


Test Verification of Conformity

On the basis of the referenced test report(s), sample(s) of the below product have been found to comply with the harmonized standards and Directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product.

Once all product relevant  mark directives are verified in compliance, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to product identical to the test sample(s) if the product complies with all relevant CE mark Directives requirements.

Applicant Name & Address:	Shunde Kilon Electrical Co., Ltd. Xiqing Industrial Area, Longjiang Town, Shunde, Foshan, Guangdong, P. R. China
Product Description:	Combination kitchen machine (Blender and coffee mill)
Ratings & Principle	220-240 V, 50/60 Hz, 300-400 W, Class II
Characteristics:	KB: 1min. for blender function; KB: 30s for coffee mill function
Models:	KL-217, KL-217F, KL-217G, KL-217E, KL-217S, KL-217B
Brand Name:	Kilon
Relevant Standards/	EN 55014-1: 2006+A1: 2009+A2: 2011/ Electromagnetic compatibility –
Specifications/Directives:	Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission
	EN 61000-3-2: 2006+ A1: 2009+ A2: 2009/ Electromagnetic compatibility (EMC) –
	Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
	EN 61000-3-3: 2013/ Electromagnetic compatibility (EMC) – Part 3-3: Limits –
	Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
	EN 55014-2: 1997+A1: 2001+A2: 2008/ Electromagnetic compatibility –
	Requirements for household appliances, electric tools and similar apparatus – Part 2: Immunity – Product family standard
Verification Issuing Office:	EMC Directive 2004/108/EC
	Same as Legal Entity
Date of Tests:	20 Aug., 2014 to 30 Aug., 2014
Test Report Number(s):	GZ10050784-1R2
Note 1: This verification is part of the full test report(s) and should be read in conjunction with them.	
Note 2: This verification supersedes previous verification with report number(s) GZ10050784-1R1 dated 11 Sept., 2012.	

Signature:



Name:

Jack Dai

Position:

Sr. Project Engineer

Date:

09 October 2014

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TEST REPORT

Applicant Name & Address : Shunde Kilon Electrical Co., Ltd.
Xiqing Industrial Area, Longjiang Town, Shunde, Foshan, Guangdong, P. R. China
Manufacturing Site : Shunde Kilon Electrical Co., Ltd.
Xiqing Industrial Area, Longjiang Town, Shunde, Foshan, Guangdong, P. R. China

Sample Description
Product : Combination kitchen machine (Blender and coffee mill)
Model No. : KL-217, KL-217F, KL-217G, KL-217E, KL-217S, KL-217B
Electrical Rating : 220-240 V, 50/60 Hz, 300-400 W, Class II
KB: 1min. for blender function; KB: 30s for coffee mill function

Date Received : 20 Aug., 2014
Date Test Conducted : 20 Aug., 2014 to 30 Aug., 2014

Test standards : EN 55014-1: 2006+A1:2009+A2: 2011
EN 61000-3-2: 2006+ A1:2009+ A2:2009
EN 61000-3-3: 2013
EN 55014-2: 1997+A1: 2001+A2: 2008

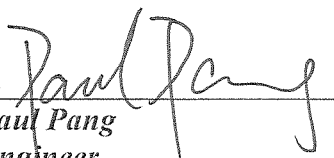
Test Result : Pass

Conclusion : The submitted samples complied with the above EMC standards.


Remark : Based on previous test report GZ10050784-1R1 dated 11 Sept., 2012.

*****End of Page*****

Prepared and Checked By:


Paul Pang
Engineer
Intertek Guangzhou

Approved By:


Jack Dai
Sr. Project Engineer
Intertek Guangzhou
09 October 2014 *Date*

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Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD Guangzhou, China
Tel / Fax: 86-20-8213 9688/86-20-3205 7538

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1

TEST RESULTS SUMMARY

Test Item	Standard	Result
Continuous conducted disturbance voltage	EN 55014-1: 2006+A1:2009+A2: 2011	Pass
Discontinuous conducted disturbance voltage	EN 55014-1: 2006+A1:2009+A2: 2011	N/A
Radiated disturbance power	EN 55014-1: 2006+A1:2009+A2: 2011	Pass
Radiated disturbance	EN 55014-1: 2006+A1:2009+A2: 2011 Reference: CISPR 16-2-3: 2006	N/A
Harmonic of current	EN 61000-3-2: 2006+ A1: 2009+ A2: 2009	Pass
Flicker	EN 61000-3-3: 2013	Pass
ESD immunity	EN 55014-2: 1997+A1: 2001+A2: 2008 Reference: EN 61000-4-2:1995+A1:1998 +A2:2001	N/A
Radiated EM field immunity	EN 55014-2: 1997+A1: 2001+A2: 2008 Reference: EN 61000-4-3:2006+A1:2008	N/A
EFT immunity	EN 55014-2: 1997+A1: 2001+A2: 2008 Reference: EN 61000-4-4:2004	N/A
Surge immunity	EN 55014-2: 1997+A1: 2001+A2: 2008 Reference: EN 61000-4-5:2006	N/A
Inject current immunity	EN 55014-2: 1997+A1: 2001+A2: 2008 Reference: EN 61000-4-6:2007	N/A
Voltage dips and interruption immunity	EN 55014-2: 1997+A1: 2001+A2: 2008 Reference: EN 61000-4-11:2004	N/A

Remark: 1. The symbol “N/A” in above table means Not Applicable.

