

APPLICATION FOR CERTIFICATION

On behalf of

Everbright Lighting Ltd.

Energy Saving Lamp

Model No. : ETU-11W, ETU-15W, ETU-20W, ETU-24W
ETUS-11W, ETUS-15W, ETUS-20W, ETUS-24W

FCC ID : QJKEBETUS0207

Application No. : SUTF020701

Date of Report : July 1-15, 2002

APPLICATION FOR FCC CERTIFICATION

Applicant : Everbright Lighting Ltd.
13/F., Universal Industrial Centre, 19-21 Shan Mei Street,
Fo Tan, Shatin, Hong Kong

Manufacturer : City Bright Lighting (Shenzhen) Co., Ltd.
Fu Cheng Ao Village, Pinghu Town, Longgang Region,
Shenzhen, Guangdong, P.R China

Equipment : Energy Saving Lamp

Model No. : EUT-11W, EUT-15W, EUT-20W, EUT-24W
EUTS-11W, EUTS-15W, EUTS-20W, EUTS-24W

FCC ID. : QJKEBETUS0207

EMC Report No. : SUTF020701

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EUT Configuration

Description of EUT

Applicant : Everbright Lighting Ltd.
13/F., Universal Industrial Centre, 19-21 Shan Mei
Street, Fo Tan, Shatin, Hong Kong

Manufacturer : City Bright Lighting (Shenzhen) CO., Ltd
Fu Cheng Ao Village, Pinghu Town, Longgang Region,
Shenzhen, Guangdong, P.R China

Product Name : Energy Saving Lamps

Model No. : ETU-11W, ETU-15W, ETU-20W, ETU-24W;
ETUS-11W, ETUS-15W, ETUS-20W, ETUS-24W.

FCC ID : QJKEBETUS0207

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On Behalf of

Everbright Lighting Ltd.

Energy Saving Lamp

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

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

Prepared by : Shenzhen Unitech Technology Co., Ltd.
Rm.906, Daxin Building, Road Nanxin, Nanshan
District, Shenzhen, Guangdong, P.R China

Telephone : (0755) 26085878~9

Report No. : SUTF020701

Date of Test : July 1-15, 2002

Date of Report : July 15-20, 2002

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TEST REPORT DECLARATION

Applicant : Everbright Lighting Limited.
Manufacturer : City Bright Lighting (Shenzhen) Co., Ltd.
EUT Description : Energy Saving Lamp

(A) Model No. : ETU-11W, ETU-15W, ETU-20W, ETU-24W
ETUS-11W, ETUS-15W, ETUS-20W, ETUS-24W
(B) Serial No. : F2002071501
(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 in AUDIX Lab by Shenzhen Unitech Technology 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 Unitech Technology Co., Ltd is assumed of full responsibility 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 Unitech Technology Co., Ltd.

Date of Test:

July 1-15, 2002

Prepared by:


Kenny Gan / Assistant

Reviewer:


Daniel Yang / Engineer

For and on behalf of
SHENZHEN UNITECH TECHNOLOGY CO., LTD.

Approved & Authorized Signer:


Jimmy Jiang / Manager

1. GENERAL INFORMATION

1.1 Description of Device (EUT)

Description	: Energy Saving Lamp
Model Number	: ETU-11W, ETU-15W, ETU-20W, ETU-24W ETUS-11W, ETUS-15W, ETUS-20W, ETUS-24W
Applicant	: Everbright Lighting Ltd. 13/F., Universal Industrial Centre, 19-21 Shan Mei Street, Fo Tan, Shatin, Hong Kong
Manufacturer	: City Bright Lighting (Shenzhen) Co., Ltd Fuchengao Village, Pinghu Town, Longgang Region, Shenzhen, Guangdong, China
Date of Receipt of Sample	: July 1, 2002
Date of Test	: July 1-15, 2002

1.2 Test Facility

Site Description

3m Anechoic Chamber	:	Certificated by FCC, USA Aug. 24, 2000
3m & 10m Open Site	:	Certificated by FCC, USA Feb. 13, 1998
EMC Lab.	:	Certificated by VCCI, Japan Oct. 29, 1998
		Certificated by DATech, German Feb. 02, 1999
		Certificated by NVLAP, USA until Mar. 03, 2001 NVLAP Code: 200372-0
		Certificated by DNV, Norway May 26, 1999
Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd.
Site Location	:	No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, P.R China

