

APPLICATION FOR CERTIFICATION

On Behalf of

SANYO Electronics (DONG GUAN) CO., LTD.

LCD Projector

**Model No.: PLC-XU4000, PLC-XU4000K, PLC-XK4000K,
PLC-XU4010C, PLC-XU4050C, LP-XU4000, LV-7490**

FCC ID: WS310KA2AC00

**Prepared for : SANYO Electronics (DONG GUAN) CO., LTD.
Hong Ye Industry Area, TangXia Town, DongGuan City,
Guangdong Prov., China**

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

Tel: (0755) 26639496

**Report Number : ACS-F11032
Date of Test : Feb.07~12, 2011
Date of Report : Feb.15, 2011**

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TEST REPORT CERTIFICATION

Applicant : SANYO Electronics (DONG GUAN) CO., LTD.
Manufacturer : SANYO Electric Co., Ltd. Digital System Company
EUT Description : LCD Projector
FCC ID : WS310KA2AC00
(A)MODEL NO. : PLC-XU4000, PLC-XU4000K,
PLC-XK4000K, PLC-XU4010C,
PLC-XU4050C, LP-XU4000, LV-7490
(B)SERIAL NO. : N/A
(C)POWER SUPPLY : AC 100-240V, 50/60Hz
(D)TEST VOLTAGE : AC 120V/60Hz

Test standard and procedure used:

FCC Rules and Regulations Part 15 Subpart B Class B 2008, ANSI C63.4-2009

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 15 Subpart B limits for radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of tests. Also, this report shows that 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.

Date of Test : Feb.07~12, 2011 Report of date: Feb.15, 2011

Prepared by : Selina Liu Reviewer by : Jamy Yu
Selina Liu / Assistant Jamy Yu / Supervisor



Approved & Authorized Signer : Ken Lu
Ken Lu / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Power Line Conducted Emission Test	FCC Part 15: 2008 ANSI C63.4: 2009	Class B	PASS
Radiated Emission Test	FCC Part 15: 2008 ANSI C63.4: 2009	Class B	PASS

2. GENERAL INFORMATION

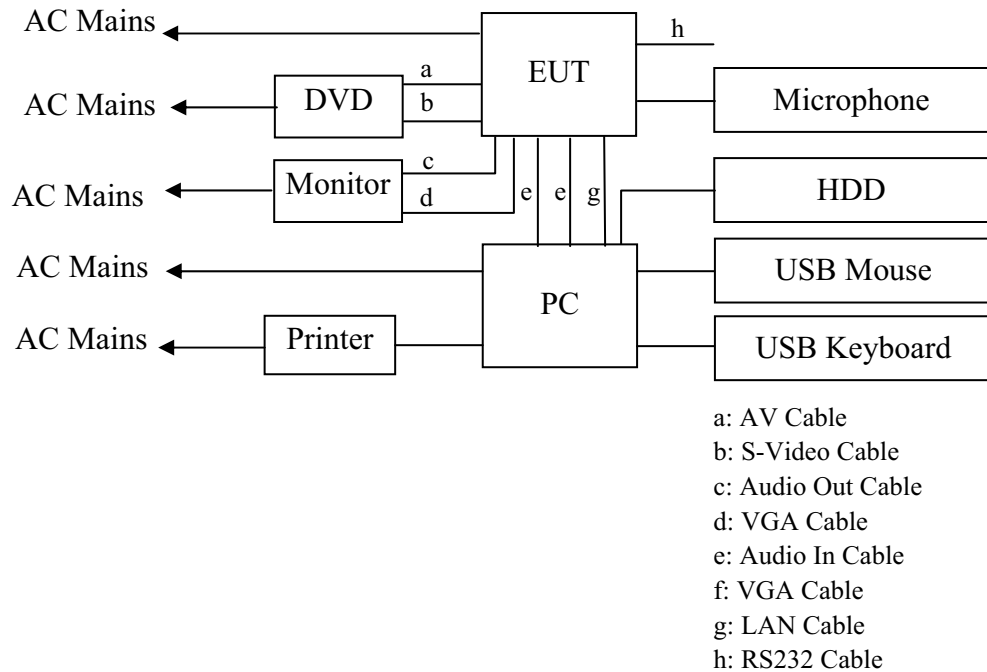
2.1. Description of Device (EUT)

Description	: LCD Projector
Model Number	: PLC-XU4000, PLC-XU4000K, PLC-XK4000K, PLC-XU4010C, PLC-XU4050C, LP-XU4000, LV-7490 PLC-XU4000K, PLC-XK4000K, PLC-4010C, PLC-XU4050C are same as PLC-XU4000 except for model name and rating (100-120V is deleted) LP-XU4000 is for Japan use, the deference is model name rating. * LV-7490 is "Canon brand model" Difference is as below. 1. Brand name as below 2. Manufacturer name is Canon (China) Co., Ltd. 3. Shape of front cabinet is slightly different from modified PLC-XU4000. 4. Color of the cabinet. 5. Type of remote controller is MXCP.
Applicant	: SANYO Electronics (DONG GUAN) CO., LTD. Hong Ye Industry Area, TangXia Town, DongGuan City, Guangdong Prov., China
Manufacturer	: SANYO Electric Co., Ltd. Digital System Company 1-1, Sanyo-cho, Daito-shi, Osaka, Japan.
Max. Work Frequency	: 166MHz
Date of Test	: Feb.07~12, 2011
Date of Receipt	: Jan.16, 2011
Sample Type	: Prototype production

2.2. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	Personal Computer	-	Lenovo	M46000	SS05730806	<input type="checkbox"/> FCC ID <input checked="" type="checkbox"/> BSMI ID: R33002
	Power Cord: Unshielded, Detachable, 1.5m Audio In Cable: Shielded, Detachable, 1.8m VGA Cable: Shielded, Detachable, 1.8m (with two cores) RS232 Cable: Shielded, Detachable, 3.0m					
2.	LCD Monitor	ACS-EMC-LM07R	DELL	3008WFPt	CN-0RW915-71618-846-397L	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R3A002
	Power Cord: Unshielded, Detachable, 1.8m Audio out Cable: Shielded, Detachable, 1.8m VGA Cable: Shielded, Detachable, 1.8m (with two cores)					
3.	USB Keyboard	ACS-EMC- K03R	DELL	SK-8115	CN-ODJ313-71616-711-04WJ	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: T3A002
	Data Cable: shielded, Undetachable, 2.0m					
4.	USB Mouse	ACS-EMC-M03R	DELL	M056UO	512023253	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R41108
	Data Cable: shielded, Undetachable, 1.8m					
5.	Printer	ACS-EMC-PT04	HP	C9079A	-	<input type="checkbox"/> FCC ID <input checked="" type="checkbox"/> BSMI ID
	USB Cable: shielded, Detachable, 1.5m Power Cord: Unshielded, Detachable, 1.8m Power Adaptor: HP, 0957-2119, DC Cable: Unshielded, Detachable, 1.5m					
6.	HDD	ACS-EMC-HDD02	Terasys	F12-UF	A0100215-5390018	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: 4912A022
	USB Cable: Shielded, Detachable, 1.8m					
7.	DVD Player	ACS-EMC-DVD01	DENON	DVD-3910	4098400342E	<input type="checkbox"/> FCC ID <input type="checkbox"/> BSMI ID
	AV Cable: Unshielded, Detachable, 1.5m S-Video Cable: Unshielded, Detachable, 1.5m Power Cord: Unshielded, Detachable, 1.8m					
8.	Microphone	ACS-EMC-MIC02	SONCN	SM-300	N/A	<input checked="" type="checkbox"/> FCC DoC <input type="checkbox"/> BSMI ID
	Cable: Shielded, Undetachable, 1.7m					

2.3. Block Diagram of connection between EUT and simulators



(EUT: LCD Projector)

2.4. Test Facility

Site Description

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

3m Anechoic Chamber : Mar. 31, 2009 File on Federal Communication
Commission
Registration Number: 90454

3m & 10m Anechoic Chamber : Dec. 30, 2009 File on Federal Communication
Commission
Registration Number: 794232

EMC Lab. : Accredited by DATech, German
Registration Number: DAT-P-091/99-01
Feb. 02, 2009

Accredited by NVLAP, USA
NVLAP Code: 200372-0
Apr.01, 2010

2.5. Test Uncertainty (95% confidence levels, k=2)

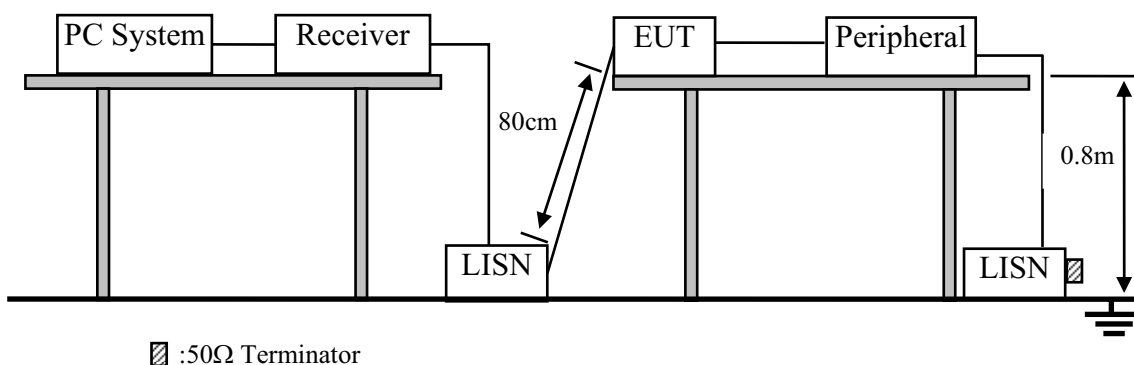
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 2 Conduction	3.64 dB (9kHz to 150kHz)
	3.22 dB (150kHz to 30MHz)
Uncertainty for Radiation Emission test in 10m chamber (Distance: 10m)	4.86 dB (30~200MHz, Polarize: H)
	4.98dB (30~200MHz, Polarize: V)
	4.98dB (200M~1GHz, Polarize: H)
	4.98dB (200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz)	3.12 dB (Distance: 3m Polarize: V)
	3.74 dB (Distance: 3m Polarize: H)
Uncertainty for SVSWR in 10m Chamber	2.42 dB (Distance: 3m Polarize: V)
	2.44 dB (Distance: 3m Polarize: H)
Uncertainty for test site temperature and humidity	0.3℃
	2%

3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Nov.05, 10	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Nov.05, 10	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 10	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 10	1 Year
5.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 10	1 Year
6.	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 10	1 Year
7.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 10	1 Year

3.2. Block Diagram of Test Setup



■ :50Ω Terminator

3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

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

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

3.4. 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.

