

Application for FCC Certificate
On Behalf of
XIAMEN LONGSTAR LIGHTING CO., LTD.

Energy Saving Lamp

Model No.:	FE- II SM-13W	FE- II SM-15W	FE- II SM-18W
	FE- II SM-20W	FE-USM-15W	FE-USM-18W
	FE-USM-20W	FE-USM-23W	FE-USM-26W
	FE-USM-30W	FE- I SM-20W	FE- I SM-23W
	FE- I SM-26W	FE- I SM-30W	FE-T9M-22W
	FE-T9M-32W		

FCC ID: PKCLS0303

Prepared For : XIAMEN LONGSTAR LIGHTING CO., LTD.
CHENGNAN INDUSTRIAL ZONE,
TONGAN, XIAMEN, CHINA

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F03036
Date of Test : April 3~May 11, 2003
Date of Report : Jun 12, 2003

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TEST REPORT FOR FCC CERTIFICATE

Applicant : XIAMEN LONGSTAR LIGHTING CO., LTD.

Manufacturer : XIAMEN LONGSTAR LIGHTING CO., LTD.

EUT Description : Energy Saving Lamp

(A) Model No.:

FE- II SM-13W	FE- II SM-15W	FE- II SM-18W	FE- II SM-20W
FE-USM-15W	FE-USM-18W	FE-USM-20W	FE-USM-23W
FE-USM-26W	FE-USM-30W	FE- I SM-20W	FE- I SM-23W
FE- I SM-26W	FE- I SM-30W	FE-T9M-22W	FE-T9M-32W

(B) Power Supply: 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 18 CONSUMER DEVICES (2000)
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 conducted emissions and field strength.

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 : April 3~May 11, 2003

Prepared by :

Jean Liu 2003.6.18
JEAN LIU
(Assistant)

Test Engineer :

2003.6.24
Solon Gong
AUDIX SOLON GONG
For and on behalf of
Audix Technology (Shanghai) Co., Ltd.
(Engineer)

Reviewer :

Sammy Chen 2003.6.26
SAMMY CHEN
(Engineer)

Approved Signatory :

Barbara KWO 03 July 03
AUDIX BARBARA KWO
Authorized Signatory
(Assistant Manager)

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test

Description : Energy Saving Lamp

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

Model Number :

FE- II SM-13W FE- II SM-15W FE- II SM-18W

FE- II SM-20W FE-USM-15W FE-USM-18W

FE-USM-20W FE-USM-23W FE-USM-26W

FE-USM-30W FE- I SM-20W FE- I SM-23W

FE- I SM-26W FE- I SM-30W FE-T9M-22W

FE-T9M-32W

The Circuit Card Copper Traces are in agreement with the schematic.

Applicant : XIAMEN LONGSTAR LIGHTING CO., LTD.
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TONGAN, XIAMEN, CHINA

Manufacturer : XIAMEN LONGSTAR LIGHTING CO., LTD.
CHENGNAN INDUSTRIAL ZONE
TONGAN, XIAMEN, CHINA

Test Model	Apparent Power (V • A)	Real Power (W)	Test Model	Apparent Power (V • A)	Real Power (W)
FE- II SM-13W	12.57	7.38	FE- II SM-15W	24.32	14.06
FE- II SM-18W	15.24	9.36	FE- II SM-20W	15.34	9.45
FE-USM-15W	13.27	9.66	FE-USM -18W	22.61	14.69
FE-USM-20W	15.66	9.78	FE-USM-23W	21.43	11.96
FE-USM-26W	22.91	13.34	FE-USM-30W	24.35	14.04
FE- I SM-20W	20.23	11.06	FE- I SM-23W	20.38	11.35
FE- I SM-26W	22.56	12.9	FE- I SM-30W	23.69	13.68
FE-T9M-22W	13.66	6.93	FE-T9M-32W	19.04	10.71

1.2 Description of Test Facility

Site Description : Sept. 17, 1998 file on
(Semi-Anechoic Chamber) Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai, China 200233.

NVLAP Lab Code : 200371-0

1.3 Measurement Uncertainty

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

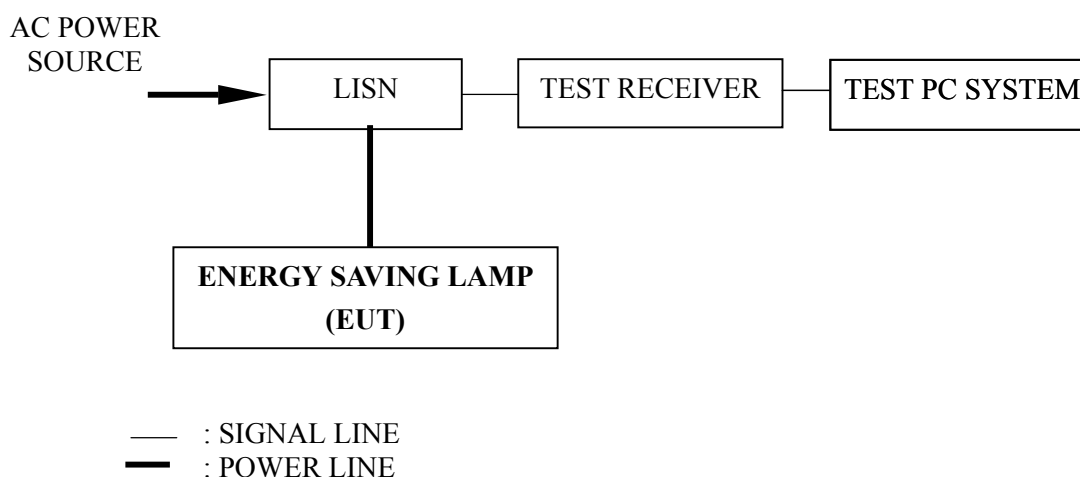
2 AC POWERLINE CONDUCTED EMISSION TEST

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	Apr 21, 2003	1 Year
2.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-5	Apr 24, 2003	1 Year

2.2 Block Diagram of Test Setup



2.3 Conducted Emission Limits

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE 1 - Decreases with the logarithm of the frequency within the band 0.15 MHz to 5 MHz. NOTE 2 - The lower limit applies at the band edges. NOTE 3 - The average should be read if the quasi-peak's margin is below 10 dB.		

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

2.5.1 Setup the EUT as shown in Sec. 2.2.

2.5.2 Turn on the power of all equipment.

2.5.3 The EUT will be operated normally.

2.6 Test Procedures

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

The frequency range from 150 kHz to 30 MHz was checked.

The test mode (Lighting) was done on conducted test and the test results of the highest emissions are listed in Sec. 2.7.

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.

NOTE 1 – Probe Factor means insertion loss of LISN

NOTE 2 – Level = Read Level + Factor

NOTE 3 – Factor = Cable Loss + Probe Factor

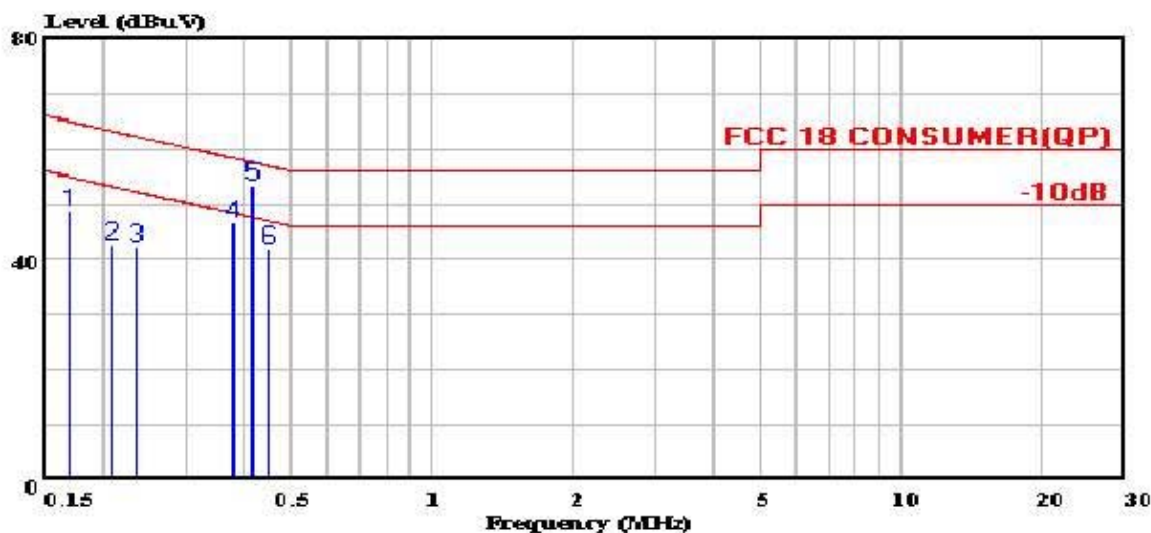
NOTE 4 – QP means Quasi-Peak Values, AV means Average Values.



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Data#: 321 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 10:11:39



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-13W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

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	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.169	48.40	48.62	65.01	-16.39	0.22	0.03	0.19
2	0.207	42.60	42.82	63.32	-20.50	0.22	0.04	0.18
3	0.235	42.20	42.41	62.27	-19.86	0.21	0.04	0.17
4	0.379	46.40	46.53	58.30	-11.77	0.13	0.04	0.09
5	0.413	53.40	53.53	57.59	-4.06	0.13	0.04	0.09
6	0.447	41.91	42.03	56.93	-14.90	0.12	0.04	0.08

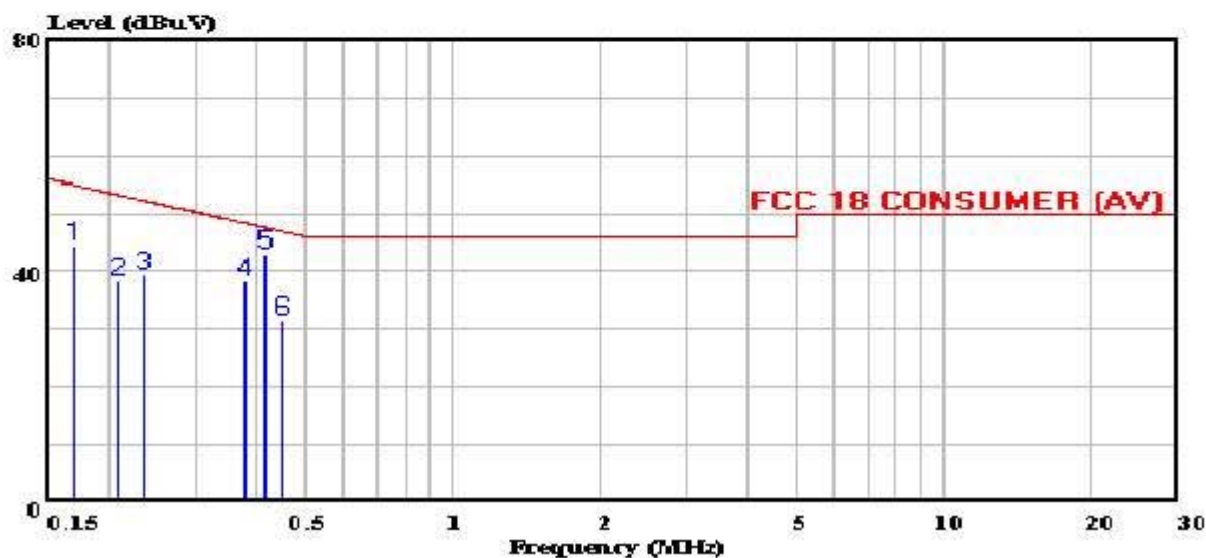
NOTE - The worst emission is detected at 0.413 MHz with corrected signal level of 53.53 (μ V) (limit is 57.59 μ V)), when the VA of the EUT is connected to LISN.



