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

EMC TEST- REPORT

TEST REPORT NUMBER: EFSH14040635-IE-01-E01-A4

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1 Contents

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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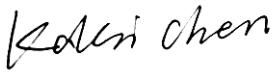
Operator:

Date	Eurofins-Lab.	Name / Title	Signature
2022-02-18		Kalsi Chen / Project Engineer	

Technical responsibility for area of testing:

Date	Eurofins	Name / Title	Signature
2022-02-18		Andy Li / Supervisor	

2.2 Testing laboratory

Eurofins Product Testing Service (Shanghai) Co., Ltd.
No.395 West Jiangchang Road, Jing'an District, Shanghai, 200436, P.R. China
Telephone : +86-21-61819181
Telefax : +86-21-61819180

Test location, where different:

2.3 Details of approval holder

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

2.4 Application details

Date of receipt of test item	:	2014-04-09
Date of test	:	2014-04-09 to 2014-05-21
Amendment 1	:	2016-05-23 (date of test: N/A)
Amendment 2	:	2017-04-10 (date of test: N/A)
Amendment 3	:	2020-03-26 (date of test: N/A)
Amendment 4	:	2022-02-18 (Date of test: N/A)

2.5 EUT information

Product type	:	Hand-held blender
Model name	:	YW-1123A, YW-1123AN, YW-1123B, YW-1123BN, YDHB-002A
Brand name	:	./.
Serial number	:	./.
Ratings	:	220-240V~, 50/60Hz, Class II for all models YW-1123A, YW-1123B: 500W; YW-1123AN, YW-1123BN, YDHB-002A: 600W
Test voltage	:	230V~, 50Hz
Additional information	:	

The appliances covered by this report are Hand-held blender for household and indoor use.
Model Similarity:
Models YW-1123AN, YW-1123A, YW-1123BN, YW-1123B are series model. They all have food processor function and blender function and whisk function.
YW-1123AN and YW-1123BN are identical except for YW-1123B has a metallic decorative enclosure.
YW-1123AN and YW-1123A are identical except for rated power marked on the label.
YW-1123BN and YW-1123B are identical except for rated power marked on the label.
YDHB-002A has different appliance comparing with other models and also has food processor function and blender function and whisk function.

After review, YW-1123BN and YDHB-002A are selected as the models to be tested and the most unfavourable test results are recorded.

See page 29 for Amendment 1, Amendment 2, Amendment 3 and Amendment 4.

2.6 Test standards

Technical standard :

EN IEC 55014-1: 2021

EN IEC 55014-2: 2021

EN IEC 61000-3-2: 2019+A1: 2021

EN 61000-3-3: 2013+A1: 2019

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

3.3 Test mode

Operating

3.4 Test equipment utilized

Refer to the latest test date: 2014-04-09 to 2014-05-21

Measurement Equipment List				
No.	**Name:**	**Type:**	**Manufacturer:**	**Cal due data:**
1	Ultra compact simulator	UCS500N7	EMTEST	2014-11-28
2	Oscilloscope	TDS3012C	Tektronix	2014-11-28
3	Current transformer	MC2630	EMTEST	2014-11-28
4	Motorized Variac	MV2616	EMTEST	2014-11-28
5	Capacitive coupling clamp	HFK	EMTEST	2014-11-28
6	Continuous Wave Simulator	CWS500N1	EMTEST	2014-11-28
7	CDN	L 801 M2/M3	Luethi	2014-11-28
8	EM Clamp	EM 101	EM 101	2014-11-28
9	ESD	NSG 437	TESEQ	2014-11-28
10	EMI Test Receiver	ESCI	R&S	2014-11-28
11	Single phase Harmonics & Flicker analyser	PACS-1	California Instruments	2014-11-28
12	AC Power Source	5001iX	California Instruments	2014-11-28
13	Absorbing clamp	MDS21	Luethi	2014-11-28
14	Artificial mains	ENV216	R&S	2014-11-28
15	Click meter	CL55C	AFJ	2014-11-28

3.5 Test results

☒ 1st test ☐ test after modification ☐ production test

Test case	Subclause	Required	Test passed	Test failed
Conducted Emission	Clause 4.3.2 & 4.3.3 of EN IEC 55014-1	☒	☒	☐
Disturbance power	Clause 4.3.4 of EN IEC 55014-1	☒	☒	☐
Radiated disturbance	Clause 4.3.4 of EN IEC 55014-1	☐	☐	☐
Radiated disturbance (1GHz to 6GHz)	Clause 4.3.5 of EN IEC 55014-1	☐	☐	☐
Magnetic field (equipment using IPT)	Clause 4.3.2 of EN IEC 55014-1	☐	☐	☐
Discontinuous disturbance	Clause 4.4.2 of EN IEC 55014-1	☐	☐	☐
Harmonic Current Emissions	EN IEC 61000-3-2	☐	☐	☐
Voltage Changes, Voltage Fluctuations and Flicker	EN 61000-3-3	☒	☒	☐
Electrostatic Discharge	Clause 5.1 of EN IEC 55014-2 & IEC 61000-4-2	☐	☐	☐
Electrical Fast Transients	Clause 5.2 of EN IEC 55014-2 & IEC 61000-4-4	☐	☐	☐
Injected currents	Clause 5.3 & 5.4 of EN IEC 55014-2 & IEC 61000-4-6	☐	☐	☐
Radio frequency electromagnetic fields	Clause 5.5 of EN IEC 55014-2 & IEC 61000-4-3	☐	☐	☐
Surges	Clause 5.6 of EN IEC 55014-2 & IEC 61000-4-5	☐	☐	☐
Voltage dips	Clause 5.7 of EN IEC 55014-2 & IEC 61000-4-11	☐	☐	☐

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.

Note 3: The click rate was less than 5, and the click duration was less than 10ms. So it is deemed to comply with Discontinuous disturbance test.

Note 4: Radiated disturbance test in the frequency range from 1 GHz to 6 GHz is not required as the highest clock frequency (Fx) of EUT is less than 108MHz.

Note 5: The EUT is deemed to conform to the harmonic current limits without further testing according to Annex B.13 of EN IEC 61000-3-2.

4 Emission Test

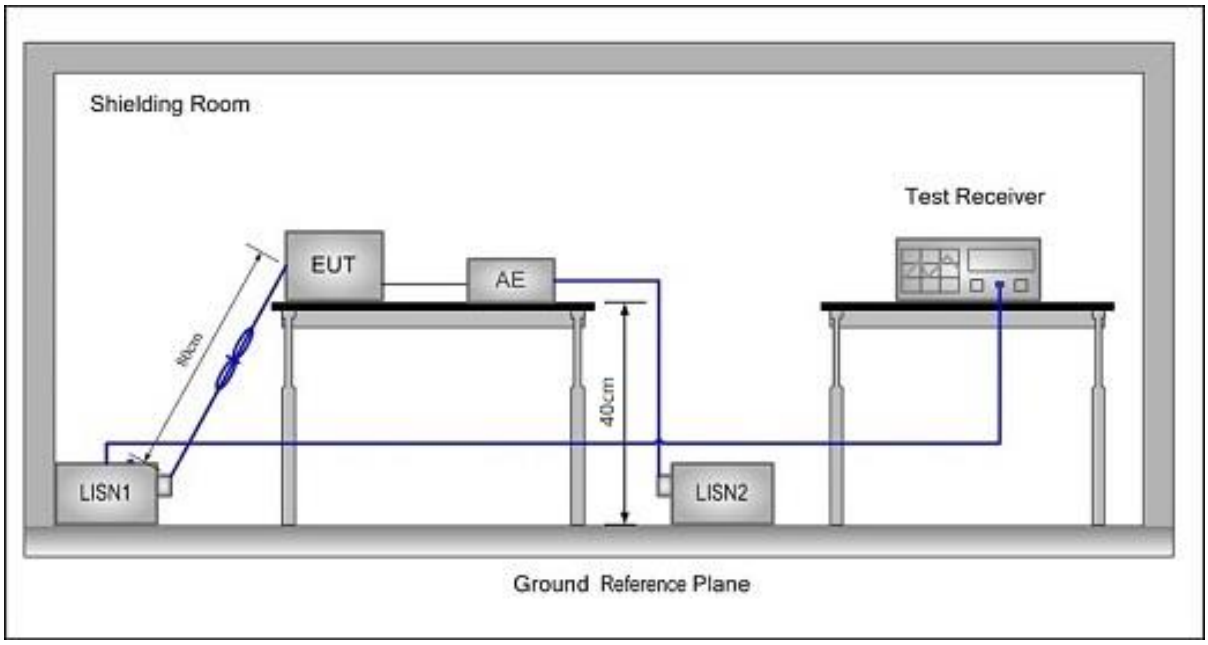
4.1 Conducted Emission

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 (μV)	
	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 μ H + 5 Ω) || 50 Ω 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.

