

EMC TEST REPORT

Test item : LASER PROJECTOR
Model No. : SA565-JP
Order No. : 1212-03065
Date of receipt : 2012-12-27
Test duration : 2013-01-16 ~ 2013-01-17
Use of report : FCC CoC Marking
Date of Issue : 2013-01-28

Applicant : LG Electronics USA.

1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States.

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
(Class B personal computers and peripherals)

Test environment : Temperature : (20 ~ 21) °C,
Humidity : 40 % 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.

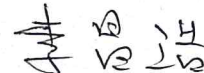
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Tested by:

Reviewed by:



Manager
MyungJin Song



General Manager
ChangHo Lee

PRESIDENT OF DIGITAL EMC CO., LTD.

CONTENTS

1. General Remarks	3
2. Test Laboratory	3
3. General Information of EUT	4
4. Test Summary	6
4.1 Applied standards and test results	6
4.2 Test environment and conditions	6
4.3 Test result Summary	6
5. Test Set-up and operation mode	7
5.1 Principle of Configuration Selection	7
5.2 Test Operation Mode	7
5.3 Support Equipment Used	7
6. Test Results : Emission	8
6.1 Conducted Disturbance	8
6.2 Radiated Disturbance	15
Appendix 1	35
List of Test and Measurement Instruments	35
Appendix 2	37
Report Revision History	37

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.	SA565-JP
Add Model No.	N/A
Wifi Module Model No.	TWFM-B003D
Serial No	Proto type
FCC ID	BEJSA565JP
Rating Power Supply	AC 100-240 V, 50/60 Hz, 2.2 A
Clock Frequency	400 MHz
Supplied Power for Test	AC 120 V, 60 Hz
Applicant	LG Electronics USA. 1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States.
Manufacturer	LG Electronics Inc. 222 LG-ro Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do 451-713, Korea

HDMI/DVI-DTV/WiDi mode supported

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
480p	31.47	60
	31.47	59.94
	31.5	60
576p	31.25	50
720P	37.5	50
	44.96	59.94
	45	60
1080i	28.125	50
	33.75	60
1080p	56.25	50
	67.432	59.94
	67.5	60
	67.432	59.939
	27	24
	26.97	23.976
	33.75	30
	33.71	29.97

Supported Monitor Display

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720*400	31.469	70.08
640*480	31.469	59.94
800*600	37.879	60.31
1024*768	48.363	60.00
1152*864	54.348	60.053
1280*800	49.68	60
1280*1024	63.981	60.020
1400*1050	65.317	59.979
1680*1050	65.3	60

Supported Video Codecs

Maximum resolution: 1920 x 1080 @30p

Extension	Codec	
.asf .wmv	Video	VC-1 Advanced Profile, VC-1 Simple and Main Profile
	Audio	WMA Standard, WMA 9 Professional
.divx .avi	Video	DivX3.11, DivX4, DivX5, DivX6, XviD, H.264/AVC, Motion Jpeg
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, Dolby Digital Plus, LPCM, ADPCM, DTS
.mp4 .m4v .mov	Video	H.264/AVC, MPEG-4 Part 2
	Audio	AAC
.mkv	Video	H.264/AVC
	Audio	HE-AAC, Dolby Digital
.ts .trp .tp	Video	H.264/AVC, MPEG-2, VC-1
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3) Dolby Digital, Dolby Digital Plus, AAC
.vob	Video	MPEG-1, MPEG-2
	Audio	Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM
.mpg .mpeg .dat	Video	MPEG-1
	Audio	MPEG-1 Layer I, II

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	01-16	21	40
Radiated Disturbance	01-17	20	40

4.3 Test result Summary

(1) Conducted Emission (HDMI MODE, USB MODE)

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
0.18945	L1	38.5	Average	54.1	15.6
0.18929	L1	38.5	Average	54.1	15.6

(2) Radiated Emission (HDMI MODE)

Frequency [MHz]	Pol.	Result [dB(μ V/m)]	Detector	Limit [dB(μ V/m)]	Margin [dB]
50.208	H	33.1	Quasi-Peak	40.0	6.9
48.654	V	33.1	Quasi-Peak	40.0	6.9

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

- RGB MODE : 1680 x 1050 Resolution - 'H' Characters on the monitor screen, continuous scroll.
- HDMI MODE : 1920 x 1080 Resolution - 'H' Characters on the monitor screen, continuous scroll.
- USB MODE : USB file play 1920x1080 Resolution