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Data#: 322 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 10:12:14



Site : Conducted emission
Condition : FCC 18 CONSUMER (AV) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-13W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

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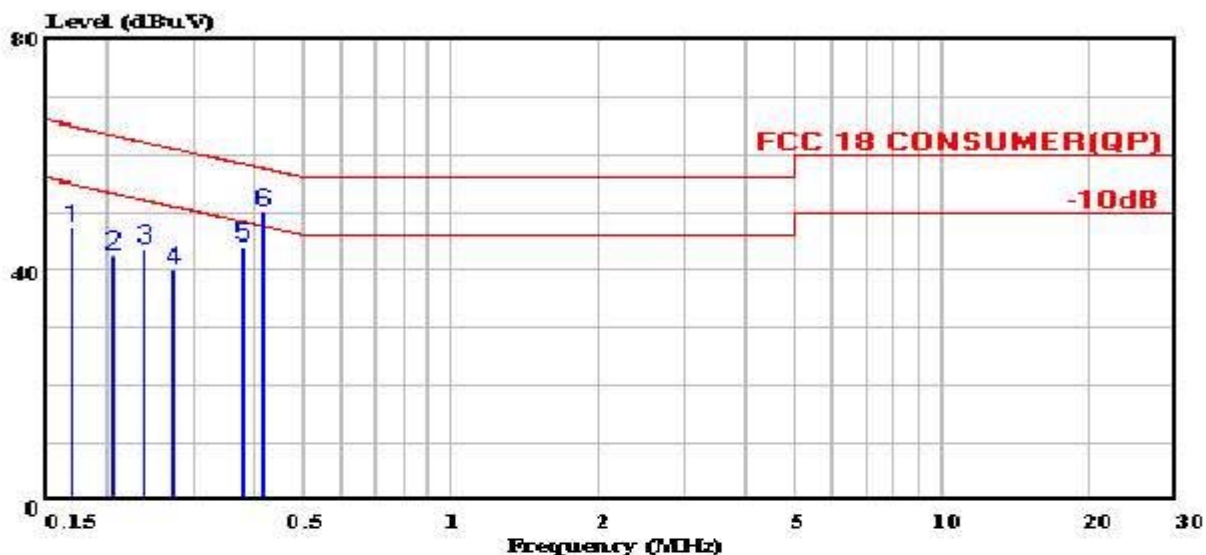
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.169	44.10	44.32	55.01	-10.69	0.22	0.03	0.19
2	0.207	38.00	38.22	53.32	-15.10	0.22	0.04	0.18
3	0.235	39.20	39.41	52.27	-12.86	0.21	0.04	0.17
4	0.379	38.20	38.33	48.30	-9.97	0.13	0.04	0.09
5	0.413	42.80	42.93	47.59	-4.66	0.13	0.04	0.09
6	0.447	31.51	31.63	46.93	-15.30	0.12	0.04	0.08



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Data#: 324 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 10:20:13



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-13W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

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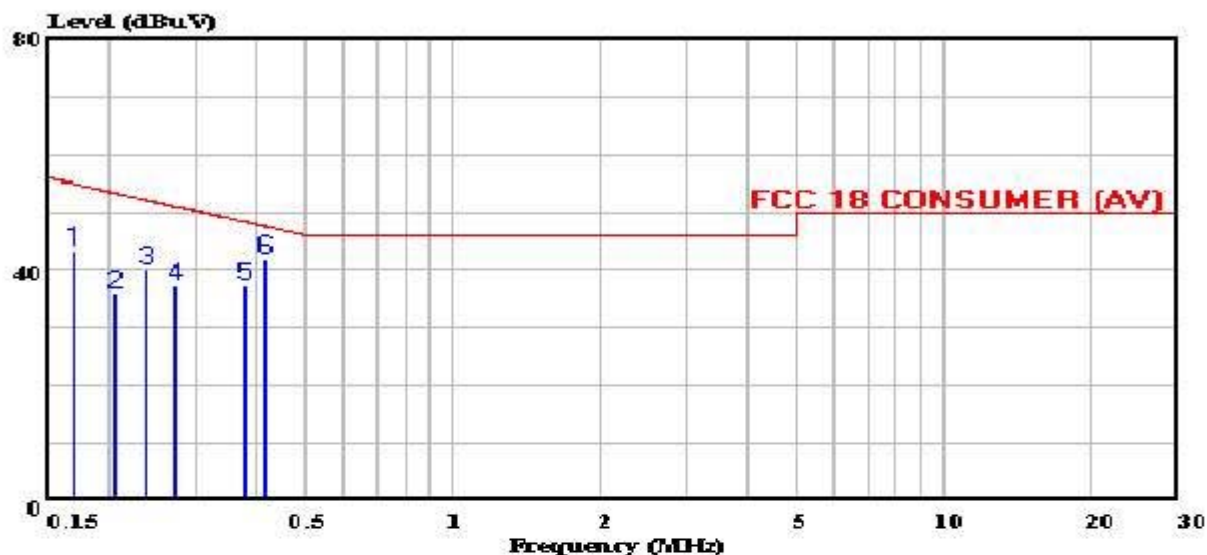
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.169	47.00	47.23	65.01	-17.78	0.23	0.03	0.20
2	0.204	42.50	42.70	63.45	-20.75	0.20	0.04	0.16
3	0.238	43.60	43.80	62.17	-18.37	0.20	0.04	0.16
4	0.274	39.90	40.10	61.00	-20.90	0.20	0.04	0.16
5	0.377	43.80	43.98	58.35	-14.37	0.18	0.04	0.14
6	0.413	50.00	50.17	57.59	-7.42	0.17	0.04	0.13



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Data#: 325 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 10:21:00



Site : Conducted emission
Condition : FCC 18 CONSUMER (AV) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-13W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

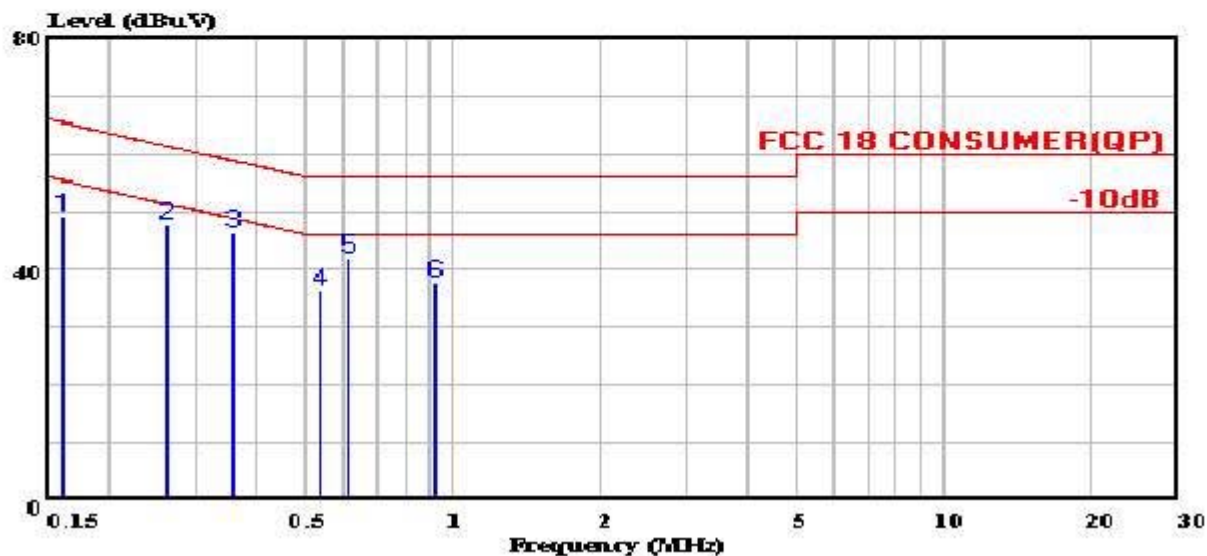
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.169	43.20	43.43	55.01	-11.58	0.23	0.03	0.20
2	0.204	35.70	35.90	53.45	-17.55	0.20	0.04	0.16
3	0.238	40.10	40.30	52.17	-11.87	0.20	0.04	0.16
4	0.274	37.20	37.40	51.00	-13.60	0.20	0.04	0.16
5	0.377	37.20	37.38	48.35	-10.97	0.18	0.04	0.14
6	0.413	41.70	41.87	47.59	-5.72	0.17	0.04	0.13



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Data#: 1018 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-04 Time: 17:03:17



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-15W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

