

FCC PART 18

EMI MEASUREMENT AND TEST REPORT

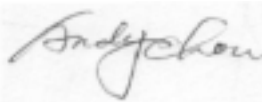
For
LINK ELECTRONIC SHANGHAI CO., LTD.

Zhu Jia Long Village, Gu Cun Town, Bao Shan District, Shanghai, China

Class II Permissive Change

Model No: LKE45

FCC ID: USDK50362

This Report Concerns: <input checked="" type="checkbox"/> Original Report	Equipment Type: Self Ballasted Lamp
Test Engineer: Andy Chou 	
Report No.: BTR06120401-1	
Report Date: 2006-11-08	
Reviewed By: Chris Zeng 	
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Note: The test report is specially limited to the above company and the product model only, it may not be duplicated without prior written consent of Best Test Service (Shenzhen) Co., Ltd.

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The LINK ELECTRONIC SHANGHAI CO., LTD.'s model LKE45 or the "EUT" as referred to in this report is Self Ballasted Lamp, which measures approximately is 8.0cmL x 8.0cmW x 23.5cmH, rated input voltage: AC 120V/60Hz. This product is a non-consumer RF Lighting, its work frequency is from 40KHz to 50KHz, the product have the same circuit diagram/block diagram and PCB layout, only the lamp bulb and power is lower than original, so this product apply Class II Permissive Change.

The test data was only good for the test sample. It may have deviation for other test sample.

Objective

The following test report is prepared on behalf of LINK ELECTRONIC SHANGHAI CO., LTD.. in accordance with Part 2, Subpart J, and Part 18, Subparts A, B, and C of the Federal Communication Commissions rules and regulations.

The objective of the manufacturer is to demonstrate compliance with FCC Part 18 limit requirements for Industrial, Scientific, and Medical Equipment.

Related Submittal(s)/Grant(s)

No Related Submittals.

Test Methodology

All measurements contained in this report were conducted with MP-5 1986, FCC Method of measurements of radio noise emission from Industrial, Scientific and Medical equipments.

Test Facility

All measurement facilities used to collect the data are located at Huatongwei Building , Keji Rd, 12 S, high-Tech Park, Nanshan District, Shenzhen, China.

The sites are constructed in conformance with the requirements of ANSI C63.7/634 and CISPR 22, The site was accredited by FCC (662850), A2LA(2243.01) and CNAL (L1225)

SYSTEM TEST CONFIGURATION

Justification

The EUT was tested under normal mode as used by a common (typical) user.

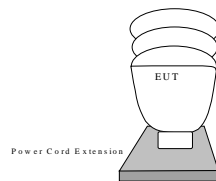
Schematics / Block Diagram

N/A.

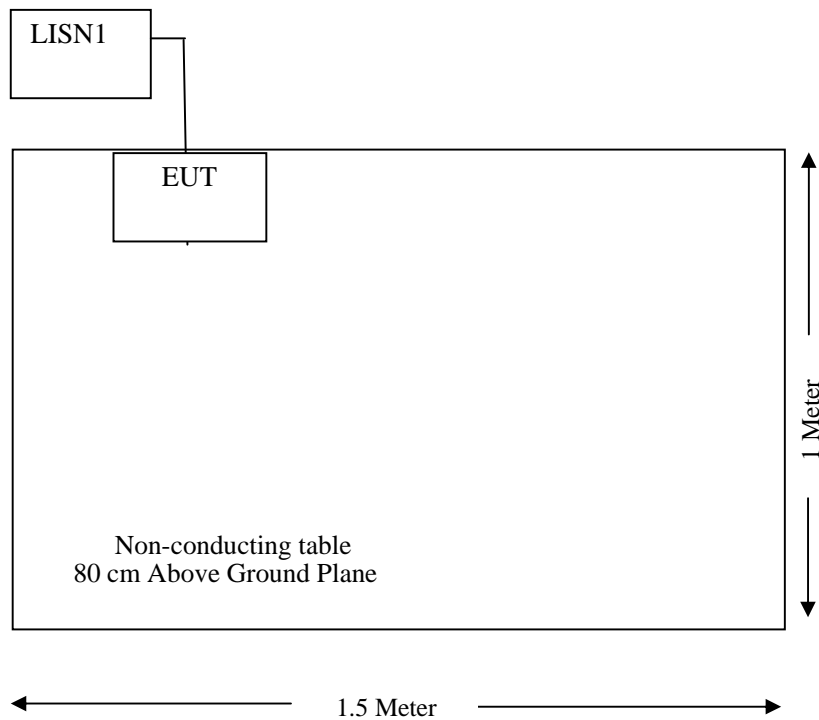
Equipment Modifications

No modifications were made by BEST TEST SERVICE (SHENZHEN) CO., LTD. to ensure the EUT to comply with the application limits and requirements.

