

Application for FCC

On Behalf of
Suzhou Sanex Electronics Co., Ltd.

Summary

The equipment comply with the requirements according to the following standard(s):

47CFR Part 18 (2004): Industrial, Scientific, and Medical Equipment

FCC/OET MP-5 (1986): FCC Methods of Measurements of Radio Noise Emissions From Industrial, Scientific, and Medical Equipment

ANSI C63.4 (2003): Interim Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.

Description

The appliances were tested by Intertek Testing Services ETL SEMKO Shanghai Limited and found compliance with relevant requirements described in FCC Part 18 RF lighting Device.

Test results are contained in this test report and Intertek Testing Services ETL SEMKO Shanghai Limited is assumed full responsibility for the accuracy and completeness of these measurements.

The test report applies to tested samples only and shall not be reproduced in part without written approval of Intertek Testing Services ETL SEMKO Shanghai Limited.

Date of Issue: May 30, 2005

Prepared by:



Daniel Zhao (Engineer)

Report Approved by:



Steve li (EMC Manager)

Description of Test Facility

Name of Firm : Shanghai Institute of Measurement and Testing Technology.

Site Location : 716 Yi Shan Road. Shanghai. P.R. China

Name of contact : Mr. Hall (first name) Wang (last name)

Phone : 86-21-64700066 ext. 201

Fax : 86-21-64701810

E-mail address: wangh1@simt.com.cn

CONTENTS

SUMMARY.....	1
DESCRIPTION	1
DESCRIPTION OF TEST FACILITY	2
CONTENTS	3
1.APPLICANT INFORMATION	4
2.INFORMATION OF EQUIPMENT UNDER TEST (EUT)	4
2.1 IDENTIFICATION OF THE EUT	4
2.2 ADDITIONAL INFORMATION ABOUT THE EUT	4
2.3 PERIPHERAL EQUIPMENT	4
3. CONDUCTED POWERLINE MEASUREMENT	5
3.1 CONDUCTED LIMITS FOR CONSUMER EQUIPMENT	5
3.2 INSTRUMENTS LIST	5
3.3 TEST SETUP	6
3.4 TEST CONFIGURATION	6
3.5 TEST PROCEDURE.....	7
3.6 TEST RESULTS.....	8
3.7 MEASUREMENT UNCERTAINTY	9
4. PHOTOGRAPH OF TEST SETUP.....	10
5. PHOTOGRAPH OF EUT.....	11

1. Applicant Information

Applicant : Suzhou Sanex Electronics Co., Ltd.
Xin Su Industrial Zone, Northeast of Ba Ji Bridge, Dong
Huan Road, Suzhou, Jiangsu 215001, P.R. China

Manufacturer: Suzhou Sanex Electronics Co., Ltd.
Xin Su Industrial Zone, Northeast of Ba Ji Bridge, Dong
Huan Road, Suzhou, Jiangsu 215001, P.R. China

Country of origin: P.R. China

Name of contact: Mr. Shen Yingping

Telephone: 86-512-65421639
Telefax: 86-512-65424543

2. Information of Equipment Under Test (EUT)

2.1 Identification of the EUT

Equipment: Compact Fluorescent Lamp

Type of EUT: Production Pre-product Pro-type

Type/model: SER-24, SER-15

Serial number: none

Date of sample receipt May 10, 2005

Date of test May 24, 2005

Rating: 120V~, 60Hz, 24W, 15W

2.2 Additional information about the EUT

The family of product contains 2 models, which were described above. They are the same in schematic diagram, difference between them are their appearance and rating.

Internal clock frequencies or other used frequencies: None

The tests have been performed on the EUT provided with the following modification:

None

2.3 Peripheral equipment

none

3. Conducted Powerline Measurement

3.1 Conducted limits for Consumer Equipment

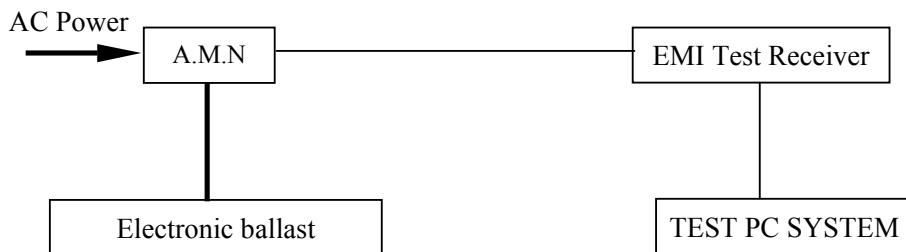
Frequency (MHz)	Maximum RF line voltage measured with a 50uH/50 ohm LISN	
	(μ V)	dB(μ V)
0.45 – 2.51	250	48
2.51 – 3.0	3000	69.5
3.0 – 30	250	48
RF Line Voltage dB(μ V) = 20 lg RF Line Voltage (μ V)		

3.2 Instruments List

The following instruments were used during the measurement of RF voltage conducted back into the power lines.

