

FCC Part 18

Measurement and Test Report

For

Shanghai Mingdai Electrics & Appliance Co., Ltd.

No.338 Huagao Road, Huating Industrial Zone, Jiading District, Shanghai,

China, 201811

FCCID: RSPMSA25W

Test Standards: FCC Part 18

Product Description: CFL

Tested Model: MSA25W

Report No.: STR13018379I

Tested Date: 2013-01-16 to 2013-01-19

Issued Date: 2013-01-24

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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by SEM.Test Compliance Service Co., Ltd

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Shanghai Mingdai Electrics & Appliance Co., Ltd.
Address of applicant: No.338 Huagao Road, Huating Industrial Zone,
Jiading District, Shanghai, China, 201811

Manufacturer: Shanghai Mingdai Electrics & Appliance Co., Ltd.
Address of manufacturer: No.338 Huagao Road, Huating Industrial Zone,
Jiading District, Shanghai, China, 201811

General Description of EUT

Product Name:	CFL
Trade Name:	Mindy
Model No.:	MSA25W
Adding Models:	MS18W, MS23W, MSGS18W, MSA20W

Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance, model name and power of others models listed in the report are different from main-test model MSA25, but the circuit and the electronic construction do not change. Test data is gathered from the product which has a maximum power.

Technical Characteristics of EUT

Rated Voltage:	AC120V, 60Hz
Rated Current:	/
Operating Frequency:	40~60kHz

1.2 Test Standards

The following report is prepared on behalf of Shanghai Mingdai Electrics & Appliance Co., Ltd. in accordance with FCC Part 18, Subpart C, and section 18.307 and 18.311 of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 18, Subpart C, and section 18.307 and 18.311 of the Federal Communication Commissions rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

- **FCC – Registration No.: 994117**

SEM.Test Compliance Services Co., Ltd. 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 and the Registration is 994117.

- **Industry Canada (IC) Registration No.: 7673A**

The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Electronics Service Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, P.R.C (518101)

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	Lighting	AC120V,60Hz

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
AC Power Cable	1.5	Unshielded	Without Core

2. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§ 18.307 (c)	Conducted Emission	Compliant
§ 18.305 (c)	Radiated Emission	N/A

N/A: not applicable

3. CONDUCTED EMISSION

3.1 Standard Applicable

According to FCC 18.307(c), 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:

Frequency (MHz)	Maximum RF line voltage measured with a 50 μ H/50 ohm LISN (μ V)
Non-consumer equipment	
0.45 to 1.6	1,000
1.6 to 30	3,000
Consumer equipment:	
0.45 to 2.51	250
2.51 to 3.0	3,000
3.0 to 30	250

3.2 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

3.3 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2012-03-28	2013-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2012-03-28	2013-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2012-03-28	2013-03-27

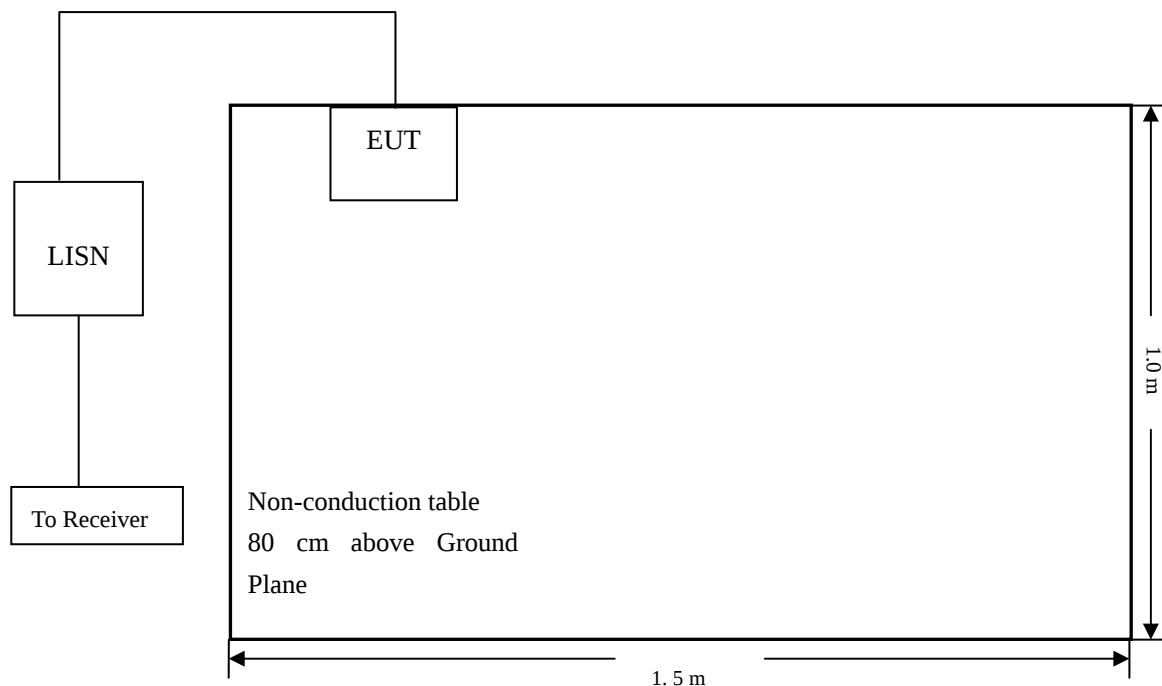
3.4 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 18.307 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

