EMC Test Report

China

Add value.
Inspire trust.

Product: Raclette apparatus

Model: WJ-K223A, WJ-K223AB, WJ-K223, WJ-K223B, WJ-K224, WJ-K224A, WJ-K224B

Applicant: NingBo WeiJie Electrical Appliances Co. Ltd.

Address: Tannan Village, Zhouxiang Town 315300 Cixi City, PEOPLE'S REPUBLIC OF CHINA

In accordance with EN IEC 55014-1,

EN IEC 55014-2, EN IEC 61000-3-2 and

EN 61000-3-3

COMMERCIAL-IN-CONFIDENCE

Issue Date: March 20, 2023
Report Number: 708882301210-00

RESPONSIBLE FOR	NAME	SIGNATURE	DATE
Approved By	Liping XUE	Liping Xue	Mar. 20. 2023
Prepared By	Yong ZHANG	Yong Zhang	Mar. 20. 2023

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service control rules.

EXECUTIVE SUMMARY
A sample of this product was tested and found to be in compliance with EN IEC 55014-1:2021, EN IEC 55014-2:2021, EN IEC 61000-3-2:2019/A1:2021 and EN 61000-3-3:2013/A1:2019/A2:2021.

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Contents

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Report No.	Description of Change	Date of Issue
-00	First Issue	03/20/2023

1.2 Introduction

The information contained in this report is intended to show verification of the EMC Qualification Approval Testing of the requirements of the standards for the tests listed in Section 1.3.

Applicant	NingBo WeiJie Electrical Appliances Co. Ltd.
Address	Tannan Village, Zhouxiang Town 315300 Cixi City, PEOPLE'S REPUBLIC OF CHINA
Manufacturer	NingBo WeiJie Electrical Appliances Co. Ltd.
Address	Tannan Village, Zhouxiang Town 315300 Cixi City, PEOPLE'S REPUBLIC OF CHINA
Factory	NingBo WeiJie Electrical Appliances Co. Ltd.
Address	Tannan Village, Zhouxiang Town 315300 Cixi City, PEOPLE'S REPUBLIC OF CHINA
Model Number(s)	WJ-K223A, WJ-K223AB, WJ-K223, WJ-K223B, WJ-K224, WJ-K224A, WJ-K224B
Rated Input Voltage/Frequency	220-240V~, 50Hz
Rated Input Power	WJ-K223, WJ-K224, WJ-K224A: 450W; WJ-K223B, WJ-K224B: 350W; WJ-K223A: 450W for grill, Max 6A~ for socket-outlet; WJ-K223AB: 350W for grill, Max 6A~ for socket-outlet.
Protection Class	Class I
Sample Number(s)	SHA-712987-3
Number of Samples Tested	1
Test Specification	EN IEC 55014-1:2021, EN IEC 55014-2:2021 EN IEC 61000-3-2:2019/A1:2021 and EN 61000-3-3:2013/A1:2019/A2:2021
Date of Receipt of EUT	03/08/2023
Start of Test	03/10/2023
Finish of Test	03/13/2023
Name of Engineer(s)	Yong ZHANG

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1.3 Brief Summary of Results

The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.

A brief summary of the tests carried out in accordance with EN IEC 55014-1, EN IEC 61000-3-2 and EN 61000-3-3 is shown below.

Section	Specification	Clause	Test Description	Result	Comments/Base Standard
AC Powered Power on					
2.1	EN IEC 55014-1:2021	4.3.3.6	Conducted Disturbance	Pass (Minimum limit margin: >6dB)	
2.2	EN IEC 55014-1:2021	4.4	Discontinuous Disturbance	Pass	
2.3	EN IEC 55014-1:2021	4.3.4.4	Disturbance power	Pass (Minimum limit margin: >6dB)	
2.4	EN IEC 61000-3:2019/A1:2021	7	Harmonic current emission	Pass	
AC Powered switch on/off					
2.5	EN 61000-3-3:2013 /A1:2019/A2:2021	5	Flicker	Pass	

China

1.4 Product Information

1.4.1 Technical Description

The Equipment Under Test (EUT) was Raclette apparatus.

According to client's declaration, all models are same in electrical structure and circuit diagram except for the different appearance and model WJ-K223A, WJ-K223AB have a socket-outlet (Max 6A~), but the other models have not. so model WJ-K224 was chosen to perform all the tests.

Pre-tests are performed under 220-240V~ 50Hz, only the maximum emission was recorded.

Remark:
1. Due to the fact that the disturbance power emission readings from the EUT is lower than the limits (Table 7) reduced by the margin (Table 8), and the maximum clock frequency is less than 30MHz,the EUT is deemed to comply in the frequency range from 300MHz to 1000MHz without testing (EN IEC 55014-1:2021, clause 4.3.4.2 & 4.3.4.4).

2. Due to the fact that the EUT contains no electronic control circuitry (Category I), they are deemed to fulfil the relevant immunity requirements without testing (EN IEC 55014-2:2021, clause 4.2 & 7.2.2).

1.4.2 EUT Port/Cable Identification

Port	Max Cable Length specified	Usage	Type	Screened
Power on				
Enclosure port	--	--	--	--
AC mains port	1.5 m	Power cord	3 cores	No

1.4.3 Test Configuration

Configuration	Description
AC Powered	220-240V~, 50Hz

1.4.4 Modes of Operation

Mode	Description
Power on	The EUT was power on.
Switch on/off	The EUT was switch on/off.

1.5 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

China

1.6 Test Location

The following tests were performed at TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai branch

Address:

No.16, Lane 1951, Duhui Road
Shanghai, 201108, P.R.China

Test Name	Name of Engineer(s)
Conducted Disturbance	Zhong Yuwei
Discontinuous Disturbance	Zhong Yuwei
Disturbance power	Zhong Yuwei
Harmonic current emission	Zhong Yuwei
Flicker	Zhong Yuwei

China

2 Test Details

2.1 Conducted Disturbance

2.1.1 Specification Reference

EN IEC 55014-1:2021, Clause 4.3.3.6

2.1.2 Equipment Under Test

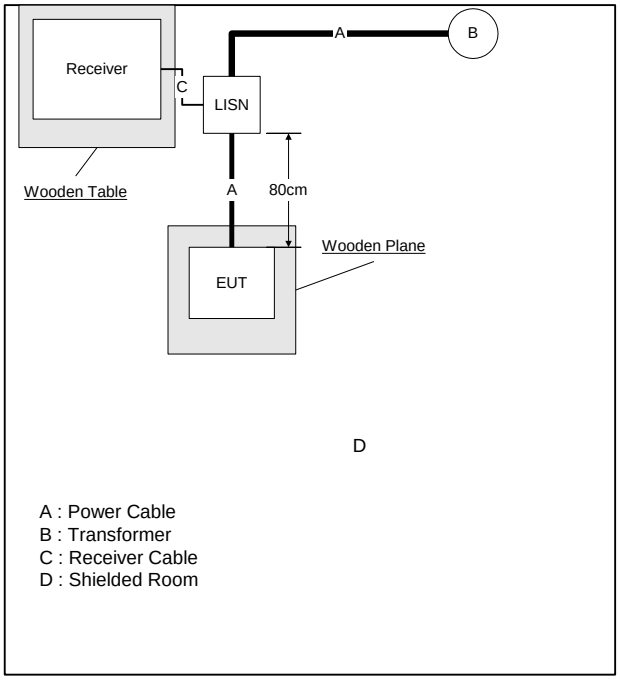
WJ-K224

2.1.3 Date of Test

03/13/2023

2.1.4 Test Method

Table-top EUT shall be placed:
– at a distance of (0,4 ± 0,05) m from a RGP of at least 2 m × 2 m in size;
– at a distance of 0,8 m from the AMN, and
– shall be kept at least 0,8 m from any other earthed conducting surface.
The RGP shall be either horizontal or vertical.
Floor standing EUT shall be:
– placed at a height of (0,12 ± 0,04) m above a horizontal RGP of at least 2 m × 2 m in size,
– placed at a distance of 0,8 m from the AMN,
– kept at least 0,8 m from any other earthed conducting surface, and
– placed in a manner to ensure that the RGP extends at least 0,5 m beyond the EUT boundaries
Parts supporting the EUT and its parts at the required height shall be made of non-conductive material.



