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卓時檢測
TIMEWAY TESTING LABORATORY



ISO/IEC17025 Accredited Lab.

Report No: FCC 0812217

File reference No: 2009-01-23

Applicant: Xiamen Huacheng Lighting Technology Co.,Ltd

Product: Energy Saving Lamp

Brand Name: MINNENG

Model No: MN3U1215 MN3U1218 MN3U1220 MN3U1223 MNSP1215
MNSP1218 MNSP1220 MNSP1223

Test Standards: FCC Part 18.307

Test result: It is herewith confirmed and found to comply with the requirements set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: Jan 23, 2009

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. Chegongmiao, FuTian District, Shenzhen,
CHINA.

Tel (755) 83448688 Fax (755) 83442996



Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

IC- Registration No.: IC5205A-01

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-01.

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Test Report Conclusion

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1.0 General Details

1.1 Test Lab Details

Name : SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD
Address: East 5/Block 4, Anhua Industrial Zone, No.8,Tairan Rd. CheGongMiao, FuTian District, Shenzhen, CHINA.
Telephone: (755) 83448688
Fax: (755) 83442996

1.2 Applicant Details

Applicant: Xiamen Huacheng Lighting Technology Co.,Ltd
Address: No.75,Huandong Coastal Meixi Road,Xiamen,China
Telephone: +86-592-5826568
Fax: +86-592-5826568

1.3 Description of EUT

Product: Energy Saving Lamp
Manufacturer: Fujian Minneng Lighting Technology Co., Ltd.
Address: Inside Government Yard,Wenfeng Town, Zhangzhou,Fujian, China
Brand Name: MINNENG
Model Number: MN3U1215 MN3U1218 MN3U1220 MN3U1223 MNSP1215 MNSP1218
MNSP1220 MNSP1223
Additional Model Number:
Rating: Input: 120V~, 60Hz, ≤25
Remark: --

1.4 Submitted Sample: 8 Sample

1.5 Test Duration

2008-12-31 to 2009-01-23

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB
Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by

Print Name: Terry Tong

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2.0 List of Measurement Equipment

2.1 Conducted Emission Test

Name	Model No.	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
EMI Test Receiver	ESCS30	830245/009	RS	2008.2.23	1 Year
Coaxial Switch	MP59B	M70585	ANRITSU	N/A	N/A
LISN	NTFM8132	8132137	SCHWARZBECK	2008.2.24	1 Year
LISN	NTFM8134	8134109	SCHWARZBECK	2008.2.24	1 Year
LISN	NTFM8136	8136102	SCHWARZBECK	2008.2.24	1 Year

3.0 Technical Details

3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

FCC Part 18 Subpart C

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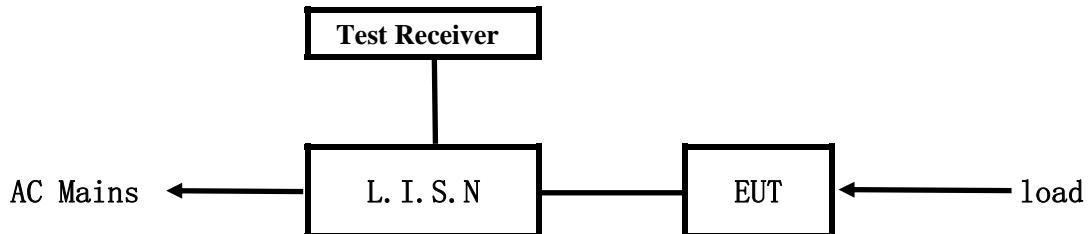
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4.0 Conducted Power line Test

4.1 Schematics of the test

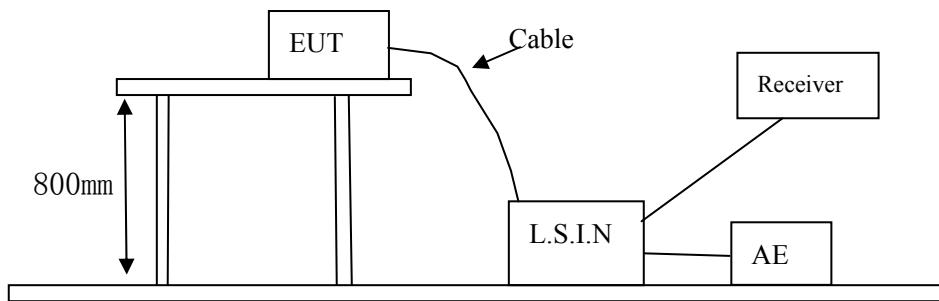


EUT: Equipment Under Test

4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 -2003. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Block diagram of Test setup



4.3 Power line conducted Emission Limit

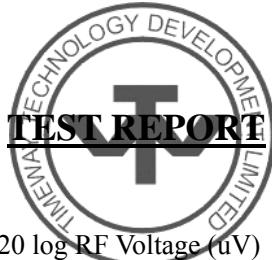
Frequency(MHz)	Maximum RF line voltage measured with a 50 uH/50 ohm LISN (uV)
Non-consumer equipment	
0.45-1.6	1000
1.6-30	3000
Consumer equipment	
0.45-2.51	250
2.51-3.0	3000
3.0-30	250

Notes: 1. *decreasing linearly with logarithm of frequency.
2. The tighter limit shall apply at the transition frequencies

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3. RF Voltage (dBuV) = $20 \log_{10} \text{RF Voltage (uV)}$

4.4 Test Results

The frequency spectrum from 0.415MHz to 30MHz was investigated. All reading are peak values with a resolution bandwidth of 9kHz.

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A: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

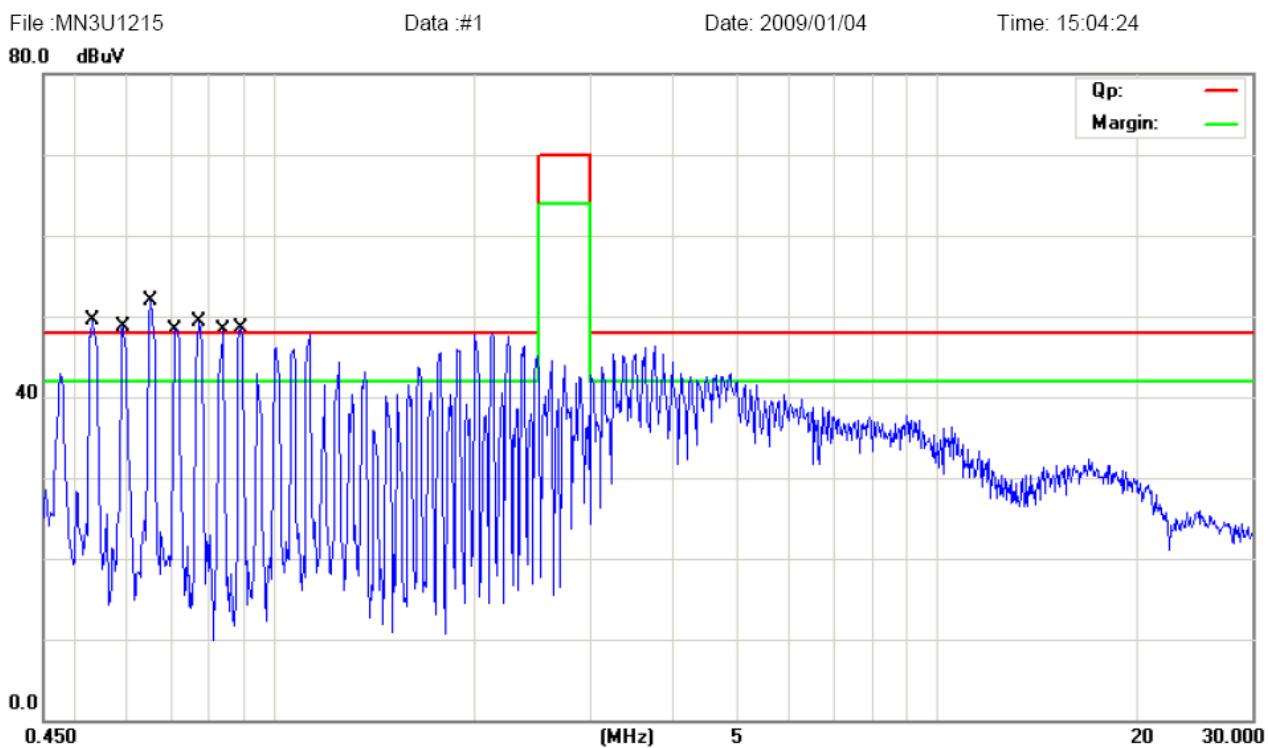
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MN3U1215