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		
				RGB	1.8	Shield		
				RS232	1.8	Non-shield		
				USB	1.8	Non-shield		
				USB	1.8	Non-shield		
				USB	1.8	Non-shield		
KEYBOARD	SKG-3000UB	TAKB601233M	MONITEREY INTERNATIONAL CORP	USB	1.8	Shield	Plastic	DOC
MOUSE	1094	X817158-002	LOGITECH Inc.	USB	1.8	Shield	Plastic	DOC
CD/DVD PLAYER	DVP-NS92V	2000407	SONY EMCS	POWER AV	1.8 1.6	Non-shield Non-shield	Plastic	VER
USB MEMORY	Cruzer Z37	N/A	Sandisk	USB	-	-	-	DOC
PRINTER	SRP-770	N/A	BICSOLON	POWER USB	1.8 1.8	Non-shield	Plastic	DOC
HEAD SET	COV903	N/A	COSY	STEREO	1.8	Non-shield	Plastic	DOC
Interactive Dongle	AN-IP100D	N/A	LG Electronics Inc	-	-	-	-	-
Interactive pen	AN-IP100	N/A	LG Electronics Inc	-	-	-	-	-

6. Test Results : Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

In the range of 0.15 MHz to 30 MHz, the conducted disturbance was measured and set-up was made accordance with **ANSI C63.4**.

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 0.4 m from the conducting wall of the shielded room.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Connect the EUT's power source lines to the appropriate power mains / peripherals through the LISN. All the other peripherals are connected to the 2nd LISN, if any.

Unused measuring port of the LISN was resistively terminated by 50 ohm terminator.

The measuring port of the LISN for EUT was connected to spectrum analyzer.

Using conducted emission test software, the emissions were scanned with peak detector mode.

After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and Average detector.

By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.

For further description of the configuration refer to the picture of the test set-up.

6.1.2 Limit for Conducted Disturbance

(1) Conducted disturbance at mains ports.

Frequency range (MHz)	Limits dB(μV)			
	Quasi-peak		Average	
	Class A	Class B	Class A	Class B
0.15 to 0.50	79	66 to 56	66	56 to 46
0.50 to 5	73	56	60	46
5 to 30		60		50

Note 1 The lower limit shall apply at the transition frequencies.
 Note 2 The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

- Note) 1. Emission Level = Reading Value + Correction Factor.
 2. Correction Factor = Cable Loss + Insertion Loss of LISN
 3. Margin = Limit - Emission level

Test Result

< HDMI MODE >



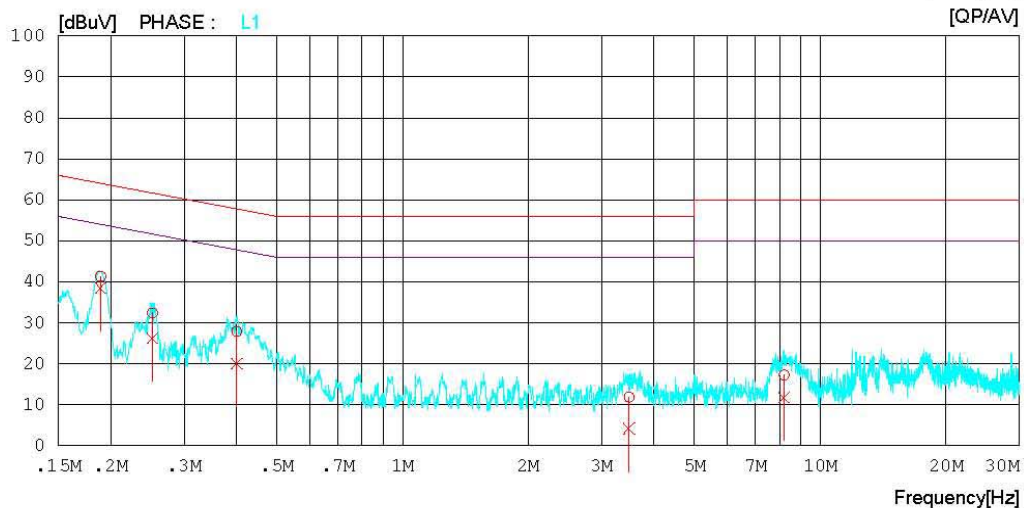
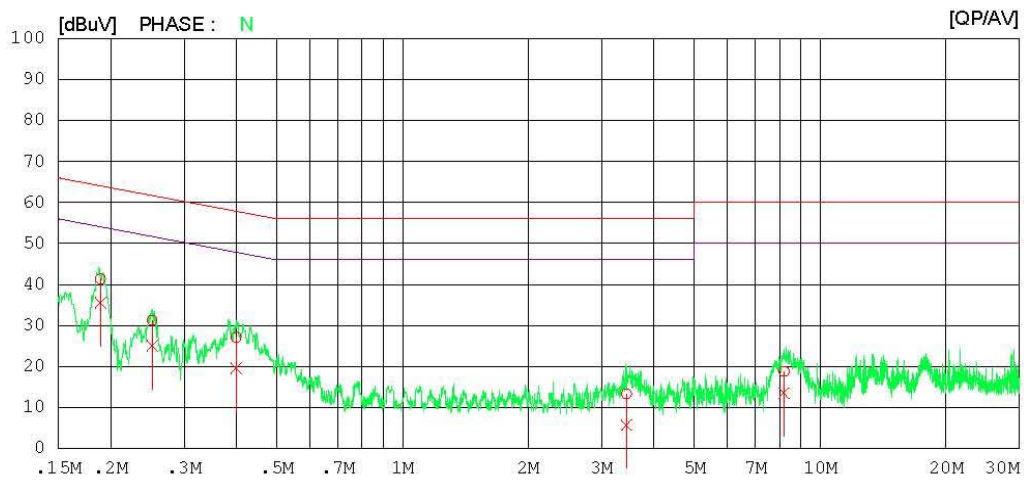
Results of Conducted Emission

