	Test Report issued under the responsibility of: kiwa
EN IEC55014-1, EN IEC55014-2, EN IEC 61000-3-2, EN 61000-3-3 Household appliances, electrical tools & similar apparatus	
Project Number ..... :	**705623**
Report Number. ..... :	705623-004
Date of issue ..... :	2025-01-12
Total number of pages ..... :	62 pages
Name of Testing Laboratory preparing the Report ..... :	Kiwa Gastec (China) Ltd Room 209, No.46, Nanxiang 3rd Road, Science City Development Zone, Guangzhou, China 510663
Applicant's name ..... :	Shenzhen Muren Smart Manufacturing Co., Ltd
Address ..... :	Room 2105-07, Block B, Building 1,Shangzhi Science & Technology Park, No.380 Guangming Road, Tangwei Community, Fenghuang Street, Guangming District, Shenzhen, China.
Standards ..... :	EN IEC 55014-1:2021; EN IEC 55014-2:2021; EN IEC 61000-3-2:2019+A1:2021**+A2:2024**; EN 61000-3-3:2013+A1:2019+A2:2021+AC:2022;
Test item description ..... :	Multi-function stand mixer
Trademark or brand name ..... :	--
Manufacturer ..... :	Same as applicant
Model/Type reference(s) ..... :	MK-1201L, MK-2901L, MK-1201LBG, MK-2901LBG, MK-8805L, **MK-1201LE, MK-2901LE, MK-1201LEBG, MK-2901LEBG,** **MK-8805LE,** MK-1201, MK-2901, MK-1201BG, MK-2901BG, MK-8805, **MK-1201E, MK-2901E, MK-1201EBG, MK-2901EBG, MK-8805E**
Ratings..... :	220-240 V~, 50-60 Hz, Class II 1000W for MK-1201L, MK-2901L, MK-1201LBG, MK-2901LBG, MK-8805L, **MK-1201LE, MK-2901LE, MK-1201LEBG, MK-2901LEBG, MK-8805LE** 1400W for MK-1201, MK-2901, MK-1201BG, MK-2901BG, MK-8805, **MK-1201E, MK-2901E, MK-1201EBG, MK-2901EBG, MK-8805E**

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
Testing Laboratory:	Kiwa Gastec (China) Ltd	
Testing location/ address ..... :	Room 209, No.46, Nanxiang 3rd Road, Science City Development Zone, Guangzhou, China 510663	
Tested by (name, function, signature) ..... :	Charles Qin (Engineer)	..... Charles Qin
Approved by (name, function, signature) .. :	Stawart Tan (Manager)	..... Stawart Tan .....

Doc No: KGGZ-LAB-F-124 version 1.0

Tests performed (name of test and test clause): Tests were conducted on model MK-1201BG, MK-1201LBG. **Amendment 1:** Tests were conducted on model MK-8805E.	**Testing location:** Kiwa Gastec (China) Ltd Room 209, No.46, Nanxiang 3rd Road, Science City Development Zone, Guangzhou, China 510663

Use of uncertainty of measurement for decisions on conformity (decision rule):

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 16-4-2:2011+A1:2014+A2:2018.
The measurement uncertainty is given with a confidence of 95%, k=2.

Possible test case verdicts:

- test case does not apply to the test object……:	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……..:	2023-12-22; 2024-11-07
Date (s) of performance of tests……..…:	2023-12-22 to 2023-12-29; 2024-11-07 to 2024-11-15

CONTENT

1 TEST RESULTS SUMMARY

Test Item	Standard	Result
Continuous conducted disturbance voltage	EN IEC 55014-1:2021;	Pass
Discontinuous conducted disturbance voltage	EN IEC 55014-1:2021;	N/A
Radiated disturbance power	EN IEC 55014-1:2021;	Pass
Radiated disturbance	EN IEC 55014-1:2021;	N/A
Harmonic of current	EN IEC 61000-3-2:2019+A1:2021**+A2:2024**;;	Pass
Flicker	EN 61000-3-3:2013+A1:2019+A2:2021+ AC:2022;	Pass
ESD immunity	EN IEC 55014-2:2021 Reference: IEC 61000-4-2:2008	Pass
Radiated EM field immunity	EN IEC 55014-2:2021 Reference: IEC 61000-4-3:2006+A1:2007+A2:2010	N/A
EFT immunity	EN IEC 55014-2:2021 Reference: IEC 61000-4-4:2012	Pass
Surge immunity	EN IEC 55014-2:2021 Reference: IEC 61000-4-5:2014+A1:2017	Pass
Inject current immunity	EN IEC 55014-2:2021 Reference: IEC 61000-4-6:2013	Pass
Voltage dips and interruption immunity	EN IEC 55014-2:2021 Reference: IEC 61000-4-11:2020	Pass

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.

3. The EUT did not contained any circuit with clock frequency more than 30MHz, so the EUT was compliant with the Radiated disturbance test (30M-1GHz) without test.

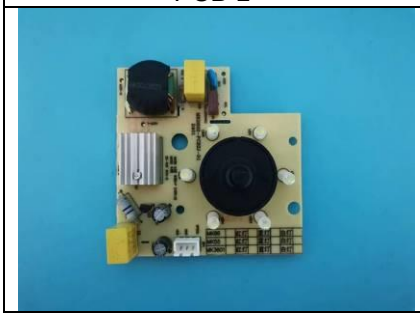
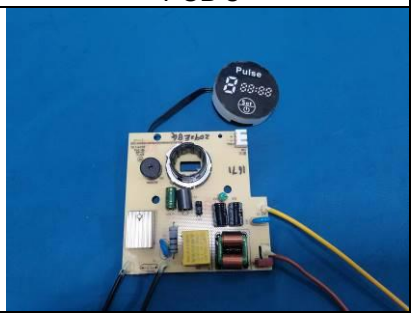
4. The EUT belongs to Category II, so the Radio frequency electromagnetic fields test is not required.

2 EMC Results Conclusion

(with Justification)

We tested The Multi-function stand mixer, Model: MK-1201L, MK-2901L, MK-1201LBG, MK-2901LBG, MK-8805L, MK-1201, MK-2901, MK-1201BG, MK-2901BG, MK-8805, **MK-1201LE, MK-2901LE, MK-1201LEBG, MK-2901LEBG, MK-8805LE, MK-1201E, MK-2901E, MK-1201EBG, MK-2901EBG, MK-8805E** to determine if it was in compliance with the relevant standards as marked on the Test Results Summary. We found that the unit met the requirements of EN IEC 55014-1, EN IEC 61000-3-2, EN 61000-3-3 and EN IEC 55014-2 (IEC 61000-4-2), EN IEC 55014-2 (IEC 61000-4-4), EN IEC 55014-2 (IEC 61000-4-6), EN IEC 55014-2 (IEC 61000-4-5), & EN IEC 55014-2 (IEC 61000-4-11) standards when tested as received. The worst case's test data was presented in this test report.

Portable multi-function stand mixer for household and indoor use only.
Models MK-1201L, MK-2901L, MK-1201LBG, MK-2901LBG, MK-8805L are identical to MK-1201, MK-2901, MK-1201BG, MK-2901BG, MK-8805 respectively except motor and rated power.
Models MK-1201BG, MK-2901BG are identical to MK-1201, MK-2901 respectively except that MK-1201BG, MK-2901BG added blender function and mincer function.
Models MK-1201, MK-2901 and MK-8805 are identical except appearance.
Models MK-1201LE, MK-2901LE, MK-1201LEBG, MK-2901LEBG, MK-8805LE, MK-1201E, MK-2901E, MK-1201EBG, MK-2901EBG, MK-8805E are identical to MK-1201L, MK-2901L, MK-1201LBG, MK-2901LBG, MK-8805L, MK-1201, MK-2901, MK-1201BG, MK-2901BG, MK-8805 respectively except PCB circuit and appearance.

PCB 1	PCB 2	PCB 3
		

Remark:

1. PCB 1, PCB 2 for MK-1201L, MK-2901L, MK-1201LBG, MK-2901LBG, MK-8805L, MK-1201, MK-2901, MK-1201BG, MK-2901BG, MK-8805;

2. PCB 3 for MK-1201LE, MK-2901LE, MK-1201LEBG, MK-2901LEBG, MK-8805LE, MK-1201E, MK-2901E, MK-1201EBG, MK-2901EBG, MK-8805E

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

Amendment 1:

This report was based on original EMC report 704959-006, dated 22 May, 2024, with the following changes:

1. Upgraded standard to “EN IEC 61000-3-2:2019+A1:2021**+A2:2024”.**

2. Added new models **MK-1201LE, MK-2901LE, MK-1201LEBG, MK-2901LEBG, MK-8805LE, MK-1201E, MK-2901E, MK-1201EBG, MK-2901EBG, MK-8805E,** model differences refer to above product information.

The old report 704959-006 was replaced by this report.

3 LABORATORY MEASUREMENTS

Configuration Information

Equipment Under Test (EUT):	Multi-function stand mixer
Model:	MK-1201BG, MK-1201LBG, **MK-8805E**
Serial No.	--
Support Equipment:	N/A
Rated Voltage:	220-240 V~, 50-60 Hz, Class II, 1000W for MK-1201LBG, 1400W for MK-1201BG, **MK-8805E**
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. The EMS measurements had been made in the frequency bands being investigated, with the EUT in the most susceptible operating mode consistent with normal applications. The configuration of the test sample had been varied to achieve maximum susceptibility.

Equipment used during test

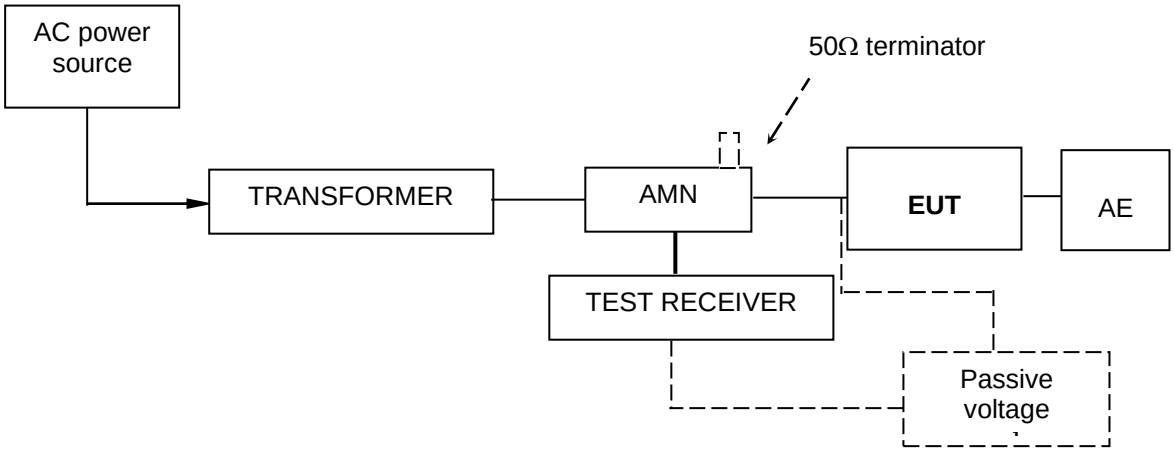
Test Equipment	Type/Mode	Equipment No.	Manufacturer	Cal. Due
Terminal disturbance voltage Power input terminal AC/DC (0.15MHz to 30MHz)				/
EMI receiver	ESRP3	KGGZ-E297	Rohde & Schwarz	2025-06-30
LISN	NSLK8127	KGGZ-E246	SCHWARZBECK	2025-06-30
EMC shield Room	SR-843	KGGZ-E210	EMCU	2027-10-23
Disturbance Power				/
EMI receiver	ESRP3	KGGZ-E297	Rohde & Schwarz	2025-06-30
Absorb Power Clamp	MDS-21C	KGGZ-E199	Rohde & Schwarz	2025-03-27
EMC shield Room	SR-843	KGGZ-E210	EMCU	2027-10-23
Harmonic Emission on AC (100 Hz to 2 kHz) / Voltage fluctuations and flicker				/
Single-phase harmonic flicker analyzer	Profline 2105	KGGZ-E298	TESEQ	2025-03-27
Electrostatic discharge				/
ESD Generator	PSE-30	KGGZ-E257	EMCU	2025-07-01
Electrical Fast Transients / Surges/dips				/
Surge/EFT generator	PSS-5-S-E	KGGZ-E254	EMCU	2025-06-30
Injected currents (150 kHz to 230 MHz)				/
C/S test generator	PCS 80	KGGZ-E249	EMCU	2025-06-30
CDN-M2	CDN-M2-16	KGGZ-E252	EMCU	2025-06-30
6dB Attenuator	ATN-6-100	KGGZ-E251	EMCU	2025-06-30
Voltage dips and interruptions				/
Voltage drop test system	PSD	KGGZ-E256-1	EMCU	2025-06-30
Adjustable power supply	PSD 1PM	KGGZ-E256-2	EMCU	2025-06-30

4 EMI TEST

4.1 *EN IEC 55014-1 Continu*ous Conducted Disturbance Voltage Test

Test Result: Pass

4.1.1Block Diagram of Test Setup



4.1.2Test 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.