Configuration of Test System



Test Setup Block Diagram



CONDUCTED EMISSIONS TEST DATA

Applicable Standard

For the following equipment, when designed to be connected to the public utility (AC) power line the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies shall not exceed the limits in the following tables. Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal using a 50 μ H/50 ohms line impedance stabilization network (LISN).

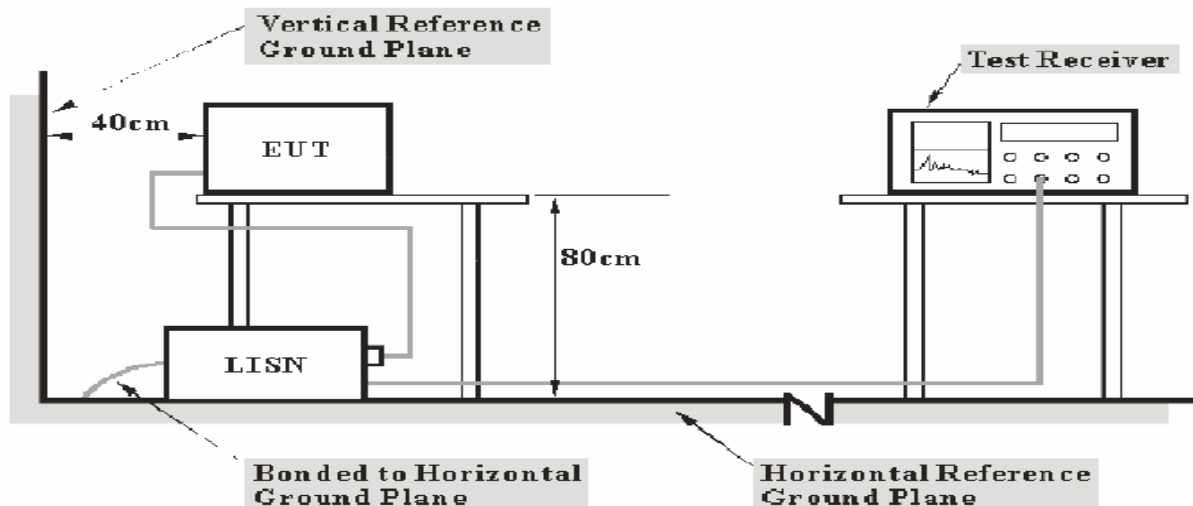
Frequency Range (MHz)	Max RF Voltage (μ V)	Max RF Voltage (dBuV)
Non-consumer equipment		
0.45 to 1.6	1,000	60.0
1.6 to 30	3,000	69.0
Consumer equipment		
0.45 to 2.51	250	48.0
2.51 to 3.0	3000	69.0
3.0 to 30	250	48.0

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMI. The factors contributing to uncertainties are EMI Test Receiver, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMI Measurements, and the best estimate of the uncertainty of any conducted emissions measurement at BEST TEST SERVICE (SHENZHEN) CO., LTD. is ± 2.0 dB.

EUT Setup



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5 measurement procedure. The specification used was the FCC Part 18 limits.

The EUT was connected to the power cord extension and placed on the left of the back edge on the test table.

The power cord extension was connected with 120 VAC/60 Hz power source.

Test Equipments

Manufacturer	Description	Model	Serial Number	Cal. Date	Cal. Due.Date
ROHDE & SCHWARZ	EMI TEST RECEIVER	ESCS30	100038	2006-11-06	2007-11-06
ROHDE & SCHWARZ	L.I.S.N	ESH2-Z5	100028	2006-11-06	2007-11-06
ROHDE & SCHWARZ	Pulse Limiter	ESHSZ2	100044	2006-11-06	2007-11-06

Statement of traceability: BEST attests that all calibrations have been performed per the CNAL /A2LA requirements, traceable to NIM China

Test Procedure

During the conducted emission test, the power cord of the power cord extension was connected to the auxiliary outlet of the first LISN.

Maximizing procedure was performed on the six (6) highest emissions to ensure that the EUT is compliant with all installation combination.

All data was recorded in the peak detection mode. Quasi-peak readings were only performed when an emission was found to be marginal (within 4 dB μ V of specification limits). Quasi-peak readings are distinguished with a "Qp".

The EUT was tested under the normal modes during the final qualification test to represent the worst-case results.