Digital EMC
Date : 2013-01-16

Model No.	: SA565-JP	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 40 %R.H.
Test Condition	: HDMI	Operator	:

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2013-01-16

Model No.	: SA565-JP	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 40 %R.H.
Test Condition	: HDMI	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	0.18929	41.1	35.3	0.2	41.3	35.5	64.1	54.1	22.8	18.6	N
2	0.25170	31.1	24.8	0.2	31.3	25.0	61.7	51.7	30.4	26.7	N
3	0.39978	26.9	19.4	0.2	27.1	19.6	57.9	47.9	30.8	28.3	N
4	3.43950	13.0	5.4	0.3	13.3	5.7	56.0	46.0	42.7	40.3	N
5	8.19300	18.2	12.9	0.6	18.8	13.5	60.0	50.0	41.2	36.5	N
6	0.18945	41.1	38.3	0.2	41.3	38.5	64.1	54.1	22.8	15.6	L1
7	0.25205	32.2	26.1	0.2	32.4	26.3	61.7	51.7	29.3	25.4	L1
8	0.40053	27.7	19.9	0.2	27.9	20.1	57.8	47.8	29.9	27.7	L1
9	3.48950	11.6	3.9	0.3	11.9	4.2	56.0	46.0	44.1	41.8	L1
10	8.19900	16.7	11.2	0.6	17.3	11.8	60.0	50.0	42.7	38.2	L1

< RGB MODE >



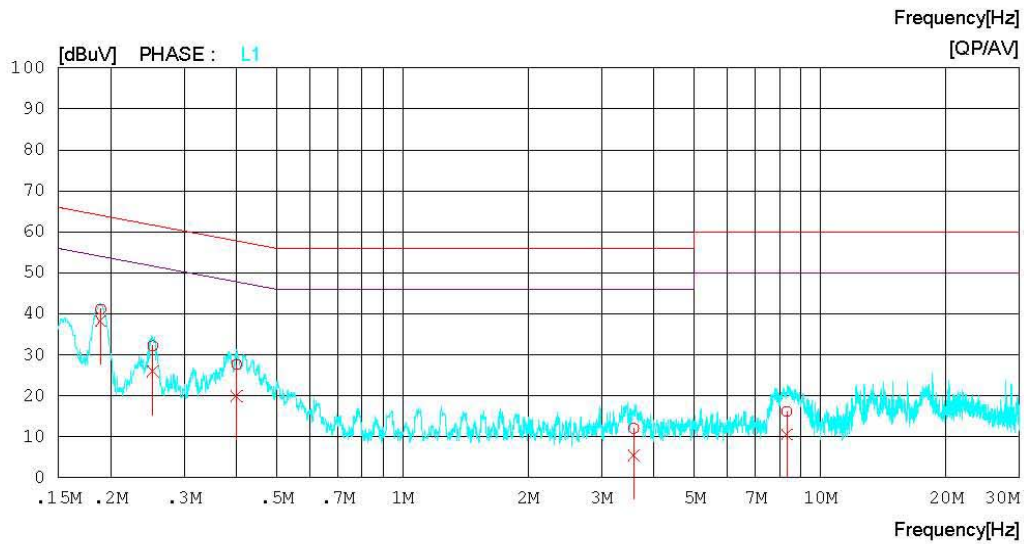
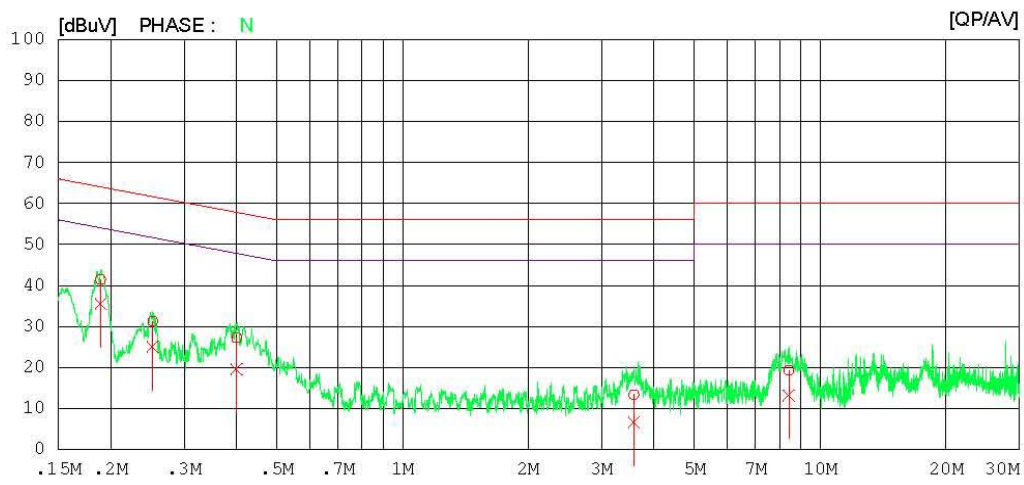
Results of Conducted Emission