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2.1.5 Environmental Conditions

Ambient Temperature	20.3 °C
Relative Humidity	44.1 %
Atmospheric Pressure	1033 mbar

2.1.6 Specification Limits

Household appliances and equipment causing similar disturbances and regulating controls incorporating semiconductor devices						
Frequency range	Disturbance voltage at main terminals		Disturbance voltage at associated ports		Disturbance current at associated ports	
MHz	Quasi-peak dBµV	Average dBµV	Quasi-peak dBµV	Average dBµV	Quasi-peak dBµA	Average dBµA
0.15 to 0.5	66 to 56	59 to 46	80	70	40 to 30	30 to 20
0.5 to 5	56	46	74	64	30	20
5 to 30	60	50	74	64		

2.1.7 Test Results

Results for Configuration and Mode: AC Powered/Power on.

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

China

150k-30MHz Conducted Disturbance Test

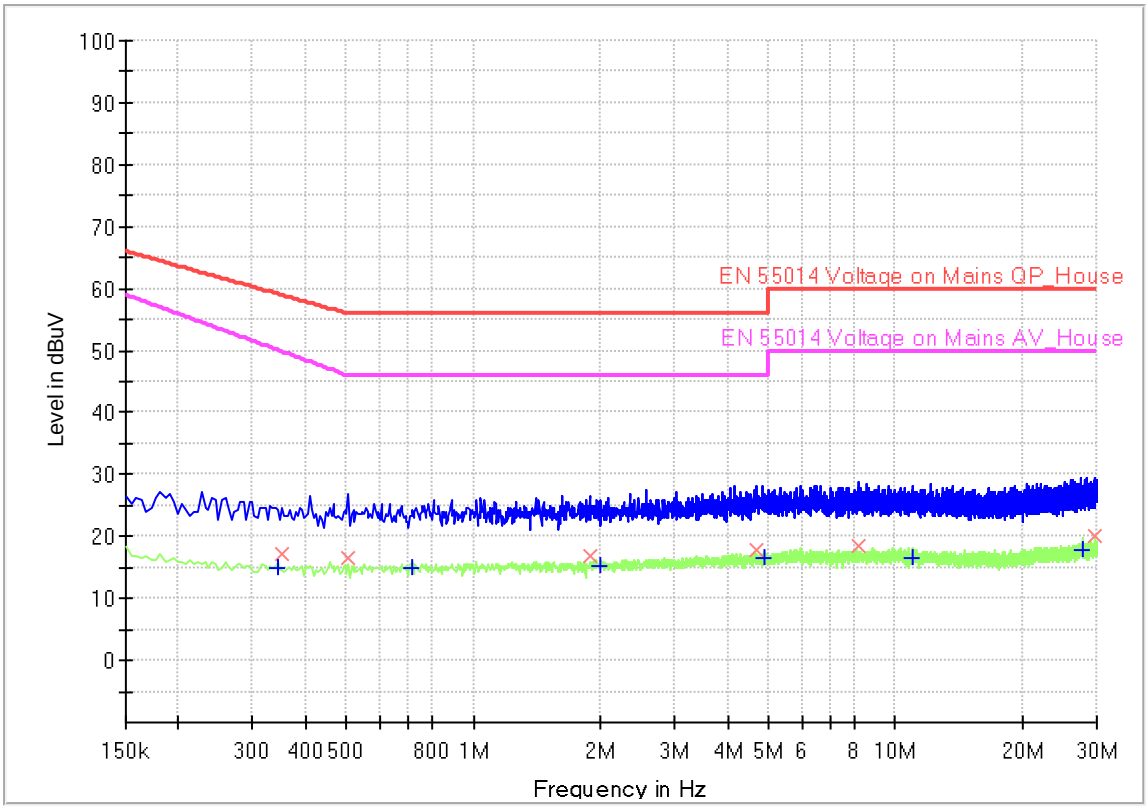
EUT Information

EUT Name:	Raclette apparatus
Model	WJ-K224
Client:	Ningbo WeiJie Electrical Appliances Co., Ltd.
Op Cond	Power on, AC 230V/50Hz, T20.3, H44.1%, P103.3kPa
Operator:	Zhong Yuwei
Standard	EN IEC 55014-1
Comment:	Phase L
Sample No.:	SHA-712987-3

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup:	Voltage with 2-Line-LISN
Receiver:	[ESR 3]
Level Unit:	dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	20 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	20 dB



China

Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.343500	---	14.89	50.05	35.16	1000.0	9.000	L1	19.6
0.352500	17.14	---	58.90	41.76	1000.0	9.000	L1	19.6
0.505500	16.45	---	56.00	39.55	1000.0	9.000	L1	19.6
0.717000	---	14.79	46.00	31.21	1000.0	9.000	L1	19.6
1.882500	16.98	---	56.00	39.02	1000.0	9.000	L1	19.6
2.008500	---	15.34	46.00	30.66	1000.0	9.000	L1	19.6
4.699500	17.97	---	56.00	38.03	1000.0	9.000	L1	19.6
4.902000	---	16.57	46.00	29.43	1000.0	9.000	L1	19.6
8.160000	18.49	---	60.00	41.51	1000.0	9.000	L1	19.7
11.031000	---	16.69	50.00	33.31	1000.0	9.000	L1	19.8
27.847500	---	17.75	50.00	32.25	1000.0	9.000	L1	20.3
29.773500	20.02	---	60.00	39.98	1000.0	9.000	L1	20.3

