

Application for FCC Certificate
On Behalf of
Tospo Electronics Co., Ltd.

Compact Fluorescent Lamp

Model No.: TP120-13RLF TP120-15RLF TP120-23RLF
TP120-13RLC TP120-15RLC TP120-23RLC
TP120-7SL TP120-9SL TP120-11SL
TP120-26SL TP120-30SL
TP120-13AL TP120-15AL

FCC ID : PDYTPRA0715

Prepared For : Tospo Electronics Co., Ltd.
No.2 West Xing-Sheng Road, Hengdian Industrial
Area Dong Yang City
Zhejiang, P.R. China

Prepared By : AUDIX Technology (Shanghai) Co., Ltd.
3 F., 34 Bldg., 680 Guiping Rd.,
Caohejing Hi-Tech Park, Shanghai, China

Tel : (+8621) 64955500

Report No. : ACI-F01029
Date of Test : Apr 27 ~ 28, 2001
Date of Report : Apr 29, 2001

TABLE OF CONTENTS

	Page
1 GENERAL INFORMATION	4
1.1 Description of Equipment Under Test	4
1.2 Description of Test Facility	5
1.3 Measurement Uncertainty	5
2 AC POWERLINE CONDUCTED EMISSION TEST	6
2.1 Test Equipment	6
2.2 Block Diagram of Test Setup	6
2.3 Conducted Emission Limits	6
2.4 Test Configuration	7
2.5 Operating Condition of EUT	7
2.6 Test Procedures	7
2.7 Test Results	8
3 RADIATED EMISSION TEST	14
3.1 Test Equipment	14
3.2 Block Diagram of Test Setup	14
3.3 Radiated Emission Limits	15
3.4 Test Configuration	15
3.5 Operating Condition of EUT	15
3.6 Test Procedures	15
3.7 Test Results	16

TEST REPORT FOR FCC CERTIFICATE

Applicant : Tospo Electronics Co., Ltd.
Manufacturer : Tospo Electronics Co., Ltd.
EUT Description : Compact Fluorescent Lamp
Model No. : TP120-13RLF TP120-15RLF TP120-23RLF
TP120-13RLC TP120-15RLC TP120-23RLF
TP120-7SL TP120-9SL TP120-11SL
TP120-26SL TP120-30SL
TP120-13AL TP120-15AL
Serial No. : HD200104001 ~ HD200104013
Power Supply : 110 ~ 420V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 18 CONSUMER DEVICES (1998)
AND MP-5/1986*

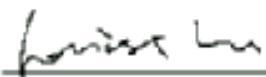
The device described above is tested by AUDIX Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 18 RF Lighting Device limits both radiated and conducted emissions.

The test results are contained in this test report and AUDIX Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology (Shanghai) Co., Ltd.

This report must not be used by the applicant to claim product endorsement by NVLAP or any agency of the U.S. Government.

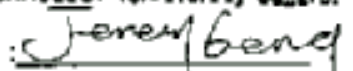
Date of Test : Apr 27 ~ Apr 28, 2001

Prepared by : 
(LOUISE LU)

Test Engineer : 
(ADA ZOU)

For and on behalf of
AUDIX TECHNOLOGY (SHANGHAI) CO., LTD.

Reviewer : 
(HUAL WANG)

Approved Signatory : 
(JEREMY GENG)

Authorized Signature(s)

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test

Description : Compact Fluorescent Lamp

Type of EUT : ☒ Production ☐ Pre-product ☐ Pro-type

Model Number : TP120-13RLF TP120-15RLF TP120-23RLF
TP120-13RLC TP120-15RLC TP120-23RLF
TP120-7SL TP120-9SL TP120-11SL
TP120-26SL TP120-30SL
TP120-13AL TP120-15AL
(All samples have been tested, the test results of TP120-13RLF, TP120-15RLF, TP120-23RLF, TP120-7SL, TP120-11SL, TP120-30SL were reported.)

Serial Number : HD200104001 ~ HD200104013

Applicant : Tospo Electronics Co., Ltd.
No.2 West Xing-Sheng Road, Hengdian Industrial Area
Dong Yang City
Zhejiang, P.R. China

Manufacturer : Tospo Electronics Co., Ltd.
No.2 West Xing-Sheng Road, Hengdian Industrial Area
Dong Yang City
Zhejiang, P.R. China

1.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	:	Sept. 17, 1998 file on Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	AUDIX Technology (Shanghai) Co., Ltd.
Site Location	:	3 F., 34 Bldg., 680 Guiping Rd., Caohejing Hi-Tech Park, Shanghai, China
NVLAP Lab Code	:	200371-0

1.3 Measurement Uncertainty

Conducted Emission Uncertainty	:	U = 2.66dB
Radiated Emission Uncertainty	:	U = 3.90dB

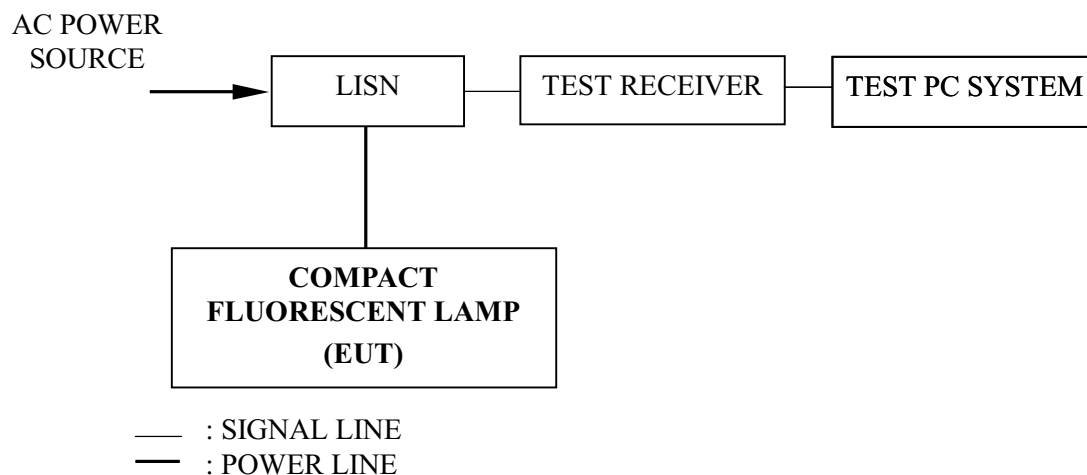
2 AC POWERLINE CONDUCTED EMISSION TEST

2.1 Test Equipment

The following test equipment are used during the powerline conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	844077/020	May 20, 2000	1 Year
2.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Jun. 02, 2000	1 Year

2.2 Block Diagram of Test Setup



2.3 Conducted Emission Limits

Frequency (MHz)	Maximum RF Line Voltage	
	(μ V)	dB(μ V)
0.45 ~ 2.51	250	48
2.51 ~ 3	3000	70
3 ~ 30	250	48
NOTE 1 – RF Line Voltage dB(μ V) = 20 log RF Line Voltage (μ V)		

2.4 Test Configuration

The EUT (listed in Sec. 1.1) was installed as shown on Sec. 2.2 to meet FCC requirement and operating in a manner which tends to maximize its emission level in a normal application.

2.5 Operating Condition of EUT

The EUT was connected to the power mains through a Line Impedance Stabilization Network (LISN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to MP-5/1986 during conducted emission test.

The bandwidth of Test Receiver ESHS10 was set at 10 kHz.

The frequency range from 450 kHz to 30 MHz was checked. The test mode (ON) was done on conducted test and the test results of the highest emissions are listed in Sec. 2.7.

2.6 Test Procedures

- 2.6.1 Setup the EUT as shown in Sec. 2.2.
- 2.6.2 Turn on the power of all equipment.
- 2.6.3 The EUT will be operated normally.

2.7 Test Results

< PASS >

The frequency and amplitude of the highest AC powerline conducted emissions relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

EUT	:	Compact Fluorescent Lamp	Temperature :	23°C
Model No.	:	TP120-13RLF	Humidity :	53%
Test Mode	:	ON	Date of Test :	Apr 27, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.469	0.32	46.68	47.00	48.00	1.00
	0.529	0.31	41.88	42.19	48.00	5.81
	0.672	0.29	41.42	41.71	48.00	6.29
	0.716	0.29	40.78	41.07	48.00	6.93
	3.025	0.27	36.45	36.72	48.00	11.28
	4.900	0.27	36.40	36.67	48.00	11.33
VB	0.461	0.33	42.40	42.73	48.00	5.27
	0.527	0.31	40.70	41.01	48.00	6.99
	0.627	0.30	42.59	42.89	48.00	5.11
	0.788	0.28	40.86	41.14	48.00	6.86
	1.054	0.27	37.91	38.18	48.00	9.82
	4.848	0.27	35.62	35.89	48.00	12.11

NOTE 1 – Emission Level = Meter Reading + Factor

NOTE 2 – Factor = Insertion Loss + Cable Loss

NOTE 3 – All reading are Quasi-Peak Values.

NOTE 4 – The worst emission is detected at 0.469 MHz with corrected signal level of 47.00 dB(μV) (limit is 48.00 dB(μV)), when the VA of the EUT is connected to LISN.

NOTE 5 - At the frequencies (VA – 0.469 MHz), the measured results are below the specification limit by a margin less than the measurement uncertainty. It is not therefore possible to determine compliance at a level of confidence of 95%. However, the measured result indicates a higher probability that the product tested complies with the specification limit.

TEST ENGINEER: 
(ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-15RLF Humidity : 53%

Test Mode : ON Date of Test : Apr 27, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.474	0.32	43.69	44.01	48.00	3.99
	0.634	0.30	41.11	41.41	48.00	6.59
	0.668	0.29	41.21	41.50	48.00	6.50
	0.853	0.28	38.72	39.00	48.00	9.00
	0.953	0.27	37.58	37.85	48.00	10.15
	1.160	0.27	35.97	36.24	48.00	11.76
VB	0.491	0.31	40.49	40.80	48.00	7.20
	0.535	0.31	42.43	42.74	48.00	5.26
	0.592	0.30	37.46	37.76	48.00	10.24
	0.697	0.29	39.90	40.19	48.00	7.81
	0.880	0.28	36.29	36.57	48.00	11.43
	1.027	0.27	35.54	35.81	48.00	12.19
NOTE 1 – Emission Level = Meter Reading + Factor NOTE 2 – Factor = Insertion Loss + Cable Loss NOTE 3 – All reading are Quasi-Peak Values. NOTE 4 – The worst emission is detected at 0.474 MHz with corrected signal level of 44.01 dB(μV) (limit is 48.00 dB(μV)), when the VA of the EUT is connected to LISN.						

TEST ENGINEER: 
(ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-23RLF Humidity : 53%

Test Mode : ON Date of Test : Apr27, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.481	0.32	48.47	48.79	48.00	0.79
	0.538	0.31	42.21	42.52	48.00	5.48
	0.589	0.30	42.20	42.50	48.00	5.50
	0.624	0.30	42.64	42.94	48.00	5.06
	0.755	0.29	42.93	43.22	48.00	4.78
	5.112	0.27	40.48	40.75	48.00	7.25
VB	0.479	0.32	46.09	46.41	48.00	1.59
	0.538	0.31	43.66	43.97	48.00	4.03
	0.637	0.30	40.47	40.77	48.00	7.23
	0.743	0.29	43.79	44.08	48.00	3.92
	0.963	0.27	42.38	42.65	48.00	5.35
	5.058	0.27	37.87	38.14	48.00	9.86
NOTE 1 – Emission Level = Meter Reading + Factor NOTE 2 – Factor = Insertion Loss + Cable Loss NOTE 3 – All reading are Quasi-Peak Values. NOTE 4 – The worst emission is detected at 0.481 MHz with corrected signal level of 48.79 dB(μV) (limit is 48.00 dB(μV)), when the VA of the EUT is connected to LISN. NOTE 5 - At the frequencies (VA – 0.481 MHz, VB – 0.479 MHz), the measured results are below the specification limit by a margin less than the measurement uncertainty. It is not therefore possible to determine compliance at a level of confidence of 95%. However, the measured result indicates a higher probability that the product tested complies with the specification limit.						

TEST ENGINEER:  (ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-7SL Humidity : 53%

Test Mode : ON Date of Test : Apr 27, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.466	0.32	40.56	40.88	48.00	7.12
	0.549	0.30	36.34	36.64	48.00	11.36
	0.644	0.29	37.11	37.40	48.00	10.60
	0.751	0.29	32.92	33.21	48.00	14.79
	0.857	0.28	32.01	32.29	48.00	15.71
	1.269	0.27	22.32	22.59	48.00	25.41
VB	0.494	0.31	34.92	35.23	48.00	12.77
	0.552	0.30	36.45	36.75	48.00	11.25
	0.592	0.30	34.64	34.94	48.00	13.06
	0.668	0.29	34.88	35.17	48.00	12.83
	0.739	0.29	30.38	30.67	48.00	17.33
	0.871	0.28	32.37	32.65	48.00	15.35
NOTE 1 – Emission Level = Meter Reading + Factor NOTE 2 – Factor = Insertion Loss + Cable Loss NOTE 3 – All reading are Quasi-Peak Values. NOTE 4 – The worst emission is detected at 0.466 MHz with corrected signal level of 40.88 dB(μV) (limit is 48.00 dB(μV)), when the VA of the EUT is connected to LISN.						

TEST ENGINEER:  (ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-11SL Humidity : 53%

Test Mode : ON Date of Test : Apr 27, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.527	0.31	31.00	31.31	48.00	16.69
	0.598	0.30	34.24	34.54	48.00	13.46
	0.658	0.29	35.86	36.15	48.00	11.85
	0.788	0.28	32.82	33.10	48.00	14.90
	0.848	0.28	33.47	33.75	48.00	14.25
	0.958	0.27	31.42	31.69	48.00	16.31
VB	0.499	0.31	32.29	32.60	48.00	15.40
	0.549	0.30	36.73	37.03	48.00	10.97
	0.595	0.30	35.69	35.99	48.00	12.01
	0.672	0.29	35.66	35.95	48.00	12.05
	0.788	0.28	32.08	32.36	48.00	15.64
	0.876	0.28	32.32	32.60	48.00	15.40
NOTE 1 – Emission Level = Meter Reading + Factor NOTE 2 – Factor = Insertion Loss + Cable Loss NOTE 3 – All reading are Quasi-Peak Values. NOTE 4 – The worst emission is detected at 0.549 MHz with corrected signal level of 37.03 dB(μV) (limit is 48.00 dB(μV)), when the VB of the EUT is connected to LISN.						

TEST ENGINEER:  (ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-30SL Humidity : 53%

Test Mode : ON Date of Test : Apr 27, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.486	0.32	39.97	40.29	48.00	7.71
	0.529	0.31	45.41	45.72	48.00	2.28
	0.576	0.30	41.62	41.92	48.00	6.08
	0.672	0.29	41.83	42.12	48.00	5.88
	0.848	0.28	38.46	38.74	48.00	9.26
	0.968	0.27	37.74	38.01	48.00	9.99
VB	0.529	0.31	46.86	47.17	48.00	0.83
	0.582	0.30	38.93	39.23	48.00	8.77
	0.627	0.30	43.16	43.46	48.00	4.54
	0.775	0.28	42.41	42.69	48.00	5.31
	0.876	0.28	36.22	36.50	48.00	11.50
	0.948	0.27	38.81	39.08	48.00	8.92
NOTE 1 – Emission Level = Meter Reading + Factor NOTE 2 – Factor = Insertion Loss + Cable Loss NOTE 3 – All reading are Quasi-Peak Values. NOTE 4 – The worst emission is detected at 0.529 MHz with corrected signal level of 47.17 dB(μV) (limit is 48.00 dB(μV)), when the VB of the EUT is connected to LISN. NOTE 5 - At the frequencies (VA – 0.529 MHz, VB – 0.529 MHz), the measured results are below the specification limit by a margin less than the measurement uncertainty. It is not therefore possible to determine compliance at a level of confidence of 95%. However, the measured result indicates a higher probability that the product tested complies with the specification limit.						

TEST ENGINEER: 
(ADA ZOU)

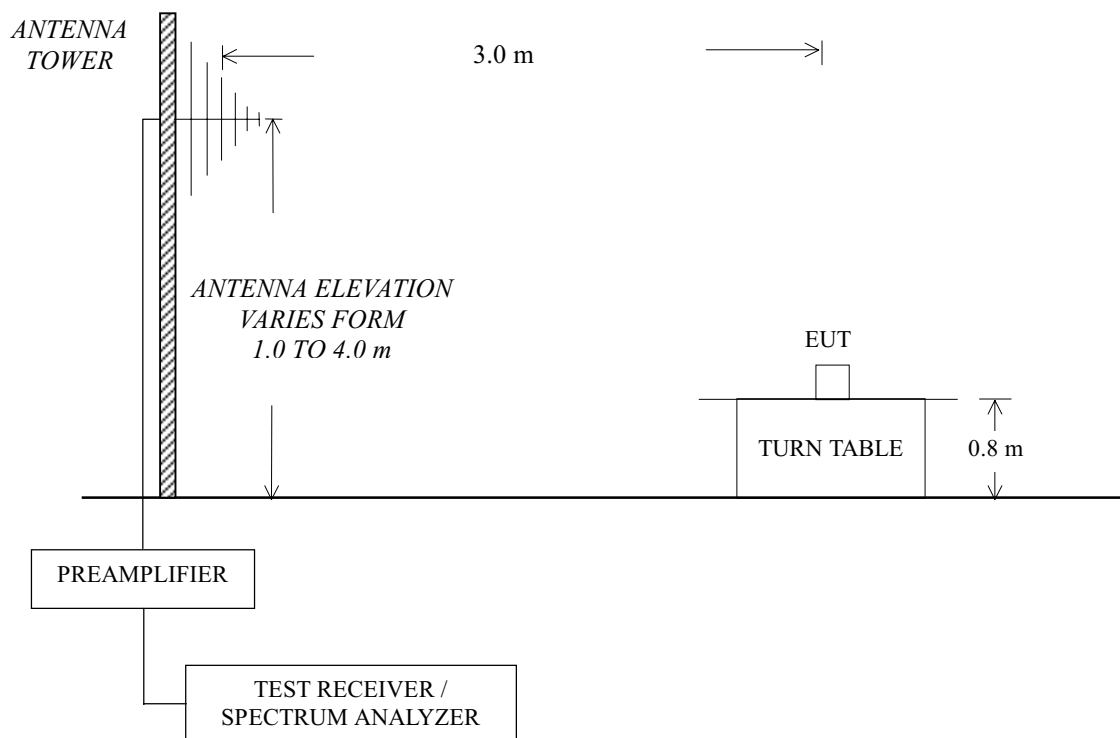
3 RADIATED EMISSION TEST

3.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8593EM	3628A00167	May 20, 2000	1 Year
2.	Preamplifier	HP	8447D	2944A06849	Dec 10, 2000	1/2 Year
3.	Bilog Antenna	Chase	CBL6111	1146	Dec 10, 2000	1/2 Year
4.	Test Receiver	Rohde & Schwarz	ESVS10	844594/001	May 20, 2000	1 Year

3.2 Block Diagram of Test Setup



3.3 Radiated Emission Limits

Frequency (MHz)	Distance (m)	Field strength limits ($\mu\text{V/m}$)	Converted Field Strengths Limits By 3 meters Measuring Distance	
			$\mu\text{V/m}$	$\text{dB}(\mu\text{V/m})$
30 ~ 88	30	10	100	40.0
88 ~ 216	30	15	150	43.5
216 ~ 1000	30	20	200	46.0
NOTE 1 - Emission Level $\text{dB}(\mu\text{V/m}) = 20 \log \text{Emission Level } (\mu\text{V/m})$ NOTE 2 - The tighter limit applies at the band edges. NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system. NOTE 4 - The measurements are made at 3 meters distance, then the permissible field strength limits be adjusted using $1/d$ as an attenuation factor.				

3.4 Test Configuration

The configuration of the EUT is same as those used in conducted emission test.

Please refer to Sec. 2.4.

3.5 Operating Condition of EUT

The EUT was placed on a turn table which is 0.8 meter above ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or dipole antenna were used as receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to MP-5/1986 requirements during radiated test.

The bandwidth setting on Test Receiver ESVS10 was 120 kHz.

The frequency range from 30 MHz to 1000 MHz was checked. The test mode (ON) was done on radiated emission test and the test results of the highest emissions are listed in Sec. 3.7.

3.6 Test Procedures

Same as conducted emission test which is listed in Sec. 2.6, except the test set up replaced by Sec. 3.2.

3.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emissions relative the limit is reported. All the emissions not reported below are too low against the FCC Part 18 limit.

