APPLICATION FOR CERTIFICATION
On Behalf of
Shunde Corso Electronics Co., Ltd.
Electronic Adapter

Model Number: EC30AH
EC36/40AH

Prepared for : Shunde Corso Electronics Co., Ltd.
Damenqu Daliang Town,
Shunde Guangdong China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6 Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

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Report Number : ACS-F02132
Date of Test : Aug.19, 2002
Date of Report : Aug.26, 2002

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TEST REPORT CERTIFICATION

Applicant	:	Shunde Corso Electronics Co., Ltd.
Manufacturer	:	Shunde Corso Electronics Co., Ltd.
EUT Description	:	Electronic Adapter
		(A) MODEL NO. : EC30AH
		EC36/40AH
		(B) SERIAL NO. : F2002082601
		(C) POWER SUPPLY : AC 120V/60Hz

Measurement 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 both radiated and conducted emissions. The measurement results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the 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.

Date of Test : Aug. 19, 2002

Prepared by : Jane Dai / Assistant

Reviewer : Lake Wang / Supervisor

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

Approved & Authorized Signer : Alex Deng Authorized Signature(s)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	Electronic Adapter
Model Number	:	EC30AH EC36/40AH
Applicant	:	Shunde Corso Electronics Co., Ltd. Damenqu Daliang Town, Shunde Guangdong China
Manufacturer	:	Shunde Corso Electronics Co., Ltd. Damenqu Daliang Town, Shunde Guangdong China
Power Cord	:	Unshielded, Detachable 1.0m
Date of Test	:	Aug. 19, 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. Measurement Uncertainty

Conduction Uncertainty	=	± 2.66dB
Radiation Uncertainty	=	± 4.26dB

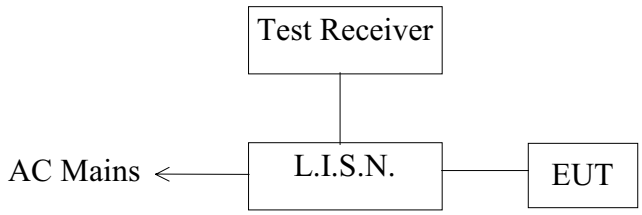
2. POWER LINE CONDUCTED EMISSION TEST

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



(EUT: Electronic Adapter)

2.3. Power Line Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage
	Quasi-Peak Level dB(μV)
450KHz ~ 30MHz	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 equipments 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. Electronic Adapter（EUT)

Model Number	:	EC30AH EC36/40AH,
Serial Number	:	F2002082601
Manufacturer	:	Shunde Corso Electronics Co., Ltd.

2.5. Operating Condition of EUT

2.5.1. Setup the EUT and simulator as shown on 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：	Aug.19, 2002	Temperature：	25℃
EUT ：	Electronic Adapter	Humidity：	56%
Model No.：	EC30AH	Test Mode：	ON
Test Engineer：	Chris		

Frequency MHz	Reading		Limit dB(μV)
	Phase VA dB(μV)	Phase VB dB(μV)	
0.450	*	43.9	48.00
0.452	44.3	*	48.00
0.498	*	44.1	48.00
0.504	**44.5**	*	**48.00**
0.612	*	41.8	48.00
0.614	42.6	*	48.00
1.540	36.8	*	48.00
1.580	*	34.7	48.00
3.580	26.9	*	48.00
3.610	*	24.8	48.00
24.580	*	20.3	48.00
24.730	21.4	*	48.00

Remark： 1. All readings are Quasi-Peak values.
2. The worst emission is detected at 0.504MHz with corrected signal level of 44.5dB(μV) (limit is 48dB(μV)) when the VA side of the EUT is connected to L.I.S.N.

Reviewer : Jake Wang

Date of Test：	Aug.19, 2002	Temperature：	25℃
EUT ：	Electronic Adapter	Humidity：	56%
Model No.：	EC36/40AH	Test Mode：	ON
Test Engineer：	Chris		

Frequency MHz	Reading		Limit dB(μV)
	Phase VA dB(μV)	Phase VB dB(μV)	
0.452	**44.5**	**43.9**	**48.00**
0.494	*	41.7	48.00
0.496	42.7	*	48.00
0.594	41.6	*	48.00
0.596	*	40.5	48.00
0.732	38.4	*	48.00
0.734	*	39.2	48.00
2.160	*	33.5	48.00
2.180	32.5	*	70.00
25.790	20.6	*	48.00
25.810	*	21.2	48.00

Remark： 1. All readings are Quasi-Peak values.

2. The worst emission is detected at 0.452MHz with corrected signal level of 44.5dB(μV) (limit is 48dB(μV)) when the VA side of the EUT is connected to L.I.S.N.