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	AV
0.534	42.12	-	48
0.592	41.23	-	48
0.652	42.42	-	48
0.711	39.56	-	48
0.770	38.74	-	48
0.828	40.14		48
0.888	42.84		48

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B: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

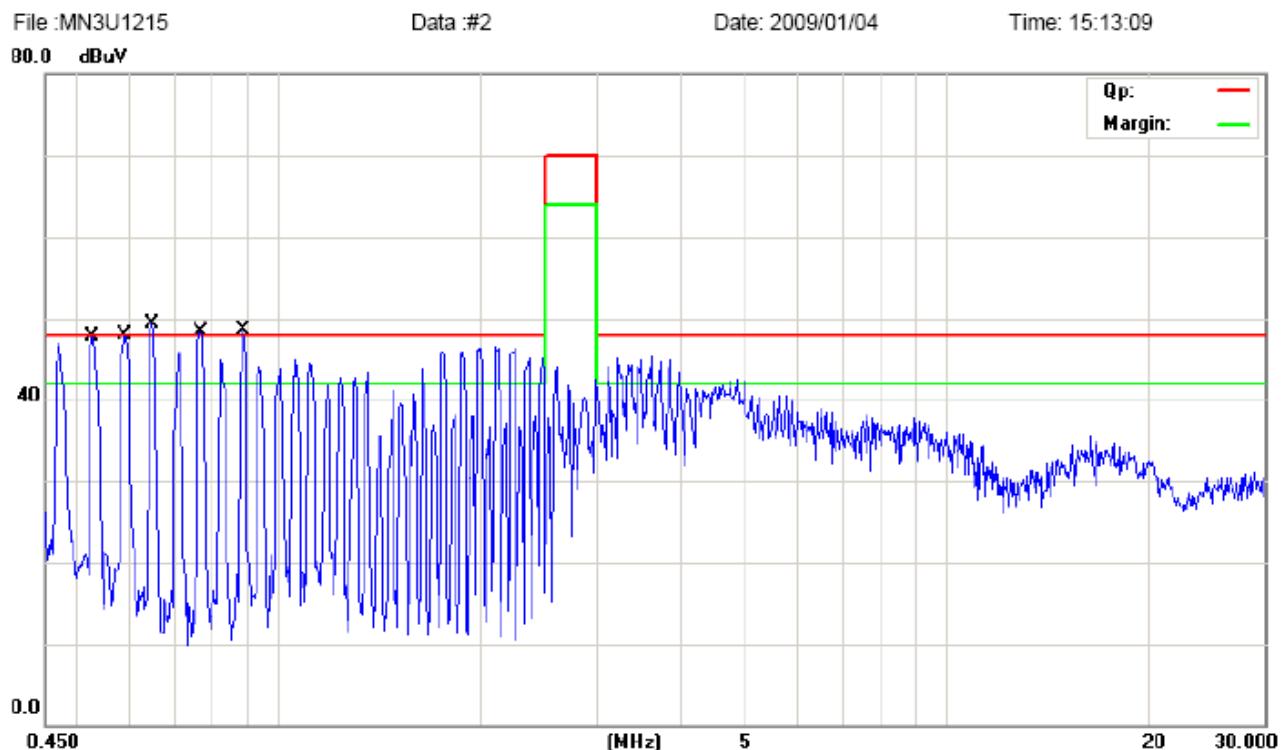
EUT set Condition: Normal operation mode

Level **Class B**

Results: **Pass**

Model: **MN3U1215**

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.530	-	41.00	48
0.589	-	41.47	48
0.649	-	42.93	48
0.768	-	41.45	48
0.885	-	41.38	48

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C: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

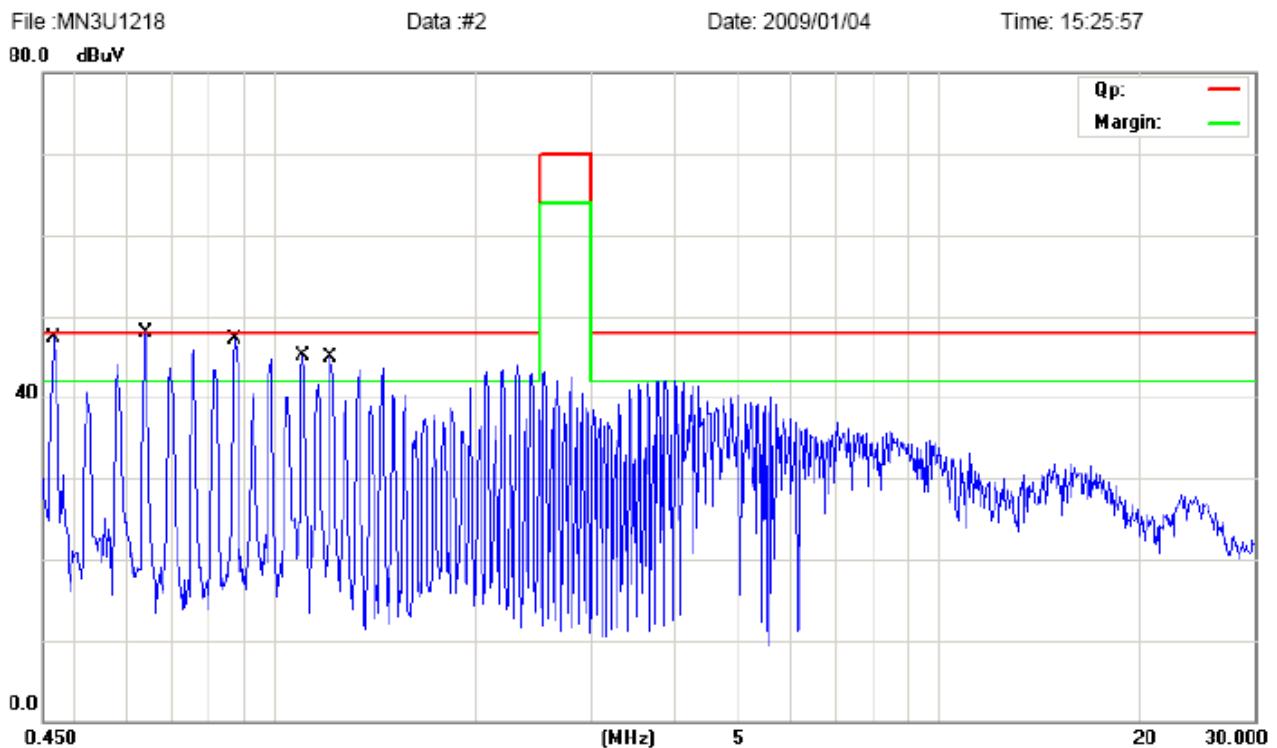
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MN3U1218

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.465	38.13	-	48
0.639	40.52	-	48
0.873	39.47	-	48
1.105	37.14	-	48
1.220	36.59	-	48

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D: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

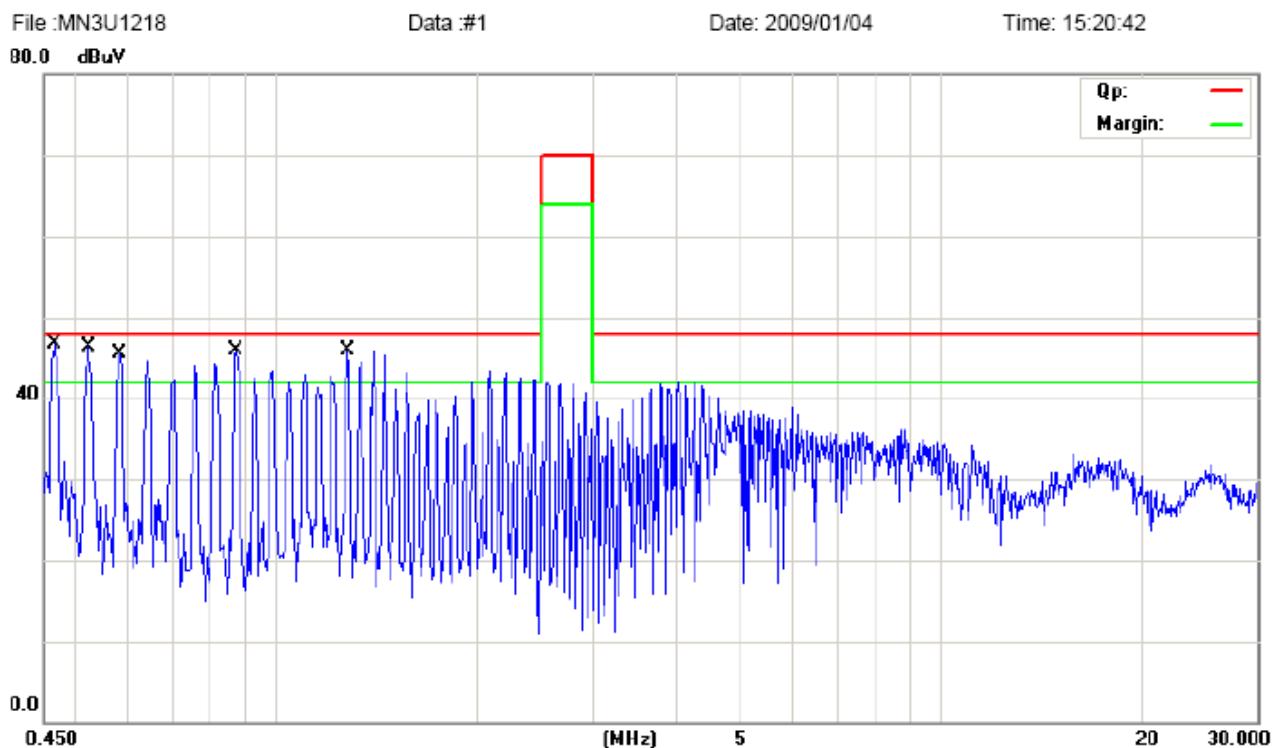
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MN3U1218

