

# FCC PART 18 MEASUREMENT AND TEST REPORT

For

**Jiangxi Elegant Lighting Co., Ltd.**

No.713, Xihuo Street, Guixi City, Jiangxi, China

**FCC ID: VGZGYR20GYA**

<b>Report Type:</b> Original Report	<b>Product Type:</b> CFL
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<b>Report Number:</b> RSZ08062754	
<b>Report Date:</b> 2008-09-12	
<b>Reviewed By:</b> EMC Manager	<i>Green Xu</i>
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\* This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk “\*” (Rev.2)

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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

The *Jiangxi Elegant Lighting Co., Ltd.*'s model:

GYR207W/GYR209W/GYR2011W/GYG207W/GYA5511W/GYA6013W or the "EUT" as referred to in this report is a CFL which measures proximately as following:

Model	L (cm)	W (cm)	H(cm)
GYR207W	10.5	6.0	6.0
GYR209W	11.5	6.0	6.0
GYR2011W	11.5	6.0	6.0
GYG207W	10.5	6.0	6.0
GYA5511W	11.5	5.5	5.5
GYA6013W	11.5	5.5	5.5

rated input voltage: AC 120V/60Hz.

\* All measurement and test data in this report was gathered from production sample serial number: 0806560 (Assigned by BACL, Shenzhen). The EUT was received on 2008-06-27.

### Objective

The following test report is prepared on behalf of *Jiangxi Elegant 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 determine compliance with FCC Part 18 limits.

### Related Submittal(s)/Grant(s)

No related submittal(s).

### Test Methodology

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



NVLAP LAB CODE 200707-0

The current scope of accreditations can be found at

<http://ts.nist.gov/Standards/scopes/2007070.htm>.

## SYSTEM TEST CONFIGURATION

### Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

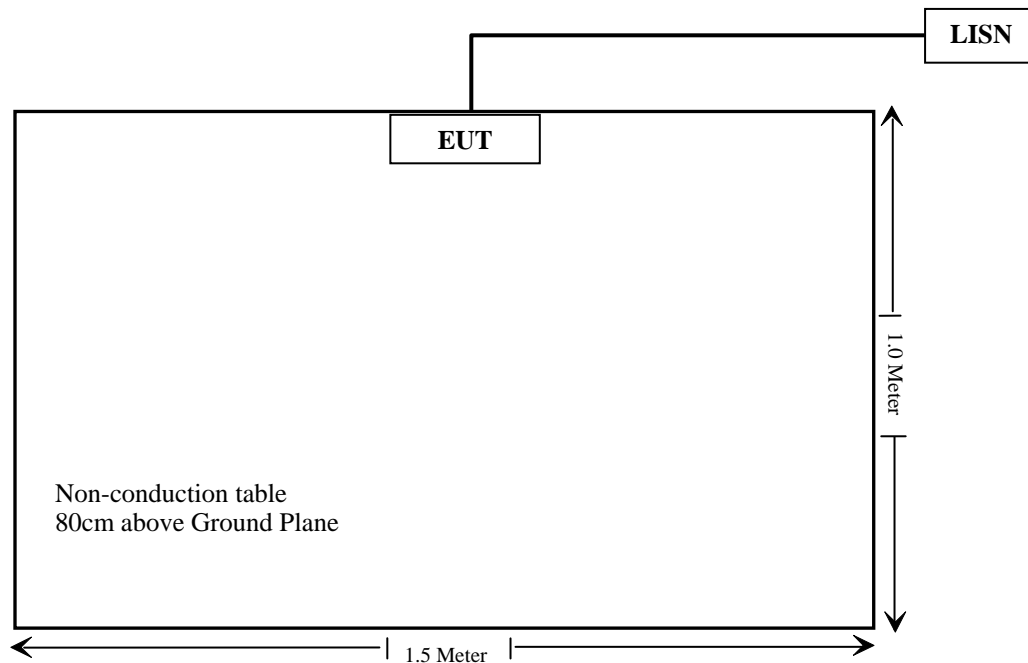
### Equipment Modifications

No modifications were made to the unit tested.

### Configuration of Test Setup



### Block Diagram of Test Setup



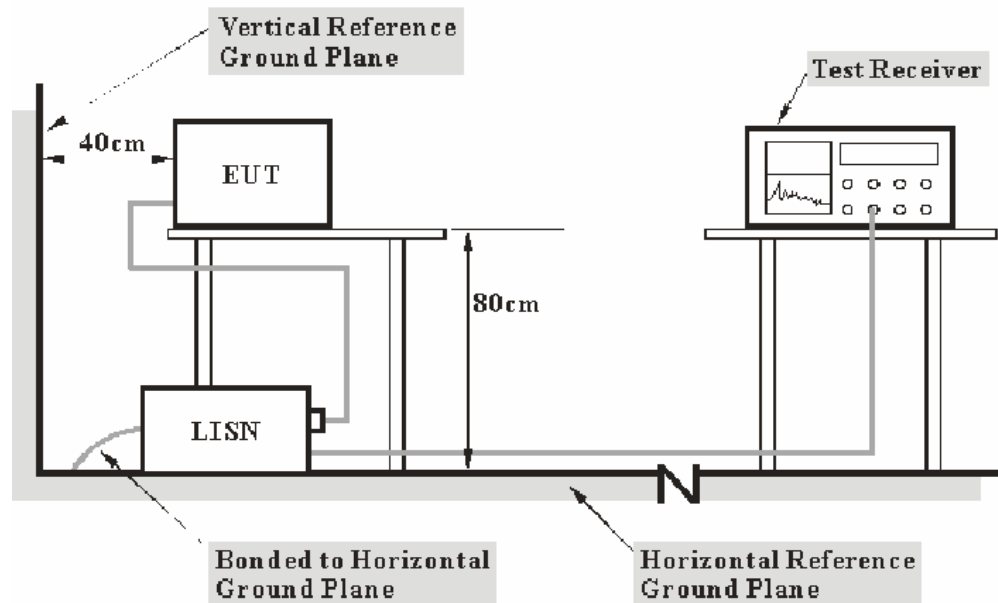
## CONDUCTED EMISSIONS

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen). is  $\pm 2.4$  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: 1986 measurement procedure. Specification used was with the FCC Part 18 limits.

The EUT was connected to a 120 VAC/ 60Hz power source.

### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 450 kHz to 30 MHz.

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

<u>Frequency Range</u>	<u>IFBW</u>
450 kHz – 30 MHz	9 kHz

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	DE25330	2008-03-25	2009-03-25
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2008-03-25	2009-03-25

\* Com-Power's LISN were used as the supporting equipment.

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen).attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

During the conducted emission test, the EUT power cord was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the peak detection mode.

