

FCC TEST REPORT

UNDER
FCC Part 18 RF Lighting Device

PREPARED FOR :

Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

Tian Peng Industrial District HengLan Town, Zhongshan, GuangDong, China

FCC ID: QXGSREEUT

EUT: Self-Ballasted Fluorescent Lamp

**Model: SRE-15W; SRE-20W; SRE-23W; SRE-25W;
EUT-15W; EUT-20W; EUT-23W; EUT-25W**

February 18, 2003

Report Type: Original Report

Test Engineer: Peter Lin

Test Date: January 21, 2003



Review By: _____

Apollo Liu

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FCC Registration Number: 97379

TABLE OF CONTENTS

1. Summary of Test Results.....	3
2. Test Statement.....	4
2. 1 Test Statement.....	4
2. 2 Departure From Document Policies, Procedure or Specifications, The Statement	4
3. EUT Modifications	5
4. Conducted Power Line Test.....	6
4. 1 Test Equipment.....	6
4. 2 Test Procedure	6
4. 3 Test Setup	6
4. 4 Configuration of The EUT.....	7
4. 5 EUT Operating Condition.....	8
4. 6 Conducted Power Line Emission Limits	8
4. 7 Conducted Power Line Test Result.....	9
5. Radiated Emission Test	21
5. 1 Test Equipment.....	21
5. 2 Test Procedure	21
5. 3 Radiated Test Setup	21
5. 4 Configuration of The EUT.....	22
5. 5 EUT Operating Condition.....	22
5. 6 Radiated Emission Limit	22
5. 7 Radiated Emission Test Result.....	23
6. Photos of Testing.....	34
6. 1 EUT Test Photographs.....	34
6. 2 EUT Detailed Photographs	36
7. FCC ID Label.....	37
8. Test Equipment.....	38

1. Summary of Test Results

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 18	Conducted Test	PASS	The test results meet limit
FCC Part 18	Radiated Test	PASS	The test results meet limit.

2. Test Statement

2. 1 Test Statement

- A. This statement explains the test condition of this project. The EUT was tested under the condition of each test item.
- B. The data shown in this report reflects the worst – case data for the condition as the summary of test result.
- C. EUT conditions.

Note: (1)The EUT is Self-Ballasted Fluorescent Lamp; Working Frequency: (0.040~0.045)MHz.
(2)It is acknowledged by Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory the Selling Model No.: SRE-15W; SRE-20W; SRE-23W; SRE25W; EUT-15W; EUT-20W; EUT-23W; EUT-25W are identical. The Model difference is for marketing purposes only.

Model	Rating	Power(W)
SRE-15W	120V/60Hz, 240mA	11.27
SRE-20W	120V/60Hz, 320mA	16.13
SRE-23W	120V/60Hz, 360mA	18.65
SRE-25W	120V/60Hz, 400mA	21.03
EUT-15W	120V/60Hz, 240mA	11.09
EUT-20W	120V/60Hz, 320mA	16.22
EUT-23W	120V/60Hz, 360mA	18.46
EUT-25W	120V/60Hz, 400mA	21.51

2. 2 Departure From Document Policies, Procedure or Specifications, The Statement

1. Did have Any departure from document policies & procedures or from specifications.
Yes , No
If yes , the description as below.
2. The report must not be used by the client to claim product endorsement by any agency the government.
3. This product is a test sample that was shown as the photos of this test report only.
4. The effect that the results relate only to the items tested.

3. EUT Modifications

No modification by Shenzhen Academy of Metrology & Quality Inspection.

4. Conducted Power Line Test

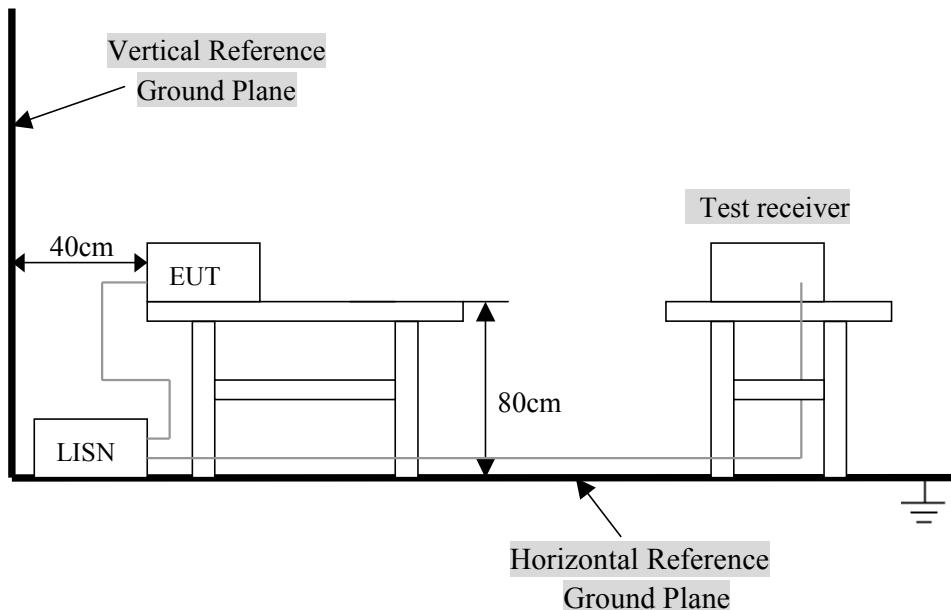
4. 1 Test Equipment

Please refer to Section 8 this report.

4. 2 Test Procedure

The EUT was tested according to ANSI C63.4 - 1992. The frequency spectrum from 0.45 MHz to 30 MHz was investigated. The LISN used was 50 ohm / 50 uHenry as specified by section 5.1 OF ANSI C63.4 - 1992. cables and peripherals were moved to find the maximum emission levels for each frequency.

4. 3 Test Setup



For the actual test configuration, Please refer to the related items – Photos of Testing.

4. 4 Configuration of The EUT

The EUT was configured according to ANSI C63.4-1992. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

DEVICE	MANUFACTURER	MODEL #	FCCID / DoC
Self-Ballasted Fluorescent Lamp	Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory	SRE-15W; SRE-20W; SRE-23W; SRE-25W; EUT-15W; EUT-20W; EUT-23W; EUT-25W	QXGSREEUT

B. Internal Devices

DEVICE	MANUFACTURER	MODEL #	FCCID / DoC
N/A			

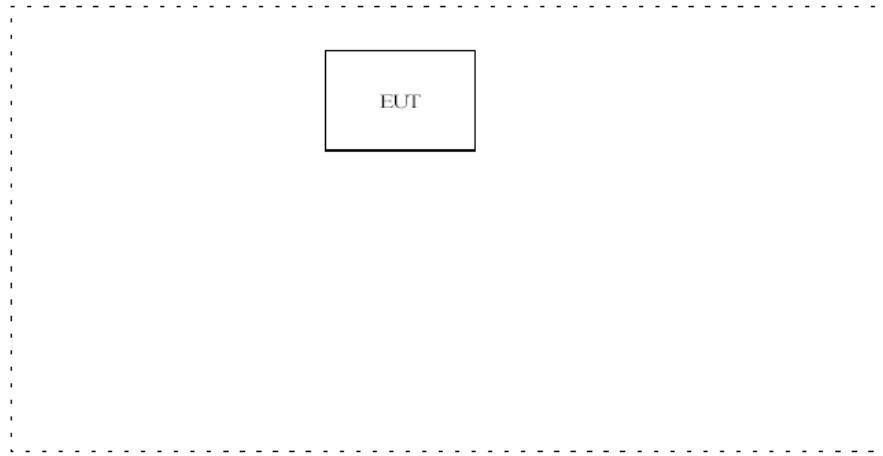
C. Peripherals

DEVICE	MANUFAC-TURER	MODEL # SERIAL #	FCC ID/ DoC	CABLE
N/A				

4. 5 EUT Operating Condition

Operating condition is according to ANSI C63.4 - 1992.

- A. Setup the EUT and simulators as shown on follow.
- B. The EUT was connected to the power main through a Line Impedance Stabilization Network (LISN).
- C. This provided a 50 ohm coupling impedance for the measuring equipment..



4. 6 Conducted Power Line Emission Limits

FCC Part 18 (dBuV)	
FREQUENCY RANGE (MHz)	Limits (dBuV)
0 . 45 – 2.51	48
2.51 – 3.0	69.5
3.0 – 30	48

NOTE : In the above table, the tighter limit applies at the band edges.

4. 7 Conducted Power Line Test Result

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-15W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.460	40.2	Va	48.0	-7.8
0.533	38.3	Va	48.0	-9.7
0.910	37.0	Va	48.0	-11.0
0.460	40.3	Vb	48.0	-7.7
0.520	35.7	Vb	48.0	-12.3
0.610	37.2	Vb	48.0	-10.8

Note:

- 1.Uncertainty in conducted emission measured is <+/ -2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-20W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.451	34.4	Va	48.0	-13.6
0.780	35.2	Va	48.0	-12.8
0.948	39.5	Va	48.0	-8.5
0.680	39.4	Vb	48.0	-8.6
0.845	40.3	Vb	48.0	-7.7
0.960	35.4	Vb	48.0	-12.6

Note:

- 1.Uncertainty in conducted emission measured is <+/ -2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-23W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.450	45.1	Va	48.0	-2.9
0.705	44.7	Va	48.0	-3.2
0.968	45.3	Va	48.0	-2.7
0.457	44.2	Vb	48.0	-3.8
0.523	43.9	Vb	48.0	-4.1
1.058	44.1	Vb	48.0	-3.9

Note:

- 1.Uncertainty in conducted emission measured is <+/-2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-25W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.450	42.0	Va	48.0	-6.0
0.547	39.1	Va	48.0	-8.9
0.688	39.3	Va	48.0	-8.7
0.458	44.7	Vb	48.0	-3.2
0.503	39.3	Vb	48.0	-8.7
0.600	39.4	Vb	48.0	-8.6

Note:

- 1.Uncertainty in conducted emission measured is <+/-2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-15W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.565	37.3	Va	48.0	-10.7
0.750	36.7	Va	48.0	-11.3
0.950	33.4	Va	48.0	-14.6
0.615	37.1	Vb	48.0	-10.9
0.815	35.4	Vb	48.0	-12.6
1.335	35.0	Vb	48.0	-13.0

Note:

- 1.Uncertainty in conducted emission measured is <+/-2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-20W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.770	38.7	Va	48.0	-9.3
0.911	41.2	Va	48.0	-6.8
1.281	43.3	Va	48.0	-4.7
0.785	38.5	Vb	48.0	-9.5
0.890	45.1	Vb	48.0	-2.9
1.215	44.7	Vb	48.0	-3.4

Note:

- 1.Uncertainty in conducted emission measured is <+/-2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-23W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.510	43.4	Va	48.0	-4.6
0.830	41.2	Va	48.0	-6.8
0.955	43.5	Va	48.0	-4.5
0.460	39.2	Vb	48.0	-8.8
0.651	41.2	Vb	48.0	-6.8
0.819	39.6	Vb	48.0	-8.4

Note:

- 1.Uncertainty in conducted emission measured is <+/-2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-25W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

