

EXHIBIT 5

Test Report

APPLICATION FOR CERTIFICATION

On Behalf of

Everbright Lighting Ltd.

Energy Saving Lamp

Model Number : ETU-SS-11W, 15W, 20W, 24W

Prepared for : Everbright Lighting Ltd.
13/F., Universal Industrial Center, 19-21 Shan
Mei Street, Fo Tan, Shatin, N.T., Hong Kong

Prepared by : Shenzhen EMTEK Co., Ltd.
Bldg 69, Majialong, Taipinyang Industrial Zone,
Nanshan District, Shenzhen, Guangdong, China

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Report No. : AT03282-2

Date of Test : July 30 – August 5, 2003

Date of Report : August 6, 2002

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TEST REPORT DECLARATION

Applicant : Everbright Lighting Ltd.
Manufacturer : City Bright Lighting (Shenzhen) Co., Ltd
EUT Description : Energy Saving Lamp
(A) Model No. : ETU-SS-11/15/20/24W
(B) Serial No. : F20030806002
(C) Power Supply : AC120V /60Hz

Test Procedure Used:

FCC Rules and Regulations Part 18 Subpart B Class B October 1998.

The devices described above have been tested by Shenzhen EMTEK Co., Ltd to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 18 Subpart B Class B limits conducted. The test results are contained in this test report and Shenzhen EMTEK Co., Ltd is responsible for the accuracy and completeness of these tests. Also, this report shows that the EUT (Equipment Under Test) is complies with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen EMTEK Co., Ltd.

Date of Test:

July 30 – August 5, 2003

Prepared by:



Engineer

Reviewer:



Quality Manager

Approved & Authorized Signer:



Manager

1. GENERAL INFORMATION

1.1 Description of Device (EUT)

Description	: Energy Saving Lamp
Model Number	: ETU-SS-11W, 15W, 20W, 24W
Applicant	: Everbright Lighting Ltd. 13/F., Universal Industrial Center, 19-21 Shan Mei Street, Fo Tan, Shatin, N.T., Hong Kong
Manufacturer	: City Bright Lighting (Shenzhen) Co., Ltd Fuchengao Village, Pinghu Town, Longgang Region, Shenzhen, Guangdong, China
Date of Receipt	: July 10, 2003
Date of Test	: July 30 – August 5, 2003

1.2 Test Facility

Site Description

EMC Laboratory : Accredited by FCC, December 09,2002
The Certificate Registration No. is 709623.
: Accredited by Industry Canada, January 8,2003
The Certificate Registration No. is 46405-4480
: Accredited by TUV Rheinland Guangdong
March 26, 2001
The Certificate Registration No. is G2130000

Name of Firm : Shenzhen EMTEK Co., Ltd.

Site Location : Bldg 69, Taipinyang Industrial Zone, Majialong,
Nanshan, Shenzhen, Guangdong, China

1.3 Test Uncertainty

Conducted Emission Uncertainty = $\pm 2.66\text{dB}$

2. POWER LINE CONDUCTED EMISSION TEST

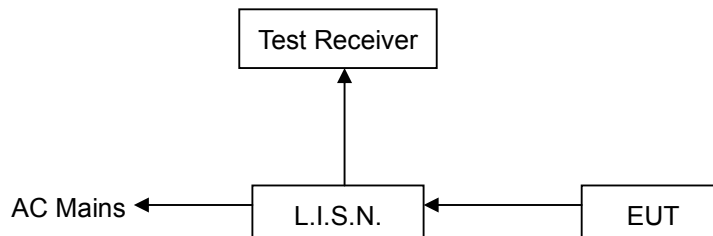
2.1 Test Equipment

The following test equipments are used during the power line conducted emission test:

Item	Equipment	Manufacturer	Model No	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	1102.4500	May 30, 03	1 Year
2.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100007	May 30, 03	1 Year
3.	L.I.S.N	Kyoritsu Corp.	KNW407	8-1492-9	May 30, 03	1 Year
4.	50Ω Coaxial Switch	Anritsu Corp.	MP59B	61002175589	May 30, 03	1 Year

2.2 Block Diagram of Test Setup

Block diagram of connection between the EUT and simulators



(EUT: Energy Saving Lamp)

2.3 Power Line Conducted Emission Test Limits

Frequency MHz	Test Limits dB μ V
0.45 ~ 2.51	48
2.51-3.0	70
3.0-30	48

2.4 Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

2.4.1 Energy Saving Lamp (EUT)

Model No.	:	ETU-SS-11W, 15W, 20W, 24W
Serial No.	:	F20030806002
Manufacturer	:	City Bright Lighting (Shenzhen) Co., Ltd

2.5 Operating Condition of EUT

2.5.1 Setup the EUT and simulator as shown as Section 2.2.

2.5.2 Turn on the power of all equipment.

2.5.3 Let the EUT work in test mode (ON) and test it.

2.6 Test Procedure

2.6.1 The EUT is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohms coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission levels. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4-2000 on Conducted Emission Test.

