EMC TEST REPORT

Test item	: LED TV Monitor
Model No.	: 60LN5400-UA
Order No.	: DEMC1302-00492
Date of receipt	: 2013-02-05
Test duration	: 2013-02-14 ~ 2013-02-15
Use of report	: FCC CoC Marking
Date of Issue	: 2013-02-19

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 °C,
Humidity : (38 ~ 40) % R.H.

Test result : ☒ Comply ☐ Not Comply

Tested by:

Manager
HyunSuk Ko

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.	60LN5400-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ60LN5400UA
Type of Sample Tested	Pre-Production
High Frequency	790 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.1 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 (DTV) supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720 x 480p	31.47	59.94
	31.50	60.00
1280 x 720p	44.96	59.94
	45.00	60.00
1920 x 1080i	33.72	59.94
	33.75	60.00
1920 x 1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.94
	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	02-14	19	38
Radiated Disturbance	02-15	19	40

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dBμV]	Detector	Limit [dBμV]	Margin [dB]
0.59806	**N**	**32.1**	Average	**46.0**	**13.9**

(2) Radiated Emission (USB MODE)

Frequency [MHz]	Pol.	Result [dB(μV/m)]	Detector	Limit [dB(μV/m)]	Margin [dB]
5326.492	**H**	**48.5**	Average	**54.0**	**5.5**

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)
- USB MODE : Play MP3 file

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE				Backshell	FCC ID
				Connect type	Length (m)	ferrite core	shield		
PC	VOSTRO220	G3RZKBX	DELL INC.	POWER HDMI USB USB USB LAN STEREO	1.8 1.8 1.8 1.8 1.5 1.6 1.5	Not use Not use Not use Not use Not use Not use Not use	Non-shield Shield Shield Shield Shield Non-shield Non-shield	Plastic	DOC
KEYBOARD	SKG-3300UB	TAKZ200031M	MONITEREY INTERNATIONAL CORP	USB	1.8	Not use	Shield	Plastic	DOC
MOUSE	1484	352700021372	MICROSOFT CORPORATION	USB	1.8	Not use	Shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2001499	SONY EMCS.	POWER Component	1.8 1.6	Not use Not use	Non-shield Non-shield	Plastic	VER
USB MEMORY	Sandisk Cruzer Z37 4G	N/A	SANDISK	USB	-	-	-	-	DOC
PRINTER	SRP-770	SRP77008060035	BIXOLON	POWER USB	1.5 1.6	Not use Not use	Non-shield Shield	Plastic	DOC
HEADSET	COV903	N/A	COSY	STEREO	2.1	Not use	Non-shield	Plastic	DOC
REMOTE CONTROL	AKB73715608	N/A	OHSUNG ELECTRONICS CO., LTD.	-	-	-	-	-	-

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

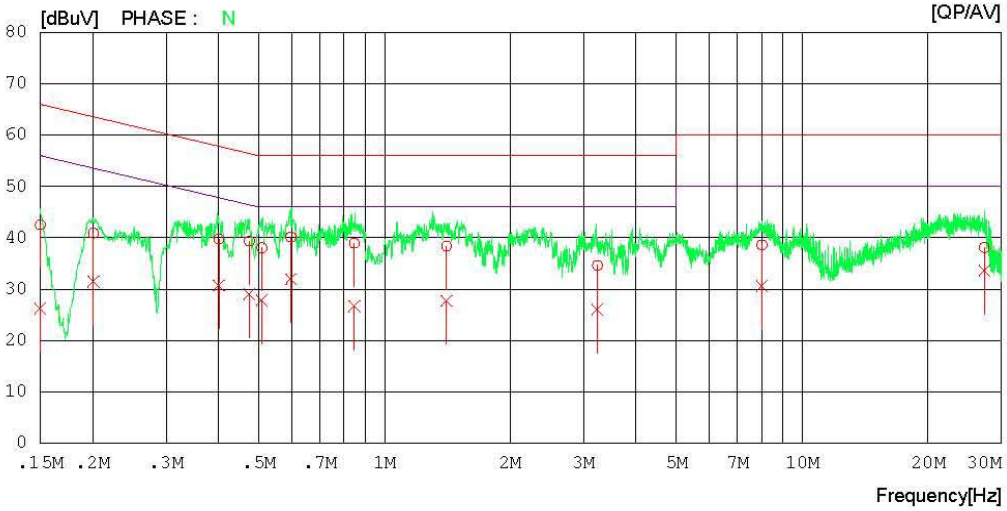
Results of Conducted Emission

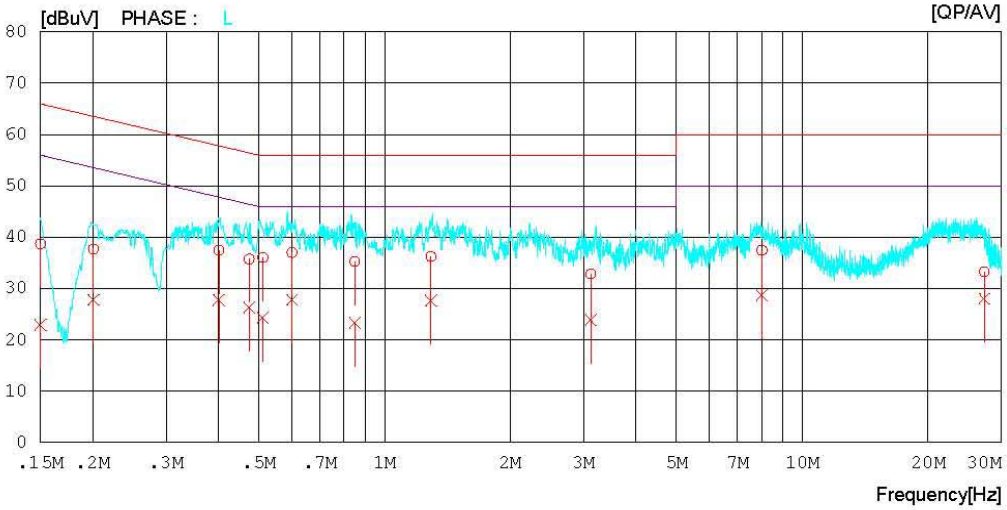
Digital EMC
Date : 2013-02-14

Model No.	:	60LN5400-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 : 2013-02-14