Digital EMC
 Date : 2013-01-16

Model No.	: SA565-JP	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 40 %R.H.
Test Condition	: RGB	Operator	:

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2013-01-16

Model No.	: SA565-JP	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 40 %R.H.
Test Condition	: RGB	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	0.18930	41.2	35.3	0.2	41.4	35.5	64.1	54.1	22.7	18.6	N
2	0.25253	31.1	24.8	0.2	31.3	25.0	61.7	51.7	30.4	26.7	N
3	0.40054	27.0	19.4	0.2	27.2	19.6	57.8	47.8	30.6	28.2	N
4	3.58000	13.0	6.2	0.3	13.3	6.5	56.0	46.0	42.7	39.5	N
5	8.41400	18.6	12.5	0.7	19.3	13.2	60.0	50.0	40.7	36.8	N
6	0.18941	40.9	38.1	0.2	41.1	38.3	64.1	54.1	23.0	15.8	L1
7	0.25259	32.0	25.8	0.2	32.2	26.0	61.7	51.7	29.5	25.7	L1
8	0.40065	27.5	19.7	0.2	27.7	19.9	57.8	47.8	30.1	27.9	L1
9	3.57850	11.8	5.2	0.3	12.1	5.5	56.0	46.0	43.9	40.5	L1
10	8.32650	15.5	9.9	0.7	16.2	10.6	60.0	50.0	43.8	39.4	L1

< USB MODE >



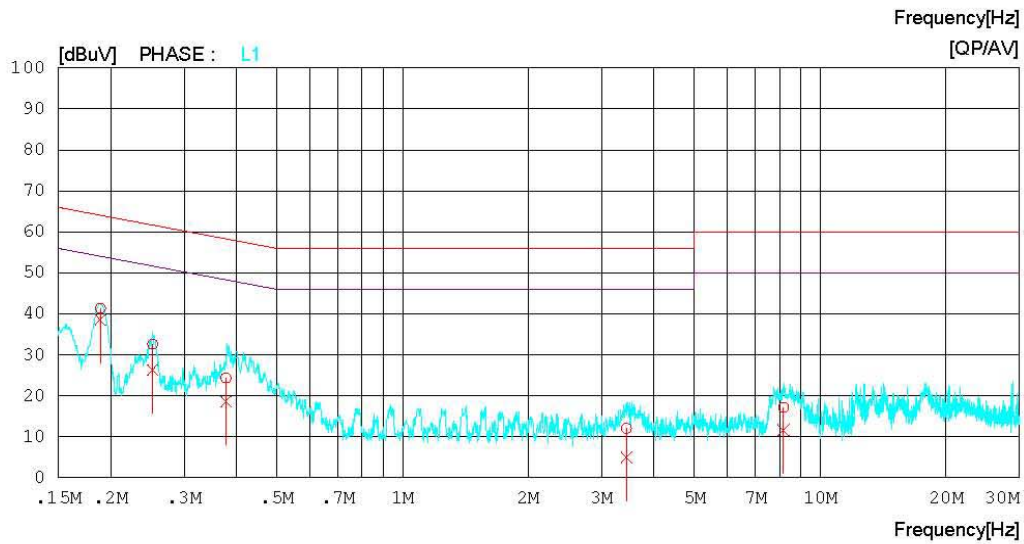
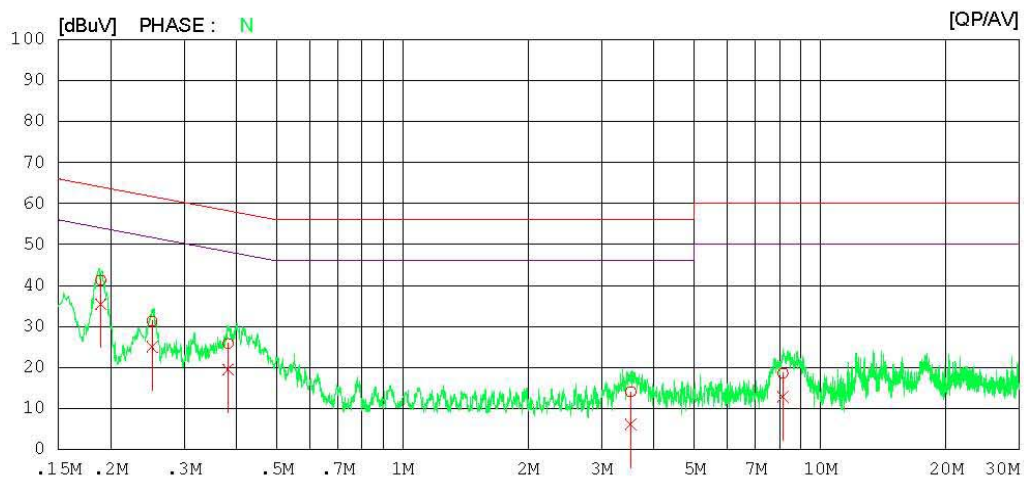
Results of Conducted Emission

