



EUROFINS PRODUCT TESTING SERVICE (SHANGHAI) CO., LTD.

EMC TEST- REPORT

TEST REPORT NUMBER: EFSH14120797-IE-01-E01-A4



Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai,
200436, P.R. China

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Page 1 of 53

TABLE OF CONTENTS

1 Contents

1	Contents	2
2	General Information	3
2.1	Notes	3
2.2	Testing laboratory	4
2.3	Details of approval holder	5
2.4	Application details	5
2.5	EUT Information	5
2.6	Test standards	6
3	Technical test	7
3.1	Summary of test results	7
3.2	Test environment	7
3.3	Test equipment utilized	8
3.4	Test results	9
4	Emission Test	10
4.1	Conducted Emission	10
4.2	Disturbance power	15
4.3	Discontinuous disturbance	18
4.4	Harmonic Current Emissions	20
4.5	Voltage Changes, Voltage Fluctuations and Flicker	25
5	Test Setup Photos	27
6	EUT Photos	29
7	Amendment 1	52
8	Amendment 2	52
9	Amendment 3	52
10	Amendment 4	53

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

2 General Information

2.1 Notes

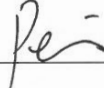
The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

Eurofins Product Testing Service (Shanghai) Co., Ltd. is not responsible for any generalisations and conclusions drawn from this report. Any modification of the test item can lead to invalidity of test results and this test report may therefore be not applicable to the modified test item.

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Operator:

2017-09-01		Perry Li / Testing Engineer	
<hr/>			
Date	Eurofins-Lab.	Name / Title	Signature

Technical responsibility for area of testing:

2017-09-01		Stefan Zhao / Project Engineer	
<hr/>			
Date	Eurofins	Name / Title	Signature

Test Report No.: EFSH14120797-IE-01-E01-A4

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2.2 Testing laboratory

Eurofins Product Testing Service (Shanghai) Co., Ltd.

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Telephone : +86-21-61819181

Telefax : +86-21-61819180

Test location, where different:

Test Report No.: EFSH14120797-IE-01-E01-A4

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2.3 Details of approval holder

Name
 Address : ./.
 Telephone : ./.
 Fax

2.4 Application details

	:	2014-12-09
	:	2014-12-09
Date of receipt of application	:	2014-12-09 to 2014-12-31
Date of receipt of test item	:	
Date of test	:	
Amendment 1	:	2016-07-01
Amendment 2	:	2016-10-12
Amendment 3	:	2017-06-16
Amendment 4	:	2017-09-01 (Date of test: N/A)

2.5 EUT Information

Product type : Frying Pan
 Model name : EFP-001, EFP-001-A, EFP-001-B, **EFP-001-C**, EFP-002, EFP-002-A, EFP-005, EFP-008, EPP-28, EPP-30, EPP-34, EPP-34-A, EPP-38, EPP-38-A, EPP-40, PP-004-34, PP-004-38, PP-010, PP-010-1, EPP-28-A, EPP-30-A, EPP-30-B
 Brand name : COYA®
 Serial number : ./.
 Ratings : 220-240V~, 50-60Hz, Class I for all models
 EFP-001, EFP-001-A, EFP-001-B, **EFP-001-C**, EFP-002, EFP-002-A, EFP-005, EFP-008, EPP-28, EPP-30, EPP-34, EPP-34-A, EPP-38, EPP-38-A, EPP-40, PP-004-34, PP-004-38, PP-010, PP-010-1, EPP-30-B: 1500W; EPP-28-A, EPP-30-A: 1000W
 Additional information :
 The appliances covered by this report are Frying Pans for household indoor use only.
 All of the models have the same construction except for the handle, the shape and the size of the pot.
 After view, full test were performed on EPP-40 and the most unfavourable test results are recorded.

See page 52 for Amendment 1, Amendment 2 and Amendment 3.

EFP-001-C:
 See page 53 for Amendment 4.

2.6 Test standards

Technical standard :

EN 55014-1: 2006+A1: 2009+A2: 2011

EN 55014-2: 1997 + A1: 2001+A2: 2008

EN 55014-2: 2015

EN 61000-3-2: 2014

EN 61000-3-3: 2013

3 Technical test

3.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.



or

The deviations as specified were ascertained in the course of the tests performed.



3.2 Test environment

Temperature	:	20	...	25°C
Relative humidity content	:	30	...	60%
Air pressure	:	100	...	103kPa

Test Report No.: EFSH14120797-IE-01-E01-A4

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3.3 Test equipment utilized

Measurement Equipment List				
No.	Name:	Type:	Manufacturer:	Cal due date:
1	EMI test receiver	ESCI	R&S	2017-11-25
2	Single phase Harmonics & Flicker analyser	PACS-1	California Instruments	2017-11-25
3	AC Power Source	5001ix	California Instruments	2017-11-25
4	Coupling/Decoupling Network	L 801 M2/M3	Luethi	2017-11-25
5	Ultra Compact Simulator	UCS 500N7	EMTEST	2017-11-25
6	ESD	NSG 437	TESEQ	2018-07-19
7	Current transformer	MC2630	EMTEST	2017-11-25
8	Motorized variac	MV2616	EMTEST	2017-11-25
9	Continuous wave simulator	CWS500N1	EMTEST	2017-11-25
10	Magnetic field coil	MS100	EMTEST	2017-11-25
11	Current transformer	MC26100	EMTEST	2017-11-25
12	Artificial mains	ENV216	R&S	2017-11-25
13	Click analyser	CL55C	AFJ	2017-11-25
14	Absorbing clamp	MDS21	Luethi	2017-11-25
15	EM clamp	EM101	Luethi	2017-11-25
16	Oscilloscope	TDS3012C	Tektronix	2017-11-25

Test Report No.: EFSH14120797-IE-01-E01-A4

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3.4 Test results

 1st test

 test after modification

 production test

Test case	Subclause	Required	Test passed	Test failed
Conducted Emission	Clause 4.1.1 of EN 55014-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Disturbance power	Clause 4.1.2 of EN 55014-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated disturbance	Clause 4.1.2 of EN 55014-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discontinuous disturbance	Clause 4.2 of EN 55014-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Harmonic Current Emissions	EN 61000-3-2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Voltage Changes, Voltage Fluctuations and Flicker	EN 61000-3-3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electrostatic Discharge	Clause 5.1 of EN 55014-2 & IEC 61000-4-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrical Fast Transients	Clause 5.2 of EN 55014-2 & IEC 61000-4-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Injected currents (RF continues conducted)	Clause 5.3 & 5.4 of EN 55014-2 & IEC 61000-4-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio frequency electromagnetic fields	Clause 5.5 of EN 55014-2 & IEC 61000-4-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surge immunity	Clause 5.6 of EN 55014-2 & IEC 61000-4-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Voltage dips and Interruption	Clause 5.7 of EN 55014-2 & IEC 61000-4-11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note 1: The additional margin(0-10dB) was meet in the frequency range 200MHz to 300MHz in Disturbance power test(absorbing clamp), and the EUT did not contained any circuit with clock frequency more than 30MHz, so the EUT was compliant with the Radiated disturbance test (300MHz-1GHz) without test.

Note 2: Category I apparatus is deemed to fulfil the relevant immunity requirements without testing.

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

4 Emission Test

4.1 Conducted Emission

This clause lays down the general requirements for the measurement of disturbance voltage produced at the terminals of apparatus.

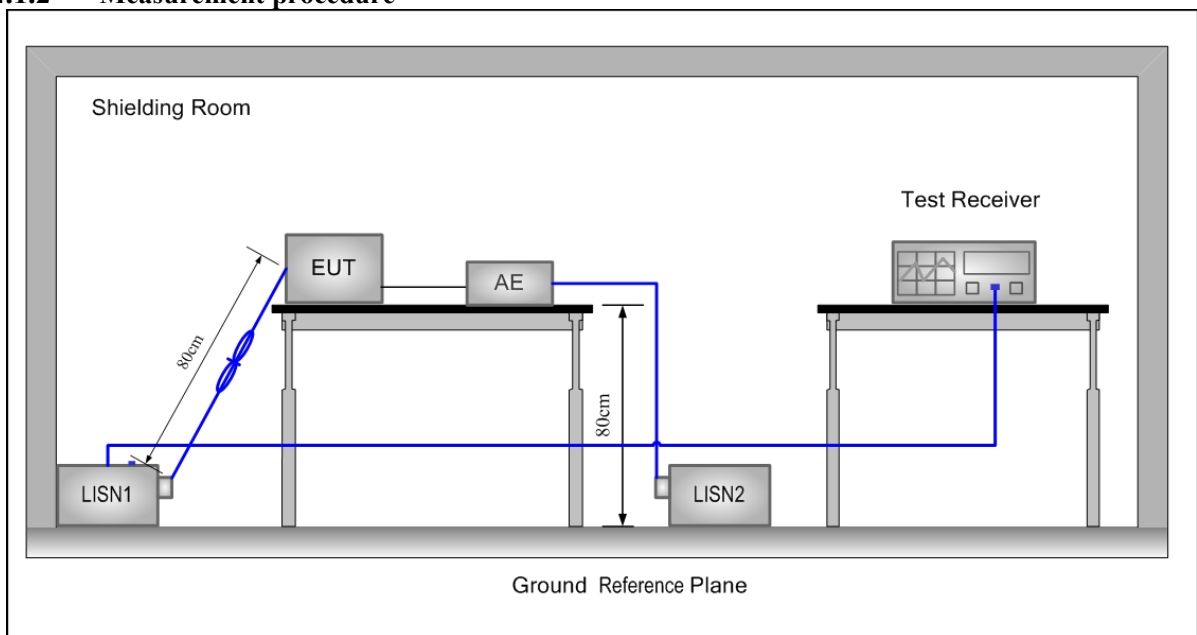
4.1.1 Limits

Frequency range MHz	At mains terminals dB (μ V)	
	Quasi-peak Limit	Average Limit
0.15 to 0.50	66 to 56	59 to 46
0.50 to 5	56	46
5 to 30	60	50

Note1: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 30 MHz.