3.4.1. LCD Projector (EUT)

Model Number : LV-7490

Serial Number : N/A

3.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.2

3.5.Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 2.2.
- 3.5.2. Turn on the power of all equipment.
- 3.5.3. PC mode: PC ran “BurnIntest.exe” program and sent “H” character to EUT through VGA cable, and EUT will display it, and EUT will also output this “H” character to monitor. PC also playing 1KHz audio signal and input to EUT.
- 3.5.4. AV In/S-Video Mode: DVD player playing color bar signal with 1KHz audio signal and input to EUT to display it.
- 3.5.5. The other peripheral devices were driven and operated in turn during all testing.

3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). Both sides of AC line are checked to find out the maximum conducted emission. 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 C63.4-2009 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked. The test results are reported and test results for Conducted Disturbance Test on Section 3.7.

3.7.Power Line Conducted Emission Test Results

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

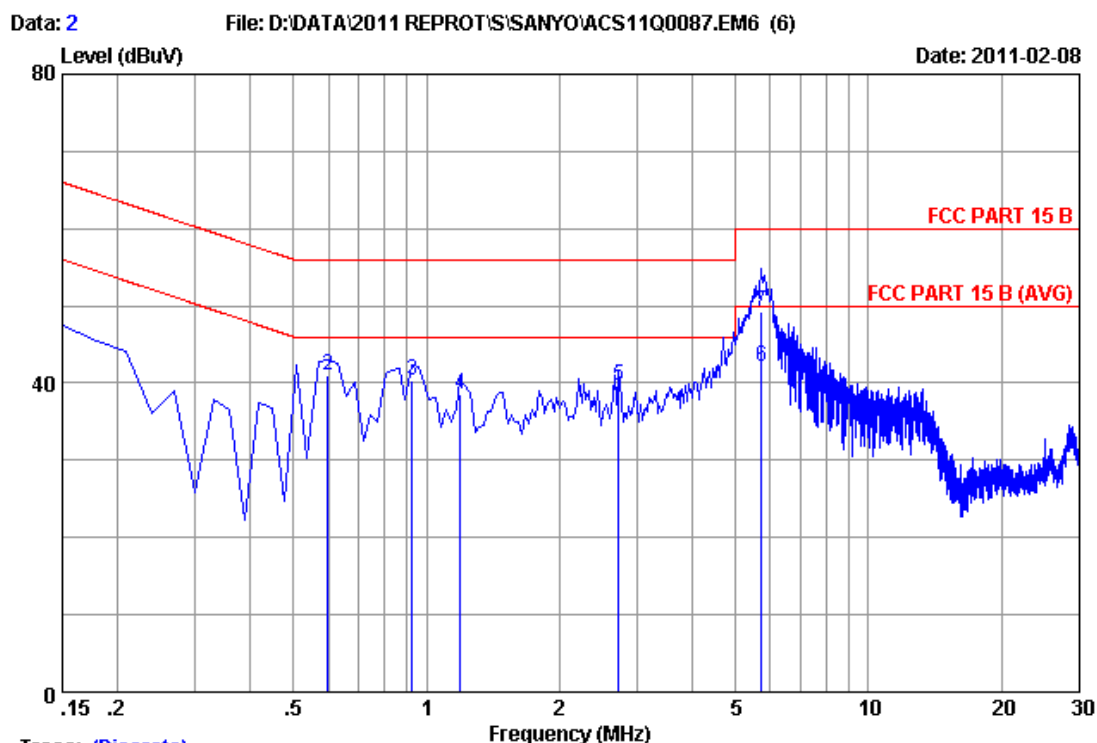
EUT: LCD Projector Model No. : LV-7490

The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

Test Date: Feb.08, 2011 Temperature: 29.5℃ Humidity: 55%

The details of test modes are as follows :

NO.	Test Mode	Reference Test Data No.	
		LINE	NEUTRAL
1.	PC mode	#2	#1
2.	AV In Mode (Play Color Bar)	#6	#5
3.	S-Video Mode (Play Color Bar)	#3	#4



Trace: (Discrete)

Site no :1#conduction Data No :2

Dis./Ant. : ** 2011 ESH2-25 LINE

Limit : FCC PART 15 B

Env./Ins. : 29.5°C/55% Engineer : Leo-Li

EUT : LCD Projector M/N: LV-7490

Power Rating : AC 120V/60Hz

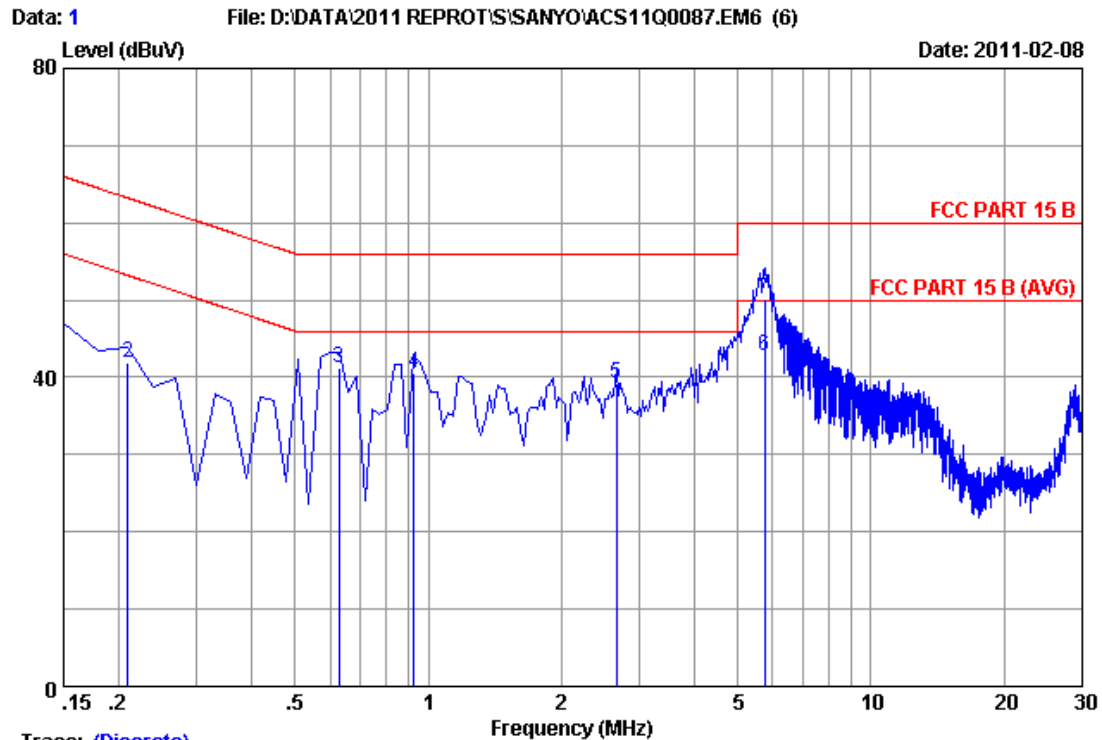
Test Mode : PC Mode

Running "H" Pattern and Play 1KHz signal

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.17	9.88	35.34	45.39	66.00	20.61	QP
2	0.59775	0.19	9.88	31.00	41.07	56.00	14.93	QP
3	0.92610	0.22	9.89	30.18	40.29	56.00	15.71	QP
4	1.195	0.25	9.89	28.39	38.53	56.00	17.47	QP
5	2.717	0.32	9.93	29.52	39.77	56.00	16.23	QP
6	5.730	0.41	9.95	31.69	42.05	50.00	7.95	Average
7	5.730	0.41	9.95	38.79	49.15	60.00	10.85	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.

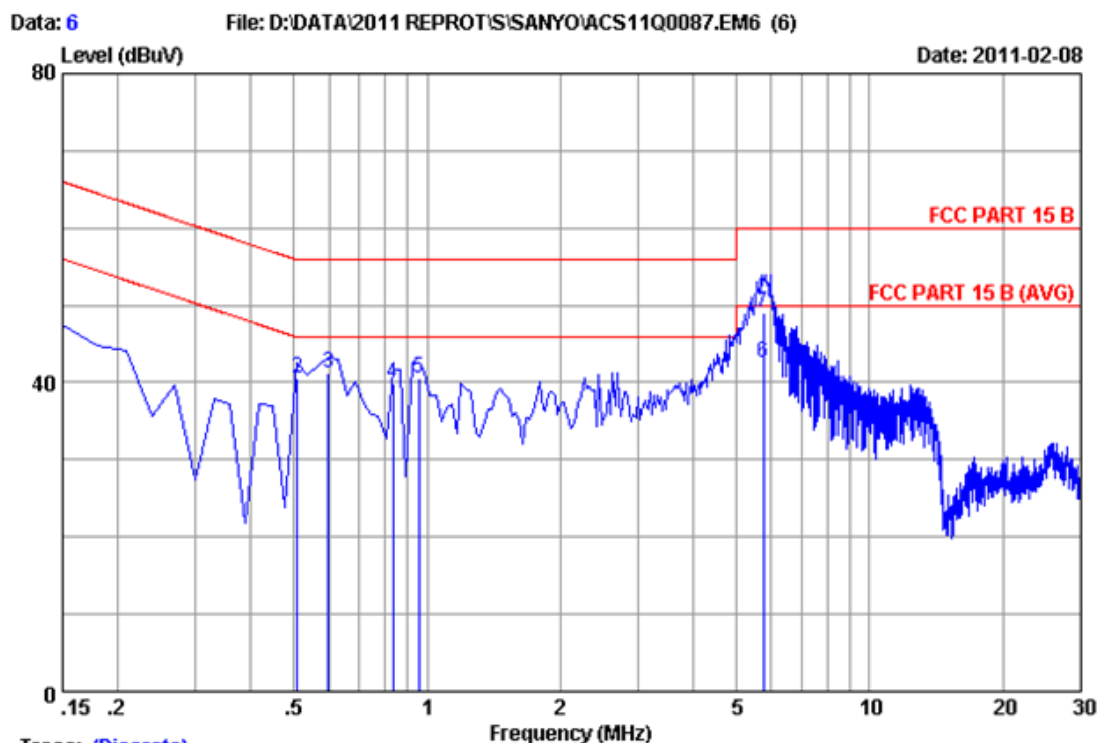
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.