Digital EMC
 Date : 2013-01-16

Model No.	: SA565-JP	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 40 %R.H.
Test Condition	: USB	Operator	:

Memo :

LIMIT : CISPR22_B QP
 CISPR22_B AV



Results of Conducted Emission

Digital EMC
 Date : 2013-01-16

Model No.	: SA565-JP	Reference No.	:
Type	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi.	: 21 °C 40 %R.H.
Test Condition	: USB	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	0.18963	41.1	35.2	0.2	41.3	35.4	64.1	54.1	22.8	18.7	N
2	0.25178	31.1	24.8	0.2	31.3	25.0	61.7	51.7	30.4	26.7	N
3	0.38250	25.7	19.3	0.2	25.9	19.5	58.2	48.2	32.3	28.7	N
4	3.52300	13.8	5.8	0.3	14.1	6.1	56.0	46.0	41.9	39.9	N
5	8.14650	18.0	12.3	0.6	18.6	12.9	60.0	50.0	41.4	37.1	N
6	0.18929	41.2	38.3	0.2	41.4	38.5	64.1	54.1	22.7	15.6	L1
7	0.25219	32.4	26.1	0.2	32.6	26.3	61.7	51.7	29.1	25.4	L1
8	0.37803	24.1	18.4	0.2	24.3	18.6	58.3	48.3	34.0	29.7	L1
9	3.43950	11.8	4.6	0.3	12.1	4.9	56.0	46.0	43.9	41.1	L1
10	8.17000	16.5	11.1	0.6	17.1	11.7	60.0	50.0	42.9	38.3	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 10m away from the interference receiving antenna in the **10m semi-anechoic chamber**.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m above the reference ground plane continuously to determine associated with higher emission levels and record them.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

For below 1 GHz frequency range, Quasi-Peak detector with 120 kHz RBW was used.

Also Peak and Average detector with 1 MHz RBW were used for above 1 GHz frequency range.

For further description of the configuration refer to the picture of the test set-up.

6.2.2 Limit for Radiated Disturbance

- The test frequency range of Radiated Disturbance measurements are listed below.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1 000
108 – 500	2 000
500 – 1 000	5 000
Above 1 000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

(1) Limit for Radiated Emission below 1 000MHz

Frequency range (MHz)	Class A Equipment (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 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 μ V/m)	Quasi-peak (dB μ 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 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