1.3 Test Uncertainty

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

Radiated Emission Uncertainty = $\pm 4.26\text{dB}$

2. POWER LINE CONDUCTED EMISSION TEST

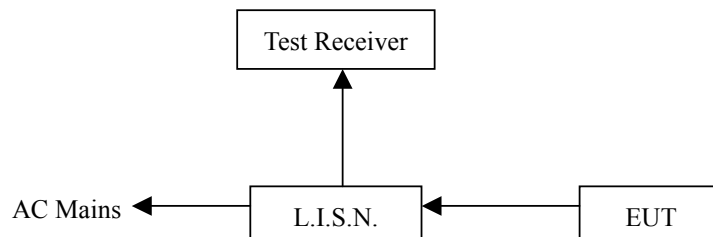
2.1 Test Equipment

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	ESHS20	836600/006	Jun. 04, 02	1 Year
2.	L.I.S.N.	Kyoritsu	KNW-407	8-541-4	Jun. 04, 02	1 Year
3.	Terminator	EMCO	50Ω	No. 1	Jun. 04, 02	1 Year
4.	Terminator	EMCO	50Ω	No. 2	Jun. 04, 02	1 Year
5.	RF Cable	FUJIKURA	RG-55/U	LISN Cable	Mar. 04, 02	1/2 Year
6.	Passive Probe	Rohde & Schwarz	ESH-Z3	299.7810.52	Jun. 04, 02	1 Year
7.	Coaxial Switch	Anritsu	MP59B	M73989	Jun. 04, 02	1/2 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
	dBμV
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-11W, ETU-15W, ETU-20W, ETU-24W
	:	ETUS-11W, ETUS-15W, ETUS-20W, ETUS-24W
Serial No.	:	F2002071501
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 ESHS20) is set at 10KHz.
- 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.
And all of the test data, please see Appendix I.

3. MODIFICATION TO TEST SPECIFICATIONS

[NONE]

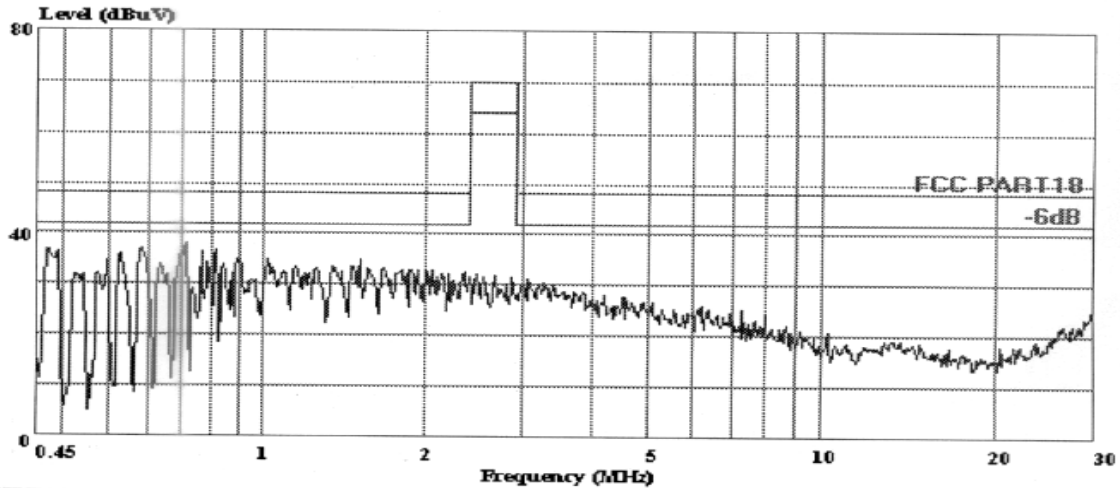
APPENDIX I

Power Line Conduction Emission Test Data

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Data#: 8 File#: Everbright.EMI Date: 2002-07-07 Time: 16:45:37



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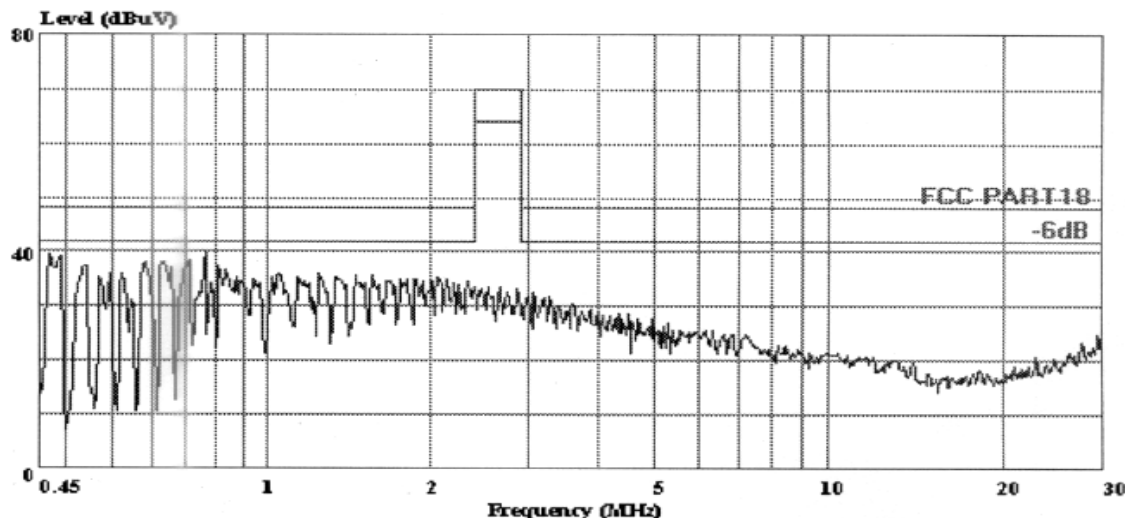
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Condition: FCC PART18 VA(KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETUS-11W
POWER: : AC 120V/60Hz :Va
MEMO: : Light

