

EMC TEST REPORT

Test item : LED TV Monitor
Model No. : 32LN520B-UM
Order No. : DEMC1304-01399
Date of receipt : 2013-04-25
Test duration : 2013-05-02 ~ 2013-05-04
Use of report : FCC CoC Marking
Date of Issue : 2013-05-06

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 : (17 ~ 22) °C,
Humidity : (38 ~ 52) % 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.

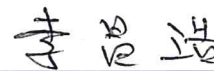
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Tested by:



Manager
DaeHwa Eun

Reviewed by:



Technical Manager
ChangHo Lee

PRESIDENT OF DIGITAL EMC CO., LTD.

CONTENTS

1. General Remarks	3
2. Test Laboratory	3
3. General Information of EUT	4
4. Test Summary	5
4.1 Applied standards and test results	5
4.2 Test environment and conditions	5
4.3 Test result Summary	5
5. Test Set-up and operation mode	6
5.1 Principle of Configuration Selection	6
5.2 Test Operation Mode	6
5.3 Support Equipment Used	6
6. Test Results : Emission	7
6.1 Conducted Disturbance	7
6.2 Radiated Disturbance	12
Appendix 1	26
List of Test and Measurement Instruments	26
Appendix 2	28
Report Revision History	28

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.	32LN520B-UM
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ32LN520BUM
Type of Sample Tested	Pre-Production
High Frequency	800 MHz
Rating (Use for Adaptor)	Model No.: LCAP38 Manufacturer : Lien Chang Electronic Enterprise Co., Ltd. Input : 100-240 V, 50-60 Hz, 1.5 A Output : 24 V, 2.7 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 350	31.46	70.09
720 x 400	31.46	70.08
640 x 480	31.46	59.94
800 x 600	37.87	60.31
1024 x 768	48.36	60.00
1360 x 768	47.71	60.01
1152 x 864	54.34	60.05

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	05-02	22	38
Radiated Disturbance	05-04	17	51
	05-04	17	52

4.3 Test result Summary

(1) Conducted Emission (USB MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [Db]
0.62535	N	46.0	Quasi-Peak	56.0	10.0

(2) Radiated Emission (HDMI MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
40.421	V	36.0	Quasi-Peak	40.0	4.0

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, 1152 x 864 Resolution
- USB MODE : USB recorded 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	VOSTRO460	6J7JXBX	DELL INC.	POWER	1.6	Not use	Non-shield	Plastic	DOC
				USB	1.7	Not use	Non-shield		
				USB	1.6	Use	Non-shield		
				USB	1.8	Use	Non-shield		
				HDMI	1.7	Not use	Shield		
KEYBOARD	KB-065	CN11163233	HP.	USB	1.7	Not use	Non-shield	Plastic	DOC
MOUSE	1484	3527000213 75	MICROSOFT CORPORATION	USB	1.6	Use	Non-shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2001499	SONY EMCS.	POWER	1.7	Not use	Non-shield	Plastic	VER
				AV	1.8	Not use	Non-shield		
USB MEMORY	SDCZ37-004G	N/A	SANDISK	USB	-	Not use	-	Plastic	DOC
PRINTER	SRP770	N/A	BICSOLON	POWER	1.8	Not use	Non-shield	Plastic	DOC
				USB	1.8	Use	Non-shield		
REMOTE CONTROL	AKB73715608	N/A	OHSUNG ELECTRONICS	-	-	Not use	-	Plastic	DOC
AC ADAPTOR	LCAP38	ED48N6306 99010023	Lien Chang Electronics	POWER	1.7	Not use	Non-shield	Plastic	DOC
				POWER	1.6	Not use	Non-shield		

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

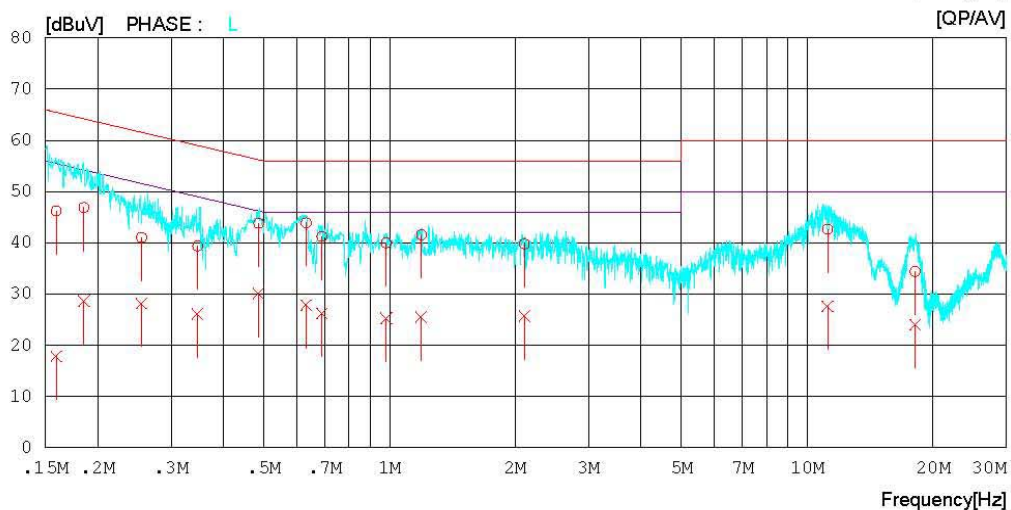
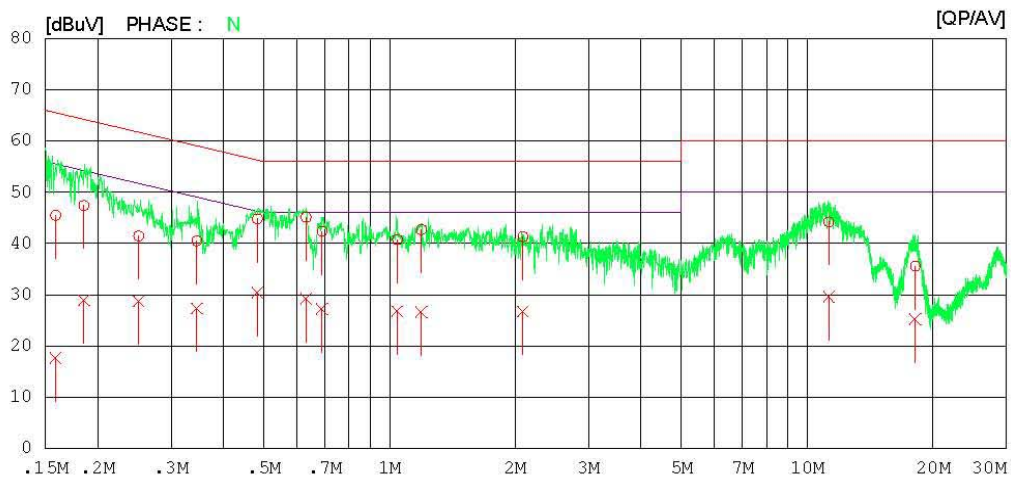
Digital EMC
Date : 2013-05-02