2. When determining the test results, measurement uncertainty of tests has been considered.

EMC Results Conclusion

(with Justification)

RE: EMC Testing Pursuant to EMC Directive 2004/108/EC Performed on the Combination kitchen machine (Blender and coffee mill), Models: KL-217, KL-217F, KL-217G, KL-217E, KL-217S, KL-217B.

This report is the revision of the previous test report GZ10050784-1R1 dated 11 Sept., 2012 and shall be used together with it.

This report was issued because of the following change:

- 1 Standard was updated to "EN 61000-3-3: 2013";
- 2 Add models KL-217G, KL-217S, KL-217E, KL-217B;

Model KL-217G was identical to model KL-217F except KL-217G has only blender attachment and with different capacity cup and interlock device and motor.

Model KL-217S was identical to model KL-217G except KL-217S has plastic enclosure and without power switch.

Model KL-217E and KL-217G were identical except the model name.

Model KL-217B and KL-217S were identical except the model name.

Based on above change and engineering judgment, we selected model KL-217G to conduct tests listed on the Test Result Summary.

We tested the Combination kitchen machine (Blender and coffee mill), Model: KL-217G, to determine if it was in compliance with the relevant EN standards as marked on the Test Results Summary. We found that the unit met the requirements of EN 55014-1, EN 61000-3-2 and EN 61000-3-3 standards when tested as received. The worst case's test data was presented in this test report.

The production units are required to conform to the initial sample as received when the units are placed on the market.

3

LABORATORY MEASUREMENTS**Configuration Information**

Equipment Under Test (EUT):	Combination kitchen machine (Blender and coffee mill)	
Model:	KL-217G	
Serial No.	Not Labeled	
Support Equipment:	N/A	
Rated Voltage:	220-240 V~, 50/60 Hz	
Condition of Environment:	Temperature	: 22~28°C
	Relative Humidity:	35~60%
	Atmosphere Pressure	86~106kPa

Notes:

1. The EMI measurements had been made in the operating mode produced the largest emission in the frequency band being investigated consistent with normal applications.

An attempt had been made to maximize the emission by varying the configuration of the EUT.

2. Test Location:

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

All tests were performed at:

Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD Guangzhou, China

Except Radiated Disturbance was performed at:

Room 101, Block A, No.11 Jing Ye San Street, Yu Shu Industrial Park, Guangzhou Science City, GETDD Guangzhou

4 EMI TEST

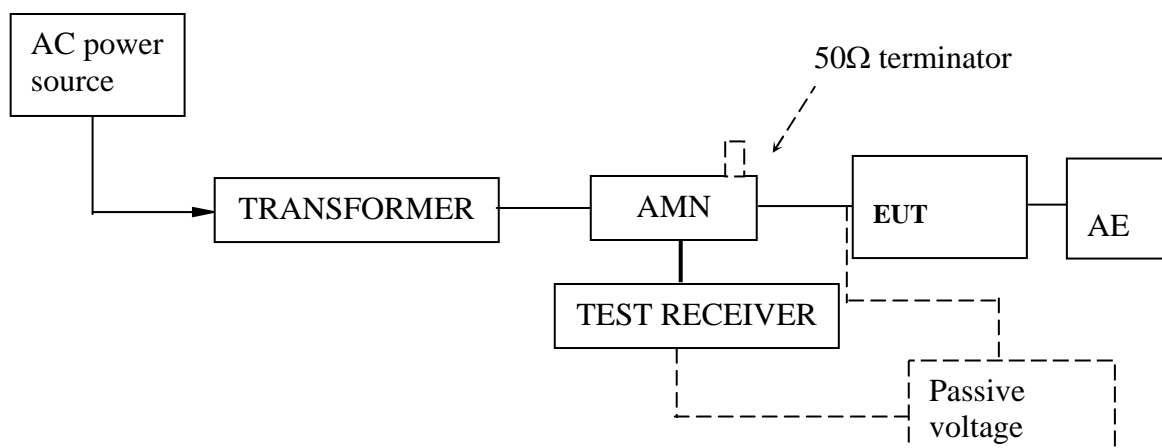
4.1 EN 55014-1 Continuous Conducted Disturbance Voltage Test

Test Result: Pass

4.1.1 Used Test Equipment

Equipment No.	Equipment	Model	Manufacturer
EM080-05	EMI receiver	ESCI	R&S
EM006-05	LISN	ENV216	R&S
EM004-04	EMC shield Room	8m×3m×3m	Zhongyu

4.1.2 Block Diagram of Test Setup



4.1.3 Test Setup and Procedure

The EUT was set to achieve the maximum emission level. The mains terminal disturbance voltage was measured with the EUT in a shielded room. The EUT was connected to AC power source through an Artificial Mains Network which provides a 50Ω linear impedance. Artificial hand is used if appropriate (for handheld apparatus). The load/control terminal disturbance voltage was measured with passive voltage probe if appropriate.

The table-top EUT was placed on a 0.4m high non-metallic table above earthed ground plane (Ground Reference Plane). And for floor standing EUT, was placed on a 0.1m high non-metallic supported on GRP. The EUT keeps a distance of at least 0.8m from any other of the metallic surface. The Artificial Mains Network is situated at a distance of 0.8m from the EUT.

