Lab Code: 200707-0

FCC PART 18

EMI MEASUREMENT AND TEST REPORT

For

ALKI ELECTRONICS TECHNOLOGY CORPORATION

7F, NO. 52, LANE 10, JI-HU ROAD, NEI WU DIST., TAIPEI, TAIWAN, R. O. C.

FCC ID: RIZFEB1106

This Report Concerns:	**Equipment Type:**
☒ Original Report	Electronic Ballast

Test Engineer:	Simon Mo simon mo
Report Number:	RSZ06112251
Test Date:	2006-11-23
Report Date:	2006-12-08
Reviewed By:	EMC Manager: Boni Baniqued
Prepared By:	Bay Area Compliance Laboratory Corp. (ShenZhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, GuangDong 518038, P.R.China Tel: +86-755-33320018 Fax: +86-755-33320008

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *ALKI ELECTRONICS TECHNOLOGY CORPORATION*'s model: *FEB-1-13-120-N-S-A, FEB-1-26-120-N-S-A* or the "EUT" as referred to in this report is a *Electronic Ballast* which measures approximately *FEB-1-13-120-N-S-A:* 9.1cm L x 6.0cm W x 3.0cm H, *FEB-1-26-120-N-S-A:* 9.1cm L x 6.0cm W x 3.0cm H rated input voltage: AC 120V/60Hz.

* *The test data gathered are from production sample, serial number: 0611110, Provided by the manufacturer, we received EUT on 2006-11-22.*

Objective

The following test report is prepared on behalf of *ALKI ELECTRONICS TECHNOLOGY CORPORATION* 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 determine compliance with FCC Part 18 limits.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All measurement was performed at Bay Area Compliance Laboratory Corp. (ShenZhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratory Corp. (ShenZhen) to collect radiated and conducted emission measurement data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, GuangDong 518038, P.R.China.

Test site at Bay Area Compliance Laboratory Corp. (ShenZhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003 and FCC MP-5.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratory Corp. (ShenZhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0). The current scope of accreditations can be found at http://ts.nist.gov/ts/htdocs/210/214/scopes/2007070.htm

External I/O Cable

Cable Description	Length (M)	From/Port	To
Unshielded Detachable AC Power Cable	1.0	EUT	AC Port

SYSTEM TEST CONFIGURATION

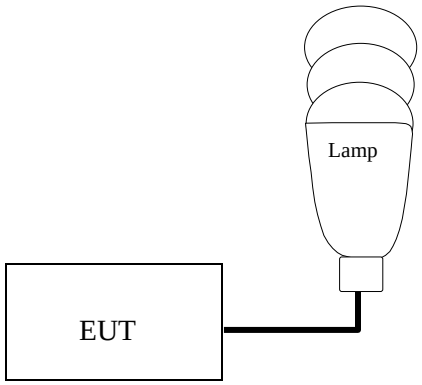
Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

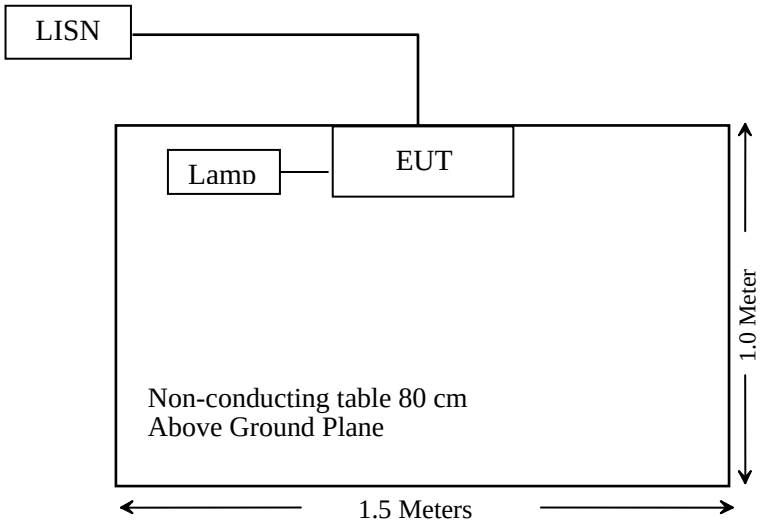
Equipment Modifications

Bay Area Compliance Laboratory Corp. (ShenZhen) has not done any modification on the EUT.