Summary of Test Results

Pass

The EUT complied with the FCC 18 Conducted margin for industry, scientific and medical device, and with the worst margin reading of:

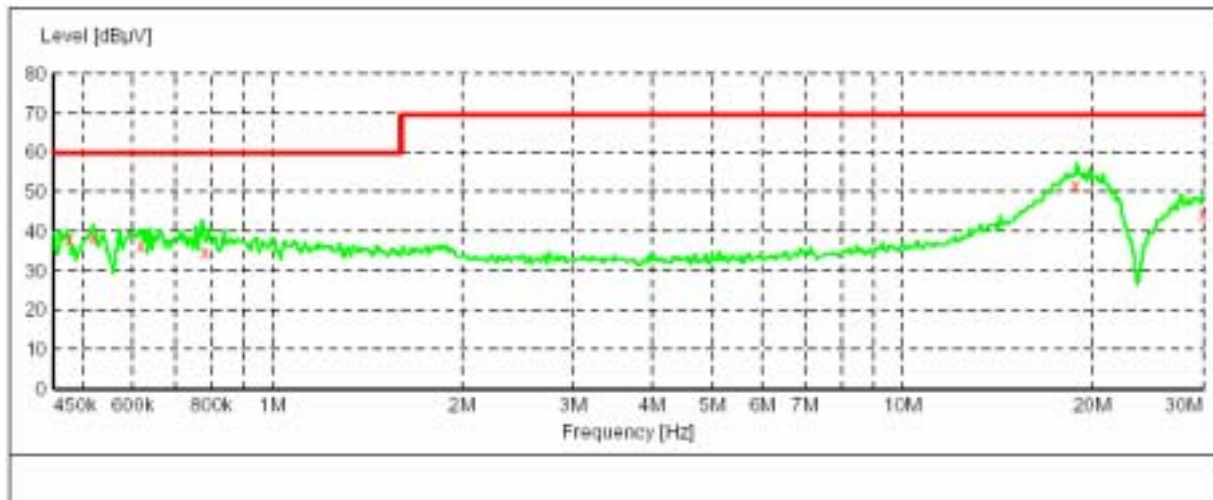
16.9 dB μ V at 25.189 MHz in the Neutral mode for LKE45

Conducted Emissions Test Data and Plots**Disturbance Voltage at AC Mains FCC 18**

EUT: Self Ballasted Lamp M/N:LKE45
 Manufacturer: LINK
 Operating Condition: On
 Test Site: SHIELDED ROOM
 Operator: Andy Chou
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 12/02/2006

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

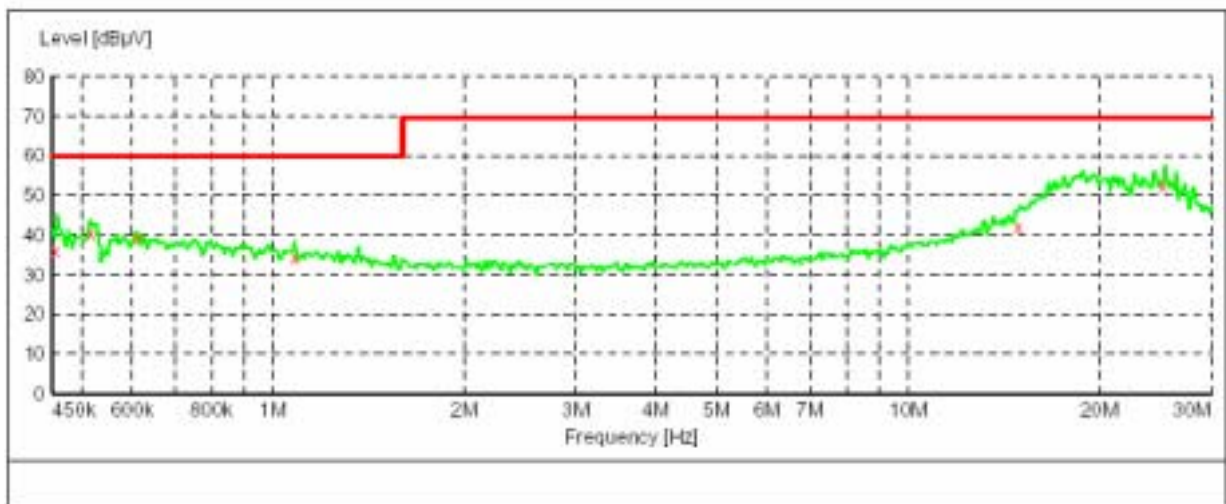
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.476280	38.00	10.1	60	22.0	QP	L1	GND
0.519916	38.40	10.1	60	21.6	QP	L1	GND
0.619530	36.50	10.1	60	23.5	QP	L1	GND
0.780580	34.80	10.1	60	25.2	QP	L1	GND
18.757440	51.70	11.2	70	17.8	QP	L1	GND
30.000000	44.50	11.7	70	25.0	QP	L1	GND

Disturbance Voltage at AC Mains FCC 18

EUT: Self Ballasted Lamp M/N:LKB45
 Manufacturer: LINK
 Operating Condition: On
 Test Site: SHIELDED ROOM
 Operator: Andy Chou
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 12/02/2006

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.454050	35.90	10.1	60	24.1	QP	N	GND
0.515784	40.50	10.1	60	19.5	QP	N	GND
0.609739	39.20	10.1	60	20.8	QP	N	GND
1.082189	34.20	10.2	60	25.8	QP	N	GND
14.887374	42.00	10.9	70	27.5	QP	N	GND
25.189140	52.60	11.5	70	16.9	QP	N	GND