During the test, mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m.

The bandwidth of test receiver was set at 9 kHz. The frequency range from 150 kHz to 30MHz was checked.

When measurements of disturbance are being made, the appliance shall be operated under the conditions defined in clause 7.



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4.1.4 Test Data

At main terminal: Pass

Tested Wire: Live

Operation Mode: EUT ON

EDIT PEAK LIST (Final Measurement Results)				
Trace1:	CE14QP			
Trace2:	CE14AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB	
1 Quasi Peak	158 kHz	39.98 L1	-25.58	
1 Quasi Peak	4.282 MHz	26.43 L1	-29.56	

Tested Wire: Neutral

Operation Mode: EUT ON

EDIT PEAK LIST (Final Measurement Results)				
Trace1:	CE14QP			
Trace2:	CE14AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB	
1 Quasi Peak	178 kHz	36.72 L1	-27.85	
1 Quasi Peak	4.61 MHz	25.14 L1	-30.85	
1 Quasi Peak	6.494 MHz	29.60 L1	-30.39	

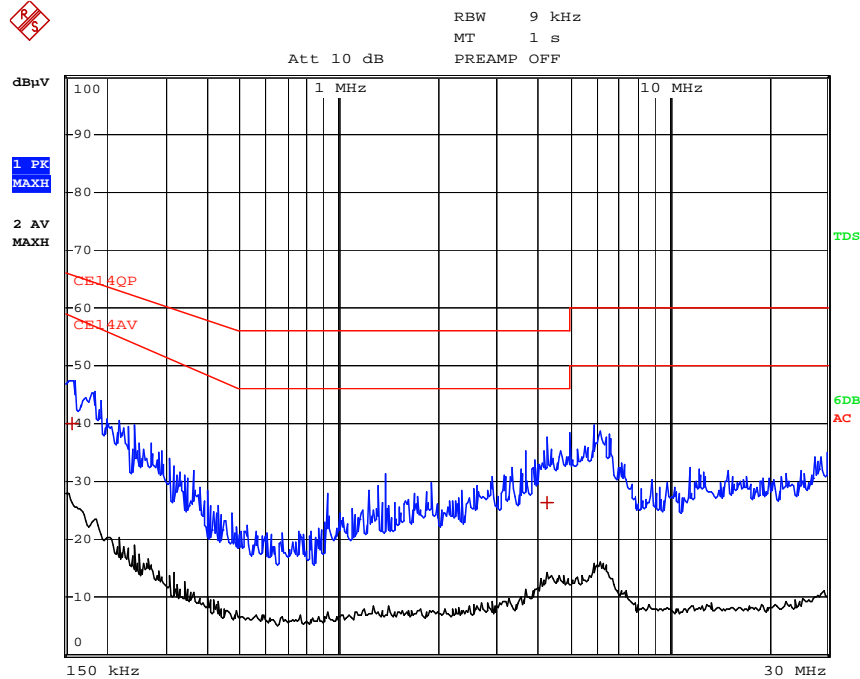
At load/control terminal: Not Applicable

Frequency	Quasi-Peak		Average	
[MHz]	Disturbance level [dB (μ V)]	Permitted limit [dB(μV)]	Disturbance level [dB(μ V)]	Permitted limit [dB(μ V)]
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--

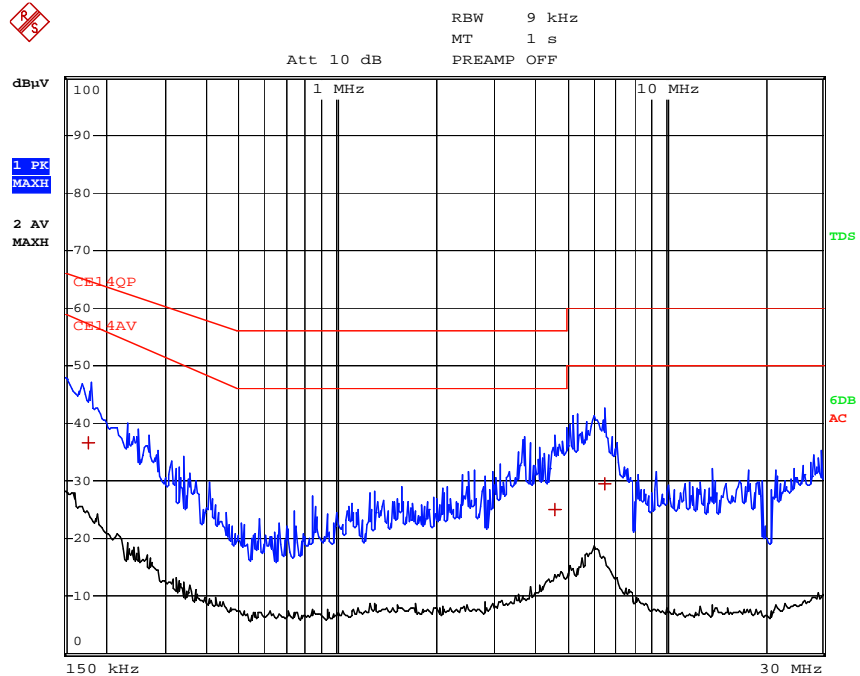
4.1.5 Emission Curve

At mains terminal:

Tested Wire: Live



Tested Wire: Neutral



At load/control terminal:

Not Applicable.

