

1. VERIFICATION OF COMPLIANCE

Equipment Type: RF LIGHTING DEVICE

Equipment Under Test: BALLASTS

Category: CONSUMER ISM DEVICE

Model Number: FEH, FEJ, FER SERIES

Serial Number: N/A

Company: ZHEJIANG SUNLIGHT GROUP CORP.
NO. 127, FENG SHAN ROAD
SHANGYU CITY, ZHEJIANG
P. R. CHINA

Type of Test: CERTIFICATION (CFR 47, PART 18, SUB-C)

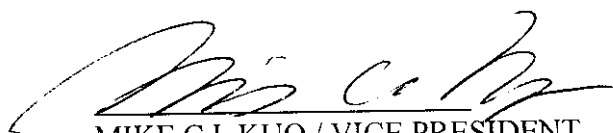
Report Number: 99C0067-1

Date Tested: FEBRUARY 10, 1999

Tested By: MIKE ZHU

Result: PASSED

The above equipment was tested by Compliance Engineering Services for compliance with the requirement set forth in the FCC Rules and Regulations Part 18, Subpart C. This said equipment in the configuration described in above report, shows the maximum emission levels emanating from equipment are within the compliance requirements.



MIKE C.I. KUO / VICE PRESIDENT
COMPLIANCE ENGINEERING SERVICES, INC.

2. SCOPE

The Federal Communications Commission (FCC) establishes Rules and Regulations to regulate industrial, scientific, and medical equipment (ISM) that emits electromagnetic energy on frequencies within the radio frequency spectrum in order to prevent harmful interference to authorized radio communication services. An electromagnetic emissions test has been performed on the applicant/manufacturer's product to establish compliance with these Rules.

The test data contained in this report was obtained utilizing test procedures, equipment, and sites which were either approved by or prescribed by the FCC. The test procedures described herein are the established methods for the measurement of radio noise emitted from ISM equipment as defined in Section 18.107 of the FCC Rules. The technical standards for ISM equipment are set forth in Subpart C of Part 18 of FCC Rules (47 CFR 18-C). Methods for the measurement of radiated and powerline conducted radio noise are covered herein. These methods of measurement are those used by the FCC in testing ISM equipment.

3. APPLICANT INFORMATION

Applicant: ZHEJIANG SUNLIGHT GROUP CORP.
NO. 127, FENG SHAN ROAD
SHANGYU CITY, ZHEJIANG
P. R. CHINA

Contact Person: WU, GUOMING / MANAGER

Phone Number: 575-202-7737

P.O. Number: N/A

Product Tested: BALLASTS

Model Number: FEH, FEJ, FER SERIES

Manufacturer: ZHEJIANG SUNLIGHT GROUP CORP.
NO. 127, FENG SHAN ROAD
SHANGYU CITY, ZHEJIANG
P. R. CHINA

Type of Test: CERTIFICATION (CFR 47, PART 18, SUB-C)

ISM Category: CONSUMER ISM EQUIPMENT

4. PRODUCT INFORMATION

Product Description: BALLASTS

Housing Type: PLASTIC

Power Supply Type: 120V AC

Line Filter Type: N/A

Line Cord Type: UN-SHIELDED

Nominal Operating Frequency: 35 KHz

Maximum RF Energy Generated: N/A

Input Watts : 25W/22W/20W/18W/15W

Model Differences:

Model Name	Differences	Tested (Checked)
FEH SERIES	DIFFERENT BULB SHAPE AND RATING	☒
FEJ SERIES	DIFFERENT BULB SHAPE AND RATING	☒
FER SERIES	DIFFERENT BULB SHAPE AND RATING	☒

5 EQUIPMENT / CABLE PHOTOGRAPH

N/A

The above photograph shows equipment under test and cabling placement.

6. TEST FACILITY

6.1 General Information

The Compliance Engineering Services, Inc. test site is located at 561F Monterey Road, Route 2, Morgan Hill, California. The site is constructed and calibrated in conformance with the requirements of ANSI C63.4/1992 and MP-5.

6.2 Open Field Test

A description of the open field test site maintained by Compliance Engineering Services has been submitted to the FCC pursuant to CFR 47 Section 15.38. A detailed description of test facilities was submitted to the Commission on May 27, 1994.

6.3 Preliminary Test

The preliminary test is used for administration, preliminary radiation testing and conducted radio noise measurements.

7. MEASUREMENT INSTRUMENTATION

All measurements were made using equipment which conforms to the America National Standard Specifications for Electromagnetic Interference and Field Strength Instrumentation 10 KHZ to 1 GHZ, C63.2.

7.1 Measuring Instrument Calibration

The measuring equipment which was utilized in performing the tests documented herein has been calibrated in accordance with the manufacturers recommendations utilizing calibration equipment which are traceable to recognized national standards.

<u>DESCRIPTION</u>	<u>LAST CAL.</u>	<u>DUE CAL.</u>
H.P. 8447D Pre-Amplifier	09/30/98	10/01/99
H.P. 8568B Spectrum Analyzer	09/30/98	10/01/99
H.P. 85650 Quasi-Peak Adaptor	09/30/98	10/01/99

The calibration of the measuring instruments, including any accessories that may affect such calibration, are checked frequently to assure its accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

7.2 *Detector Function Selection and Bandwidth*

	<u>Line Conducted Test</u>	<u>Radiated Test</u>
Bandwidth	9KHz	100KHz
Scanwidth	200KHz/div	200KHz/div
Sweep	2MHz	2MHz
Scantime	10ms/div	5ms/div
Sensitivity	-90dbm	-90dbm
Video Filter	OFF	OFF
Reading Mode	PEAK	PEAK

All conducted and radiated radio noise emission testing was performed utilizing Spectrum Analyzer or radio noise meters incorporating CISPR Quasi-Peak function, if a weighing circuit was employed in that instrument. If measurements were made using equipment which does not employ weighing circuits, measurements were made using peak reading.

7.3 Units of Measurement

Measurements of radiated interference are reported in terms of microvolt per meter, or dB(microV/m) at a specified distance. The indicated readings on the spectrum analyzer was converted to microvolt per meter, or dB(microV/m) by use of appropriate conversion factors. Measurements of conducted interference are reported in terms of microvolt, or dB(microV).

8. ANTENNAS

Antenna Type :	Biconical	Roberts tuned dipoles	Log Periodics
Frequency Range :	20MHz to 200MHz	30MHz to 1000MHz	200MHz to 1GHz
Correction Factors:	Programmed into software		
Antenna Height :	Varied from 1 to 4 meters above ground plane		
Polarization :	Vertical/Horizontal		
Distance from EUT :	3 meters		

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast three meters from the leading edge of the EUT.

The FCC Rules specify that the test height above ground for table mounted devices shall be 0.8 meters and for floor mounted equipment shall be tested at floor ground level. During radiated measurements, the EUT is positioned on a non-conductive, motorized turntable in the normal operating mode in conformance with this requirement.

9. AMBIENT CONDITION

The ambient conditions at the time of the test was conducted were as follows:

Temperature 10 Degrees Centigrade

Relative Humidity 78 %

10. TEST METHODS

10.1 Test Configuration

The equipment under test was configured and operated in a manner which tend to maximize its emission characteristics in a typical application. Power and signal distribution, ground, interconnecting cabling and physical placement of equipment were simulating the typical application and usage in so far as practicable.

During the Radiated test equipment and cables were moved to different directions and places to maximize different emissions.

10.2 Grounding

All conducted powerline measurements were performed with LISN housing, measurement instrumentation case, ground planes, etc., electrically bonded together in such a manner that they were at the same RF potential. A ground screen is used at Compliance Engineering Services for both Line Conducted and Radiated testing to eliminate any ground variations.

10.3 Data Report Format

The measurement results expressed in accordance with MP-5 and specific limits where applicable are presented in tabular or graphical form, or alternatively as recorder charts or photographs of a spectrum analyzer display, showing the level vs. frequency.

10.4 Line Conducted Test Procedure

Conducted emissions are measured at the plug end of the power cord supplied with the EUT, from the voltage developed across the 50 ohm port in the LISN.

The EUT is placed 80 cm from an earth grounded conducted surface and is kept at least 100 cm from any other earth grounded conducted surface. Each device under test is separately tested for conducted emissions.

Emissions which have peak values close to the specification limit are also measured in the quasi-peak detection mode to determine compliance.

Analyzer setting are given on page 5. Analyzer is scanned from 0.45 MHZ to 30 MHZ for emissions.

During this test EUT was operating to simulating actual use. Emission levels are checked to see if equipment/cable placement are maximized.

Recorded on each peak and sent to plotter to generate graphic output in linear format.

10.5 Radiated Test Procedure

Measurements of radiated radio-noise were made using the measuring instrumentation and antenna specified in 7.1 and 8 respectively. Primarily, tests were made to determine the system spectrum signature, the strengths of the stronger emissions, and the directions in which these emerge from the devise.

EUT and all other equipment used with EUT were placed on a wooded table 0.8 meter above a ground screen. Table is placed three meters away from antenna.

All equipment/cables are placed in a manner which tend to maximize its emission characteristics in a typical application. This is accomplished by watching the analyzer while moving equipment/cables.

Table was rotated 360 degrees to further maximize emissions.

Antenna was positioned between 1 to 4 meters above ground screen to even further maximize emissions. During test many antennas are used and positioned vertical and horizontal.

Analyzer settings are given on page 5. Analyzer is scanned from 30 MHZ to 1000 MHZ for emissions.

When an emission is found and maximized, the frequency and condition are then entered into computer.

RADIATED TEST SETUP

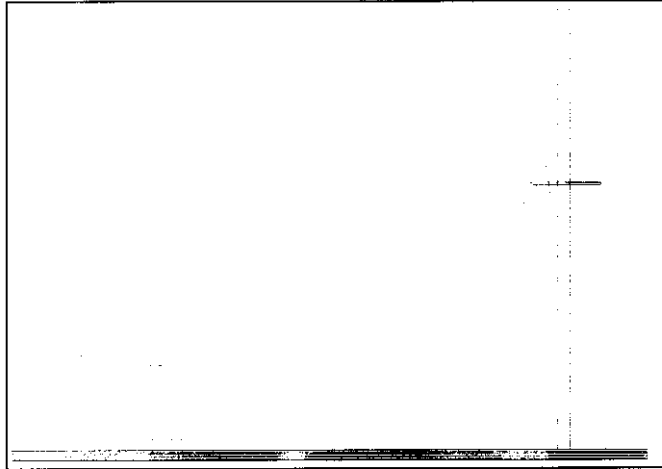


Figure 1 Radiated Test Setup

11. EQUIPMENT DEFINITION AND LIMITATIONS

The following information has been provided to clarify the FCC requirements with regard to equipment definition and technical standards. These requirements are found in the FCC Rules for devices subject to Equipment Authorization Procedures, Parts 2.J and 18.B.

11.1 ISM Equipment Definition

Industrial, Scientific, and medical (ISM) equipment: Equipment or appliances designed to generate and use locally RF energy for industrial, scientific, medical, domestic or similar purpose, excluding applications in the field of telecommunication. (Ref.CFR 47, section 18.107 (c))

Industrial heating equipment: A category of ISM equipment used for or in connection with industrial heating operations utilized in a manufacturing or production process. (Ref.CFR 47, section 18.107 (d))

Medical diathermy equipment: A category of ISM equipment used for therapeutic purpose, not including surgical diathermy apparatus designed for intermittent operation with low power. (Ref. CFR 47, section 18.107(e))

Ultrasonic equipment: A category of ISM equipment in which the RF energy is used to excite or drive an electromechanical transducer for the production of sonic or ultrasonic mechanical energy for industrial, scientific, medical or other non-communication purposes.(Ref. CFR 47, section 18.107(f))

Consumer ISM equipment: A category of ISM equipment used or intended to be used by the general public in a residential environment, notwithstanding use in other area.(Ref. CFR 47,section 18.107(g))

11.2 Equipment Limitations

Ultrasonic equipment Conduction limits: Maximum RF line voltage measured with a 5 uH/50 ohm LISN

Frequency MHz	Emissions uV	Emissions dBuV
0.010 - 0.49	1000	60.0
0.49 - 30.0	200	46.0

Induction Cooking Ranges Conduction limits: Maximum RF line voltage measured with a 5uH/50 ohm LISN

Frequency MHz	Emissions mV
0.010 - 0.1	10-1 (linear interpolation)
0.1 - 0.5	1
0.5 - 30.0	0.25

RF lighting devices Conduction limits: Maximum RF line voltage measured with a 50 uH/ 50 ohm LISN

Frequency MHz	Emissions uV	Emissions dBuV
Non-consumer equipment		
0.45 - 1.6	1000	60.0
1.6 - 30	3000	69.5
Consumer equipment		
0.45 - 30	250	48

Radiated Field Strength Limits: (Operating frequency lie outside the bands specified in section 18.301)

Equipment	Operating Frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (Misc.)	Any ISM frequency	Below 500 500 or more	25 25 power/500	300 ¹ 300
	Any non-ISM frequency	Below 500 500 or more	15 15 power/500	300 ¹ 300
Industrial heaters and RF stabilized arc welders	On/below 5,725 MHz	Any	10	1,600
	Above 5,725 MHz	Any	(²)	(²)
Medical diathermy	Any ISM freq.	Any	25	300
	Any non-ISM freq.	Any	15	300
Ultrasonic	Below 490 KHz	Below 500 500 or more	2,400/F(KHz) 2,400/F(KHz) power/500	300 ³ 300
	4900 to 1600 KHz	Any	2,400/F(KHz)	30
	Above 1,600 KHz	Any	15	30
Induction cooking ranges	Below 90 KHz	Any	1,500	⁴ 30
	On/above 90 KHz	Any	300	⁴ 30

1. Field strength may not exceed 10 uV/m at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.
2. Reduced to the greatest extent possible.
3. Field strength may not exceed 10 uV/m at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.
4. Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

Radiated Field Strength limits for RF lighting devices:

<u>Frequency</u> <u>MHZ</u>	<u>Distance</u> <u>Meters</u>	<u>Radiated</u> <u>dBuV/M</u>
Non-consumer equipment		
30 - 88	3	48.5
88 - 216	3	54
216 - 1000	3	57
Consumer equipment		
30 - 88	3	40
88 - 216	3	43.5
216 - 1000	3	46

12. SUMMARY

Company Name : ZHEJIANG SUNLIGHT GROUP CORP.

