EMC TEST REPORT

Test item	: LED TV Monitor
Model No.	: 60LA7400-UA
Order No.	: DEMC1302-00842
Date of receipt	: 2013-02-27
Test duration	: 2013-03-07 ~ 2013-03-08
Use of report	: FCC CoC Marking
Date of Issue	: 2013-03-11

Applicant : LG Electronics Inc.
19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

Test laboratory : Digital EMC Co., Ltd.
683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, 449-080, Korea

Test specification : ANSI C 63.4:2003
FCC Part 15 Subpart B
(Type of Device : Class B Personal Computers and Peripherals (JBP))

Test environment : Temperature : (19 ~ 21) °C,
Humidity : (38 ~ 40) % R.H.

Test result : ☒ Comply ☐ Not Comply

Tested by:

Engineer
HyungJun Kim

Reviewed by:

General Manager
ChangHo Lee

PRESIDENT OF DIGITAL EMC CO., LTD.

CONTENTS

1. General Remarks

This report contains the result of tests performed by:

DIGITAL EMC CO., LTD.

Address : 683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Gyeonggi-Do, 449-080, Korea

http://www.digitalemc.com

Tel: +82-31-321-2664 Fax: +82-31-321-1664

2. Test Laboratory

Digital EMC Co., Ltd. has been accredited / filed / authorized by the agencies listed in the following table;

Certificate	Nation	Agency	Code	Mark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
Site Filing	USA	FCC	101842 678747	Test Facility list & NSA Data
	Canada	IC	5740A-1 5740A-2	Test Facility list & NSA Data
	Japan	VCCI	C-1427 R-1364, R-3385 T-1442, G-338	Test Facility list & NSA Data
Certification	Korea	KC	KR0034	Test Facility list & NSA Data
	Germany	TUV	ROK1221C	ISO/IEC 17025

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competent of calibration and testing laboratory”.

3. General Information of EUT

Model No.	60LA7400-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ60LA7400UA
Type of Sample Tested	Pre-Production
High Frequency	800 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.8 A
Supplied Power for Test	AC 120 V, 60 Hz
Applicant	LG Electronics Inc. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea
Manufacturer	LG Electronics Inc. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

HDMI (PC) supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
640 x 480	31.469	59.94
800 x 600	37.879	60.31
1024 x 768	48.363	60.00
1152 x 864	54.348	60.05
1360 x 768	47.712	60.015
1280 x 1024	63.981	60.02
1920 x 1080	67.50	60.00

4. Test Summary

4.1 Applied standards and test results

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4:2003	**C**
Radiated Disturbance	ANSI C63.4:2003	**C**
C=Comply N/C=Not Comply N/T=Not Tested N/A=Not Applicable		

The data in this test report are traceable to the national or international standards.

4.2 Test environment and conditions

Test Items	Test date (MM-DD)	Temp (℃)	Humidity (% R.H.)
Conducted Disturbance	03-07	19	38
Radiated Disturbance	03-08 03-08	20 21	39 40

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dBμV]	Detector	Limit [dBμV]	Margin [dB]
0.84174	**L**	**31.3**	Average	**46.0**	**14.7**

(2) Radiated Emission (USB MODE)

Frequency [MHz]	Pol.	Result [dB(μV/m)]	Detector	Limit [dB(μV/m)]	Margin [dB]
783.927	**V**	**42.3**	Quasi-Peak	**46.0**	**3.7**

5. Test Set-up and operation mode

5.1 Principle of Configuration Selection

Emission : The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

5.2 Test Operation Mode

- HDMI MODE : 1920x1080 Resolution (Worst case) “H” characters scroll on the LCD TV screen.
- USB MODE : USB record file play

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE				Backshell	FCC ID
				Connect type	Length (m)	ferrite core	shield		
PC	DC8CMF	G3RZKBX	DELL INC.	POWER HDMI USB USB USB	1.8 1.8 1.8 1.8 1.5	Not use Not use Not use Not use Not use	Non-shield Shield Shield Shield Shield	Plastic	DOC
KEYBOARD	KB-065	CN111363232	HP	USB	1.8	Not use	Shield	Plastic	DOC
MOUSE	1094	X817158-002	MICROSOFT CORPORATION	USB	1.6	Not use	Shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS	POWER COMPONENT	1.8 1.6	Not use Not use	Non-shield Non-shield	Plastic	VER
USB MEMORY	Cruzer 4GB	N/A	SANDISK	USB	-	-	-	-	DOC
PRINTER	Aculaser M1200	LWTZ181070	EPSON	USB AC POWER	1.8 1.5	Not use Not use	Shield Non-shield	Plastic	-
HEADSET	COV903	N/A	COSY	HEADPHONE	2.5	Not use	Non-shield	Plastic	DOC
REMOTE CONTROL	AN-MR400G	N/A	OHSUNG ELECTRONIC	-	-	-	-	-	-

6. Test Results : Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

In the range of 0.15 MHz to 30 MHz, the conducted disturbance was measured and set-up was made accordance with **ANSI C63.4.**

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 0.4 m from the conducting wall of the shielded room.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Connect the EUT's power source lines to the appropriate power mains / peripherals through the LISN. All the other peripherals are connected to the 2nd LISN, if any.

Unused measuring port of the LISN was resistively terminated by 50 ohm terminator.

The measuring port of the LISN for EUT was connected to spectrum analyzer.

Using conducted emission test software, the emissions were scanned with peak detector mode.

After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and Average detector.

By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.

For further description of the configuration refer to the picture of the test set-up.

6.1.2 Limit for Conducted Disturbance

(1) Conducted disturbance at mains ports.