Reviewer : Lake Wang

3. MAGNETIC FIELD EMISSION TEST

3.1. Test Equipment

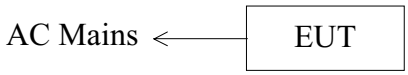
The following test equipments are used during the radiated emission test:

3.1.1. 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

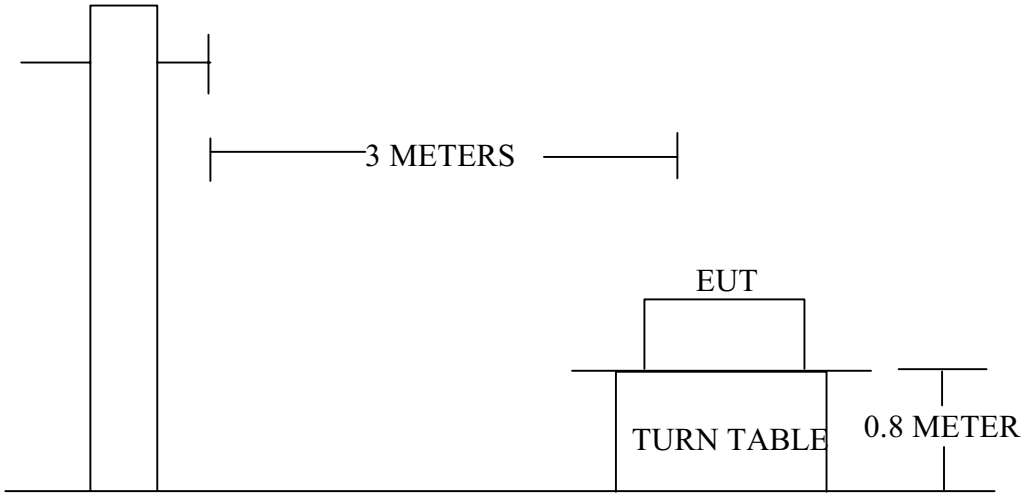
3.2. Block Diagram of Test Setup

3.2.1. Block Diagram of connection between the EUT and simulators



(EUT: Electronic Adapter)

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(μV/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

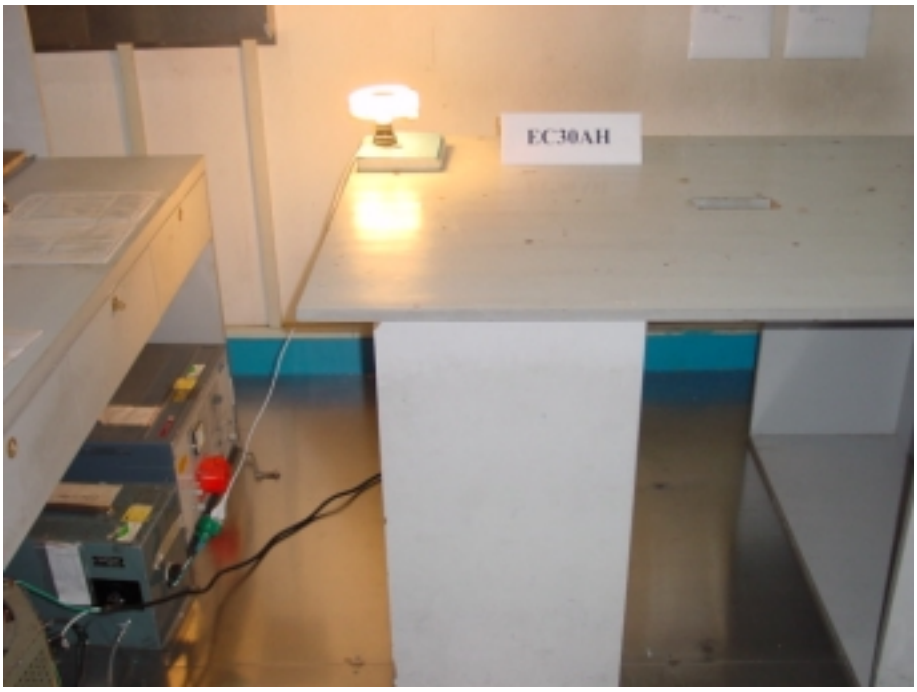
The EUT is placed on a turn table which is 0.8 meter above ground. Measurements are performed at 3m distance with a 0.6m loop antenna as described in 15.2.1 of CISPR 16-1. The antenna shall be vertically installed, with the lower edge of the loop at 1m height above the floor.