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 18, with the worst margin reading of:

**7.1 dB** at **1.155 MHz** in the **Line** conductor mode for *GYR207W Model*  
**9.9 dB** at **1.055 MHz** in the **Neutral** conductor mode for *GYR209W Model*  
**6.2 dB** at **5.775 MHz** in the **Line** conductor mode for *GYR2011W Model*  
**10.0 dB** at **0.475/1.055 MHz** in the **Neutral/Line** conductor mode for *GYG207W Model*  
**10.0 dB** at **0.45 MHz** in the **Line** conductor mode for *GYA5511W Model*  
**9.7 dB** at **5.84 MHz** in the **Neutral** conductor mode for *GYA6013W Model*

## Test Data

### Environmental Conditions

<b>Temperature:</b>	25° C
<b>Relative Humidity:</b>	56 %
<b>ATM Pressure:</b>	100.0 kPa

Testing was performed by Allan An on 2008-07-04.

Test Mode: ON

**Model: GYR207W**

Line Conducted Emissions				FCC Part 18	
Frequency (MHz)	Amplitude (dBμV)	Detector (PK/QP)	Conductor (Line/Neutral)	Limit (dBμV)	Margin (dB)
1.155	40.90	Peak	Line	48.00	7.10
0.475	37.90	Peak	Neutral	48.00	10.10
0.980	37.90	Peak	Line	48.00	10.10
0.475	35.30	Peak	Line	48.00	12.70
0.820	34.70	Peak	Neutral	48.00	13.30
1.135	34.70	Peak	Neutral	48.00	13.30
0.980	33.90	Peak	Neutral	48.00	14.10
0.550	33.60	Peak	Neutral	48.00	14.40
0.755	33.50	Peak	Line	48.00	14.50
13.675	27.00	Peak	Line	48.00	21.00
27.345	22.80	Peak	Line	48.00	25.20
14.835	19.70	Peak	Neutral	48.00	28.30

**Model: GYR209W**

Line Conducted Emissions				FCC Part 18	
Frequency (MHz)	Amplitude (dBμV)	Detector (PK/QP)	Conductor (Line/Neutral)	Limit (dBμV)	Margin (dB)
1.055	38.10	Peak	Neutral	48.00	9.90
0.590	35.70	Peak	Neutral	48.00	12.30
0.550	35.10	Peak	Line	48.00	12.90
0.755	34.30	Peak	Neutral	48.00	13.70
0.915	34.00	Peak	Neutral	48.00	14.00
1.060	34.00	Peak	Line	48.00	14.00
0.605	32.30	Peak	Line	48.00	15.70
0.835	32.00	Peak	Line	48.00	16.00
1.240	31.50	Peak	Neutral	48.00	16.50
27.280	25.20	Peak	Line	48.00	22.80
27.770	23.40	Peak	Neutral	48.00	24.60
4.605	21.50	Peak	Line	48.00	26.50



**Model:** GYR2011W

Line Conducted Emissions				FCC Part 18	
Frequency (MHz)	Amplitude (dBμV)	Detector (PK/QP)	Conductor (Line/Neutral)	Limit (dBμV)	Margin (dB)
5.775	41.80	Peak	Line	48.00	6.20
1.740	41.00	Peak	Neutral	48.00	7.00
0.505	33.40	Peak	Line	48.00	14.60
0.900	33.40	Peak	Line	48.00	14.60
0.965	33.00	Peak	Neutral	48.00	15.00
0.505	32.80	Peak	Neutral	48.00	15.20
0.805	32.40	Peak	Line	48.00	15.60
4.770	32.30	Peak	Line	48.00	15.70
0.630	31.90	Peak	Neutral	48.00	16.10
1.190	28.30	Peak	Neutral	48.00	19.70
27.670	24.50	Peak	Neutral	48.00	23.50
27.495	23.30	Peak	Line	48.00	24.70

**Model:** GYG207W

Line Conducted Emissions				FCC Part 18	
Frequency (MHz)	Amplitude (dBμV)	Detector (PK/QP)	Conductor (Line/Neutral)	Limit (dBμV)	Margin (dB)
0.475	38.00	Peak	Neutral	48.00	10.00
1.055	38.00	Peak	Line	48.00	10.00
0.475	36.70	Peak	Line	48.00	11.30
1.135	35.20	Peak	Line	48.00	12.80
1.055	34.00	Peak	Neutral	48.00	14.00
0.550	32.70	Peak	Neutral	48.00	15.30
0.755	31.80	Peak	Neutral	48.00	16.20
1.215	31.70	Peak	Line	48.00	16.30
29.470	29.10	Peak	Neutral	48.00	18.90
27.475	23.10	Peak	Neutral	48.00	24.90
27.120	23.00	Peak	Line	48.00	25.00
13.770	19.90	Peak	Line	48.00	28.10

**Model: GYA5511W**

Line Conducted Emissions				FCC Part 18	
Frequency (MHz)	Amplitude (dBμV)	Detector (PK/QP)	Conductor (Line/Neutral)	Limit (dBμV)	Margin (dB)
0.450	38.00	Peak	Line	48.00	10.00
0.490	37.50	Peak	Line	48.00	10.50
0.490	36.90	Peak	Neutral	48.00	11.10
1.185	35.50	Peak	Neutral	48.00	12.50
0.600	35.30	Peak	Neutral	48.00	12.70
0.590	34.10	Peak	Line	48.00	13.90
1.005	33.80	Peak	Neutral	48.00	14.20
0.720	32.00	Peak	Neutral	48.00	16.00
0.835	31.10	Peak	Line	48.00	16.90
1.190	29.60	Peak	Line	48.00	18.40
27.640	23.00	Peak	Neutral	48.00	25.00
27.120	21.20	Peak	Line	48.00	26.80

**Model: GYA6013W**

Line Conducted Emissions				FCC Part 18	
Frequency (MHz)	Amplitude (dBμV)	Detector (PK/QP)	Conductor (Line/Neutral)	Limit (dBμV)	Margin (dB)
5.840	38.30	Peak	Neutral	48.00	9.70
1.145	38.00	Peak	Line	48.00	10.00
0.990	35.90	Peak	Line	48.00	12.10
5.625	35.80	Peak	Neutral	48.00	12.20
1.180	35.70	Peak	Neutral	48.00	12.30
1.065	35.40	Peak	Neutral	48.00	12.60
0.495	35.40	Peak	Line	48.00	12.60
0.565	33.50	Peak	Neutral	48.00	14.50
22.600	26.40	Peak	Line	48.00	21.60
1.695	24.70	Peak	Line	48.00	23.30
27.585	24.40	Peak	Line	48.00	23.60
29.835	23.40	Peak	Neutral	48.00	24.60