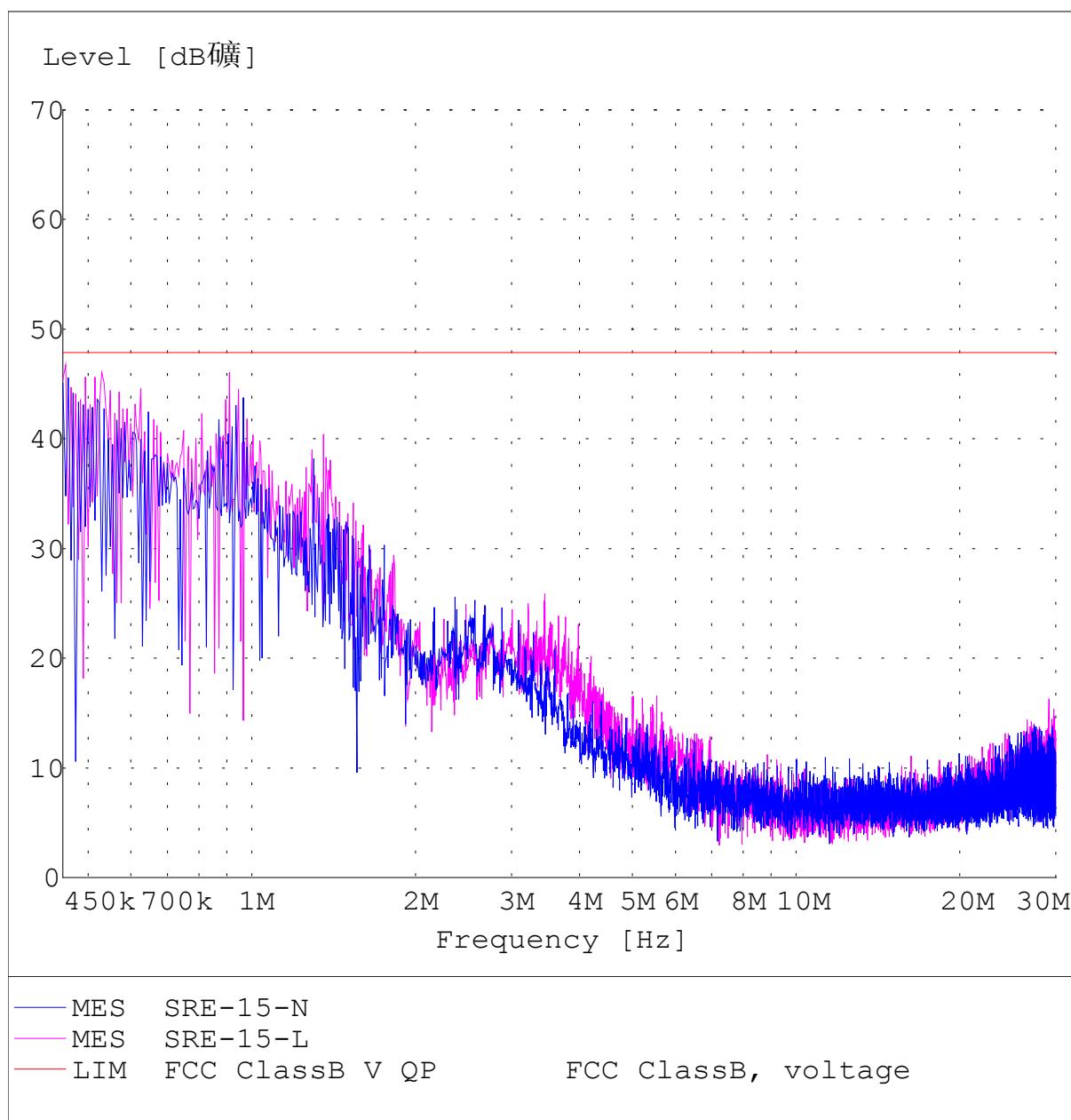
FREQ. (MHz)	EMISSION (dBuV)	Va/Vb	LIMITS QP (dBuV)	MARGIN (dB)
0.614	41.7	Va	48.0	-6.3
0.751	40.4	Va	48.0	-7.6
1.354	44.5	Va	48.0	-3.5
0.763	41.6	Vb	48.0	-6.4
1.060	39.8	Vb	48.0	-8.2
1.345	44.5	Vb	48.0	-3.5

Note:

- 1.Uncertainty in conducted emission measured is <+/-2dB.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.The Quasi-peak emission level also meets average limit and measurement with the average detector is unnecessary.
- 4.Emission = Meter Reading + Factor ; Factor = Insertion Loss + Cable Loss.
- 5.Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Conducted Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: SRE-15W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC LAB.*Operator: *Peter Lin*Test Specification: *LINE&NEUTRAL*

Comment:



Conducted Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp *M/N:* SRE-20W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

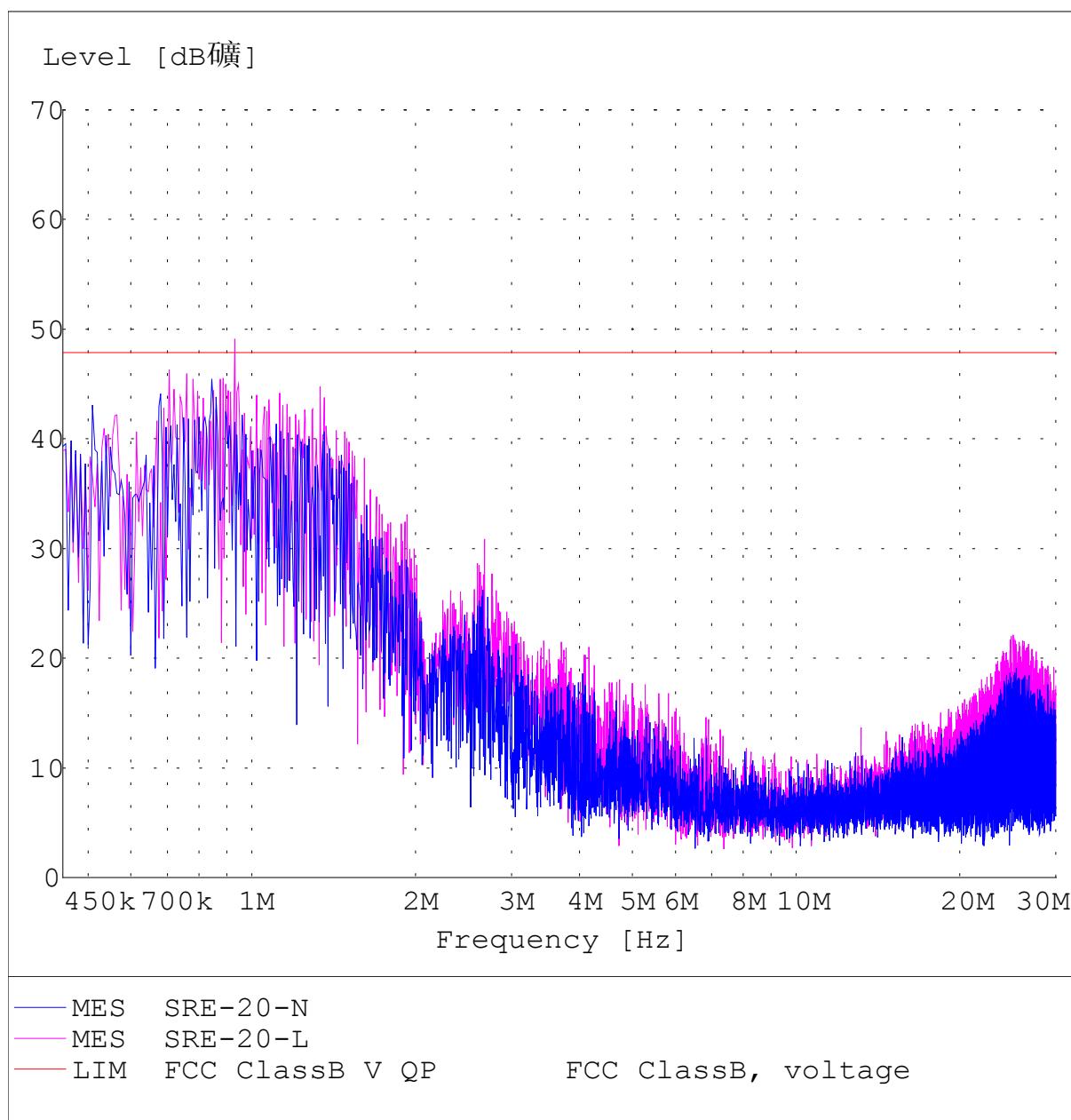
Operating Condition: Normal

Test Site: SMQ EMC LAB.

Operator: Peter Lin

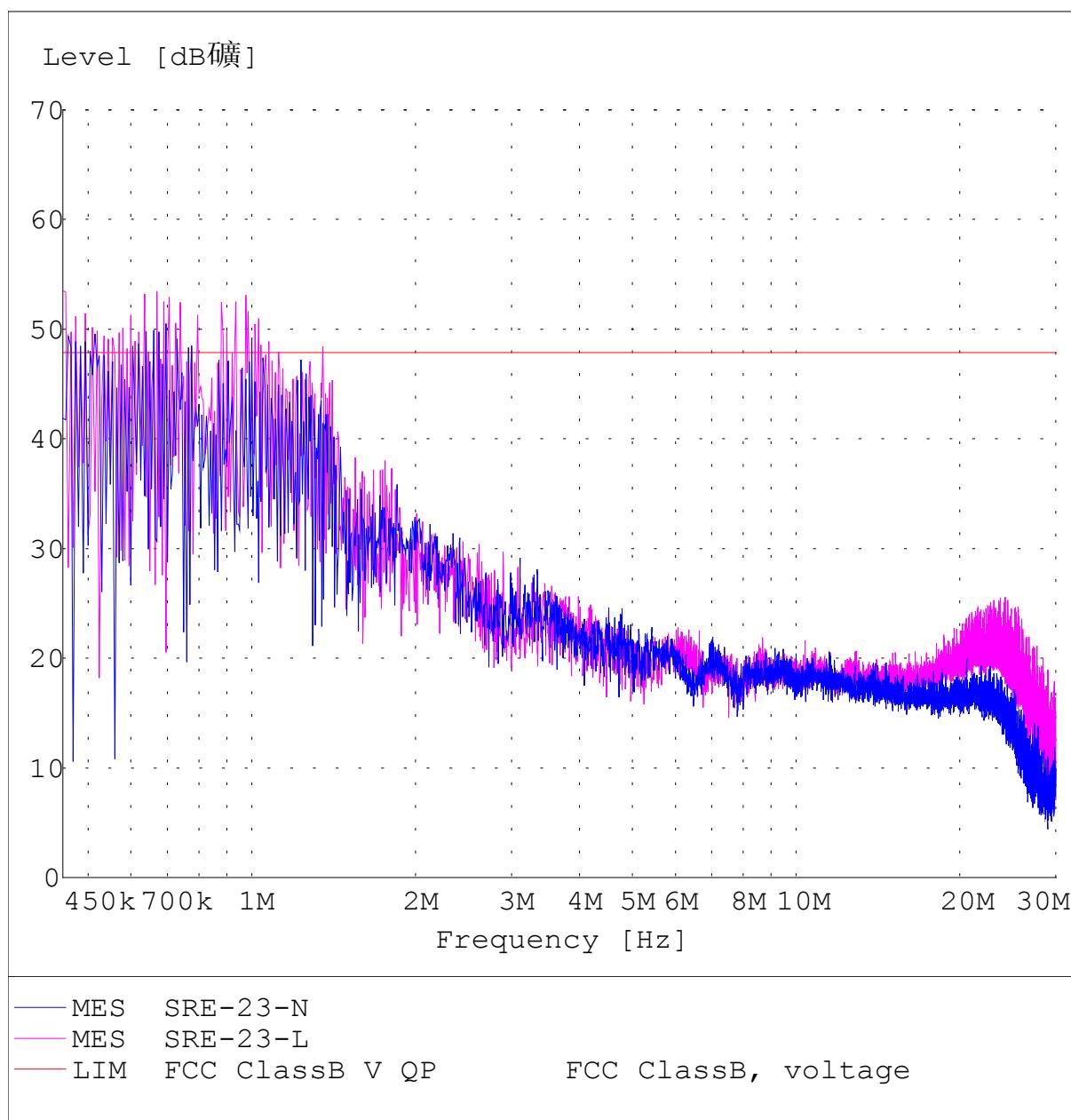
Test Specification: LINE&NEUTRAL

Comment:



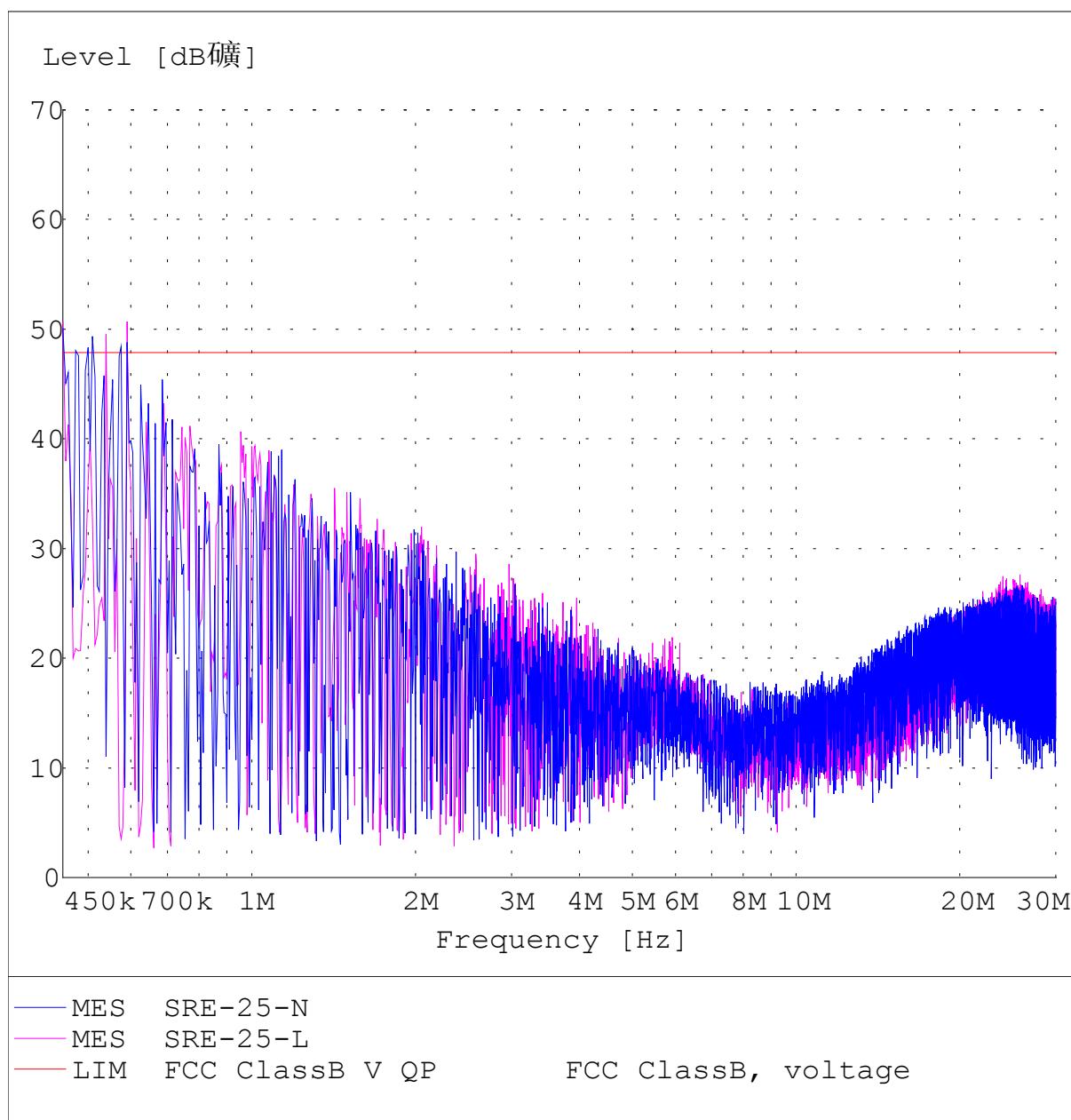
Conducted Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: SRE-23W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC LAB.*Operator: *Peter Lin*Test Specification: *LINE&NEUTRAL*

Comment:



Conducted Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: SRE-25W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC LAB.*Operator: *Peter Lin*Test Specification: *LINE&NEUTRAL*

Comment:



Conducted Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp *M/N:* EUT-15W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

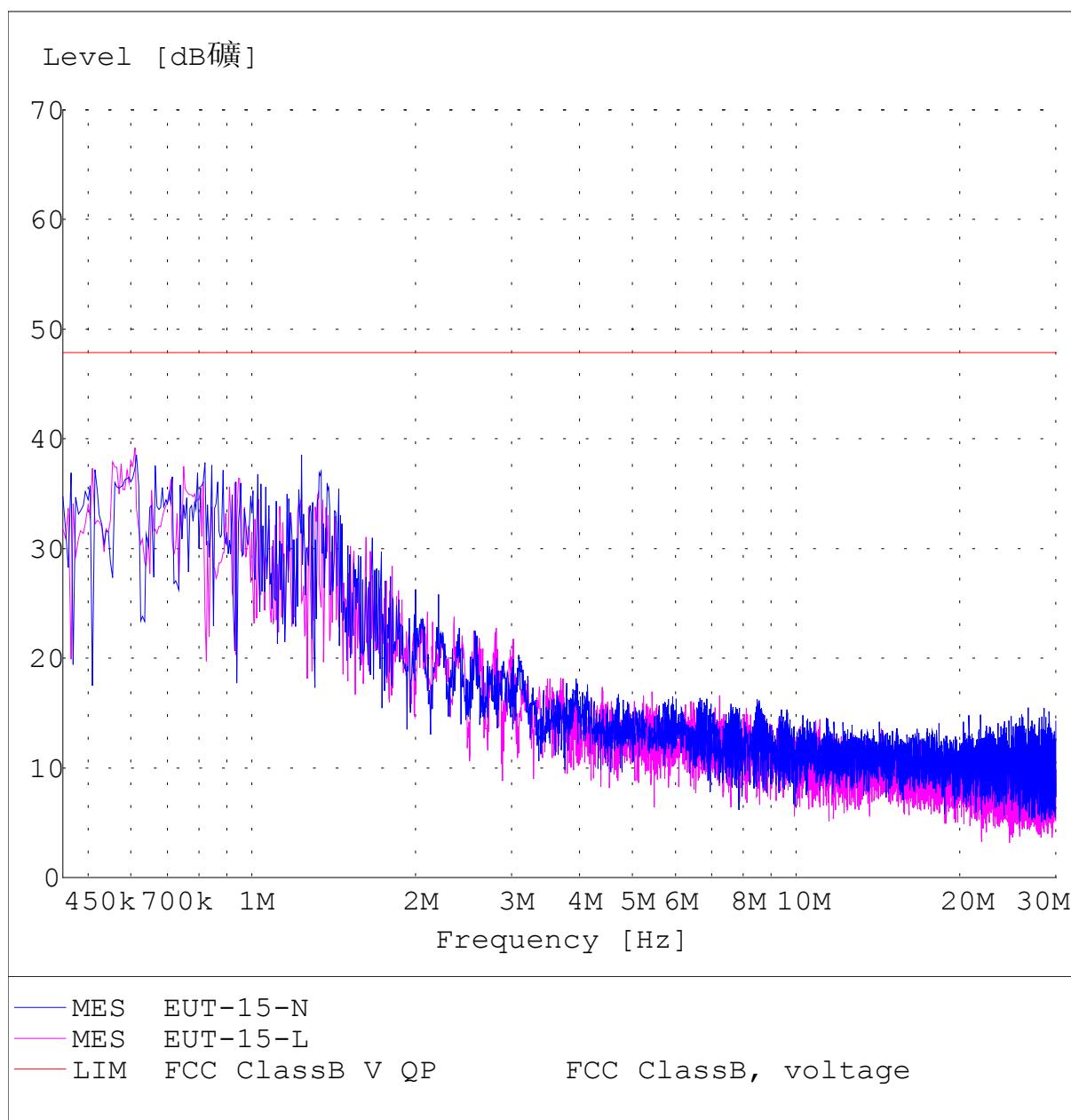
Operating Condition: Normal

Test Site: SMQ EMC LAB.