2.6.2 The bandwidth of test receiver(R & S ESCS30) is set at 9KHz.

2.6.3 The frequency range from 450KHz to 30MHz is checked.

2.6.4 The test results are reported on Section 2.7, all the scanning waveforms for Conducted Emission Test are attached in Appendix I.

2.7 Power Line Conducted Emission Test Results

PASS.

The frequency range from 450KHz to 30 MHz is investigated.

All emissions not reported below are too low against the prescribed limits.

Date of Test: July 31, 2003 Temperature: 25□
 EUT: Energy Saving Lamp Humidity: 58%
 M/N: ETU-SS-11W Test Engineer: Mike Yang

■ Va □ Neutral □ Other			■ Vb □ Live □ Other		
Frequency (MHz)	QP (dBuV)	Limit	Frequency (MHz)	QP (dBuV)	Limit
0.475	32.8	48.00	0.150	28.3	48.00
0.900	28.2	48.00	0.720	31.2	48.00
0.985	24.1	48.00	0.905	30.9	48.00
1.070	30.3	48.00	0.990	28.1	48.00
1.200	27.8	48.00	1.035	30.0	48.00
1.245	28.6	48.00	1.075	33.2	48.00

Date of Test: July 31, 2003 Temperature: 25□
 EUT: Energy Saving Lamp Humidity: 58%
 M/N: ETU-SS-15W Test Engineer: Mike Yang

■ Va □ Neutral □ Other			■ Vb □ Live □ Other		
Frequency (MHz)	QP (dBuV)	Limit	Frequency (MHz)	QP (dBuV)	Limit
0.480	25.8	48.00	0.525	28.5	48.00
0.525	28.1	48.00	0.575	28.1	48.00
0.835	27.6	48.00	0.835	27.6	48.00
0.930	25.5	48.00	0.965	18.4	48.00
1.025	29.2	48.00	1.010	21.2	48.00
1.115	29.7	48.00	1.100	27.3	48.00

Date of Test: July 31, 2003 Temperature: 25°C
 EUT: Energy Saving Lamp Humidity: 58%
 M/N: ETU-SS-20W Test Engineer: Mike Yang

■ Va □ Neutral □ Other			■ Vb □ Live □ Other		
Frequency (MHz)	QP (dBuV)	Limit	Frequency (MHz)	QP (dBuV)	Limit
0.490	39.2	48.00	0.455	36.6	48.00
0.565	37.1	48.00	0.495	35.6	48.00
0.650	35.3	48.00	0.575	38.2	48.00
0.715	37.9	48.00	0.655	37.5	48.00
0.945	37.1	48.00	0.820	36.8	48.00
1.025	39.1	48.00	0.975	37.2	48.00

Date of Test: July 31, 2003 Temperature: 25°C
 EUT: Energy Saving Lamp Humidity: 58%
 M/N: ETU-SS-24W Test Engineer: Mike Yang

■ Va □ Neutral □ Other			■ Vb □ Live □ Other		
Frequency (MHz)	QP (dBuV)	Limit	Frequency (MHz)	QP (dBuV)	Limit
0.490	29.9	48.00	0.465	33.9	48.00
0.690	32.6	48.00	0.500	35.5	48.00
0.770	33.0	48.00	0.665	32.8	48.00
0.855	33.1	48.00	0.765	31.6	48.00
0.935	28.1	48.00	0.890	31.5	48.00
1.015	31.5	48.00	1.050	29.9	48.00

3. MODIFICATION TO TEST SPECIFICATIONS

[NONE]

APPENDIX I

Power Line Conduction Emission Test Data

CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS11W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Va 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:48