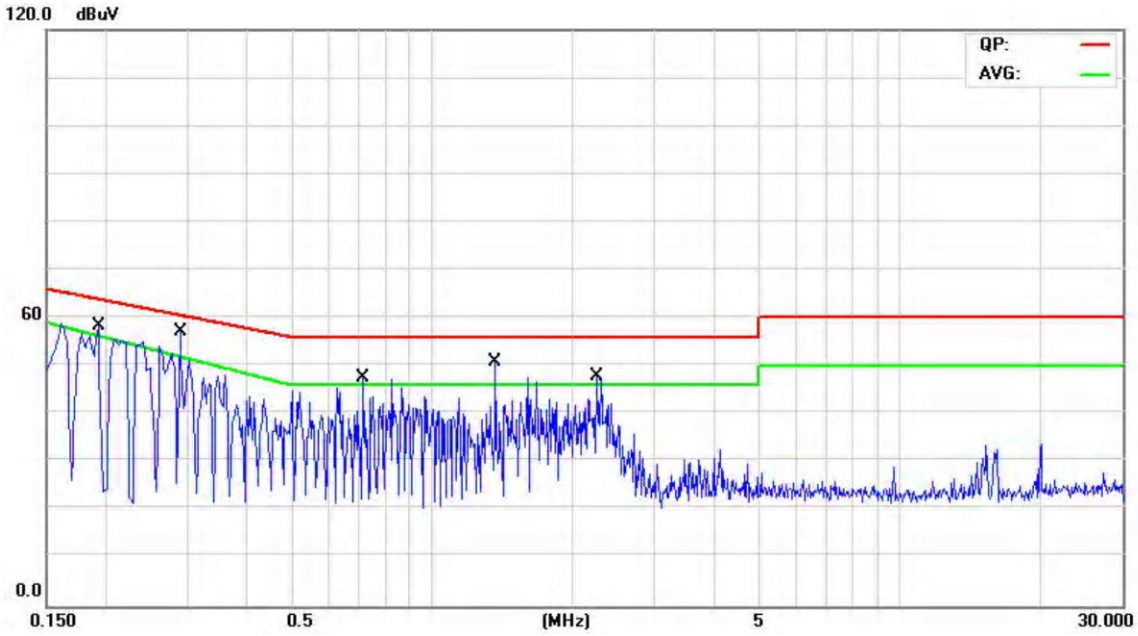
4. Before get the final emission results with quasi-peak(QP) detector and average(AVG) detector, a pre-scan was performed with the peak(PK) and average(AVG) detector to find out the maximum emission data plots of the EUT.

4.1.3 Measurement uncertainty

Ulab(cond) = 1.8dB at 95% level of confidence, k=2

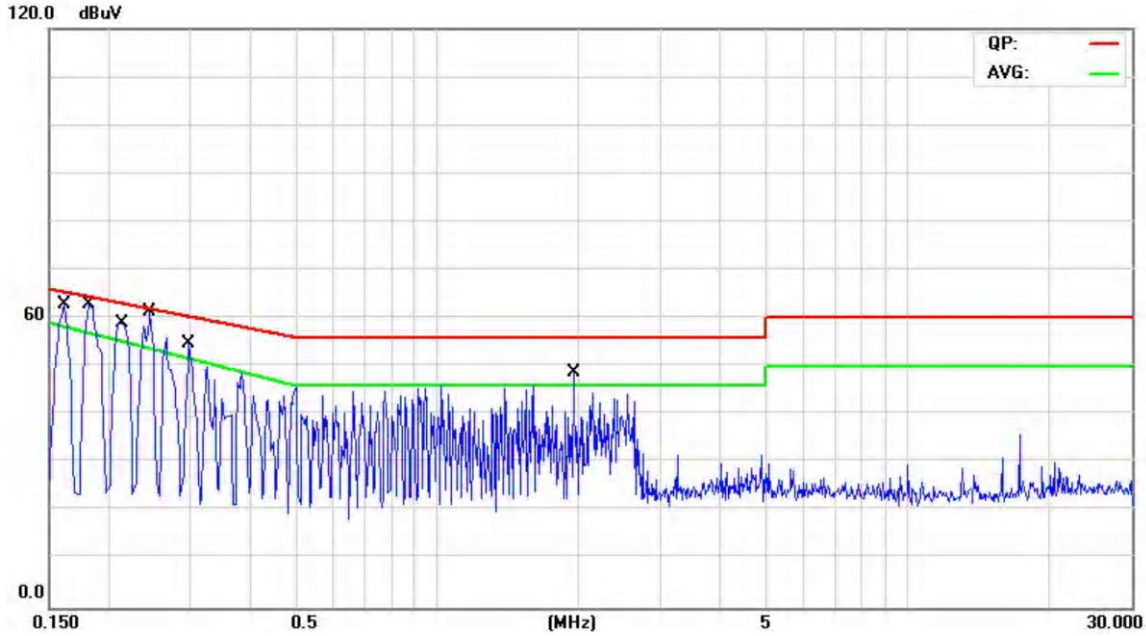
4.1.4 Results -Measurement Data

YW-1123BN
Live Line:
Level



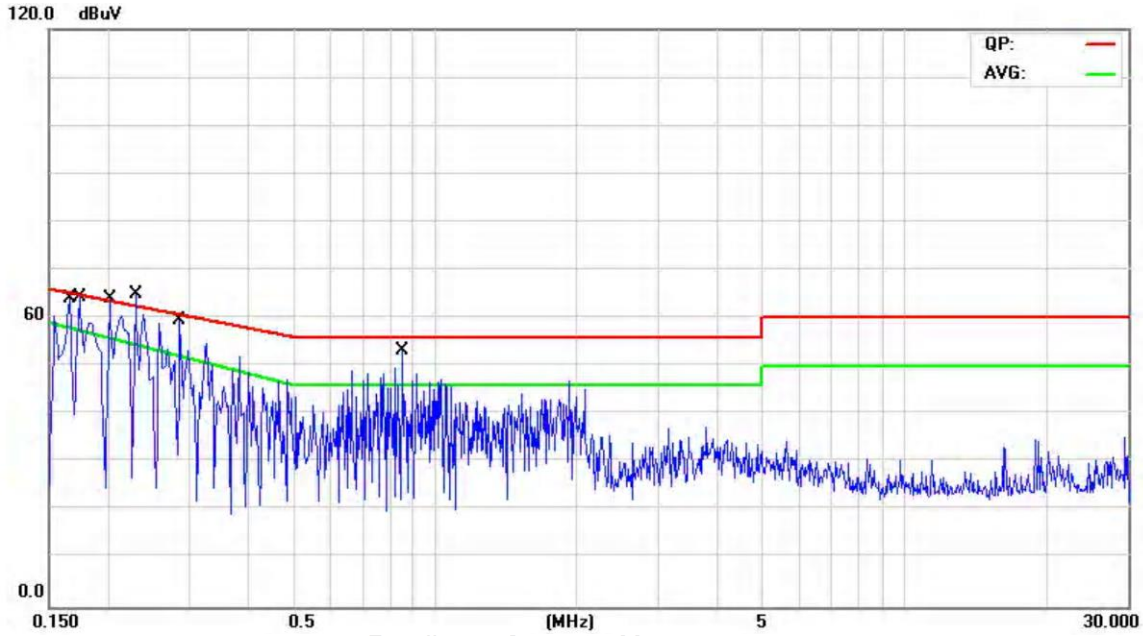
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.1940	45.35	9.91	55.26	63.86	-8.60	QP
2		0.1940	28.76	9.91	38.67	56.22	-17.55	AVG
3		0.2900	40.53	9.82	50.35	60.52	-10.17	QP
4		0.2900	22.14	9.82	31.96	51.88	-19.92	AVG
5		0.7140	26.69	9.75	36.44	56.00	-19.56	QP
6		0.7140	13.54	9.75	23.29	46.00	-22.71	AVG
7		1.3700	25.48	9.73	35.21	56.00	-20.79	QP
8		1.3700	11.40	9.73	21.13	46.00	-24.87	AVG
9		2.2500	25.40	9.88	35.28	56.00	-20.72	QP
10		2.2500	11.08	9.88	20.96	46.00	-25.04	AVG