Trace: (Discrete)

Site no :1#conduction Data No :1
 Dis./Ant. :** 2011 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :29.5°C/55% Engineer :Leo-Li
 EUT :LCD Projector M/N:LV-7490
 Power Rating :AC 120V/60Hz
 Test Mode :PC Mode
 Running "H" Pattern and Play 1KHz signal

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.21	9.88	34.84	44.93	66.00	21.07	QP
2	0.20970	0.21	9.88	31.81	41.90	63.22	21.32	QP
3	0.62760	0.23	9.88	31.22	41.33	56.00	14.67	QP
4	0.92610	0.24	9.89	30.34	40.47	56.00	15.53	QP
5	2.657	0.28	9.93	28.93	39.14	56.00	16.86	QP
6	5.760	0.35	9.95	32.50	42.80	50.00	7.20	Average
7	5.760	0.35	9.95	39.80	50.10	60.00	9.90	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)
 +Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.

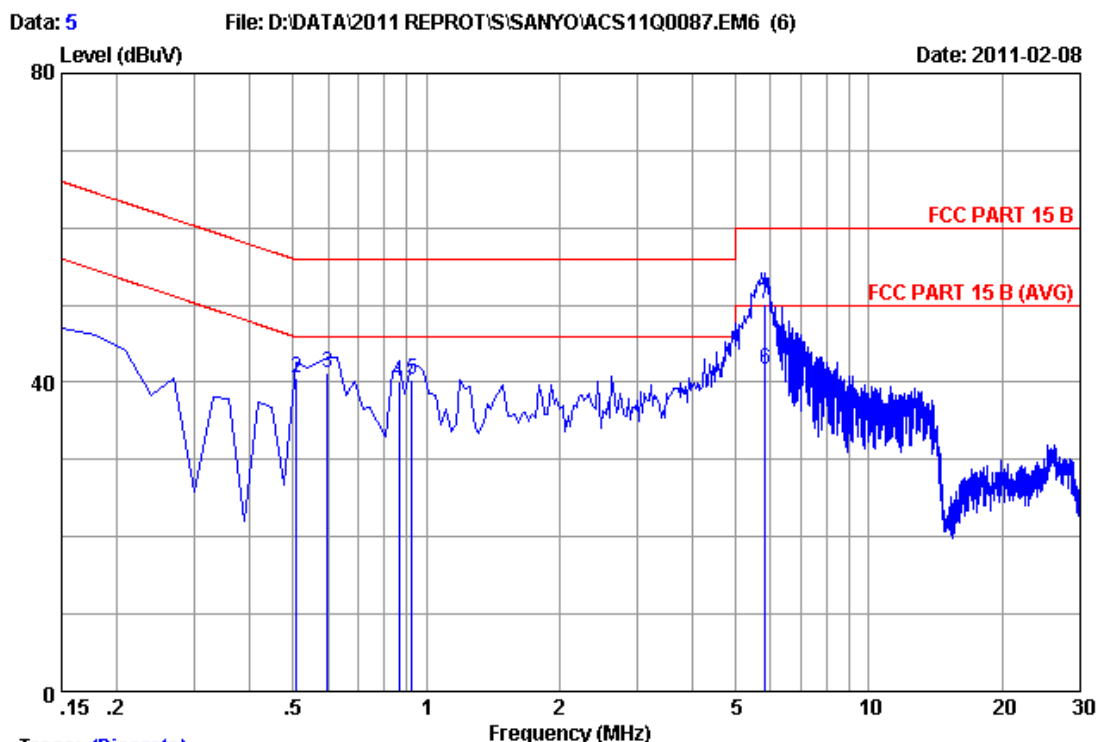

Trace: (Discrete)

Site no :1#conduction Data No :6
 Dis./Ant. : ** 2011 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :29.5°C/55% Engineer :Leo-Li
 EUT :LCD Projector M/N:LV-7490
 Power Rating :AC 120V/60Hz
 Test Mode :AV IN Mode(Play Color Bar)

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.17	9.88	34.48	44.53	66.00	21.47	QP
2	0.50820	0.19	9.88	30.41	40.48	56.00	15.52	QP
3	0.59775	0.19	9.88	31.06	41.13	56.00	14.87	QP
4	0.83655	0.21	9.89	29.68	39.78	56.00	16.22	QP
5	0.95595	0.23	9.89	30.40	40.52	56.00	15.48	QP
6	5.740	0.41	9.95	32.29	42.65	50.00	7.35	Average
7	5.740	0.41	9.95	38.59	48.95	60.00	11.05	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.

2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

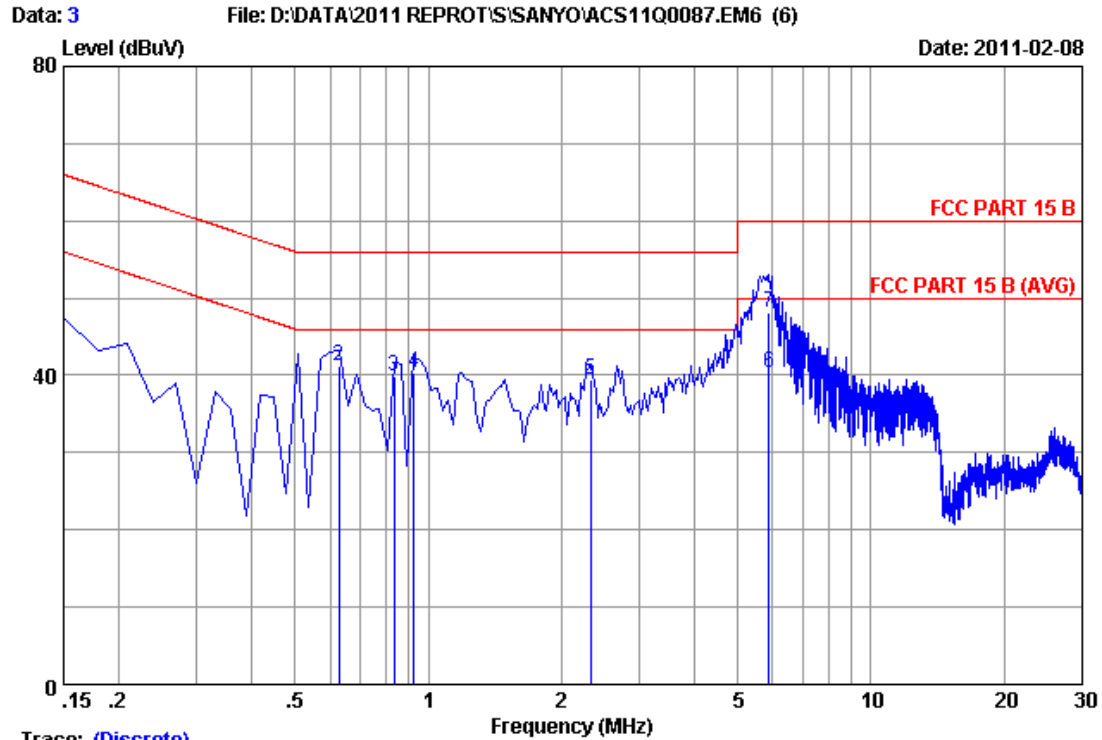

Trace: (Discrete)

Site no : 1#conduction Data No : 5
 Dis./Ant. : ** 2011 ESH2-25 NEUTRAL
 Limit : FCC PART 15 B
 Env./Ins. : 29.5°C/55% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power Rating : AC 120V/60Hz
 Test Mode : AV IN Mode(Play Color Bar)

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.21	9.88	34.94	45.03	66.00	20.97	QP
2	0.50820	0.22	9.88	30.36	40.46	56.00	15.54	QP
3	0.59775	0.23	9.88	31.10	41.21	56.00	14.79	QP
4	0.86640	0.24	9.89	29.90	40.03	56.00	15.97	QP
5	0.92610	0.24	9.89	30.30	40.43	56.00	15.57	QP
6	5.822	0.36	9.95	31.26	41.57	50.00	8.43	Average
7	5.822	0.36	9.95	39.82	50.13	60.00	9.87	QP

Remarks: 1. Emission Level = LISN Factor + Cable Loss (Include 10dB pulse limit) + Reading.

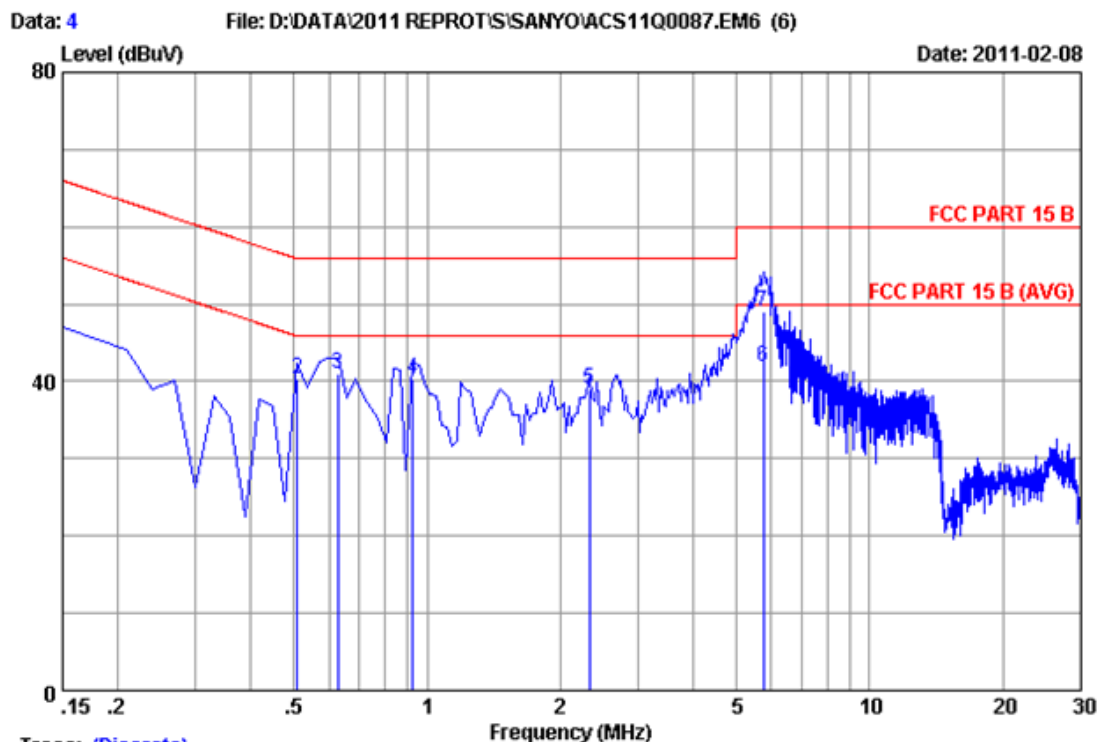
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.