Model No.	:	60LN5400-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	0.15000	42.3	26.0	0.2	42.5	26.2	66.0	56.0	23.5	29.8	N
2	0.20104	40.7	31.2	0.2	40.9	31.4	63.6	53.6	22.7	22.2	N
3	0.40120	39.6	30.5	0.2	39.8	30.7	57.8	47.8	18.0	17.1	N
4	0.47500	39.1	28.9	0.2	39.3	29.1	56.4	46.4	17.1	17.3	N
5	0.50895	37.8	27.6	0.2	38.0	27.8	56.0	46.0	18.0	18.2	N
6	0.59698	39.9	31.7	0.2	40.1	31.9	56.0	46.0	15.9	14.1	N
7	0.84685	38.7	26.4	0.2	38.9	26.6	56.0	46.0	17.1	19.4	N
8	1.40700	38.1	27.4	0.3	38.4	27.7	56.0	46.0	17.6	18.3	N
9	3.23400	34.3	25.7	0.3	34.6	26.0	56.0	46.0	21.4	20.0	N
10	8.01200	38.1	30.1	0.5	38.6	30.6	60.0	50.0	21.4	19.4	N
11	27.29600	37.1	32.6	1.0	38.1	33.6	60.0	50.0	21.9	16.4	N
12	0.15006	38.5	22.7	0.2	38.7	22.9	66.0	56.0	27.3	33.1	L
13	0.20086	37.5	27.6	0.2	37.7	27.8	63.6	53.6	25.9	25.8	L
14	0.40144	37.2	27.6	0.2	37.4	27.8	57.8	47.8	20.4	20.0	L
15	0.47483	35.5	26.1	0.2	35.7	26.3	56.4	46.4	20.7	20.1	L
16	0.51140	35.8	24.1	0.2	36.0	24.3	56.0	46.0	20.0	21.7	L
17	0.60074	36.8	27.6	0.2	37.0	27.8	56.0	46.0	19.0	18.2	L
18	0.84929	35.1	23.1	0.2	35.3	23.3	56.0	46.0	20.7	22.7	L
19	1.29250	35.9	27.4	0.3	36.2	27.7	56.0	46.0	19.8	18.3	L
20	3.12000	32.5	23.6	0.3	32.8	23.9	56.0	46.0	23.2	22.1	L
21	8.00900	37.0	28.3	0.5	37.5	28.8	60.0	50.0	22.5	21.2	L
22	27.29150	32.3	27.0	1.0	33.3	28.0	60.0	50.0	26.7	22.0	L

< USB MODE >

Digital EMC

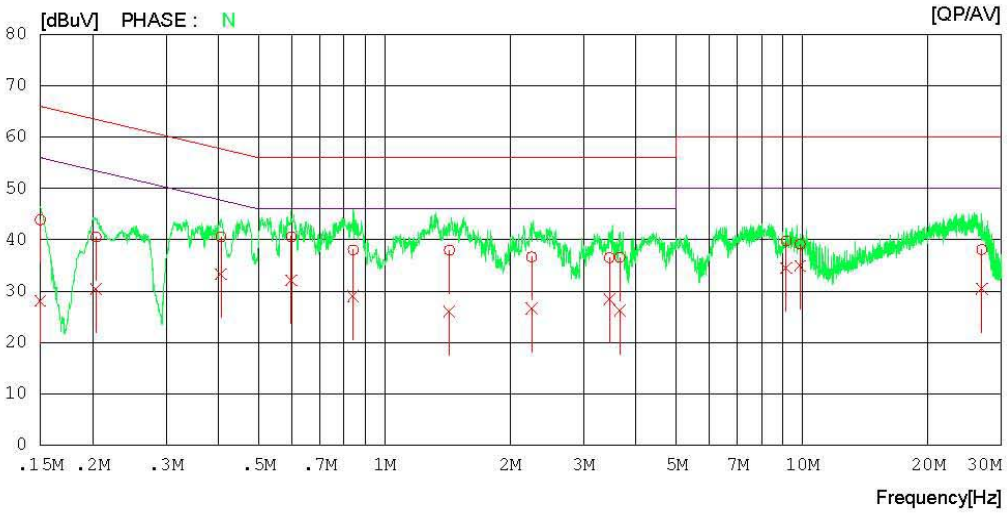
Results of Conducted Emission

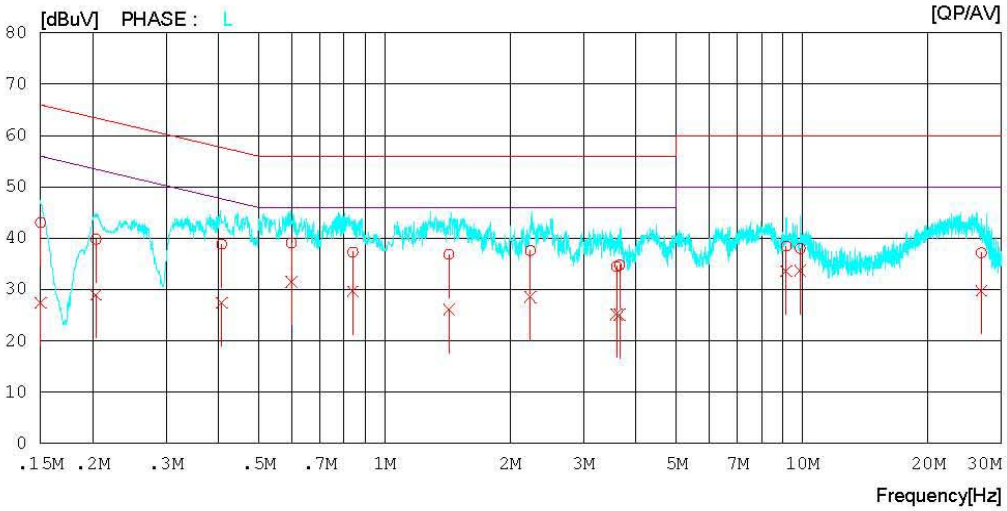
Digital EMC
Date : 2013-02-14

Model No.	:	60LN5400-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 : 2013-02-14

Model No.	:	60LN5400-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	0.15000	43.7	27.9	0.2	43.9	28.1	66.0	56.0	22.1	27.9	N
2	0.20395	40.3	30.2	0.2	40.5	30.4	63.4	53.4	22.9	23.0	N
3	0.40605	40.3	33.1	0.2	40.5	33.3	57.7	47.7	17.2	14.4	N
4	0.59806	40.4	31.9	0.2	40.6	32.1	56.0	46.0	15.4	13.9	N
5	0.84120	37.8	28.8	0.2	38.0	29.0	56.0	46.0	18.0	17.0	N
6	1.43050	37.7	25.7	0.3	38.0	26.0	56.0	46.0	18.0	20.0	N
7	2.25100	36.4	26.3	0.3	36.7	26.6	56.0	46.0	19.3	19.4	N
8	3.45600	36.2	28.1	0.3	36.5	28.4	56.0	46.0	19.5	17.6	N
9	3.66200	36.3	25.9	0.3	36.6	26.2	56.0	46.0	19.4	19.8	N
10	9.15800	39.1	33.8	0.7	39.8	34.5	60.0	50.0	20.2	15.5	N
11	9.89050	38.4	34.2	0.7	39.1	34.9	60.0	50.0	20.9	15.1	N
12	26.91450	37.1	29.4	1.0	38.1	30.4	60.0	50.0	21.9	19.6	N
13	0.15006	42.8	27.3	0.2	43.0	27.5	66.0	56.0	23.0	28.5	L
14	0.20388	39.6	28.8	0.2	39.8	29.0	63.5	53.5	23.7	24.5	L
15	0.40750	38.6	27.2	0.2	38.8	27.4	57.7	47.7	18.9	20.3	L
16	0.59853	38.8	31.3	0.2	39.0	31.5	56.0	46.0	17.0	14.5	L
17	0.84050	37.1	29.4	0.2	37.3	29.6	56.0	46.0	18.7	16.4	L
18	1.42750	36.6	25.9	0.3	36.9	26.2	56.0	46.0	19.1	19.8	L
19	2.23500	37.3	28.2	0.3	37.6	28.5	56.0	46.0	18.4	17.5	L
20	3.59250	34.2	24.9	0.3	34.5	25.2	56.0	46.0	21.5	20.8	L
21	3.65450	34.5	24.8	0.3	34.8	25.1	56.0	46.0	21.2	20.9	L
22	9.15900	37.7	32.9	0.7	38.4	33.6	60.0	50.0	21.6	16.4	L
23	9.89100	37.3	33.0	0.7	38.0	33.7	60.0	50.0	22.0	16.3	L
24	26.85250	36.2	28.8	1.0	37.2	29.8	60.0	50.0	22.8	20.2	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 >

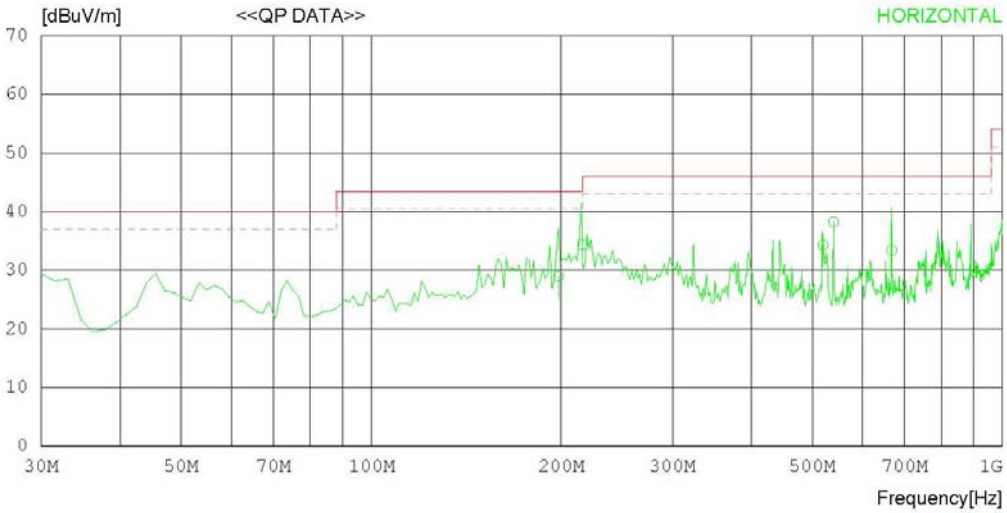
RADIATED EMISSION

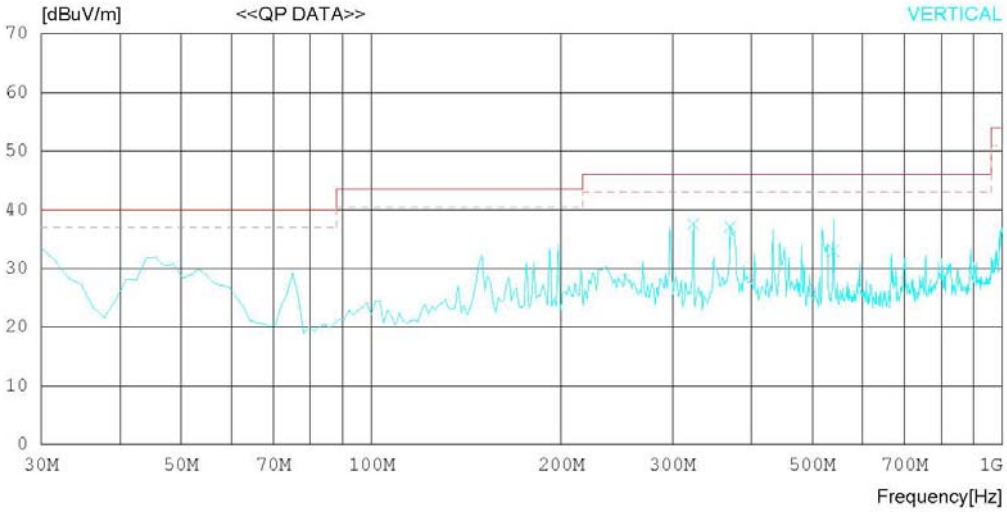
Date : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

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





RADIATED EMISSION

Date : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 '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	216.019	45.3	10.6	2.4	23.9	34.4	46.0	11.6	210	17
2	519.706	35.9	17.6	3.9	23.1	34.3	46.0	11.7	194	265
3	540.009	39.7	17.9	3.8	23.2	38.2	46.0	7.8	110	118
4	667.600	34.2	18.6	4.3	23.7	33.4	46.0	12.6	261	73
5	198.010	41.0	9.7	2.3	24.0	29.0	43.5	14.5	100	358
----- Vertical ------										
6	324.009	43.8	14.3	3.1	23.6	37.6	46.0	8.4	239	310
7	370.216	41.9	15.4	3.4	23.6	37.1	46.0	8.9	100	154
8	539.985	34.5	17.9	3.8	23.2	33.0	46.0	13.0	245	272