E.U.T. : BALLASTS

Serial Number : N/A

Type of Test : CERTIFICATION (CFR 47, PART 18, SUB-C)

Passed / Failed : PASSED

Line Conducted Test: EUT was connected to AC 120V power source. Three models have been individually tested. Model FEH, FEJ, FER SERIES represented the Worse case.

Radiated Emission Test: EUT was setup as the same as it was in the Line Conducted Test. EUT was tested at a 3 meter open field test site.

Model: FEH, FEJ, FER SERIES

APPENDICES

A. Reference Documents

Title 47 CFR, Part 15, Subpart J	"Computing Devices"
Title 47 CFR, Part 2, Subpart J	"Certification, Type Acceptance, Type Approval, Notification and Verification"
Title 47 CFR, Part 2, Subpart I	"Equipment Marketing Rules"
Title 47 CFR, Part 2, Subpart K	"Importation of Devices Capable of Causing Harmful Interference"
Title 47 USC, Sections 501-504	"Penalties for Non-compliance with FCC Rules"
FCC / OST Bulletin #55 (1987)	"Characteristics of Open Field Test Sites"
FCC / OST Bulletin MP-4 (JULY 1987)	"FCC Methods of Measurement of Radio Noise from Computing Devices"
FCC / OST Bulletin #62 (1984)	"Understanding the FCC Regulations Concerning Computing Devices"
FCC / OST Bulletin #61 (1984)	"The FCC Equipment Authorization Program for Radio Frequency Devices"

B. Sample Calculations (Radiated Emissions)

Meter reading are compared to the specification limit after correcting for antenna and cable losses, distance factor, and preamplifier gain.

- Meter Reading (dBm)

+ Distance Factor
Added for Converting to dBuV (107)

- Preamplifier Gain (dB)

+ Cable Loss (dB)

+ Antenna Factor (Loss) (dB/Meter)

= Corrected Reading (dBuV/Meter)

- Specification Limit (dBuV/Meter)

= dB Relative to Spec (+ / - dB)

FEDERAL COMMUNICATIONS COMMISSION (F.C.C.) STATEMENT

This equipment generates, uses and can radiate radio frequency energy and , if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation, if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/ TV technician for help.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

Compliance Engineering Services Inc.

Project No. : 99C0067
Report No. : 990210B2
Date : 02/10/1999
Time : 14:09
Test Engr : MIKE ZHU

>> 3 M RADIATED EMISSION DATA <<

Company : ZHEJIANG SUNLIGHT GROUP
Equipment Under Test : FEH FEJ FER SERIES/BALLASTS
Test Configuration : EUT ONLY
Type of Test : FCC 18 CERTIFICATION
Mode of Operation : NORMAL

Freq.	dBuV	PreAmp	Ant	Cable	dBuV/m	Limit	Margin	Pol	Hgt(m)	Az
R 25W:										
Biconical	1197 ;	Pre-pamp = 8447D-P8 2944A06589:								
33.04	44.20	-27.70	12.10	1.20	29.79	40.00	-10.21	V	1.0	0
36.73	42.60	-27.70	12.30	1.26	28.46	40.00	-11.54	V	1.0	0
40.31	45.10	-27.71	12.44	1.27	31.11	40.00	-8.89	V	1.0	30
57.26	47.70	-27.63	7.83	1.50	29.40	40.00	-10.60	V	1.0	0
81.23	44.70	-27.60	9.32	1.78	28.21	40.00	-11.79	V	1.0	0
117.77	41.60	-27.50	10.85	2.22	27.17	43.50	-16.33	V	1.0	30
33.02	38.80	-27.70	13.98	1.19	26.27	40.00	-13.73	H	3.0	60
36.73	40.90	-27.70	13.91	1.26	28.37	40.00	-11.63	H	3.0	60
57.26	48.10	-27.63	9.19	1.50	31.16	40.00	-8.84	H	3.0	60
81.23	42.40	-27.60	8.51	1.78	25.09	40.00	-14.91	H	3.0	40
J 25W:										
30.30	39.60	-27.71	13.93	1.12	26.94	40.00	-13.06	H	3.0	60
34.13	39.70	-27.70	14.00	1.23	27.22	40.00	-12.78	H	3.0	60
41.59	43.60	-27.73	13.51	1.29	30.67	40.00	-9.33	H	3.0	60
65.12	48.70	-27.60	6.88	1.58	29.56	40.00	-10.44	H	3.0	60
30.24	40.10	-27.71	11.92	1.12	25.43	40.00	-14.57	V	1.0	0
40.06	42.40	-27.70	12.46	1.27	28.43	40.00	-11.57	V	1.0	0
65.50	43.70	-27.60	6.22	1.58	23.90	40.00	-16.10	V	1.0	0
80.14	43.80	-27.60	9.14	1.77	27.11	40.00	-12.89	V	1.0	30
EH 25W:										
40.18	43.20	-27.70	12.45	1.27	29.22	40.00	-10.78	V	1.0	60
44.88	43.60	-27.80	12.11	1.34	29.25	40.00	-10.75	V	1.0	60
50.72	46.80	-27.79	10.46	1.41	30.88	40.00	-9.12	V	1.0	60
65.32	49.10	-27.60	6.24	1.58	29.32	40.00	-10.68	V	1.0	60
74.52	43.60	-27.62	7.31	1.68	24.97	40.00	-15.03	V	1.0	60
30.55	38.80	-27.71	13.94	1.13	26.16	40.00	-13.84	H	3.0	60
42.07	39.70	-27.74	13.44	1.30	26.70	40.00	-13.30	H	3.0	60
52.91	44.60	-27.74	10.60	1.44	28.90	40.00	-11.10	H	3.0	60
61.43	44.40	-27.57	7.90	1.55	26.28	40.00	-13.72	H	3.0	60

Total # of data 27

V. b2.2

NO SIGNIFICANT EMISSIONS WERE FOUND ON THE RANGE OF 30-1000MHZ EXCEPT ABOVE DATA, ESPECIALLY FOR THE LOW POWER EUT LESS THAN 25W.

Spectrum Analyzer: HP 8568A, 100Hz-1.5Ghz, cal due: 2/8/00

Preamp: HP 8447D, 0.1-1300Mhz, cal due: 8/14/99

Antenna: EATON 94455-1, 30-200Mhz, cal due: 8/16/99

EMCO 3146, 200-2000Mhz, cal due: 8/15/99

Analyzer bandwidth settings:

Res BW 100Khz

Vid BW 100Khz

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

FEH 25

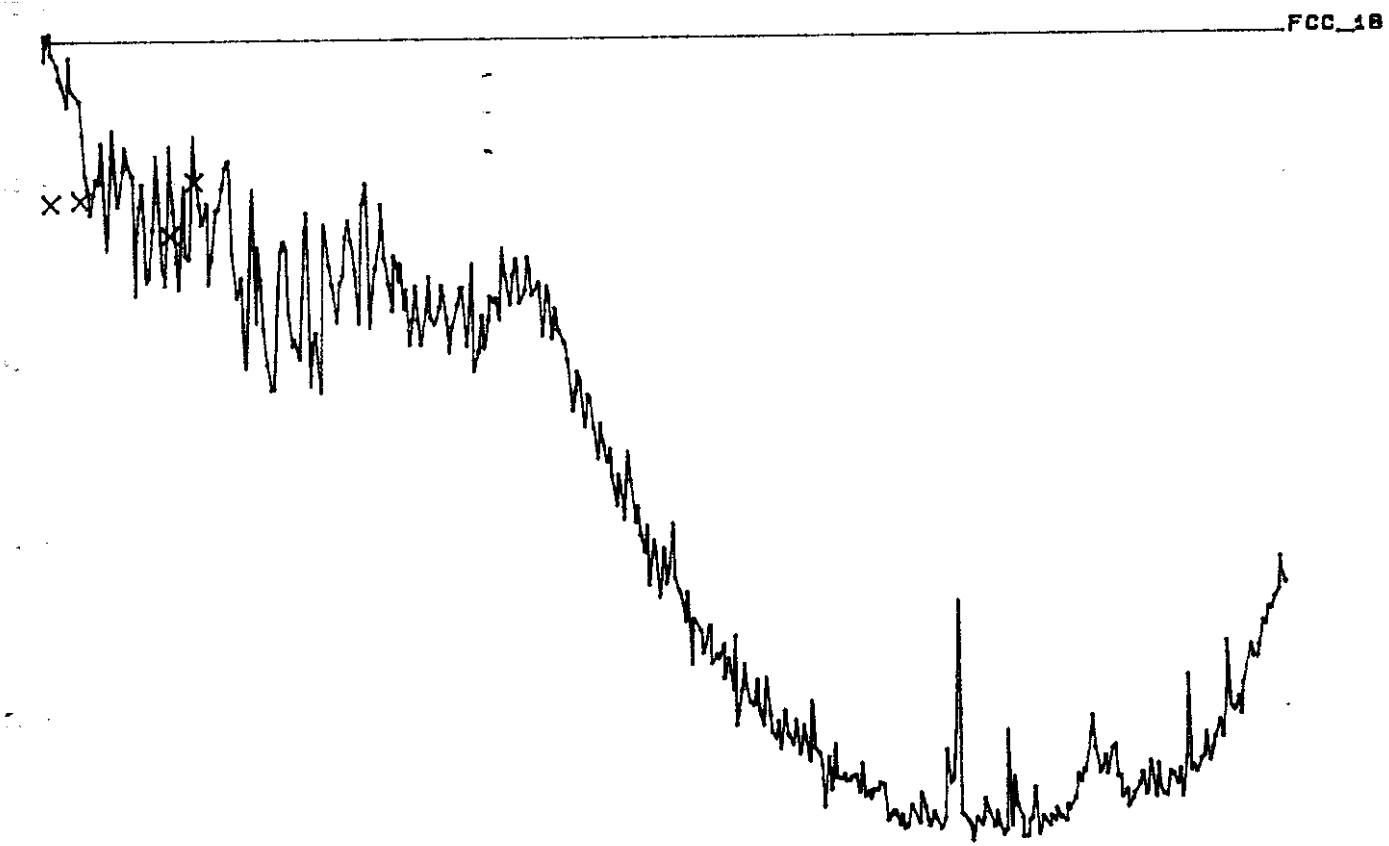
EUT: BALLASTS/FEH 25W, NO.7
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE HOT: (RED), NEUTRAL (BLUE)
120Vac, 60Hz.

Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	60dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	60dB

Final Measurement: x QP
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

Transducer No. Start Stop Name
1 10K 30M FISCHER



COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

EUT: BALLASTS/FEH 25W, NO.7
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE HOT: (RED), NEUTRAL (BLUE)
120Vac, 60Hz.

FEH 25

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.48150	38.9	48.0
0.51000	39.1	48.0
0.69000	37.0	48.0
0.75000	40.0	48.0

* limit exceeded

COMPLIANCE ENGINEERING SERVICES INC.

RFI VOLTAGE

EUT: BALLASTS/FEI 25W. NO.7
 Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
 Op Cond: STANDARD
 Operator: MIKE ZHU
 Test Spec: FCC 18 CERTIFICATION
 Comment: LINE HOT: (RED), NEUTRAL (BLUE)
 120Vac, 60Hz.

FEH 25

Scan Settings (2 Ranges)			Receiver Settings					
Frequencies			IF BW	Detector	M-Time	Atten	Preamp	OpRge
Start	Stop	Step	10K	PK	100ms	AUTO	LN OFF	80dB
450k	500k	500Hz	10k	PK	20ms	AUTO	LN OFF	80dB
500k	30M	5k						

Final Measurement:		Transducer No.	Start	Stop	Name
x QP		1	10k	30M	FISCHER
Meas Time:	1 s				
Subranges:	25				
Acc Margin:	6dB				

FCC 18

X

X

X
X

2.

10

9

COMPLIANCE ENGINEERING SERVICES INC.