Trace: (Discrete)

Site no :1#conduction Data No :3
 Dis./Ant. :** 2011 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :29.5°C/55% Engineer :Leo-Li
 EUT :LCD Projector M/N:LV-7490
 Power Rating :AC 120V/60Hz
 Test Mode :S-Video IN Mode(Play Color Bar)

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.17	9.88	35.46	45.51	66.00	20.49	QP
2	0.62760	0.19	9.88	31.12	41.19	56.00	14.81	QP
3	0.83655	0.21	9.89	29.68	39.78	56.00	16.22	QP
4	0.92610	0.22	9.89	30.24	40.35	56.00	15.65	QP
5	2.329	0.32	9.92	29.28	39.52	56.00	16.48	QP
6	5.881	0.41	9.95	30.08	40.44	50.00	9.56	Average
7	5.881	0.41	9.95	37.69	48.05	60.00	11.95	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)
 +Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.


Trace: (Discrete)

Site no : 1#conduction Data No : 4
 Dis./Ant. : ** 2011 ESH2-25 NEUTRAL
 Limit : FCC PART 15 B
 Env./Ins. : 29.5°C/55% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power Rating : AC 120V/60Hz
 Test Mode : S-Video IN Mode(Play Color Bar)

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.21	9.88	34.84	44.93	66.00	21.07	QP
2	0.50820	0.22	9.88	30.23	40.33	56.00	15.67	QP
3	0.62760	0.23	9.88	30.80	40.91	56.00	15.09	QP
4	0.92610	0.24	9.89	30.20	40.33	56.00	15.67	QP
5	2.329	0.28	9.92	28.78	38.98	56.00	17.02	QP
6	5.762	0.35	9.95	31.56	41.86	50.00	8.14	Average
7	5.762	0.35	9.95	38.81	49.11	60.00	10.89	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.

2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

Frequency rang: 30~1000MHz

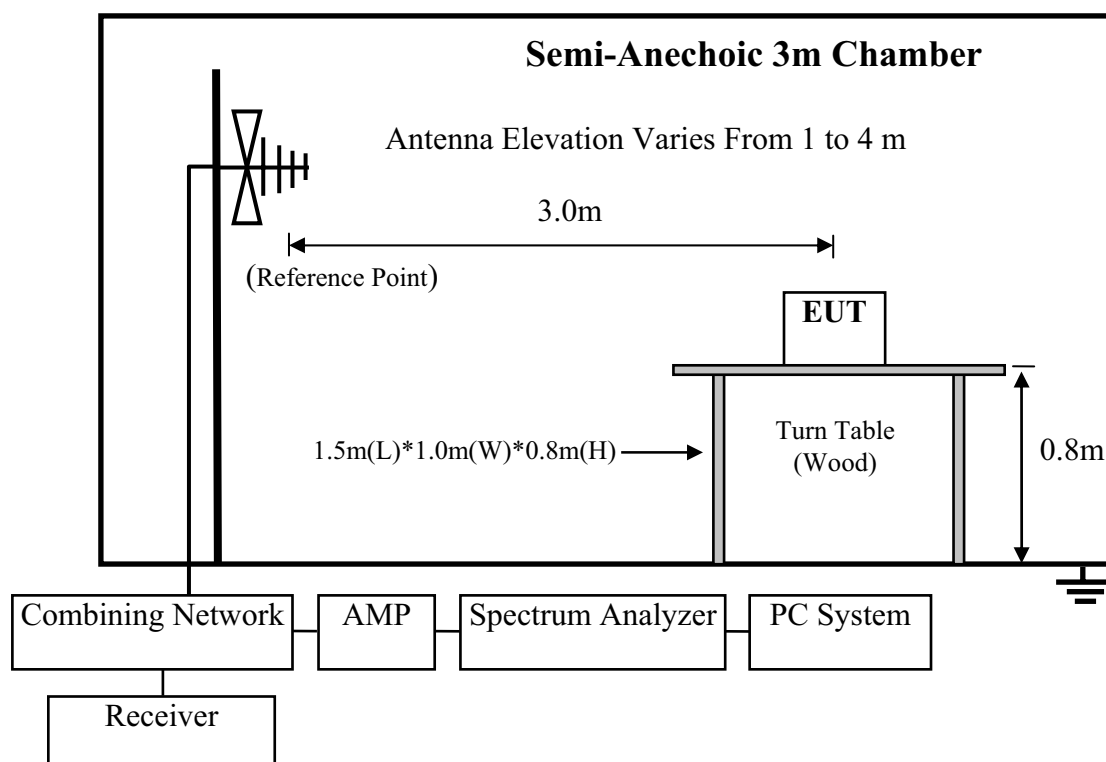
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.06,10	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 10	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 10	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 10	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Oct.26, 10	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 10	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 10	1 Year

Frequency rang: above 1000MHz

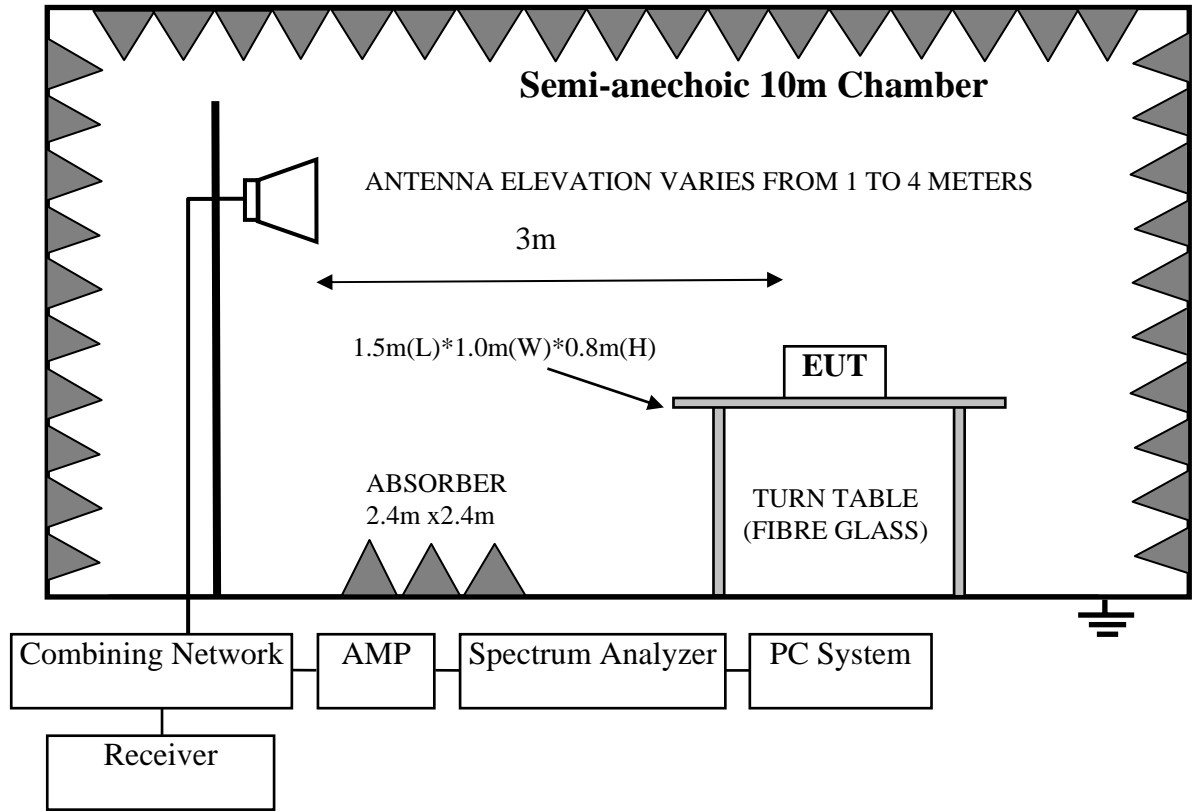
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2	Horn Antenna	EMCO	3115	9510-4580	Nov.19, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Nov.25, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 10	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

4.2. Block Diagram of Test Setup

4.2.1. Anechoic Chamber Setup Diagram (30-1000MHz)



4.2.2. In Anechoic Chamber Test Setup Diagram for above 1GHz



4.3. Radiated Emission Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0
Above 1000	3	74(Peak)54(Average)

- Remark: (1) Emission level = Antenna Factor + Cable Loss + Reading
 (2) The smaller limit shall apply at the cross point between two frequency bands.
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

4.5. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 4.2.

4.6.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission Test.

According FCC Part15A:15.32 requirements, test was performed with device installed in a typical enclosure, and both with enclosure's cover removed and installed. Test also performed with enclosure in vertical and horizontal position.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

4.7.Radiated Emission Test Results

PASS.

EUT: LCD Projector Model No. : LV-7490

For frequency range 30MHz~1000MHz

The EUT with the following test modes were tested and selected to read Q.P values, all the test results listed in next pages.

Test Date: Feb.12, 2011

Temperature: 24℃

Humidity: 56%

The details of test mode are as follows :

NO.	Test Mode	Reference Test Data No.	
		Horizontal	Vertical
1.	PC Mode	#1	#2
2.	AV In Mode (Play Color Bar)	#4	#3
3.	S-Video Mode (Play Color Bar)	#5	#6

For frequency range 1GHz~2GHz

The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages

Note: For all the emissions above 1GHz, the peak measured level comply with average limit, so the average level were deemed to comply with average limit.

