

FCC PART 18

EMI MEASUREMENT AND TEST REPORT

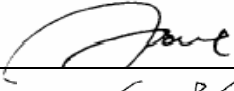
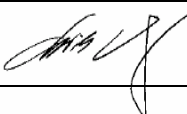
For

Jiangxi Superson Technology Lighting Co., Ltd.

Supersun Park, Wannian Industrial Zone, Jiangxi Province, China

FCC ID: WL820091201

Dec 05, 2009

Product Name:	CFL
Model No:	SPS T3 13GUS/ SPS T3 18GUS/ SPS T3 23GUS/ SPS T3 26GUS/ SPS T3 27GUS/ SPS T3 18S/ SPS T3 23S/ SPS T3 26S/ SPS T3 13S12
Sample	
Received Date:	Nov 14, 2009
Test	
Performed Date:	Dec 03, 2009
Test Engineer:	Paul Tan 
Reviewed By:	Chris Zeng 
Prepared By:	BEST Test Service Shenzhen Co., Ltd. C, 310-316, Huameiju Business Center, 82 Block, Baoan District, Shenzhen, China TEL: +86-755-28236006 FAX: +86-755-28236249 Email: certification@bestcert.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The Jiangxi Superson Technology Lighting Co., Ltd.'s model SPS T3 13GUS/ SPS T3 18GUS/ SPS T3 23GUS/ SPS T3 26GUS/ SPS T3 27GUS/ SPS T3 18S/ SPS T3 23S/ SPS T3 26S/ SPS T3 13S12 or the "EUT" as referred to in this report is CFL, rated input voltage: AC 120V/60Hz, operation frequency between 40 KHz to 60 KHz.

Model	SPS T3 13GUS	Electrical Power	13W
Model	SPS T3 13S12	Electrical Power	13W
Model	SPS T3 18GUS	Electrical Power	18W
Model	SPS T3 18S	Electrical Power	18W
Model	SPS T3 23GUS	Electrical Power	23W
Model	SPS T3 23S	Electrical Power	23W
Model	SPS T3 26S	Electrical Power	26W
Model	SPS T3 26GUS	Electrical Power	26W
Model	SPS T3 27GUS	Electrical Power	27W

The test data was only good for the test sample. It may have deviation for other test sample.

Note: SPS T3 13GUS and SPS T3 13S12 have the same circuit diagram/PCB Layout, only the lamp base is different, one is E12, the other is GU24, so they have the same EMI performance; SPS T3 18GUS and SPS T3 18S have the same circuit diagram/PCB Layout, only the lamp base is different, one is GU 24, the other is E26, so they have the same EMI performance; SPS T3 26GUS and SPS T3 26S have the same circuit diagram/PCB Layout, only the lamp base is different, one is GU 24, the other is E26, so they have the same EMI performance; SPS T3 23GUS and SPS T3 23S have the same circuit diagram/PCB Layout, only the lamp base is different, one is GU 24, the other is E26, so they have the same EMI performance. SPS T3 26GUS and SPS T3 27GUS is same product, different model number is only for market use only. So we select SPS T3 13GUS/ SPS T3 18GUS/ SPS T3 23GUS/ SPS T3 26GUS to test and result is included in this report.

Objective

The following test report is prepared on behalf of Jiangxi Superson Technology Lighting Co., Ltd.. in accordance with Part 2, Subpart J, and Part 18, Subparts A, B, and C of the Federal Communication Commissions rules and regulations.

The objective of the manufacturer is to demonstrate compliance with FCC Part 18 limit requirements for Industrial, Scientific, and Medical Equipment.

Related Submittal(s)/Grant(s)

No Related Submittals.

Test Methodology

All measurements contained in this report were conducted with MP-5 1986, FCC Method of measurements of radio noise emission from Industrial, Scientific and Medical equipments.

Test Facility

All measurement facilities used to collect the data are located at Huatongwei Building , Keji Rd, 12 S, high-Tech Park, Nanshan District, Shenzhen, China.