3.5 Basic Test Setup Block Diagram



3.6 Environmental Conditions

Temperature:	25° C
Relative Humidity:	54%
ATM Pressure:	1016 mbar

3.7 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency 450 kHz
 Stop Frequency..... 30 MHz
 Sweep Speed Auto
 IF Bandwidth..... 10 kHz
 Quasi-Peak Adapter Bandwidth 9 kHz
 Quasi-Peak Adapter Mode Normal

3.8 Summary of Test Results/Plots

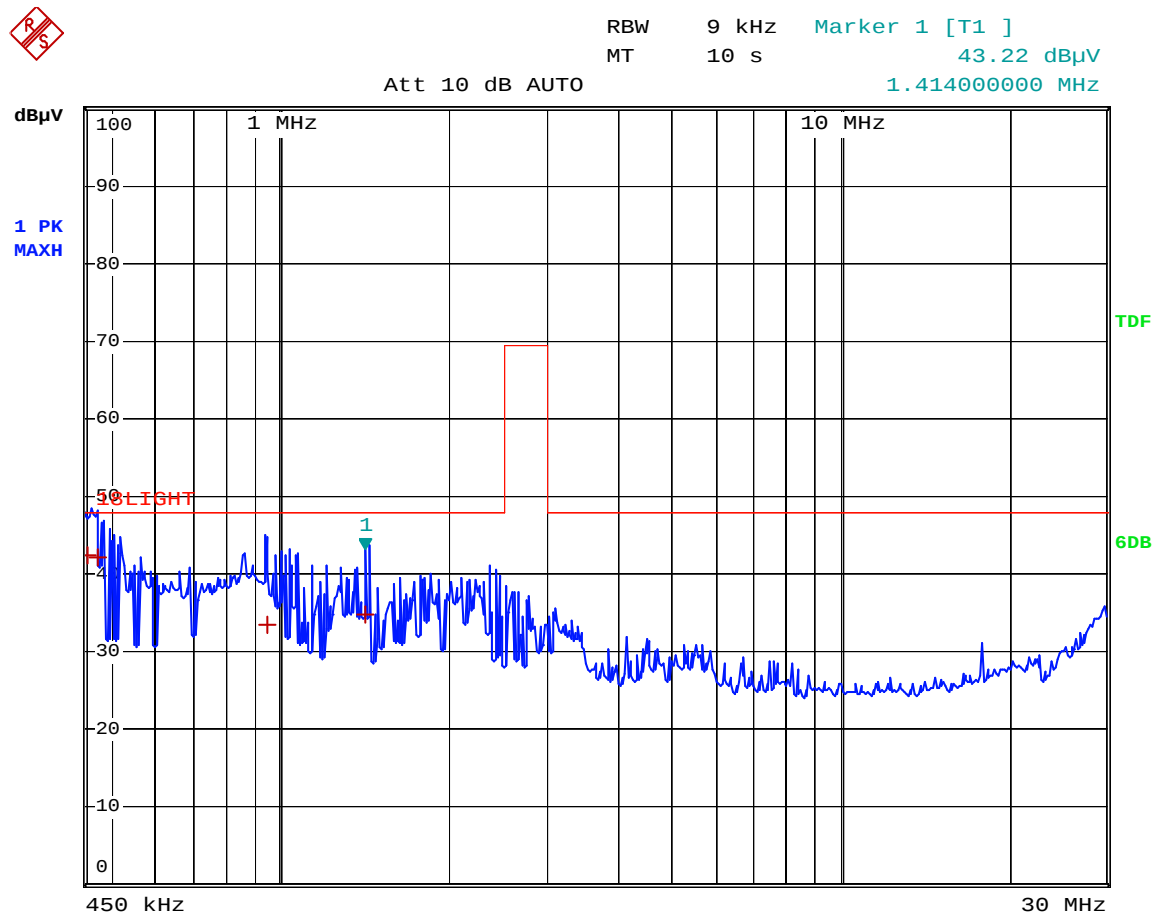
According to the data in this section, the EUT complied with the FCC Part 18C Conducted margin for a RF lighting device, with the *worst* margin reading of:

-5.57 dB at 0.458 MHz in the **Neutral, QP** detector, 0.15-30MHz

Plot of Conducted Emissions Test Data

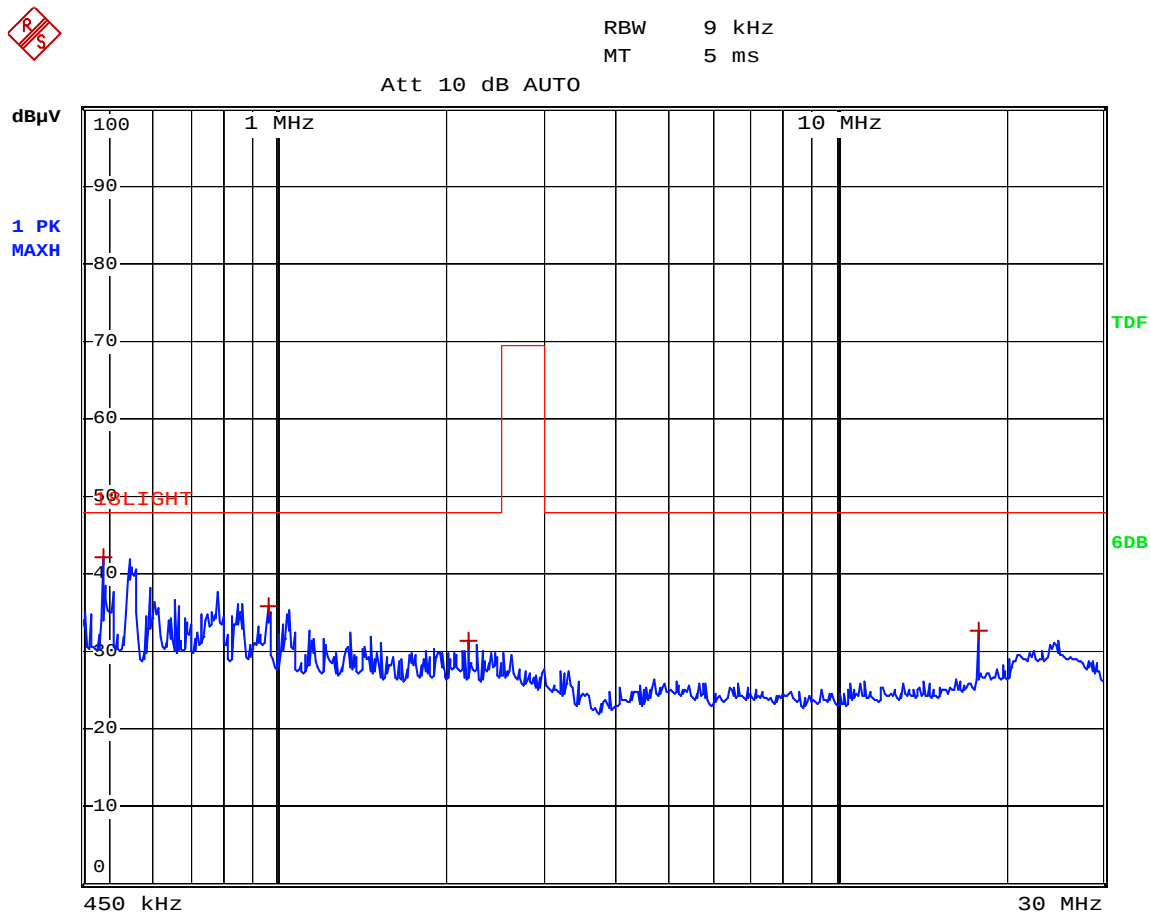
EUT: CFL
Tested Model: MSA25W
Operating Condition: Lighting
Comment:

Test Specification: Neutral



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	18LIGHT		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Quasi Peak	458 kHz	42.42	-5.57
1 Quasi Peak	470 kHz	42.14	-5.86
1 Quasi Peak	946 kHz	33.55	-14.44
1 Quasi Peak	1.414 MHz	34.77	-13.22

Test Specification: Line



EDIT PEAK LIST (Prescan Results)			
Trace1:	18LIGHT		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Max Peak	486 kHz	41.99	-6.00
1 Max Peak	966 kHz	35.85	-12.14
1 Max Peak	2.202 MHz	31.46	-16.53
1 Max Peak	17.99 MHz	32.61	-15.38

***** END OF REPORT *****