

# EMC TEST REPORT

Test item : LCD TV Monitor  
Model No. : 32CS460-UC  
Order No. : 1112-01772  
Date of receipt : 2011-12-19  
Test duration : 2011-12-23 ~ 2011-12-30  
Use of report : FCC CoC Marking  
Date of Issue : 2012-01-03

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 : (17 ~ 23) °C,  
Humidity : (31 ~ 37) % 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.

This test report shall not be reproduced except in full, without the written approval of DIGITAL EMC CO., LTD.

Tested by:



Assistant Manager  
D.H.EUN

Reviewed by:



General Manager  
C.H.LEE

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

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

## 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.	32CS460-UC
EUT Type	LCD TV Monitor
Serial No	NONE
FCC ID	BEJ32CS460UC
Type of Sample Tested	Pre-Production
High Frequency	800 MHz
Rating	AC100-240 V~, 50/60 Hz, 1.1 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)
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1360x768	47.712	60.015
1280x1024	63.981	60.02
1920x1080	67.5	60.00

## 4. Test Summary

### 4.1 Applied standards and test results

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4:2003	<b>C</b>
Radiated Disturbance	ANSI C63.4:2003	<b>C</b>
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	12-23	18	34	-
Radiated Disturbance	12-27	19	30	
	12-30	23	37	

### 4.3 Test result Summary

#### (1) Conducted Emission(USB MODE)

Frequency [MHz]	Phase	Result [dB $\mu$ V]	Detector	Limit [dB $\mu$ V]	Margin [dB]
<b>3.23550</b>	<b>N</b>	<b>35.0</b>	Average	<b>46.0</b>	<b>11.0</b>

#### (2) Radiated Emission(HDMI MODE)

Frequency [MHz]	Pol.	Result [dB( $\mu$ V/m)]	Detector	Limit [dB( $\mu$ V/m)]	Margin [dB]
<b>36.300</b>	<b>V</b>	<b>33.2</b>	Quasi-Peak	<b>40.0</b>	<b>6.8</b>

## 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	1.8	Non-shield	Plastic	DOC
				HDMI	1.8	Shield		
				USB	1.8	Non-shield		
				PS/2	1.6	Non-shield		
				PS/2	1.8	Non-shield		
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	1.8	Non-shield	Plastic	DOC
				USB	1.8			
USB MEMORY	POP-S2	N/A	MEMORIVE	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 2<sup>nd</sup> 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( $\mu$ V)			
	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 >



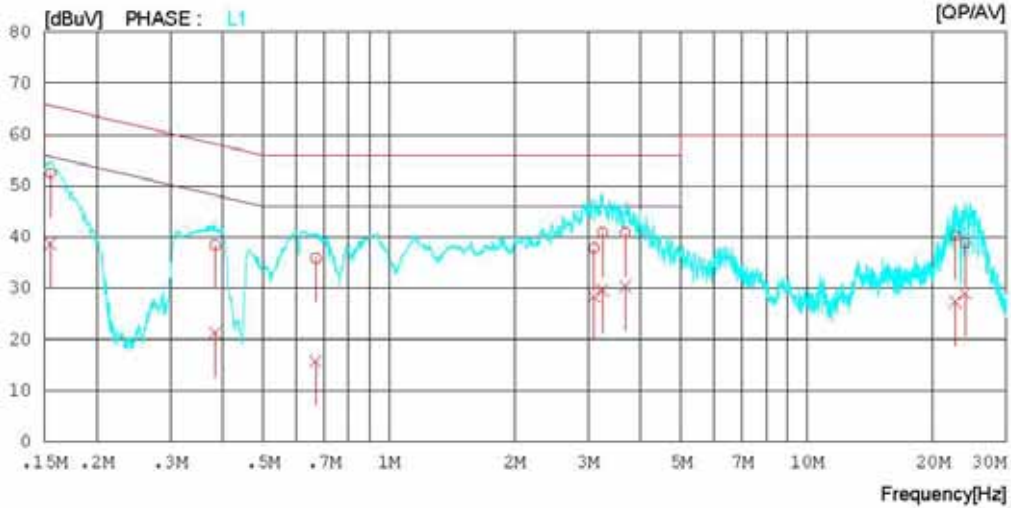
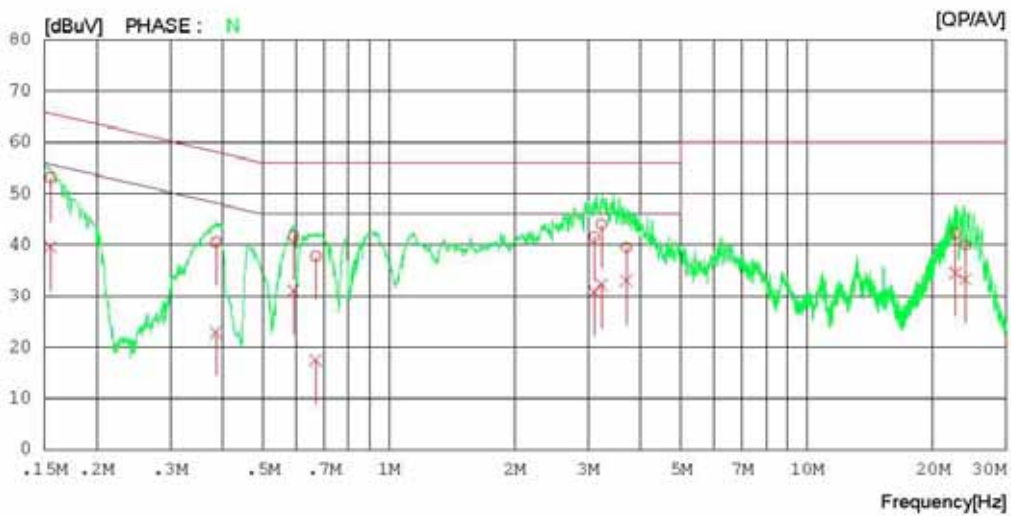
### Results of Conducted Emission