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Data#: 7 File#: Everbright.EMI Date: 2002-07-07 Time: 16:44:24



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Ref Trace:

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EUT: : Energy Saving Lamp

M/N: : ETUS-11W

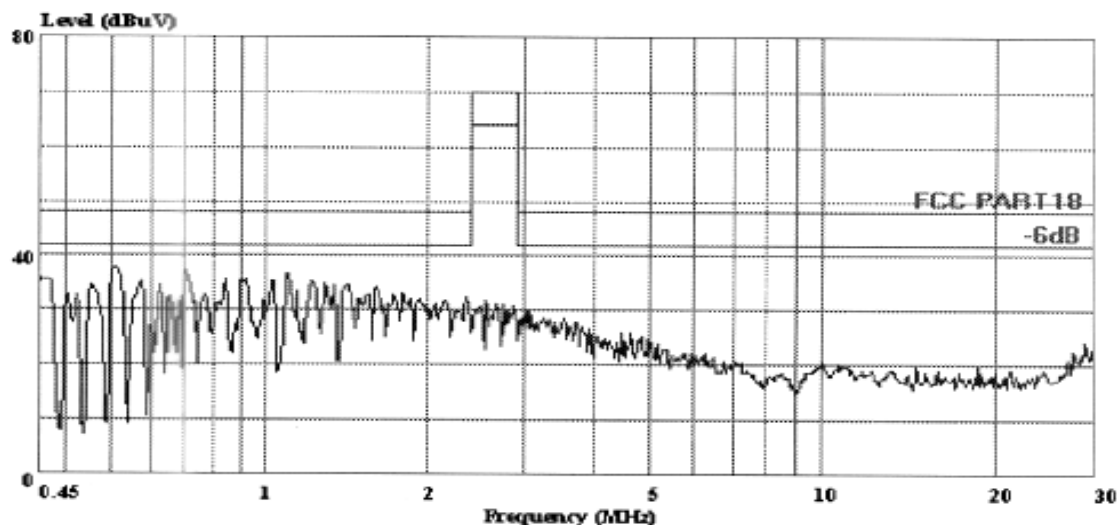
POWER: : AC 120V/60Hz Vb

MEMO: : Light

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Data#: 6 File#: Everbright.EMI Date: 2002-07-07 Time: 16:41:15



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Trace:

Ref Trace:

Condition: FCC PART18 VA (KNW-407)

