

APPLICATION FOR CERTIFICATION  
On Behalf of  
Jiadianbao Electrical Products (Shenzhen) Co., Ltd

Track Lighting Rated 50W

Model Number: G90022

Prepared for : Jiadianbao Electrical Products (Shenzhen) Co., Ltd  
Region No.117, Feng Huang Guan Village, Xin An,  
Baoan Country, Shenzhen City, Guangdong Province,  
518102 China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.  
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Report Number : ACS-F02112  
Date of Test : Jul. 18 ~ 20, 2002  
Date of Report : Sep.03, 2002

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## TEST REPORT DECLARATION

Applicant : Jiadianbao Electrical Products (Shenzhen) Co., Ltd

Manufacturer : Jiadianbao Electrical Products (Shenzhen) Co., Ltd.

EUT Description : Track Lighting Rated 50W

(A) MODEL NO : G90022

(B) SERIAL NO : F2002090301

(C) POWER SUPPLY : 120V/60Hz

Test Procedure Used:

## FCC RULES AND REGULATIONS PART 18 SUBPART C RF LIGHTING DEVICES CONSUMER (1998) AND MP-5/1986

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 18 Subpart C limits for radiation and conduction emissions. The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is technically compliant with FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) 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 : Jul. 18 ~ 20, 2002Prepared by : Jane Dai  
Jane Dai / AssistantReviewer : Lake Wang  
Lake Wang / SupervisorFor and on behalf of  
AUDIX TECHNOLOGY (SHENZHEN) CO.,LTD.Approved & Authorized Signer : Alex Deng  
Alex Deng / Authorized Signer(s)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

Description : Track Lighting Rated 50W

Model Number : G90022

Applicant : Jiadianbao Electrical Products (Shenzhen) Co., Ltd  
Region No.117, Feng Huang Guan Village, Xin An,  
Baoan Country, Shenzhen City, Guangdong Province,  
518102 China

Manufacturer : Jiadianbao Electrical Products (Shenzhen) Co., Ltd  
Region No.117, Feng Huang Guan Village, Xin An,  
Baoan Country, Shenzhen City, Guangdong Province,  
518102 China

Power Cord : Unshielded, Detachable 1.3m

Date of Test : Jul. 18 ~ 20, 2002

## 1.2. Test Facility

### Site Description

3m Anechoic Chamber :	Certificated by FCC, USA Aug. 24, 2000	
3m & 10m Open Site :	Certificated by FCC, USA Jan. 29, 2001	
:	Certificated by VCCI, Japan Jan. 01, 1998	
EMC Lab.	Certificated by DATech, German Feb. 02, 1999	
	Certificated by NVLAP, USA NVLAP Code: 200372-0 Mar. 31, 2003	
	Certificated by Nemko, Norway December. 18, 2000	
	Certificated by DNV, Norway May 26, 1999	
Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd.
Site Location	:	No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

## 1.3. Test Uncertainty

Conducted Emission Uncertainty =  $\pm$  2.66dB

Radiated Emission Uncertainty =  $\pm$  4.26dB

## 2. POWER LINE CONDUCTED EMISSION TEST

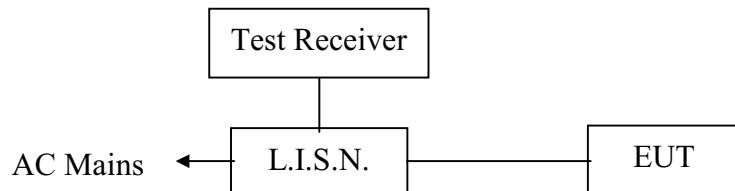
### 2.1. Test Equipment

The following test equipments are used during the power line conducted emission test:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Jun. 02, 02	1 Year
2.	L.I.S.N. #1	Kyoritsu	KNW-407	8-541-4	Jun. 02, 02	1 Year
3.	L.I.S.N. #2	R&S	ESH2-Z5	834066/011	Jun. 02, 02	1 Year
4.	Terminator	EMCO	50Ω	No. 1	Jun. 02, 02	1 Year
5.	Terminator	EMCO	50Ω	No. 2	Jun. 02, 02	1 Year
6.	RF Cable	FUJIKURA	RG-55/U	LISN Cable	Aug. 23, 02	1/2 Year
7.	Coaxial Switch	Anritsu	MP59B	M73989	May. 31,02	1/2 Year
8.	PC	N/A	586ATXS	N/A	N/A	N/A
9.	Printer	HP	Laserjet2100	SGGJ092351	N/A	N/A