Digital EMC  
Date : 2011-12-23

Model No. : 32CS460-UC  
 Type :  
 Serial No. :  
 Test Condition : HDMI

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi. : 18 °C 34 % R.H.  
 Operator :

Memo :  
 LIMIT : CISPR22\_B OP  
 CISPR22\_B AV



## Results of Conducted Emission

Digital EMC  
Date : 2011-12-23

Model No. : 32CS460-UC  
 Type :  
 Serial No. :  
 Test Condition : HDMI

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi. : 18 °C 34 % 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	0.15510	52.9	39.4	0.2	53.1	39.6	65.7	55.7	12.6	16.1	N
2	0.38615	40.2	22.7	0.2	40.4	22.9	58.1	48.1	17.7	25.2	N
3	0.59244	41.5	31.0	0.1	41.6	31.1	56.0	46.0	14.4	14.9	N
4	0.66941	37.7	17.3	0.1	37.8	17.4	56.0	46.0	18.2	28.6	N
5	3.09850	41.1	30.5	0.4	41.5	30.9	56.0	46.0	14.5	15.1	N
6	3.22900	43.5	31.8	0.4	43.9	32.2	56.0	46.0	12.1	13.8	N
7	3.70150	39.1	32.6	0.4	39.5	33.0	56.0	46.0	16.5	13.0	N
8	22.68200	41.1	33.4	1.1	42.2	34.5	60.0	50.0	17.8	15.5	N
9	23.94400	38.9	32.1	1.1	40.0	33.2	60.0	50.0	20.0	16.8	N
10	0.15505	52.3	38.5	0.2	52.5	38.7	65.7	55.7	13.2	17.0	L1
11	0.38446	38.2	21.1	0.2	38.4	21.3	58.2	48.2	19.8	26.9	L1
12	0.66958	35.8	15.6	0.1	35.9	15.7	56.0	46.0	20.1	30.3	L1
13	3.09400	37.4	28.1	0.4	37.8	28.5	56.0	46.0	18.2	17.5	L1
14	3.24700	40.5	29.3	0.4	40.9	29.7	56.0	46.0	15.1	16.3	L1
15	3.68150	40.5	30.0	0.4	40.9	30.4	56.0	46.0	15.1	15.6	L1
16	22.68100	39.1	26.2	1.1	40.2	27.3	60.0	50.0	19.8	22.7	L1
17	23.92150	37.8	27.9	1.1	38.9	29.0	60.0	50.0	21.1	21.0	L1

< USB MODE >



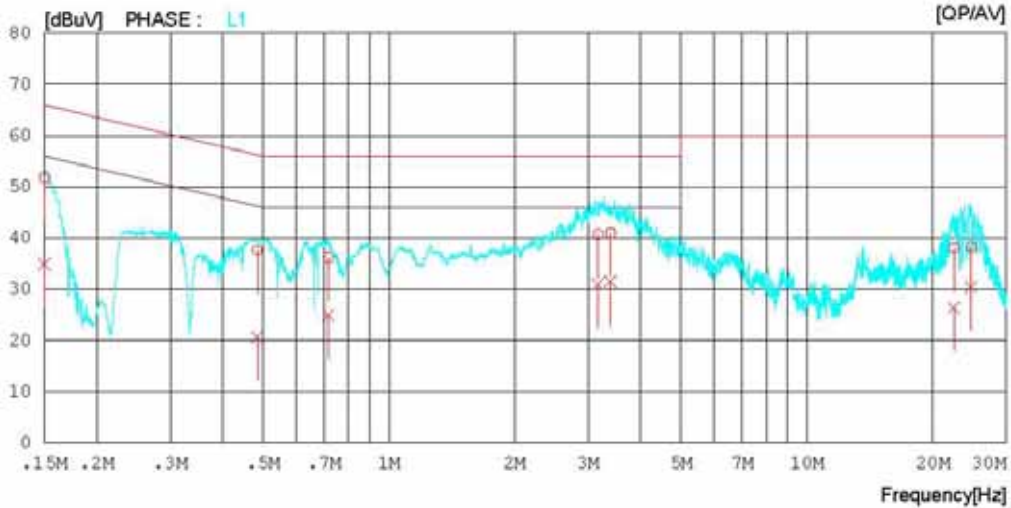
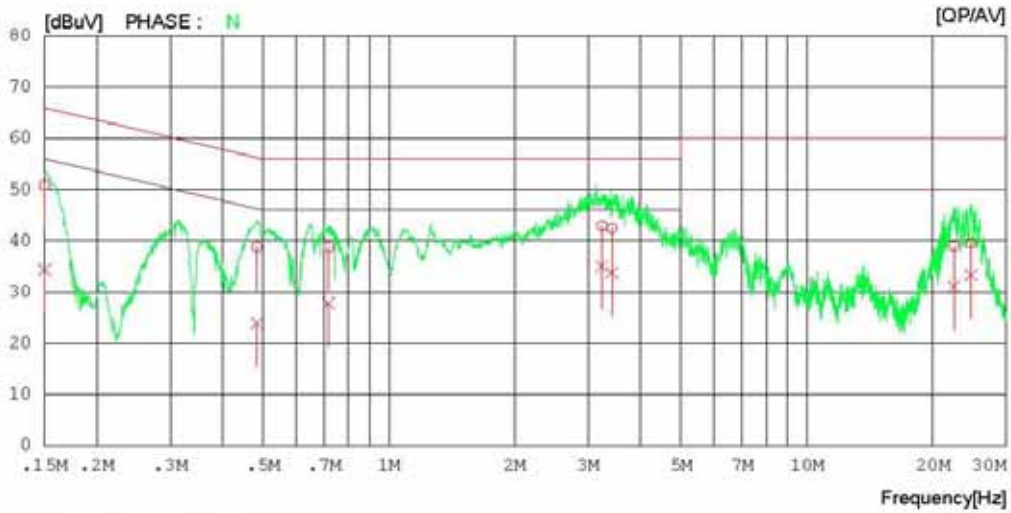
### Results of Conducted Emission