China

150k-30MHz Conducted Disturbance Test

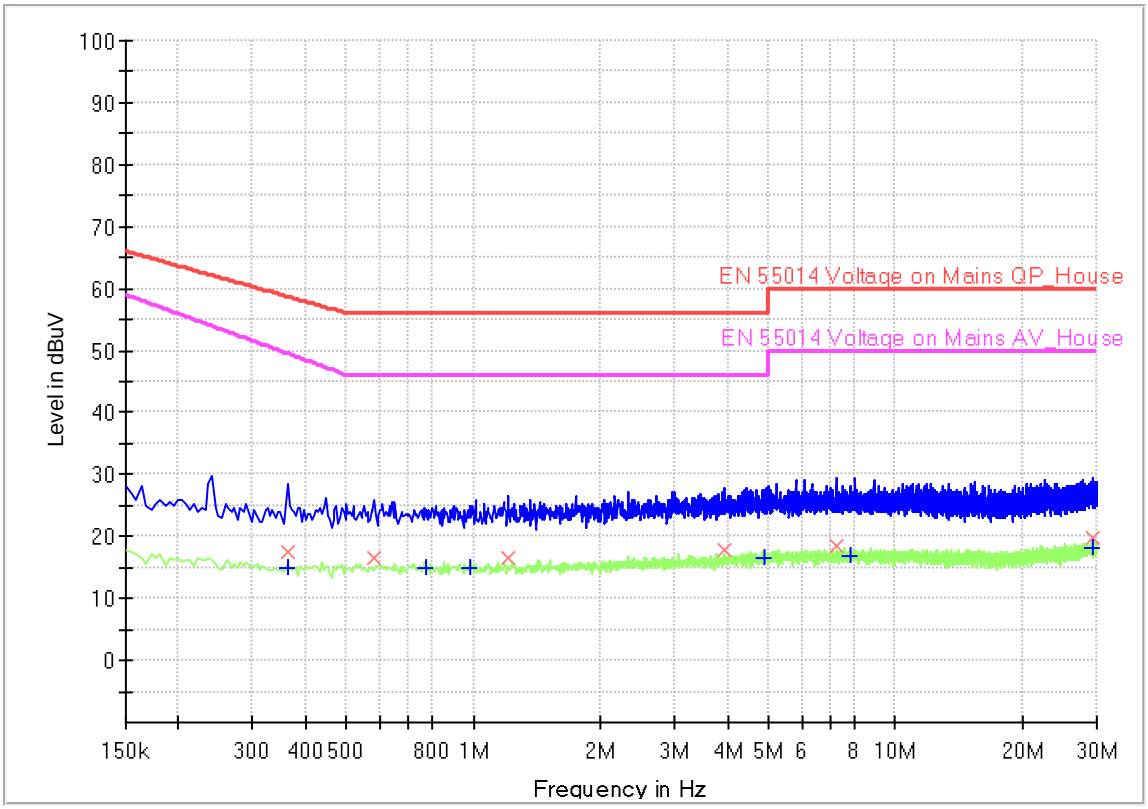
EUT Information

EUT Name:	Raclette apparatus
Model	WJ-K224
Client:	Ningbo WeiJie Electrical Appliances Co., Ltd.
Op Cond	Power on, AC 230V/50Hz, T20.3, H44.1%, P103.3kPa
Operator:	Zhong Yuwei
Standard	EN IEC 55014-1
Comment:	Phase N
Sample No.:	SHA-712987-3

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup:	Voltage with 2-Line-LISN
Receiver:	[ESR 3]
Level Unit:	dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	20 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	20 dB



China

Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.361500	---	14.85	49.50	34.65	1000.0	9.000	N	19.6
0.361500	17.55	---	58.69	41.14	1000.0	9.000	N	19.6
0.582000	16.39	---	56.00	39.61	1000.0	9.000	N	19.6
0.771000	---	14.87	46.00	31.13	1000.0	9.000	N	19.6
0.982500	---	14.99	46.00	31.01	1000.0	9.000	N	19.6
1.207500	16.54	---	56.00	39.46	1000.0	9.000	N	19.6
3.948000	17.89	---	56.00	38.11	1000.0	9.000	N	19.7
4.906500	---	16.56	46.00	29.44	1000.0	9.000	N	19.7
7.233000	18.42	---	60.00	41.58	1000.0	9.000	N	19.7
7.813500	---	16.91	50.00	33.09	1000.0	9.000	N	19.7
29.274000	---	18.06	50.00	31.94	1000.0	9.000	N	20.2
29.467500	19.79	---	60.00	40.21	1000.0	9.000	N	20.2

China

Test Setup

2.1.8 Test Location

This test was carried out in shielded room Z119.

China

2.2 Discontinuous Disturbance

2.2.1 Specification Reference

EN IEC 55014-1:2021, Clause 4.4

2.2.2 Equipment Under Test

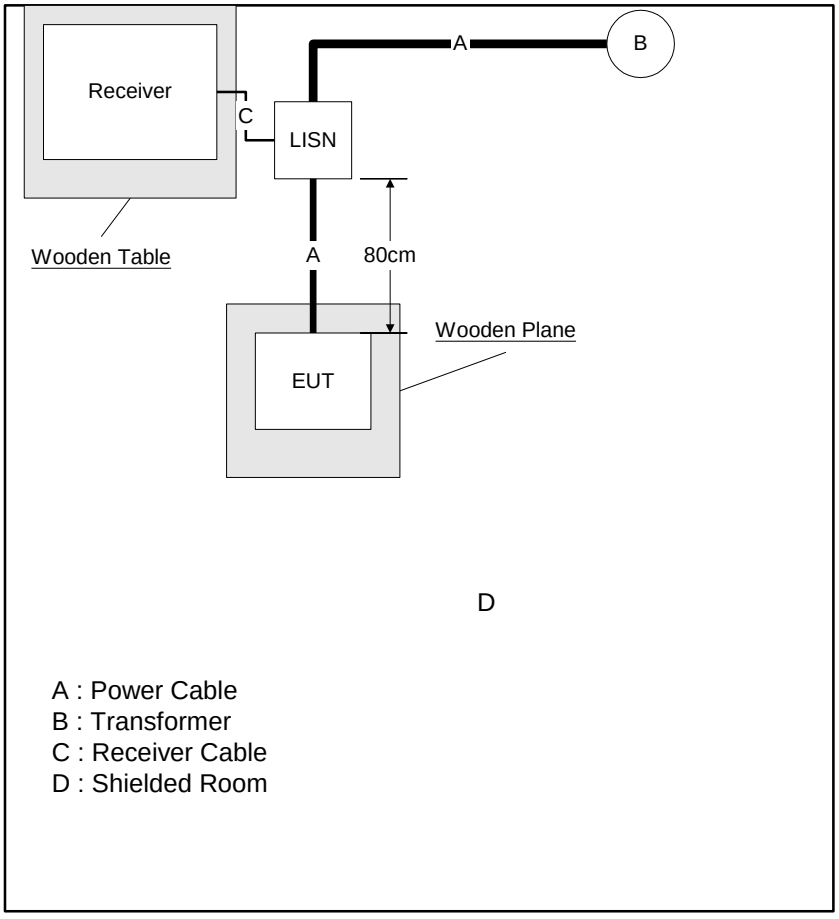
WJ-K224

2.2.3 Date of Test

03/13/2023

2.2.4 Test Method

All power was connected to the EUT through an Artificial Mains Network (AMN). Conducted disturbance voltage measurements on mains lines were made at the output of the AMN. An initial measurement was made in an observation period of 120 minutes, or the time to register 40 clicks. The clicks obtained was compared against the corresponding click limit Lq for the required 4 individual frequencies. The test was repeated in similar period as the initial measurement. The number of clicks during the second measurement should not exceed a quarter of that measured during the initial measurement.



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2.2.5 Environmental Conditions

Ambient Temperature	20.3 °C
Relative Humidity	44.1 %
Atmospheric Pressure	1033 mbar

2.2.6 Specification Limits

Frequency Range (MHz)	Click Limit Values (dBµV)	
	N < 0.2	0.2 ≤ N < 30
0.15	110dBµV	66dBµV + 20 log (30/N)
0.5	100dBµV	56dBµV + 20 log (30/N)
1.4	100dBµV	56dBµV + 20 log (30/N)
30	104dBµV	60dBµV + 20 log (30/N)
Note: N refers to click rate		

2.2.7 Test Results

Results for Configuration and Mode: AC Powered/Power on.

