FCC TEST REPORT

FCC ID : QTUCFLE1526
Applicant : Everlite Electric Industries Corp.
Address : 200.Kuang-Fu Rd.,Section 2 Hsinchu,Taiwan

Equipment Under Test (EUT) :

Product description : Energy Saving Lamp
Model No. : CFLE15S/L/827/840/865 CFLE18S/L/827/840/865
CFLE20S/L/827/840/865 CFLE23S/L/827/840/865
CFLE26S/L/827/840/865 CFLE26SX/L/827/840/865

Standards : FCC Part18

Date of Test : April 29, 2006

Test Engineer : **Tiger Su**

Reviewed By :

PERPARED BY:
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Contents

Page

1 COVER PAGE 1

CONTENTS 2

2 TEST SUMMARY 4

3 GENERAL INFORMATION 5

3.1 CLIENT INFORMATION 5
3.2 GENERAL DESCRIPTION OF E.U.T. 5
3.3 DETAILS OF E.U.T. 5
3.4 DESCRIPTION OF SUPPORT UNITS 5
3.5 STANDARDS APPLICABLE FOR TESTING 5
3.6 TEST METHODOLOGY 5
3.7 TEST FACILITY 6
3.8 TEST LOCATION 6

4 EQUIPMENT USED DURING TEST 7

5 CONDUCTED EMISSION TEST 8

5.1 TEST EQUIPMENT 8
5.2 TEST PROCEDURE 8
5.3 CONDUCTED TEST SETUP 9
5.4 EUT OPERATING CONDITION 9
5.5 CONDUCTED EMISSION LIMITS 10
5.6 SPECTRUM ANALYZER 10
5.7 FREQUENCY RANGE OF MEASUREMENTS 11
5.8 CONDUCTED EMISSION TEST RESULT 11
5.8.1 Measurement Data 11
5.8.2 Conducted Emissions Test Data 18

6 PHOTOGRAPHS OF TESTING 20

6.1 CONDUCTED EMISSION TEST VIEW FOR CFLE15S/L/827/840/865 20
6.2 CONDUCTED EMISSION TEST VIEW FOR CFLE18S/L/827/840/865 20
6.3 CONDUCTED EMISSION TEST VIEW FOR CFLE20S/L/827/840/865 21
6.4 CONDUCTED EMISSION TEST VIEW FOR CFLE23S/L/827/840/865 21
6.5 CONDUCTED EMISSION TEST VIEW FOR CFLE26S/L/827/840/865 22
6.6 CONDUCTED EMISSION TEST VIEW FOR CFLE26SX/L/827/840/865 22

7 PHOTOGRAPHS - CONSTRUCTIONAL DETAILS 23

7.1 EUT - FRONT VIEW FOR CFLE15S/L/827/840/865 23
7.2 EUT - FRONT VIEW FOR CFLE18S/L/827/840/865 23
7.3 EUT - FRONT VIEW FOR CFLE20S/L/827/840/865 24
7.4 EUT - FRONT VIEW FOR CFLE23S/L/827/840/865 24
7.5 EUT - FRONT VIEW FOR CFLE26S/L/827/840/865 25
7.6 EUT - FRONT VIEW FOR CFLE26SX/L/827/840/865 25
7.7 PCB - FRONT VIEW FOR CFLE15S/L/827/840/865 26
7.8 PCB - BACK VIEW FOR CFLE15S/L/827/840/865 26
7.9 PCB - FRONT VIEW FOR CFLE18S/L/827/840/865 27

7.10 PCB - BACK VIEW FOR CFLE18S/L/827/840/865 27
7.11 PCB - FRONT VIEW FOR CFLE20S/L/827/840/865 28
7.12 PCB - BACK VIEW FOR CFLE20S/L/827/840/865 28
7.13 PCB - FRONT VIEW FOR CFLE23S/L/827/840/865 29
7.14 PCB - BACK VIEW FOR CFLE23S/L/827/840/865 29
7.15 PCB - FRONT VIEW FOR CFLE26S/L/827/840/865 30
7.16 PCB - BACK VIEW FOR CFLE26S/L/827/840/865 30
7.17 PCB - FRONT VIEW FOR CFLE26SX/L/827/840/865 31
7.18 PCB - BACK VIEW FOR CFLE26SX/L/827/840/865 31

8 FCC ID LABEL 32

2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 18: 2003	ANSI C63.4:2003	Class B	N/A
Conducted Emission (150KHz to 30MHz)	FCC PART 18: 2003	ANSI C63.4:2003	Class B	PASS

3 General Information

3.1 Client Information

Applicant: Everlite Electric Industries Corp.
Address of Applicant: 200.Kuang-Fu Rd.,Section 2 Hsinchu,Taiwan

Manufacturer: EVERLITE(H.K)CO.
Address of Manufacture: Sicun Administrative Dist.Tangxia Town.
DongguanGuanggong.china

3.2 General Description of E.U.T.

Product description: Energy Saving Lamp
Model No.: CFLE15S/L/827/840/865 CFLE18S/L/827/840/865
CFLE20S/L/827/840/865 CFLE23S/L/827/840/865
CFLE26S/L/827/840/865 CFLE26SX/L/827/840/865

3.3 Details of E.U.T.

Power Supply: 120VAC / 60Hz

3.4 Description of Support Units

The EUT has been tested as an independent unit.

3.5 Standards Applicable for Testing

The customer requested FCC tests for an Energy Saving Lamp. The standards used were FCC Part18.

3.6 Test Methodology

All measurements contained in this report are conducted with FCC Measurement Procedure MP-5, technical requirements for Methods of Measurement of Radio-Noise Emission from ISM Equipment.

3.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC – Registration No.: 759357**

  Solid Industrial (Shenzhen) 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. Registration 759357, November 04, 2003.

3.8 Test Location

All Emissions testswere performed at:-

Solid Industrial (Shenzhen) Co., Ltd. at 333 Bulong Highway Buji Longgang, Shenzhen, Guangdong, China.

Its' **VCCI – Registration No.: 2153**

4 Equipment Used during Test

Equipment	Brand Name	Model	Cal. Int Months	Last Cal. Date
EMI Shielded Room				
Spectrum analyzer	ADVANTEST	R3261C	12	2005-08
EMI Test Receiver	R&S	ESS	12	2005-08
Pre Amplifier	Anritsu	MH648A	12	2005-08
LISN	R&S	MNZ050D11	12	2005-08
LISN	Kyoritsu	KNW-407	12	2005-08
LISN	Kyoritsu	KNW-242C	12	2005-08
Absorbing Clamp	R&S	MDS-21	12	2005-08
Absorbing Clamp	R&S	MDS-21	12	2005-08
Absorbing Clamp	Kyoritsu	KT-20	12	-
Distortion Meter	MEGURO	MAK-6578A	12	2005-09
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2005-08
Oscilloscope	LEADER	LS1020	12	2005-09
Function Generator	National	VP-7422A	12	2005-08
Signal Generator	R&S	SMG	12	2005-08
RF Selector	TOYO	NS4000	-	-
RF Selector	TOYO	NS4900	-	-
Remote Controller	TOYO	MAC	-	-

5 Conducted Emission Test

Product Name:	Energy Saving Lamp
Test Requirement:	FCC Part 18
Test Method:	Based on FCC Part 18
Test Date:	April 29, 2006
Frequency Range:	150kHz to 30MHz
Class:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

5.1 Test Equipment

Please refer to Section 5 this report.

