

# EMC TEST REPORT

Test item : LED TV Monitor  
Model No. : 50LA6205-UA  
Order No. : DEMC1301-00383  
Date of receipt : 2013-01-29  
Test duration : 2013-02-07 ~ 2013-02-08  
Use of report : FCC CoC Marking  
Date of Issue : 2013-02-12

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 : (20 ~ 21) °C,  
Humidity : (38 ~ 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.

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

Tested by:

Reviewed by:

  
\_\_\_\_\_  
Engineer  
SeHyun Kim

  
\_\_\_\_\_  
General Manager  
ChangHo Lee

**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	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.	50LA6205-UA
EUT Type	LED TV Monitor
Serial No	NONE
FCC ID	BEJ50LA6205UA
Type of Sample Tested	Pre-Production
High Frequency	Max 800 MHz
Rating	AC 100-240 V~ 50/60 Hz, 1.4 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 480	31.469	59.94
800 x 600	37.879	60.31
1024 x 768	48.363	60.00
1152 x 864	54.348	60.053
1360 x 768	47.712	60.015
1280 x 1024	63.981	60.020
1920 x 1080	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 (°C)	Humidity (% R.H.)
Conducted Disturbance	02-08	21	41
Radiated Disturbance	02-07	20	38

### 4.3 Test result Summary

#### (1) Conducted Emission (HDMI MODE)

Frequency [MHz]	Phase	Result [dB $\mu$ V]	Detector	Limit [dB $\mu$ V]	Margin [dB]
0.80086	N	46.4	Quasi-Peak	56.0	9.6

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

Frequency [MHz]	Pol.	Result [dB( $\mu$ V/m)]	Detector	Limit [dB( $\mu$ V/m)]	Margin [dB]
751.964	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

- HDMI MODE : 1920x1080 Resolution (Worst case)
- USB MODE : USB record 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	VOSTRO430	9K77SBX	DELL	POWER	1.8	Not use	Non-shield	Plastic	DOC
				HDMI	1.8	Not use	Shield		
				USB	1.8	Not use	Shield		
				USB	1.8	Not use	Shield		
				USB	1.8	Not use	Shield		
KEYBOARD	SKG-2000UB	TAKB40142 5B	MONITREY INTERNATIONAL CORP	USB	1.8	Not use	Shield	Plastic	DOC
MOUSE	1094	X817158- 002	MICROSOFT CORPORATION	USB	1.8	Not use	Shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS	POWER AV	1.8 1.6	Not use Not use	Non-shield Non-shield	Plastic	VER
USB MEMORY	Cruzer Z37	N/A	Sandisk	USB	-	-	-	-	DOC
PRINTER	SRP-770	SRP770080 60035	BICSOLON	POWER USB	1.8 1.8	Not use Not use	Non-shield	Plastic	DOC
Remote Control	AN-MR400G	N/A	OHSUNG ELECTRONIC	-	-	-	-	-	-
Headset	COV903	N/A	COSY	STEREO	1.5	Not use	Non-shield	Plastic	DOC

## 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 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(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 >



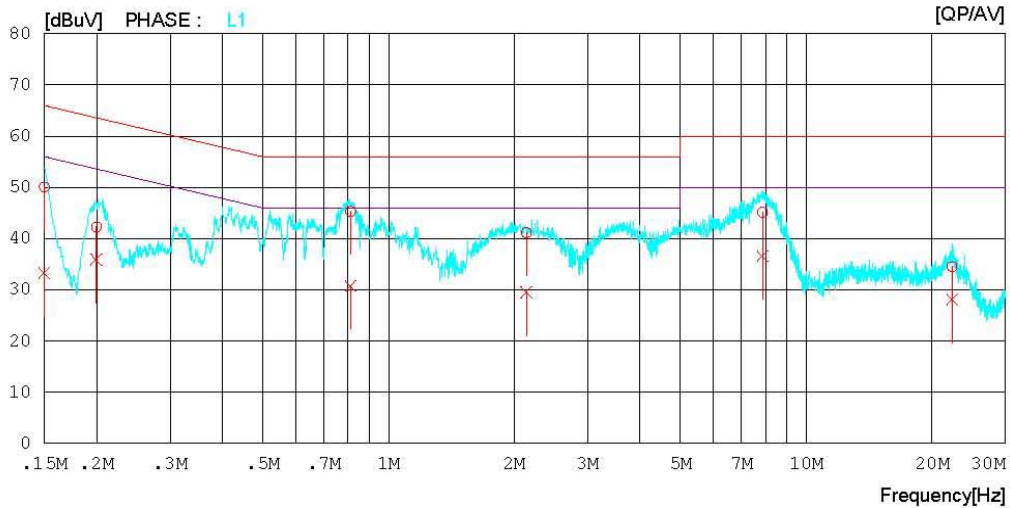
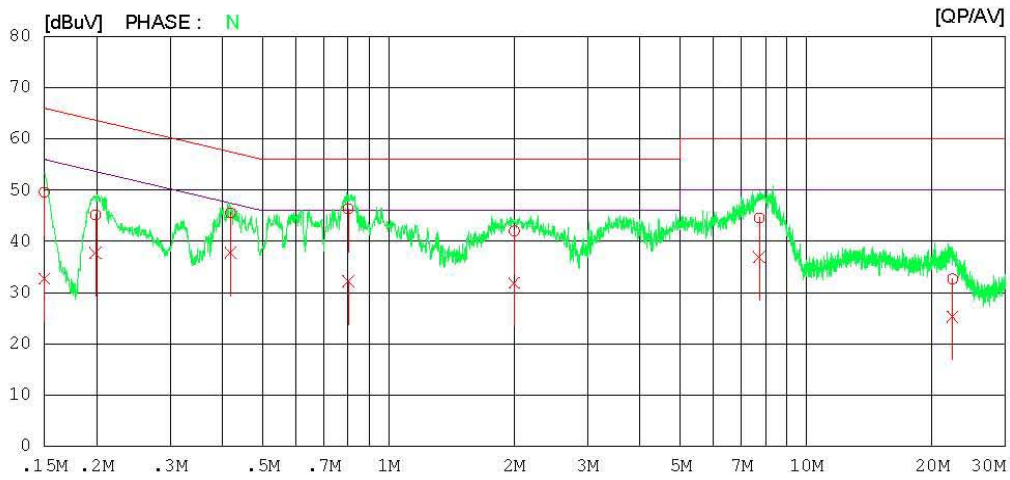
Results of Conducted Emission

Digital EMC  
Date : 2013-02-08

Model No. : 50LA6205-UA  
Type :  
Serial No. :  
Test Condition : HDMI

Reference No. :  
Power Supply : 120 V 60 Hz  
Temp/Humi. : 21 °C 41 % R.H.  
Operator :

Memo :  
LIMIT : CISPR22\_B QP  
CISPR22\_B AV



## Results of Conducted Emission

Digital EMC  
 Date : 2013-02-08

Model No. : 50LA6205-UA  
 Type :  
 Serial No. :  
 Test Condition : HDMI

Reference No. :  
 Power Supply : 120 V 60 Hz  
 Temp/Humi. : 21 °C 41 % 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	0.15000	49.4	32.5	0.2	49.6	32.7	66.0	56.0	16.4	23.3	N
2	0.19895	45.0	37.5	0.2	45.2	37.7	63.7	53.7	18.5	16.0	N
3	0.41850	45.4	37.6	0.2	45.6	37.8	57.5	47.5	11.9	9.7	N
4	0.80086	46.2	32.0	0.2	46.4	32.2	56.0	46.0	9.6	13.8	N
5	1.99950	41.7	31.6	0.3	42.0	31.9	56.0	46.0	14.0	14.1	N
6	7.72350	44.1	36.5	0.5	44.6	37.0	60.0	50.0	15.4	13.0	N
7	22.41800	31.7	24.4	0.9	32.6	25.3	60.0	50.0	27.4	24.7	N
8	0.15000	49.9	33.1	0.2	50.1	33.3	66.0	56.0	15.9	22.7	L1
9	0.19978	42.1	35.7	0.2	42.3	35.9	63.6	53.6	21.3	17.7	L1
10	0.81193	45.1	30.6	0.2	45.3	30.8	56.0	46.0	10.7	15.2	L1
11	2.13800	40.9	29.2	0.3	41.2	29.5	56.0	46.0	14.8	16.5	L1
12	7.86200	44.6	36.1	0.5	45.1	36.6	60.0	50.0	14.9	13.4	L1
13	22.36100	33.6	27.2	0.9	34.5	28.1	60.0	50.0	25.5	21.9	L1

< USB MODE >



Results of Conducted Emission

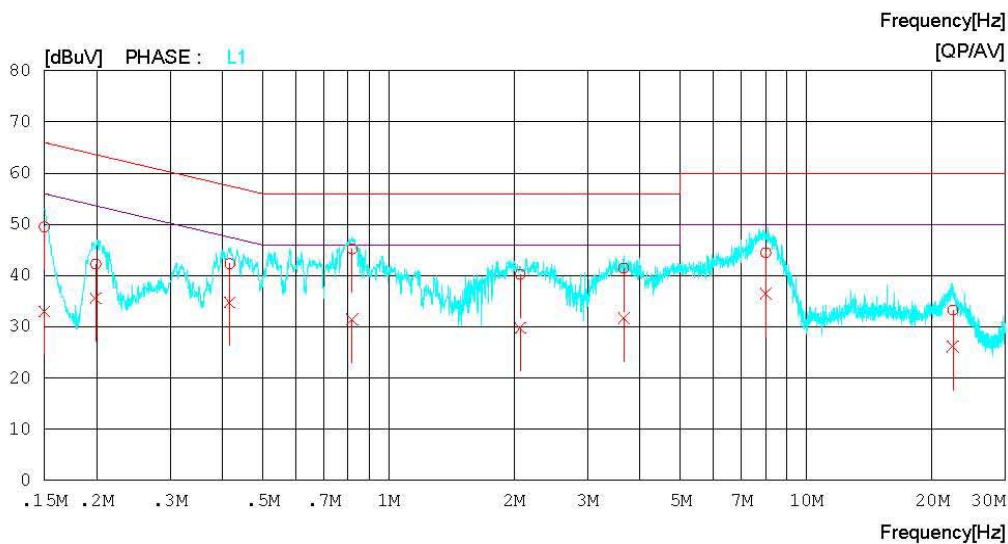
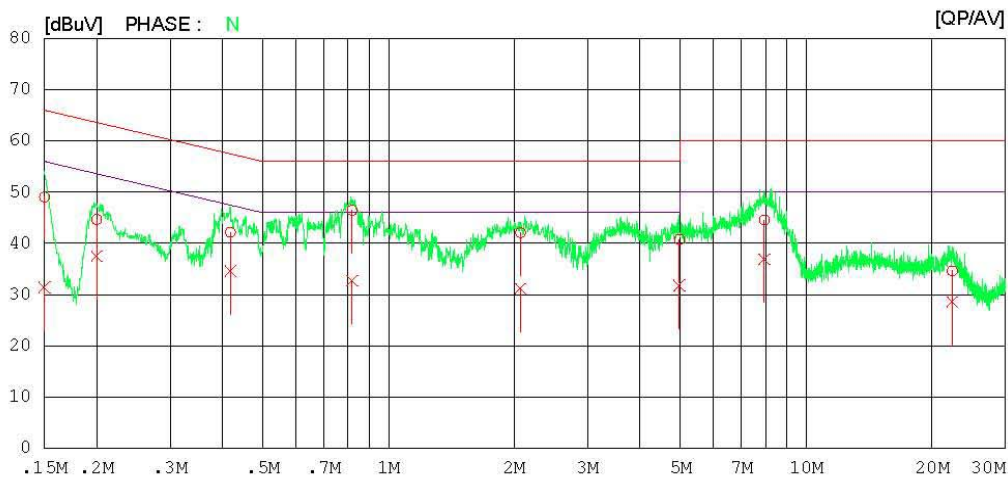
Digital EMC  
Date : 2013-02-08

Model No. : 50LA6205-UA  
Type :  
Serial No. :  
Test Condition : USB

Reference No. :  
Power Supply : 120 V 60 Hz  
Temp/Humi. : 21 °C 41 % R.H.  
Operator :

Memo :

LIMIT : CISPR22\_B QP  
CISPR22\_B AV



## Results of Conducted Emission

Digital EMC  
 Date : 2013-02-08

Model No. : 50LA6205-UA  
 Type :  
 Serial No. :  
 Test Condition : USB

Reference No. :  
 Power Supply : 120 V 60 Hz  
 Temp/Humi. : 21 °C 41 % 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	0.15012	48.8	31.2	0.2	49.0	31.4	66.0	56.0	17.0	24.6	N
2	0.20030	44.4	37.3	0.2	44.6	37.5	63.6	53.6	19.0	16.1	N
3	0.41838	41.9	34.4	0.2	42.1	34.6	57.5	47.5	15.4	12.9	N
4	0.81846	46.2	32.5	0.2	46.4	32.7	56.0	46.0	9.6	13.3	N
5	2.07100	41.8	30.8	0.3	42.1	31.1	56.0	46.0	13.9	14.9	N
6	4.96950	40.4	31.4	0.4	40.8	31.8	56.0	46.0	15.2	14.2	N
7	7.93450	44.0	36.4	0.5	44.5	36.9	60.0	50.0	15.5	13.1	N
8	22.37950	33.7	27.6	0.9	34.6	28.5	60.0	50.0	25.4	21.5	N
9	0.15000	49.3	32.8	0.2	49.5	33.0	66.0	56.0	16.5	23.0	L1
10	0.19925	42.0	35.4	0.2	42.2	35.6	63.6	53.6	21.4	18.0	L1
11	0.41699	42.1	34.6	0.2	42.3	34.8	57.5	47.5	15.2	12.7	L1
12	0.81846	45.0	31.2	0.2	45.2	31.4	56.0	46.0	10.8	14.6	L1
13	2.06950	40.0	29.5	0.3	40.3	29.8	56.0	46.0	15.7	16.2	L1
14	3.65900	41.1	31.4	0.3	41.4	31.7	56.0	46.0	14.6	14.3	L1
15	8.00650	44.0	36.0	0.5	44.5	36.5	60.0	50.0	15.5	13.5	L1
16	22.45200	32.4	25.3	0.9	33.3	26.2	60.0	50.0	26.7	23.8	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 0.8 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 <sup>th</sup> 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 (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 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 (dB $\mu$ V/m)	Quasi-peak (dB $\mu$ V/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 (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

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

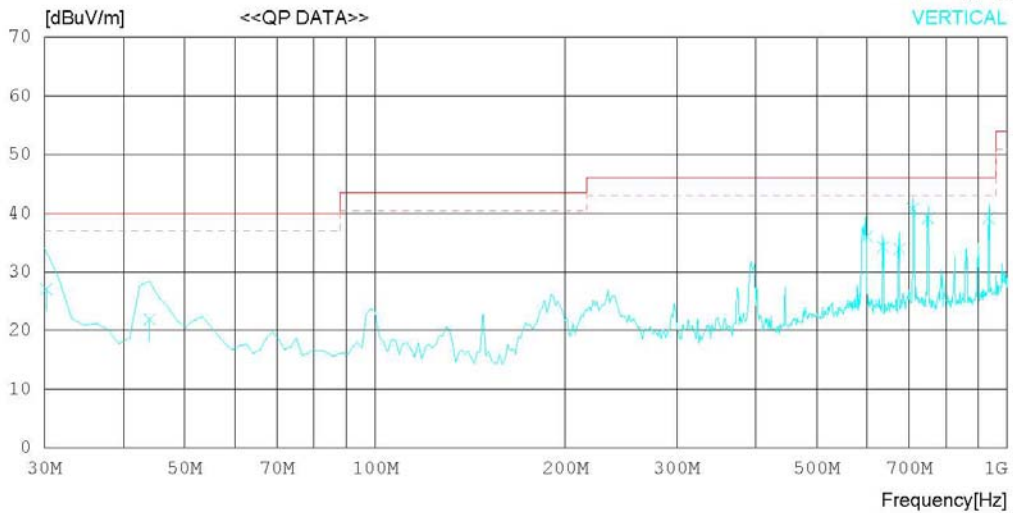
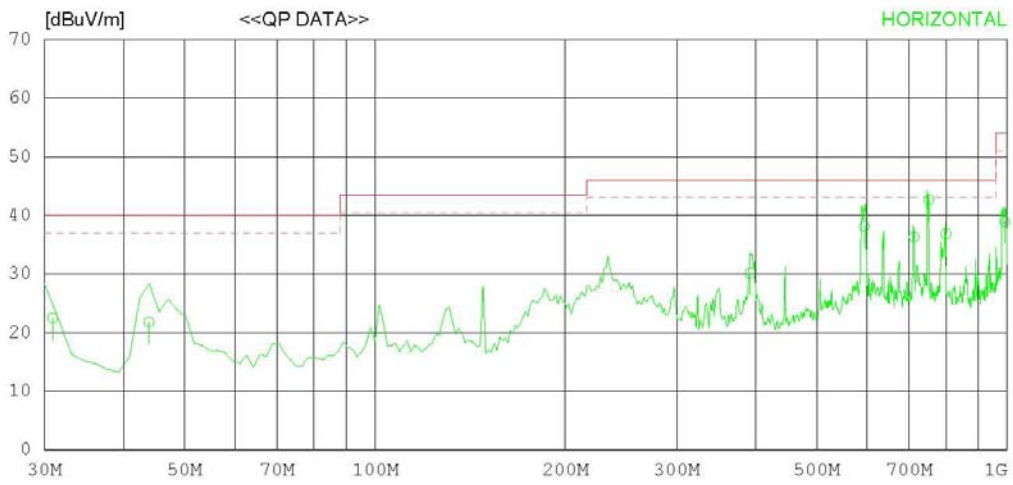
Date : 2013-02-07

Model Name : 50LA6205-UA  
Model No. :  
Serial No. :  
Test Condition : HDMI

Reference No. :  
Power Supply : 120 V 60 Hz  
Temp/Humi : 20 °C 38 % R.H.  
Operator :

Memo :

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



## RADIATED EMISSION

Date : 2013-02-07

Model Name : 50LA6205-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 38 % 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	30.914	28.0	17.4	0.9	23.8	22.5	40.0	17.5	201	141
2	43.890	31.2	13.7	1.1	24.2	21.8	40.0	18.2	400	136
3	392.174	34.2	15.9	3.5	23.5	30.1	46.0	15.9	100	144
4	594.274	38.8	18.6	4.1	23.4	38.1	46.0	7.9	100	138
5	712.182	36.8	18.7	4.6	23.8	36.3	46.0	9.7	100	151
6	751.964	42.3	19.3	4.6	23.6	42.6	46.0	3.4	400	133
7	799.918	35.5	20.0	4.8	23.5	36.8	46.0	9.2	299	150
8	990.383	34.2	22.1	5.4	22.8	38.9	54.0	15.1	201	142
----- Vertical -----										
9	30.226	32.2	17.8	0.9	23.8	27.1	40.0	12.9	199	141
10	43.994	31.3	13.7	1.1	24.2	21.9	40.0	18.1	400	148
11	600.038	36.6	18.7	4.2	23.4	36.1	46.0	9.9	100	137
12	636.508	35.1	18.6	4.2	23.6	34.3	46.0	11.7	400	152
13	676.112	34.7	18.6	4.4	23.7	34.0	46.0	12.0	199	149
14	709.374	41.3	18.7	4.6	23.8	40.8	46.0	5.2	400	136
15	749.224	38.9	19.3	4.6	23.6	39.2	46.0	6.8	100	138
16	934.748	35.5	21.3	5.4	23.0	39.2	46.0	6.8	100	142

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

**RADIATED EMISSION**

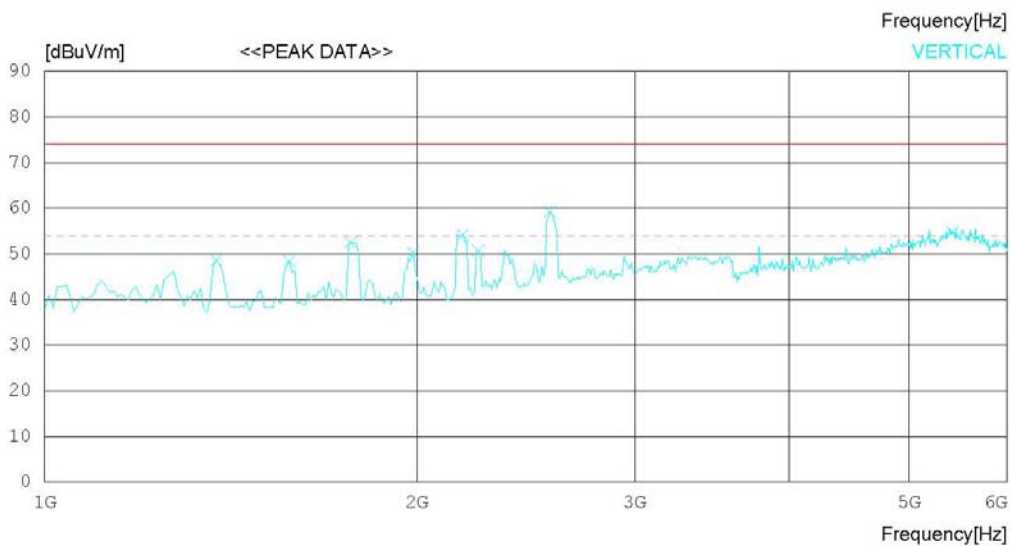
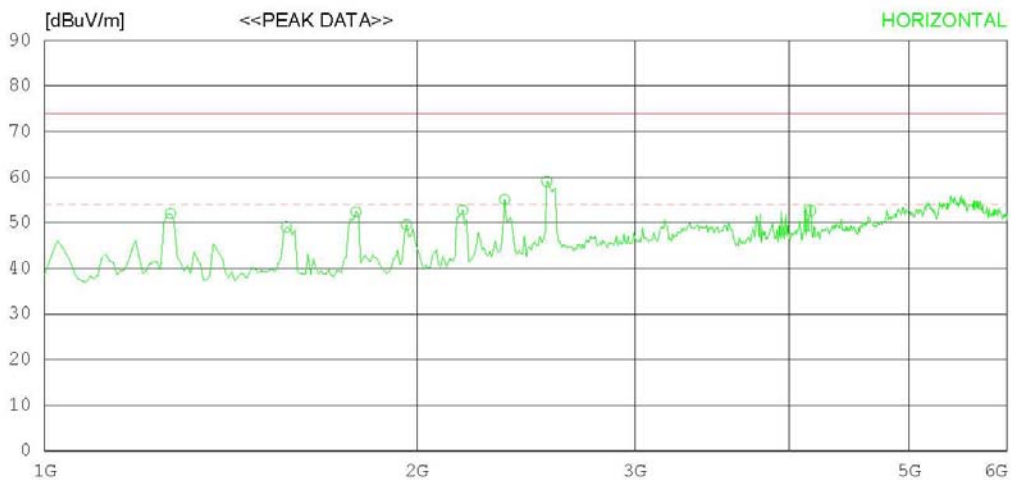
Date : 2013-02-07

Model Name : 50LA6205-UA  
Model No. :  
Serial No. :  
Test Condition : HDMI

Reference No. :  
Power Supply : 120 V 60 Hz  
Temp/Humi : 20 °C 38 % 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 : 2013-02-07

Model Name : 50LA6205-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 38 % 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	1264.423	49.5	24.3	6.7	28.5	52.0	74.0	22	100	162
2	1568.910	45.4	24.6	7.6	28.5	49.1	74.0	24.9	100	154
3	1785.256	48.3	24.6	8.0	28.5	52.4	74.0	21.6	100	154
4	1961.538	45.1	24.6	8.4	28.5	49.6	74.0	24.4	100	162
5	2177.886	46.9	25.6	8.8	28.5	52.8	74.0	21.2	100	147
6	2354.171	47.8	26.6	9.2	28.5	55.1	74.0	18.9	100	162
7	2546.481	50.3	27.6	9.6	28.4	59.1	74.0	14.9	100	162
8	4165.093	37.5	30.4	13.1	28.3	52.7	74.0	21.3	100	162
----- Vertical -----										
9	1376.602	45.5	24.5	7.1	28.5	48.6	74.0	25.4	100	158
10	1576.923	44.7	24.6	7.6	28.5	48.4	74.0	25.6	100	154
11	1769.230	48.4	24.6	8.0	28.5	52.5	74.0	21.5	100	146
12	1985.577	45.7	24.6	8.4	28.5	50.2	74.0	23.8	100	139
13	2177.886	48.3	25.6	8.8	28.5	54.2	74.0	19.8	100	146
14	2241.990	44.2	26.0	9.0	28.5	50.7	74.0	23.3	100	158
15	2562.507	50.3	27.6	9.7	28.4	59.2	74.0	14.8	100	156
16	5415.074	33.3	34.6	14.9	28.1	54.7	74.0	19.3	100	0

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

**RADIATED EMISSION**

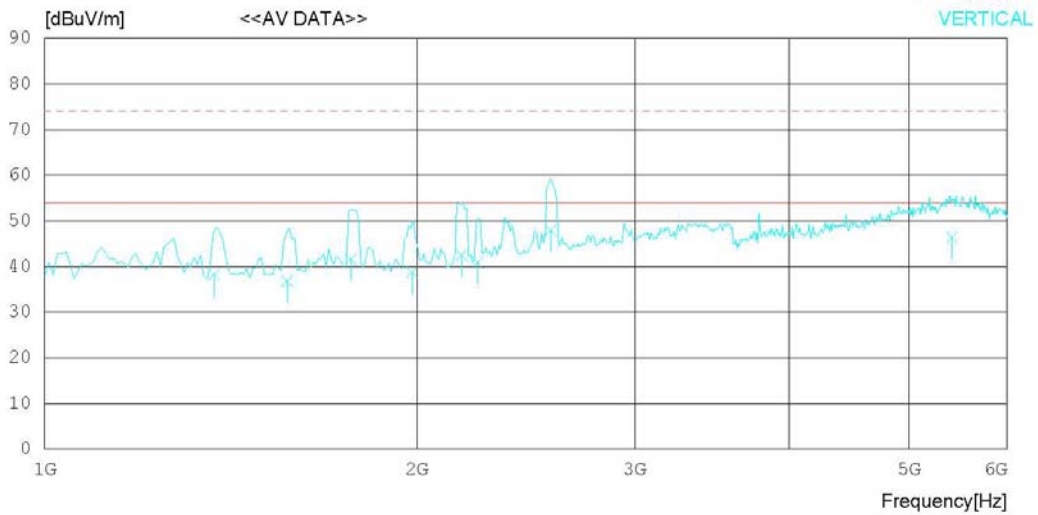
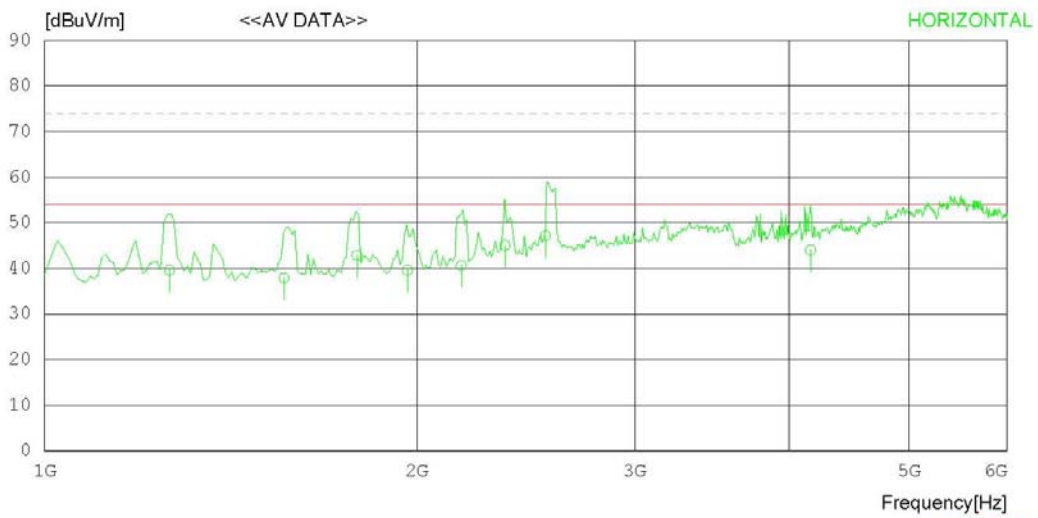
Date : 2013-02-07

Model Name : 50LA6205-UA  
Model No. :  
Serial No. :  
Test Condition : HDMI

Reference No. :  
Power Supply : 120 V 60 Hz  
Temp/Humi : 20 °C 38 % 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 : 2013-02-07

Model Name : 50LA6205-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 38 % 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	1261.629	37.1	24.3	6.7	28.5	39.6	54.0	14.4	100	136
2	1561.158	34.2	24.6	7.6	28.5	37.9	54.0	16.1	100	155
3	1788.621	38.8	24.6	8.0	28.5	42.9	54.0	11.1	100	149
4	1964.518	35.1	24.6	8.4	28.5	39.6	54.0	14.4	100	151
5	2171.528	34.8	25.5	8.8	28.5	40.6	54.0	13.4	100	135
6	2356.394	37.7	26.6	9.2	28.5	45.0	54.0	9.0	100	134
7	2540.385	38.4	27.6	9.6	28.4	47.2	54.0	6.8	100	127
8	4161.447	28.8	30.4	13.1	28.3	44.0	54.0	10.0	100	144
----- Vertical -----										
9	1371.847	35.2	24.5	7.0	28.5	38.2	54.0	15.8	100	146
10	1571.418	33.1	24.6	7.6	28.5	36.8	54.0	17.2	100	147
11	1768.502	37.5	24.6	8.0	28.5	41.6	54.0	12.4	100	136
12	1981.693	34.2	24.6	8.4	28.5	38.7	54.0	15.3	100	141
13	2173.369	36.6	25.6	8.8	28.5	42.5	54.0	11.5	100	138
14	2240.147	34.5	25.9	9.0	28.5	40.9	54.0	13.1	100	136
15	2566.987	38.9	27.7	9.7	28.4	47.9	54.0	6.1	100	142
16	5414.174	25.0	34.6	14.9	28.1	46.4	54.0	7.6	100	151

< USB MODE\_30 MHz ~ 1 GHz >

## RADIATED EMISSION

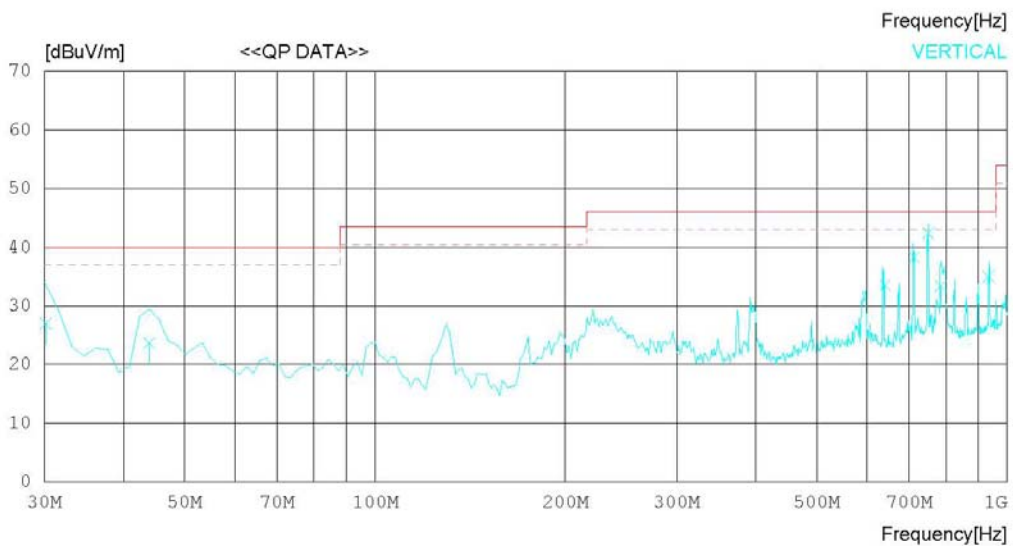
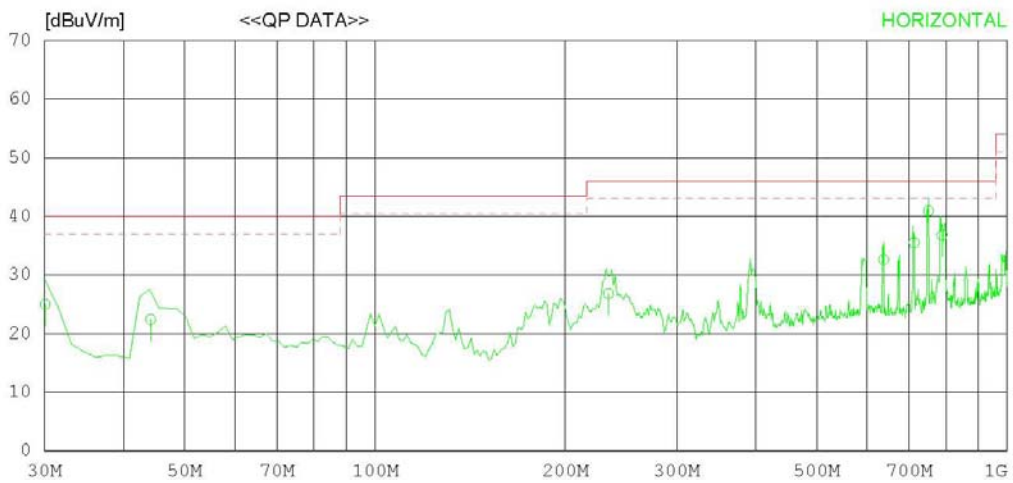
Date : 2013-02-07

Model Name : 50LA6205-UA  
 Model No. :  
 Serial No. :  
 Test Condition : USB

Reference No. :  
 Power Supply : 120 V 60 Hz  
 Temp/Humi : 20 °C 38 % R.H.  
 Operator :

Memo :

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



## RADIATED EMISSION

Date : 2013-02-07

Model Name : 50LA6205-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 38 % 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	30.071	30.2	17.8	0.8	23.8	25.0	40.0	15.0	100	139
2	44.140	31.8	13.7	1.1	24.2	22.4	40.0	17.6	100	141
3	234.188	36.3	11.8	2.5	23.8	26.8	46.0	19.2	400	150
4	637.814	33.4	18.6	4.2	23.6	32.6	46.0	13.4	400	138
5	712.255	36.0	18.7	4.6	23.8	35.5	46.0	10.5	201	136
6	750.949	40.6	19.3	4.6	23.6	40.9	46.0	5.1	400	142
7	788.262	35.7	19.8	4.8	23.5	36.8	46.0	9.2	100	155
----- Vertical -----										
8	30.160	32.2	17.8	0.8	23.8	27.0	40.0	13.0	400	148
9	43.990	33.1	13.7	1.1	24.2	23.7	40.0	16.3	199	144
10	641.158	34.4	18.6	4.2	23.6	33.6	46.0	12.4	100	139
11	712.102	38.8	18.7	4.6	23.8	38.3	46.0	7.7	100	151
12	750.399	42.1	19.3	4.6	23.6	42.4	46.0	3.6	100	129
13	785.414	32.3	19.8	4.8	23.5	33.4	46.0	12.6	400	131
14	934.077	31.3	21.3	5.4	23.0	35.0	46.0	11.0	100	144

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

**RADIATED EMISSION**

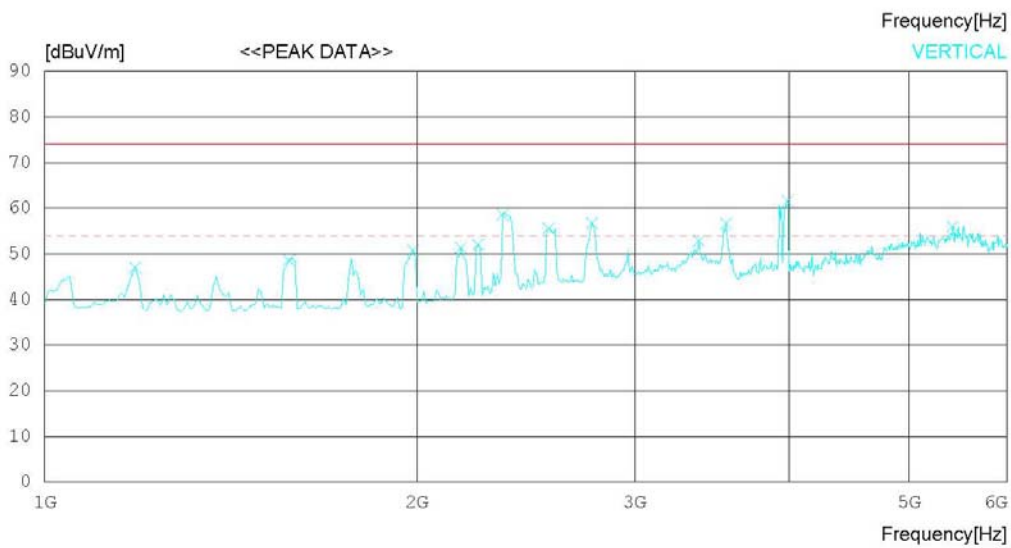
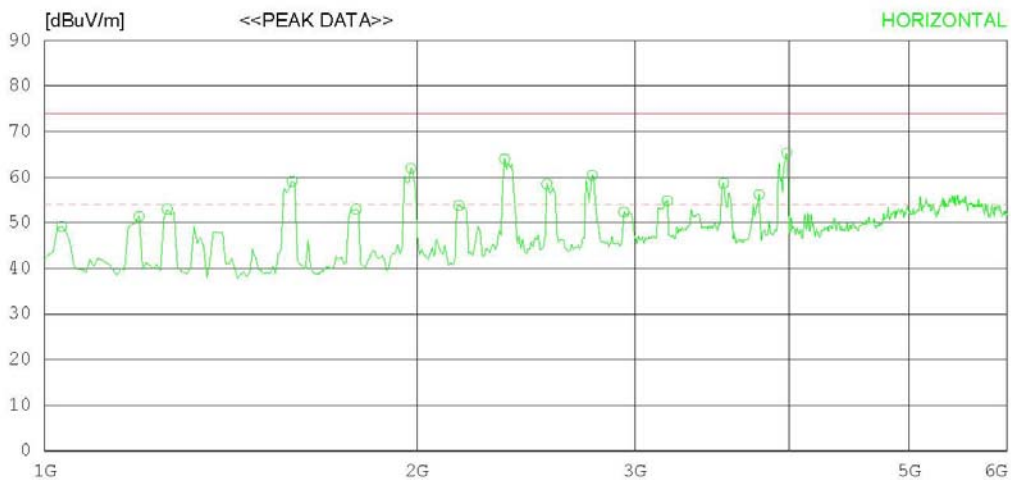
Date : 2013-02-07

Model Name : 50LA6205-UA  
Model No. :  
Serial No. :  
Test Condition : USB

Reference No. :  
Power Supply : 120 V 60 Hz  
Temp/Humi : 20 °C 38 % 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 : 2013-02-07

Model Name : 50LA6205-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 38 % 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	1032.051	61.2	23.9	5.9	41.8	49.2	74.0	24.8	100	218
2	1192.308	62.7	24.2	6.4	41.9	51.4	74.0	22.6	100	358
3	1256.410	63.9	24.3	6.6	41.8	53.0	74.0	21	100	236
4	1584.936	68.4	24.6	7.7	41.6	59.1	74.0	14.9	100	244
5	1785.256	62.2	24.6	8.0	41.8	53.0	74.0	21	100	358
6	1977.564	70.7	24.6	8.4	41.7	62.0	74.0	12	100	358
7	2161.860	61.2	25.5	8.8	41.7	53.8	74.0	20.2	100	358
8	2354.171	70.1	26.6	9.2	41.9	64.0	74.0	10	100	174
9	2546.481	63.3	27.6	9.6	42.0	58.5	74.0	15.5	100	221
10	2770.844	63.7	28.3	10.1	41.7	60.4	74.0	13.6	100	214
11	2939.115	55.0	28.8	10.4	41.8	52.4	74.0	21.6	100	255
12	3187.517	56.7	28.9	11.0	41.8	54.8	74.0	19.2	100	358
13	3540.086	59.9	29.0	11.8	42.0	58.7	74.0	15.3	100	358
14	3780.474	56.0	29.6	12.4	41.8	56.2	74.0	17.8	100	225
15	3980.798	64.3	30.1	12.9	42.0	65.3	74.0	8.7	100	209
----- Vertical -----										
16	1184.295	58.3	24.2	6.4	41.9	47.0	74.0	27	100	246
17	1576.923	58.0	24.6	7.6	41.6	48.6	74.0	25.4	100	254
18	1985.577	59.4	24.6	8.4	41.7	50.7	74.0	23.3	100	240
19	2169.873	58.8	25.5	8.8	41.7	51.4	74.0	22.6	100	244
20	2241.990	58.7	26.0	9.0	41.7	52.0	74.0	22	100	340
21	2346.158	64.7	26.6	9.2	41.9	58.6	74.0	15.4	100	242
22	2554.494	60.3	27.6	9.6	41.9	55.6	74.0	18.4	100	240
23	2770.844	60.0	28.3	10.1	41.7	56.7	74.0	17.3	100	240
24	3379.827	54.5	28.9	11.4	41.9	52.9	74.0	21.1	100	240
25	3556.112	57.9	29.0	11.8	42.0	56.7	74.0	17.3	100	248
26	3988.811	60.6	30.1	12.9	42.0	61.6	74.0	12.4	100	240
27	5423.086	48.9	34.7	14.9	42.5	56.0	74.0	18	100	296

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

**RADIATED EMISSION**

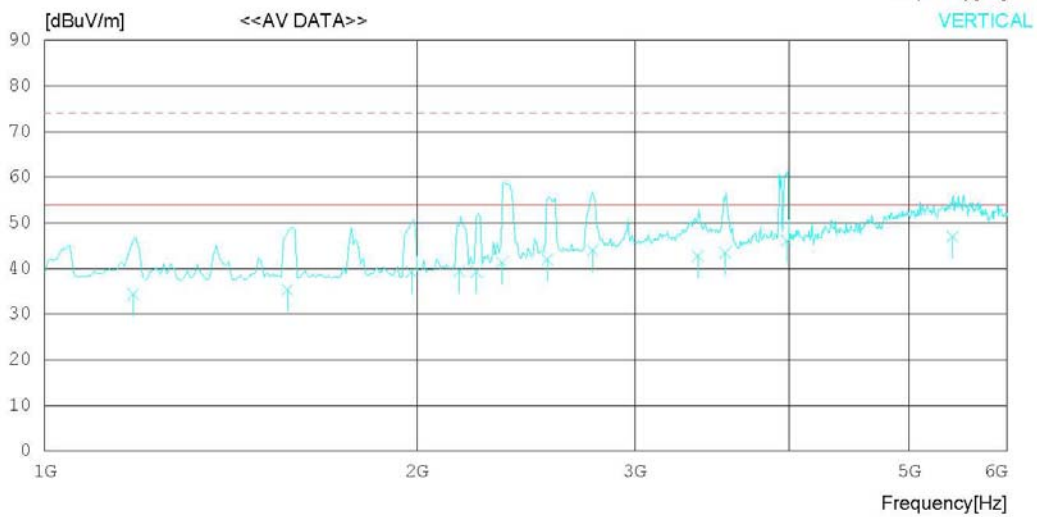
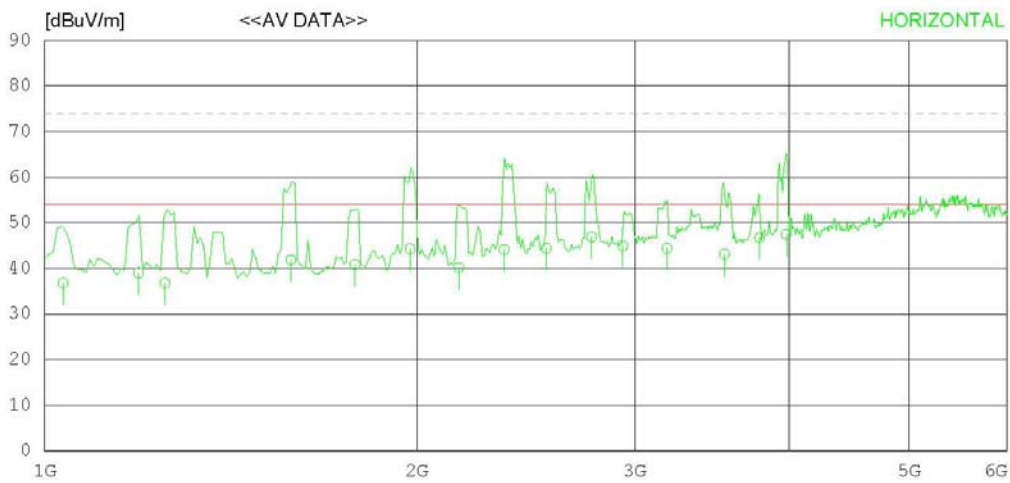
Date : 2013-02-07

Model Name : 50LA6205-UA  
Model No. :  
Serial No. :  
Test Condition : USB

Reference No. :  
Power Supply : 120 V 60 Hz  
Temp/Humi : 20 °C 38 % 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 : 2013-02-07

Model Name : 50LA6205-UA	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 38 % 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	1034.968	35.5	23.9	5.9	28.5	36.8	54.0	17.2	100	136
2	1191.326	36.9	24.2	6.4	28.5	39.0	54.0	15.0	100	148
3	1251.364	34.4	24.3	6.6	28.5	36.8	54.0	17.2	100	139
4	1582.154	38.1	24.6	7.7	28.5	41.9	54.0	12.1	100	140
5	1782.585	36.7	24.6	8.0	28.5	40.8	54.0	13.2	100	152
6	1974.915	39.8	24.6	8.4	28.5	44.3	54.0	9.7	100	154
7	2162.336	34.4	25.5	8.8	28.5	40.2	54.0	13.8	100	136
8	2352.147	36.8	26.6	9.2	28.5	44.1	54.0	9.9	100	147
9	2544.691	35.6	27.6	9.6	28.4	44.4	54.0	9.6	100	143
10	2768.269	36.9	28.3	10.1	28.4	46.9	54.0	7.1	100	135
11	2933.411	34.1	28.8	10.4	28.4	44.9	54.0	9.1	100	146
12	3184.859	33.0	28.9	10.9	28.4	44.4	54.0	9.6	100	137
13	3544.959	30.6	29.0	11.8	28.3	43.1	54.0	10.9	100	133
14	3784.602	33.0	29.6	12.4	28.3	46.7	54.0	7.3	100	145
15	3977.122	32.8	30.1	12.9	28.3	47.5	54.0	6.5	100	139
----- Vertical -----										
16	1179.915	32.3	24.2	6.4	28.5	34.4	54.0	19.6	100	143
17	1571.636	31.6	24.6	7.6	28.5	35.3	54.0	18.7	100	139
18	1981.474	34.7	24.6	8.4	28.5	39.2	54.0	14.8	100	147
19	2164.658	33.6	25.5	8.8	28.5	39.4	54.0	14.6	100	136
20	2233.695	32.9	25.9	9.0	28.5	39.3	54.0	14.7	100	129
21	2344.205	34.1	26.5	9.2	28.5	41.3	54.0	12.7	100	148
22	2550.331	33.2	27.6	9.6	28.4	42.0	54.0	12.0	100	151
23	2775.507	34.0	28.3	10.1	28.4	44.0	54.0	10.0	100	139
24	3374.718	30.8	28.9	11.4	28.4	42.7	54.0	11.3	100	146
25	3550.209	31.0	29.0	11.8	28.3	43.5	54.0	10.5	100	143
26	3980.471	31.4	30.1	12.9	28.3	46.1	54.0	7.9	100	142
27	5421.669	25.5	34.7	14.9	28.1	47.0	54.0	7.0	100	139

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## Appendix 1

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### 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
<input type="checkbox"/> SPECTRUM ANALYZER	8591E	H/P	3649A05889	2012.03.05	2013.03.05
<input type="checkbox"/> RFI/FIELD INTENSITY METER	KNM-2402	KYORITSU	4N-170-3	2012.07.02	2013.07.02
<input type="checkbox"/> LISN	KNW-407	KYORITSU	8-317-8	2013.01.08	2014.01.08
<input type="checkbox"/> LISN	PMM L2-16B	NARDA S.T.S. / PMM	000WX20305	2012.07.25	2013.07.25
<input type="checkbox"/> 50 OHM TERMINATOR	CT-01	TME	N/A	2013.01.08	2014.01.08
<input checked="" type="checkbox"/> EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2012.03.06	2013.03.06
<input checked="" type="checkbox"/> LISN	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2012.09.18	2013.09.18
<input checked="" type="checkbox"/> LISN	LISN1600	TTI	197204	2012.07.02	2013.07.02
<input checked="" type="checkbox"/> 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
<input checked="" type="checkbox"/> EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2013.01.08	2014.01.08
<input checked="" type="checkbox"/> BILOG ANTENNA	CBL6112B	SCHAFFNER	2737	2012.11.06	2014.11.06
<input checked="" type="checkbox"/> HORN ANTENNA	BBHA9120A	SCHWARZBECK	322	2012.05.15	2014.05.15
<input checked="" type="checkbox"/> AMPLIFIER	8447E	H/P	2945A02865	2013.01.08	2014.01.08
<input checked="" type="checkbox"/> AMPLIFIER	MLA-100M18-B01-25	TSJ	1719458	2012.06.04	2013.06.04
<input type="checkbox"/> SPECTRUM ANALYZER	E4411B	AGILENT	US41062735	2012.07.11	2013.07.11
<input type="checkbox"/> AMPLIFIER	8447D	AGILENT	2443A03690	2012.07.01	2013.07.01
<input type="checkbox"/> EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2012.03.06	2013.03.06
<input type="checkbox"/> BICONICAL ANT.	VHA 9103	SCHWARZBECK	91032789	2012.04.10	2014.04.10
<input type="checkbox"/> LOG-PERIODIC ANT.	UHALP 9108A	SCHWARZBECK	590	2012.04.10	2014.04.10
<input type="checkbox"/> BICONICAL ANT.	VHA 9103	SCHWARZBECK	91031946	2012.03.12	2014.03.12
<input type="checkbox"/> LOG-PERIODIC ANT.	UHALP 9108-A1	SCHWARZBECK	1098	2012.03.12	2014.03.12
<input type="checkbox"/> AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2012.03.05	2013.03.05

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**Appendix 2**

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**Report Revision History**

Revision Date	Description	Revised By	Revision Reviewed By
None	Original	N/A	N/A