Test Date: Feb.07, 2011 Temperature: 24℃ Humidity: 56%

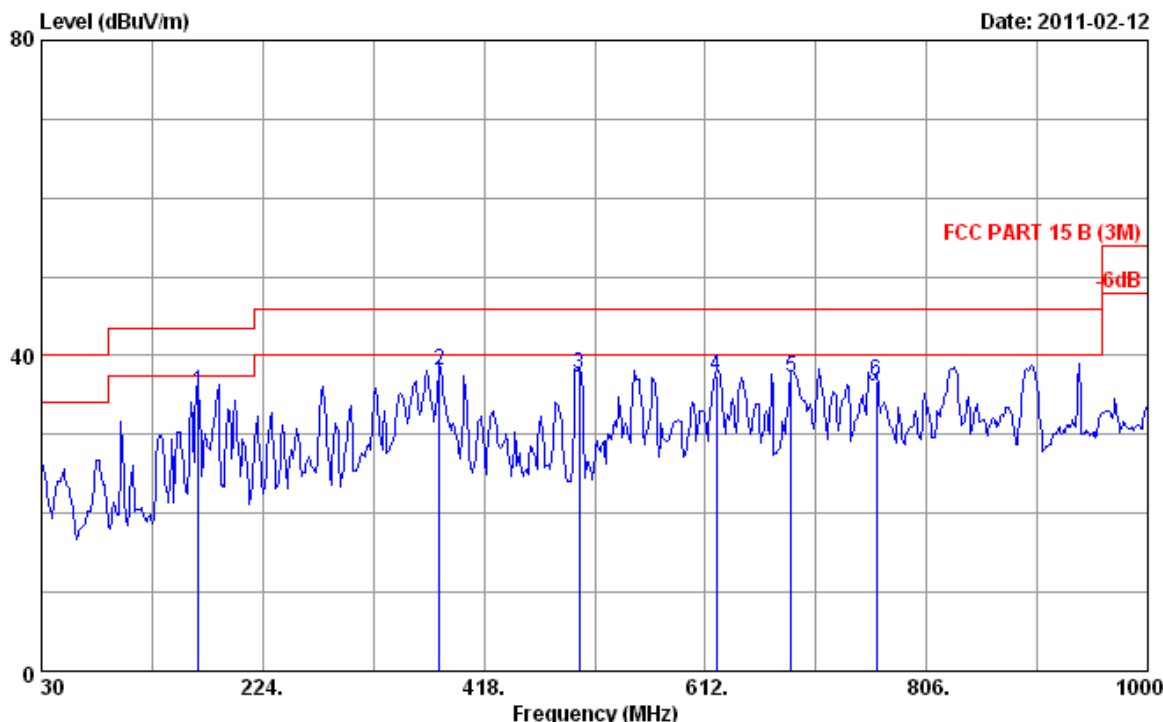
NO.	Test Mode	Reference Test Data No.	
		Horizontal	Vertical
1.	PC mode	#2	#1
2.	AV In Mode (Play Color Bar)	#6	#5
3.	S-Video Mode (Play Color Bar)	#3	#4

Test Frequency: 30MHz-1000MHz

Data: 1

File: E:\2011 Report data\SIACS11Q0087.EM6 (6)

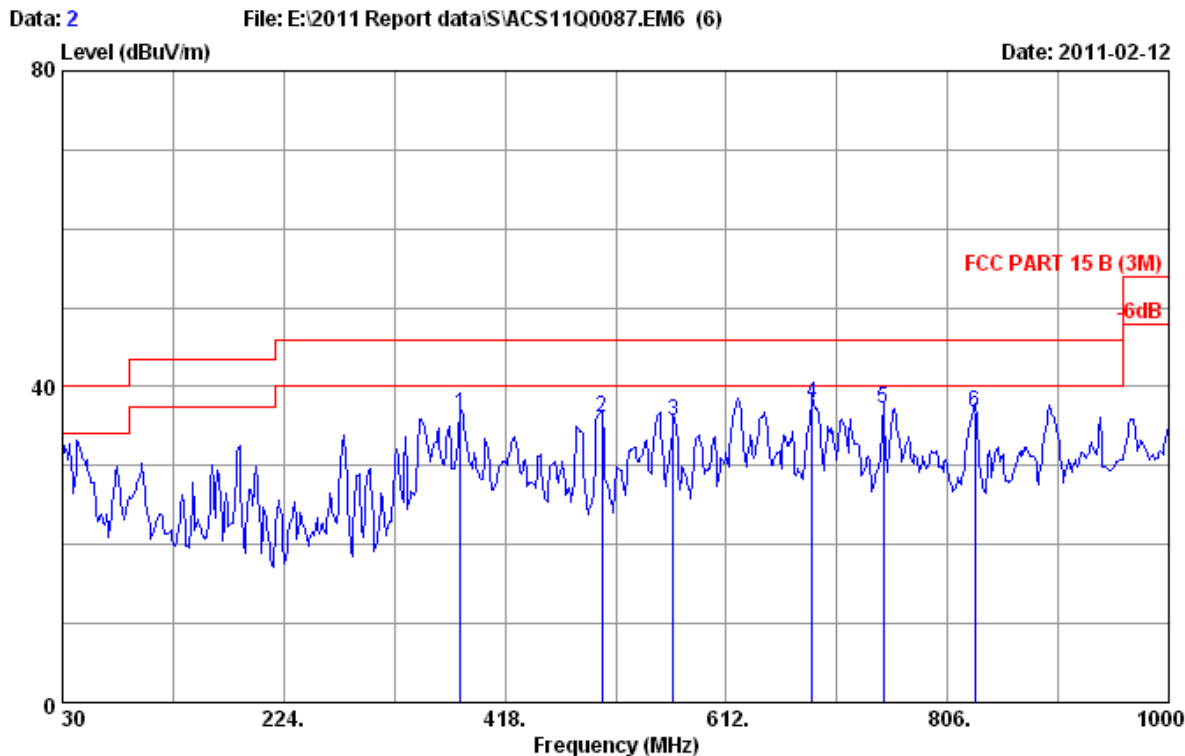
Date: 2011-02-12



Site no. : 3m Chamber Data no. : 1
Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B (3M)
Env. / Ins. : 24°C/56% Engineer : Leo-Li
EUT : LCD Projector M/N: LV-7490
Power rating : AC 120V/60Hz
Test Mode : PC Mode
Running 'H' Pattern and Play 1KHz Signal

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	167.740	10.40	1.34	23.75	35.49	43.50	8.01	QP
2	379.200	15.68	2.82	19.62	38.12	46.00	7.88	QP
3	501.420	18.30	3.56	15.79	37.65	46.00	8.35	QP
4	621.700	20.04	4.20	13.15	37.39	46.00	8.61	QP
5	687.660	20.78	4.45	11.94	37.17	46.00	8.83	QP
6	762.350	22.02	4.75	10.05	36.82	46.00	9.18	QP

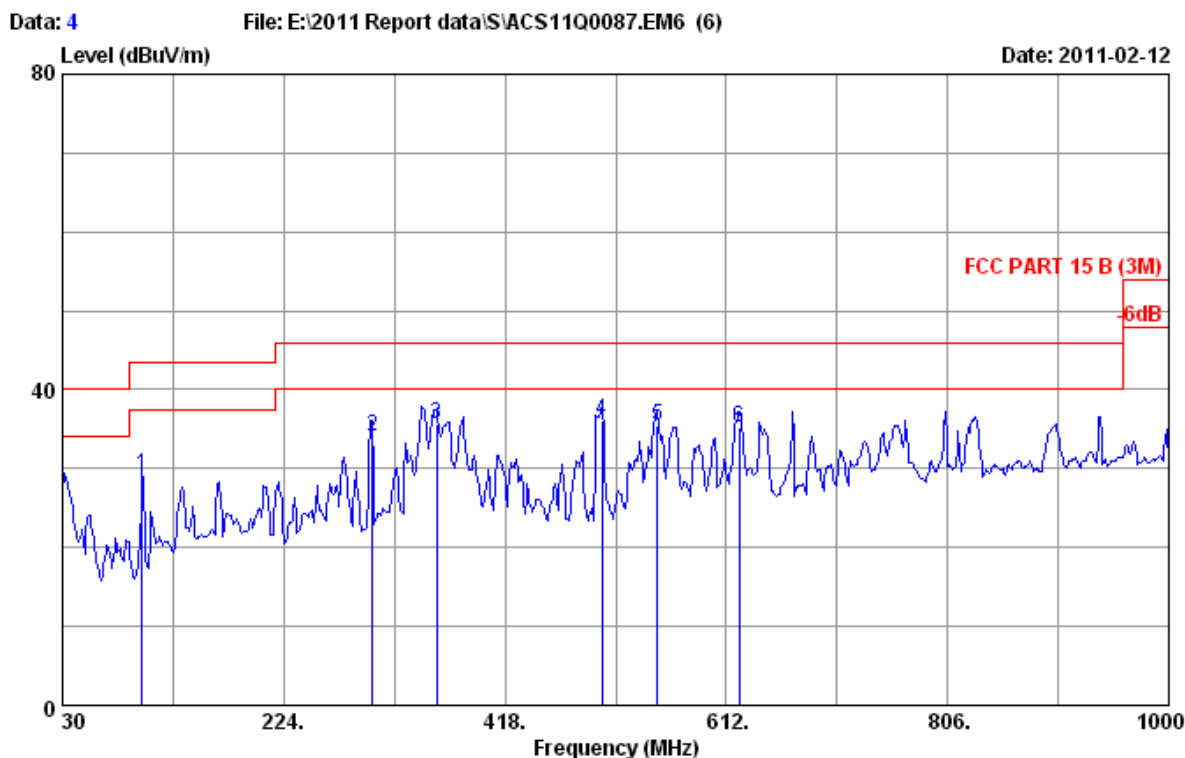
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 2
Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL
Limit : FCC PART 15 B (3M)
Env. / Ins. : 24°C/56% Engineer : Leo-Li
EUT : LCD Projector M/N: LV-7490
Power rating : AC 120V/60Hz
Test Mode : PC Mode
Running 'H' Pattern and Play 1KHz Signal

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	379.200	15.68	2.82	17.96	36.46	46.00	9.54	QP
2	503.360	18.30	3.57	14.16	36.03	46.00	9.97	QP
3	565.440	19.61	3.92	12.08	35.61	46.00	10.39	QP
4	687.660	20.78	4.45	12.68	37.91	46.00	8.09	QP
5	749.740	22.00	4.70	10.44	37.14	46.00	8.86	QP
6	830.250	22.20	4.99	9.67	36.86	46.00	9.14	QP