Item	Equipment	Manu.	Type	Serials no.	Last Cal.	Cal. Interval
1	EMI Test Receiver	Rohde & Schwarz	ESCS 30	828985/026	May 8, 2005	1 Year
2	A.M.N.	Rohde & Schwarz	ESH3-Z5	825640/018	Marh 8, 2005	1 Year
3	Shield Room	-	3m X 7m RHS	SIPAI/T – J07002	Nov. 10, 2004	1 Year

3.3 Test Setup



Note:
— means "power line"
— means "signal line"

3.4 Test Configuration

The Conducted Powerline Measurement was proceeded in a shielded room.

The EUT was connected to AC power source through an Artificial Mains Network (A.M.N.), which provides a 50 ohm, standardized RF impedance for the measured equipment. Other support equipment was powered by another AMN.

The EUT was placed on a 1m×1.5m×0.8m wooden table and keep 40 centimeters from the wall of the earthed shielded room, which was considered as Ground Reference Plane(GRP), and kept at least 80 centimeters from any other earthed conducting surface. The EUT was placed at a distance of 80 centimeters from the AMN's, and connected thereto by a unshielded lead of 1 meter in length.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition.

The frequency range from 450 kHz to 30 MHz was checked.

The bandwidth of Test Receiver ESCS 30 was set at 10 kHz.
Both 120V and 277V operation conditions were tested

After scanned by automatic peak mode, the frequency producing the max. level was reexamined using the detector function set to the CISPR Quasi-peak mode by manual.

The EUT, support equipment and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was maximized by switching power lines,

varying the mode of operation or resolution, clock or data exchange speed, if applicable, whichever determined the worst-case emission.

During measurement, EUT was set at “Lighting” mode.

Test Results were listed in sec. 3.6.

3.5 Test Procedure

- 3.5.1 Establish the test setup as sec. 3.3.
- 3.5.2 Set the Electronic ballast to “Lighting” mode.
- 3.5.3 Proceed the measurement

3.6 Test Results

Pass Fail

3.6.1 Measurement environment

Temperature : 22.7 °C Relative Humidity : 53 %

3.6.2 Data table

All emissions not listed below are too low against the prescribed limits.

Emission level = Reading level + Insertion loss + Cable loss

Since the test software will automatically add the insertion loss and cable loss to the reading level, only the emission level was listed in the test report. The highest six points were chose automatically through software by its compare the pre-scanned graph to the limit.

Model: SER-24

Frequency (MHz)	Emission Level dB(µV)	Limits Db (µV)	Margin (dB)	Test Line
0.50	31.96	48.00	-16.04	N
0.63	30.48	48.00	-17.52	L
0.74	27.60	48.00	-20.40	N
1.01	30.19	48.00	-17.81	L
1.56	23.64	48.00	-24.36	N
28.71	24.29	48.00	-23.71	L

Model: SER-15

Frequency (MHz)	Emission Level dB(µV)	Limits dB(µV)	Margin (dB)	Test Line
0.51	30.48	48.00	-17.52	N
0.75	26.36	48.00	-21.64	N
0.86	33.89	48.00	-14.11	N
1.80	33.46	48.00	-14.54	L
6.79	31.05	48.00	-16.95	L
29.40	28.58	48.00	-19.42	N