4.1.6 Measurement Uncertainty

The measurement uncertainty describes the overall uncertainty of the given measured value during the operation of the EUT.

Measurement uncertainty is calculated in accordance with CISPR 16-4-2: 2003.

Measurement uncertainty of mains terminal disturbance voltage in CISPR band B: 2.58 dB.

The measurement uncertainty is given with a confidence of 95%, $k=2$.

4.2 EN 55014-1 Discontinuous Conducted Disturbance Voltage

Test Result: Not Applicable

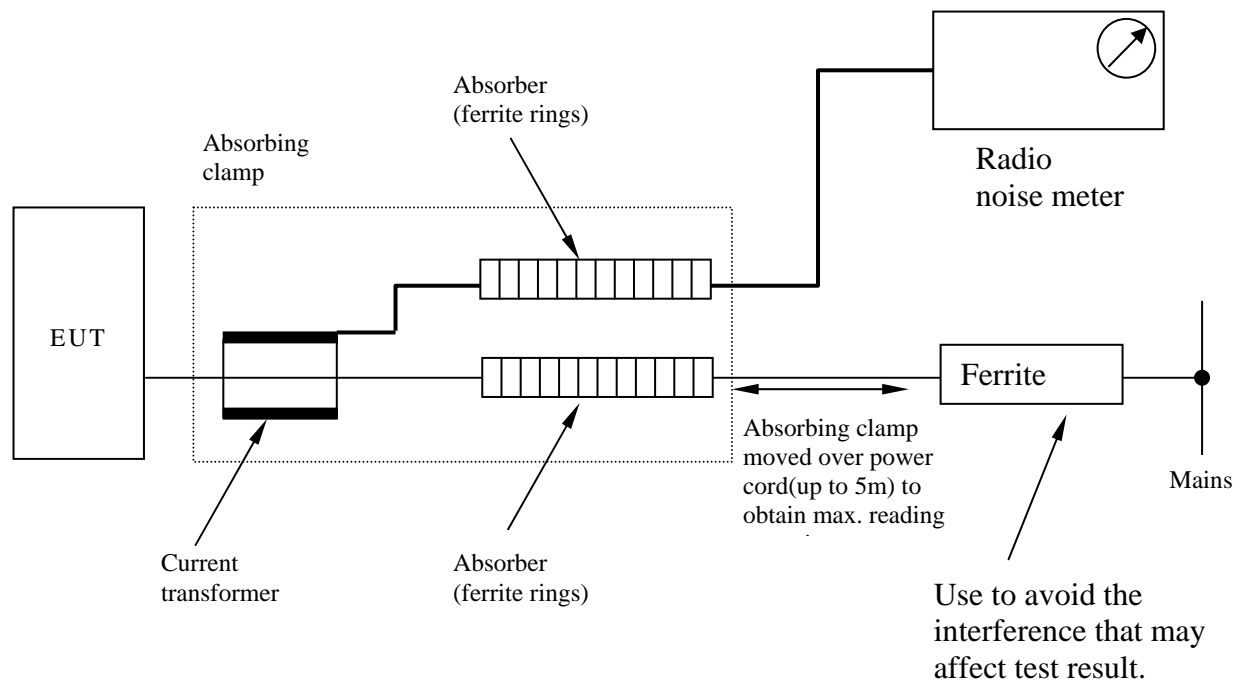
4.3 EN 55014-1 Radiated Disturbance Power

Test Result: Pass

4.3.1 Used Test Equipment

Equip. No.	Equipment	Model	Manufacturer
EM080-05	EMI receiver	ESCI	R&S
EM081-04	Absorb Power Clamp	MDS-21	R&S
EM004-04	EMC shield Room	8m×3m×3m	Zhongyu

4.3.2 Block Diagram of Test Setup



4.3.3 Test Setup and Procedure

The disturbance power was measured with the EUT in a shielded room. The height of the table shall be $0,1 \text{ m} \pm 0,025 \text{ m}$ for appliances primarily intended to be positioned on the floor in normal use, and $0,8 \text{ m} \pm 0,05 \text{ m}$ for other appliances. The EUT was placed on a non-metallic table at least 0.8m from other metallic surface and the mains lead of EUT was extended to about 6m long. The auxiliary lead longer than 0.25m but shorter than twice length of absorbing clamp was extend to twice length of clamp and those longer than twice length was extend to 6 meters.

The absorbing clamp was moved along the lead to obtain maximum disturbance. The EUT was set to achieve the maximum emission level, and for each point which appears a relevant high emission level, the absorbing clamp was moved around the lead to get the maximum disturbance value.

The bandwidth of test receiver was set at 120 kHz. The frequency range from 30MHz to 300MHz was checked.

When measurements of disturbance are being made, the appliance shall be operated under the conditions defined in clause 7.