5.2 Test Procedure

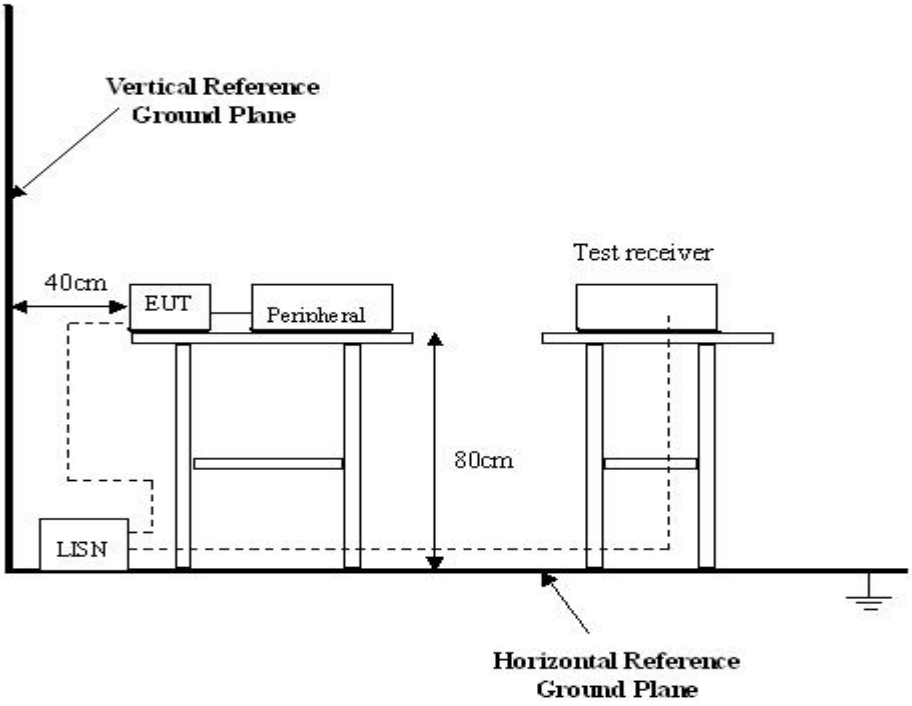
1. During the conducted emission test, the power cord of the EUT is connected to the auxiliary outlet of the LISN.
2. The EUT was tested according to FCC MP-5. The frequency spectrum from 150kHz to 30MHz was investigated.
3. The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

5.3 Conducted Test Setup

The conducted emission tests were performed using the setup accordance with the FCC MP-5 measurement procedure.

The EUT is tested independently.

The power supply used by the EUT is connected to a 120VAC / 60Hz power source.



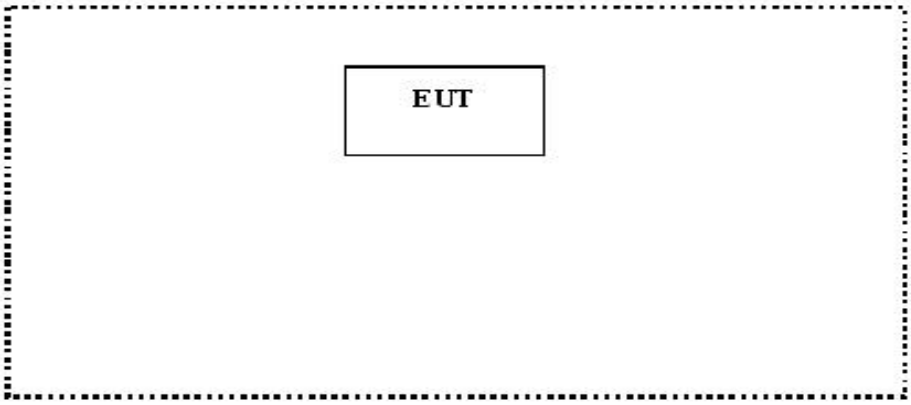
5.4 EUT Operating Condition

Operating condition is according to FCC MP-5.

A. Setup the EUT and simulators as shown on follow.

B. Enable RF signal and confirm EUT active.

C. Modulate output capacity of EUT up to specification.



5.5 Conducted Emission Limits

Frequency of Emission (MHz)	Conducted Limit (dBuV)- Quasi-peak
0.15— 0.5	66-56
0.5 — 5.0	56
5.0 — 30	60

Note: In the above limits, the tighter limit applies at the band edges.

5.6 Spectrum Analyzer

The spectrum analyzer is configured during the conduction test is as follows:

Start Frequency ····· 150 kHz
Stop Frequency ····· 30 MHz
Sweep Speed ····· Auto
IF Bandwidth ····· 9 kHz
Video Bandwidth ····· 100 kHz
Quasi-Peak Adaptor Bandwidth ····· 9 kHz
Quasi-Peak Adaptor Mode ····· Normal

5.7 Frequency Range Of Measurements

Frequency band in which device operates (MHz)	Range of frequency measurements	
	Lowest frequency	Highest frequency
Below 1.705	Lowest frequency generated in the device, but not lower than 9 kHz.	30MHz.
1.705 to 30	Lowest frequency generated in the device, but not lower than 9 kHz.	400MHz.
30 to 500	Lowest frequency generated in the device or 25MHz, whichever is lower.	Tenth harmonic or 1,000MHz, whichever is higher.
500 to 1,000	Lowest frequency generated in the device or 100MHz, whichever is lower.	Tenth harmonic.
Above 1,000	do	Tenth harmonic or highest detectable emission.

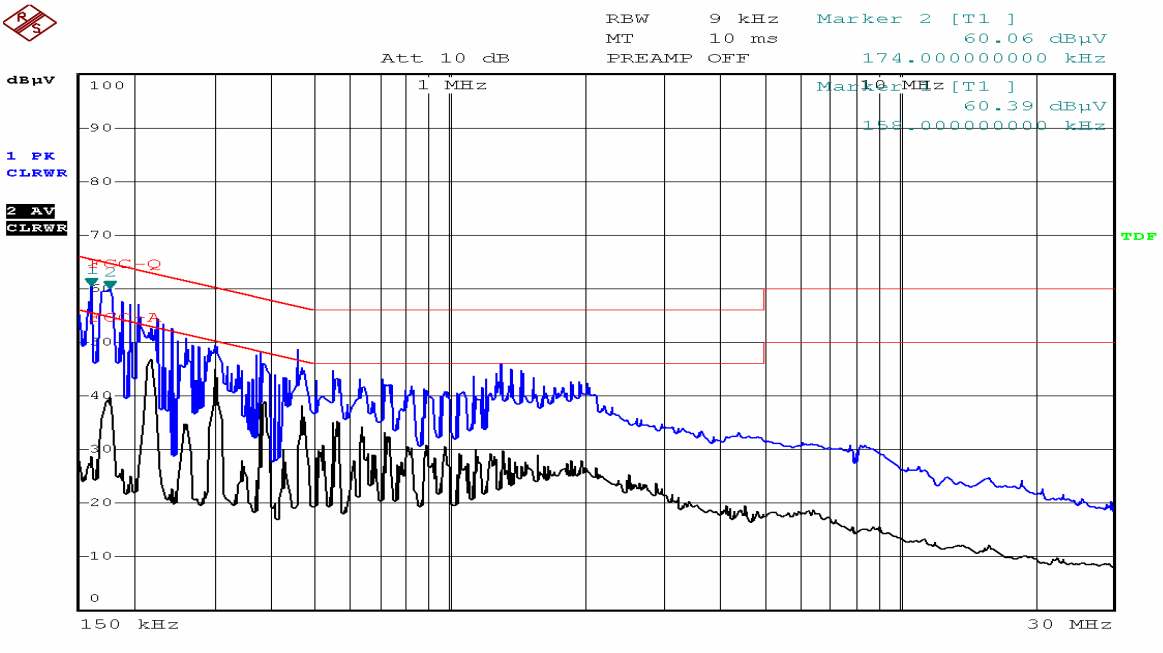
5.8 Conducted Emission Test Result

Test Item: Conducted Emission Test
Test Voltage: 120VAC / 60Hz
Test Mode: Normal
Temperature: 24 °C
Humidity: 52%RH
Test Result: PASS