Configuration of Test Setup



Block Diagram of Test Setup



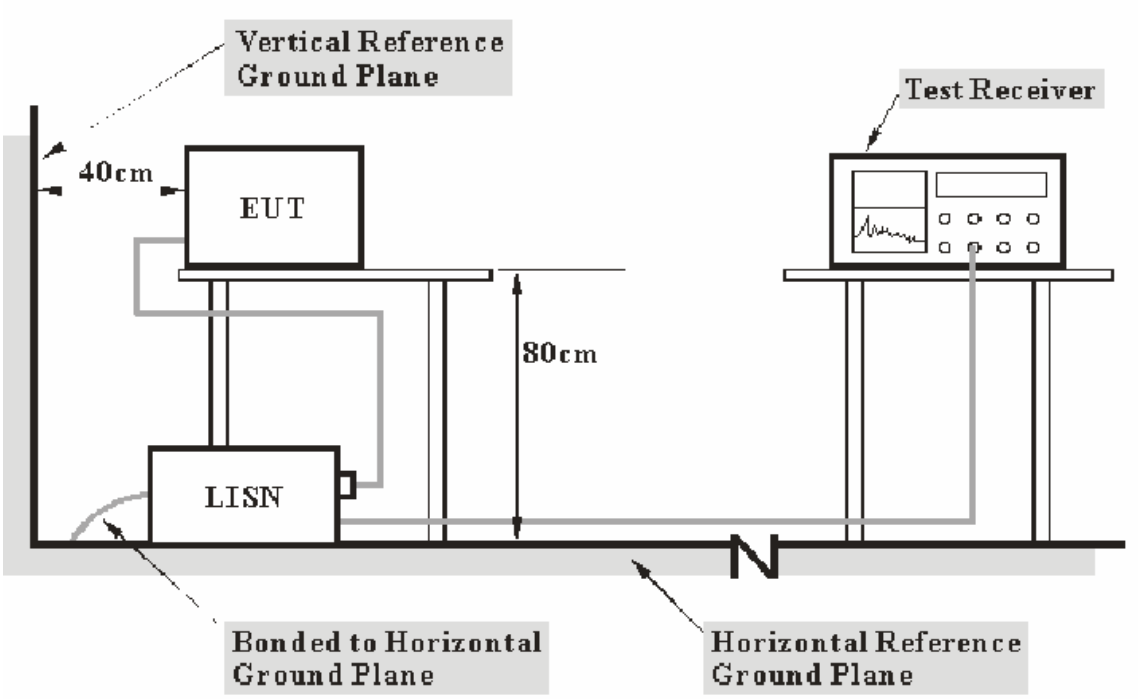
CONDUCTED EMISSION

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratory Corp. (ShenZhen) is ±2.4 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: 1986 measurement procedure. Specification used was with the FCC Part 18 limits.

The EUT was connected to a 120 VAC/ 60Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	***IFBW***
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12208	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	DE25330	2006-3-20	2007-3-19
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2006-3-1	2007-3-1

***** Com-Power's LISN were used as the supporting equipment.
*** Statement of Traceability:** Bay Area Compliance Laboratory Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the EUT power cord was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Peak detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 18, with the worst margin reading of:

FEB-1-13-120-N-S-A: **-9.30 dB** at **1.395 MHz** in the **Live** conductor mode.
FEB-1-26-120-N-S-A: **-1.10 dB** at **1.435 MHz** in the **Neutral** conductor mode.

Test Data

Environmental Conditions

Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	940mbar

Testing was performed by Simon Mo on 2006-11-23.

Test Mode: On (FEB-1-13-120-N-S-A)

LINE CONDUCTED EMISSIONS					FCC Part 18		
Frequency (MHz)	Amplitude (dBμV)	Detector		Phase Neutral/Live	Limit (dBμV)		Margin (dB)
		PK	AV		PK	AV	
1.395	38.70	PK	*	Live	48.00	N/A	-9.30
1.340	37.80	PK	*	Neutral	48.00	N/A	-10.20
0.965	32.50	PK	*	Neutral	48.00	N/A	-15.50
0.775	31.90	PK	*	Live	48.00	N/A	-16.10
0.465	29.10	PK	*	Live	48.00	N/A	-18.90
0.470	27.50	PK	*	Neutral	48.00	N/A	-20.50
19.585	17.20	PK	*	Neutral	48.00	N/A	-30.80
19.735	16.20	PK	*	Live	48.00	N/A	-31.80
5.370	15.30	PK	*	Live	48.00	N/A	-32.70
1.895	14.40	PK	*	Neutral	48.00	N/A	-33.60
4.725	10.50	PK	*	Neutral	48.00	N/A	-37.50
7.805	9.80	PK	*	Live	48.00	N/A	-38.20

Test Mode: On (FEB-1-26-120-N-S-A)

LINE CONDUCTED EMISSIONS					FCC Part 18		
Frequency (MHz)	Amplitude (dBμV)	Detector		Phase Neutral/Live	Limit (dBμV)		Margin (dB)
		PK	AV		PK	AV	
1.435	46.90	PK	*	Neutral	48.00	N/A	-1.10
1.375	46.60	PK	*	Neutral	48.00	N/A	-1.40
1.440	46.30	PK	*	Live	48.00	N/A	-1.60
1.380	46.20	PK	*	Live	48.00	N/A	-1.80
0.520	45.20	PK	*	Neutral	48.00	N/A	-2.80
0.520	44.80	PK	*	Live	48.00	N/A	-3.20
0.460	43.60	PK	*	Live	48.00	N/A	-4.40
0.640	41.00	PK	*	Neutral	48.00	N/A	-7.00
29.220	23.40	PK	*	Neutral	48.00	N/A	-24.60
28.740	19.20	PK	*	Live	48.00	N/A	-28.80
19.535	18.30	PK	*	Neutral	48.00	N/A	-29.70
19.805	16.70	PK	*	Live	48.00	N/A	-31.30

REMARKS:

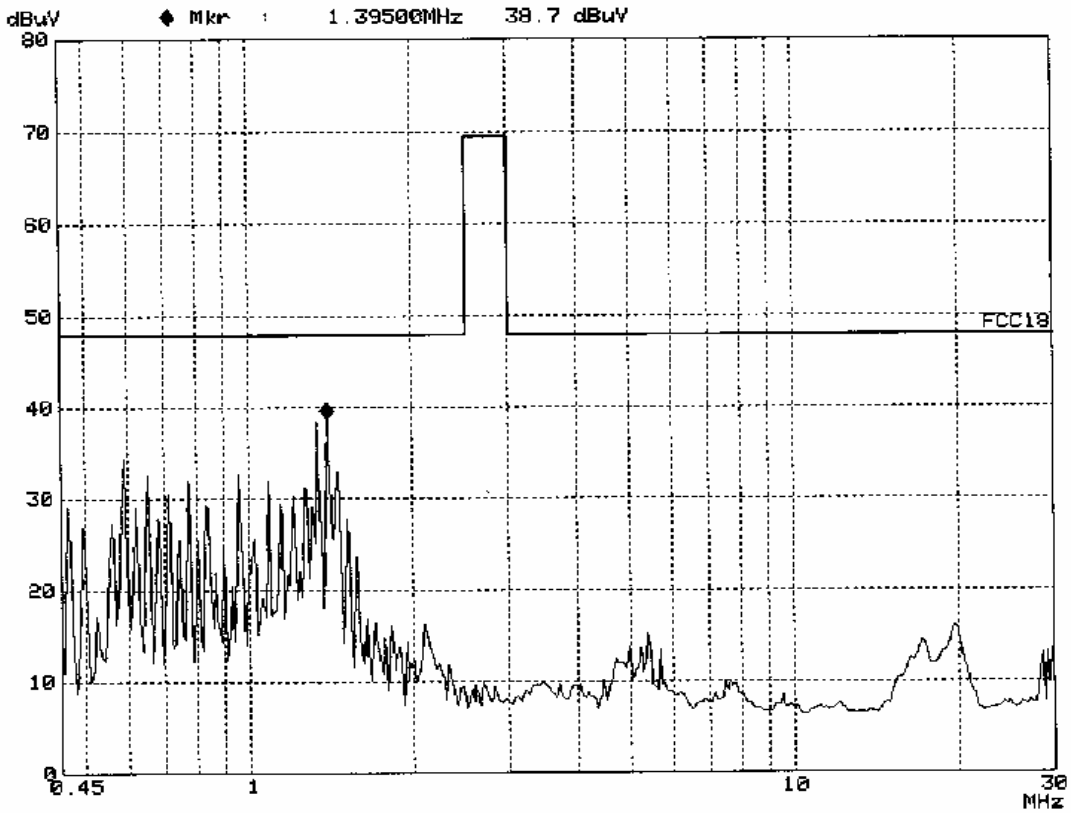
1. "*" Denotes the average detector measurement is not applicable for RF lighting device (consumer equipments).

Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.

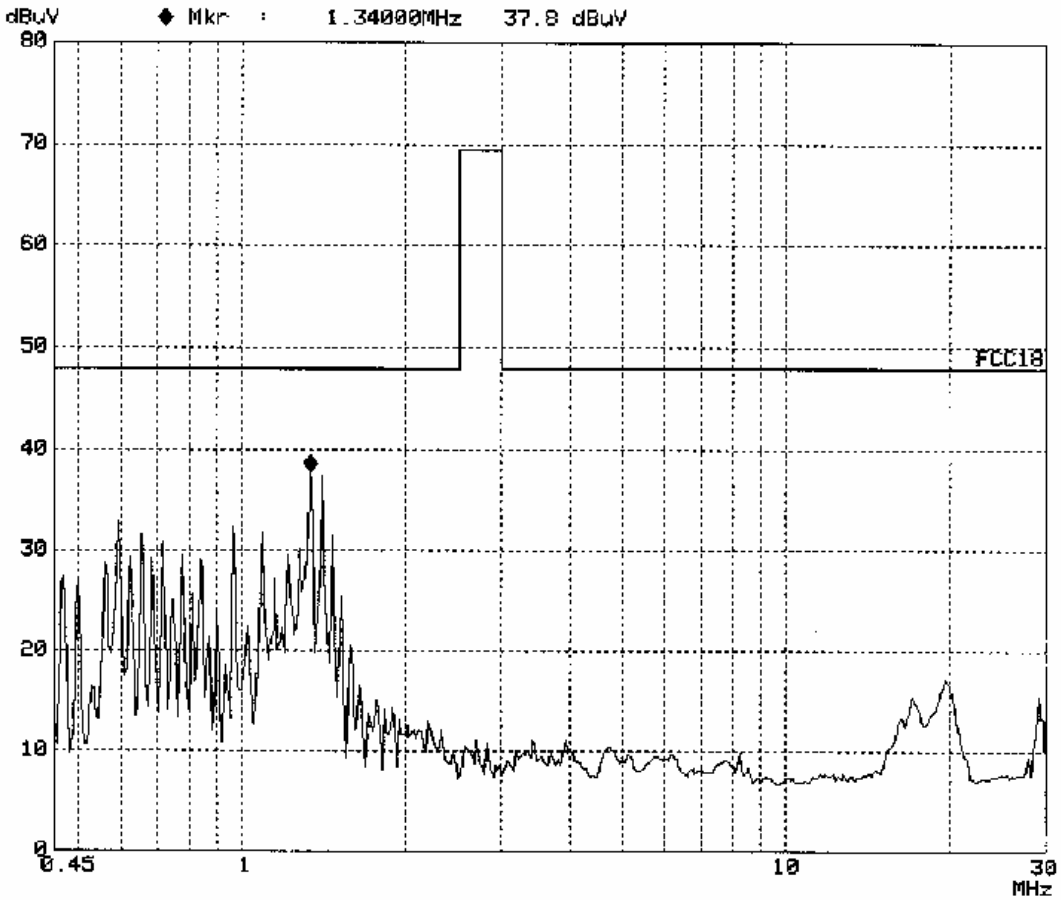
Conduction Emission Test
FCC18ID

EUT:	ELECTRONIC BALLAST M/N:FEB-1-13-120-N-SA
Manuf:	ALKI
Op Cond:	ON
Operator:	SIMON
Test Spec:	AC 120V/60Hz L
Comment:	emp:25'C Humi:56%
Date:	23. Nov 06 19:25