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

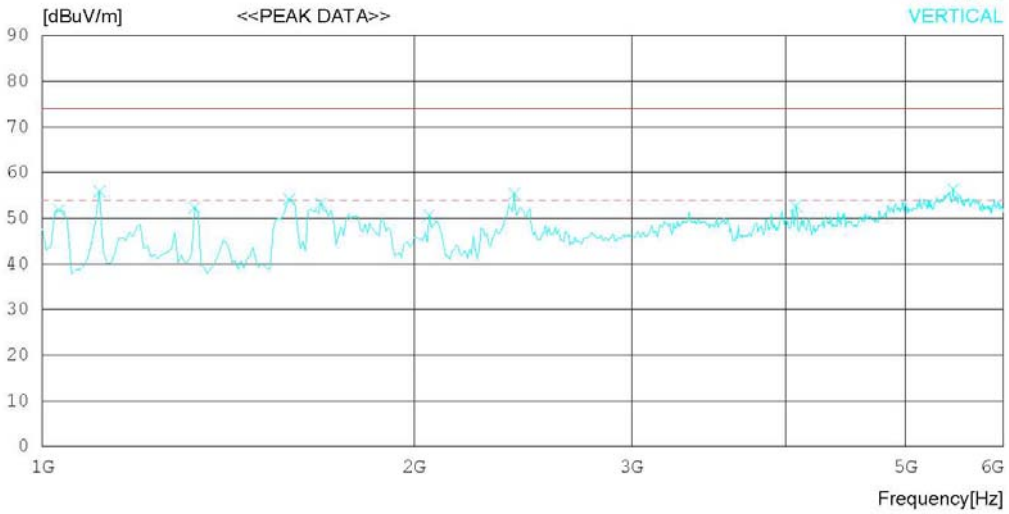
RADIATED EMISSION

Date : 2013-02-15

Model Name	: 60LN5400-UA	Reference No.	:		
Model No.	:	Power Supply	:	120 V	60 Hz
Serial No.	:	Temp/Humi	:	19 'C	40 % 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 : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % 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	1112.179	56.7	24.0	6.1	28.5	58.3	74.0	15.7	100	358
2	1328.526	53.7	24.4	6.9	28.5	56.5	74.0	17.5	100	358
3	1576.923	50.2	24.6	7.6	28.5	53.9	74.0	20.1	100	358
4	1881.410	47.2	24.6	8.2	28.5	51.5	74.0	22.5	100	131
5	2065.705	47.9	24.9	8.6	28.5	52.9	74.0	21.1	100	172
6	2394.236	46.0	26.8	9.3	28.5	53.6	74.0	20.4	100	221
7	2786.870	41.6	28.3	10.1	28.4	51.6	74.0	22.4	100	358
8	3219.568	40.4	28.9	11.0	28.4	51.9	74.0	22.1	100	102
9	3580.151	39.5	29.1	11.9	28.3	52.2	74.0	21.8	100	358
10	5415.074	34.2	34.6	14.9	28.1	55.6	74.0	18.4	100	113
----- Vertical ------										
11	1032.051	50.5	23.9	5.9	28.5	51.8	74.0	22.2	100	196
12	1112.179	54.3	24.0	6.1	28.5	55.9	74.0	18.1	100	165
13	1328.526	49.6	24.4	6.9	28.5	52.4	74.0	21.6	100	139
14	1584.936	50.4	24.6	7.7	28.5	54.2	74.0	19.8	100	1
15	1681.089	49.4	24.6	7.8	28.5	53.3	74.0	20.7	100	1
16	2057.692	45.7	24.9	8.6	28.5	50.7	74.0	23.3	100	113
17	2410.261	47.7	26.9	9.3	28.5	55.4	74.0	18.6	100	1
18	4076.953	37.7	30.3	13.0	28.3	52.7	74.0	21.3	100	181
19	5463.150	34.7	34.9	14.9	28.1	56.4	74.0	17.6	100	1