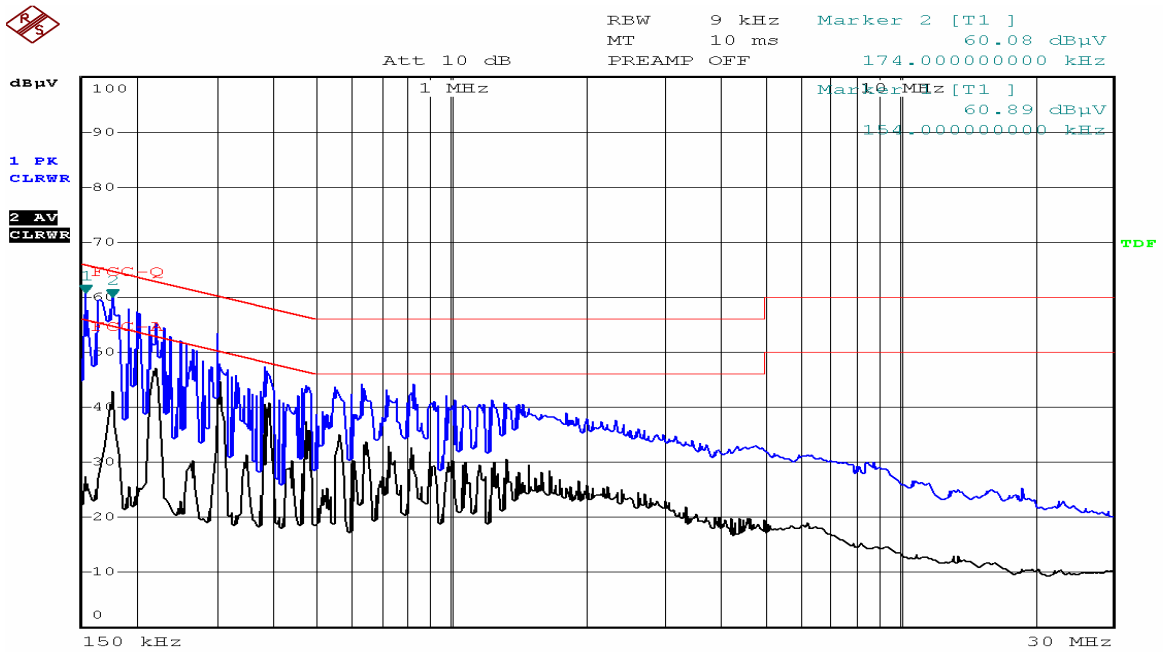
5.8.1 Measurement Data

An initial pre-scan was performed on the live and neutral lines.
No futher quasi-peak or average measurements were performed since no peak emissions were detected within 10dB line below the average limit.
Please refer to the following peak scan graph for reference.