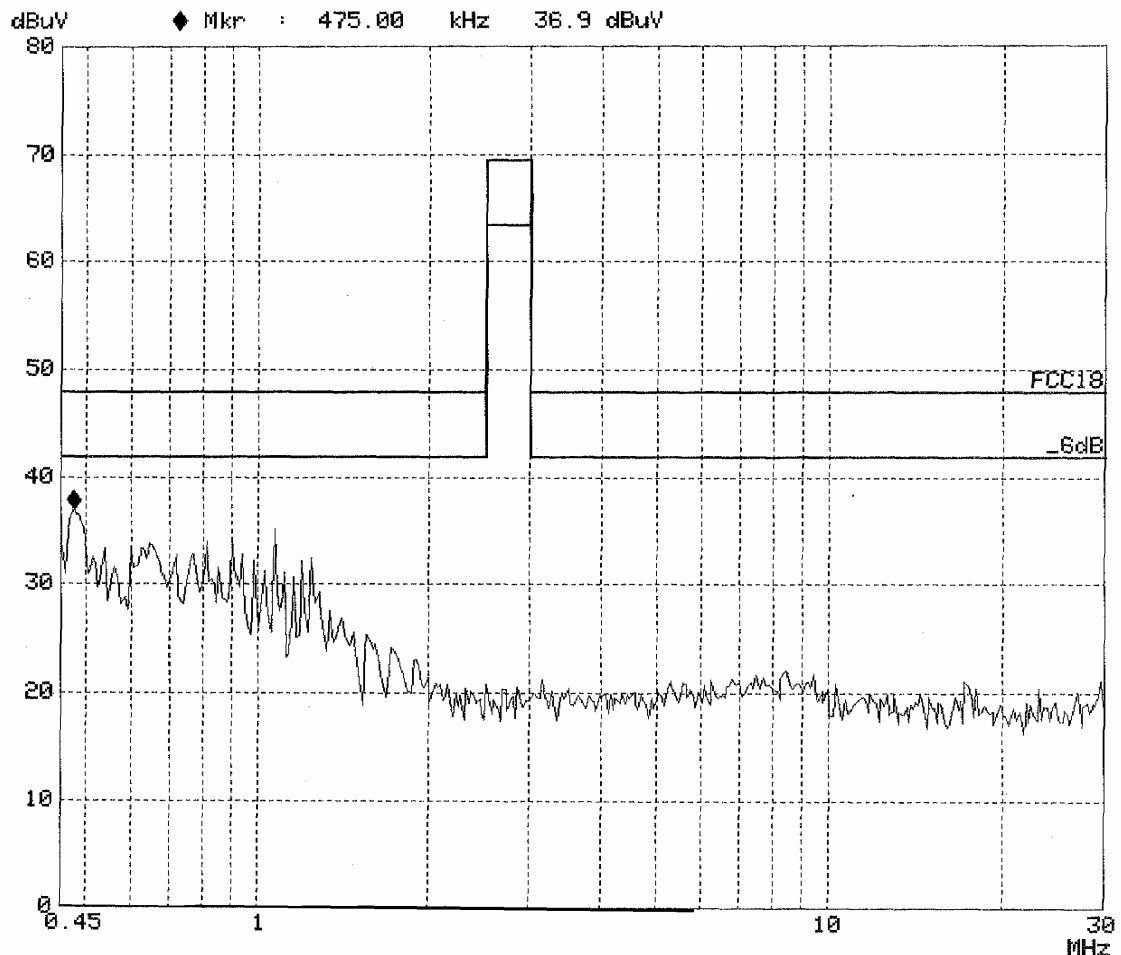
Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF	
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF	
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF	

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS11W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Vb 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:46