Model No. : 32LN520B-UM
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 22°C 38 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-05-02

Model No. : 32LN520B-UM
Type :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 22 °C 38 % 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	0.15885	45.3	17.5	0.2	45.5	17.7	65.5	55.5	20.0	37.8	N
2	0.18548	47.2	28.7	0.2	47.4	28.9	64.2	54.2	16.8	25.3	N
3	0.25085	41.3	28.5	0.2	41.5	28.7	61.7	51.7	20.2	23.0	N
4	0.34581	40.3	27.1	0.2	40.5	27.3	59.1	49.1	18.6	21.8	N
5	0.48314	44.6	30.2	0.2	44.8	30.4	56.3	46.3	11.5	15.9	N
6	0.63153	44.9	29.0	0.2	45.1	29.2	56.0	46.0	10.9	16.8	N
7	0.68920	42.2	27.0	0.2	42.4	27.2	56.0	46.0	13.6	18.8	N
8	1.04400	40.4	26.5	0.3	40.7	26.8	56.0	46.0	15.3	19.2	N
9	1.19250	42.4	26.3	0.3	42.7	26.6	56.0	46.0	13.3	19.4	N
10	2.08600	41.0	26.4	0.3	41.3	26.7	56.0	46.0	14.7	19.3	N
11	11.26300	43.5	28.9	0.7	44.2	29.6	60.0	50.0	15.8	20.4	N
12	18.14900	34.7	24.3	0.9	35.6	25.2	60.0	50.0	24.4	24.8	N
13	0.15938	46.0	17.6	0.2	46.2	17.8	65.5	55.5	19.3	37.7	L
14	0.18565	46.7	28.5	0.2	46.9	28.7	64.2	54.2	17.3	25.5	L
15	0.25491	40.8	28.0	0.2	41.0	28.2	61.6	51.6	20.6	23.4	L
16	0.34733	39.2	25.9	0.2	39.4	26.1	59.0	49.0	19.6	22.9	L
17	0.48621	43.6	29.9	0.2	43.8	30.1	56.2	46.2	12.4	16.1	L
18	0.63193	43.7	27.6	0.2	43.9	27.8	56.0	46.0	12.1	18.2	L
19	0.68901	41.0	26.0	0.2	41.2	26.2	56.0	46.0	14.8	19.8	L
20	0.98200	39.8	25.1	0.2	40.0	25.3	56.0	46.0	16.0	20.7	L
21	1.19200	41.3	25.3	0.3	41.6	25.6	56.0	46.0	14.4	20.4	L
22	2.10550	39.5	25.4	0.3	39.8	25.7	56.0	46.0	16.2	20.3	L
23	11.19400	41.9	26.9	0.7	42.6	27.6	60.0	50.0	17.4	22.4	L
24	18.13650	33.5	23.1	0.9	34.4	24.0	60.0	50.0	25.6	26.0	L