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

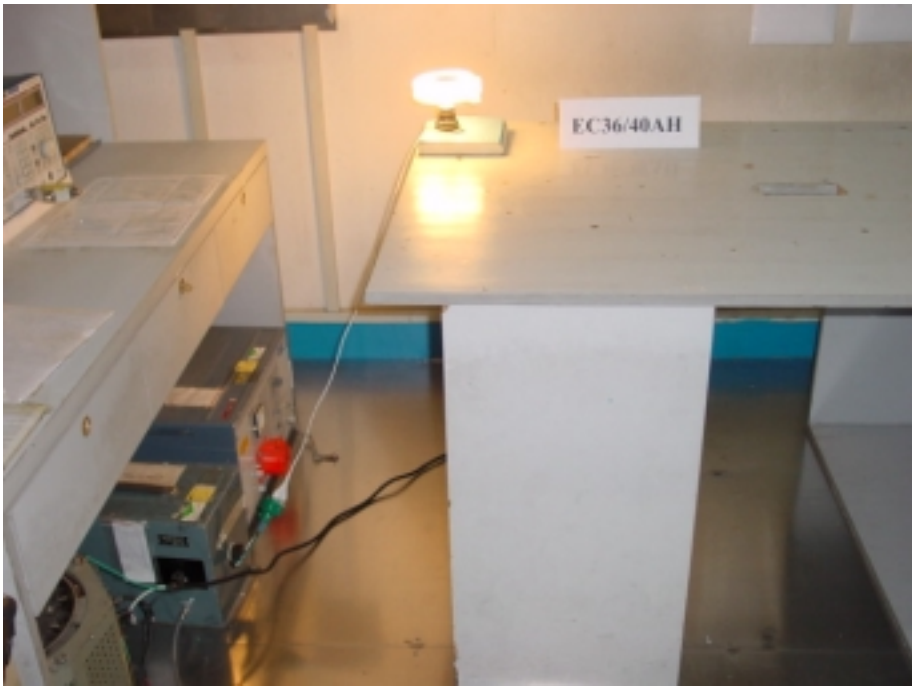
4.1. Photos of Power Line Conducted Emission Test