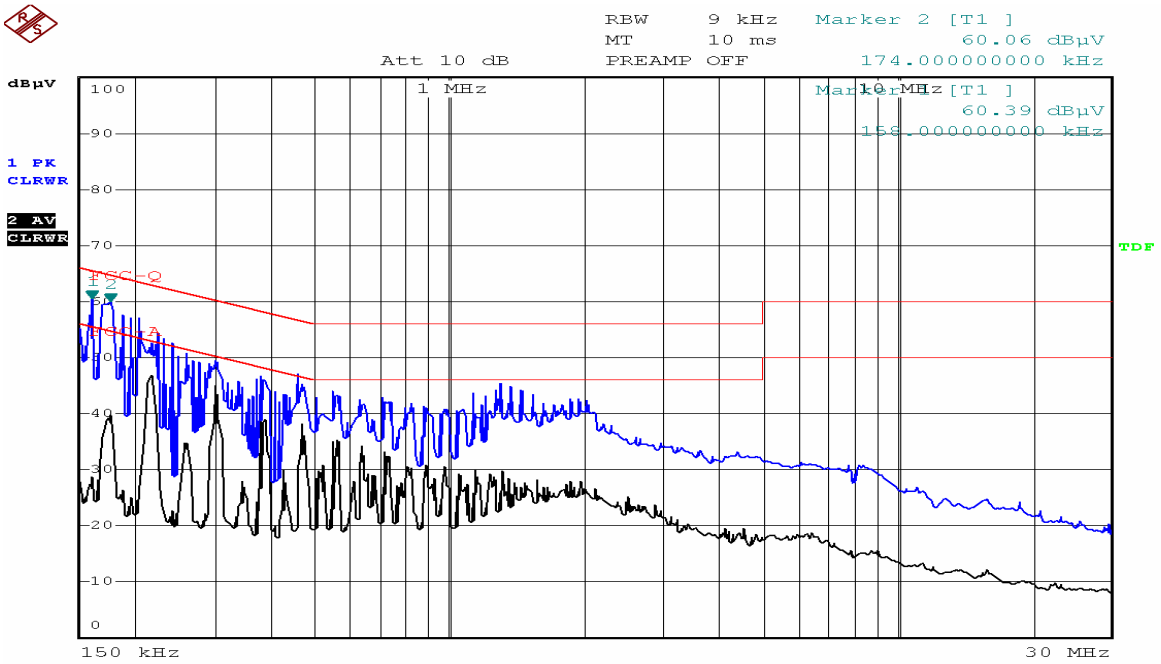
Live Line For CFLE15S/L/827/840/865



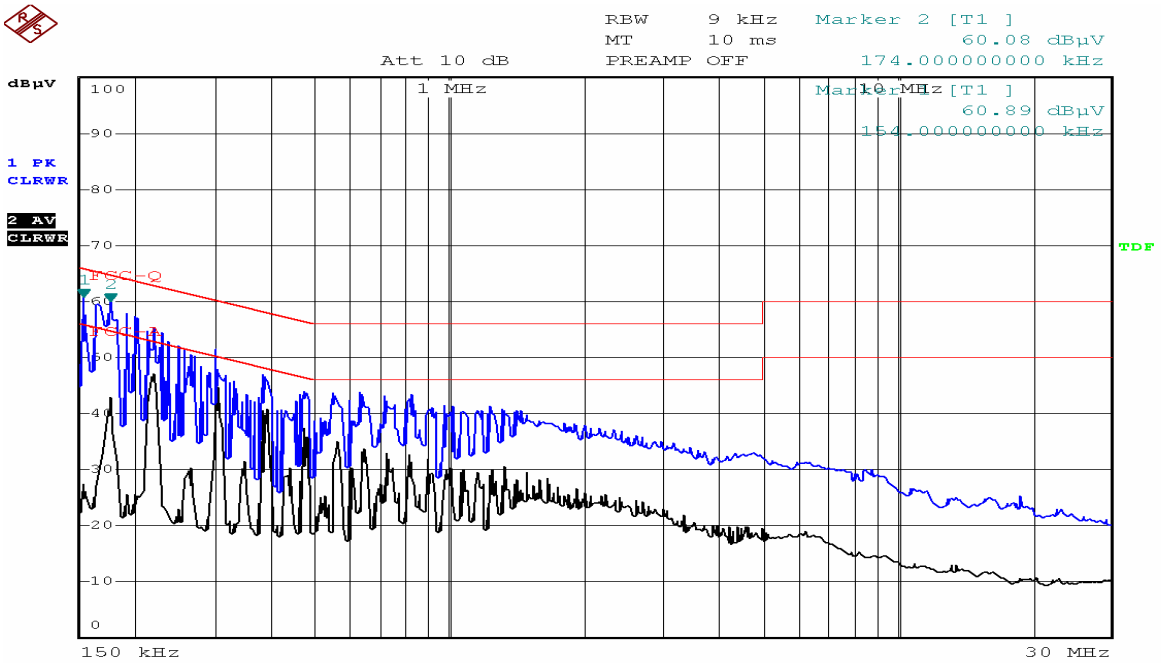
Neutral Line For CFLE15S/L/827/840/865



Live Line For CFLE18S/L/827/840/865



Neutral Line For CFLE18S/L/827/840/865



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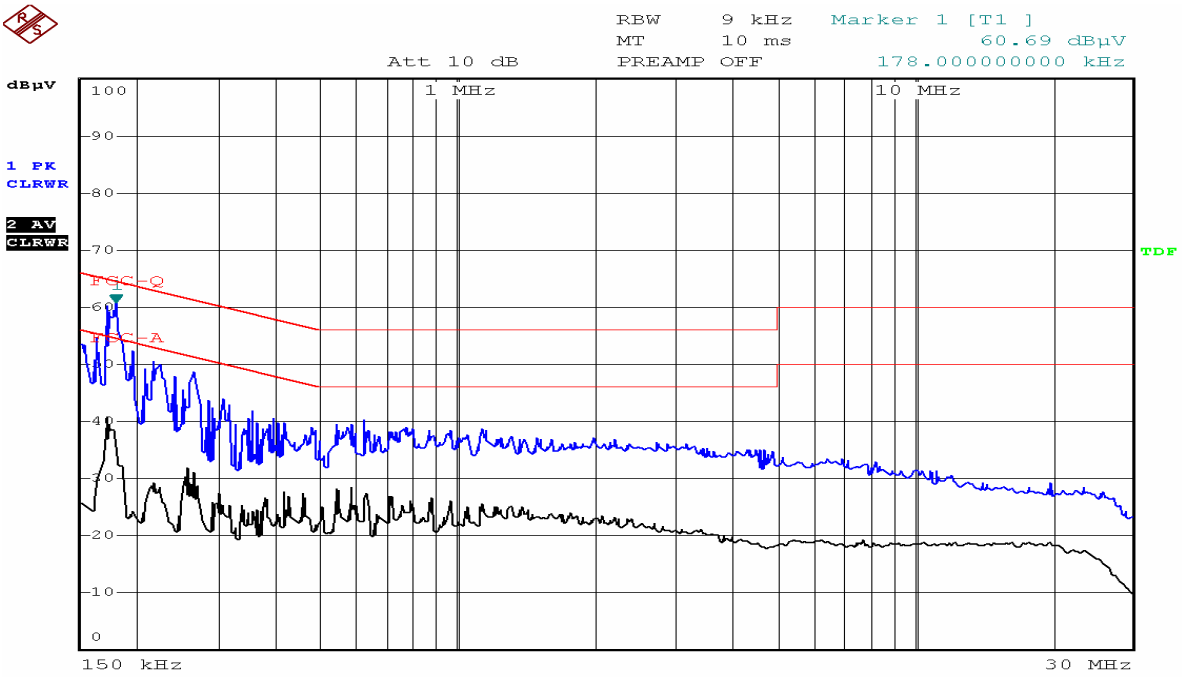
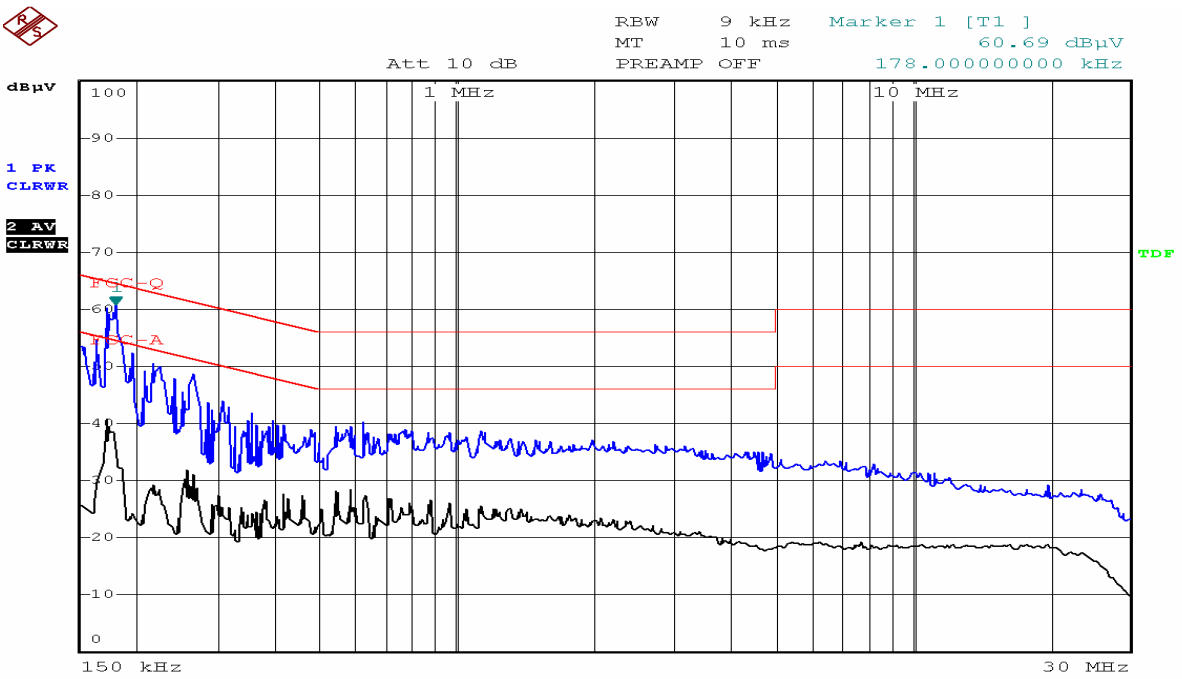
Live Line For CFLE20S/L/827/840/865