< USB MODE >



Results of Conducted Emission

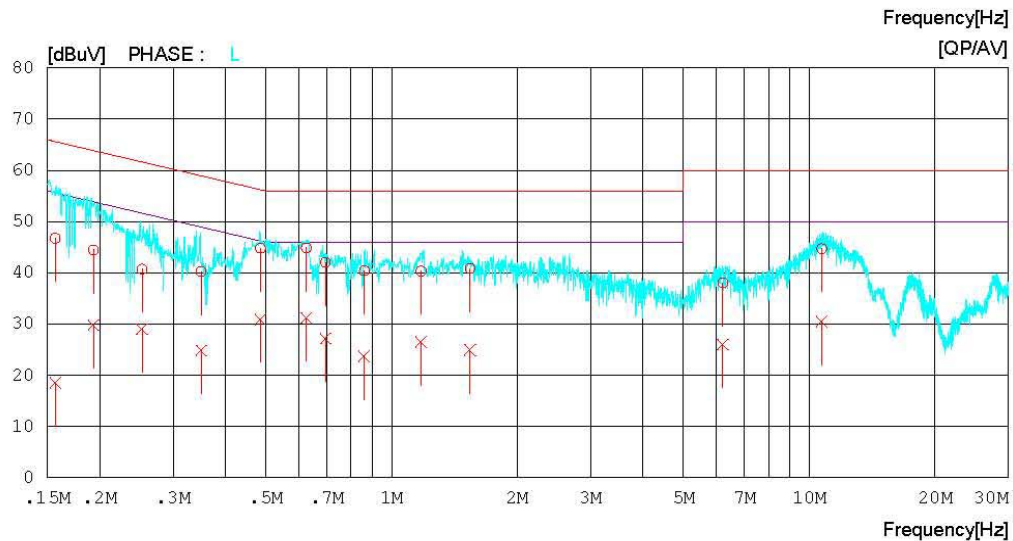
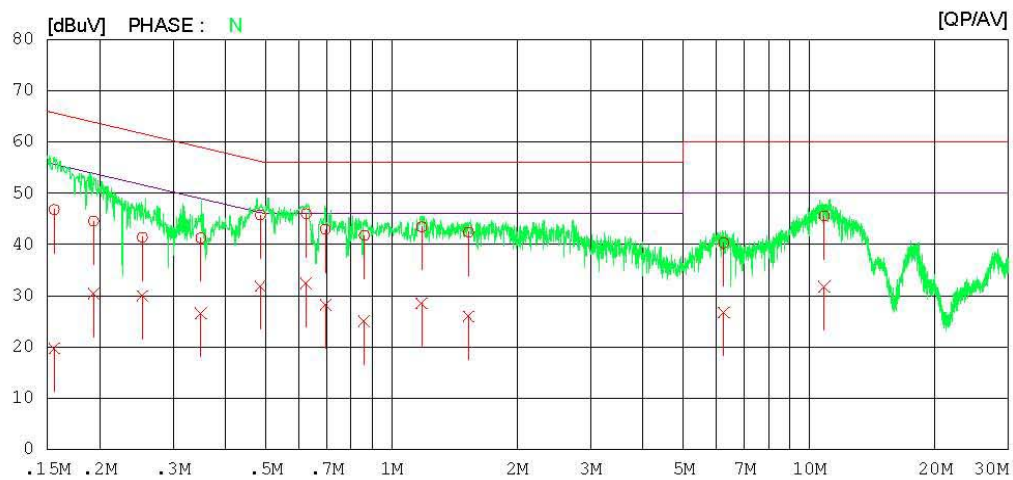
Digital EMC
Date : 2013-05-02

Model No. : 32LN520B-UM
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 22°C 38 % R.H.
Operator :

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
Date : 2013-05-02

Model No. : 32LN520B-UM
Type :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi. : 22 °C 38 % 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	0.15591	46.6	19.5	0.2	46.8	19.7	65.7	55.7	18.9	36.0	N
2	0.19366	44.3	30.2	0.2	44.5	30.4	63.9	53.9	19.4	23.5	N
3	0.25331	41.2	29.7	0.2	41.4	29.9	61.6	51.6	20.2	21.7	N
4	0.34964	41.0	26.4	0.2	41.2	26.6	59.0	49.0	17.8	22.4	N
5	0.48551	45.5	31.7	0.2	45.7	31.9	56.2	46.2	10.5	14.3	N
6	0.62535	45.8	32.2	0.2	46.0	32.4	56.0	46.0	10.0	13.6	N
7	0.69540	42.8	28.0	0.2	43.0	28.2	56.0	46.0	13.0	17.8	N
8	0.86050	41.6	24.8	0.2	41.8	25.0	56.0	46.0	14.2	21.0	N
9	1.18150	43.1	28.2	0.3	43.4	28.5	56.0	46.0	12.6	17.5	N
10	1.52900	42.1	25.7	0.3	42.4	26.0	56.0	46.0	13.6	20.0	N
11	6.24000	39.8	26.2	0.5	40.3	26.7	60.0	50.0	19.7	23.3	N
12	10.86850	44.8	31.1	0.7	45.5	31.8	60.0	50.0	14.5	18.2	N
13	0.15666	46.6	18.3	0.2	46.8	18.5	65.6	55.6	18.8	37.1	L
14	0.19355	44.3	29.6	0.2	44.5	29.8	63.9	53.9	19.4	24.1	L
15	0.25278	40.5	28.8	0.2	40.7	29.0	61.7	51.7	21.0	22.7	L
16	0.35044	40.1	24.7	0.2	40.3	24.9	59.0	49.0	18.7	24.1	L
17	0.48591	44.6	30.7	0.2	44.8	30.9	56.2	46.2	11.4	15.3	L
18	0.62511	44.7	31.0	0.2	44.9	31.2	56.0	46.0	11.1	14.8	L
19	0.69563	41.8	27.0	0.2	42.0	27.2	56.0	46.0	14.0	18.8	L
20	0.86050	40.2	23.5	0.2	40.4	23.7	56.0	46.0	15.6	22.3	L
21	1.17800	40.0	26.2	0.3	40.3	26.5	56.0	46.0	15.7	19.5	L
22	1.54200	40.6	24.6	0.3	40.9	24.9	56.0	46.0	15.1	21.1	L
23	6.20800	37.6	25.6	0.5	38.1	26.1	60.0	50.0	21.9	23.9	L
24	10.72350	44.0	29.8	0.7	44.7	30.5	60.0	50.0	15.3	19.5	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 (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