Neutral Line:
Level



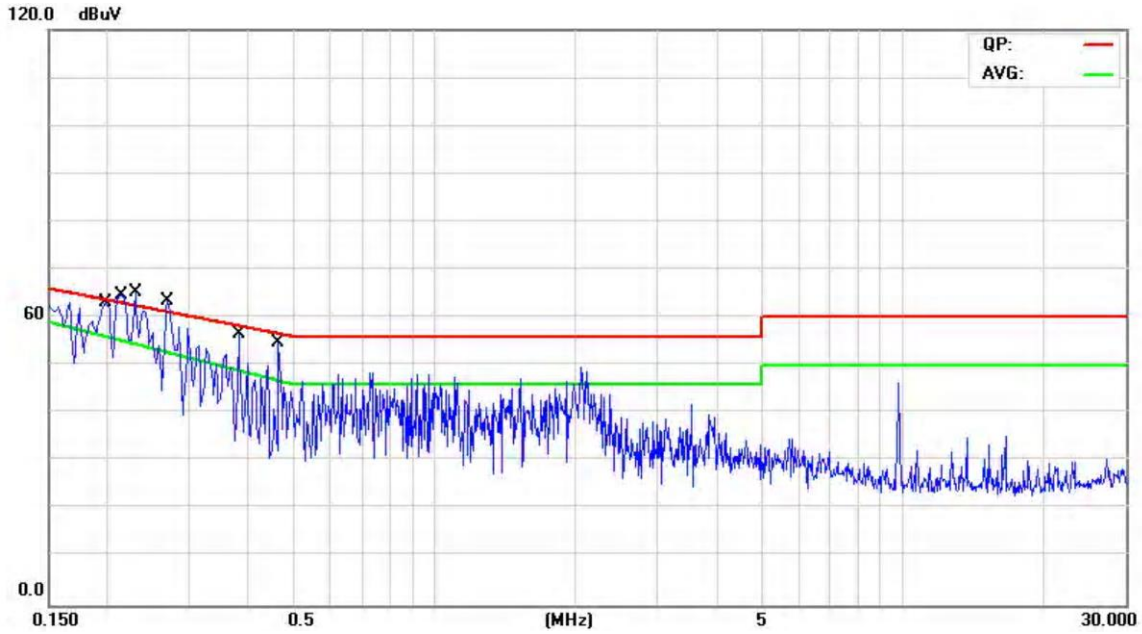
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1620	45.36	10.11	55.47	65.36	-9.89	QP
2		0.1620	29.11	10.11	39.22	58.17	-18.95	AVG
3	*	0.1820	45.98	9.98	55.96	64.39	-8.43	QP
4		0.1820	29.00	9.98	38.98	56.91	-17.93	AVG
5		0.2140	44.74	9.86	54.60	63.05	-8.45	QP
6		0.2140	28.16	9.86	38.02	55.16	-17.14	AVG
7		0.2460	41.81	9.85	51.66	61.89	-10.23	QP
8		0.2460	25.97	9.85	35.82	53.66	-17.84	AVG
9		0.2980	38.06	9.82	47.88	60.30	-12.42	QP
10		0.2980	21.23	9.82	31.05	51.59	-20.54	AVG
11		1.9540	23.10	9.86	32.96	56.00	-23.04	QP
12		1.9540	10.03	9.86	19.89	46.00	-26.11	AVG

YDHB-002A
Live Line:
Level



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1660	48.47	10.08	58.55	65.16	-6.61	QP
2		0.1660	30.14	10.08	40.22	57.91	-17.69	AVG
3		0.1740	49.52	10.03	59.55	64.77	-5.22	QP
4		0.1740	31.08	10.03	41.11	57.40	-16.29	AVG
5		0.2020	49.11	9.87	58.98	63.53	-4.55	QP
6		0.2020	30.89	9.87	40.76	55.79	-15.03	AVG
7	*	0.2300	48.69	9.85	58.54	62.45	-3.91	QP
8		0.2300	30.17	9.85	40.02	54.38	-14.36	AVG
9		0.2860	43.62	9.82	53.44	60.64	-7.20	QP
10		0.2860	25.46	9.82	35.28	52.03	-16.75	AVG
11		0.8500	30.30	9.70	40.00	56.00	-16.00	QP
12		0.8500	15.05	9.70	24.75	46.00	-21.25	AVG

Neutral Line:
Level



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.1980	51.81	9.88	61.69	63.69	-2.00	QP
2		0.1980	32.68	9.88	42.56	56.00	-13.44	AVG
3		0.2140	51.10	9.86	60.96	63.05	-2.09	QP
4		0.2140	31.97	9.86	41.83	55.16	-13.33	AVG
5		0.2300	50.42	9.85	60.27	62.45	-2.18	QP
6		0.2300	31.58	9.85	41.43	54.38	-12.95	AVG
7		0.2700	46.22	9.83	56.05	61.12	-5.07	QP
8		0.2700	27.89	9.83	37.72	52.65	-14.93	AVG
9		0.3820	35.76	9.77	45.53	58.24	-12.71	QP
10		0.3820	18.49	9.77	28.26	48.91	-20.65	AVG
11		0.4660	31.72	9.73	41.45	56.58	-15.13	QP
12		0.4660	15.38	9.73	25.11	46.76	-21.65	AVG

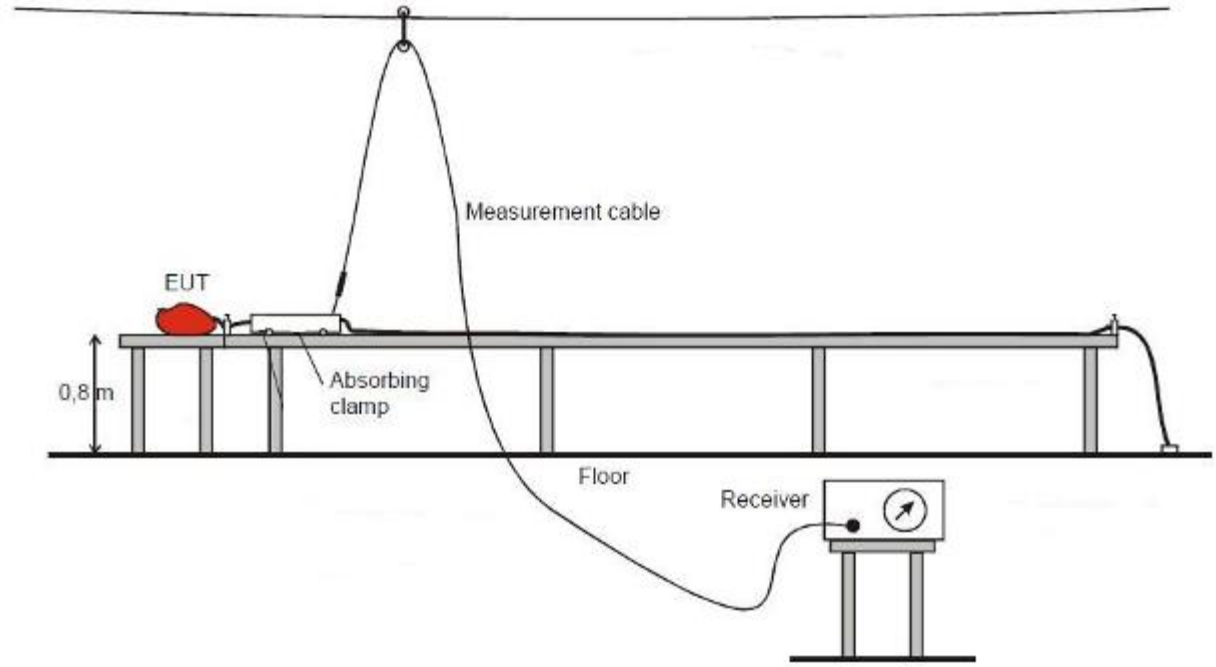
4.2 Disturbance power

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



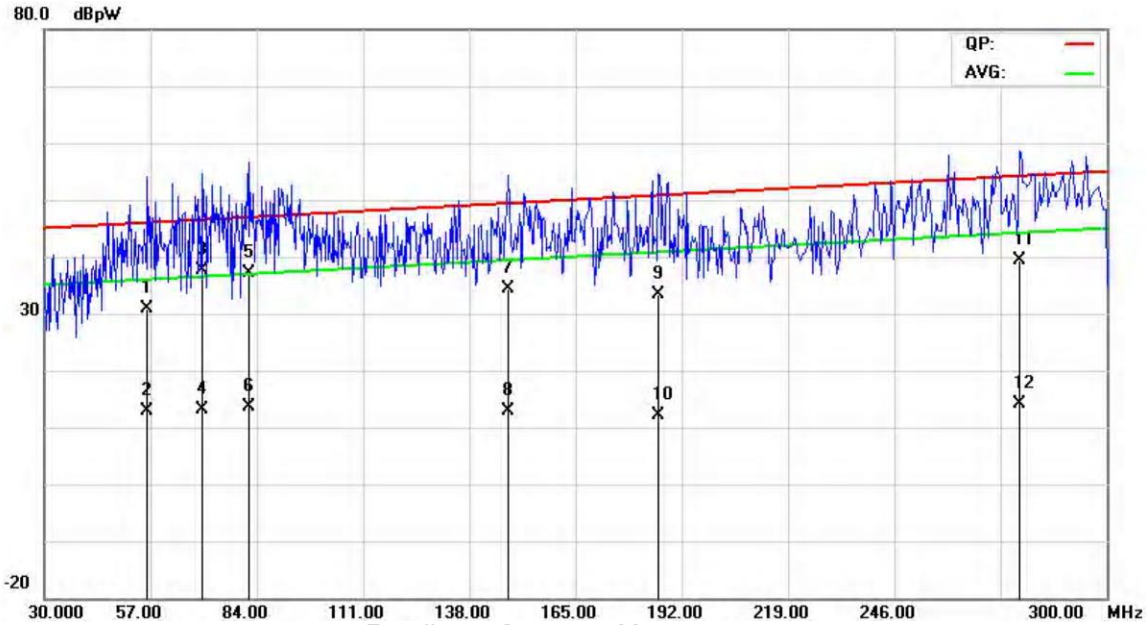
The test configuration corresponds to the standard EN IEC 55014-1. The equipment under test is placed on a non metallic table with 0,8 m high. The lead to be measured is stretched horizontally in a straight line, to permit variation in position of the absorbing clamp along the lead to find the maximum indication. The lead shall be at least length of 6 meter. 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