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

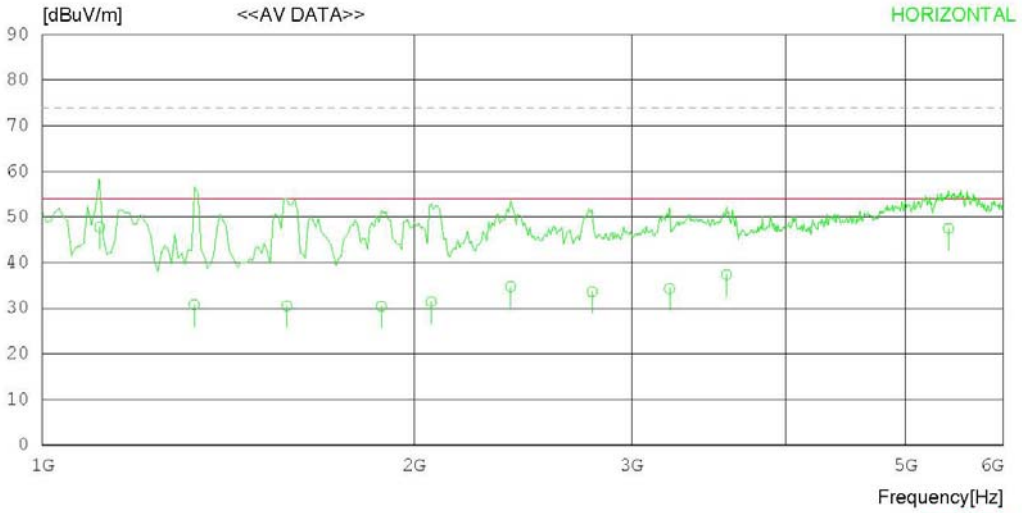
RADIATED EMISSION

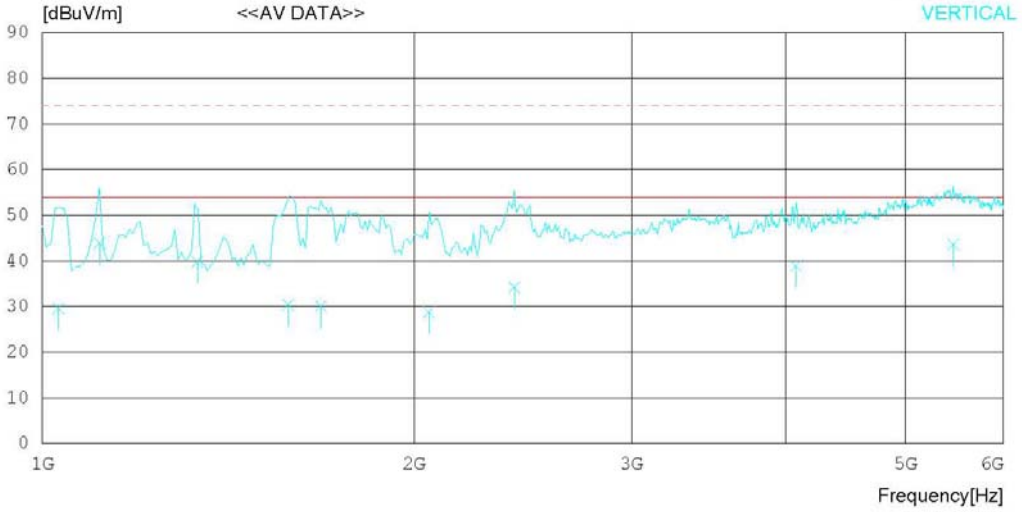
Date : 2013-02-15

Model Name	: 60LN5400-UA	Reference No.	:		
Model No.	:	Power Supply	:	120 V	60 Hz
Serial No.	:	Temp/Humi	:	19 'C	40 % 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 : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % 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	1112.633	46.2	24.0	6.1	28.5	47.8	54.0	6.2	100	161
2	1327.134	28.0	24.4	6.9	28.5	30.8	54.0	23.2	100	189
3	1577.690	26.8	24.6	7.6	28.5	30.5	54.0	23.5	100	101
4	1881.464	26.1	24.6	8.2	28.5	30.4	54.0	23.6	100	267
5	2064.519	26.4	24.9	8.6	28.5	31.4	54.0	22.6	100	172
6	2394.480	27.2	26.8	9.3	28.5	34.8	54.0	19.2	100	281
7	2787.426	23.6	28.3	10.1	28.4	33.6	54.0	20.4	100	98
8	3219.288	22.8	28.9	11.0	28.4	34.3	54.0	19.7	100	102
9	3581.890	24.7	29.1	11.9	28.3	37.4	54.0	16.6	100	76
10	5415.568	26.1	34.6	14.9	28.1	47.5	54.0	6.5	100	164
----- Vertical ------										
11	1031.134	28.4	23.9	5.8	28.5	29.6	54.0	24.4	100	278
12	1112.673	42.3	24.0	6.1	28.5	43.9	54.0	10.1	100	126
13	1335.139	37.1	24.4	6.9	28.5	39.9	54.0	14.1	100	167
14	1581.996	26.6	24.6	7.7	28.5	30.4	54.0	23.6	100	172
15	1681.116	26.2	24.6	7.8	28.5	30.1	54.0	23.9	100	225
16	2056.086	23.8	24.9	8.6	28.5	28.8	54.0	25.2	100	17
17	2411.778	26.5	26.9	9.3	28.5	34.2	54.0	19.8	100	212
18	4076.448	23.9	30.3	13.0	28.3	38.9	54.0	15.1	100	168
19	5463.833	21.9	34.9	14.9	28.1	43.6	54.0	10.4	100	206

< USB MODE_30 MHz ~ 1 GHz >

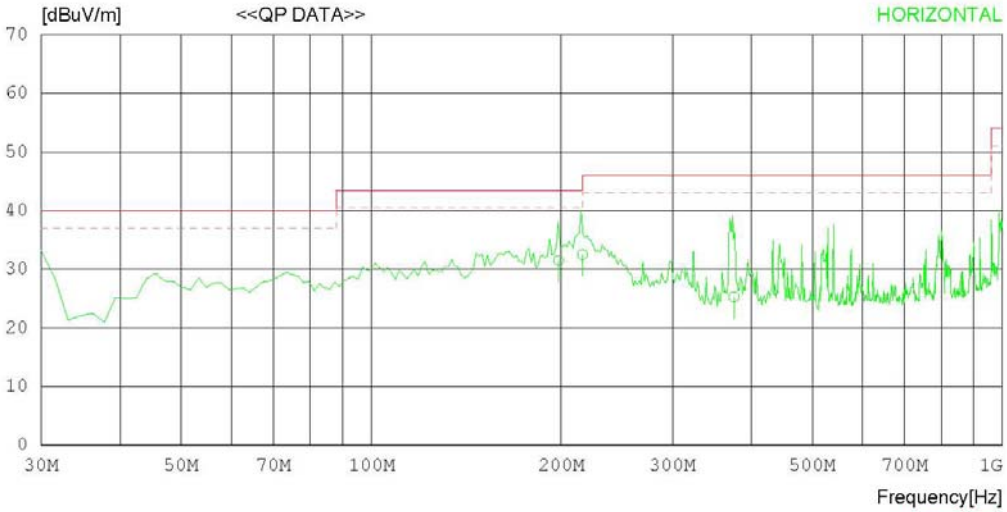
RADIATED EMISSION

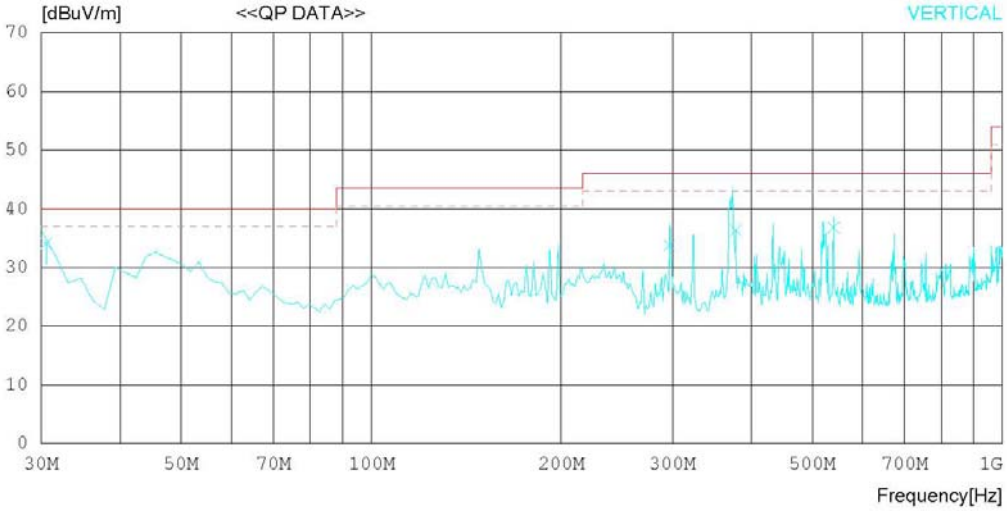
Date : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

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





RADIATED EMISSION

Date : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 '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	198.057	43.5	9.7	2.3	24.0	31.5	43.5	12.0	339	115
2	216.019	43.4	10.6	2.4	23.9	32.5	46.0	13.5	379	148
3	375.427	30.0	15.5	3.4	23.6	25.3	46.0	20.7	270	142
----- Vertical ------										
4	30.552	39.4	17.6	0.9	23.8	34.1	40.0	5.9	113	158
5	297.048	40.9	13.7	2.8	23.6	33.8	46.0	12.2	206	353
6	378.216	40.9	15.5	3.5	23.5	36.4	46.0	9.6	100	118
7	540.009	38.3	17.9	3.8	23.2	36.8	46.0	9.2	316	334

