EMC TEST REPORT

Test item	: LCD TV Monitor
Model No.	: 32LS3400-UA
Order No.	: 1201-00045
Date of receipt	: 2012-01-13
Test duration	: 2012-01-16 ~ 2012-01-17
Use of report	: FCC CoC Marking
Date of Issue	: 2012-01-19

Applicant : LG Electronics Inc.
9-1, 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 ~ 22) °C,
Humidity : (31 ~ 36) % R.H.

Test result : ☒ Comply ☐ Not Comply

Tested by:

Assistant Manager
D.H.EUN

Reviewed by:

Manager
M.J.SONG

The above test report is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

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	ROK1028C	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.	32LS3400-UA
EUT Type	LCD TV Monitor
Serial No	NONE
FCC ID	BEJ32LS3400UA
Type of Sample Tested	Pre-Production
High Frequency	800 MHz
Rating	AC100-240 V~, 50/60 Hz, 0.7 A
Supplied Power for Test	AC120 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

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720x480p	31.47 31.50	59.94 60.00
1280x720p	44.96 45.00	59.94 60.00
1920x1080i	33.72 33.75	59.94 60.00
1920x1080p	26.97 27.00 33.71 33.75 67.432 67.50	23.976 24.00 29.97 30.00 59.94 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.)	Pressure (hPa)
Conducted Disturbance	01-17	22	36	-
Radiated Disturbance	01-16	19 21	31 34	

4.3 Test result Summary

(1) Conducted Emission(USB MODE)

Frequency [MHz]	Phase	Result [dBμV]	Detector	Limit [dBμV]	Margin [dB]
0.15824	**N**	**54.8**	Quasi-Peak	**65.6**	**10.8**

(2) Radiated Emission(USB MODE)

Frequency [MHz]	Pol.	Result [dB(μV/m)]	Detector	Limit [dB(μV/m)]	Margin [dB]
296.750	**H**	**34.8**	Quasi-Peak	**46.0**	**11.2**

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 – Resolution : 1920 x 1080 Resolution (Worst Case)
- USB MODE

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE			Backshell	FCC ID
				Connect type	Length (m)	shield		
PC	VOSTRO430	9K77SBX	DELL	POWER HDMI STEREO USB PS/2 PS/2	1.8 1.8 1.6 1.8 1.6 1.8	Non-shield Shield Non-shield Non-shield Non-shield Non-shield	Plastic	DOC
KEYBOARD	SKG-210P	TAKSC12255P	MONITOEREY INTERNATIONAL CORP	PS/2	1.6	Non-shield	Plastic	DOC
MOUSE	SML-510PB	TAKS903519Z	MONITOEREY INTERNATIONAL CORP	PS/2	1.8	Non-shield	Plastic	DOC
PRINTER	SRP-770	SRP77008060035	BICSOLON	POWER USB	1.8 1.8	Non-shield	Plastic	DOC
USB MEMORY	JEWERLY	N/A	AXXEN	USB	-	-	-	DOC

6. Test Results : Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

In the range of 0.15MHz to 30MHz, 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 0.8m above the reference ground plane and 0.4m 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 0.15m 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 0.15MHz to 0.5MHz.