EUT: : Energy Saving Lamp

M/N: : ETUS-15W

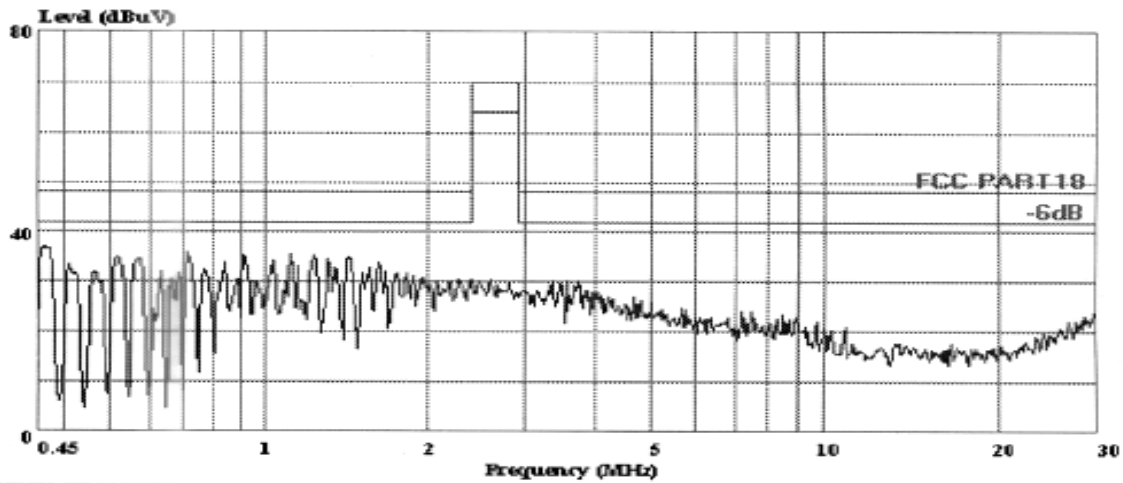
POWER: : AC 120V/60Hz Va

MEMO: : Light

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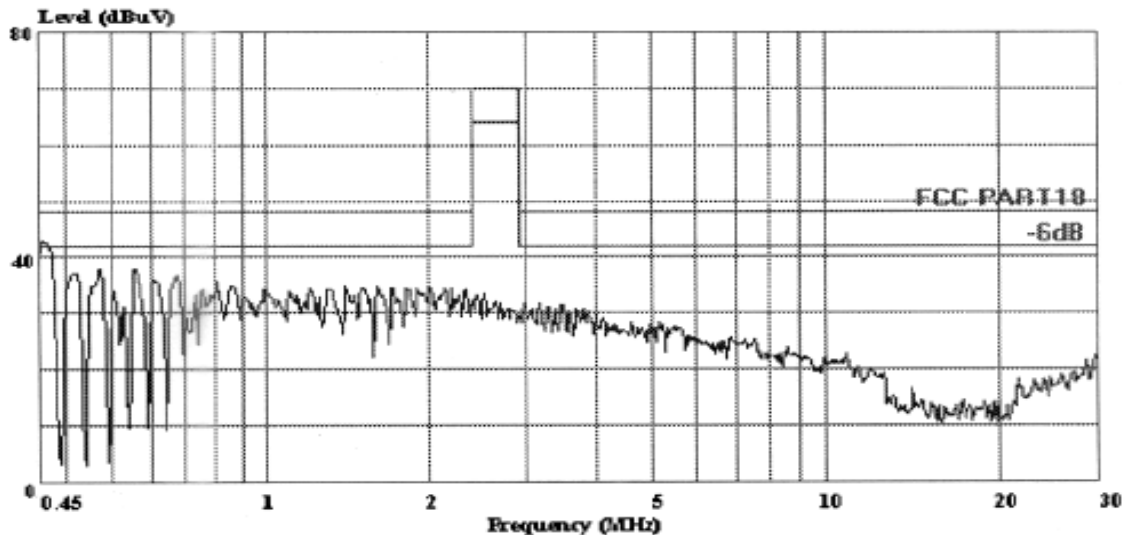
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Condition: FCC PART18 VB (KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETUS-15W
POWER: : AC 120V/60Hz VB
MEMO: : Light

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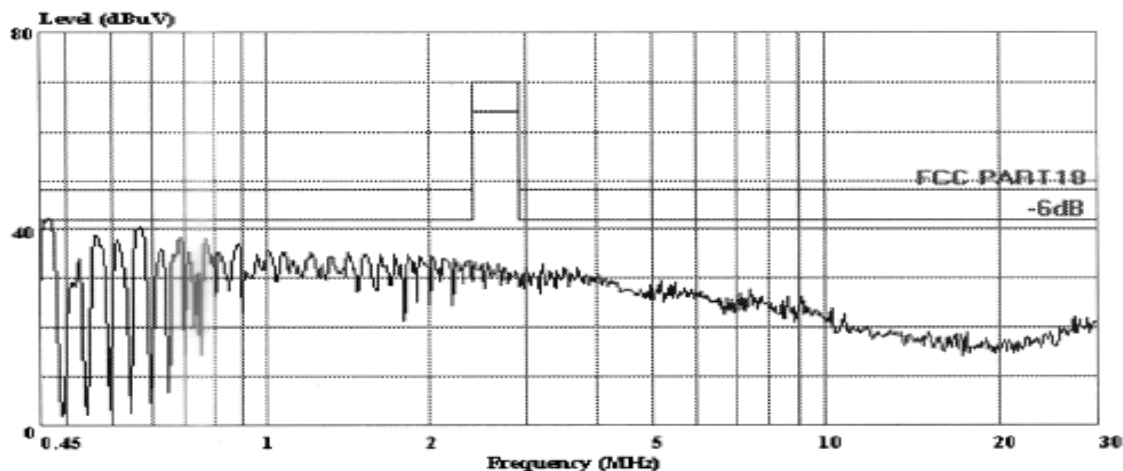
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Condition: FCC PART18 VA (KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETUS-20W
POWER: : AC 120V/60Hz Va
MEMO: : Light

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Trace:

Ref Trace:

Condition: FCC PART18 VB(KNW-407)