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

China

Discontinuous Disturbance(clicks)
Measurements according to <EN55014-1>

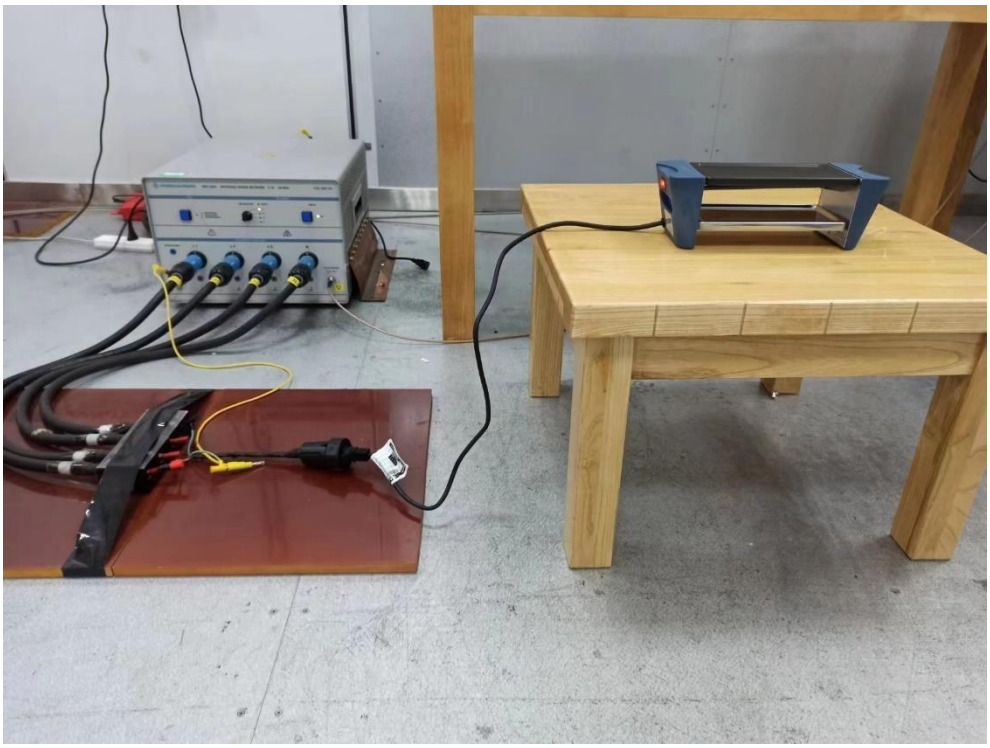
EUT Information

EUT Name:	Raclette apparatus
Model:	WJ-K224
Client:	Ningbo WeiJie Electrical Appliances Co., Ltd.
Op Cond:	Power on, AC 230V/50Hz, T20.3, H44.1%, P103.3kPa
Operator:	Zhong Yuwei
Standard	EN IEC 55014-1
Comment:	Phase N
Sample No.:	SHA-712987-3

Test Duration: 2:00:00 LISN Phase N Attenuation [dB]: 40
Overload: No

Frequency	150 kHz	500 kHz	1.4 MHz	30 MHz
Clicks (<=10 ms)	0	0	0	0
Clicks (>10 ms <= 20 ms)	0	0	0	0
Clicks (> 20 ms <= 200 ms	0	0	0	0
Click Rate [1/min]	0.00	0.00	0.00	0.00
Continous Disturbances	0	0	0	0
L [dBuV]	66	56	56	60
Lq [dBuV]	110.0	100.0	100.0	104.0
Clicks > Lq	0	0	0	0
Clicks > Lq [%]	0	0	0	0
Max. Allowed Nr. of Clicks > Lq	-	-	-	-
Fridge Rules	0	0	0	0
600 ms Rule used	NO	NO	NO	NO
Overall Correction	10.00	10.00	10.00	10.00
Margin for PK Detector	0.00	0.00	0.00	0.00
Result	PASSED	PASSED	PASSED	PASSED

China



Test Setup

2.2.8 Test Location

This test was carried out in shielded room Z119.

China

2.3 Disturbance power

2.3.1 Specification Reference

EN IEC 55014-1:2021, Clause 4.3.4.4

2.3.2 Equipment Under Test

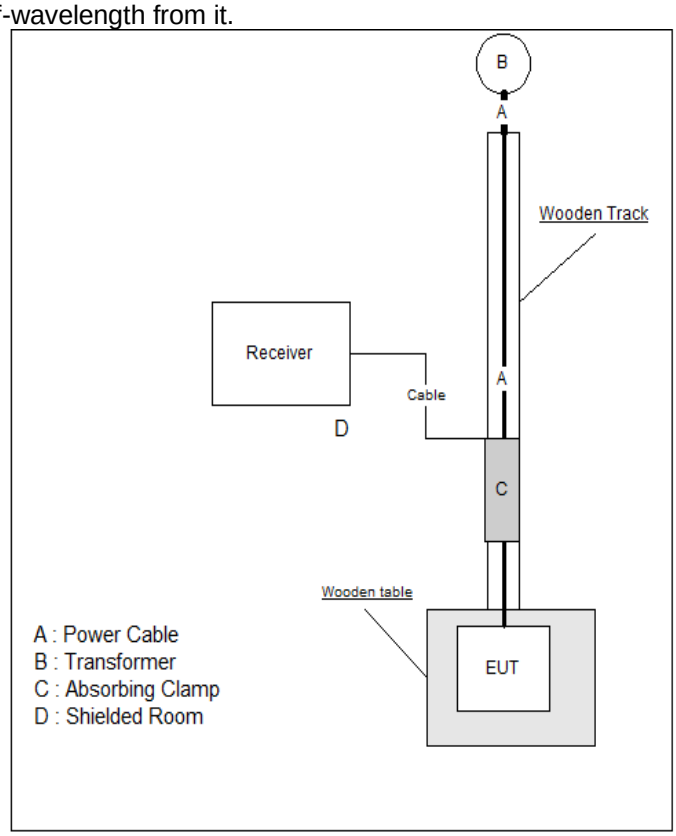
WJ-K224

2.3.3 Date of Test

03/13/2023

2.3.4 Test Method

The distance between the clamp test set-up (the EUT, the mains lead and the absorbing clamp) and any other conductive objects (including persons, walls and ceiling, but excluding the floor) shall be at least 0,8 m. The EUT shall be placed on a non-metallic support parallel to the floor.
The height of the support (e.g. pallet) shall be (0,12 ± 0,04) m for floor standing EUT and (0,8 ± 0,05) m for table-top EUT.
The absorbing clamp shall be clamped around the lead under test and, at each test frequency, moved along the lead in order to find the position that gives the maximum indication. The maximum value is found between a position adjacent to the EUT and a distance of about a half-wavelength from it.



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2.3.5 Environmental Conditions

Ambient Temperature	20.3 °C
Relative Humidity	50.3 %
Atmospheric Pressure	1033 mbar

2.3.6 Specification Limits

Disturbance power limits for frequency range 30MHz to 300MHz		
Frequency range	Household and similar appliances dB(pW)	
MHz	Quasi-peak	Average
30 to 300	45 to 55	35 to 45

Margin when performing disturbance power measurement in the frequency range 30MHz to 300MHz		
Frequency range	Household and similar appliances dB(pW)	
MHz	Quasi-peak	Average
	Increasing linearly with the frequency from	
200 to 300	0 to 10 dB	0

2.3.7 Test Results

Results for Configuration and Mode: AC Powered/Power on.

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

Line Under Test: Power line.