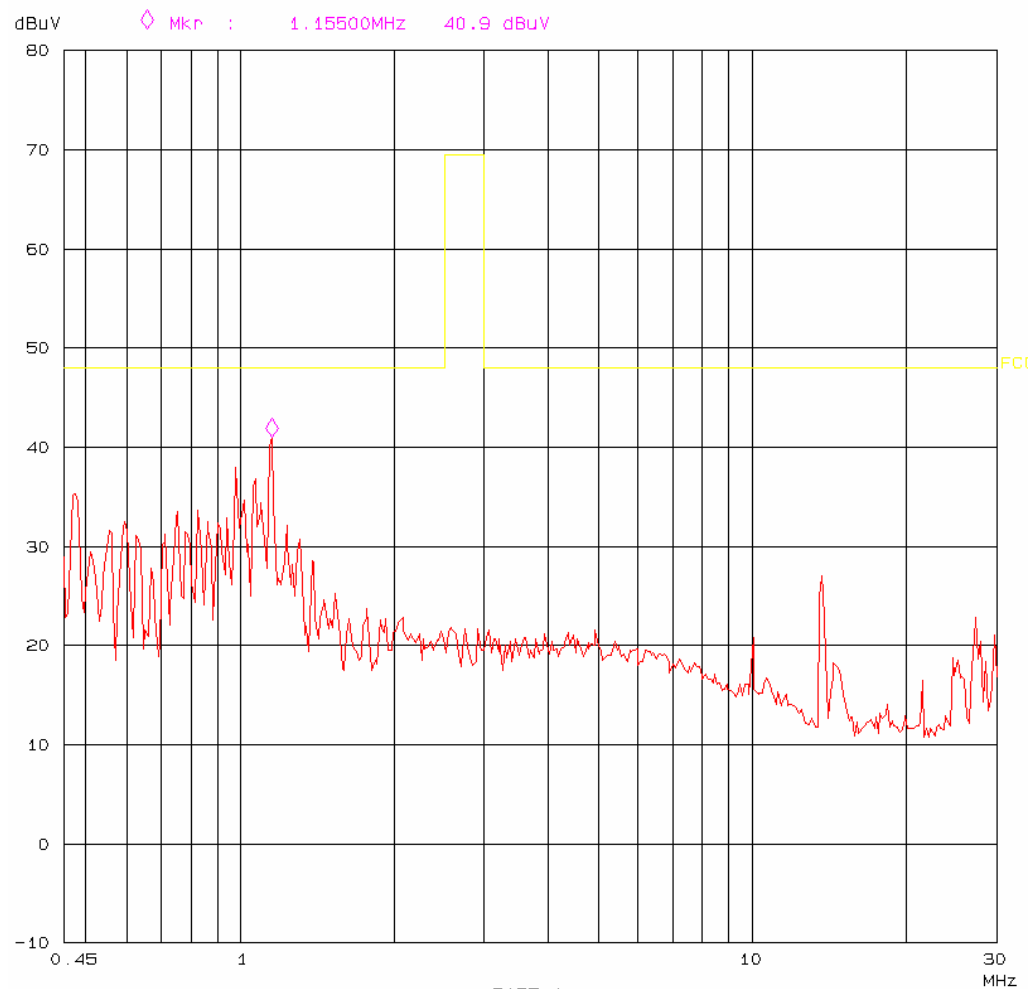
**Plot(s) of Test Data**

Plot(s) of Test Data is presented hereinafter as reference.

**Model: GYR207W**Conduction Emission  
FCC Part 18

01. Jul 08 17:24

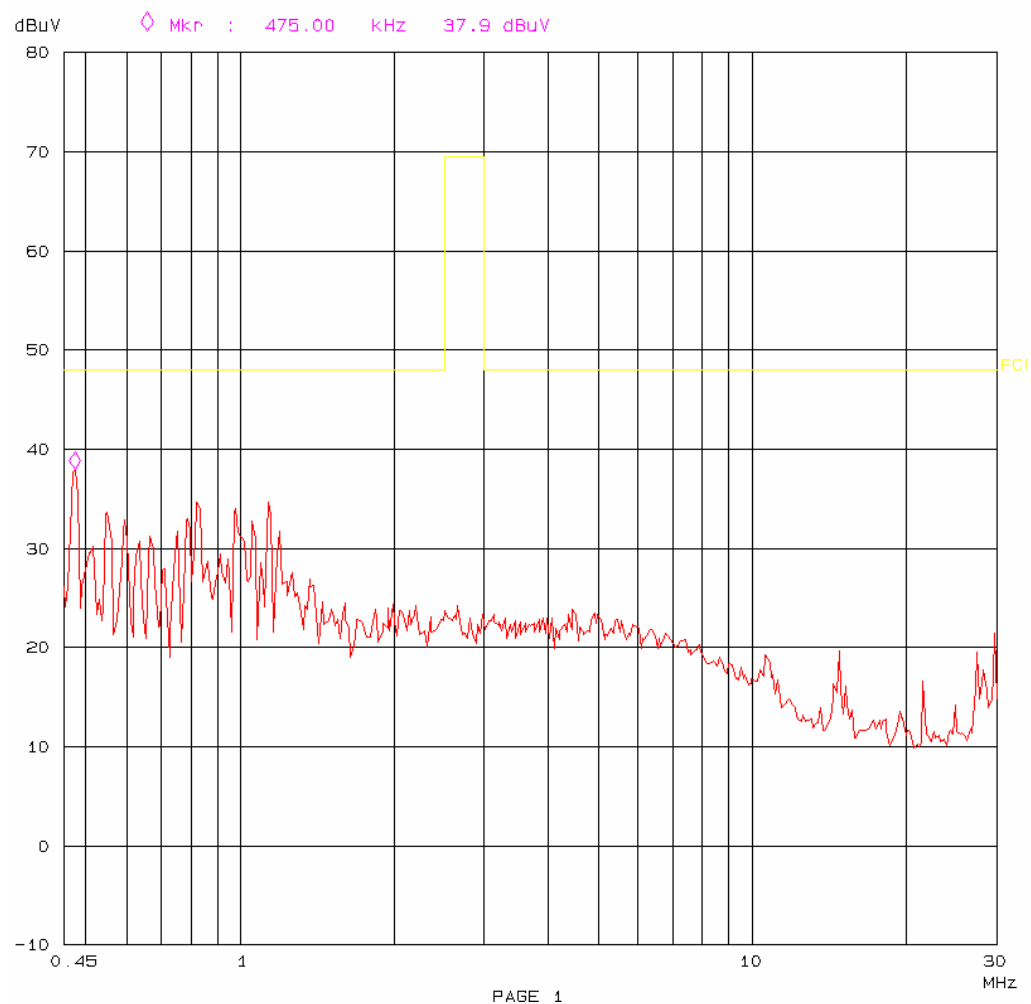
EUT: CFL M/N: GYR207W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC120V/60Hz Line  
Comment: Temp: 25 Hum: 56%