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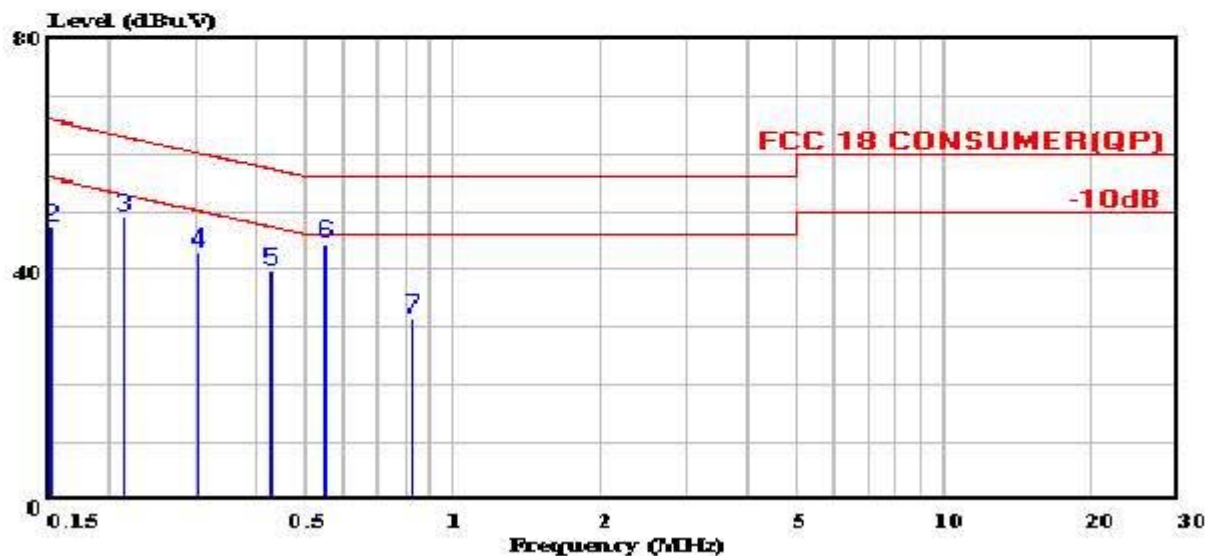
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.161	48.98	49.20	65.43	-16.23	0.22	0.03	0.19
2	0.262	47.60	47.78	61.38	-13.60	0.18	0.04	0.14
3	0.357	46.30	46.43	58.80	-12.37	0.13	0.04	0.09
4	0.535	36.00	36.12	56.00	-19.88	0.12	0.04	0.08
5	0.614	41.71	41.82	56.00	-14.18	0.11	0.04	0.07
6	0.923	37.42	37.52	56.00	-18.48	0.10	0.05	0.05



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Data#: 1019 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-04 Time: 17:13:19



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-15W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.151	47.30	47.56	65.94	-18.38	0.26	0.03	0.23
2	0.152	47.11	47.37	65.91	-18.54	0.26	0.03	0.23
3	0.213	48.84	49.04	63.10	-14.06	0.20	0.04	0.16
4	0.304	42.70	42.90	60.13	-17.23	0.20	0.04	0.16
5	0.427	39.50	39.67	57.31	-17.64	0.17	0.04	0.13
6	0.552	44.39	44.54	56.00	-11.46	0.15	0.04	0.11
7	0.828	31.30	31.46	56.00	-24.54	0.16	0.05	0.11

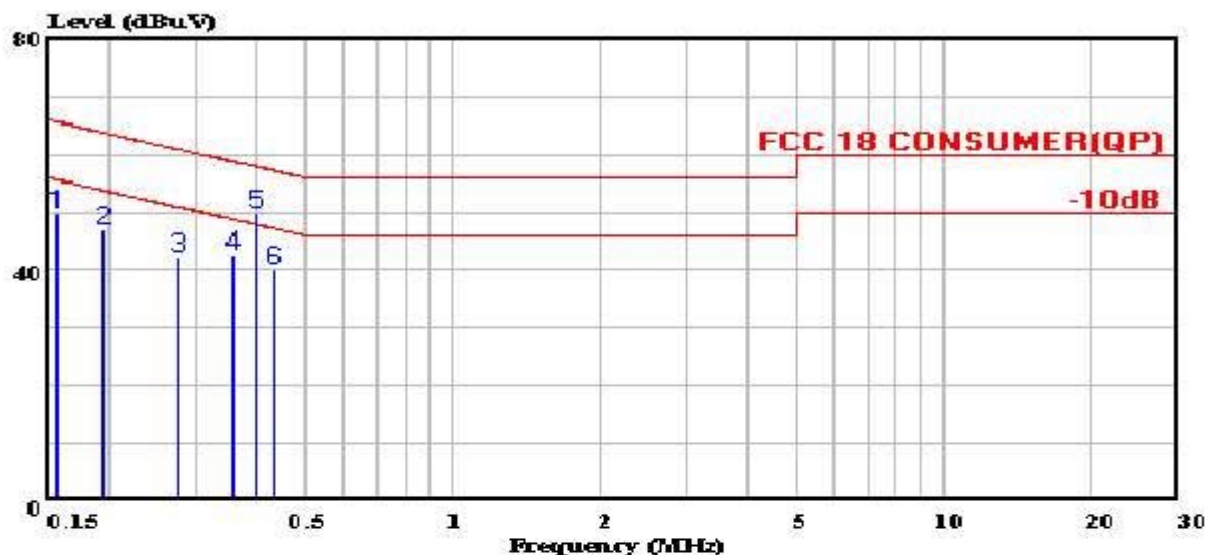
NOTE - The worst emission is detected at 0.552 MHz with corrected signal level of 44.54 (μ V) (limit is 56.00 μ V)), when the VB of the EUT is connected to LISN.



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Data#: 341 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 11:49:15



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-18W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

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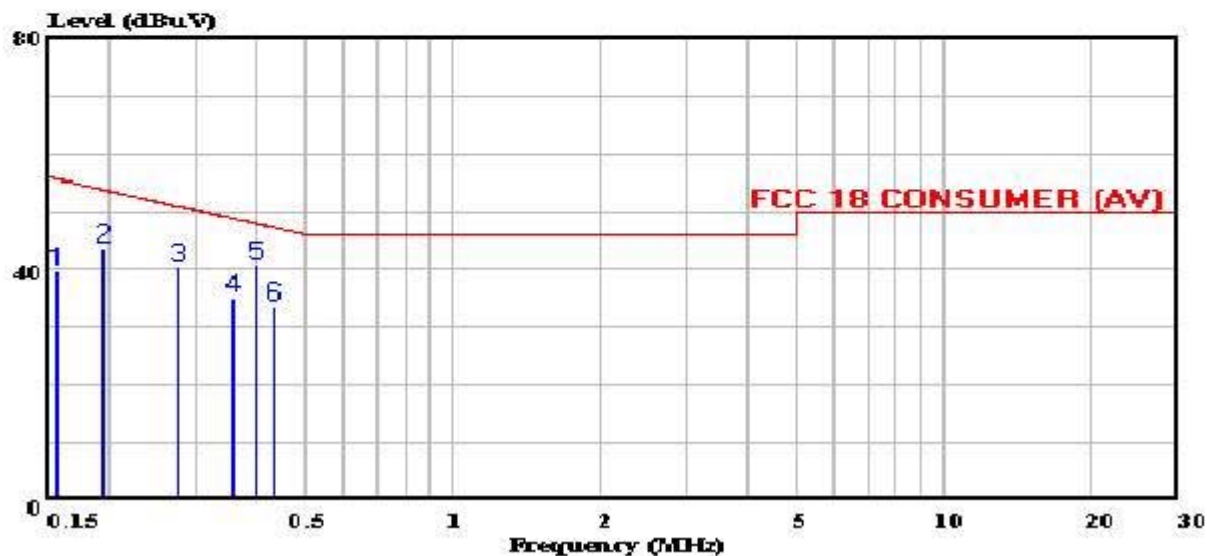
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	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.157	49.60	49.82	65.62	-15.80	0.22	0.03	0.19
2	0.194	46.60	46.82	63.86	-17.04	0.22	0.04	0.18
3	0.277	42.30	42.47	60.91	-18.44	0.17	0.04	0.13
4	0.356	42.70	42.83	58.82	-15.99	0.13	0.04	0.09
5	0.396	49.60	49.73	57.94	-8.21	0.13	0.04	0.09
6	0.433	40.10	40.23	57.19	-16.96	0.13	0.04	0.09



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Data#: 342 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 11:49:45



Site : Conducted emission
Condition : FCC 18 CONSUMER (AV) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-18W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

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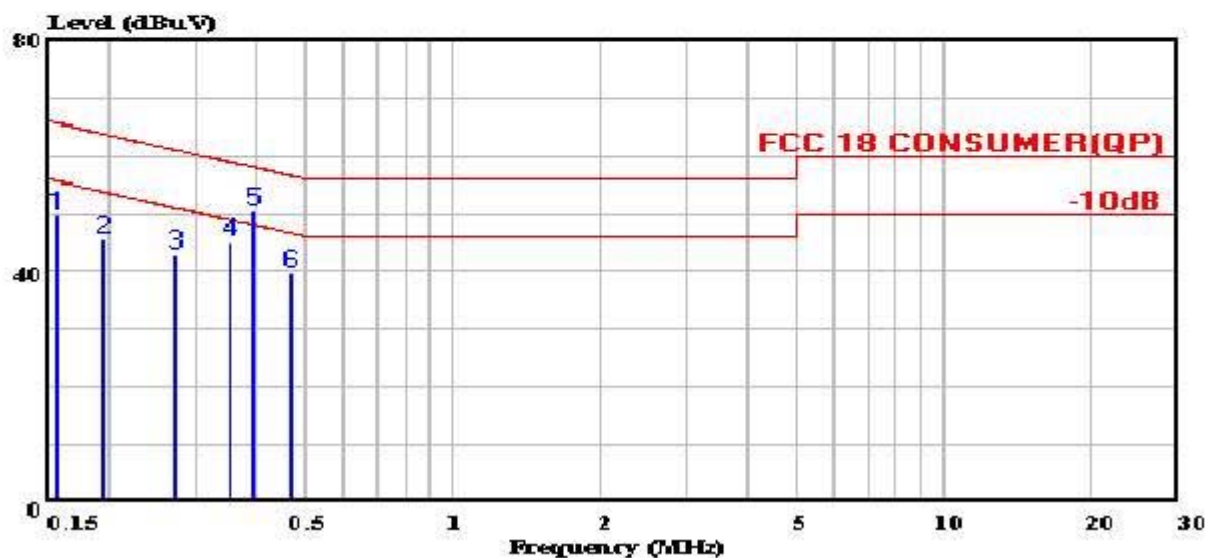
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.157	39.60	39.82	55.62	-15.80	0.22	0.03	0.19
2	0.194	43.40	43.62	53.86	-10.24	0.22	0.04	0.18
3	0.277	40.50	40.67	50.91	-10.24	0.17	0.04	0.13
4	0.356	34.90	35.03	48.82	-13.79	0.13	0.04	0.09
5	0.396	40.60	40.73	47.94	-7.21	0.13	0.04	0.09
6	0.433	33.60	33.73	47.19	-13.46	0.13	0.04	0.09