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-13RLF Humidity : 53%

Test Mode : ON Date of Test : Apr 28, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	36.790	15.29	0.76	25.49	27.45	18.01	40.00	21.99
	48.430	9.05	0.87	25.38	31.17	15.71	40.00	24.29
	74.620	7.31	1.06	25.21	29.00	12.16	40.00	27.84
	139.610	11.57	1.58	25.10	27.68	15.73	43.50	27.77
	159.980	10.84	1.74	25.10	29.46	16.94	43.50	26.56
	281.230	13.76	2.41	25.10	34.72	25.79	46.00	20.21
Vertical	33.880	16.50	0.72	25.52	35.43	27.13	40.00	12.87
	48.430	9.05	0.87	25.38	42.10	26.64	40.00	13.36
	75.590	7.37	1.06	25.21	39.64	22.86	40.00	17.14
	133.790	11.63	1.53	25.10	35.76	23.82	43.50	19.68
	216.240	10.54	2.10	25.10	34.96	22.50	46.00	23.50
	281.230	13.76	2.41	25.10	37.40	28.47	46.00	17.53

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor

NOTE 2 – All reading are Quasi-Peak values.

NOTE 3 – The worst emission at horizontal polarization was detected at 281.230 MHz with corrected signal level of 25.79 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 2.10m height and the turn table was at 178°.

NOTE 4 – The worst emission at vertical polarization was detected at 33.880 MHz with corrected signal level of 27.13 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.00 m height and the turn table was at 182°.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: 
(ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-15RLF Humidity : 53%

Test Mode : ON Date of Test : Apr 28, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	36.790	15.29	0.76	25.49	27.43	17.99	40.00	22.01
	65.890	6.41	1.00	25.26	27.68	9.83	40.00	30.17
	75.590	7.37	1.06	25.21	27.95	11.17	40.00	28.83
	159.980	10.84	1.74	25.10	29.89	17.37	43.50	26.13
	216.240	10.54	2.10	25.10	28.19	15.73	46.00	30.27
	281.230	13.76	2.41	25.10	35.62	26.69	46.00	19.31
Vertical	33.880	16.50	0.72	25.52	34.73	26.43	40.00	13.57
	48.430	9.05	0.87	25.38	41.43	25.97	40.00	14.03
	75.590	7.37	1.06	25.21	32.38	15.60	40.00	24.40
	130.880	11.65	1.50	25.10	33.07	21.12	43.50	22.38
	159.980	10.84	1.74	25.10	35.15	22.63	43.50	20.87
	281.230	13.76	2.41	25.10	37.78	28.85	46.00	17.15
NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor NOTE 2 – All reading are Quasi-Peak values. NOTE 3 – The worst emission at horizontal polarization was detected at 281.230 MHz with corrected signal level of 26.69dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 2.20m height and the turn table was at 164°. NOTE 4 – The worst emission at vertical polarization was detected at 33.880 MHz with corrected signal level of 26.43 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.00 m height and the turn table was at 194°. NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.								

TEST ENGINEER: 
(ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-23RLF Humidity : 53%

Test Mode : ON Date of Test : Apr 28, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	48.430	9.05	0.87	25.38	29.28	13.82	40.00	26.18
	75.590	7.37	1.06	25.21	30.37	13.59	40.00	26.41
	126.030	11.69	1.46	25.10	31.00	19.05	43.50	24.45
	159.980	10.84	1.74	25.10	31.09	18.57	43.50	24.93
	216.240	10.54	2.10	25.10	29.11	16.65	46.00	29.35
	281.230	13.76	2.41	25.10	33.44	24.51	46.00	21.49
Vertical	36.790	15.29	0.76	25.49	35.55	26.11	40.00	13.89
	48.430	9.05	0.87	25.38	43.35	27.89	40.00	12.11
	74.620	7.31	1.06	25.21	36.05	19.21	40.00	20.79
	121.180	12.85	1.41	25.10	36.11	25.27	43.50	18.23
	216.240	10.54	2.10	25.10	35.31	22.85	46.00	23.15
	281.230	13.76	2.41	25.10	37.46	28.53	46.00	17.47

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor

NOTE 2 – All reading are Quasi-Peak values.

NOTE 3 – The worst emission at horizontal polarization was detected at 281.230 MHz with corrected signal level of 24.51 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 2.40m height and the turn table was at 158°.

