FCC PART 18

MEASUREMENT AND TEST REPORT

For

TDC Power Products Co., Ltd

Room C13, 5F, #210, Sect.3, Ta-Tung Rd. Shi-Chih City, Taipei Hsien, Taiwan

FCC ID: R8OB055L2-A

November 3, 2004

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

Test Engineer:	Sam Lin
Report Number	RSZ04092984
Test Date:	November 2, 2004
Reviewed By:	Lisa Zhu
Prepared By:	Bay Area Compliance Lab Corp. (ShenZhen) 6/F, the 3nd 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

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *TDC Power Products Co., Ltd* 's model *EBA-055L2A* or the "EUT" as referred to in this report is a *Electronic Ballast* which measures approximately 24.0cm L x 4.3cm W x 3.0cm H, rated input voltage: AC 120 V/60 Hz.

** The test data gathered are from production sample, serial number: 0000208, provided by the manufacturer.*

Objective

The following test report is prepared on behalf of *TDC Power Products 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 is to determine compliance with FCC rules.

Related Submittal(s)/Grant(s)

No Related Submittals.

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 radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 Meters.

Test Facility

Test site at Bay Area Compliance Laboratory Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2001 and FCC MP-5.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-1298 and R-1234. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

External Cable

Cable Description	Length (M)	From/Port	To
Unshielded Detachable Power Line	1.8	EUT	AC Power

SYSTEM TEST CONFIGURATION

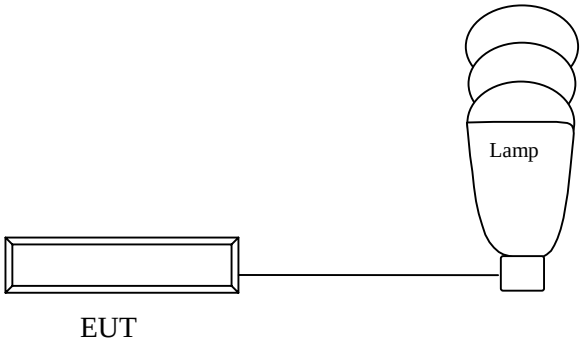
Justification

The EUT was tested under the normal operating conditions stated in the instructions by the manufacturer.

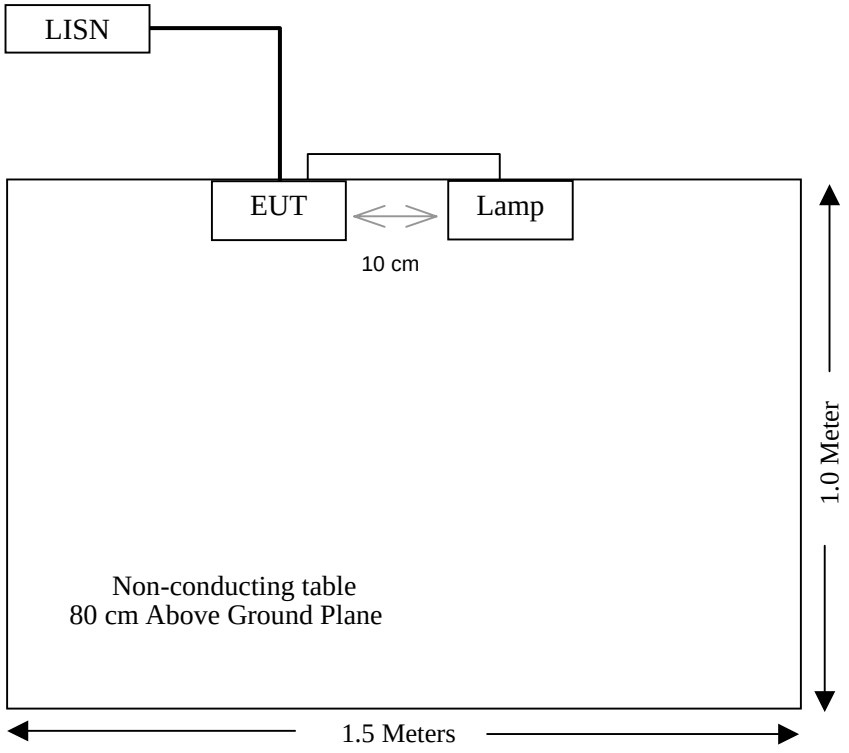
Equipment Modifications

The EUT samples provided were reported by the manufacturer to be representative production samples.