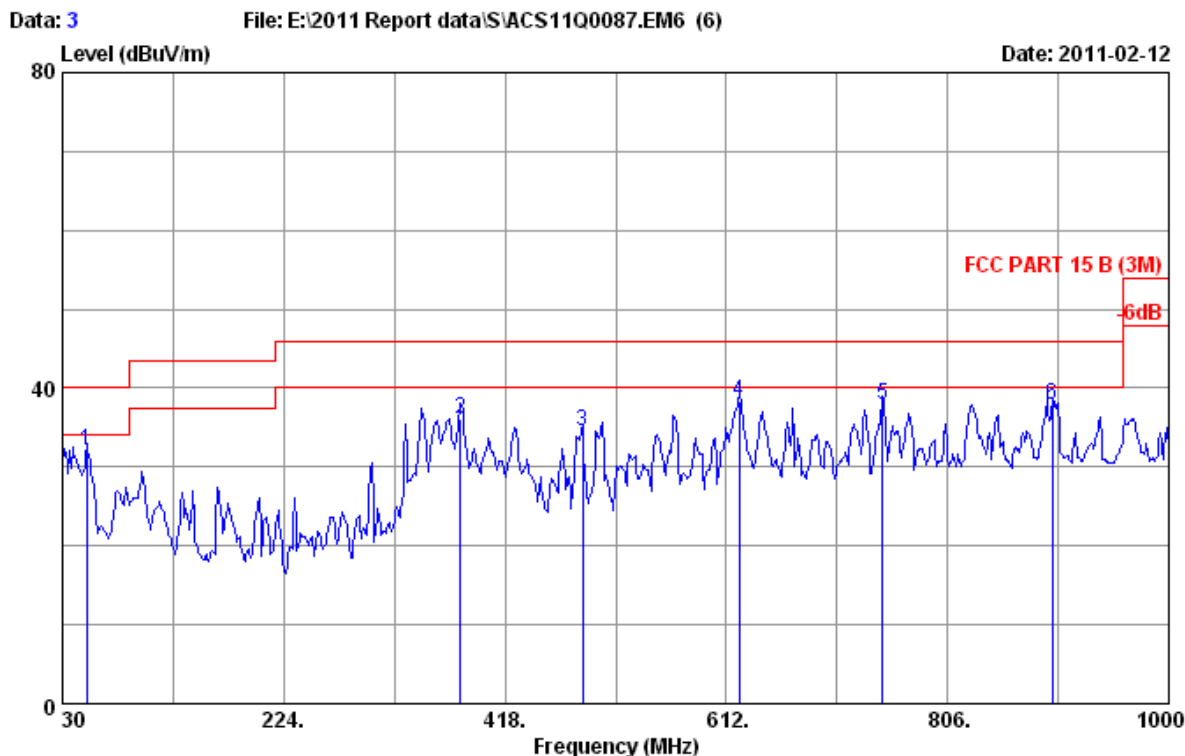
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 4
 Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/56% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power rating : AC 120V/60Hz
 Test Mode : AV IN Mode (Playing Color Bar)

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	99.840	10.40	1.12	17.74	29.26	43.50	14.24	QP
2	301.600	13.75	2.49	17.86	34.10	46.00	11.90	QP
3	357.860	15.50	2.73	17.41	35.64	46.00	10.36	QP
4	503.360	18.30	3.57	14.21	36.08	46.00	9.92	QP
5	551.860	19.26	3.84	12.35	35.45	46.00	10.55	QP
6	623.640	20.07	4.21	10.95	35.23	46.00	10.77	QP

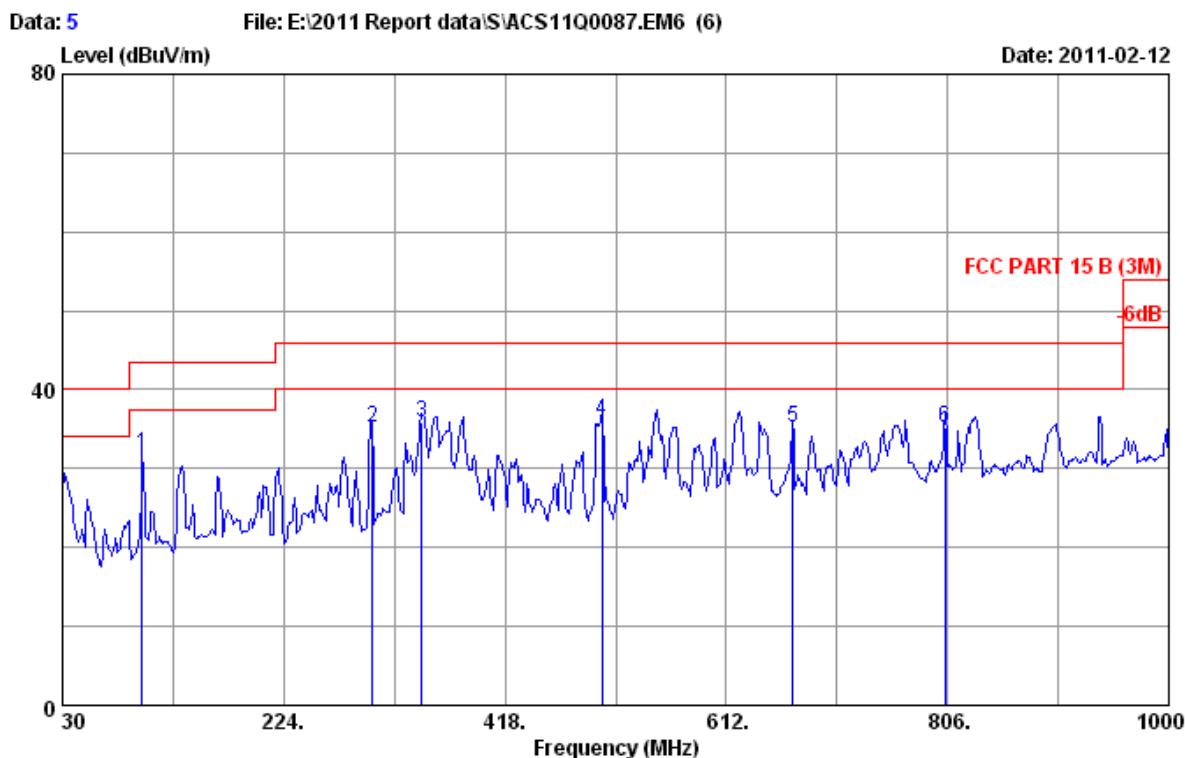
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 3
 Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/56% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power rating : AC 120V/60Hz
 Test Mode : AV IN Mode (Playing Color Bar)

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	51.340	8.86	0.79	22.35	32.00	40.00	8.00	QP
2	379.200	15.68	2.82	17.52	36.02	46.00	9.98	QP
3	485.900	18.16	3.46	12.85	34.47	46.00	11.53	QP
4	623.640	20.07	4.21	13.96	38.24	46.00	7.76	QP
5	748.770	21.98	4.69	11.27	37.94	46.00	8.06	QP
6	898.150	22.82	5.19	9.82	37.83	46.00	8.17	QP

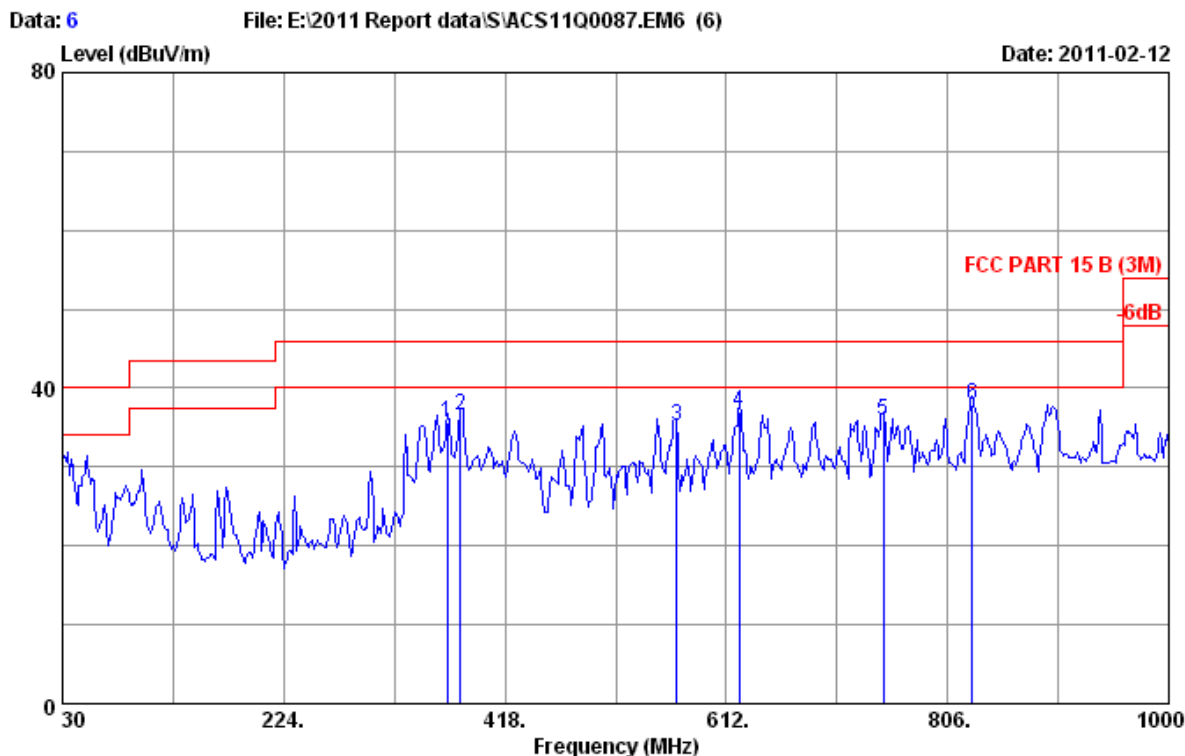
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 5
 Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/56% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power rating : AC 120V/60Hz
 Test Mode : S-Video Mode (Playing Color Bar)

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	99.840	10.40	1.12	20.36	31.88	43.50	11.62	QP
2	301.600	13.75	2.49	18.86	35.10	46.00	10.90	QP
3	345.250	14.95	2.68	18.28	35.91	46.00	10.09	QP
4	503.360	18.30	3.57	14.21	36.08	46.00	9.92	QP
5	670.200	20.80	4.39	10.00	35.19	46.00	10.81	QP
6	804.060	22.00	4.91	8.27	35.18	46.00	10.82	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