# Conduction Emission FCC Part 18

01. Jul 08 17:10

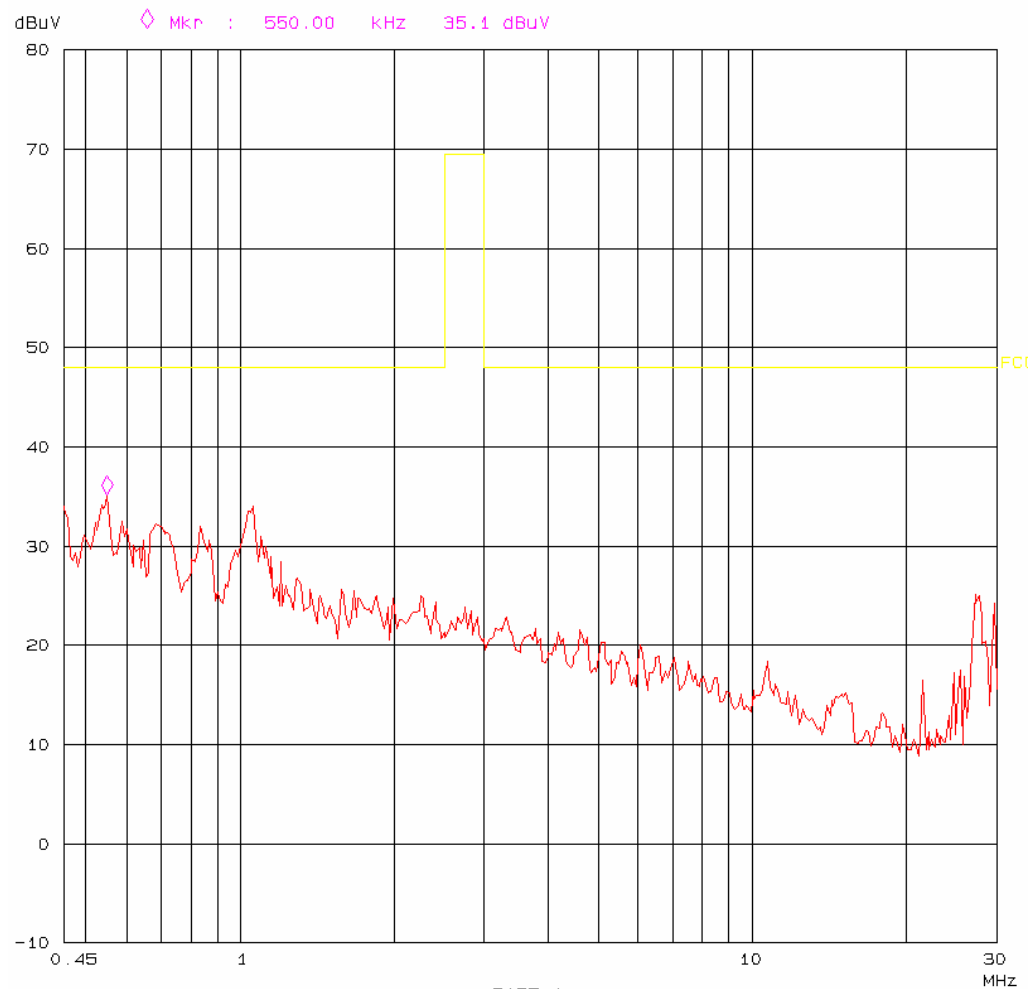
EUT: CFL M/N: GYR207W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC120V/60Hz Neutral  
Comment: Temp: 25 Hum: 56%



**Model: GYR209W**Conduction Emission  
FCC Part 18

02 Jul 08 13:14

EUT: CFL M/N: GYR209W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Line  
Comment: Temp: 25 Hum: 56%