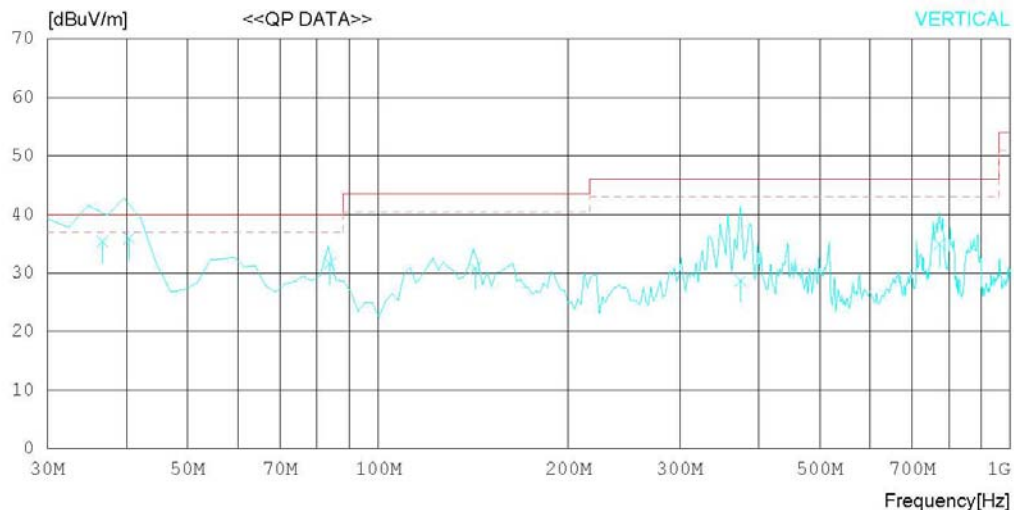
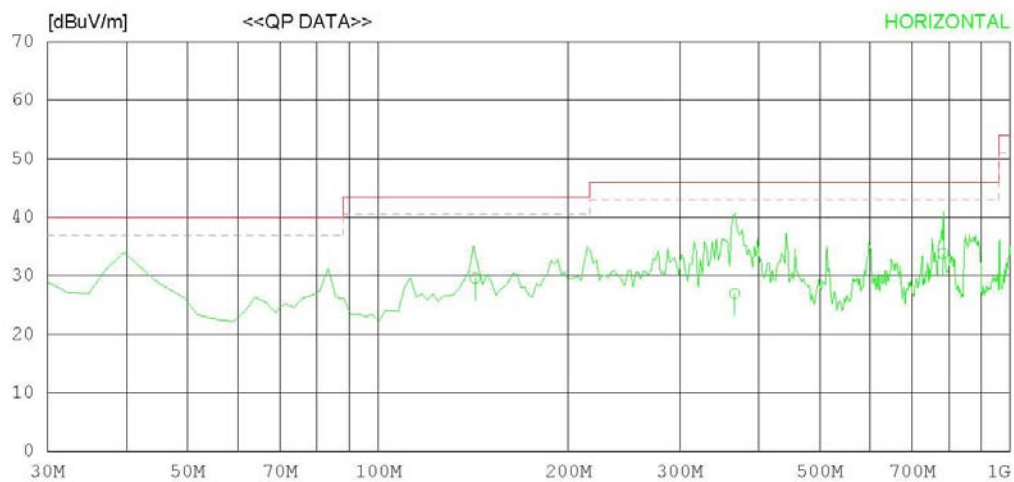
Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 52 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 52 % R.H.
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	142.400	41.3	10.8	1.7	24.2	29.6	43.5	13.9	100	79
2	366.499	31.9	15.3	3.4	23.6	27.0	46.0	19.0	100	154
3	783.082	32.1	19.7	4.8	22.8	33.8	46.0	12.2	100	143
----- Vertical -----										
4	36.652	43.8	14.5	1.1	24.0	35.4	40.0	4.6	100	177
5	40.421	46.0	13.0	1.1	24.1	36.0	40.0	4.0	100	175
6	83.850	46.4	7.9	1.6	24.2	31.7	40.0	8.3	100	1
7	142.400	42.6	10.8	1.7	24.2	30.9	43.5	12.6	100	24
8	374.960	33.4	15.5	3.4	23.6	28.7	46.0	17.3	100	172
9	772.908	33.4	19.6	4.7	22.8	34.9	46.0	11.1	100	175

