

EMC TEST REPORT

Test item : LED TV Monitor
Model No. : 50LN5710-UI
Order No. : DEMC1303-01009
Date of receipt : 2013-03-15
Test duration : 2013-03-19 ~ 2013-03-25
Use of report : FCC CoC Marking
Date of Issue : 2013-03-27

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 : 23 °C,
Humidity : (32 ~ 34) % R.H.

Test result : ☒ Comply ☐ Not Comply

The test results presented in this test report are limited only to the sample supplied by applicant and
the use of this test report is inhibited other than its purpose.

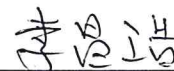
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Tested by:



Engineer
JunHo Park

Reviewed by:



Technical Manager
ChangHo Lee

PRESIDENT OF DIGITAL EMC CO., LTD.

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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.digitalemcc.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.	50LN5710-UI
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ50LN5710UI
Type of Sample Tested	Pre-Production
High Frequency	790 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.4 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)
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1152x864	54.348	60.053
1360x768	47.712	60.015
1280x1024	63.981	60.020
1920x1080	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 (°C)	Humidity (% R.H.)
Conducted Disturbance	03-19	23	32
Radiated Disturbance	03-25	23	34

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dBμV]	Detector	Limit [dBμV]	Margin [dB]
0.15049	L	55.0	Quasi-Peak	66.0	11.0

(2) Radiated Emission (HDMI MODE)

Frequency [MHz]	Pol.	Result [dB(μV/m)]	Detector	Limit [dB(μV/m)]	Margin [dB]
742.487	V	42.6	Quasi-Peak	46.0	3.4

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 : 'H' Pattern mode, 1920x1080 Resolution (Worst Case)
- USB MODE : USB video 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	DCSCMF	G3RZKBX	DELL	Power	1.8	Not use	Non-shield	Plastic	DOC
				USB	1.7	Not use	Non-shield		
				USB	1.6	Not use	Non-shield		
				USB	1.8	Not use	Shield		
				HDMI	1.9	Not use	Shield		
Keyboard	SKG-3000UB	TAKB601238B	MONITEREY INTERNATIONAL CORP.	USB	1.7	Not use	Shield	Plastic	DOC
MOUSE	1484	352700021378	MICROSOFT CORPORATION	USB	1.6	Not use	Shield	Plastic	DOC
PRINT	EPSON Aculaser M1200	LWTZ181070	EPSON	Power	1.8	Not use	Shield	Plastic	DOC
				USB	1.8	Not use	Non-shield		
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS.	POWER AV	1.8 1.5	Not use Not use	Non-shield Non-shield	Plastic	VER
USB MEMORY	CRUZER 4GB	N/A	SANDISK	USB	-	-	-	Plastic	DOC
HEADSET	COV9	N/A	COSY	STEREO	1.9	Not use	Non-shield	Plastic	DOC
REMOTE CONTROL	AKB73756542	N/A	HANSUNG 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 >



Results of Conducted Emission

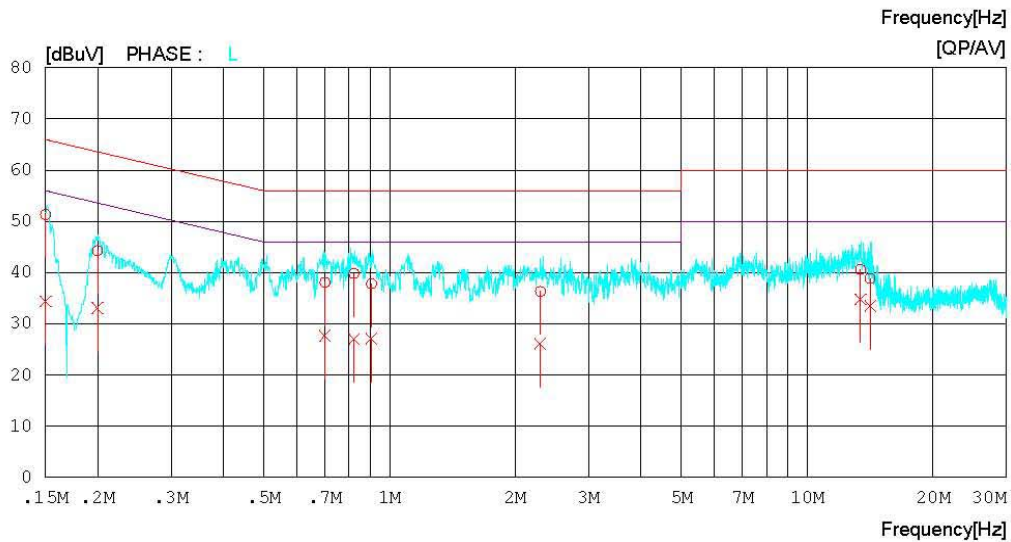
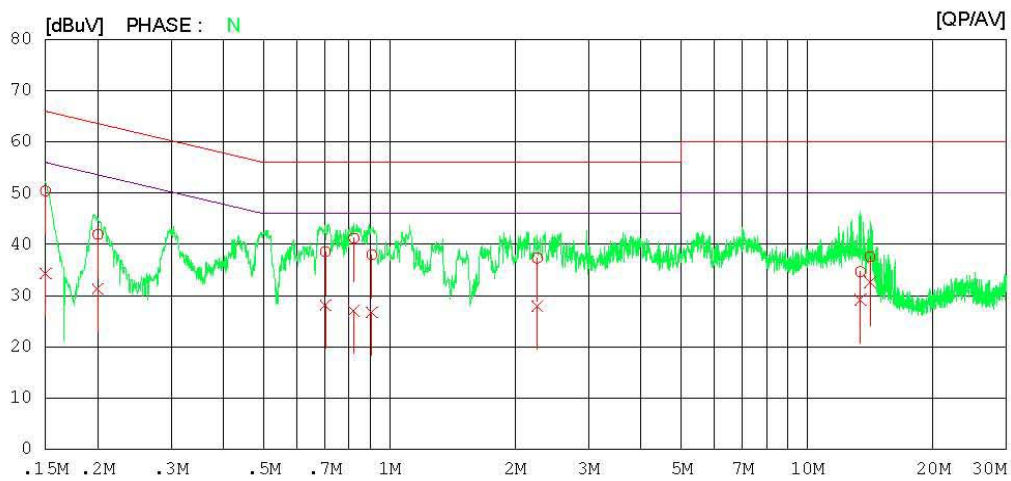
Digital EMC
Date : 2013-03-19