4.3.4 Test Data

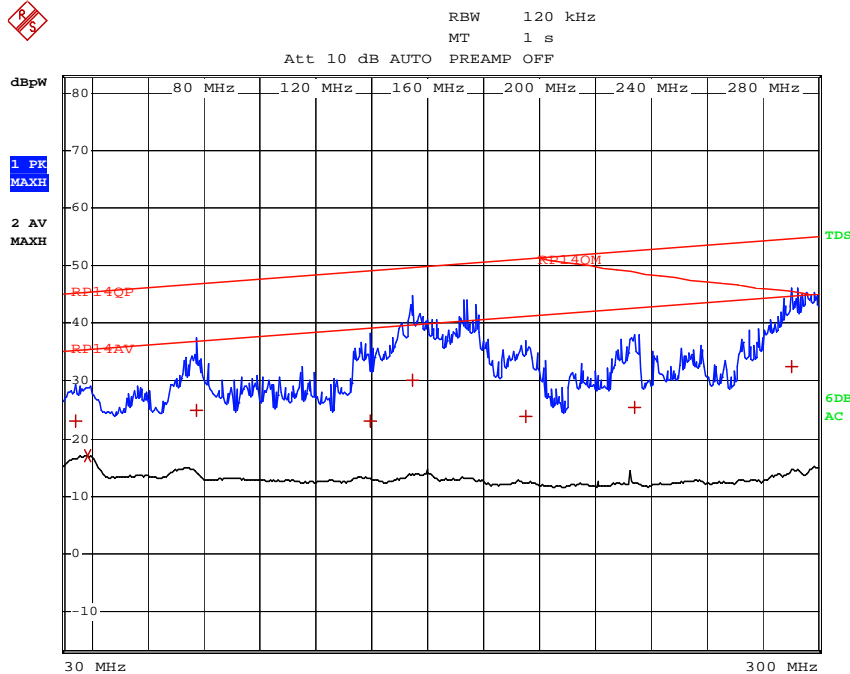
Tested Port: AC Mains

Operation mode: EUT ON

EDIT PEAK LIST (Final Measurement Results)				
Trace1:	RP14QP			
Trace2:	RP14AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBpW		DELTA LIMIT dB
1 Quasi Peak	34.08 MHz	22.97 L1		-22.17
2 Average	38.36 MHz	16.91 L1		-18.39
1 Quasi Peak	77.68 MHz	24.75 L1		-22.01
1 Quasi Peak	139.56 MHz	23.01 L1		-26.04
1 Quasi Peak	154.88 MHz	30.19 L1		-19.43
1 Quasi Peak	195.32 MHz	23.78 L1		-27.34
1 Quasi Peak	234.04 MHz	25.30 L1		-27.24
1 Quasi Peak	290.2 MHz	32.46 L1		-22.17

The measurement quasi-peak data of disturbance power is lower than applicable limit reduced by the margin (0 to 10dB) at frequency range 200 to 300 MHz and the maximum clock frequency is less than 30MHz

4.3.5 Test Curve



4.3.6 Measurement Uncertainty

The measurement uncertainty describes the overall uncertainty of the given measured value during the operation of the EUT.

Measurement uncertainty is calculated in accordance with CISPR 16-4-2: 2003.

Measurement uncertainty of mains terminal disturbance power: 3.13 dB

The measurement uncertainty is given with a confidence of 95%, k=2.

4.4 EN 55014-1 Radiated Disturbance

Test Result: Not Applicable

Remark:

☒ Radiated disturbance shall not be conducted, if the measurement quasi-peak data of disturbance power is lower than applicable limit reduced by the margin (0 to 10dB) at frequency range 200 to 300 MHz and the maximum clock frequency is less than 30MHz,.

☐ Radiated disturbance (300-1000MHz) shall be conducted, if the measurement quasi-peak data of disturbance power is between the limit and limit reduced by the margin (0 to 10dB) at frequency range 200 to 300 MHz or the maximum clock frequency is not less than 30MHz,.

☐ Radiated disturbance(30-1000MHz) is applied to battery-operated appliance

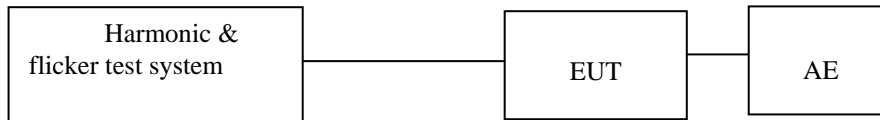
5 Harmonic of Current

Test Result: Pass

5.1 Used Test Equipment

Equip. No.	Equipment	Model	Manufacturer
EM001-02	Harmonic & Flicker Test System	5001IX-CTS-400-413	California Instrument

5.2 Block Diagram of Test Setup



5.3 Test Setup and Procedure

Harmonics of the fundamental current were measured up to 40 order harmonics using a digital power meter with an analogue output and frequency analyser which was integrated in the harmonic & flicker test system. The measurements were carried out under steady conditions.

☒ Kitchen machines as listed in the scope of IEC 60335-2-14 are deemed to conform to the harmonic current limits of this standard without further testing.