China

30M-300MHz Disturbance Power Test

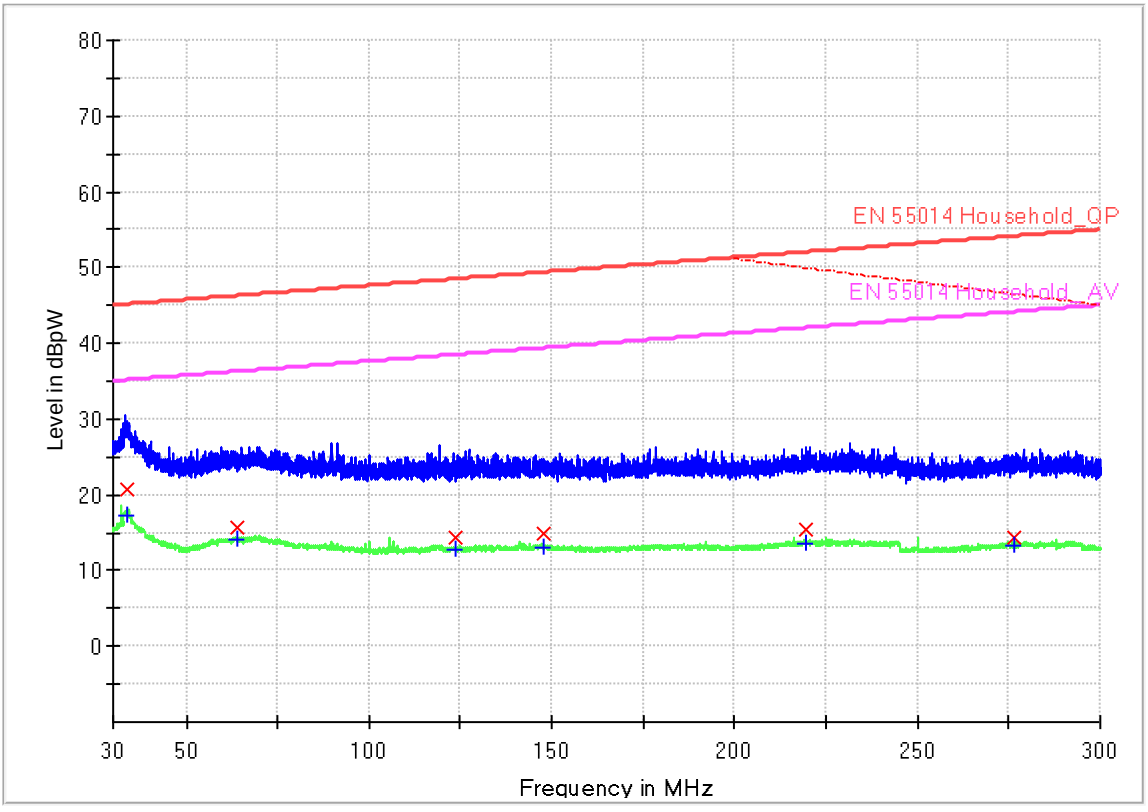
EUT Information

EUT Name:	Raclette apparatus
Model:	WJ-K224
Client:	Ningbo WeiJie Electrical Appliances Co., Ltd.
Op cond:	Power on, AC 230V/50Hz, T20.3, H50.3%, P103.3kPa
Operator:	Zhong Yuwei
Test Spec:	EN IEC 55014-1
Comment:	AC line
Sample No.:	SHA-712987-3

Scan Setup: Power max [EMI conducted]

Hardware Setup:	Power
Receiver:	[ESR 3]
Level Unit:	dBpW

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 300 MHz	40 kHz	PK+; AVG	120 kHz	0.01 s	0 dB



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Limit and Margin

Frequency (MHz)	QuasiPeak (dBpW)	CAverage (dBpW)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBpW)	Margin - CAV (dB)	Limit - CAV (dBpW)
33.960000	20.6	17.2	1000.0	120.000	8.5	24.6	45.1	18.0	35.1
63.960000	15.7	14.1	1000.0	120.000	8.4	30.6	46.3	22.2	36.3
123.560000	14.5	12.8	1000.0	120.000	6.5	34.0	48.5	25.7	38.5
147.960000	14.8	13.0	1000.0	120.000	6.3	34.6	49.4	26.3	39.4
219.440000	15.3	13.7	1000.0	120.000	6.6	36.7	52.0	28.3	42.0
276.320000	14.3	13.3	1000.0	120.000	6.6	39.8	54.1	30.8	44.1

Test Setup

2.3.8 Test Location

This test was carried out in shielded room Z120.

China

2.4 Harmonic current emission

2.4.1 Specification Reference

EN IEC 61000-3-2:2019/A1:2021, Clause 7

2.4.2 Equipment Under Test

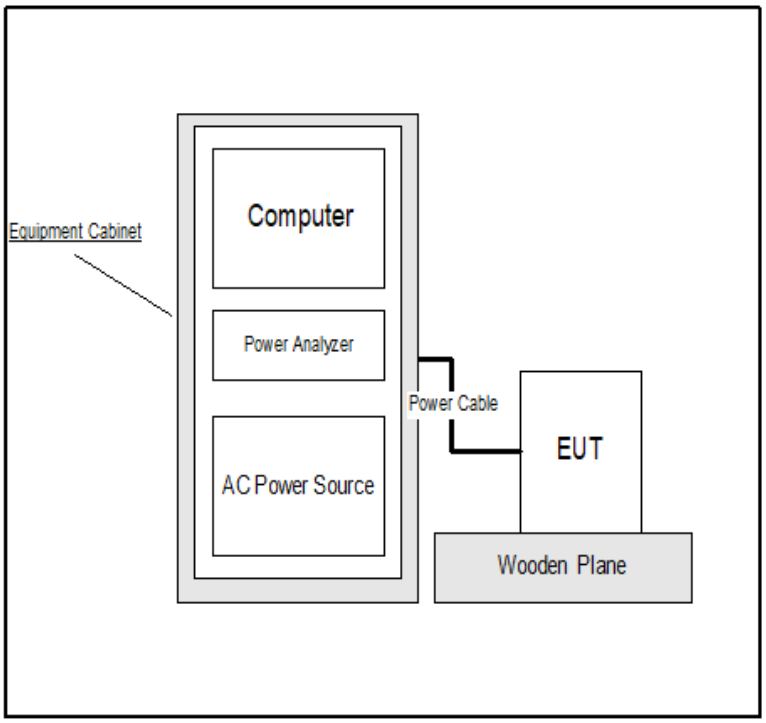
WJ-K224

2.4.3 Date of Test

03/10/2023

2.4.4 Test Method

Harmonic components shall be measured in accordance with the requirements given in Annex A of EN IEC 61000-3-2 for the test circuit and the supply source



2.4.5 Environmental Conditions

Ambient Temperature	22.3 °C
Relative Humidity	50.7 %
Atmospheric Pressure	1033 mbar

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2.4.6 Specification Limits

Limits for class A Equipment	
Harmonic order h	Maximum permissible harmonic current A
Odd harmonics	
3	2.30
5	1.14
7	0.77
9	0.40
11	0.33
13	0.21
15≤ h≤ 39	0.15(15/h)
Even harmonics	
2	1.08
4	0.43
6	0.30
8≤ h ≤40	0.23(8/h)

2.4.7 Test Results

Results for Configuration and Mode: AC Powered/Power on.