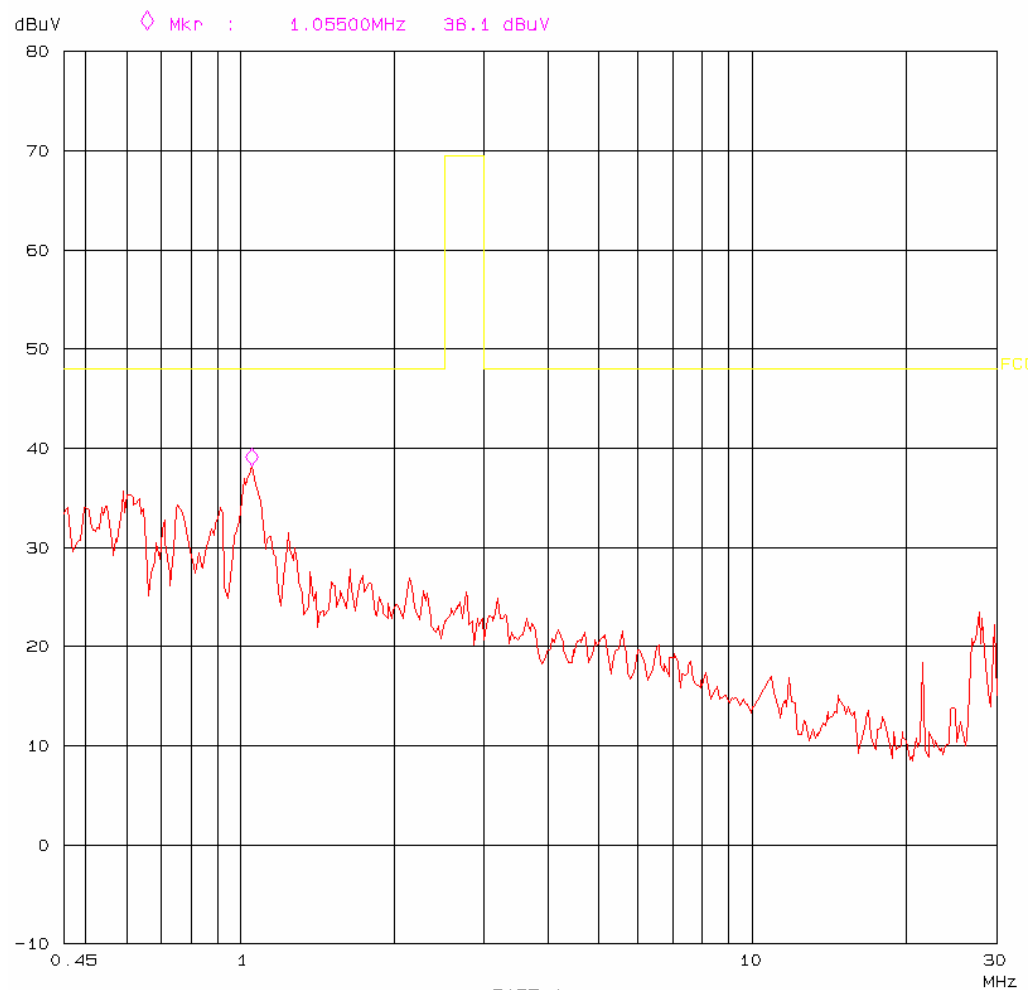


## Conduction Emission

02. Jul 08 13:21

## FCC Part 18

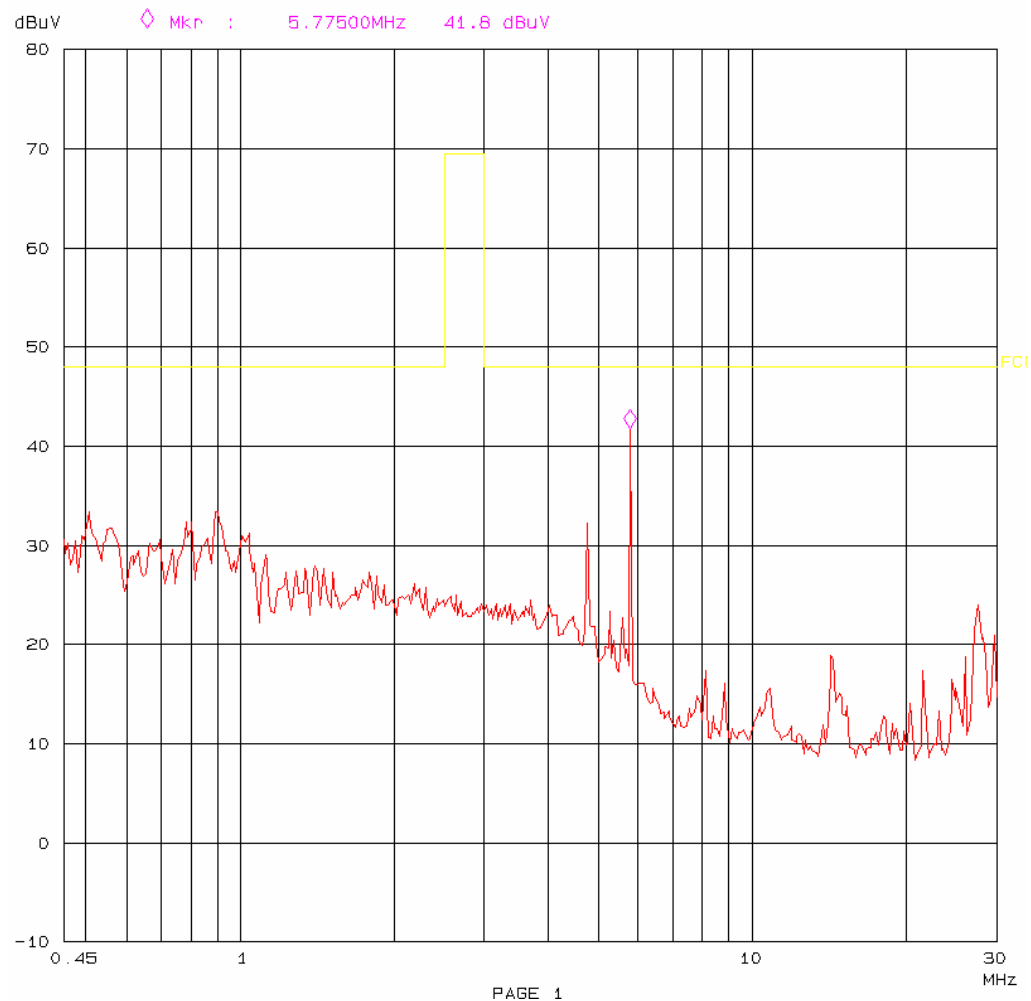
EUT: CFL M/N: GYR209W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Natural  
Comment: Temp: 25 Hum: 56%



**Model: GYR2011W**Conduction Emission  
FCC Part 18

01. Jul 08 17:43

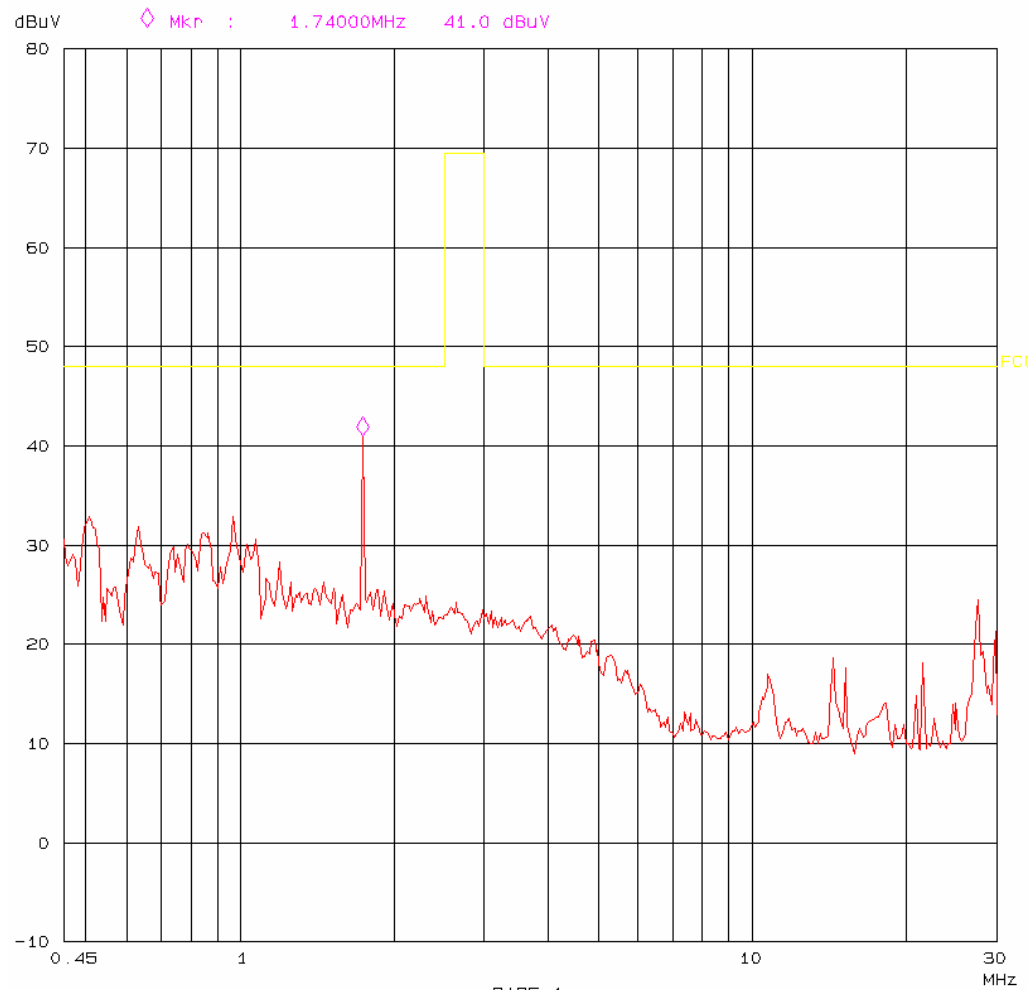
EUT: CFL M/N: GYR2011W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC120V/60Hz Line  
Comment: Temp: 25 Hum: 56%



# Conduction Emission FCC Part 18

01. Jul 08 17:34

EUT: CFL M/N: GYR2011W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC120V/60Hz N  
Comment: Temp: 25 Hum: 56%