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Data#: 344 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 11:55:42



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-18W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.157	49.60	49.85	65.62	-15.77	0.25	0.03	0.22
2	0.193	45.30	45.51	63.91	-18.40	0.21	0.04	0.17
3	0.273	43.00	43.20	61.03	-17.83	0.20	0.04	0.16
4	0.354	45.10	45.28	58.87	-13.59	0.18	0.04	0.14
5	0.393	50.50	50.67	58.00	-7.33	0.17	0.04	0.13
6	0.469	39.50	39.66	56.53	-16.87	0.16	0.04	0.12

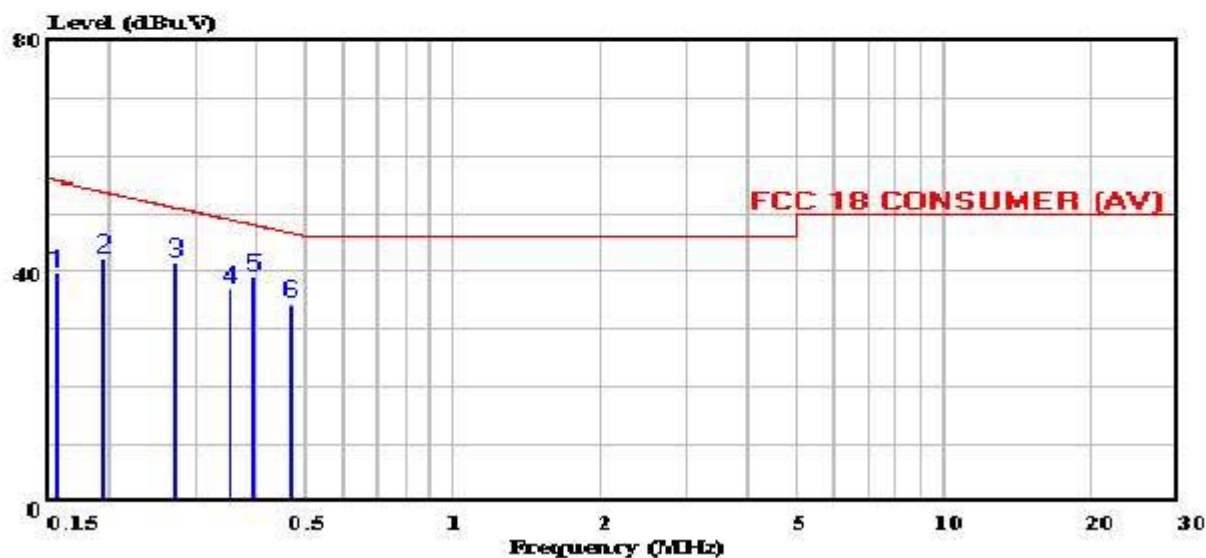
NOTE - The worst emission is detected at 0.393 MHz with corrected signal level of 50.67 (μ V) (limit is 58.00 μ V)), when the VB of the EUT is connected to LISN.



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Data#: 345 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 11:56:21



Site : Conducted emission
Condition : FCC 18 CONSUMER (AV) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-18W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

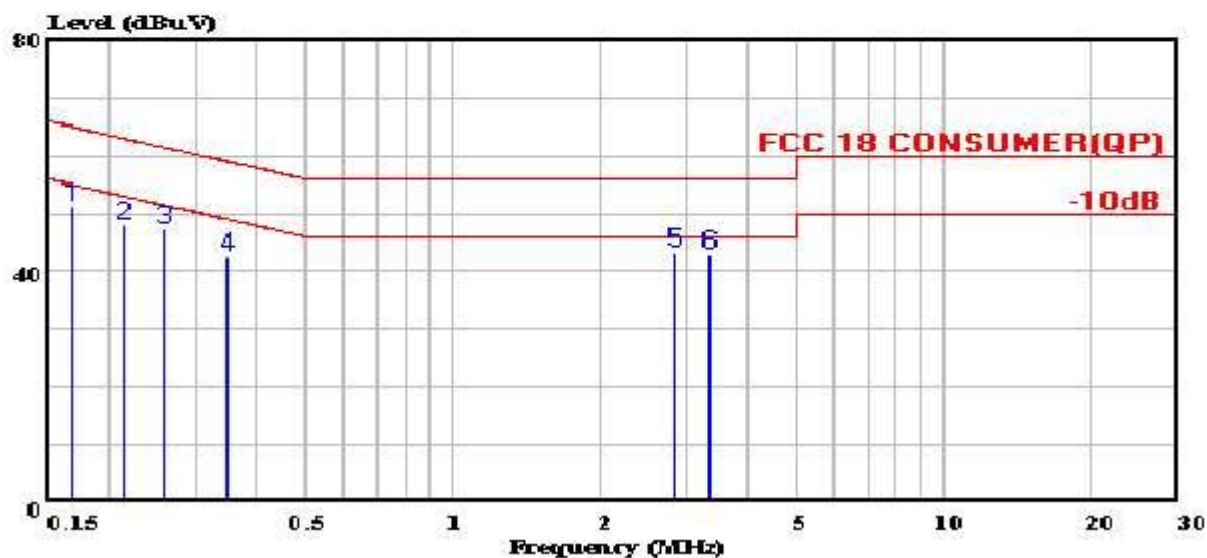
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.157	39.70	39.95	55.62	-15.67	0.25	0.03	0.22
2	0.193	42.10	42.31	53.91	-11.60	0.21	0.04	0.17
3	0.273	41.50	41.70	51.03	-9.33	0.20	0.04	0.16
4	0.354	36.60	36.78	48.87	-12.09	0.18	0.04	0.14
5	0.393	38.90	39.07	48.00	-8.93	0.17	0.04	0.13
6	0.469	34.40	34.56	46.53	-11.97	0.16	0.04	0.12



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Data#: 338 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 11:38:03



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KMW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-20W
S/N :
Power Supply : 120V/60Hz
Ambient : 23°C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.167	51.06	51.28	65.12	-13.84	0.22	0.03	0.19
2	0.213	48.00	48.21	63.10	-14.89	0.21	0.04	0.17
3	0.258	47.00	47.19	61.51	-14.32	0.19	0.04	0.15
4	0.346	42.57	42.70	59.05	-16.35	0.13	0.04	0.09
5	2.832	43.19	43.36	56.00	-12.64	0.17	0.10	0.07
6	3.355	42.86	43.04	56.00	-12.96	0.18	0.11	0.07

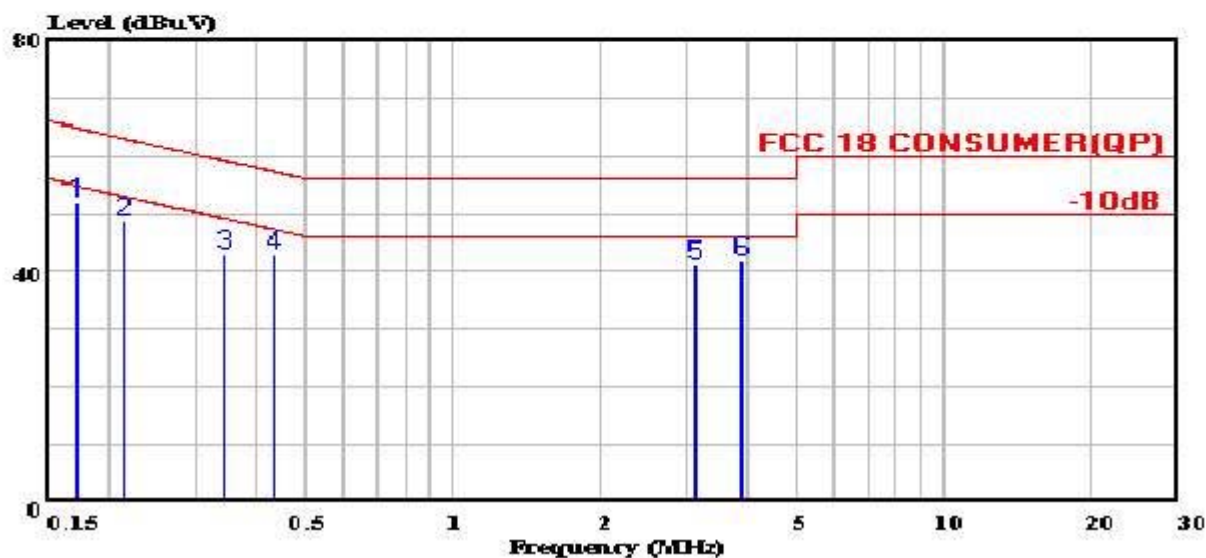
NOTE - The worst emission is detected at 2.832 MHz with corrected signal level of 43.36 (μ V) (limit is 56.00 μ V)), when the VA of the EUT is connected to LISN.



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Data#: 336 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 11:28:16



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-IISM-20W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

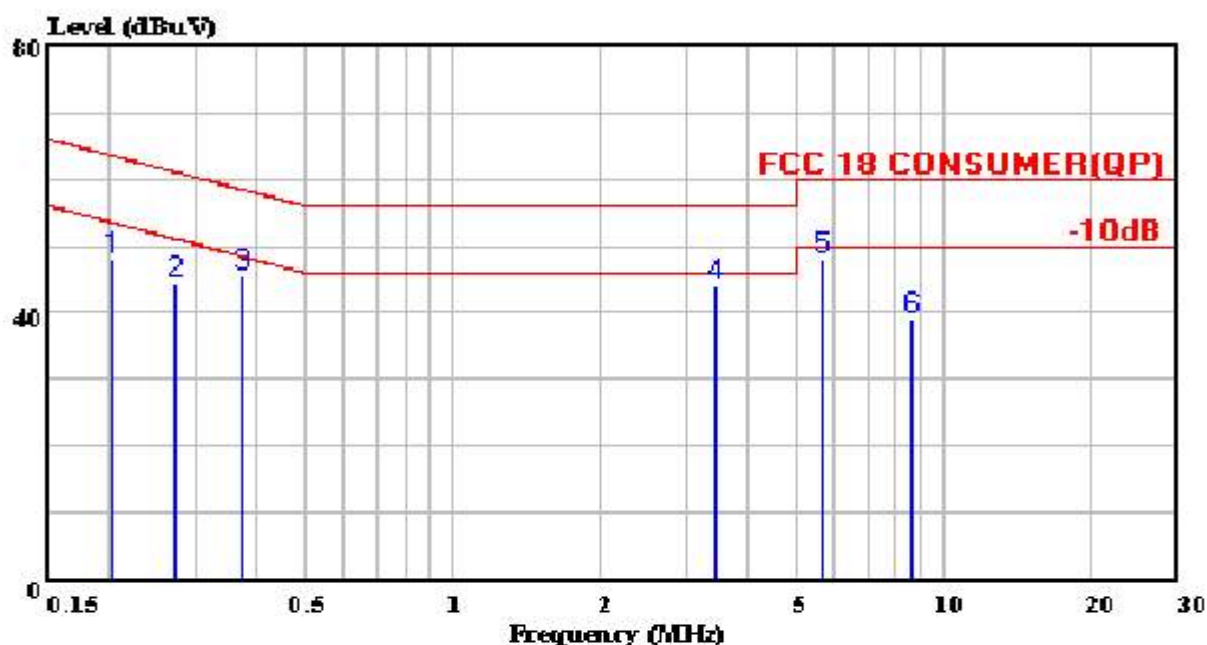
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.172	51.62	51.85	64.86	-13.01	0.23	0.03	0.20
2	0.213	48.48	48.68	63.10	-14.42	0.20	0.04	0.16
3	0.343	42.69	42.88	59.13	-16.25	0.19	0.04	0.15
4	0.433	42.73	42.89	57.20	-14.31	0.16	0.04	0.12
5	3.141	41.06	41.26	56.00	-14.74	0.20	0.10	0.10
6	3.872	41.70	41.92	56.00	-14.08	0.22	0.11	0.11