Model No. : 50LN5710-UI
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 C 32 % R. H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-03-19

Model No. : 50LN5710-UI
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 °C 32 % R. H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15006	50.2	34.1	0.2	50.4	34.3	66.0	56.0	15.6	21.7	N
2	0.20039	41.7	31.1	0.2	41.9	31.3	63.6	53.6	21.7	22.3	N
3	0.70323	38.4	27.9	0.2	38.6	28.1	56.0	46.0	17.4	17.9	N
4	0.82174	41.0	26.9	0.2	41.2	27.1	56.0	46.0	14.8	18.9	N
5	0.90678	37.7	26.5	0.2	37.9	26.7	56.0	46.0	18.1	19.3	N
6	2.26000	37.0	27.6	0.3	37.3	27.9	56.0	46.0	18.7	18.1	N
7	13.41600	33.9	28.5	0.7	34.6	29.2	60.0	50.0	25.4	20.8	N
8	14.15300	36.9	31.9	0.7	37.6	32.6	60.0	50.0	22.4	17.4	N
9	0.15006	51.1	34.2	0.2	51.3	34.4	66.0	56.0	14.7	21.6	L
10	0.19998	44.1	32.9	0.2	44.3	33.1	63.6	53.6	19.3	20.5	L
11	0.70103	37.9	27.5	0.2	38.1	27.7	56.0	46.0	17.9	18.3	L
12	0.82221	39.7	26.8	0.2	39.9	27.0	56.0	46.0	16.1	19.0	L
13	0.90550	37.6	26.9	0.2	37.8	27.1	56.0	46.0	18.2	18.9	L
14	2.29700	36.0	25.8	0.3	36.3	26.1	56.0	46.0	19.7	19.9	L
15	13.41950	39.9	34.1	0.7	40.6	34.8	60.0	50.0	19.4	15.2	L
16	14.15500	38.1	32.8	0.7	38.8	33.5	60.0	50.0	21.2	16.5	L

< USB MODE >



Results of Conducted Emission

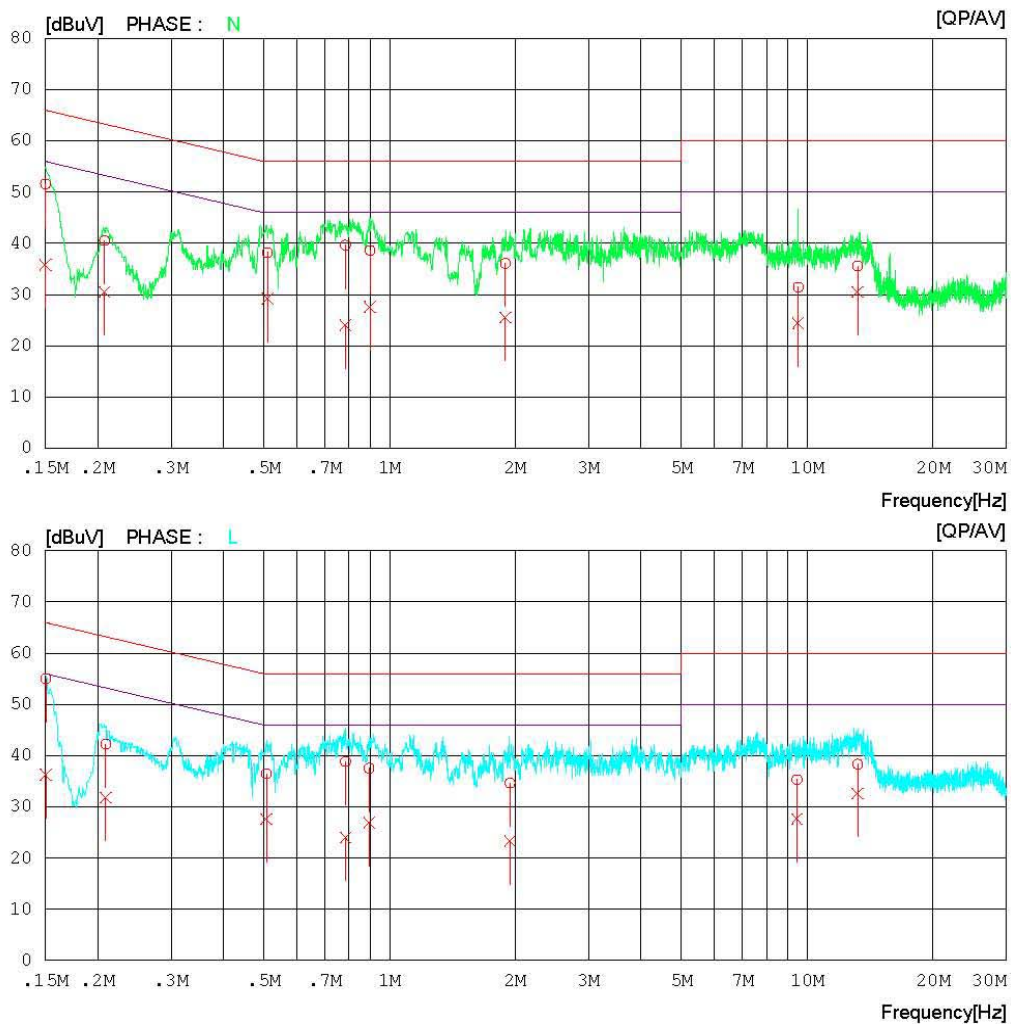
Digital EMC
Date : 2013-03-19

Model No. : 50LN5710-UI
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 C 32 % R. H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-03-19