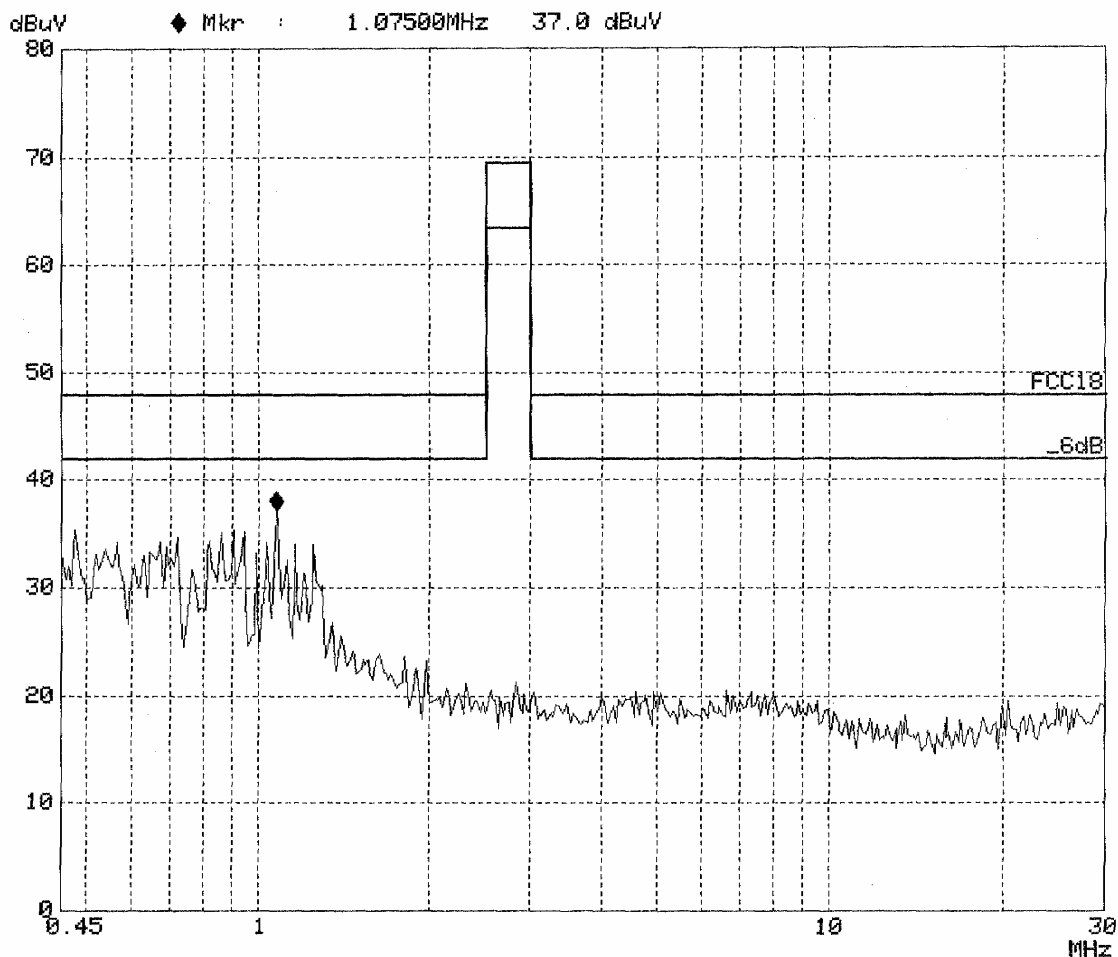
Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS15W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Va 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:40