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.466	-	37.34	48
0.525	-	37.30	48
0.584	-	38.46	48
0.875	-	36.17	48
1.285	-	36.21	48

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E: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

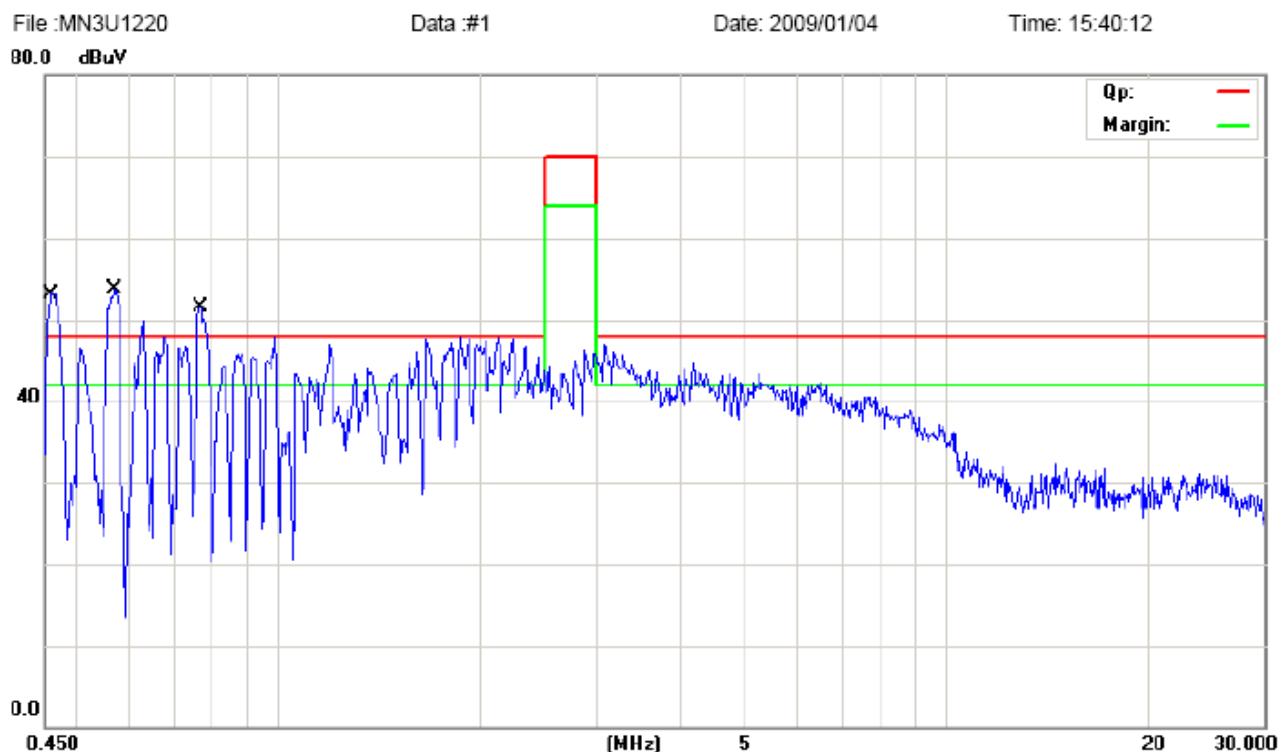
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MN3U1220

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.459	43.93	-	48
0.566	45.24	-	48
0.767	40.85	-	48

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F: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

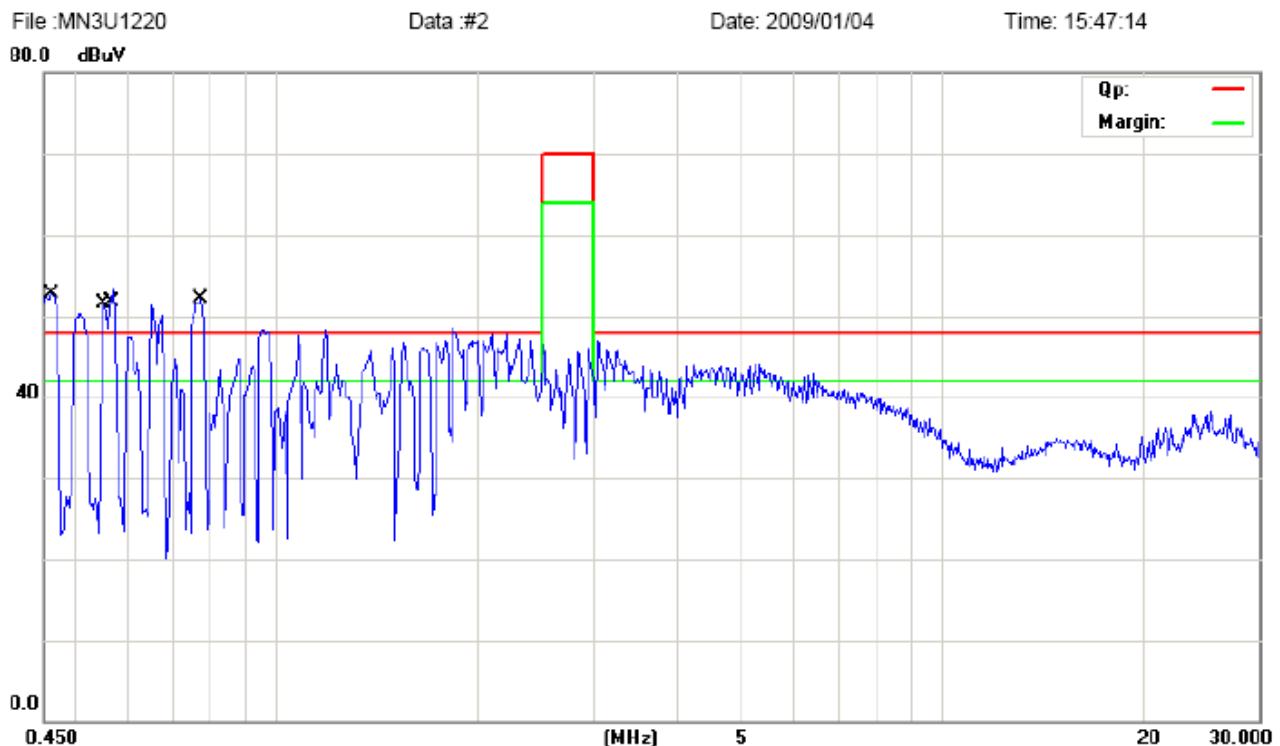
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MN3U1220

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	AV
0.553	-	42.53	48
0.561	-	42.64	48
0.770	-	45.16	48
0.461	-	44.83	48

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G: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