Neutral Line For CFLE20S/L/827/840/865



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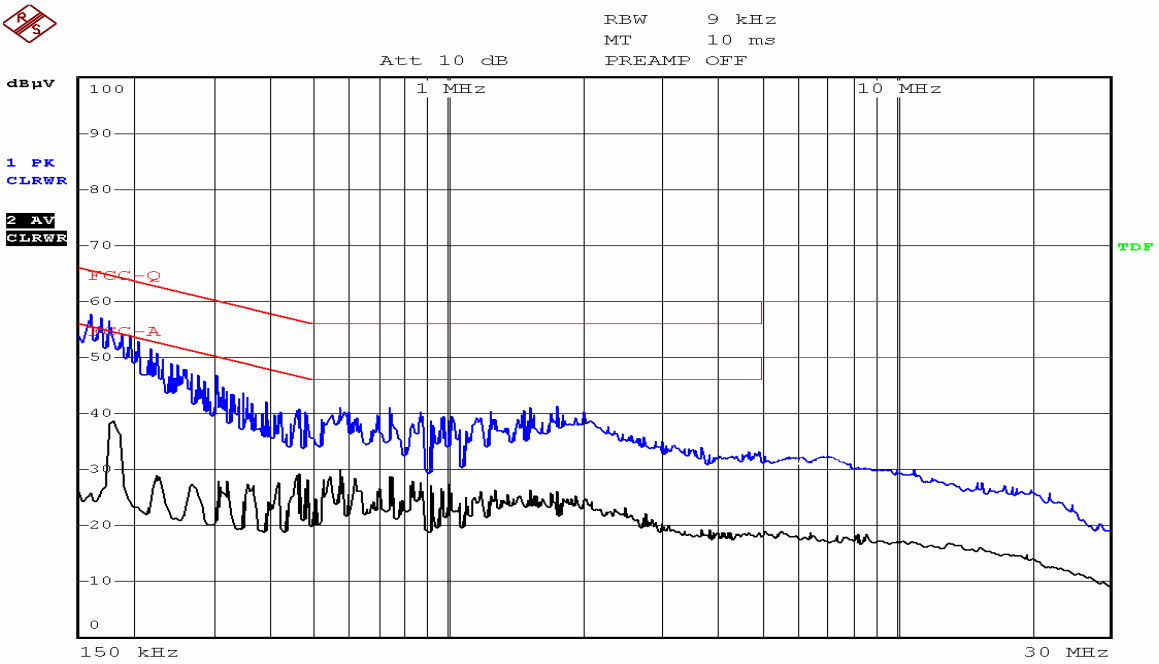
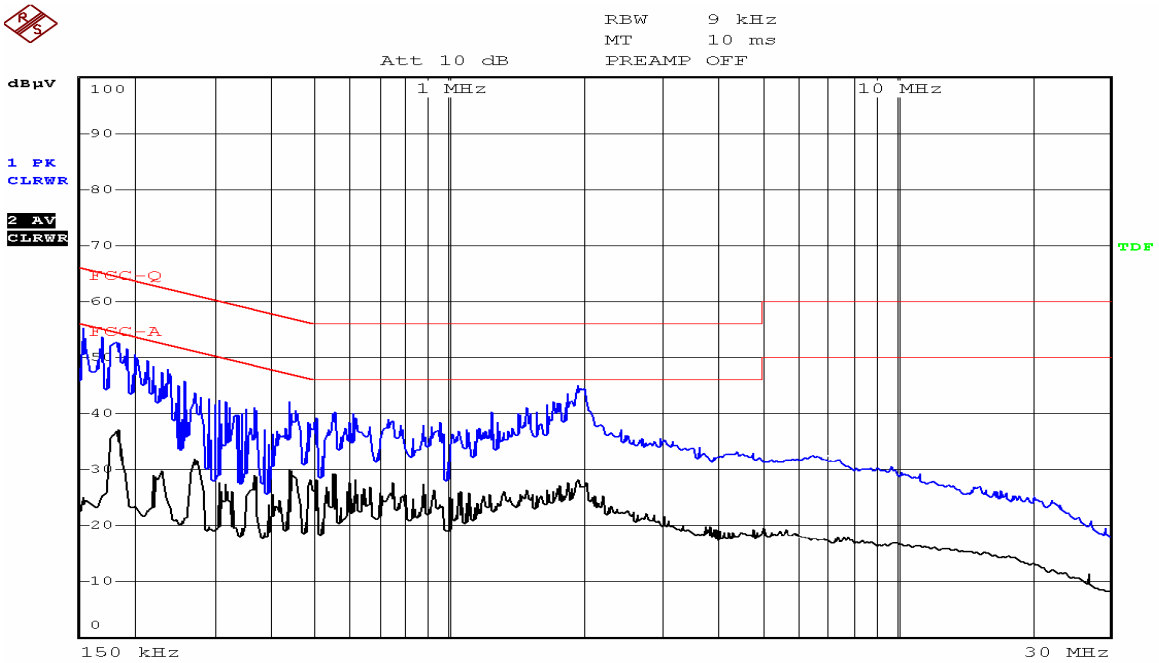