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

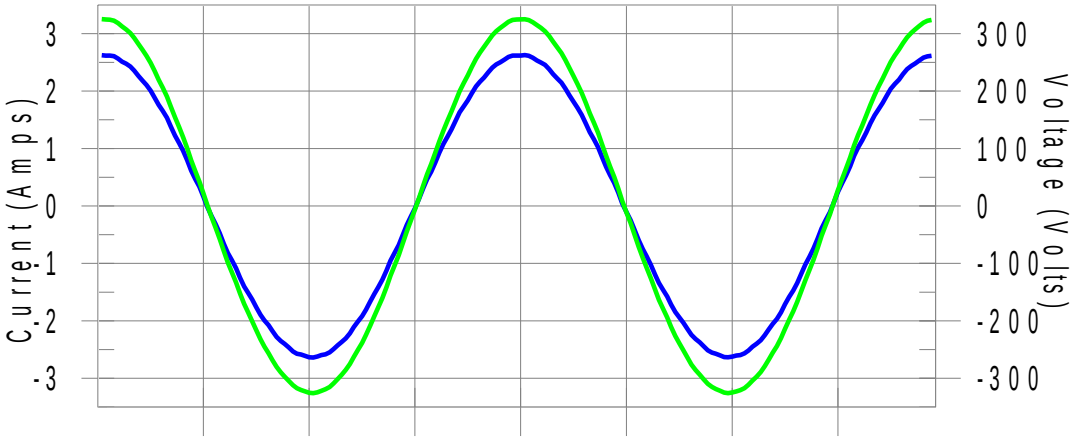
China

Harmonics – Class-A per IEC 61000-3-2:2018/AMD1:2020(Run time) incl. inter-harmonics

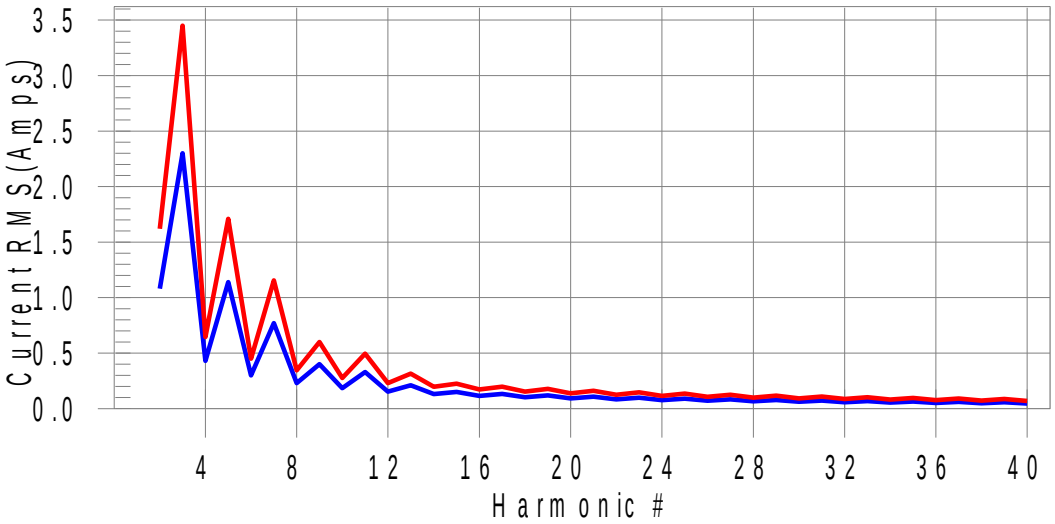
EUT: Raclette apparatus, WJ-K224 **Tested by: Zhong Yuwei**
Test category: Class-A (European limits) **Test Margin: 100**
Test date: 3/10/2023 **Start time: 6:34:07 PM** **End time: 6:36:48 PM**
Test duration (min): 2.5 **Data file name: H-000162.cts_data**
Comment: Power on, SHA-712987-3,T:22.3, H:50.7%, P:103.3kPa
Customer: NingBo Weijie Electrical Appliances Co.,Ltd

Test Result: Pass **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class A limit line **European Limits**



Test result: Pass Worst harmonics H0-0.0% of 150% limit, H0-0% of 100% limit

China

Current Test Result Summary (Run time)

EUT: Raclette apparatus, WJ-K224 **Tested by: Zhong Yuwei**
Test category: Class-A (European limits) **Test Margin: 100**
Test date: 3/10/2023 **Start time: 6:34:07 PM** **End time: 6:36:48 PM**
Test duration (min): 2.5 **Data file name: H-000162.cts_data**
Comment: Power on, SHA-712987-3,T:22.3, H:50.7%, P:103.3kPa
Customer: NingBo Weijie Electrical Appliances Co.,Ltd

Test Result: Pass **Source qualification: Normal**
THC(A): 0.004 **I-THD(%): 0.2** **POHC(A): 0.001** **POHC Limit(A): 0.251**

Highest parameter values during test:

V_RMS (Volts):	230.17	Frequency(Hz):	50.00
I_Peak (Amps):	2.646	I_RMS (Amps):	1.860
I_Fund (Amps):	1.860	Crest Factor:	1.425
Power (Watts):	428.0	Power Factor:	1.000

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	N/A	0.002	1.620	N/A	Pass
3	0.003	2.300	N/A	0.004	3.450	N/A	Pass
4	0.001	0.430	N/A	0.001	0.645	N/A	Pass
5	0.000	1.140	N/A	0.001	1.710	N/A	Pass
6	0.000	0.300	N/A	0.000	0.450	N/A	Pass
7	0.001	0.770	N/A	0.001	1.155	N/A	Pass
8	0.000	0.230	N/A	0.000	0.345	N/A	Pass
9	0.000	0.400	N/A	0.001	0.600	N/A	Pass
10	0.000	0.184	N/A	0.000	0.276	N/A	Pass
11	0.000	0.330	N/A	0.000	0.495	N/A	Pass
12	0.000	0.153	N/A	0.000	0.230	N/A	Pass
13	0.000	0.210	N/A	0.000	0.315	N/A	Pass
14	0.000	0.131	N/A	0.000	0.197	N/A	Pass
15	0.000	0.150	N/A	0.000	0.225	N/A	Pass
16	0.000	0.115	N/A	0.000	0.173	N/A	Pass
17	0.000	0.132	N/A	0.000	0.198	N/A	Pass
18	0.000	0.102	N/A	0.000	0.153	N/A	Pass
19	0.000	0.118	N/A	0.000	0.178	N/A	Pass
20	0.000	0.092	N/A	0.000	0.138	N/A	Pass
21	0.000	0.107	N/A	0.000	0.161	N/A	Pass
22	0.000	0.084	N/A	0.000	0.125	N/A	Pass
23	0.000	0.098	N/A	0.000	0.147	N/A	Pass
24	0.000	0.077	N/A	0.000	0.115	N/A	Pass
25	0.000	0.090	N/A	0.000	0.135	N/A	Pass
26	0.000	0.071	N/A	0.000	0.107	N/A	Pass
27	0.000	0.083	N/A	0.000	0.125	N/A	Pass
28	0.000	0.066	N/A	0.000	0.099	N/A	Pass
29	0.000	0.078	N/A	0.000	0.116	N/A	Pass
30	0.000	0.061	N/A	0.000	0.092	N/A	Pass
31	0.000	0.073	N/A	0.000	0.109	N/A	Pass
32	0.000	0.058	N/A	0.000	0.086	N/A	Pass
33	0.000	0.068	N/A	0.000	0.102	N/A	Pass
34	0.000	0.054	N/A	0.000	0.081	N/A	Pass
35	0.000	0.064	N/A	0.000	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	0.077	N/A	Pass
37	0.000	0.061	N/A	0.000	0.091	N/A	Pass
38	0.000	0.048	N/A	0.000	0.073	N/A	Pass
39	0.000	0.058	N/A	0.000	0.087	N/A	Pass
40	0.000	0.046	N/A	0.000	0.069	N/A	Pass

China

Voltage Source Verification Data (Run time)

EUT: Raclette apparatus, WJ-K224 **Tested by: Zhong Yuwei**
Test category: Class-A (European limits) **Test Margin: 100**
Test date: 3/10/2023 **Start time: 6:34:07 PM** **End time: 6:36:48 PM**
Test duration (min): 2.5 **Data file name: H-000162.cts_data**
Comment: Power on, SHA-712987-3,T:22.3, H:50.7%, P:103.3kPa
Customer: NingBo Weijie Electrical Appliances Co.,Ltd

