CMA Testing and Certification Laboratories
廠商會檢定中心

TEST REPORT

Report No.	:	AG022333-001	Date :	2006 September 26
Application No.	:	LG214415(6)		
Applicant	:	Ngai Lik Electronics Trading Limited Rm. 29-32, 8/F., Block B, Focal Industrial Centre, 21 Man Lok Street, Hung Hom, Kowloon Hong Kong		
Sample Description	:	One(1) submitted sample(s) stated to be LCOS Mini Projector of Model No. PJX500A Rating : AC 100-240V to DC 15V adaptor No. of submitted sample : One(1) set(s) ***		
Date Received	:	2006 June 26		
Test Period	:	2006 June 26 – 2006 August 24		
Test Requested	:	FCC Part 15 Certification.		
Test Method	:	47 CFR Part 15 (10-1-05 Edition) ANSI C63.4 – 2003		
Test Result	:	See attached sheet(s) from page 2 to 12.		
Conclusion	:	The submitted sample was found to comply with requirement of FCC Part 15 Subpart B.		

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____
Danny Chui
Deputy Manager - EL. Division

FCC ID: CEIPJX500A

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Room 1302, Yan Hing Centre, 9-13 Wong Chuk Yeung St.., Fo Tan, Shatin, Hong Kong.
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1 General Information

1.1 General Description

The equipment under test (EUT) is a projector for LCOS Mini Projector. It operates at 28.6363MHz for Video Decoder ADV7403 and 14.31818MHz for Video Scalar Zipro2. The Micro Controller MTV230V is operates at 12MHz and generated by crystal. The EUT is powered by AC 100-240V to DC 15V adaptor. It has eight button keys to adjust the location of the picture and functions. The signal input terminal is located on left side and it supports VGA, Components Video, S-Video and 3.5mm Audio. It has IR receiver to support the remote control.

The brief circuit description is saved with filename: OpDes.pdf

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1.2 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. A shielded room is located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

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1.3 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.
EMI Test Receiver	R&S	ESCS30	100001
Broadband Antenna	Schaffner	CBL6112B	2692
LISN	R&S	ESH3-Z5	100038
Spectrum Analyzer	R&S	FSP 30	100628

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2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

2.2 Test Result

All other measurements are well below the limit. Thus, those highest emissions were presented in next page.

The emissions meeting the requirement of section 15.109 are based on measurements employing the CISPR quasi-peak detector below 1000MHz and average detector for frequencies above 1000MHz.

It was found that the EUT meet the FCC requirement.

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2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Operation Mode: PC Connection

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBμV/m)	Antenna and Cable factor (dB)	Field Strength (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
32.020	V	19.1	18.4	37.5	40.0	- 2.5
40.830	V	18.4	12.9	31.3	40.0	- 8.7
170.030	H	30.2	10.4	40.6	43.5	- 2.9
204.032	H	31.2	9.7	40.9	43.5	- 2.6
237.995	H	31.2	9.7	40.9	46.0	- 5.1
251.596	H	26.6	13.9	40.5	46.0	- 5.5
272.181	H	30.1	13.9	44.0	46.0	- 2.0
329.332	H	25.3	14.9	40.2	46.0	- 5.8
340.080	H	28.5	14.9	43.4	46.0	- 2.6
476.100	V	22.3	17.7	40.0	46.0	- 6.0

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Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Operation Mode: Stand Alone

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBμV/m)	Antenna and Cable factor (dB)	Field Strength (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
136.034	H	22.4	12.4	34.8	43.5	- 2.5
229.083	H	34.3	9.7	44.0	46.0	- 8.7
272.660	H	30.1	13.9	44.0	46.0	- 2.9
286.350	H	28.1	13.9	42.0	46.0	- 2.6
310.267	H	26.6	14.9	41.5	46.0	- 5.1
340.100	H	24.5	14.9	39.4	46.0	- 5.5
343.624	H	24.1	14.9	39.0	46.0	- 2.0
400.892	H	22.9	17.7	40.6	46.0	- 5.8
408.120	H	23.1	17.7	40.8	46.0	- 2.6
680.183	H	19.8	21.2	41.0	46.0	- 6.0

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3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

The PC connected mode has been tested. The EUT connecting with VGA and the measurement Data was indicated in Appendix. The result showed that the EUT met the FCC requirement.

3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filing, the documents are saved with filename TestRpt2.pdf

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4 Photograph

4.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup10.jpg

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho12.jpg.

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5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

5.1 Bandwidth

N/A

5.2 Duty cycle

N/A

5.3 Transmission time

N/A

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6 Appendices

A1	Photos of the set-up of Radiated Emissions	2	pages
A2	Photos of the set-up of Conducted Emissions	3	pages
A3	Photos of External Configurations	2	pages
A4	Photos of Internal Configurations	6	pages
A5	ID Label/Location	1	page
A6	Conducted Emission Measurement Data	2	pages
A7	Block Diagram	1	page
A8	Schematics Diagram	5	pages
A9	User Manual	20	pages
A10	Operation Description	1	page

***** End of Report *****

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