Neutral Line For CFLE23S/L/827/840/865



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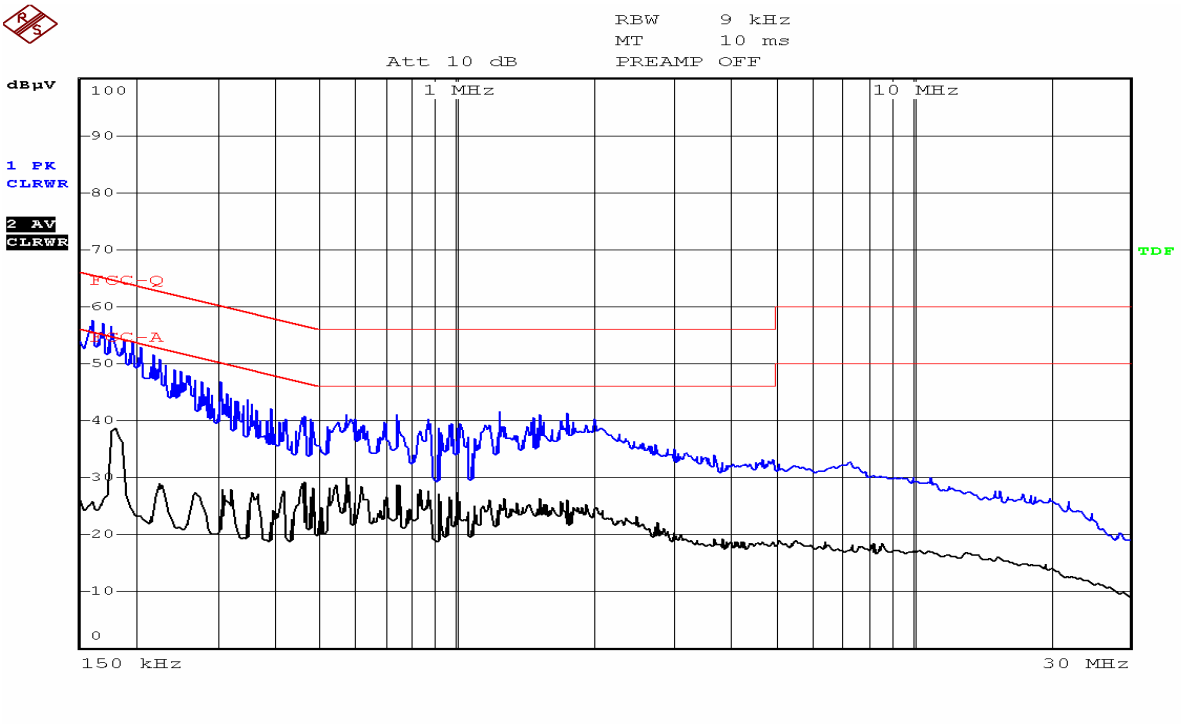
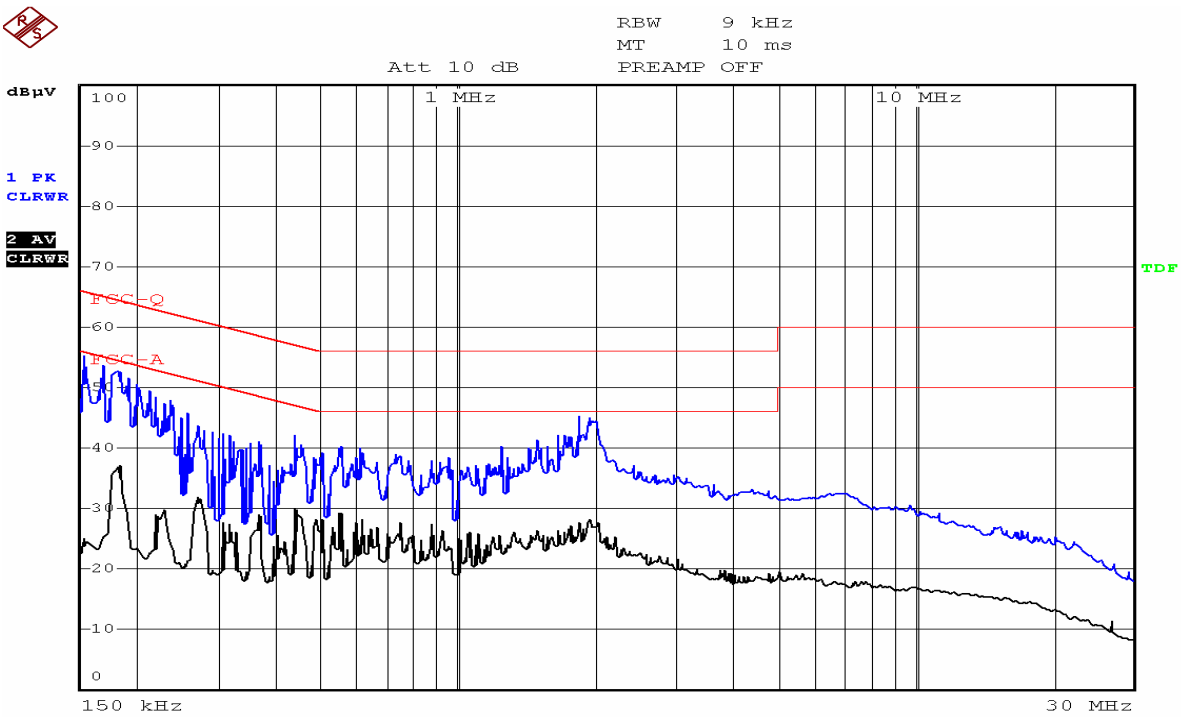
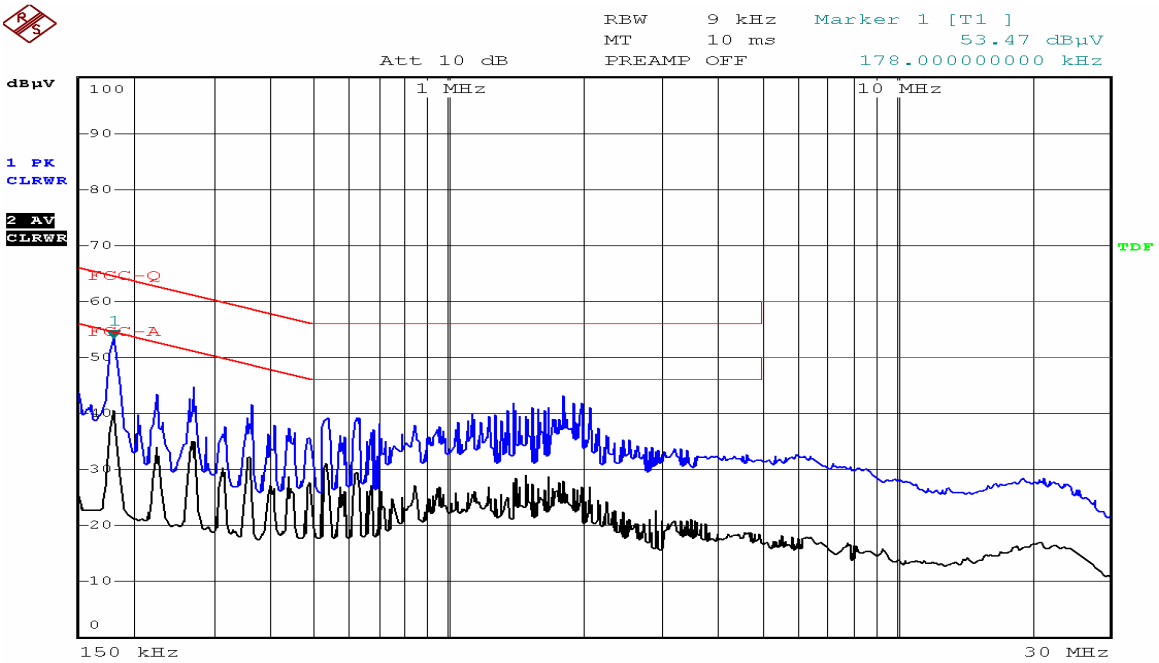
Live Line For CFLE26S/L/827/840/865



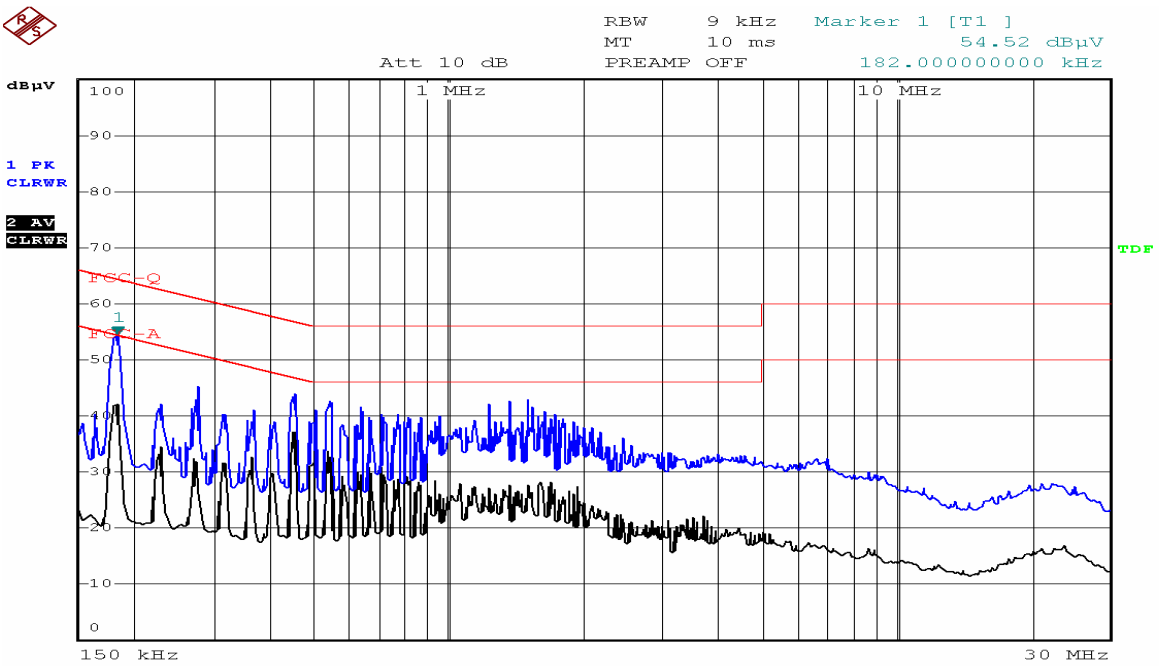
Neutral Line For CFLE26S/L/827/840/865



Live Line For CFLE26SX/L/827/840/865



Neutral Line For CFLE26SX/L/827/840/865



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5.8.2 Conducted Emissions Test Data