Test Result: Pass **Source qualification: Normal**

Highest parameter values during test:

Voltage (Vrms):	**230.17**	**Frequency(Hz):**	**50.00**
I_Peak (Amps):	**2.646**	**I_RMS (Amps):**	**1.860**
I_Fund (Amps):	**1.860**	**Crest Factor:**	**1.425**
Power (Watts):	**428.0**	**Power Factor:**	**1.000**

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.085	0.460	18.53	OK
3	0.463	2.071	22.37	OK
4	0.047	0.460	10.14	OK
5	0.055	0.920	5.93	OK
6	0.018	0.460	3.96	OK
7	0.046	0.690	6.60	OK
8	0.019	0.460	4.06	OK
9	0.020	0.460	4.28	OK
10	0.016	0.460	3.37	OK
11	0.016	0.230	7.09	OK
12	0.013	0.230	5.46	OK
13	0.012	0.230	5.33	OK
14	0.009	0.230	3.72	OK
15	0.010	0.230	4.51	OK
16	0.010	0.230	4.48	OK
17	0.005	0.230	2.39	OK
18	0.006	0.230	2.81	OK
19	0.005	0.230	2.31	OK
20	0.011	0.230	4.93	OK
21	0.005	0.230	2.29	OK
22	0.004	0.230	1.77	OK
23	0.005	0.230	2.06	OK
24	0.003	0.230	1.38	OK
25	0.005	0.230	2.01	OK
26	0.003	0.230	1.34	OK
27	0.006	0.230	2.63	OK
28	0.003	0.230	1.39	OK
29	0.005	0.230	2.10	OK
30	0.005	0.230	2.00	OK
31	0.004	0.230	1.74	OK
32	0.004	0.230	1.57	OK
33	0.005	0.230	1.98	OK
34	0.005	0.230	2.05	OK
35	0.004	0.230	1.86	OK
36	0.002	0.230	0.97	OK
37	0.004	0.230	1.88	OK
38	0.002	0.230	1.03	OK
39	0.004	0.230	1.72	OK
40	0.008	0.230	3.52	OK

Test setup

2.4.8 Test Location

This test was carried out in harmonic current emission and flicker Test area.

China

2.5 Flicker

2.5.1 Specification Reference

EN 61000-3-3:2013/A1:2019/A2:2021, Clause 5

2.5.2 Equipment Under Test

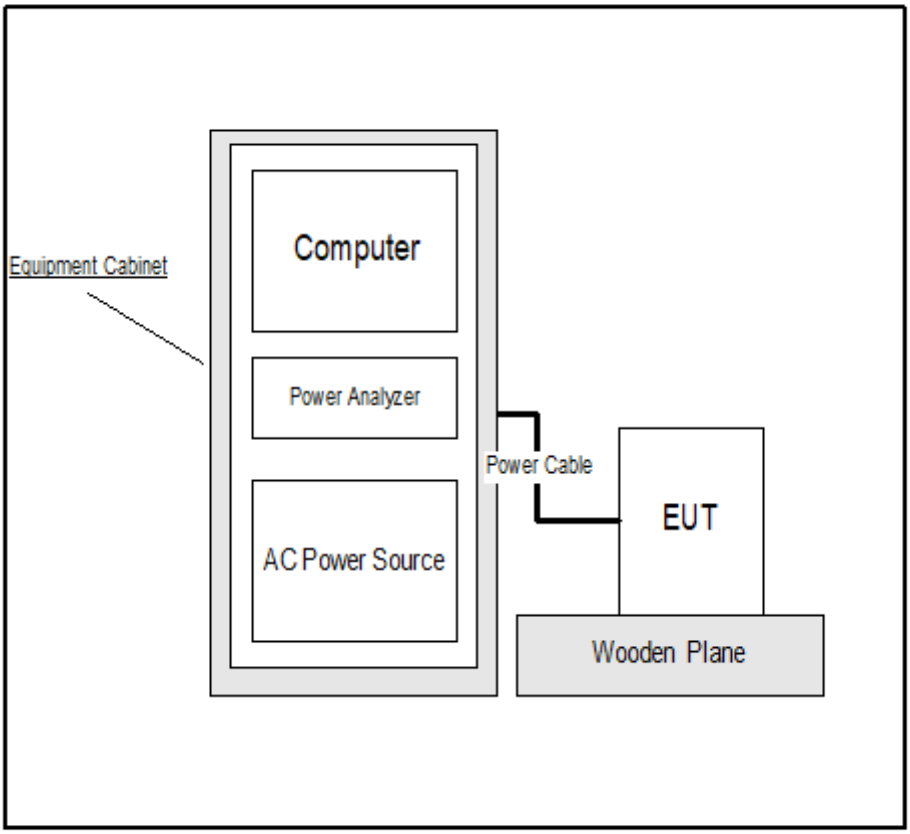
WJ-K224

2.5.3 Date of Test

03/10/2023

2.5.4 Test Method

For equipment not mentioned in annex A of EN 61000-3-3, controls or automatic programs should be set to produce the most unfavourable sequence of voltage change, using only those combinations of controls and programmes which are mentioned by the manufacturer in the instruction manual, or are otherwise likely to be used



China

2.5.5 Environmental Conditions

Ambient Temperature	22.3 °C
Relative Humidity	50.7 %
Atmospheric Pressure	1033 mbar

2.5.6 Specification Limits

The value of Pst shall not be greater than 1.0
The value of Plt shall not be greater than 0.65
Tmax, the accumulated time value of d(t) with a deviation exceeding 3.3% during a single voltage change at the EUT terminals, shall not exceed 500ms
The maximum relative steady-state voltage change, dc, shall not exceed 3.3%
The maximum relative voltage change dmax, shall not exceed
a) 4% without additional conditions
b) 6% for equipment which is:
- Switched manually, or
- Switched automatically more frequently than twice per day, and also has either a delayed start, or manual restart, after a power supply interruption

c) 7% for equipment which is:
- Attended whilst in use, or
- Switched on automatically, or is intended to be switched on manually, no more than twice per day, and also has either a delayed restart or manual restart, after a power supply interruption

2.5.7 Test Results

Results for Configuration and Mode: AC Powered/switch on/off.

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

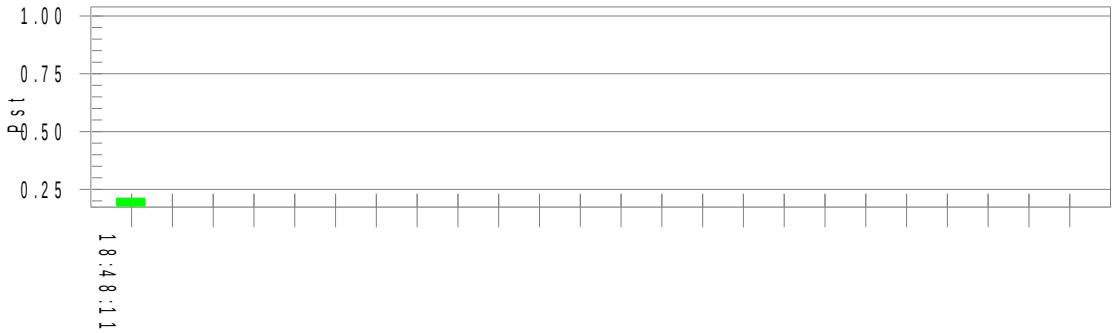
China

Flicker Test Summary per IEC61000-3-3:2013/AMD1:2017 (Run time)

EUT: Raclette apparatus, WJ-K224 **Tested by: Zhong Yuwei**
Test category: dt,dmax,dc and Pst (European limits) **Test Margin: 100**
Test date: 3/10/2023 **Start time: 6:37:50 PM** **End time: 6:48:17 PM**
Test duration (min): 10 **Data file name: F-000163.cts_data**
Comment: Power on, switch on/off, SHA-712987-3,T:22.3, H:50.7%, P:103.3kPa
Customer: NingBo Weijie Electrical Appliances Co.,Ltd

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**



Parameter values recorded during the test:

Vrms at the end of test (Volt):	**230.10**			
Highest dt (%):		**Test limit (%):**		
T-max (mS):	**0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.213**	**Test limit:**	**1.000**	**Pass**

China

Test setup

2.5.8 Test Location

This test was carried out in harmonic current emission and flicker Test area.