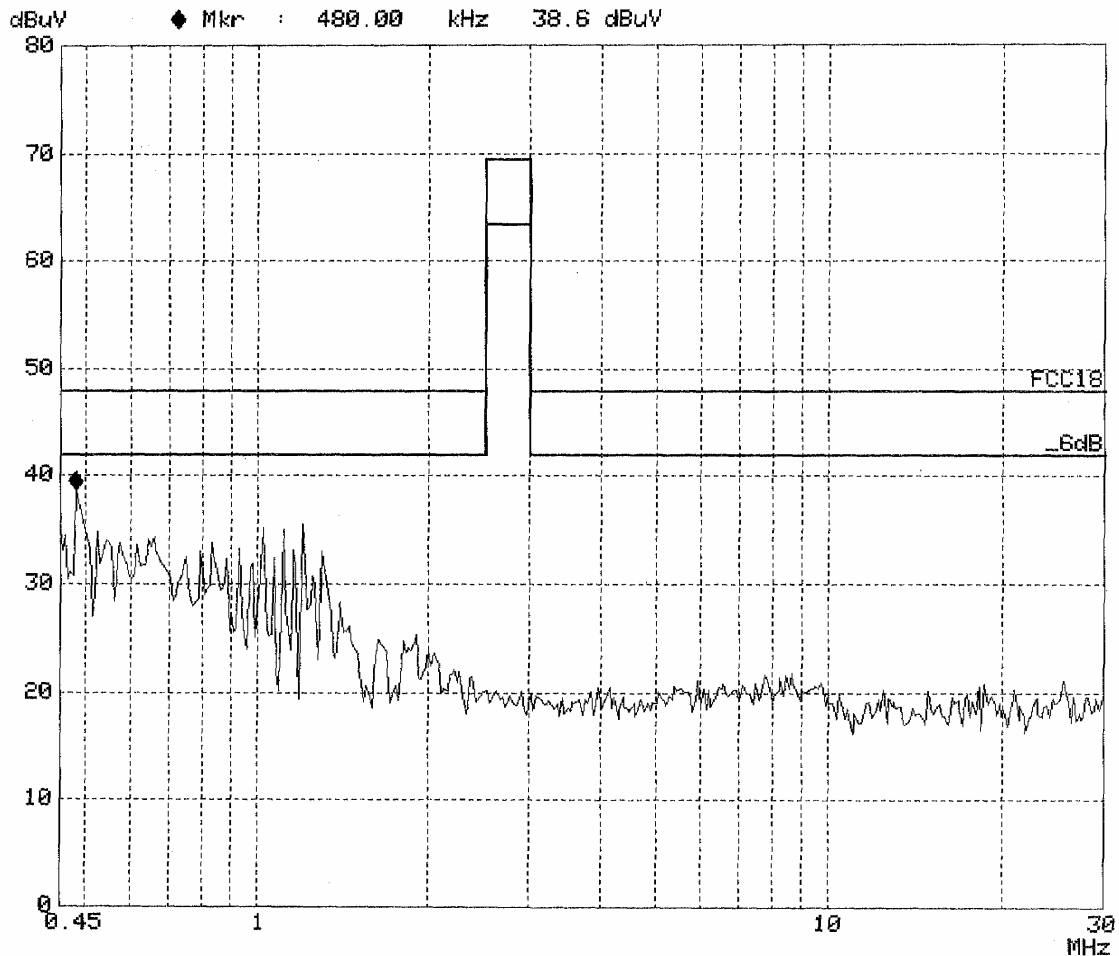
Scan Settings (3 Ranges)

----- Frequencies -----			----- Receiver Settings -----				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS15W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Vb 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:43

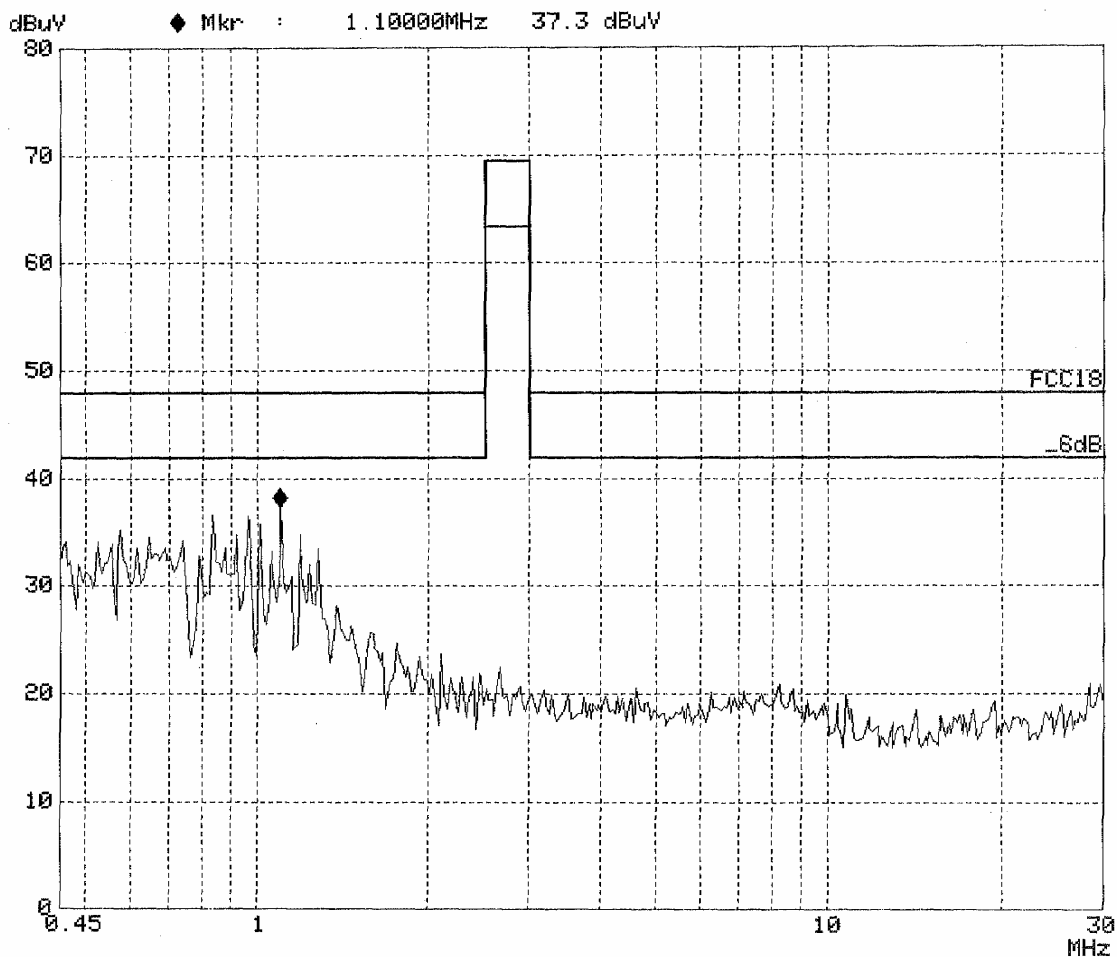
Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS20W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Va 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:35