Frequency range (MHz)	Limits dB(μV)			
	Quasi-peak		Average	
	Class A	Class B	Class A	Class B
0.15 to 0.50	79	66 to 56	66	56 to 46
0.50 to 5	73	56	60	46
5 to 30		60		50
Note 1 The lower limit shall apply at the transition frequencies. Note 2 The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Note) 1. Emission Level = Reading Value + Correction Factor.
2. Correction Factor = Cable Loss + Insertion Loss of LISN
3. Margin = Limit - Emission level

Test Result

< HDMI MODE >

Digital EMC

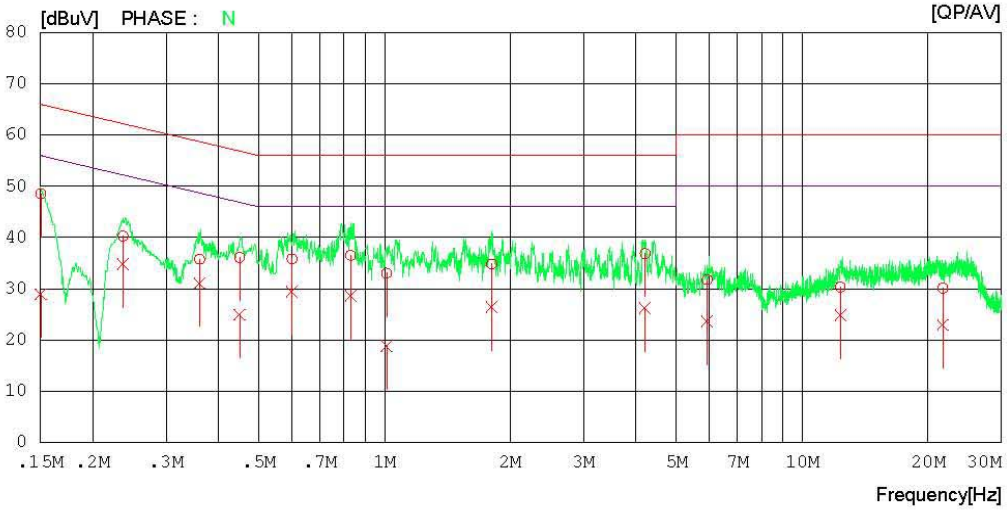
Results of Conducted Emission

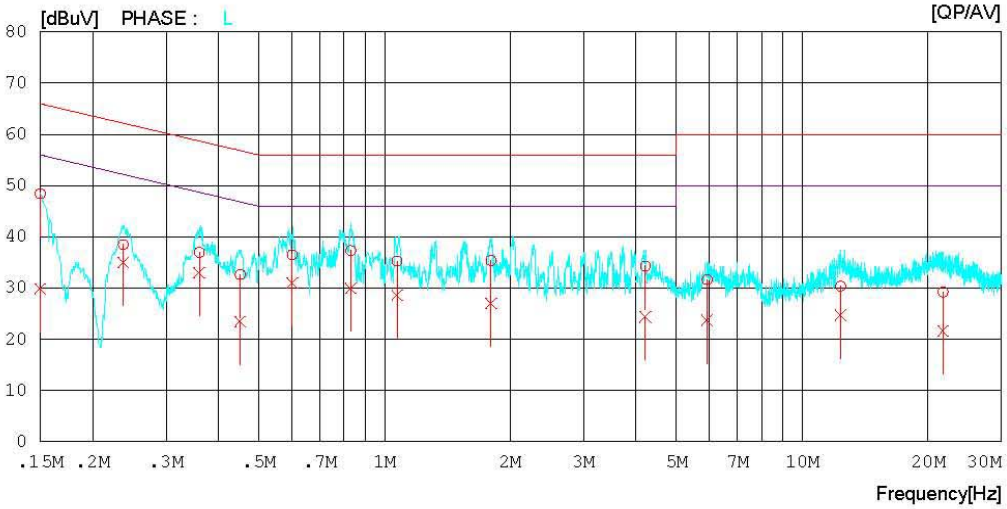
Digital EMC
Date : 2013-03-07

Model No.	:	60LA7400-UA	Referrence No.	:	
Type	:		Power Supply	: 120 V	60 Hz
Serial No.	:		Temp/Humi.	: 19 'C	38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





Results of Conducted Emission

Digital EMC
Date : 2013-03-07

Model No.	:	60LA7400-UA	Referrence No.	:	
Type	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi.	:	19 'C 38 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.15025	46.8	27.1	1.8	48.6	28.9	66.0	56.0	17.4	27.1	N
2	0.23674	39.2	33.7	1.1	40.3	34.8	62.2	52.2	21.9	17.4	N
3	0.36096	34.9	30.3	0.8	35.7	31.1	58.7	48.7	23.0	17.6	N
4	0.44971	35.4	24.2	0.7	36.1	24.9	56.9	46.9	20.8	22.0	N
5	0.60056	35.2	28.8	0.6	35.8	29.4	56.0	46.0	20.2	16.6	N
6	0.82983	36.0	28.1	0.5	36.5	28.6	56.0	46.0	19.5	17.4	N
7	1.01200	32.6	18.4	0.4	33.0	18.8	56.0	46.0	23.0	27.2	N
8	1.80600	34.5	26.2	0.3	34.8	26.5	56.0	46.0	21.2	19.5	N
9	4.20850	36.7	26.0	0.2	36.9	26.2	56.0	46.0	19.1	19.8	N
10	5.92350	31.4	23.3	0.3	31.7	23.6	60.0	50.0	28.3	26.4	N
11	12.34400	29.9	24.5	0.4	30.3	24.9	60.0	50.0	29.7	25.1	N
12	21.71900	29.6	22.4	0.5	30.1	22.9	60.0	50.0	29.9	27.1	N
13	0.15000	46.6	28.1	1.8	48.4	29.9	66.0	56.0	17.6	26.1	L
14	0.23696	37.4	33.9	1.1	38.5	35.0	62.2	52.2	23.7	17.2	L
15	0.36031	36.2	32.2	0.8	37.0	33.0	58.7	48.7	21.7	15.7	L
16	0.45116	31.9	22.8	0.7	32.6	23.5	56.9	46.9	24.3	23.4	L
17	0.60155	35.9	30.4	0.6	36.5	31.0	56.0	46.0	19.5	15.0	L
18	0.83030	36.8	29.5	0.5	37.3	30.0	56.0	46.0	18.7	16.0	L
19	1.07250	34.9	28.2	0.4	35.3	28.6	56.0	46.0	20.7	17.4	L
20	1.79900	35.1	26.7	0.3	35.4	27.0	56.0	46.0	20.6	19.0	L
21	4.21150	34.1	24.2	0.2	34.3	24.4	56.0	46.0	21.7	21.6	L
22	5.92050	31.3	23.4	0.3	31.6	23.7	60.0	50.0	28.4	26.3	L
23	12.37150	30.0	24.3	0.4	30.4	24.7	60.0	50.0	29.6	25.3	L
24	21.74750	28.7	21.1	0.5	29.2	21.6	60.0	50.0	30.8	28.4	L