CFLE15S/L/827/840/865

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.175000	Live	58.80	64.72	5.92	39.95	54.72	14.77
0.246000	Live	52.04	61.89	9.85	44.21	51.89	7.68
0.568000	Live	43.82	56.00	12.18	36.87	46.00	9.13
0.178000	Neutral	57.05	64.67	7.62	43.65	54.67	11.02
0.586000	Neutral	44.07	56.00	11.93	35.81	46.00	10.19
0.753000	Neutral	41.92	56.00	14.08	27.83	46.00	18.17

CFLE18S/L827/840/865

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.168000	Live	59.64	65.06	5.42	39.87	55.06	15.19
0.302000	Live	48.63	60.19	11.56	44.62	50.19	5.57
0.462000	Live	47.31	56.66	9.35	37.66	46.66	9.00
0.174000	Neutral	57.68	64.77	7.09	43.28	54.77	11.49
0.638000	Neutral	43.96	56.00	12.04	35.34	46.00	10.66
0.814000	Neutral	43.82	56.00	12.18	34.73	46.00	11.27

CFLE20S/L/827/840/865

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.175000	Live	59.94	64.72	4.78	40.07	54.72	14.65
0.546000	Live	39.91	56.00	16.09	37.93	46.00	8.07
0.952000	Live	37.37	56.00	18.63	26.82	46.00	19.18
0.176000	Neutral	59.06	64.72	5.66	37.20	54.72	17.52
0.266000	Neutral	49.94	61.89	11.95	27.89	51.89	24.00
0.804000	Neutral	37.27	56.00	18.73	24.12	46.00	21.88

CFLE23S/L/827/840/865

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.177000	Live	56.27	64.63	8.36	37.89	54.63	16.74
0.468000	Live	41.35	56.55	15.20	28.67	46.55	17.88
0.726000	Live	42.46	56.00	13.54	27.83	46.00	18.17
0.182000	Neutral	52.31	64.39	12.08	36.53	54.39	17.86
0.234000	Neutral	43.28	62.31	19.03	32.07	52.31	20.24
0.752000	Neutral	38.62	56.00	17.38	27.64	46.00	18.36

CFLE26S/L/827/840/865

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.179000	Live	55.26	64.53	9.27	38.06	54.53	16.47
0.463000	Live	41.25	56.64	15.39	28.13	46.64	18.51
0.735000	Live	42.92	56.00	13.08	27.82	46.00	18.18
0.181000	Neutral	52.57	64.44	11.87	37.06	54.44	17.38
0.459000	Neutral	41.26	56.71	15.45	38.17	46.71	8.54
0.783000	Neutral	38.05	56.00	17.95	24.38	46.00	21.62

CFLE26SX/L/827/840/865

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.177000	Live	53.61	64.63	11.02	40.08	54.63	14.55
0.518000	Live	39.28	56.00	16.72	31.54	46.00	14.46
0.826000	Live	37.69	56.00	18.31	26.46	46.00	19.54
0.181000	Neutral	53.62	64.44	10.82	42.31	54.44	12.13
0.318000	Neutral	40.05	59.76	19.71	31.26	49.76	18.50
0.591000	Neutral	37.96	56.00	18.04	29.03	46.00	16.97

6 Photographs of Testing

6.1 Conducted Emission Test View For CFLE15S/L/827/840/865

6.2 Conducted Emission Test View For CFLE18S/L/827/840/865

6.3 Conducted Emission Test View For CFLE20S/L/827/840/865

6.4 Conducted Emission Test View For CFLE23S/L/827/840/865

6.5 Conducted Emission Test View For CFLE26S/L/827/840/865

6.6 Conducted Emission Test View For CFLE26SX/L/827/840/865

7 Photographs - Constructional Details

7.1 EUT - Front View For CFLE15S/L/827/840/865

7.2 EUT - Front View For CFLE18S/L/827/840/865

7.3 EUT - Front View For CFLE20S/L/827/840/865

7.4 EUT - Front View For CFLE23S/L/827/840/865

7.5 EUT - Front View For CFLE26S/L/827/840/865

7.6 EUT - Front View For CFLE26SX/L/827/840/865

7.7 PCB - Front View For CFLE15S/L/827/840/865

7.8 PCB - Back View For CFLE15S/L/827/840/865

7.9 PCB - Front View For CFLE18S/L/827/840/865

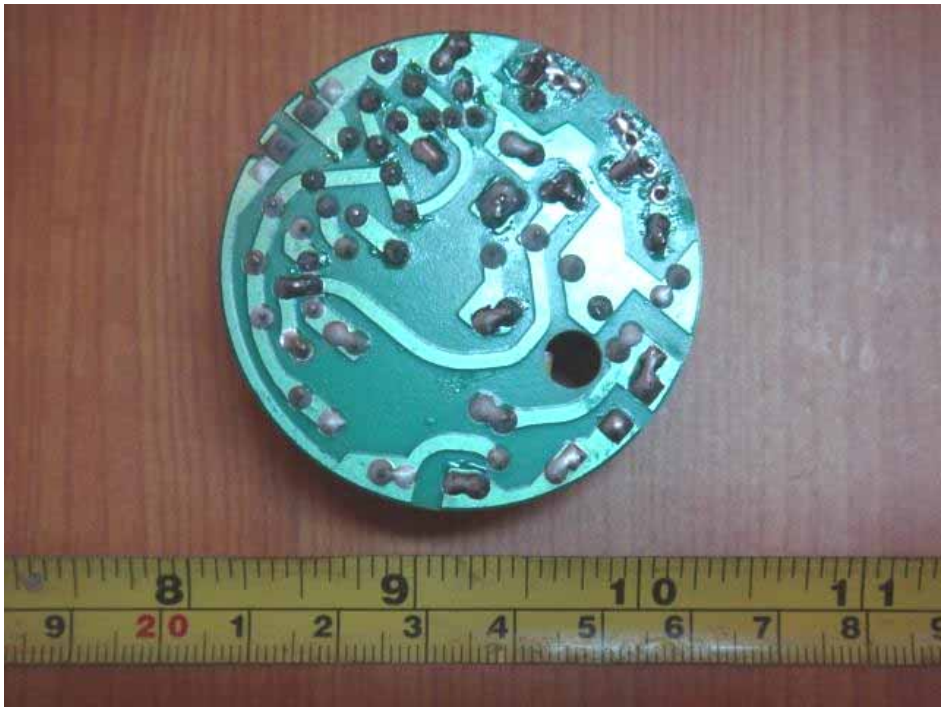
7.10 PCB - Back View For CFLE18S/L/827/840/865