Note2: The lower limit is applicable at the transition frequency.

4.1.2 Measurement procedure



1. The mains terminal disturbance voltage was measured with the EUT in a shielded room.
2. The EUT was connected to AC power source through a LISN (Line Impedance Stabilization Network) which provides a $(50 \mu\text{H} + 5 \Omega) \parallel 50 \Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN, which was bonded to the ground reference plane in the same way as the LISN for the unit being measured.
3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

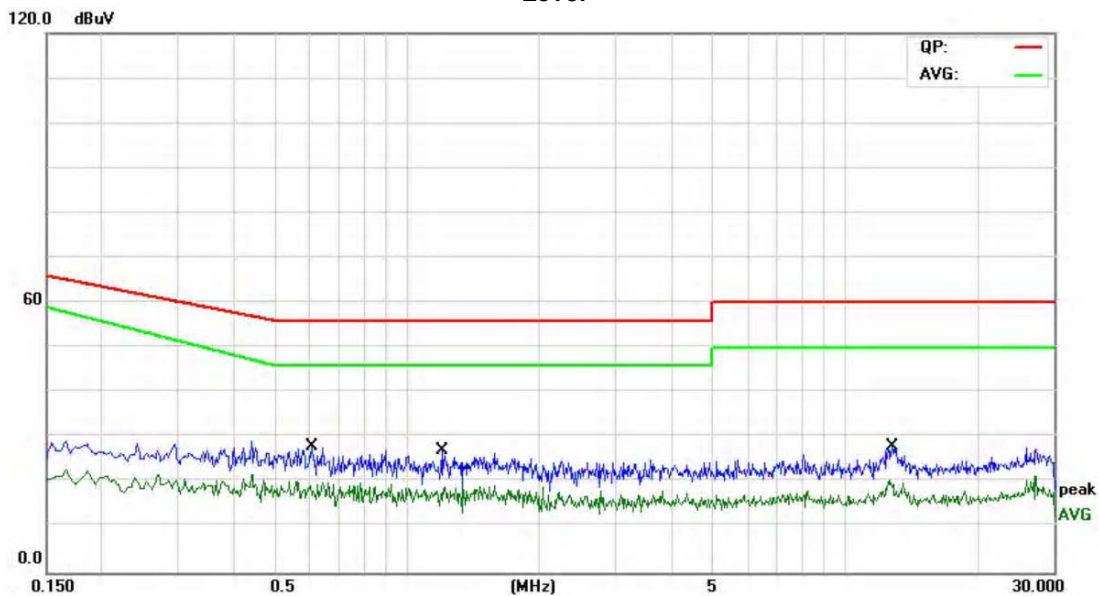
4. According to a pre-test at 160kHz, the worst voltage was selected for final test. Before get the final emission results with quasi-peak(QP) detector and average(AVG) detector, a pre-scan was performed with the peak(PK) and average(AVG) detector to find out the maximum emission data plots of the EUT.

4.1.3 Measurement uncertainty

U_{lab(cond)} = 2.5dB at 95% level of confidence, k=2

4.1.4 Results -Measurement Data

EPP-40
Live Line:
Level

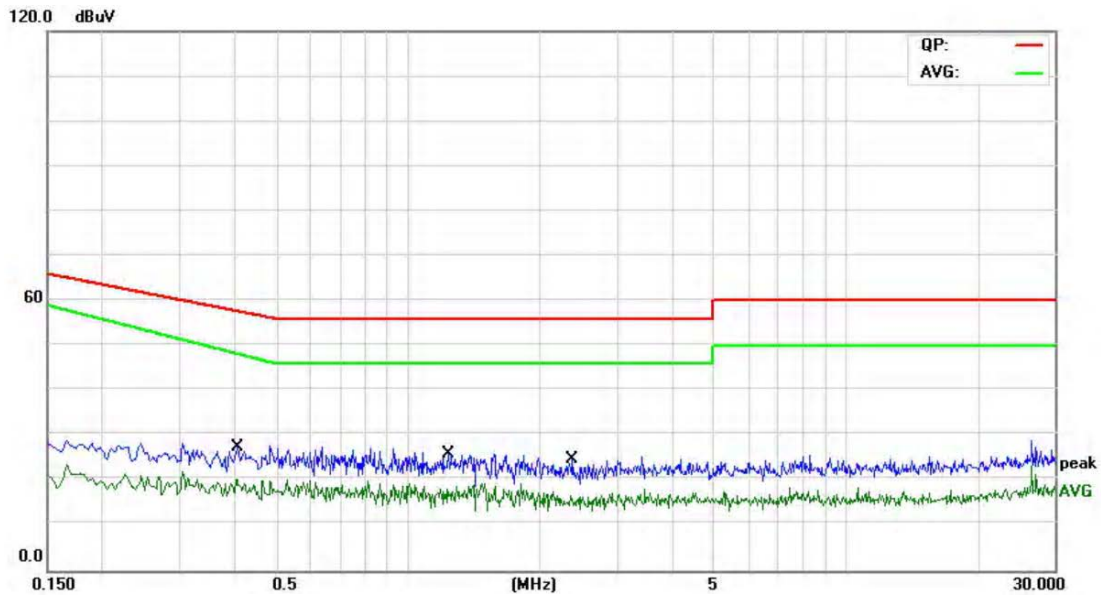


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.6060	11.04	9.73	20.77	56.00	-35.23	QP
2	*	0.6060	7.55	9.73	17.28	46.00	-28.72	AVG
3		1.1980	9.22	9.69	18.91	56.00	-37.09	QP
4		1.1980	6.11	9.69	15.80	46.00	-30.20	AVG
5		12.7980	13.24	9.92	23.16	60.00	-36.84	QP
6		12.7980	5.58	9.92	15.50	50.00	-34.50	AVG

Test Report No.: EFSH14120797-IE-01-E01-A4

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No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

**Neutral Line:
Level**

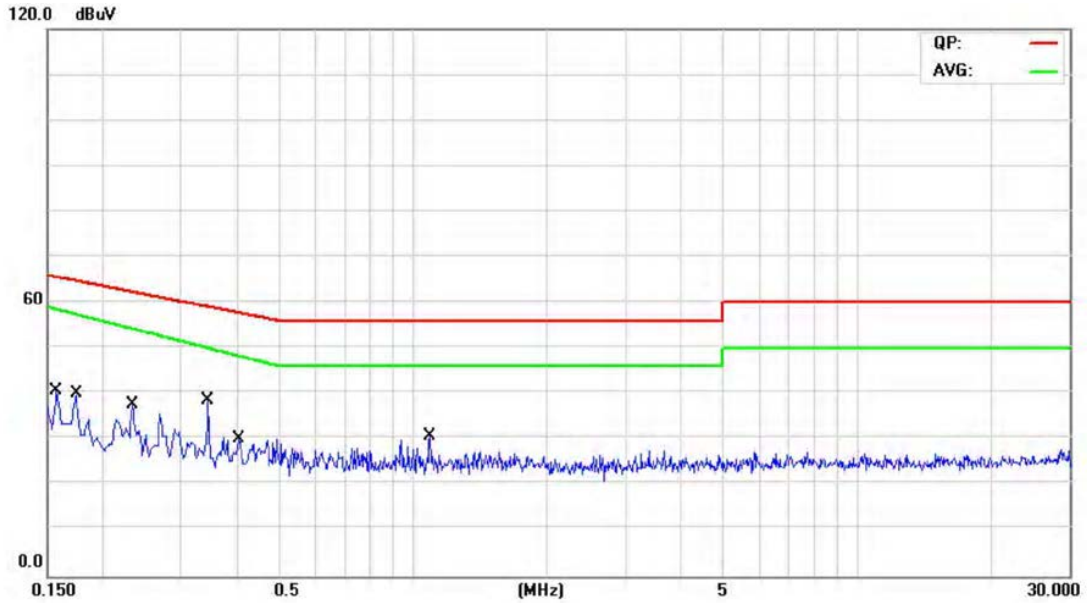


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.4100	11.57	9.76	21.33	57.65	-36.32	QP
2		0.4100	8.06	9.76	17.82	48.14	-30.32	AVG
3		1.2380	9.30	9.70	19.00	56.00	-37.00	QP
4	*	1.2380	6.06	9.70	15.76	46.00	-30.24	AVG
5		2.3780	8.68	9.88	18.56	56.00	-37.44	QP
6		2.3780	4.09	9.88	13.97	46.00	-32.03	AVG

