		N
	Components that have been tested and shown to comply with the resistance to fire requirements in the EN standard for the relevant component need not be retested provided that:		N
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		N
	- the test report for the component states the values of t_e and t_i acc. to EN 60695-2-11		N
	If the above two conditions are not satisfied, the component is tested as part of the appliance		N
	Power electronic converter circuits are not required to comply with EN 62477-1, but tested as part of the appliance according to this standard		N
	Unless components have been tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		N
	Components that have not been tested and found to comply with the relevant EN standard, and		N
	components that are not marked or not used in accordance with their marking,		N
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Lamp-holders and starter-holders that have not been tested and found to comply with the relevant EN standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance		N
	Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		N
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard		N
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		N
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if		N
	direct supply to these parts from the supply mains gives rise to a hazard		N
	For plugs used in CENELEC countries Annex ZH applies		P
24.1.7	When the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003		N
	Compliance with Clause 8 of this standard is not impaired by connecting the appliance to a device covered by EN 41003		N
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1		N
25.1	Plugs and pins for insertion into socket outlets follow the relevant standards sheets in Annex ZH		P
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors, or		N
	when they are liable to be exposed to significant amount of ultraviolet radiation		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
25.25	Instead of IEC/TR 60083, dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are in accordance with the dimensions of the relevant plug standard		P
	Common plugs and socket-outlets types in CENELEC countries as shown in Annex ZH		P
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position,		N
	unless they are held in place near the terminals independently of the solder		N
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N
32	Compliance regarding electromagnetic fields is checked according to EN 62233		P
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		P
	The duration of any of the tests is as specified in 19.7		P
ZA	**ANNEX ZA (**NORMATIVE) **SPECIAL NATIONAL CONDITIONS (EN)**		--
	Denmark, Sweden, Norway and Finland		--
7.12.8	The maximum inlet water pressure is at least 1,0 MPa ..... :		N
	Norway		--
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N
	Norway		--
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Denmark		--
22.47	The maximum inlet water pressure is at least 1,0 MPa .... :		N
	Ireland and United Kingdom		--
25.8	In the table, the line >10 A and ≤16 A is replaced with:		N
	> 10 and ≤ 13 1,25 (1,0)[b]		N
	> 13 and ≤ 16 1,5 (1,0)[b]		N
ZB	**ANNEX ZB** (INFORMATIVE) **A-DEVIATIONS**		--
	Ireland		--
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N
	United Kingdom		--
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		N
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N
ZC	*ANNEX ZC **(NORMATIVE)*** *NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS*		--
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		P
ZD	**ANNEX ZD** (INFORMATIVE) **IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS**		--
	List of IEC and CENELEC code designations for flexible cords		P

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZE	**ANNEX ZE** (INFORMATIVE) **SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE**		--
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative ..... :		N
	Model or type reference..... :		N
	Serial number, if any		N
	Production year		N
	Designation of the appliance ..... :		N
7.12	Instructions provided with the appliance so that the appliance can be used safely		N
	The instructions contain at least the following information:		--
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		N
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		N
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		N
	- the general description of the appliance, when needed due to the complexity of the appliance		N
	- specific precautions required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving		N
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		N
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		N
	The words “Original instructions” appear on the language version(s) verified by the manufacturer or by the authorized representative		N
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence “Translation of the original instructions” appear in the relevant instructions delivered with the appliance		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand		N
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures		N
7.12.ZE1	If needed for specific appliances, the following information to be given:		--
	- on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts		N
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N
	- on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided		N
	- on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance		N
	- on the specifications on the spare parts to be used, when these affect the health and safety of the operator		N
	- on airborne noise emissions, determined and declared in accordance with the relevant Part 2, which includes:		N
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A).....;		N
	- where this level does not exceed 70 dB(A), this fact is indicated		N
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 μPa) .....:		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A) ..... :		N
7.12.ZE2	The instructions include a warning to disconnect the appliance from its power source during service and when replacing parts		N
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug is such that an operator can check from any of the points to which he has access that the plug remains removed		N
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N
	a manual operation is required to restart it		N
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		N
20.2	Dangerous moving transmission parts safeguarded either by design or guards		N
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		N
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		N
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N
	Interlocking movable guards used where frequent access is required		N
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N
	The distance between the seat and the control devices capable of being adapted to the operator		N
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or		N
	so designed that they can be fitted with such attachments, or		N
	be shaped in such a way that standard lifting gear can easily be used		N
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely		N
22.ZE.5	The fixing systems of fixed guards which prevent access to dangerous moving transmission parts only removable with the use of tools		N
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N
	Where possible, guards are incapable of remaining in place without their fixings		N
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N
	Movable guards are interlocked		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		--
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N
	Interlocking movable guards remain attached to the appliance when open, and		N
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions		N
	The guard is opened to the extent needed to cause the interlocking to operate and is then closed, the number of operations being defined in the specific Part 2 .....:		N
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N
	After these tests the interlock system is fit for further use		N
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		--
	- adjustable manually or automatically, depending on the type of work involved, and		N
	- readily adjustable without the use of tools		N
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		N