The sites are constructed in conformance with the requirements of ANSI C63.7/634 and CISPR 22, The site was accredited by FCC (662850), A2LA(2243.01) and CNAL (L1225)

SYSTEM TEST CONFIGURATION

Justification

The EUT was tested under normal mode as used by a common (typical) user.

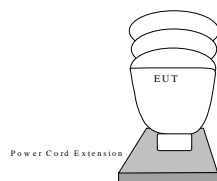
Schematics / Block Diagram

N/A.

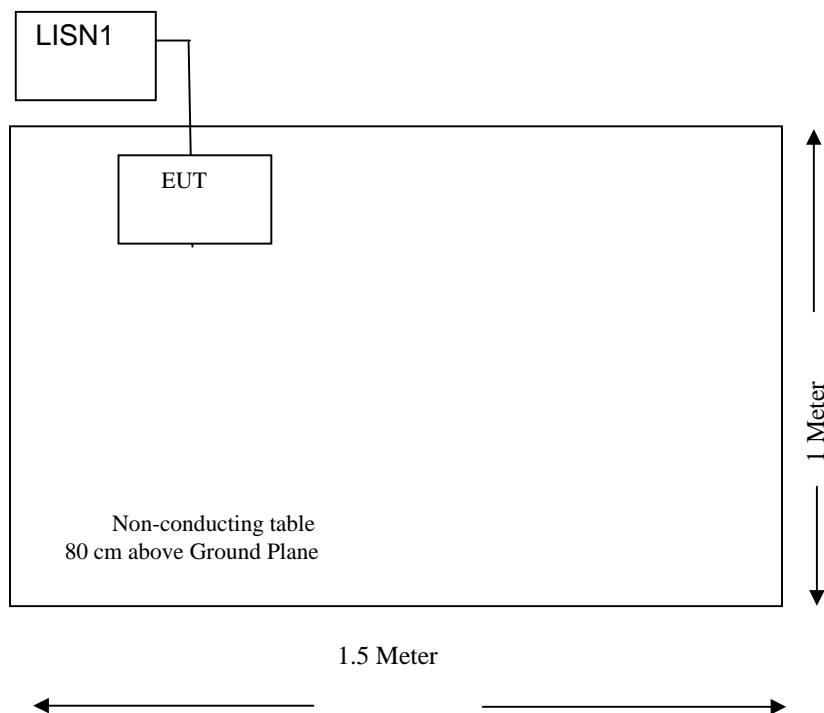
Equipment Modifications

No modifications were made by BEST TEST SERVICE (SHENZHEN) CO., LTD. to ensure the EUT to comply with the application limits and requirements.

Configuration of Test System



Test Setup Block Diagram



CONDUCTED EMISSIONS TEST DATA

Applicable Standard

For the following equipment, when designed to be connected to the public utility (AC) power line the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies shall not exceed the limits in the following tables. Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal using a 50 μ H/50 ohms line impedance stabilization network (LISN).