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

EFP-005
Live Line:
Level

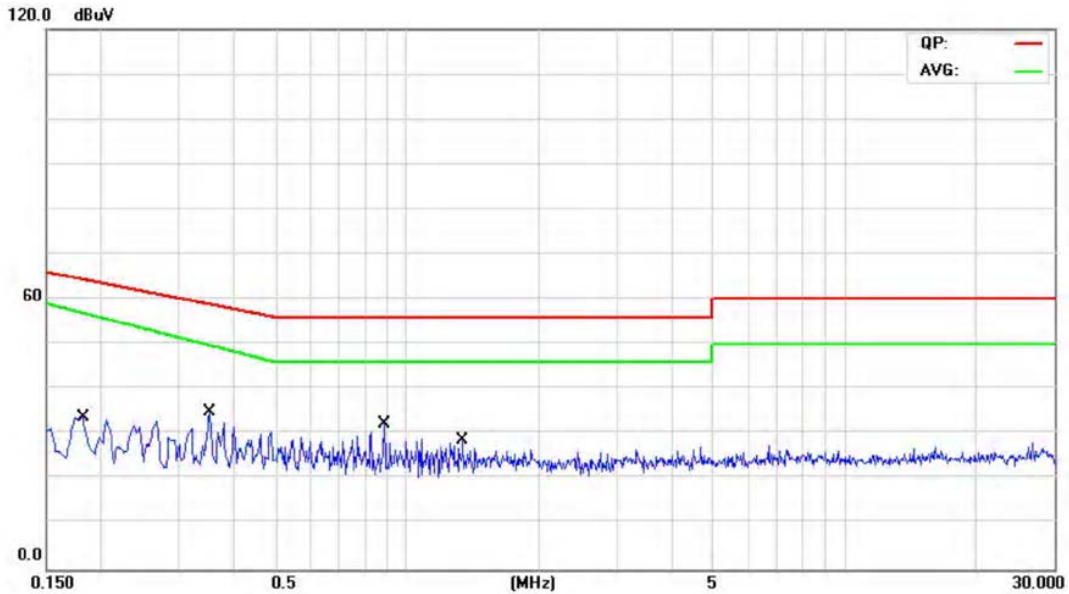


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV	dBuV	dB	
1		0.1580	28.04	10.36	38.40	65.57	-27.17	QP
2		0.1580	14.64	10.36	25.00	58.44	-33.44	AVG
3		0.1740	30.22	10.36	40.58	64.77	-24.19	QP
4		0.1740	12.71	10.36	23.07	57.40	-34.33	AVG
5		0.2340	21.91	10.54	32.45	62.31	-29.86	QP
6		0.2340	11.64	10.54	22.18	54.20	-32.02	AVG
7		0.3460	15.60	10.42	26.02	59.06	-33.04	QP
8		0.3460	8.04	10.42	18.46	49.98	-31.52	AVG
9	*	0.4060	24.90	10.35	35.25	57.73	-22.48	QP
10		0.4060	8.28	10.35	18.63	48.25	-29.62	AVG
11		1.0900	10.17	10.34	20.51	56.00	-35.49	QP
12		1.0900	5.84	10.34	16.18	46.00	-29.82	AVG

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
 No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Neutral Line:
Level



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV	dBuV	dB	
1		0.1820	18.69	10.42	29.11	64.39	-35.28	QP
2		0.1820	9.56	10.42	19.98	56.91	-36.93	AVG
3		0.3540	14.70	10.30	25.00	58.87	-33.87	QP
4		0.3540	7.46	10.30	17.76	49.73	-31.97	AVG
5		0.8860	10.89	10.33	21.22	56.00	-34.78	QP
6	*	0.8860	6.41	10.33	16.74	46.00	-29.26	AVG
7		1.3380	9.49	10.35	19.84	56.00	-36.16	QP
8		1.3380	5.74	10.35	16.09	46.00	-29.91	AVG

Test Report No.: EFSH14120797-IE-01-E01-A4

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No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

4.2 Disturbance power

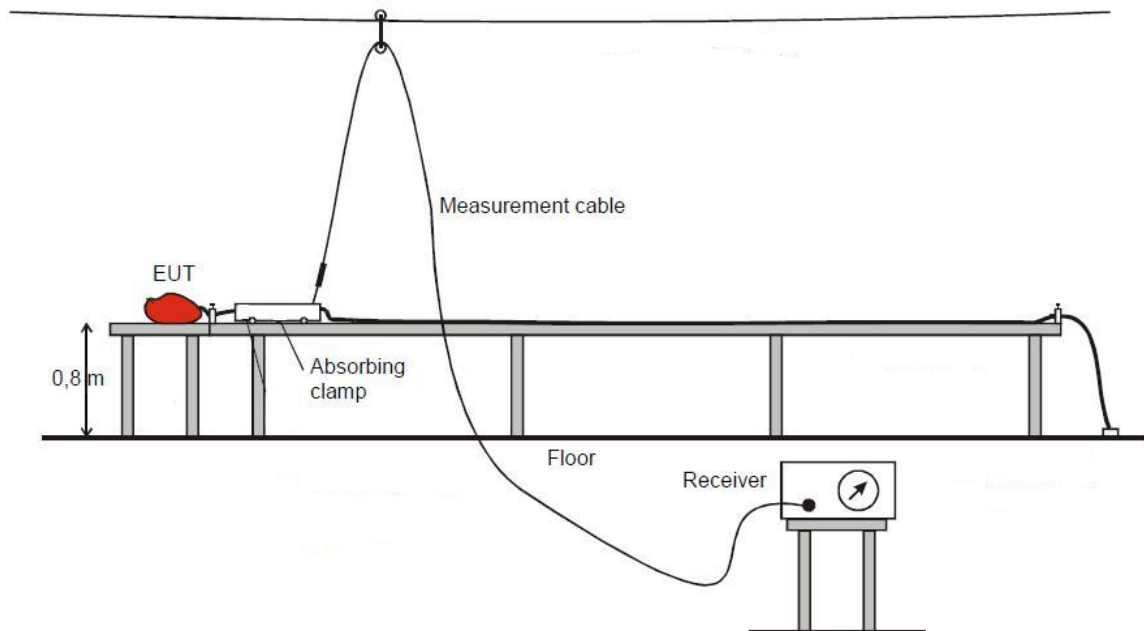
This clause lays down the general requirements for the measurement of disturbance power produced at the terminals of apparatus.

4.2.1 limits

Frequency range MHz	Limit dB (pW)	
	Quasi-peak	Average
30 to 300	45 to 55	35 to 45

Note1: Increasing linearly with the frequency from.

4.2.2 Measurement procedure



The test configuration corresponds to the standard EN 55014-1. The equipment under test is placed on a non metallic table with 0,8 m high. The lead to be measured is stretched horizontally in a straight line, to permit variation in position of the absorbing clamp along the lead to find the maximum indication. The lead shall be at least length of 6 meter. According to a pre-test at 50MHz, the worst voltage was selected for final test. Before get the final emission results with quasi-peak(QP) detector and average(AVG) detector, a pre-scan was performed with the peak(PK) detector to find out the maximum emission data plots of the EUT. The absorbing clamp is placed around the lead.