Operator: Peter Lin

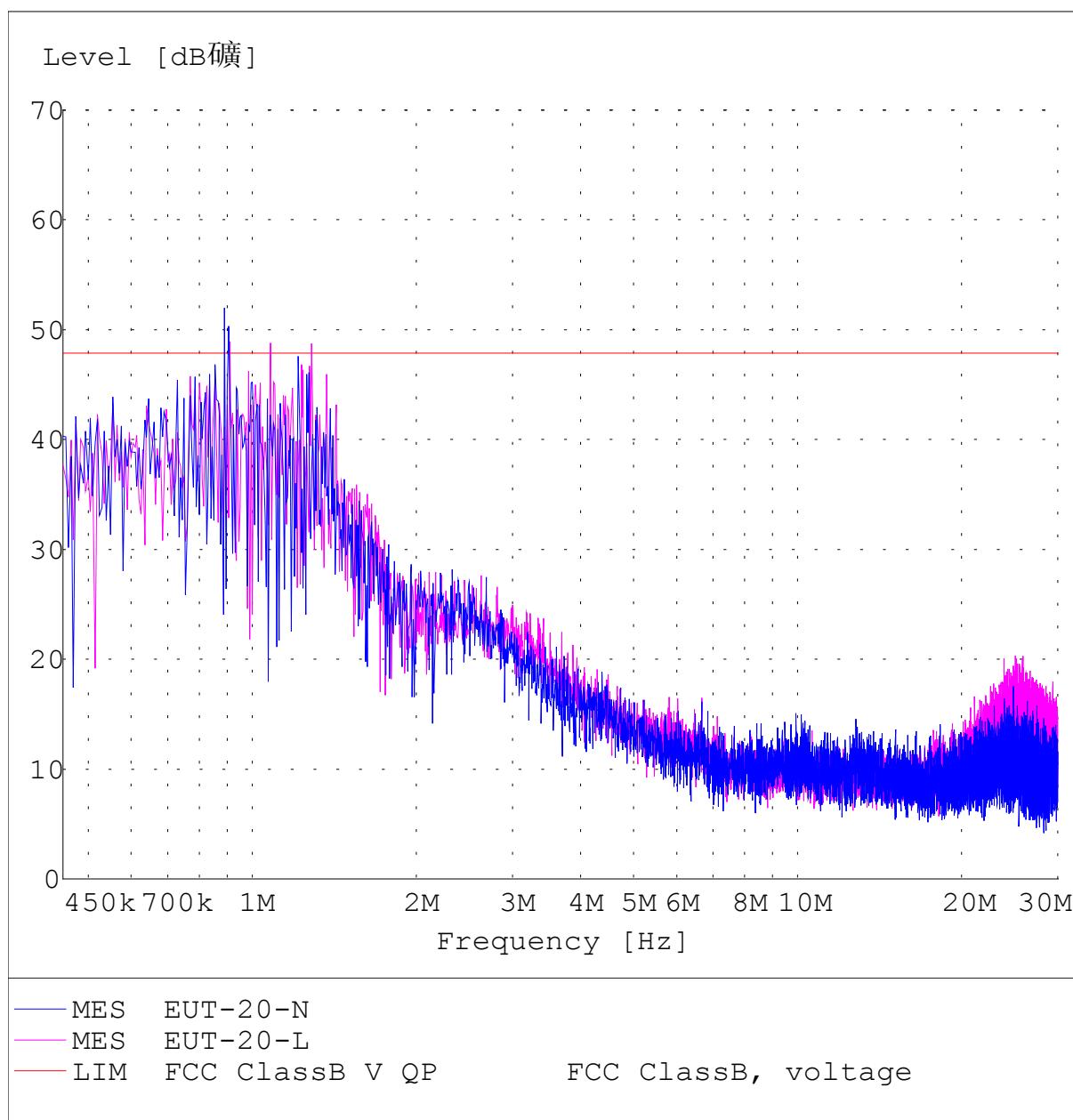
Test Specification: LINE&NEUTRAL

Comment:



Conducted Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: EUT-20W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC LAB.*Operator: *Peter Lin*Test Specification: *LINE&NEUTRAL*

Comment:



Conducted Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp *M/N:* EUT-23W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

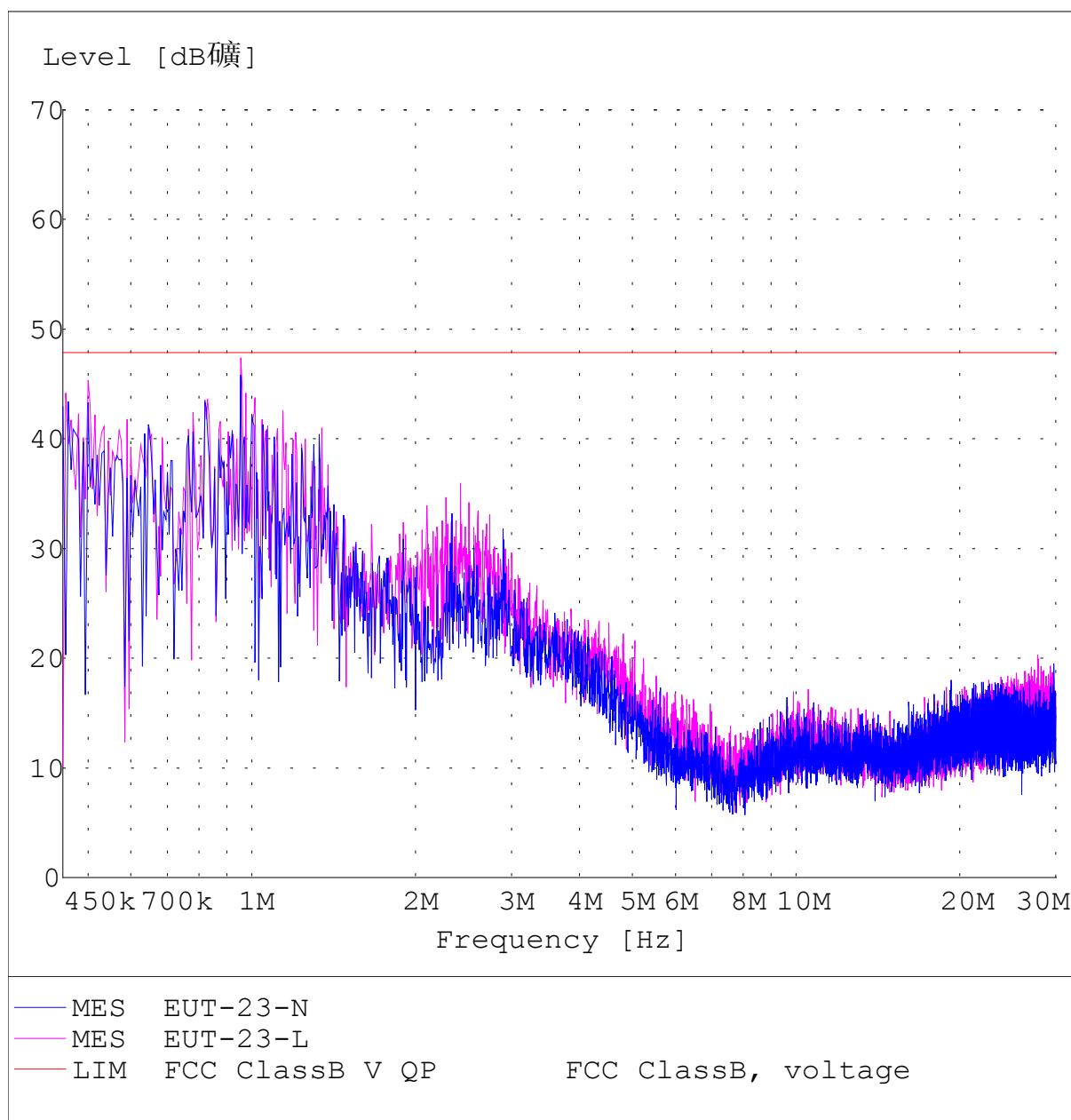
Operating Condition: Normal

Test Site: SMQ EMC LAB.

Operator: Peter Lin

Test Specification: LINE&NEUTRAL

Comment:



Conducted Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp *M/N:* EUT-25W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

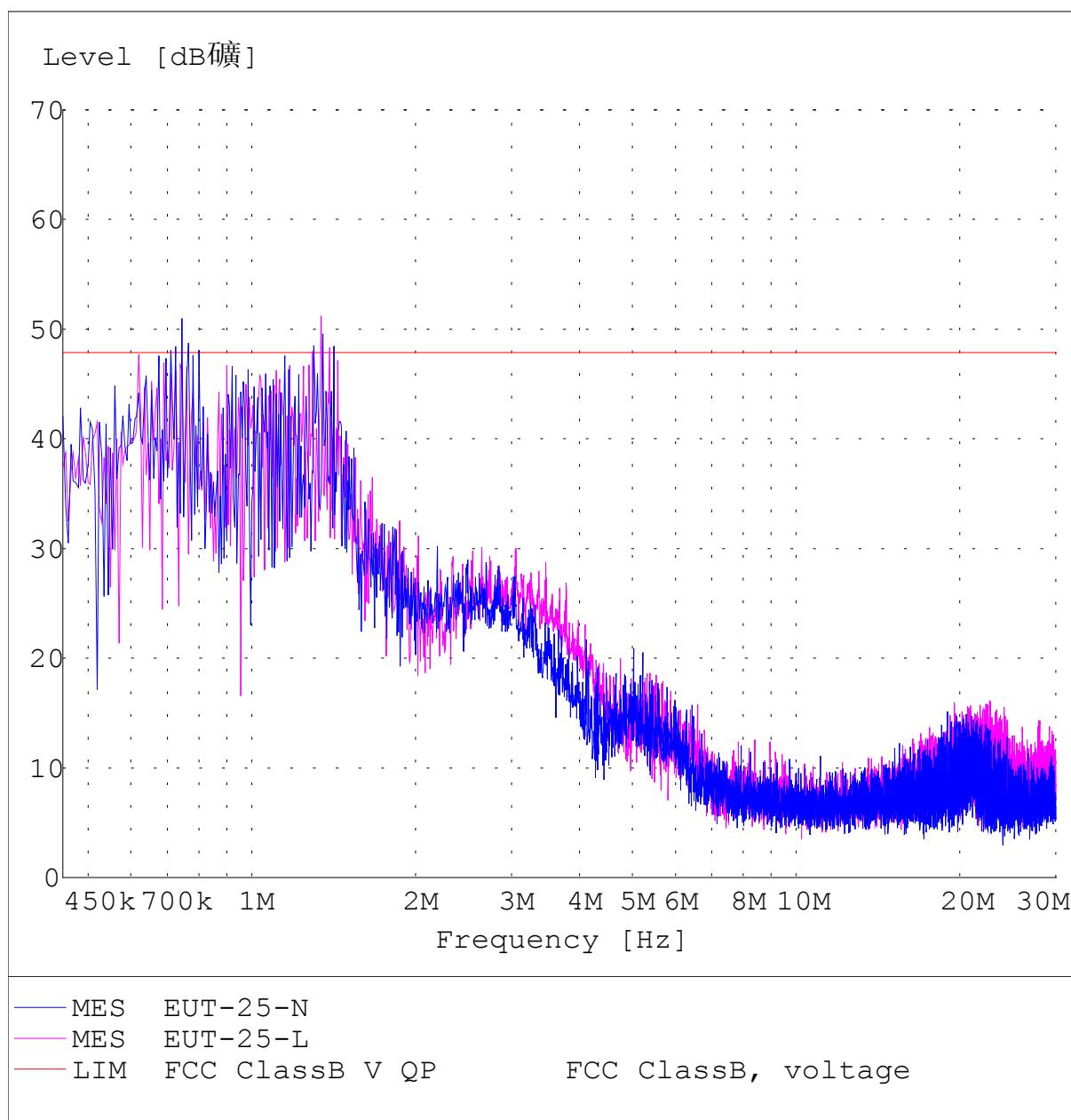
Operating Condition: Normal

Test Site: SMQ EMC LAB.