### 2.2. Block Diagram of Test Setup

#### 2.2.1. Block diagram of connection between the EUT and simulators



(EUT: Track Lighting Rated 50W)

### 2.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage
	Quasi-Peak Level dB(µV)
0.45KHz ~ 3MHz	48

Notes: 1. \* Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

## 2.4.Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

### 2.4.1.Track Lighting Rated 50W (EUT)

Model Number	:	G90022
Serial Number	:	F2002090301
Manufacturer	:	Jiadianbao Electrical Products (Shenzhen) Co., Ltd

## 2.5.Operating Condition of EUT

- 2.5.1.Setup the EUT and simulator as shown as Section 2.2.
- 2.5.2.Turn on the power of all equipment.
- 2.5.3.Let the EUT work in test mode (ON) and test it.

## 2.6.Test Procedure

The EUT is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission levels. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4-1992 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS20) is set at 10KHz.

The frequency range from 450KHz to 30MHz is checked.

The test result are reported on Section 2.7, all the scanning waveforms for Conducted Emission Test are attached in Appendix I.

## 2.7.Power Line Conducted Emission Test Results

**PASS.**

The frequency range from 450KHz to 30 MHz is investigated.

All emissions not reported below are too low against the prescribed limits.

Date of Test :	Jul. 20, 2002	Temperature :	23.9°C
EUT :	Track Lighting Rated 50W	Humidity :	55%
Model No. :	G90022	Test Mode :	ON
Test Engineer :	Richzhy		

Frequency MHz	Reading		Limit dB(μV)
	Phase VA dB(μV)	Phase VB dB(μV)	
<b>0.509</b>	<b>41.2</b>	*	<b>48.00</b>
0.686	*	38.6	48.00
0.716	40.3	*	48.00
0.893	41.1	39.7	48.00
1.071	40.6	*	48.00
1.366	*	36.9	48.00
1.898	*	40.1	48.00
4.203	*	30.9	48.00
5.976	*	31.2	48.00
6.005	30.7	*	48.00
9.876	29.6	*	48.00

Remark : 1. All readings are Quasi-Peak values.  
 2. The worst emission is detected at 0.509MHz with corrected signal level of 41.2dB(μV) (limit is 48dB(μV)) when the VA side of the EUT is connected to L.I.S.N.

Reviewer : Labe Wang

### 3. MAGNETIC FIELD EMISSION TEST

#### 3.1. Test Equipment

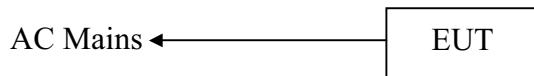
The following test equipments are used during the radiated emission test:

##### 3.1.1. For Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Loop Antenna	Chase	HLA6120	1062	Jun. 02, 02	1 Year
2	Test Receiver	Rohde & Schwarz	ESHS20	836600/006	Jun.02, 02	1 Year

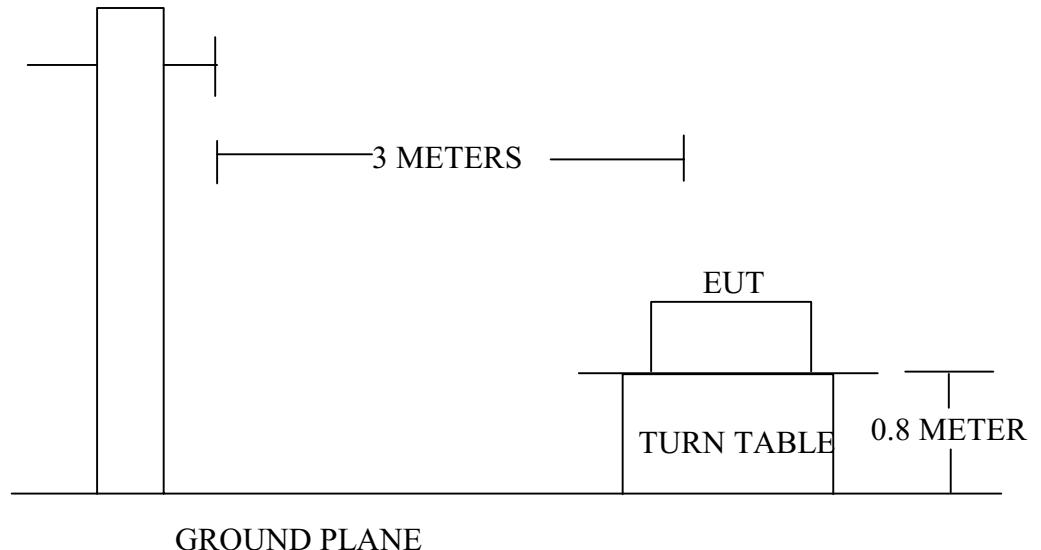
#### 3.2. Block Diagram of Test Setup

##### 3.2.1. Block Diagram of connection between EUT and simulators



(EUT: Track Lighting Rated 50W)