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

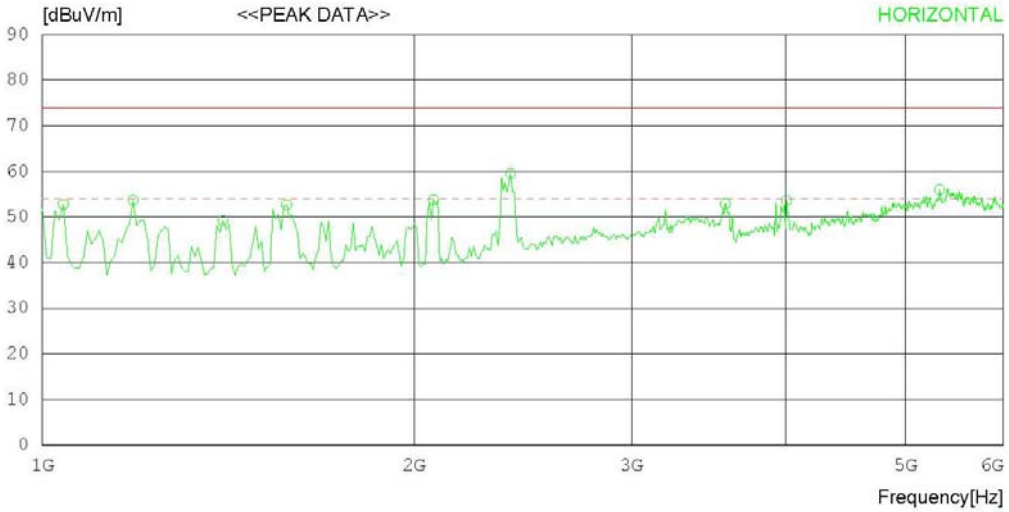
RADIATED EMISSION

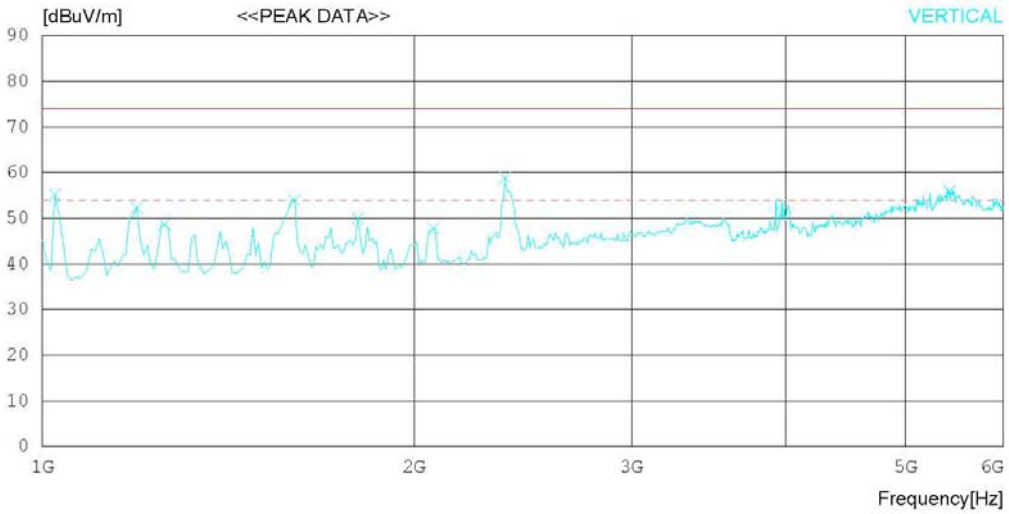
Date : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % 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 : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % 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	1040.064	51.5	23.9	5.9	28.5	52.8	74.0	21.2	100	1
2	1184.295	51.6	24.2	6.4	28.5	53.7	74.0	20.3	100	203
3	1400.641	46.0	24.5	7.2	28.5	49.2	74.0	24.8	100	89
4	1576.923	49.0	24.6	7.6	28.5	52.7	74.0	21.3	100	98
5	2073.718	48.7	25.0	8.6	28.5	53.8	74.0	20.2	100	1
6	2394.236	52.0	26.8	9.3	28.5	59.6	74.0	14.4	100	120
7	3572.138	40.2	29.1	11.9	28.3	52.9	74.0	21.1	100	109
8	4004.836	38.8	30.2	12.9	28.3	53.6	74.0	20.4	100	1
9	5326.934	34.8	34.2	15.1	28.1	56.0	74.0	18	100	93
----- Vertical ------										
10	1024.038	53.9	23.9	5.8	28.5	55.1	74.0	18.9	100	148
11	1192.308	50.2	24.2	6.4	28.5	52.3	74.0	21.7	100	181
12	1256.410	46.3	24.3	6.6	28.5	48.7	74.0	25.3	100	358
13	1600.961	50.2	24.6	7.7	28.5	54.0	74.0	20	100	115
14	1801.282	45.8	24.6	8.1	28.5	50.0	74.0	24	100	358
15	2073.718	42.8	25.0	8.6	28.5	47.9	74.0	26.1	100	358
16	2370.197	51.4	26.7	9.3	28.5	58.9	74.0	15.1	100	133
17	3972.785	38.6	30.1	12.9	28.3	53.3	74.0	20.7	100	137
18	5423.086	34.4	34.7	14.9	28.1	55.9	74.0	18.1	100	8