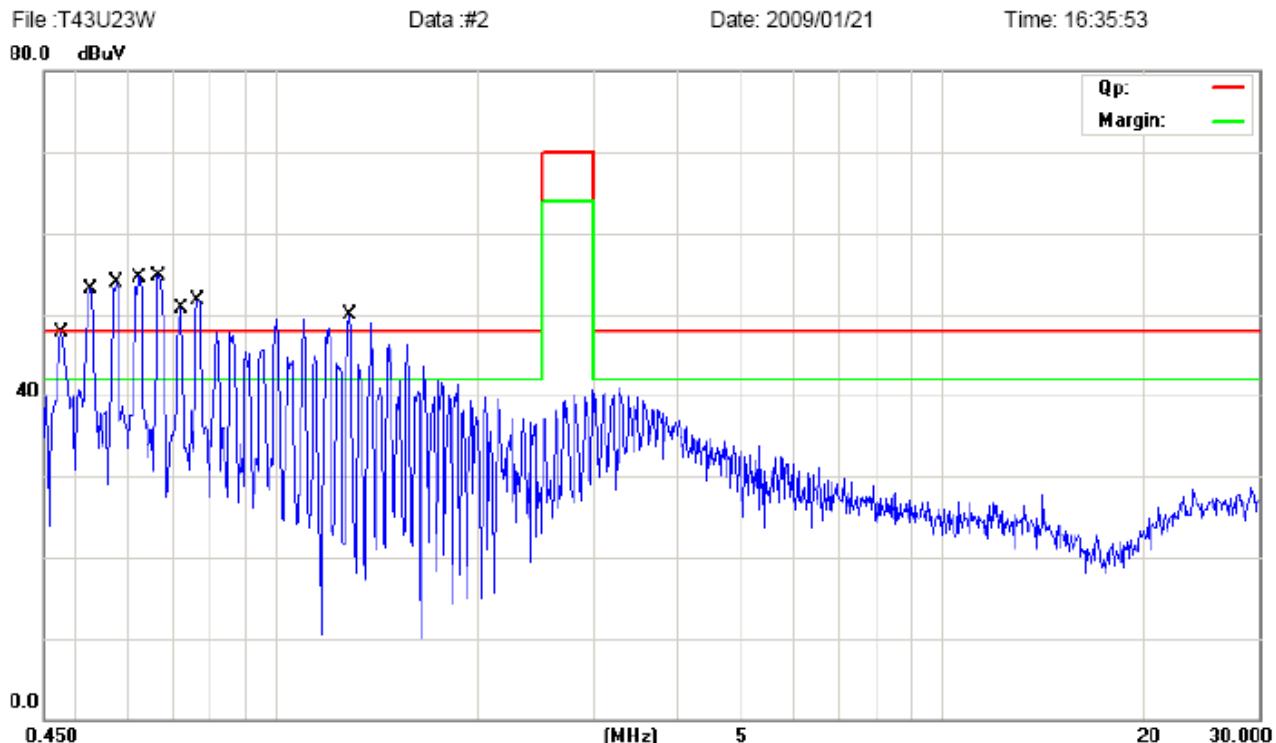
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MN3U1223

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	AV
0.476	40.95	-	48
0.526	43.40	-	48
0.575	44.95	-	48
0.622	46.00	-	48
0.670	46.25	-	48
0.720	42.10	-	48
0.766	42.95	-	48
1.292	34.42	-	48

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H: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

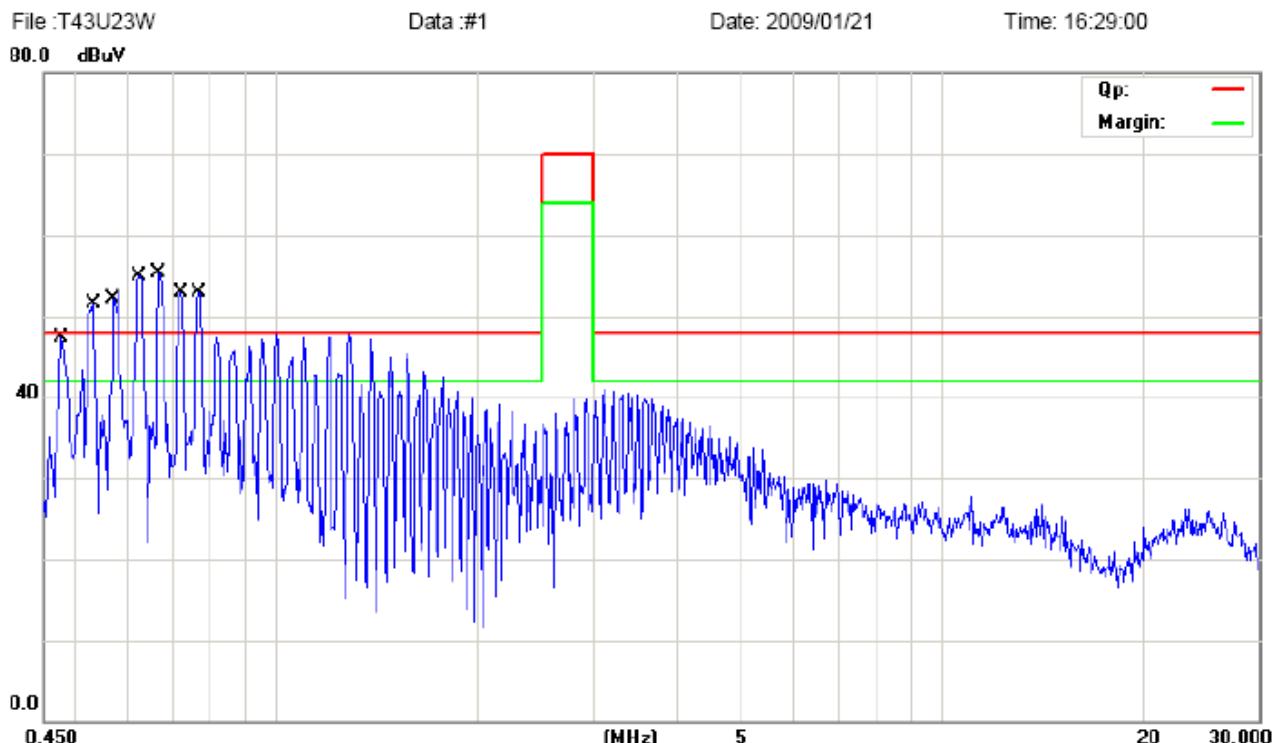
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MN3U1223

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.476	-	39.75	48
0.531	-	45.10	48
0.573	-	44.25	48
0.625	-	44.10	48
0.672	-	46.05	48
0.720	-	43.10	48
0.769	-	44.36	48

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I: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

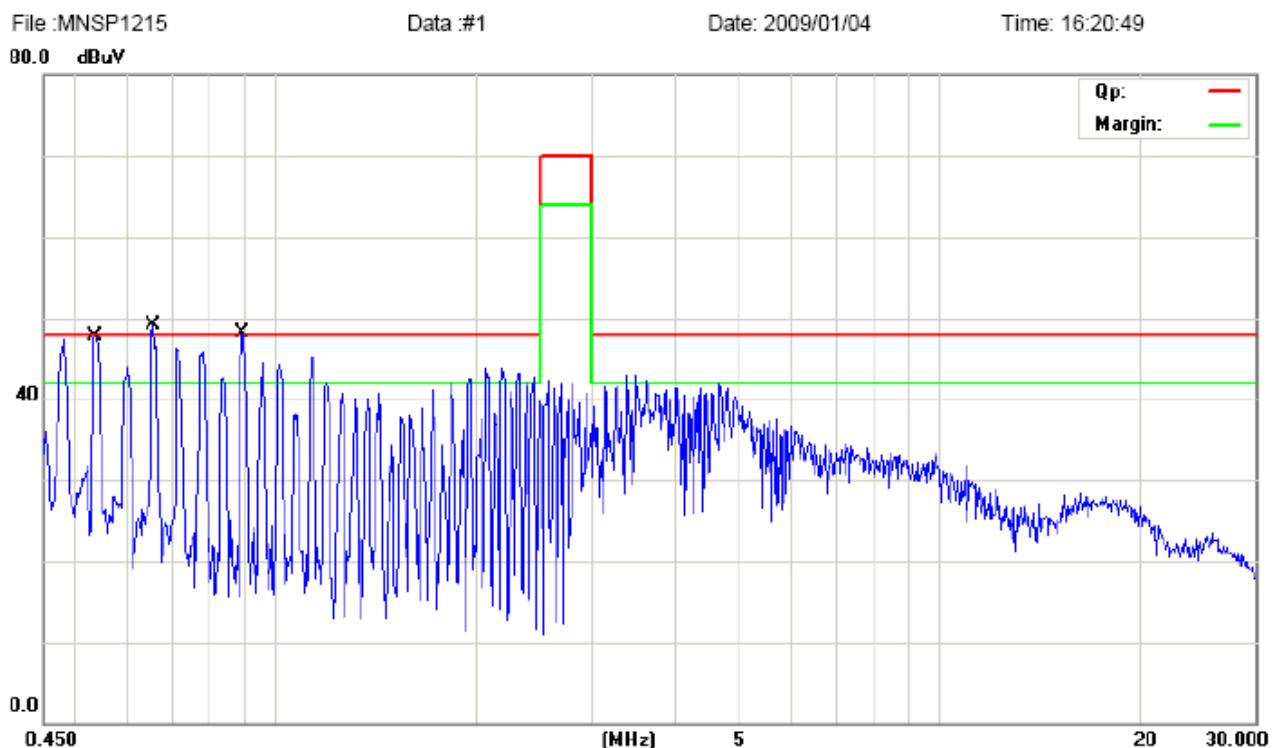
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MNSP1215