EUT: : Energy Saving Lamp

M/N: : ETUS-20W

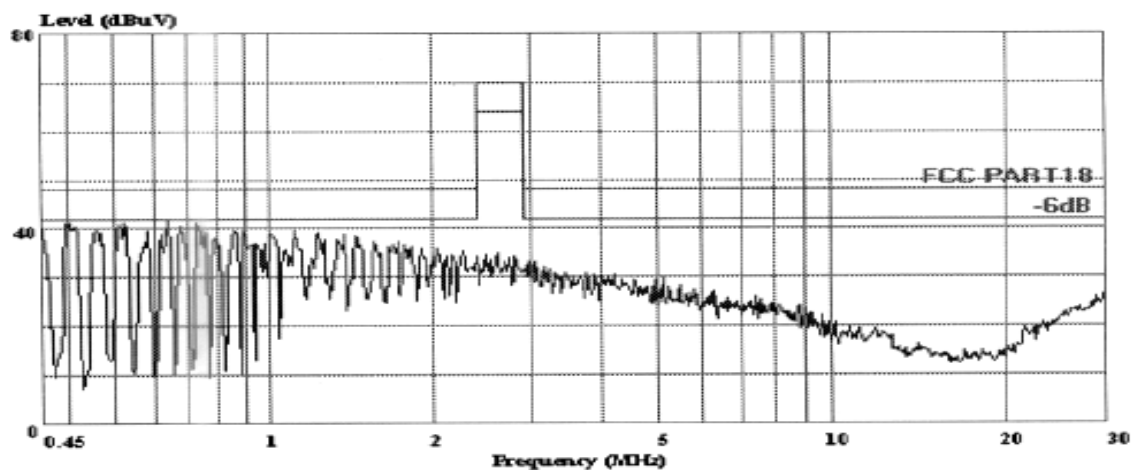
POWER: : AC 120V/60Hz Vb

MEMO: : Light

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Data#: 3 File#: Everbright.EMI Date: 2002-07-07 Time: 16:06:58



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Trace:

Ref Trace:

Condition: FCC PART18 VA(KNW-407)

EUT: : Energy Saving Lamp

M/N: : ETUS-24W

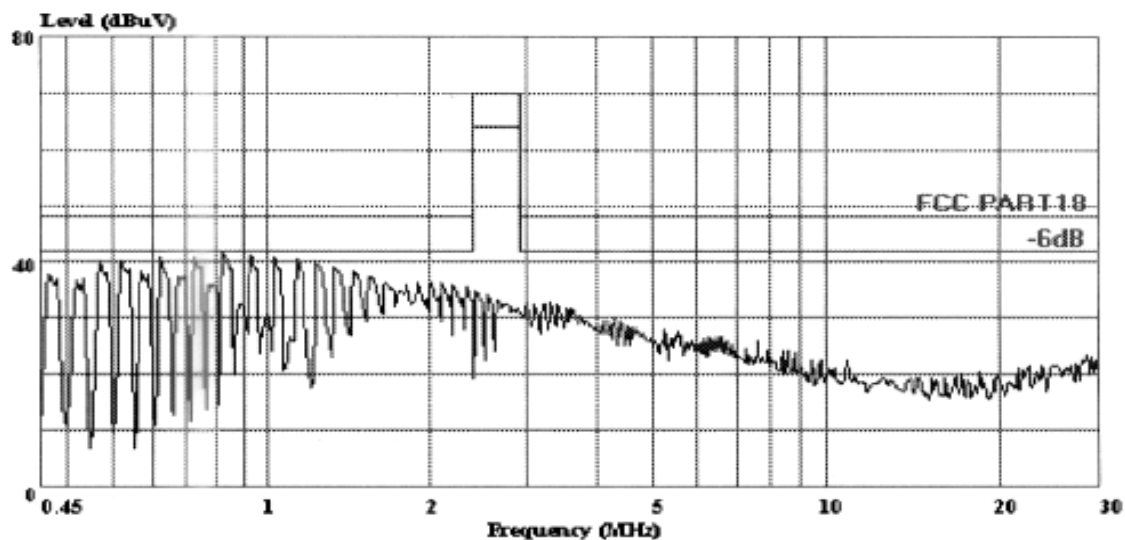
POWER: : AC 120V/60Hz Va

MEMO: : Light

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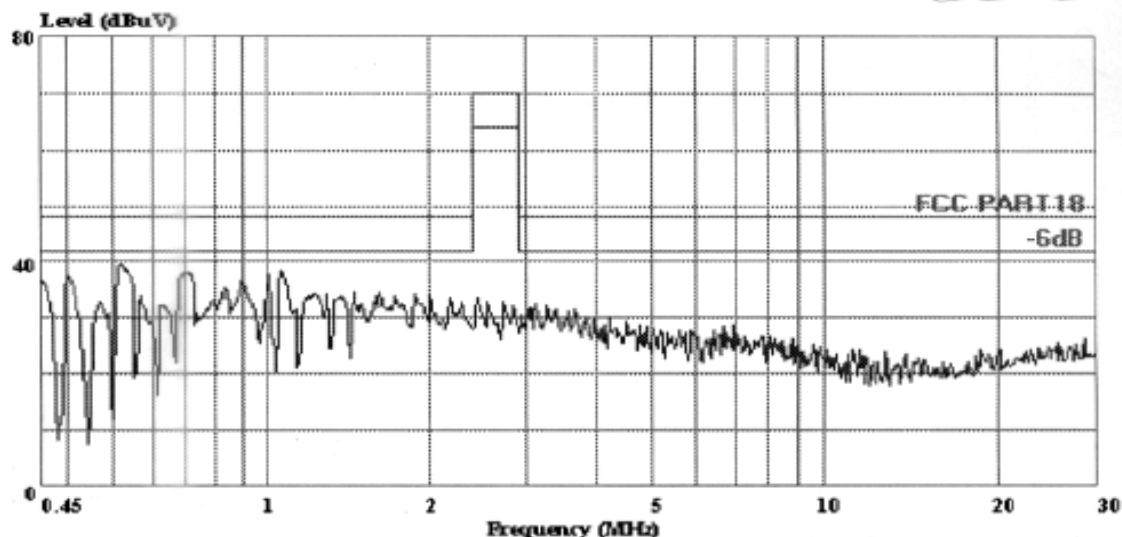
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Condition: FCC PART18 VB (KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETUS-24W
POWER: : AC 120V/60Hz VB
MEMO: : Light