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N
	Such isolators are clearly identified, and		N
	they are capable of being locked if reconnection endanger persons		N
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N
ZF	**ANNEX ZF** (INFORMATIVE) **CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD**		--
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive).....:		P
ZG	**ANNEX ZG** (NORMATIVE) **UV APPLIANCES**		--
	The following modifications to this standard apply to appliances having UV emitters		N
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109		N
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source		N
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant		N
ZH	**ANNEX ZH** (INFORMATIVE) **Common plug and socket-outlet types in CENELEC countries**		--
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:		P

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4:		P
	- for class II appliances, standard sheet EU5, EU6 or EU7.....:		N
	There are exemptions or differences in certain CENELEC countries		N
ZI	**ANNEX ZI** (INFORMATIVE) **Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A**		--
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1		P
ZZA	**ANNEX ZZA** (INFORMATIVE) **RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96} AIMED TO BE COVERED**		--
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		P
ZZB	**ANNEX ZZB** (INFORMATIVE) **RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED**		--
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		P

Attachment 1: EU difference

IEC 60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		P
	ANNEX EN 62233:2008 + AC:2008 **EMF- ELECTROMAGNETICS FIELDS**		--
	The tested product also complies with the requirements of EN 62233:2008		--
	Limit ……100%	Measured max. :10.67%	P