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Data#: 1023 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-04 Time: 17:32:31



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : vining Lamp
M/N : 120V/60Hz W
S/N : E03033165
Power Supply : 120V/50Hz
Ambient : 23'C 56%RH
Test line :
Test Mode :
Test Engineer: *Solon Gong*

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.203	47.80	48.02	63.49	-15.47	0.22	0.04	0.18
2	0.273	44.25	44.42	61.03	-16.61	0.17	0.04	0.13
3	0.373	45.43	45.56	58.43	-12.87	0.13	0.04	0.09
4	3.417	43.85	44.03	56.00	-11.97	0.18	0.11	0.07
5	5.653	48.02	48.25	60.00	-11.75	0.23	0.14	0.09
6	8.592	38.84	39.18	60.00	-20.82	0.34	0.20	0.14

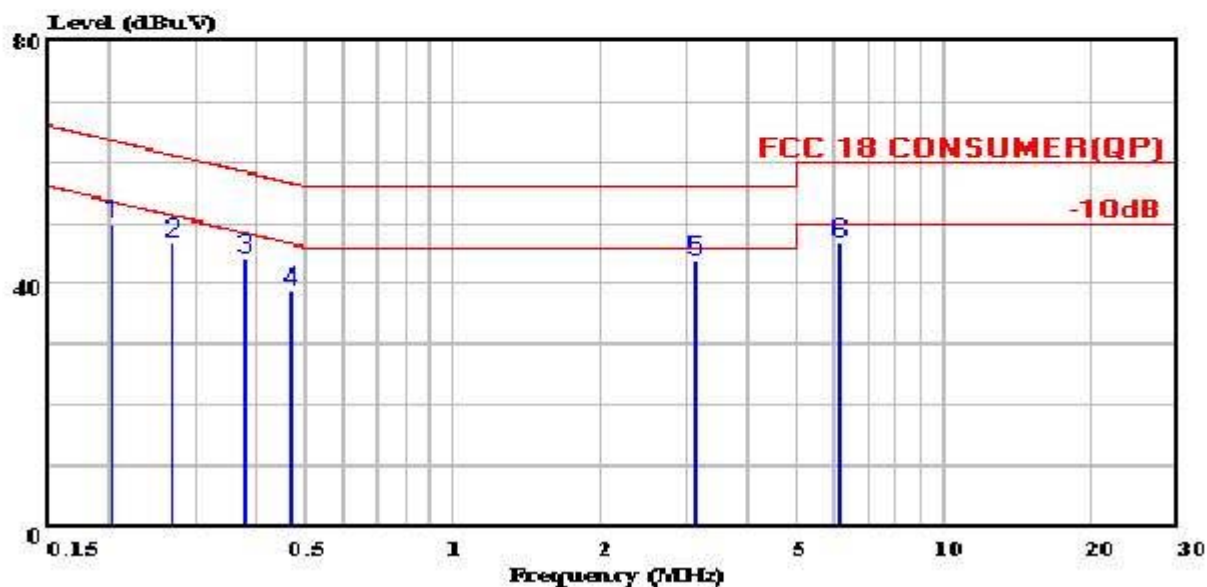
NOTE - The worst emission is detected at 5.653 MHz with corrected signal level of 48.25 (μ V) (limit is 60.00 μ V)), when the VA of the EUT is connected to LISN.



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Data#: 1021 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-04 Time: 17:26:43



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-15W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

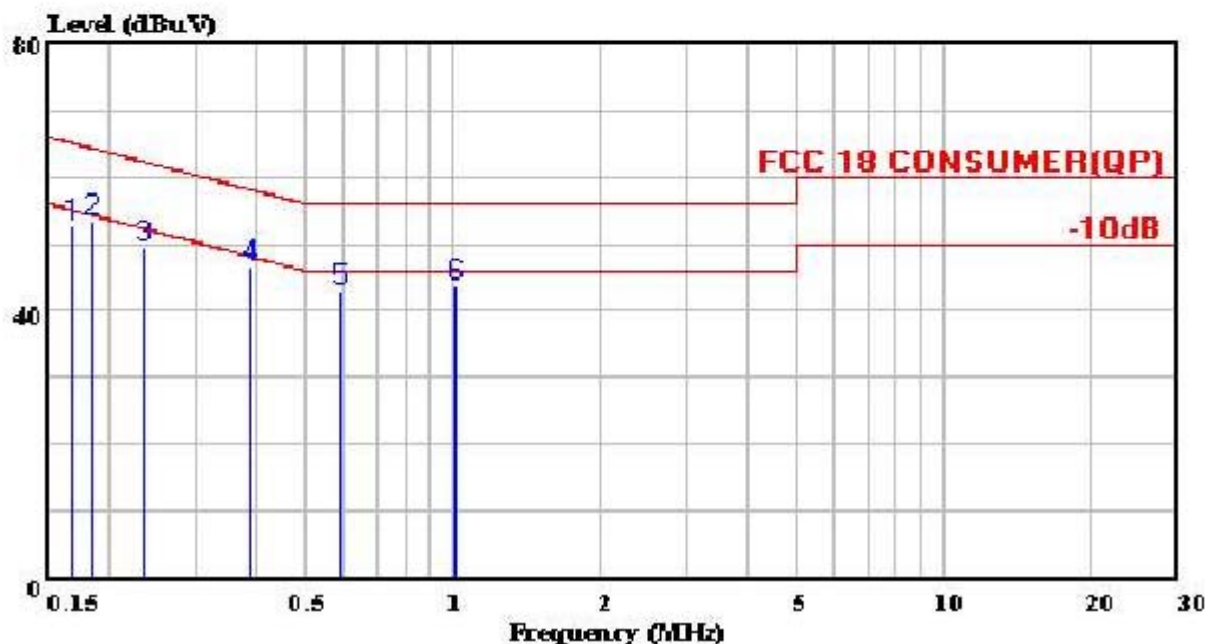
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.203	49.80	50.00	63.49	-13.49	0.20	0.04	0.16
2	0.270	46.26	46.46	61.12	-14.66	0.20	0.04	0.16
3	0.375	44.07	44.25	58.39	-14.14	0.18	0.04	0.14
4	0.471	38.47	38.63	56.49	-17.86	0.16	0.04	0.12
5	3.107	43.52	43.72	56.00	-12.28	0.20	0.10	0.10
6	6.153	46.53	46.79	60.00	-13.21	0.26	0.14	0.12



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Data#: 453 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 17:28:33



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : vining Lamp
M/N : 120V/60Hz W
S/N : E03033166
Power Supply : 120V/50Hz
Ambient : 23°C 56%RH
Test line : ---
Test Mode :
Test Engineer: *Solon Gong*

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.167	52.61	52.83	65.12	-12.29	0.22	0.03	0.19
2	0.183	53.18	53.40	64.33	-10.93	0.22	0.04	0.18
3	0.234	49.40	49.61	62.30	-12.69	0.21	0.04	0.17
4	0.387	46.61	46.74	58.12	-11.38	0.13	0.04	0.09
5	0.589	43.03	43.14	56.00	-12.86	0.11	0.04	0.07
6	1.016	43.52	43.62	56.00	-12.38	0.10	0.05	0.05

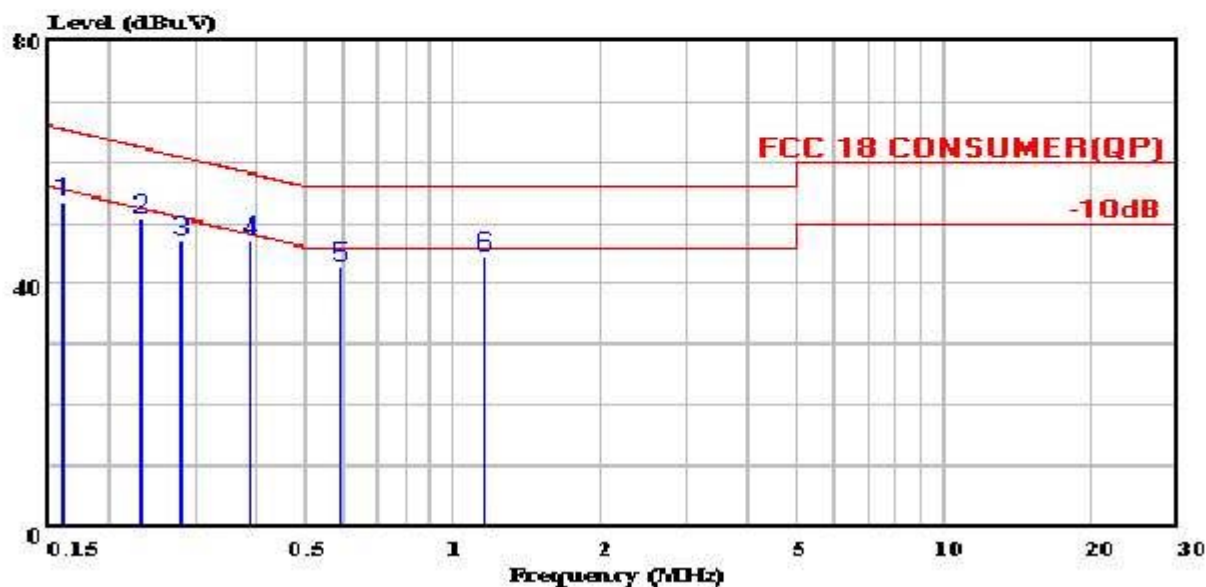
NOTE - The worst emission is detected at 0.183 MHz with corrected signal level of 53.40 (μ V) (limit is 64.33 μ V)), when the VA of the EUT is connected to LISN.