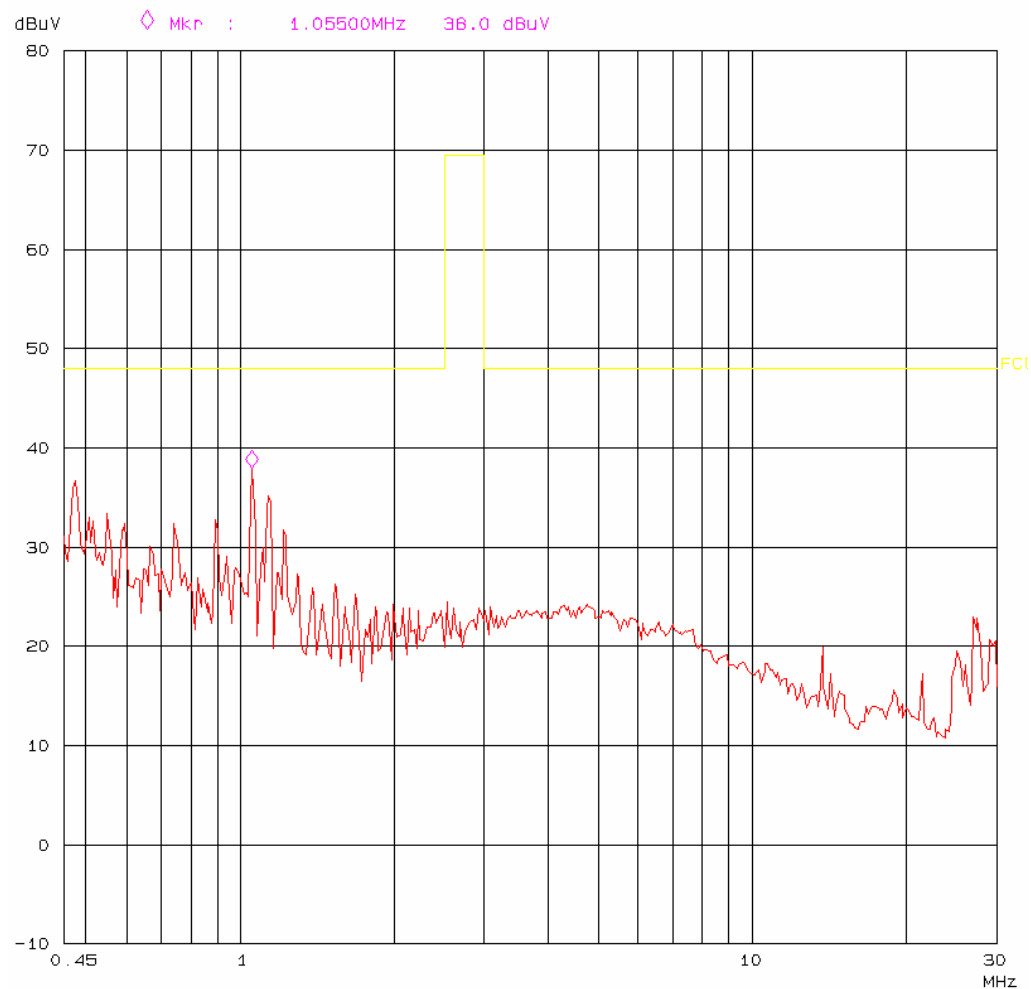




**Model: GYG207W**Conduction Emission  
FCC Part 18

02. Jul 08 09:35

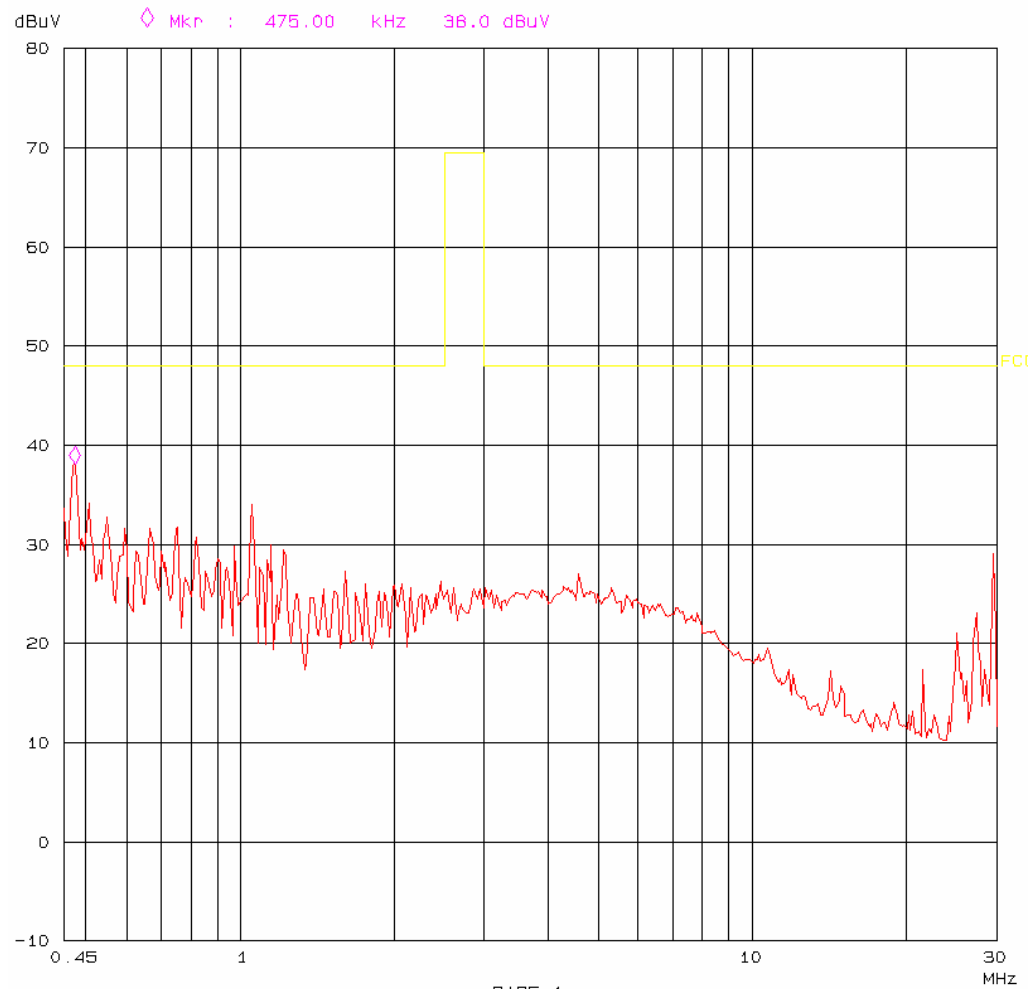
EUT: CFL M/N: GYG207W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Line  
Comment: Temp: 25 Hum: 56%

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# Conduction Emission FCC Part 18