Operator: Peter Lin

Test Specification: LINE&NEUTRAL

Comment:



5. Radiated Emission Test

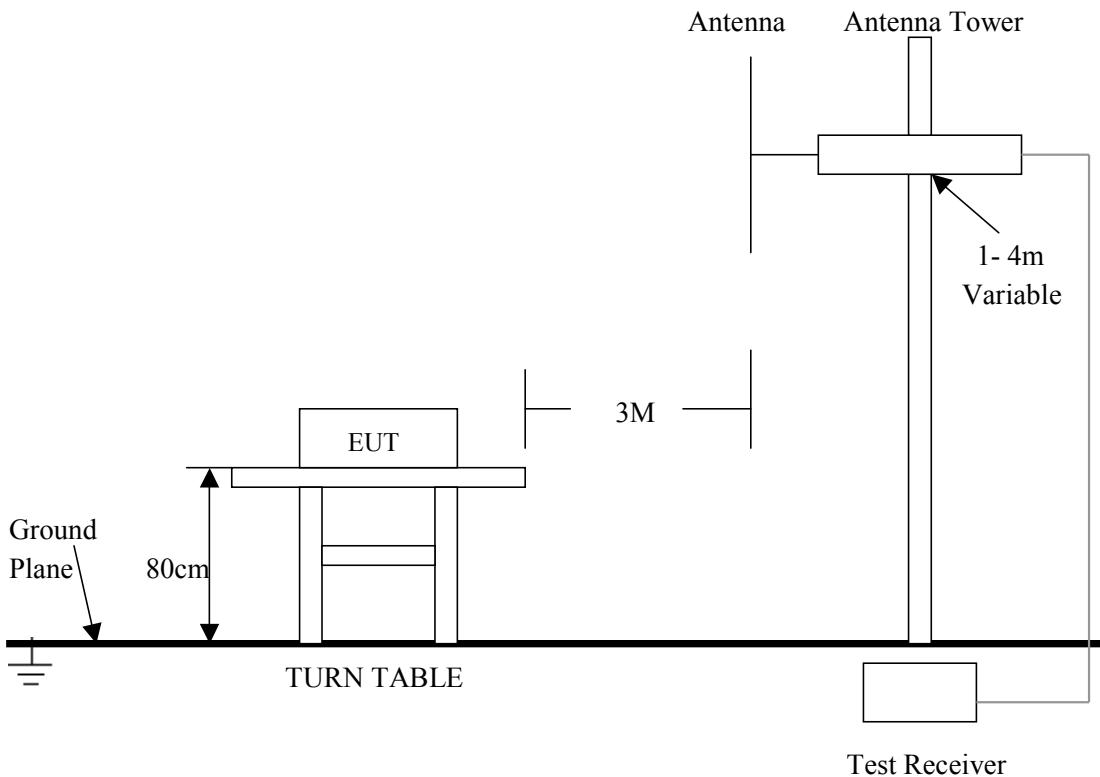
5. 1 Test Equipment

Please refer to Section 8 this report.

5. 2 Test Procedure

1. The EUT was tested according to ANSI C63.4 - 1992. The radiated test was performed at Shenzhen Academy of Metrology and Quality Inspection. This site is on file with the FCC laboratory division, Registration No. 97379.
2. The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-1992.
3. The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz , peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters.
4. The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
5. Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
6. The antenna polarization : Vertical polarization and Horizontal polarization.

5. 3 Radiated Test Setup



For the actual test configuration , please refer to the related items – Photos of Testing.

5. 4 Configuration of The EUT

Same as section 4 . 4 of this report

5. 5 EUT Operating Condition

Same as section 4 . 5 of this report.

5. 6 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below :

Frequencies in restricted band are complied to limit on FCC Part 18.

Frequency (MHz)	Distance (m)	Field Strength (dBuV/m)
30 - 88	3	40.0
88 - 216	3	43.5
216 - 1000	3	46.0

Note:

- (1) RF Voltage (dBuV) = 20 log RF Voltage (uV)
- (2) In the Above Table, the tighter limit applies at the band edges.
- (3) Distance refers to the distance in meters between the measuring instrument antenna and the

5. 7 Radiated Emission Test Result

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-15W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

Note: The RF voltages was scanned from 30MHz to 1000MHz on Radiated Emission of Self-Ballasted Fluorescent Lamp and no significant emissions were found in this frequency band. Test Results were under the required limit with 20dB margin or more.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-20W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV/m)	HORIZ / VERT	LIMITS (dBuV/m)	MARGIN (dB)
32.080	23.6	VERT	40.0	-16.4
41.663	19.1	VERT	40.0	-20.9

Note: (1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value.
 (2) Emission = Reading Level + Probe Factor + Cable Loss.
 (3) Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-23W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV/m)	HORIZ / VERT	LIMITS (dBuV/m)	MARGIN (dB)
32.020	24.8	VERT	40.0	-15.2
41.500	21.0	VERT	40.0	-19.0

Note: (1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value.
 (2) Emission = Reading Level + Probe Factor + Cable Loss.
 (3) Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : SRE-25W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV/m)	HORIZ / VERT	LIMITS (dBuV/m)	MARGIN (dB)
33.354	31.6	VERT	40.0	-8.4
45.551	16.5	VERT	40.0	-23.5

Note: (1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value.
 (2) Emission = Reading Level + Probe Factor + Cable Loss.
 (3) Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-15W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

Note: The RF voltages was scanned from 30MHz to 1000MHz on Radiated Emission of Self-Ballasted Fluorescent Lamp and no significant emissions were found in this frequency band. Test Results were under the required limit with 20dB margin or more.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-20W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV/m)	HORIZ / VERT	LIMITS (dBuV/m)	MARGIN (dB)
32.658	26.1	VERT	40.0	-13.9
42.625	20.1	VERT	40.0	-19.9

Note: (1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value.
 (2) Emission = Reading Level + Probe Factor + Cable Loss.
 (3) Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-23W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

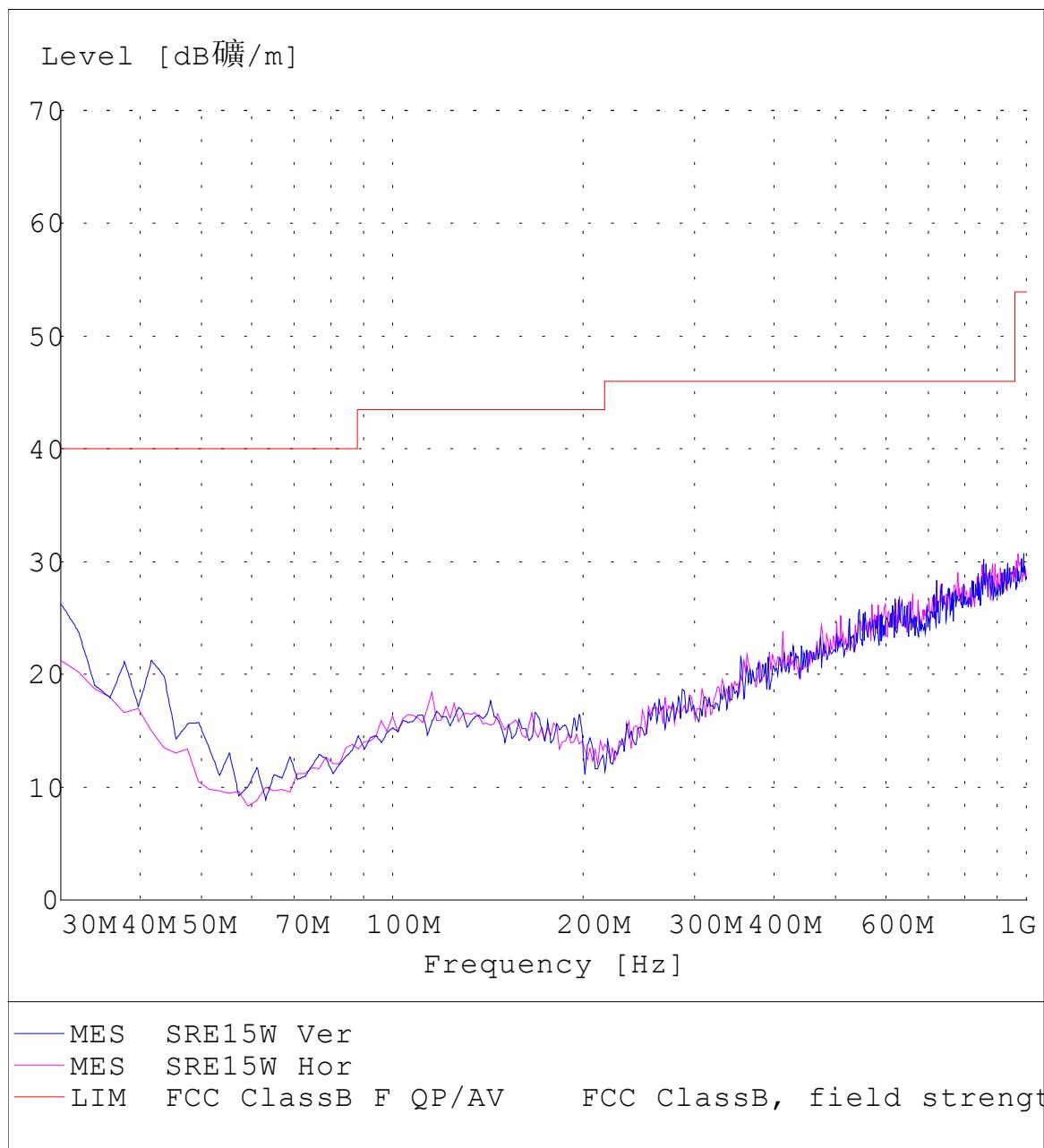
FREQ. (MHz)	EMISSION (dBuV/m)	HORIZ / VERT	LIMITS (dBuV/m)	MARGIN (dB)
32.646	34.0	VERT	40.0	-6.0
42.817	32.4	VERT	40.0	-7.6

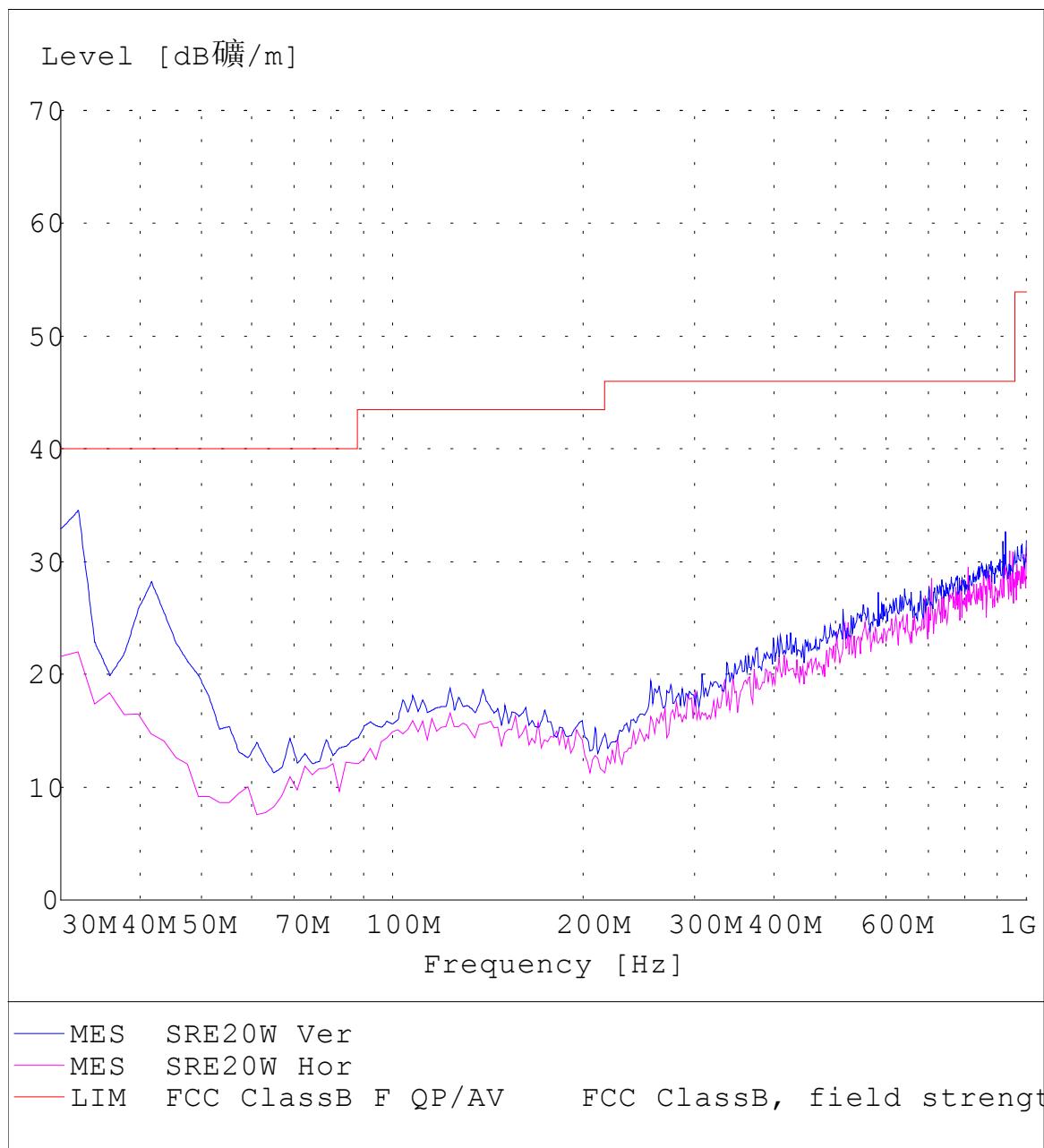
Note: (1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value.
 (2) Emission = Reading Level + Probe Factor + Cable Loss.
 (3) Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