$U_{lab(cond)}$ = 3.35 dB at confidence of 95%, k=2

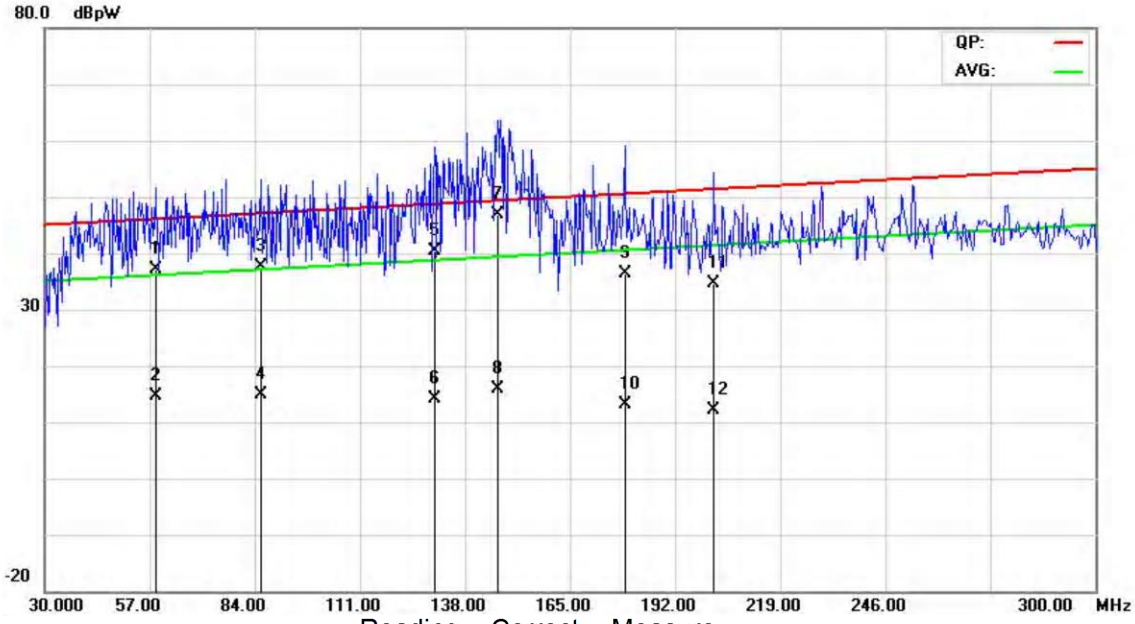
4.2.4 Results

YW-1123BN
Level



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBpW	dB	dBpW	dBpW	dB	Detector
1		56.2799	8.76	22.23	30.99	45.97	-14.98	QP
2		56.2799	-9.39	22.23	12.84	35.97	-23.13	AVG
3	*	70.4800	15.93	21.59	37.52	46.50	-8.98	QP
4		70.4800	-8.58	21.59	13.01	36.50	-23.49	AVG
5		82.3200	15.42	21.64	37.06	46.94	-9.88	QP
6		82.3200	-8.10	21.64	13.54	36.94	-23.40	AVG
7		148.0800	13.32	20.94	34.26	49.37	-15.11	QP
8		148.0800	-8.01	20.94	12.93	39.37	-26.44	AVG
9		186.3199	13.57	19.87	33.44	50.79	-17.35	QP
10		186.3199	-7.73	19.87	12.14	40.79	-28.65	AVG
11		278.0799	19.24	20.20	39.44	54.19	-14.75	QP
12		278.0799	-6.14	20.20	14.06	44.19	-30.13	AVG

YDHB-002A
Level



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBpW	dB	dBpW	dBpW	dB	Detector
1		58.8000	15.22	21.93	37.15	46.07	-8.92	QP
2		58.8000	-7.19	21.93	14.74	36.07	-21.33	AVG
3		85.8000	15.93	21.66	37.59	47.07	-9.48	QP
4		85.8000	-6.85	21.66	14.81	37.07	-22.26	AVG
5		130.3600	18.95	21.36	40.31	48.72	-8.41	QP
6		130.3600	-7.27	21.36	14.09	38.72	-24.63	AVG
7	*	146.4400	25.88	20.98	46.86	49.31	-2.45	QP
8		146.4400	-5.11	20.98	15.87	39.31	-23.44	AVG
9		179.0800	16.39	20.09	36.48	50.52	-14.04	QP
10		179.0800	-6.89	20.09	13.20	40.52	-27.32	AVG
11		202.1600	15.09	19.46	34.55	51.38	-16.83	QP
12		202.1600	-7.23	19.46	12.23	41.38	-29.15	AVG

4.3 Voltage Changes, Voltage Fluctuations and Flicker

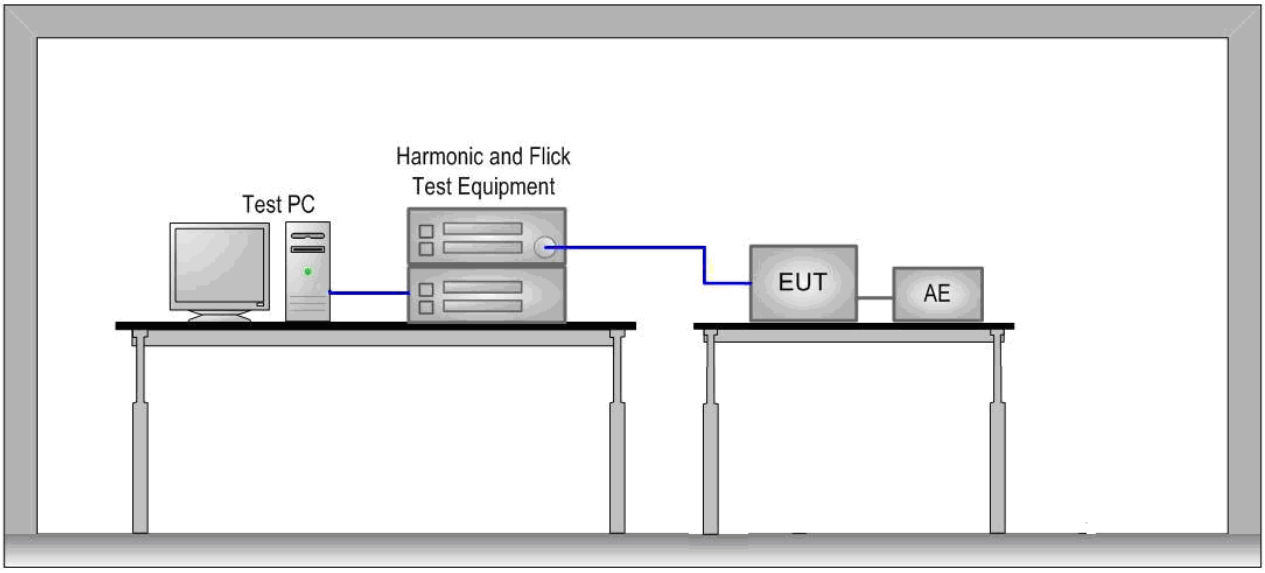
This part is concerned with the limitation of voltage fluctuations and flicker impressed on the public low-voltage system.

4.3.1 Limits

Value	Limit
Pst	1,0
Plt	0,65
dt	3,3%
dc	3,3%
dmax	7,0%

Note: Pst and Plt requirements shall not be applied to voltage changes caused by manual switching. The EUT is an equipment which is attended whilst in use.

4.3.2 Measurementest 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.

4.3.3 Results

YW-1123BN
Parameter values recorded during the test:

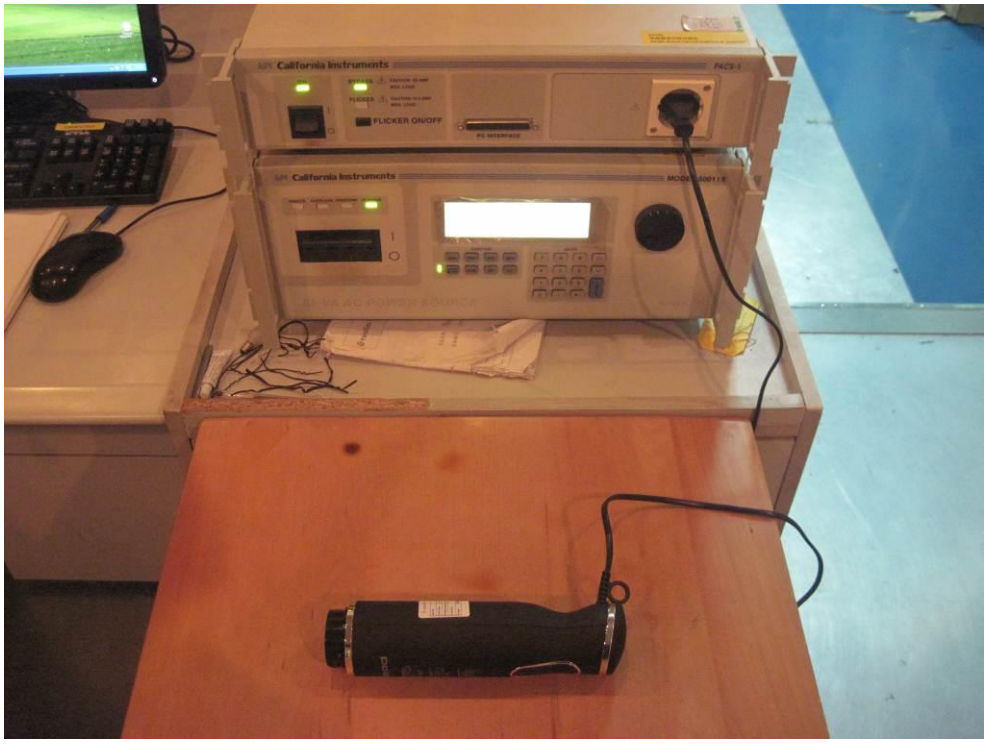
Vrms at the end of test (Volt):	**229.97**			
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.58**	**Test limit (%):**	**7.00**	**Pass**