M/N: EC30AH



FRONT VIEW OF CONDUCTED EMISSION TEST

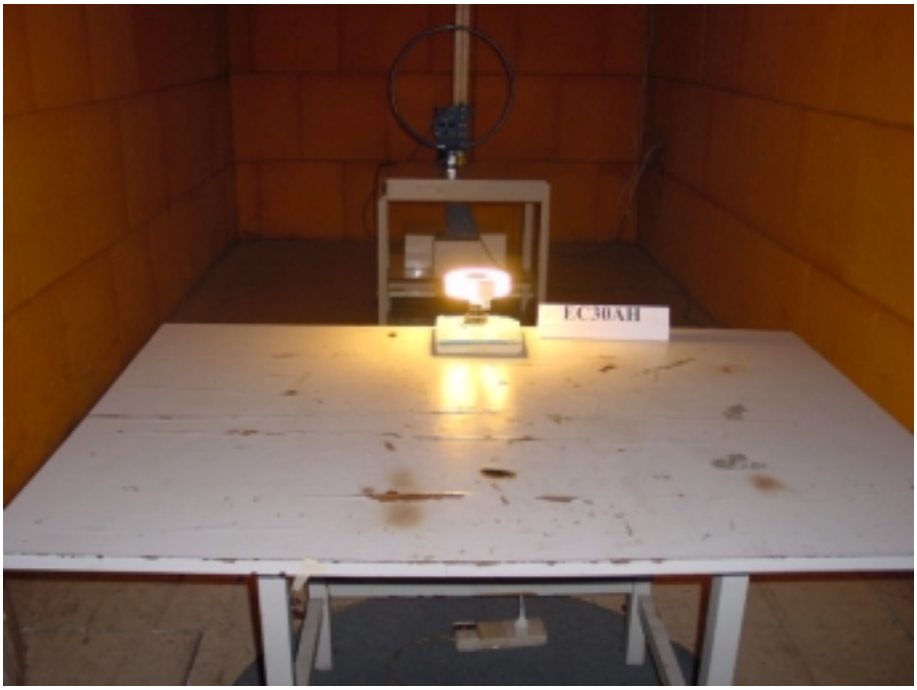
M/N: EC36/40AH



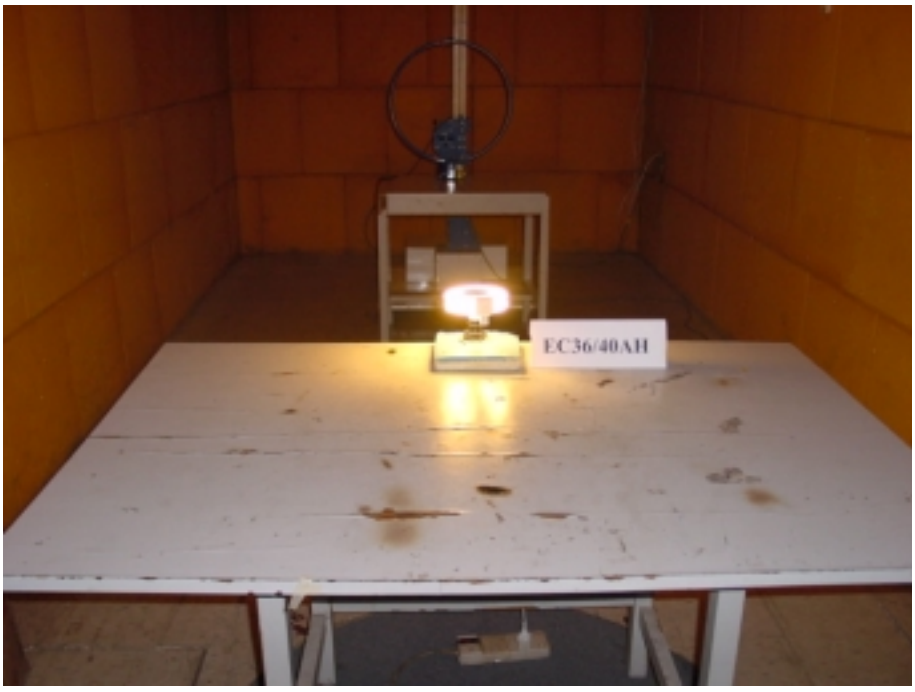
FRONT VIEW OF CONDUCTED EMISSION TEST

4.2. Photos of Magnetic Field Emission test

M/N: EC30AH



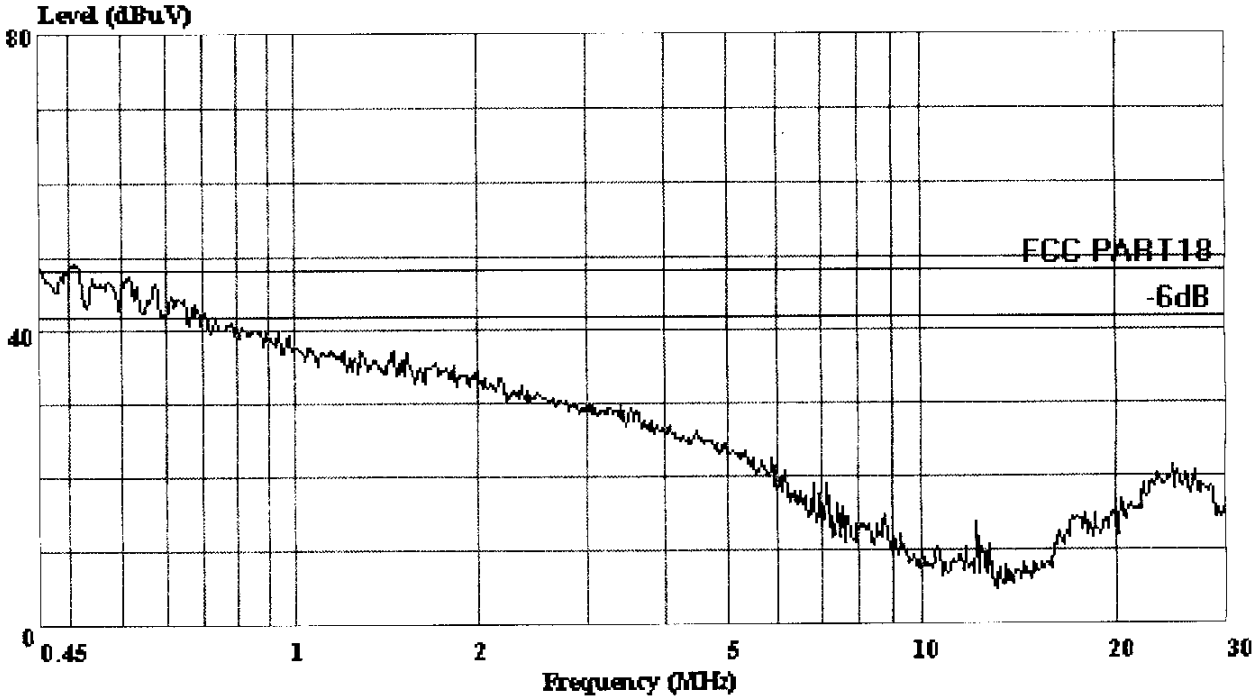
M/N: EC36/40AH



APPENDIX I

AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.
Shenzhen Science & Ind Park
Nantou,Guangdong,China
Tel:0755-26639495~7
Fax:0755-26632877