Model No. : 50LN5710-UI
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23°C 32 % R. H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15012	51.4	35.6	0.2	51.6	35.8	66.0	56.0	14.4	20.2	N
2	0.20768	40.3	30.3	0.2	40.5	30.5	63.3	53.3	22.8	22.8	N
3	0.51056	38.0	29.0	0.2	38.2	29.2	56.0	46.0	17.8	16.8	N
4	0.78429	39.4	23.9	0.2	39.6	24.1	56.0	46.0	16.4	21.9	N
5	0.89844	38.4	27.4	0.2	38.6	27.6	56.0	46.0	17.4	18.4	N
6	1.89400	35.8	25.2	0.3	36.1	25.5	56.0	46.0	19.9	20.5	N
7	9.51900	30.7	23.7	0.7	31.4	24.4	60.0	50.0	28.6	25.6	N
8	13.21700	34.9	29.8	0.7	35.6	30.5	60.0	50.0	24.4	19.5	N
9	0.15049	54.8	36.0	0.2	55.0	36.2	66.0	56.0	11.0	19.8	L
10	0.20919	42.0	31.6	0.2	42.2	31.8	63.2	53.2	21.0	21.4	L
11	0.50744	36.2	27.4	0.2	36.4	27.6	56.0	46.0	19.6	18.4	L
12	0.78540	38.6	23.8	0.2	38.8	24.0	56.0	46.0	17.2	22.0	L
13	0.89408	37.3	26.7	0.2	37.5	26.9	56.0	46.0	18.5	19.1	L
14	1.94400	34.3	23.0	0.3	34.6	23.3	56.0	46.0	21.4	22.7	L
15	9.45250	34.6	26.9	0.7	35.3	27.6	60.0	50.0	24.7	22.4	L
16	13.21550	37.6	31.9	0.7	38.3	32.6	60.0	50.0	21.7	17.4	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	5 th 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 (dB μ V/m)	Quasi-peak (dB μ V/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 (dB μ V/m)	Quasi-peak (dB μ V/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 (dB μ V/m)	Average (dB μ V/m)	Peak (dB μ V/m)	Average (dB μ V/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

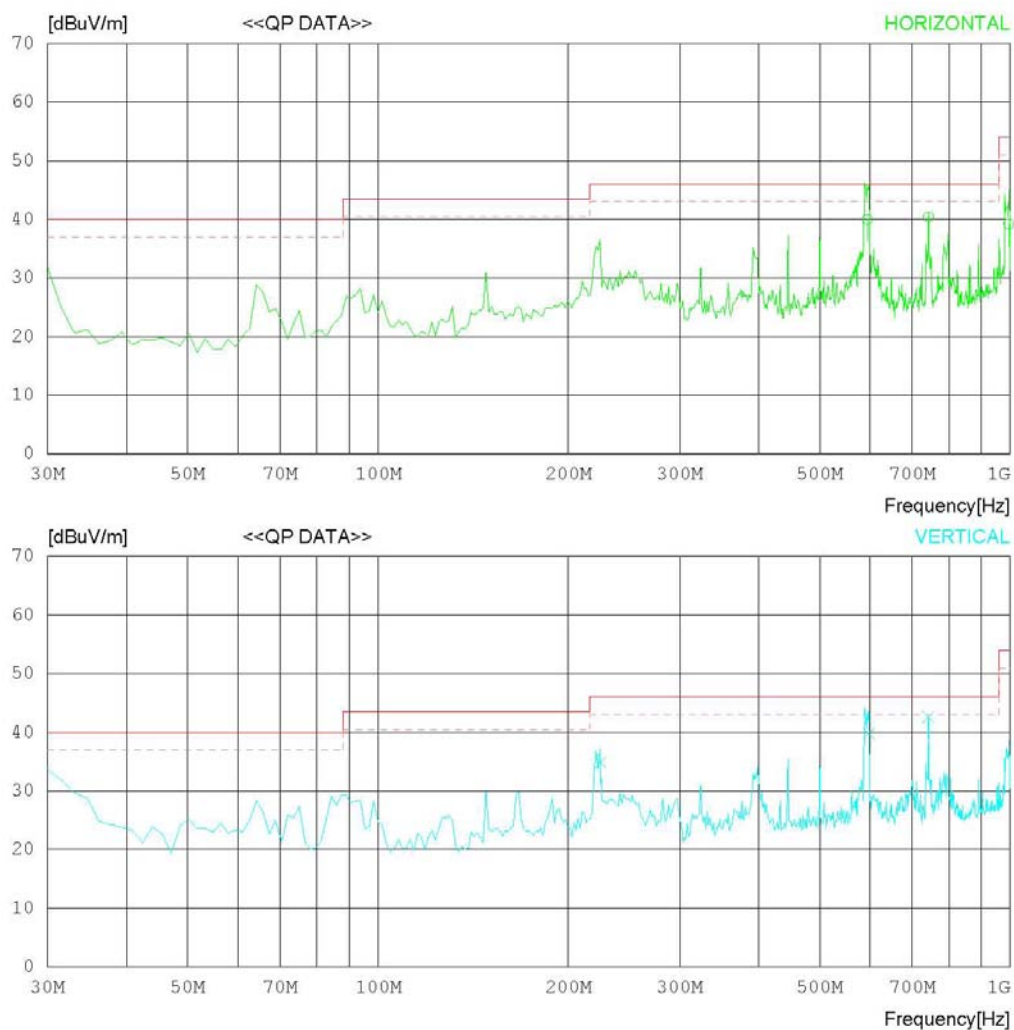
Date : 2013-03-25

Model Name : 50LN5710-UI
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23°C 34 % R. H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-03-25

Model Name : 50LN5710-UI	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 34 % 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	593.955	40.7	18.6	4.1	23.4	40.0	46.0	6.0	100	176
2	742.471	40.3	19.2	4.6	23.7	40.4	46.0	5.6	100	197
3	995.325	34.2	22.2	5.5	22.7	39.2	54.0	14.8	371	218
----- Vertical -----										
4	225.024	45.2	11.2	2.4	23.9	34.9	46.0	11.1	214	175
5	597.764	40.4	18.7	4.1	23.4	39.8	46.0	6.2	228	190
6	742.487	42.5	19.2	4.6	23.7	42.6	46.0	3.4	100	160

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

RADIATED EMISSION

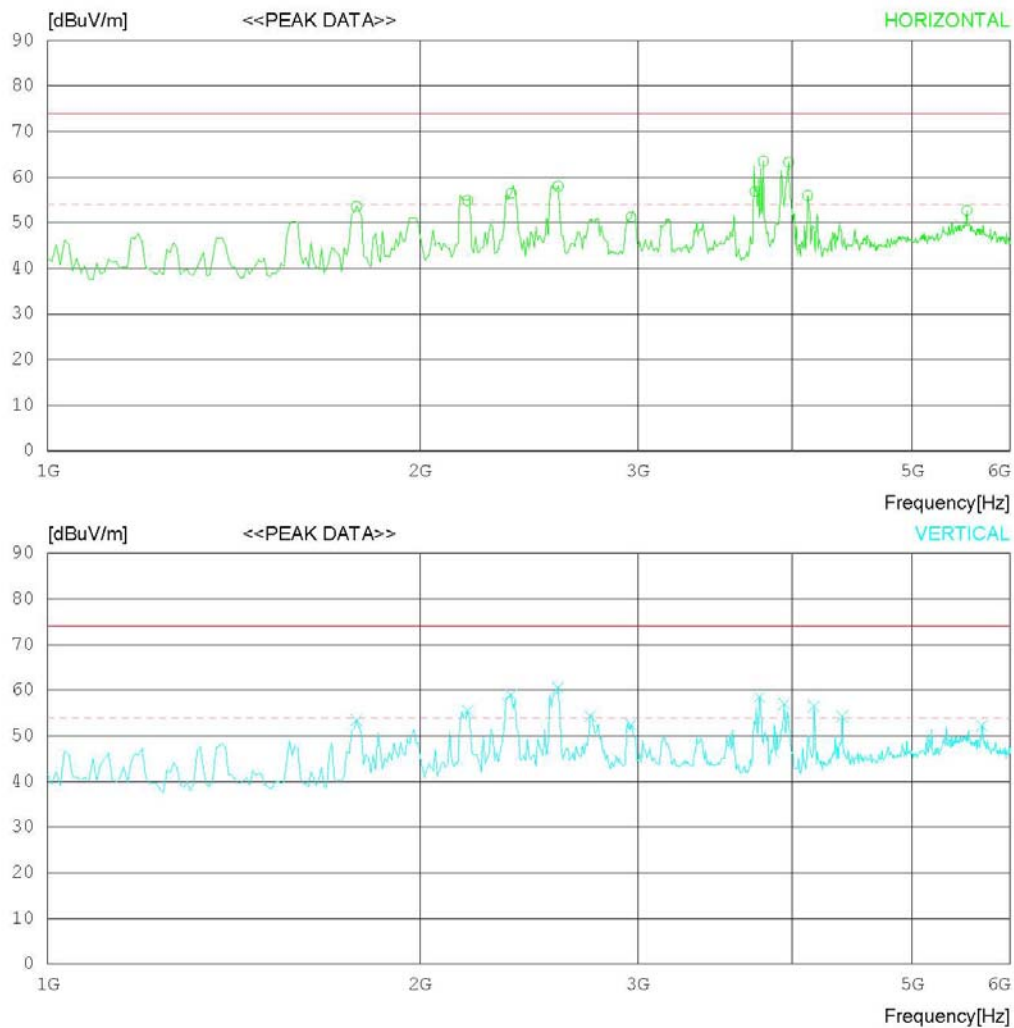
Date : 2013-03-25

Model Name : 50LN5710-UI
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23°C 34 % R. H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-03-25

Model Name : 50LN5710-UI	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 34 % 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	1777.243	64.3	24.6	4.4	39.7	53.6	74.0	20.4	100	237
2	2185.899	63.8	25.6	4.9	39.4	54.9	74.0	19.1	100	229
3	2370.197	64.0	26.7	5.1	39.3	56.5	74.0	17.5	100	182
4	2586.546	64.3	27.7	5.3	39.3	58.0	74.0	16	100	358
5	2963.154	56.0	28.9	5.6	39.3	51.2	74.0	22.8	100	358
6	3732.396	59.7	29.5	6.4	38.7	56.9	74.0	17.1	100	358
7	3788.487	66.0	29.6	6.5	38.6	63.5	74.0	10.5	100	202
8	3972.785	64.9	30.1	6.7	38.4	63.3	74.0	10.7	100	178
9	4117.017	57.3	30.3	6.8	38.4	56.0	74.0	18	100	358
10	5535.264	48.1	34.9	8.0	38.3	52.7	74.0	21.3	100	202
----- Vertical -----										
11	1777.243	64.1	24.6	4.4	39.7	53.4	74.0	20.6	100	1
12	2185.899	64.4	25.6	4.9	39.4	55.5	74.0	18.5	100	219
13	2370.197	66.4	26.7	5.1	39.3	58.9	74.0	15.1	100	1
14	2586.546	66.9	27.7	5.3	39.3	60.6	74.0	13.4	100	170
15	2746.805	60.0	28.2	5.5	39.3	54.4	74.0	19.6	100	193
16	2963.154	57.2	28.9	5.6	39.3	52.4	74.0	21.6	100	1
17	3764.448	61.2	29.6	6.5	38.7	58.6	74.0	15.4	100	215
18	3940.733	58.8	30.0	6.6	38.4	57.0	74.0	17	100	199
19	4165.093	57.7	30.4	6.8	38.4	56.5	74.0	17.5	100	206
20	4389.449	55.1	30.7	7.0	38.5	54.3	74.0	19.7	100	189
21	5695.518	48.9	33.8	8.1	38.5	52.3	74.0	21.7	100	214

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

RADIATED EMISSION

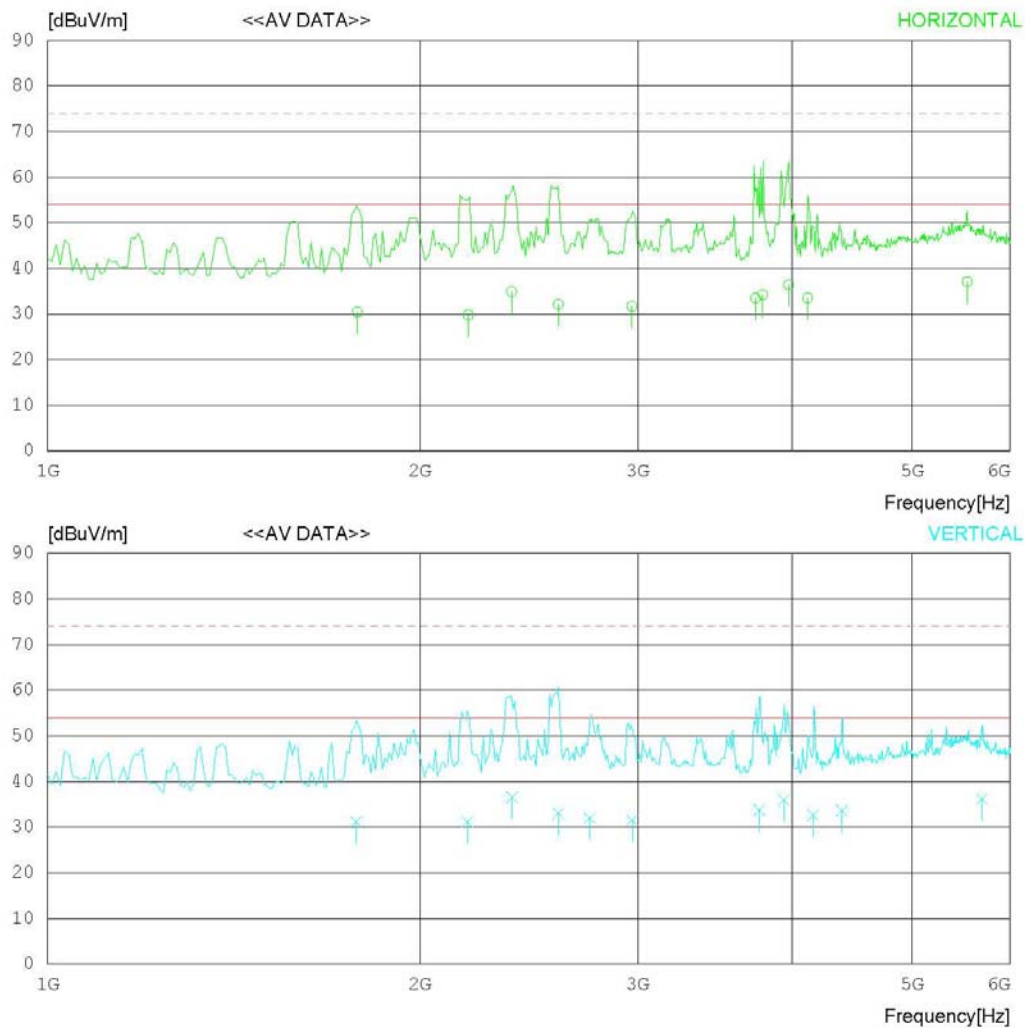
Date : 2013-03-25

Model Name : 50LN5710-UI
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23°C 34 % R. H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-03-25

Model Name : 50LN5710-UI	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 34 % 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	1779.546	41.1	24.6	4.4	39.7	30.4	54.0	23.6	100	237
2	2188.250	38.7	25.6	4.9	39.4	29.8	54.0	24.2	100	229
3	2371.773	42.4	26.7	5.1	39.3	34.9	54.0	19.1	100	182
4	2587.125	38.4	27.7	5.3	39.3	32.1	54.0	21.9	100	358
5	2967.023	36.5	28.9	5.6	39.3	31.7	54.0	22.3	100	358
6	3735.292	36.3	29.5	6.4	38.7	33.5	54.0	20.5	100	358
7	3784.399	36.7	29.6	6.5	38.6	34.2	54.0	19.8	100	202
8	3972.309	38.0	30.1	6.7	38.4	36.4	54.0	17.6	100	178
9	4116.480	34.8	30.3	6.8	38.4	33.5	54.0	20.5	100	358
10	5538.180	32.6	34.8	8.0	38.3	37.1	54.0	16.9	100	202
----- Vertical -----										
11	1776.679	41.8	24.6	4.4	39.7	31.1	54.0	22.9	100	1
12	2185.032	40.1	25.6	4.9	39.4	31.2	54.0	22.8	100	219
13	2374.583	44.0	26.7	5.1	39.3	36.5	54.0	17.5	100	1
14	2589.077	39.3	27.7	5.3	39.3	33.0	54.0	21.0	100	170
15	2744.685	37.6	28.2	5.5	39.3	32.0	54.0	22.0	100	193
16	2968.545	36.3	28.9	5.6	39.3	31.5	54.0	22.5	100	1
17	3761.917	36.5	29.5	6.5	38.7	33.8	54.0	20.2	100	215
18	3939.071	37.7	30.0	6.6	38.4	35.9	54.0	18.1	100	199
19	4159.327	33.8	30.4	6.8	38.4	32.6	54.0	21.4	100	206
20	4386.946	34.4	30.7	7.0	38.5	33.6	54.0	20.4	100	189
21	5695.518	32.8	33.8	8.1	38.5	36.2	54.0	17.8	100	214

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

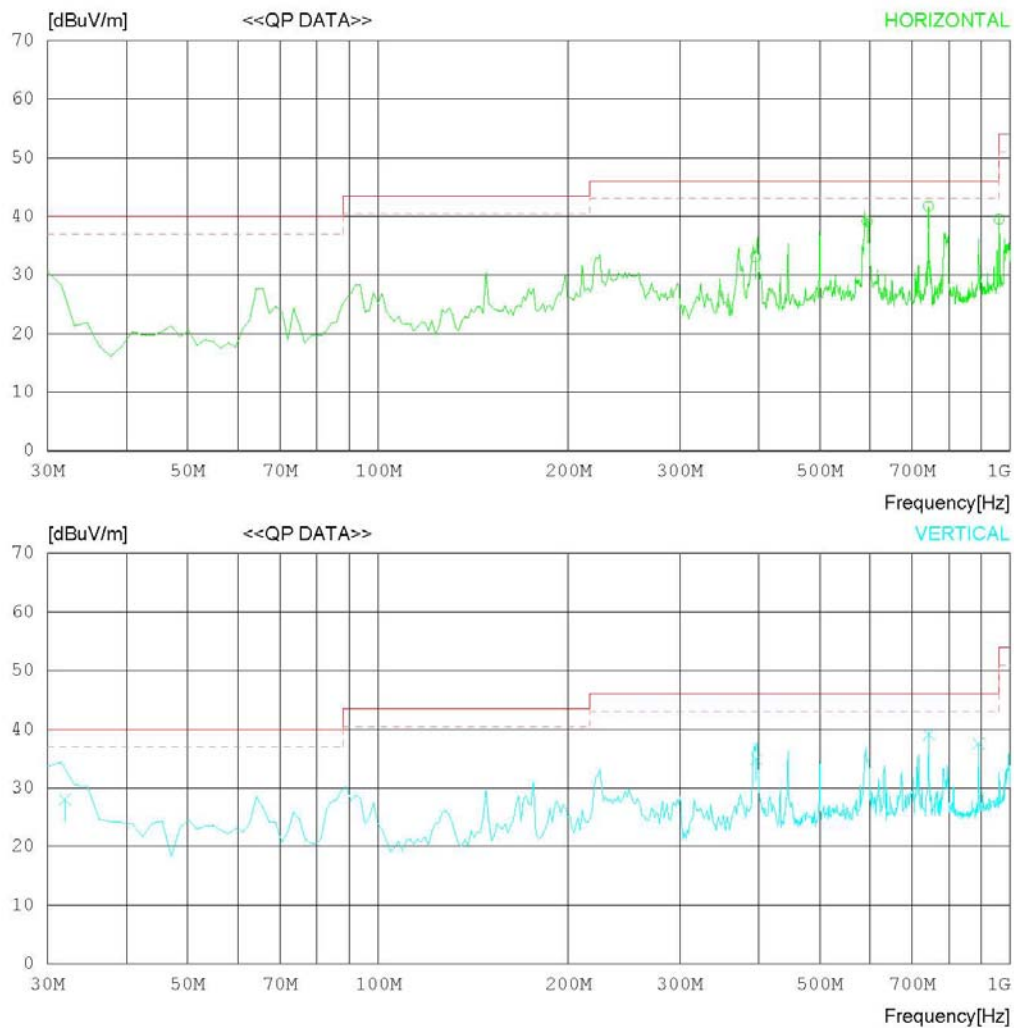
Date : 2013-03-25

Model Name : 50LN5710-UI
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23°C 34% R. H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-03-25

Model Name : 50LN5710-UI	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 34 % 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	395.340	37.2	15.9	3.5	23.5	33.1	46.0	12.9	100	352
2	593.994	39.8	18.6	4.1	23.4	39.1	46.0	6.9	100	244
3	742.468	41.6	19.2	4.6	23.7	41.7	46.0	4.3	121	13
4	960.000	35.3	21.7	5.4	22.9	39.5	46.0	6.5	400	333
----- Vertical -----										
5	31.966	34.2	16.8	0.9	23.9	28.0	40.0	12.0	215	119
6	397.037	38.9	16.0	3.5	23.5	34.9	46.0	11.1	100	159
7	744.205	39.0	19.2	4.6	23.7	39.1	46.0	6.9	100	200
8	890.995	34.8	20.7	5.2	23.1	37.6	46.0	8.4	100	182

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

RADIATED EMISSION

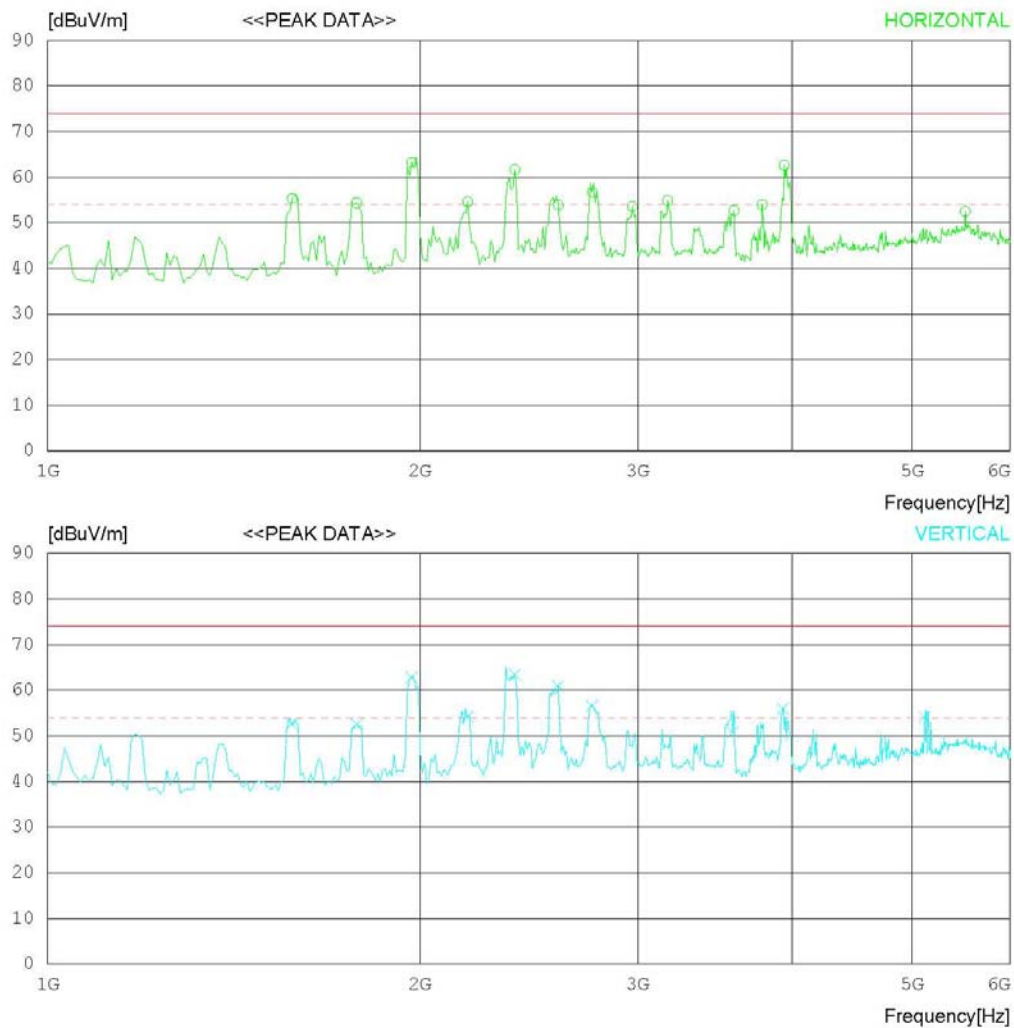
Date : 2013-03-25

Model Name : 50LN5710-UI
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23°C 34 % R. H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-03-25

Model Name : 50LN5710-UI	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 34 % 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	1576.923	66.5	24.6	4.2	40.0	55.3	74.0	18.7	100	233
2	1777.243	65.1	24.6	4.4	39.7	54.4	74.0	19.6	100	233
3	1969.551	73.4	24.6	4.7	39.5	63.2	74.0	10.8	100	358
4	2185.899	63.5	25.6	4.9	39.4	54.6	74.0	19.4	100	358
5	2386.223	69.1	26.8	5.1	39.3	61.7	74.0	12.3	100	358
6	2586.546	60.2	27.7	5.3	39.3	53.9	74.0	20.1	100	358
7	2754.818	62.3	28.2	5.5	39.3	56.7	74.0	17.3	100	358
8	2971.167	58.4	28.9	5.6	39.3	53.6	74.0	20.4	100	202
9	3171.491	59.3	28.9	5.9	39.2	54.9	74.0	19.1	100	358
10	3588.164	56.2	29.1	6.3	38.9	52.7	74.0	21.3	100	212
11	3780.474	56.5	29.6	6.5	38.6	54.0	74.0	20	100	358
12	3940.733	64.4	30.0	6.6	38.4	62.6	74.0	11.4	100	172
13	5519.239	47.9	35.0	7.9	38.3	52.5	74.0	21.5	100	196
----- Vertical -----										
14	1576.923	63.7	24.6	4.2	40.0	52.5	74.0	21.5	100	220
15	1777.243	63.3	24.6	4.4	39.7	52.6	74.0	21.4	100	1
16	1969.551	73.0	24.6	4.7	39.5	62.8	74.0	11.2	100	196
17	2185.899	63.1	25.6	4.9	39.4	54.2	74.0	19.8	100	179
18	2386.223	70.8	26.8	5.1	39.3	63.4	74.0	10.6	100	1
19	2586.546	67.3	27.7	5.3	39.3	61.0	74.0	13	100	178
20	2754.818	62.1	28.2	5.5	39.3	56.5	74.0	17.5	100	1
21	3580.151	54.3	29.1	6.3	38.9	50.8	74.0	23.2	100	1
22	3932.720	57.8	30.0	6.6	38.4	56.0	74.0	18	100	1
23	5118.604	51.8	33.1	7.9	38.7	54.1	74.0	19.9	100	214

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

RADIATED EMISSION

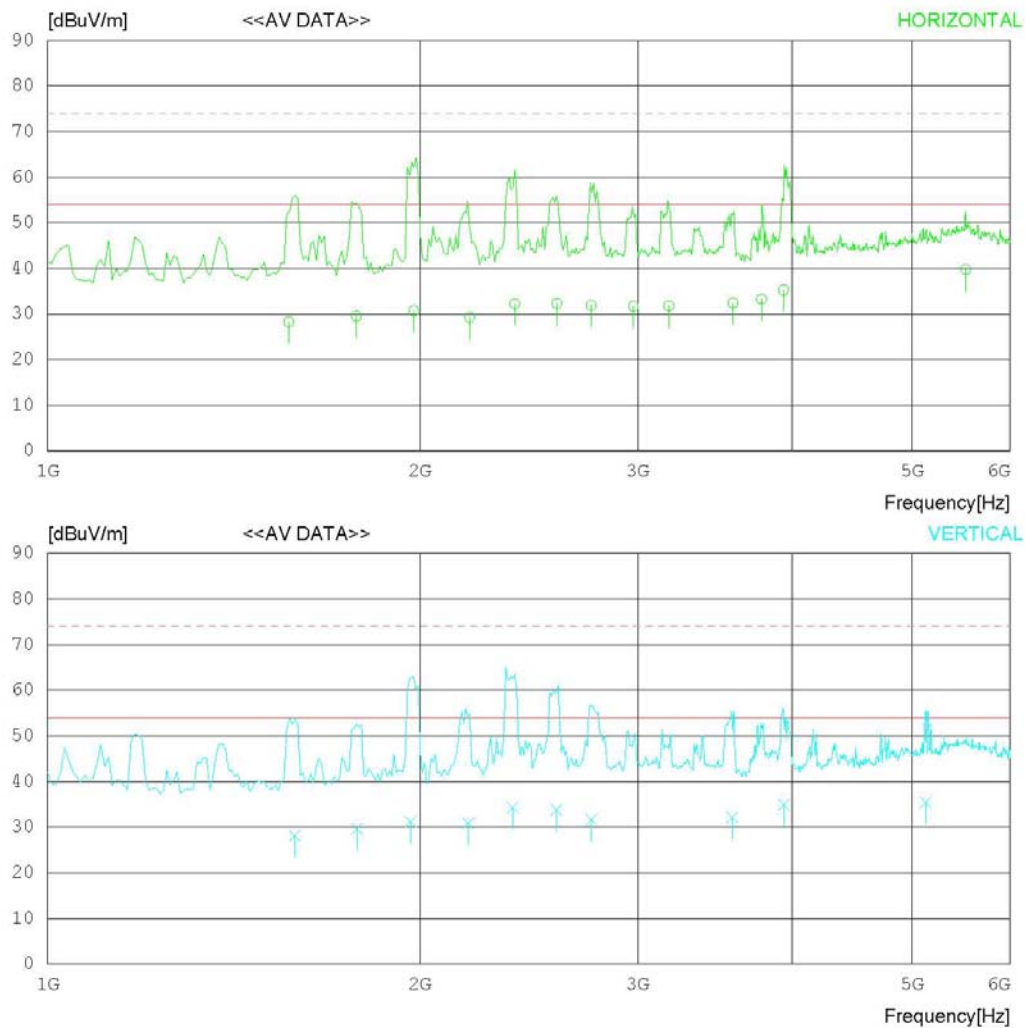
Date : 2013-03-25

Model Name : 50LN5710-UI
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 23°C 34% R. H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-03-25

Model Name : 50LN5710-UI	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 34 % 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	1566.160	39.5	24.6	4.2	40.0	28.3	54.0	25.7	100	233
2	1776.679	40.2	24.6	4.4	39.7	29.5	54.0	24.5	100	233
3	1977.077	40.9	24.6	4.7	39.5	30.7	54.0	23.3	100	358
4	2193.077	38.1	25.7	4.9	39.4	29.3	54.0	24.7	100	358
5	2385.968	39.6	26.8	5.1	39.3	32.2	54.0	21.8	100	358
6	2580.295	38.6	27.7	5.3	39.3	32.3	54.0	21.7	100	358
7	2750.442	37.5	28.2	5.5	39.3	31.9	54.0	22.1	100	358
8	2975.840	36.5	28.9	5.6	39.3	31.7	54.0	22.3	100	202
9	3177.186	36.2	28.9	5.9	39.2	31.8	54.0	22.2	100	358
10	3581.237	35.9	29.1	6.3	38.9	32.4	54.0	21.6	100	212
11	3776.315	35.8	29.6	6.5	38.6	33.3	54.0	20.7	100	358
12	3935.096	37.1	30.0	6.6	38.4	35.3	54.0	18.7	100	172
13	5524.769	35.3	34.9	7.9	38.3	39.8	54.0	14.2	100	196
----- Vertical -----										
14	1584.494	39.3	24.6	4.2	40.0	28.1	54.0	25.9	100	220
15	1779.788	40.3	24.6	4.4	39.7	29.6	54.0	24.4	100	157
16	1965.730	41.4	24.6	4.7	39.5	31.2	54.0	22.8	121	196
17	2189.519	39.7	25.6	4.9	39.4	30.8	54.0	23.2	100	179
18	2377.154	41.8	26.7	5.1	39.3	34.3	54.0	19.7	100	100
19	2578.498	40.1	27.7	5.3	39.3	33.8	54.0	20.2	100	178
20	2752.237	37.2	28.2	5.5	39.3	31.6	54.0	22.4	100	1
21	3576.795	35.6	29.1	6.3	38.9	32.1	54.0	21.9	106	1
22	3938.795	36.7	30.0	6.6	38.4	34.9	54.0	19.1	100	22
23	5127.487	33.1	33.1	7.9	38.7	35.4	54.0	18.6	100	214

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