02. Jul 08 09:48

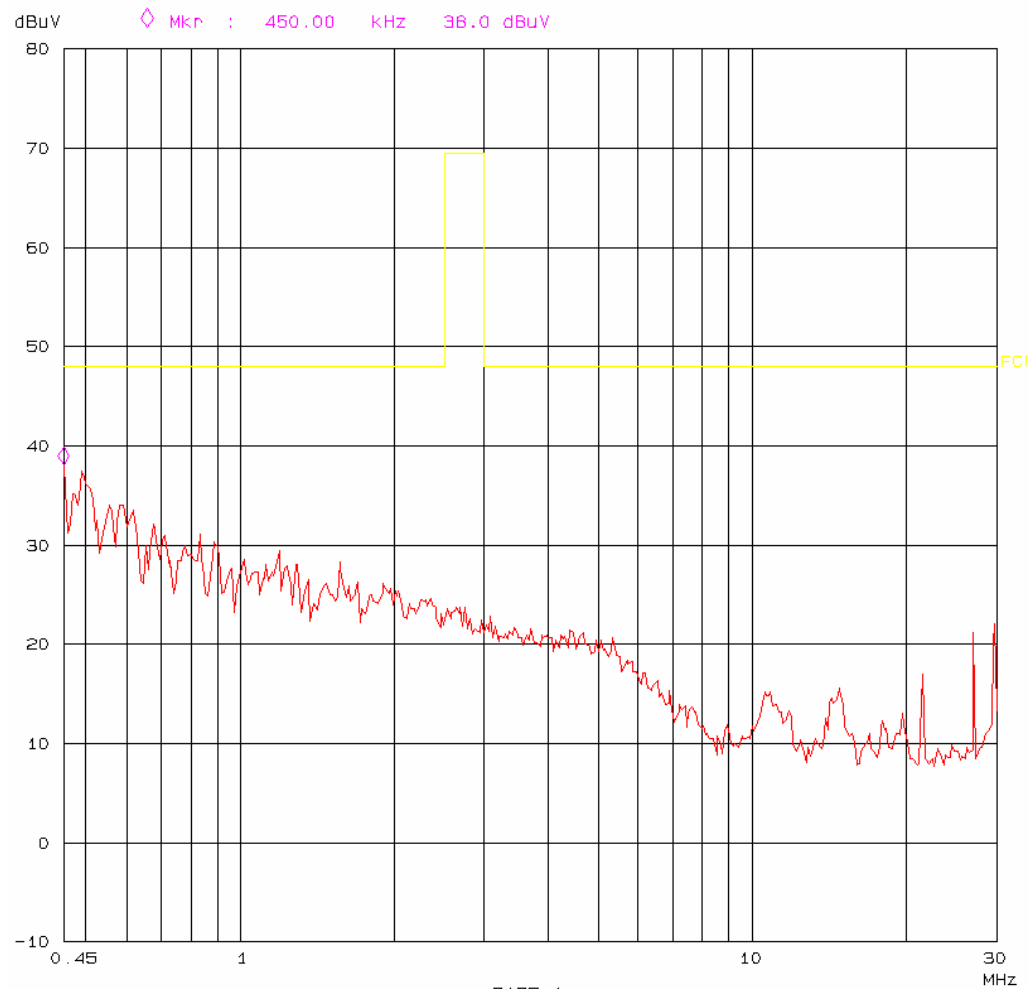
EUT: CFL M/N: GYG207W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Neutral  
Comment: Temp: 25 Hum: 56%



**Model: GYA5511W**Conduction Emission  
FCC Part 18

02. Jul 08 10:29

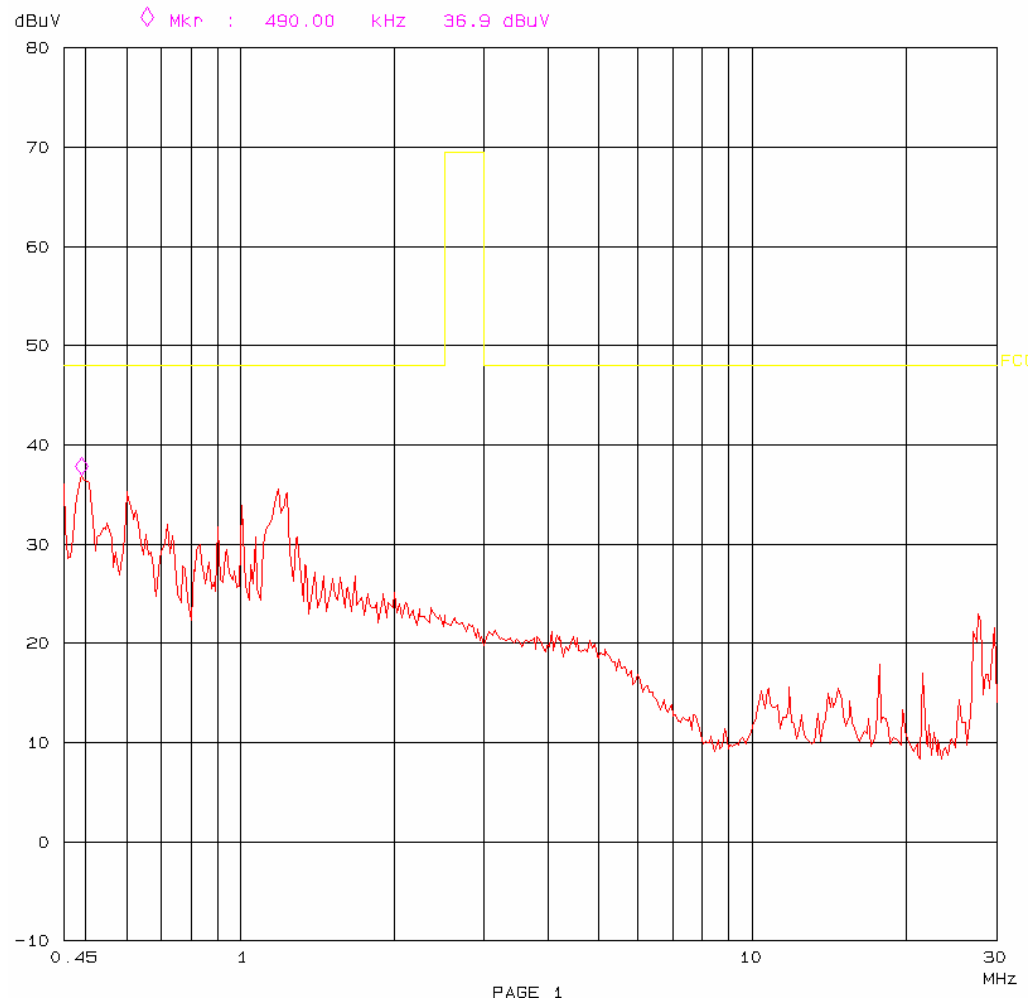
EUT: CFL M/N: GYA5511W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Line  
Comment: Temp: 25 Hum: 56%