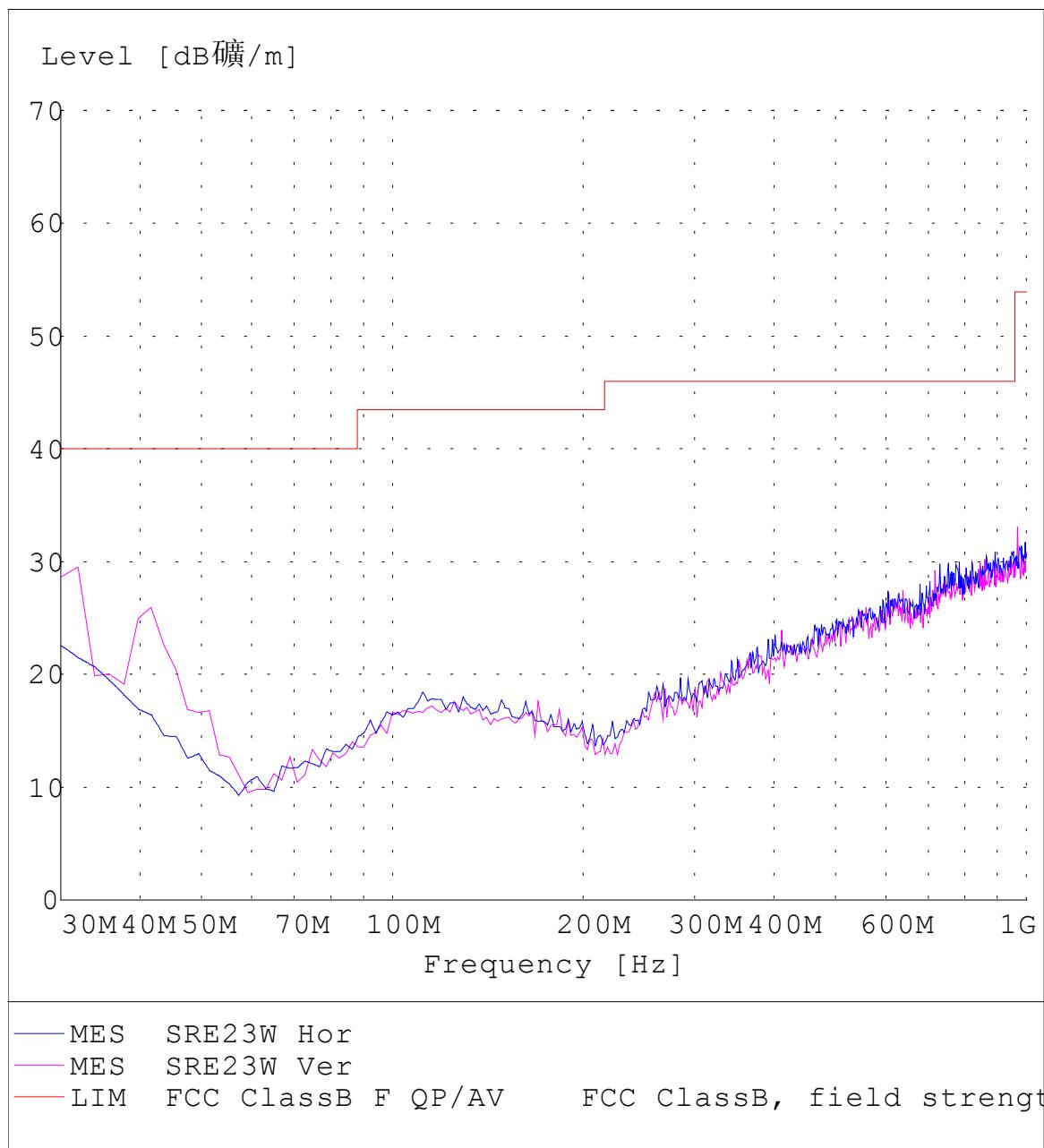
Product : Self-Ballasted Fluorescent Lamp
 Test Item : General Conducted Emission Data
 Test Voltage : 120V/60Hz AC
 Test Mode : EUT-25W
 Temperature : 24 °C
 Humidity : 52%RH
 Test Result : PASS

FREQ. (MHz)	EMISSION (dBuV/m)	HORIZ / VERT	LIMITS (dBuV/m)	MARGIN (dB)
32.620	24.6	VERT	40.0	-15.4
42.581	22.2	VERT	40.0	-17.8

Note: (1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value.
 (4) Emission = Reading Level + Probe Factor + Cable Loss.
 (5) Margin Value = EMISSION Level - LIMIT Value. All reading are Quasi-Peak Values.

Radiated Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: SRE-15W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC Laboratory, SAC*Operator: *Peter Lin*Test Specification: *Vertical & Horizontal*Comment: *120V/60Hz*

Radiated Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: SRE-20W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC Laboratory, SAC*Operator: *Peter Lin*Test Specification: *Vertical & Horizontal*Comment: *120V/60Hz*

Radiated Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: SRE-23W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC Laboratory, SAC*Operator: *Peter Lin*Test Specification: *Vertical & Horizontal*Comment: *120V/60Hz*

Radiated Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp M/N: SRE-25W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

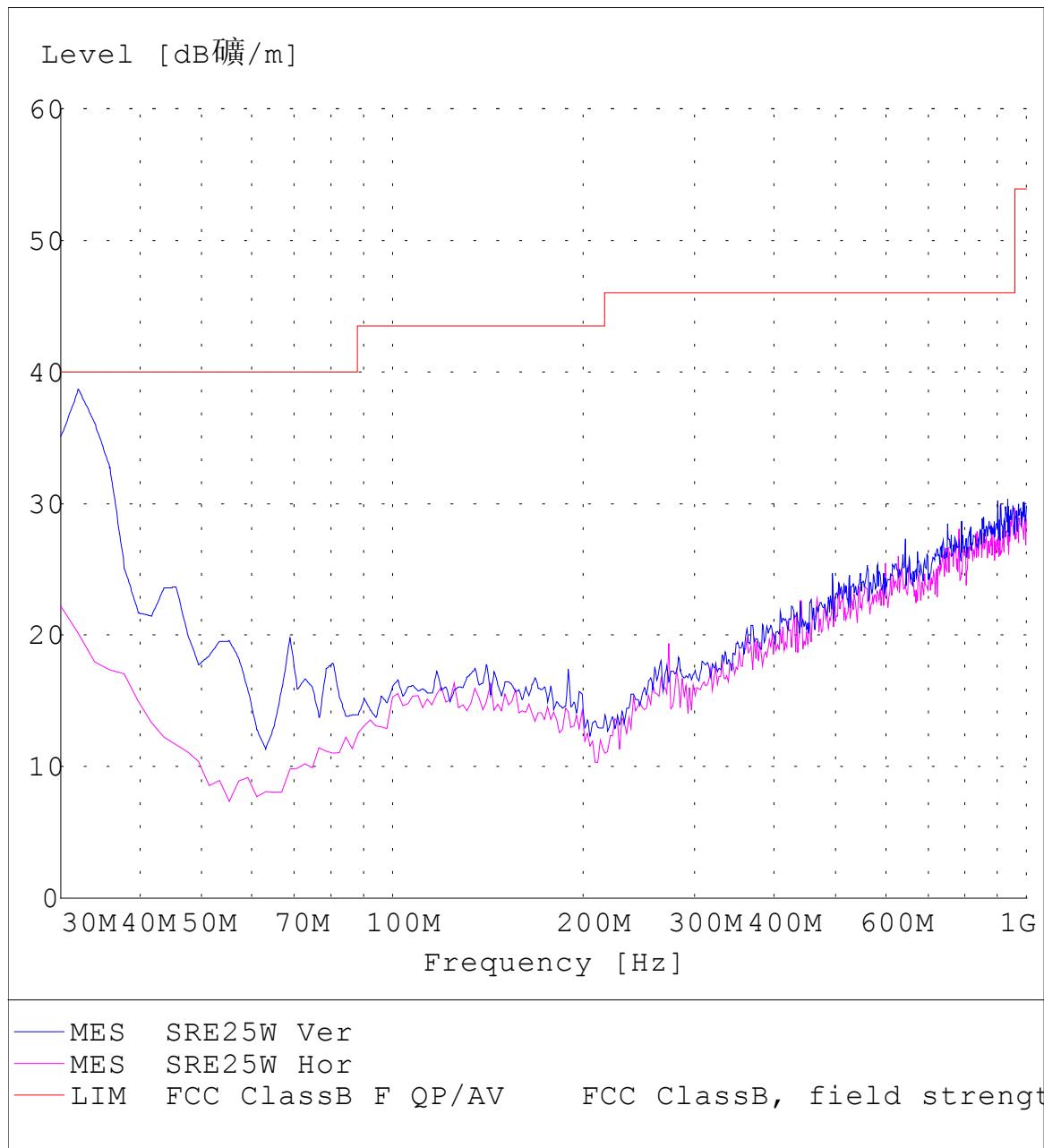
Operating Condition: Normal

Test Site: SMQ EMC Laboratory, SAC

Operator: Peter Lin

Test Specification: Vertical & Horizontal

Comment: 120V/60Hz



Radiated Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp M/N: EUT-15W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