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 >

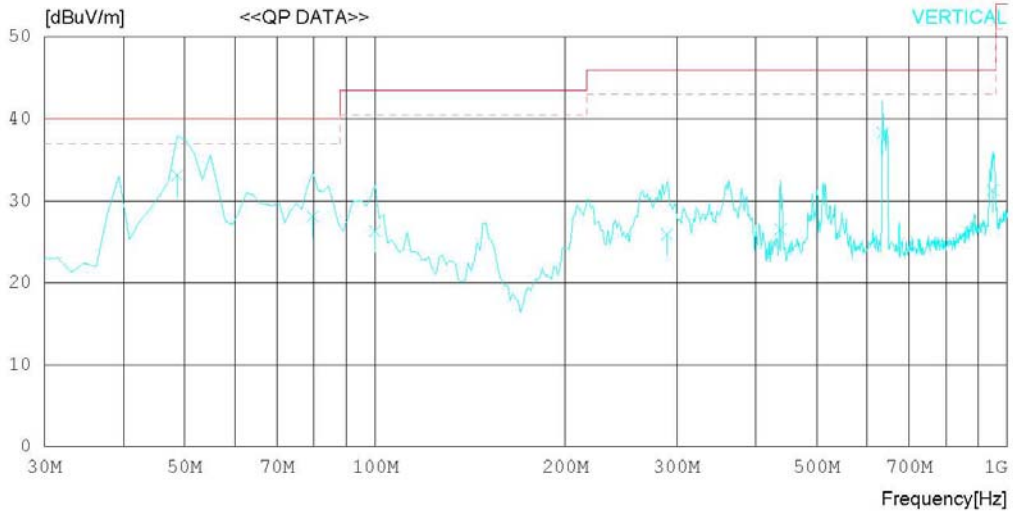
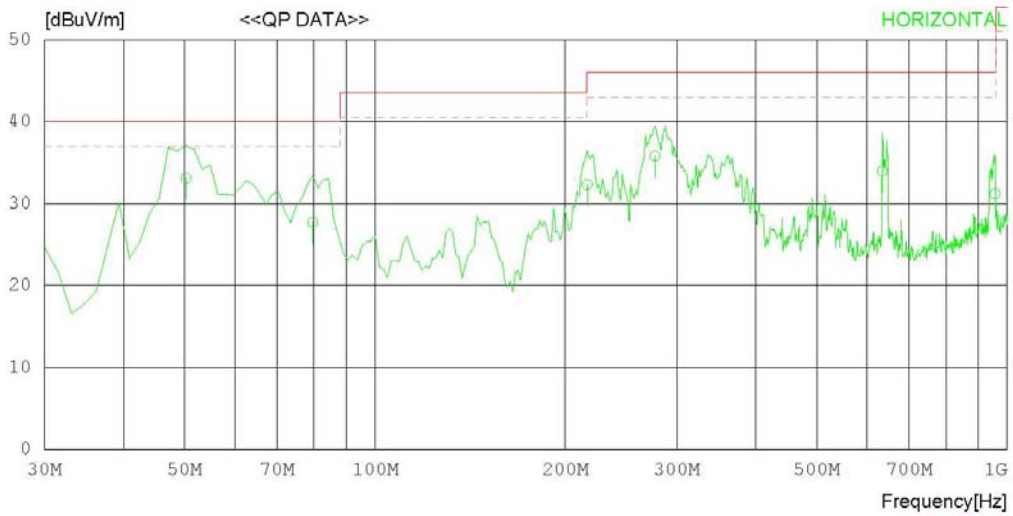
RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % R.H.
Test Condition	: HDMI	Operator	:

Memo :

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



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % 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	50.208	47.8	8.3	1.4	24.4	33.1	40.0	6.9	299	1
2	79.744	43.3	7.1	1.6	24.3	27.7	40.0	12.3	400	197
3	216.539	43.1	10.7	2.4	23.9	32.3	46.0	13.7	100	167
4	277.164	43.5	13.3	2.7	23.7	35.8	46.0	10.2	100	268
5	634.695	34.8	18.6	4.2	23.6	34.0	46.0	12.0	199	39
6	956.477	27.1	21.6	5.4	22.9	31.2	46.0	14.8	199	358
----- Vertical -----										
7	48.654	46.3	9.8	1.3	24.3	33.1	40.0	6.9	100	358
8	79.744	43.7	7.1	1.6	24.3	28.1	40.0	11.9	100	358
9	99.952	38.3	10.7	1.4	24.1	26.3	43.5	17.2	100	355
10	289.599	33.3	13.5	2.8	23.7	25.9	46.0	20.1	200	1
11	437.274	29.8	16.5	3.5	23.3	26.5	46.0	19.5	100	185
12	634.695	39.1	18.6	4.2	23.6	38.3	46.0	7.7	100	358
13	948.705	27.3	21.5	5.4	22.9	31.3	46.0	14.7	301	0