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

RADIATED EMISSION

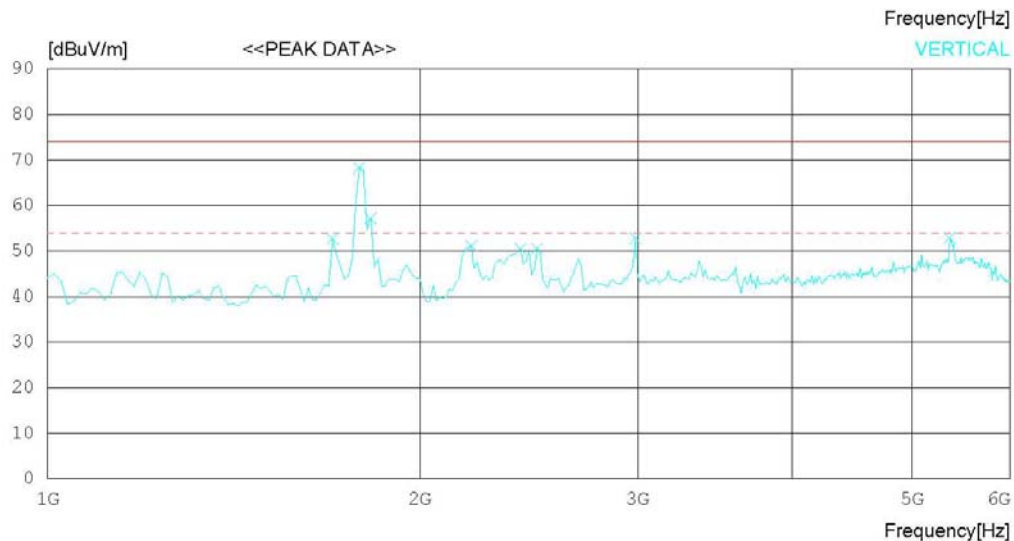
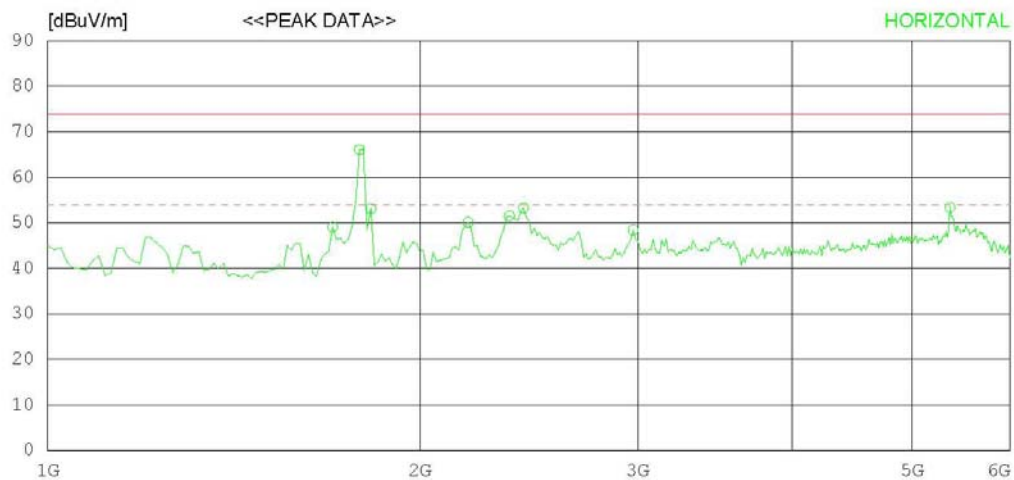
Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 'C 51 % 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 : 2013-05-04

Model Name : 32LN520B-UM	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 17 °C 51 % 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	1700.000	60.0	24.6	4.3	39.8	49.1	74.0	24.9	100	358
2	1787.500	76.8	24.6	4.4	39.7	66.1	74.0	7.9	100	214
3	1825.000	63.7	24.6	4.5	39.7	53.1	74.0	20.9	100	205
4	2187.500	59.0	25.6	4.9	39.4	50.1	74.0	23.9	100	358
5	2362.500	59.0	26.7	5.1	39.3	51.5	74.0	22.5	100	198
6	2425.000	60.4	27.0	5.2	39.3	53.3	74.0	20.7	100	225
7	2975.000	53.2	28.9	5.6	39.3	48.4	74.0	25.6	100	200
8	5362.500	49.5	34.4	7.9	38.4	53.4	74.0	20.6	100	358
----- Vertical -----										
9	1700.000	63.6	24.6	4.3	39.8	52.7	74.0	21.3	100	165
10	1787.500	79.0	24.6	4.4	39.7	68.3	74.0	5.7	100	1
11	1825.000	67.8	24.6	4.5	39.7	57.2	74.0	16.8	100	1
12	2200.000	59.9	25.7	4.9	39.4	51.1	74.0	22.9	100	206
13	2412.500	57.8	26.9	5.1	39.3	50.5	74.0	23.5	100	1
14	2487.500	57.2	27.4	5.2	39.3	50.5	74.0	23.5	100	1
15	2987.500	57.5	28.9	5.7	39.3	52.8	74.0	21.2	100	1
16	5362.500	49.0	34.4	7.9	38.4	52.9	74.0	21.1	100	184

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

RADIATED EMISSION

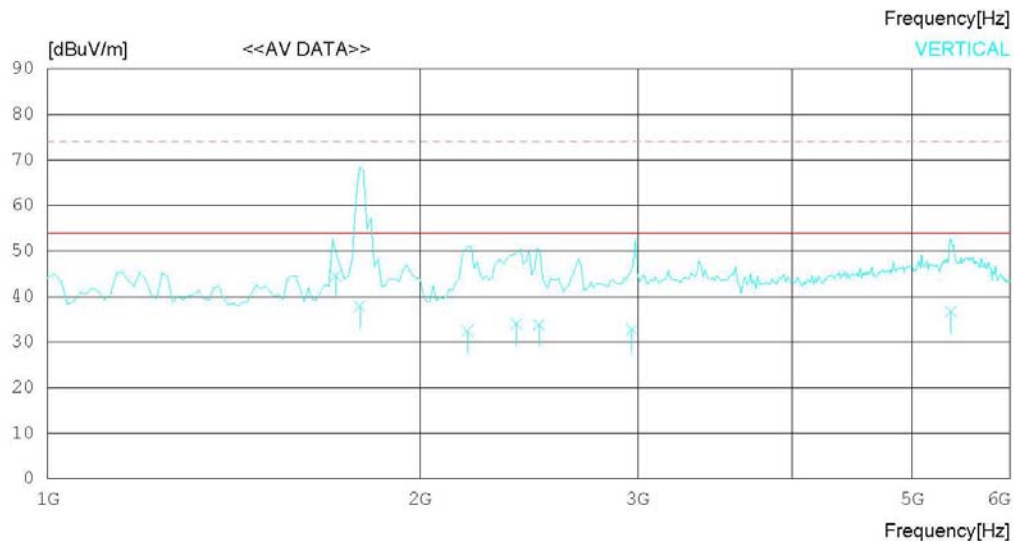
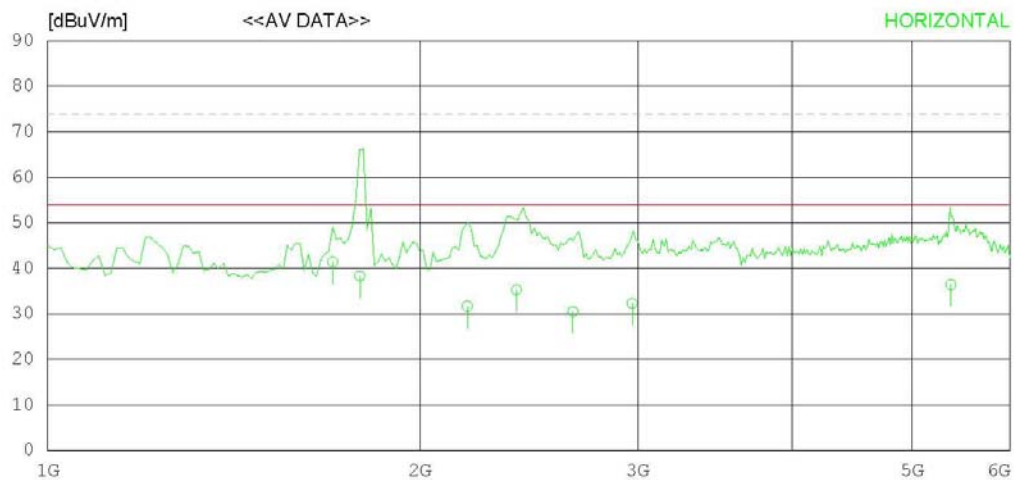
Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : HDMI