4.1.3Test Data&Curve

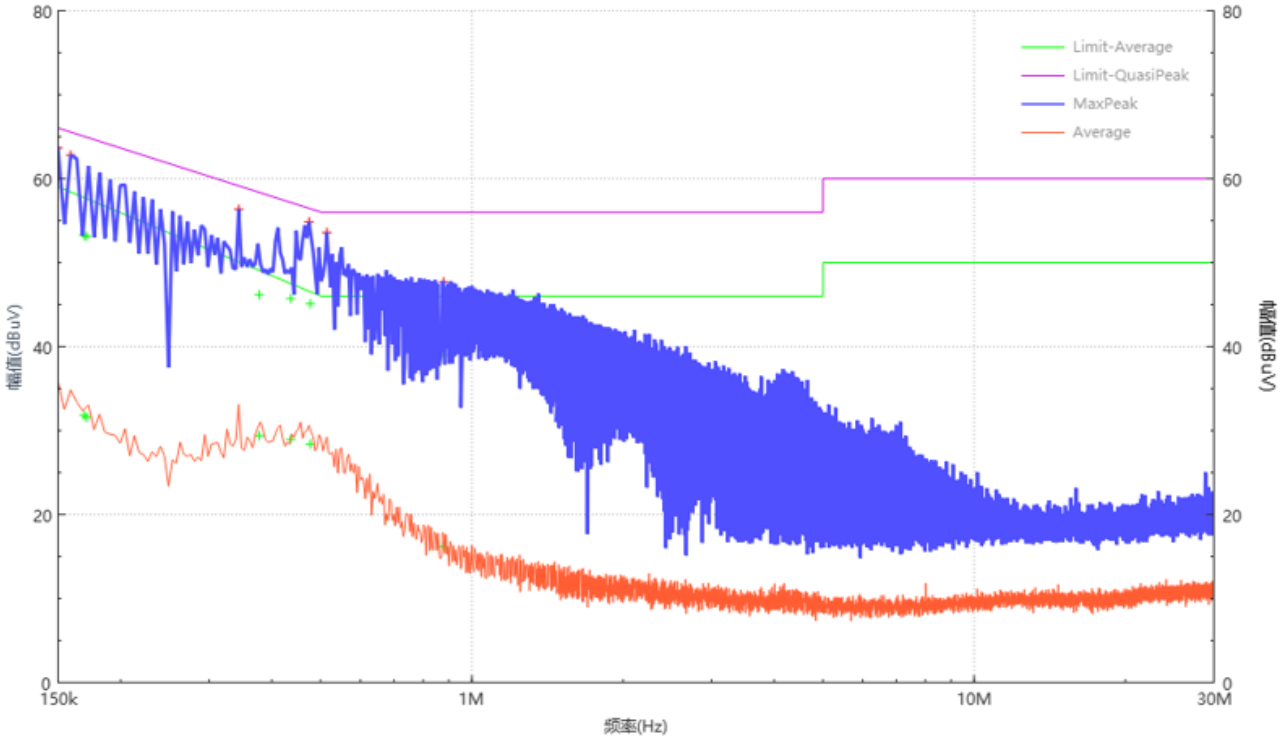
At main terminal: Pass

Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201LBG	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Line	Factor	Quasi Peak			Average			Pass/Fail
Hz		dB	Level	Limit	Margin	Level	Limit	Margin	
			dB(μV)	dB(μV)	dB	dB(μV)	dB(μV)	dB	
169.03k	L	10.45	53.24	65.01	11.76	31.84	57.71	25.87	Pass
170.98k	L	10.45	53.13	64.91	11.78	31.56	57.59	26.03	Pass
377.16k	L	10.39	46.17	58.34	12.17	29.4	49.04	19.64	Pass
435.89k	L	10.4	45.73	57.14	11.41	28.95	47.48	18.53	Pass
476.76k	L	10.43	45.11	56.4	11.28	28.41	46.51	18.11	Pass
878.89k	L	10.46	38.96	56	17.04	16.18	46	29.82	Pass

TRACE

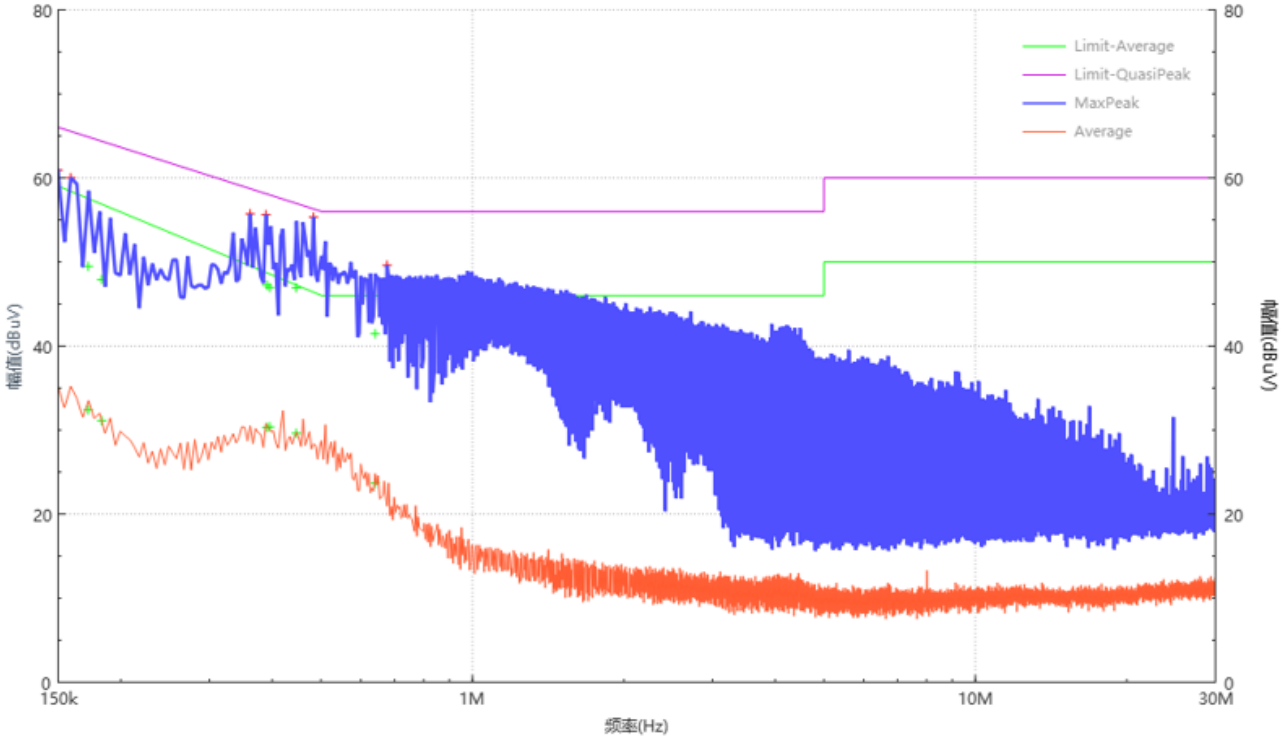


Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201LBG	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Line	Factor	Quasi Peak			Average			Pass/Fail
Hz		dB	Level	Limit	Margin	Level	Limit	Margin	
			dB(μV)	dB(μV)	dB	dB(μV)	dB(μV)	dB	
172.26k	N	10.41	49.48	64.85	15.37	32.39	57.51	25.11	Pass
183.25k	N	10.42	47.91	64.34	16.43	31.12	56.84	25.71	Pass
390.38k	N	10.41	47.23	58.06	10.83	46.96	57.95	10.99	Pass
395.37k	N	10.41	30.38	48.54	18.16	30.31	48.67	18.36	Pass
446.47k	N	10.37	46.93	56.94	10.01	29.62	47.22	17.6	Pass
640.46k	N	10.38	41.47	56	14.53	23.68	46	22.32	Pass

TRACE:

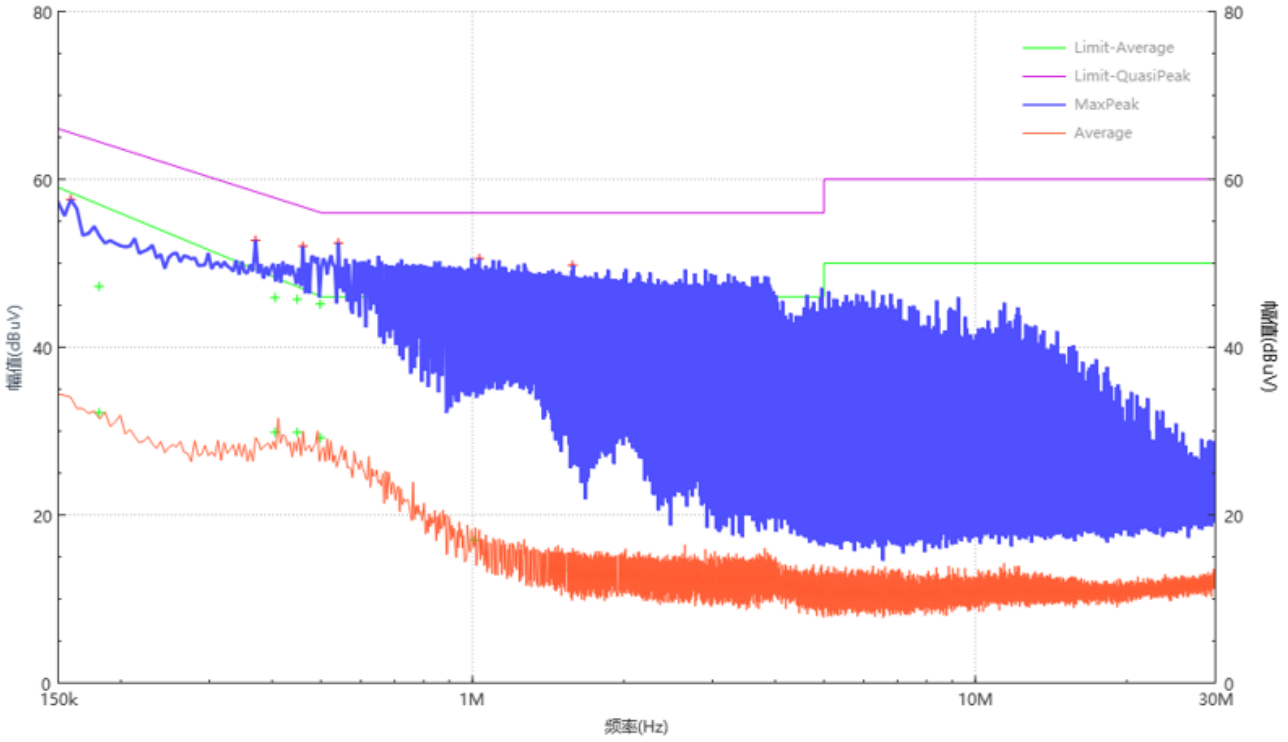


Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201BG	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Line	Factor	Quasi Peak			Average			Pass/Fail
Hz		dB	Level	Limit	Margin	Level	Limit	Margin	
			dB(μV)	dB(μV)	dB	dB(μV)	dB(μV)	dB	
181.01k	L1	10.46	47.22	64.44	17.22	32.2	56.97	24.77	Pass
405.02k	L1	10.38	45.91	57.75	11.84	29.87	48.27	18.41	Pass
448.32k	L1	10.41	45.7	56.91	11.2	29.85	47.18	17.33	Pass
498.46k	L1	10.45	45.13	56.03	10.89	29.22	46.03	16.82	Pass
1.01M	L1	10.47	40.66	56	15.34	16.99	46	29.01	Pass
1.55M	L1	10.48	39.74	56	16.26	13.44	46	32.56	Pass

TRACE:

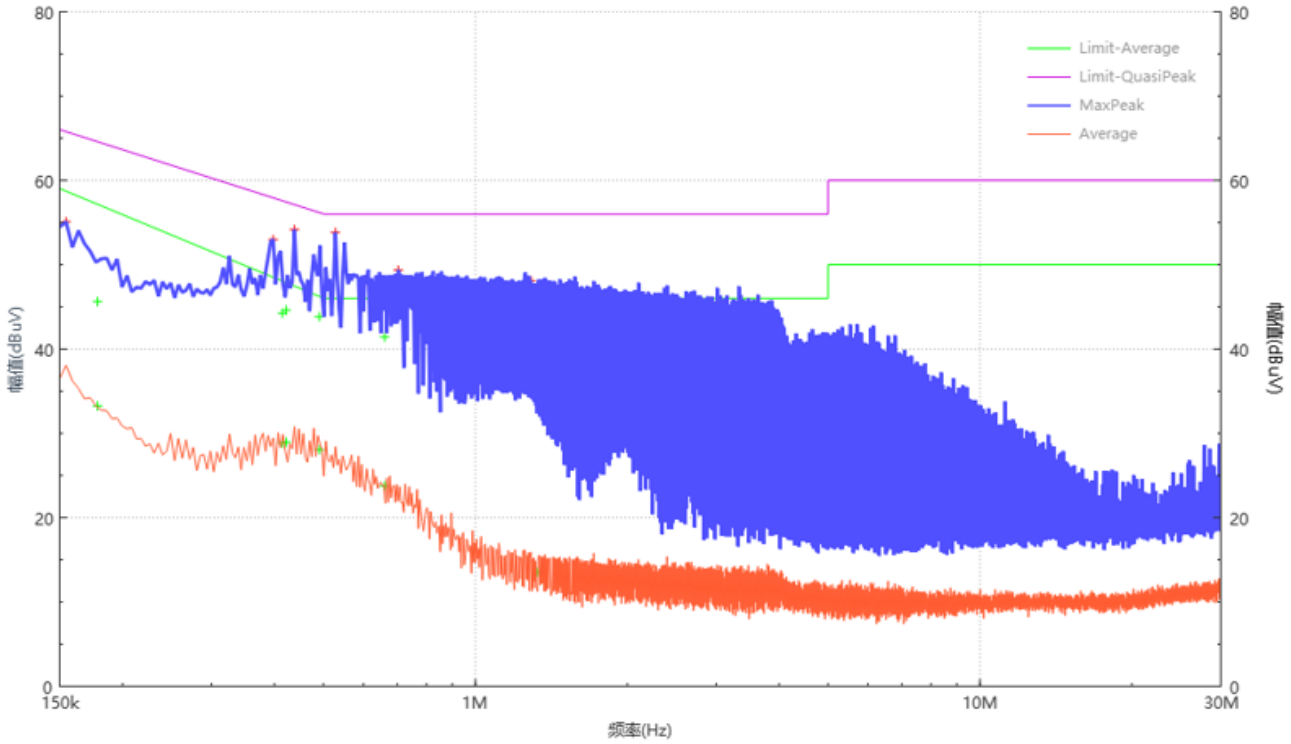


Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201BG	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Line	Factor	Quasi Peak			Average			Pass/Fail
Hz		dB	Level	Limit	Margin	Level	Limit	Margin	
			dB(μV)	dB(μV)	dB	dB(μV)	dB(μV)	dB	
178.37k	N	10.42	45.62	64.56	18.94	33.26	57.13	23.87	Pass
414.8k	N	10.39	44.24	57.55	13.31	44.6	57.42	12.81	Pass
421.6k	N	10.39	28.96	47.84	18.89	28.84	48.02	19.18	Pass
490.75k	N	10.34	43.83	56.16	12.33	28.05	46.2	18.15	Pass
660.93k	N	10.39	41.41	56	14.59	23.76	46	22.24	Pass
1.33M	N	10.41	39.08	56	16.92	13.51	46	32.49	Pass