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Data#: 451 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 17:26:19



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-18W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

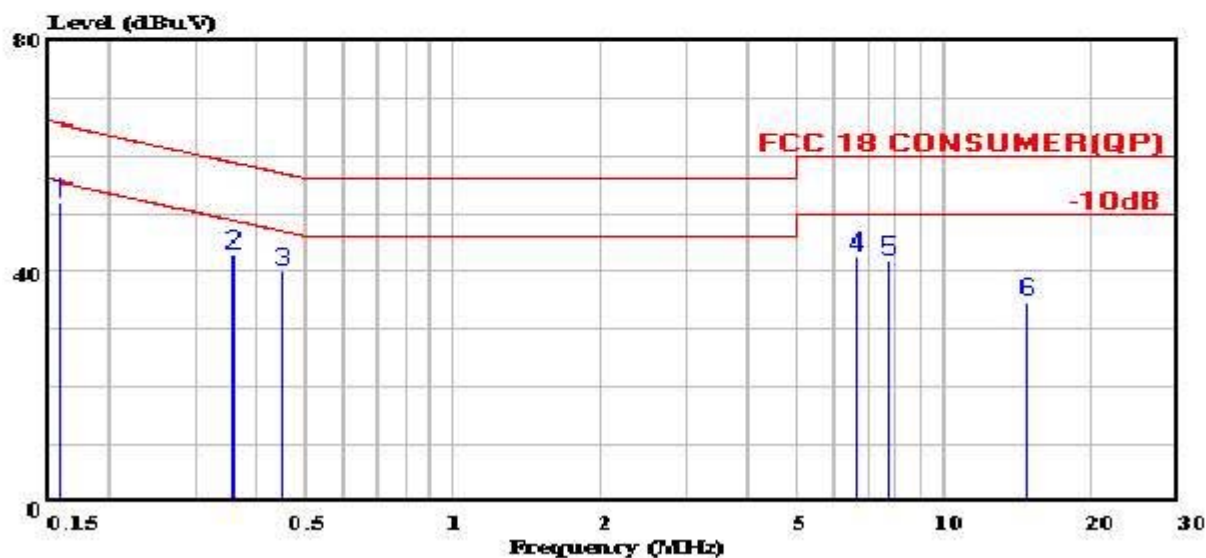
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.161	53.16	53.40	65.43	-12.03	0.24	0.03	0.21
2	0.232	50.30	50.50	62.39	-11.89	0.20	0.04	0.16
3	0.280	46.76	46.96	60.81	-13.85	0.20	0.04	0.16
4	0.389	46.67	46.84	58.08	-11.24	0.17	0.04	0.13
5	0.589	42.59	42.74	56.00	-13.26	0.15	0.04	0.11
6	1.160	44.36	44.53	56.00	-11.47	0.17	0.06	0.11



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Data#: 359 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 12:22:56



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-20W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

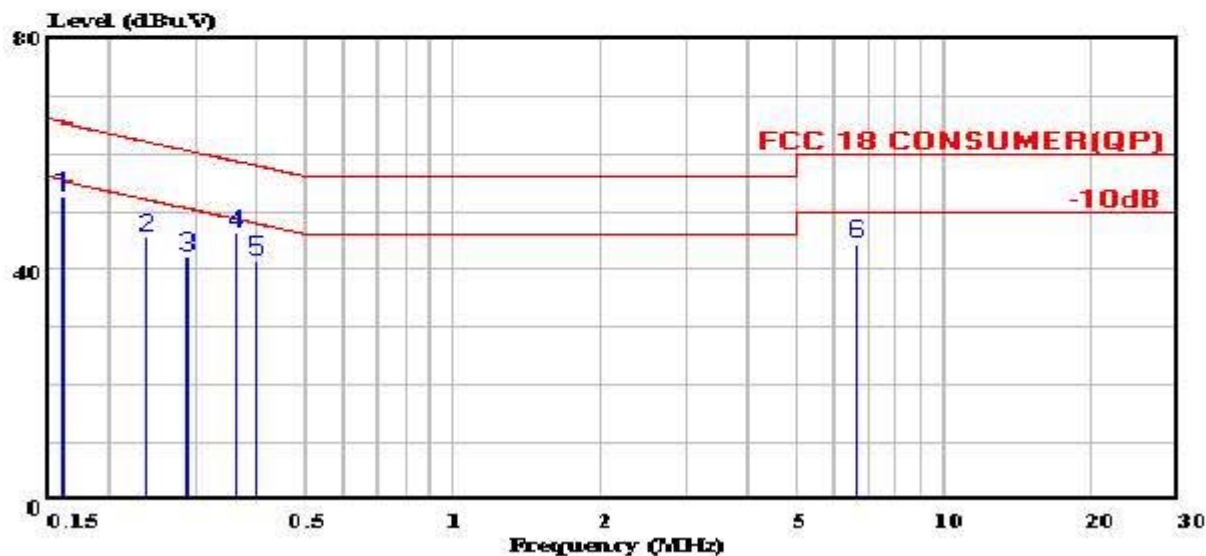
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.159	51.70	51.92	65.52	-13.60	0.22	0.03	0.19
2	0.358	42.80	42.93	58.77	-15.84	0.13	0.04	0.09
3	0.447	40.11	40.23	56.93	-16.70	0.12	0.04	0.08
4	6.700	42.50	42.75	60.00	-17.25	0.25	0.16	0.09
5	7.690	41.80	42.09	60.00	-17.91	0.29	0.18	0.11
6	14.750	34.31	34.92	60.00	-25.08	0.61	0.26	0.35



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Data#: 361 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 12:25:06



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-20W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.160	52.36	52.60	65.46	-12.86	0.24	0.03	0.21
2	0.239	45.40	45.60	62.13	-16.53	0.20	0.04	0.16
3	0.286	41.97	42.17	60.63	-18.46	0.20	0.04	0.16
4	0.361	45.97	46.15	58.69	-12.54	0.18	0.04	0.14
5	0.398	41.61	41.78	57.90	-16.12	0.17	0.04	0.13
6	6.709	44.38	44.66	60.00	-15.34	0.28	0.16	0.12

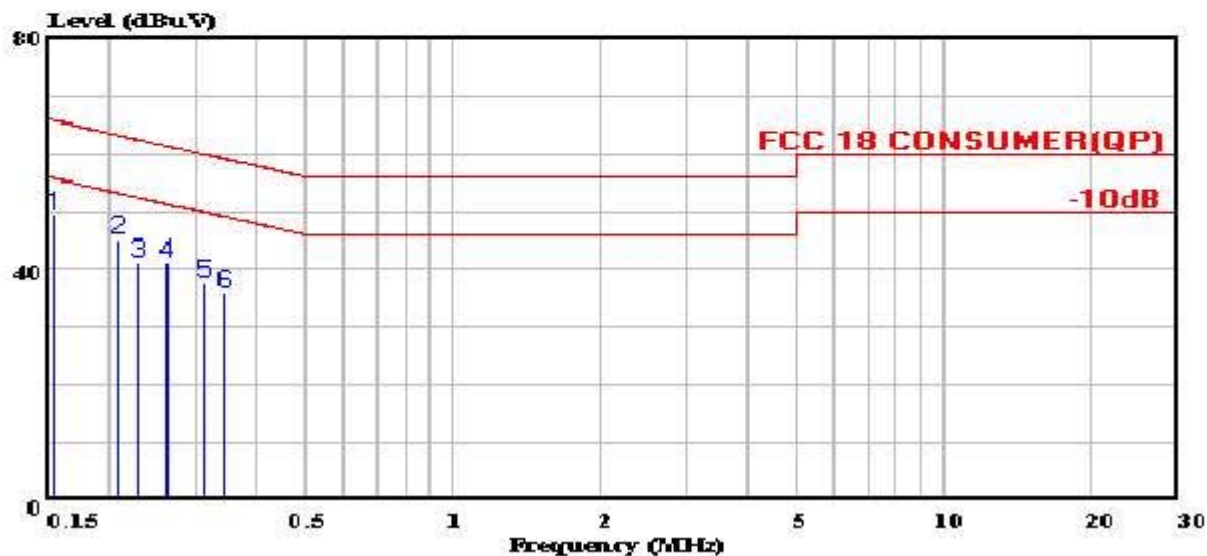
NOTE - The worst emission is detected at 0.361 MHz with corrected signal level of 46.15 (μV) (limit is 58.69μV)), when the VB of the EUT is connected to LISN.