7.11 PCB - Front View For CFLE20S/L/827/840/865

7.12 PCB - Back View For CFLE20S/L/827/840/865

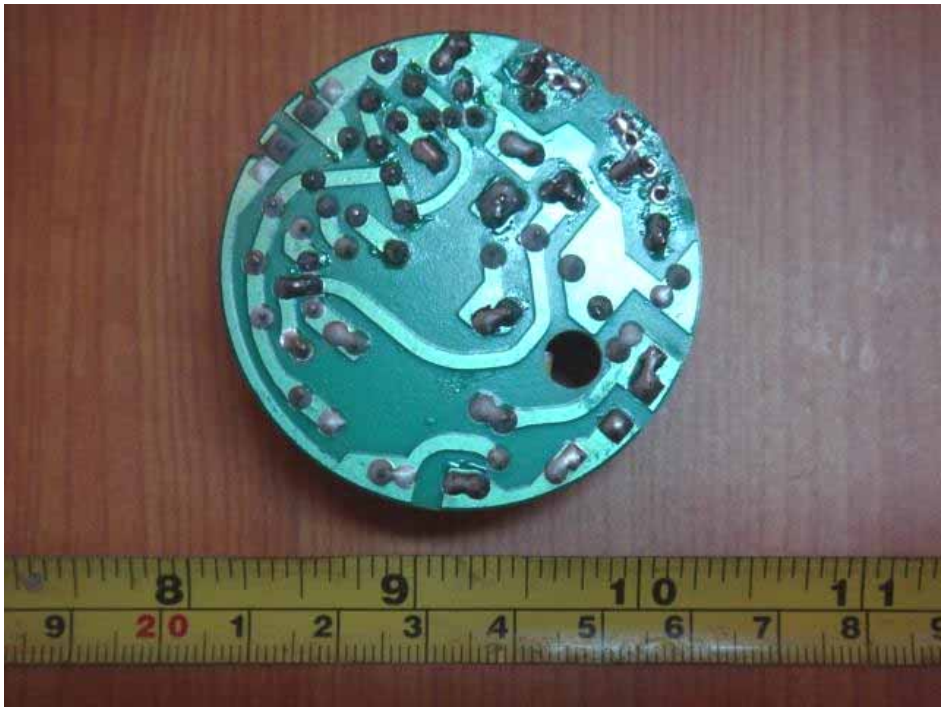
7.13 PCB - Front View For CFLE23S/L/827/840/865

7.14 PCB - Back View For CFLE23S/L/827/840/865

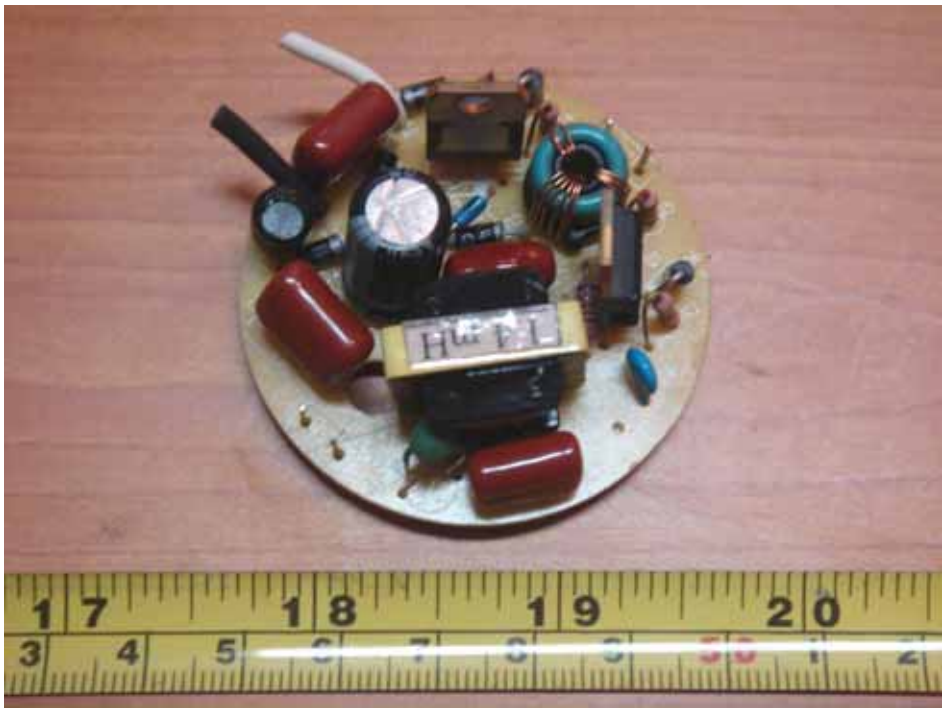


7.15 PCB - Front View For CFLE26S/L/827/840/865

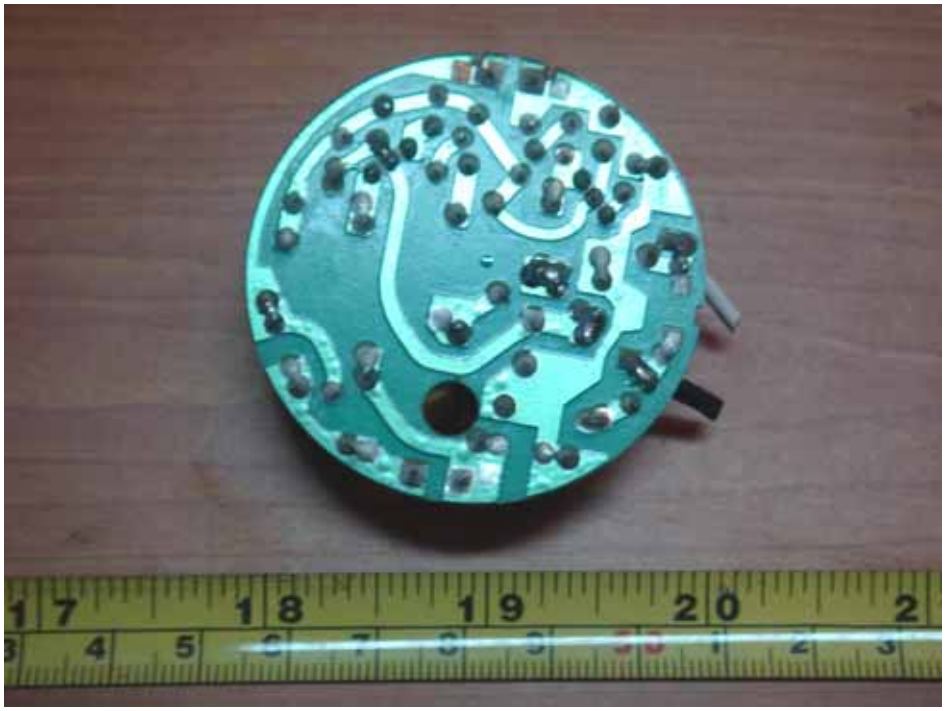
7.16 PCB - Back View For CFLE26S/L/827/840/865



7.17 PCB - Front View For CFLE26SX/L/827/840/865



7.18 PCB - Back View For CFLE26SX/L/827/840/865



8 FCC ID Label

This device complies with Part 18 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference,and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT

EUT Top View/ proposed FCC Mark Location