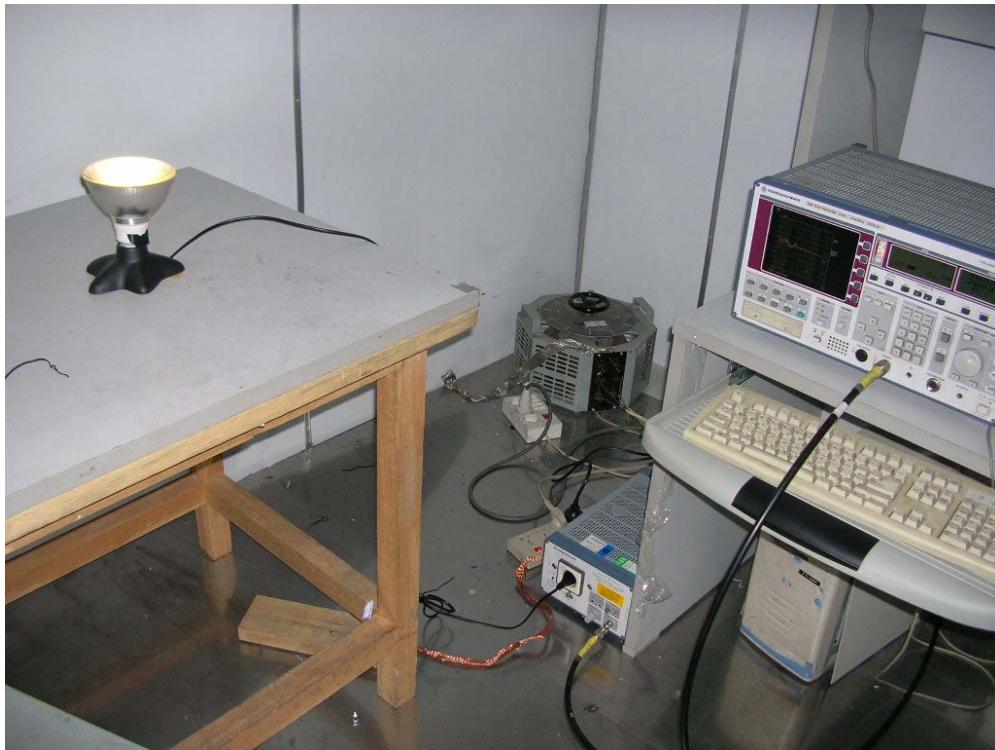
Note:

1. All data listed are Quasi-Peak value.

3.7 Measurement Uncertainty

Measurement uncertainty of conducted power line test is $\pm 3.34\text{dB}$
The measurement uncertainty is given with a confidence of 95%, $k=2$.