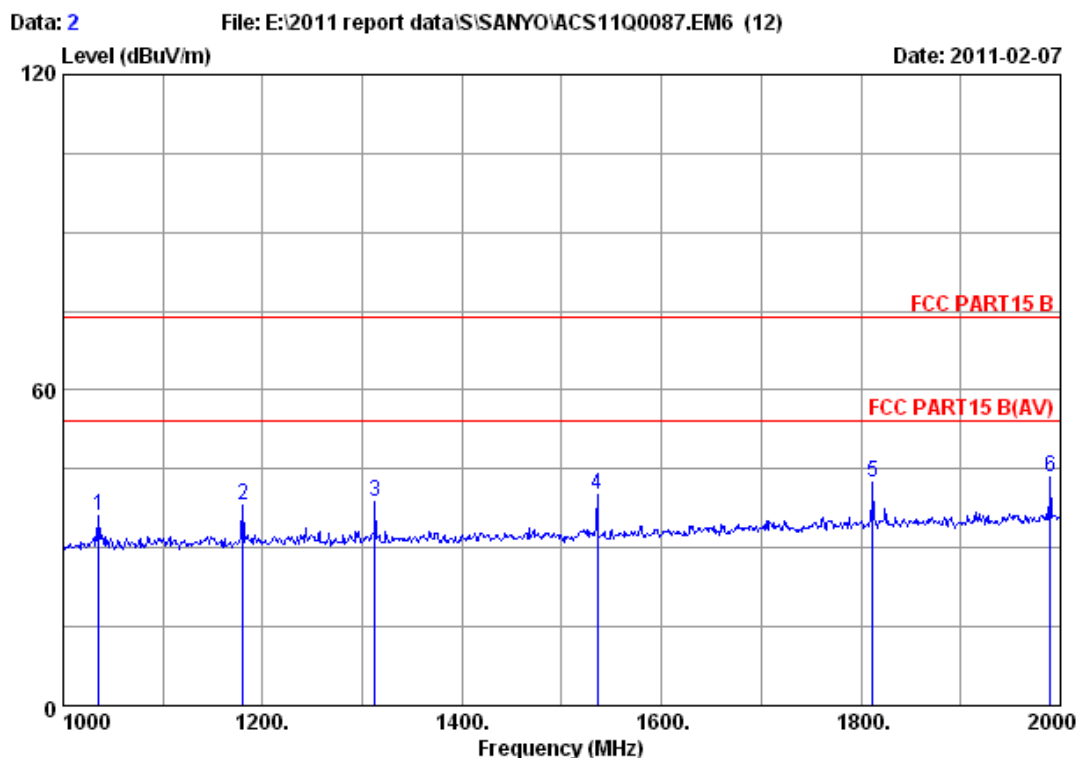


Site no. : 3m Chamber Data no. : 6
 Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/56% Engineer : Leo-Li
 EUT : LCD Projector M/N:LV-7490
 Power rating : AC 120V/60Hz
 Test Mode : S-Video Mode (Playing Color Bar)

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	367.560	15.53	2.77	17.39	35.69	46.00	10.31	QP
2	379.200	15.68	2.82	17.95	36.45	46.00	9.55	QP
3	568.350	19.66	3.94	11.51	35.11	46.00	10.89	QP
4	623.640	20.07	4.21	12.74	37.02	46.00	8.98	QP
5	749.740	22.00	4.70	9.28	35.98	46.00	10.02	QP
6	827.340	22.20	4.98	10.77	37.95	46.00	8.05	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Test Frequency: Above 1GHz

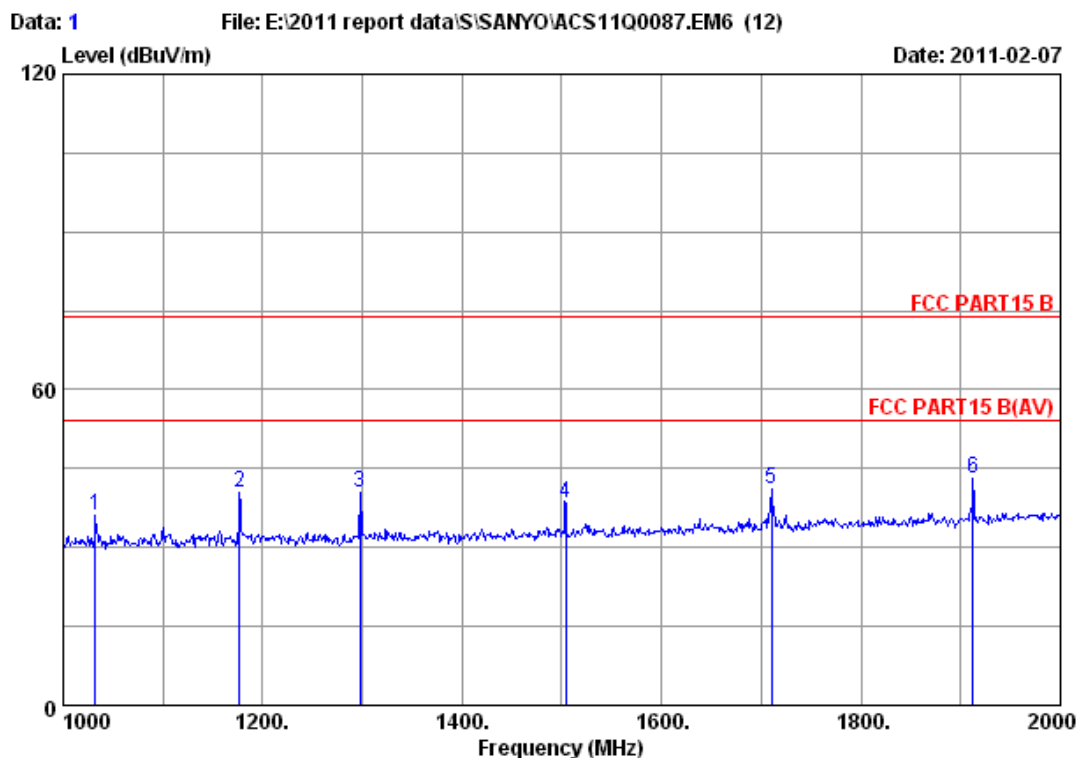


Site no. : RF Chamber Data no. : 2
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART15 B
Env. / Ins. : 23°C/58% Engineer : Leo-Li
EUT : LCD Projector M/N:LV-7490
Power : AC 120V/60Hz
Test mode : PC Mode
M/N : Running "H" Pattern and Play 1KHz Signal

	Ant.	Cable	Amp.		Emission				
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1036.000	25.47	4.82	37.33	43.11	36.07	74.00	37.93	Peak
2	1180.000	25.78	5.12	36.95	44.02	37.97	74.00	36.03	Peak
3	1313.000	26.02	5.35	36.49	43.93	38.81	74.00	35.19	Peak
4	1536.000	26.68	5.76	36.30	43.83	39.97	74.00	34.03	Peak
5	1812.000	28.17	6.29	36.34	44.35	42.47	74.00	31.53	Peak
6	1990.000	29.11	6.63	36.06	43.89	43.57	74.00	30.43	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

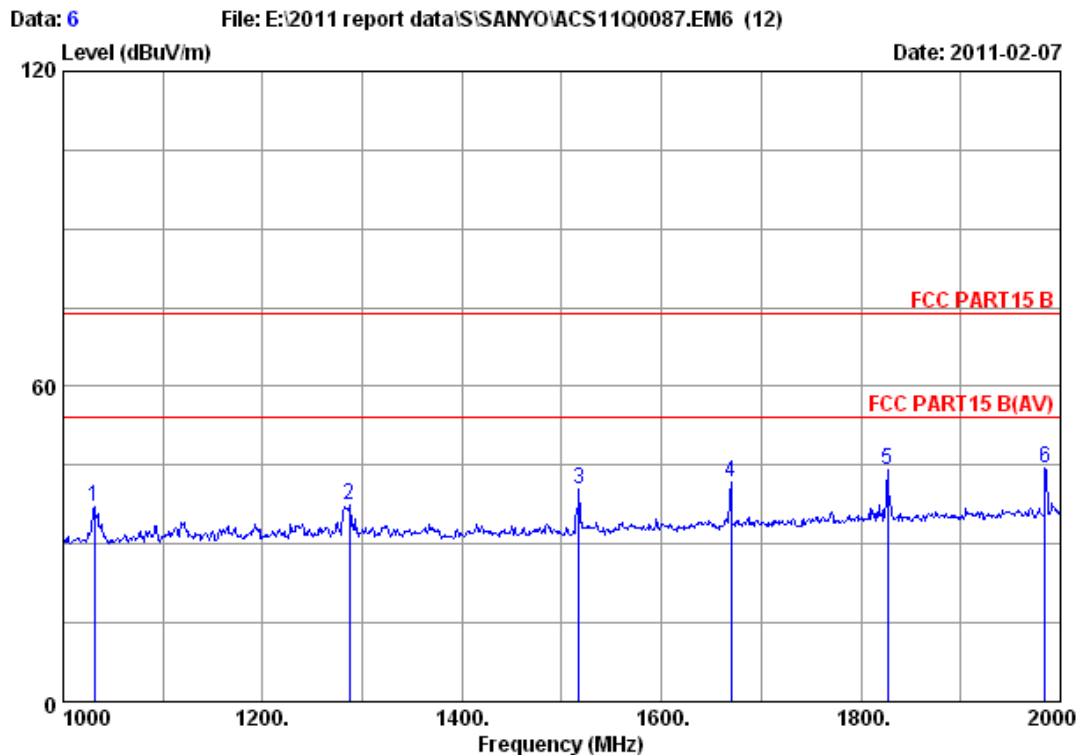


Site no. : RF Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/58% Engineer : Leo-Li
 EUT : LCD Projector M/N:LV-7490
 Power : AC 120V/60Hz
 Test mode : PC Mode
 M/N : Running "H" Pattern and Play 1KHz Signal

	Ant.	Cable	Amp.			Emission			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1032.000	25.47	4.82	37.33	43.17	36.13	74.00	37.87	Peak
2	1177.000	25.74	5.08	36.92	46.55	40.45	74.00	33.55	Peak
3	1298.000	26.02	5.31	36.49	45.50	40.34	74.00	33.66	Peak
4	1504.000	26.49	5.73	36.61	42.73	38.34	74.00	35.66	Peak
5	1710.000	27.61	6.10	36.30	43.64	41.05	74.00	32.95	Peak
6	1912.000	28.73	6.48	36.23	44.21	43.19	74.00	30.81	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