RFI VOLTAGE

EUT: BALLASTS/FEH 25W, NO.7
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE HOT: (RED). NEUTRAL (BLUE)
120Vac, 60Hz.

FEH 25

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.48200	40.3	48.0
0.51500	43.2	48.0
0.69500	38.8	48.0
0.75500	38.4	48.0

* limit exceeded

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 99 14:15

M, 2

EUT: BALLASTS/FEH/20W, NO.3
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

FEH 20

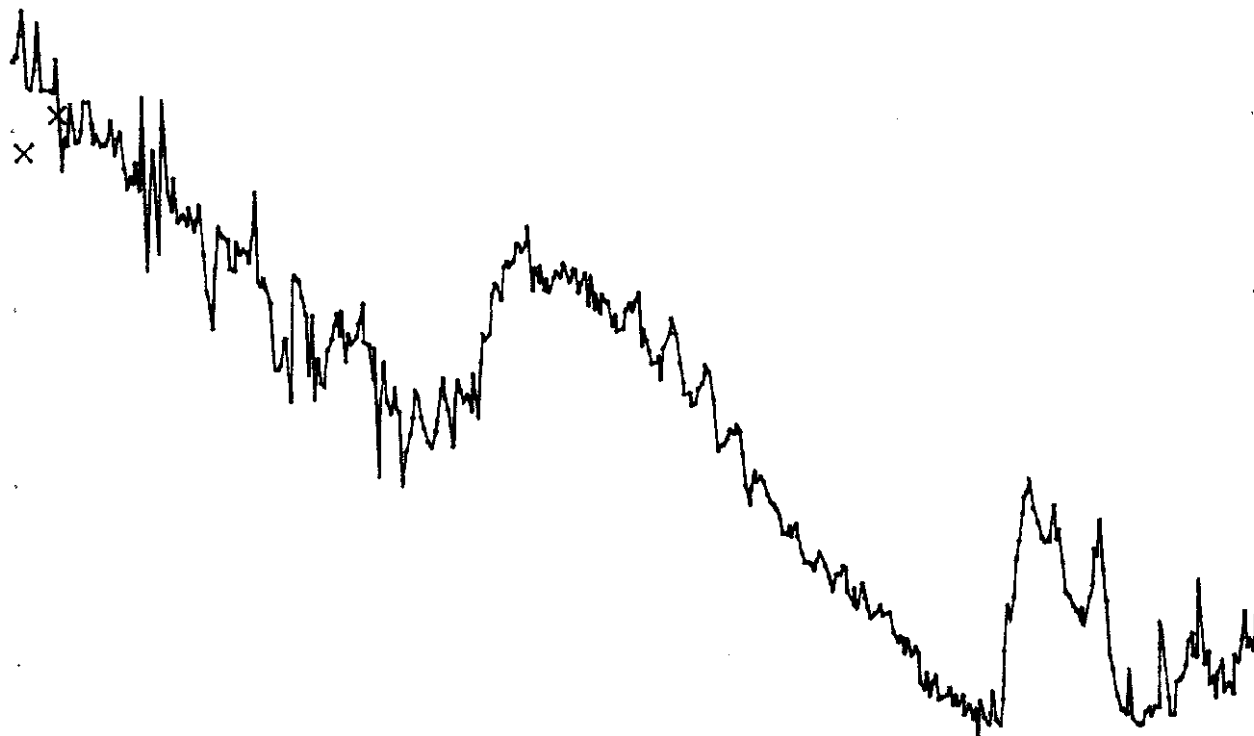
Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
450k	500k	800Hz	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement: x QP
Measure Time: 1 s
Subranges: 25
Acc Margin: 8dB

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

FCC_1B



M, 2

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

08. Feb 98 14:15

EUT: BALLASTS/FEM20W, NO.3
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

FEH 20

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.48800	38.7	48.0
0.52800	40.9	48.0
* limit exceeded		

COMPLIANCE ENGINEERING SERVICES INC.

RFI VOLTAGE

09. Feb 98 14:07

11.7



FEH 20

EUT: BALLASTS/FEH20W.NO.3
 Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
 Op Cond: STANDARD
 Operator: MIKE ZHU
 Test Spec: FCC 1B CERTIFICATION
 Comment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC. 60Hz.

Scan Settings (2 Ranges)			Receiver Settings					
Frequencies			IF BW	Detector	M-Time	Atten	Preamp	OpRge
Start	Stop	Step	10k	PK	100ms	AUTO	LN OFF	80dB
450k	500k	500Hz	10k	PK	20ms	AUTO	LN OFF	80dB
500k	30M	5k						

Final Measurement:		Transducer	No.	Start	Stop	Name
X QP			1	9k	30M	FISCHER
Meas Time:	1 s					
Subranges:	25					
Acc Margin:	5dB					



FCC_1B

X X
 X
 X

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 99 14:07

101.2

EUT: BALLASTS/FE120W, NO.3
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC, 60Hz.

FEH 20

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.45000	43.5	48.0
0.52500	43.2	48.0
0.65000	40.3	48.0
0.75000	38.5	48.0

* limit exceeded

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 99 14:22

142

EUT: BALLASTS/FEH18W, NO.2
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

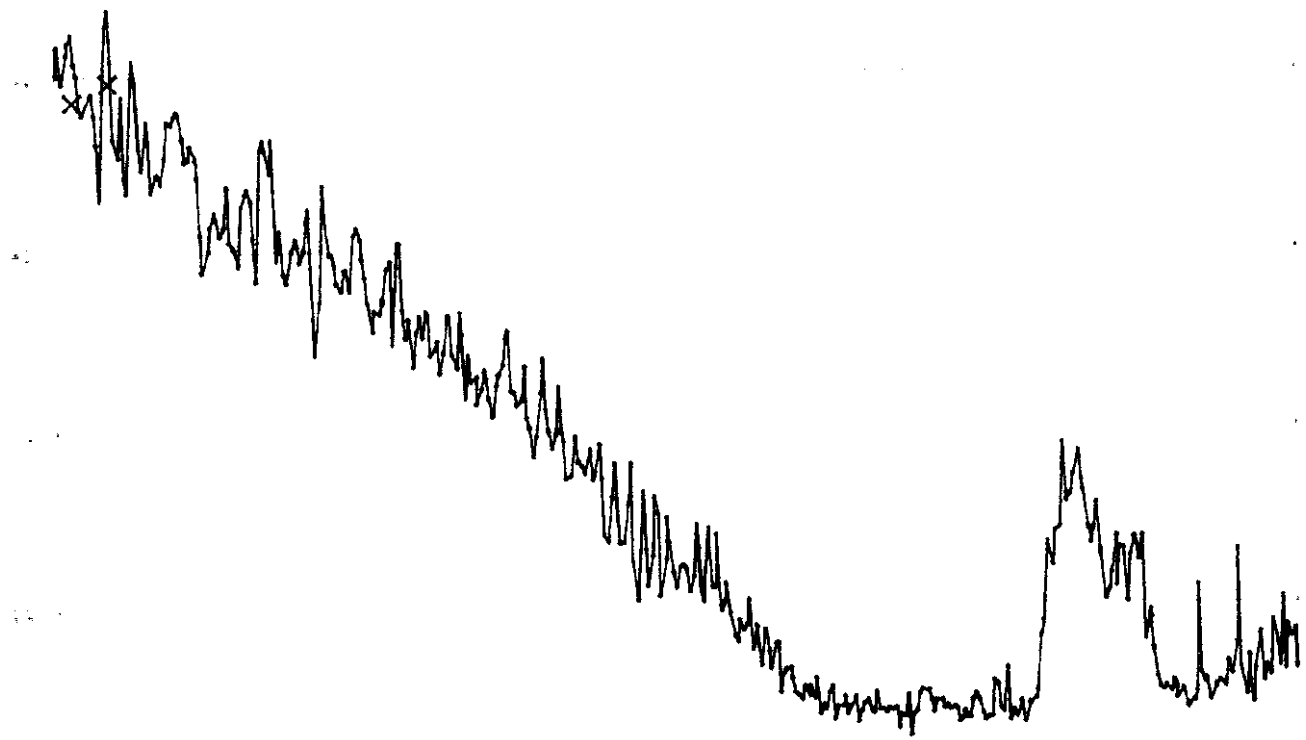
FEH 18

Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
480k	800k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement: x QP
 Measure Time: 1 s
 Subranges: 25
 Acc Margin: 8dB
Transducer No. 1 Start 9k Stop 30M Name FISCHER

FCC_18



COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 98 14:22

m2

EUT: BALLASTS/FEH18W, NO.2
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

FEH 18

Final Measurement Results:

Frequency MHz	QP Level dBuV	QP Limit dBuV
0.47550	38.8	48.0
0.54000	38.8	48.0

* limit exceeded

COMPLIANCE ENGINEERING SERVICES INC.

09. Feb 99 15:28

m. ~

RFI VOLTAGE

FEH 18

EUT: BALLASTS/FEH18W.NO.2
 Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
 Op Cond: STANDARD
 Operator: MIKE ZHU
 Test Spec: FCC 18 CERTIFICATION
 Comment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC, 60Hz.

Scan Settings (2 Ranges)			Receiver Settings					
Frequencies			IF BW	Detector	M-Time	Atten	Preamp	OpRge
Start	Stop	Step						
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	60dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	60dB

Final Measurement: x QP Transduc

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

FCC 18

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 88 18:37

M2

EUT: BALLASTS/FEH15W, NO.1
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

FEH 15

Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpAmp
450k	500k	500Hz	10k	PK	100ms	AUTO	LN	OFF
500k	30M	5k	10k	PK	20ms	AUTO	LN	OFF

Final Measurement:	x QP	Transducer No.	Start	Stop	Name
Meas Time:	1 s	1	9k	30M	FISCHER
Subranges:	25				
Acc Margin:	6dB				

FCC_18



RFI VOLTAGE

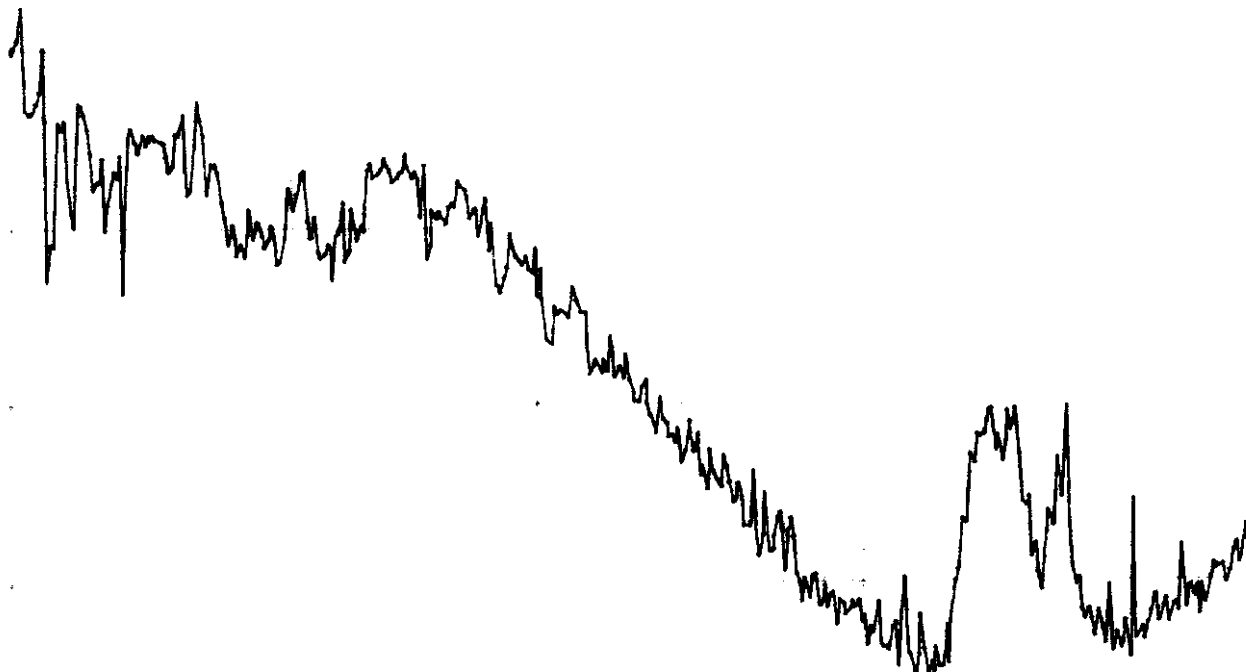
EUT: BALLASTS/FEN22W, NO. 4
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC, 60Hz.

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
900K	30M	10K	10K	PK	100ms	AUTO	LN OFF	80dB

Final Measurement:	x QP	Transducer No.	Start	Stop	Name
		1	9K	30M	FISCHER
	Meas Time:		1 s		
	Subranges:		25		
	Acc Margin:		8dB		

FCC_18



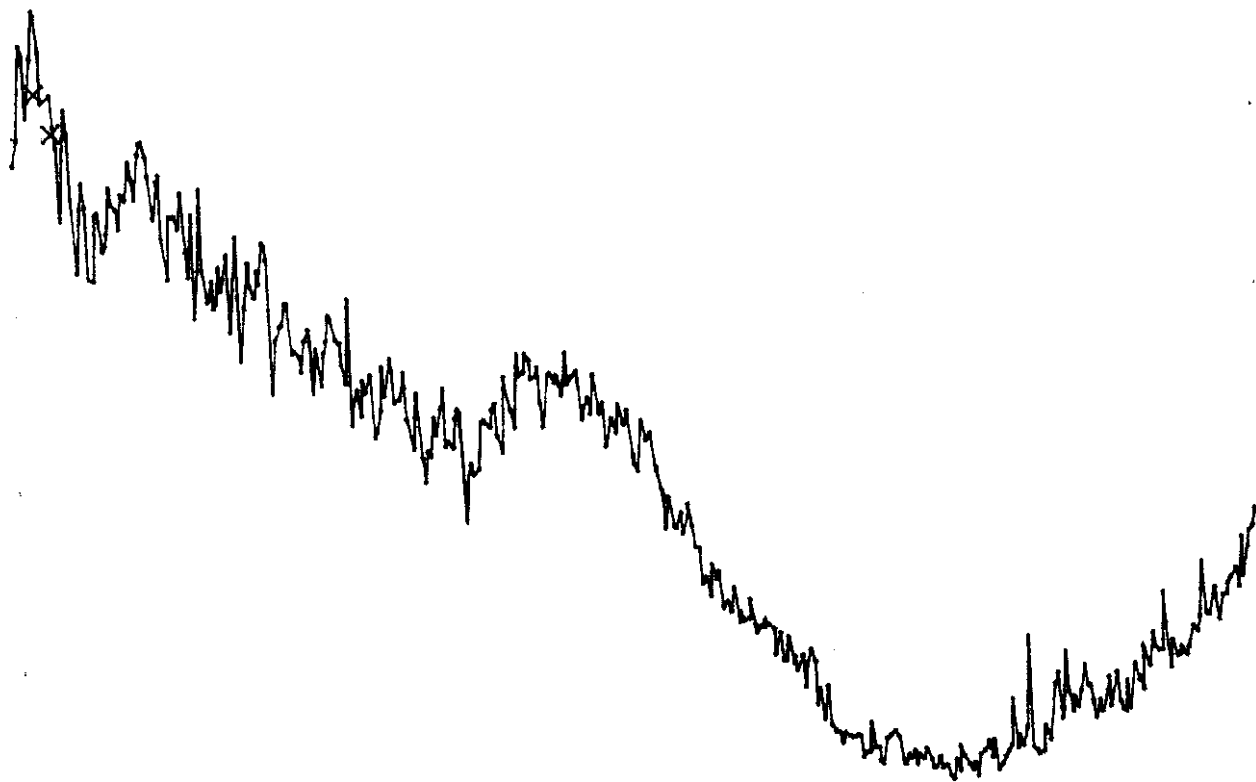
COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

EUT: BALLASTS/FE. 25W. NO. 8
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE HOT: (RED). NEUTRAL (BLUE)
120Vac, 60Hz.

Scan Settings (2 Ranges)			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Presamp	OpRge
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	8k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement:	x GP	Transducer	No.	Start	Stop	Name
Meas Time:	1 s		1	10k	30M	FISCHER
Subranges:	25					
Acc Margin:	8dB					

FCC_1B



COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

EUT: BALLASTS/FE/ 25W, NO.9
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE HOT: (RED). NEUTRAL (BLUE)
120Vac, 60Hz.

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.48500	42.4	48.0
0.51500	40.2	48.0
* limit exceeded		

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

EUT: BALLASTS/FE 25W, NO. 9
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE HOT: (RED), NEUTRAL (BLUE)
120Vac, 60Hz.

Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpAgs
480k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement:	x QP	Transducer	No.	Start	Stop	Name
	Mass Time: 1 s		1	10k	30M	FISCHER
	Subranges: 25					
	Acc Margin: 8dB					

FCC_18

(A)

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 99 10: 47

212

EUT: BALLASTS/FEI 22W, NO.8
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 15 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp OpRge
450k	500k	500Hz	10k	PK	100ms	AUTO LN OFF	60dB
500k	30M	5k	10k	PK	20ms	AUTO LN OFF	60dB

Final Measurement: x GP Transducer No. Start Stop Name
 Mess Time: 1 s 1 5k 30M FISCHER
 Subranges: 25
 Acc Margin: 6dB

FCC_15

X

XX X

COMPLIANCE ENGINEERING SERVICES INC.

09. Feb 98 10:47

Ap. 2

RFI VOLTAGE

EUT: BALLASTS/FE/22W, NO.8
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 15 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.45150	45.1	48.0
0.61000	38.8	48.0
0.68500	38.5	48.0
0.82500	38.0	48.0

* limit exceeded



COMPLIANCE ENGINEERING SERVICES INC.

RFI VOLTAGE

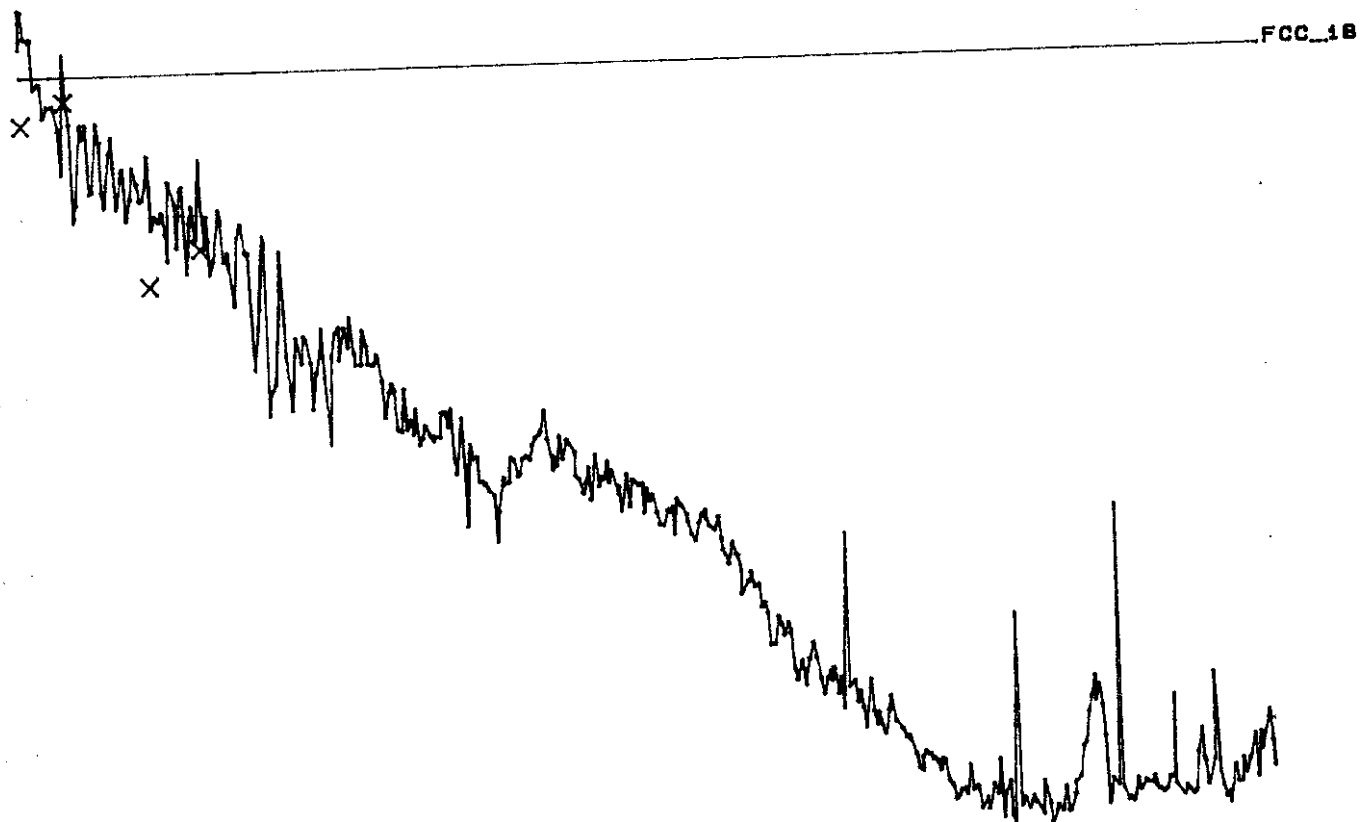
09. Feb 99 10:56

M1.2

EUT: BALLASTS/FE/22W. NO.8
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC, 60Hz.

Scan Settings (2 Ranges)			Receiver Settings					
Frequencies			IF BW	Detector	M-Time	Atten	Preamp	OpRge
Start	Stop	Step	10k	PK	100ms	AUTO	LN OFF	80dB
450k	500k	500Hz	10k	PK	20ms	AUTO	LN OFF	80dB
500k	30M	5k						

Final Measurement:	X QP	Transducer	No.	Start	Stop	Name
Mass Time:	1 s		1	9k	30M	FISCHER
Subranges:	25					
Acc Margin:	8dB					



COMPLIANCE ENGINEERING SERVICES INC.

09. Feb 98 10:56

In 2

RFI VOLTAGE

EUT: BALLASTS/FEJ22W, NO.6
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.45300	45.2	48.0
0.52500	46.5	48.0
0.89500	38.1	48.0
0.82500	38.1	48.0

* limit exceeded

COMPLIANCE ENGINEERING SERVICES INC.

FI VOLTAGE

05. Mar 99 11:34

UT: BALLASTS /FEJ 20W
 nuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
 Cond: STANDARD
 erator: MIKE ZHU
 at Spec: FCC 15 CERTIFICATION
 mment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC. 60Hz.

Scan Settings (2 Ranges)			Receiver Settings						
Frequencies			IF	BW	Detector	M-Time	Atten	Preamp	OpRge
Start	Stop	Step							
450k	500k	800Hz	10k	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	5k	10k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement:		Transducer No.		Start	Stop	Name
x	QP	1	9k	30M	FISCHER	
Meas Time:	1 s					
Subranges:	25					
Acc Margin:	8dB					

FCC_18

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

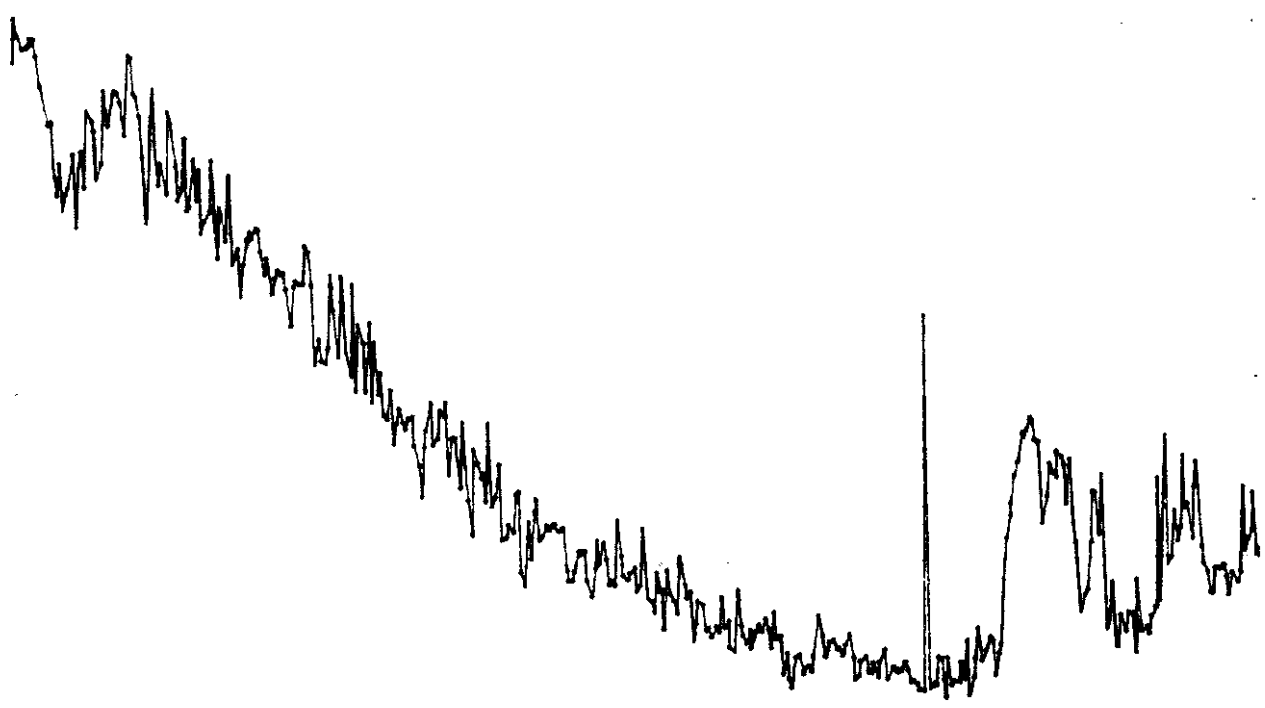
05. Mar 99 10:28

EUT: BALLASTS /FEJ18W
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC. 60Hz.

Scan Settings (2 Ranges)			Receiver Settings				
Frequencies			IF BW	Detector	M-Time	Atten	Preamp
Start	Stop	Step					OpRge
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF 80dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF 80dB

Final Measurement:	X QP	Transducer	No.	Start	Stop	Name
	Meas Time: 1 s		1	9k	30M	FISCHER
	Subranges: 28					
	Acc Margin: 8dB					

FCC_1B

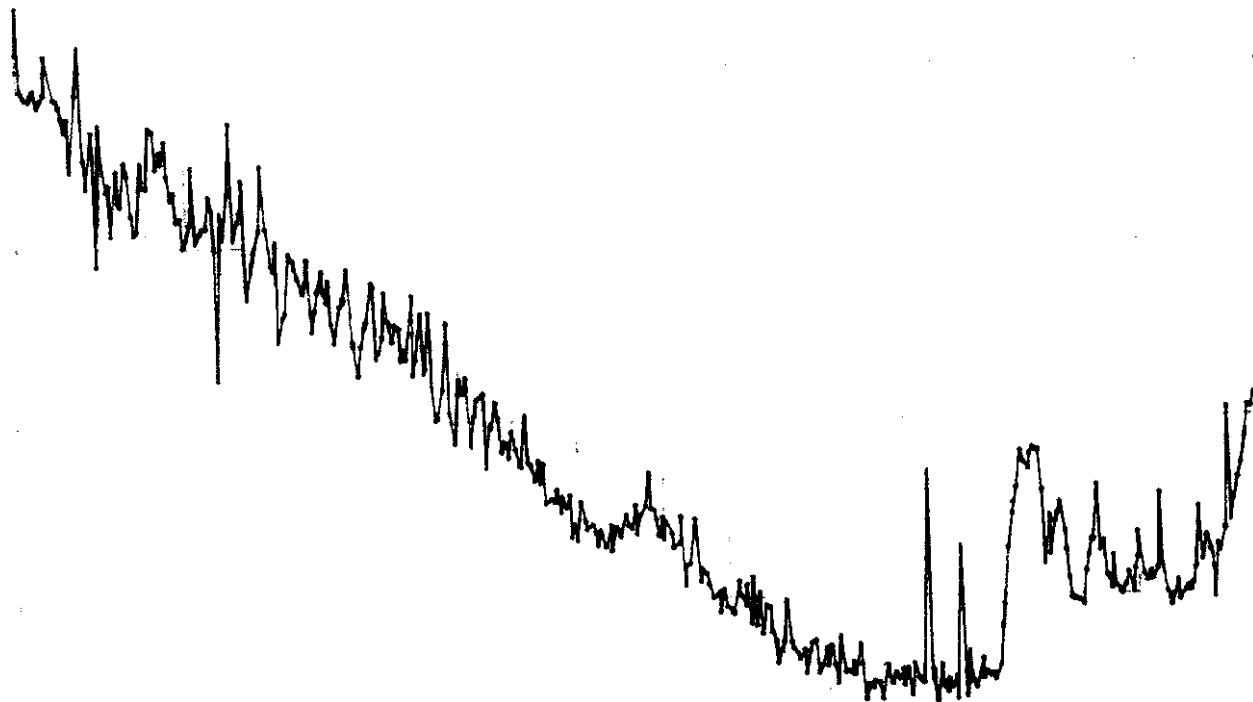


05. Mar 82 10: 42

Scan Settings (2 Ranges)

Final Measurement:	X QP	Transducer No.	Start	Stop	Name
	Meas Time:	1 s	1	30M	FISCHER
	Subranges:	25			
	Acc Margin:	5dB			

_FCC_10



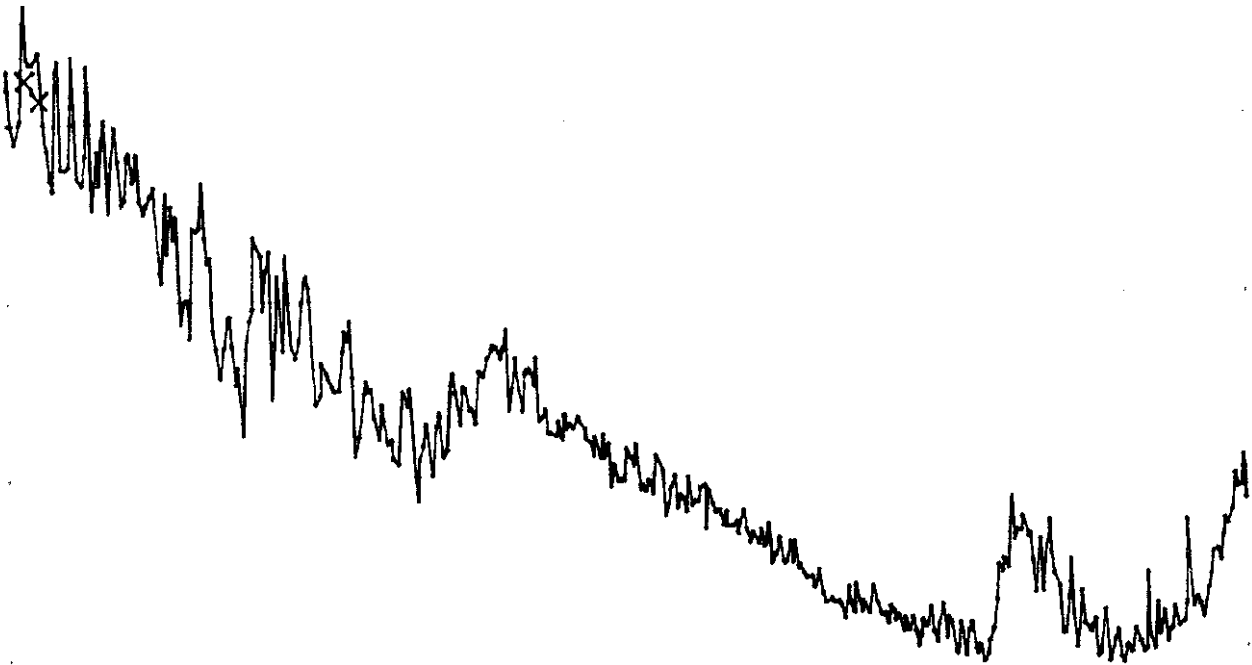
COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

EUT: BALLASTS/FER 25W, NO.8
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE HOT: (RED), NEUTRAL (BLUE)
120Vac, 60Hz.

Scan Settings (2 Ranges)			Receiver Settings					
Frequencies			IF BW	Detector	M-Time	Atten	Preamp	OpRgs
Start	Stop	Step						
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement:	x QP	Transducer No.	Start	Stop	Name
	Meas Time: 1 s	1	10k	30M	FISCHER
	Subranges: 25				
	Acc Margin: 8dB				

FCC 1B



COMPLIANCE ENGINEERING SERVICES INC.

RFI VOLTAGE

W. 1000 1000 1000 1000

21, 2

EUT: BALLASTS/FER 25W, NO. 8
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE HOT: (RED), NEUTRAL (BLUE)
120Vac, 60Hz.

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.48100	42.5	48.0
0.50500	41.3	48.0

* limit exceeded

COMPLIANCE ENGINEERING SERVICES INC.

RFI VOLTAGE

EUT: BALLASTS/FER 25W, NO.8
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE HOT: (RED), NEUTRAL (BLUE)
120Vac, 60Hz.

Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
480k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement: x QP Transducer No. Start Stop Name
 Meas Time: 1 s 1 10k 30M FISCHER
 Subranges: 25
 Acc Margin: 8dB

FCC_18

X
X
X

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

DATE: 11/11/2014

Mr. 2

EUT: BALLASTS/FER 25W, NO.8
Manuf: ZHEJIANG SUNLIGHT GROUP CORP.
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE HOT: (RED), NEUTRAL (BLUE)
120Vac, 60Hz.

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.48000	43.9	48.0
0.51000	45.0	48.0
0.63000	41.2	48.0

* limit exceeded

RFI VOLTAGE

EUT: BALLASTS/FEA 22W, NO.5
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 15 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

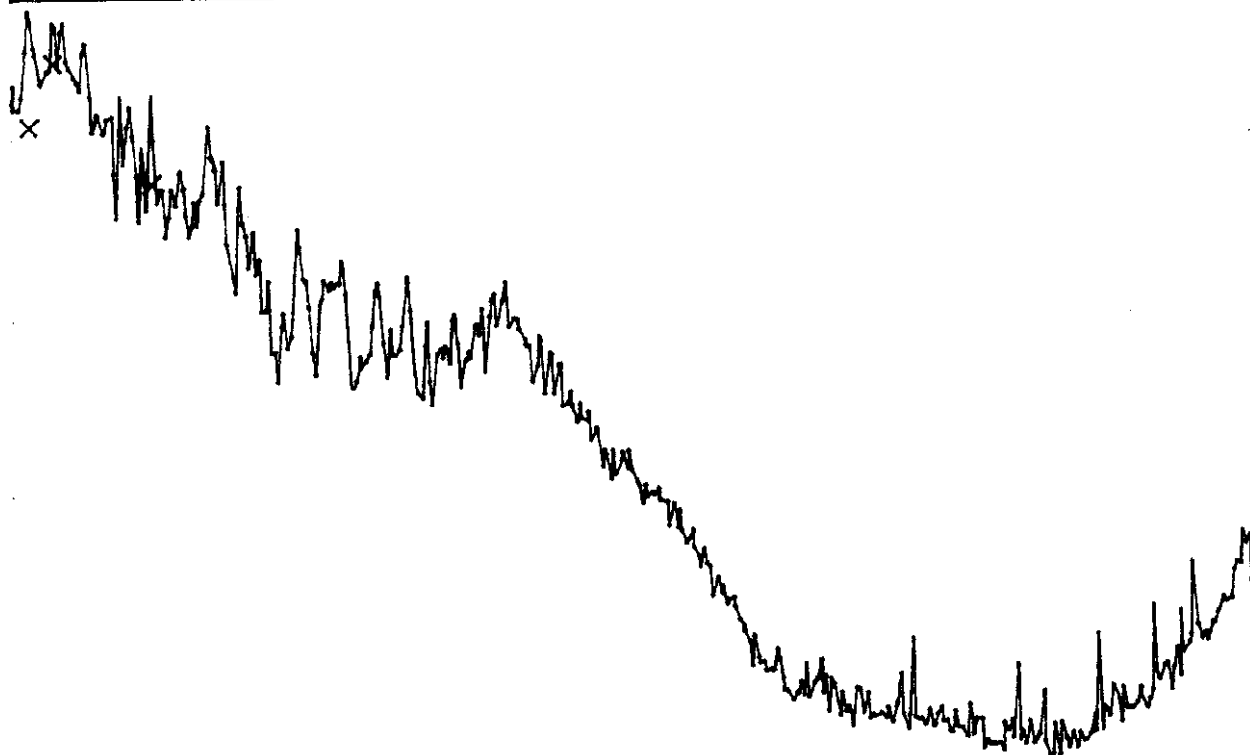
Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	50dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	50dB

Final Measurement: x GP
Measure Time: 1 s
Subranges: 25
Acc Margin: 5dB

Transducer No. Start Stop Name
1 5k 30M FISCHER

FCC_18



COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 89 10:13

24, 2

EUT: BALLASTS/FEP22W, NO.5
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

Final Measurement Results:

Frequency MHz	QP Level dB	QP Limit dB
0.47850	40.8	48.0
0.52000	44.4	48.0
0.72500	37.8	48.0

* limit exceeded

W. 2

COMPLIANCE ENGINEERING SERVICES INC.
RFI VOLTAGE

09. Feb 88 10:20

EUT: BALLASTS/FER22W, NO.5
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

Scan Settings (2 Ranges)			Receiver Settings						
Frequencies			IF BW	Detector	M-Time	Atten	Preamp	OpRge	
Start	Stop	Step							
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB	
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB	

Final Measurement:	x QP	Transducer No.	Start	Stop	Name
	Meas Time: 1 s	1	9k	30M	FISCHER
	Subranges: 25				
	Acc Margin: 8dB				

FCC_1B

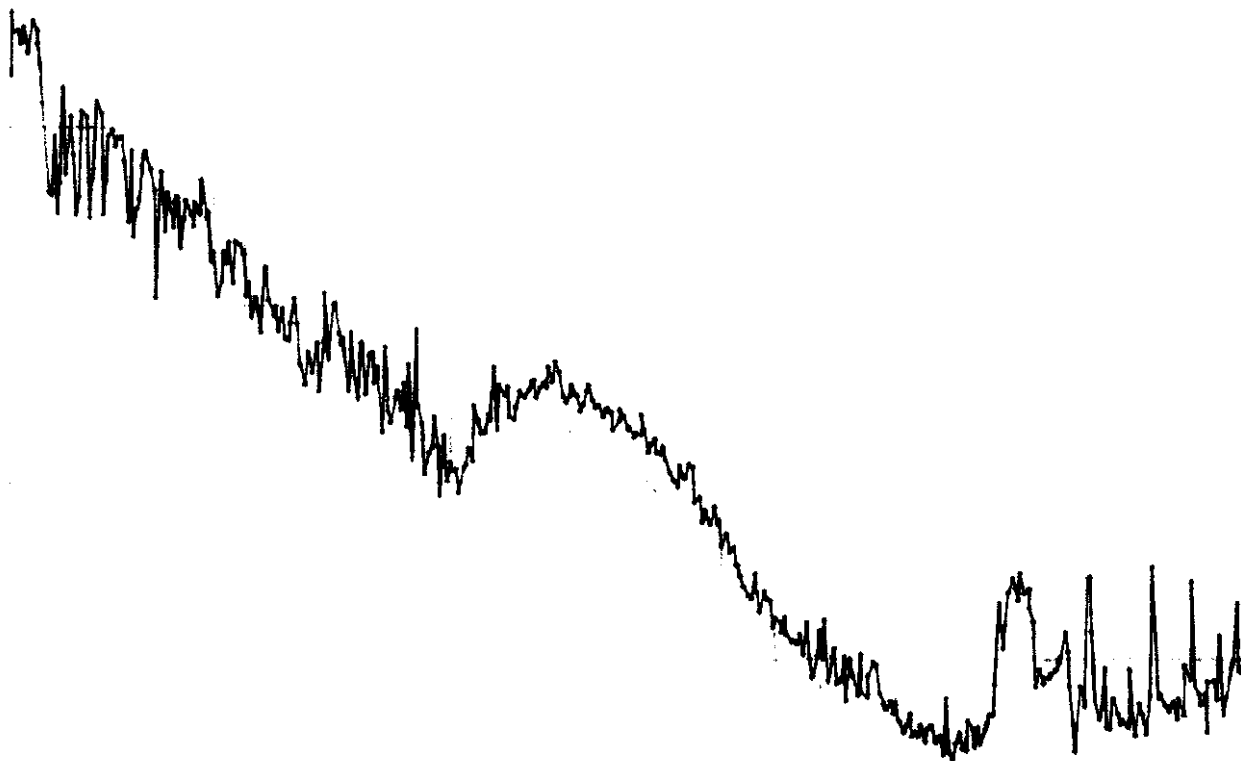
05. Mar 98 11:02

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EUT:          BALLASTS /FER20W
Manuf:        ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond:      STANDARD
Operator:      MIKE ZHU
Test Spec:    FCC 18 CERTIFICATION
Comment:      LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.
```

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB

Final Measurement:	x QP	Transducer No.	Start	Stop	Name
Meas Time:	1 s	1	9k	30M	FISCHER
Subranges:	25				
Acc Margin:	6dB				

_FCC_10



COMPLIANCE ENGINEERING SERVICES INC.

05. Mar 99 11:17

RFI VOLTAGE

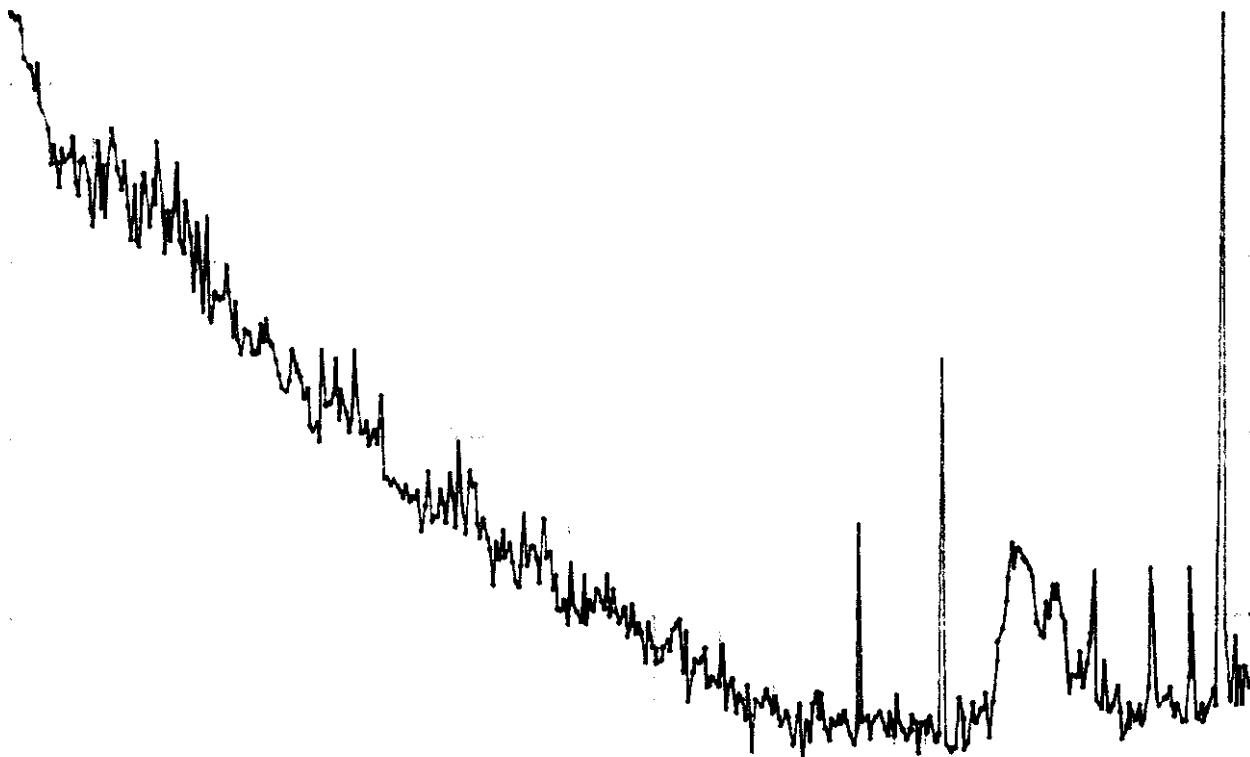
EUT: BALLASTS /FER10W
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 18 CERTIFICATION
Comment: LINE: HOT: (RED), NEUTRAL (BLUE) 120VAC, 60Hz.

Scan Settings (2 Ranges)

Frequencies			Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
450k	500k	500Hz	10k	PK	100ms	AUTO	LN OFF	80dB	
500k	30M	5k	10k	PK	20ms	AUTO	LN OFF	80dB	

Final Measurement: x QP Transducer No. Start Stop Name
1 9k 30M FISCHER
Mess Time: 1 s
Subranges: 25
Acc Margin: 8dB

FCC_18



RFI VOLTAGE

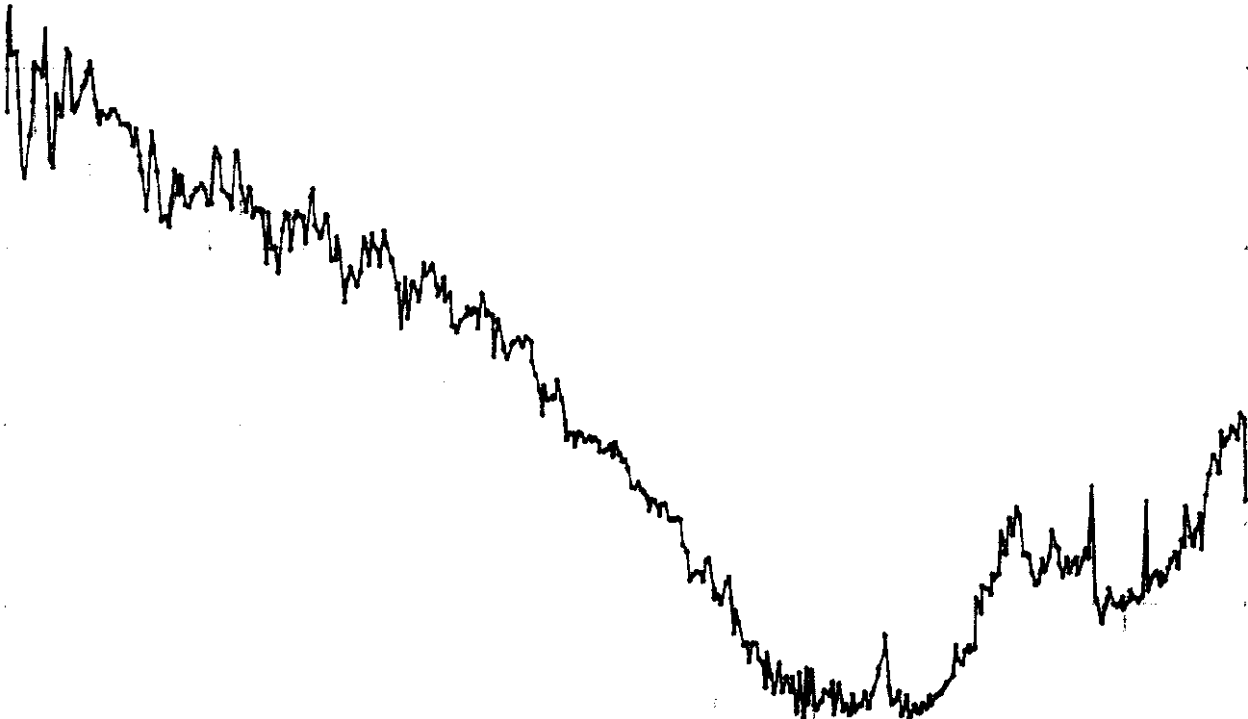
EUT: BALLASTS /FER15W
Manuf: ZHEJIANG SUNLIGHT GROUP CORPORATION
Op Cond: STANDARD
Operator: MIKE ZHU
Test Spec: FCC 1B CERTIFICATION
Comment: LINE: HOT: (RED). NEUTRAL (BLUE) 120VAC. 60Hz.

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp OpRge
450k	500k	500Hz	10k	PK	100ms	AUTO LN OFF	80dB
500k	30M	5k	10k	PK	20ms	AUTO LN OFF	80dB

Final Measurement: x QP Transducer No. Start Stop Name
 Meas Time: 1 s 1 9k 30M FISCHER
 Subranges: 25
 Acc Margin: 8dB

FCC_1B



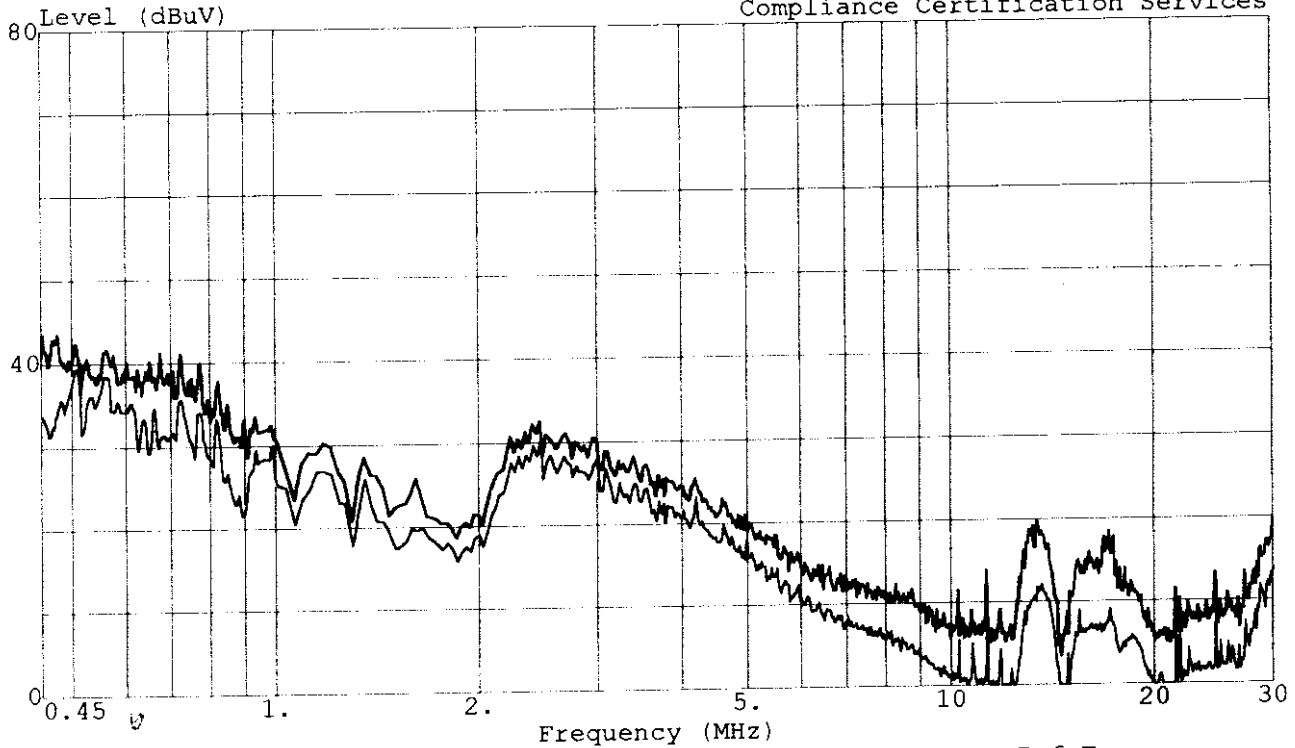


1366 Bordeaux Dr.
Sunnyvale, CA 94089-1005 USA
Tel: (408) 752-8166
Fax: (408) 752-8168 *PK*

Data#: 14 File#: 99C0067.EMI

Date: 06-14-1999 Time: 15:22:22

Compliance Certification Services



Trace: 12

Ref Trace:

Project No. : 99c0067
Report No. : 990614
Test Engr : PETE KREBILL
Company : ZHEJIANG SUNLIGHT GROUP
EUT : FEH 20 WATT
Test Config.: EUT ONLY
Type of Test: FCC 18 CERTIFICATION
Mode of Op. : 120Vac, 60Hz
: L1: GREEN=QP BLACK=PEAK

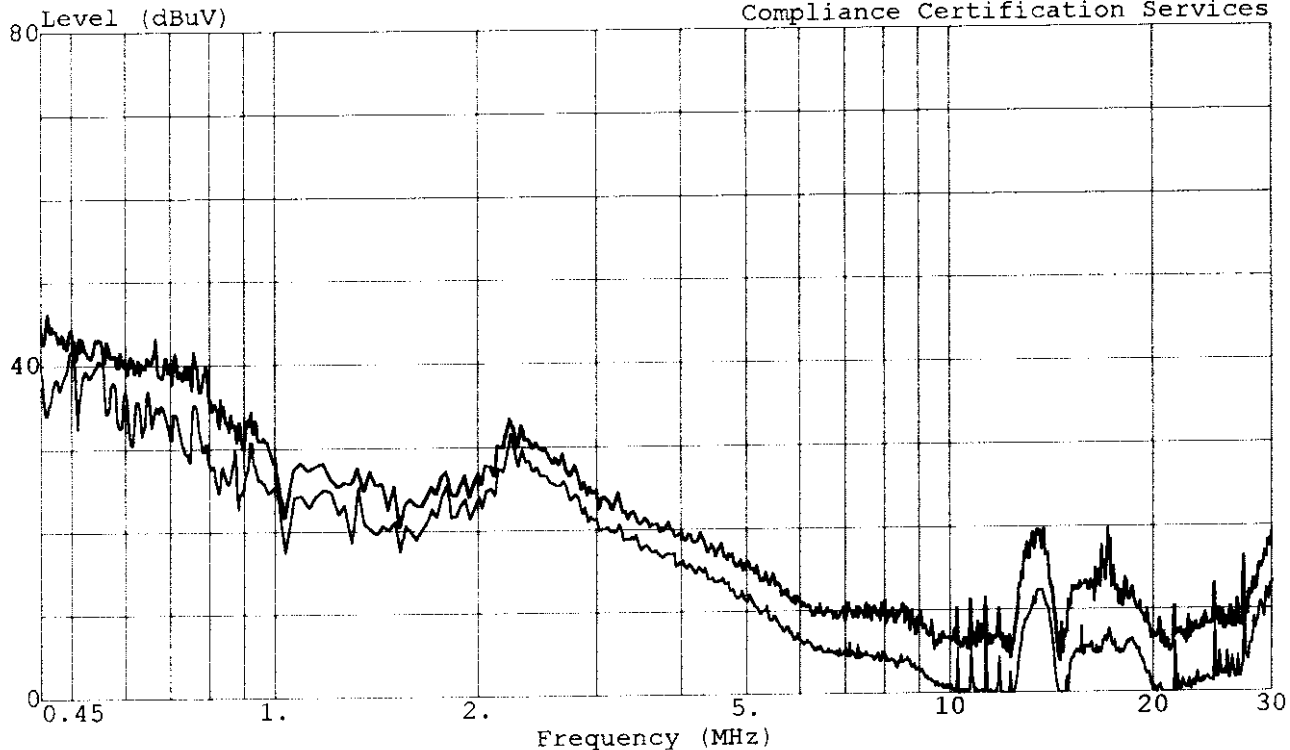


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Date: 06-14-1999 Time: 15:40:49

Compliance Certification Services



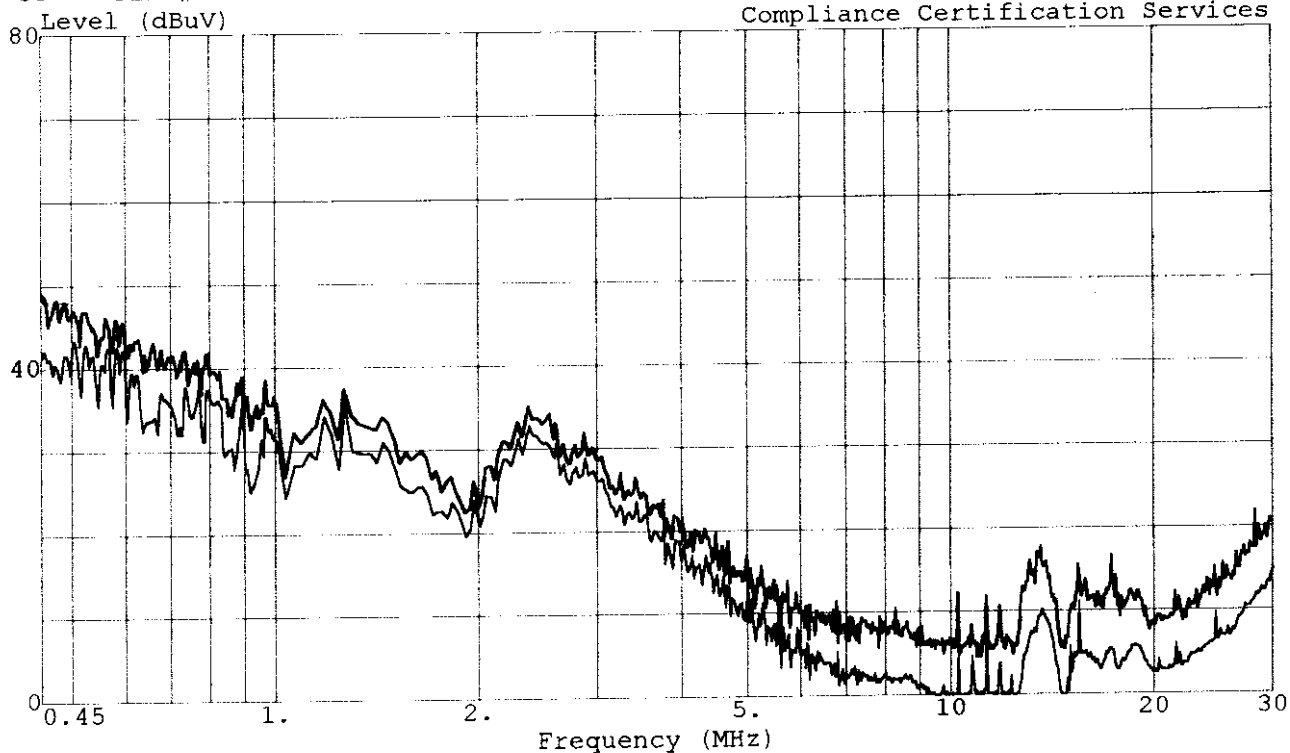
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Ref Trace:

Project No. : 99c0067
Report No. : 990614
Test Engr : PETE KREBILL
Company : ZHEJIANG SUNLIGHT GROUP
EUT : FEH 20 WATT
Test Config.: EUT ONLY
Type of Test: FCC 18 CERTIFICATION
Mode of Op. : 120Vac, 60Hz
: L2: GREEN=QP BLACK=PEAK

Data#: 35 File#: 99C0067.EMI

Date: 06-14-1999 Time: 16:32:59
Compliance Certification Services



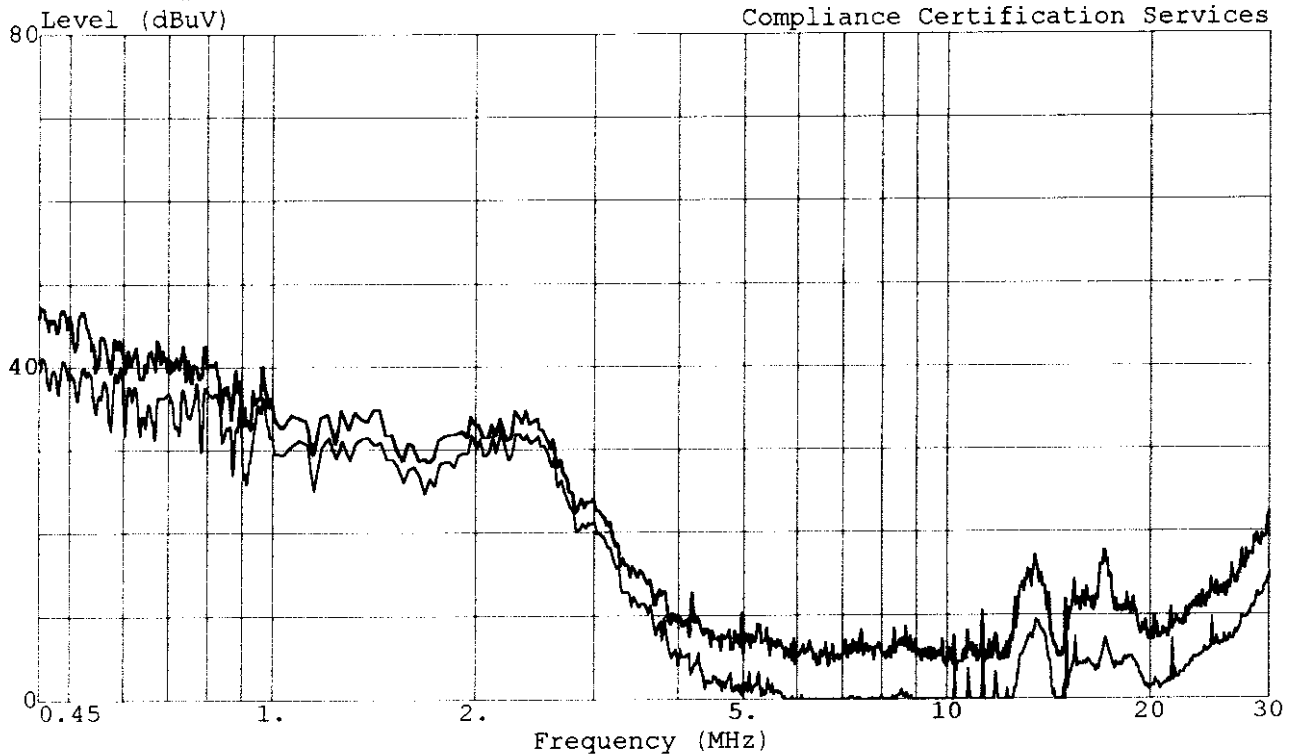
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Ref Trace:

Project No. : 99c0067
Report No. : 990614
Test Engr : PETE KREBILL
Company : ZHEJIANG SUNLIGHT GROUP
EUT : FEH 25 WATT
Test Config.: EUT ONLY
Type of Test: FCC 18 CERTIFICATION
Mode of Op. : 120Vac, 60Hz
: L2: GREEN=QP BLACK=PEAK

Data#: 28 File#: 99C0067.EMI

Date: 06-14-1999 Time: 16:15:26



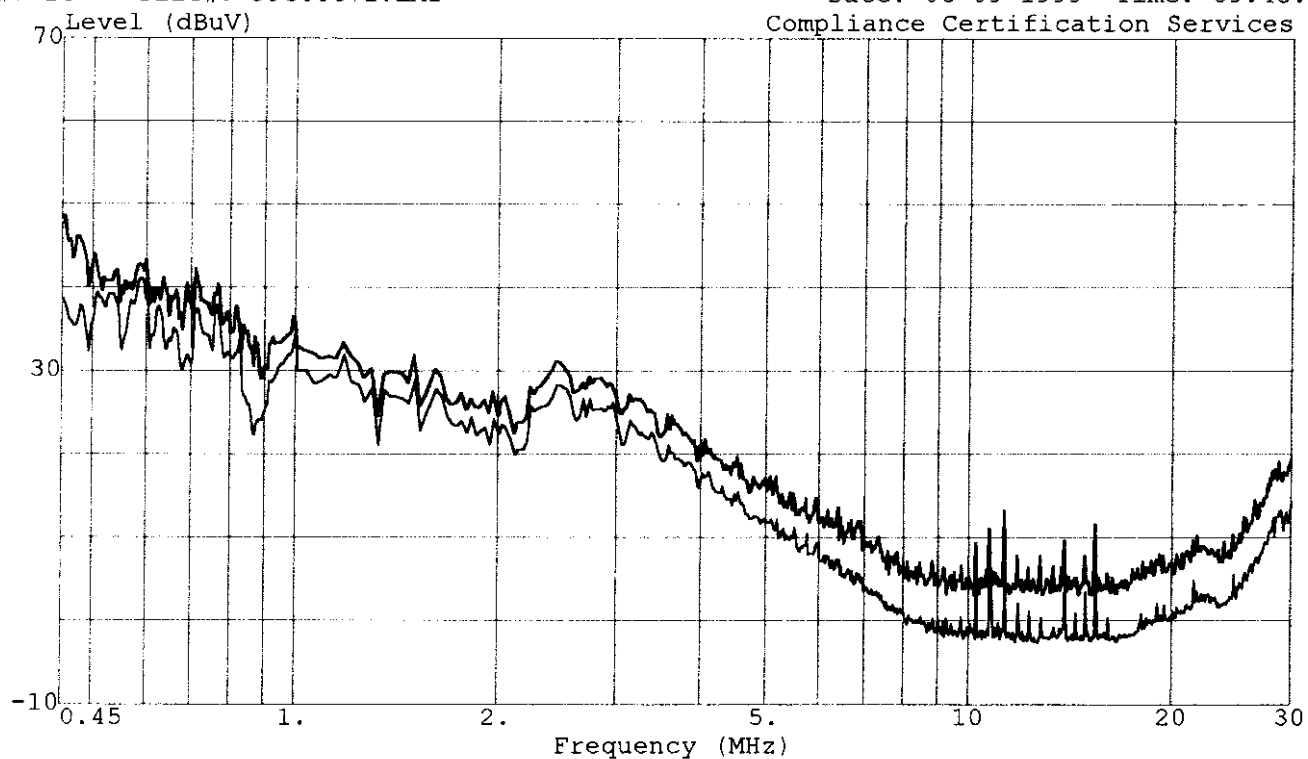
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Project No. : 99c0067
Report No. : 990614
Test Engr : PETE KREBILL
Company : ZHEJIANG SUNLIGHT GROUP
EUT : FEH 25 WATT
Test Config.: EUT ONLY
Type of Test: FCC 18 CERTIFICATION
Mode of Op. : 120Vac, 60Hz
: L1: GREEN=QP BLACK=PEAK

Data#: 14 File#: 99C00671.EMI

Date: 06-09-1999 Time: 09:43:34



Trace: 12

Ref Trace:

Project No. : 99C0067-1

Report No. : 990608LC

Test Engr : MIKE ZHU

Company : ZHEJIANG SUNLIGHT GROUP CORP.

EUT : BALLASTS/FEH 22W, No4

Test Config.: EUT ONLY

Type of Test: FCC 18 CERTIFICATION

Mode of Op. : NORMAL

: L2: Black (PK), Green(QP)

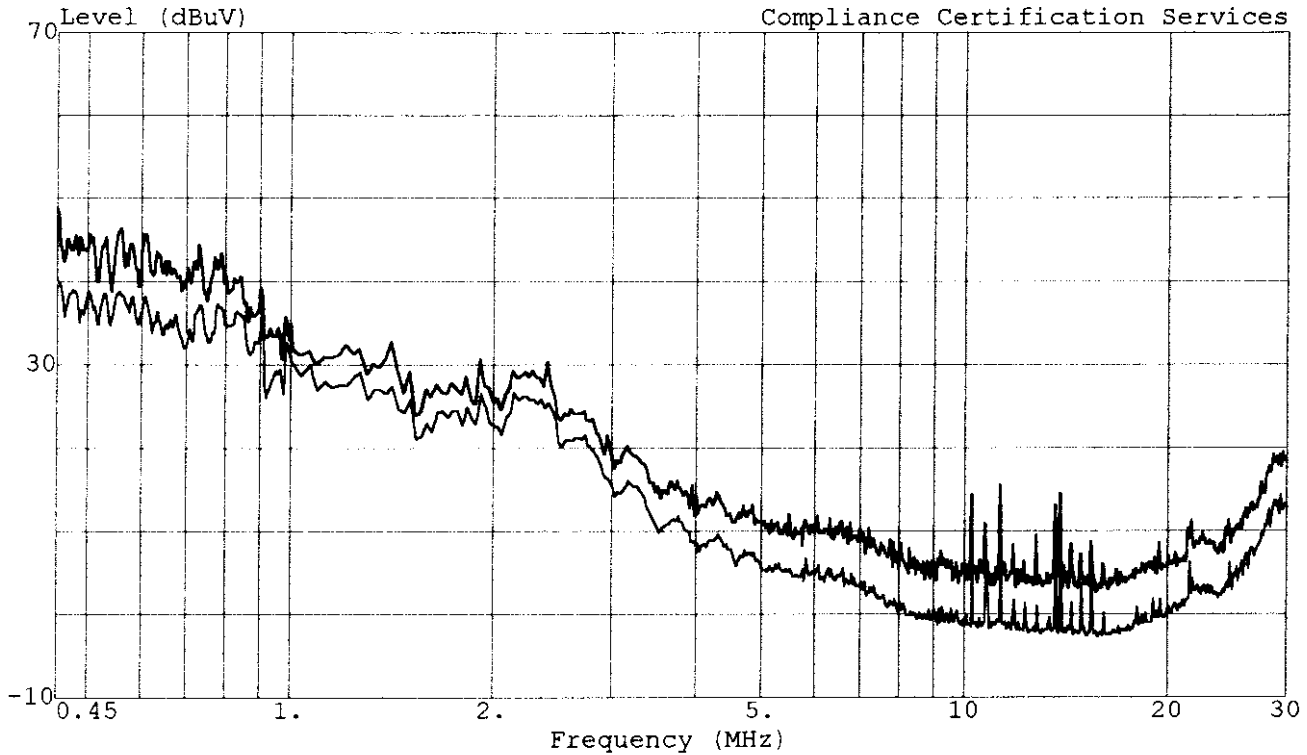
: 120VAC, 60Hz



MZ

Data#: 7 File#: 99C00671.EMI

Date: 06-09-1999 Time: 09:11:54



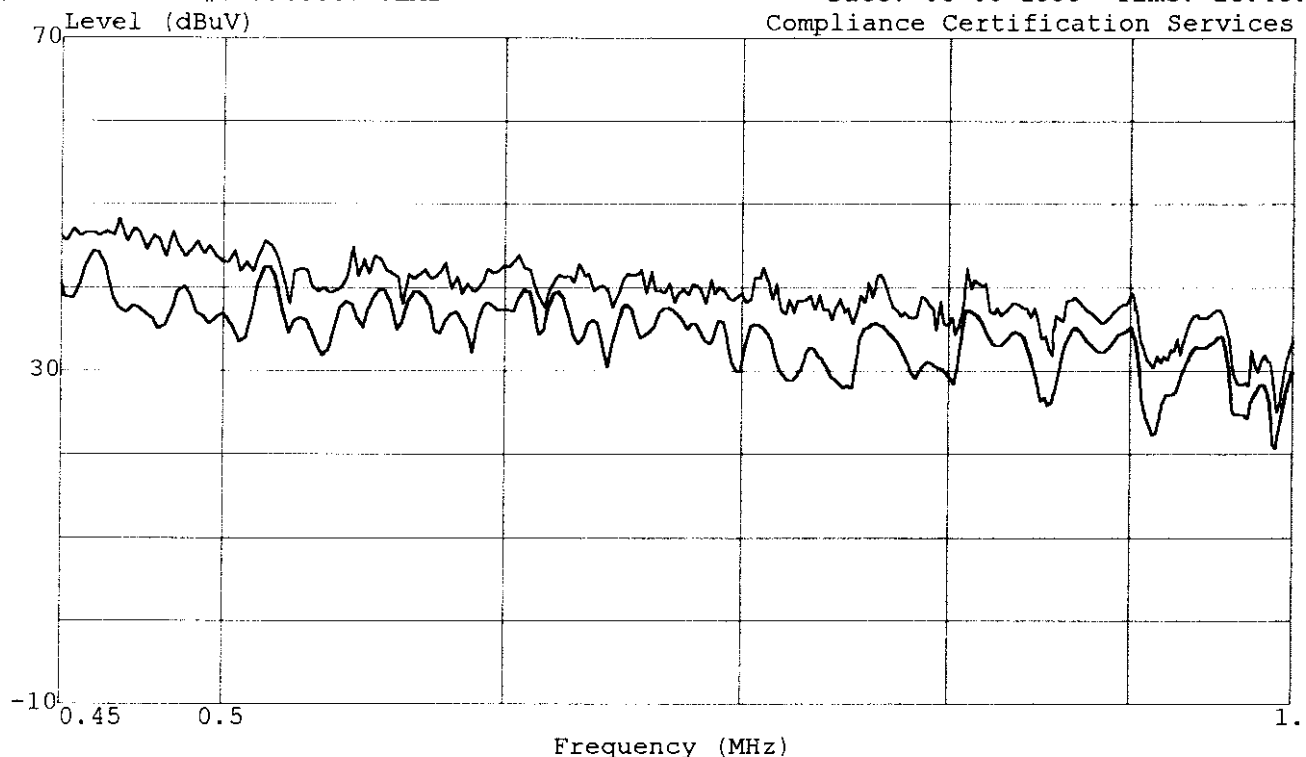
Trace: 5

Ref Trace:

Project No. : 99C0067-1
Report No. : 990608LC
Test Engr : MIKE ZHU
Company : ZHEJIANG SUNLIGHT GROUP CORP.
EUT : BALLASTS/FEH 22W, No4
Test Config.: EUT ONLY
Type of Test: FCC 18 CERTIFICATION
Mode of Op. : NORMAL
: (L): Black (PK), Green (QP)
: 120VAC, 60Hz

Data#: 4 File#: 99C0067-.EMI

Date: 06-08-1999 Time: 16:46:22



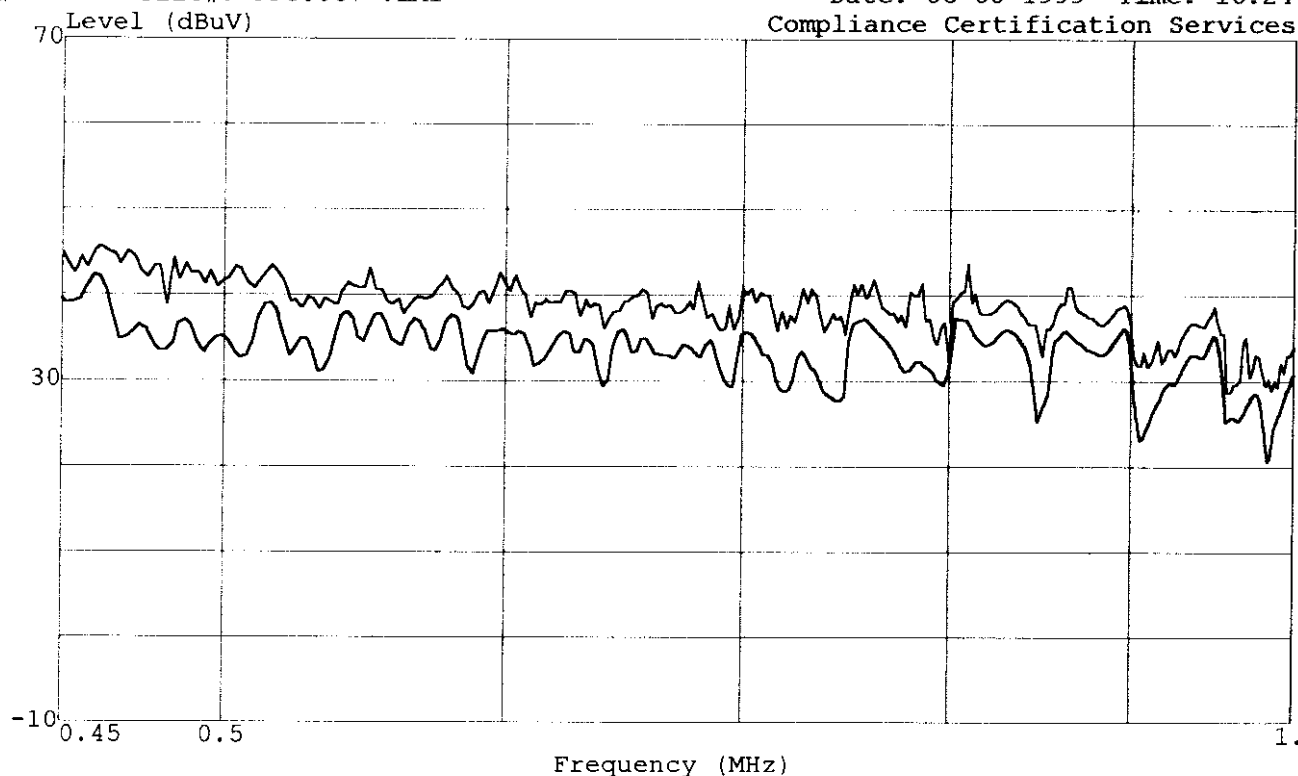
Trace: 3

Ref Trace:

Project No. : 99C0067
 Report No. : 990608LC
 Test Engr : MIKE ZHU
 Company : ZHEJIANG SUNLIGHT GROUP CORP.
 EUT : BALLASTS/FEJ22W,NO.6
 Test Config.: EUT ONLY
 Type of Test: FCC 18 CERTIFICATION
 Mode of Op. : NORMAL
 : L2: Green (PK),Black (QP)
 : 120VAC, 60Hz

Data#: 2 File#: 99C0067-.EMI

Date: 06-08-1999 Time: 16:24:00



Trace: 1

Ref Trace:

Project No. : 99C0067
Report No. : 990608LC
Test Engr : MIKE ZHU
Company : ZHEJIANG SUNLIGHT GROUP CORP.
EUT : BALLASTS/FEJ22W,NO.6
Test Config.: EUT ONLY
Type of Test: FCC 18 CERTIFICATION
Mode of Op. : NORMAL
: L1: Green (Pk) ; Black (QP)
: 120VAC, 60Hz