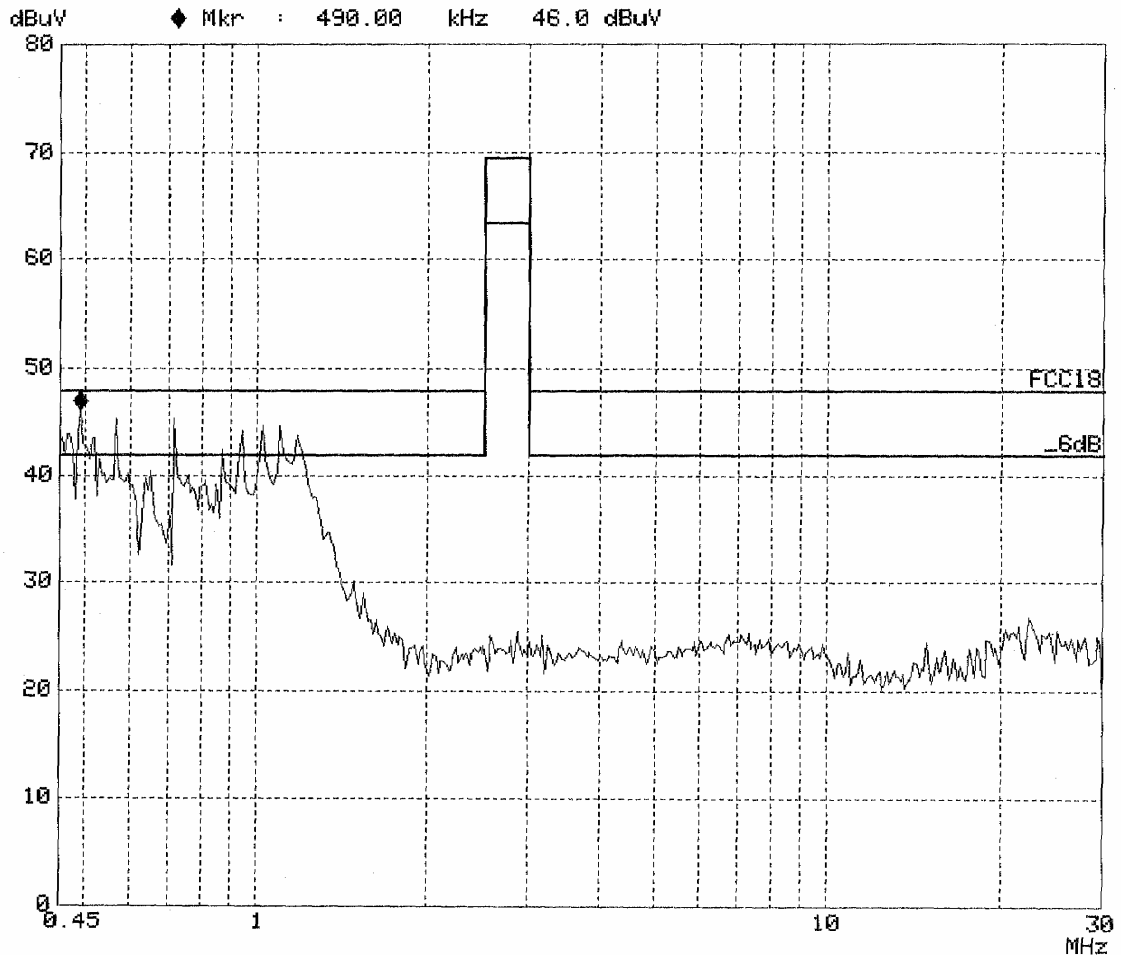
Scan Settings (3 Ranges)

