

Application for FCC Identifier
On Behalf of
Suzhou Sanex Electronics Co., Ltd.
(FCC ID OUMSMX120)

Summary

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

47CFR Part 18: 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 (2000): 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 *Shanghai Institute of Process Automation Instr.* 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 Test: October 23, 2001

Date of Issue: November 7, 2001

Prepared by:

Steve li (Engineer)

Report Approved by:

Ole Stiling (Chief Engineer)

Description of Test Facility

Name of Firm : Shanghai Institute of Process Automation Instr.
Site Location : 103 Cao Bao Road, Shanghai 200233, China
Name of contact : Miss. Ying (first name) Wang (last name)
Phone : 86-21-64368180 ext. 574
Fax : 86-21-64847454
E-mail address : emclab@sipai.com
FCC Registration number: 96504

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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. Yingping (first name) Shen (last name)

Telephone: 86-512-7248473

Telefax: 86-512-7246087

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: SMI-9, SMI-11, SMI-13, SMI-15, SMR-9, SMR-11, SMR-13, SMR-15

Serial number: 01*1066-001, 01*1066-002, 01*1066-003, 01*1066-004
01*1066-005, 01*1066-006, 01*1066-007, 01*1066-008

Date of sample receipt: 2001-10-9

Date of test: 2001-10-23

Rating: 120V~, 60Hz
9W for SMI-9, SMR-9, 11W for SMI-11, SMR-11
13W for SMI-13, SMR-13, 15W for SMI-15, SMR-15

2.2 Additional information about the EUT

The family of product contains 8 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 Conduction Limit

For Consumer Equipment

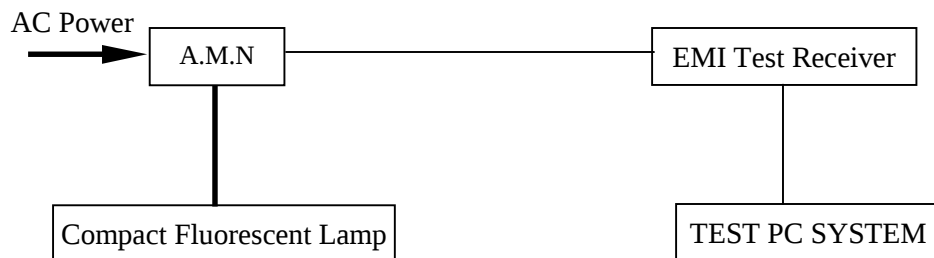
Frequency (MHz)	Maximum RF line voltage measured with a 50uH/50 ohm LISN	
	(μV)	dB(μV)
0.45 – 2.51	250	48
2.51 – 3.0	3000	69.5
3.0 – 30	250	48
RF Line Voltage dB(μV) = 20 lg RF Line Voltage (μV)		

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	2001-2-8	1 Year
2	A.M.N.	Rohde & Schwarz	ESH3-Z5	825640/018	2001-3-5	1 Year
3	Shielded Room	--	3m×7m - RHS	SIPAI/T-J07002	2000.11.10	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 measuring equipment.

The EUT was placed 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.

In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to MP-5/1986 during measurement.

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

The bandwidth of Test Receiver ESCS 30 was set at 10 kHz.

During measurement, EUT was set at " LIGHTING ON " 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 Lighting on the EUT to its stable operation.
- 3.5.3 Proceed the measurement.

3.6 Test Results

☒ Pass ☐ Fail

3.6.1 Measurement environment

Temperature : 22.7 °C

Relative Humidity : 47 %

3.6.2 Test Personnel

Name: Ying Wang Title: Engineer
Tel: 86-21-64368180 ext. 574
Fax: 86-21-64847454
E-mail address: emclab@sipai.com

3.6.3 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 : SMI-9

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.4785	30.80	48.00	17.20
	0.5640	33.90	48.00	14.10
	0.7440	33.00	48.00	15.00
VB	0.6090	26.20	48.00	21.80
	0.6585	29.90	48.00	18.10
	24.5085	11.30	48.00	36.70

Note:

- All data listed are Quasi-Peak value.
- The worst emission was founded at 0.5640 MHz with emission level 33.90 dBμV, at line VA.

Model : SMI-11

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.4605	33.80	48.00	14.20
	0.5100	31.90	48.00	16.10
VB	0.5370	40.60	48.00	7.40
	0.5865	32.40	48.00	15.60
	0.6270	30.10	48.00	17.90
	0.6855	34.50	48.00	13.50

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.5370 MHz with emission level 40.60 dBμV, at line VB.

Model : SMI-13

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.4515	32.30	48.00	15.70
	0.6360	30.60	48.00	17.40
VB	0.5460	32.40	48.00	15.60
	0.6180	35.80	48.00	12.20
	0.7305	23.30	48.00	24.70
	0.7710	25.60	48.00	22.40

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.6180 MHz with emission level 35.80 dBμV, at line VB.

Model : SMI-15

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.4785	31.50	48.00	16.50
	0.5190	32.70	48.00	15.30
	0.6180	30.70	48.00	17.30
	0.7035	31.30	48.00	16.70
VB	0.5550	29.60	48.00	18.40
	0.6630	28.20	48.00	19.80

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.5190 MHz with emission level 32.70 dBμV, at line VA.

Model : SMR-9

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.5280	31.60	48.00	16.40
	0.7080	44.30	48.00	3.70
	0.7935	41.80	48.00	6.20
VB	0.5595	31.60	48.00	16.40
	0.6045	28.20	48.00	19.80
	0.6450	33.40	48.00	14.60

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.7080 MHz with emission level 44.30 dBμV, at line VA.

Model : SMR-11

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.4605	33.80	48.00	14.20
	0.5100	31.90	48.00	16.10
VB	0.5370	40.60	48.00	7.40
	0.5865	32.40	48.00	15.60
	0.6270	30.10	48.00	17.90
	0.6855	34.50	48.00	13.50

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.5370 MHz with emission level 40.60 dBμV, at line VB.

Model : SMR-13

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.4875	30.60	48.00	17.40
	0.5415	30.00	48.00	18.00
	0.6675	30.20	48.00	17.80
	0.8340	32.60	48.00	15.40
VB	0.6270	34.90	48.00	13.10
	0.7395	34.10	48.00	13.90

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.6270 MHz with emission level 34.90 dBμV, at line VB.

Model : SMR-15

Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.4650	34.80	48.00	13.20
	0.5460	40.00	48.00	8.00
	0.5730	45.69	48.00	2.21
	0.6270	38.50	48.00	9.50
	0.6585	22.60	48.00	25.40
	0.7485	32.30	48.00	15.70

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.5730 MHz with emission level 45.69 dBμV, at line VA.

Test Engineer: Wang ying
Ying Wang

Date of test: 2001-10-23

3.7 Measurement Uncertainty

Measurement uncertainty of conducted power line test is 3.34dB
The measurement uncertainty is given with a confidence of 95%