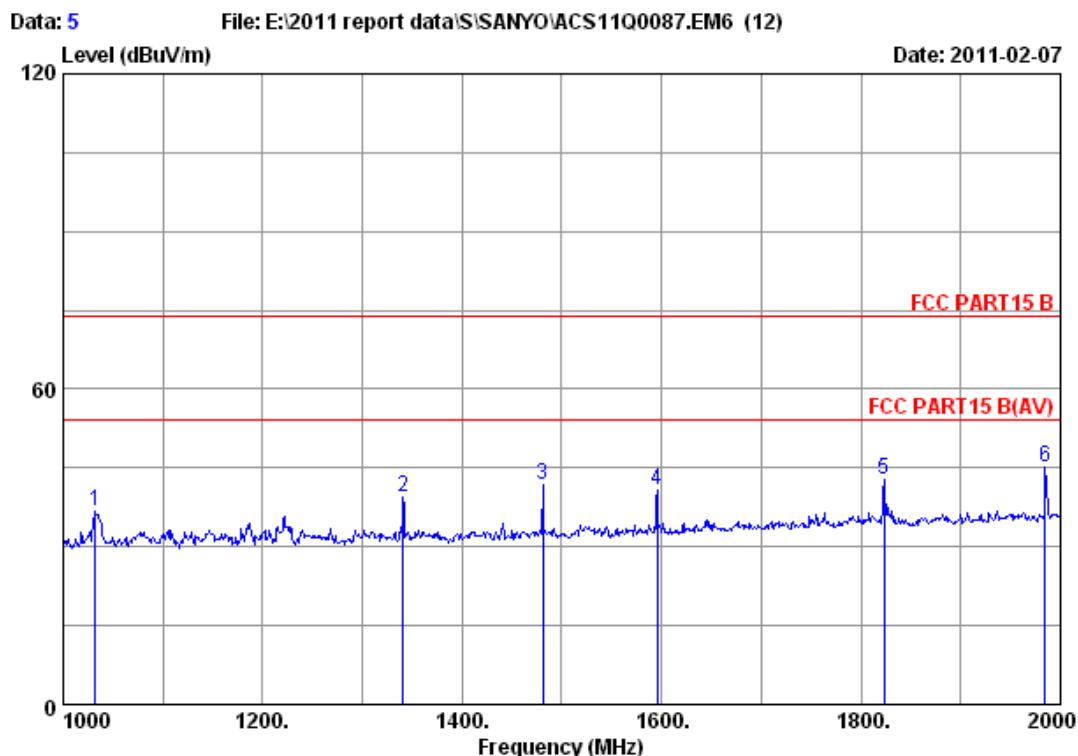


Site no. : RF Chamber Data no. : 6
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/58% Engineer : Leo-Li
 EUT : LCD Projector M/N:LV-7490
 Power : AC 120V/60Hz
 Test mode : AV IN Mode (Play Color Bar)
 M/N :

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1031.000	25.47	4.82	37.33	44.05	37.01	74.00	36.99	Peak
2	1287.000	25.99	5.31	36.77	42.94	37.47	74.00	36.53	Peak
3	1517.000	26.49	5.73	36.61	44.75	40.36	74.00	33.64	Peak
4	1670.000	27.33	6.03	36.27	44.67	41.76	74.00	32.24	Peak
5	1827.000	28.27	6.33	36.28	45.69	44.01	74.00	29.99	Peak
6	1985.000	29.11	6.63	36.06	44.66	44.34	74.00	29.66	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

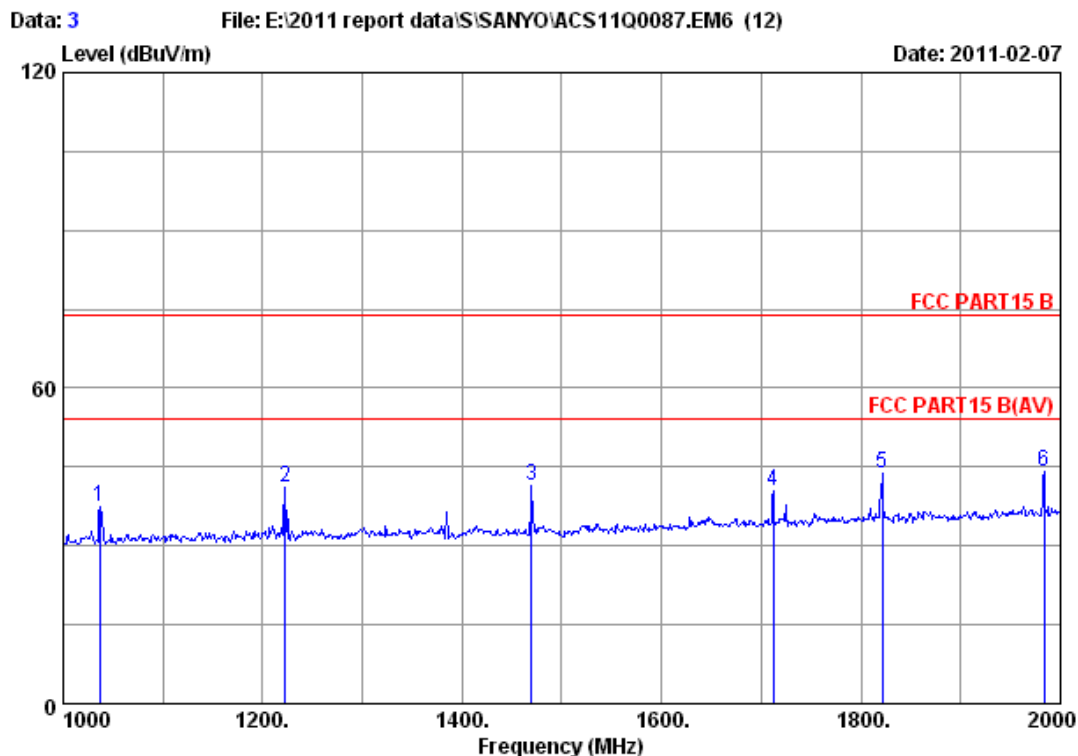


Site no. : RF Chamber Data no. : 5
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/58% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power : AC 120V/60Hz
 Test mode : AV IN Mode (Play Color Bar)
 M/N :

	Ant.	Cable	Amp.			Emission			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1032.000	25.47	4.82	37.33	43.80	36.76	74.00	37.24	Peak
2	1341.000	26.09	5.42	36.67	44.68	39.52	74.00	34.48	Peak
3	1481.000	26.37	5.69	36.53	46.29	41.82	74.00	32.18	Peak
4	1596.000	26.96	5.88	36.43	44.30	40.71	74.00	33.29	Peak
5	1823.000	28.17	6.33	36.34	44.60	42.76	74.00	31.24	Peak
6	1985.000	29.11	6.63	36.06	45.56	45.24	74.00	28.76	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

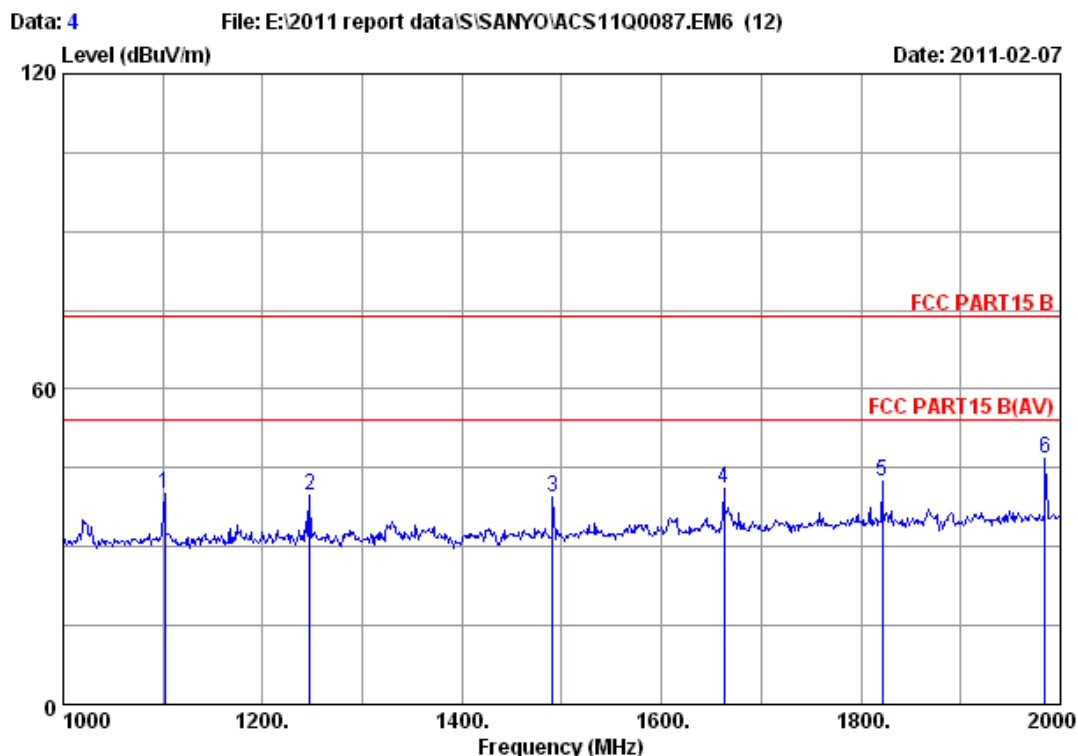


Site no. : RF Chamber Data no. : 3
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/58% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power : AC 120V/60Hz
 Test mode : S-Video Mode (Play Color Bar)
 M/N :

	Ant.	Cable	Amp.		Emission				
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1037.000	25.47	4.82	37.33	44.44	37.40	74.00	36.60	Peak
2	1223.000	25.85	5.20	36.83	46.97	41.19	74.00	32.81	Peak
3	1470.000	26.37	5.65	36.53	45.90	41.39	74.00	32.61	Peak
4	1712.000	27.61	6.10	36.30	43.11	40.52	74.00	33.48	Peak
5	1821.000	28.17	6.33	36.34	45.60	43.76	74.00	30.24	Peak
6	1984.000	29.11	6.63	36.06	44.54	44.22	74.00	29.78	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : RF Chamber Data no. : 4
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/58% Engineer : Leo-Li
 EUT : LCD Projector M/N: LV-7490
 Power : AC 120V/60Hz
 Test mode : S-Video Mode (Play Color Bar)
 M/N :

	Ant.	Cable	Amp.			Emission			
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1102.000	25.61	4.97	37.19	46.77	40.16	74.00	33.84	Peak
2	1247.000	25.92	5.23	36.86	45.40	39.69	74.00	34.31	Peak
3	1491.000	26.40	5.69	36.57	43.77	39.29	74.00	34.71	Peak
4	1663.000	27.33	6.03	36.27	43.92	41.01	74.00	32.99	Peak
5	1821.000	28.17	6.33	36.34	44.24	42.40	74.00	31.60	Peak
6	1985.000	29.11	6.63	36.06	46.96	46.64	74.00	27.36	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

5. DEVIATION TO TEST SPECIFICATIONS

[NONE]