

EMC TEST REPORT

Test item : LCD TV Monitor
Model No. : 47CM565-UB
Order No. : 1201-00028
Date of receipt : 2012-01-05
Test duration : 2012-01-15 ~ 2012-01-17
Use of report : FCC CoC Marking
Date of Issue : 2012-01-18

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 : (20 ~ 22) °C,
Humidity : (34 ~ 36) % R.H.

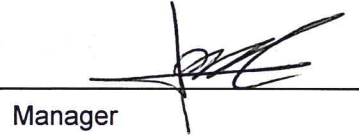
Test result : ☒ Comply ☐ Not Comply

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:

Reviewed by:


Assistant Manager
D.H.EUN
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.

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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.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.	47CM565-UB
EUT Type	LCD TV Monitor
Serial No	NONE
FCC ID	BEJ47CM565UB
Type of Sample Tested	Pre-Production
High Frequency	667 MHz
Rating	AC100-240 V~, 50/60 Hz, 2.3 A
Supplied Power for Test	AC120V, 60Hz
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	01-15	20	35	
	01-17	21	34	

4.3 Test result Summary

(1) Conducted Emission(DSUB+LAN MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
2.23000	N	36.0	Average	46.0	10.0

(2) Radiated Emission(USB MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
960.000	H	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

- DSUB+LAN MODE – Resolution : 1920 x 1080 Resolution (Worst Case)
- HDMI+LAN 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		
				DSUB	1.8	Shield		
				STEREO	1.6	Non-shield		
				USB	1.8	Non-shield		
				PS/2	1.6	Non-shield		
				PS/2	1.8	Non-shield		
				LAN	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 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

< DSUB + LAN MODE >



Results of Conducted Emission

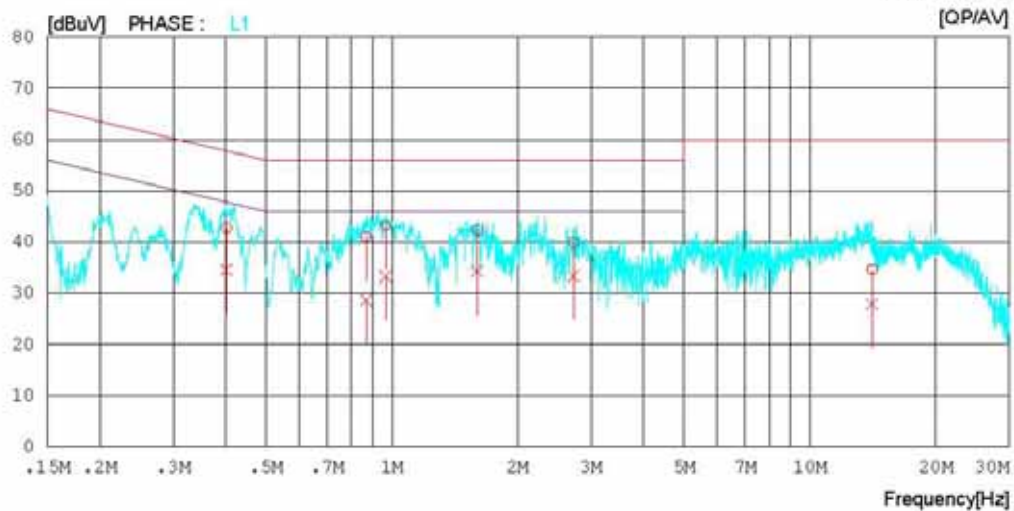
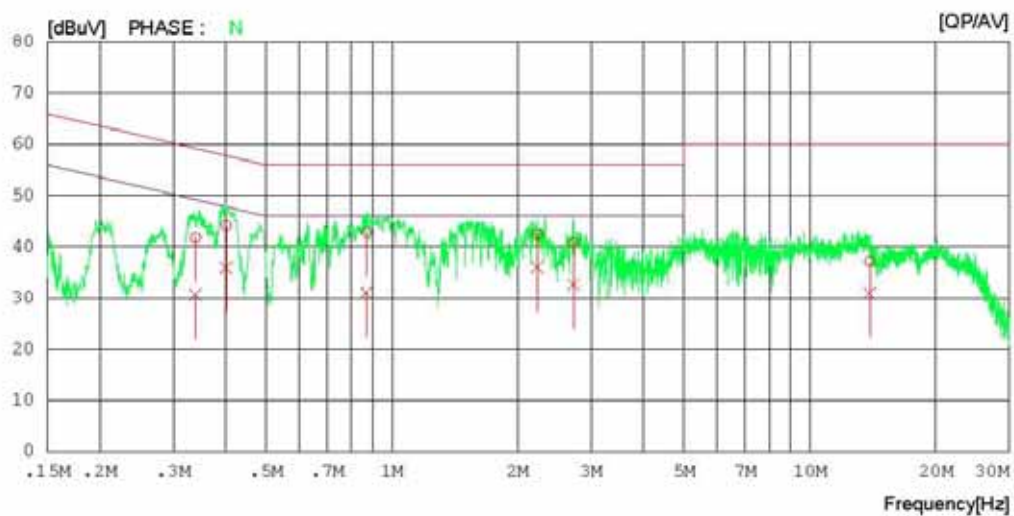
Digital EMC
 Date : 2012-01-17

Model No. : 47CM565-UB
 Type :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 22°C 36 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2012-01-17

Model No. : 47CM565-UB
 Type :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 22 °C 36 % 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	0.33900	41.6	30.4	0.2	41.8	30.6	59.2	49.2	17.4	18.6	N
2	0.40123	43.9	35.7	0.2	44.1	35.9	57.8	47.8	13.7	11.9	N
3	0.86926	42.6	30.7	0.2	42.8	30.9	56.0	46.0	13.2	15.1	N
4	2.23000	42.1	35.7	0.3	42.4	36.0	56.0	46.0	13.6	10.0	N
5	2.72250	40.5	32.3	0.3	40.8	32.6	56.0	46.0	15.2	13.4	N
6	13.92750	36.3	30.0	0.9	37.2	30.9	60.0	50.0	22.8	19.1	N
7	0.40233	42.6	34.4	0.2	42.8	34.6	57.8	47.8	15.0	13.2	L1
8	0.86856	40.8	28.4	0.2	41.0	28.6	56.0	46.0	15.0	17.4	L1
9	0.96650	43.0	33.1	0.2	43.2	33.3	56.0	46.0	12.8	12.7	L1
10	1.60400	42.2	34.1	0.2	42.4	34.3	56.0	46.0	13.6	11.7	L1
11	2.72100	39.7	33.1	0.3	40.0	33.4	56.0	46.0	16.0	12.6	L1
12	14.10250	33.8	27.0	0.9	34.7	27.9	60.0	50.0	25.3	22.1	L1

< HDMI + LAN MODE >



Results of Conducted Emission

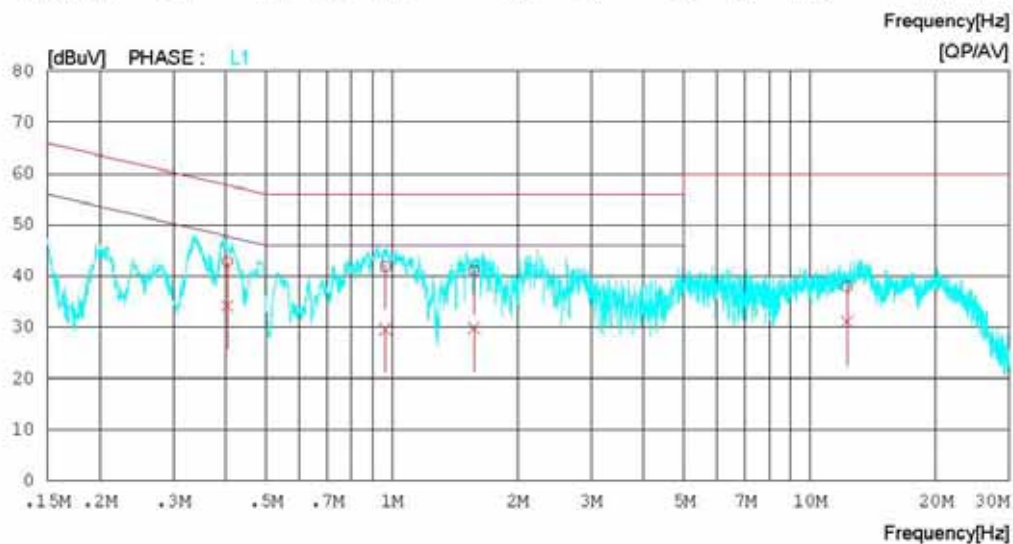
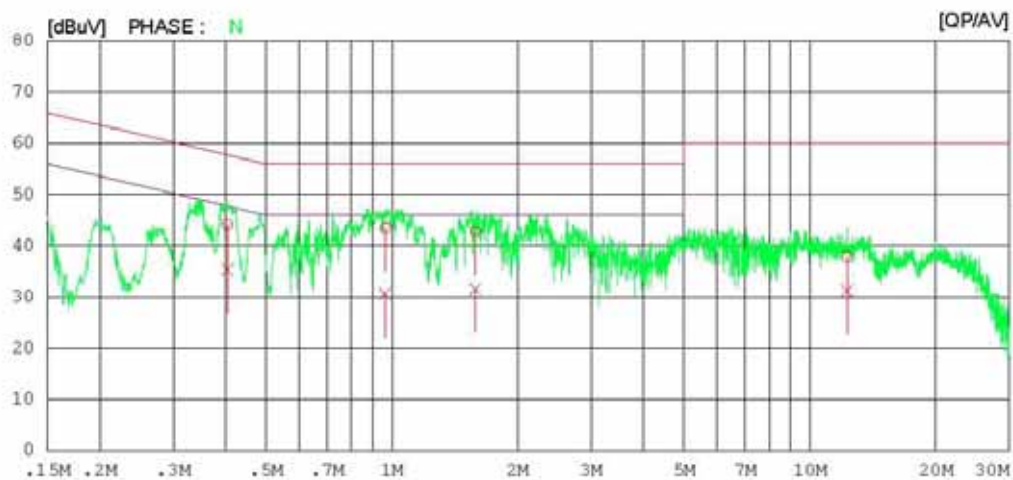
Digital EMC
 Date : 2012-01-17

Model No. : 47CM565-UB
 Type :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 22°C 36% R.H.
 Operator :

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2012-01-17

Model No. : 47CM565-UB
 Type :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 22 °C 36 % 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	0.40401	44.0	35.2	0.2	44.2	35.4	57.8	47.8	13.6	12.4	N
2	0.96484	43.4	30.4	0.2	43.6	30.6	56.0	46.0	12.4	15.4	N
3	1.58550	42.6	31.3	0.2	42.8	31.5	56.0	46.0	13.2	14.5	N
4	12.27700	37.2	30.5	0.7	37.9	31.2	60.0	50.0	22.1	18.8	N
5	0.40406	42.6	34.0	0.2	42.8	34.2	57.8	47.8	15.0	13.6	L1
6	0.96530	41.7	29.5	0.2	41.9	29.7	56.0	46.0	14.1	16.3	L1
7	1.57250	40.9	29.7	0.2	41.1	29.9	56.0	46.0	14.9	16.1	L1
8	12.27750	37.3	30.4	0.7	38.0	31.1	60.0	50.0	22.0	18.9	L1

< USB MODE >



Results of Conducted Emission

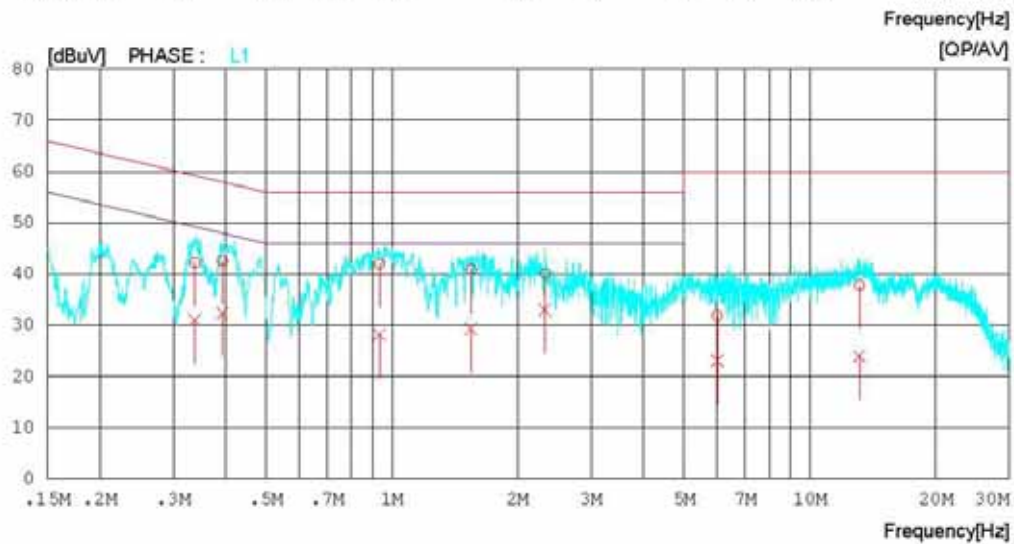
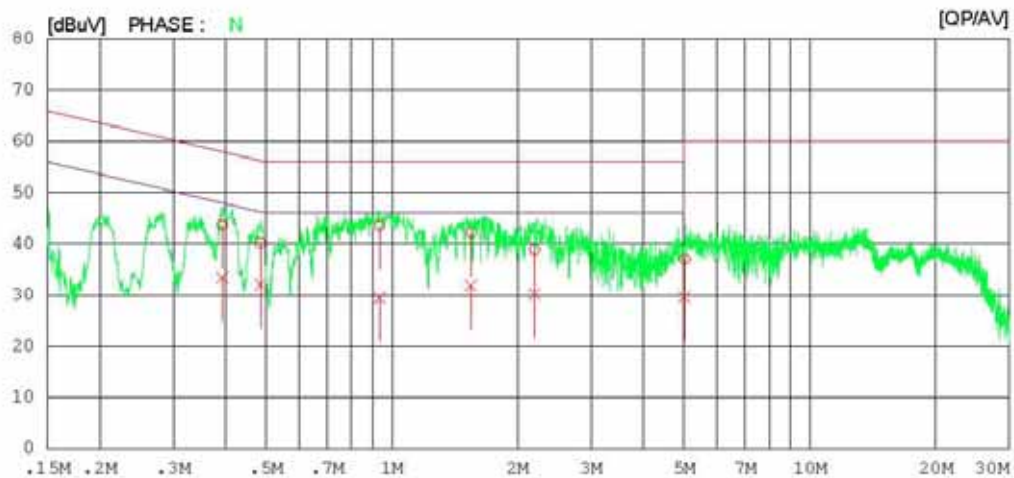
Digital EMC
 Date : 2012-01-17

Model No. : 47CM565-UB
 Type :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 22 °C 36 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B OP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2012-01-17

Model No. : 47CM565-UB
 Type :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 22 °C 36 % 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	0.39329	43.5	33.2	0.2	43.7	33.4	58.0	48.0	14.3	14.6	N
2	0.48500	40.1	31.9	0.1	40.2	32.0	56.3	46.3	16.1	14.3	N
3	0.93526	43.3	29.3	0.2	43.5	29.5	56.0	46.0	12.5	16.5	N
4	1.54900	41.9	31.6	0.2	42.1	31.8	56.0	46.0	13.9	14.2	N
5	2.19400	38.6	29.8	0.3	38.9	30.1	56.0	46.0	17.1	15.9	N
6	5.01765	36.6	29.2	0.4	37.0	29.6	60.0	50.0	23.0	20.4	N
7	0.33800	42.1	30.9	0.2	42.3	31.1	59.3	49.3	17.0	18.2	L1
8	0.39324	42.4	32.2	0.2	42.6	32.4	58.0	48.0	15.4	15.6	L1
9	0.93440	41.8	28.0	0.2	42.0	28.2	56.0	46.0	14.0	17.8	L1
10	1.54900	40.7	29.1	0.2	40.9	29.3	56.0	46.0	15.1	16.7	L1
11	2.32510	39.8	32.8	0.3	40.1	33.1	56.0	46.0	15.9	12.9	L1
12	6.01100	31.5	22.7	0.4	31.9	23.1	60.0	50.0	28.1	26.9	L1
13	13.14890	36.9	23.1	0.9	37.8	24.0	60.0	50.0	22.2	26.0	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 th 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 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 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 μ V/m)	Quasi-peak (dB μ 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 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

Test Result

< DSUB + LAN MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

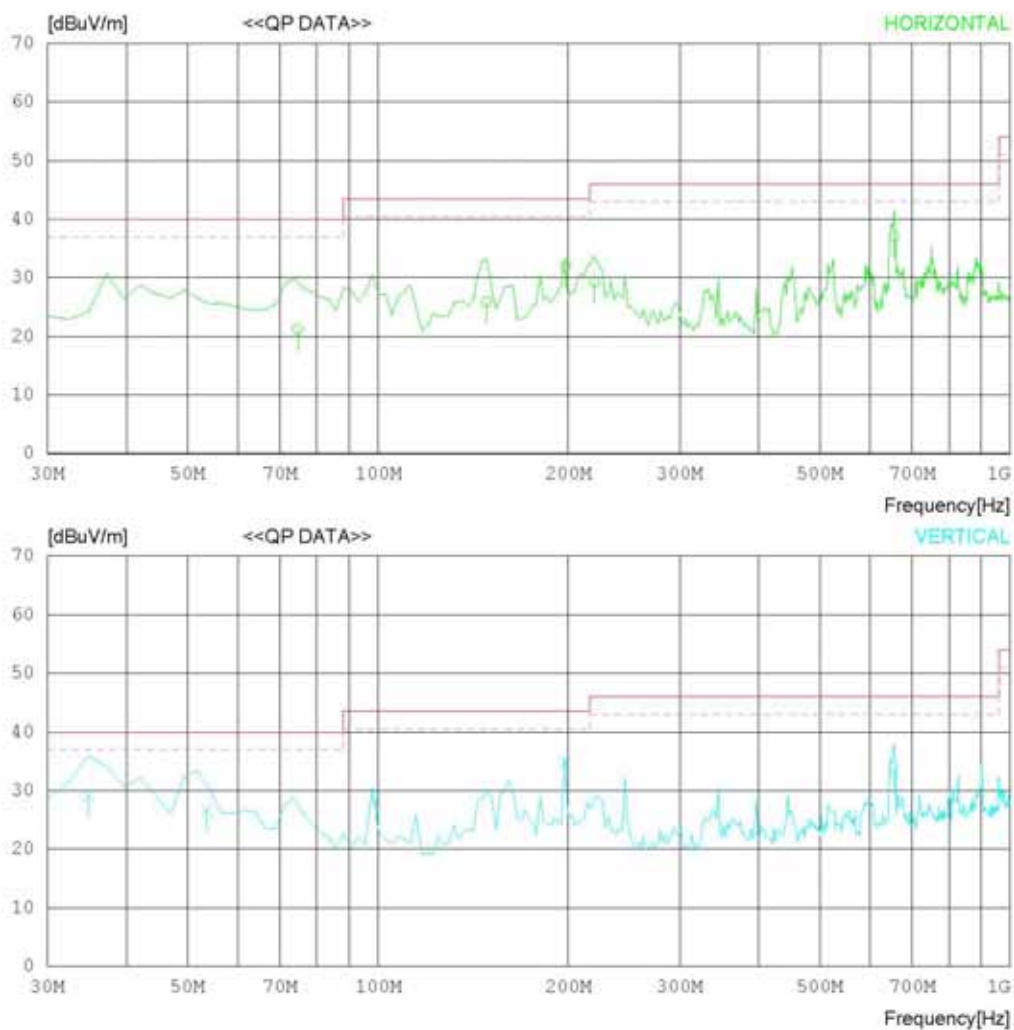
Date : 2012-01-15

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 35 % R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-01-15

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 35 % 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	74.600	35.8	6.7	1.3	22.6	21.2	40.0	18.8	201	4
2	148.512	36.8	10.5	1.7	23.1	25.9	43.5	17.6	100	358
3	198.000	43.5	9.7	2.0	23.2	32.0	43.5	11.5	100	193
4	219.910	39.5	11.0	2.2	23.4	29.3	46.0	16.7	100	208
5	656.154	38.4	18.8	4.0	24.2	37.0	46.0	9.0	100	126
----- Vertical -----										
6	34.850	34.2	16.7	0.9	22.6	29.2	40.0	10.8	100	182
7	53.570	40.1	8.0	1.1	22.6	26.6	40.0	13.4	100	1
8	99.020	39.1	10.6	1.5	22.7	28.5	43.5	15.0	100	1
9	198.000	46.3	9.7	2.0	23.2	34.8	43.5	8.7	100	1
10	656.258	34.6	18.8	4.0	24.2	33.2	46.0	12.8	100	1

< DSUB + LAN MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

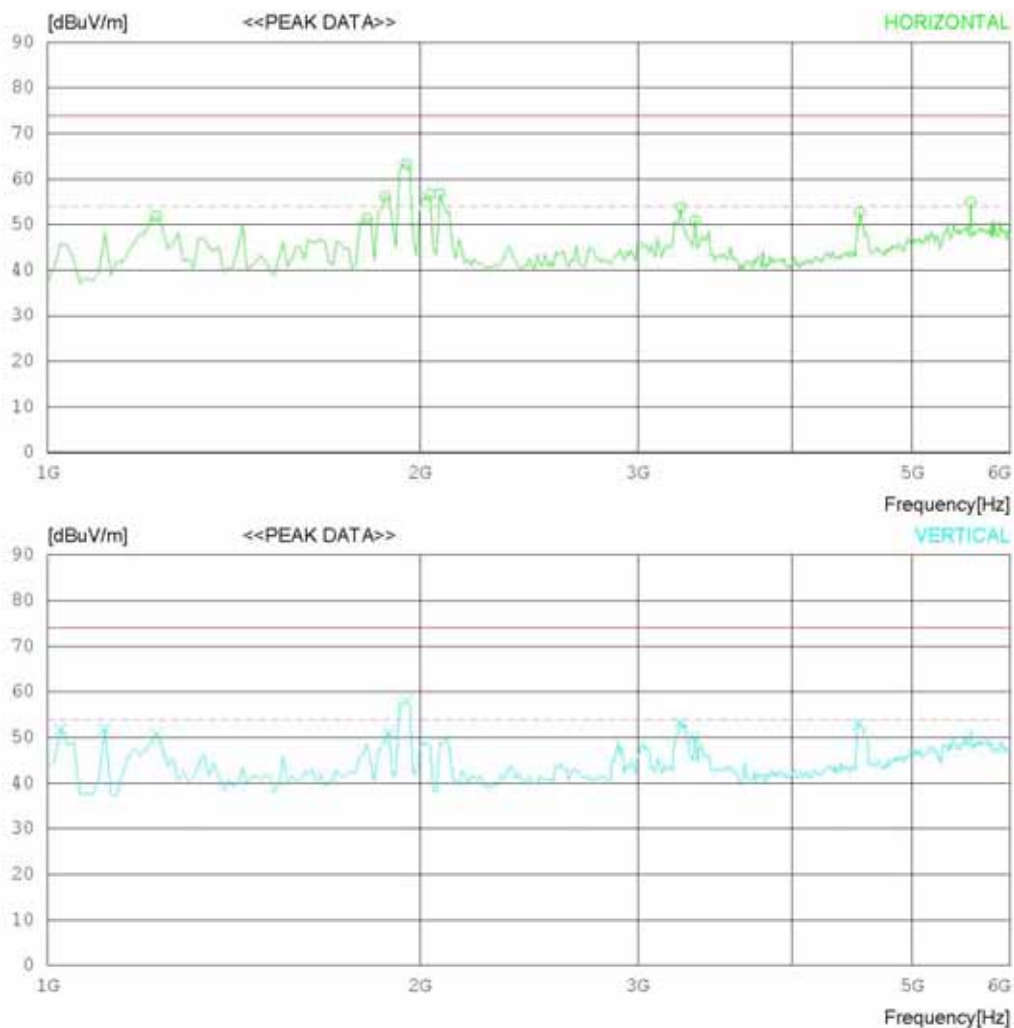
Date : 2012-01-17

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 21 °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 : 2012-01-17

Model Name : 47CM565-UB	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 21 °C 34 % R.H.
Test Condition : DSUB	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	64.1	24.3	5.3	41.8	51.9	74.0	22.1	100	1
2	1812.500	61.5	25.2	6.6	42.0	51.3	74.0	22.7	100	223
3	1875.000	66.3	25.2	6.7	42.0	56.2	74.0	17.8	100	239
4	1950.000	73.2	25.2	6.9	42.0	63.3	74.0	10.7	100	239
5	2037.500	66.1	25.4	7.1	42.0	56.6	74.0	17.4	100	230
6	2075.000	66.1	25.5	7.1	42.0	56.7	74.0	17.3	100	223
7	3250.000	57.7	29.0	9.1	42.0	53.8	74.0	20.2	100	1
8	3337.500	54.7	29.0	9.2	42.0	50.9	74.0	23.1	100	1
9	4537.500	52.5	30.9	10.7	41.4	52.7	74.0	21.3	100	1
10	5575.000	48.5	34.7	12.0	40.3	54.9	74.0	19.1	100	1
----- Vertical -----										
11	1025.000	65.0	23.7	4.9	41.8	51.8	74.0	22.2	100	358
12	1112.500	64.7	24.0	5.1	41.8	52.0	74.0	22	100	358
13	1225.000	62.9	24.3	5.3	41.8	50.7	74.0	23.3	100	210
14	1887.500	61.0	25.2	6.8	42.0	51.0	74.0	23	100	358
15	1950.000	67.7	25.2	6.9	42.0	57.8	74.0	16.2	100	358
16	3250.000	57.3	29.0	9.1	42.0	53.4	74.0	20.6	100	199
17	3337.500	53.8	29.0	9.2	42.0	50.0	74.0	24	100	358
18	4525.000	52.9	30.8	10.7	41.4	53.0	74.0	21	100	174

< DSUB + LAN MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

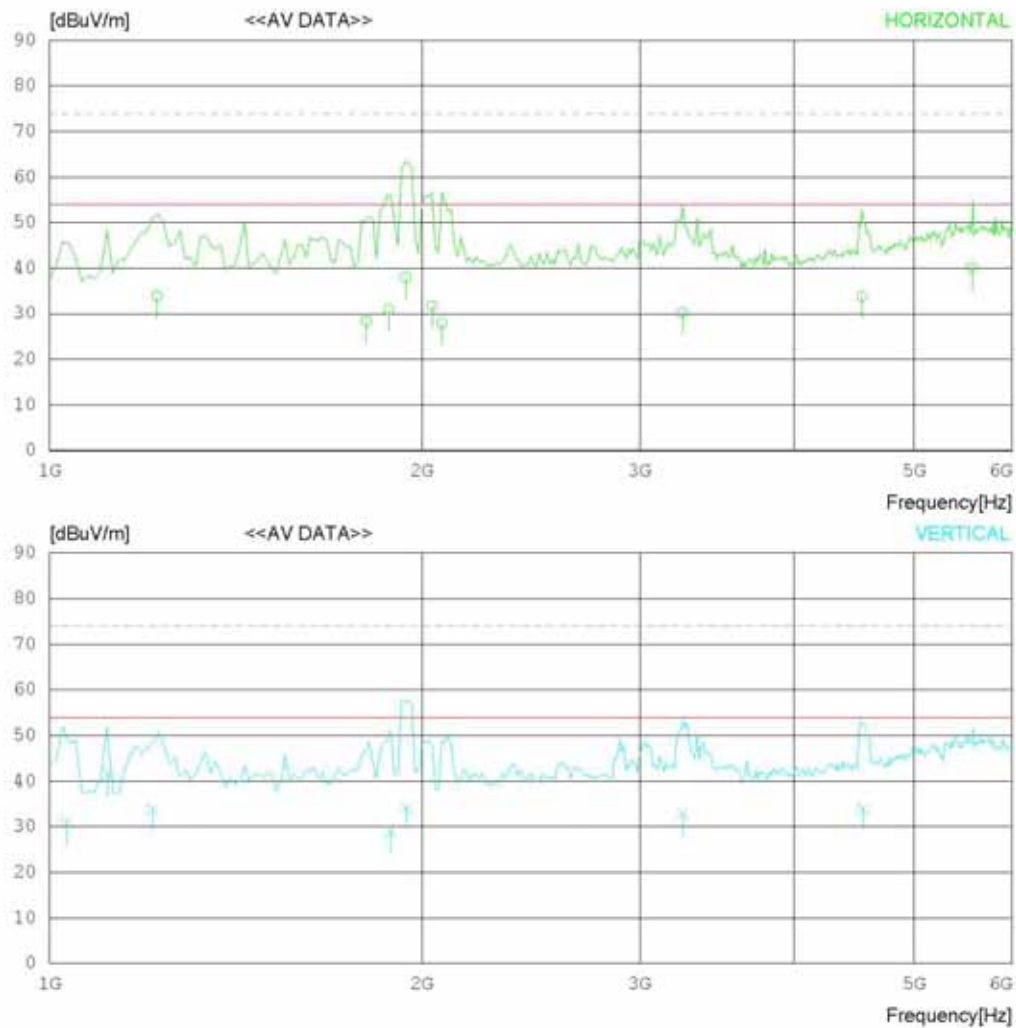
Date : 2012-01-17

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 21 °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 : 2012-01-17

Model Name : 47CM565-UB	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 21 °C 34 % R.H.
Test Condition : DSUB	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	1221.000	46.1	24.3	5.3	41.8	33.9	54.0	20.1	100	354
2	1803.198	38.6	25.2	6.6	42.0	28.4	54.0	25.6	100	223
3	1879.640	40.9	25.2	6.8	42.0	30.9	54.0	23.1	100	239
4	1938.990	48.0	25.2	6.9	42.0	38.1	54.0	15.9	100	239
5	2037.500	41.3	25.4	7.1	42.0	31.8	54.0	22.2	100	230
6	2075.000	37.4	25.5	7.1	42.0	28.0	54.0	26.0	100	223
7	3247.500	34.2	29.0	9.1	42.0	30.3	54.0	23.7	100	209
8	4537.500	33.6	30.9	10.7	41.4	33.8	54.0	20.2	100	1
9	5568.000	33.9	34.7	11.9	40.3	40.2	54.0	13.8	100	173
----- Vertical -----										
10	1113.600	54.1	24.0	5.1	41.8	41.4	54.0	12.6	100	358
11	1212.360	46.0	24.3	5.3	41.8	33.8	54.0	20.2	100	358
12	1031.250	44.1	23.7	4.9	41.8	30.9	54.0	23.1	100	210
13	1887.500	38.9	25.2	6.8	42.0	28.9	54.0	25.1	100	358
14	1944.760	44.0	25.2	6.9	42.0	34.1	54.0	19.9	100	358
15	3250.000	36.7	29.0	9.1	42.0	32.8	54.0	21.2	100	199
16	4546.000	33.7	30.9	10.7	41.4	33.9	54.0	20.1	100	174

< HDMI + LAN MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

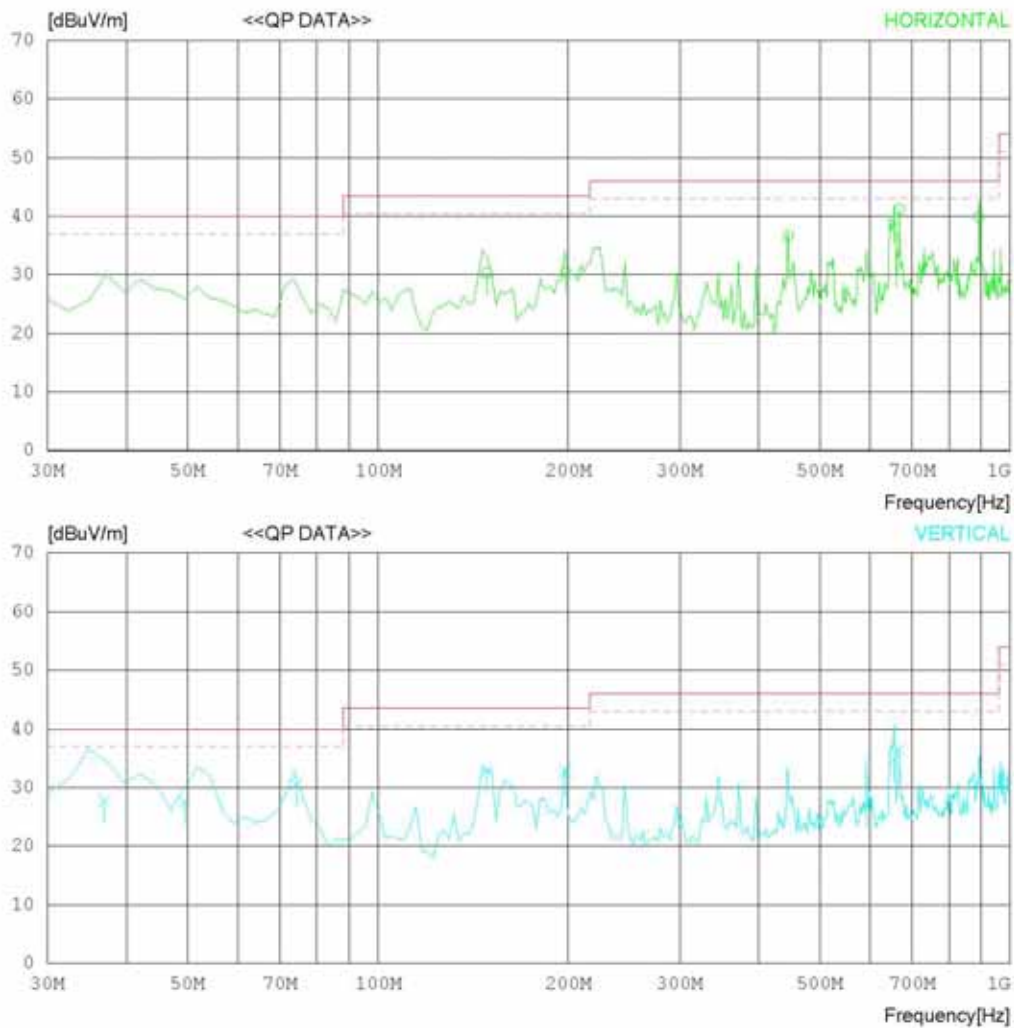
Date : 2012-01-15

Model Name : 47CM565-UB
 Model No.
 Serial No.
 Test Condition : HDMI

Reference No.
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 35 % R.H.
 Operator

Memo :

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



RADIATED EMISSION

Date : 2012-01-15

Model Name : 47CM565-UB	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 35 % 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	148.525	41.2	10.5	1.7	23.1	30.3	43.5	13.2	201	238
2	198.000	41.9	9.7	2.0	23.2	30.4	43.5	13.1	100	1
3	445.508	41.1	16.8	3.2	24.5	36.6	46.0	9.4	100	186
4	655.625	40.6	18.8	4.0	24.2	39.2	46.0	6.8	106	0
5	668.250	42.3	18.9	4.1	24.1	41.2	46.0	4.8	100	137
6	891.025	37.7	20.6	4.8	23.3	39.8	46.0	6.2	105	228
----- Vertical -----										
7	36.900	33.8	15.6	0.9	22.6	27.7	40.0	12.3	100	358
8	49.500	39.3	9.9	1.0	22.6	27.6	40.0	12.4	100	289
9	74.275	45.1	6.7	1.3	22.6	30.5	40.0	9.5	100	22
10	148.500	43.9	10.5	1.7	23.1	33.0	43.5	10.5	100	358
11	198.000	44.3	9.7	2.0	23.2	32.8	43.5	10.7	100	358
12	592.320	28.9	18.7	3.9	24.4	27.1	46.0	18.9	199	52
13	654.750	36.2	18.8	4.0	24.2	34.8	46.0	11.2	100	190
14	668.250	37.6	18.9	4.1	24.1	36.5	46.0	9.5	100	358

< HDMI + LAN MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

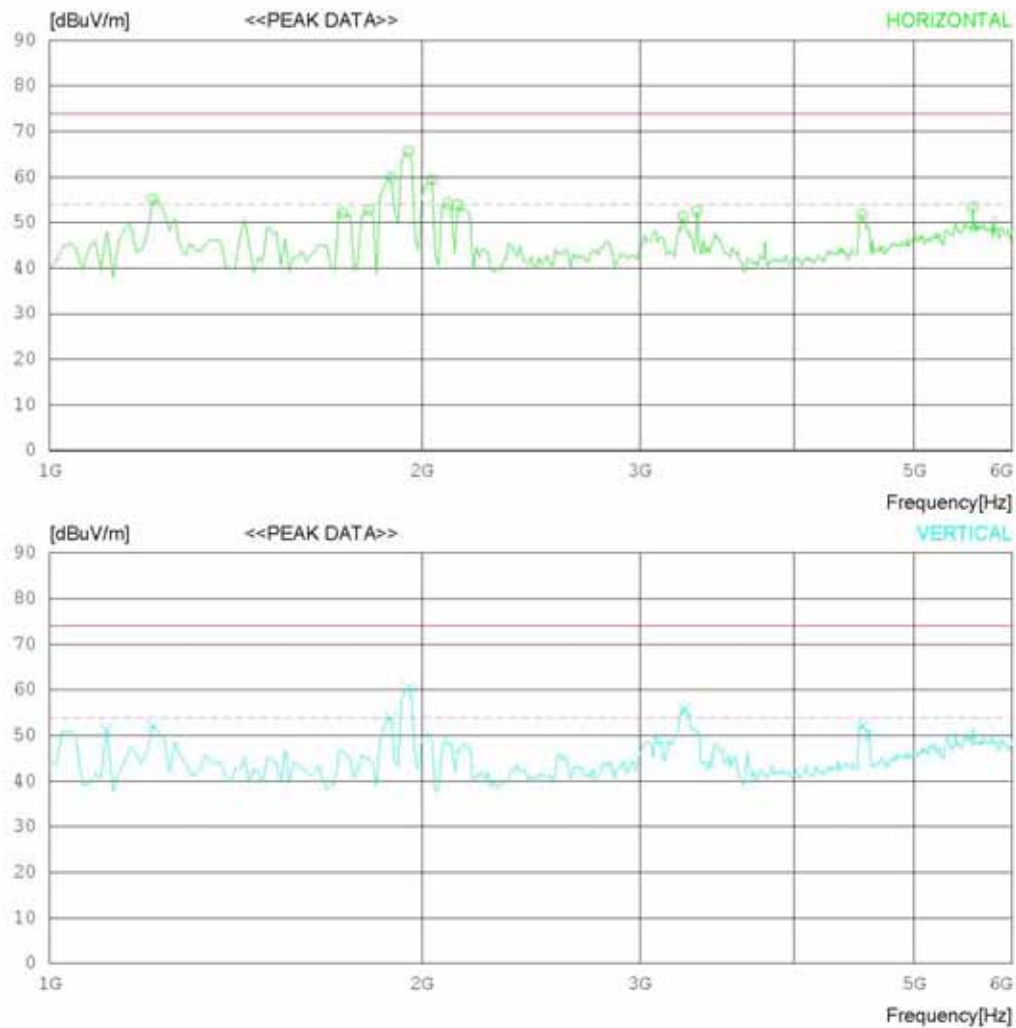
Date : 2012-01-17

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 21 °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 : 2012-01-17

Model Name : 47CM565-UB	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	1212.500	67.3	24.3	5.3	41.8	55.1	74.0	18.9	100	244
2	1725.000	62.4	25.2	6.4	41.9	52.1	74.0	21.9	100	203
3	1812.500	63.0	25.2	6.6	42.0	52.8	74.0	21.2	100	358
4	1887.500	69.8	25.2	6.8	42.0	59.8	74.0	14.2	100	358
5	1950.000	75.5	25.2	6.9	42.0	65.6	74.0	8.4	100	358
6	2037.500	68.9	25.4	7.1	42.0	59.4	74.0	14.6	100	358
7	2100.000	63.4	25.6	7.2	42.0	54.2	74.0	19.8	100	228
8	2137.500	62.9	25.8	7.2	42.0	53.9	74.0	20.1	100	228
9	3250.000	55.2	29.0	9.1	42.0	51.3	74.0	22.7	100	358
10	3337.500	56.3	29.0	9.2	42.0	52.5	74.0	21.5	100	358
11	4537.500	51.6	30.9	10.7	41.4	51.8	74.0	22.2	100	358
12	5575.000	47.0	34.7	12.0	40.3	53.4	74.0	20.6	100	358
----- Vertical -----										
13	1112.500	63.9	24.0	5.1	41.8	51.2	74.0	22.8	100	1
14	1212.500	64.2	24.3	5.3	41.8	52.0	74.0	22	100	183
15	1887.500	63.9	25.2	6.8	42.0	53.9	74.0	20.1	100	1
16	1950.000	70.3	25.2	6.9	42.0	60.4	74.0	13.6	100	1
17	3262.500	59.6	29.0	9.1	42.0	55.7	74.0	18.3	100	1
18	4550.000	52.0	30.9	10.7	41.4	52.2	74.0	21.8	100	219

< HDMI + LAN MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

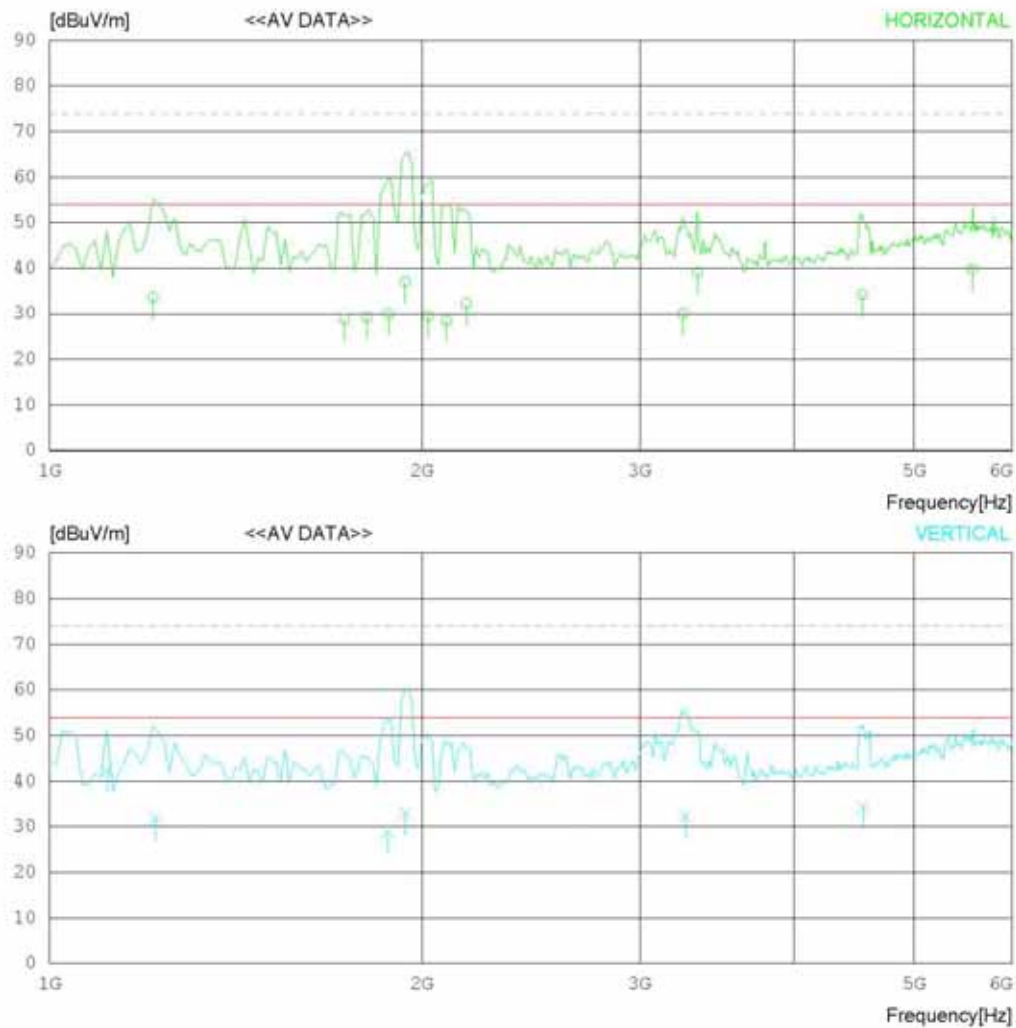
Date : 2012-01-17

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 21 °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 : 2012-01-17

Model Name : 47CM565-UB	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	1212.500	45.8	24.3	5.3	41.8	33.6	54.0	20.4	100	244
2	1730.698	39.1	25.2	6.4	41.9	28.8	54.0	25.2	100	203
3	1804.564	39.4	25.2	6.6	42.0	29.2	54.0	24.8	100	358
4	1879.500	40.0	25.2	6.8	42.0	30.0	54.0	24.0	100	196
5	1938.750	46.9	25.2	6.9	42.0	37.0	54.0	17.0	100	203
6	2022.782	39.2	25.3	7.0	42.0	29.5	54.0	24.5	100	204
7	2093.000	37.8	25.6	7.1	42.0	28.5	54.0	25.5	100	228
8	2172.000	41.0	25.9	7.3	42.0	32.2	54.0	21.8	100	228
9	3250.000	33.9	29.0	9.1	42.0	30.0	54.0	24.0	100	358
10	3341.250	42.9	29.0	9.2	42.0	39.1	54.0	14.9	100	358
11	4539.750	34.0	30.9	10.7	41.4	34.2	54.0	19.8	100	23
12	5568.500	33.5	34.7	11.9	40.3	39.8	54.0	14.2	100	196
----- Vertical -----										
13	1113.600	55.1	24.0	5.1	41.8	42.4	54.0	11.6	100	45
14	1218.000	44.0	24.3	5.3	41.8	31.8	54.0	22.2	100	183
15	1876.500	38.9	25.2	6.7	42.0	28.8	54.0	25.2	100	177
16	1938.750	42.8	25.2	6.9	42.0	32.9	54.0	21.1	100	1
17	3266.000	36.1	29.0	9.1	42.0	32.2	54.0	21.8	100	1
18	4550.000	34.1	30.9	10.7	41.4	34.3	54.0	19.7	100	219

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

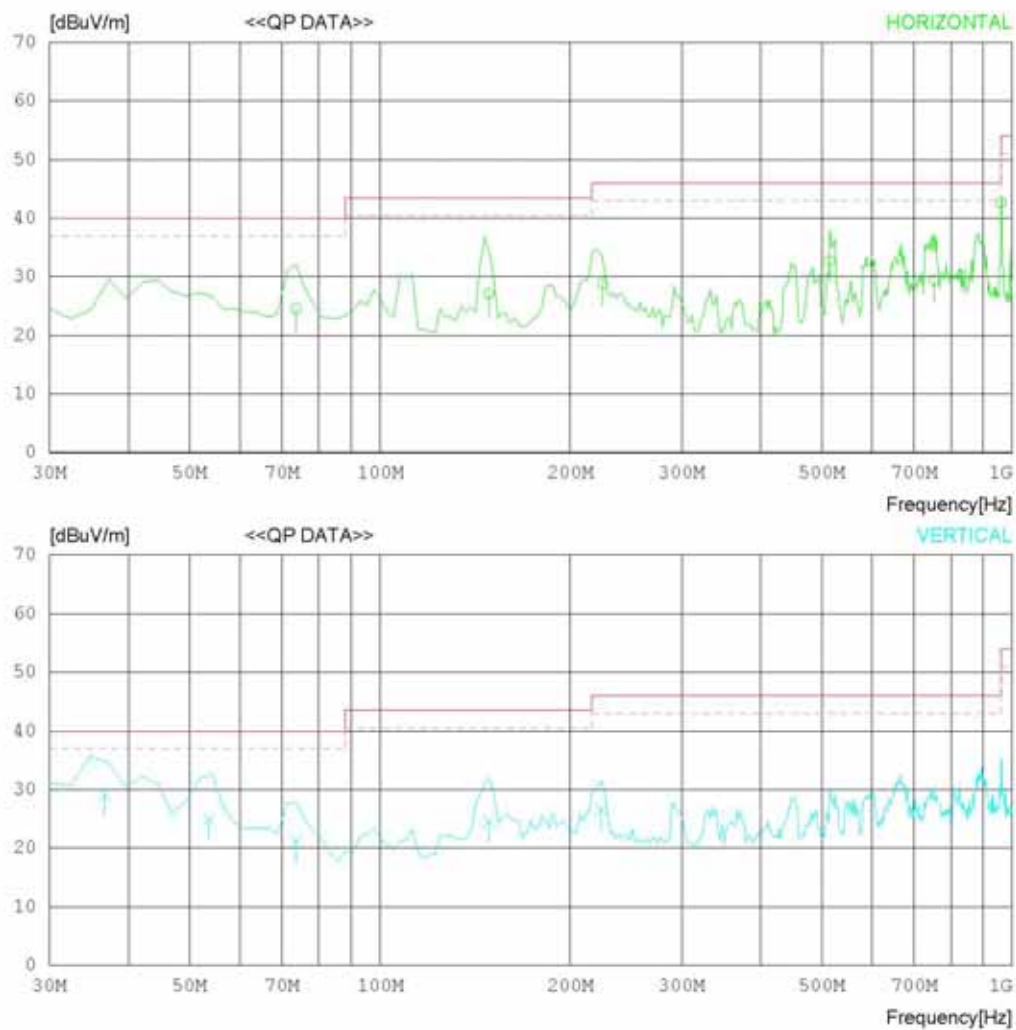
Date : 2012-01-15

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 35 % R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2012-01-15

Model Name : 47CM565-UB	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 35 % 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	73.650	39.2	6.6	1.3	22.6	24.5	40.0	15.5	200	32
2	148.600	38.0	10.5	1.7	23.1	27.1	43.5	16.4	100	358
3	224.775	38.7	11.3	2.2	23.4	28.8	46.0	17.2	100	326
4	514.575	36.1	17.8	3.4	24.6	32.7	46.0	13.3	100	209
5	752.648	29.2	19.6	4.4	23.8	29.4	46.0	16.6	100	106
6	960.000	39.7	21.0	4.9	23.0	42.6	46.0	3.4	100	0
----- Vertical -----										
7	36.700	35.1	15.7	0.9	22.6	29.1	40.0	10.9	100	1
8	53.650	38.5	8.0	1.1	22.6	25.0	40.0	15.0	100	245
9	73.650	35.9	6.6	1.3	22.6	21.2	40.0	18.8	100	46
10	148.825	35.4	10.5	1.7	23.1	24.5	43.5	19.0	100	207
11	223.855	36.5	11.3	2.2	23.4	26.6	46.0	19.4	100	199

< USB MODE_1 GHz ~ 6 GHz_Peak >

RADIATED EMISSION

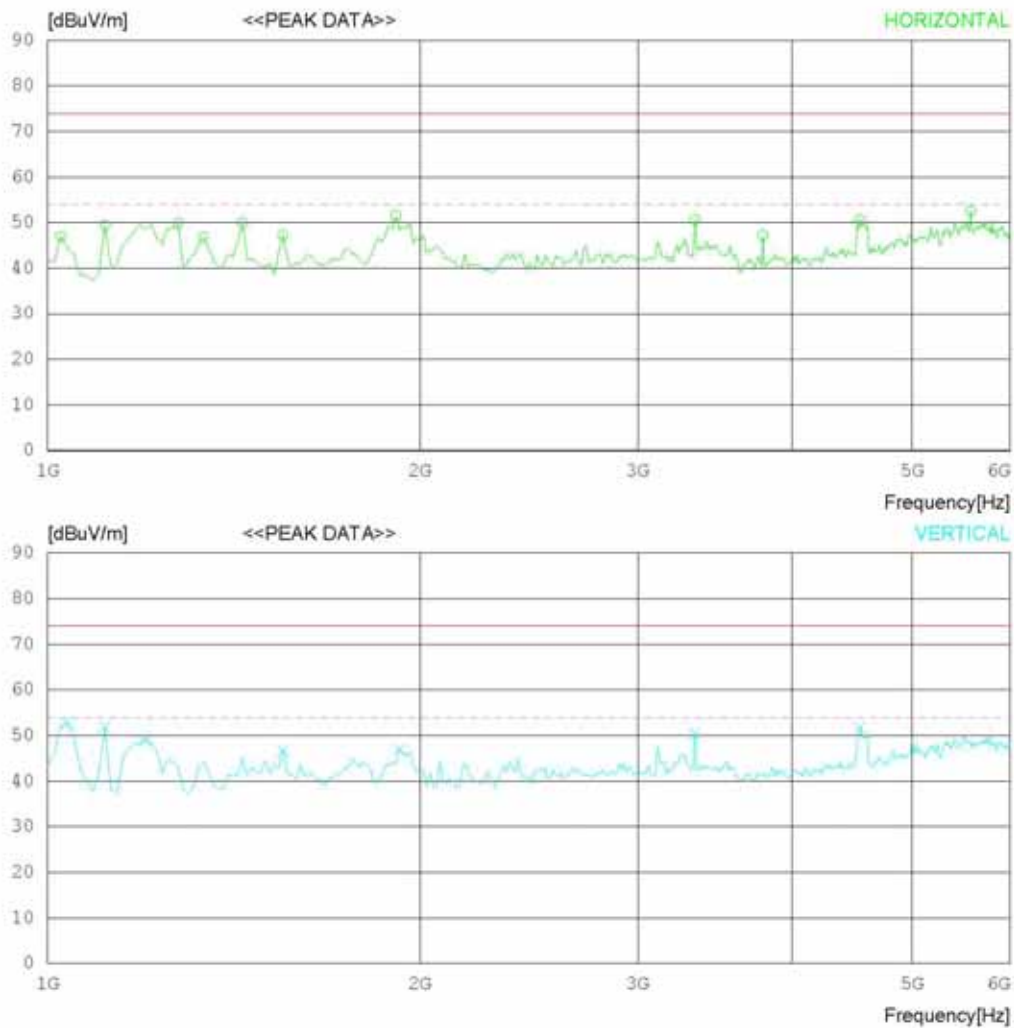
Date : 2012-01-17

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 21 °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 : 2012-01-17

Model Name : 47CM565-UB	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	1025.000	60.2	23.7	4.9	41.8	47.0	74.0	27	100	358
2	1112.500	62.1	24.0	5.1	41.8	49.4	74.0	24.6	100	358
3	1275.000	61.8	24.5	5.4	41.9	49.8	74.0	24.2	100	229
4	1337.500	58.5	24.6	5.6	41.9	46.8	74.0	27.2	100	137
5	1437.500	61.1	25.0	5.8	41.9	50.0	74.0	24	100	238
6	1550.000	58.0	25.1	6.1	41.9	47.3	74.0	26.7	100	173
7	1912.500	61.5	25.2	6.8	42.0	51.5	74.0	22.5	100	358
8	3337.500	54.4	29.0	9.2	42.0	50.6	74.0	23.4	100	135
9	3787.500	49.6	29.7	9.8	41.9	47.2	74.0	26.8	100	135
10	4537.500	50.4	30.9	10.7	41.4	50.6	74.0	23.4	100	358
11	5575.000	46.2	34.7	12.0	40.3	52.6	74.0	21.4	100	120
----- Vertical -----										
12	1037.500	66.0	23.7	4.9	41.8	52.8	74.0	21.2	100	165
13	1112.500	64.5	24.0	5.1	41.8	51.8	74.0	22.2	100	1
14	1200.000	61.4	24.2	5.3	41.8	49.1	74.0	24.9	100	1
15	1550.000	57.4	25.1	6.1	41.9	46.7	74.0	27.3	100	190
16	1925.000	56.9	25.2	6.9	42.0	47.0	74.0	27	100	1
17	3337.500	54.1	29.0	9.2	42.0	50.3	74.0	23.7	100	209
18	4537.500	51.5	30.9	10.7	41.4	51.7	74.0	22.3	100	1

< USB MODE_1 GHz ~ 6 GHz_Average >

RADIATED EMISSION

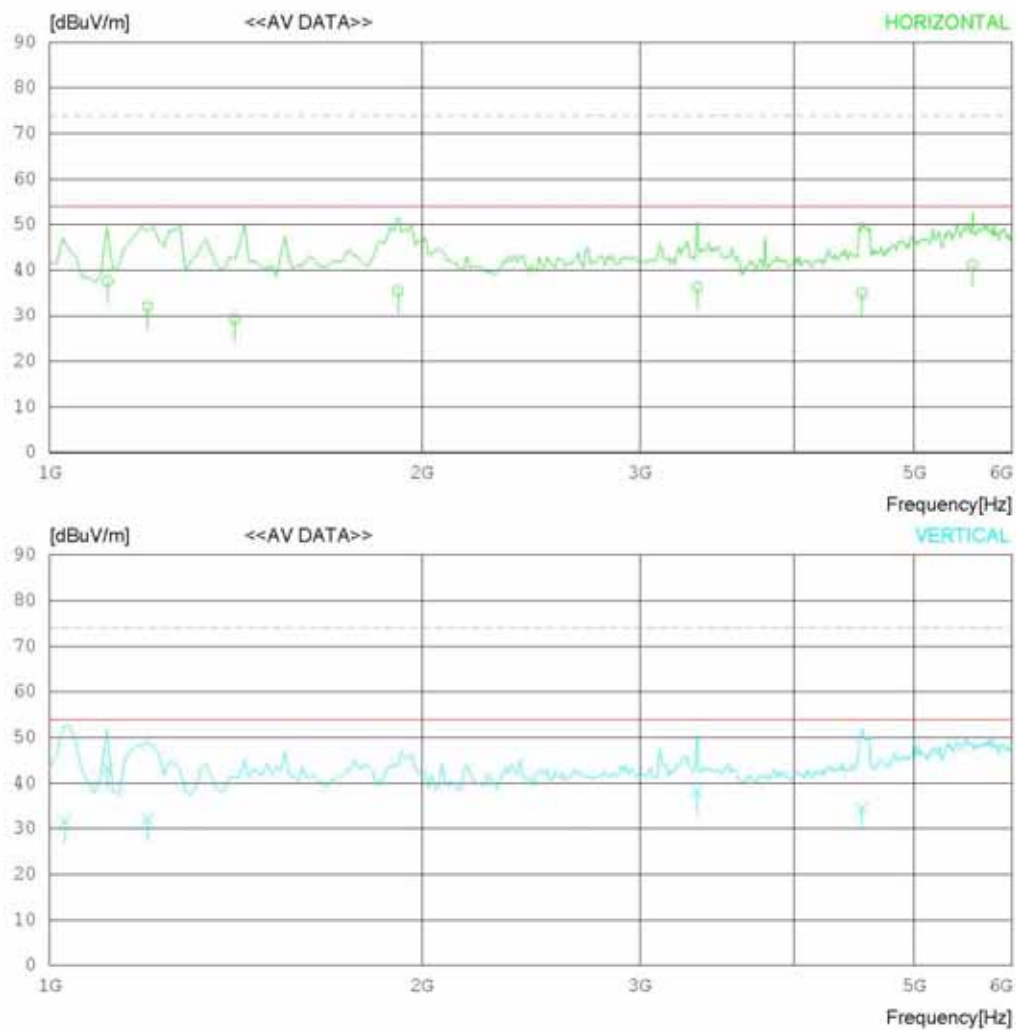
Date : 2012-01-17

Model Name : 47CM565-UB
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 21 °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 : 2012-01-17

Model Name : 47CM565-UB	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	1113.750	50.3	24.0	5.1	41.8	37.6	54.0	16.4	100	358
2	1200.000	44.3	24.2	5.3	41.8	32.0	54.0	22.0	100	229
3	1410.700	40.6	24.9	5.7	41.9	29.3	54.0	24.7	100	238
4	1912.500	45.4	25.2	6.8	42.0	35.4	54.0	18.6	100	358
5	3341.497	40.0	29.0	9.2	42.0	36.2	54.0	17.8	100	135
6	4537.500	34.8	30.9	10.7	41.4	35.0	54.0	19.0	100	358
7	5568.875	34.8	34.7	11.9	40.3	41.1	54.0	12.9	100	120
----- Vertical -----										
8	1029.000	44.9	23.7	4.9	41.8	31.7	54.0	22.3	100	165
9	1113.750	55.8	24.0	5.1	41.8	43.1	54.0	10.9	100	201
10	1200.000	44.3	24.2	5.3	41.8	32.0	54.0	22.0	100	301
11	3337.500	42.1	29.0	9.2	42.0	38.3	54.0	15.7	100	209
12	4536.500	34.2	30.9	10.7	41.4	34.4	54.0	19.6	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