Data#: 4 File#: Corso.emi Date: 2002-08-19 Time: 10:34:35

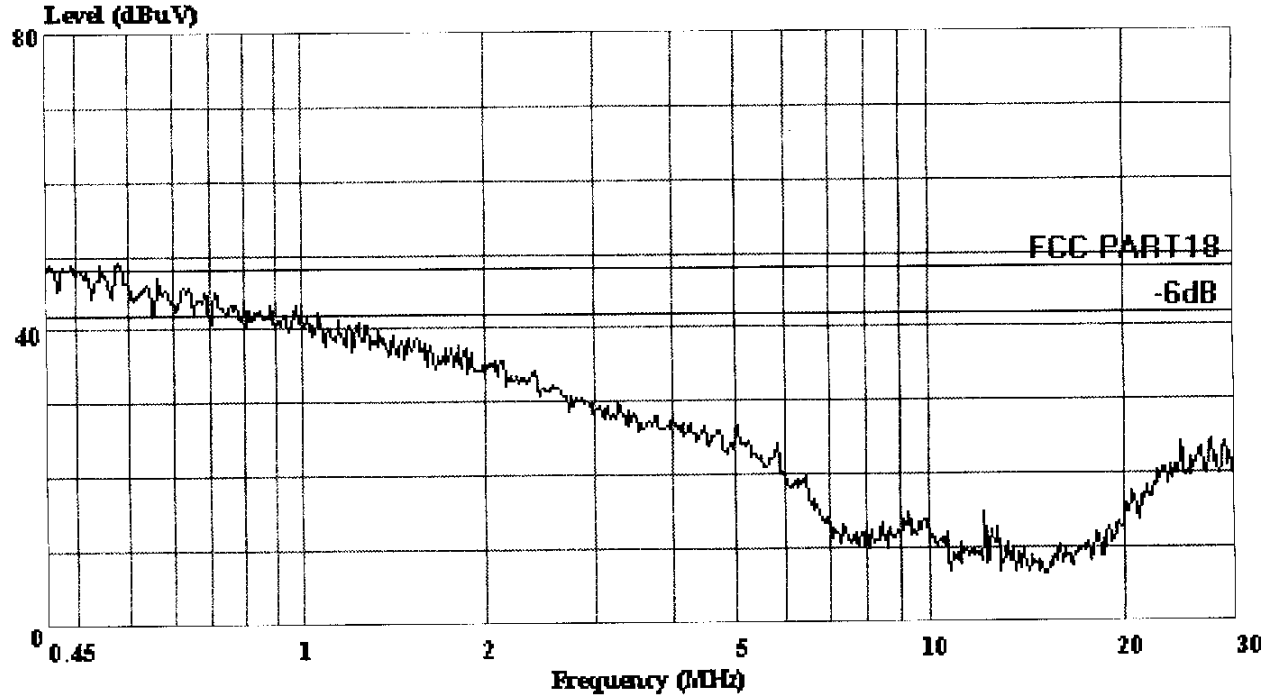


Trace: Ref Trace:

Condition: FCC PART18 VA(KNW-407)
Eut: : ELECTRONIC ADAPTER M/N:EC30AH
OP Cond: : On
Operator: : Chris
Test Spec:: 120V/60Hz
Comment: : Temp:25'C
: Humi:56%

AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.
Shenzhen Science & Ind Park
Nantou,Guangdong,China
Tel:0755-26639495~7
Fax:0755-26632877

Data#: 3 File#: Corso.emi Date: 2002-08-19 Time: 10:22:48



Trace: Ref Trace:

Condition: FCC PART18 VB(KNW-407)
Eut: : ELECTRONIC ADAPTER M/N:EC30AH
OP Cond: : On
Operator: : Chris
Test Spec:: 120V/60Hz
Comment: : Temp:25'C
: Humi:56%

AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.
Shenzhen Science & Ind Park
Nantou,Guangdong,China
Tel:0755-26639495~7
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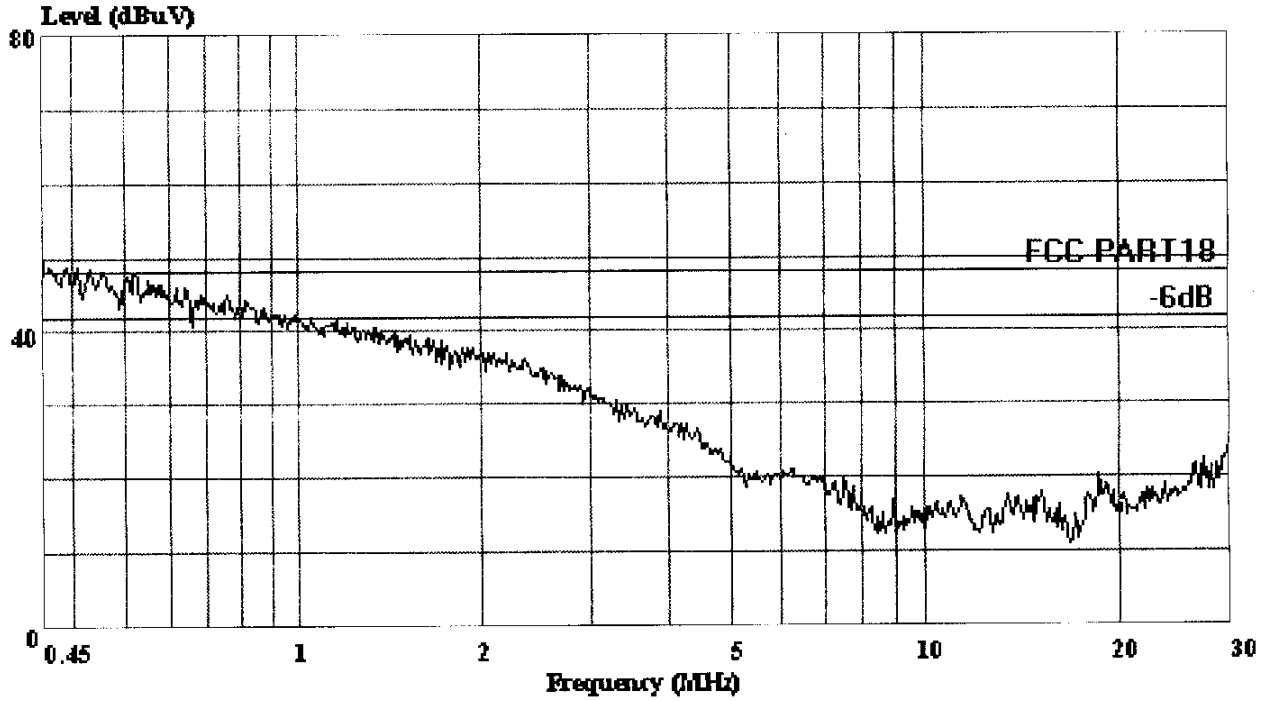