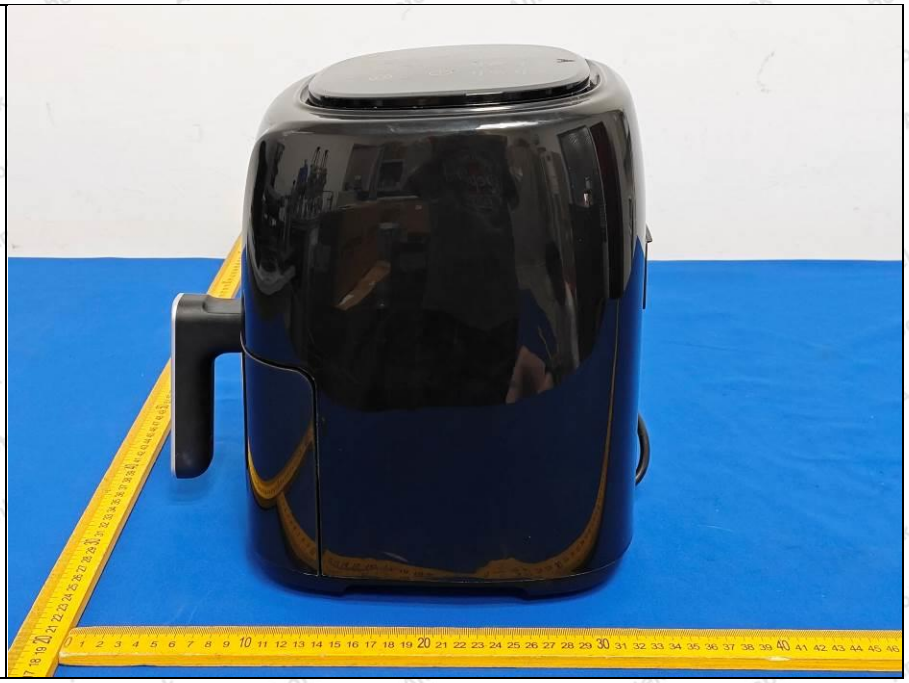
Attachment 2: Photo documentation

Photo 1 L-5061 Front	
Photo 2 L-5061 Rear	

Attachment 2: Photo documentation

Photo 3 L-5061 Top	
Photo 4 L-5061 Bottom	

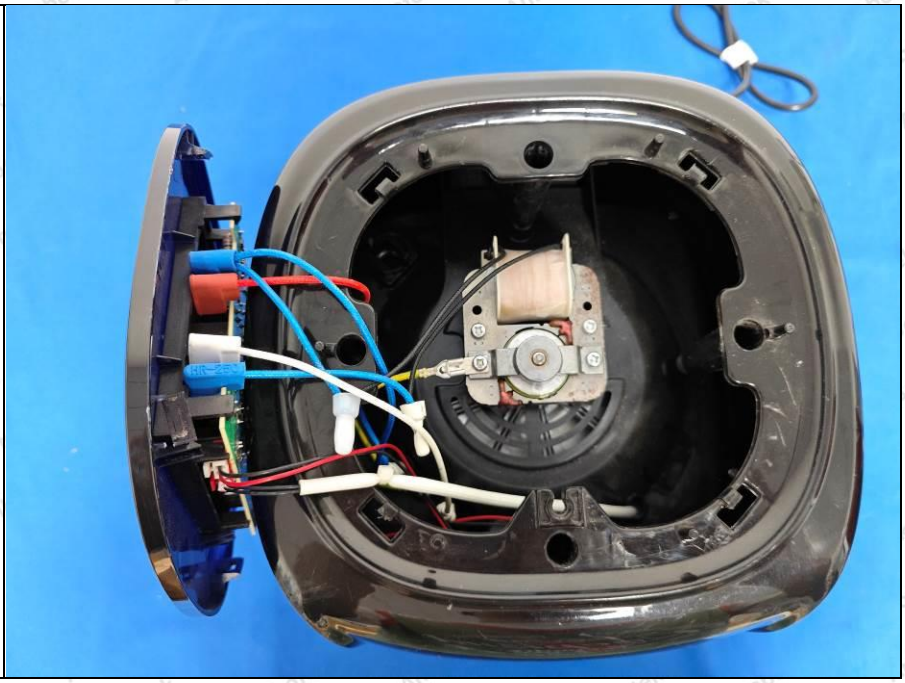
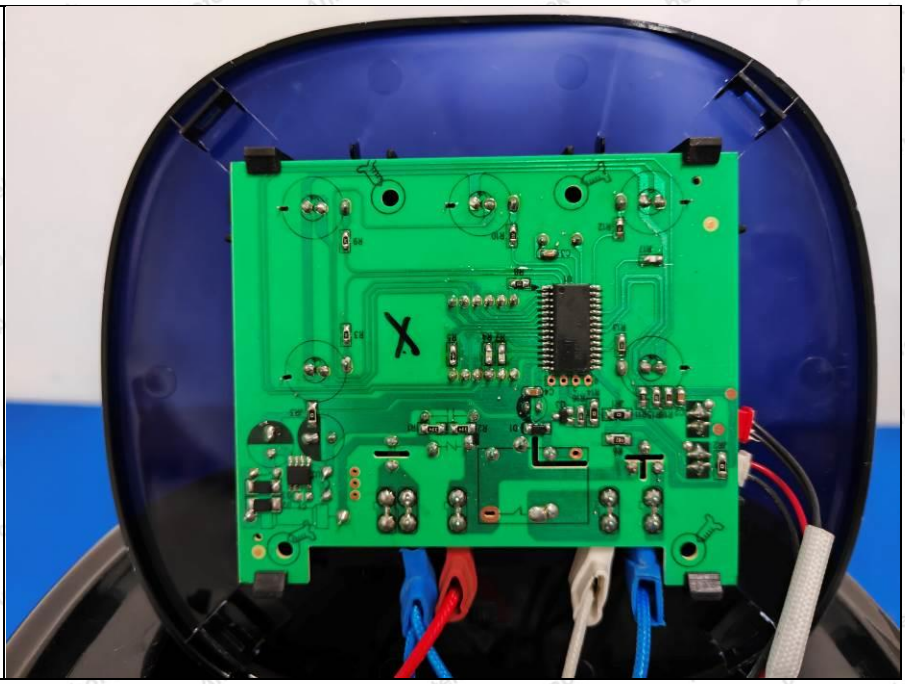
Attachment 2: Photo documentation