TRACE:

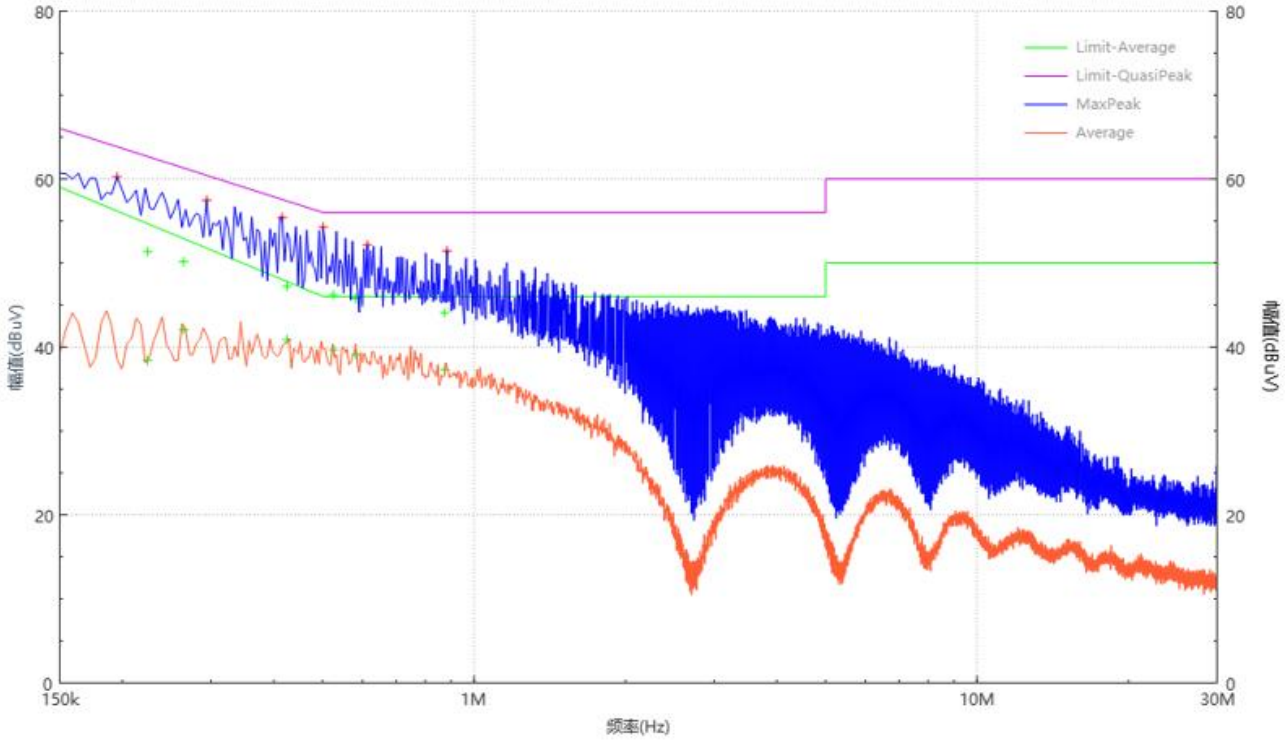


Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-8805E	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Line	Factor	Quasi Peak			Average			Pass/Fail
Hz		dB	Level	Limit	Margin	Level	Limit	Margin	
			dB(μV)	dB(μV)	dB	dB(μV)	dB(μV)	dB	
224.51k	L1	10.46	51.36	62.65	11.29	38.42	54.65	16.23	Pass
264.37k	L1	10.45	50.16	61.29	11.13	42.06	52.88	10.82	Pass
424.58k	L1	10.4	47.21	57.36	10.15	40.88	47.77	6.89	Pass
525.48k	L1	10.45	46.21	56	9.79	39.65	46	6.35	Pass
582.1k	L1	10.45	45.8	56	10.2	39.1	46	6.9	Pass
873.87k	L1	10.46	44.08	56	11.92	37.3	46	8.7	Pass

TRACE:

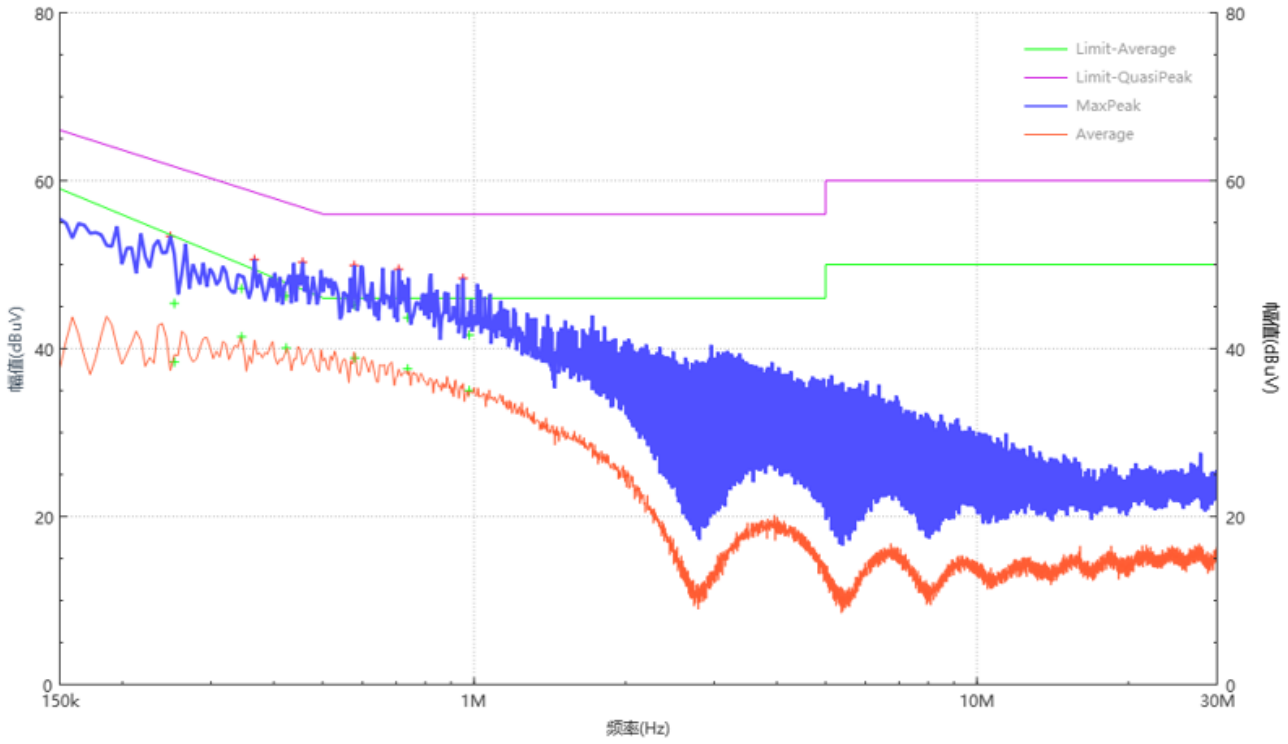


Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-8805E	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Line	Factor	Quasi Peak			Average			Pass/Fail
Hz		dB	Level	Limit	Margin	Level	Limit	Margin	
			dB(μV)	dB(μV)	dB	dB(μV)	dB(μV)	dB	
253.52k	N	10.42	45.38	61.64	16.26	38.4	53.33	14.94	Pass
345.05k	N	10.4	47.15	59.08	11.93	41.4	50.01	8.6	Pass
423.01k	N	10.39	46.24	57.39	11.14	40.07	47.81	7.73	Pass
579.61k	N	10.36	45.16	56	10.84	38.89	46	7.11	Pass
737.63k	N	10.4	43.67	56	12.33	37.6	46	8.4	Pass
978.11k	N	10.41	41.6	56	14.4	35.01	46	10.99	Pass

TRACE:



At load/control terminal: Not Applicable

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

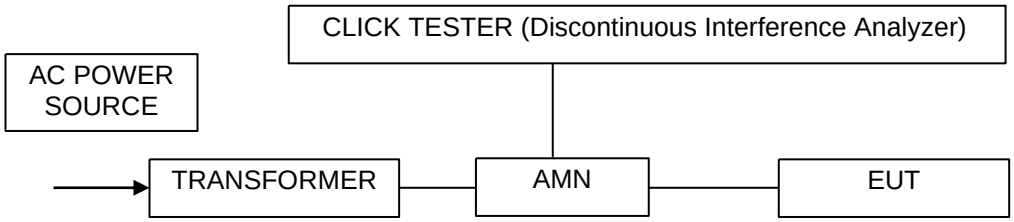
4.1.4 Measurement Uncertainty

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: 2011+A1:2014+A2:2018.
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 IEC 55014-1 Dis*continuous Conducted Disturbance Voltage

Test Result: Not Applicable

4.2.1Block Diagram of Test Setup



4.2.2Test Setup and Procedure

The EUT was placed on a 0.8m high non-metallic table in shielded room, the wall of shielded room used as Ground Reference Plane (GRP), and keeps a distance of at least 0.8m from any of the other metallic surface.

The EUT was connected to an artificial mains network and at a distance of 0.8m from it, the excess lead of EUT was bundled with a length of 0.3m to 0.4m parallel to the main lead.

The number of counted clicks above the permitted limit for continuous interference and their duration, spacing and rate were measured during the observation time. When relevant, a permitted(relaxed) limit for clicks were calculated and a second measurement was performed. Determination of compliance with the permitted limit according to the upper quartile method was applied. The frequency 150kHz, 500 kHz, 1.4 MHz and 30 MHz was checked.

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

4.2.3 Test Data

Temperature	--	Humidity	--
Atmospheric Pressure	--	Test Voltage	--
Model No.	--	Operating Mode	--
Result	**N/A**		

Final Data List

Frequency (MHz)	0.15	0.50	1.40	30.00
Permitted limit for continuous interference (dBμV)	66	56	56	60
Short Clicks [T<10ms]	0	0	0	0
Mid. Clicks [10ms<T<20ms]	0	0	0	0
Long Clicks [T>20ms]	0	0	0	0
Total clicks (number)	0	0	0	0
Switching operation (number)	--			
Factor	--			
Observation time (min.)	--			
Click rate, N	0	0	0	0
Value to be added (dB)	44	44	44	44
Counted clicks allowed to exceed the permitted limit (number)	0	0	0	0
Permitted limit for clicks (dBμV)	110	100	100	104
Counted clicks exceeding the limit (number)	0	0	0	0
Complies with the limit (Pass/Fail)	**N/A**	**N/A**	**N/A**	**N/A**

4.2.4 Measurement Uncertainty

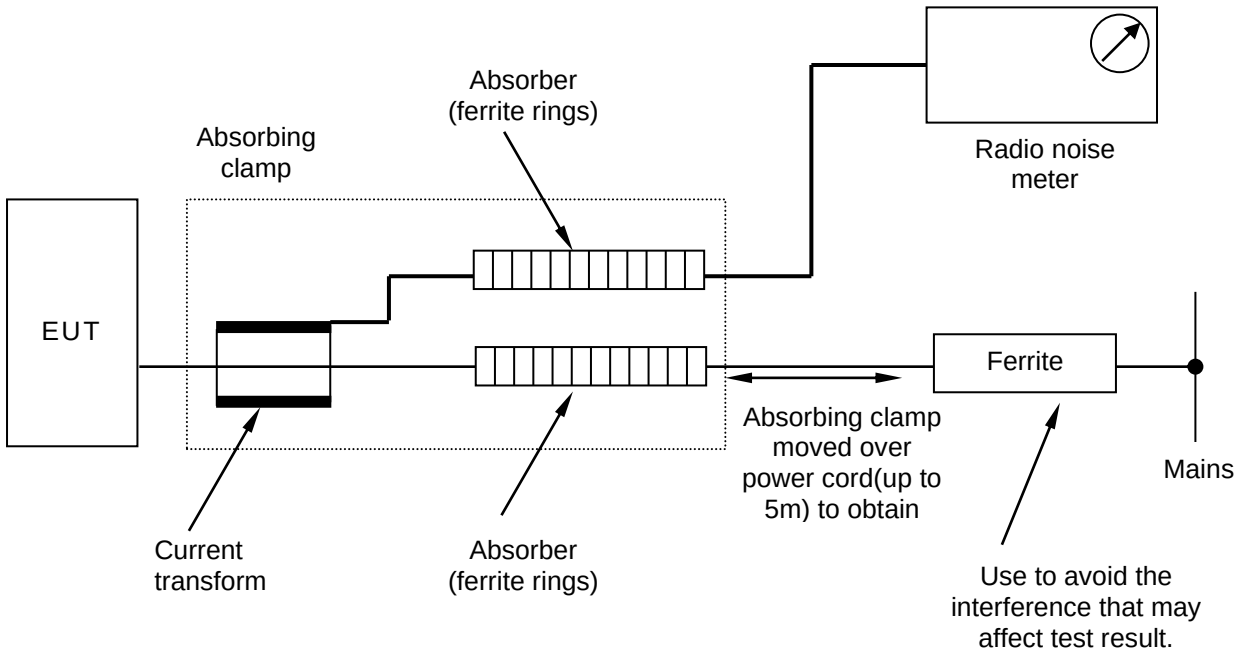
The measurement uncertainty for click test is under consideration according to CISPR 16-4-2:2011+A1:2014+A2:2018.