Configuration of Test System



Test Setup Block Diagram



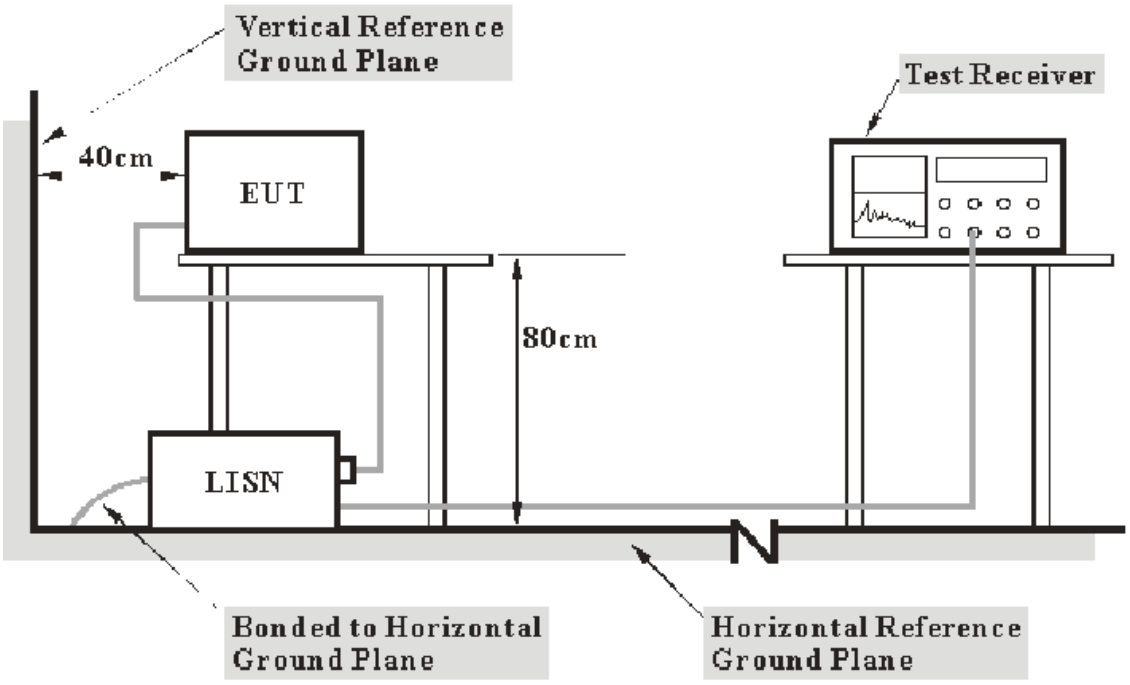
CONDUCTED EMISSION

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 BACL 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 measurement procedure. The specification used was the FCC Part 18 limits.

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

EMI Test Receiver Setup

The EMI Test Receiver was set to investigate the spectrum from 450 kHz to 30 MHz.

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

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde &Schwarz	A.M.N	ESH2-Z5	892107/021	2003-11-20	2004-11-19
Rohde &Schwarz	EMI Test Receiver	ESCS30	830245/006	2003-11-20	2004-11-19
Rohde &Schwarz	EMI Test Receiver	ESH3Z2	DE25985	2003-11-20	2004-11-19
THERMAX	Coaxial Cable	RGS-142	EC001	2003-11-20	2004-11-19
Compower	LISN	LT-200	12208	2004-10-29	2005-10-28
Compower	LISN	LT-200	12005	2004-10-29	2005-10-28
Fluke	True RMS Multimeter	187	78540402	2004-3-23	2005-3-22

*** Statement of Traceability: BACL** 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 were performed on the six (6) highest emissions of the EUT.

All data was recorded in the peak detection mode.

Test Data

Date of Test	:	November 2, 2004	Temperature	:	27℃
EUT	:	Electronic Ballast	Humidity	:	65%
M/N	:	EBA-055L2A	Operating Mode	:	54W
S/N	:	0000208	Test Engineer	:	Sam Lin

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBμV	Margin dB
19.770	43.60	PK	Neutral	48.00	-4.40
15.490	42.80	PK	Neutral	48.00	-5.20
0.510	42.70	PK	Line	48.00	-5.30
20.960	41.60	PK	Line	48.00	-6.40
0.495	41.20	PK	Neutral	48.00	-6.80
0.715	40.00	PK	Line	48.00	-8.00

Date of Test	:	November 2, 2004	Temperature	:	27℃
EUT	:	Electronic Ballast	Humidity	:	65%
M/N	:	EBA-055L2A	Operating Mode	:	55W
S/N	:	0000208	Test Engineer	:	Sam Lin