Photo 5 L-5061 Side	
Photo 6 L-5061 Side	

Attachment 2: Photo documentation

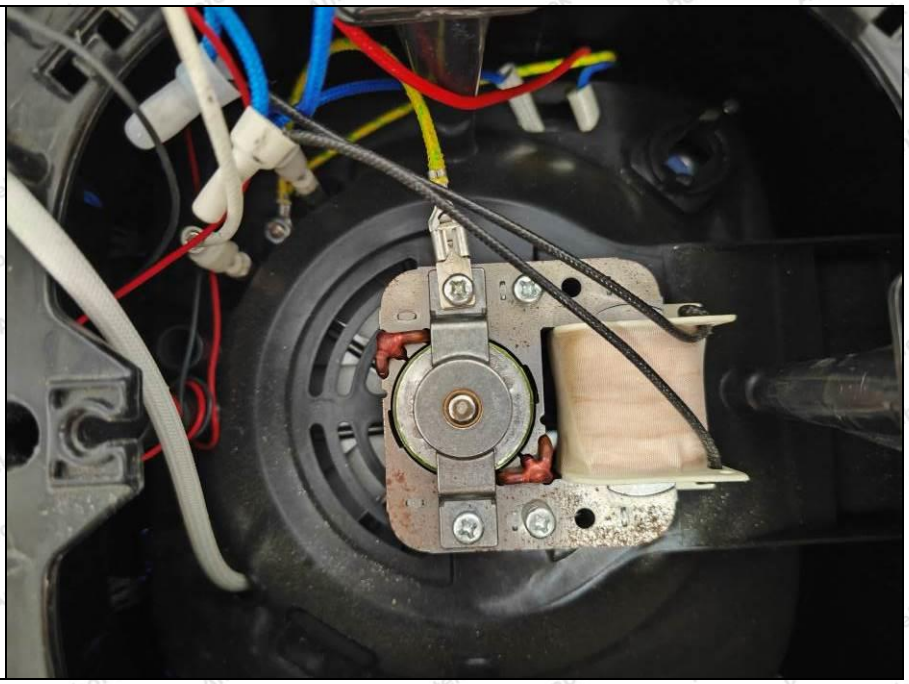
Photo 7 L-5061 Overall	
Photo 8 L-5061 Part	

Attachment 2: Photo documentation

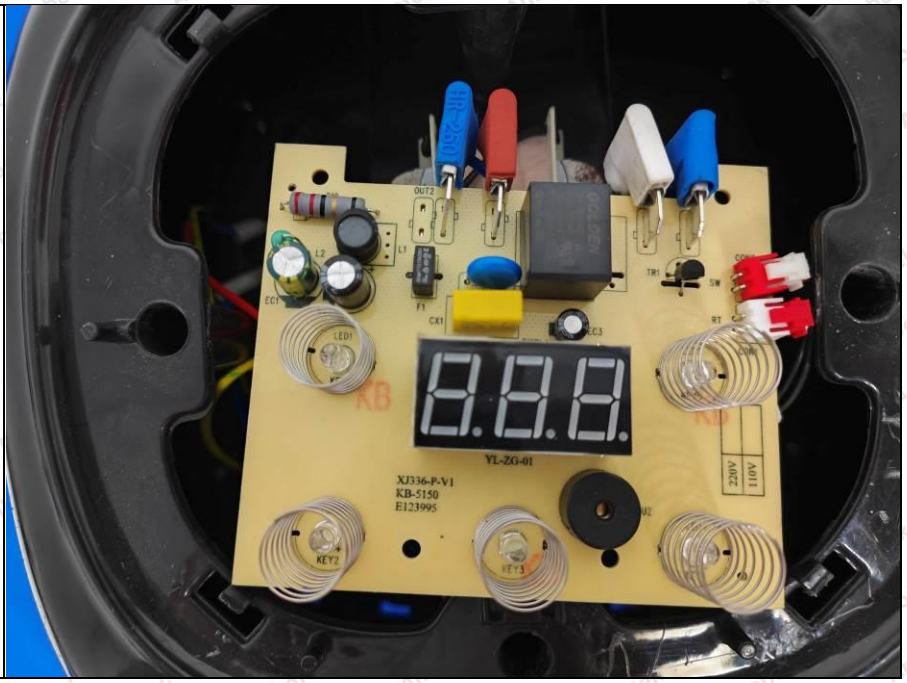
Photo 9 L-5061 Internal	
Photo 10 L-5061 Internal	