NOTE 4 – The worst emission at vertical polarization was detected at 48.430 MHz with corrected signal level of 27.89 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.00 m height and the turn table was at 128°.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER:  (ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-7SL Humidity : 53%

Test Mode : ON Date of Test : Apr 28, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	31.940	17.30	0.70	25.54	26.68	19.14	40.00	20.86
	99.840	10.34	1.18	25.10	27.97	14.39	43.50	29.11
	121.180	12.85	1.41	25.10	27.20	16.36	43.50	27.14
	164.830	10.40	1.78	25.10	30.77	17.85	43.50	25.65
	231.760	11.59	2.19	25.10	26.86	15.54	46.00	30.46
	281.230	13.76	2.41	25.10	33.76	24.83	46.00	21.17
Vertical	51.340	8.00	0.90	25.36	33.83	17.37	40.00	22.63
	90.140	7.62	1.14	25.14	36.49	20.11	43.50	23.39
	130.880	11.65	1.50	25.10	38.60	26.65	43.50	16.85
	159.980	10.84	1.74	25.10	34.21	21.69	43.50	21.81
	216.240	10.54	2.10	25.10	34.80	22.34	46.00	23.66
	281.230	13.76	2.41	25.10	36.60	27.67	46.00	18.33

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor

NOTE 2 – All reading are Quasi-Peak values.

NOTE 3 – The worst emission at horizontal polarization was detected at 31.940 MHz with corrected signal level of 19.14dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 2.20m height and the turn table was at 164°.

NOTE 4 – The worst emission at vertical polarization was detected at 130.880 MHz with corrected signal level of 26.65 dB(μV/m) (limit is 43.50 dB(μV/m)), when the antenna was 1.00 m height and the turn table was at 184°.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: 
(ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-11SL Humidity : 53%

Test Mode : ON Date of Test : Apr 28, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	40.670	13.46	0.80	25.45	26.44	15.25	40.00	24.75
	89.170	7.53	1.13	25.14	27.13	10.65	43.50	32.85
	107.600	11.51	1.27	25.10	26.29	13.97	43.50	29.53
	119.240	13.18	1.39	25.10	26.61	16.08	43.50	27.42
	162.890	10.60	1.76	25.10	27.99	15.25	43.50	28.25
	281.230	13.76	2.41	25.10	32.90	23.97	46.00	22.03
Vertical	48.430	9.05	0.87	25.38	30.50	15.04	40.00	24.96
	130.880	11.65	1.50	25.10	31.48	19.53	43.50	23.97
	159.980	10.84	1.74	25.10	31.88	19.36	43.50	24.14
	216.240	10.54	2.10	25.10	34.91	22.45	46.00	23.55
	242.430	12.27	2.24	25.10	30.37	19.78	46.00	26.22
	281.230	13.76	2.41	25.10	37.45	28.52	46.00	17.48

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor

NOTE 2 – All reading are Quasi-Peak values.

NOTE 3 – The worst emission at horizontal polarization was detected at 281.230 MHz with corrected signal level of 23.97 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 2.40m height and the turn table was at 127°.

NOTE 4 – The worst emission at vertical polarization was detected at 281.230 MHz with corrected signal level of 28.52 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.00 m height and the turn table was at 210°.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: 
(ADA ZOU)

EUT : Compact Fluorescent Lamp Temperature : 23°C

Model No. : TP120-30SL Humidity : 53%

Test Mode : ON Date of Test : Apr 28, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	33.880	16.50	0.72	25.52	26.36	18.06	40.00	21.94
	80.440	7.60	1.09	25.18	26.94	10.45	40.00	29.55
	108.570	11.68	1.28	25.10	27.19	15.05	43.50	28.45
	163.860	10.50	1.77	25.10	27.14	14.31	43.50	29.19
	228.850	11.38	2.17	25.10	26.91	15.36	46.00	30.64
	281.230	13.76	2.41	25.10	36.37	27.44	46.00	18.56
Vertical	48.430	9.05	0.87	25.38	34.07	18.61	40.00	21.39
	130.880	11.65	1.50	25.10	38.51	26.56	43.50	16.94
	159.980	10.84	1.74	25.10	30.59	18.07	43.50	25.43
	216.240	10.54	2.10	25.10	34.42	21.96	46.00	24.04
	243.400	12.32	2.24	25.10	29.03	18.49	46.00	27.51
	281.230	13.76	2.41	25.10	37.42	28.49	46.00	17.51

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor

NOTE 2 – All reading are Quasi-Peak values.

NOTE 3 – The worst emission at horizontal polarization was detected at 281.230 MHz with corrected signal level of 27.44 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 2.70m height and the turn table was at 154°.

NOTE 4 – The worst emission at vertical polarization was detected at 130.880 MHz with corrected signal level of 26.56 dB(μV/m) (limit is 43.50 dB(μV/m)), when the antenna was 1.00 m height and the turn table was at 178°.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: 
(ADA ZOU)