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBµV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBµV	Margin dB
23.180	44.90	PK	Line	48.00	-3.10
22.515	44.40	PK	Neutral	48.00	-3.60
0.450	41.40	PK	Neutral	48.00	-6.60
0.470	40.60	PK	Line	48.00	-7.40
0.495	40.10	PK	Neutral	48.00	-7.90
0.530	39.00	PK	Line	48.00	-9.00

Date of Test	:	November 2, 2004	Temperature	:	27℃
EUT	:	Electronic Ballast	Humidity	:	65%
M/N	:	EBA-055L2A	Operating Mode	:	108W
S/N	:	0000208	Test Engineer	:	Sam Lin

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBμV	Margin dB
21.505	41.20	PK	Line	48.00	-6.80
15.365	40.90	PK	Line	48.00	-7.10
0.470	40.90	PK	Line	48.00	-7.10
0.450	40.80	PK	Neutral	48.00	-7.20
15.305	40.70	PK	Neutral	48.00	-7.30
19.640	40.50	PK	Neutral	48.00	-7.50

Date of Test	:	November 2, 2004	Temperature	:	27℃
EUT	:	Electronic Ballast	Humidity	:	65%
M/N	:	EBA-055L2A	Operating Mode	:	110W
S/N	:	0000208	Test Engineer	:	Sam Lin

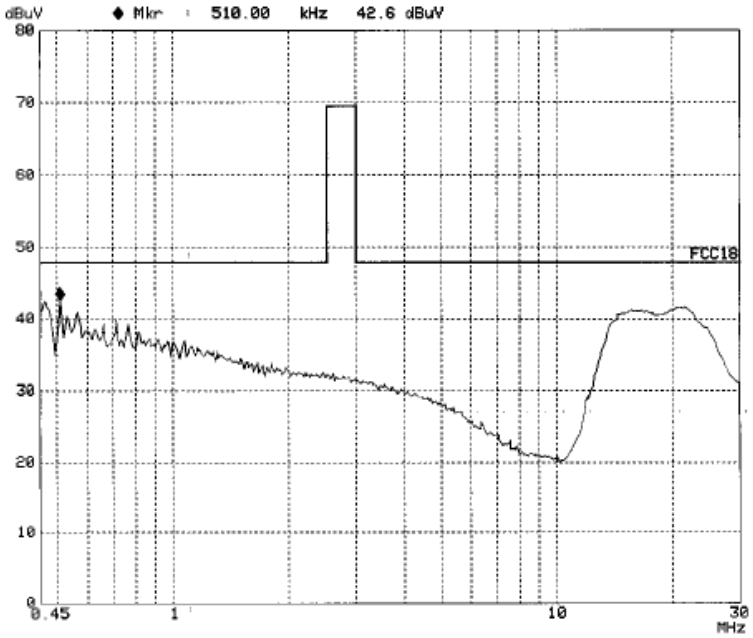
LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBμV	Margin dB
21.905	42.50	PK	Neutral	48.00	-5.50
15.615	42.00	PK	Line	48.00	-6.00
0.475	40.30	PK	Line	48.00	-7.70
0.490	40.30	PK	Line	48.00	-7.70
0.475	37.00	PK	Neutral	48.00	-11.00
0.580	35.40	PK	Neutral	48.00	-12.60