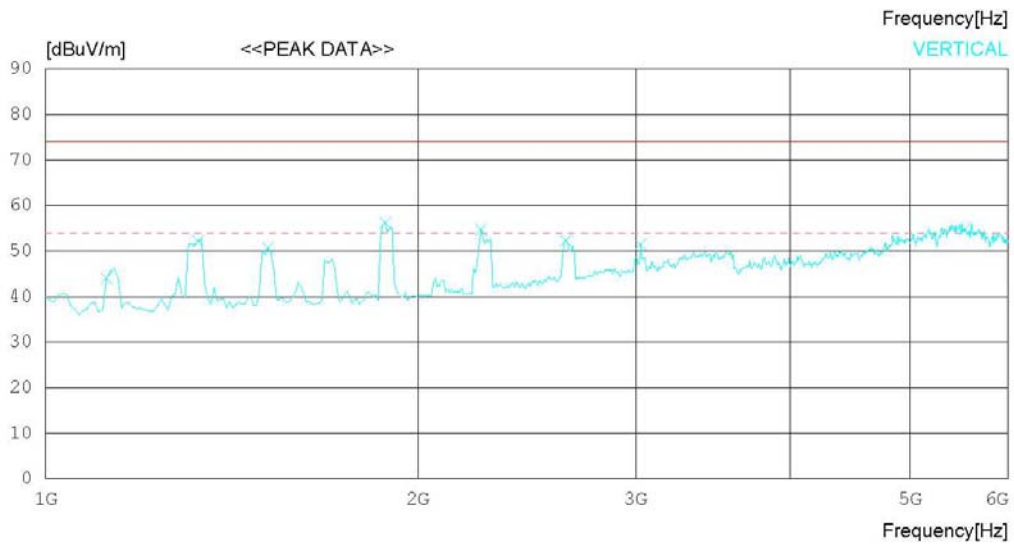
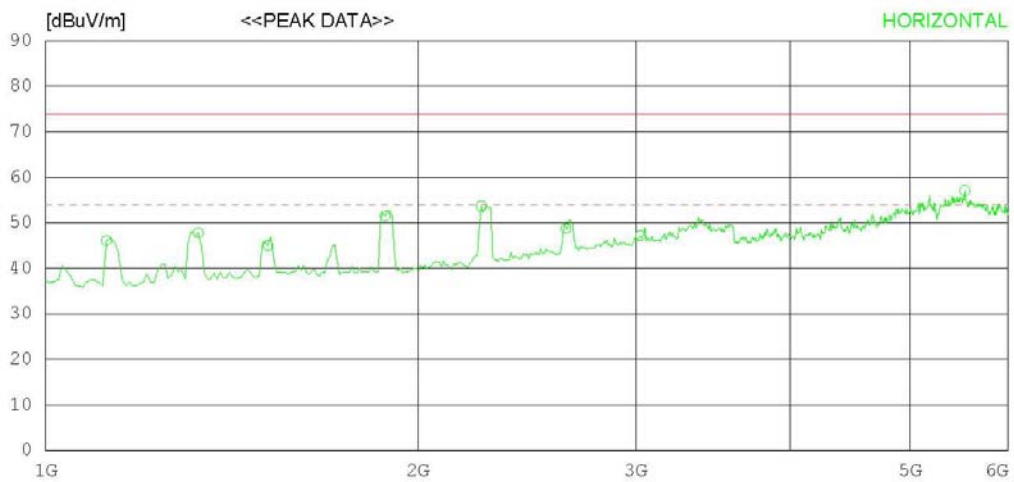
< HDMI MODE_(1 ~ 6) GHz_Peak >

RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % 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)



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % 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	1120.192	44.4	24.0	6.2	28.5	46.1	74.0	27.9	100	358
2	1328.526	44.9	24.5	6.9	28.5	47.8	74.0	26.2	100	146
3	1512.820	41.1	24.9	7.5	28.5	45.0	74.0	29	100	146
4	1881.410	46.7	25.1	8.2	28.5	51.5	74.0	22.5	100	358
5	2250.003	47.1	26.1	9.0	28.5	53.7	74.0	20.3	100	130
6	2634.624	39.9	27.5	9.8	28.4	48.8	74.0	25.2	100	141
7	3027.258	36.2	28.8	10.6	28.4	47.2	74.0	26.8	100	358
8	5535.264	35.3	35.1	14.9	28.2	57.1	74.0	16.9	100	358
----- Vertical -----										
9	1120.192	42.3	24.0	6.2	28.5	44.0	74.0	30	100	141
10	1328.526	49.3	24.5	6.9	28.5	52.2	74.0	21.8	100	164
11	1512.820	46.8	24.9	7.5	28.5	50.7	74.0	23.3	100	140
12	1881.410	51.4	25.1	8.2	28.5	56.2	74.0	17.8	100	131
13	2250.003	48.1	26.1	9.0	28.5	54.7	74.0	19.3	100	276
14	2634.624	43.4	27.5	9.8	28.4	52.3	74.0	21.7	100	162
15	3027.258	40.5	28.8	10.6	28.4	51.5	74.0	22.5	100	168
16	5535.264	33.0	35.1	14.9	28.2	54.8	74.0	19.2	100	28