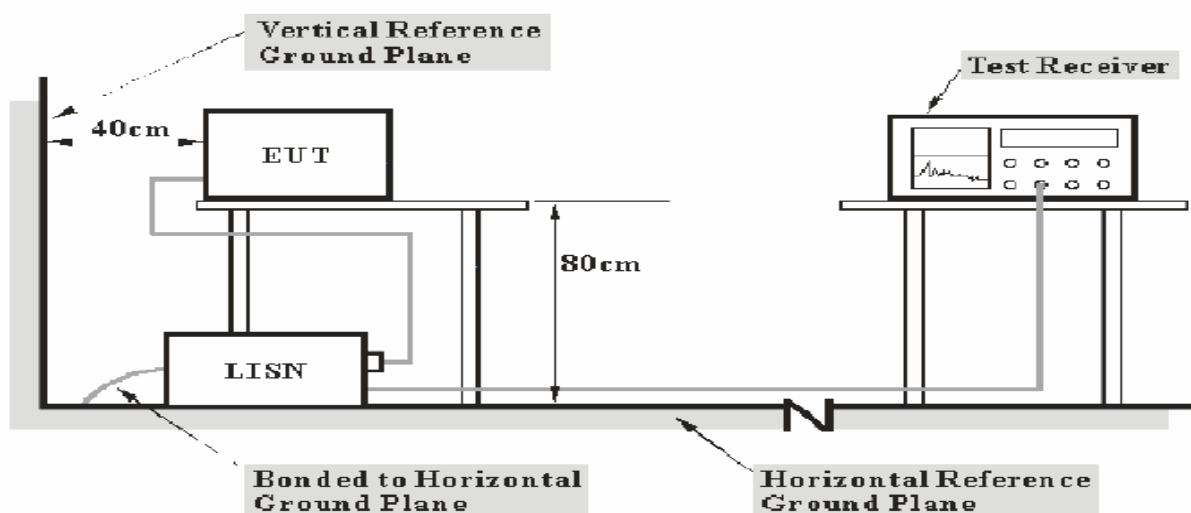
Frequency Range (MHz)	Max RF Voltage (μ V)	Max RF Voltage (dBuV)
Non-consumer equipment		
0.45 to 1.6	1,000	60.0
1.6 to 30	3,000	69.0
Consumer equipment		
0.45 to 2.51	250	48.0
2.51 to 3.0	3000	69.0
3.0 to 30	250	48.0

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMI. The factors contributing to uncertainties are EMI Test Receiver, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMI Measurements, the best estimate of the uncertainty of any conducted emissions measurement at BEST TEST SERVICE (SHENZHEN) CO., LTD. is ± 2.0 dB.

EUT Setup



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5 measurement procedure. The specification used was the FCC Part 18 limits.

The EUT was connected to the power cord extension and placed on the left of the back edge on the test table.

The power cord extension was connected with 120 VAC/60 Hz power source.

Test Equipments

Manufacturer	Description	Model	Serial Number	Cal. Date	Cal. Due. Date
ROHDE & SCHWARZ	EMI TEST RECEIVER	ESCS30	100038	2009-08-05	2010-08-05
ROHDE & SCHWARZ	L.I.S.N	ESH2-Z5	100028	2009-08-05	2010-08-05
ROHDE & SCHWARZ	Pulse Limiter	ESHSZ2	100044	2009-08-05	2010-08-05

Statement of traceability: BEST attests that all calibrations have been performed per the CNAL /A2LA requirements, traceable to NIM China

Test Procedure

During the conducted emission test, the power cord of the power cord extension was connected to the auxiliary outlet of the first LISN.

Maximizing procedure was performed on the six (6) highest emissions to ensure that the EUT is compliant with all installation combination.

All data was recorded in the peak detection mode. Quasi-peak readings were only performed when an emission was found to be marginal (within 4 dB μ V of specification limits). Quasi-peak readings are distinguished with a "**Qp**".

The EUT was tested under the normal modes during the final qualification test to represent the worst-case results.

Summary of Test Results

Pass

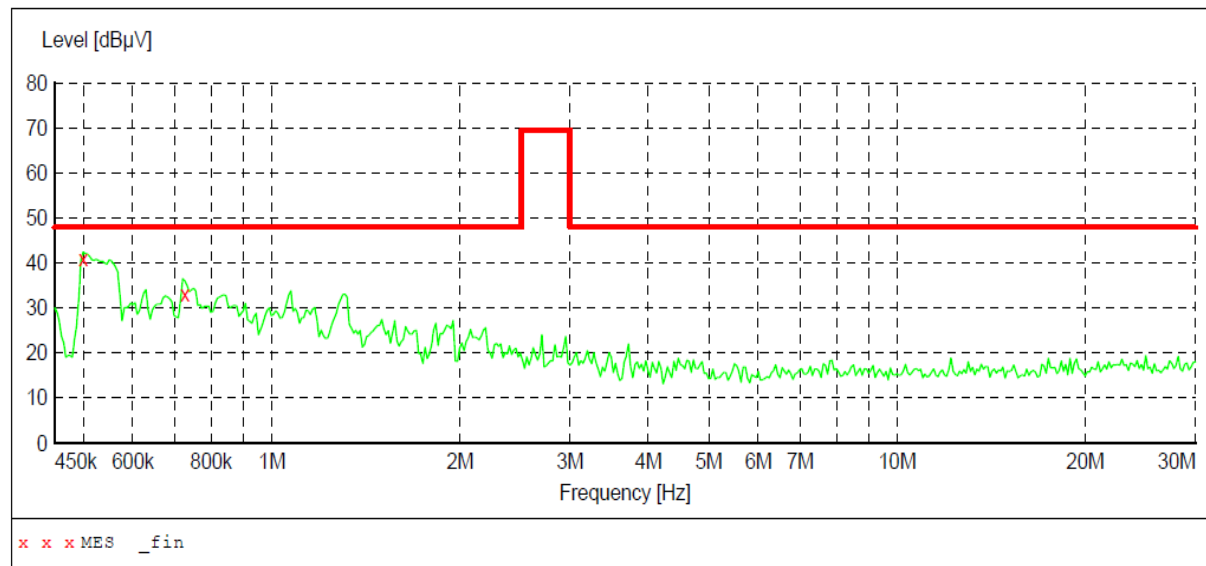
The EUT complied with the FCC 18 Conducted margin for industry, scientific and medical device, and with the worst margin reading of:

Conducted Emissions Test Data and Plots**BEST TEST SERVICE SHENZHEN CO.,LTD****Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 13GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

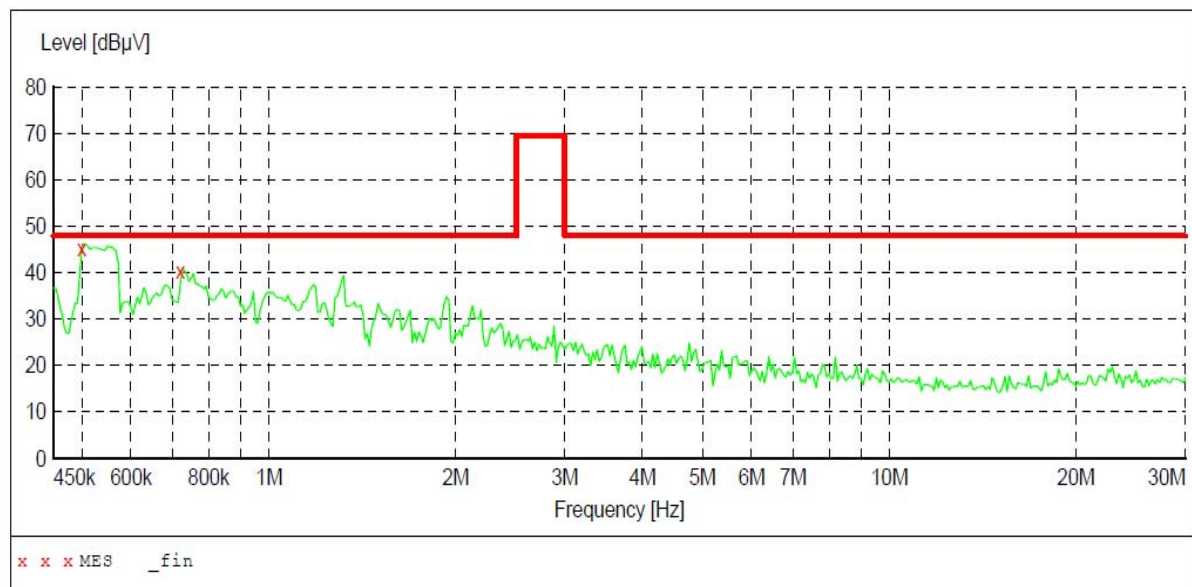
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.499605	40.90	10.0	48	7.0	QP	N	GND
0.726560	33.10	10.0	48	14.8	QP	N	GND

BEST TEST SERVICE SHENZHEN CO.,LTD**Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 13GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