##### 3.2.2. In Anechoic Chamber Test Setup Diagram



### 3.3.Magnetic Field Emission Limit

All emanations from Non-ISM devices or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Frequency band MHz	Quasi-peak Electric Field Test Distance 3m dB( $\mu$ V/m)
0.009 - 30	63.5

Note: (1) The limit shall decreasing linearly with logarithm of frequency.  
 (2) Distance refers to the distance in meters between the test instrument antenna and the closed point of any part of the E.U.T.

### 3.4.EUT Configuration on Test

The Fcc part 18 Class A regulations test method must be used to find the maximum emission during Radiated Emission test.

The configuration of EUT is same as used in Conducted Emission test. Please refer to Section 2.4.

### 3.5.Operating Condition of EUT

3.5.1.Setup the EUT and the simulators as shown on Section 3.2.

3.5.2.Turn on the power of all equipments.

3.5.3.Let the EUT work in test mode (ON) and test it.

### 3.6.Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. Measurements are performed at 3m distance with a 0.6m loop antenna as described in 15.2.1 of CISPR 16-1. The antenna shall be vertically installed, with the lower edge of the loop at 1m height above the floor.

The bandwidth setting on the test receiver (R&S TEST RECEIVER ESVS20) is 10 KHz. The EUT is tested in Chamber. All the scanning waveform are attached within Appendix II.