< USB MODE >

Digital EMC

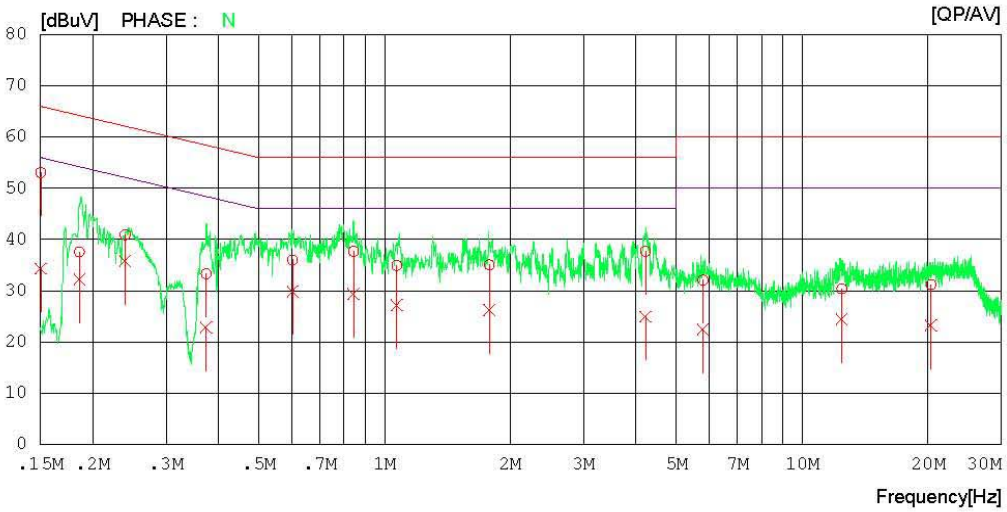
Results of Conducted Emission

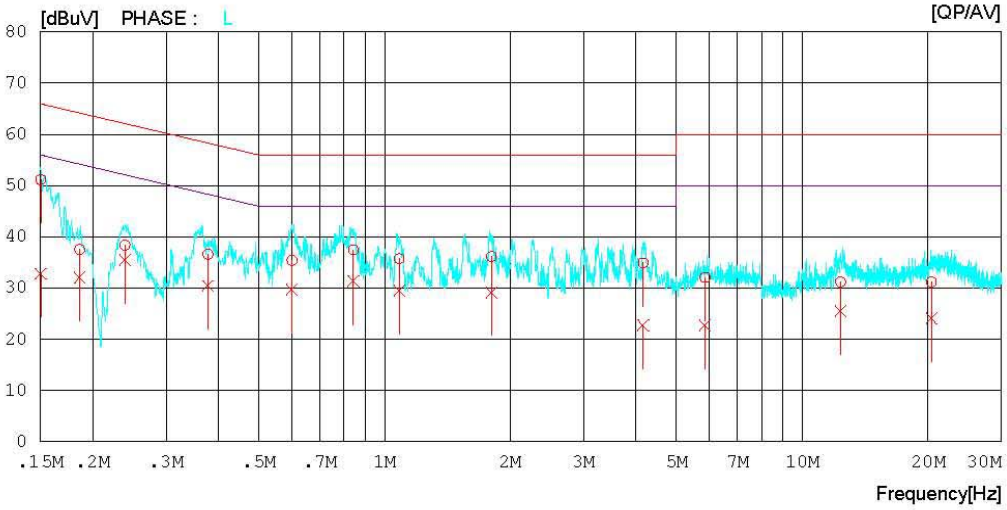
Digital EMC
Date : 2013-03-07

Model No.	:	60LA7400-UA	Referrence No.	:	
Type	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi.	:	19 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





Results of Conducted Emission

Digital EMC
Date : 2013-03-07

Model No.	:	60LA7400-UA	Referrence No.	:	
Type	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi.	:	19 'C 38 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.15037	51.3	32.5	1.8	53.1	34.3	66.0	56.0	12.9	21.7	N
2	0.18609	36.2	30.8	1.4	37.6	32.2	64.2	54.2	26.6	22.0	N
3	0.23949	39.9	34.8	1.0	40.9	35.8	62.1	52.1	21.2	16.3	N
4	0.37409	32.5	22.0	0.8	33.3	22.8	58.4	48.4	25.1	25.6	N
5	0.60244	35.4	29.3	0.6	36.0	29.9	56.0	46.0	20.0	16.1	N
6	0.84348	37.2	28.9	0.5	37.7	29.4	56.0	46.0	18.3	16.6	N
7	1.07000	34.5	26.8	0.4	34.9	27.2	56.0	46.0	21.1	18.8	N
8	1.78150	34.7	25.9	0.3	35.0	26.2	56.0	46.0	21.0	19.8	N
9	4.21600	37.5	24.7	0.2	37.7	24.9	56.0	46.0	18.3	21.1	N
10	5.79000	31.8	22.2	0.3	32.1	22.5	60.0	50.0	27.9	27.5	N
11	12.44650	29.9	24.0	0.4	30.3	24.4	60.0	50.0	29.7	25.6	N
12	20.33500	30.7	22.7	0.5	31.2	23.2	60.0	50.0	28.8	26.8	N
13	0.15025	49.3	31.0	1.8	51.1	32.8	66.0	56.0	14.9	23.2	L
14	0.18638	36.1	30.7	1.4	37.5	32.1	64.2	54.2	26.7	22.1	L
15	0.23926	37.4	34.5	1.0	38.4	35.5	62.1	52.1	23.7	16.6	L
16	0.37804	35.8	29.7	0.8	36.6	30.5	58.3	48.3	21.7	17.8	L
17	0.60053	34.8	29.1	0.6	35.4	29.7	56.0	46.0	20.6	16.3	L
18	0.84174	36.9	30.8	0.5	37.4	31.3	56.0	46.0	18.6	14.7	L
19	1.08500	35.3	29.1	0.4	35.7	29.5	56.0	46.0	20.3	16.5	L
20	1.80400	35.8	28.9	0.3	36.1	29.2	56.0	46.0	19.9	16.8	L
21	4.16300	34.7	22.5	0.2	34.9	22.7	56.0	46.0	21.1	23.3	L
22	5.85400	31.8	22.4	0.3	32.1	22.7	60.0	50.0	27.9	27.3	L
23	12.35550	30.8	25.1	0.4	31.2	25.5	60.0	50.0	28.8	24.5	L
24	20.39500	30.7	23.6	0.5	31.2	24.1	60.0	50.0	28.8	25.9	L