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.532	40.01	-	48
0.651	41.57	-	48
0.887	40.38	-	48

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J: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

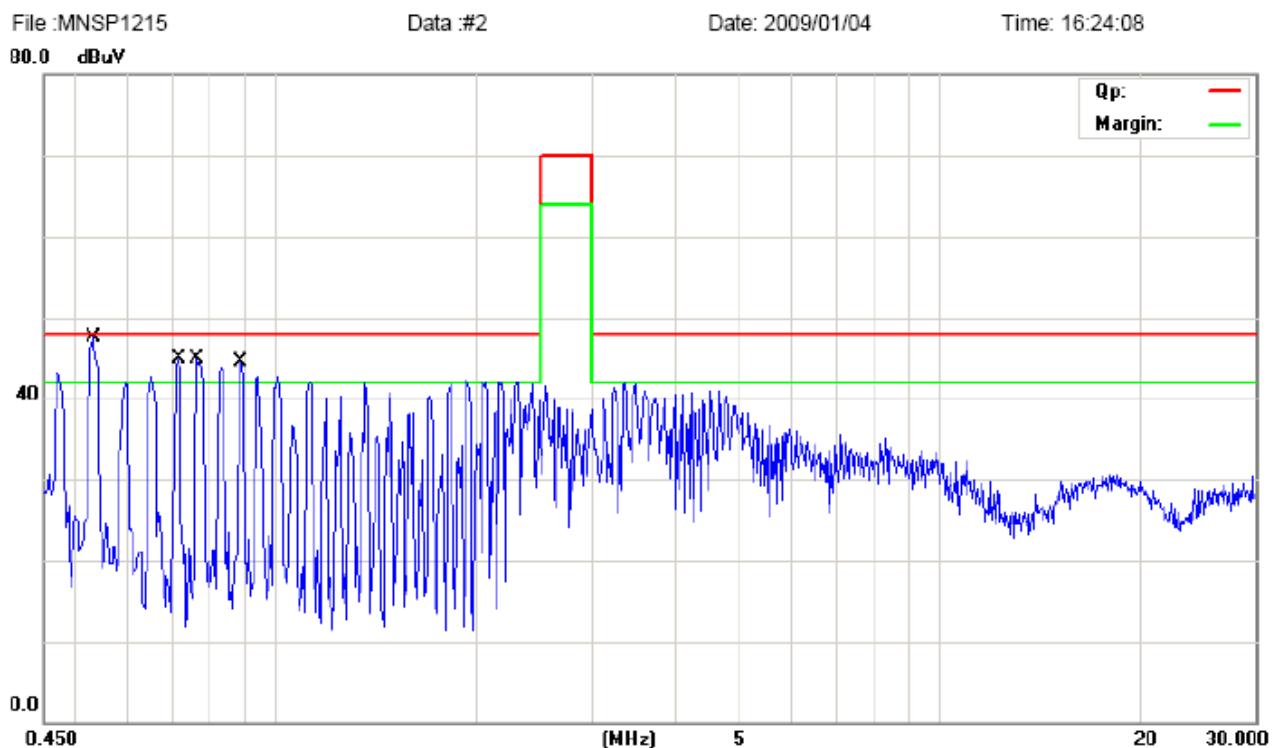
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MNSP1215

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	AV
0.534	-	39.71	48
0.715	-	39.20	48
0.770	-	38.96	48
0.889	-	37.48	48

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K: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

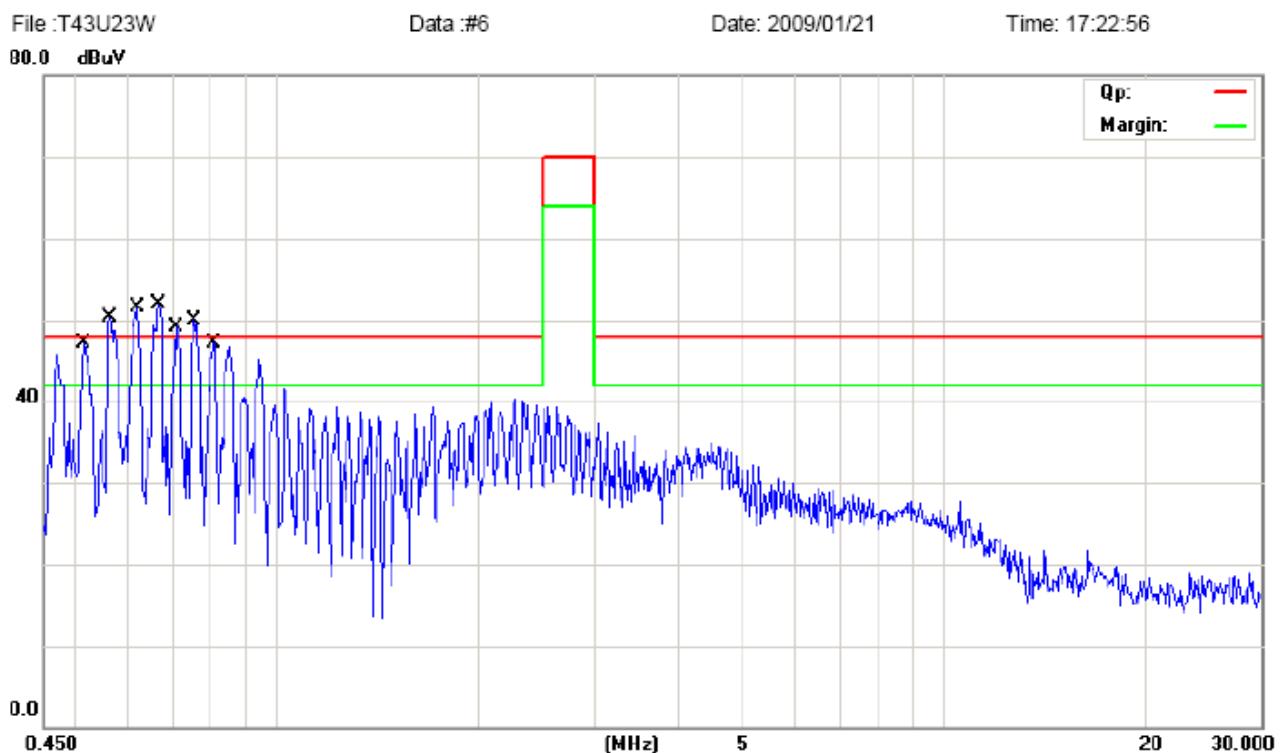
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MNSP1218

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.569	40.94	-	48
0.616	36.39	-	48
0.662	38.34	-	48
0.759	33.15	-	48
0.714	33.70	-	48
0.516	31.69	-	48
0.806	32.90	-	48

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L: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

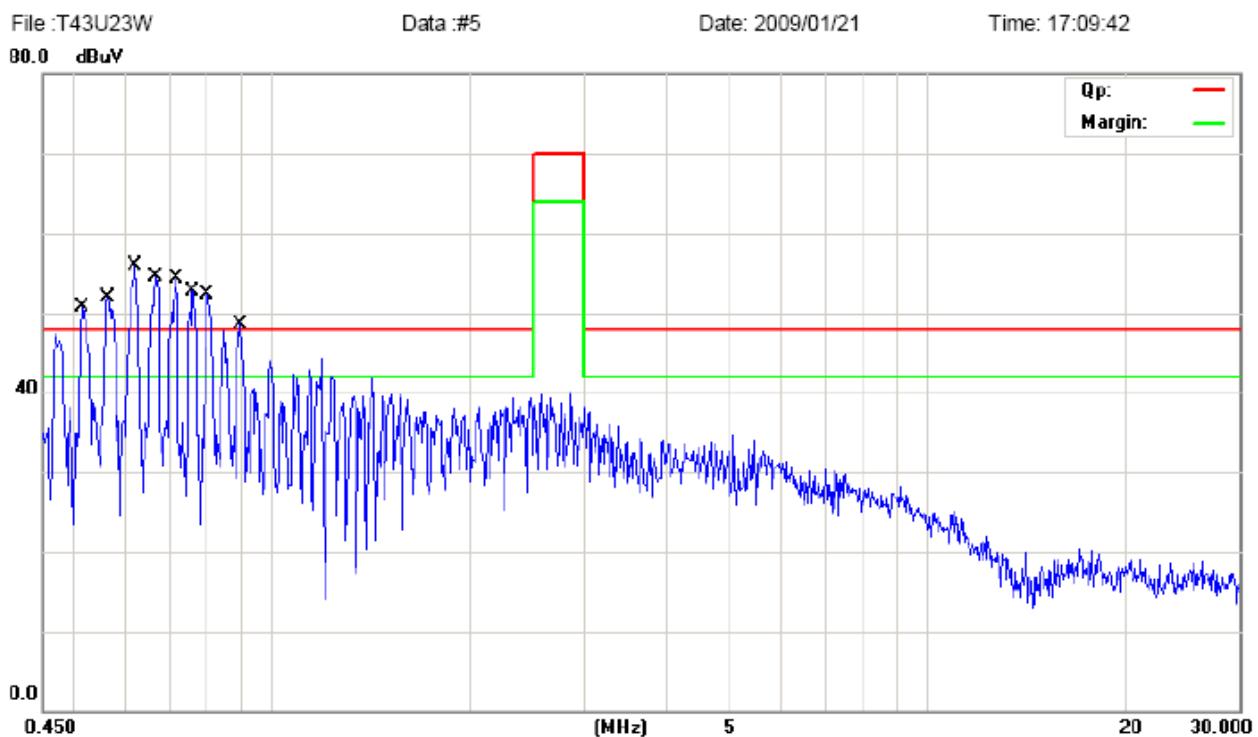
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MNSP1218