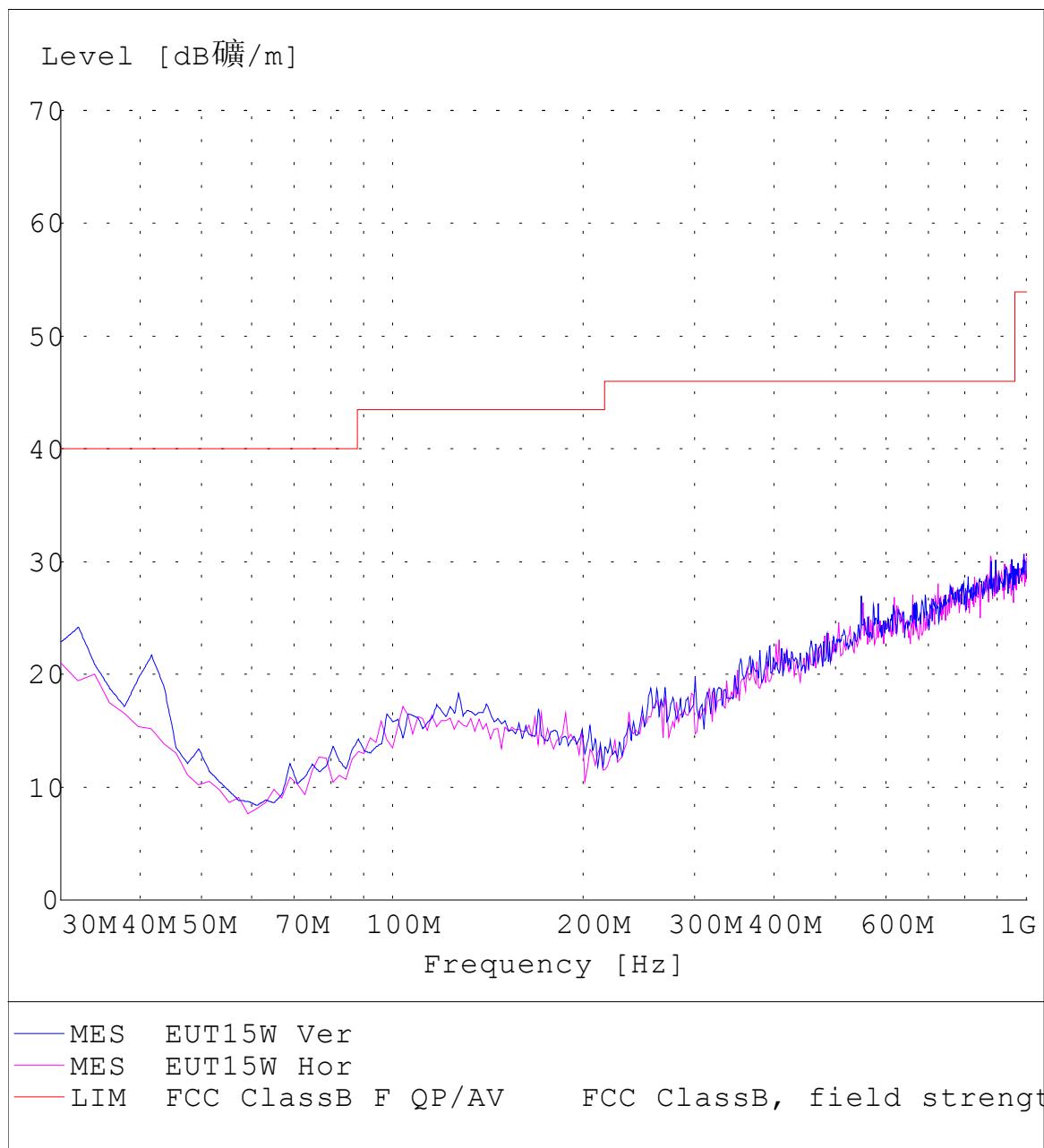
Operating Condition: Normal

Test Site: SMQ EMC Laboratory, SAC

Operator: Peter Lin

Test Specification: Vertical & Horizontal

Comment: 120V/60Hz



Radiated Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp M/N: EUT-20W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