Trace: Ref Trace:

Condition: FCC PART18 VA(KNW-407)
Eut : ELECTRONIC ADAPTER M/N:EC36/40AH
OP Cond: : On
Operator: : Chris
Test Spec:: 120V/60Hz
Comment: : Temp:25'C
: Humi:56%

AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Shenzhen Science & Ind Park
Nantou,Guangdong,China
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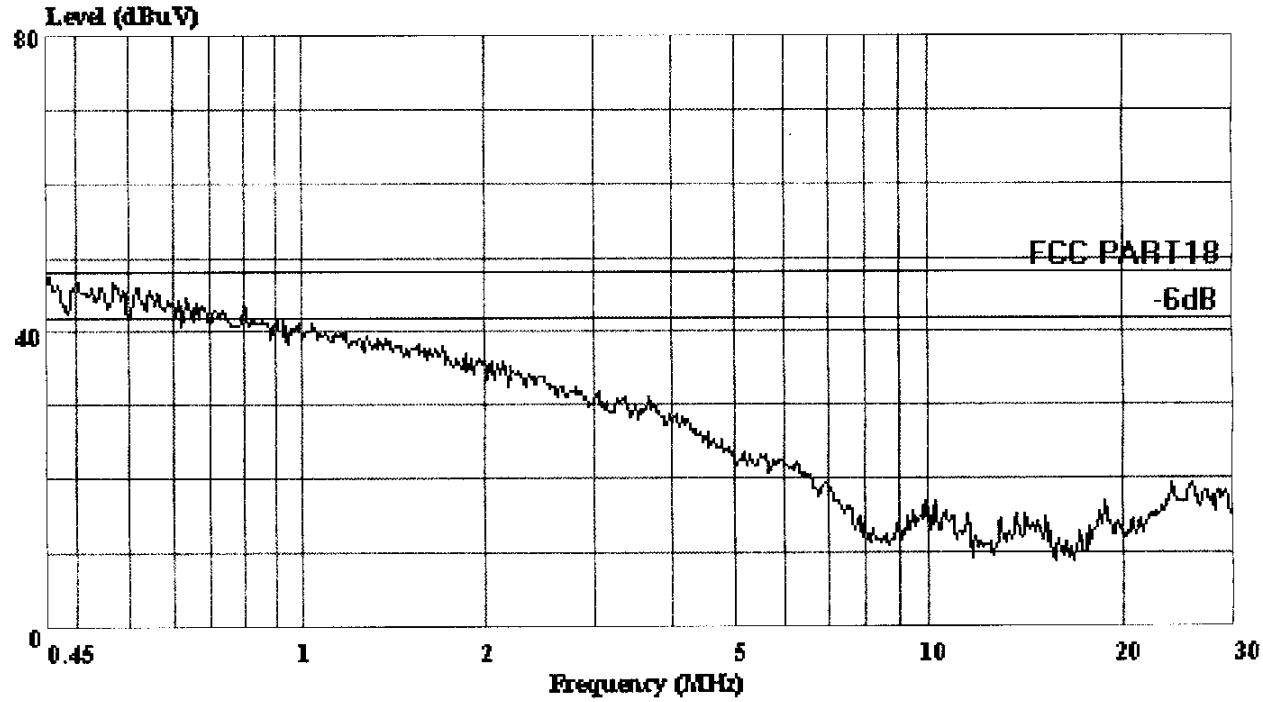
Data#: 1 File#: Corso.emi Date: 2002-08-19 Time: 10:00:02



Trace: Ref Trace:

Condition: FCC PART18 VB(KNW-407)
Eut: : ELECTRONIC ADAPTER M/N:EC36/40AH
OP Cond: : On
Operator: : Chris
Test Spec:: 120V/60Hz
Comment: : Temp:25'C
: Humi:56%