----- Frequencies -----			Receiver Settings -----				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS20W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Vb 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:32

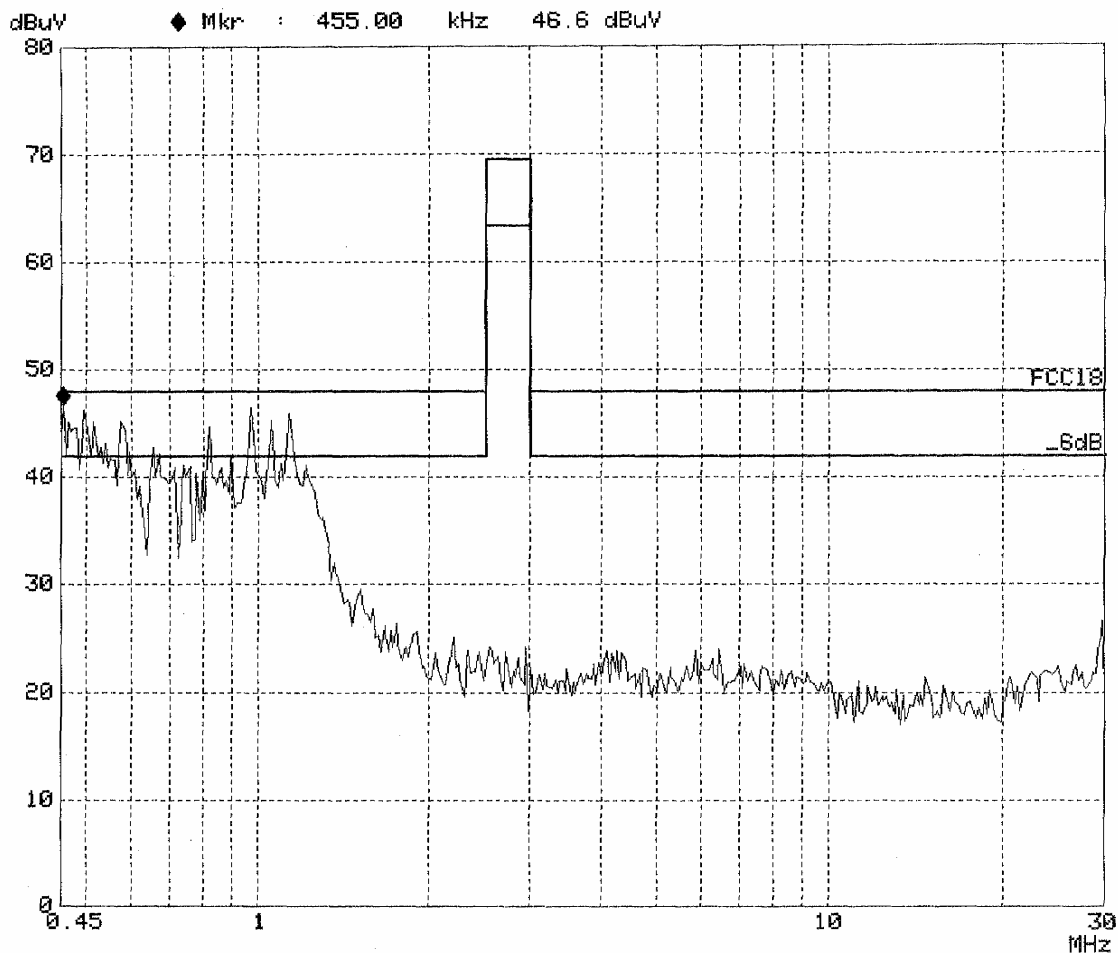
Scan Settings (3 Ranges)

----- Frequencies -----			----- Receiver Settings -----					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF	
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF	
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF	

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS24W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Va 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:26