6.2 Radiated Disturbance

6.2.1 Measurement Procedure

The radiated disturbance was measured and set-up was made accordance with **ANSI C63.4.**
If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 3 m or 10 m away from the interference receiving antenna in the **10m semi-anechoic chamber.**
Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.
Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m above the reference ground plane continuously to determine associated with higher emission levels and record them.
The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.
For below 1 GHz frequency range, Quasi-Peak detector with 120 kHz RBW was used.
Also Peak and Average detector with 1 MHz RBW were used for above 1 GHz frequency range.
For further description of the configuration refer to the picture of the test set-up.

6.2.2 Limit for Radiated Disturbance

- The test frequency range of Radiated Disturbance measurements are listed below.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1 000
108 – 500	2 000
500 – 1 000	5 000
Above 1 000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

(1) Limit for Radiated Emission below 1 000MHz

Frequency range (MHz)	Class A Equipment (10 m distance)	Class B Equipment (3 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1 000	49.5	54

Note 1 The lower limit shall apply at the transition frequency.
Note 2 Additional provisions may be required for cases where interference occurs.
Note 3 According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(CISPR), Pub. 22 shown as below.

Frequency range (MHz)	Class A Equipment (10 m distance)	Class B Equipment (10 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 230	40	30
230 to 1 000	47	37

(2) Limits for Radiated Emission above 1 000MHz at a measuring distance of 3 m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)
1 to 40	80	60	74	54

Note) 1. Emission Level = Reading Value + Correction Factor.
2. Correction Factor = Cable loss - Amp gain + Antenna Factor
3. Margin = Limit - Emission level

Test Result

< HDMI MODE _ 30 MHz ~ 1 GHz >

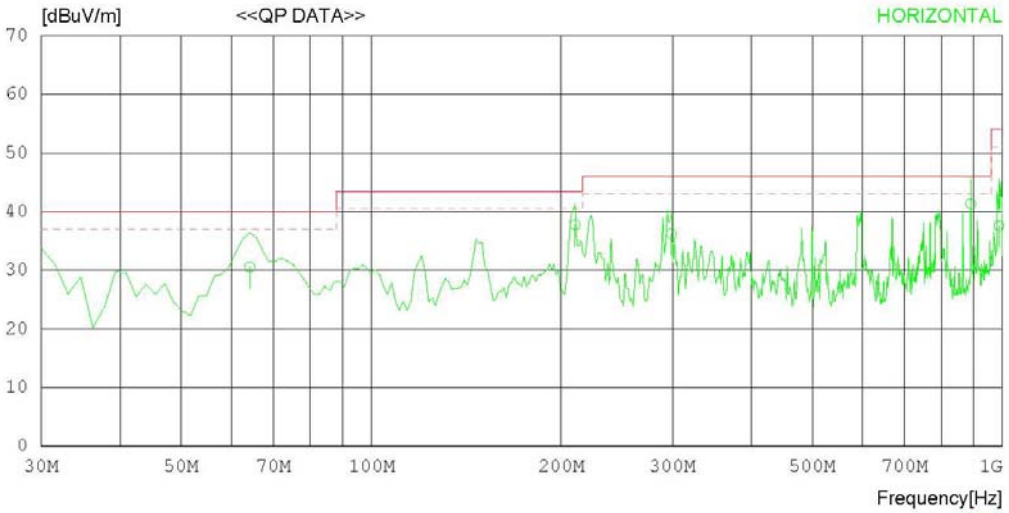
RADIATED EMISSION

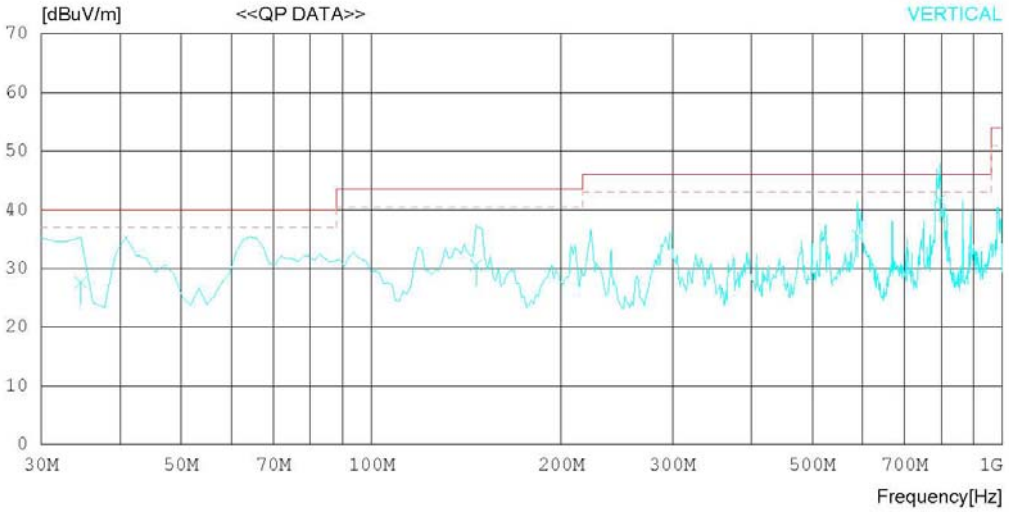
Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	21 'C 40 % R.H
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)
MARGIN: 3 dB





RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	21 'C 40 % R.H
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)
MARGIN: 3 dB

No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	64.199	47.7	5.8	1.5	24.4	30.6	40.0	9.4	295	114
2	210.321	48.9	10.3	2.4	23.9	37.7	43.5	5.8	109	358
3	298.926	43.3	13.7	2.8	23.6	36.2	46.0	9.8	100	225
4	891.188	38.5	20.7	5.2	23.1	41.3	46.0	4.7	100	241
5	987.567	32.9	22.1	5.4	22.8	37.6	54.0	16.4	188	359
----- Vertical ------										
6	34.663	35.0	15.4	1.1	23.9	27.6	40.0	12.4	100	59
7	146.587	42.5	10.6	1.7	24.2	30.6	43.5	12.9	100	1
8	589.614	36.3	18.6	4.1	23.4	35.6	46.0	10.4	100	1
9	796.363	40.5	19.9	4.8	23.5	41.7	46.0	4.3	100	177

< HDMI MODE _ (1 ~ 6) GHz _ Peak >

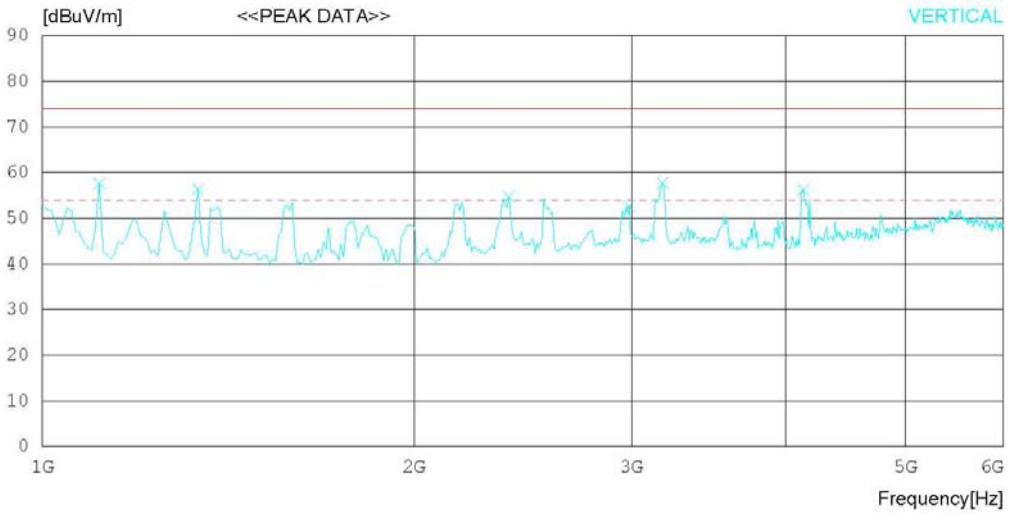
RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	1016.026	65.5	23.9	3.4	38.8	54.0	74.0	20	100	358
2	1184.295	65.9	24.2	3.6	38.5	55.2	74.0	18.8	100	218
3	1368.590	69.2	24.4	3.9	38.1	59.4	74.0	14.6	100	358
4	1592.948	65.5	24.6	4.2	37.8	56.5	74.0	17.5	100	358
5	1785.256	63.4	24.6	4.4	37.7	54.7	74.0	19.3	100	189
6	2185.899	62.2	25.6	4.9	37.5	55.2	74.0	18.8	100	125
7	2554.494	59.3	27.6	5.3	37.3	54.9	74.0	19.1	100	222
8	3956.759	53.7	30.0	6.6	36.6	53.7	74.0	20.3	100	358
----- Vertical ------										
9	1112.179	68.7	24.0	3.5	38.6	57.6	74.0	16.4	100	1
10	1336.538	66.4	24.4	3.8	38.2	56.4	74.0	17.6	100	213
11	2386.223	60.2	26.8	5.1	37.4	54.7	74.0	19.3	100	220
12	2987.193	55.4	28.9	5.7	37.3	52.7	74.0	21.3	100	242
13	3179.504	60.2	28.9	5.9	37.2	57.8	74.0	16.2	100	1
14	4133.042	55.5	30.4	6.8	36.5	56.2	74.0	17.8	100	231