# Conduction Emission FCC Part 18

02. Jul 08 11:22

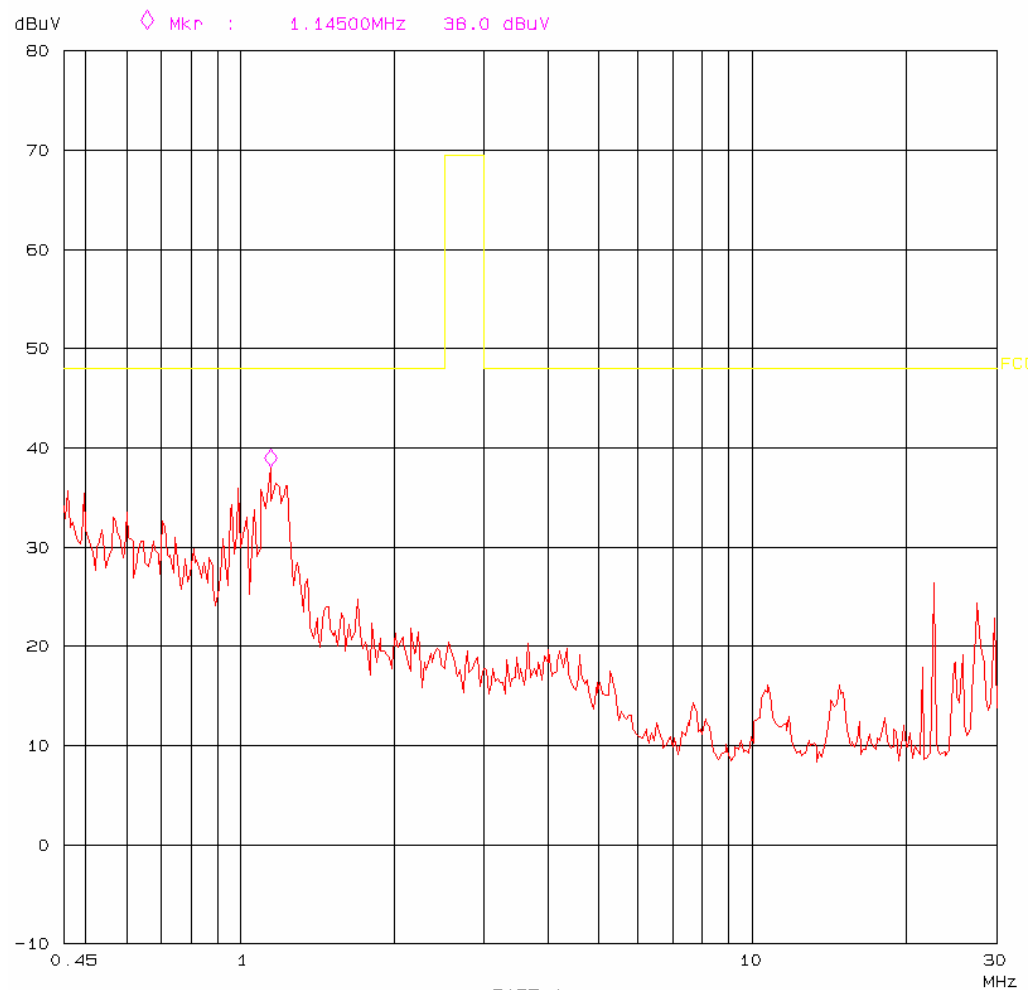
EUT: CFL M/N: GYA5511W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Neutral  
Comment: Temp: 25 Hum: 56%



**Model: GYA6013W**Conduction Emission  
FCC Part 18

02. Jul 08 10:13

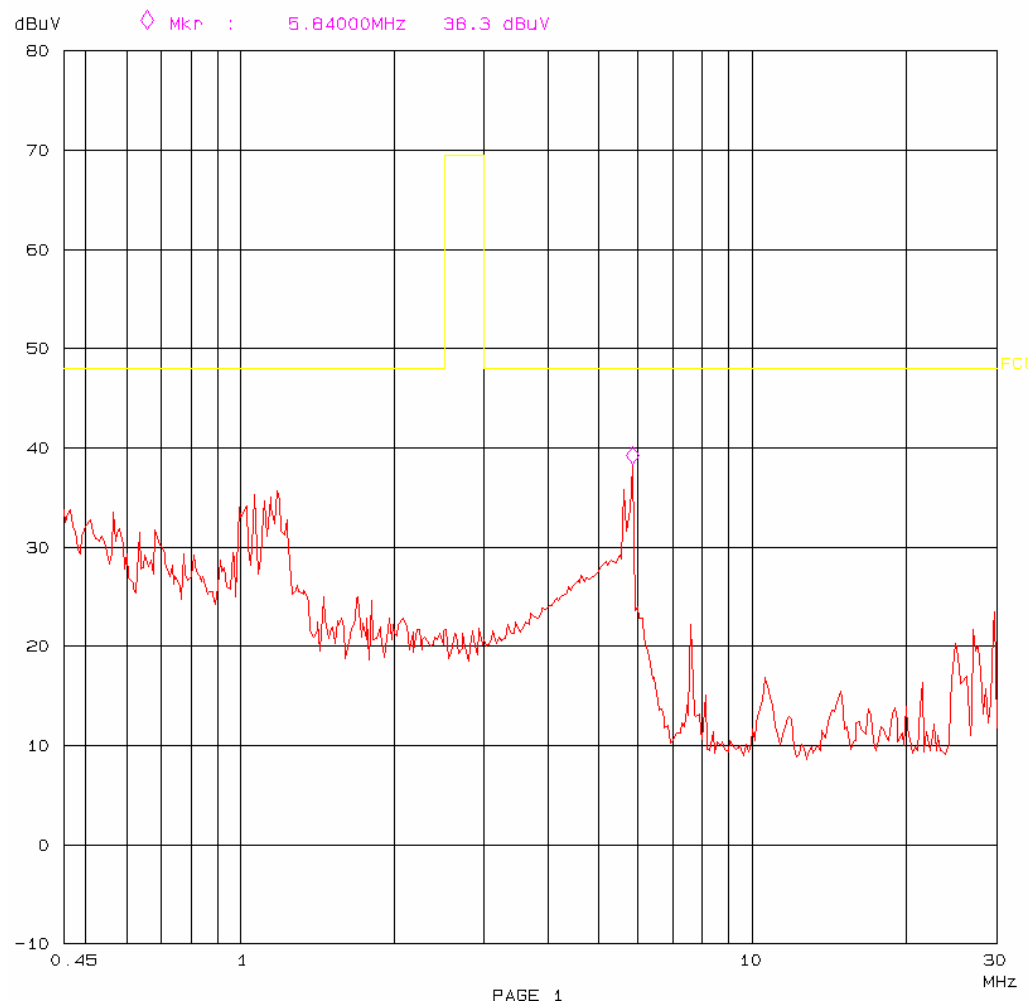
EUT: CFL M/N: GYA6013W  
Manuf: JIANGXI ELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Line  
Comment: Temp: 25 Hum: 56%



Conduction Emission  
FCC Part 18

02. Jul 08 10:03

EUT: CFL M/N: GYA6013W  
Manuf: JIANGXIELEGANT LIGHTINGS CO., LTD  
Op Cond: On  
Operator: Allan  
Test Spec: AC 120V/60Hz Neutral  
Comment: Temp: 25 Hum: 56%



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