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Data#: 357 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 12:13:49



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-23W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

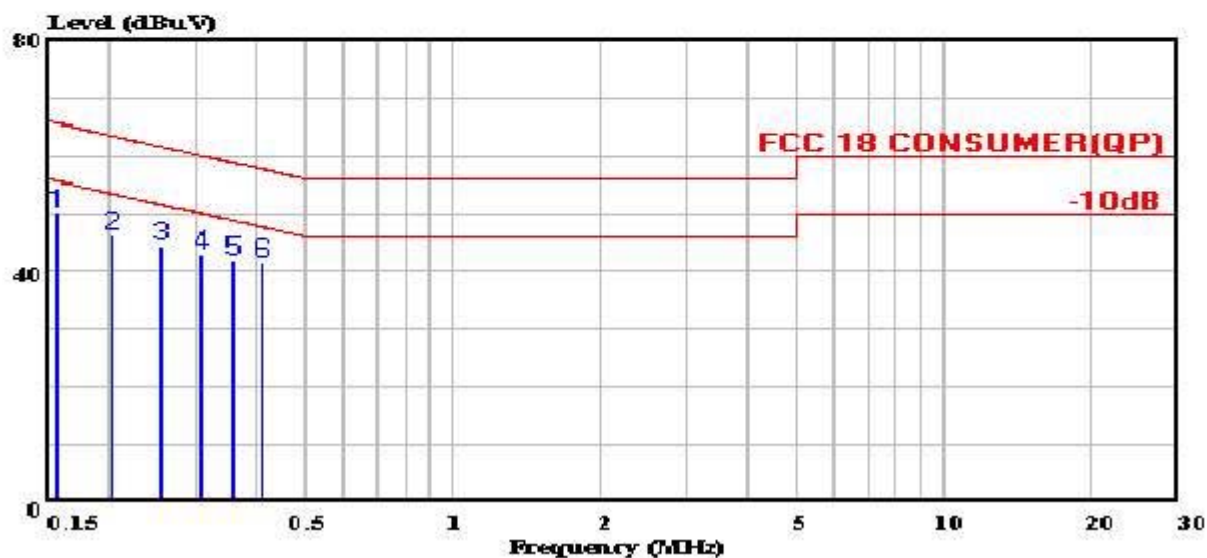
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.155	49.32	49.54	65.74	-16.20	0.22	0.03	0.19
2	0.207	44.96	45.18	63.32	-18.14	0.22	0.04	0.18
3	0.228	40.95	41.16	62.52	-21.36	0.21	0.04	0.17
4	0.260	41.17	41.36	61.42	-20.06	0.19	0.04	0.15
5	0.312	37.52	37.66	59.93	-22.27	0.14	0.04	0.10
6	0.341	35.57	35.70	59.18	-23.48	0.13	0.04	0.09



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Data#: 355 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 12:11:47



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-23W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.156	49.80	50.05	65.65	-15.60	0.25	0.03	0.22
2	0.202	46.11	46.31	63.54	-17.23	0.20	0.04	0.16
3	0.255	44.22	44.42	61.60	-17.18	0.20	0.04	0.16
4	0.308	42.70	42.90	60.02	-17.12	0.20	0.04	0.16
5	0.358	41.67	41.85	58.78	-16.93	0.18	0.04	0.14
6	0.410	41.41	41.58	57.64	-16.06	0.17	0.04	0.13

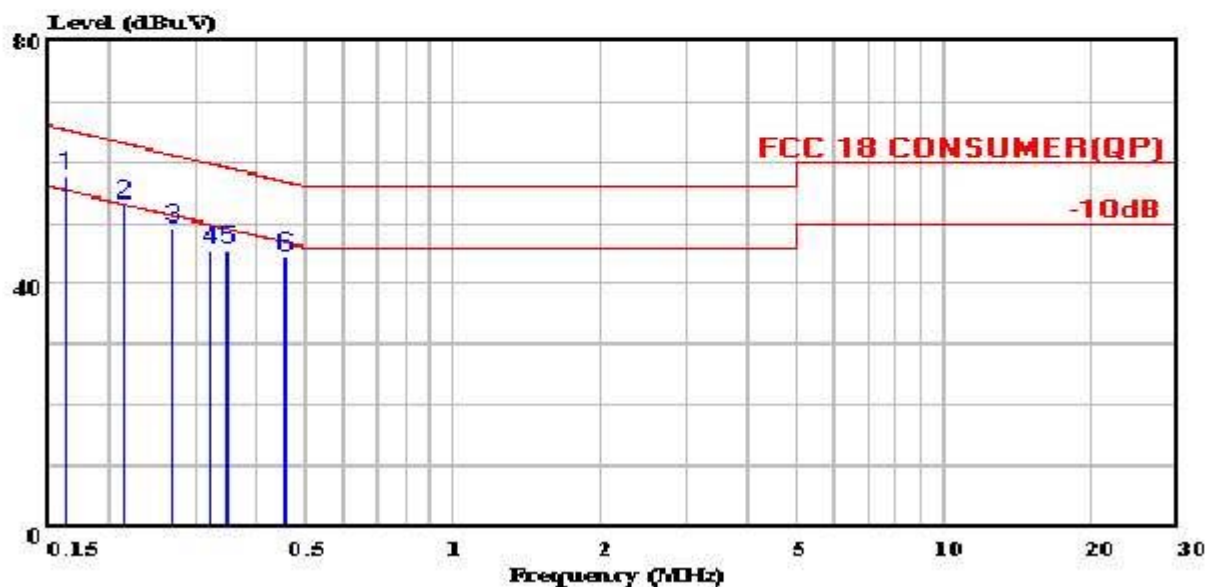
NOTE - The worst emission is detected at 0.156 MHz with corrected signal level of 50.05 (μ V) (limit is 65.65 μ V)), when the VB of the EUT is connected to LISN.



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Data#: 455 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 17:36:08



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-26W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

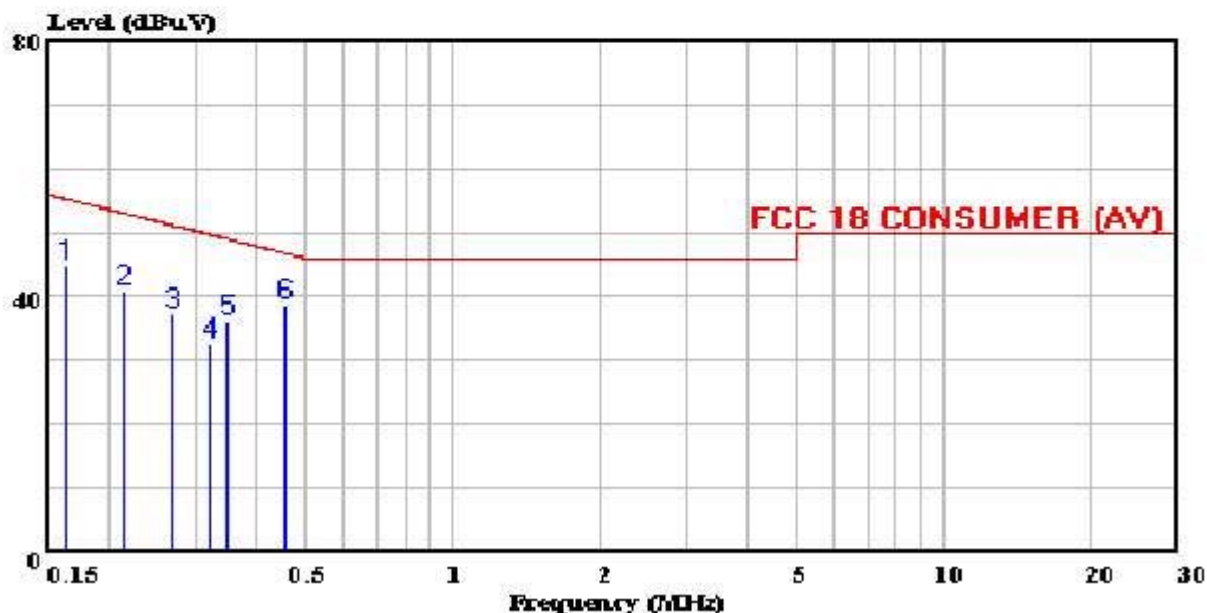
	Freq	Read	Level	Limit	Over		Cable	Probe
	MHz	dBuV	dBuV	Line	Limit	Factor	Loss	Factor
1	0.162	57.60	57.82	65.36	-7.54	0.22	0.03	0.19
2	0.214	52.80	53.01	63.05	-10.04	0.21	0.04	0.17
3	0.269	49.10	49.28	61.15	-11.87	0.18	0.04	0.14
4	0.320	45.30	45.44	59.71	-14.27	0.14	0.04	0.10
5	0.346	45.40	45.53	59.06	-13.53	0.13	0.04	0.09
6	0.454	44.21	44.33	56.80	-12.47	0.12	0.04	0.08



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Data#: 456 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 17:36:42



Site : Conducted emission
Condition : FCC 18 CONSUMER (AV) KMW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-26W
S/N :
Power Supply : 120V/60Hz
Ambient : 23°C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

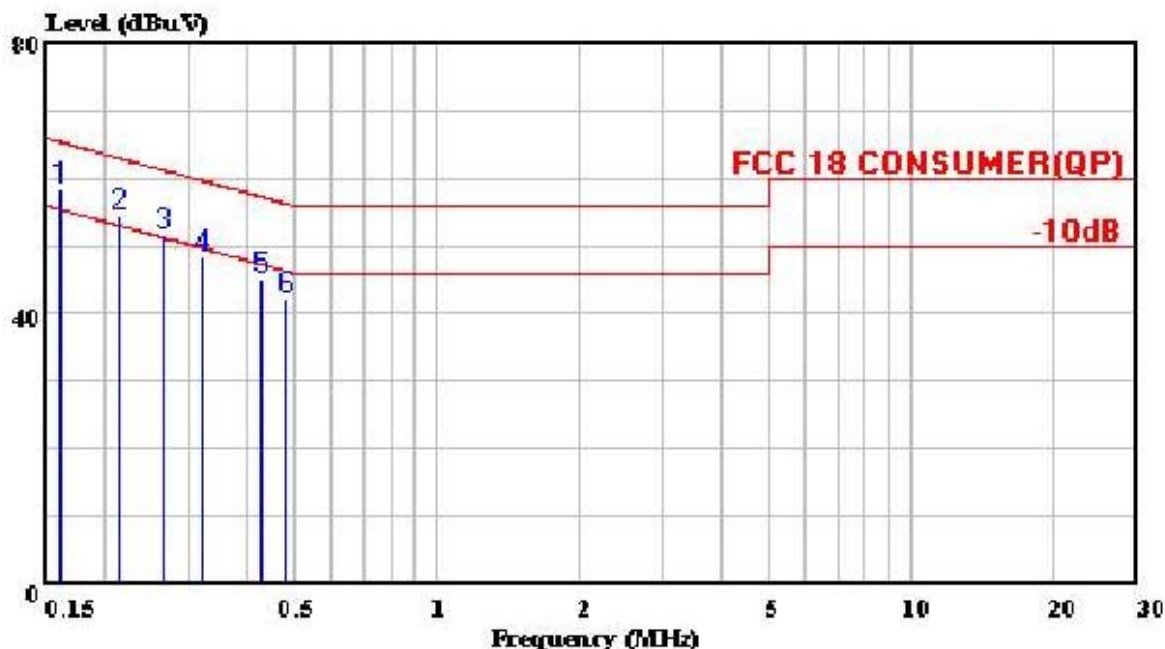
	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.162	44.60	44.82	55.36	-10.54	0.22	0.03	0.19
2	0.214	40.70	40.91	53.05	-12.14	0.21	0.04	0.17
3	0.269	37.00	37.18	51.15	-13.97	0.18	0.04	0.14
4	0.320	32.50	32.64	49.71	-17.07	0.14	0.04	0.10
5	0.346	36.20	36.33	49.06	-12.73	0.13	0.04	0.09
6	0.454	38.51	38.63	46.80	-8.17	0.12	0.04	0.08