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Trace:

Ref Trace:

Condition: FCC PART18 VA(KNW-407)

EUT: : Energy Saving Lamp

M/N: : ETU-11W

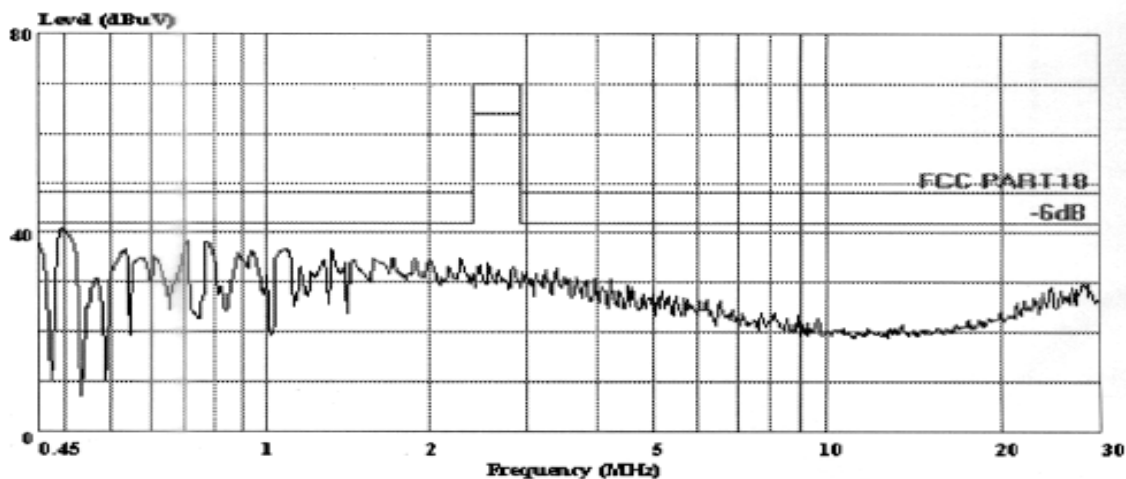
POWER: : AC 120V/60Hz Va

MEMO: : Light

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Trace:

Ref Trace:

Condition: FCC PART18 VB(KNW-407)