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 'C 51 % 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 : 2013-05-04

Model Name : 32LN520B-UM	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 17 °C 51 % 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	1700.000	52.3	24.6	4.3	39.8	41.4	54.0	12.6	100	111
2	1788.000	49.0	24.6	4.4	39.7	38.3	54.0	15.7	100	214
3	2183.980	40.6	25.6	4.9	39.4	31.7	54.0	22.3	100	46
4	2393.526	42.7	26.8	5.1	39.3	35.3	54.0	18.7	100	198
5	2659.000	36.5	27.9	5.4	39.3	30.5	54.0	23.5	100	225
6	2968.462	37.1	28.9	5.6	39.3	32.3	54.0	21.7	100	200
7	5374.350	32.5	34.4	7.9	38.4	36.4	54.0	17.6	100	168
----- Vertical -----										
8	1710.000	55.4	24.6	4.3	39.8	44.5	54.0	9.5	100	161
9	1788.000	48.6	24.6	4.4	39.7	37.9	54.0	16.1	100	121
10	2183.981	41.3	25.6	4.9	39.4	32.4	54.0	21.6	100	206
11	2393.526	41.4	26.8	5.1	39.3	34.0	54.0	20.0	100	204
12	2497.000	40.6	27.4	5.2	39.3	33.9	54.0	20.1	100	46
13	2967.564	37.6	28.9	5.6	39.3	32.8	54.0	21.2	100	125
14	5374.346	32.8	34.4	7.9	38.4	36.7	54.0	17.3	100	184

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

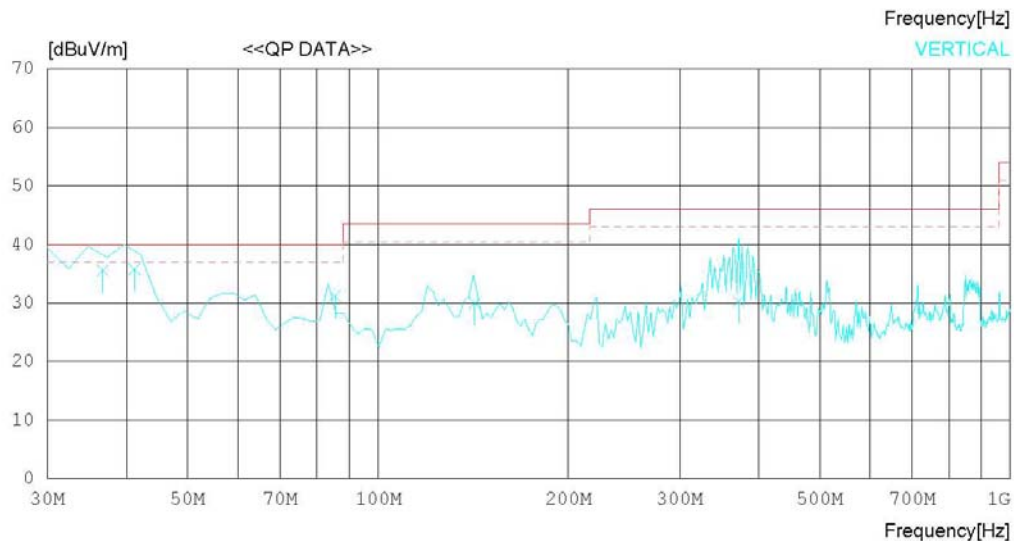
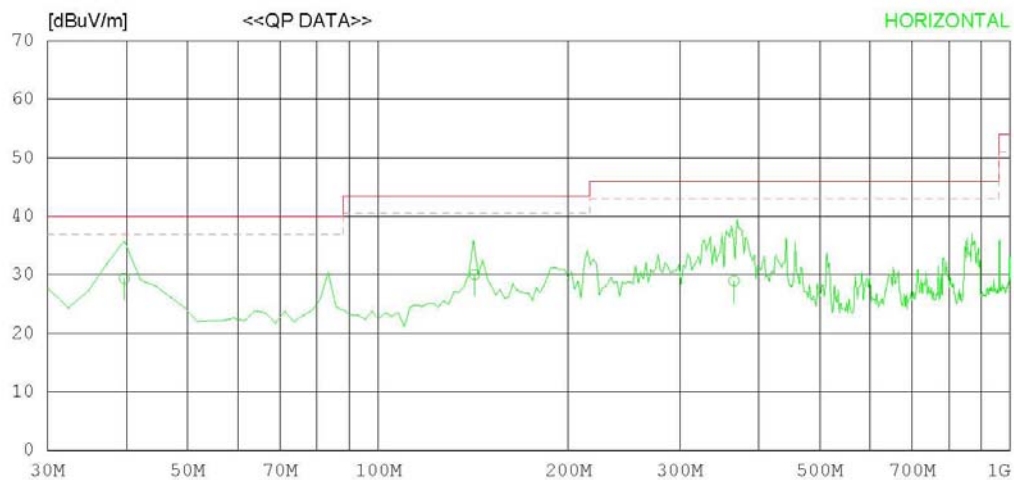
Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 52 % R.H.
Operator :