4.2.5 Remark:

4.3 *EN IEC 55014-1 Rad*iated Disturbance Power

Test Result: Pass

4.3.1Block Diagram of Test Setup



Note: ——— : power line

——— : signal lime

4.3.2Test Setup and Procedure

The disturbance power was measured with the EUT in a shielded room. The height of the table shall be 0,1 m ± 0,025 m for appliances primarily intended to be positioned on the floor in normal use, and 0,8 m ± 0,05 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.

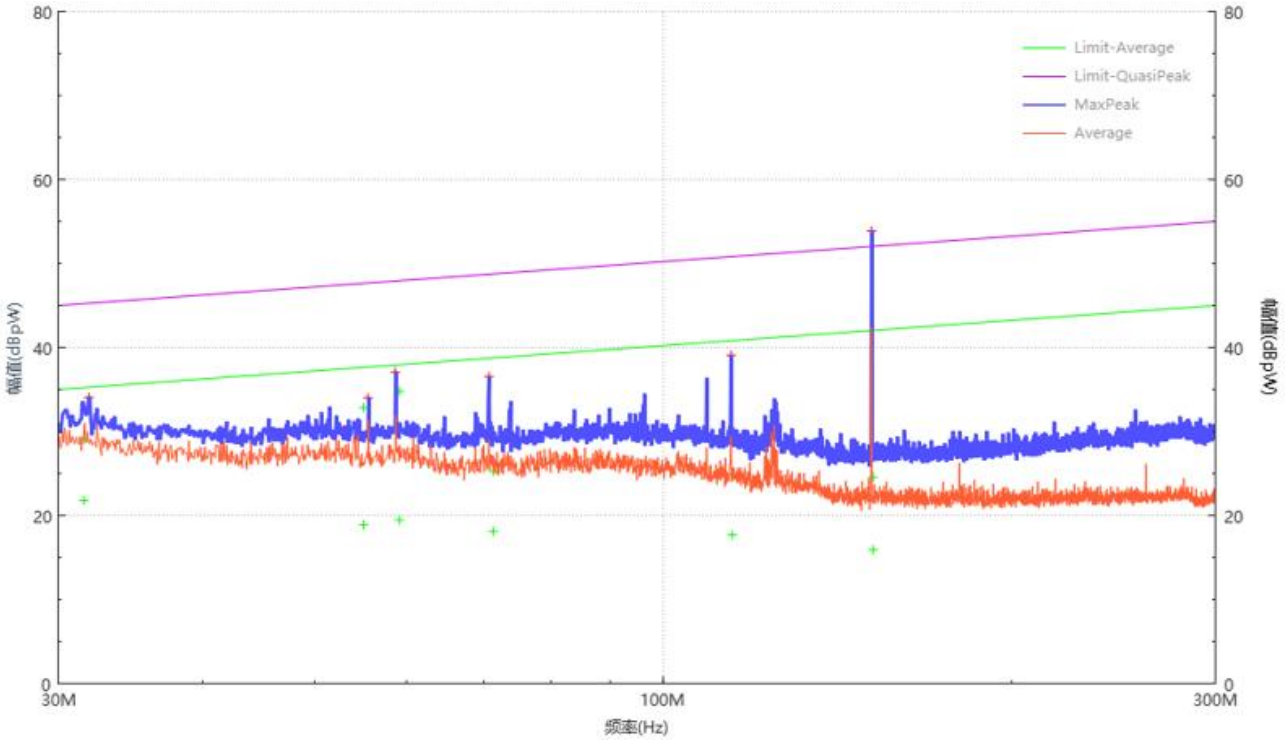
4.3.3Test Data&Curve

Temperature	23.1 ºC	Humidity	54.3 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201LBG	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Factor	Quasi Peak			Average			Pass/Fail
Hz	dB	Level	Limit	Margin	Level	Limit	Margin	
		dB(pW)	dB(pW)	dB	dB(pW)	dB(pW)	dB	
31.58M	7.77	29.06	45.22	16.17	21.77	35.22	13.45	Pass
55.08M	6.2	32.82	47.64	14.82	18.87	37.64	18.76	Pass
59.16M	6.96	34.8	47.95	13.15	19.44	37.95	18.51	Pass
71.29M	6.12	25.26	48.76	23.5	18.1	38.76	20.66	Pass
114.73M	5.76	24.85	50.83	25.97	17.69	40.83	23.13	Pass
151.8M	3.87	24.56	52.04	27.48	15.91	42.04	26.13	Pass

TRACE:

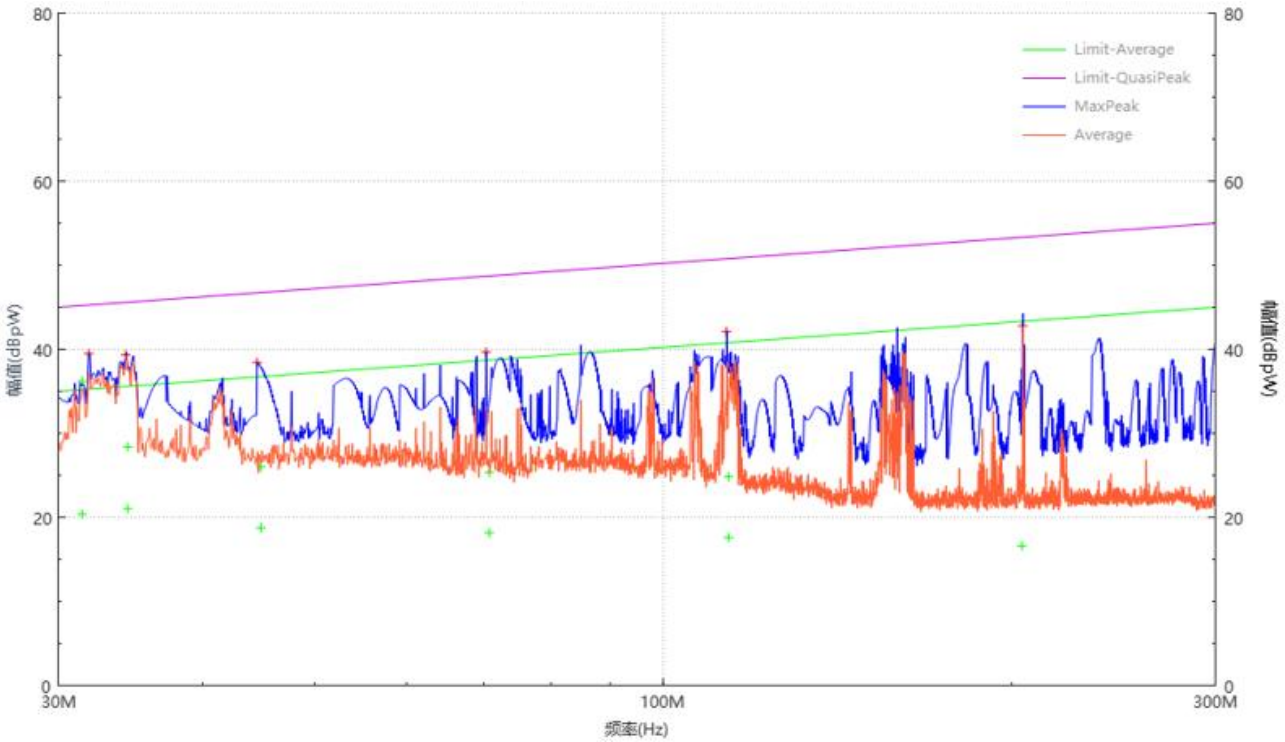


Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201BG	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Factor	Quasi Peak			Average			Pass/Fail
Hz	dB	Level	Limit	Margin	Level	Limit	Margin	
		dB(pW)	dB(pW)	dB	dB(pW)	dB(pW)	dB	
31.47M	7.79	36.2	45.21	9.01	20.39	35.21	14.82	Pass
34.47M	7.12	28.38	45.6	17.22	21.02	35.6	14.58	Pass
44.91M	6.11	26.01	46.75	20.74	18.76	36.75	17.99	Pass
70.74M	6.22	25.37	48.73	23.36	18.16	38.73	20.56	Pass
113.89M	5.73	24.85	50.79	25.94	17.62	40.79	23.18	Pass
204.08M	4.48	23.73	53.33	29.59	16.6	43.33	26.73	Pass

TRACE:

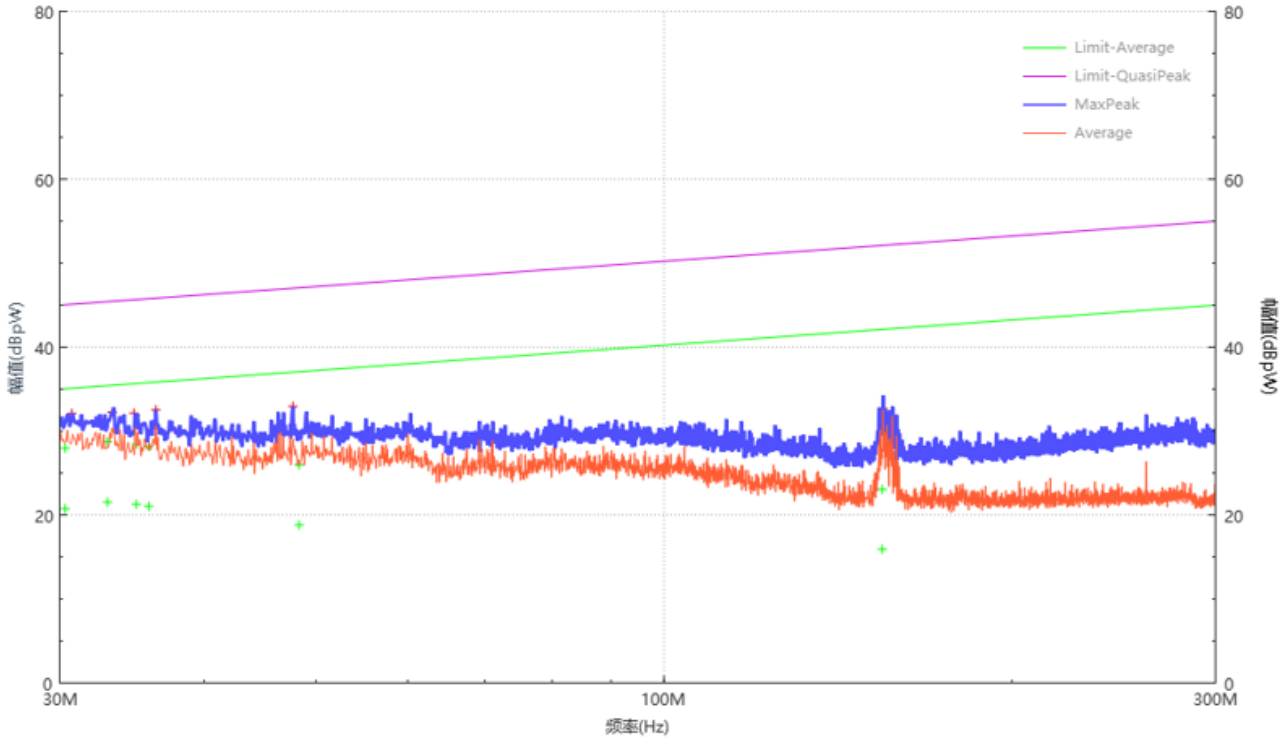


Temperature	23.5 ºC	Humidity	54.4 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-8805E	Operating Mode	Normal operation
Result	**Pass**		

Final Data List(Peak Search)

Frequency	Factor	Quasi Peak			Average			Pass/Fail
Hz	dB	Level	Limit	Margin	Level	Limit	Margin	
		dB(pW)	dB(pW)	dB	dB(pW)	dB(pW)	dB	
30.34M	8.07	27.97	45.05	17.08	20.74	35.05	14.31	Pass
33M	7.44	28.72	45.41	16.7	21.53	35.41	13.89	Pass
34.96M	7.01	28.43	45.66	17.23	21.27	35.66	14.39	Pass
35.83M	6.91	28.19	45.77	17.58	21.04	35.77	14.73	Pass
48.35M	6.69	25.95	47.07	21.12	18.81	37.07	18.27	Pass
154.46M	3.95	23.04	52.12	29.07	15.91	42.12	26.2	Pass

TRACE:



4.3.4Measurement 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: 2011+A1:2014+A2:2018.

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 IEC 55014-1 R*adiated 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.