YDHB-002A
Parameter values recorded during the test:

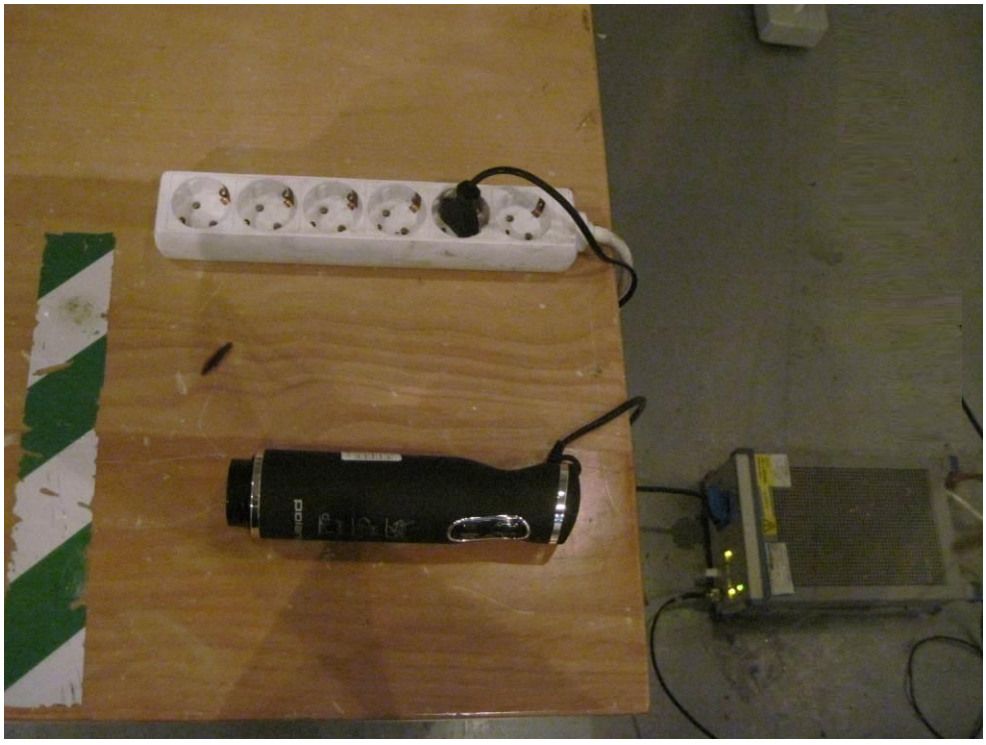
Vrms at the end of test (Volt):	**229.95**			
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.48**	**Test limit (%):**	**7.00**	**Pass**