Test Result

< HDMI MODE >

Digital EMC

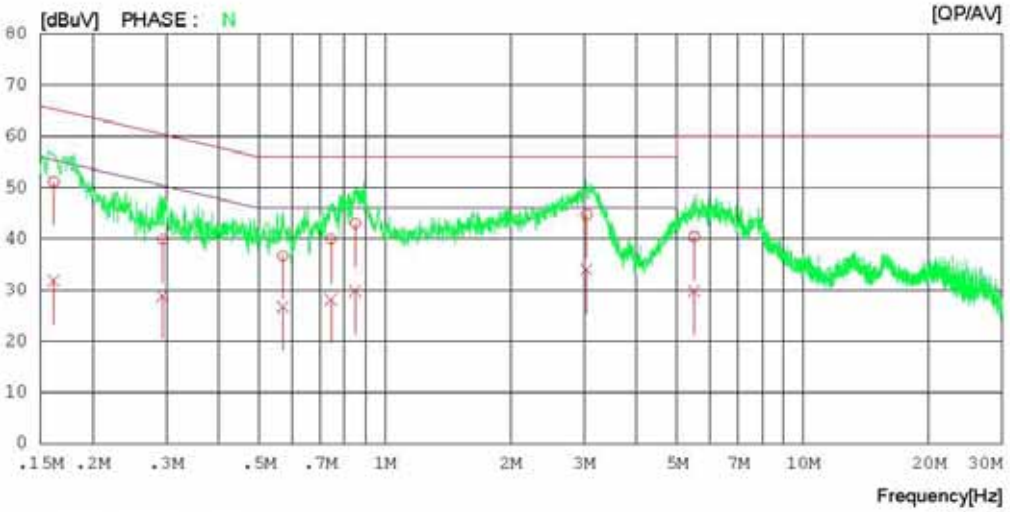
Results of Conducted Emission

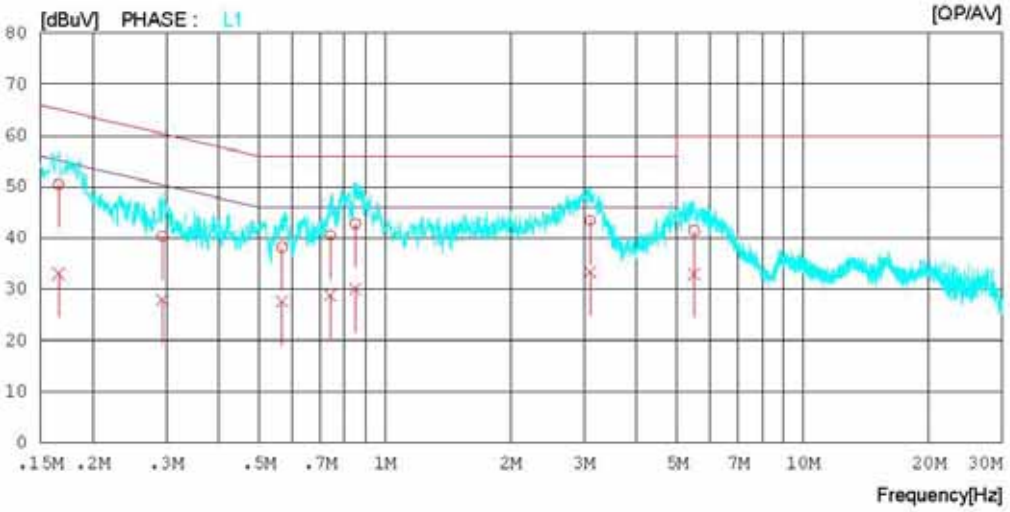
Digital EMC
Date : 2012-01-17

Model No.	:	32LS3400-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	22 'C 36 % R.H.
Test Condition	:	HDMI	Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





Results of Conducted Emission

Digital EMC
Date : 2012-01-17

Model No.	:	32LS3400-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	22 'C 36 % 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	0.16150	50.9	31.6	0.2	51.1	31.8	65.4	55.4	14.3	23.6	N
2	0.29406	39.8	28.8	0.1	39.9	28.9	60.4	50.4	20.5	21.5	N
3	0.57045	36.6	26.6	0.1	36.7	26.7	56.0	46.0	19.3	19.3	N
4	0.74358	39.8	28.1	0.1	39.9	28.2	56.0	46.0	16.1	17.8	N
5	0.85050	42.9	29.7	0.2	43.1	29.9	56.0	46.0	12.9	16.1	N
6	3.03850	44.3	33.6	0.4	44.7	34.0	56.0	46.0	11.3	12.0	N
7	5.49450	40.0	29.5	0.4	40.4	29.9	60.0	50.0	19.6	20.1	N
8	0.16563	50.3	32.9	0.2	50.5	33.1	65.2	55.2	14.7	22.1	L1
9	0.29378	40.3	27.9	0.1	40.4	28.0	60.4	50.4	20.0	22.4	L1
10	0.56795	38.1	27.6	0.1	38.2	27.7	56.0	46.0	17.8	18.3	L1
11	0.74098	40.5	28.7	0.1	40.6	28.8	56.0	46.0	15.4	17.2	L1
12	0.85068	42.7	29.9	0.2	42.9	30.1	56.0	46.0	13.1	15.9	L1
13	3.09700	43.1	33.0	0.4	43.5	33.4	56.0	46.0	12.5	12.6	L1
14	5.49450	41.0	32.6	0.4	41.4	33.0	60.0	50.0	18.6	17.0	L1

< USB MODE >

Digital EMC

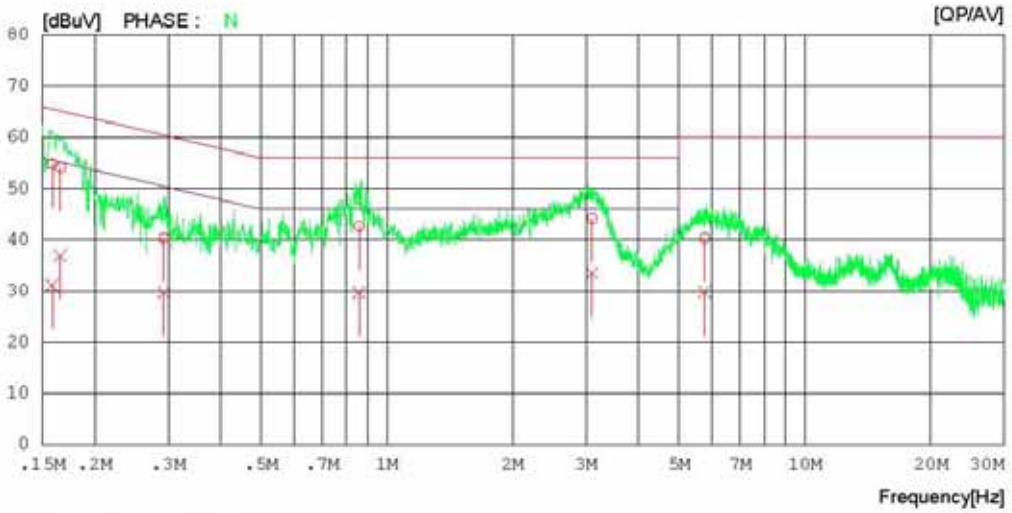
Results of Conducted Emission

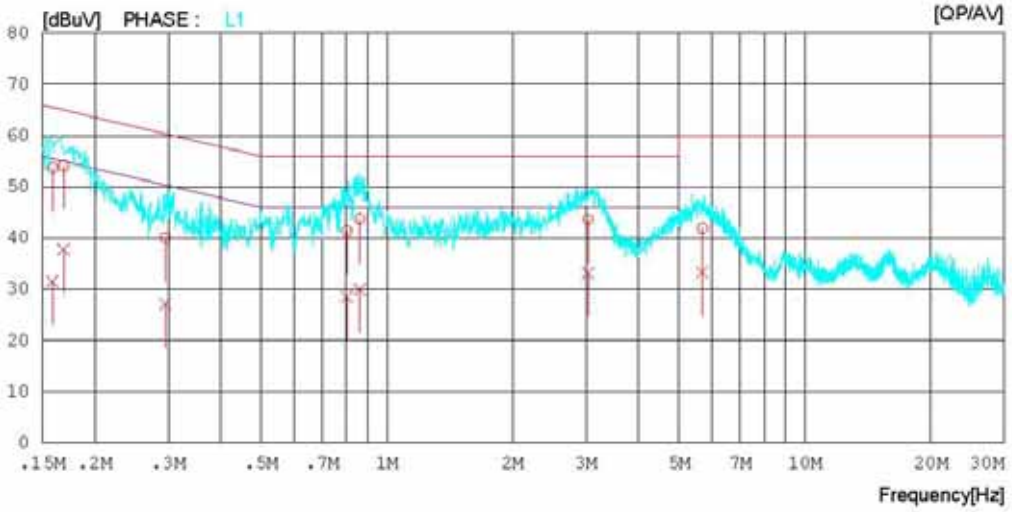
Digital EMC
Date : 2012-01-17

Model No.	: 32LS3400-UA		Referrence No.	:	
Type	:		Power Supply	: 120V	60Hz
Serial No.	:		Temp/Humi.	: 22 'C	36 % R.H.
Test Condition	: USB		Operator	:	

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV





Results of Conducted Emission

Digital EMC
Date : 2012-01-17

Model No.	:	32LS3400-UA	Referrence No.	:	
Type	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi.	:	22 'C 36 % 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	0.15824	54.6	30.9	0.2	54.8	31.1	65.6	55.6	10.8	24.5	N
2	0.16554	53.9	36.7	0.2	54.1	36.9	65.2	55.2	11.1	18.3	N
3	0.29323	40.2	29.6	0.1	40.3	29.7	60.4	50.4	20.1	20.7	N
4	0.85774	42.4	29.6	0.2	42.6	29.8	56.0	46.0	13.4	16.2	N
5	3.09500	43.8	33.1	0.4	44.2	33.5	56.0	46.0	11.8	12.5	N
6	5.76400	39.9	29.4	0.4	40.3	29.8	60.0	50.0	19.7	20.2	N
7	0.15864	53.5	31.4	0.2	53.7	31.6	65.5	55.5	11.8	23.9	L1
8	0.16844	54.0	37.7	0.1	54.1	37.8	65.0	55.0	10.9	17.2	L1
9	0.29550	40.0	27.0	0.1	40.1	27.1	60.4	50.4	20.3	23.3	L1
10	0.80250	41.2	28.4	0.2	41.4	28.6	56.0	46.0	14.6	17.4	L1
11	0.86228	43.5	29.8	0.2	43.7	30.0	56.0	46.0	12.3	16.0	L1
12	3.02850	43.2	32.8	0.4	43.6	33.2	56.0	46.0	12.4	12.8	L1
13	5.69450	41.5	32.9	0.4	41.9	33.3	60.0	50.0	18.1	16.7	L1

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 0.8m above the reference ground plane and 3m 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 0.15m above the reference ground plane.

Rotate the EUT from 0° to 360° and position the receiving antenna at heights from 1 to 4m 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 1GHz frequency range, Quasi-Peak detector with 120kHz RBW was used.

Also Peak and Average detector with 1MHz RBW were used for above 1GHz 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	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower

(1) Limit for Radiated Emission below 1000MHz

Frequency range (MHz)	Class A Equipment (10m distance)	Class B Equipment (3m 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 1000	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 (10m distance)**	**Class B Equipment (10m distance)**
	Quasi-peak (dBμV/m)	**Quasi-peak (dBμV/m)**
30 to 230	40	30
230 to 1000	47	37

(2) Limits for Radiated Emission above 1000MHz at a measuring distance of 3m

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

Test Result

< HDMI MODE_30 MHz ~ 1 GHz >

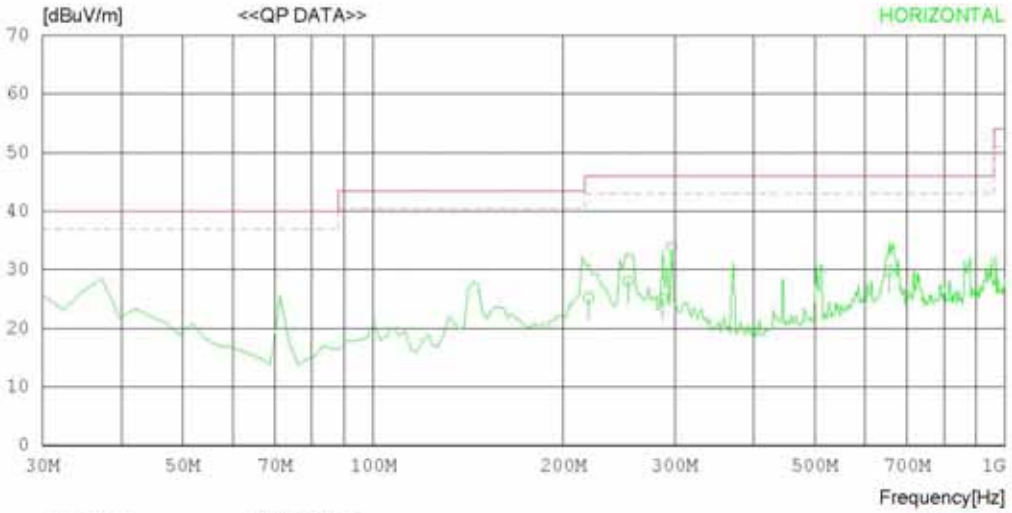
RADIATED EMISSION

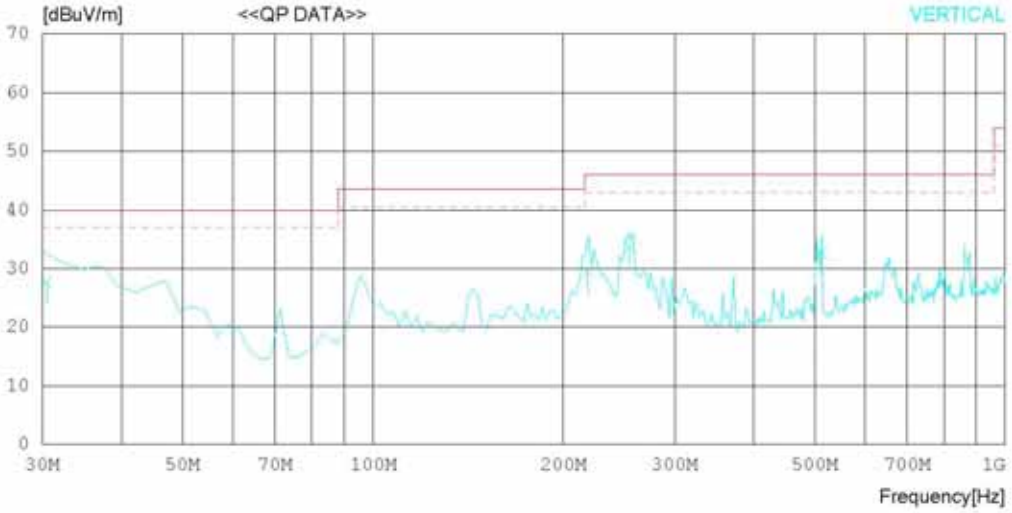
Date : 2012-01-16

Model Name	: 32LS3400-UA	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 19 'C 31 % R.H.
Test Condition	: HDMI	Operator	:

Memo :

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





RADIATED EMISSION

Date : 2012-01-16

Model Name	:	32LS3400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	19 'C 31 % 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	219.100	35.4	11.0	2.2	23.4	25.2	46.0	20.8	201	279
2	253.100	36.1	13.1	2.4	23.6	28.0	46.0	18.0	100	141
3	287.050	32.8	13.6	2.5	23.8	25.1	46.0	20.9	100	358
4	296.700	41.2	13.8	2.6	23.8	33.8	46.0	12.2	100	358
5	655.648	31.2	18.8	4.0	24.2	29.8	46.0	16.2	100	358
----- Vertical ------										
6	30.447	32.0	17.4	0.8	22.6	27.6	40.0	12.4	100	206
7	218.337	39.7	10.9	2.2	23.3	29.5	46.0	16.5	222	358
8	254.400	41.8	13.1	2.4	23.6	33.7	46.0	12.3	100	178
9	511.575	36.1	17.8	3.4	24.6	32.7	46.0	13.3	199	176

< HDMI MODE_1 GHz ~ 6 GHz_Peak >

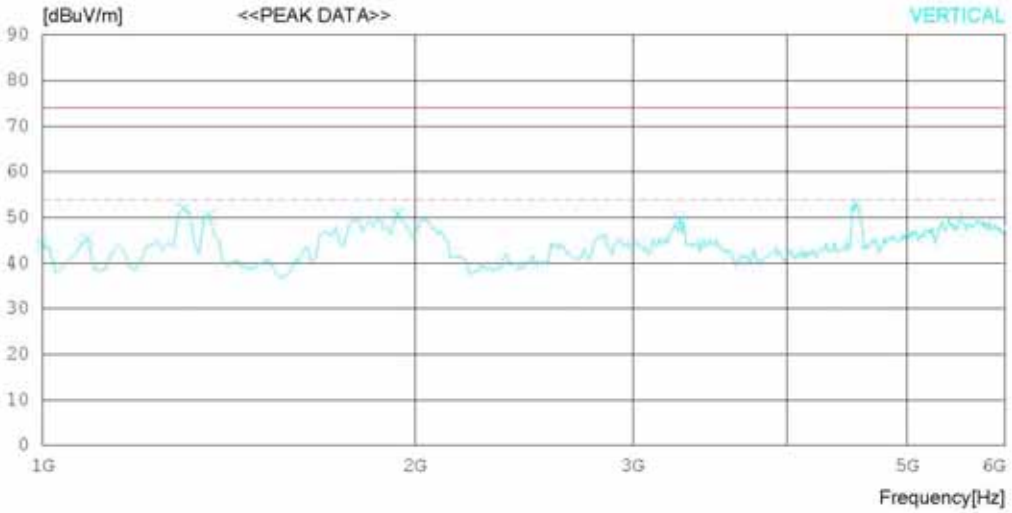
RADIATED EMISSION

Date : 2012-01-16

Model Name	: 32LS3400-UA	Reference No.	:		
Model No.	:	Power Supply	:	120V	60Hz
Serial No.	:	Temp/Humi	:	21 '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)



RADIATED EMISSION

Date : 2012-01-16

Model Name	:	32LS3400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	21 '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	1000.000	56.7	23.6	4.8	41.8	43.3	74.0	30.7	100	232
2	1162.500	55.5	24.1	5.2	41.8	43.0	74.0	31	100	241
3	1287.500	58.9	24.5	5.5	41.9	47.0	74.0	27	100	175
4	1350.000	56.2	24.7	5.6	41.9	44.6	74.0	29.4	100	182
5	1887.500	65.9	25.2	6.8	42.0	55.9	74.0	18.1	100	358
6	1987.500	59.8	25.2	7.0	42.0	50.0	74.0	24	100	175
7	2825.000	55.4	28.3	8.4	42.1	50.0	74.0	24	100	358
8	3237.500	49.4	29.0	9.1	42.0	45.5	74.0	28.5	100	358
----- Vertical ------										
9	1000.000	57.4	23.6	4.8	41.8	44.0	74.0	30	100	1
10	1087.500	58.2	23.9	5.0	41.8	45.3	74.0	28.7	100	168
11	1300.000	63.8	24.5	5.5	41.9	51.9	74.0	22.1	100	192
12	1362.500	62.0	24.7	5.6	41.9	50.4	74.0	23.6	100	1
13	1937.500	60.8	25.2	6.9	42.0	50.9	74.0	23.1	100	1
14	3275.000	53.4	29.0	9.1	42.0	49.5	74.0	24.5	100	203
15	4550.000	52.7	30.9	10.7	41.4	52.9	74.0	21.1	100	219

< HDMI MODE_1 GHz ~ 6 GHz_Average >

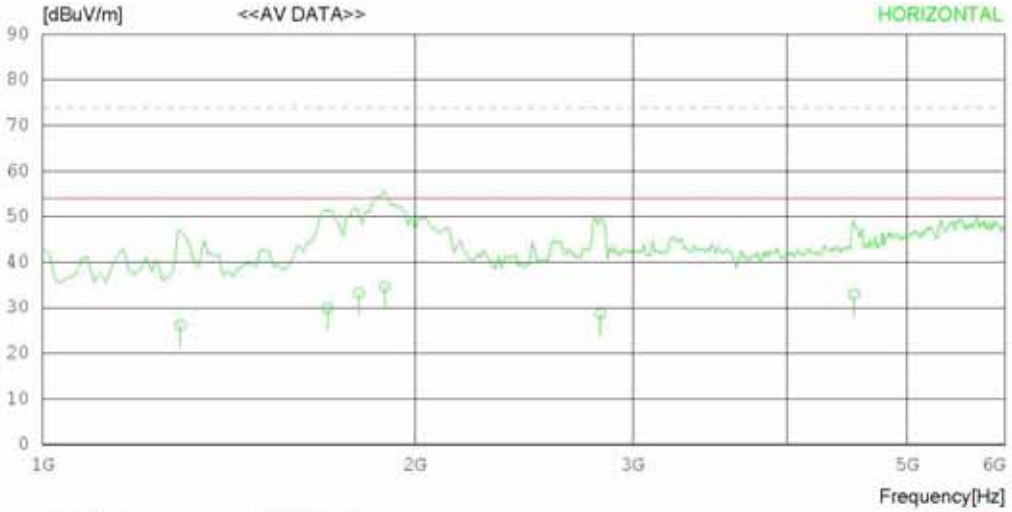
RADIATED EMISSION

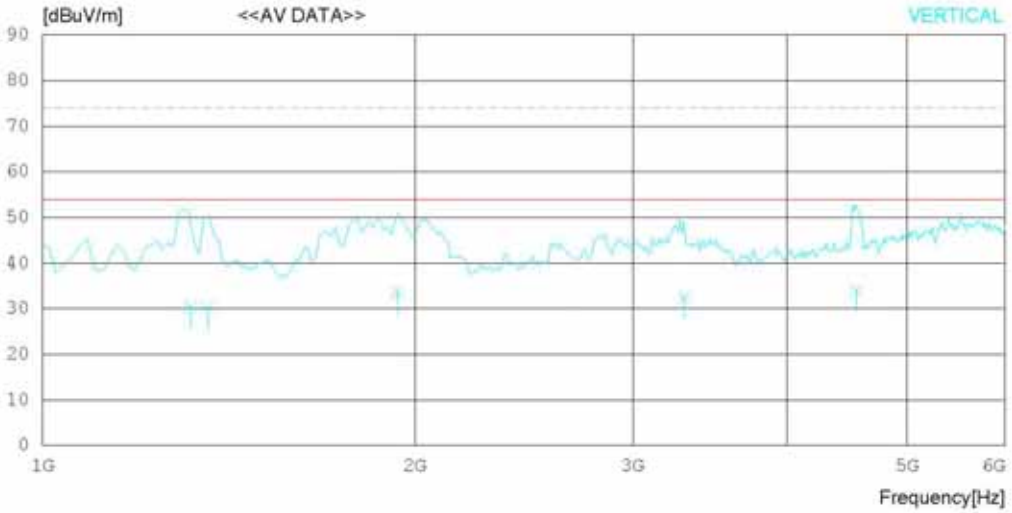
Date : 2012-01-16

Model Name	: 32LS3400-UA	Reference No.	:		
Model No.	:	Power Supply	:	120V	60Hz
Serial No.	:	Temp/Humi	:	21 '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)





RADIATED EMISSION

Date : 2012-01-16

Model Name	:	32LS3400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	21 '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	1292.559	38.1	24.5	5.5	41.9	26.2	54.0	27.8	100	241
2	1700.000	40.2	25.2	6.4	41.9	29.9	54.0	24.1	100	175
3	1801.500	43.4	25.2	6.6	42.0	33.2	54.0	20.8	100	182
4	1890.057	44.6	25.2	6.8	42.0	34.6	54.0	19.4	100	358
5	2825.000	34.1	28.3	8.4	42.1	28.7	54.0	25.3	100	358
6	4529.947	32.8	30.8	10.7	41.4	32.9	54.0	21.1	100	358
----- Vertical ------										
7	1316.078	42.2	24.6	5.5	41.9	30.4	54.0	23.6	100	1
8	1360.978	41.7	24.7	5.6	41.9	30.1	54.0	23.9	100	1
9	1935.600	43.5	25.2	6.9	42.0	33.6	54.0	20.4	100	168
10	3300.000	36.2	29.0	9.2	42.0	32.4	54.0	21.6	100	203
11	4550.000	33.8	30.9	10.7	41.4	34.0	54.0	20.0	100	219

< USB MODE_30 MHz ~ 1 GHz >

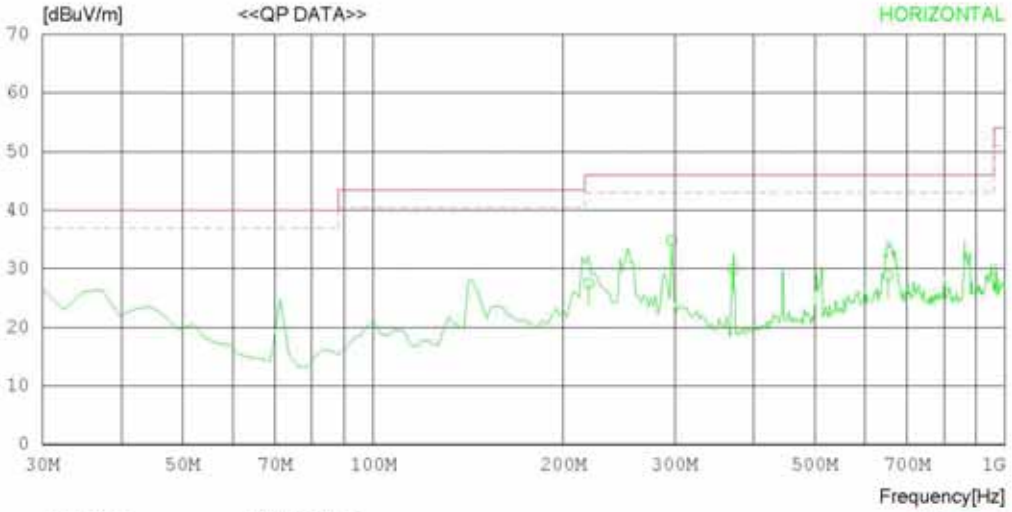
RADIATED EMISSION

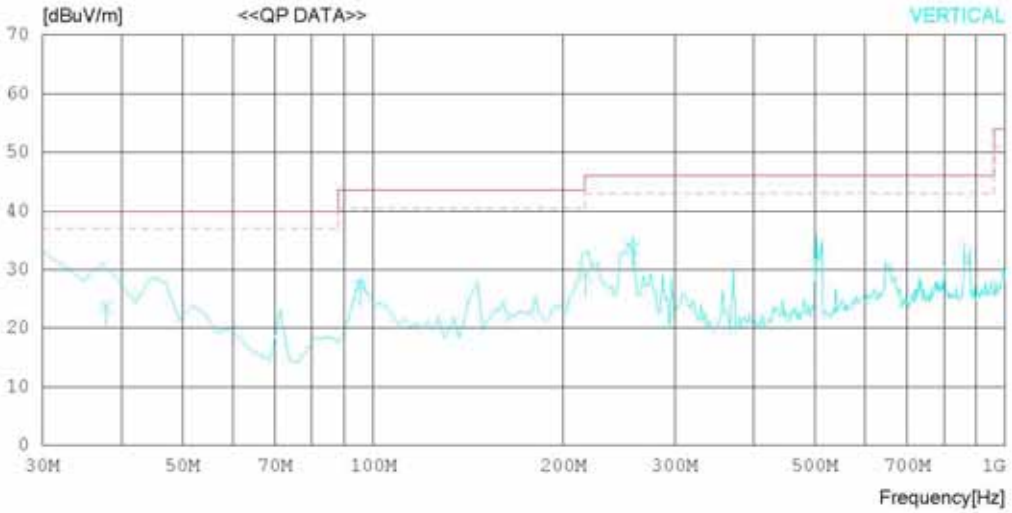
Date : 2012-01-16

Model Name	:	32LS3400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	19 'C 31 % R.H.
Test Condition	:	USB	Operator	:	

Memo :

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





RADIATED EMISSION

Date : 2012-01-16

Model Name	:	32LS3400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	19 'C 31 % 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	219.175	37.7	11.0	2.2	23.4	27.5	46.0	18.5	100	214
2	296.750	42.2	13.8	2.6	23.8	34.8	46.0	11.2	100	189
3	370.908	35.7	15.4	2.9	24.2	29.8	46.0	16.2	100	1
4	653.223	30.2	18.8	4.0	24.2	28.8	46.0	17.2	100	216
----- Vertical ------										
5	37.800	30.3	15.1	0.9	22.6	23.7	40.0	16.3	100	358
6	95.475	38.6	10.0	1.4	22.7	27.3	43.5	16.2	100	0
7	216.725	39.4	10.8	2.2	23.3	29.1	46.0	16.9	158	322
8	257.950	41.5	13.2	2.4	23.6	33.5	46.0	12.5	158	184
9	502.874	36.0	17.7	3.4	24.6	32.5	46.0	13.5	100	358

< USB MODE_1 GHz ~ 6 GHz_Peak >

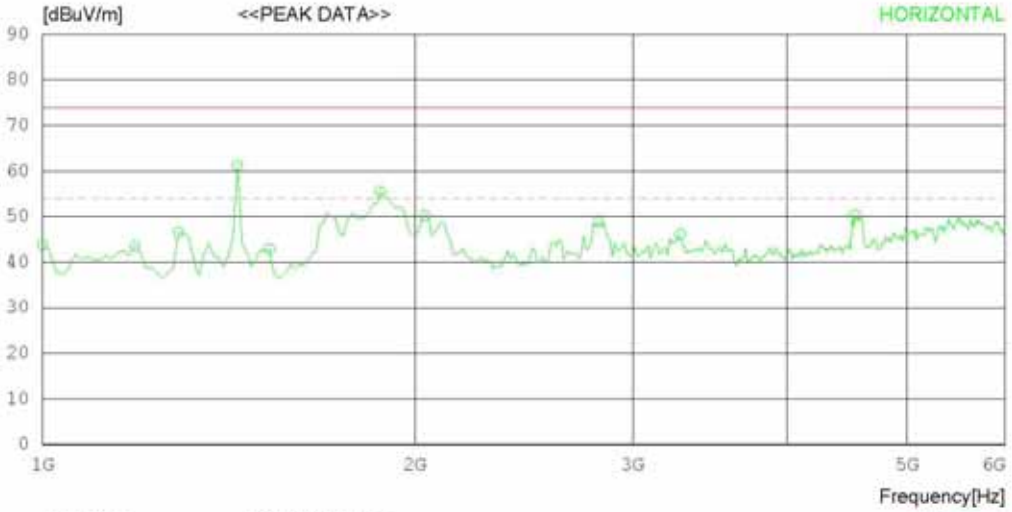
RADIATED EMISSION

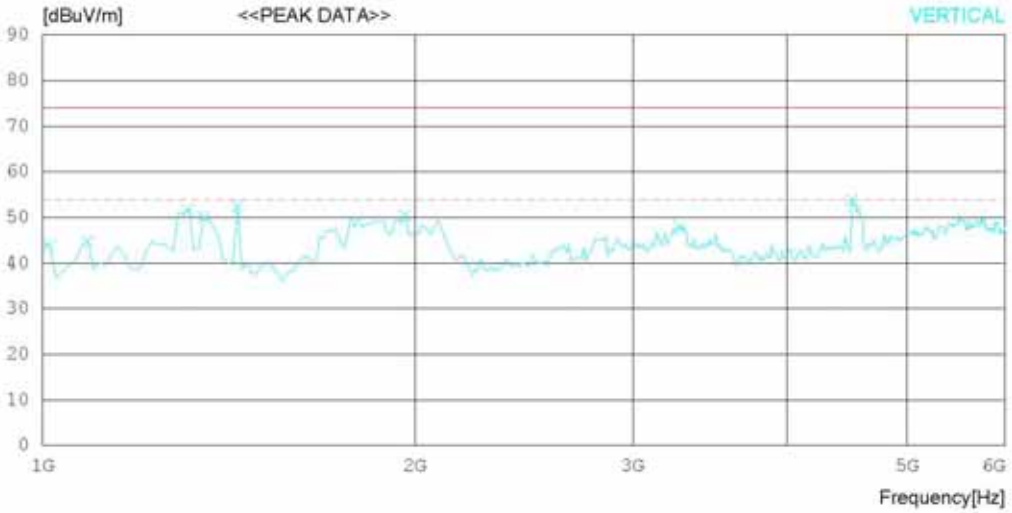
Date : 2012-01-16

Model Name	: 32LS3400-UA	Reference No.	:		
Model No.	:	Power Supply	:	120V	60Hz
Serial No.	:	Temp/Humi	:	21 '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)





RADIATED EMISSION

Date : 2012-01-16

Model Name	:	32LS3400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	21 '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	1000.000	57.2	23.6	4.8	41.8	43.8	74.0	30.2	100	112
2	1187.500	55.9	24.2	5.2	41.8	43.5	74.0	30.5	100	195
3	1287.500	58.4	24.5	5.5	41.9	46.5	74.0	27.5	100	358
4	1437.500	72.3	25.0	5.8	41.9	61.2	74.0	12.8	100	271
5	1525.000	53.7	25.1	6.0	41.9	42.9	74.0	31.1	100	358
6	1875.000	65.6	25.2	6.7	42.0	55.5	74.0	18.5	100	255
7	2037.500	59.7	25.4	7.1	42.0	50.2	74.0	23.8	100	358
8	2812.500	54.2	28.3	8.4	42.1	48.8	74.0	25.2	100	358
9	3275.000	50.0	29.0	9.1	42.0	46.1	74.0	27.9	100	358
10	4537.500	50.2	30.9	10.7	41.4	50.4	74.0	23.6	100	227
----- Vertical ------										
11	1012.500	57.3	23.7	4.8	41.8	44.0	74.0	30	100	176
12	1087.500	57.7	23.9	5.0	41.8	44.8	74.0	29.2	100	1
13	1312.500	63.5	24.6	5.5	41.9	51.7	74.0	22.3	100	167
14	1350.000	61.7	24.7	5.6	41.9	50.1	74.0	23.9	100	176
15	1437.500	63.6	25.0	5.8	41.9	52.5	74.0	21.5	100	125
16	1962.500	60.3	25.2	6.9	42.0	50.4	74.0	23.6	100	134
17	3275.000	52.0	29.0	9.1	42.0	48.1	74.0	25.9	100	1
18	4512.500	53.8	30.8	10.7	41.4	53.9	74.0	20.1	100	1

< USB MODE_1 GHz ~ 6 GHz_Average >

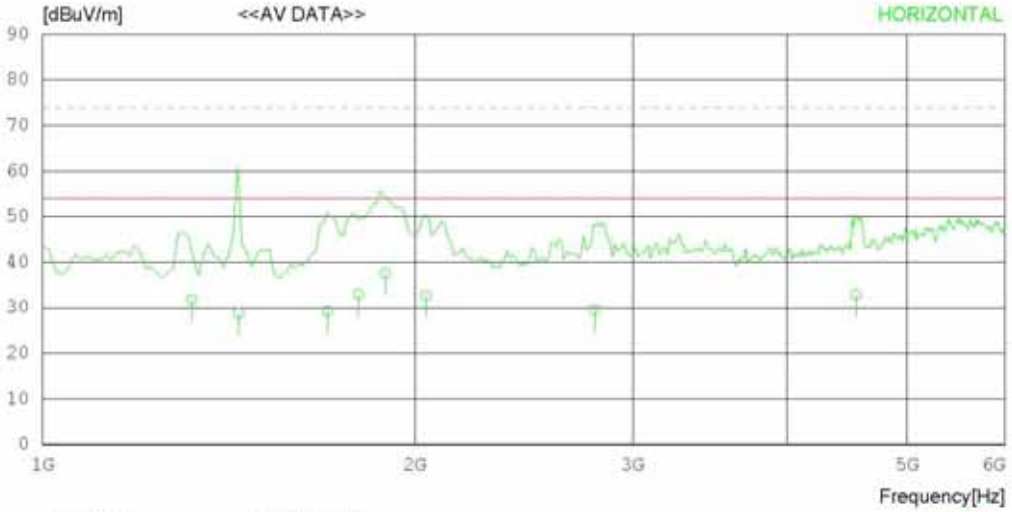
RADIATED EMISSION

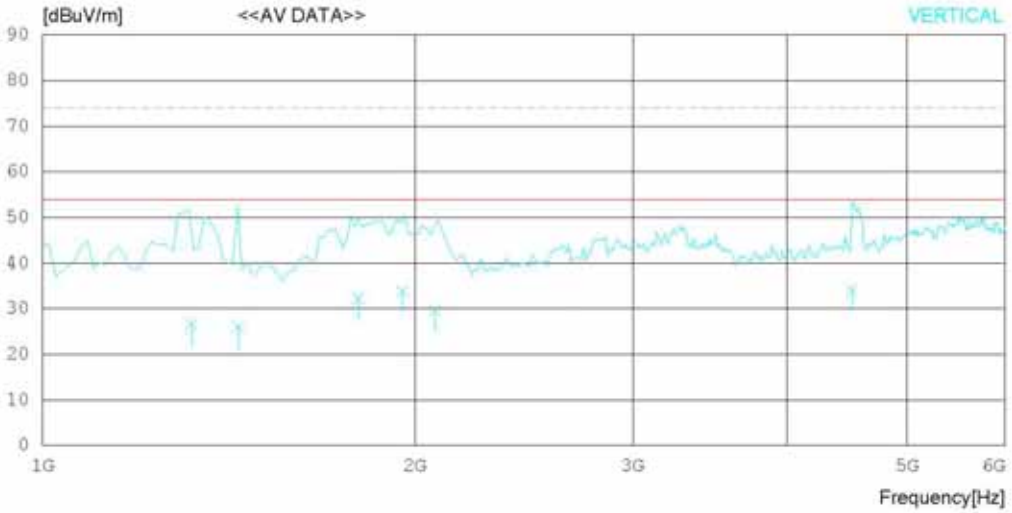
Date : 2012-01-16

Model Name	: 32LS3400-UA	Reference No.	:		
Model No.	:	Power Supply	:	120V	60Hz
Serial No.	:	Temp/Humi	:	21 '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)





RADIATED EMISSION

Date : 2012-01-16

Model Name	:	32LS3400-UA	Reference No.	:	
Model No.	:		Power Supply	:	120V 60Hz
Serial No.	:		Temp/Humi	:	21 '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	1320.032	43.6	24.6	5.5	41.9	31.8	54.0	22.2	100	195
2	1439.998	39.9	25.0	5.8	41.9	28.8	54.0	25.2	100	271
3	1700.025	39.5	25.2	6.4	41.9	29.2	54.0	24.8	100	358
4	1800.000	43.1	25.2	6.6	42.0	32.9	54.0	21.1	100	255
5	1894.000	47.5	25.2	6.8	42.0	37.5	54.0	16.5	100	358
6	2040.133	42.1	25.4	7.1	42.0	32.6	54.0	21.4	100	358
7	2794.025	35.1	28.2	8.3	42.1	29.5	54.0	24.5	100	358
8	4545.450	32.6	30.9	10.7	41.4	32.8	54.0	21.2	100	227
----- Vertical ------										
9	1320.045	38.3	24.6	5.5	41.9	26.5	54.0	27.5	100	167
10	1439.998	37.1	25.0	5.8	41.9	26.0	54.0	28.0	100	125
11	1800.000	42.5	25.2	6.6	42.0	32.3	54.0	21.7	100	134
12	1953.800	43.8	25.2	6.9	42.0	33.9	54.0	20.1	100	176
13	2078.625	39.1	25.5	7.1	42.0	29.7	54.0	24.3	100	1
14	4512.500	34.1	30.8	10.7	41.4	34.2	54.0	19.8	100	1

Appendix 1

List of Test and Measurement Instruments

1. Conducted Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☐	SPECTRUM ANALYZER	8591E	H/P	3649A05889	2011.03.07	2012.03.07
☐	RFI/FIELD INTENSITY METER	KNM-2402	KYORITSU	4N-170-3	2011.07.02	2012.07.02
☐	LISN	KNW-407	KYORITSU	8-317-8	2012.01.09	2013.01.09
☐	LISN	KNW-242	KYORITSU	8-654-15	2011.07.01	2012.07.01
☐	50 OHM TERMINATOR	CT-01	TME	N/A	2012.01.09	2013.01.09
☒	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2011.03.08	2012.03.08
☒	LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2011.09.30	2012.09.30
☒	LISN	LISN1600	TTI	197204	2011.07.02	2012.07.02
☒	50 OHM TERMINATOR	CT-01	TME	N/A	2012.01.09	2013.01.09

2. Radiated Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☒	EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2012.01.09	2013.01.09
☒	BILOG ANTENNA	CBL6112B	SCHAFFNER	2737	2010.07.14	2012.07.14
☒	HORN ANTENNA	BBHA9120A	SCHWARZBECK	322	2010.04.13	2012.04.13
☒	AMPLIFIER	8447E	H/P	2945A02865	2012.01.09	2013.01.09
☒	AMPLIFIER	MLA-00108-B02-36	TSJ	1518831	2012.01.09	2013.01.09
☐	SPECTRUM ANALYZER	E4411B	AGILENT	US41062735	2011.07.01	2012.07.01
☐	AMPLIFIER	8447D	AGILENT	2443A03690	2011.07.01	2012.07.01
☐	BILOG ANTENNA	VULB9160	SCHAFFNER	3151	2010.08.25	2012.08.25
☐	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2011.03.08	2012.03.08
☐	BICONICAL ANT.	VHA 9103	SCHWARZBECK	91032789	2010.11.29	2012.11.29
☐	LOG-PERIODIC ANT.	UHALP 9108A	SCHWARZBECK	590	2010.07.07	2012.07.07
☐	BICONICAL ANT.	VHA 9103	SCHWARZBECK	91031946	2010.12.21	2012.12.21
☐	LOG-PERIODIC ANT.	UHALP 9108-A1	SCHWARZBECK	1098	2010.11.29	2012.11.29
☐	AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2011.03.07	2012.03.07