4.2.3 Measurement uncertainty

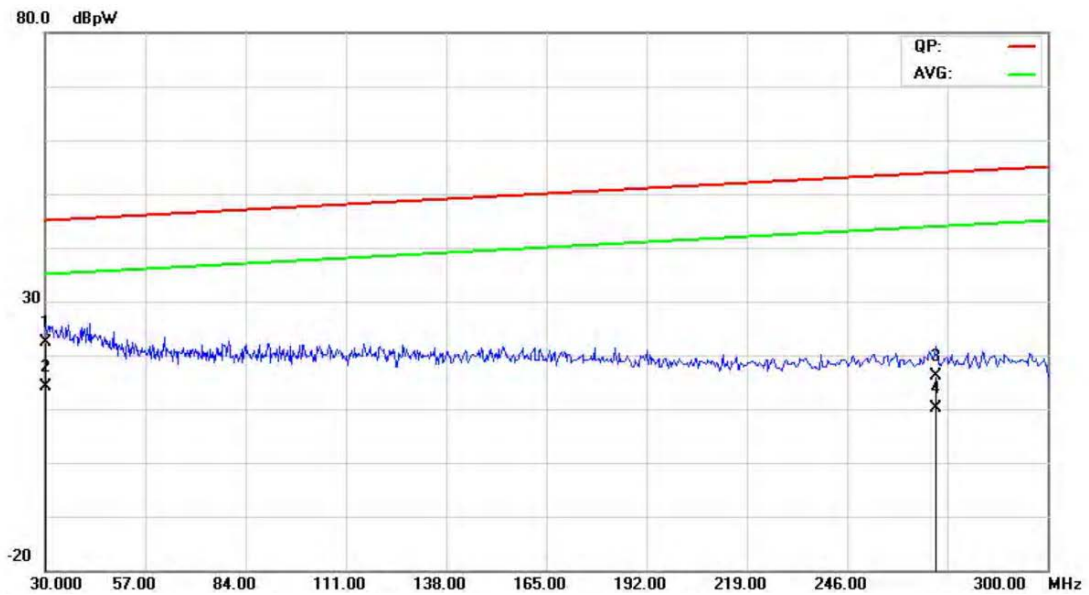
$U_{lab(cond)} = 4.08 \text{ dB}$ at confidence of 95%, $k=2$

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

4.2.4 Results

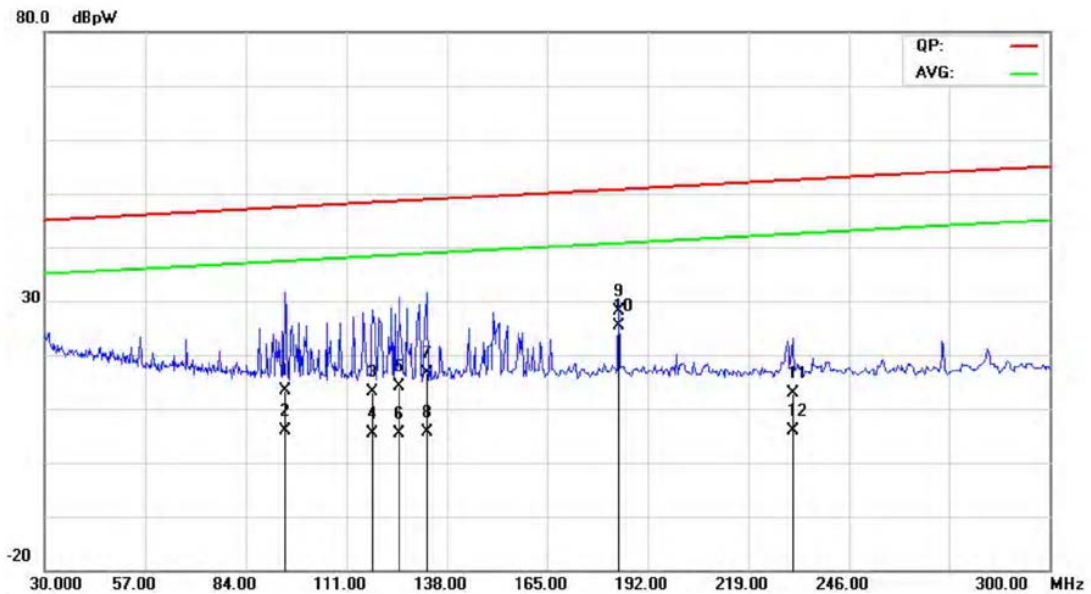
EPP-40 Level



No.	Mk.	Freq. MHz	Reading Level dBpW	Correct Factor dB	Measure- ment dBpW	Limit dBpW	Over dB	Detector
1		30.4000	-3.82	26.09	22.27	45.01	-22.74	QP
2	*	30.4000	-11.88	26.09	14.21	35.01	-20.80	AVG
3		269.9200	-3.93	20.03	16.10	53.89	-37.79	QP
4		269.9200	-9.88	20.03	10.15	43.89	-33.74	AVG

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

**EFP-005
Level**


No.	Mk.	Freq. MHz	Reading Level dBpW	Correct Factor dB	Measure- ment dBpW	Limit dBpW	Over dB	Detector
1		94.6000	-2.88	16.15	13.27	47.39	-34.12	QP
2		94.6000	-10.25	16.15	5.90	37.39	-31.49	AVG
3		118.2000	-3.02	16.03	13.01	48.27	-35.26	QP
4		118.2000	-10.53	16.03	5.50	38.27	-32.77	AVG
5		125.2800	-1.91	16.00	14.09	48.53	-34.44	QP
6		125.2800	-10.50	16.00	5.50	38.53	-33.03	AVG
7		132.8400	0.78	15.97	16.75	48.81	-32.06	QP
8		132.8400	-10.37	15.97	5.60	38.81	-33.21	AVG
9		184.2400	12.43	15.76	28.19	50.71	-22.52	QP
10	*	184.2400	9.54	15.76	25.30	40.71	-15.41	AVG
11		230.9600	-3.14	16.04	12.90	52.44	-39.54	QP
12		230.9600	-10.24	16.04	5.80	42.44	-36.64	AVG

Test Report No.: EFSH14120797-IE-01-E01-A4

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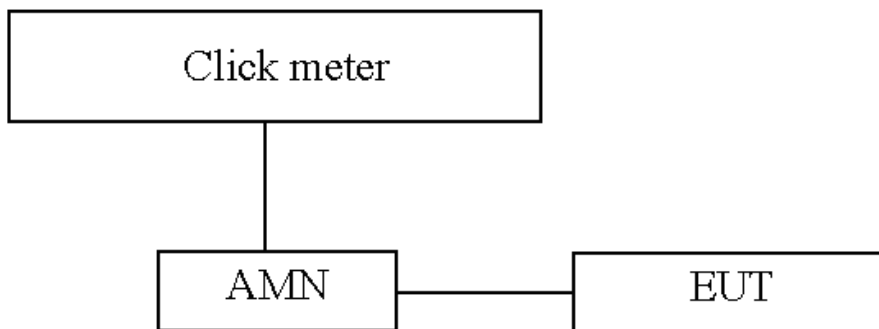
4.3 Discontinuous disturbance

Switching operations in thermostatically controlled appliances, automatic programme controlled machines and other electrically controlled or operated appliances generate discontinuous disturbance.

4.3.1 limits

Frequency range MHz	Limit dB (μ V)
0.15	66
0.5	56
1.4	56
30	60

4.3.2 Measurement procedure



The test configuration is contained inside of a shielded chamber. Receiver compliance to CISPR 16-1-1 with time domain function used during measurement. EUT arrangement was follow EN 55014-1 clause 5.2. Operation conditions were follow EN 55014-1 clause 7. 0.15MHz, 0.5MHz, 1.4MHz and 30MHz were spot checked, and upper quartile methods used during measurement. The final judgment of test result was according to figure 9 of EN 55014-1.

4.3.3 Results

EPP-40

Frequency (MHz)	0.15	0.5	1.4	30.0
Permitted limit for continuous interference dB(μ V)	66.0	56.0	56.0	60.0
Counted click/switch operation number	9	8	7	0
Observed time (min)	120	120	120	120
Click duration (ms)	<10ms	<10ms	<10ms	<10ms
Click rate N	<5	<5	<5	<5
Test result	Pass	Pass	Pass	Pass
Note: The click rate is less than 5, and the click duration is less than 10ms. So it is deemed to comply with limits.				

EFP-005

Frequency (MHz)	0.15	0.5	1.4	30.0
Permitted limit for continuous interference dB(μ V)	66.0	56.0	56.0	60.0
Counted click/switch operation number	9	8	7	0
Observed time (min)	120	120	120	120
Click duration (ms)	<10ms	<10ms	<10ms	<10ms
Click rate N	<5	<5	<5	<5
Test result	Pass	Pass	Pass	Pass
Note: The click rate is less than 5, and the click duration is less than 10ms. So it is deemed to comply with limits.				

Test Report No.: EFSH14120797-IE-01-E01-A4

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4.4 Harmonic Current Emissions

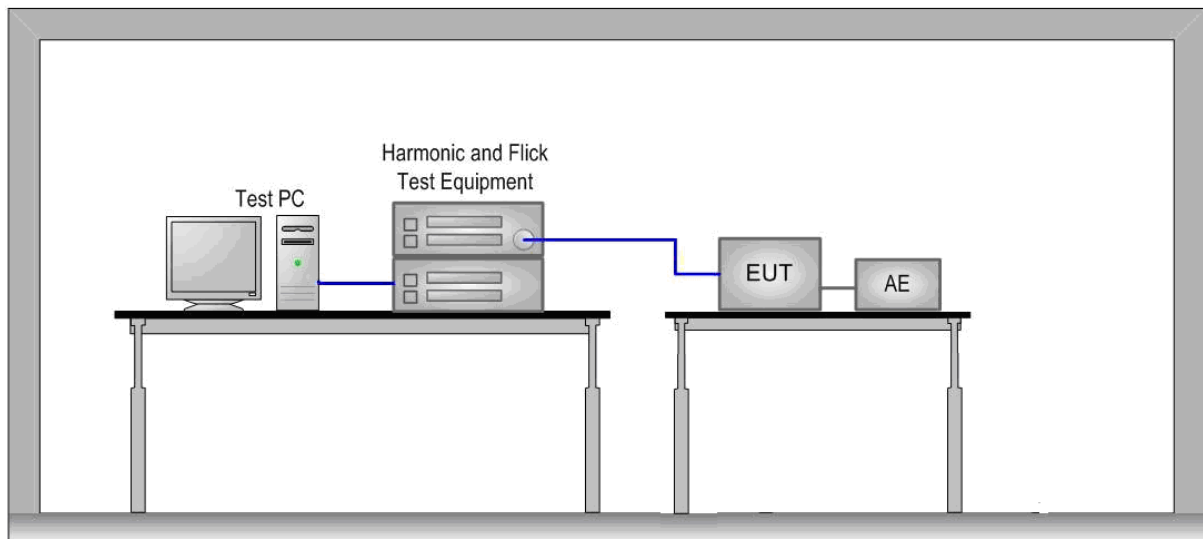
This part deals with the limitation of harmonic currents injected into the public supply system.

