FCC Part 18
Measurement and Test Report

For

Shanghai Mingdai Electics & Appliance Co., Ltd.

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

China, 201811

FCC ID:RSPMSA15W

Test Standards:	FCC Part 18
Product Description:	CFL
Tested Model:	MSA15W
Report No.:	STR13018378I
Tested Date:	2013-01-16 to 2013-01-19
Issued Date:	2013-01-24
Tested By:	Seven Song / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Shanghai Mingdai Electics & Appliance Co., Ltd.
Address of applicant:	No.338 Huagao Road, Huating Industrial Zone, Jiading District, Shanghai, China, 201811
Manufacturer:	Shanghai Mingdai Electics & 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.:	MSA15W
Note: The test data is gathered from a production sample, provided by the manufacturer.	

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 Electics & 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 uH/50 ohm LISN (uV)
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 $\pm$ 2.88 dB.

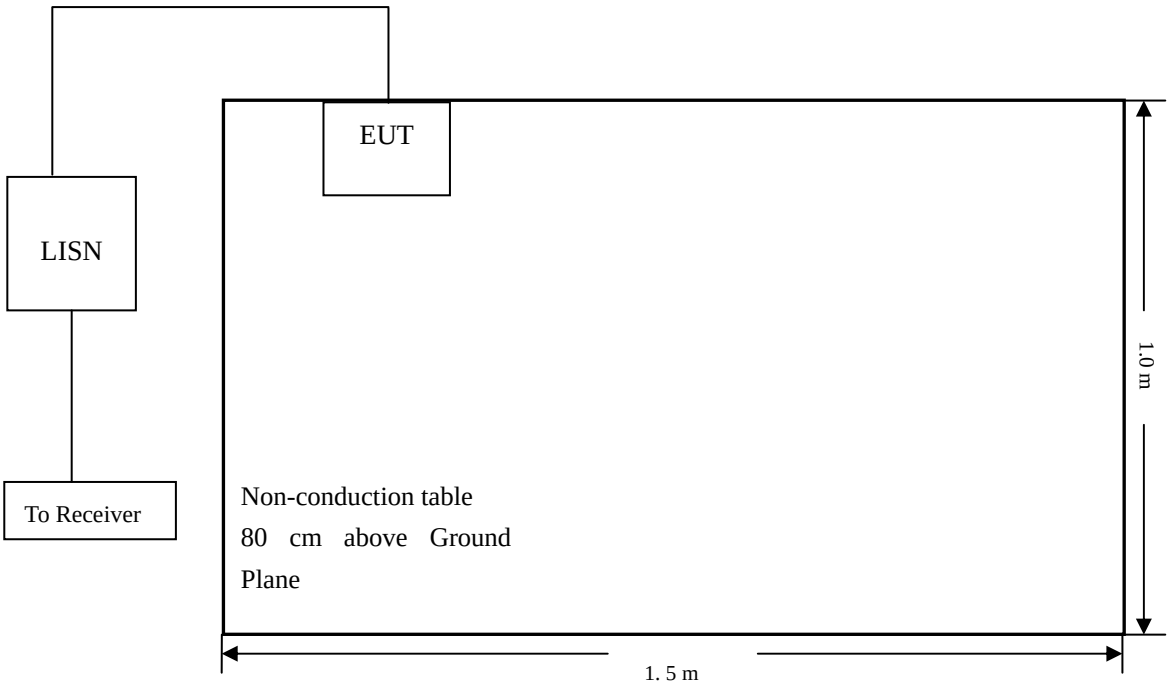
3.3 Test Equipment List and Details

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:

-1.86 dB at **0.454 MHz** in the **Neutral**, **QP** detector, 0.15-30MHz

Plot of Conducted Emissions Test Data

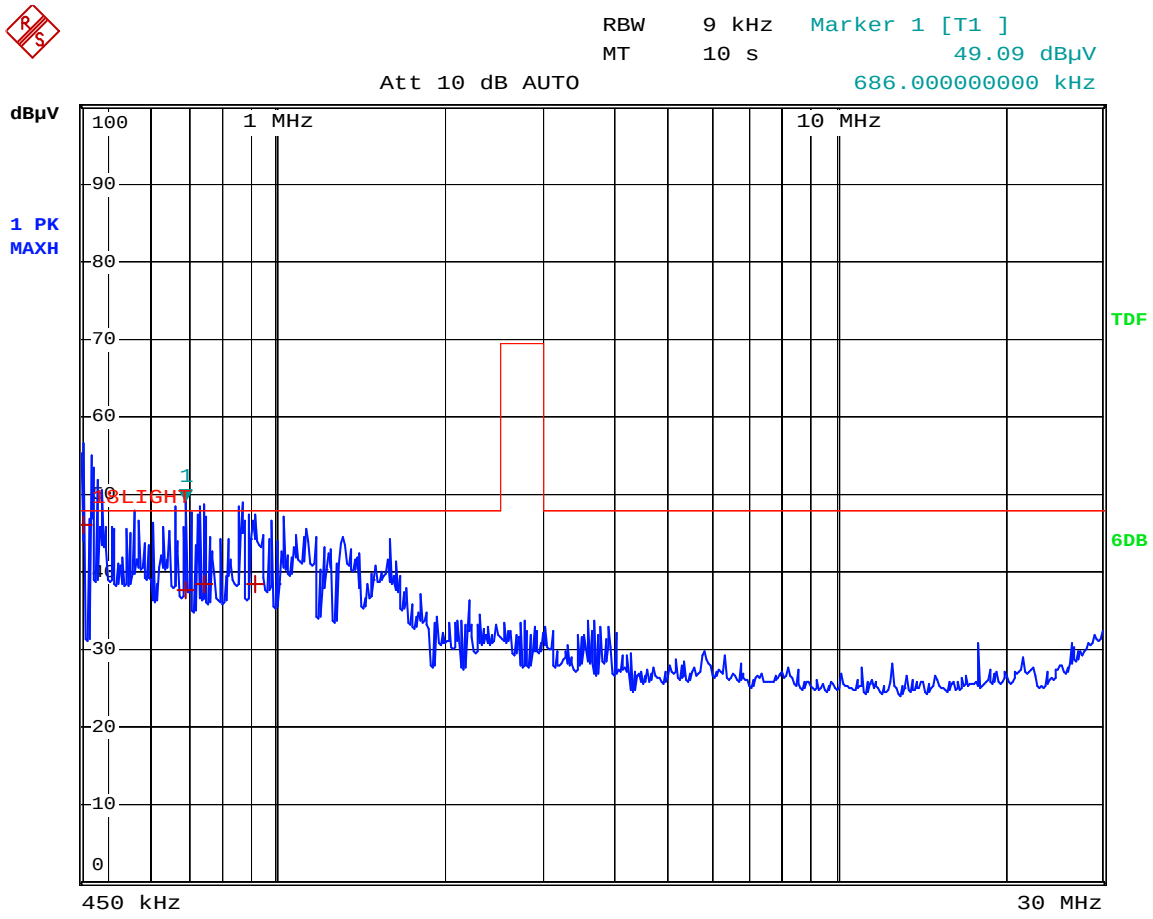
EUT: *CFL*

Tested Model: *MSA15W*

Operating Condition: *Lighting*

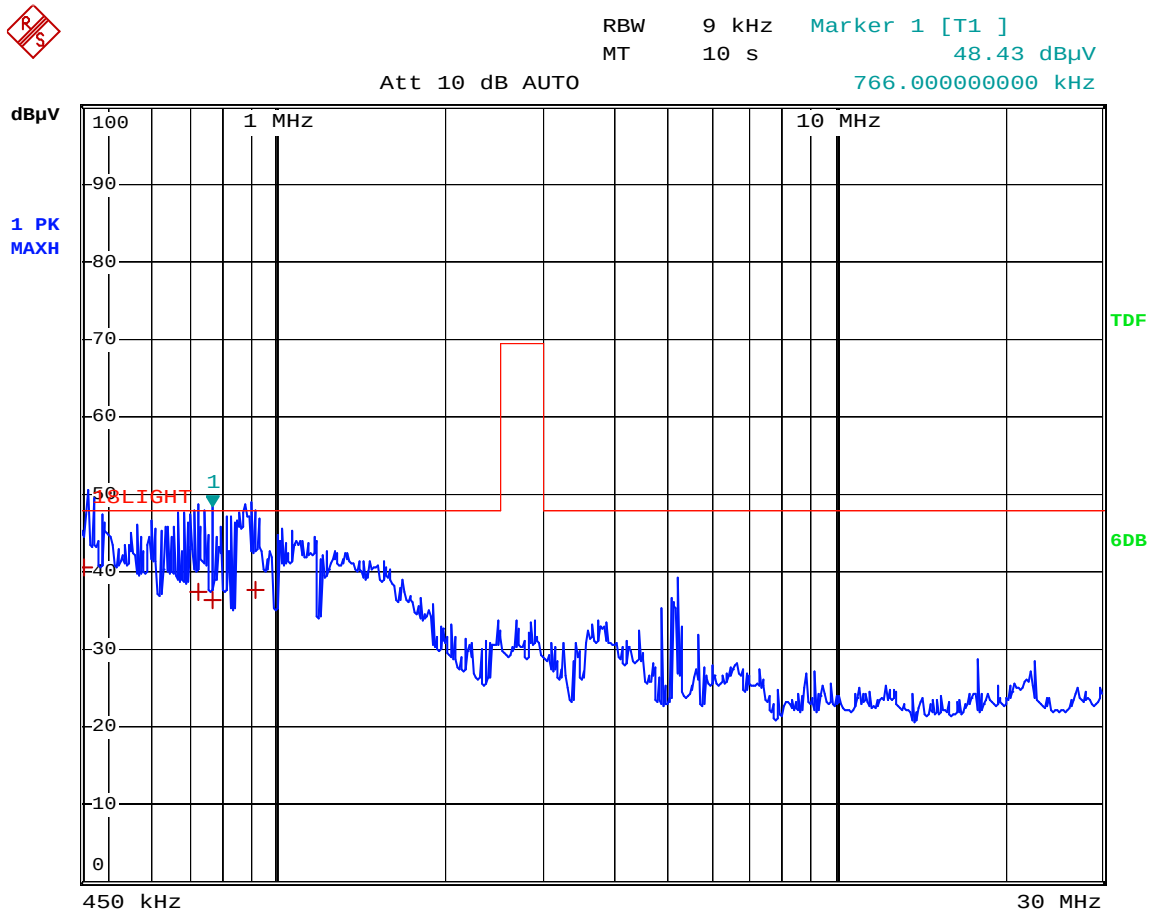
Comment:

Test Specification: *Neutral*



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	18LIGHT		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	454 kHz	46.13	-1.86
1 Quasi Peak	686 kHz	37.72	-10.28
1 Quasi Peak	738 kHz	38.42	-9.57
1 Quasi Peak	914 kHz	38.49	-9.50

Test Specification: *Line*



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	18LIGHT		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	458 kHz	40.45	-7.54
1 Quasi Peak	722 kHz	37.39	-10.61
1 Quasi Peak	766 kHz	36.43	-11.56
1 Quasi Peak	918 kHz	37.62	-10.37

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