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.617	-	39.09	48
0.664	-	40.04	48
0.711	-	39.39	48
0.759	-	35.85	48
0.805	-	33.69	48
0.563	-	35.74	48
0.516	-	34.69	48
0.900	-	32.19	48

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M: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

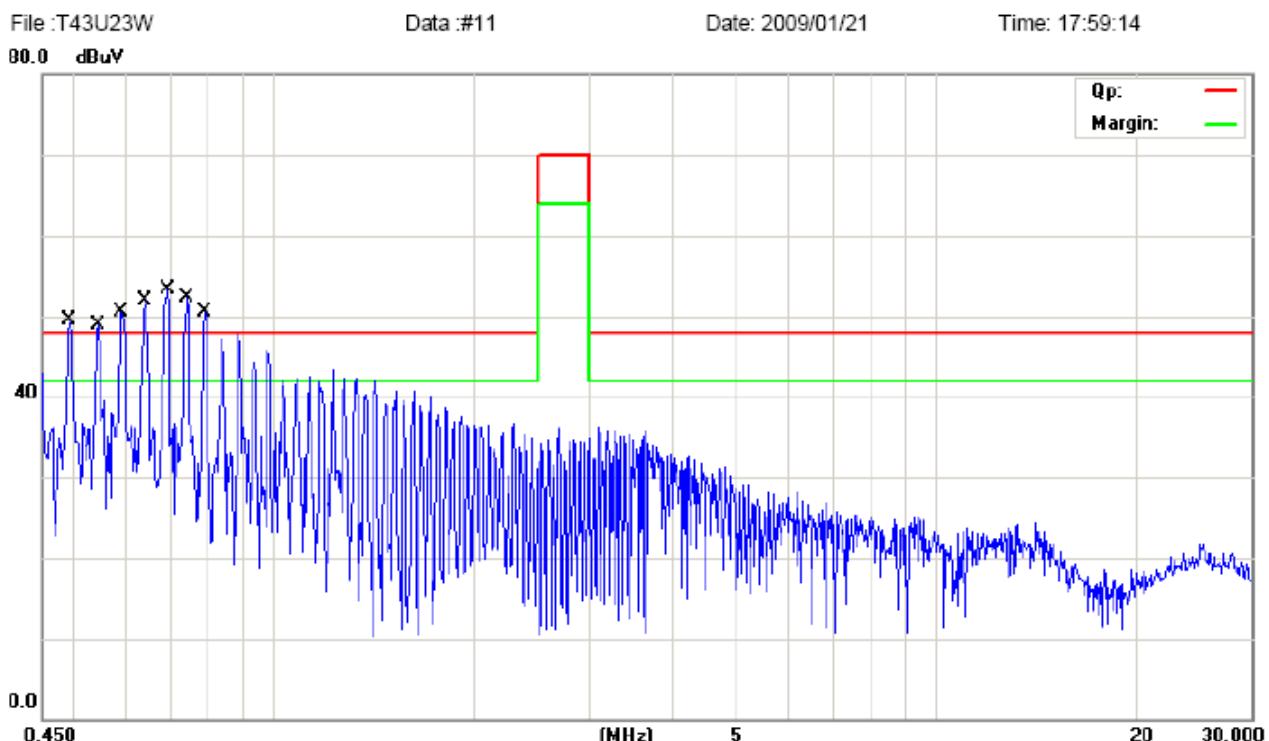
EUT set Condition: Normal operation mode

Level **Class B**

Results: **Pass**

Model: **MNSP1220**

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.490	39.46	-	48
0.541	41.21	-	48
0.588	42.66	-	48
0.637	41.52	-	48
0.686	44.37		48
0.735	42.02		48
0.784	40.77		48

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N Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

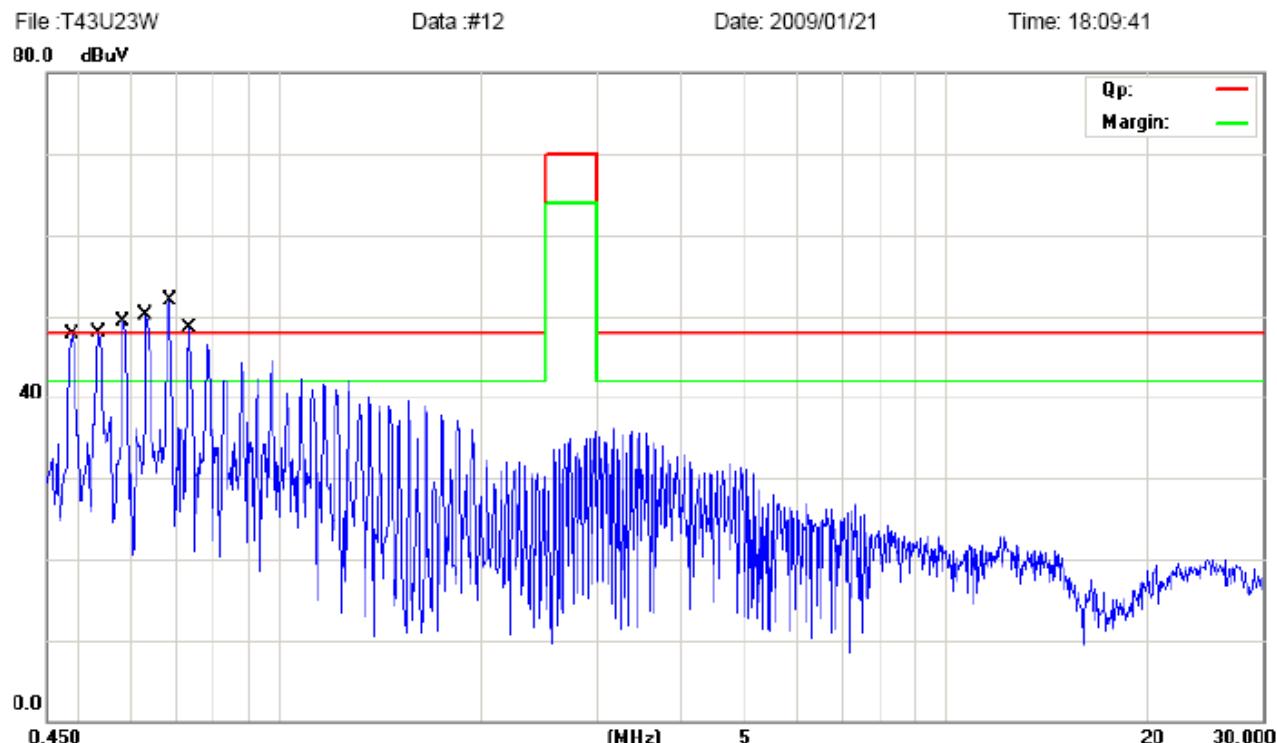
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MNSP1220

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.586	-	42.36	48
0.685	-	44.27	48
0.635	-	42.11	48
0.538	-	42.21	48
0.490	-	38.06	48
0.734	-	41.42	48

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O: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