Memo :

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



RADIATED EMISSION

Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 52 % R.H.
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	39.668	39.4	13.0	1.1	24.1	29.4	40.0	10.6	100	114
2	142.250	41.7	10.8	1.7	24.2	30.0	43.5	13.5	197	121
3	365.532	34.0	15.2	3.4	23.6	29.0	46.0	17.0	198	180
----- Vertical -----										
4	36.686	44.0	14.5	1.1	24.0	35.6	40.0	4.4	100	1
5	41.167	45.8	13.1	1.1	24.2	35.8	40.0	4.2	100	132
6	85.502	45.7	8.2	1.5	24.2	31.2	40.0	8.8	100	1
7	142.250	41.7	10.8	1.7	24.2	30.0	43.5	13.5	100	143
8	371.925	35.1	15.4	3.4	23.6	30.3	46.0	15.7	100	184

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

RADIATED EMISSION

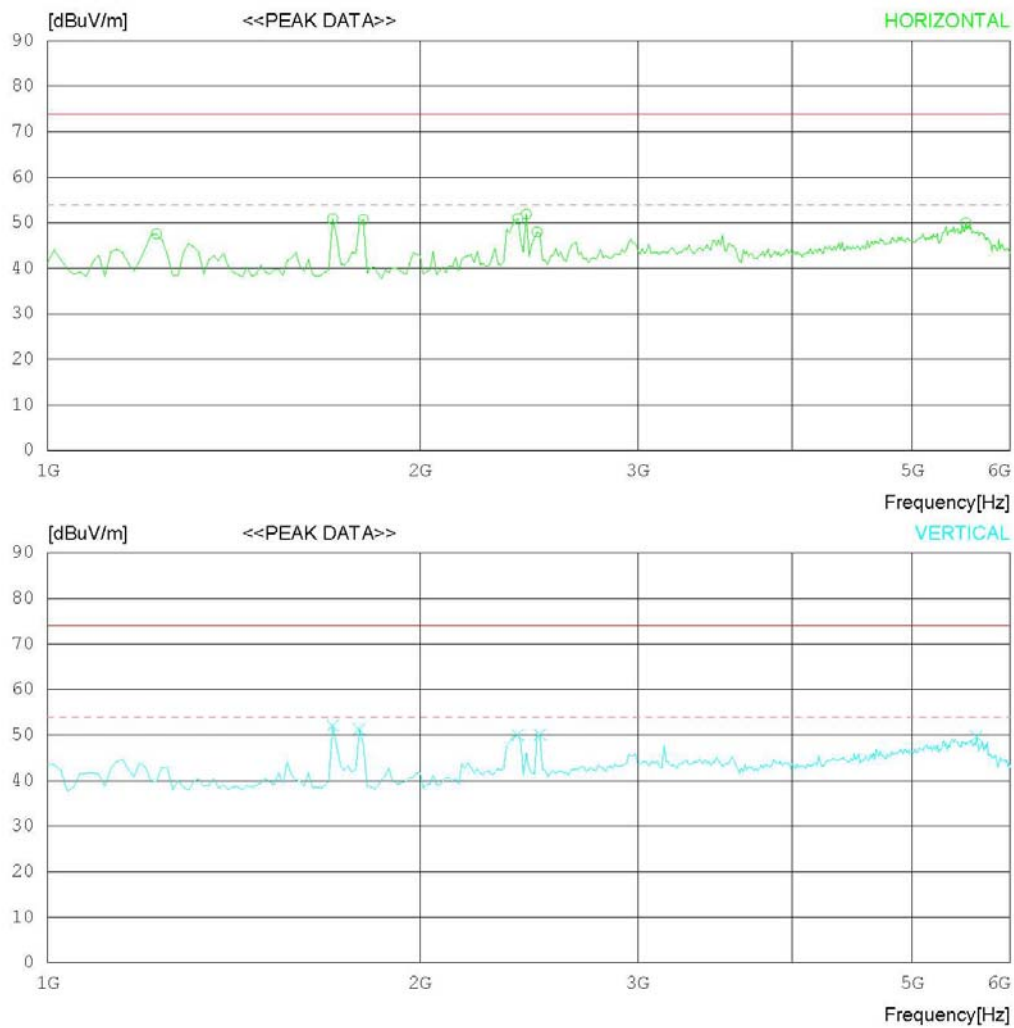
Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 'C 51 % 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 : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 °C 51 % R.H.
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	1225.000	60.4	24.2	3.7	40.7	47.6	74.0	26.4	100	1
2	1700.000	61.8	24.6	4.3	39.8	50.9	74.0	23.1	100	1
3	1800.000	61.3	24.6	4.5	39.7	50.7	74.0	23.3	100	208
4	2400.000	58.2	26.9	5.1	39.3	50.9	74.0	23.1	100	1
5	2437.500	58.9	27.1	5.2	39.3	51.9	74.0	22.1	100	223
6	2487.500	54.7	27.4	5.2	39.3	48.0	74.0	26	100	1
7	5525.000	45.5	34.9	7.9	38.3	50.0	74.0	24	100	43
----- Vertical -----										
8	1700.000	62.9	24.6	4.3	39.8	52.0	74.0	22	100	358
9	1787.500	62.0	24.6	4.4	39.7	51.3	74.0	22.7	100	153
10	2400.000	57.3	26.9	5.1	39.3	50.0	74.0	24	100	358
11	2500.000	56.7	27.5	5.2	39.3	50.1	74.0	23.9	100	358
12	5637.500	45.8	34.2	8.1	38.4	49.7	74.0	24.3	100	109