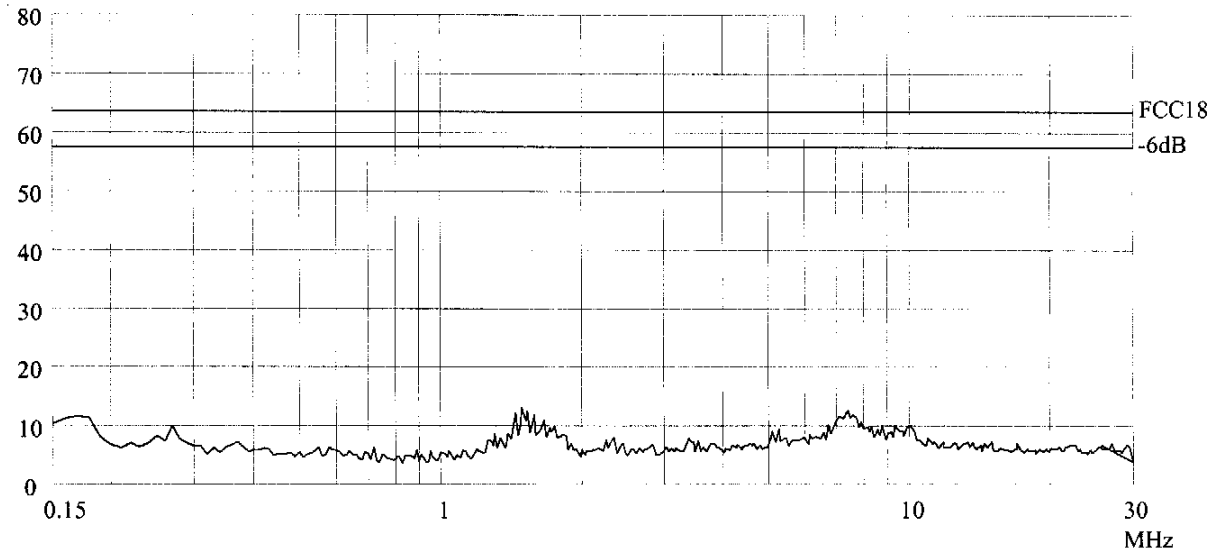
APPENDIX II

Emission Test
FCC PART 18

19. Aug 02 12:08

EUT: ELECTRONIC ADAPTER M/N:EC30AH
Manuf: SHUNDE CORSO ELECTRONIC CO., LTD.
On Cond: On
Operator: Chris
Test Spec: AC 120V/60Hz
Comment: Temp 25.6'C
Humi 56%

dBuV Mkr : 25.78000MHz 6.6 dBuV

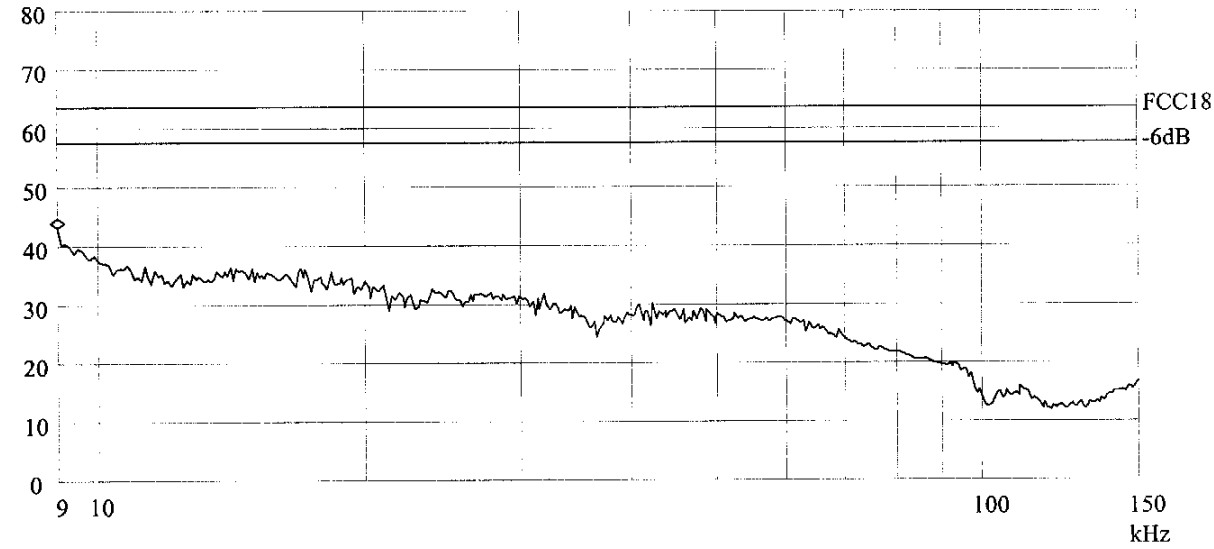


Emission Test
FCC PART 18

19. Aug 02 12:21

EUT: ELECTRONIC ADAPTER M/N:EC30AH
Manuf: SHUNDE CORSO ELECTRONIC CO., LTD.
On Cond: On
Operator: Chris
Test Spec: AC 120V/60Hz
Comment: Temp 25.6'C
Humi 56%