China

3 Test Equipment Information

3.1 General Test Equipment Used

Instrument	Manufacturer	Type No	TE No	Calibration Date	Calibration Due
Conducted Disturbance					
EMI test receiver	R & S	ESR3	S1503001-YQ-EMC	2022.8.1	2023.7.31
2-Line V-network	R & S	ENV216	S1503103-YQ-EMC	2022.8.1	2023.7.31
Discontinuous Disturbance					
EMI test receiver	R & S	ESR3	S1503101-YQ-EMC	2022.8.1	2023.7.31
4-Line V-network	R & S	ENV4200	S1503106-YQ-EMC	2022.8.1	2023.7.31
Disturbance Power					
EMI test receiver	R & S	ESR3	S1503101-YQ-EMC	2022.8.1	2023.7.31
Absorbing clamp	R & S	MDS21	S1503113-YQ-EMC	2022.8.1	2023.7.31
Ferrite clamp	R & S	EZ-24	S1503114-SB-EMC	--	--
Harmonic current emission and Flicker					
Harmonic-flicker test system	California Instruments	15003IX-CTS-400-413-LF-411	S1503193-YQ-EMC	2022.7.8	2023.7.7

China

4 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Conducted Disturbance	9 kHz to 30 MHz, 3.16dB (AMN)
Disturbance power	30MHz to 300MHz, 3.67dB
Harmonic Current Measurement	2.56%
Flicker Measurement	6.21% (dt) 6.22% (dmax) 6.20% (dc)

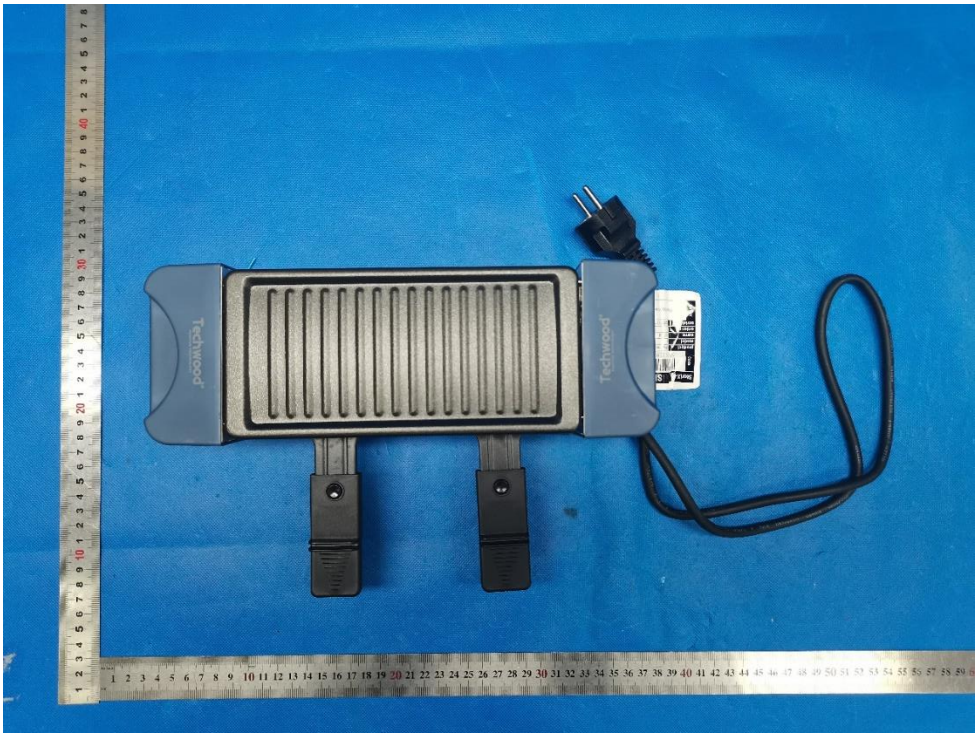
Measurement Uncertainty Decision Rule:

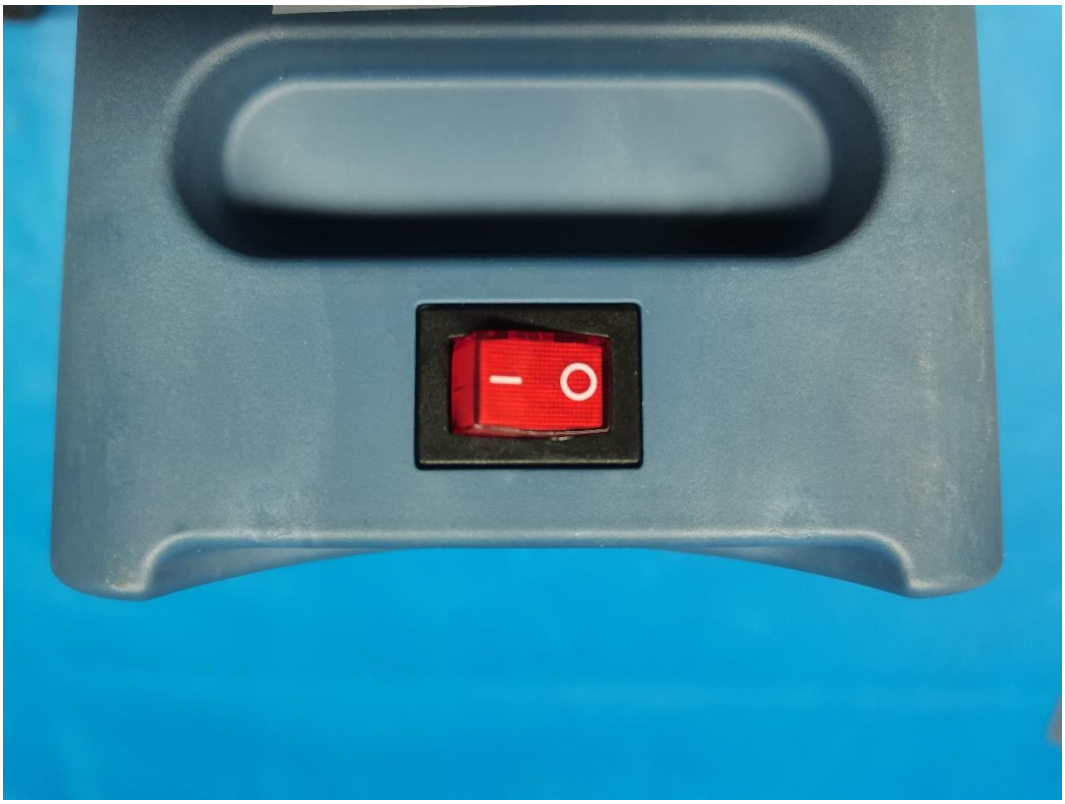
Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2021, clause 4.4.3 and 4.5.1.

China

5 Photographs

Test model: WJ-K224





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