Test Result: Pass

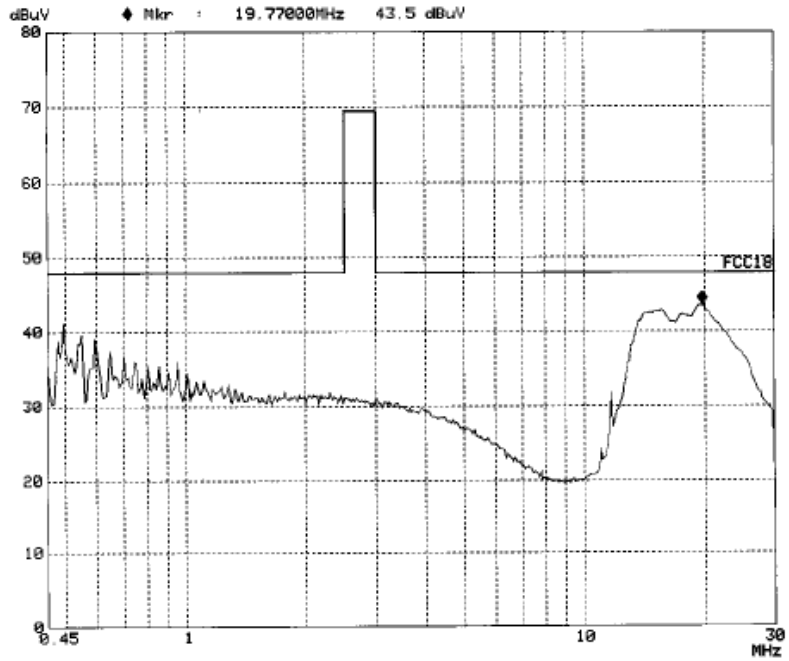
Plot(s) of Test Data

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

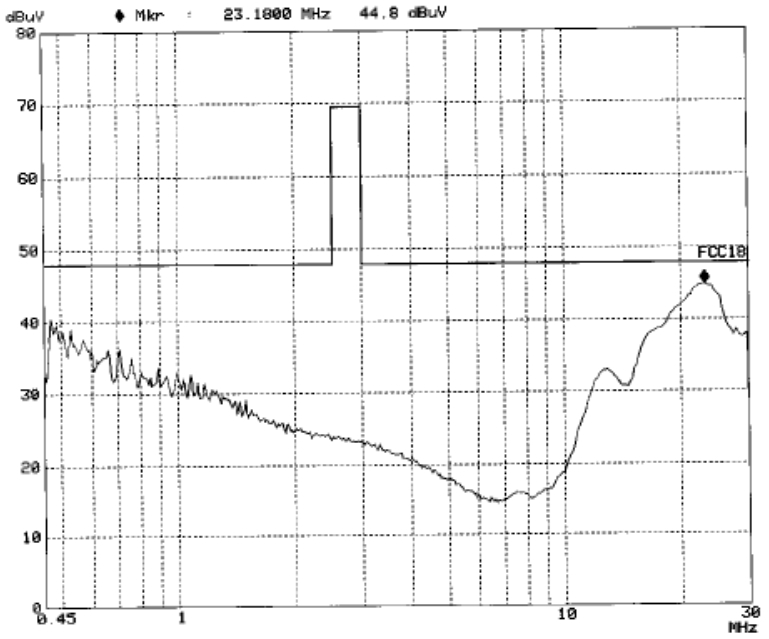
(54W):
Line:



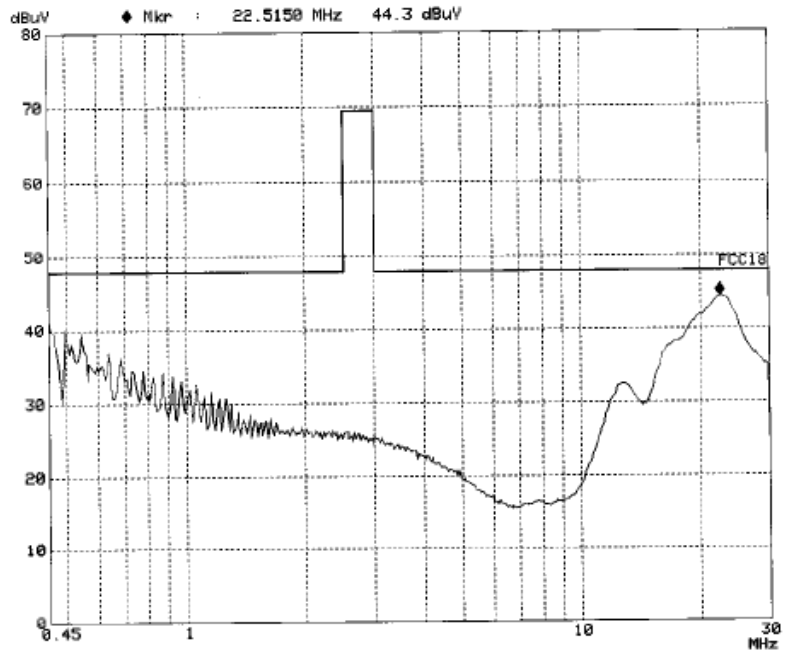
Neutral:



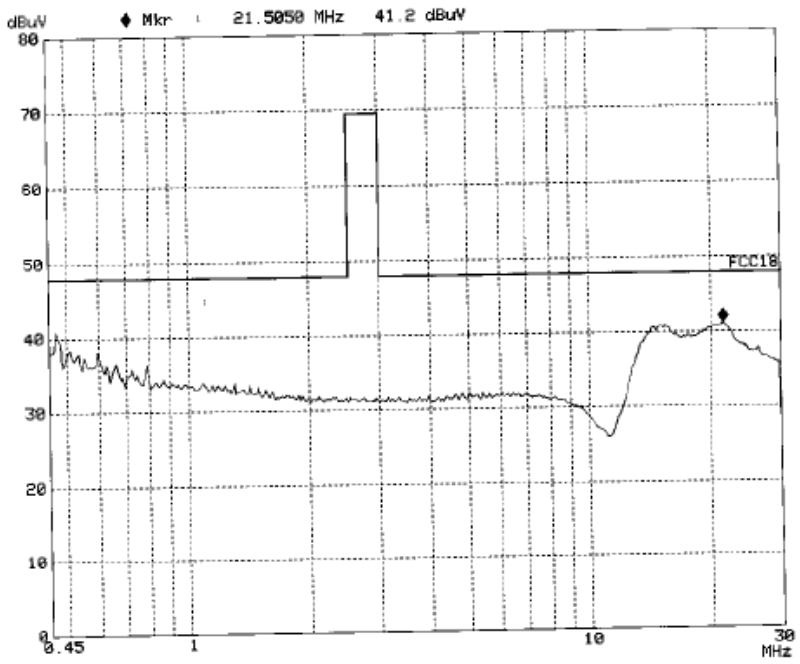
(55W):
Line:



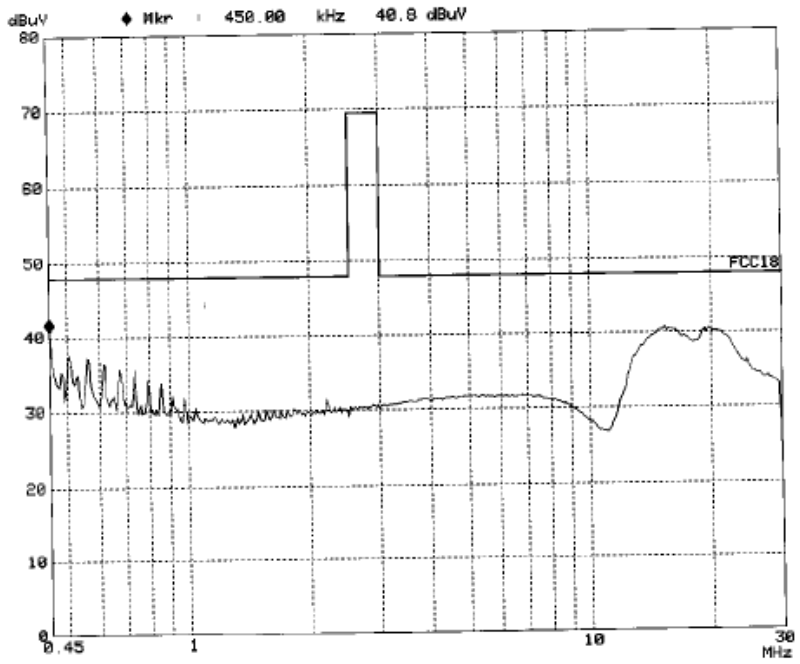
Neutral:



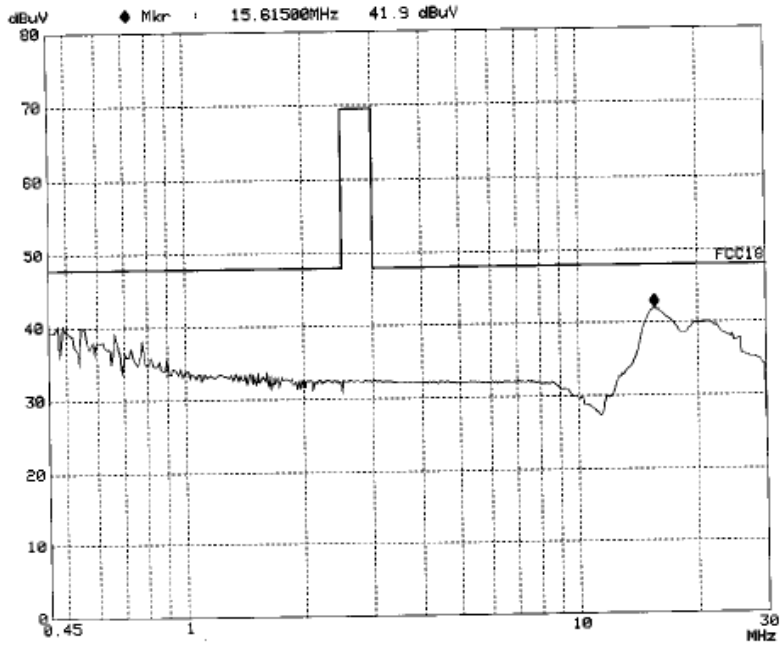
(108W):
Line:



Neutral:



(110W):
Line:



Neutral: