

EMC TEST REPORT

Test item : LED LCD TV Monitor
Model No. : 47LM9600-UC
Order No. : 1112-01713
Date of receipt : 2011-12-08
Test duration : 2011-12-13 ~ 2011-12-14
Use of report : FCC CoC Marking
Date of Issue : 2011-12-26

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 ~ 21) °C,
Humidity : (37 ~ 41) % 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:


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.

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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.	47LM9600-UC
EUT Type	LED LCD TV Monitor
Serial No	NONE
FCC ID	BEJ47LM9600UC
Type of Sample Tested	Pre-Production
High Frequency	800 MHz
Rating	AC100-240 V~, 50/60 Hz, 1.8 A, 180 W
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

□ Formats Supported

PC Input Mode	Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
HDMI-PC / RGB-PC	640x350	31.468	70.09
	720x400	31.469	70.08
	640x480	31.469	59.94
	800x600	37.879	60.31
	1024x768	48.363	60.00
	1152x864	54.348	60.053
	1360x768	47.712	60.015
	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	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	12-14	21	37	-
Radiated Disturbance	12-13	20	41	
	12-14	20	41	

4.3 Test result Summary

(1) Conducted Emission(HDMI + LAN MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
0.16491	L1	46.7	Average	55.2	8.5

(2) Radiated Emission(HDMI + LAN MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
2961.564	H	49.5	Average	54.0	4.5

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
				DSUB	1.5	Shield		
				HDMI	1.8	Shield		
				STEREO	1.6	Non-shield		
				USB	-	-		
				PS/2	1.6	Non-shield		
				PS/2	1.8	Non-shield		
				LAN	2.5	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
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 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.

Test Result

< DSUB + LAN MODE >



Results of Conducted Emission

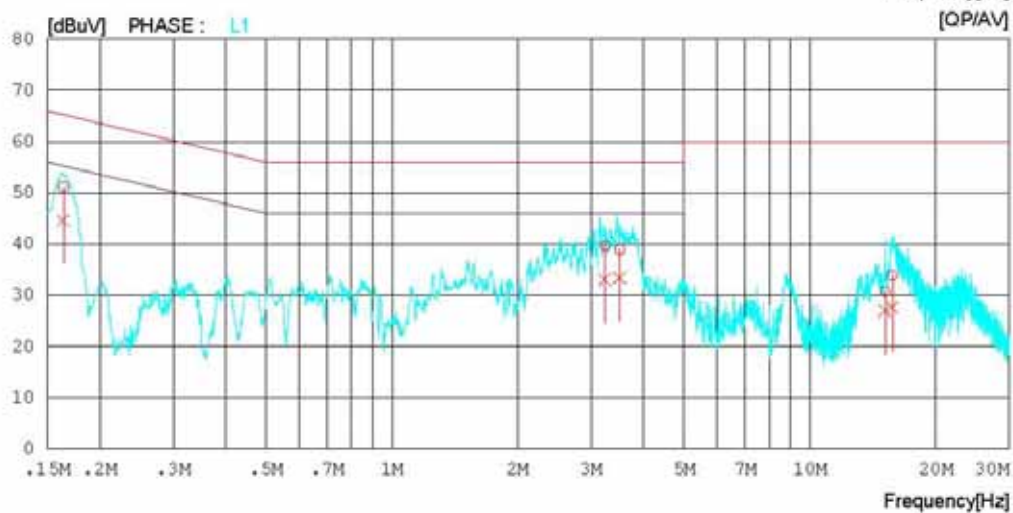
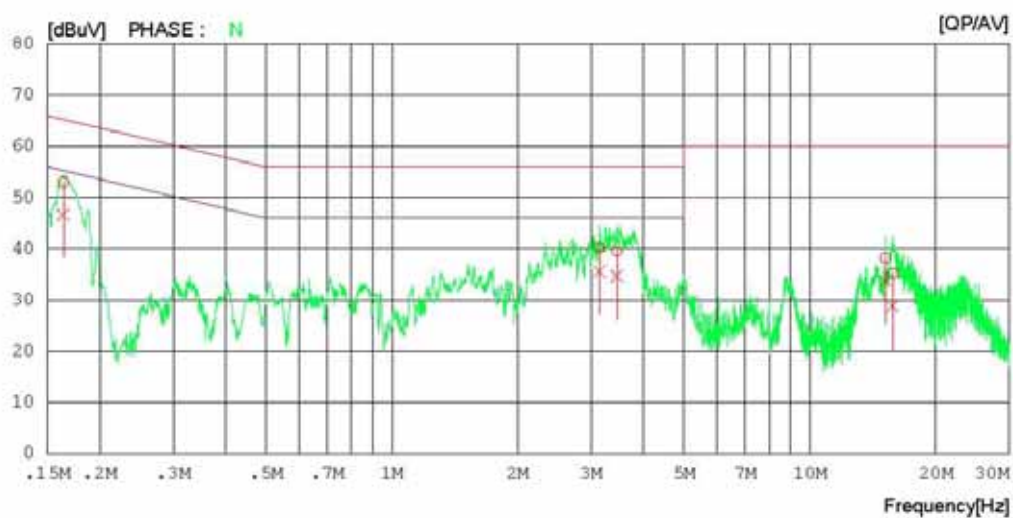
Digital EMC
 Date : 2011-12-14

Model No. : 47LM9600-UC
 Type :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 21 °C 37 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2011-12-14

Model No. : 47LM9600-UC
 Type :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 21 °C 37 % 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	0.16375	52.7	46.5	0.2	52.9	46.7	65.3	55.3	12.4	8.6	N
2	3.14150	39.8	35.2	0.4	40.2	35.6	56.0	46.0	15.8	10.4	N
3	3.45250	39.2	34.2	0.4	39.6	34.6	56.0	46.0	16.4	11.4	N
4	15.16950	37.3	32.9	0.9	38.2	33.8	60.0	50.0	21.8	16.2	N
5	15.78450	34.2	27.8	1.0	35.2	28.8	60.0	50.0	24.8	21.2	N
6	0.16393	51.0	44.4	0.2	51.2	44.6	65.3	55.3	14.1	10.7	L1
7	3.23900	39.3	32.7	0.4	39.7	33.1	56.0	46.0	16.3	12.9	L1
8	3.50900	38.5	33.0	0.4	38.9	33.4	56.0	46.0	17.1	12.6	L1
9	15.13050	29.8	26.0	0.9	30.7	26.9	60.0	50.0	29.3	23.1	L1
10	15.77000	32.9	26.7	1.0	33.9	27.7	60.0	50.0	26.1	22.3	L1

< HDMI + LAN MODE >



Results of Conducted Emission

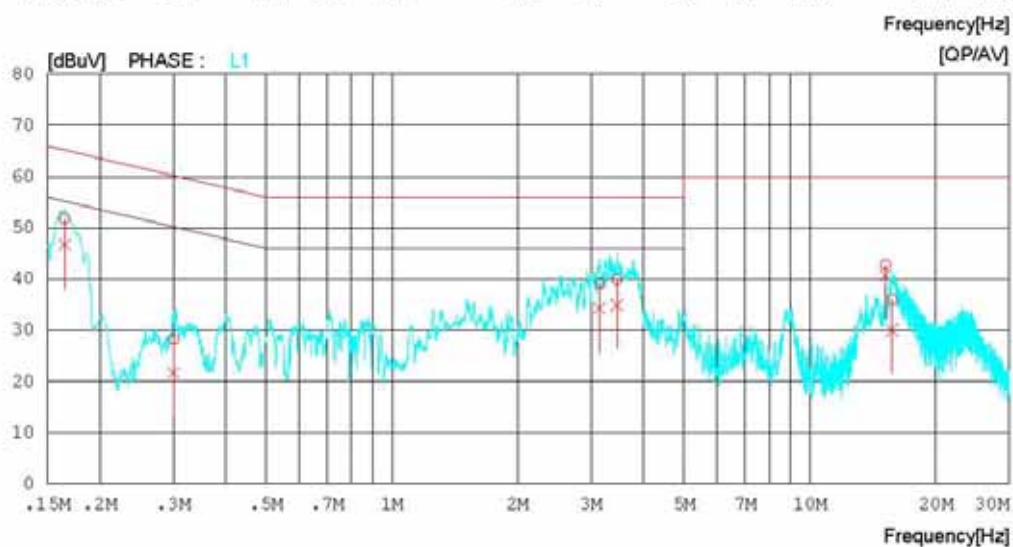
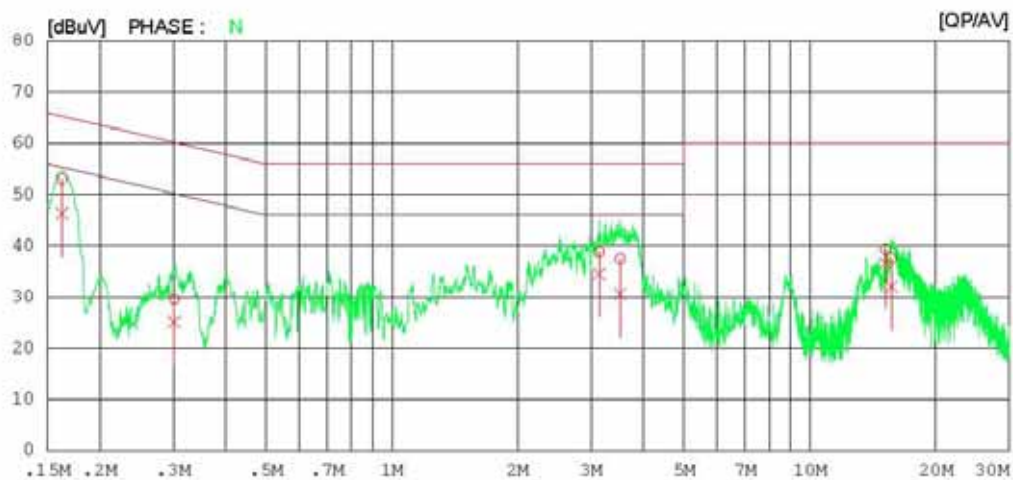
Digital EMC
 Date : 2011-12-14

Model No. : 47LM9600-UC
 Type :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 21 °C 37 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B OP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2011-12-14

Model No. : 47LM9600-UC
 Type :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 21 °C 37 % 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	0.16265	52.8	46.1	0.2	53.0	46.3	65.3	55.3	12.3	9.0	N
2	0.30141	29.5	25.0	0.1	29.6	25.1	60.2	50.2	30.6	25.1	N
3	3.13850	38.4	34.1	0.4	38.8	34.5	56.0	46.0	17.2	11.5	N
4	3.51900	37.0	30.2	0.4	37.4	30.6	56.0	46.0	18.6	15.4	N
5	15.17000	38.4	35.7	0.9	39.3	36.6	60.0	50.0	20.7	13.4	N
6	15.67150	36.6	31.0	1.0	37.6	32.0	60.0	50.0	22.4	18.0	N
7	0.16491	51.6	46.5	0.2	51.8	46.7	65.2	55.2	13.4	8.5	L1
8	0.30066	28.1	21.6	0.1	28.2	21.7	60.2	50.2	32.0	28.5	L1
9	3.14350	38.9	33.9	0.4	39.3	34.3	56.0	46.0	16.7	11.7	L1
10	3.45250	39.5	34.5	0.4	39.9	34.9	56.0	46.0	16.1	11.1	L1
11	15.17150	41.9	39.8	0.9	42.8	40.7	60.0	50.0	17.2	9.3	L1
12	15.74050	35.0	29.1	1.0	36.0	30.1	60.0	50.0	24.0	19.9	L1

< USB MODE >



Results of Conducted Emission

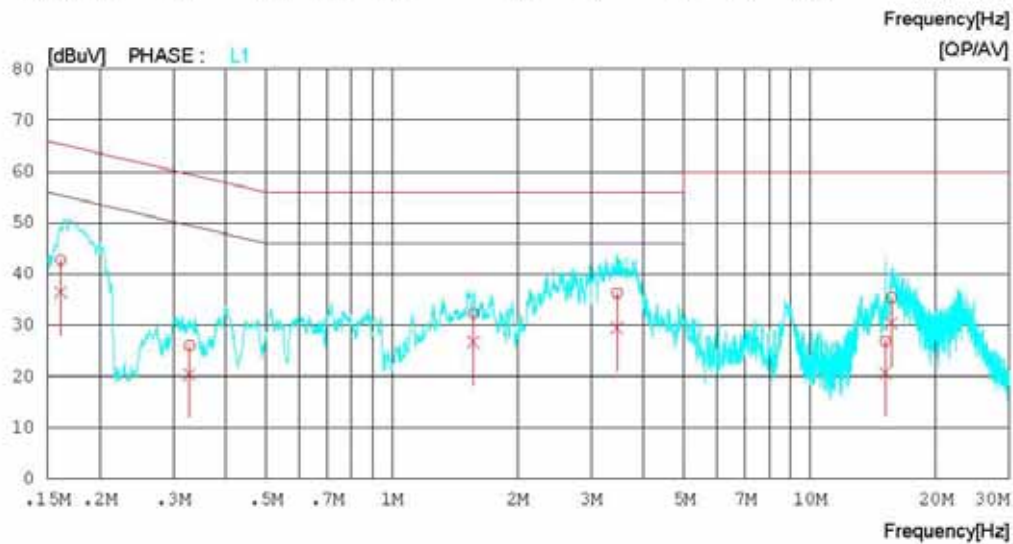
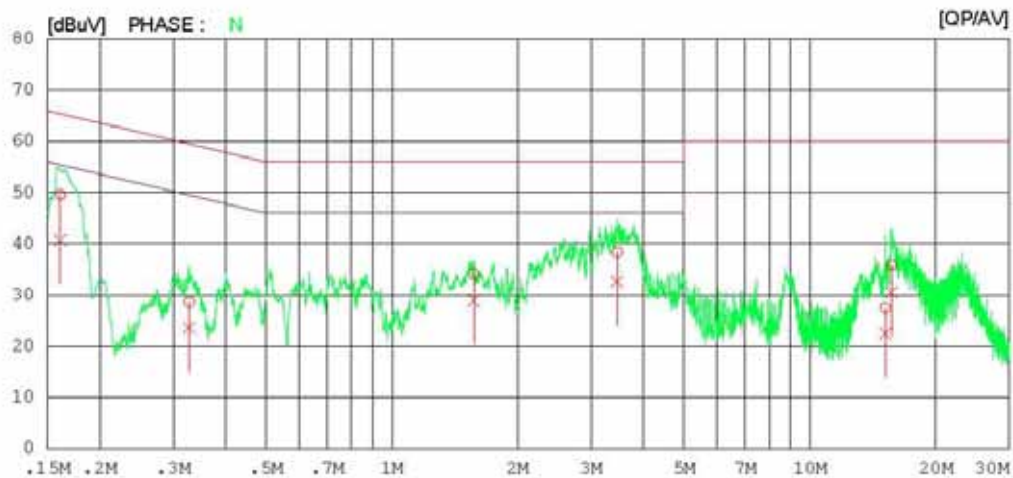
Digital EMC
 Date : 2011-12-14

Model No. : 47LM9600-UC
 Type :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 21 °C 37 % R.H.
 Operator :

Memo :

LIMIT : CISPR22_B OP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2011-12-14

Model No. : 47LM9600-UC
 Type :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi. : 21 °C 37 % 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	0.16091	49.4	40.5	0.2	49.6	40.7	65.4	55.4	15.8	14.7	N
2	0.32780	28.5	23.6	0.1	28.6	23.7	59.5	49.5	30.9	25.8	N
3	1.57100	33.9	28.8	0.2	34.1	29.0	56.0	46.0	21.9	17.0	N
4	3.45900	38.0	32.3	0.4	38.4	32.7	56.0	46.0	17.6	13.3	N
5	15.16450	26.6	21.5	0.9	27.5	22.4	60.0	50.0	32.5	27.6	N
6	15.66850	34.8	29.5	1.0	35.8	30.5	60.0	50.0	24.2	19.5	N
7	0.16133	42.6	36.3	0.2	42.8	36.5	65.4	55.4	22.6	18.9	L1
8	0.32798	25.9	20.4	0.1	26.0	20.5	59.5	49.5	33.5	29.0	L1
9	1.56900	32.1	26.5	0.2	32.3	26.7	56.0	46.0	23.7	19.3	L1
10	3.46050	35.9	29.1	0.4	36.3	29.5	56.0	46.0	19.7	16.5	L1
11	15.17050	26.0	19.8	0.9	26.9	20.7	60.0	50.0	33.1	29.3	L1
12	15.67250	34.4	29.4	1.0	35.4	30.4	60.0	50.0	24.6	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 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

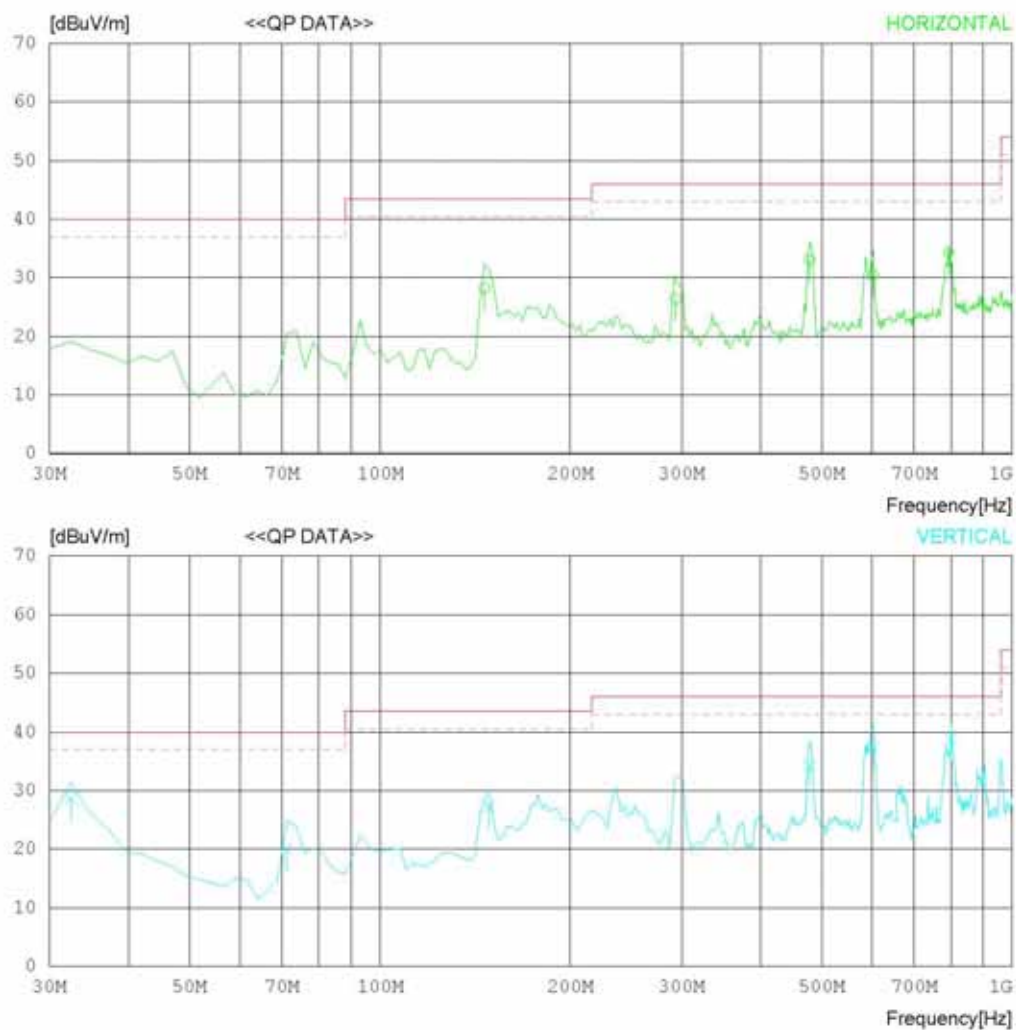
Date : 2011-12-14

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2011-12-14

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% R.H.
Test Condition : DSUB	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	146.400	39.0	10.6	1.7	23.1	28.2	43.5	15.3	400	281
2	293.200	33.9	13.7	2.6	23.8	26.4	46.0	19.6	400	358
3	478.624	37.1	17.3	3.3	24.6	33.1	46.0	12.9	400	253
4	602.299	32.2	18.7	3.9	24.3	30.5	46.0	15.5	400	228
5	793.873	33.4	20.1	4.5	23.7	34.3	46.0	11.7	400	233
----- Vertical -----										
6	32.425	33.2	17.1	0.9	22.6	28.6	40.0	11.4	100	358
7	71.225	35.0	6.4	1.2	22.6	20.0	40.0	20.0	100	186
8	148.825	38.2	10.5	1.7	23.1	27.3	43.5	16.2	100	358
9	478.624	38.3	17.3	3.3	24.6	34.3	46.0	11.7	100	176
10	602.299	39.0	18.7	3.9	24.3	37.3	46.0	8.7	100	358
11	801.148	37.9	20.2	4.5	23.6	39.0	46.0	7.0	100	358

< DSUB + LAN MODE_1 GHz ~ 6 GHz_PEAK >

RADIATED EMISSION

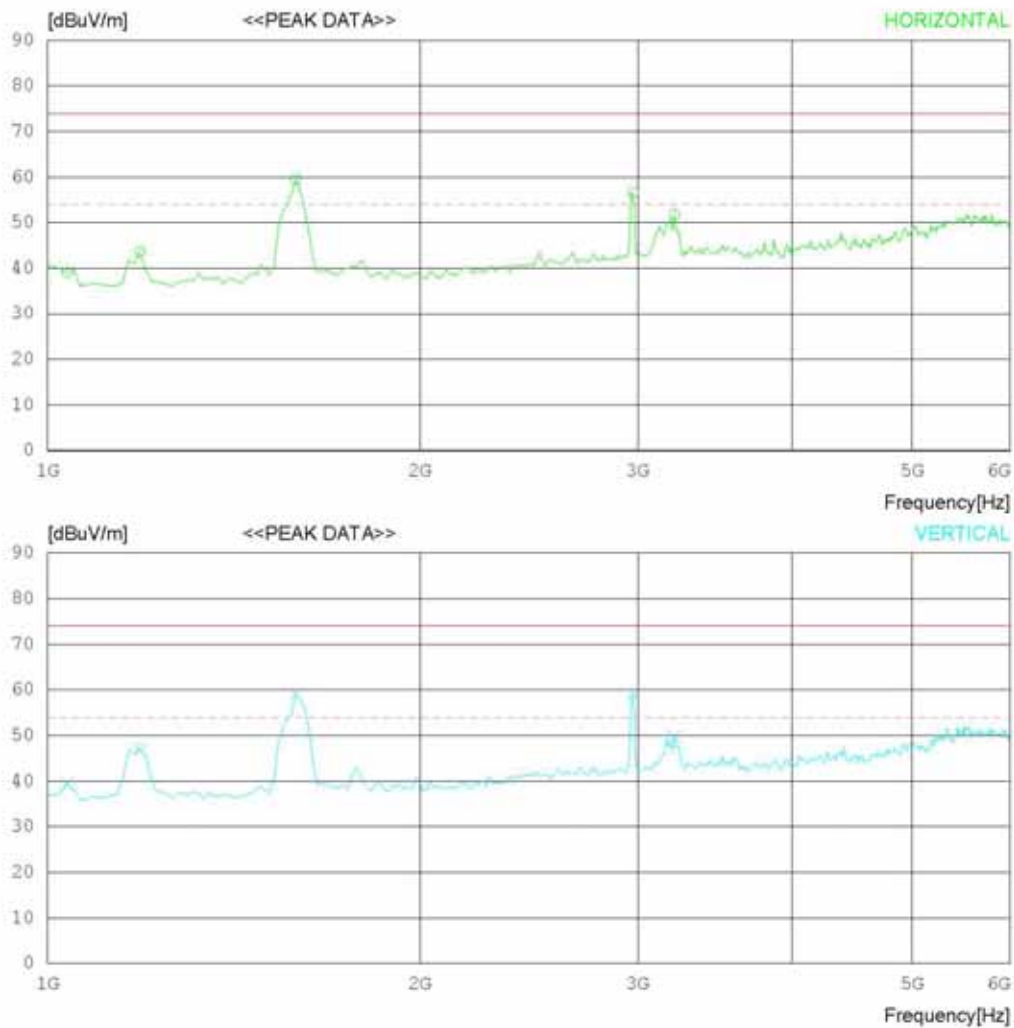
Date : 2011-12-14

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% 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 : 2011-12-14

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	1037.500	52.3	23.7	4.9	41.8	39.1	74.0	34.9	100	197
2	1187.500	56.0	24.2	5.2	41.8	43.6	74.0	30.4	100	197
3	1587.500	70.1	25.2	6.1	41.9	59.5	74.0	14.5	100	143
4	2975.000	61.3	28.7	8.7	42.1	56.6	74.0	17.4	100	197
5	3212.500	55.7	29.0	9.0	42.0	51.7	74.0	22.3	100	156
----- Vertical -----										
6	1037.500	52.6	23.7	4.9	41.8	39.4	74.0	34.6	100	146
7	1187.500	59.3	24.2	5.2	41.8	46.9	74.0	27.1	100	146
8	1587.500	69.7	25.2	6.1	41.9	59.1	74.0	14.9	100	146
9	2975.000	63.6	28.7	8.7	42.1	58.9	74.0	15.1	100	146
10	3212.500	53.8	29.0	9.0	42.0	49.8	74.0	24.2	100	146

< DSUB + LAN MODE_1 GHz ~ 6 GHz_AV >

RADIATED EMISSION

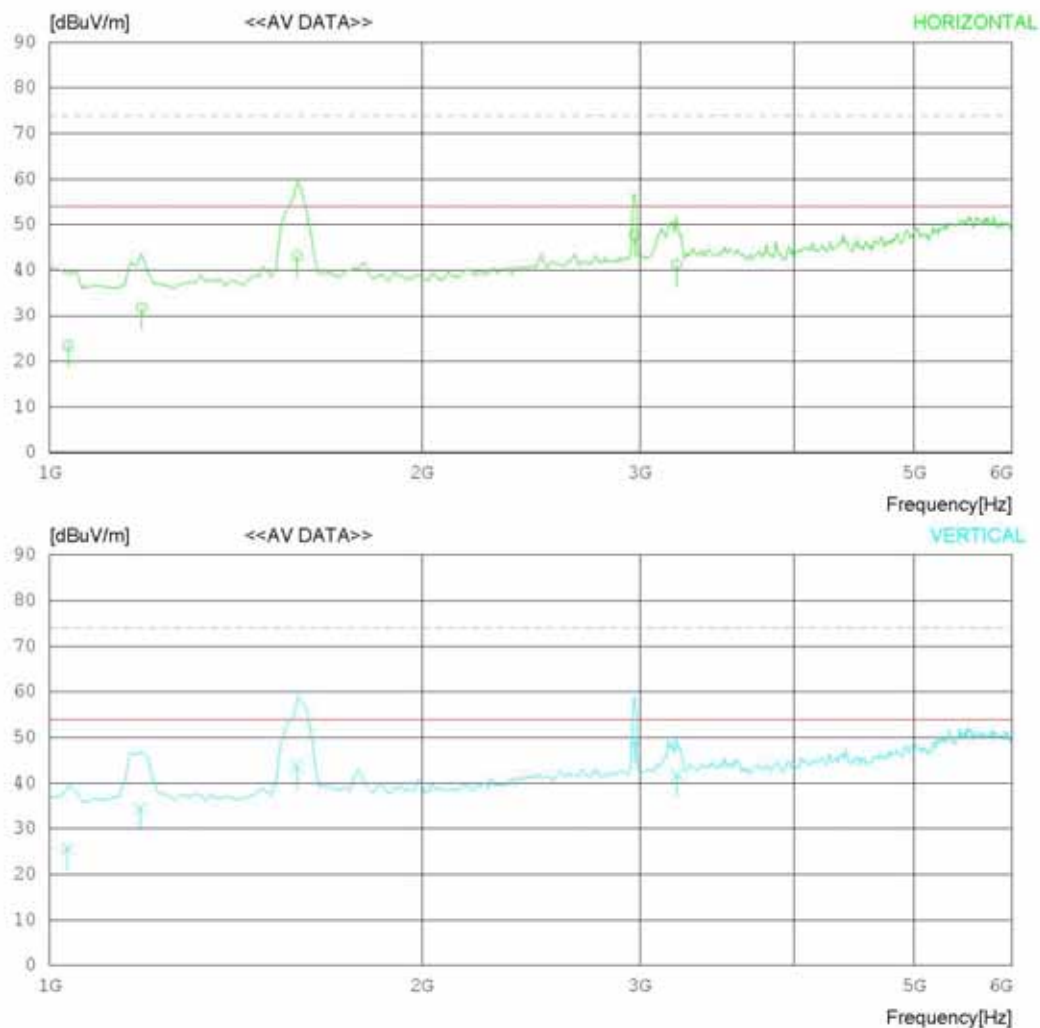
Date : 2011-12-14

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : DSUB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% 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 : 2011-12-14

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	1034.851	36.6	23.7	4.9	41.8	23.4	54.0	30.6	100	197
2	1186.958	44.2	24.2	5.2	41.8	31.8	54.0	22.2	100	197
3	1584.474	53.8	25.2	6.1	41.9	43.2	54.0	10.8	100	143
4	2971.570	52.3	28.7	8.7	42.1	47.6	54.0	6.4	100	197
5	3211.554	45.2	29.0	9.0	42.0	41.2	54.0	12.8	100	156
----- Vertical -----										
6	1033.600	38.9	23.7	4.9	41.8	25.7	54.0	28.3	100	146
7	1184.165	46.8	24.2	5.2	41.8	34.4	54.0	19.6	100	146
8	1584.518	54.2	25.2	6.1	41.9	43.6	54.0	10.4	100	146
9	2973.689	53.6	28.7	8.7	42.1	48.9	54.0	5.1	100	146
10	3216.854	45.6	29.0	9.1	42.0	41.7	54.0	12.3	100	146

< HDMI + LAN MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

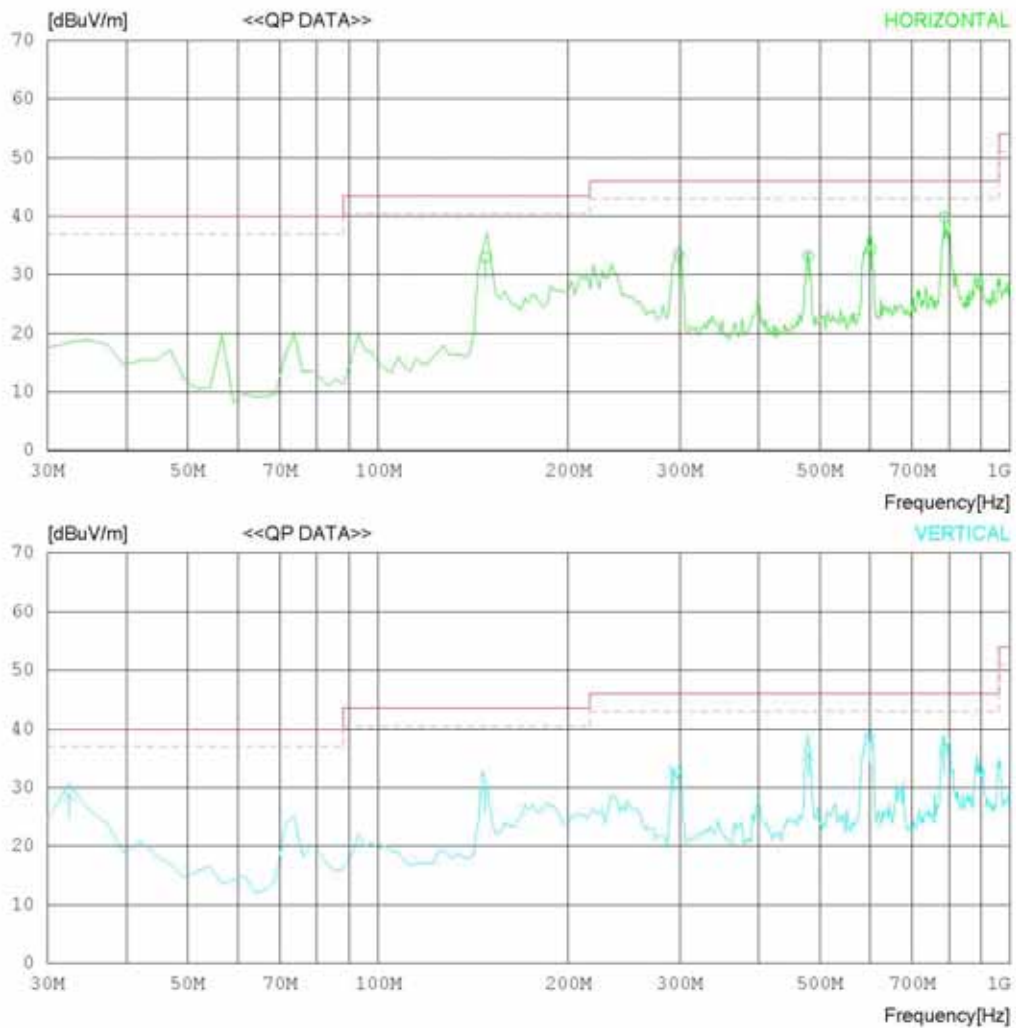
Date : 2011-12-14

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% R.H.
 Operator :

Memo :

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



RADIATED EMISSION

Date : 2011-12-14

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	147.998	43.9	10.5	1.7	23.1	33.0	43.5	10.5	100	253
2	299.175	40.9	13.8	2.6	23.9	33.4	46.0	12.6	100	358
3	479.220	37.2	17.3	3.3	24.6	33.2	46.0	12.8	100	358
4	601.997	36.0	18.7	3.9	24.3	34.3	46.0	11.7	100	240
5	786.598	39.0	20.0	4.5	23.7	39.8	46.0	6.2	100	358
----- Vertical -----										
6	32.440	33.2	17.1	0.9	22.6	28.6	40.0	11.4	100	358
7	147.250	40.1	10.6	1.7	23.1	29.3	43.5	14.2	100	47
8	293.250	40.2	13.7	2.6	23.8	32.7	46.0	13.3	100	358
9	479.125	39.6	17.3	3.3	24.6	35.6	46.0	10.4	100	181
10	600.200	39.7	18.7	3.9	24.3	38.0	46.0	8.0	100	270
11	784.173	35.2	20.0	4.5	23.7	36.0	46.0	10.0	100	206

< HDMI + LAN MODE_1 GHz ~ 6 GHz_PEAK >

RADIATED EMISSION

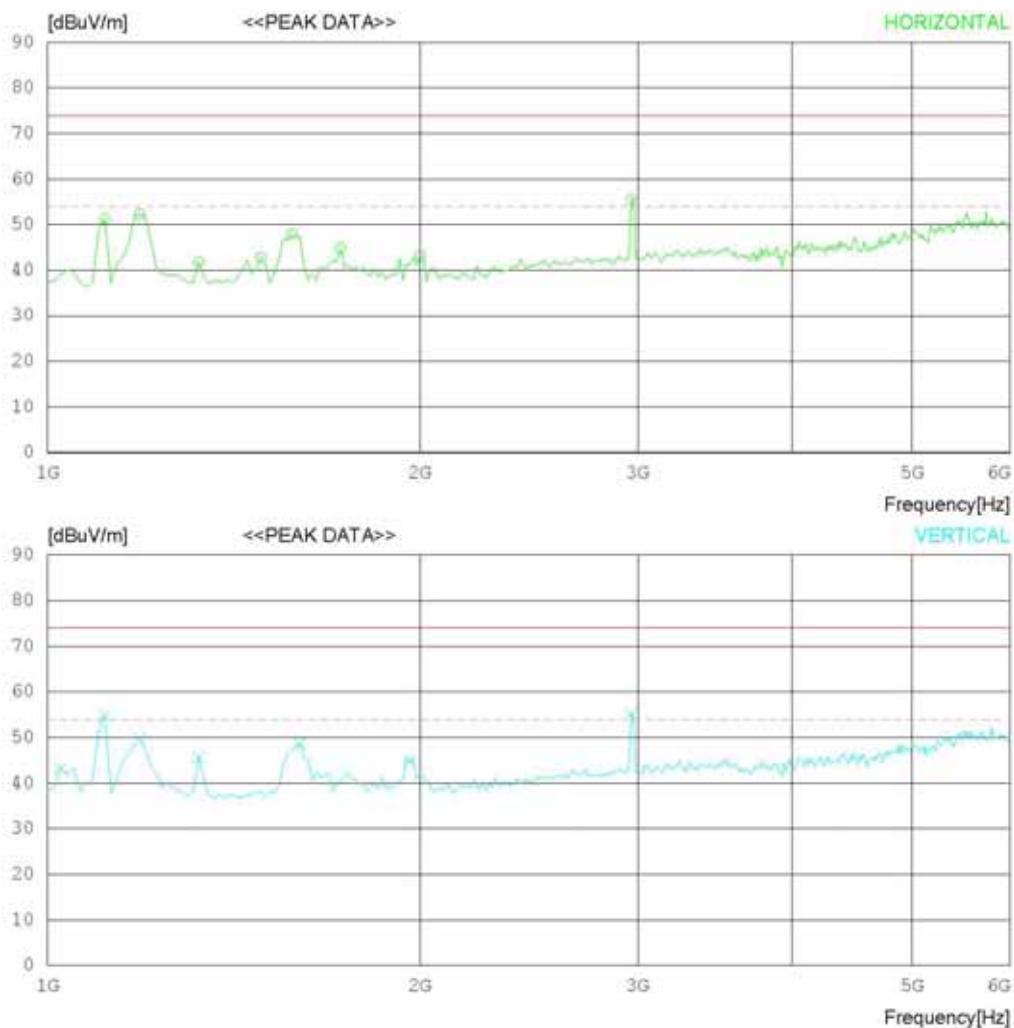
Date : 2011-12-14

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% 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 : 2011-12-14

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	1112.500	63.9	24.0	5.1	41.8	51.2	74.0	22.8	100	217
2	1187.500	64.7	24.2	5.2	41.8	52.3	74.0	21.7	100	226
3	1325.000	53.6	24.6	5.6	41.9	41.9	74.0	32.1	100	235
4	1487.500	53.7	25.1	5.9	41.9	42.8	74.0	31.2	100	217
5	1575.000	58.7	25.1	6.1	41.9	48.0	74.0	26	100	226
6	1725.000	55.1	25.2	6.4	41.9	44.8	74.0	29.2	100	241
7	2000.000	52.9	25.2	7.0	42.0	43.1	74.0	30.9	100	259
8	2962.500	60.2	28.7	8.7	42.1	55.5	74.0	18.5	100	240
----- Vertical -----										
9	1025.000	56.4	23.7	4.9	41.8	43.2	74.0	30.8	100	138
10	1112.500	67.4	24.0	5.1	41.8	54.7	74.0	19.3	100	138
11	1187.500	62.0	24.2	5.2	41.8	49.6	74.0	24.4	100	138
12	1325.000	57.3	24.6	5.6	41.9	45.6	74.0	28.4	100	138
13	1600.000	59.1	25.2	6.2	41.9	48.6	74.0	25.4	100	134
14	1962.500	54.7	25.2	6.9	42.0	44.8	74.0	29.2	100	125
15	2962.500	59.8	28.7	8.7	42.1	55.1	74.0	18.9	100	138

< HDMI + LAN MODE_1 GHz ~ 6 GHz_AV >

RADIATED EMISSION

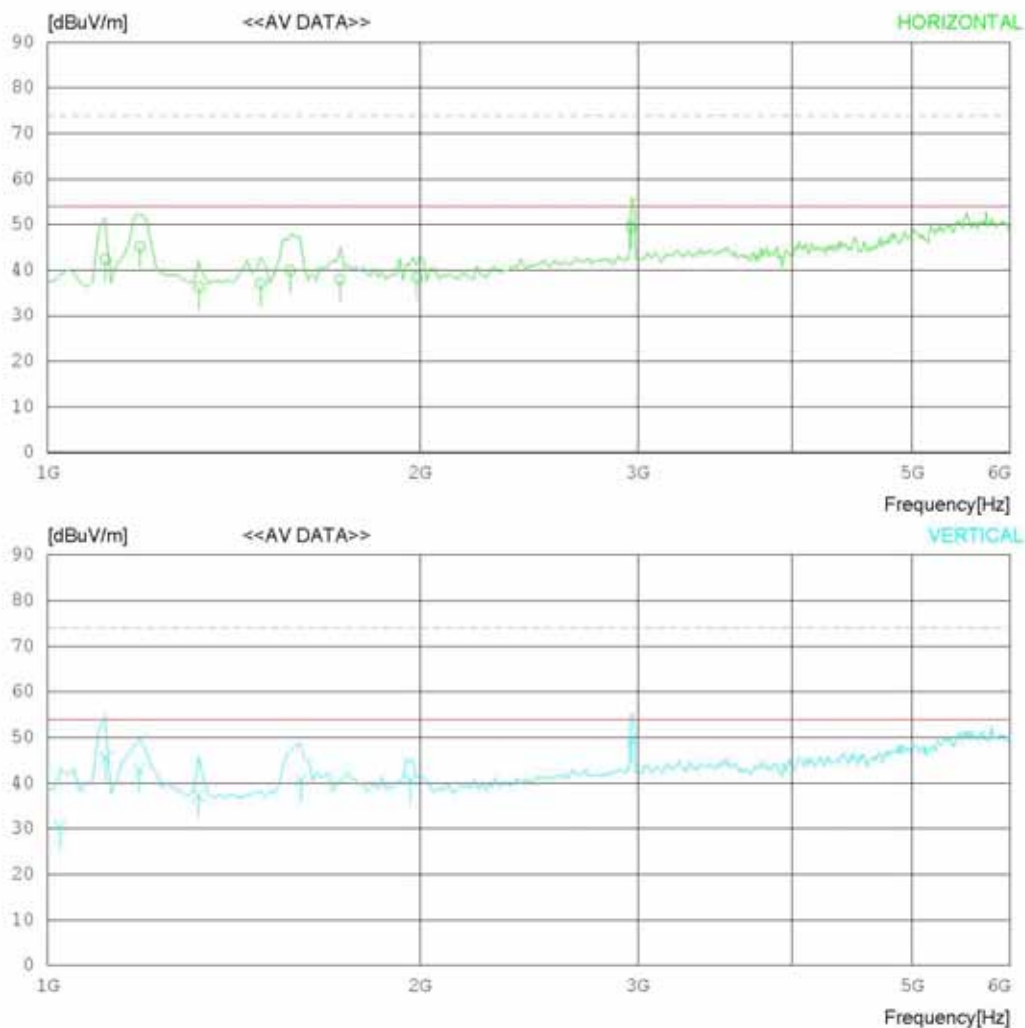
Date : 2011-12-14

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : HDMI

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% 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 : 2011-12-14

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	1113.334	55.0	24.0	5.1	41.8	42.3	54.0	11.7	100	217
2	1188.457	57.6	24.2	5.2	41.8	45.2	54.0	8.8	100	226
3	1326.845	47.9	24.6	5.6	41.9	36.2	54.0	17.8	100	235
4	1487.154	48.0	25.1	5.9	41.9	37.1	54.0	16.9	100	217
5	1571.316	50.6	25.1	6.1	41.9	39.9	54.0	14.1	100	226
6	1722.847	48.3	25.2	6.4	41.9	38.0	54.0	16.0	100	241
7	1989.925	48.2	25.2	7.0	42.0	38.4	54.0	15.6	100	259
8	2961.564	54.2	28.7	8.7	42.1	49.5	54.0	4.5	100	240
----- Vertical -----										
9	1024.184	43.6	23.7	4.9	41.8	30.4	54.0	23.6	100	138
10	1113.645	58.3	24.0	5.1	41.8	45.6	54.0	8.4	100	138
11	1186.845	55.3	24.2	5.2	41.8	42.9	54.0	11.1	100	138
12	1324.134	48.9	24.6	5.6	41.9	37.2	54.0	16.8	100	138
13	1602.214	51.3	25.2	6.2	41.9	40.8	54.0	13.2	100	134
14	1963.485	50.7	25.2	6.9	42.0	40.8	54.0	13.2	100	125
15	2966.845	53.9	28.7	8.7	42.1	49.2	54.0	4.8	100	138

< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

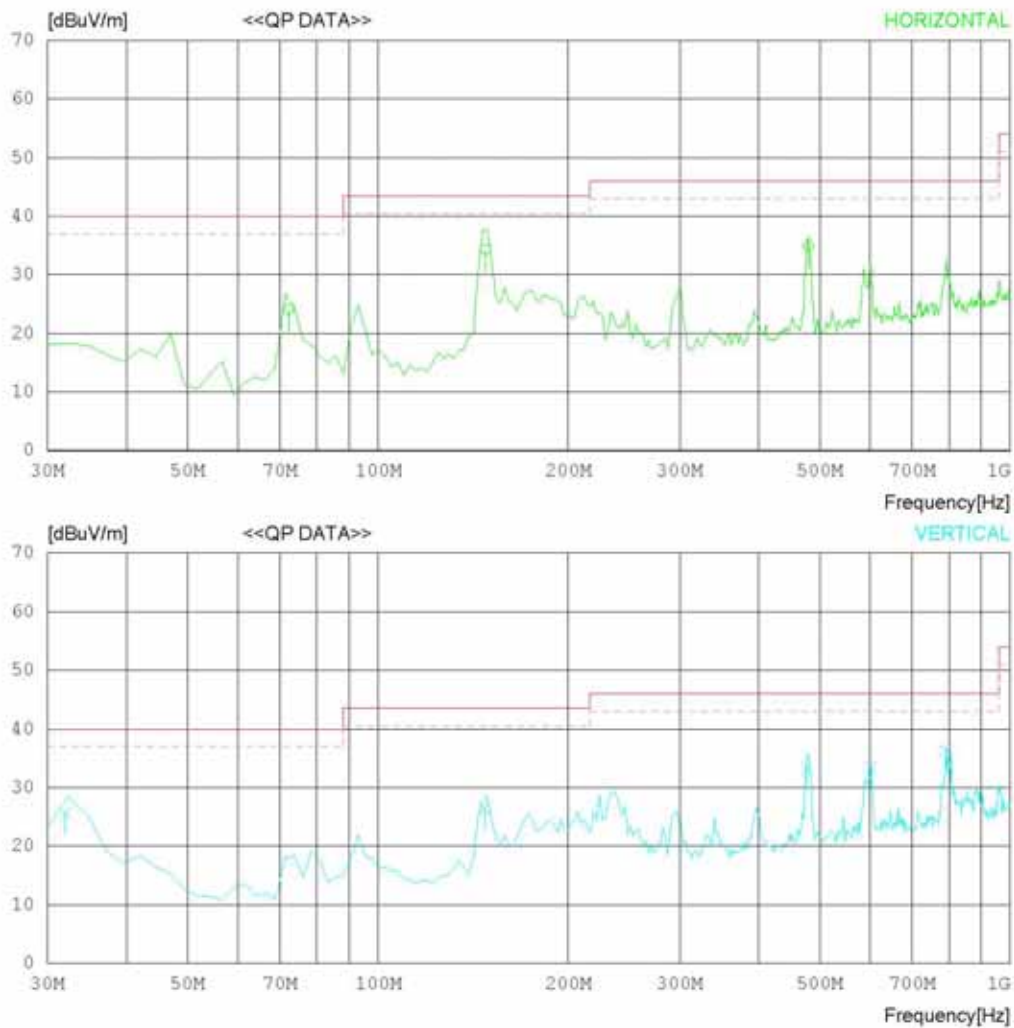
Date : 2011-12-14

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% R.H.
 Operator :

Memo :

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



< USB MODE_30 MHz ~ 1 GHz >

RADIATED EMISSION

Date : 2011-12-14

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	72.212	39.0	6.5	1.2	22.6	24.1	40.0	15.9	301	187
2	147.987	45.2	10.5	1.7	23.1	34.3	43.5	9.2	301	358
3	479.250	38.9	17.3	3.3	24.6	34.9	46.0	11.1	301	227
----- Vertical -----										
4	31.998	30.2	17.1	0.9	22.6	25.6	40.0	14.4	199	159
5	147.250	37.2	10.6	1.7	23.1	26.4	43.5	17.1	199	1
6	477.210	37.2	17.3	3.3	24.6	33.2	46.0	12.8	199	27
7	601.252	35.2	18.7	3.9	24.3	33.5	46.0	12.5	199	1
8	791.335	35.4	20.1	4.5	23.7	36.3	46.0	9.7	199	1

< USB MODE_1 GHz ~ 6 GHz_PEAK >

RADIATED EMISSION

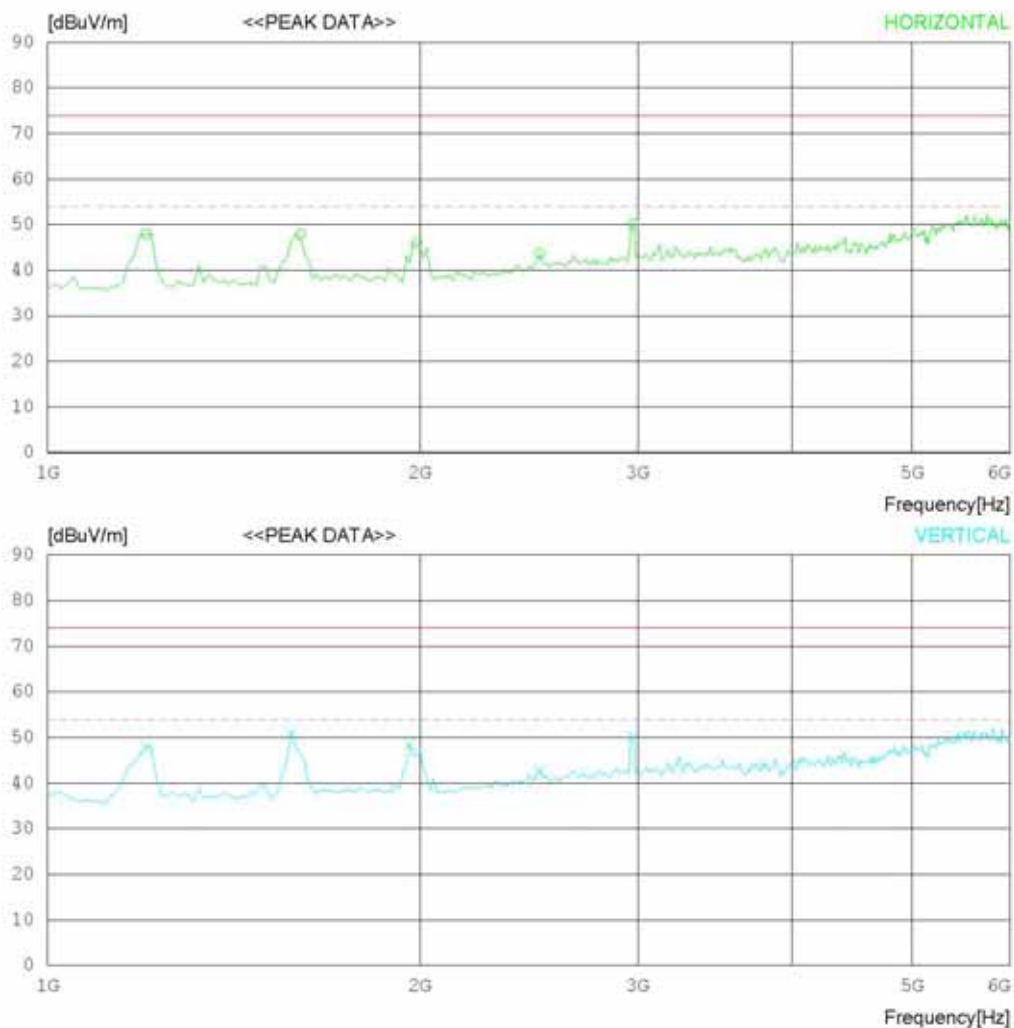
Date : 2011-12-13

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% 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 : 2011-12-13

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	1200.000	60.2	24.2	5.3	41.8	47.9	74.0	26.1	100	113
2	1600.000	58.3	25.2	6.2	41.9	47.8	74.0	26.2	100	113
3	1987.500	55.8	25.2	7.0	42.0	46.0	74.0	28	100	113
4	2500.000	50.7	27.3	7.8	42.1	43.7	74.0	30.3	100	47
5	2975.000	54.9	28.7	8.7	42.1	50.2	74.0	23.8	100	113
----- Vertical -----										
6	1200.000	60.1	24.2	5.3	41.8	47.8	74.0	26.2	100	19
7	1575.000	61.7	25.1	6.1	41.9	51.0	74.0	23	100	67
8	1962.500	58.4	25.2	6.9	42.0	48.5	74.0	25.5	100	67
9	2500.000	49.7	27.3	7.8	42.1	42.7	74.0	31.3	100	39
10	2975.000	54.9	28.7	8.7	42.1	50.2	74.0	23.8	100	67

< USB MODE_1 GHz ~ 6 GHz_AV >

RADIATED EMISSION

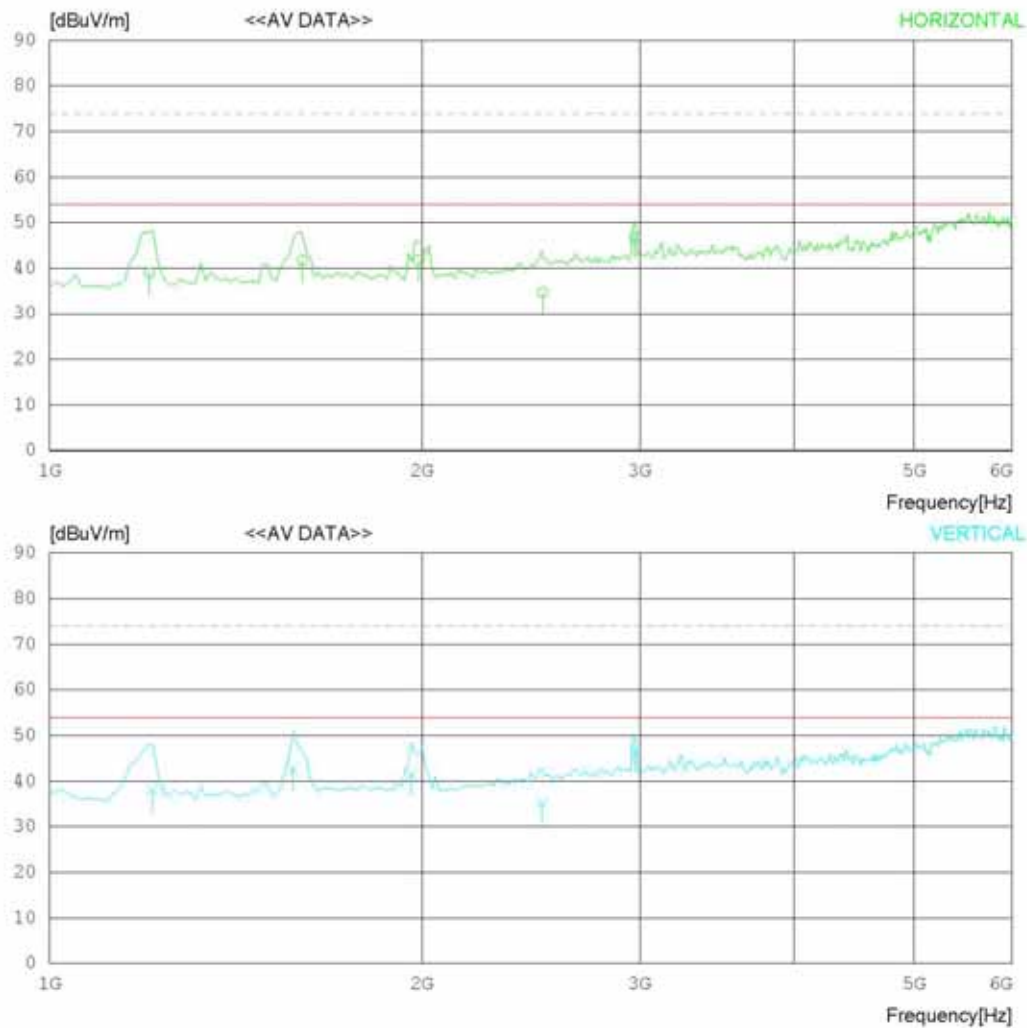
Date : 2011-12-13

Model Name : 47LM9600-UC
 Model No. :
 Serial No. :
 Test Condition : USB

Reference No. :
 Power Supply : 120V 60Hz
 Temp/Humi : 20 °C 41% 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 : 2011-12-13

Model Name : 47LM9600-UC	Reference No. :
Model No. :	Power Supply : 120V 60Hz
Serial No. :	Temp/Humi : 20 °C 41% 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	1204.160	51.2	24.2	5.3	41.8	38.9	54.0	15.1	100	355
2	1601.447	52.2	25.2	6.2	41.9	41.7	54.0	12.3	100	339
3	1987.771	51.6	25.2	7.0	42.0	41.8	54.0	12.2	100	12
4	2503.216	41.8	27.3	7.8	42.1	34.8	54.0	19.2	100	47
5	2971.854	51.6	28.7	8.7	42.1	46.9	54.0	7.1	100	44
----- Vertical -----										
6	1211.052	50.3	24.3	5.3	41.8	38.1	54.0	15.9	100	19
7	1573.311	53.3	25.1	6.1	41.9	42.6	54.0	11.4	100	16
8	1961.514	51.2	25.2	6.9	42.0	41.3	54.0	12.7	100	22
9	2502.479	42.2	27.3	7.8	42.1	35.2	54.0	18.8	100	24
10	2976.396	51.3	28.7	8.7	42.1	46.6	54.0	7.4	100	36

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	2011.01.11	2012.01.11
☐ LISN	KNW-242	KYORITSU	8-654-15	2011.07.01	2012.07.01
☐ 50 OHM TERMINATOR	CT-01	TME	N/A	2011.01.11	2012.01.11
☒ 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	2011.01.11	2012.01.11

2. Radiated Disturbance

Name of Instrument	Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☒ EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2011.01.20	2012.01.20
☒ 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	2011.01.11	2012.01.11
☒ AMPLIFIER	MLA-00108-B02-36	TSJ	1518831	2011.01.11	2012.01.11
☐ 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