4. Photograph of Test setup



5. Photograph of EUT



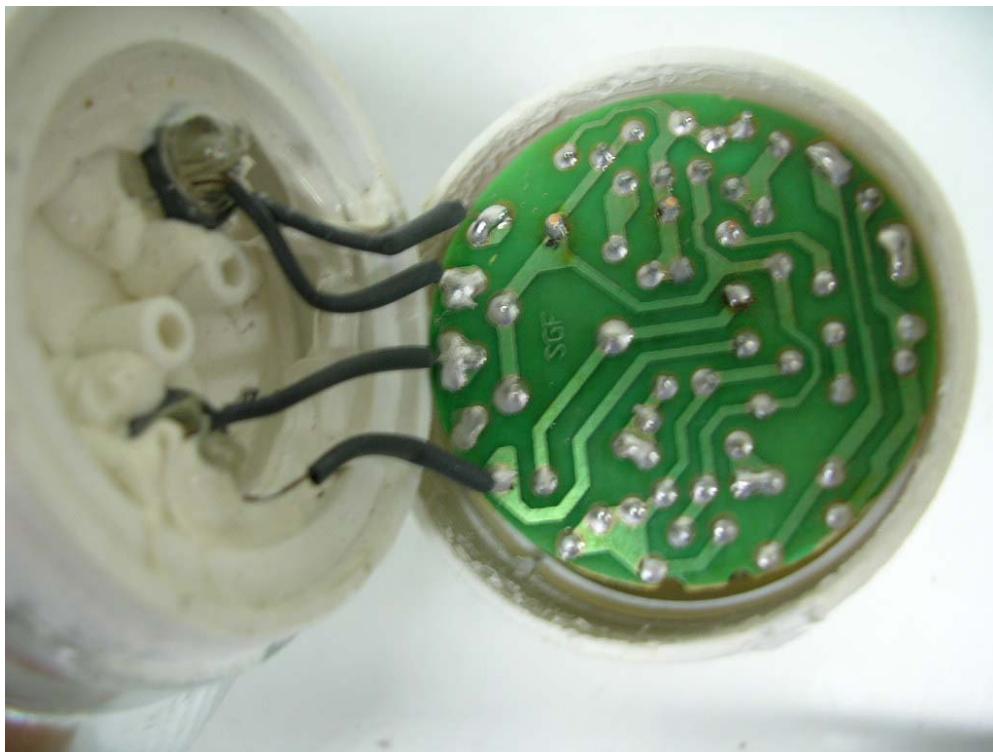
SER-24



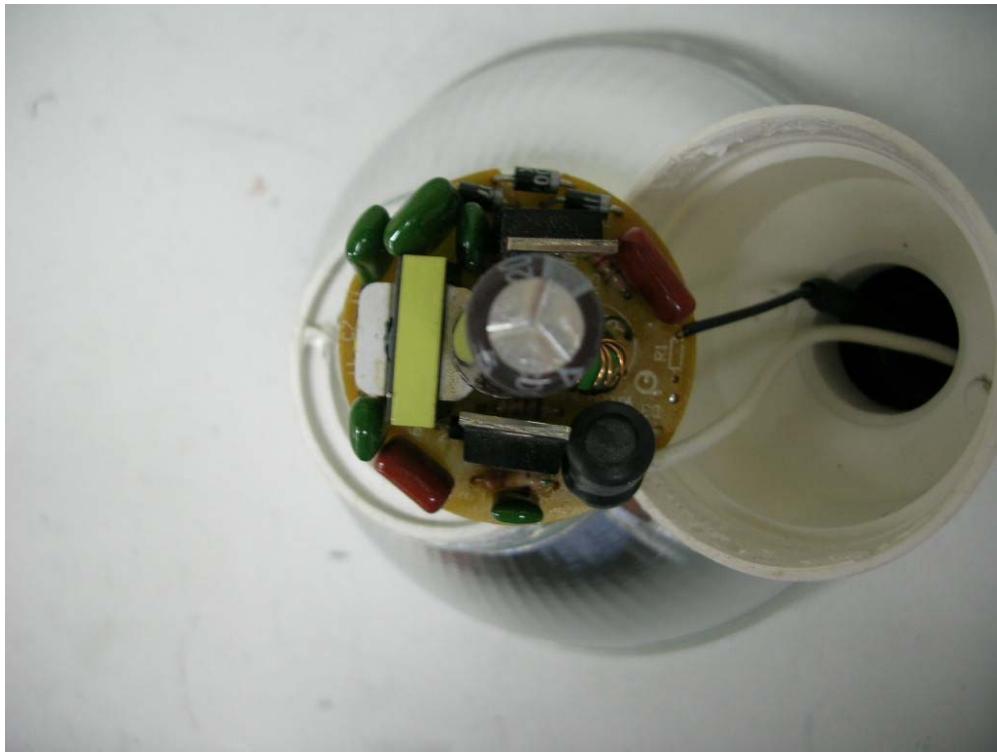
SER-15



SER-24



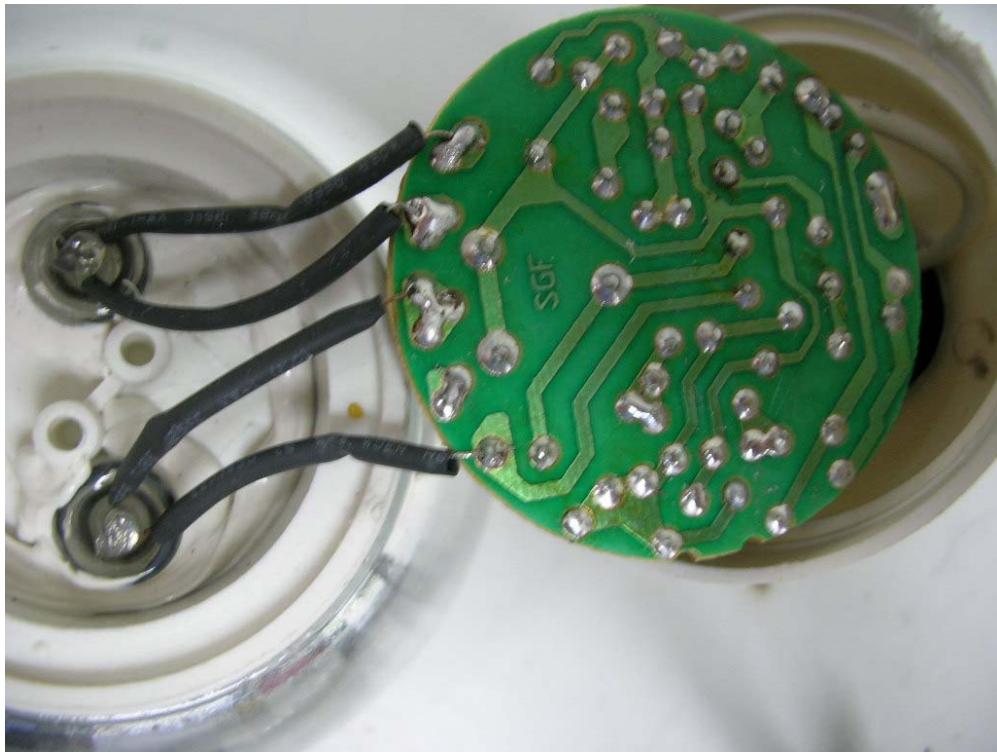
SER-24



SER-15



SER-15



SER-15