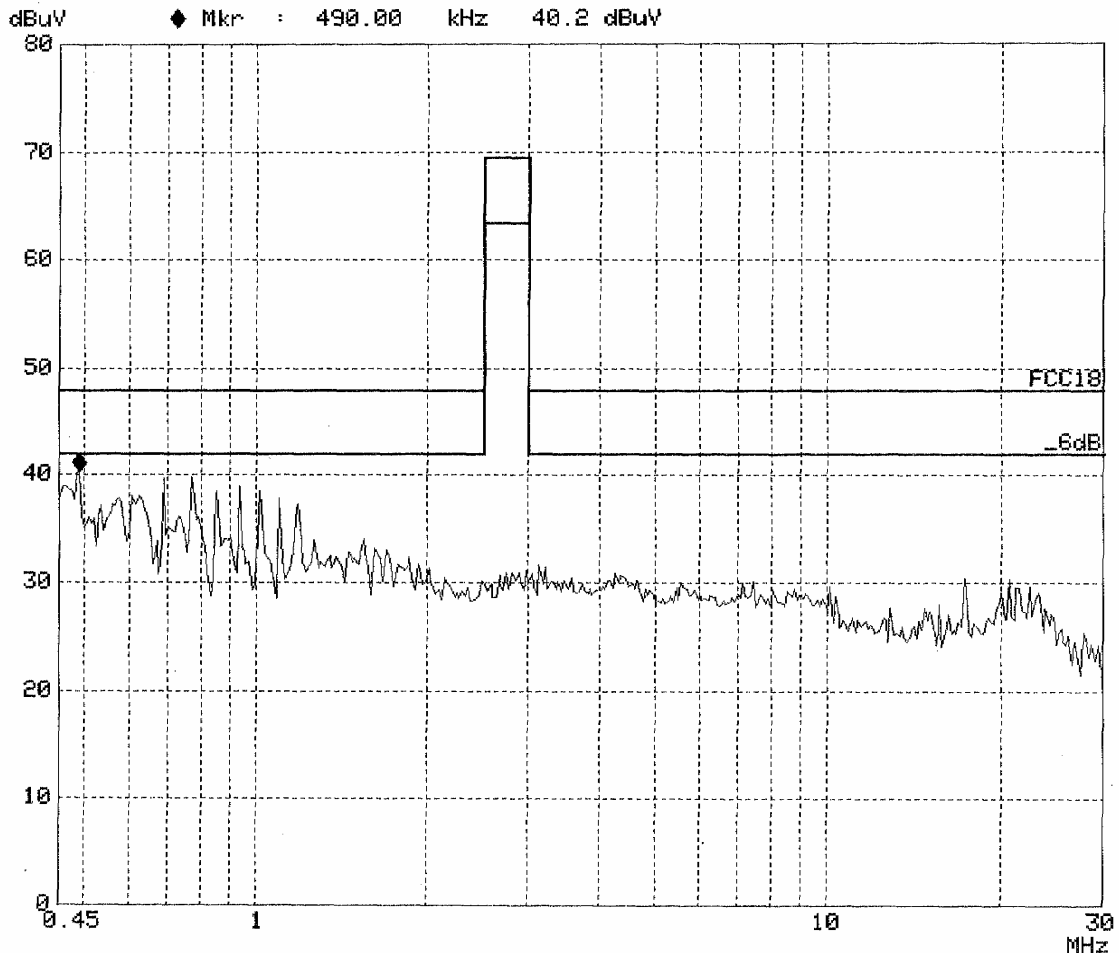
Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF	
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF	
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF	

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



CONDUCTION EMISSION STANDARD FCC PART18

EUT: Energy saving lamp M/N:ETU-SS24W
Manuf: EVERBRIGHT
Op Cond: ON
Operator: MIKE YANG
Test Spec: Vb 120V/60Hz
Comment: Tem22C Humi50%
Date: 31. Jul 03 17:29

Scan Settings (3 Ranges)

----- Frequencies -----			----- Receiver Settings -----				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
450k	2M	5k	9k	PK	20ms	AUTO LN	OFF
2M	10M	10k	9k	PK	10ms	AUTO LN	OFF
10M	30M	25k	9k	PK	1ms	AUTO LN	OFF

Transducer No.	Start	Stop	Name
1	9k	30M	CONFAC3

Final Measurement: x QP

Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