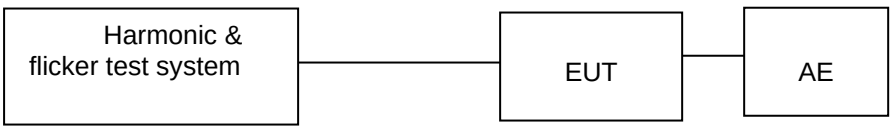
☐ Radiated disturbance (300-1000MHz) shall be conducted, if the measurement quasi-peak data of disturbance power is between the limit and limit reduced by the margin (0 to 10dB) at frequency range 200 to 300 MHz or the maximum clock frequency is not less than 30MHz.

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

5 *EN IEC 61000-3-2* Harmonic of Current

Test Result: Pass

5.1 Block Diagram of Test Setup



5.2 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.

☑This product is defined as Kitchen Machine listed in the scope of IEC 60335-2-14 which was deemed to conform to the harmonic current limits of this standard without further testing.

❑This product is not defined as lighting equipment, and rated power is less than 75W, therefore, no limit applies according to EN 61000-3-2.

5.3 Test data

Temperature	--	Humidity	--
Atmospheric Pressure	--	Test Voltage	--
Model No.	--	Operating Mode	--
Result	**N/A**		

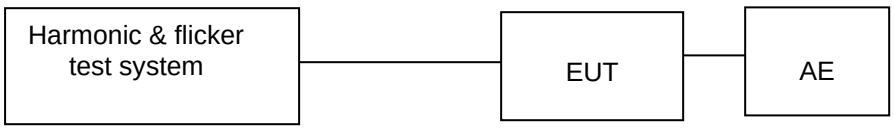
5.4 Measurement Uncertainty

The measurement uncertainty for harmonic test is under consideration according to CISPR 16-4-2:2011+A1:2014+A2:2018.

6 *EN 61000-3-3* Flicker

Test Result: Pass

6.1 Block Diagram of Test Setup



6.2 Test Setup and Procedure

6.2.1Definition

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 hous). Using successive Pst valuse.

dc: the relative steady-state voltage change

dmax: the maximum relative voltage change

d(t): the value during a voltage change

6.2.2Test condition

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

6.3 Test Data

Temperature	23 ºC	Humidity	54 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201LBG	Operating Mode	Normal operation
Result	**Pass**		

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 (%):	7.00	Pass

Temperature	23 ºC	Humidity	54 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-1201BG	Operating Mode	Normal operation
Result	**Pass**		

Parameter values recorded during the test:
Vrms at the end of test (Volt):230.02

Highest dt (%):	0.00	Test limit (%):	3.3	Pass
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 (%):	7.00	Pass

Temperature	23 ºC	Humidity	54 %RH
Atmospheric Pressure	101 kPa	Test Voltage	230 V~, 50 Hz
Model No.	MK-8805E	Operating Mode	Normal operation
Result	**Pass**		

Parameter values recorded during the test:
Vrms at the end of test (Volt):230.06

Highest dt (%):	0.00	Test limit (%):	3.3	Pass
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 (%):	7.00	Pass

6.3.1 Remark:

For food mixers, Pst and Plt shall not be evaluated.

6.4 Measurement Uncertainty

Measurement uncertainty for voltage fluctuation and flicker is under consideration according to CISPR 16-4-2:2011+A1:2014+A2:2018.

7 EMS TEST

Performance Criteria:

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

Criterion B: The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permission loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description, and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Criterion C: Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instruction for use.

Measurement Uncertainty

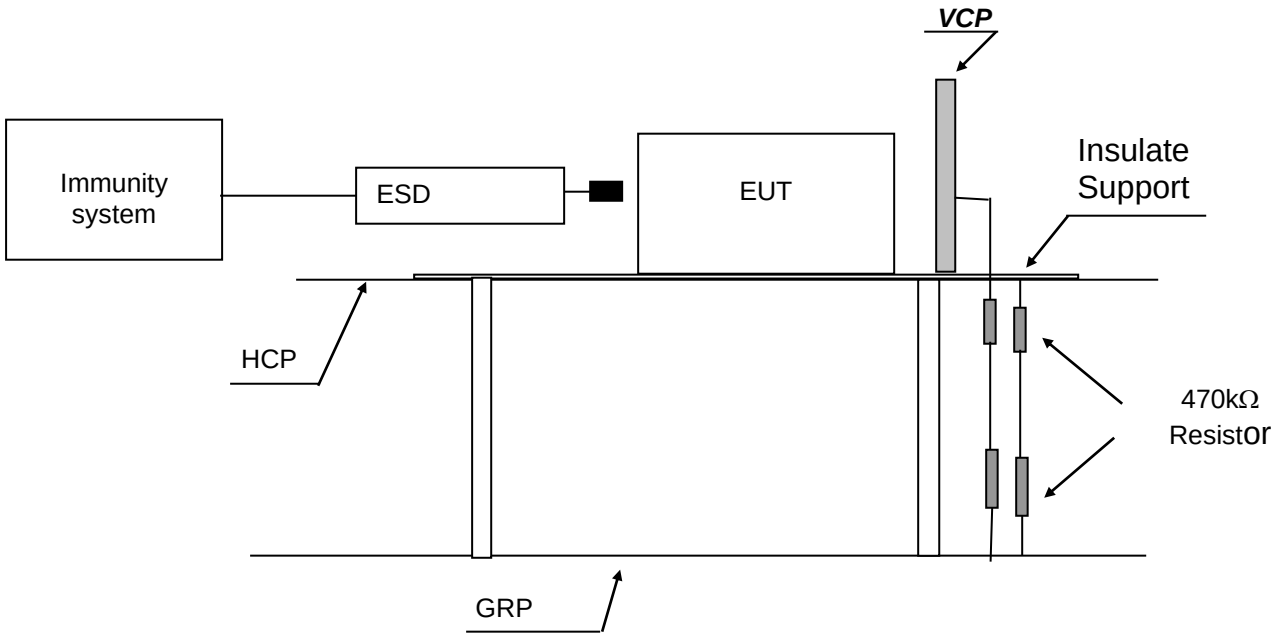
According to CISPR 16-4-2: 2011+A1:2014+A2:2018, measurement uncertainty to immunity test is under consideration.

7.1 *IEC 61000-4-2(Pursuant to EN IEC 55014-2) Elect*rostatic Discharge Immunity

Performance criterion: B

Test Result: Pass

7.1.1Block Diagram of Test Setup



Note: HCP means Horizontal Coupling Plane,
VCP means Vertical Coupling Plane
GRP means Ground Reference Plane

7.1.2Test Setup and Procedure

The EUT was put on a 0.8m high wooden tabel/0.1m high for floor standing equipment standing on the ground reference plane(GRP) 3m by 2m in size, made by iron 1.0 mm thick.

A horizontal coupling plane(HCP) 1.6m by 0.8m in size was placed on the table, and the EUT with its cables were isolated from the HCP by an insulating support thick than 0.5mm. The VCP 0.5m by 0.5m in size & HCP were constructed from the same material type & thinkmess as that of the GRP, and connected to the GRP via a 470kΩ resistor at each end.

The distance between EUT and any of the other metallic surface excepted the GRP, HCP & VCP was greater than 1m.

The EUT was arranged and connected according to its functional requirements.

Direct static electricity discharges was applied only to those points and surface which are accessible to personnel during normal usage.

On each preselected points 10 times of each polarity single discharge were applied The time interval between successive single discharges is at least 1s.

The ESD generator was held perpendicular to the surface to which the discharge is applied. The discharge return cable of the generator was kept at a distance of 0.2m whilst the discharge is being applied. During the contact discharges, the tip of the discharge electrode was touch the EUT before the discharge switch is operated. During the air discharges, the round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT.

Indirect discharge was conducted to objects placed near the EUT, simulated by applying the dischares of the ESD generator to a coupling plane, in the contact discharge mode.

After each discharge, the ESD generator was removed from the EUT, the generator is then retriggered for a new single discharge. For ungrounded product, a grounded carbon fibre brush with bleeder resistors (2×470 kΩ) in the grounding cable was used after each discharge to remove remnant electrostatic voltage.

10 times of each polarity single discharge were applied to HCP and VCP. The detail selected points are listed in the following table.

7.1.3 Test Result

Direct Application of ESD

Direct Contact Discharge

Applied Voltage (kV)	No. of Discharge for each point	Result (Pursuant to EN IEC 55014-2, criterion B)	Discharged Points
4	20	P	Accessible metal parts of the EUT Conductive substrate with coating which is not declared to be insulating

Direct Air Discharge

Applied Voltage (kV)	No. of Discharge for each point	Result (Pursuant to EN IEC 55014-2, criterion B)	Discharged Points
8	20	P	All accessible points where contact discharge cannot be applied such as Displays, Indicators light, Keyboard, Button, Switch, Knob, Air gap, Slots, Hole and so on

Indirect Application of ESD

Horizontal Coupling Plane under the EUT

Applied Voltage (kV)	No. of Discharge for each point	Result (pursuant to EN IEC 55014-2 criterion B)	Discharged Point
4	20	P	At the front edge of each HCP opposite the centre point of each unit of the EUT

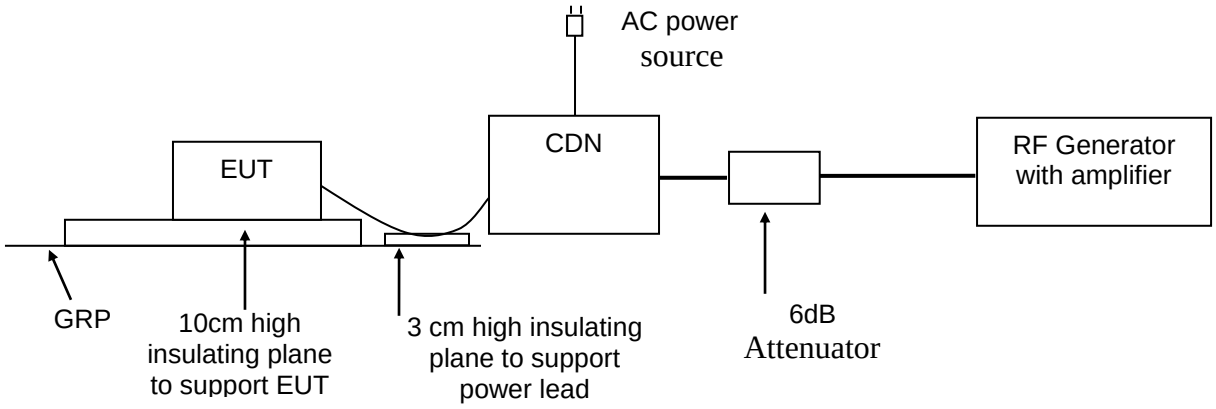
Vertical Coupling Plane beside the EUT

Applied Voltage (kV)	No. of Discharge for each point	Result (pursuant to EN IEC 55014-2 criterion B)	Discharged Point
4	20	P	The centre of the vertical edge of the coupling plane

7.2 *IEC 61000-4-6(Pursuant to EN IEC 55014-2)* Injected Current (0.15 MHz to 230 MHz)

Performance criterion: A
Test Result: Pass

7.2.1Block Diagram of Test Setup



7.2.2Test Setup and Procedure

The EUT was placed on an insulating support of 0.1m height above a ground reference Plane, arranged and connected to satisfy its functional requirement.
All relevant cables were provided with the appropriate coupling and decoupling devices at a distance between 0.1m and 0.3m from the projected geometry of the EUT on an insulating support of 0.03m height above the ground reference plane.
Test voltage was verified before each testing though power meter combined in the RF generator with AMP.
Dwell time was set to 3s and step was set as 1% to keep sufficient response time for EUT. The frequency from 0.15MHz to 230MHz was checked.

7.2.3Test Result

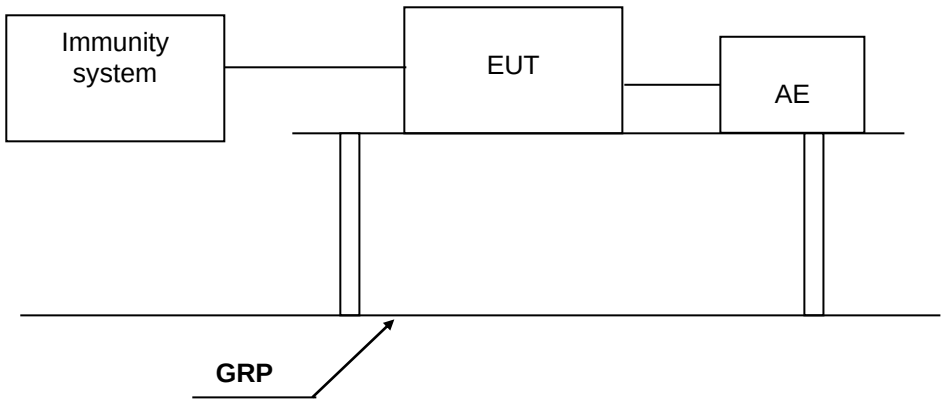
Port:	Frequency (MHz)	Level (Pursuant to EN IEC 55014-2)	Result
A.C. Power Lines	0.15 to 230	3V (r.m.s.)	P
D.C. Power Lines	0.15 to 230	1V (r.m.s.)	N/A
Signal Lines	0.15 to 230	1V (r.m.s.)	N/A
Control Lines	0.15 to 230	1V (r.m.s.)	N/A

7.3 *IEC 61000-4-4(Pursuant to EN IEC 55014-2) El*ectrical Fast Transient/Burst

Performance criterion: B

Test Result: Pass

7.3.1 Block Diagram of Test Setup



7.3.2Test Setup and Procedure

The EUT was placed on a 0.1m high wooden table, standing on the ground reference plane 3m by 2m in size, made by steel 1mm thick.