Conduction Emission Test
FCC18ID

EUT:	ELECTRONIC BALLAST M/N:FEB-1-13-120-N-SA
Manuf:	ALKI
Op Cond:	ON
Operator:	SIMON
Test Spec:	AC 120V/60Hz N
Comment:	emp:25'C Humi:56%
Date:	23, Nov 06 19:01



Conduction Emission Test
FCC18ID

EUT:	ELECTRONIC BALLAST M/N:FEB-1-26-120-N-SA
Manuf:	ALKI
Op Cond:	ON
Operator:	SIMON
Test Spec:	AC 120V/60Hz L
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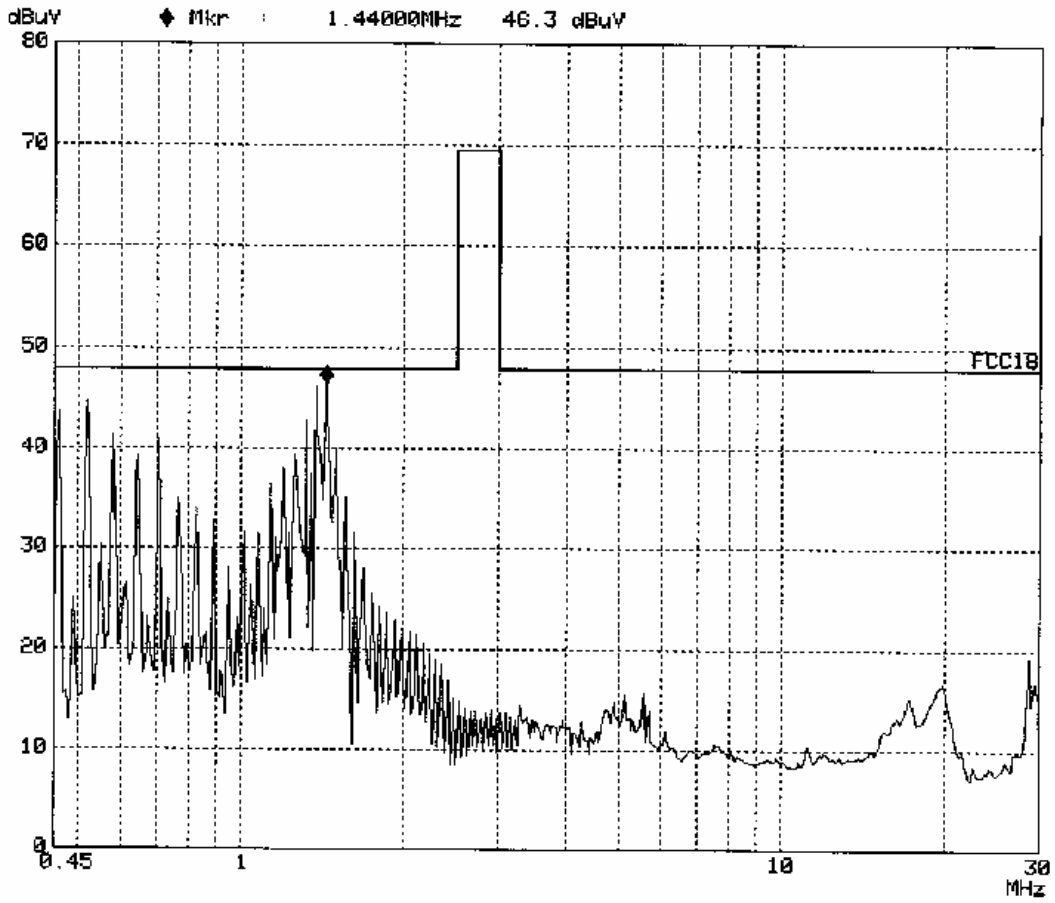

Conduction Emission Test
FCC18ID

EUT:	ELECTRONIC BALLAST M/N:FEB-1-26-120-N-SA
Manuf:	ALKI
Op Cond:	ON
Operator:	SIMON
Test Spec:	AC 120V/60Hz N
Comment:	emp:25'C Humi:56%
Date:	23. Nov 06 20:01