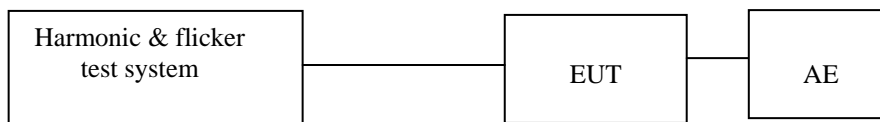
6 Flicker

Test Result: Pass

6.1 Used Test Equipment

Equip. No.	Equipment	Model	Manufacturer
EM001-02	Harmonic & Flicker Test System	5001IX-CTS-400-413	California Instrument

6.2 Block Diagram of Test Setup



6.3 Test Setup and Procedure

6.3.1 Definition

- Flicker: impression of unsteadiness of visual sensation induced by a lighting stimulus whose luminance or spectral distribution fluctuates with time.
- Pst: Short-term flicker indicator The flicker severity evaluated over a short period (in minutes); Pst=1 is the conventional threshold of irritability
- Plt: long-term flicker indicator; the flicker severity evaluated over a long period (a few hours). Using successive Pst values.
- dc: the relative steady-state voltage change
- dmax: the maximum relative voltage change
- d(t): the value during a voltage change

6.3.2 Test condition

The EUT was set to produce the most unfavourable sequence of voltage changes.

6.4 Test Data

Flicker Test Summary (Run time)

Test Result: Pass

Status: Test Completed

Parameter values recorded during the test:

Vrms at the end of test (Volt): 228.73

Highest dt (%): 0.49

T-max (mS): 0

Highest dc (%): 0.00

Highest dmax (%): 0.50

Highest Pst (10 min. period): 0.173

Test limit (%): N/A N/A

Test limit (mS): 500.0 Pass

Test limit (%): 3.30 Pass

Test limit (%): 4.00 Pass

Test limit: 1.000 Pass

6.5 Measurement Uncertainty

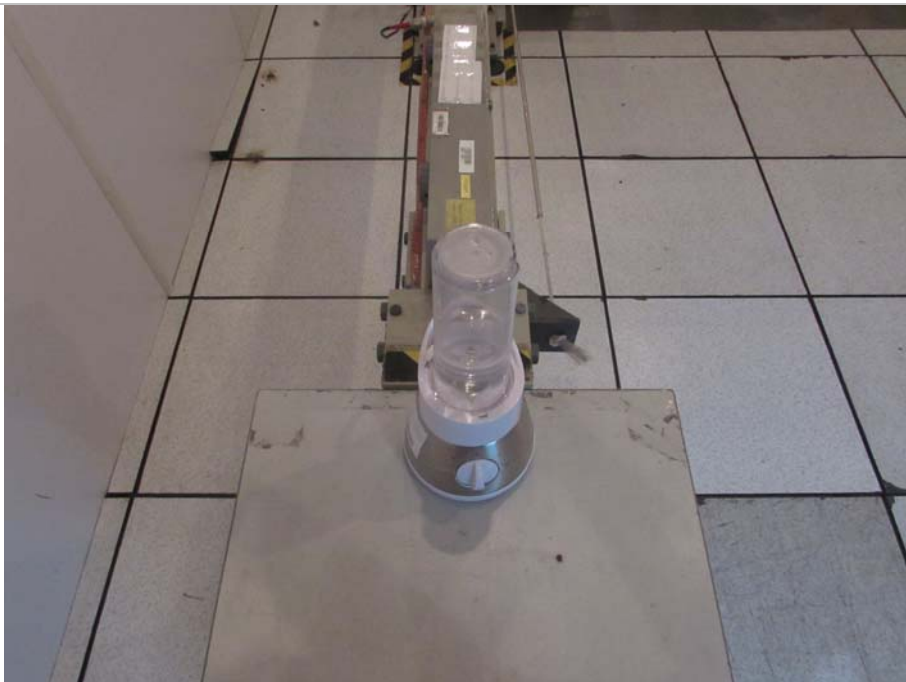
Measurement uncertainty for voltage fluctuation and flicker is under consideration according to CISPR 16-4-2:2003.

7 Appendix I - Photos of test setup

Conducted Emission



Radiated Power



Harmonics and Flicker



8 Appendix II - Photos of EUT

View of model KL-217G and KL-217E



Maximum indicated level View for models KL-217G and KL-217S and KL-217E and KL-217B



Max

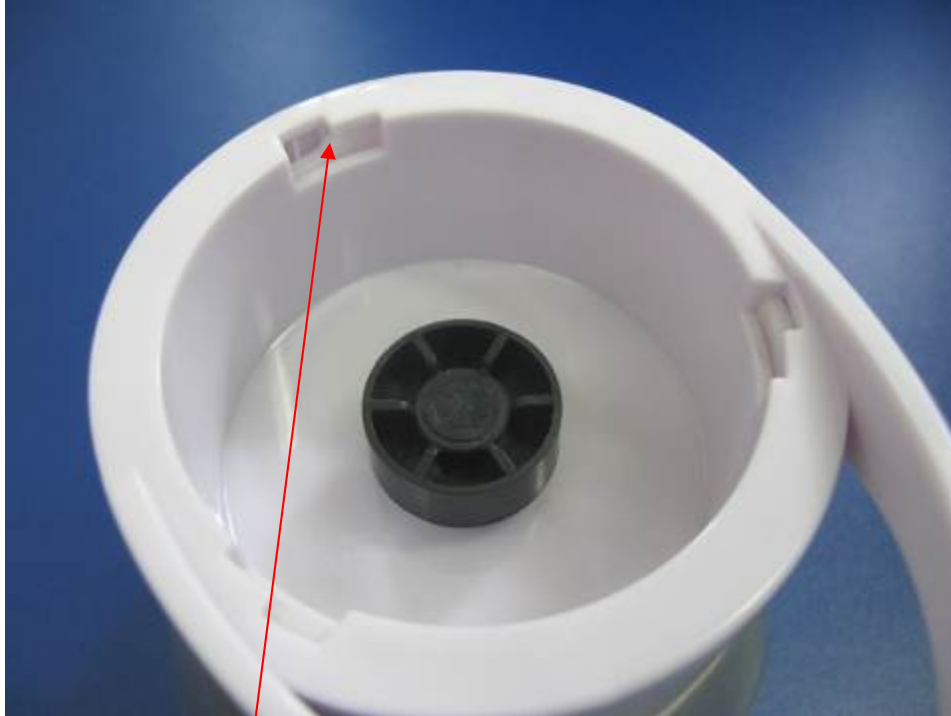
Alternative cup for models KL-217G and KL-217S and KL-217E and KL-217B