4.4.1 Limits

Limit for Class A equipment

Harmonic order n	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
$15 \leq n \leq 39$	$0,15 \frac{15}{n}$
Even harmonics	
2	1,08
4	0,43
6	0,30
$8 \leq n \leq 40$	$0,23 \frac{8}{n}$

4.4.2 Measurement procedure



The equipment under test is placed on a wooden table with a height of 0,8 m in the EMC lab. For each harmonic order, measure the 1,5 s smoothed r.m.s. harmonic current in each DFT time window and calculate the arithmetic average of the measured values from the DFT time windows, over the entire observation period. Each harmonic order, all 1.5 s smoothed r.m.s. harmonic current values and the average values for the individual harmonic currents, taken over the entire test observation period shall be less than or equal to the applicable limits.

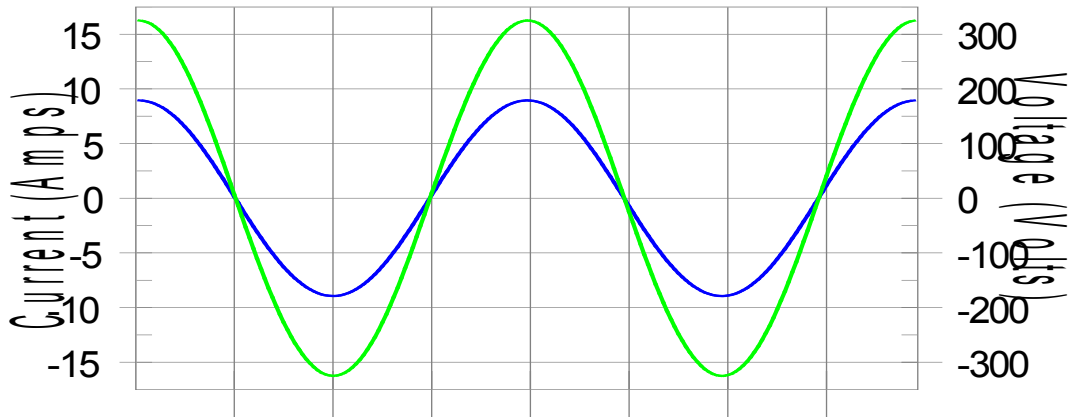
Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
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4.4.3 Results

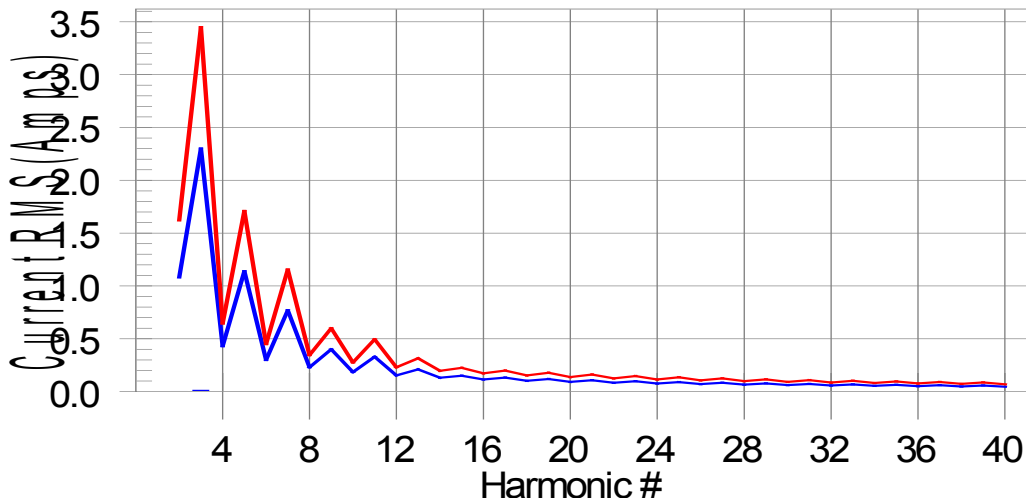
Harmonic

Test Result: Pass Source qualification: Normal
Current & voltage waveforms



Harmonics and Class A limit line

European Limits



Test result: Pass Worst harmonic was #0 with 0.00% of the limit.

Current Test Result Summary

Test Result: Pass Source qualification: Normal
 THC(A): 0.00 I-THD(%): 0.00 POHC(A): 0.000 POHC Limit(A): 0.320
 Highest parameter values during test:

V_RMS (Volts):	229.90	Frequency(Hz):	50.00
I_Peak (Amps):	8.950	I_RMS (Amps):	6.328
I_Fund (Amps):	6.309	Crest Factor:	1.415
Power (Watts):	1450.0	Power Factor:	1.000

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	0.0	0.002	1.620	0.13	Pass
3	0.014	2.300	0.0	0.014	3.450	0.41	Pass
4	0.001	0.430	0.0	0.002	0.645	0.26	Pass
5	0.001	1.140	0.0	0.001	1.710	0.07	Pass
6	0.001	0.300	0.0	0.001	0.450	0.19	Pass
7	0.002	0.770	0.0	0.002	1.155	0.14	Pass
8	0.000	0.230	0.0	0.001	0.345	0.16	Pass
9	0.001	0.400	0.0	0.001	0.600	0.14	Pass
10	0.001	0.184	0.0	0.001	0.276	0.26	Pass
11	0.000	0.330	0.0	0.000	0.495	0.10	Pass
12	0.000	0.153	0.0	0.000	0.230	0.15	Pass
13	0.001	0.210	0.0	0.001	0.315	0.22	Pass
14	0.000	0.131	0.0	0.000	0.197	0.21	Pass
15	0.001	0.150	0.0	0.001	0.225	0.40	Pass
16	0.000	0.115	0.0	0.000	0.173	0.24	Pass
17	0.001	0.132	0.0	0.001	0.199	0.49	Pass
18	0.000	0.102	0.0	0.001	0.153	0.33	Pass
19	0.001	0.118	0.0	0.001	0.178	0.55	Pass
20	0.000	0.092	0.0	0.000	0.138	0.36	Pass
21	0.001	0.107	0.0	0.001	0.161	0.56	Pass
22	0.000	0.084	0.0	0.000	0.125	0.24	Pass
23	0.001	0.098	0.0	0.001	0.147	0.59	Pass
24	0.000	0.077	0.0	0.000	0.115	0.14	Pass
25	0.001	0.090	0.0	0.001	0.135	0.62	Pass
26	0.000	0.071	0.0	0.000	0.106	0.18	Pass
27	0.001	0.083	0.0	0.001	0.125	0.59	Pass
28	0.000	0.066	0.0	0.000	0.099	0.23	Pass
29	0.001	0.078	0.0	0.001	0.116	0.59	Pass
30	0.000	0.061	0.0	0.000	0.092	0.28	Pass
31	0.001	0.073	0.0	0.001	0.109	0.69	Pass
32	0.000	0.058	0.0	0.000	0.086	0.31	Pass
33	0.001	0.068	0.0	0.001	0.102	0.66	Pass
34	0.000	0.054	0.0	0.000	0.081	0.19	Pass
35	0.001	0.064	0.0	0.001	0.096	0.72	Pass
36	0.000	0.051	0.0	0.000	0.077	0.16	Pass
37	0.001	0.061	0.0	0.001	0.091	0.60	Pass
38	0.000	0.048	0.0	0.000	0.073	0.18	Pass
39	0.001	0.058	0.0	0.001	0.087	0.72	Pass
40	0.000	0.046	0.0	0.000	0.069	0.25	Pass