5 Test Setup Photos

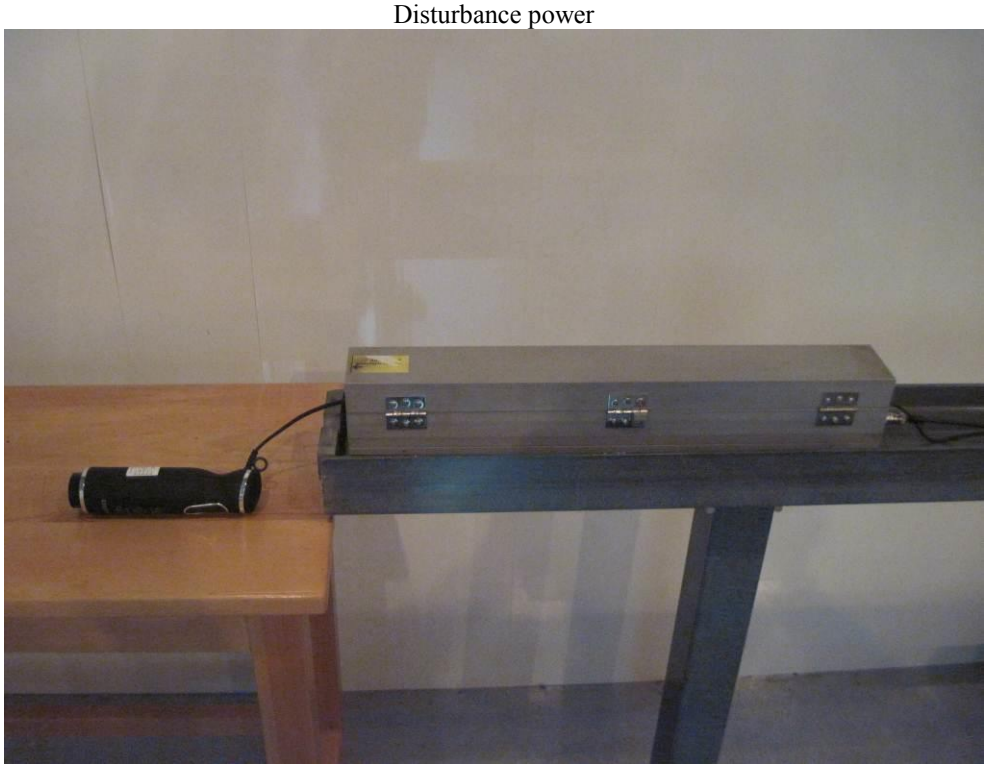
Flicker



Conducted Emission



Disturbance power

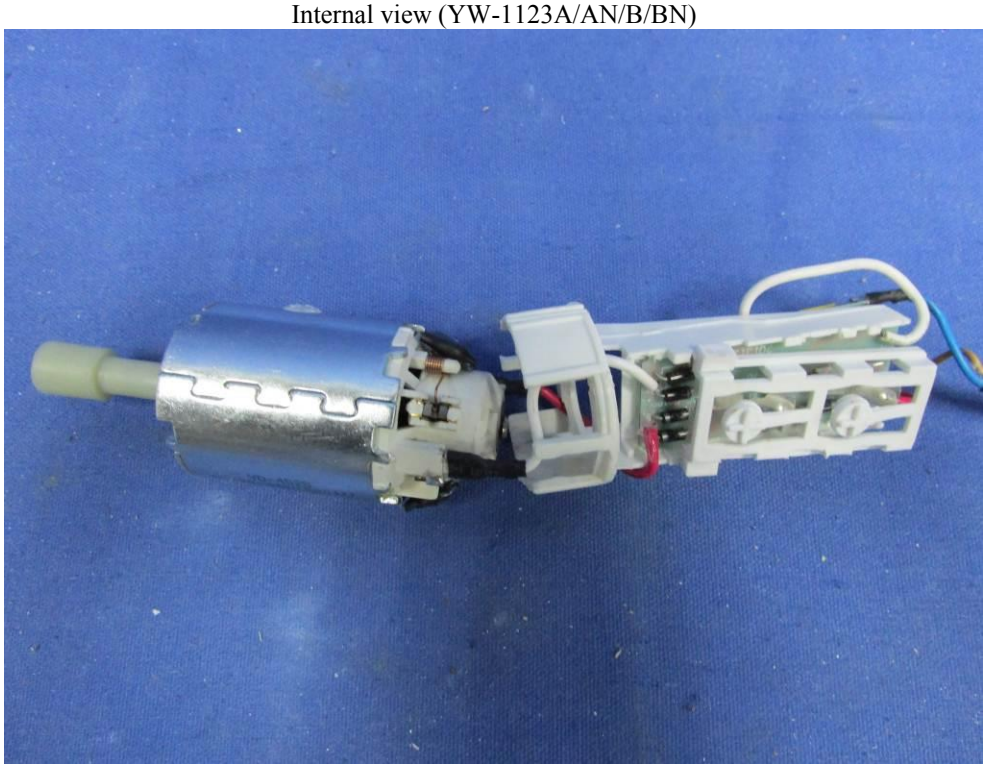


6 EUT Photos

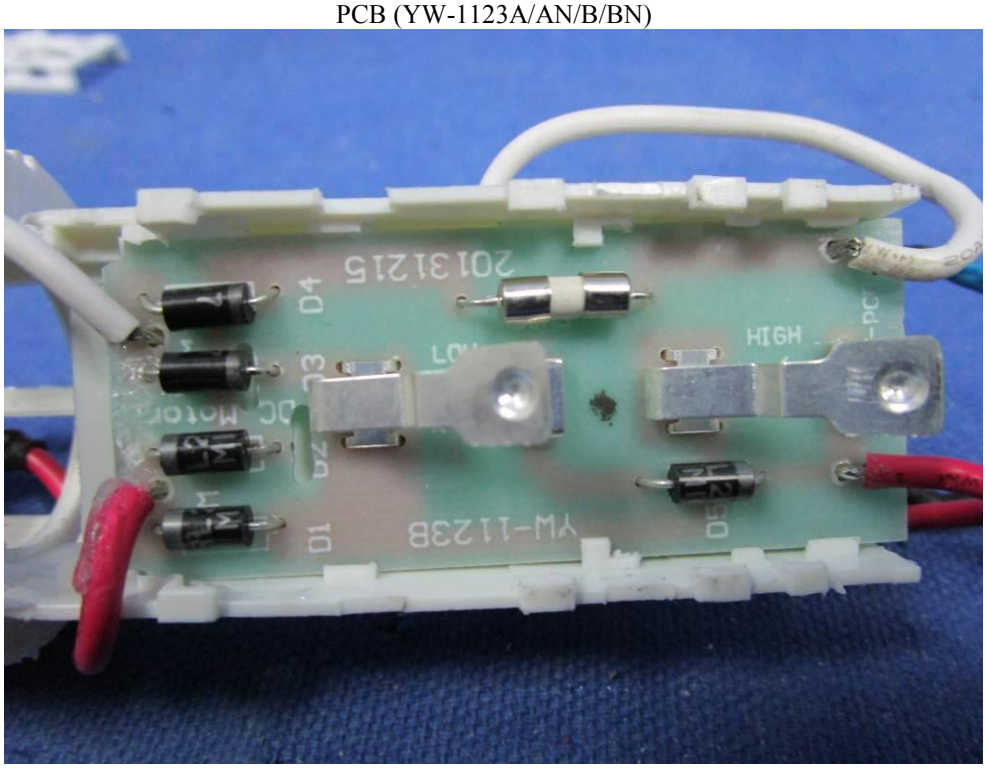
Overview (YW-1123A/AN)

Overview (YW-1123B/BN)

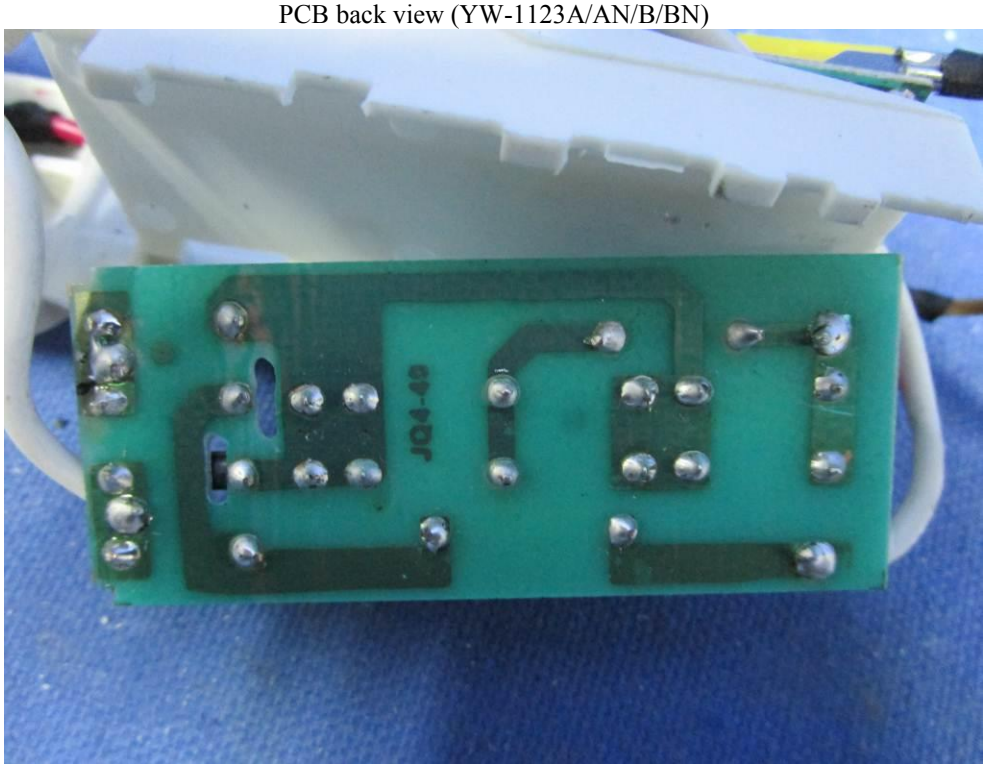
Internal view (YW-1123A/AN/B/BN)



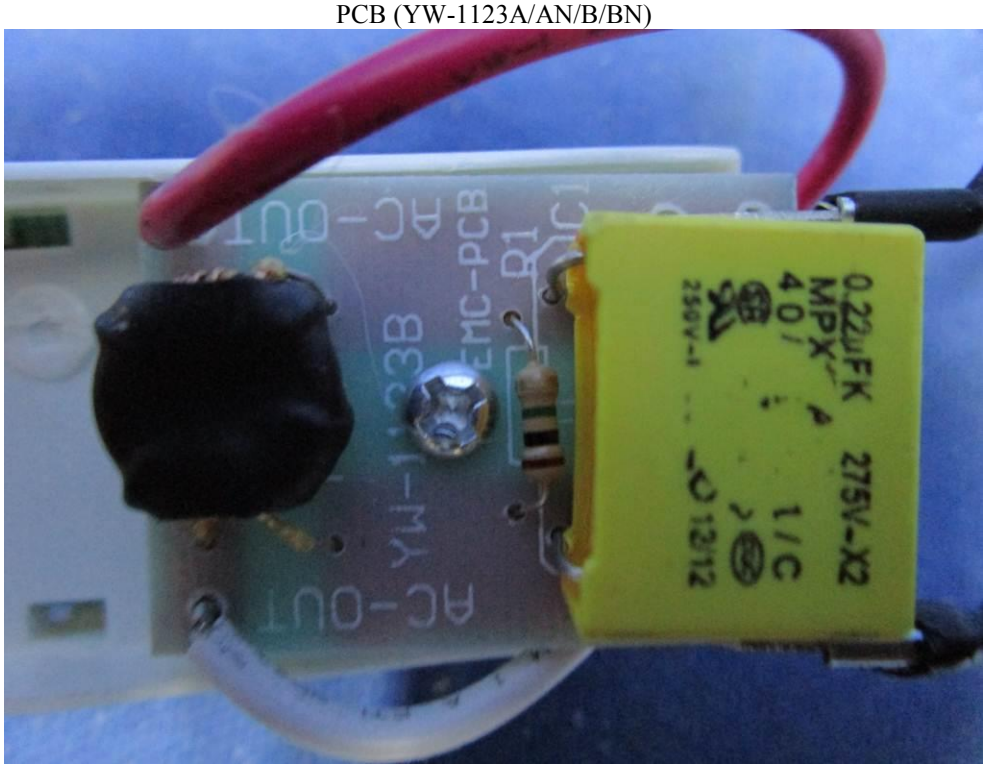
PCB (YW-1123A/AN/B/BN)



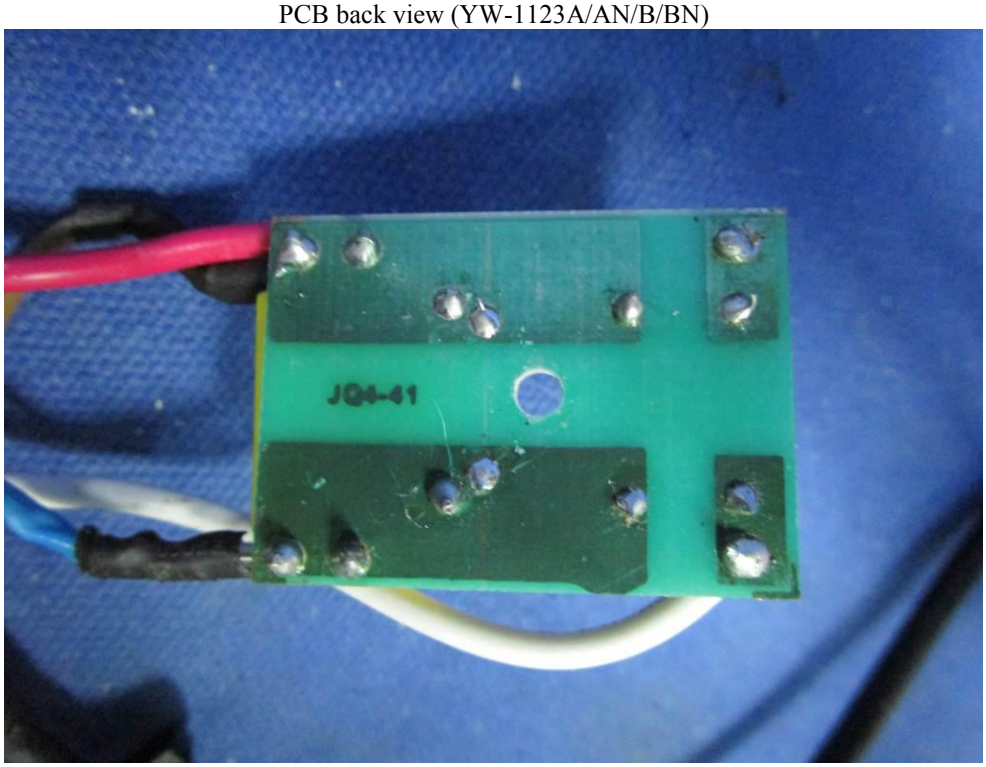
PCB back view (YW-1123A/AN/B/BN)