The distance between the EUT and any other of the metallic surface except the GRP is greater than 0.5m.

The mains lead excess than 0.5m is folded to avoid a flat coil and situated at a distance of 0.1m above the ground reference plane to insure the distance between the coupling device and the EUT were 0.5m.

The EUT was arranged and connected to satisfy its functional requirement and supplied by the coupling-decoupling network.

7.3.3Test Result

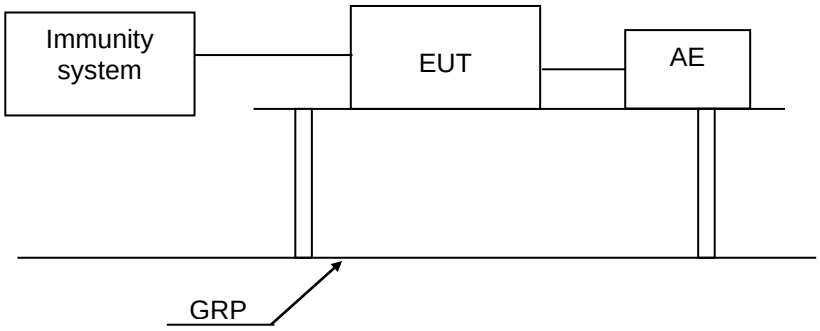
Level (Pursuant to EN IEC 55014-2)	Polarity	A.C. Power supply line and protective earth terminal	D.C. Power Lines, Signal Line & Control Line
0.5kV	+	N/A	N/A
0.5kV	-	N/A	N/A
1kV	+	P	N/A
1kV	-	P	N/A

7.4 *IEC 61000-4-5(Pursuant to EN IEC 55014-2) Sur*ge Immunity

Performance criterion: B

Test Result: Pass

7.4.1Block Diagram of Test Setup



7.4.2Test Setup and Procedure

The surge is to be applied to the EUT power supply terminals via the capacitive coupling network.

Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines and to provide sufficient decoupling impedance to the surge wave so that the specified wave may be developed on the lines under test.

The EUT was arranged and connected according to its functional requirements
The EUT was placed on a 0.1m high wooden support above the GRP, supplied by the coupling-decoupling network, and arranged and connected to satisfy its functional requirement and the power cord between the EUT and the coupling/decoupling network was less than 2 meters.

Surge is applied to the EUT power supply terminals.

7.4.3Test Result

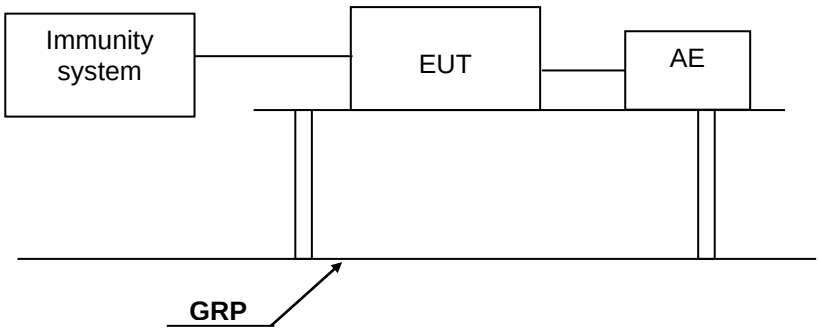
Level (Pursuant to EN IEC 55014-2)		Result
Between Phase And Phase:	1kV	N/A
Between Phase And Neutral:	1kV	P
Between Phase And Earth:	2kV	N/A
Between Neutral And Earth:	2kV	N/A

7.5 *IEC 61000-4-11(Pursuant to EN IEC 55014-2) Vo*ltage Dips and Interruptions

Performance criterion: C

Test Result: Pass

7.5.1 Block Diagram of Test Setup



7.5.2 Test Setup and Procedure

The EUT was placed on an insulating support of 0.8m height, standing on a ground reference plane, and arranged and connected to satisfy its functional requirement

The test was performed with the EUT connected to the test generator with the shortest power supply cable as specified by the EUT manufacturer.

The EUT was tested for each selected combination of test level and duration with a sequence of three dips/interruptions with intervals of 10 s minimum. Each representative mode of operation was tested.

7.5.3 Test Result

Test condition (Pursuant to EN IEC 55014-2)				
Test Level in %U_T	50 Hz		60 Hz	
	Duration	Result	Duration	Result
0	0.5	P	0.5	P
40	10	P	12	P
70	25	P	30	P

Remark: U_T is the rated voltage for the equipment.

7.6 *IEC 61000-4-3(Pursuant to EN IEC 55014-2) R*adiated Electromagnetic Field Immunity

Performance criterion: A
Test Result: Not Applicable
Remark:
Containing electronic control circuitry with no internal clock frequency or oscillator frequency higher than 15 MHz.

8 Appendix I - Photos of test setup

Conducted Emission

Model MK-1201LBG

Radiated Power

Model MK-1201LBG

Voltage fluctuations and flicker

Model MK-1201LBG

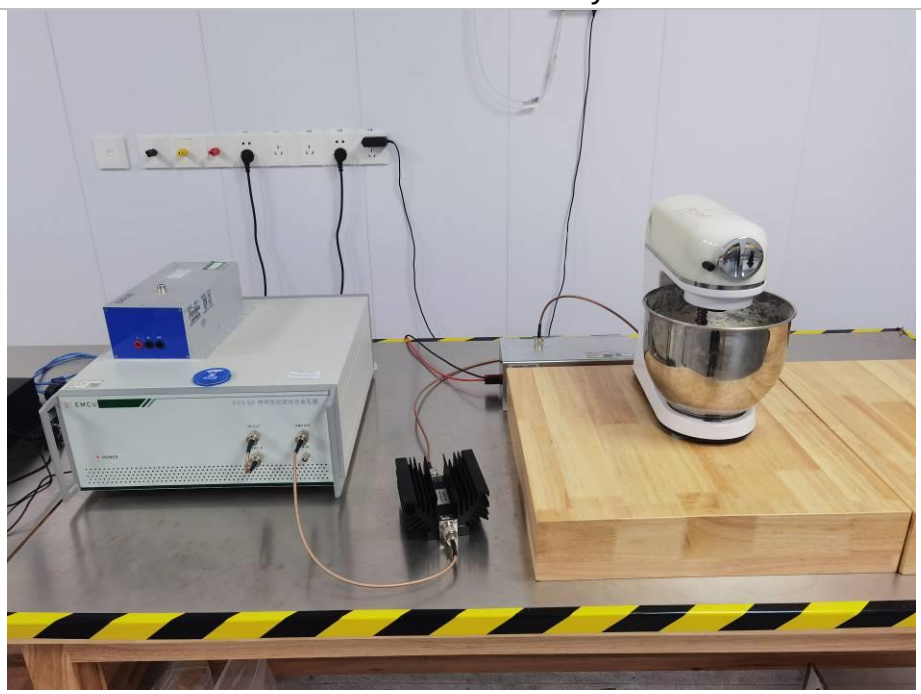
ESD Immunity

Model MK-1201LBG

SURGE / EFT Immunity

Model MK-1201LBG

Conducted Immunity



Model MK-1201LBG

Voltage dips and interruption immunity

Model MK-1201LBG

Conducted Emission

Model MK-1201BG

Radiated Power

Model MK-1201BG

Voltage fluctuations and flicker

Model MK-1201BG

ESD Immunity

Model MK-1201BG

SURGE/EFT Immunity

Model MK-1201BG

Conducted Immunity

Model MK-1201BG

Voltage dips and interruption immunity

Model MK-1201BG

9 Appendix II - Photos of EUT

Overall view for model MK-1201BG, MK-1201LBG

Accessory view for models with blender function and mincer function

Blender cup view

Interlock device

Accessory view for models without blender function and mincer function

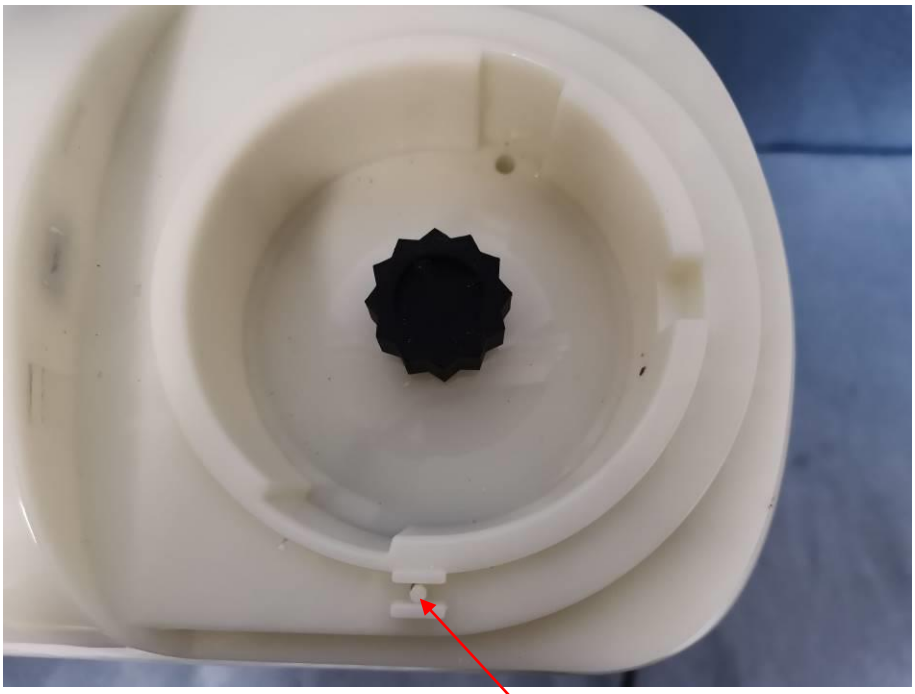
Overall view for model MK-1201BG, MK-1201LBG

Control panel view with PCB 1

Control panel view with PCB 2

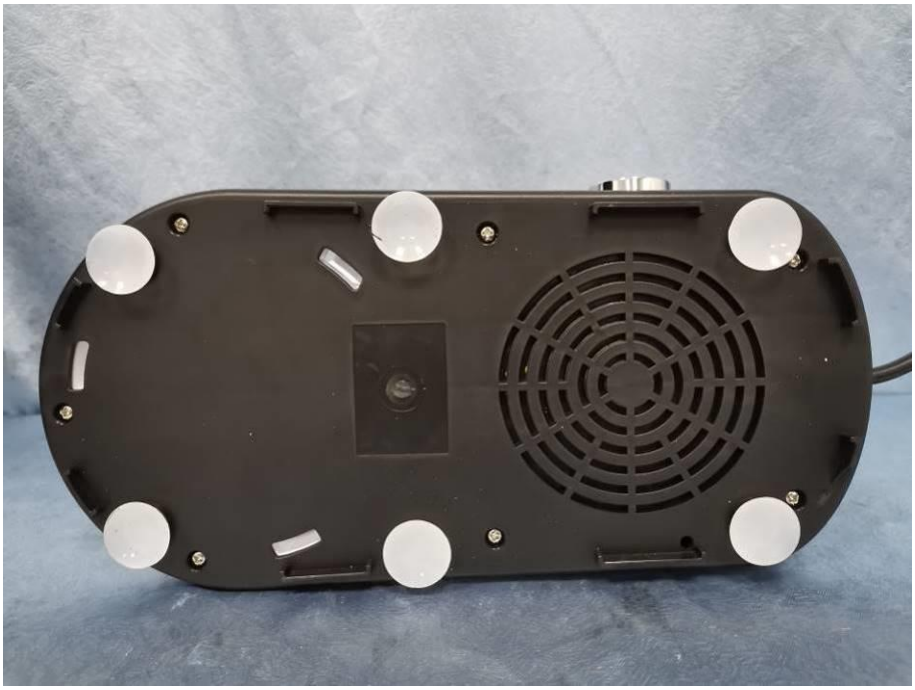
Overall view

Top view



Interlock device

Bottom view

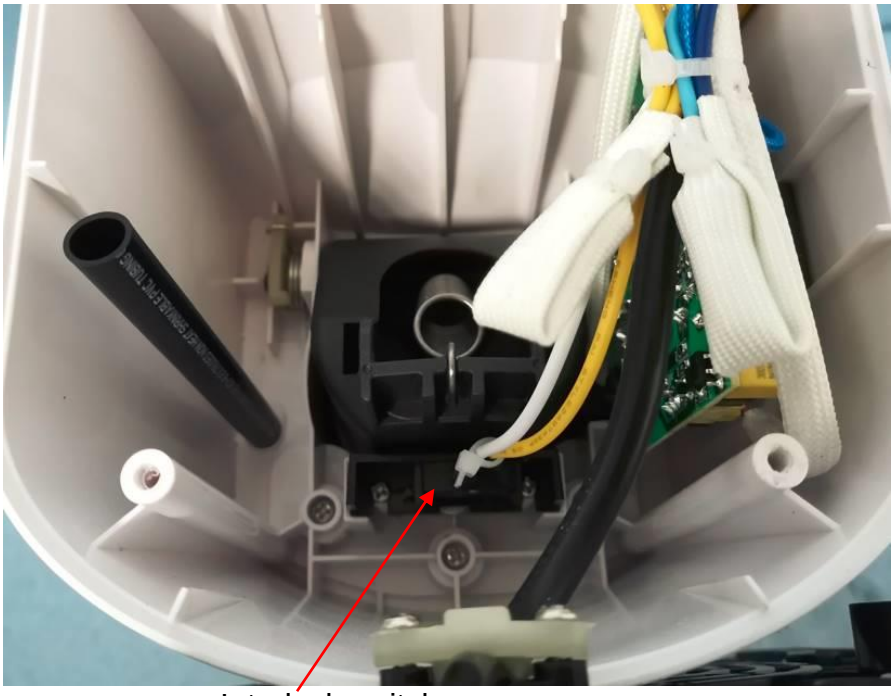


Internal view

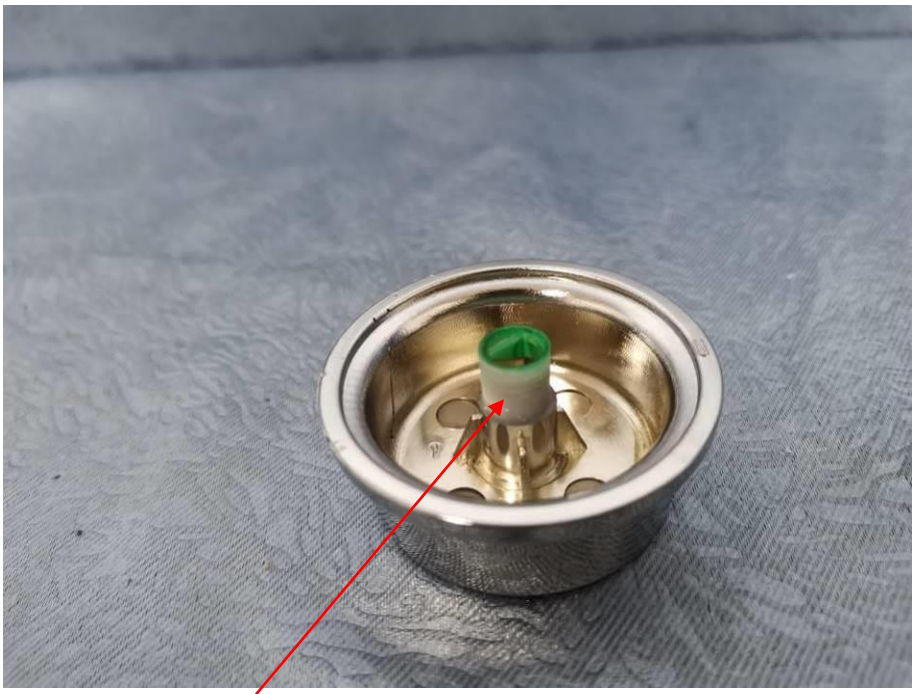
Internal view

Remark: internal wires are fixed and away from spring(Cl＞2mm, Cr＞4mm)

Internal view

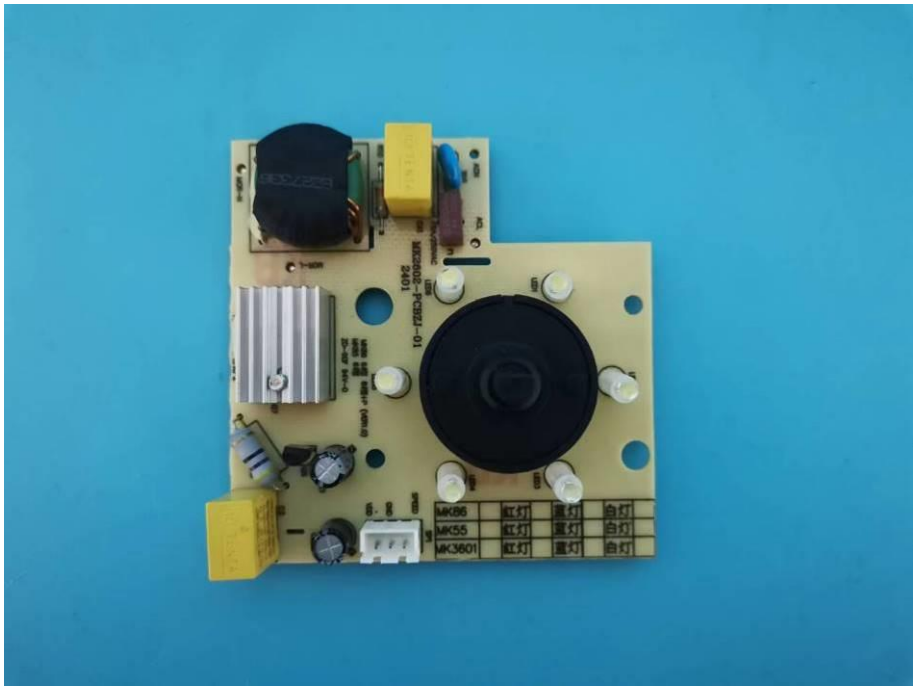


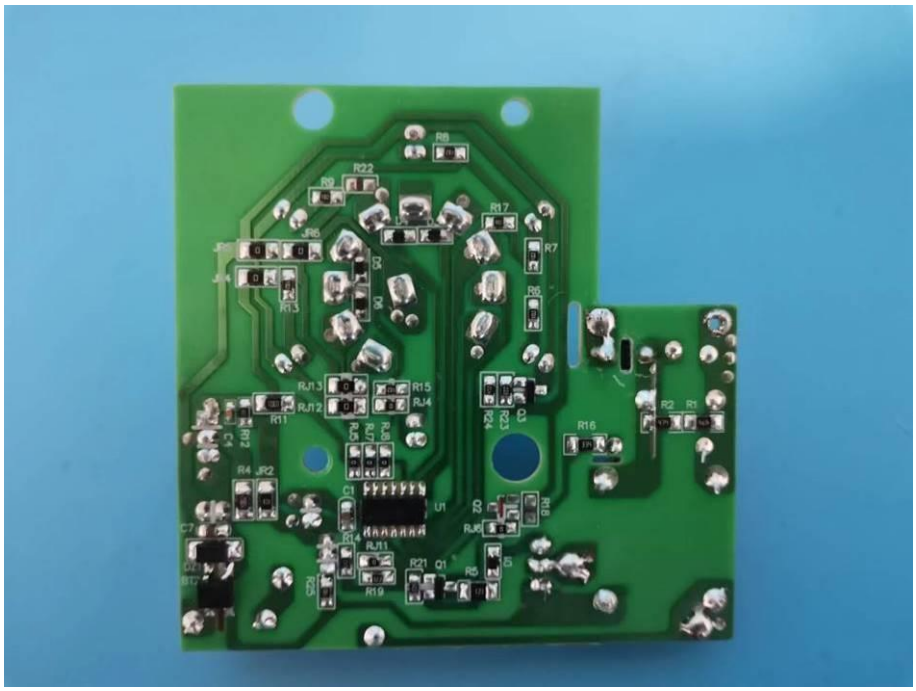
Interlock switch



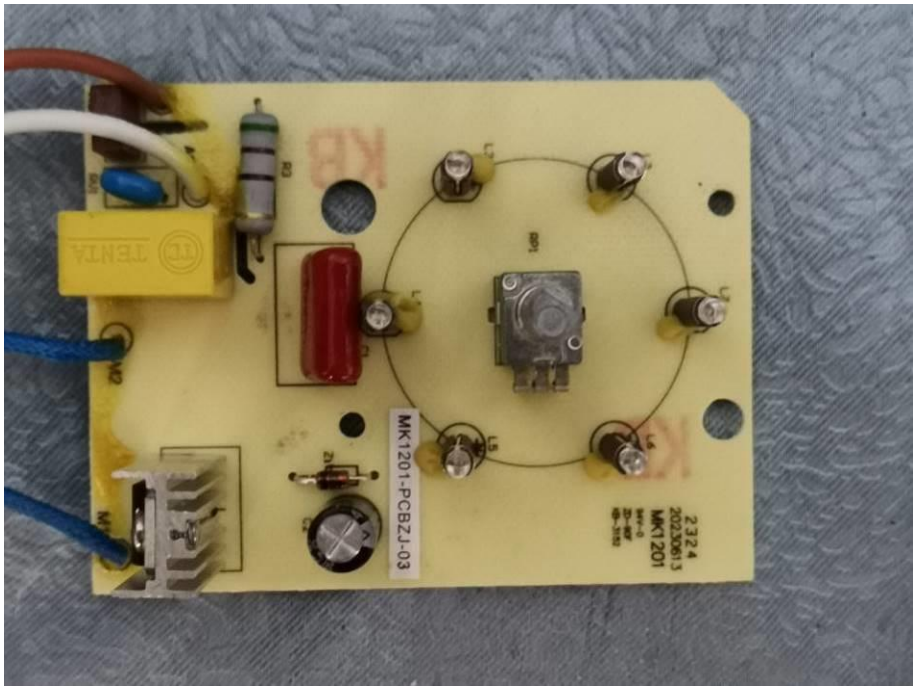
There is no conductive coating inside the knob

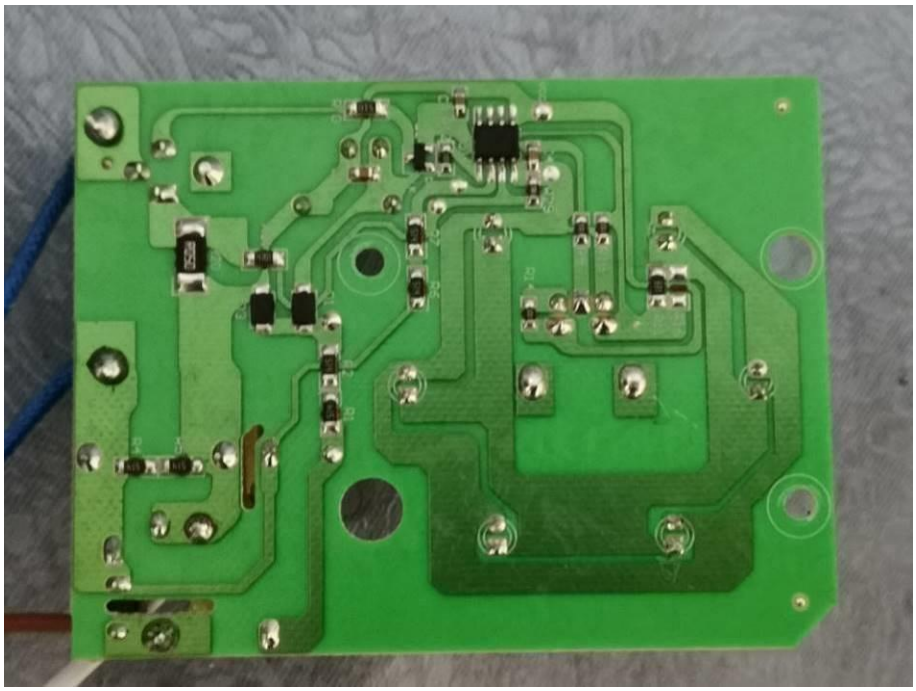
PCB 1 view



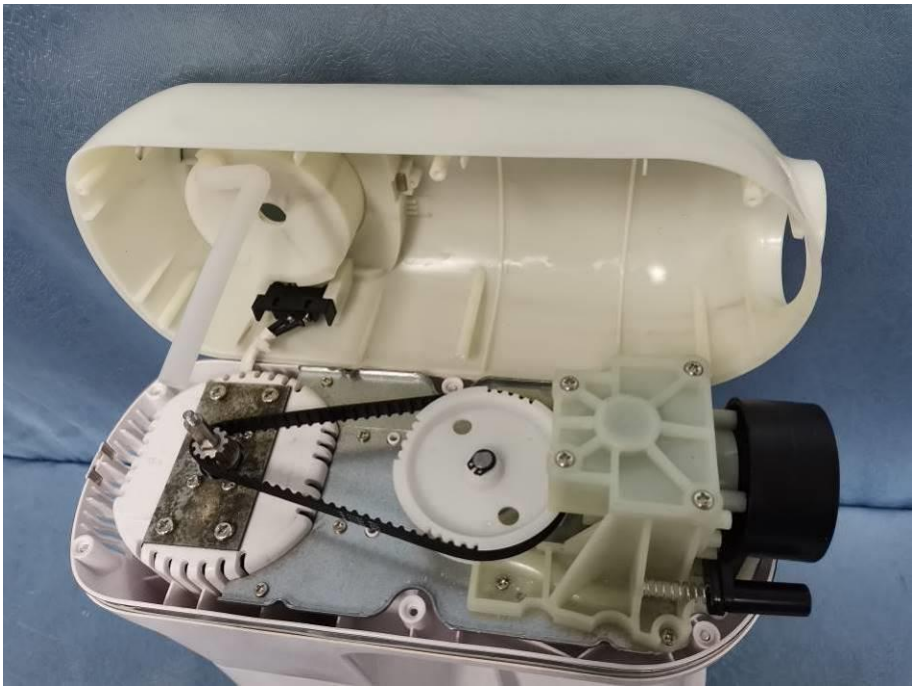


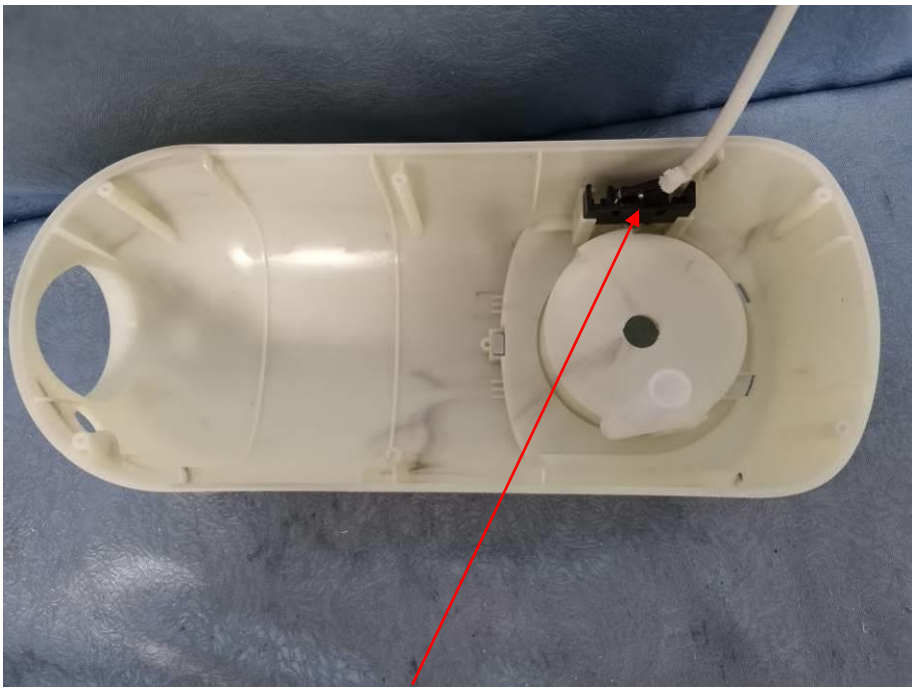
PCB 2 view





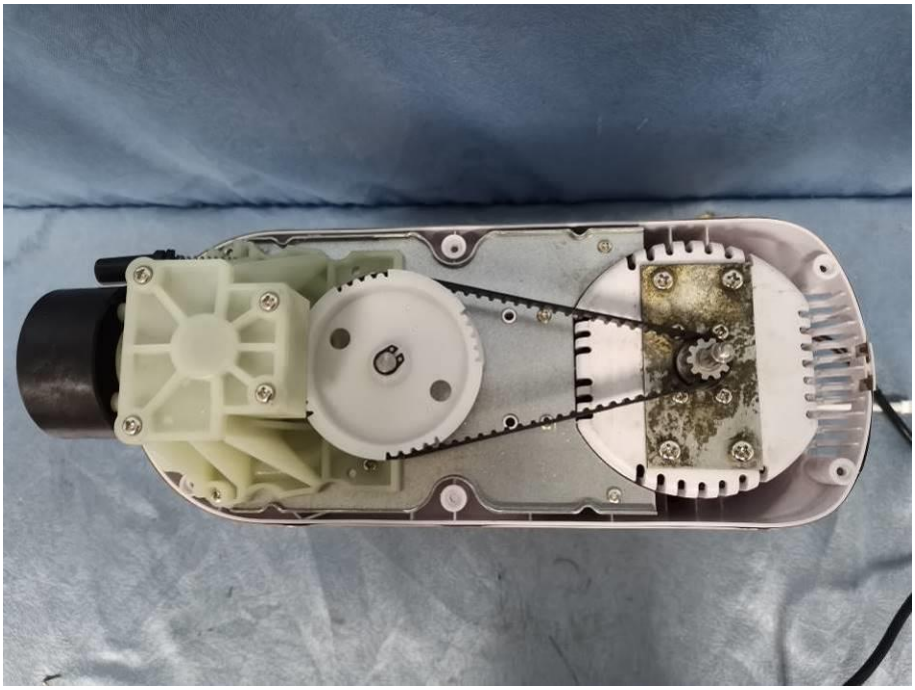
Internal view



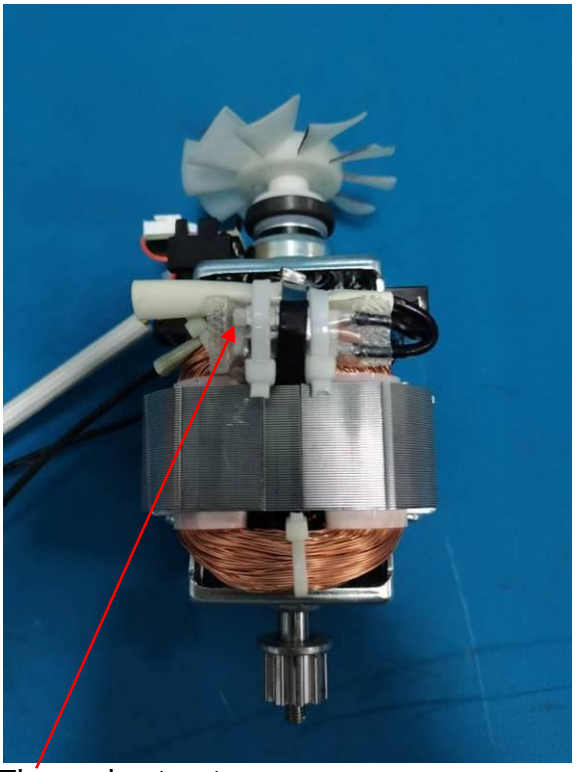


Interlock switch for blender cup

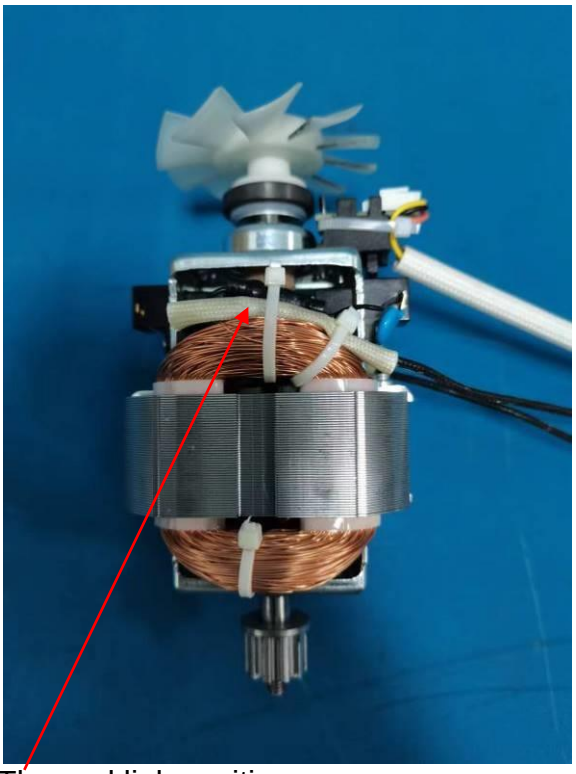
Internal view



Motor view for 1000W models

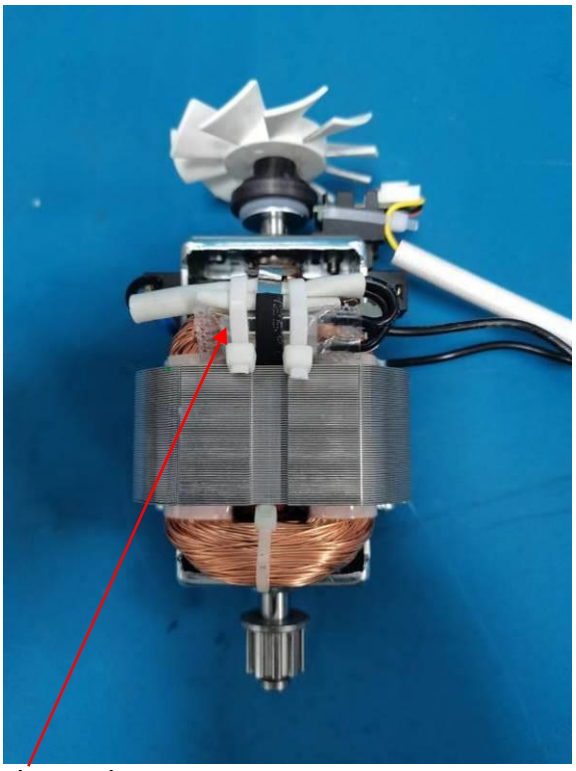


Thermal cut-out

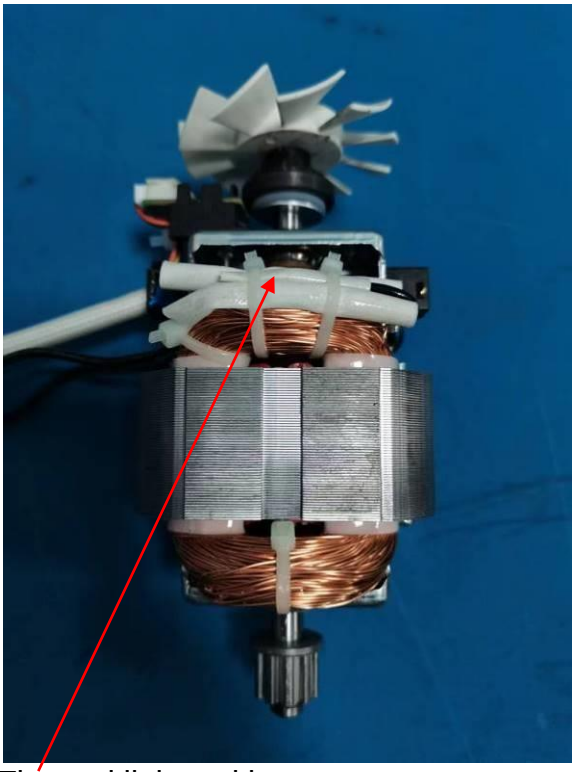


Thermal link position

Motor view for 1400W models



Thermal cut-out



Thermal link position

Overall view for model MK-1201, MK-1201L

Overall view for model MK-8805, MK-8805L

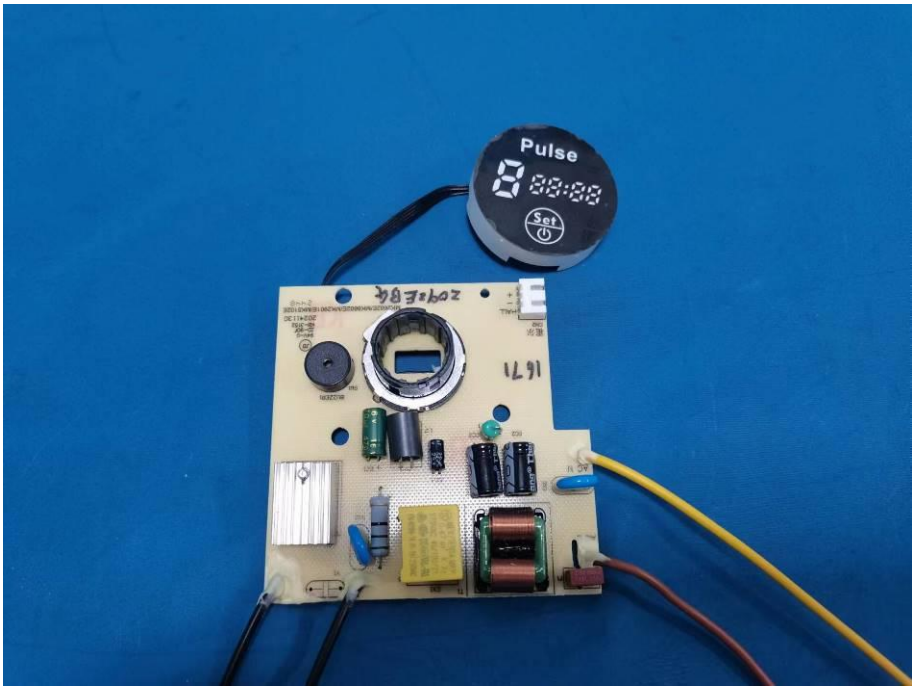
Overall view for model MK-2901, MK-2901L

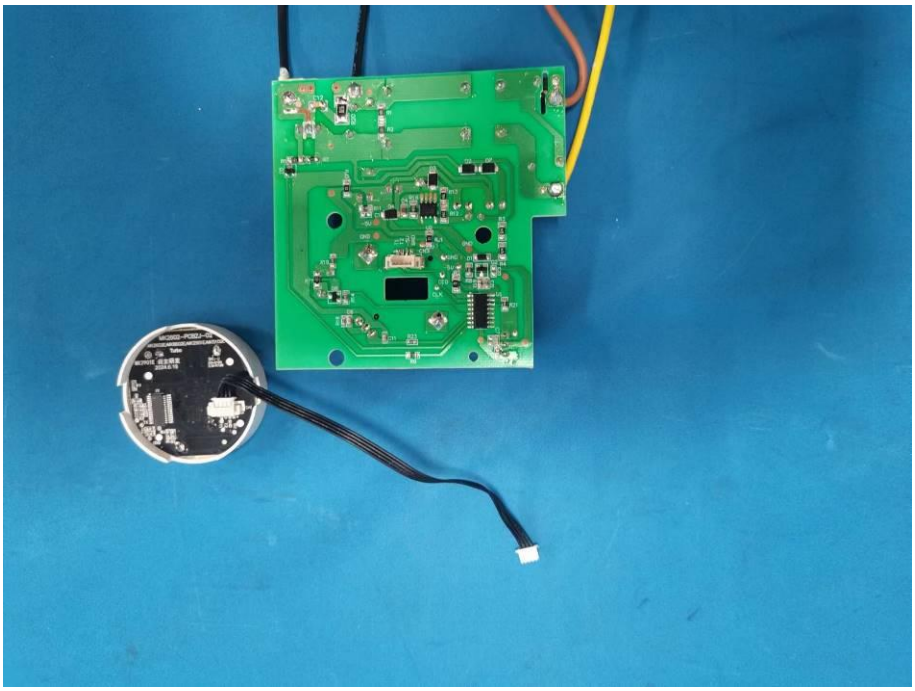
Overall view for model MK-2901BG, MK-2901LBG

Overall view for model MK-2901EBG, MK-2901LEBG

Overall view for model MK-1201EBG, MK-1201LEBG

PCB 3 view





**********End of Report**********