Attachment 2: Photo documentation

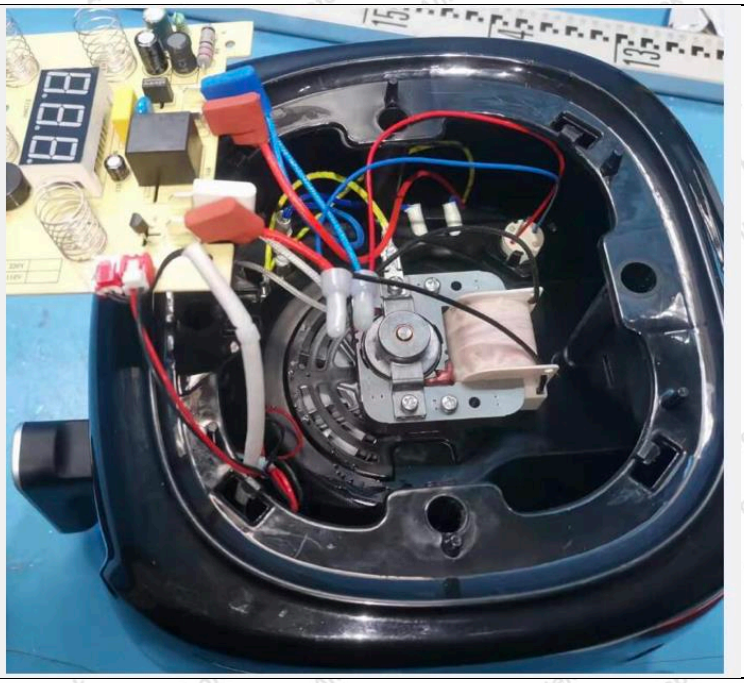
Photo 11 L-5061 Internal	

Photo 12 L-5061 Internal	

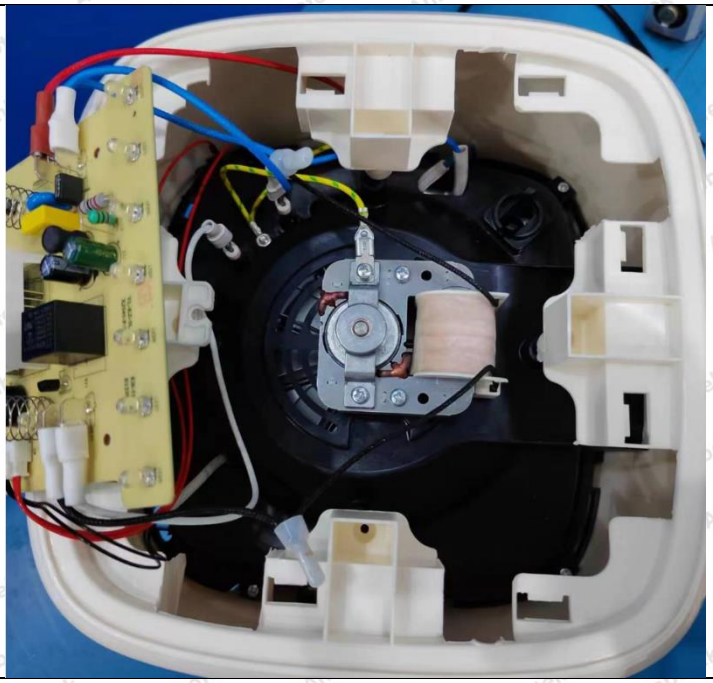
Attachment 2: Photo documentation

Photo 13 L-5061 Internal	
Photo 14 L-5061S	

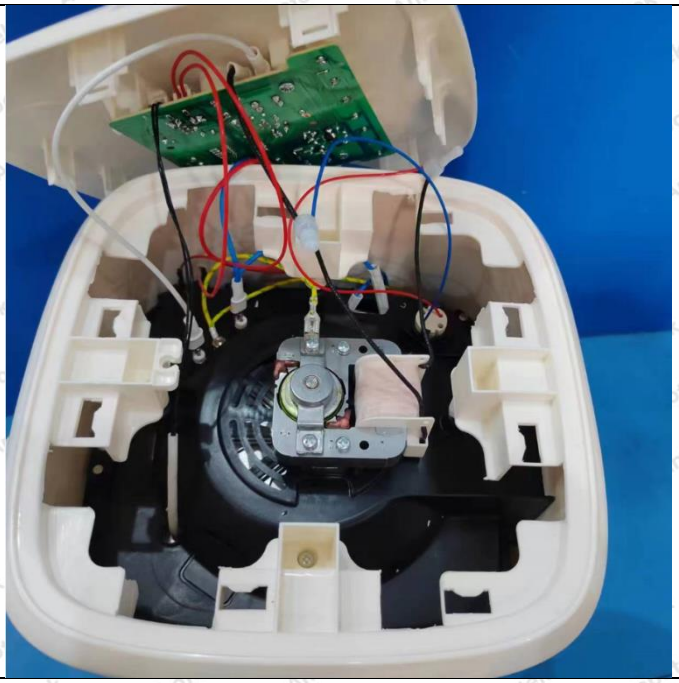
Attachment 2: Photo documentation

Photo 15 L-5061S	
Photo 16 L-5060	

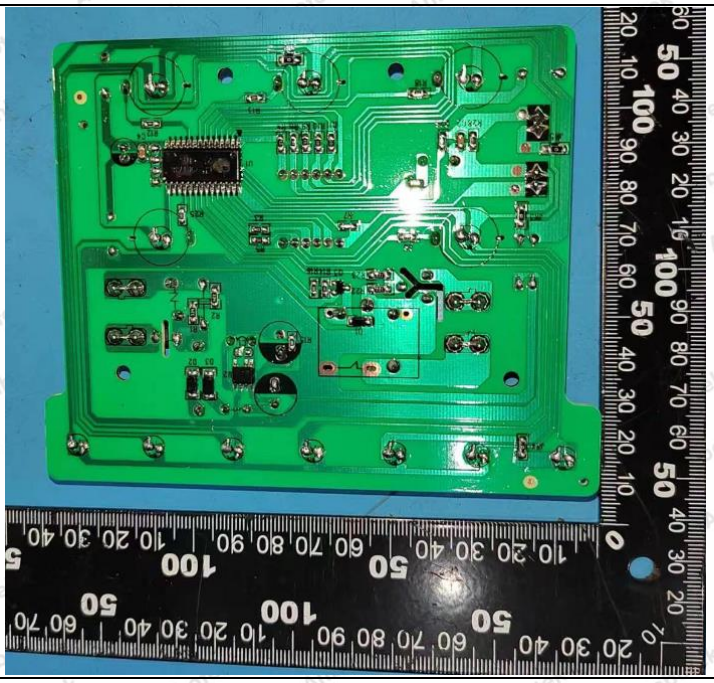