PCB (YW-1123A/AN/B/BN)



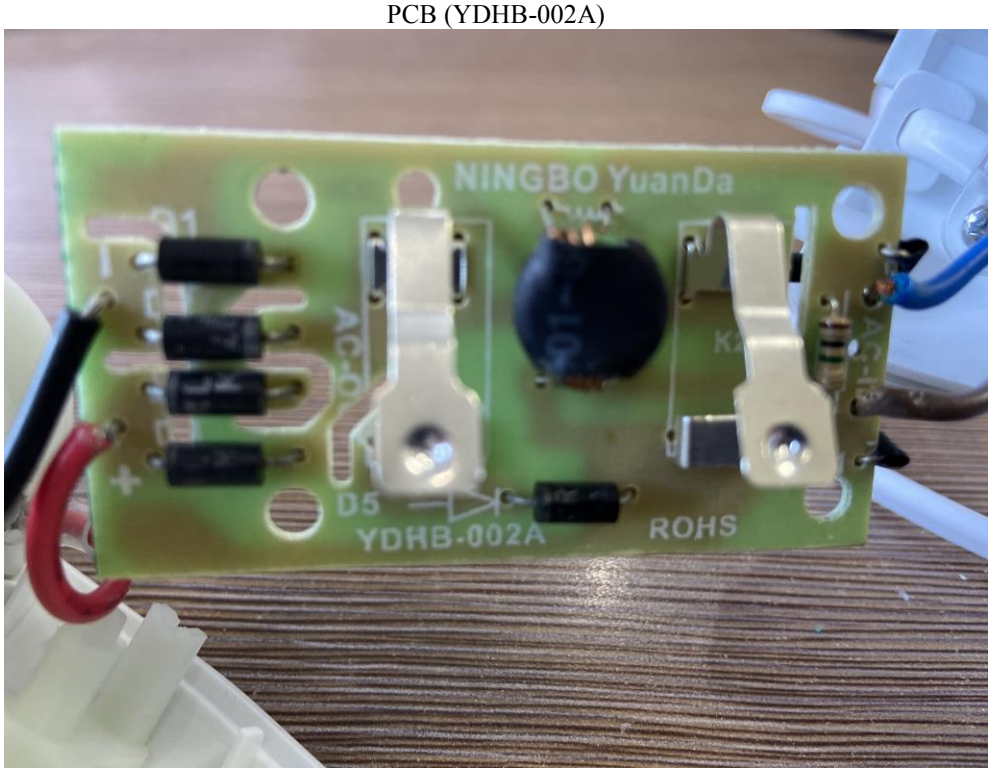
PCB back view (YW-1123A/AN/B/BN)



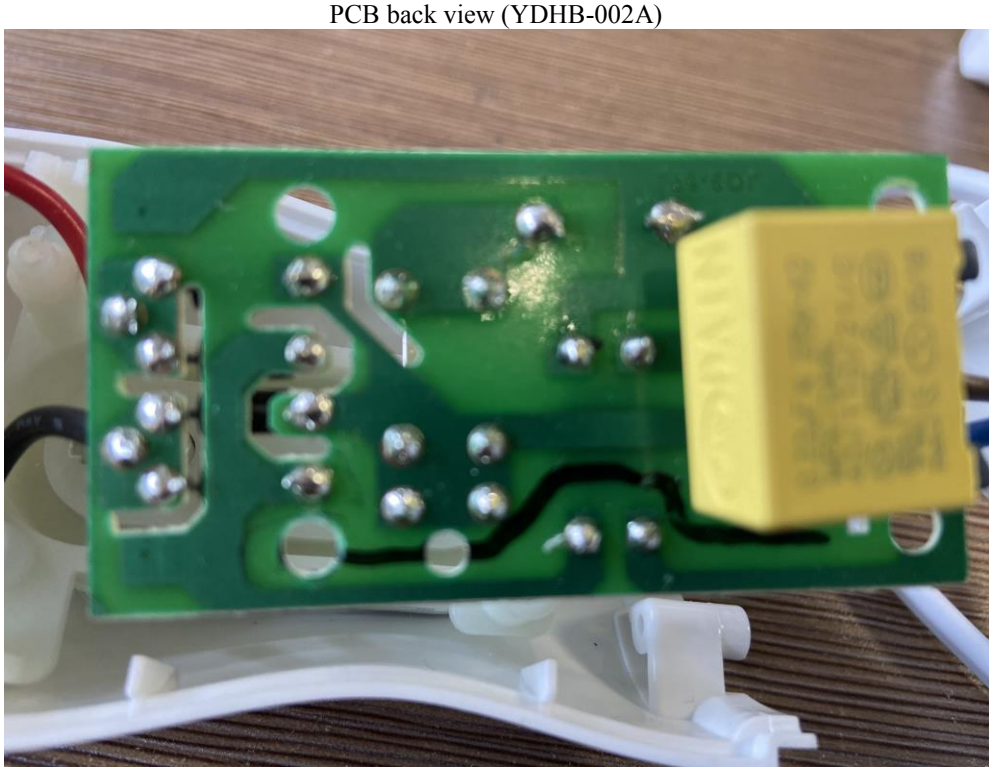
Overview (YDHB-002A)

Internal view (YDHB-002A)

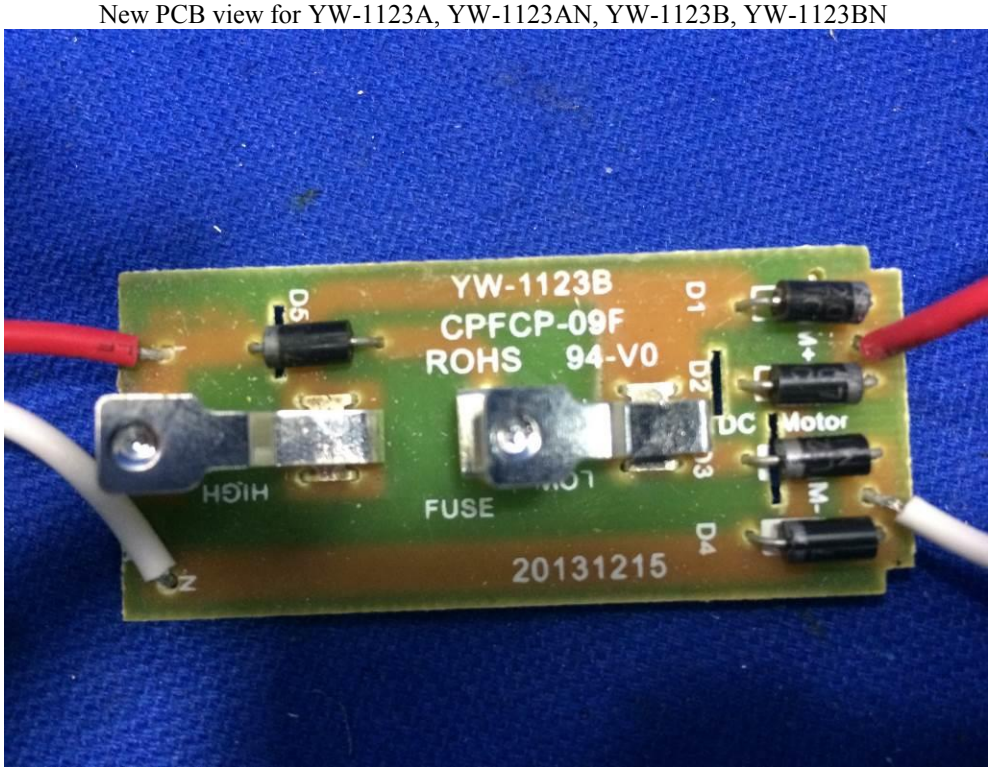
PCB (YDHB-002A)