< HDMI MODE _ (1 ~ 6) GHz _ Average >

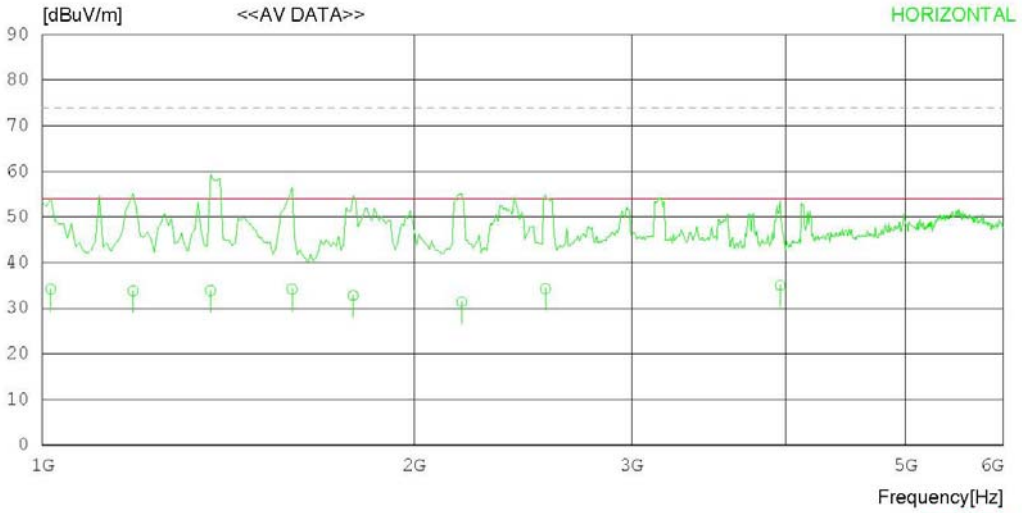
RADIATED EMISSION

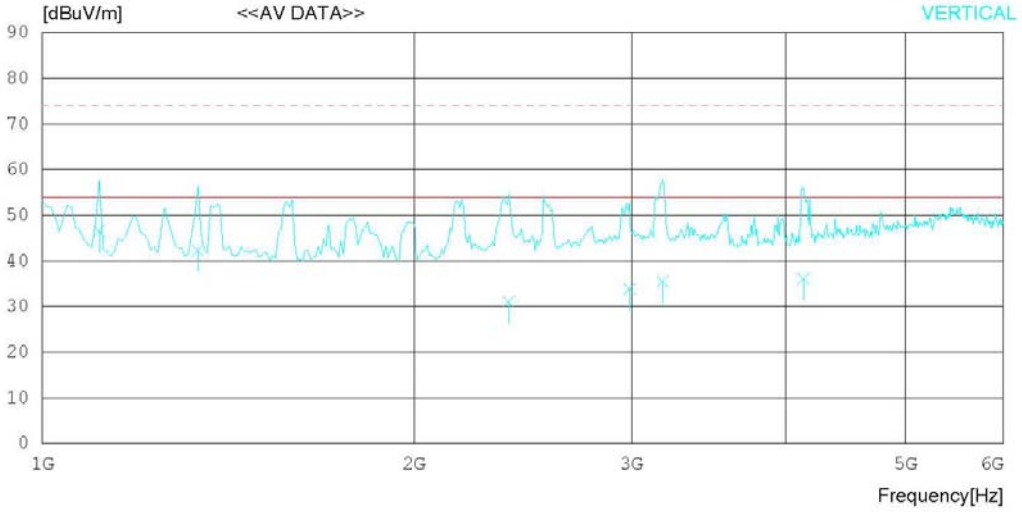
Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)





RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)

No.	FREQ [MHz]	READING AV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	1016.026	45.7	23.9	3.4	38.8	34.2	54.0	19.8	100	358
2	1184.295	44.5	24.2	3.6	38.5	33.8	54.0	20.2	100	218
3	1368.590	43.7	24.4	3.9	38.1	33.9	54.0	20.1	100	358
4	1592.948	43.2	24.6	4.2	37.8	34.2	54.0	19.8	100	358
5	1785.256	41.5	24.6	4.4	37.7	32.8	54.0	21.2	100	189
6	2185.899	38.4	25.6	4.9	37.5	31.4	54.0	22.6	100	125
7	2554.494	38.7	27.6	5.3	37.3	34.3	54.0	19.7	100	222
8	3956.759	35.0	30.0	6.6	36.6	35.0	54.0	19.0	100	358
----- Vertical ------										
9	1112.179	57.7	24.0	3.5	38.6	46.6	54.0	7.4	100	1
10	1336.538	52.4	24.4	3.8	38.2	42.4	54.0	11.6	100	213
11	2386.223	36.6	26.8	5.1	37.4	31.1	54.0	22.9	100	220
12	2987.193	36.6	28.9	5.7	37.3	33.9	54.0	20.1	100	242
13	3179.504	37.9	28.9	5.9	37.2	35.5	54.0	18.5	100	1
14	4133.042	35.4	30.4	6.8	36.5	36.1	54.0	17.9	100	231

< USB MODE _ 30 MHz ~ 1 GHz >

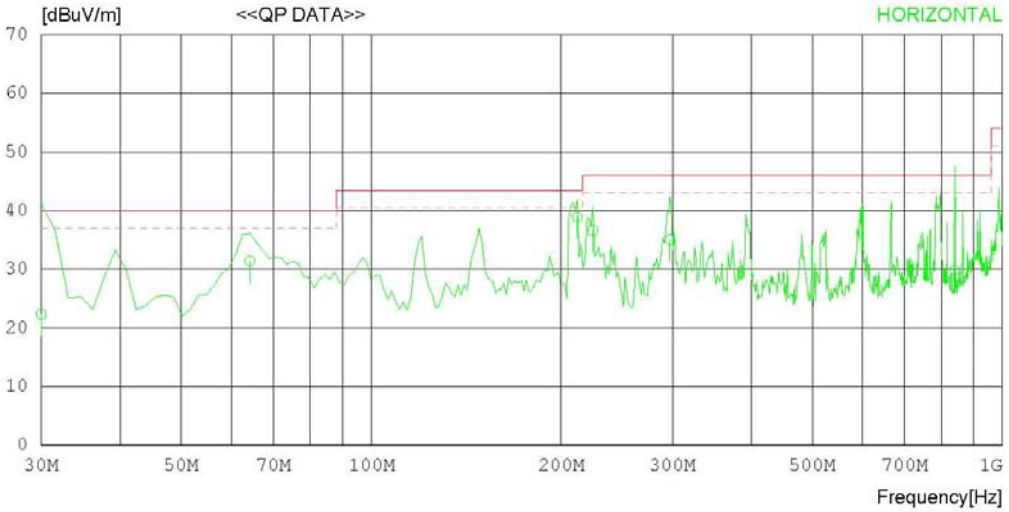
RADIATED EMISSION

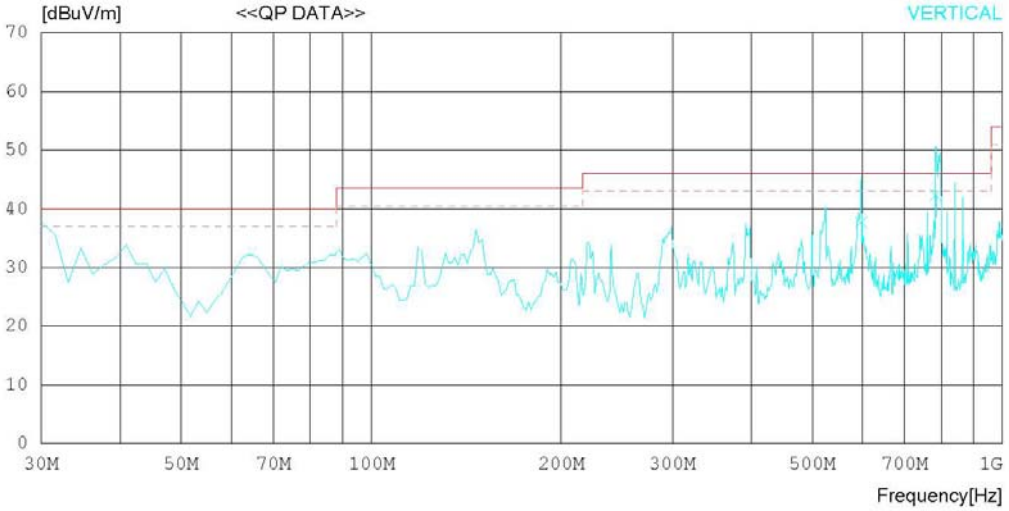
Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	21 'C 40 % R.H
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)
MARGIN: 3 dB





RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	21 'C 40 % R.H
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m)
MARGIN: 3 dB

No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	30.000	27.4	17.9	0.8	23.8	22.3	40.0	17.7	253	329
2	64.199	48.5	5.8	1.5	24.4	31.4	40.0	8.6	395	1
3	211.875	50.0	10.4	2.4	23.9	38.9	43.5	4.6	146	358
4	224.311	46.9	11.2	2.4	23.9	36.6	46.0	9.4	144	238
5	297.372	42.1	13.7	2.8	23.6	35.0	46.0	11.0	100	120
6	839.890	28.0	20.3	4.8	23.3	29.8	46.0	16.2	100	358
----- Vertical ------										
7	597.387	38.3	18.7	4.1	23.4	37.7	46.0	8.3	100	159
8	783.927	41.2	19.8	4.8	23.5	42.3	46.0	3.7	106	358

< USB MODE _ (1 ~ 6) GHz _ Peak >

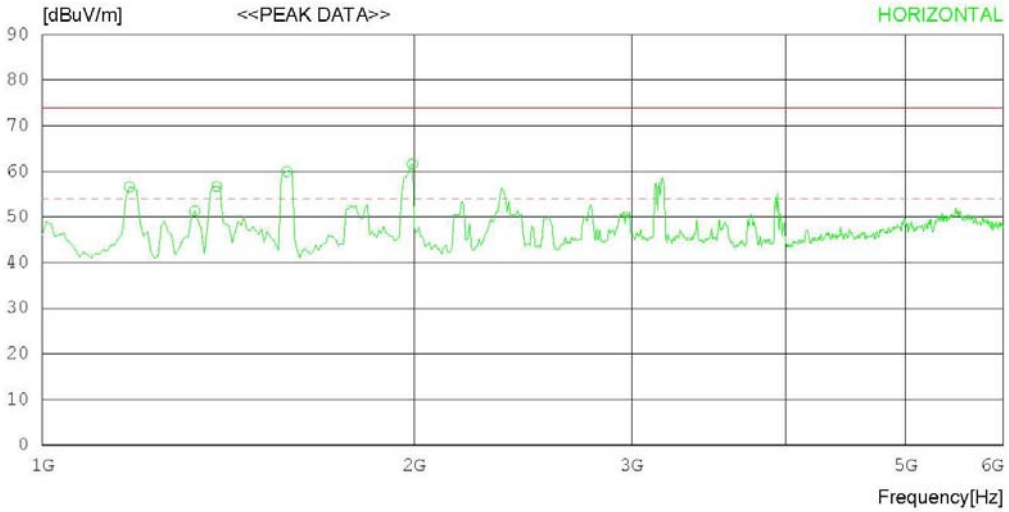
RADIATED EMISSION

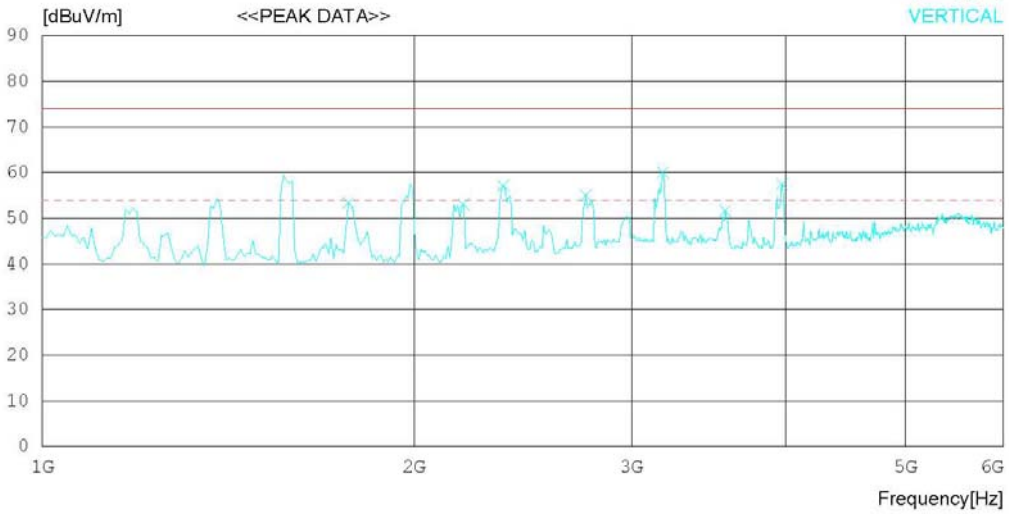
Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)





RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	1176.282	67.4	24.1	3.6	38.5	56.6	74.0	17.4	100	1
2	1328.526	61.3	24.4	3.8	38.2	51.3	74.0	22.7	100	218
3	1384.615	66.4	24.5	3.9	38.1	56.7	74.0	17.3	100	1
4	1576.923	69.1	24.6	4.2	37.9	60.0	74.0	14	100	225
5	1993.589	69.9	24.6	4.7	37.6	61.6	74.0	12.4	100	137
----- Vertical ------										
6	1769.230	62.1	24.6	4.4	37.7	53.4	74.0	20.6	100	358
7	2193.912	60.0	25.7	4.9	37.5	53.1	74.0	20.9	100	358
8	2362.184	62.8	26.7	5.1	37.4	57.2	74.0	16.8	100	358
9	2754.818	58.6	28.2	5.5	37.3	55.0	74.0	19	100	223
10	3179.504	62.5	28.9	5.9	37.2	60.1	74.0	13.9	100	240
11	3572.138	53.3	29.1	6.3	37.0	51.7	74.0	22.3	100	218
12	3972.785	57.2	30.1	6.7	36.5	57.5	74.0	16.5	100	234