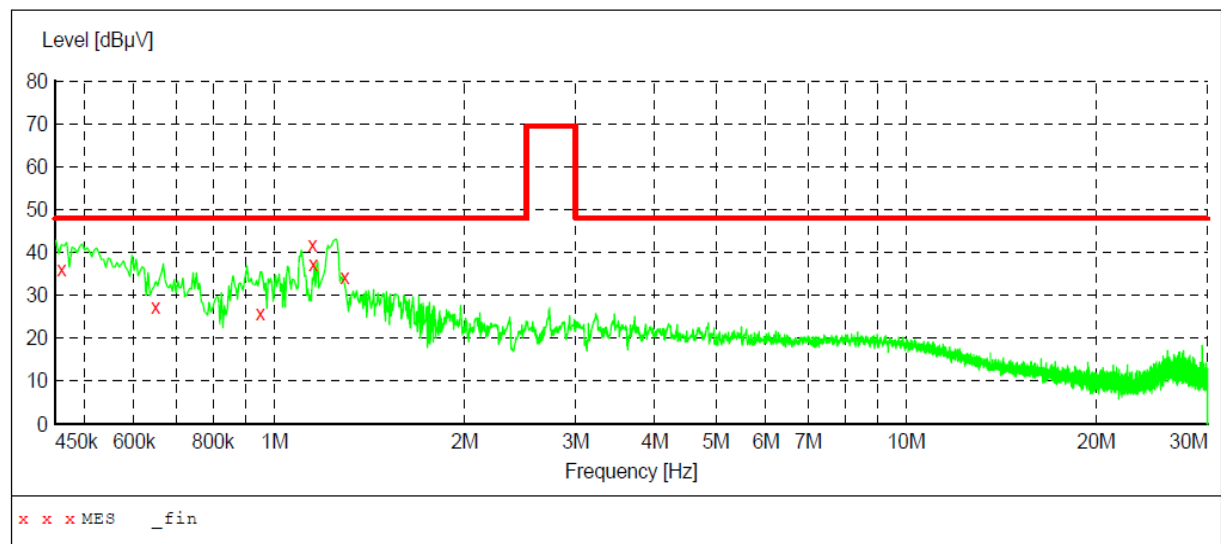
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.499610	45.20	10.0	48	2.7	QP	L1	GND
0.720800	40.30	10.0	48	7.6	QP	L1	GND

BEST TEST SERVICE SHENZHEN CO.,LTD**Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 18GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

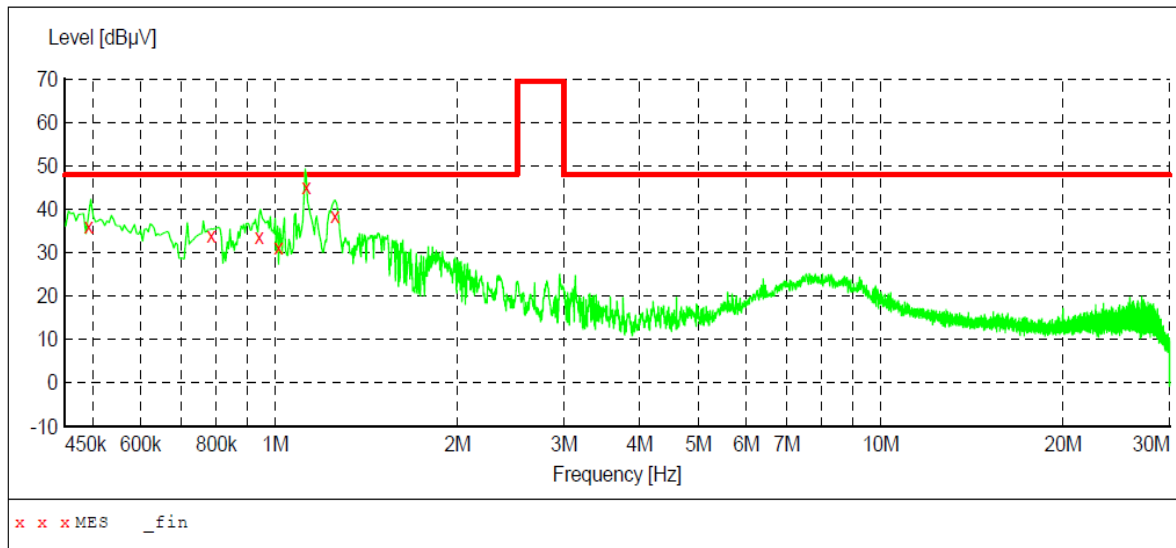
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.460500	36.10	10.2	48	11.8	QP	N	GND
0.649500	27.30	10.2	48	20.6	QP	N	GND
0.951000	25.90	10.3	48	22.0	QP	N	GND
1.149000	41.80	10.3	48	6.1	QP	N	GND
1.153500	37.40	10.3	48	10.5	QP	N	GND
1.293000	34.40	10.3	48	13.5	QP	N	GND

BEST TEST SERVICE SHENZHEN CO.,LTD**Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 18GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

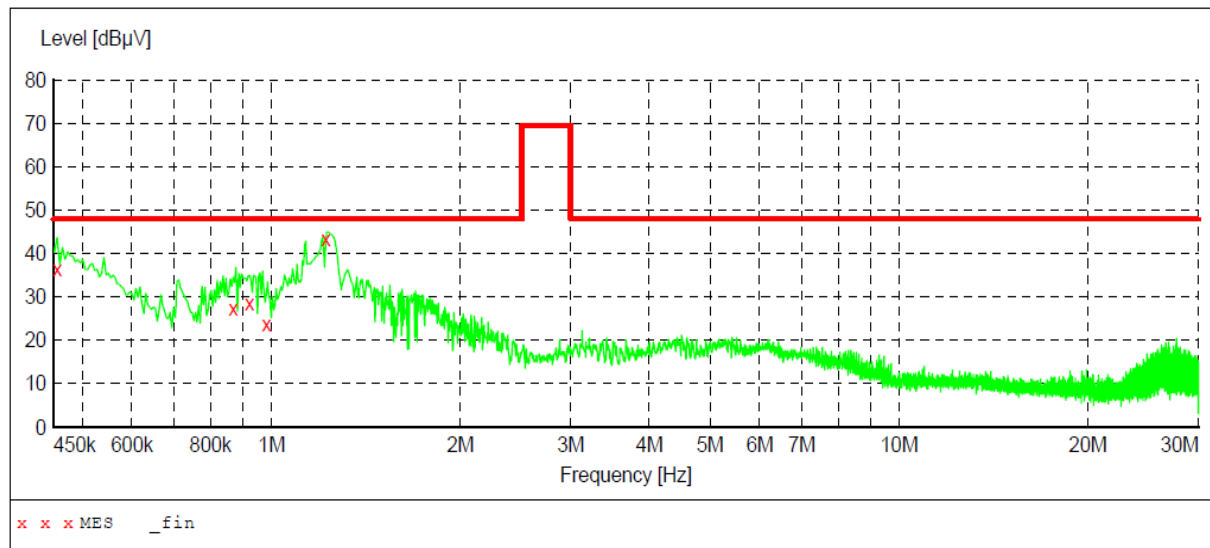
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.492000	36.10	10.2	48	11.8	QP	L1	GND
0.784500	34.00	10.2	48	13.9	QP	L1	GND
0.942000	33.70	10.3	48	14.2	QP	L1	GND
1.014000	31.20	10.3	48	16.7	QP	L1	GND
1.126500	45.20	10.3	48	2.7	QP	L1	GND
1.257000	38.50	10.3	48	9.4	QP	L1	GND

BEST TEST SERVICE SHENZHEN CO.,LTD**Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 23GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M) FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