Maximum indicated level View for alternative cup for models KL-217G and KL-217S and KL-217E and KL-217B

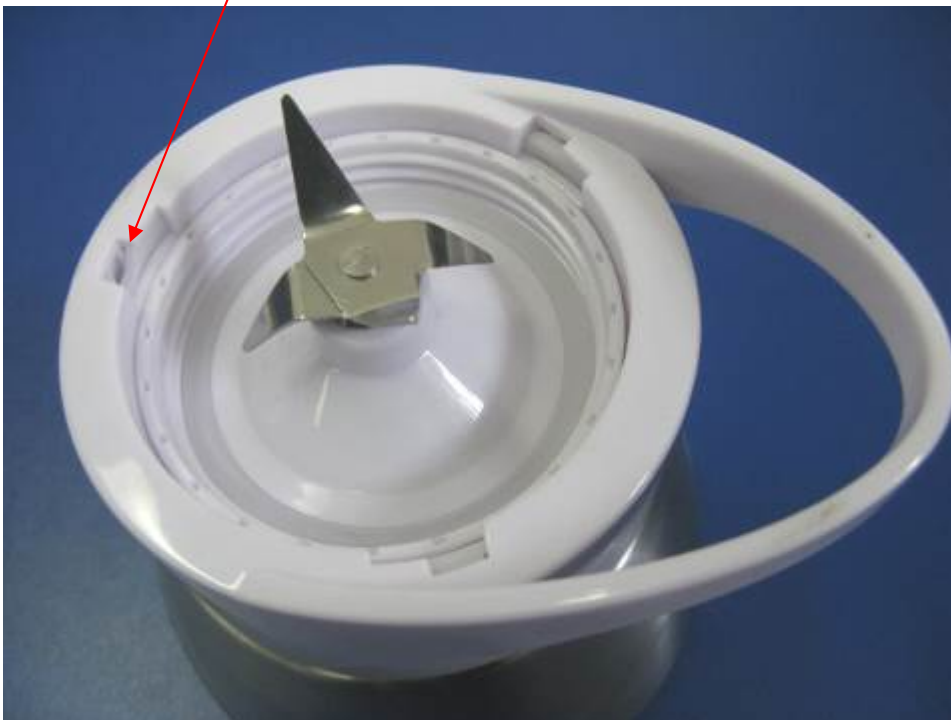


View of base for models KL-217G and KL-217S and KL-217E and KL-217B

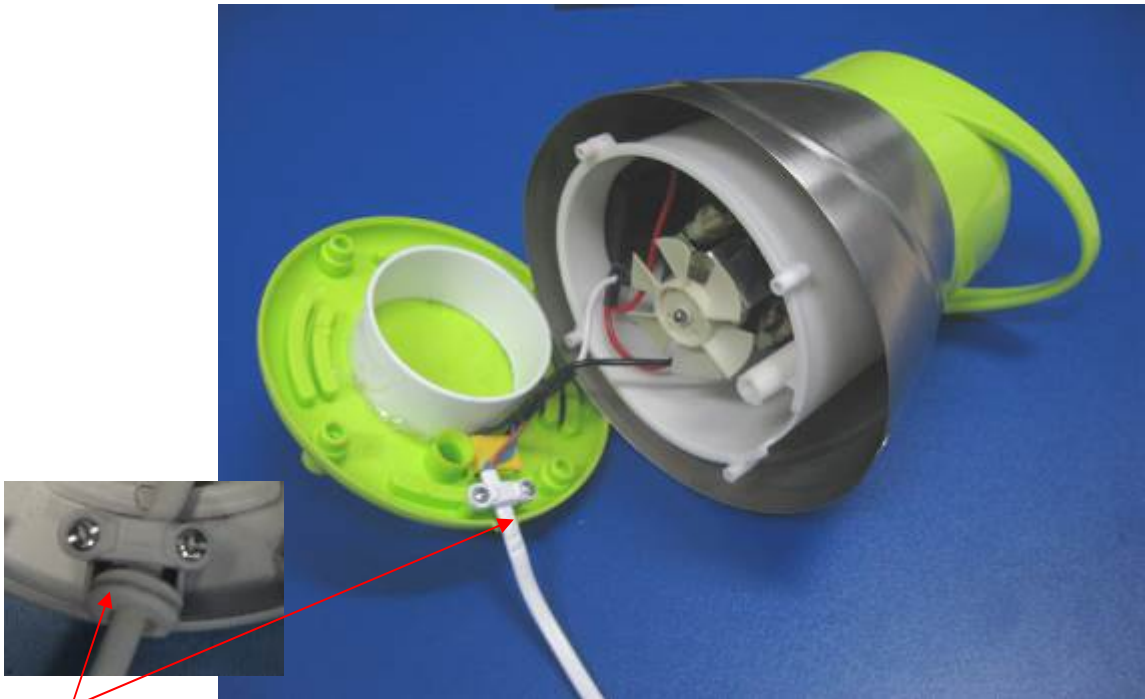


Interlock can not be operated by test probe

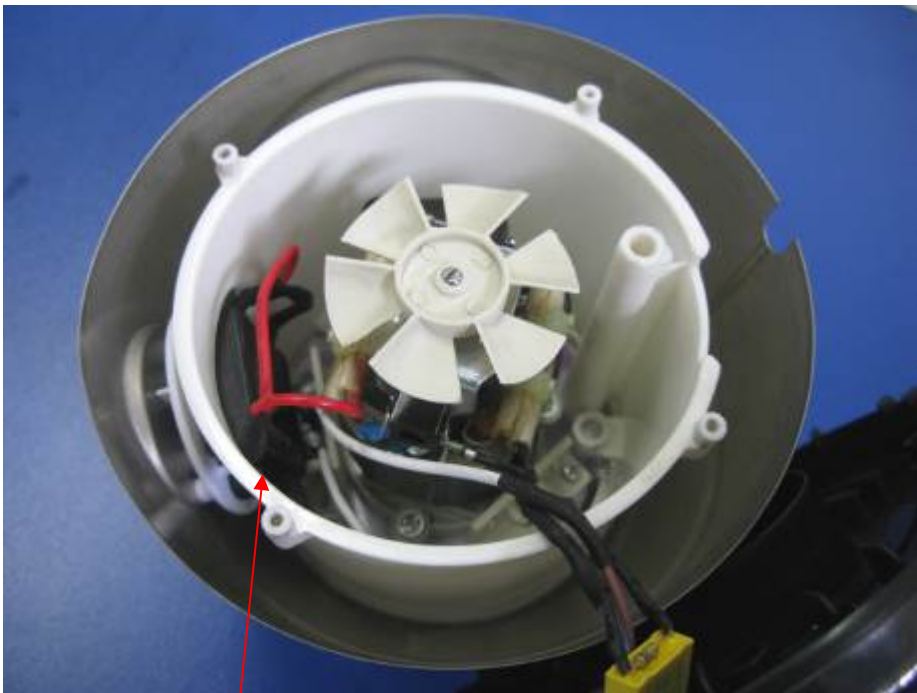