dBuV Mkr : 9.00 kHz 43.1 dBuV

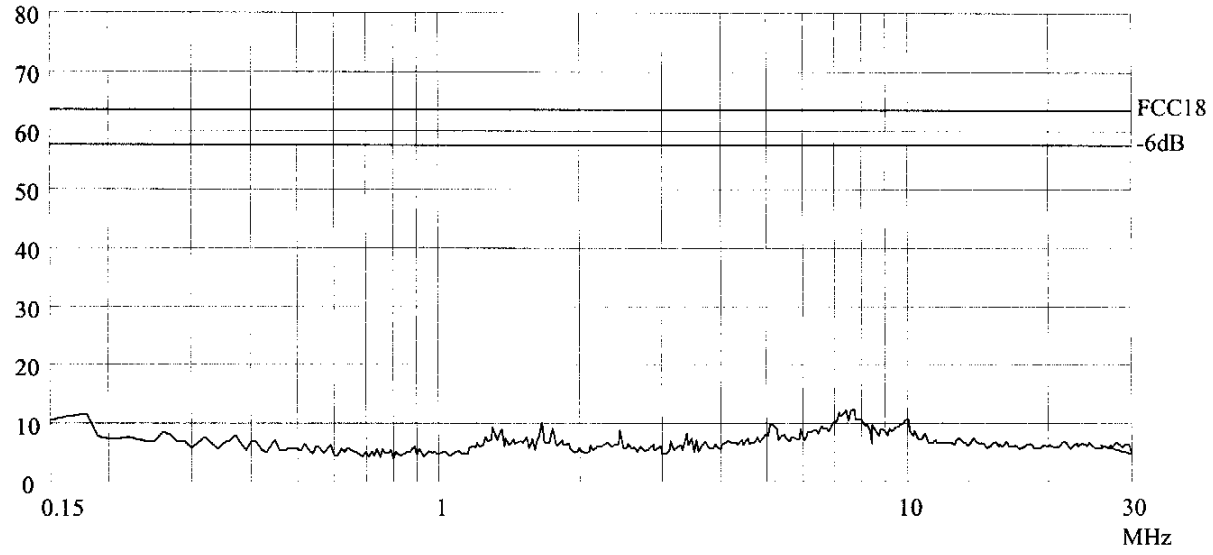


Emission Test
FCC PART 18

19. Aug 02 11:39

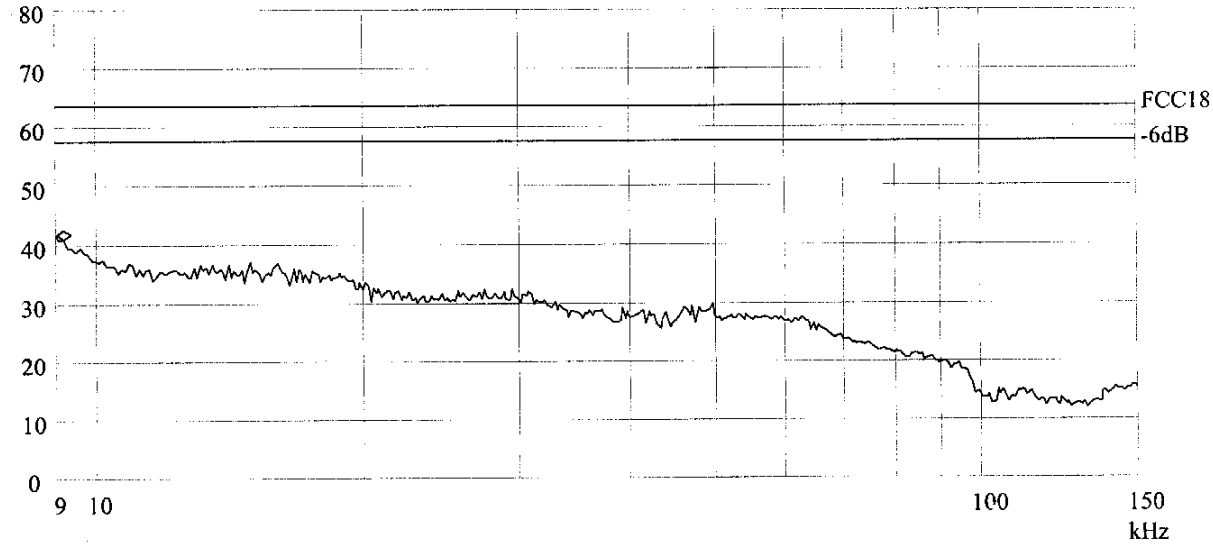
EUT: ELECTRONIC ADAPTER M/N:EC36/40AH
Manuf: SHUNDE CORSO ELECTRONIC CO., LTD.
On Cond: On
Operator: Chris
Test Spec: AC 120V/60Hz
Comment: Temp 25.6'C
Humi 56%

dBuV Mkr : 25.79000MHz 6.2 dBuV



Emission Test
FCC PART 18

19. Aug 02 11:58

EUT: ELECTRONIC ADAPTER M/N:EC36/40AH
Manuf: SHUNDE CORSO ELECTRONIC CO., LTD.
On Cond: On
Operator: Chris
Test Spec: AC 120V/60Hz
Comment: Temp 25.6'C
Humi 56%

dBuV Mkr : 9.20 kHz 41.0 dBuV