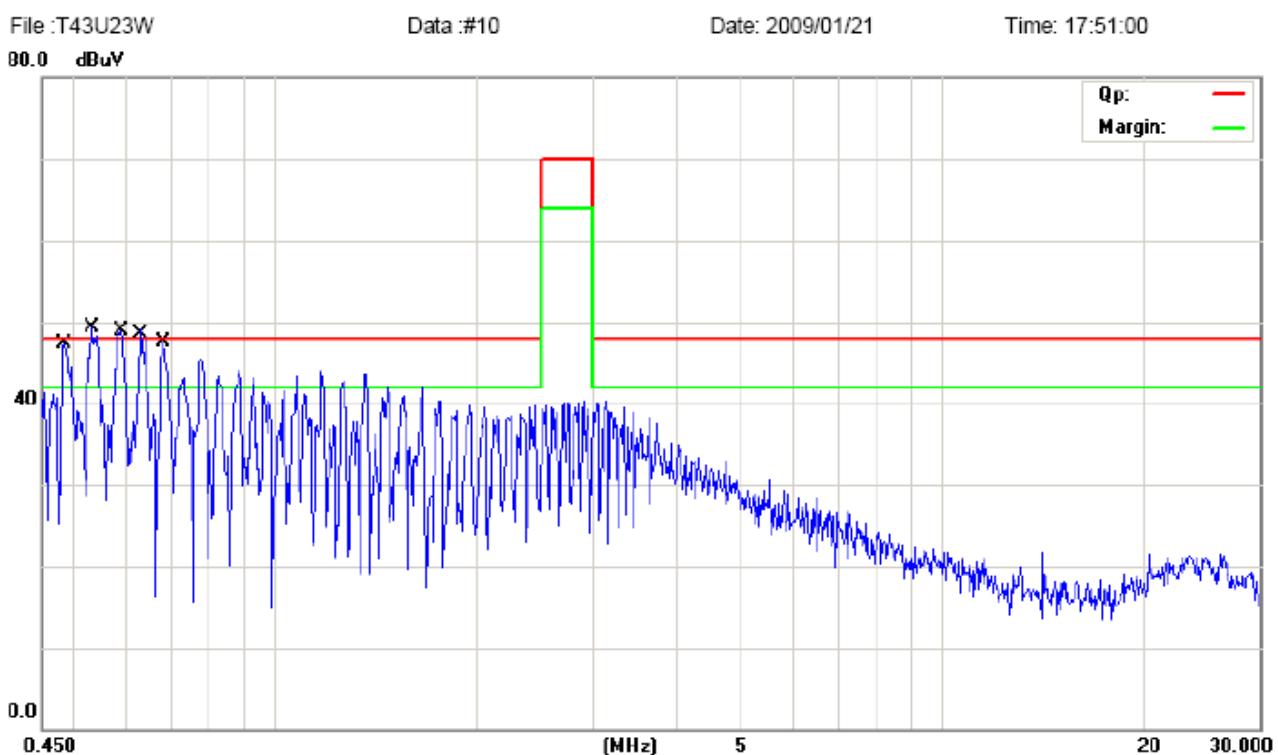
EUT set Condition: Normal operation mode

Level **Class B**

Results: **Pass**

Model: **MNSP1223**

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.485	34.16	-	48
0.530	17.80	-	48
0.536	35.51	-	48
0.587	38.76	-	48
0.635	31.11	-	48
0.683	33.06	-	48

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P Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

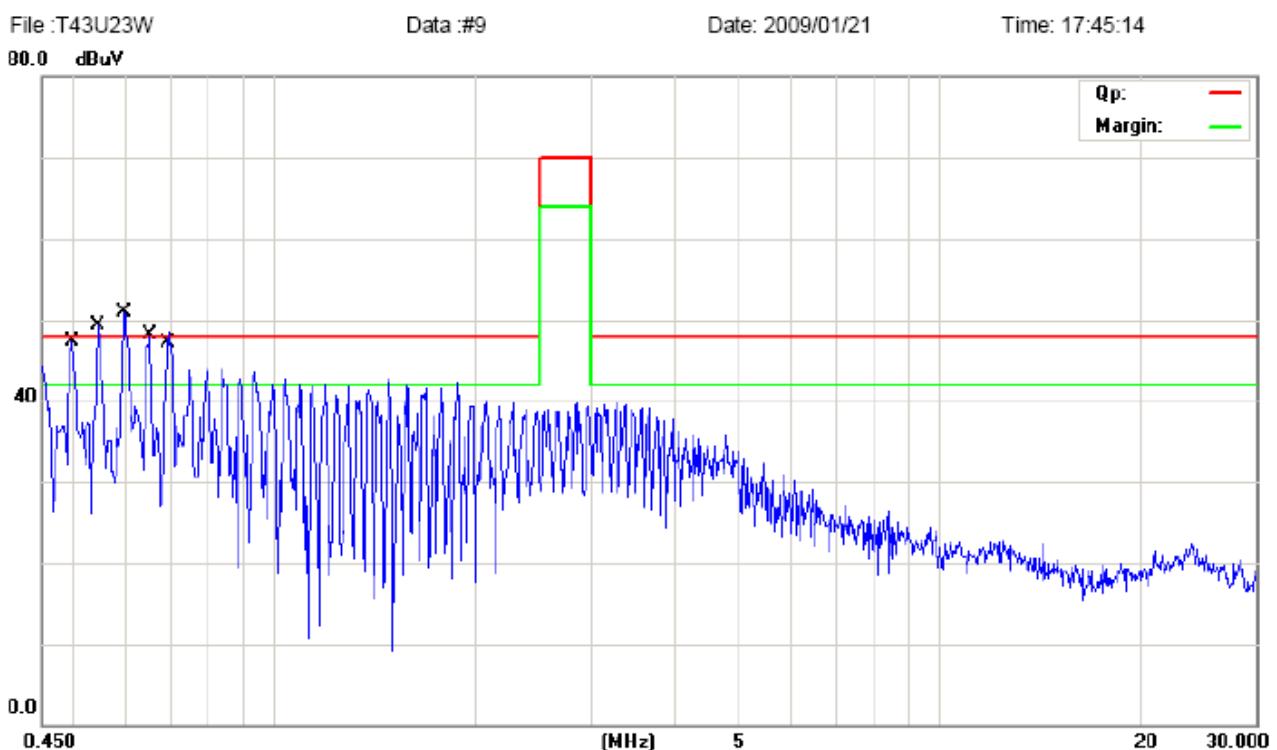
EUT set Condition: Normal operation mode

Level Class B

Results: Pass

Model: MNSP1223

Please refer to following diagram for individual



Frequency (MHz)	Reading(dB μ V)		Limit (dB μ V)
	Live	Neutral	
	AV	AV	
0.540	-	34.31	48
0.589	-	38.87	48
0.687	-	33.87	48
0.497	-	33.47	48
0.651	-	36.03	48

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5.0 FCC Label

This device complies with part 18 of FCC Rules.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:

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6.0 Photo of testing

6.1 Conducted test View--



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6.3 Photo for the EUT

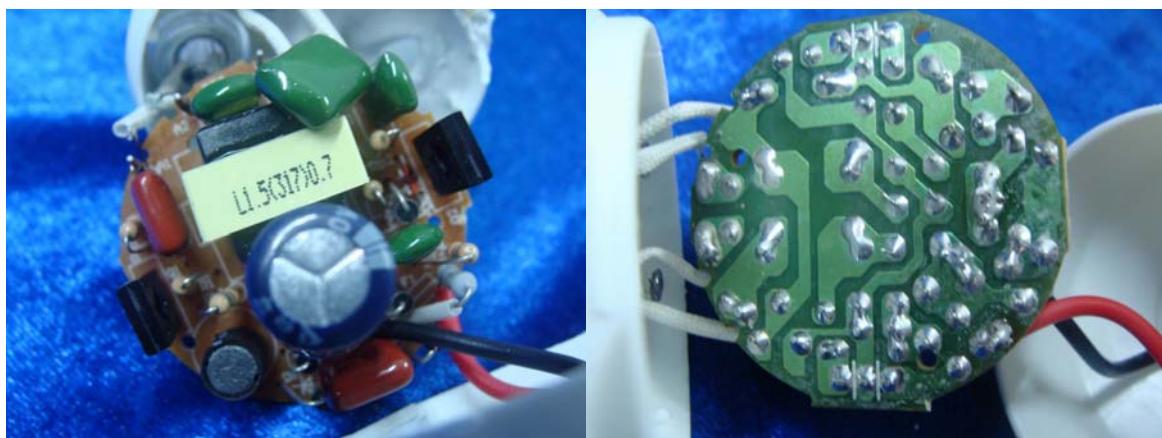
Model: MN3U1215



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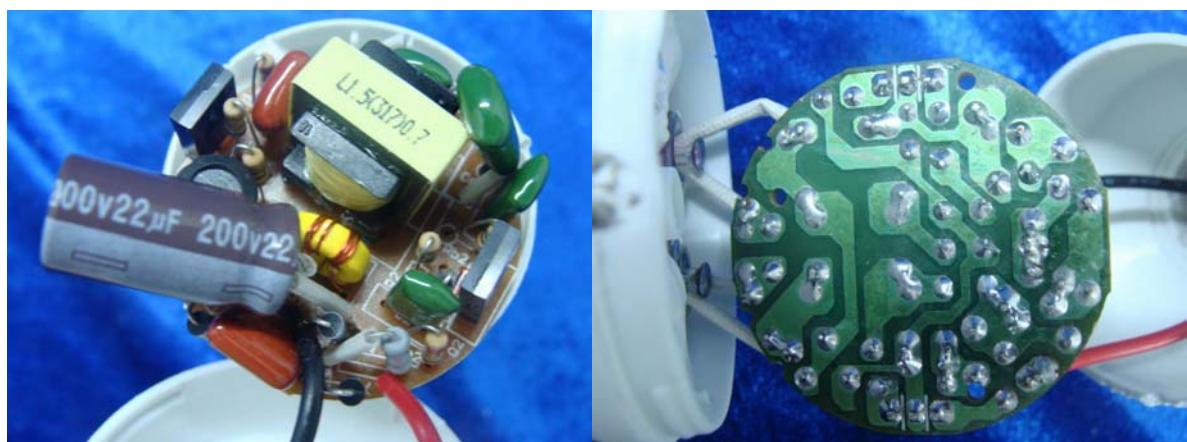
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Photo for the EUT

Model: MN3U1220



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Photo for the EUT

Model: MN3U1223



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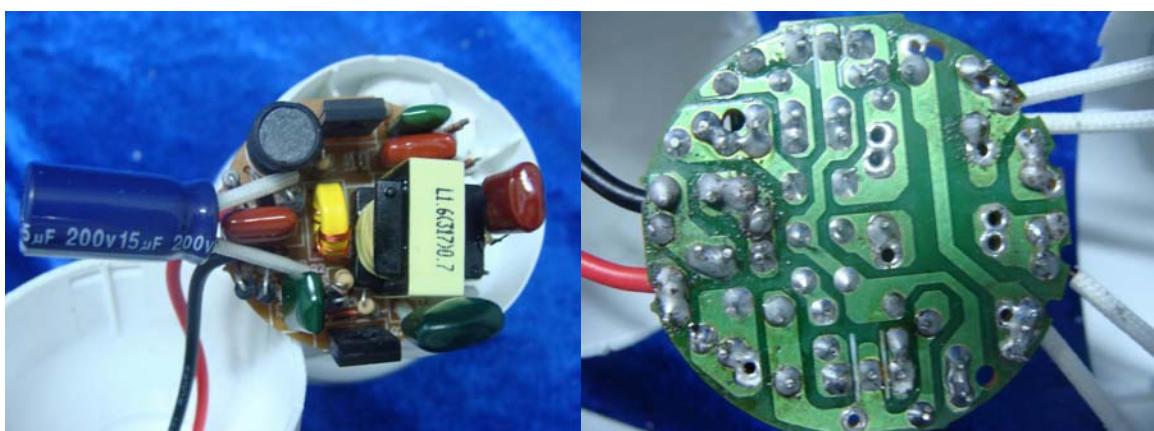
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Photo for the EUT

Model: MNSP1215



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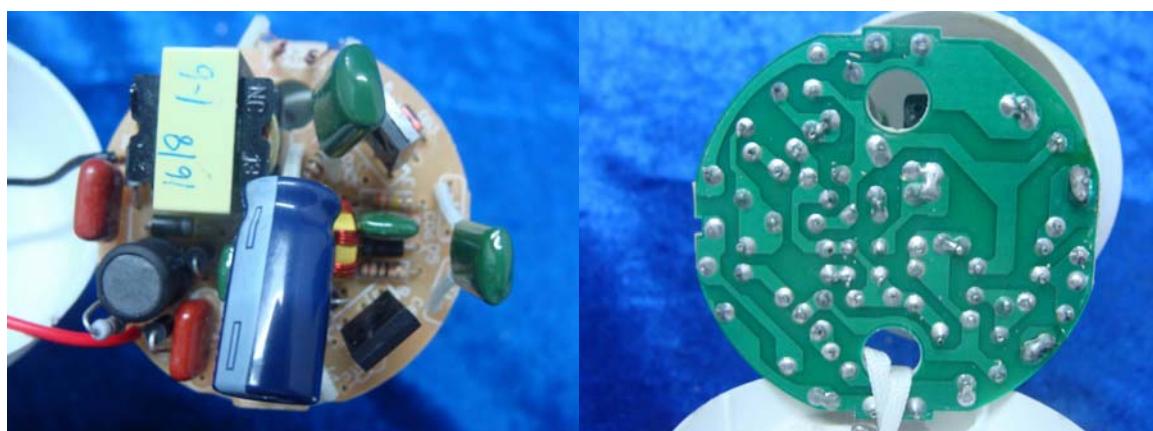
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Photo for the EUT

Model: MNSP1218



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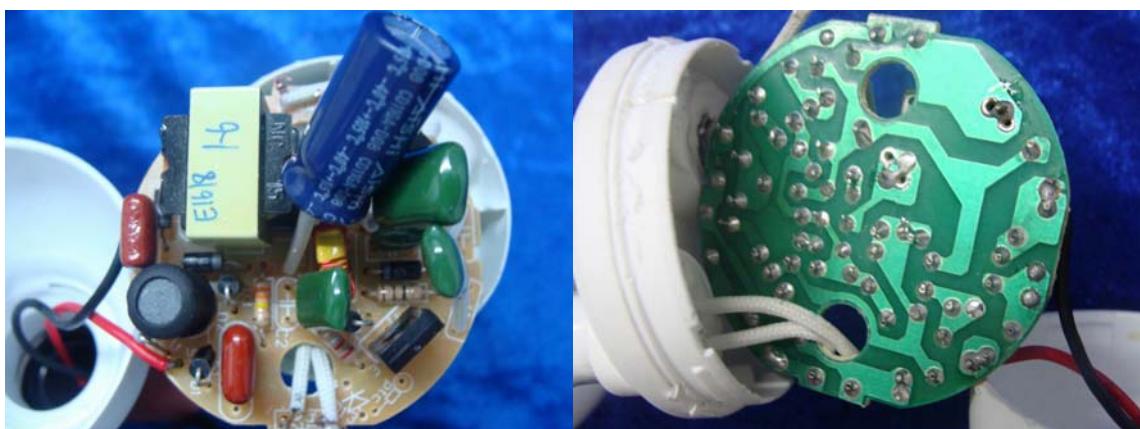
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Photo for the EUT

Model: MNSP1220



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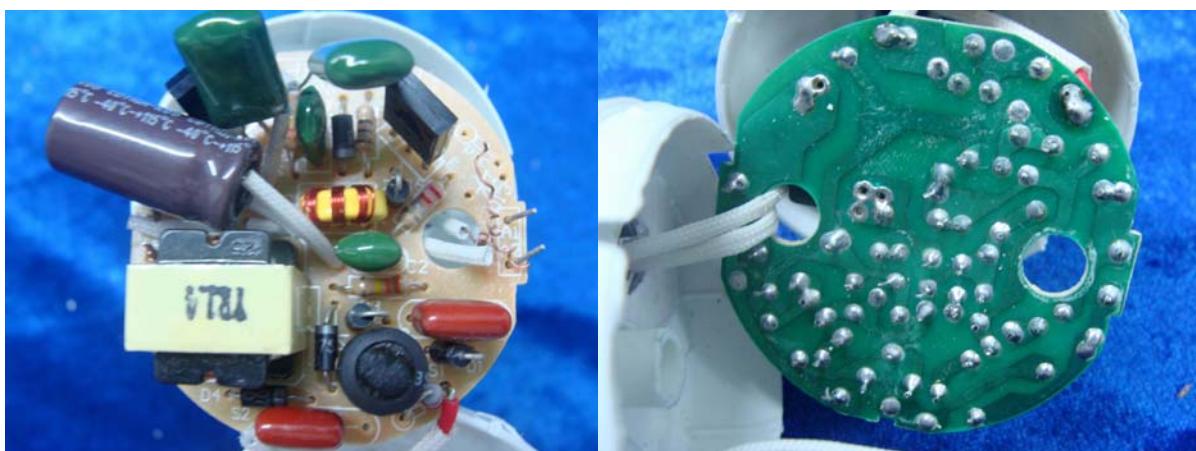
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Photo for the EUT

Model: MNSP1223



-End of the report-

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