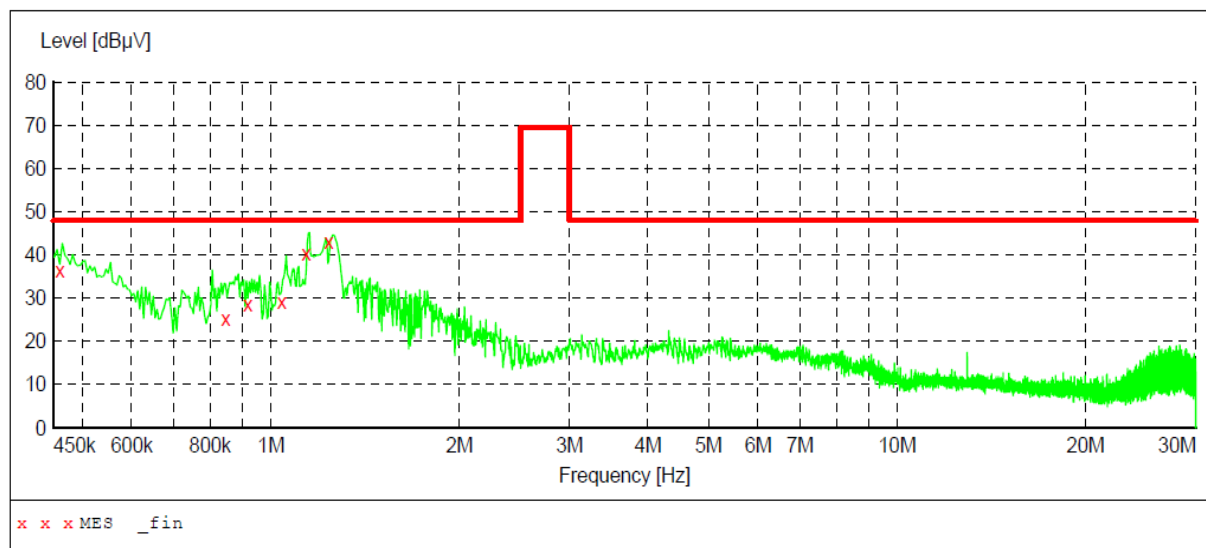
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.456000	36.50	10.2	48	11.4	QP	N	GND
0.870000	27.40	10.2	48	20.5	QP	N	GND
0.924000	28.50	10.3	48	19.4	QP	N	GND
0.982500	23.60	10.3	48	24.3	QP	N	GND
1.221000	43.40	10.3	48	4.5	QP	N	GND

BEST TEST SERVICE SHENZHEN CO.,LTD**Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 23GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

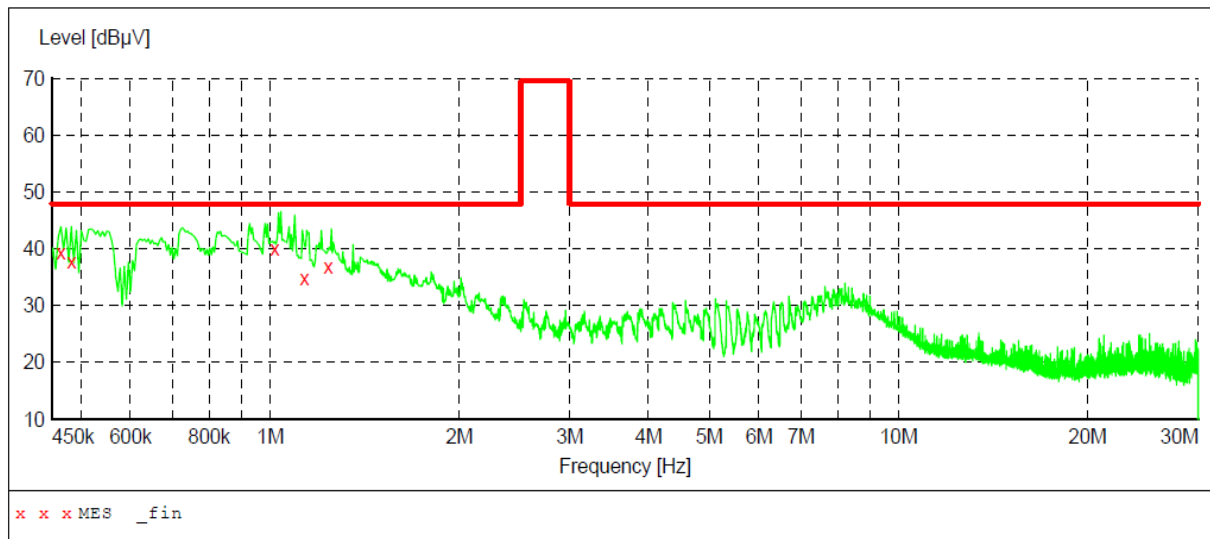
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.460500	36.50	10.2	48	11.4	QP	L	GND
0.847500	25.40	10.2	48	22.5	QP	L	GND
0.919500	28.50	10.3	48	19.4	QP	L	GND
1.041000	29.10	10.3	48	18.8	QP	L	GND
1.140000	40.50	10.3	48	7.4	QP	L	GND
1.239000	43.20	10.3	48	4.7	QP	L	GND