Digital EMC  
 Date : 2011-12-23

Model No. : 32CS460-UC  
 Type :  
 Serial No. :  
 Test Condition : USB

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi. : 18 °C 34 % R.H.  
 Operator :

Memo :  
 LIMIT : CISPR22\_B OP  
 CISPR22\_B AV



## Results of Conducted Emission

Digital EMC  
 Date : 2011-12-23

Model No. : 32CS460-UC  
 Type :  
 Serial No. :  
 Test Condition : USB

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi. : 18 °C 34 % 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	50.7	34.1	0.2	50.9	34.3	66.0	56.0	15.1	21.7	N
2	0.48350	38.7	23.8	0.1	38.8	23.9	56.3	46.3	17.5	22.4	N
3	0.71784	38.6	27.7	0.1	38.7	27.8	56.0	46.0	17.3	18.2	N
4	3.23550	42.5	34.6	0.4	42.9	35.0	56.0	46.0	13.1	11.0	N
5	3.41650	42.0	33.4	0.4	42.4	33.8	56.0	46.0	13.6	12.2	N
6	22.48950	37.9	29.9	1.1	39.0	31.0	60.0	50.0	21.0	19.0	N
7	24.71200	38.5	32.2	1.1	39.6	33.3	60.0	50.0	20.4	16.7	N
8	0.15006	51.6	34.7	0.2	51.8	34.9	66.0	56.0	14.2	21.1	L1
9	0.48438	37.6	20.6	0.1	37.7	20.7	56.3	46.3	18.6	25.6	L1
10	0.71703	36.1	24.9	0.1	36.2	25.0	56.0	46.0	19.8	21.0	L1
11	3.16550	40.3	30.7	0.4	40.7	31.1	56.0	46.0	15.3	14.9	L1
12	3.39050	40.6	31.1	0.4	41.0	31.5	56.0	46.0	15.0	14.5	L1
13	22.48300	37.0	25.3	1.1	38.1	26.4	60.0	50.0	21.9	23.6	L1
14	24.69550	37.2	29.3	1.1	38.3	30.4	60.0	50.0	21.7	19.6	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	5 <sup>th</sup> 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 (dB $\mu$ V/m)	Quasi-peak (dB $\mu$ V/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 (dB $\mu$ V/m)	Quasi-peak (dB $\mu$ V/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 (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Peak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)
1 to 40	80	60	74	54

## Test Result

< HDMI MODE\_30 MHz ~ 1 GHz >

### RADIATED EMISSION

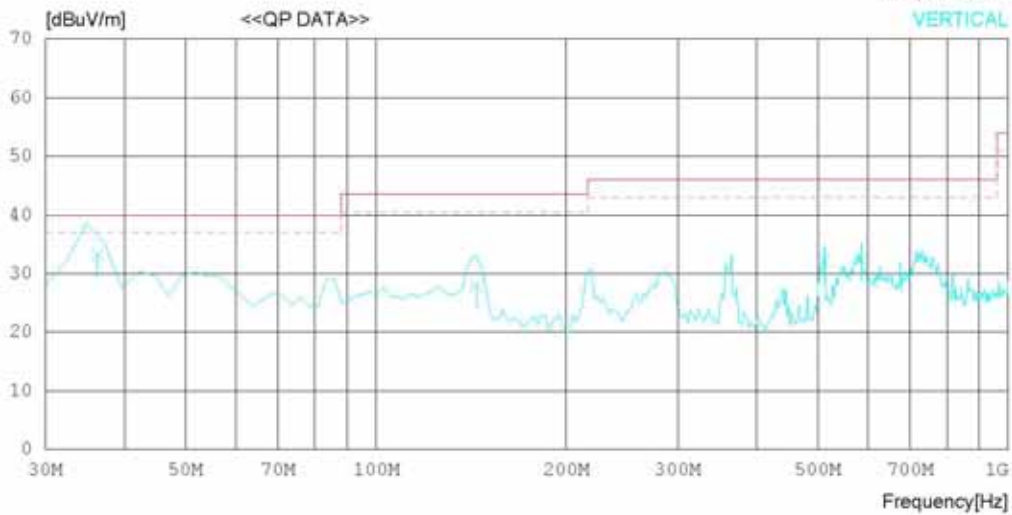
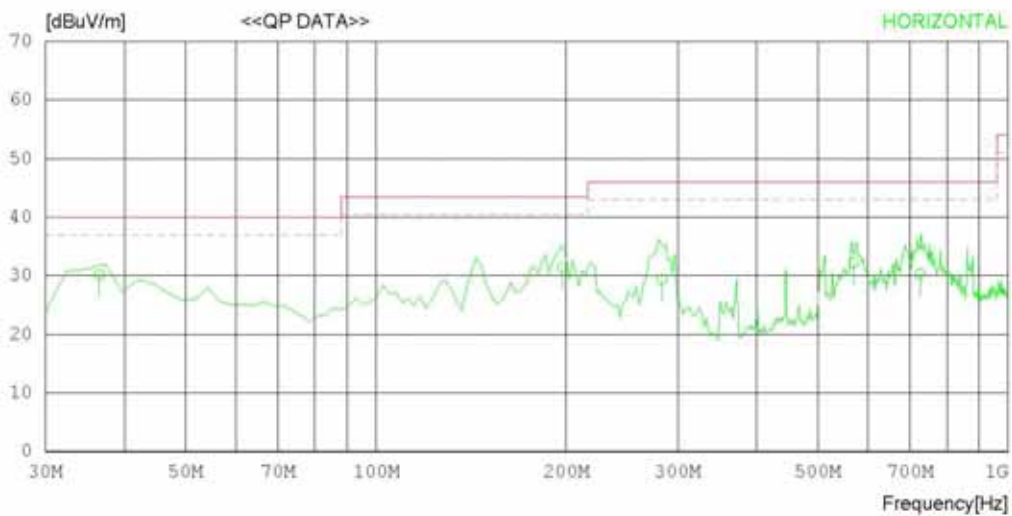
Date : 2011-12-27

Model Name : 32CS460-UC  
 Model No. :  
 Serial No. :  
 Test Condition : HDMI

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi : 19 °C 30 % R.H.  
 Operator :

Memo :

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



## RADIATED EMISSION

Date : 2011-12-27

Model Name : 32CS460-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 30 % 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	36.480	36.0	15.9	0.9	22.6	30.2	40.0	9.8	100	347
2	197.200	42.8	9.7	2.0	23.2	31.3	43.5	12.2	100	358
3	283.187	37.0	13.6	2.5	23.8	29.3	46.0	16.7	100	132
4	569.342	34.5	18.4	3.7	24.4	32.2	46.0	13.8	136	49
5	724.850	30.8	19.2	4.3	24.0	30.3	46.0	15.7	200	1
----- Vertical -----										
6	36.300	38.9	16.0	0.9	22.6	33.2	40.0	6.8	100	0
7	143.975	38.5	10.8	1.6	23.0	27.9	43.5	15.6	100	174
8	511.561	35.6	17.8	3.4	24.6	32.2	46.0	13.8	100	342
9	584.775	34.5	18.6	3.8	24.4	32.5	46.0	13.5	136	9

< HDMI MODE\_1 GHz ~ 6 GHz\_PEAK >

### RADIATED EMISSION

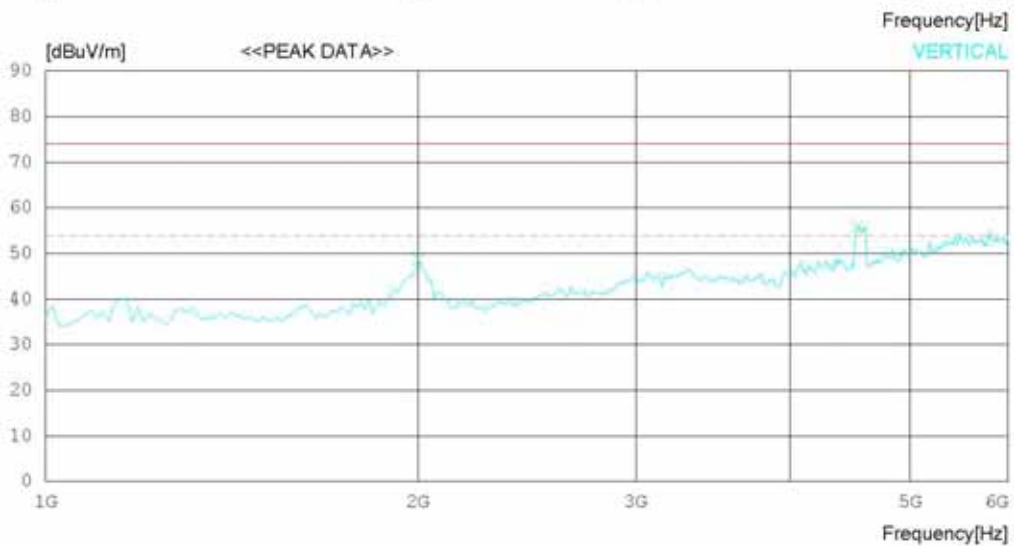
Date : 2011-12-30

Model Name : 32CS460-UC  
 Model No. :  
 Serial No. :  
 Test Condition : HDMI

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi : 23 C 37 % 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 : 2011-12-30

Model Name : 32CS460-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 37 % 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	1137.500	57.9	24.0	5.6	41.8	45.7	74.0	28.3	100	42
2	1437.500	55.4	25.0	6.2	41.9	44.7	74.0	29.3	100	349
3	1950.000	56.5	25.2	7.5	42.0	47.2	74.0	26.8	100	340
----- Vertical -----										
4	2000.000	57.8	25.2	7.7	42.0	48.7	74.0	25.3	100	358
5	4537.500	54.4	30.9	12.0	41.4	55.9	74.0	18.1	100	42

< HDMI MODE\_1 GHz ~ 6 GHz\_AV >

## RADIATED EMISSION

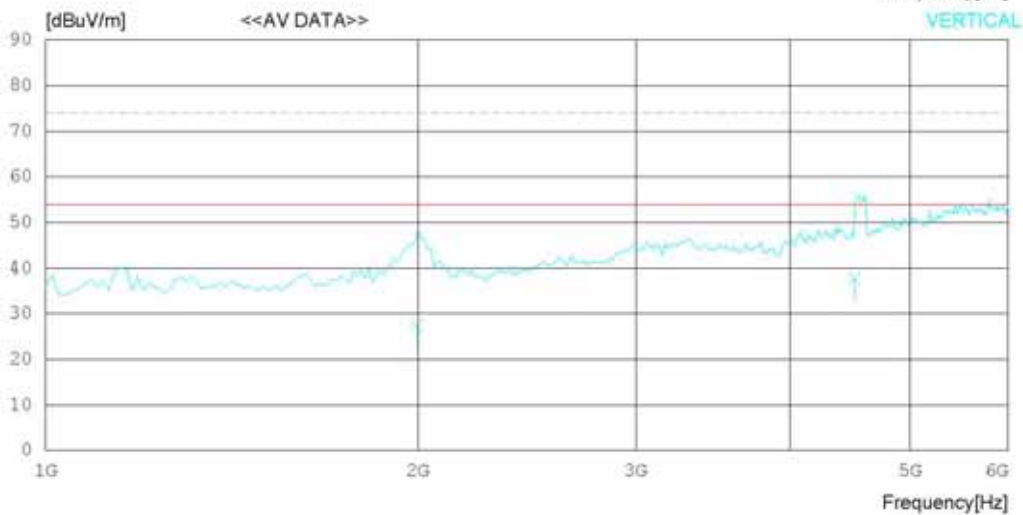
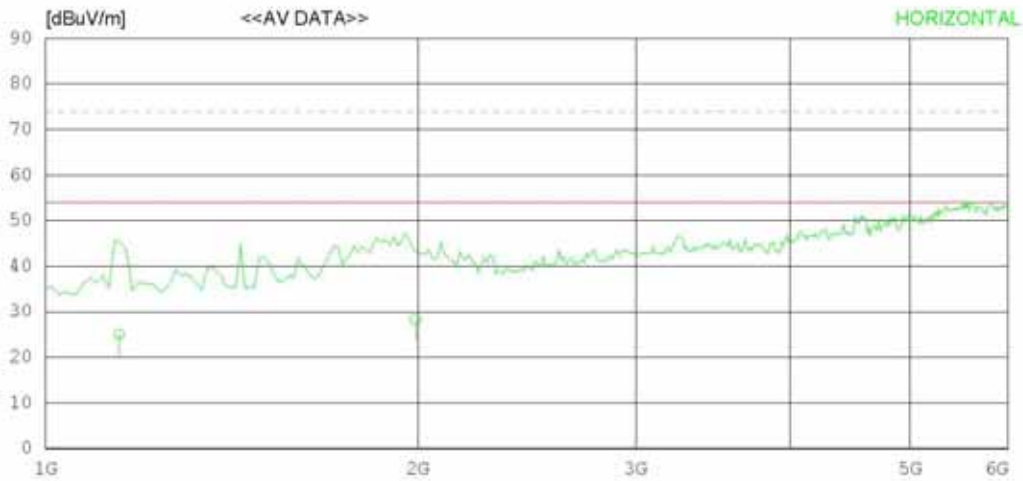
Date : 2011-12-30

Model Name : 32CS460-UC  
 Model No. :  
 Serial No. :  
 Test Condition : HDMI

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi : 23 C 37 % 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 : 2011-12-30

Model Name : 32CS460-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 37 % 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	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	FACTOR	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1146.313	37.2	24.1	5.6	41.8	25.1	54.0	28.9	100	42
2	1990.647	37.6	25.2	7.6	42.0	28.4	54.0	25.6	100	340
----- Vertical -----										
3	1996.987	36.6	25.2	7.7	42.0	27.5	54.0	26.5	100	358
4	4506.000	36.3	30.7	12.0	41.4	37.6	54.0	16.4	100	42

< USB MODE\_30 MHz ~ 1 GHz >

## RADIATED EMISSION

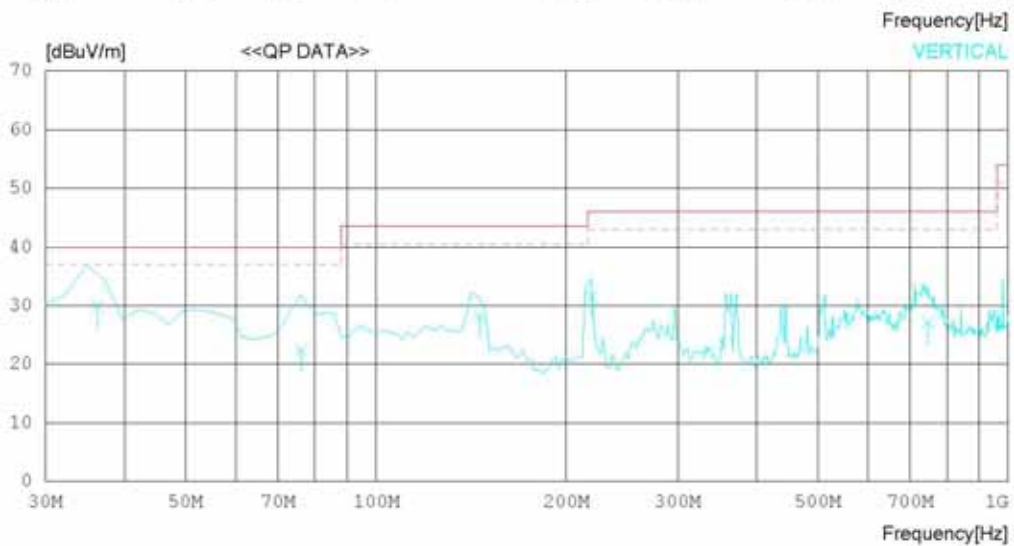
Date : 2011-12-27

Model Name : 32CS460-UC  
 Model No. :  
 Serial No. :  
 Test Condition : USB

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi : 19 °C 30 % R.H.  
 Operator :

Memo :

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



## RADIATED EMISSION

Date : 2011-12-27

Model Name : 32CS460-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 19 °C 30 % 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	34.660	32.0	16.8	0.9	22.6	27.1	40.0	12.9	201	358
2	145.125	37.5	10.7	1.7	23.0	26.9	43.5	16.6	189	10
3	196.550	36.2	9.7	2.0	23.2	24.7	43.5	18.8	100	1
4	215.200	40.2	10.7	2.1	23.3	29.7	43.5	13.8	100	310
5	370.900	42.5	15.4	2.9	24.2	36.6	46.0	9.4	219	358
6	573.852	32.0	18.5	3.7	24.4	29.8	46.0	16.2	100	58
7	733.248	32.6	19.4	4.3	23.9	32.4	46.0	13.6	100	1
----- Vertical -----										
8	36.200	35.7	16.0	0.9	22.6	30.0	40.0	10.0	199	1
9	76.075	36.9	6.8	1.3	22.6	22.4	40.0	17.6	100	288
10	146.000	38.7	10.7	1.7	23.0	28.1	43.5	15.4	100	175
11	219.390	41.8	11.0	2.2	23.4	31.6	46.0	14.4	187	22
12	746.400	27.1	19.5	4.4	23.9	27.1	46.0	18.9	100	353

< USB MODE\_1 GHz ~ 6 GHz\_PEAK >

### RADIATED EMISSION

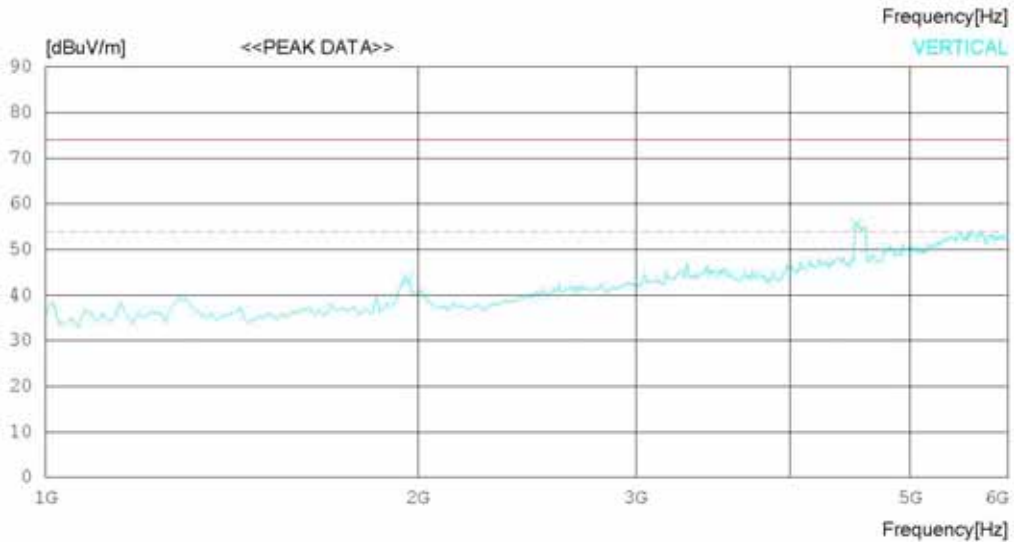
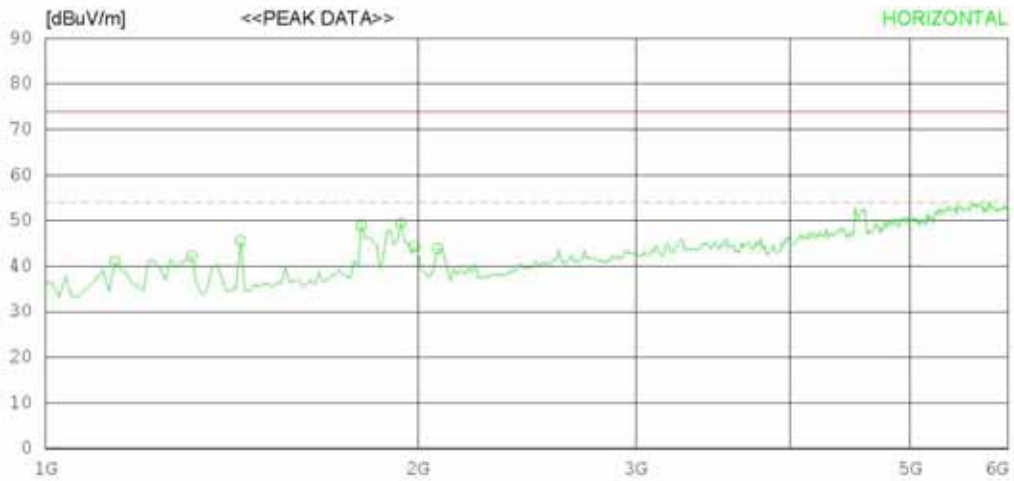
Date : 2011-12-30

Model Name : 32CS460-UC  
 Model No. :  
 Serial No. :  
 Test Condition : USB

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi : 23 C 37 % 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 : 2011-12-30

Model Name	: 32CS460-UC	Reference No.	:
Model No.	:	Power Supply	: 120V 60Hz
Serial No.	:	Temp/Humi	: 23°C 37 % 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	1137.500	53.1	24.0	5.6	41.8	40.9	74.0	33.1	100	65
2	1312.500	53.6	24.6	5.9	41.9	42.2	74.0	31.8	100	31
3	1437.500	56.2	25.0	6.2	41.9	45.5	74.0	28.5	100	358
4	1800.000	58.5	25.2	7.1	42.0	48.8	74.0	25.2	100	358
5	1937.500	58.8	25.2	7.5	42.0	49.5	74.0	24.5	100	66
6	1987.500	53.5	25.2	7.6	42.0	44.3	74.0	29.7	100	22
7	2075.000	52.6	25.5	7.8	42.0	43.9	74.0	30.1	100	358
----- Vertical -----										
8	1962.500	52.7	25.2	7.6	42.0	43.5	74.0	30.5	100	1
9	4525.000	54.1	30.8	12.0	41.4	55.5	74.0	18.5	100	44

< USB MODE\_1 GHz ~ 6 GHz\_AV >

## RADIATED EMISSION

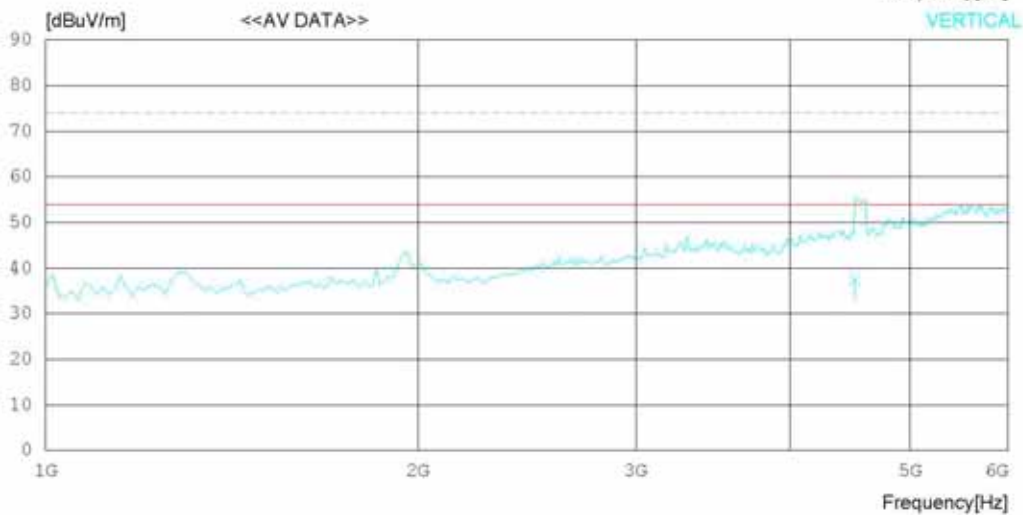
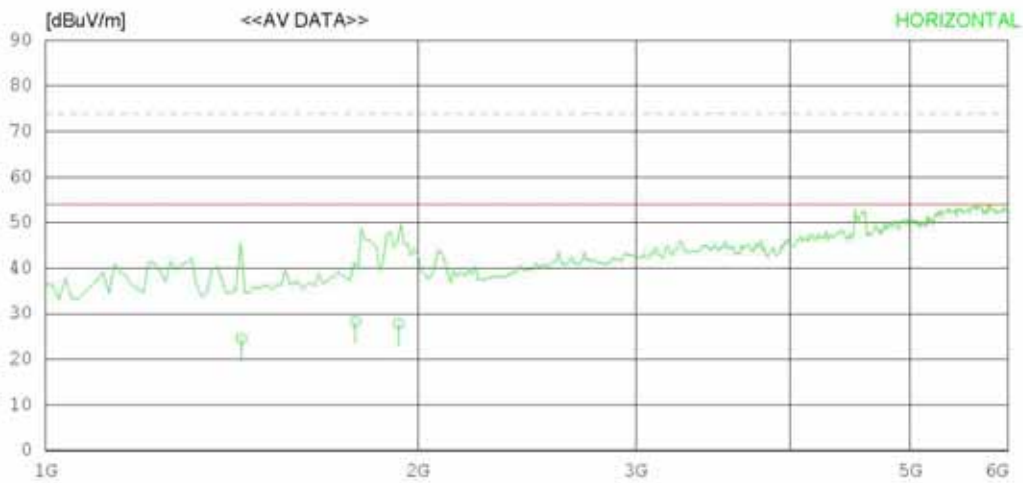
Date : 2011-12-30

Model Name : 32CS460-UC  
 Model No. :  
 Serial No. :  
 Test Condition : USB

Reference No. :  
 Power Supply : 120V 60Hz  
 Temp/Humi : 23 C 37 % 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 : 2011-12-30

Model Name : 32CS460-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 23°C 37 % 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	1440.050	35.2	25.0	6.2	41.9	24.5	54.0	29.5	100	358
2	1780.250	38.0	25.2	7.1	42.0	28.3	54.0	25.7	100	358
3	1928.750	37.1	25.2	7.5	42.0	27.8	54.0	26.2	100	66
----- Vertical -----										
4	4505.750	36.2	30.7	12.0	41.4	37.5	54.0	16.5	100	44

---

**Appendix 1**

---

**List of Test and Measurement Instruments**

1. Conducted Disturbance

Name of Instrument	Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
<input type="checkbox"/> SPECTRUM ANALYZER	8591E	H/P	3649A05889	2011.03.07	2012.03.07
<input type="checkbox"/> RFI/FIELD INTENSITY METER	KNM-2402	KYORITSU	4N-170-3	2011.07.02	2012.07.02
<input type="checkbox"/> LISN	KNW-407	KYORITSU	8-317-8	2011.01.11	2012.01.11
<input type="checkbox"/> LISN	KNW-242	KYORITSU	8-654-15	2011.07.01	2012.07.01
<input type="checkbox"/> 50 OHM TERMINATOR	CT-01	TME	N/A	2011.01.11	2012.01.11
<input checked="" type="checkbox"/> EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2011.03.08	2012.03.08
<input checked="" type="checkbox"/> LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2011.09.30	2012.09.30
<input checked="" type="checkbox"/> LISN	LISN1600	TTI	197204	2011.07.02	2012.07.02
<input checked="" type="checkbox"/> 50 OHM TERMINATOR	CT-01	TME	N/A	2011.01.11	2012.01.11

2. Radiated Disturbance

Name of Instrument	Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
<input checked="" type="checkbox"/> EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2011.01.20	2012.01.20
<input checked="" type="checkbox"/> BILOG ANTENNA	CBL6112B	SCHAFFNER	2737	2010.07.14	2012.07.14
<input checked="" type="checkbox"/> HORN ANTENNA	BBHA9120A	SCHWARZBECK	322	2010.04.13	2012.04.13
<input checked="" type="checkbox"/> AMPLIFIER	8447E	H/P	2945A02865	2011.01.11	2012.01.11
<input checked="" type="checkbox"/> AMPLIFIER	MLA-00108-B02-36	TSJ	1518831	2011.01.11	2012.01.11
<input type="checkbox"/> SPECTRUM ANALYZER	E4411B	AGILENT	US41062735	2011.07.01	2012.07.01
<input type="checkbox"/> AMPLIFIER	8447D	AGILENT	2443A03690	2011.07.01	2012.07.01
<input type="checkbox"/> BILOG ANTENNA	VULB9160	SCHAFFNER	3151	2010.08.25	2012.08.25
<input type="checkbox"/> EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2011.03.08	2012.03.08
<input type="checkbox"/> BICONICAL ANT.	VHA 9103	SCHWARZBECK	91032789	2010.11.29	2012.11.29
<input type="checkbox"/> LOG-PERIODIC ANT.	UHALP 9108A	SCHWARZBECK	590	2010.07.07	2012.07.07
<input type="checkbox"/> BICONICAL ANT.	VHA 9103	SCHWARZBECK	91031946	2010.12.21	2012.12.21
<input type="checkbox"/> LOG-PERIODIC ANT.	UHALP 9108-A1	SCHWARZBECK	1098	2010.11.29	2012.11.29
<input type="checkbox"/> AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2011.03.07	2012.03.07