View of base for modelS KL-217G and KL-217S and KL-217E and KL-217B



Internal view of model KL-217G and KL-217E

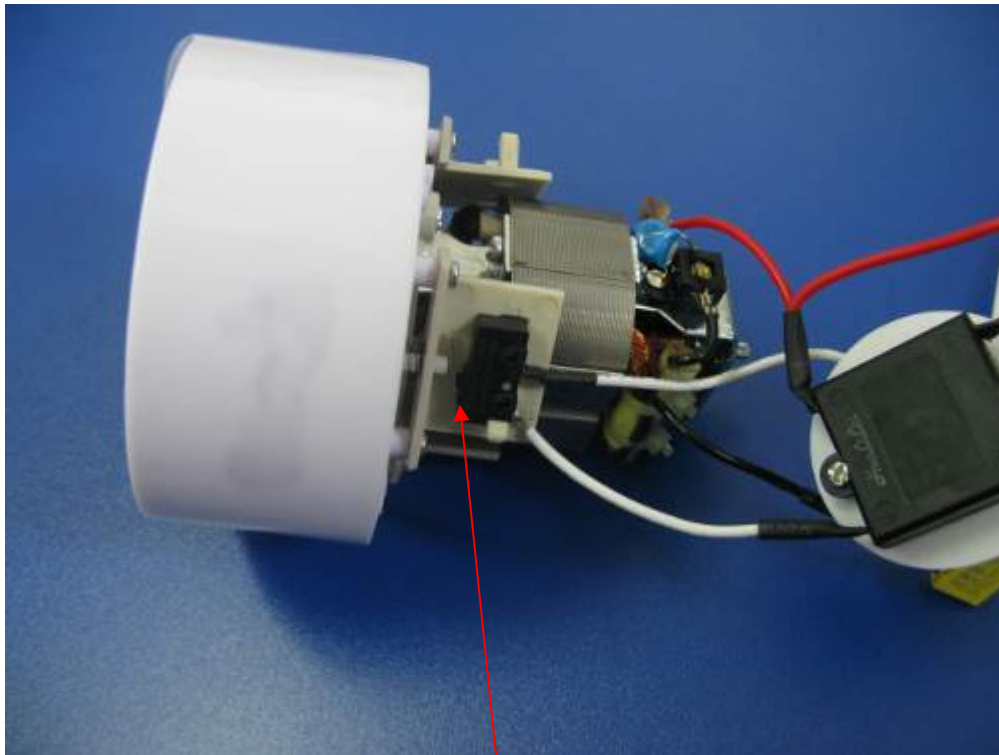


Bushing
Internal view of model KL-217G and KL-217E



Main switch

Internal view of model KL-217G and KL-217E



Interlock switch

Motor view for models KL-217G and KL-217S and KL-217E and KL-217B