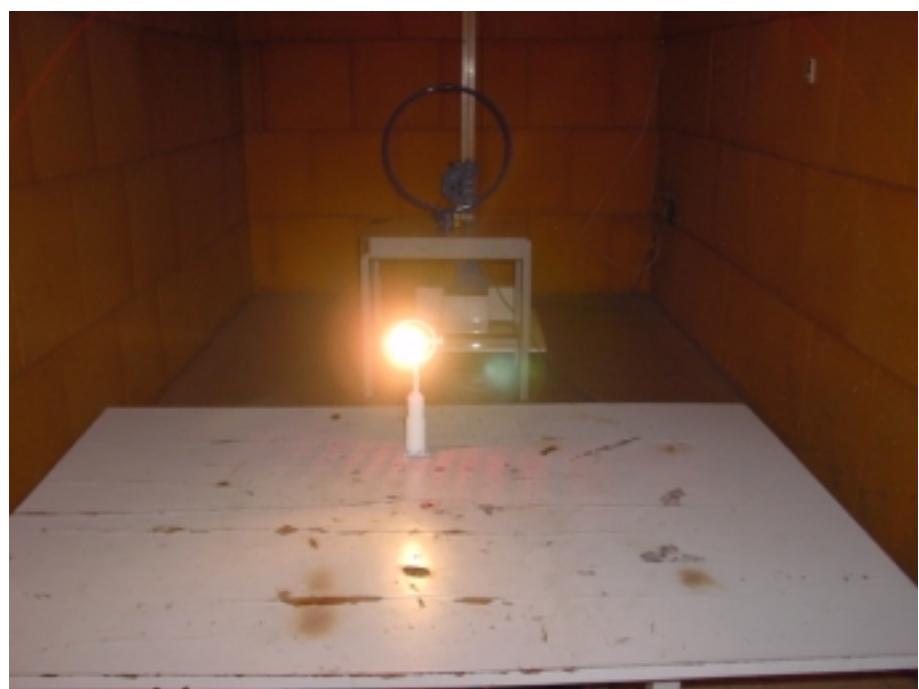
## 4. PHOTOGRAPH

### 4.1.Photos of Power Line Conducted Emission Test



FRONT VIEW OF CONDUCTED EMISSION TEST

### 4.2.Photos of Magnetic Field Emission test



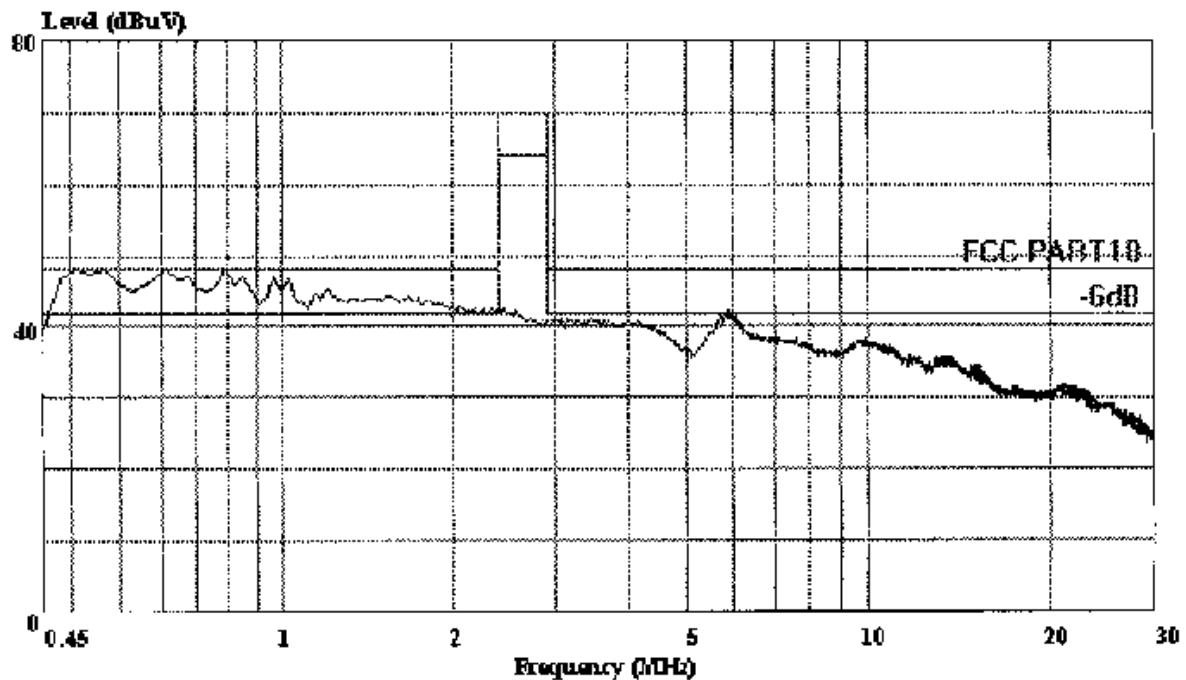
## APPENDIX I



AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Shenzhen Science & Ind Park  
Nantou, Guangdong, China  
Tel: 0755-6639495~7  
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Data#: 5 File#: jia dian bao.EMI Date: 2002-07-20 Time: 18:58:51



AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. (Audix ATC)

Trace:

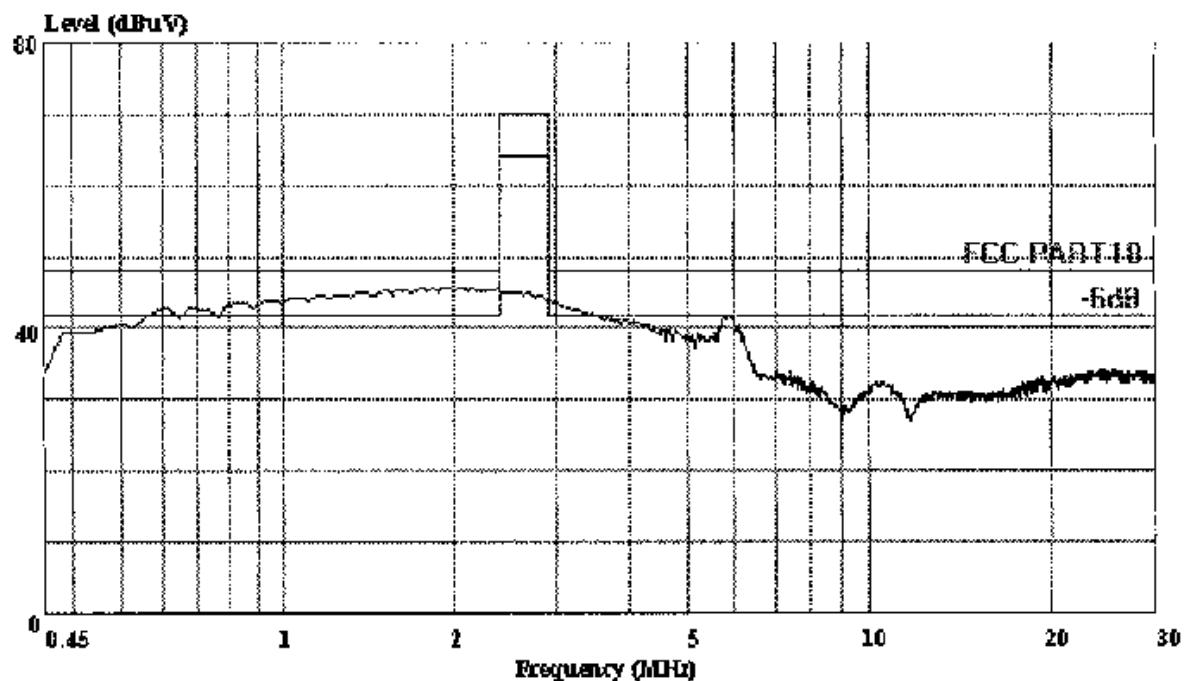
Ref Trace:

Condition: FCC PART18 VA(KNW-407)  
 Ent: : Track Lighting Rated 50W M/N:G90022  
 Manuf: : JIA DIAN BAO  
 OP Cond: : ON  
 Tested By:: Richzhy  
 Test Spec:: 120V/60Hz  
 Comment: : Temp:23.9°C  
 : Humi:55%



Shenzhen Science & Ind Park  
Nantou, Guangdong, China  
Tel: 0755-6639495~7  
Fax: 0755-6632877

Data#: 4 File#: jia dian bao.EMI Date: 2002-07-20 Time: 18:45:49



AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. (Audix ATC)

Trace:

Ref Trace:

Condition: FCC PART18 VB(KW-407)  
 Eut: : Track Lighting Rated 50W M/N:G90022  
 Manuf: : JIA DIAN BAO  
 OP Cond: : ON  
 Tested By:: Richzhy  
 Test Spec:: 120V/60Hz  
 Comment: : Temp:23.9'C  
 : Humi:55%

## APPENDIX II

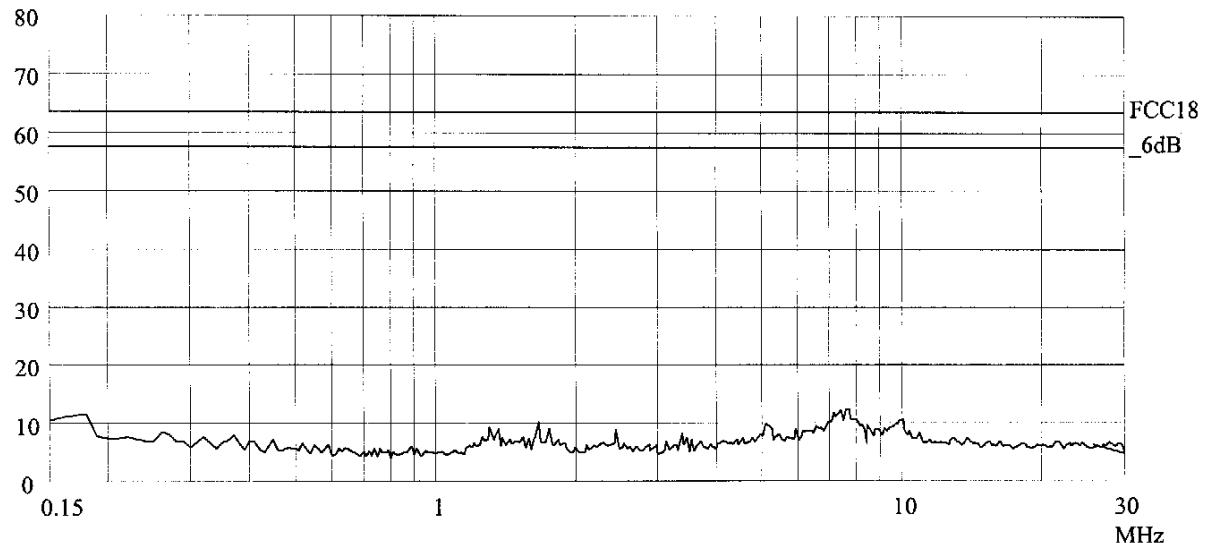
# Emission Test

## FCC PART 18

19. Jul 02 10:19

EUT: Track Lighting Rated 50W M/N:G90022  
 Manuf: Jia Dian Bao  
 On Cond: On  
 Operator: Richzhv  
 Test Spec: AC 120V/60Hz  
 Comment: Temn 25.6'C  
               Humi 56%

dBuV      Mkr : 25.79000MHz 6.2 dBuV



# Emission Test

## FCC PART 18

19. Jul 02 10:34

EUT: Track Lighting Rated 50W M/N:G90022  
 Manuf: Jia Dian Bao  
 On Cond: On  
 Operator: Richzhv  
 Test Spec: AC 120V/60Hz  
 Comment: Temn 25.6'C  
               Humi 56%

dBuV      Mkr : 19.96 kHz 18.2 dBuV