< USB MODE _ (1 ~ 6) GHz _ Average >

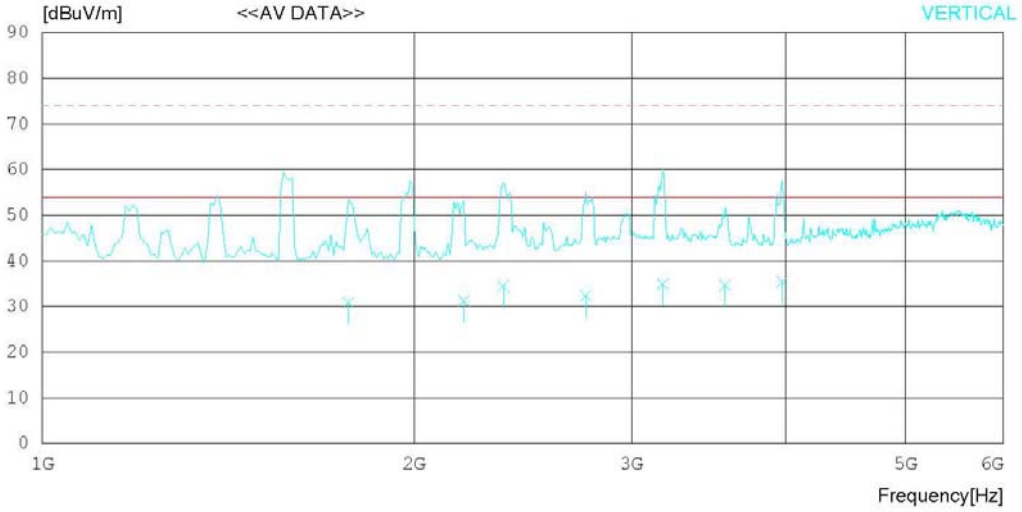
RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)



RADIATED EMISSION

Date : 2013-03-08

Model Name	:	60LA7400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	20 'C 39 % R.H
Test Condition	:	USB	Operator	:	

Memo :

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)

No.	FREQ [MHz]	READING AV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	1176.282	45.0	24.1	3.6	38.5	34.2	54.0	19.8	100	1
2	1328.526	40.9	24.4	3.8	38.2	30.9	54.0	23.1	100	218
3	1384.615	44.6	24.5	3.9	38.1	34.9	54.0	19.1	100	1
4	1576.923	44.5	24.6	4.2	37.9	35.4	54.0	18.6	100	225
5	1993.589	43.2	24.6	4.7	37.6	34.9	54.0	19.1	100	137
----- Vertical ------										
6	1769.230	39.6	24.6	4.4	37.7	30.9	54.0	23.1	100	358
7	2193.912	38.2	25.7	4.9	37.5	31.3	54.0	22.7	100	358
8	2362.184	40.1	26.7	5.1	37.4	34.5	54.0	19.5	100	358
9	2754.818	36.0	28.2	5.5	37.3	32.4	54.0	21.6	100	223
10	3179.504	37.3	28.9	5.9	37.2	34.9	54.0	19.1	100	240
11	3572.138	36.3	29.1	6.3	37.0	34.7	54.0	19.3	100	218
12	3972.785	35.1	30.1	6.7	36.5	35.4	54.0	18.6	100	234

Appendix 1

List of Test and Measurement Instruments

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment is identified by the Test Laboratory.

1. Conducted Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☐	SPECTRUM ANALYZER	8591E	H/P	3649A05889	2013.02.28	2014.02.28
☐	RFI/FIELD INTENSITY METER	KNM-2402	KYORITSU	4N-170-3	2012.07.02	2013.07.02
☐	LISN	KNW-407	KYORITSU	8-317-8	2013.01.08	2014.01.08
☒	LISN	PMM L2-16B	NARDA S.T.S. / PMM	000WX20305	2012.07.25	2013.07.25
☐	50 OHM TERMINATOR	CT-01	TME	N/A	2013.01.08	2014.01.08
☒	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2013.02.27	2014.02.27
☐	LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2012.09.18	2013.09.18
☒	LISN	LISN1600	TTI	197204	2012.07.02	2013.07.02
☒	50 OHM TERMINATOR	CT-01	TME	N/A	2013.01.08	2014.01.08

2. Radiated Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☒	EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2013.01.08	2014.01.08
☒	BILOG ANTENNA	CBL6112B	SCHAFFNER	2737	2012.11.06	2014.11.06
☒	HORN ANTENNA	BBHA9120A	SCHWARZBECK	322	2012.05.15	2014.05.15
☒	AMPLIFIER	8447E	H/P	2945A02865	2013.01.08	2014.01.08
☒	PREAMPLIFIER	8449B	AGILENT	3008A01590	2013.02.27	2014.02.27
☐	SPECTRUM ANALYZER	E4411B	AGILENT	US41062735	2012.07.11	2013.07.11
☐	AMPLIFIER	8447D	AGILENT	2443A03690	2012.07.01	2013.07.01
☐	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2013.02.27	2014.02.27
☐	BICONICAL ANT.	VHA 9103	SCHWARZBECK	91032789	2012.04.10	2014.04.10
☐	LOG-PERIODIC ANT.	UHALP 9108A	SCHWARZBECK	590	2012.04.10	2014.04.10
☐	BICONICAL ANT.	VHA 9103	SCHWARZBECK	91031946	2012.03.12	2014.03.12
☐	LOG-PERIODIC ANT.	UHALP 9108-A1	SCHWARZBECK	1098	2012.03.12	2014.03.12
☐	AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2013.02.28	2014.02.28

Appendix 2

Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
None	Original	N/A	N/A