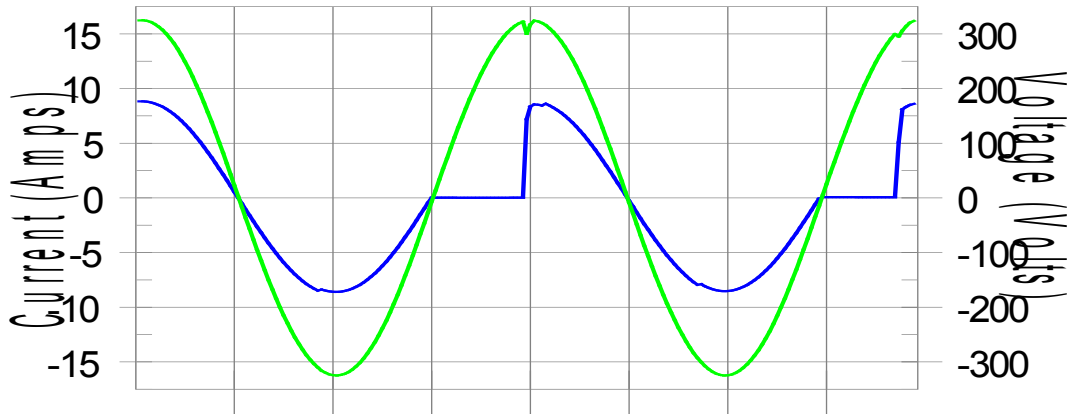
Test Report No.: EFSH14120797-IE-01-E01-A4

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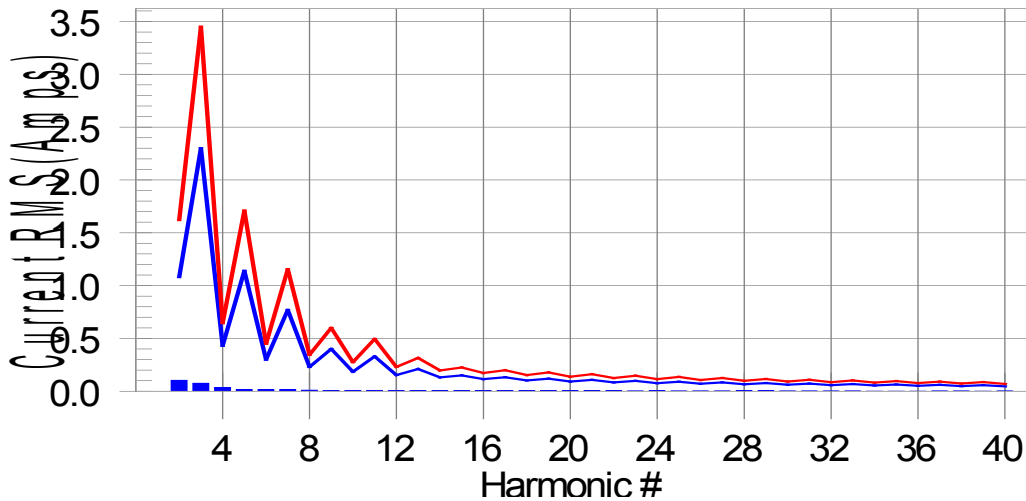
**EFP-005
Harmonics – Class-A**

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line European Limits



Test result: Pass Worst harmonic was #2 with 6.43% of the limit.

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Current Test Result Summary

Test Result: Pass Source qualification: Normal
 THC(A): 0.00 I-THD(%): 0.00 POHC(A): 0.000 POHC Limit(A): 0.251

Highest parameter values during test:

V_RMS (Volts):	230.17	Frequency(Hz):	50.00
I_Peak (Amps):	8.966	I_RMS (Amps):	6.256
I_Fund (Amps):	6.240	Crest Factor:	3.721
Power (Watts):	1434.5	Power Factor:	1.000

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	0.2	0.104	1.620	6.43	Pass
3	0.013	2.300	0.5	0.076	3.450	2.21	Pass
4	0.001	0.430	0.2	0.037	0.645	5.77	Pass
5	0.002	1.140	0.0	0.016	1.710	0.93	Pass
6	0.001	0.300	0.0	0.015	0.450	3.24	Pass
7	0.001	0.770	0.0	0.017	1.155	1.49	Pass
8	0.000	0.230	0.0	0.011	0.345	3.22	Pass
9	0.001	0.400	0.0	0.008	0.600	1.29	Pass
10	0.000	0.184	0.0	0.009	0.276	3.09	Pass
11	0.001	0.330	0.0	0.008	0.495	1.71	Pass
12	0.000	0.153	0.0	0.007	0.230	3.12	Pass
13	0.000	0.210	0.0	0.006	0.315	2.05	Pass
14	0.000	0.131	0.0	0.005	0.197	2.40	Pass
15	0.000	0.150	0.0	0.005	0.225	2.19	Pass
16	0.000	0.115	0.0	0.005	0.173	2.75	Pass
17	0.000	0.132	0.0	0.004	0.199	2.10	Pass
18	0.000	0.102	0.0	0.005	0.153	3.09	Pass
19	0.000	0.118	0.0	0.006	0.178	3.30	Pass
20	0.000	0.092	0.0	0.005	0.138	3.67	Pass
21	0.000	0.107	0.0	0.005	0.161	2.96	Pass
22	0.000	0.084	0.0	0.004	0.125	3.49	Pass
23	0.000	0.098	0.0	0.003	0.147	2.11	Pass
24	0.000	0.077	0.0	0.003	0.115	2.97	Pass
25	0.000	0.090	0.0	0.002	0.135	1.69	Pass
26	0.000	0.071	0.0	0.003	0.106	2.67	Pass
27	0.000	0.083	0.0	0.003	0.125	2.16	Pass
28	0.000	0.066	0.0	0.003	0.099	3.28	Pass
29	0.000	0.078	0.0	0.004	0.116	3.29	Pass
30	0.000	0.061	0.0	0.003	0.092	3.03	Pass
31	0.000	0.073	0.0	0.003	0.109	2.47	Pass
32	0.000	0.058	0.0	0.003	0.086	3.29	Pass
33	0.000	0.068	0.0	0.002	0.102	2.31	Pass
34	0.000	0.054	0.0	0.002	0.081	2.42	Pass
35	0.000	0.064	0.0	0.002	0.096	2.05	Pass
36	0.000	0.051	0.0	0.002	0.077	2.44	Pass
37	0.000	0.061	0.0	0.003	0.091	2.86	Pass
38	0.000	0.048	0.0	0.002	0.073	3.42	Pass
39	0.000	0.058	0.0	0.002	0.087	2.18	Pass
40	0.000	0.046	0.0	0.002	0.069	3.60	Pass

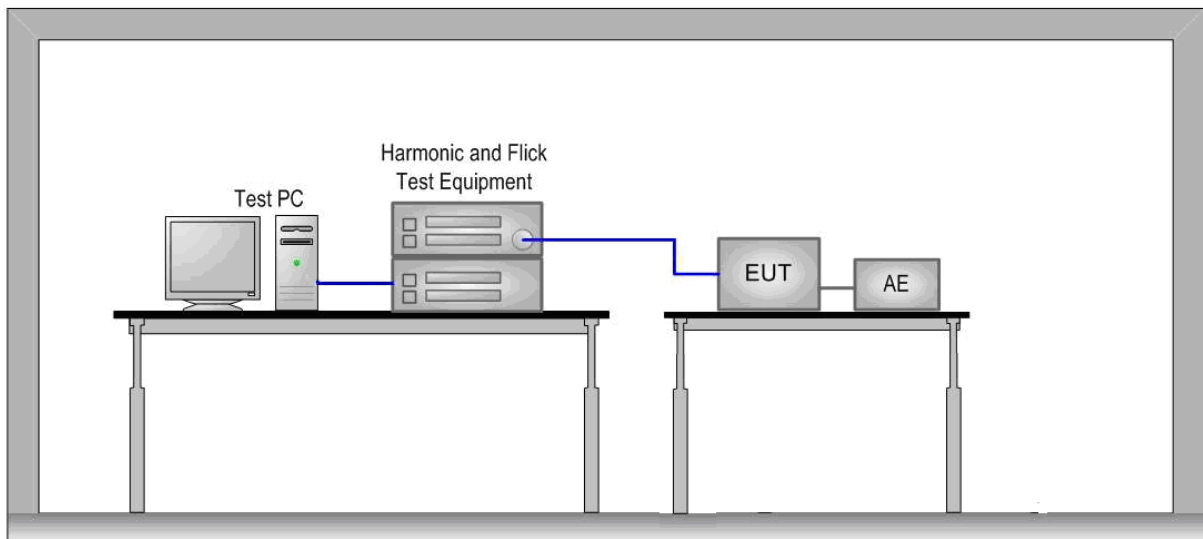
4.5 Voltage Changes, Voltage Fluctuations and Flicker

This part is concerned with the limitation of voltage fluctuations and flicker impressed on the public low-voltage system.

4.5.1 Limits

Value	Limit
Pst	1,0
Plt	0,65
dt	3,3%
dc	3,3%
dmax	4,0%

4.5.2 Measurement test procedure



The equipment under test is placed on a wooden table with a height of 0,8 m in the EMC lab. The voltage fluctuations and flicker were measured at the supply terminals of the EUT.