Attachment 2: Photo documentation

Photo 17 L-5060	
Photo 18 L-5060S	

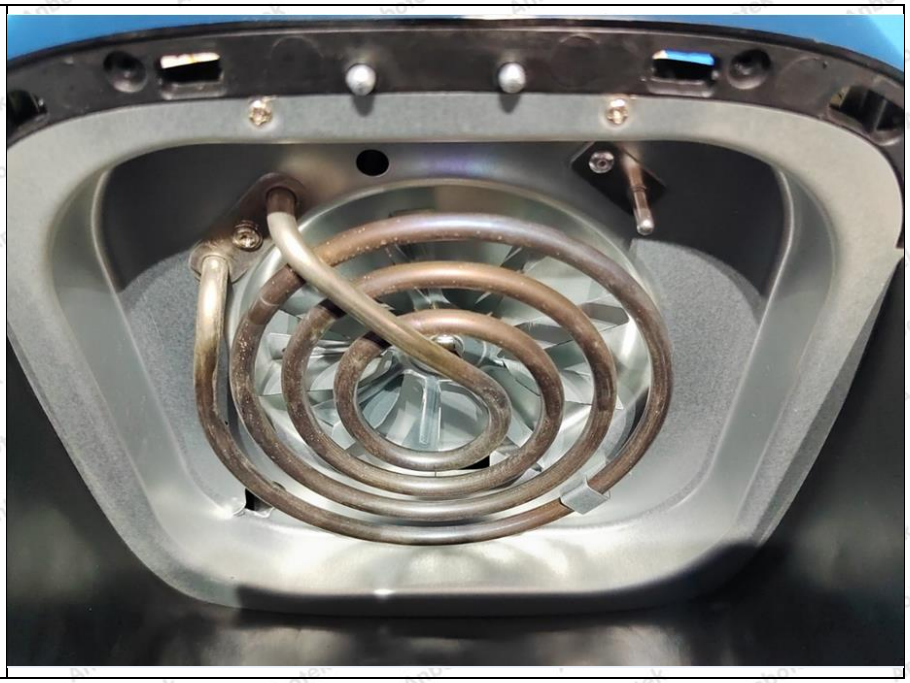
Attachment 2: Photo documentation

Photo 19 L-5060S	
Photo 20 L-5060 L-5060S	

Attachment 2: Photo documentation

Photo 21 L-5060 L-5060S	
Photo 22 L-5060 L-5060S	

Attachment 2: Photo documentation

Photo 23 L-5060 L-5061	
Photo 24 L-5060S L-5061S	

----------End of report ----------