EUT: : Energy Saving Lamp

M/N: : ETU-11W

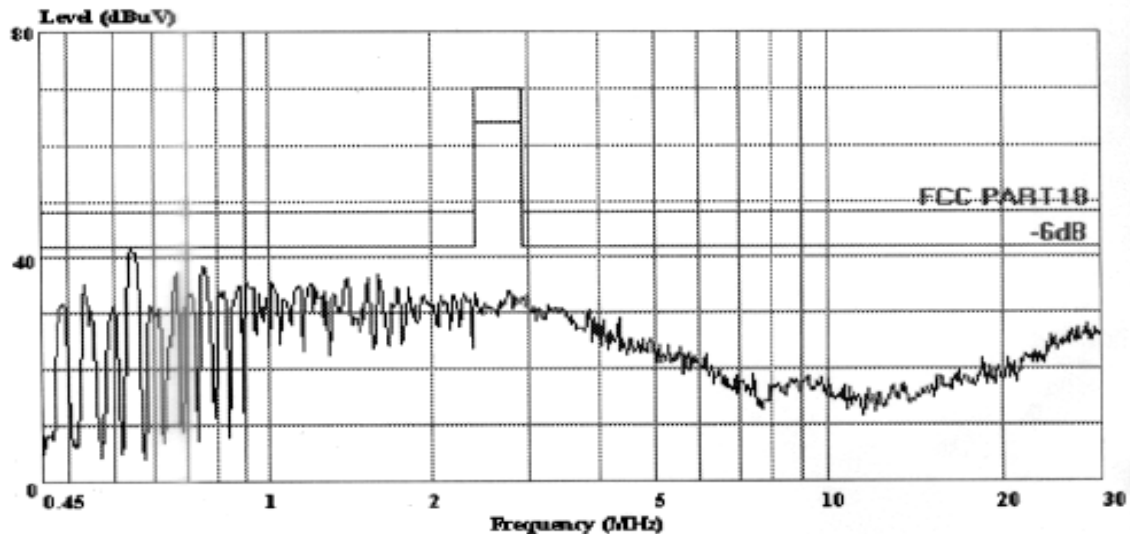
POWER: : AC 120V/60Hz Vb

MEMO: : Light

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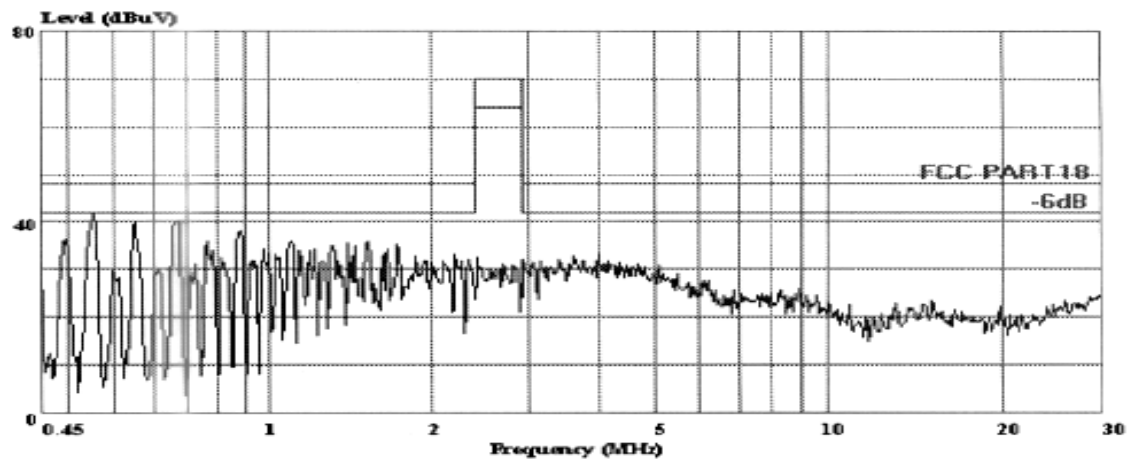
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Condition: FCC PART18 VA(KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETU-15W
POWER: AC 120V/60Hz Va
MEMO: : Light

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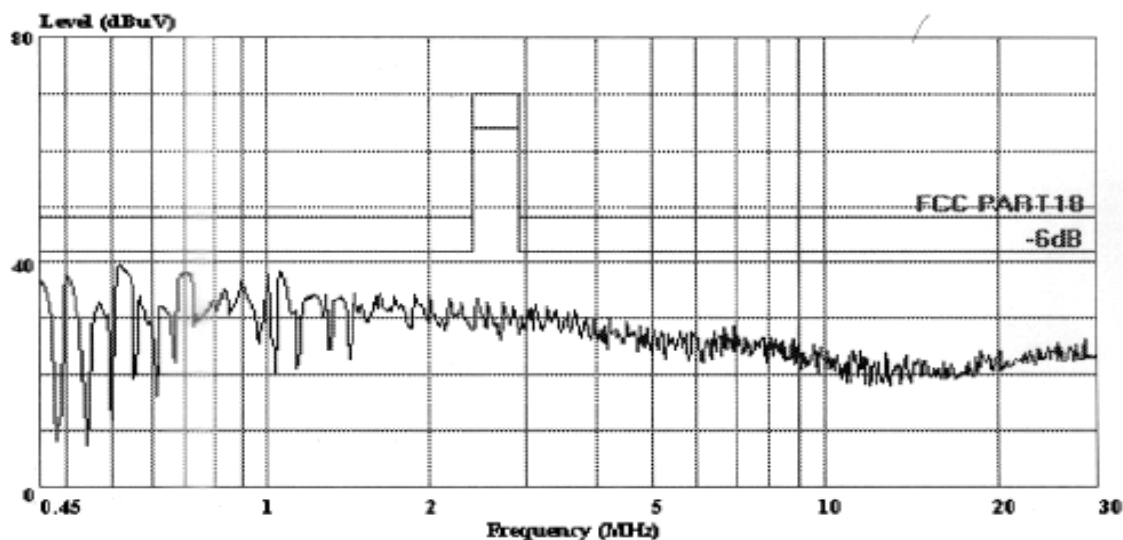
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Condition: FCC PART18 VB(KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETU-15W
POWER: AC 120V/60Hz Vb
MEMO: : Light

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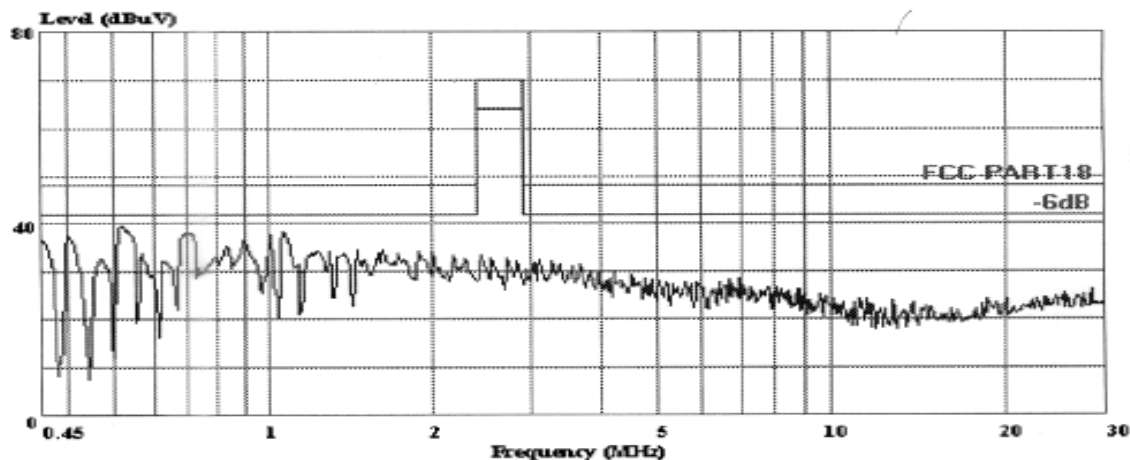
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Condition: FCC PART18 VA (KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETU-20W
POWER: : AC 120V/60Hz Va
MEMO: : Light