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

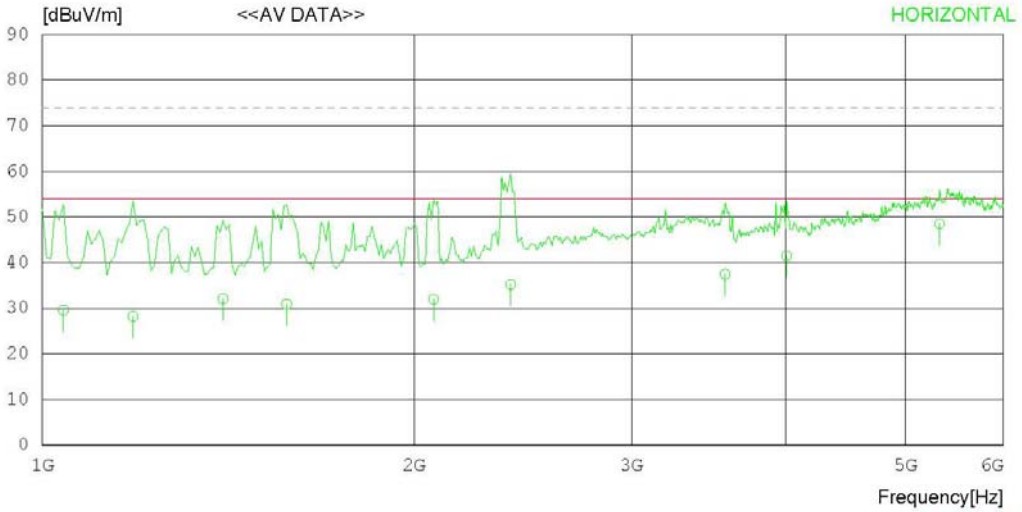
RADIATED EMISSION

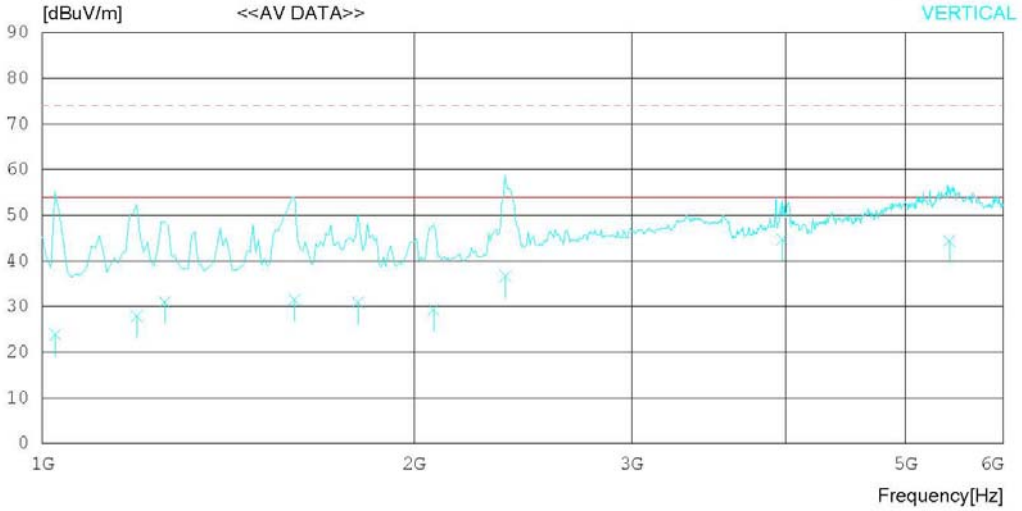
Date : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % 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 : 2013-02-15

Model Name	:	60LN5400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120 V 60 Hz
Serial No.	:		Temp/Humi	:	19 'C 40 % 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	1040.298	28.3	23.9	5.9	28.5	29.6	54.0	24.4	100	172
2	1184.240	26.1	24.2	6.4	28.5	28.2	54.0	25.8	100	210
3	1400.647	28.9	24.5	7.2	28.5	32.1	54.0	21.9	100	88
4	1576.931	27.2	24.6	7.6	28.5	30.9	54.0	23.1	100	90
5	2073.915	26.9	25.0	8.6	28.5	32.0	54.0	22.0	100	126
6	2394.841	27.6	26.8	9.3	28.5	35.2	54.0	18.8	100	140
7	3571.488	24.8	29.1	11.9	28.3	37.5	54.0	16.5	100	120
8	4003.997	26.7	30.2	12.9	28.3	41.5	54.0	12.5	100	190
9	5326.492	27.3	34.2	15.1	28.1	48.5	54.0	5.5	100	67
----- Vertical ------										
10	1024.973	22.7	23.9	5.8	28.5	23.9	54.0	30.1	100	148
11	1192.672	25.9	24.2	6.4	28.5	28.0	54.0	26.0	100	181
12	1256.752	28.6	24.3	6.6	28.5	31.0	54.0	23.0	100	358
13	1600.810	27.7	24.6	7.7	28.5	31.5	54.0	22.5	100	115
14	1801.980	26.7	24.6	8.1	28.5	30.9	54.0	23.1	100	358
15	2073.308	24.2	25.0	8.6	28.5	29.3	54.0	24.7	100	358
16	2370.871	29.2	26.7	9.3	28.5	36.7	54.0	17.3	100	133
17	3972.011	30.1	30.1	12.9	28.3	44.8	54.0	9.2	100	137
18	5423.831	22.9	34.7	14.9	28.1	44.4	54.0	9.6	100	8

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	2012.03.05	2013.03.05
☐	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	2012.03.06	2013.03.06
☒	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
☒	AMPLIFIER	MLA-100M18-B01-25	TSJ	1719458	2012.06.04	2013.06.04
☐	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	2012.03.06	2013.03.06
☐	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	2012.03.05	2013.03.05

Appendix 2

Report Revision History

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