4.5.3 Results

EPP-40

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.02		
Highest dt (%):	1.09	Test limit (%):	3.30 Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	1.24	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.433	Test limit:	1.000 Pass

Test Report No.: EFSH14120797-IE-01-E01-A4

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EFP-005

Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.85			
Highest dt (%):	1.26	Test limit (%):	3.30	Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	-1.24	Test limit (%):	3.30	Pass
Highest dmax (%):	-1.25	Test limit (%):	7.00	Pass
Highest Pst (10 min. period):	0.000	Test limit:	1.000	Pass

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
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5 Test Setup Photos

Harmonic & Flicker



Conducted Emission & Click



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
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Disturbance power



Test Report No.: EFSH14120797-IE-01-E01-A4

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6 EUT Photos

Over view of EPP-40



Over view of EPP-28



Test Report No.: EFSH14120797-IE-01-E01-A4

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Over view of EPP-30



Over view of EPP-34



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
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Over view of EPP-34-A



Over view of EPP-38



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
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Over view of EPP-38-A



Internal view of EPP-30, EPP-28, EPP-40, EPP-34, EPP-34-A, EPP-38, EPP-38-A, EFP-002



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Over view of EFP-001



Over view of EFP-002



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Internal view of EFP-001, EFP-002



Over view of PP-004-34



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Over view of PP-004-38



Over view of PP-010



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Internal view of PP-004-34, PP-004-38, PP-010



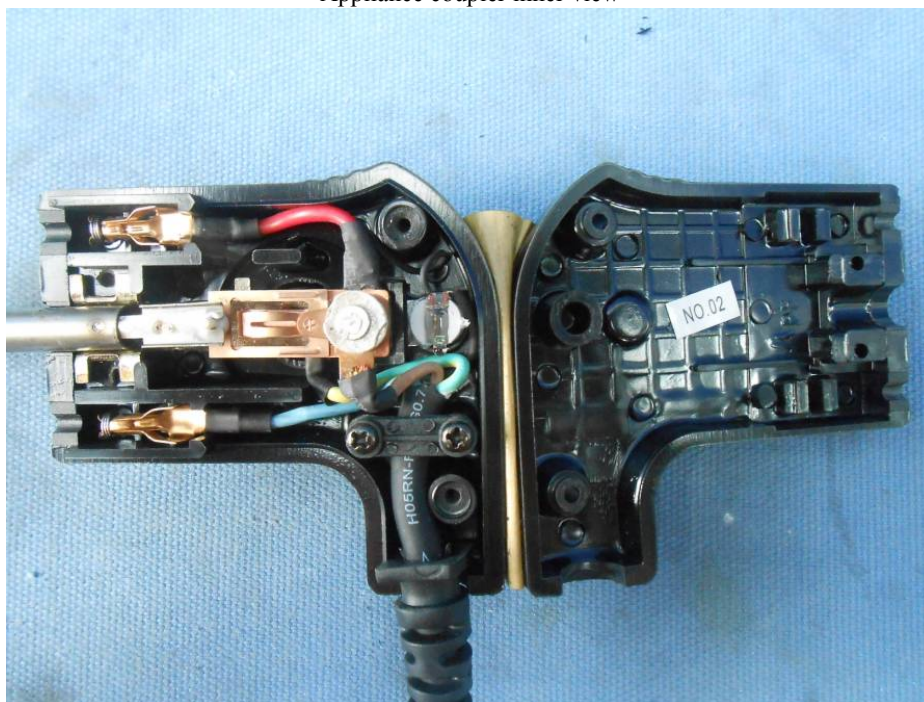
Appliance connector



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Appliance coupler inner view



Description: Over view of EPP-28-A



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
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Description: Upper view of EPP-28-A



Description: Over view of EPP-30-A and EPP-30-B



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Upper view of EPP-30-A and EPP-30-B



Description: Alternative connector of all models (Metal rods lengthened)



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Connector of all models



Description: Connector internal view of all models



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Earthing part view of all models



Description: Over view of EFP-001-A



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Over view of EFP-001-B



Description: Over view of EFP-002-A



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Over view of EFP-005



Description: Front view of EFP-005



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Side view of EFP-005



Description: Bottom view of EFP-005



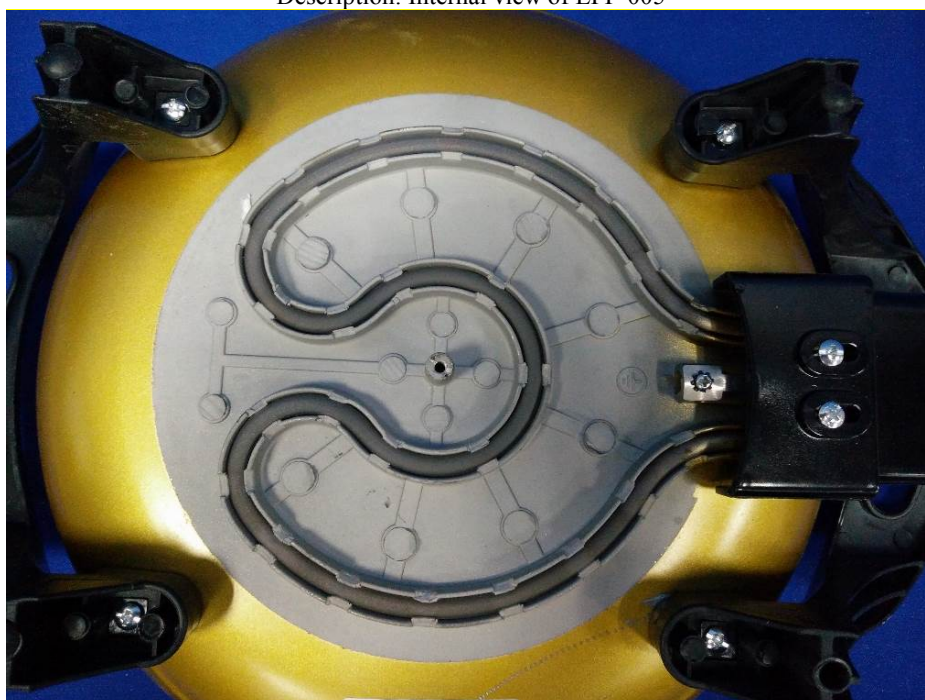
Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Appliance inlet of EFP-005



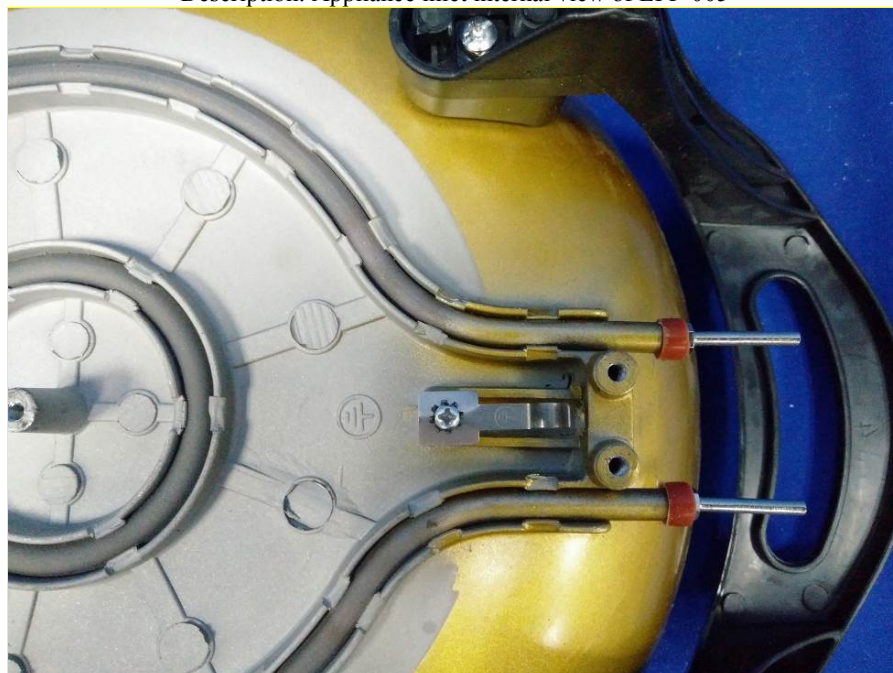
Description: Internal view of EFP-005



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Appliance inlet internal view of EFP-005



Description: Over view of EFP-008



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Bottom view of EPP-40



Description: Close view of EPP-40 handle (Alternative handle for PP series)



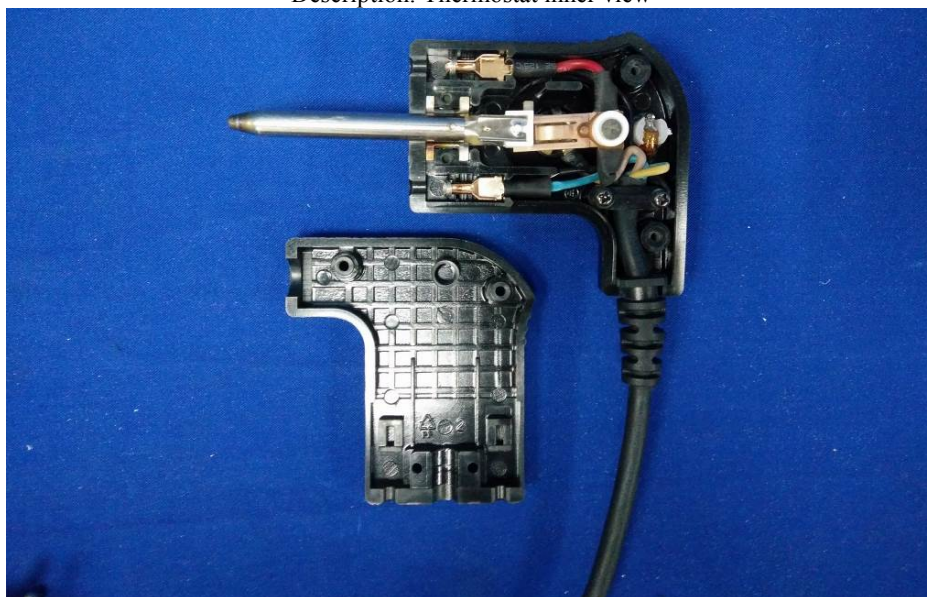
Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Thermostat of all models



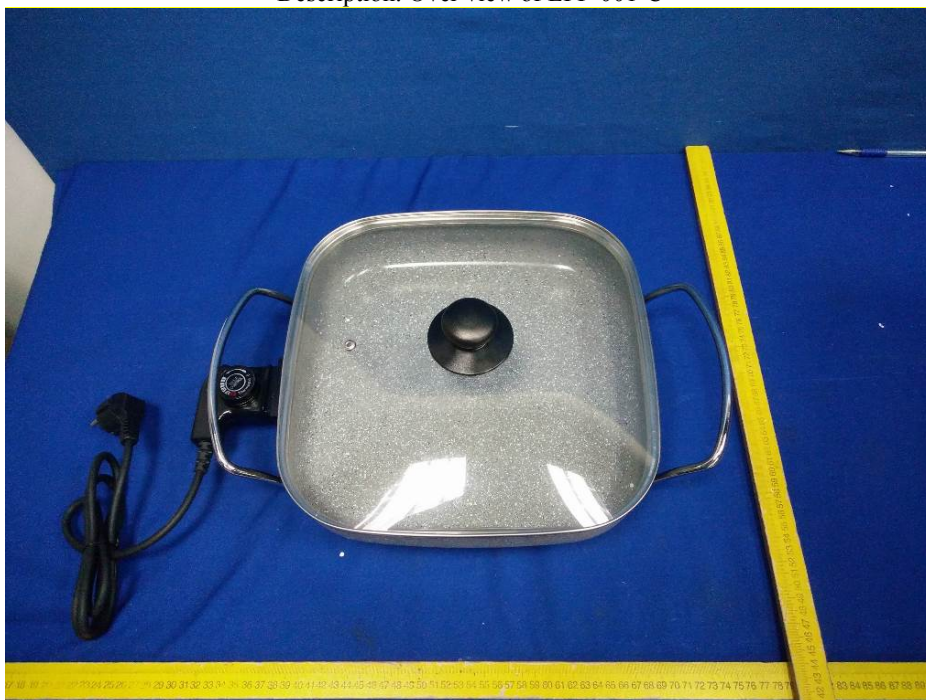
Description: Thermostat inner view



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
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Amendment 4 photo:
Description: Over view of EFP-001-C



Description: Bottom view of EFP-001-C



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Side view 1 of EFP-001-C



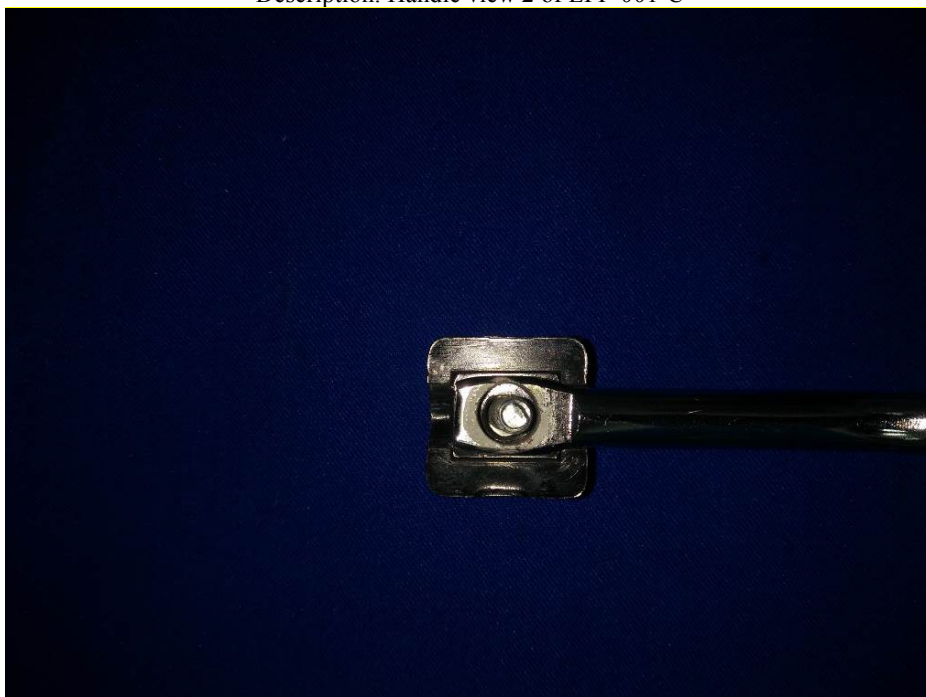
Description: Handle view 1 of EFP-001-C



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

Description: Handle view 2 of EFP-001-C



Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

7 Amendment 1

The original Test Report Ref. EFSH14120797-IE-01-E01, dated 2014-12-31 was modified on 2016-07-01 to include the following changes and/or additions:

1. Update technical standard to EN 61000-3-2: 2014.
2. Three new models: EPP-28-A, EPP-30-A and EPP-30-B were added.
3. EPP-28-A is same as EPP-28 except that different rated power input.
4. EPP-30-A is same as EPP-30 except that different rated power input.
5. EPP-30-B is same as EPP-30 except that different earthing view.

After review, no test needs to be done.

This report replaces the original test report: EFSH14120797-IE-01-E01.

8 Amendment 2

The original Test Report Ref. EFSH14120797-IE-01-E01, dated 2014-12-31 and Ref. EFSH14120797-IE-01-E01-A1, dated 2016-07-01 was modified on 2016-10-12 to include the following changes and/or additions:

1. Added an alternative connector without cord anchorage.
2. Modify the grounding screw view for all models.

After review, no test needs to be done.

This report replaces the original test report: EFSH14120797-IE-01-E01 and EFSH14120797-IE-01-E01-A1.

9 Amendment 3

The original Test Report Ref. EFSH14120797-IE-01-E01, dated 2014-12-31, Ref. EFSH14120797-IE-01-E01-A1, dated 2016-07-01 and Ref. EFSH14120797-IE-01-E01-A2, dated 2016-10-12 was modified on 2017-06-16 to include the following changes and/or additions:

1. Five new models: EFP-001-A, EFP-001-B, EFP-002-A, EFP-005, and EFP-008 were added. Compared with EFP-001, the only difference is EFP-001-A have an additional stainless steel ring on the rim of the pan. Similar condition happens to EFP-002 and EFP-002-A. The only difference between EFP-001 and EFP-001-B is that the connection type of EFP-001 is welded while on EFP-001-B is die-casting molded. Similar condition happens to EFP-005 and EFP-008.
2. Add new optional shape of handle for PP series.
- 3 Add technical standard "EN 55014-2:2015" .

After review, EFP-005 was subjected to do full of the tests as representative.

This report replaces the original test report: EFSH14120797-IE-01-E01, EFSH14120797-IE-01-E01-A1 and EFSH14120797-IE-01-E01-A2.

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China

10 Amendment 4

The original Test Report Ref. EFSH14120797-IE-01-E01, dated 2014-12-31, Ref. EFSH14120797-IE-01-E01-A1, dated 2016-07-01, Ref. EFSH14120797-IE-01-E01-A2, dated 2016-10-12 and Ref. EFSH14120797-IE-01-E01-A3, dated 2017-06-16 was modified on 2017-09-01 to include the following changes and/or additions:

1. New model EFP-001-C was added. Compared with EFP-001, the only difference between EFP-001 and EFP-001-C is the material of handle: metal for EFP-001-C while plastic for EFP-001.

After review, no additional test needs to be performed.

Test report ref. No. EFSH14120797-IE-01-E01-A3 was replaced by this test report ref. No. EFSH14120797-IE-01-E01-A4.

Test Report No.: EFSH14120797-IE-01-E01-A4

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China