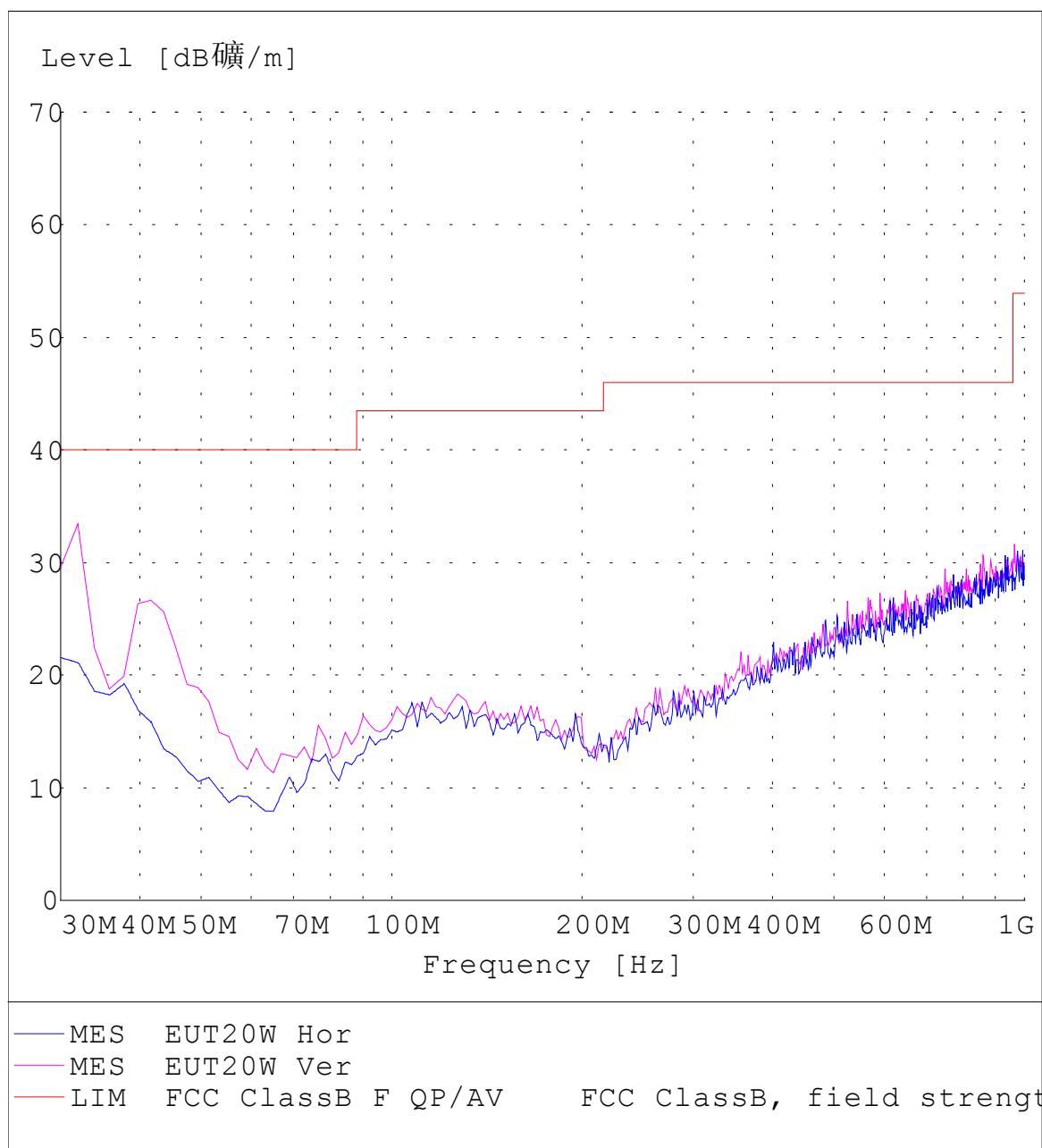
Operating Condition: Normal

Test Site: SMQ EMC Laboratory, SAC

Operator: Peter Lin

Test Specification: Vertical & Horizontal

Comment: 120V/60Hz



Radiated Emission**FCC Part 18**

EUT: Self-Ballasted Fluorescent Lamp M/N: EUT-23W

Manufacturer: Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory

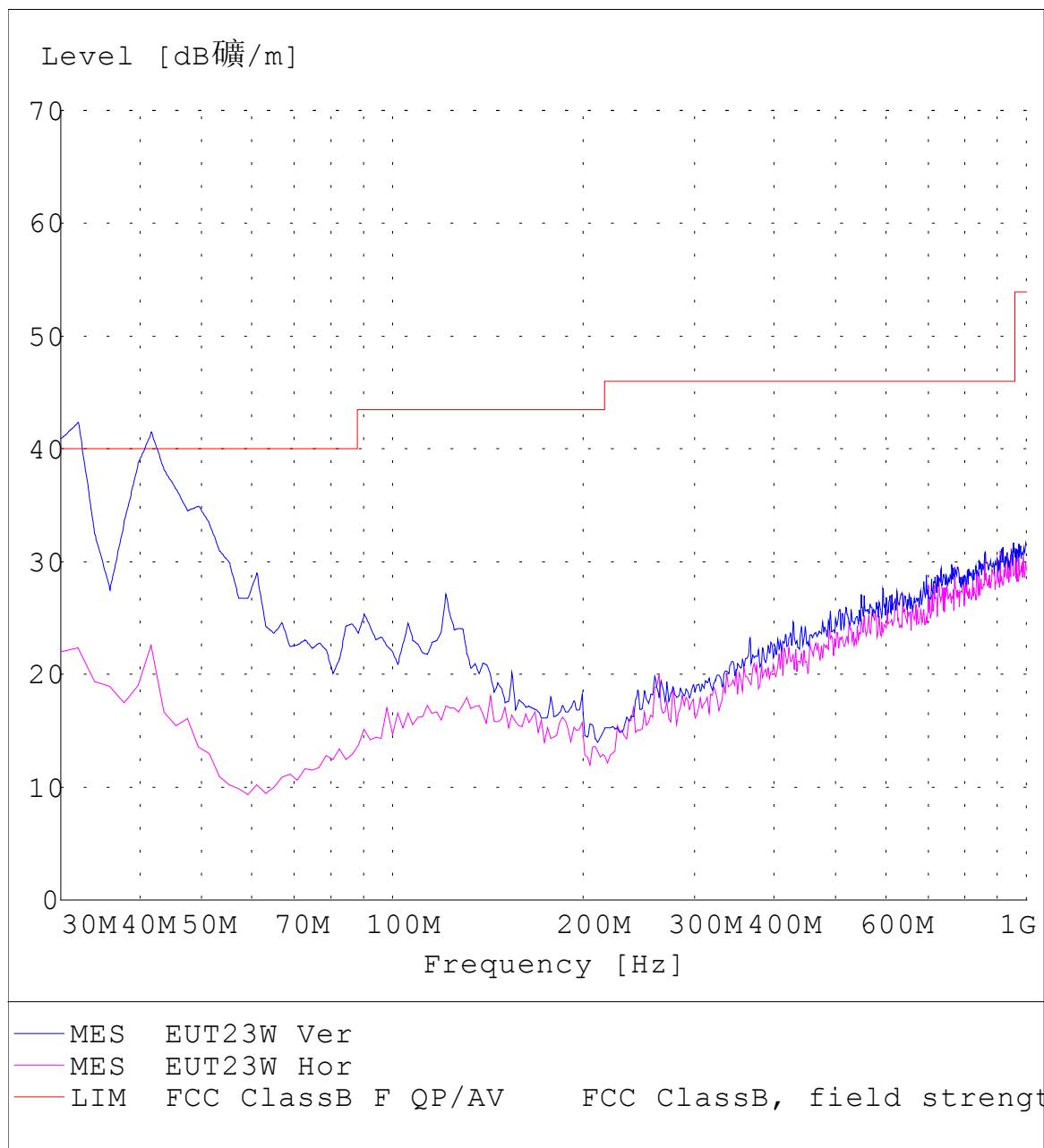
Operating Condition: Normal

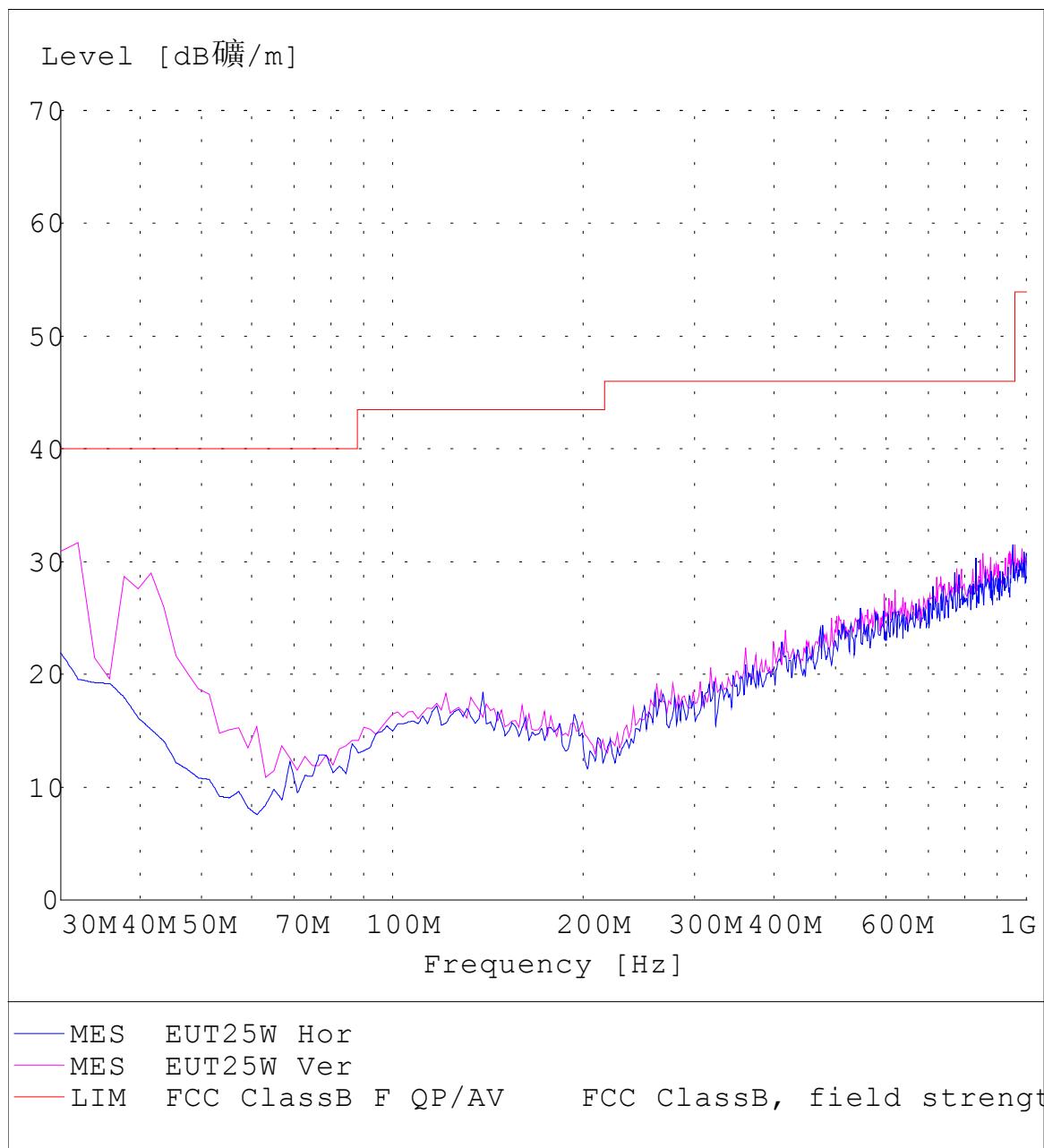
Test Site: SMQ EMC Laboratory, SAC

Operator: Peter Lin

Test Specification: Vertical & Horizontal

Comment: 120V/60Hz



Radiated Emission**FCC Part 18**EUT: *Self-Ballasted Fluorescent Lamp M/N: EUT-25W*Manufacturer: *Zhongshan Tianpeng Electronic Lighting and Communication Equipment Factory*Operating Condition: *Normal*Test Site: *SMQ EMC Laboratory, SAC*Operator: *Peter Lin*Test Specification: *Vertical & Horizontal*Comment: *120V/60Hz*

6. Photos of Testing

6. 1 EUT Test Photographs

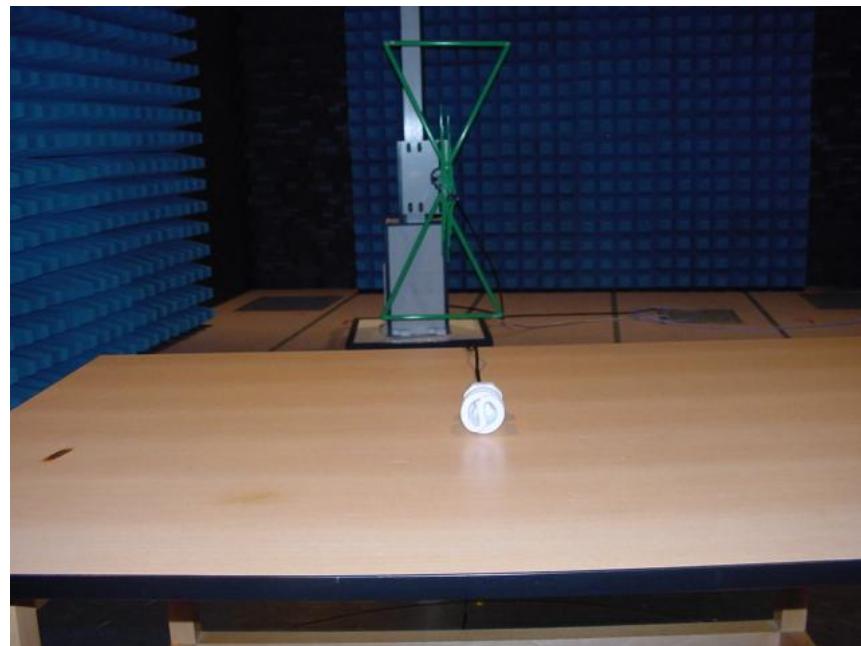
Conducted Emission Test View for SRE series



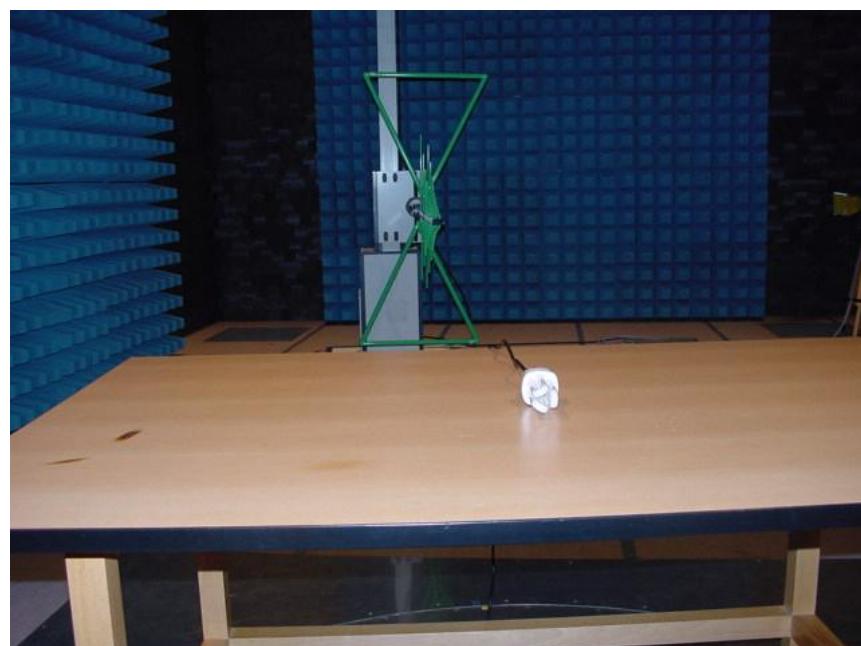
Conducted Emission Test View for EUT series



Radiated emission test view for SRE series



Radiated emission test view for EUT series



6. 2 EUT Detailed Photographs

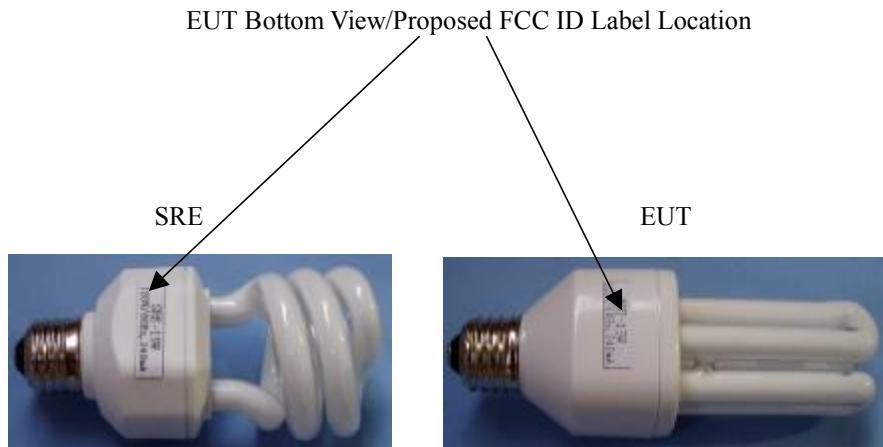
7. FCC ID Label

FCC ID: QXGSREEUT

The Label shown shall be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.

The Label must not be a stick-on paper label. 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



8. Test Equipment

The following test equipments were used during the radiated & conducted emission test:

Equipment/ Facilities	Manufacturer	Model #	Serial No.	Date of Cal.	Due Date
EMI Test Receiver	Rohde & Schwarz	ESCS30	100003	Feb27, 2002	Feb 27, 2003
AMN	Rohde & Schwarz	ESH3-Z5	100002	Feb 01, 2002	Feb 01, 2003
LISN	Kyoritsu	KNW-407	8-1441-8	Feb 23, 2002	Feb 23, 2003
EMI Test Receiver	Rohde & Schwarz	ESI26	838786/013	Feb 01, 2002	Feb 01, 2003
Bilog Antenna	Chase	CBL6112B	2591	Feb 01, 2002	Feb 01, 2003
Horn Antenna	Rohde & Schwarz	HF906	100014	Feb 01, 2002	Feb 01, 2003
3m Semi-Anechoic Chamber	Albatross Projects	9mX6mX6m	N/A	Feb 01, 2002	Feb 01, 2003