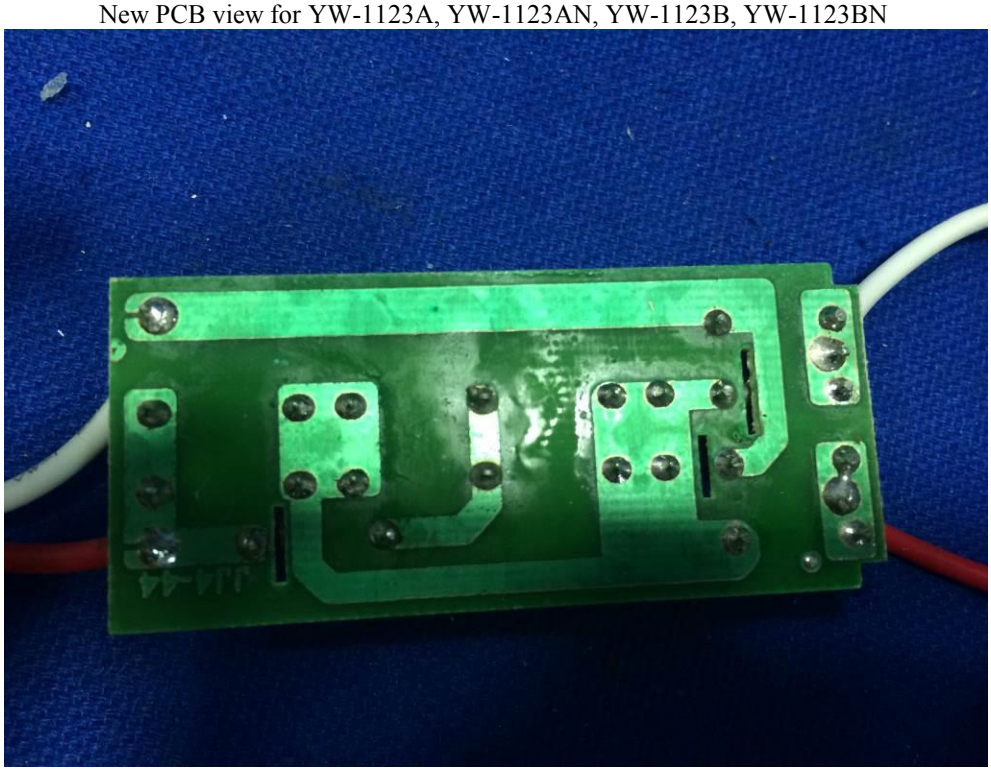
PCB back view (YDHB-002A)



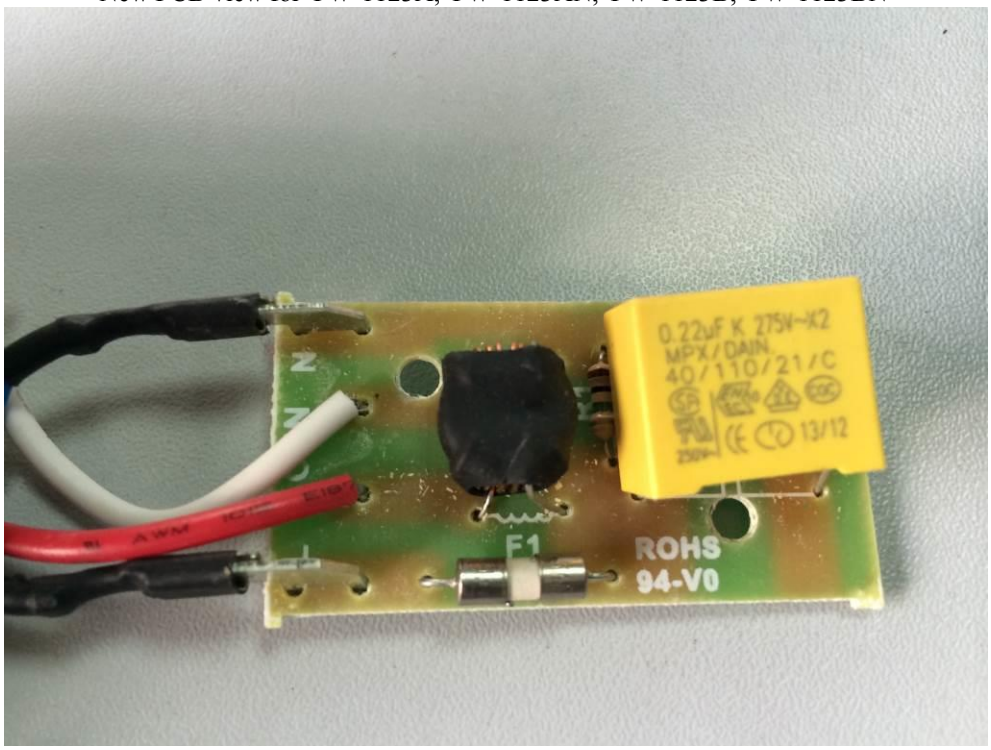
New PCB view for YW-1123A, YW-1123AN, YW-1123B, YW-1123BN



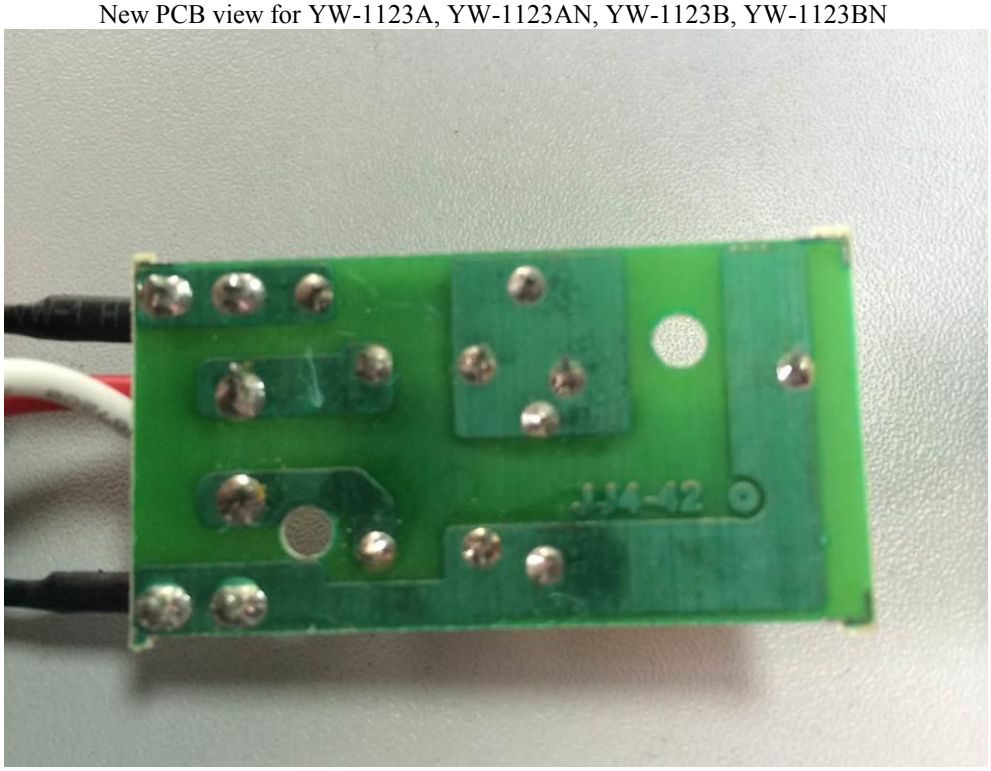
New PCB view for YW-1123A, YW-1123AN, YW-1123B, YW-1123BN



New PCB view for YW-1123A, YW-1123AN, YW-1123B, YW-1123BN



New PCB view for YW-1123A, YW-1123AN, YW-1123B, YW-1123BN



7 Amendment 1

The test Report Ref. EFSH14040635-IE-01-E01, dated 2014-05-21 was modified on 2016-05-23 to include the following changes and/or additions:

1. Update technical standard to EN 61000-3-2: 2014.
2. Change the position of fuse on PCB for model YW-1123A, YW-1123AN, YW-1123B, YW-1123BN.

After review, no test needs to be done.

This report replaces the original test report: EFSH14040635-IE-01-E01.

8 Amendment 2

The test Report Ref. EFSH14040635-IE-01-E01, dated 2014-05-21 and Ref. EFSH14040635-IE-01-E01-A1, dated 2016-05-23 was modified on 2017-04-10 to include the following changes and/or additions:

1. Add technical standard EN 55014-2: 2015.

After review, no test needs to be done.

This report replaces the original test report: EFSH14040635-IE-01-E01 and EFSH14040635-IE-01-E01-A1.

9 Amendment 3

The test report Ref. No. EFSH14040635-IE-01-E01-A2 dated 2017-04-10 was modified on 2020-03-26 to include the following changes and/or additions:

1. Update technical standard to “EN 55014-1: 2017”.
2. Remove technical standard “EN 55014-2: 1997+A1: 2001+A2: 2008”.
3. Update technical standard to “EN IEC 61000-3-2: 2019”.
4. Update technical standard to “EN 61000-3-3: 2013+A1: 2019”.
5. Update the address of approval holder from “No.88 Daqiao Road, Henghe, Cixi, Zhejiang 315318, P.R. China” to “No.347-349 Yangmei Road, Henghe, Cixi, Ningbo, Zhejiang, 315318, P.R. China”.

After review, no additional test needs to be performed.

Test report ref. No. EFSH14040635-IE-01-E01-A2 is replaced by this test report ref. No. EFSH14040635-IE-01-E01-A3.

10 Amendment 4

The test report Ref. No. EFSH14040635-IE-01-E01-A3 dated 2020-03-26 was modified on 2022-02-18 to include the following changes and/or additions:

1. Update technical standard to “EN IEC 55014-1: 2021”.
2. Update technical standard to “EN IEC 55014-2: 2021”.
3. Update technical standard to “EN IEC 61000-3-2: 2019+A1: 2021”.

After review, no additional test needs to be performed.

Test report ref. No. EFSH14040635-IE-01-E01-A3 is replaced by this test report ref. No. EFSH14040635-IE-01-E01-A4.