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Data#: 458 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 17:42:09



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-26W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

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	Freq	Read Level	Level	Limit Line	Over Limit	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB
1 !	0.160	58.31	58.55	65.46	-6.91	0.24	0.21
2 !	0.213	54.50	54.70	63.09	-8.39	0.20	0.16
3 !	0.266	51.40	51.60	61.24	-9.64	0.20	0.16
4	0.320	48.30	48.49	59.71	-11.22	0.19	0.15
5	0.426	45.20	45.37	57.33	-11.96	0.17	0.13
6	0.479	42.01	42.16	56.36	-14.20	0.15	0.11

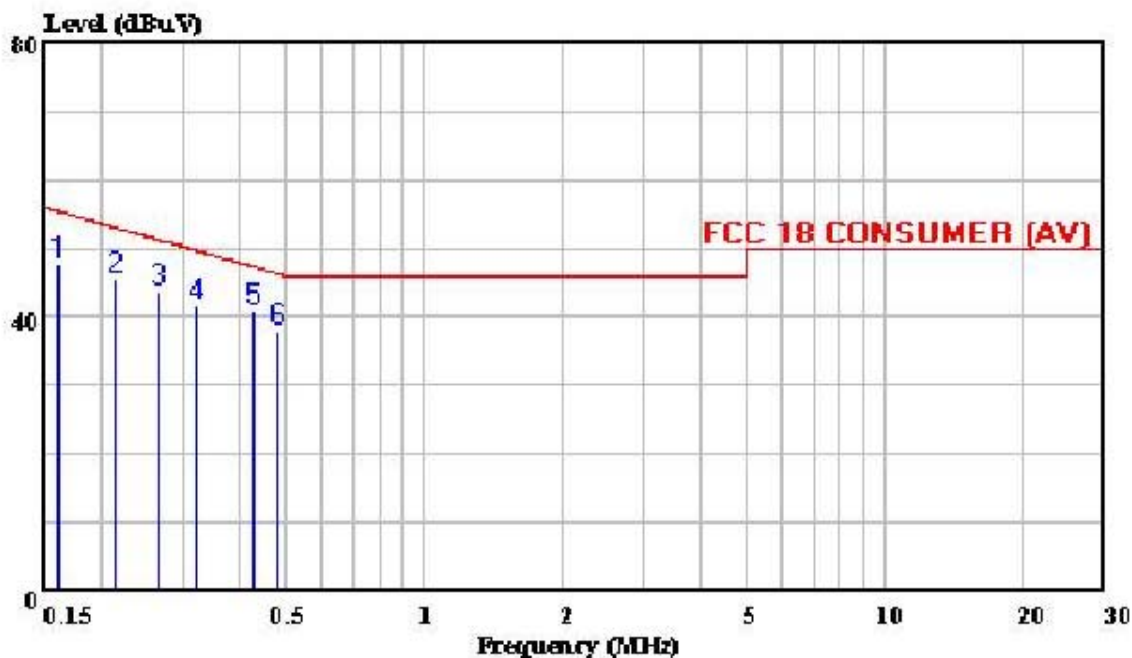
NOTE - The worst emission is detected at 0.160 MHz with corrected signal level of 58.55 (μ V) (limit is 65.46 μ V)), when the VB of the EUT is connected to LISN.



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Data#: 459 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 17:42:36



Site : Conducted emission
Condition : FCC 18 CONSUMER (AV) KMW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-26W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

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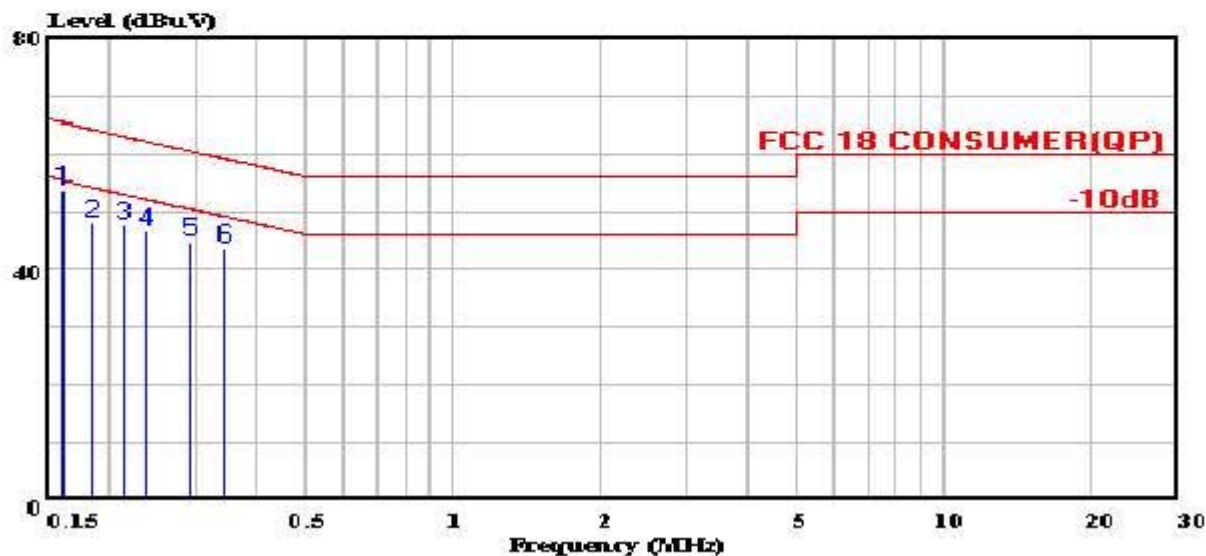
	Freq	Read Level	Limit Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.160	47.51	47.75	55.46	-7.71	0.24	0.03	0.21
2	0.213	45.20	45.40	53.09	-7.69	0.20	0.04	0.16
3	0.266	43.60	43.80	51.24	-7.44	0.20	0.04	0.16
4	0.320	41.30	41.49	49.71	-8.22	0.19	0.04	0.15
5	0.426	40.70	40.87	47.33	-6.46	0.17	0.04	0.13
6	0.479	38.01	38.16	46.36	-8.20	0.15	0.04	0.11



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Data#: 351 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 12:05:51



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VA
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-30W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VA
Test Mode : on
Test Engineer:

Solon Gong

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	Freq	Read	Level	Limit	Over	Cable	Probe
	MHz	Level	Level	Line	Limit	Loss	Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB
1	0.160	53.64	53.86	65.47	-11.61	0.22	0.19
2	0.184	47.84	48.06	64.28	-16.22	0.22	0.18
3	0.213	47.42	47.63	63.10	-15.47	0.21	0.17
4	0.239	46.42	46.62	62.13	-15.51	0.20	0.16
5	0.291	44.86	45.01	60.50	-15.49	0.15	0.11
6	0.343	43.46	43.59	59.13	-15.54	0.13	0.09

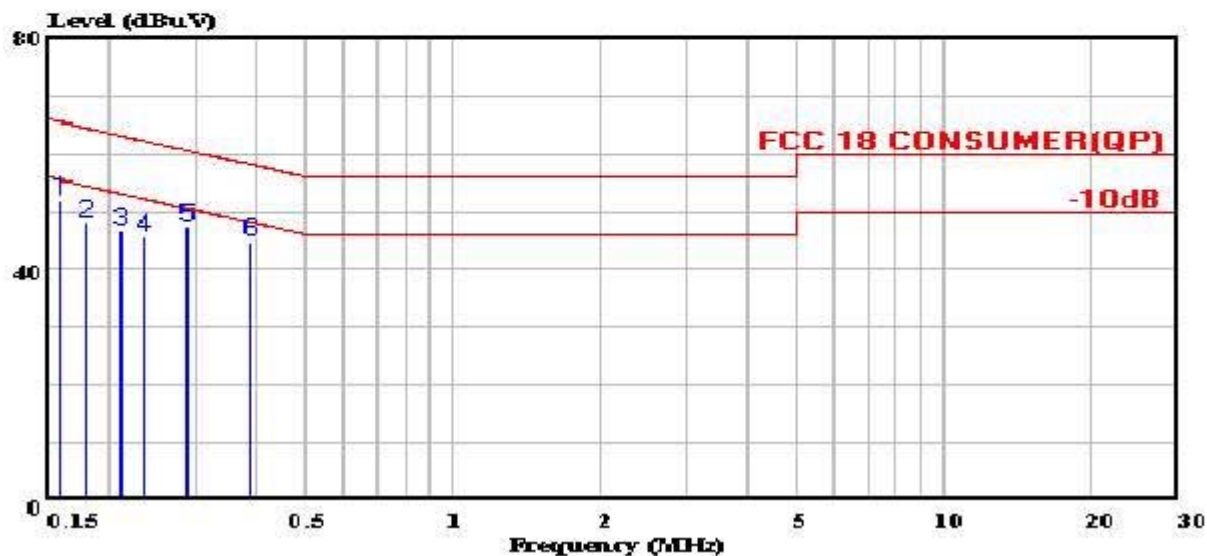
NOTE - The worst emission is detected at 0.160 MHz with corrected signal level of 53.86 (μ V) (limit is 65.47 μ V)), when the VA of the EUT is connected to LISN.



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Data#: 353 File#: C:\emivm\TEST\L\longstar.EMI

Date: 2003-04-03 Time: 12:08:12



Site : Conducted emission
Condition : FCC 18 CONSUMER(QP) KNW-407 VB
Project No. : AOE-000365
Applicant : XIAMEN LONGSTAR LIGHTING CO.,LTD
EUT : Energy Saving Lamp
M/N : FE-USM-30W
S/N :
Power Supply : 120V/60Hz
Ambient : 23'C 56%RH
Test line : VB
Test Mode : on
Test Engineer:

Solon Gong

Page: 1

	Freq	Read Level	Level	Limit Line	Over Limit	Factor	Cable Loss	Probe Factor
	MHz	dBuV	dBuV	dBuV	dB	dB	dB	dB
1	0.157	51.67	51.92	65.60	-13.68	0.25	0.03	0.22
2	0.179	48.00	48.23	64.55	-16.32	0.23	0.04	0.19
3	0.209	46.39	46.59	63.23	-16.64	0.20	0.04	0.16
4	0.235	45.52	45.72	62.26	-16.54	0.20	0.04	0.16
5	0.286	47.15	47.35	60.63	-13.28	0.20	0.04	0.16
6	0.389	44.74	44.91	58.08	-13.17	0.17	0.04	0.13