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

RADIATED EMISSION

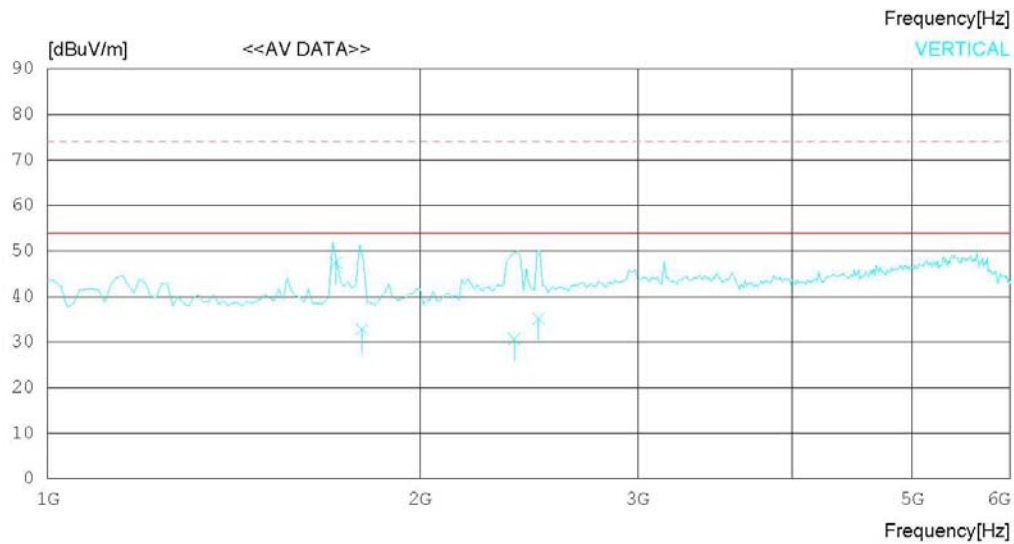
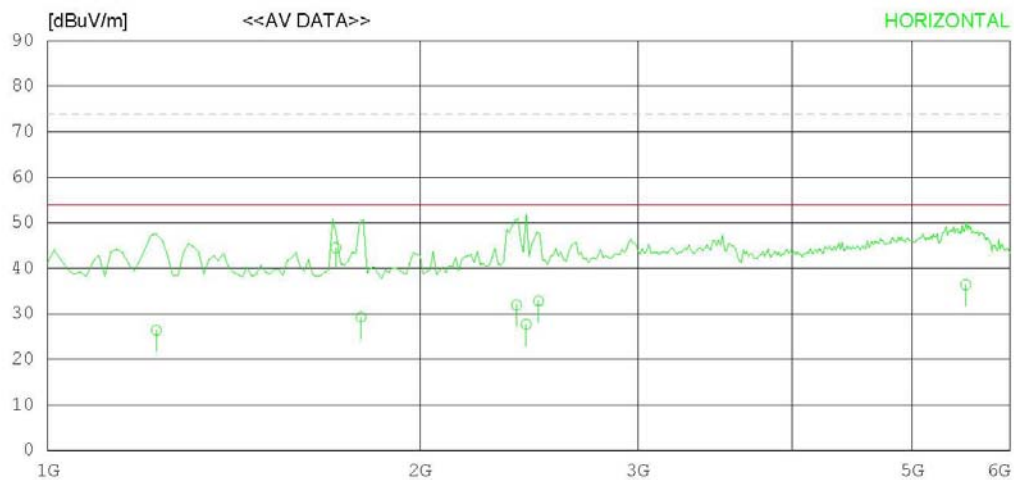
Date : 2013-05-04

Model Name : 32LN520B-UM
Model No. :
Serial No. :
Test Condition : USB

Reference No. :
Power Supply : 120V 60Hz
Temp/Humi : 17 'C 51 % 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 : 2013-05-04

Model Name : 32LN520B-UM	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 17 °C 51 % 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	1224.093	39.2	24.2	3.7	40.7	26.4	54.0	27.6	100	32
2	1710.000	55.4	24.6	4.3	39.8	44.5	54.0	9.5	100	204
3	1791.974	40.0	24.6	4.4	39.7	29.3	54.0	24.7	100	177
4	2394.083	39.3	26.8	5.1	39.3	31.9	54.0	22.1	100	194
5	2437.500	34.7	27.1	5.2	39.3	27.7	54.0	26.3	100	223
6	2494.327	39.5	27.4	5.2	39.3	32.8	54.0	21.2	100	302
7	5525.000	31.9	34.9	7.9	38.3	36.4	54.0	17.6	100	43
----- Vertical -----										
8	1710.000	58.3	24.6	4.3	39.8	47.4	54.0	6.6	100	177
9	1795.125	43.4	24.6	4.5	39.7	32.8	54.0	21.2	100	153
10	2383.084	38.1	26.8	5.1	39.3	30.7	54.0	23.3	100	234
11	2494.500	41.9	27.4	5.2	39.3	35.2	54.0	18.8	100	358

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