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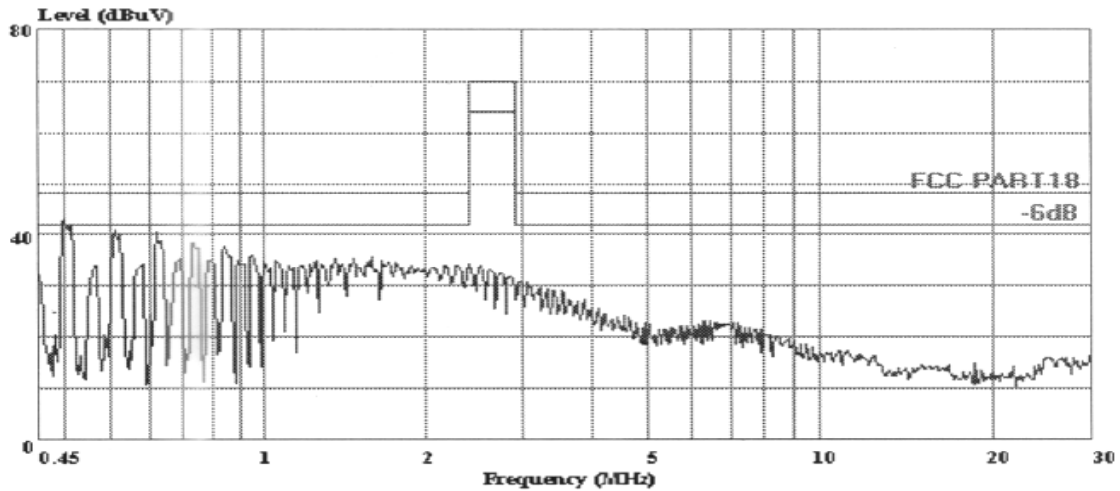
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Condition: FCC PART18 VB (KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETU-20W
POWER: : AC 120V/60Hz Vb
MEMO: : Light

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Data#: 16 File#: Everbright.EMI Date: 2002-07-07 Time: 17:12:21



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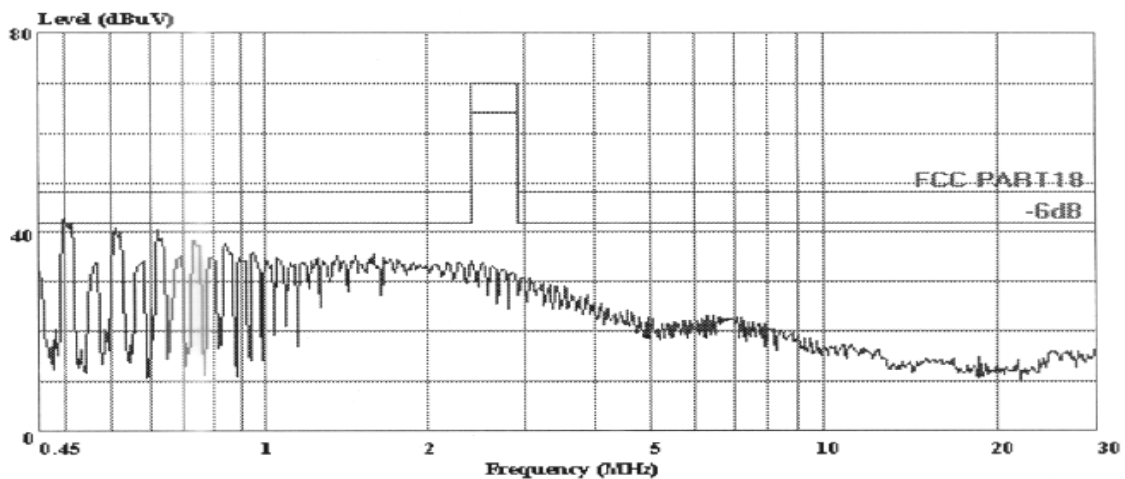
Ref Trace:

Condition: FCC PART18 VA(KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETU-24W
POWER: AC 120V/60Hz Va
MEMO: : Light

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Data#: 15 File#: Everbright.EMI Date: 2002-07-07 Time: 17:08:21



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Trace:

Ref Trace:

Condition: FCC PART18 VB(KNW-407)
EUT: : Energy Saving Lamp
M/N: : ETU-24W
POWER: AC 120V/60Hz Vb
MEMO: : Light