BEST TEST SERVICE SHENZHEN CO.,LTD**Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 26GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

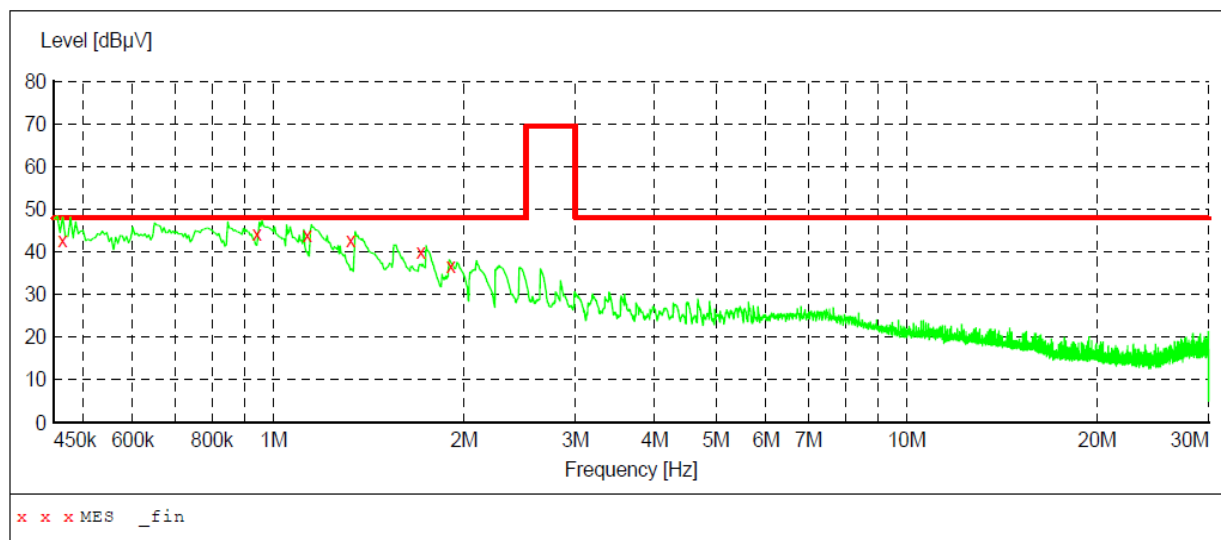
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.465000	39.40	10.2	48	8.5	QP	L1	GND
0.483000	37.90	10.2	48	10.0	QP	L1	GND
1.018500	40.10	10.3	48	7.8	QP	L1	GND
1.135500	34.90	10.3	48	13.0	QP	L1	GND
1.239000	36.90	10.3	48	11.0	QP	L1	GND

BEST TEST SERVICE SHENZHEN CO.,LTD**Voltage Mains Test FCC PART 18**

EUT: CFL M/N:SPS T3 26GUS
Manufacturer: Supersun
Operating Condition: ON
Test Site: 3# SHIELDED ROOM
Operator: DENSON
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 12/3/2009

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.465000	42.80	10.2	48	5.1	QP	N	GND
0.942000	44.40	10.3	48	3.5	QP	N	GND
1.131000	44.10	10.3	48	3.8	QP	N	GND
1.324500	42.70	10.3	48	5.2	QP	N	GND
1.711500	40.00	10.3	48	7.9	QP	N	GND
1.909500	36.80	10.3	48	11.1	QP	N	GND