< HDMI MODE_(1 ~ 6) GHz_Average >

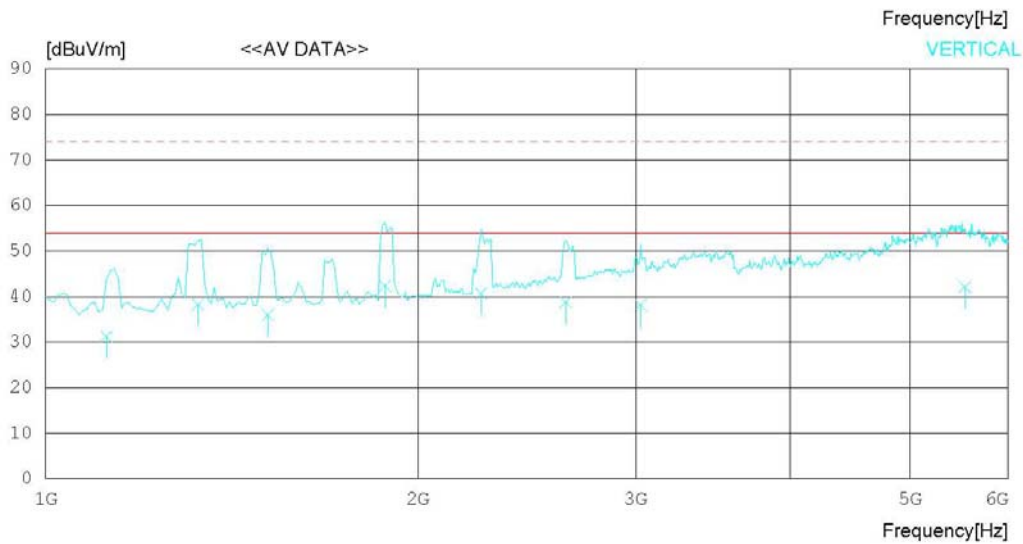
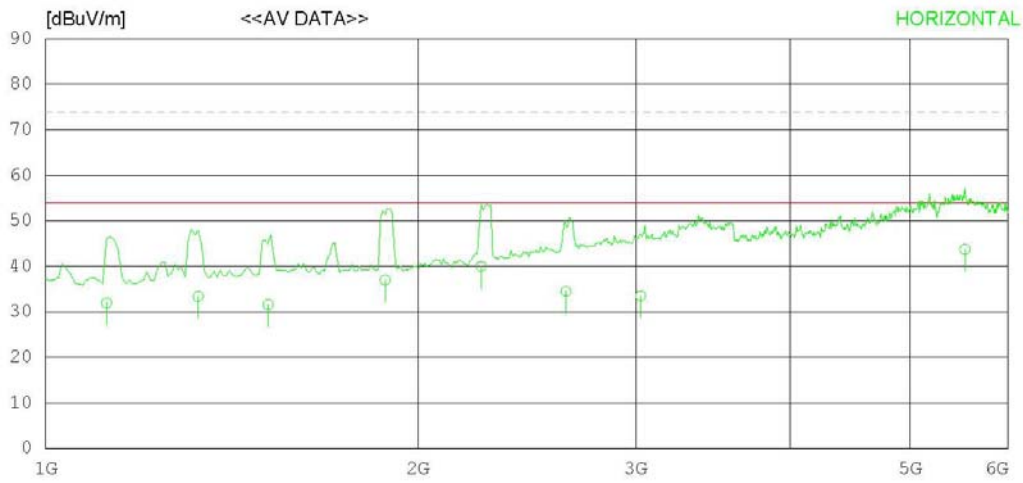
RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20°C 40 % 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)



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % 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	1120.192	30.3	24.0	6.2	28.5	32.0	54.0	22.0	100	358
2	1328.526	30.5	24.5	6.9	28.5	33.4	54.0	20.6	100	146
3	1512.820	27.7	24.9	7.5	28.5	31.6	54.0	22.4	100	146
4	1881.410	32.2	25.1	8.2	28.5	37.0	54.0	17.0	100	358
5	2250.003	33.4	26.1	9.0	28.5	40.0	54.0	14.0	100	130
6	2634.624	25.6	27.5	9.8	28.4	34.5	54.0	19.5	100	141
7	3027.258	22.5	28.8	10.6	28.4	33.5	54.0	20.5	100	358
8	5535.264	21.9	35.1	14.9	28.2	43.7	54.0	10.3	100	358
----- Vertical -----										
9	1120.192	29.5	24.0	6.2	28.5	31.2	54.0	22.8	100	141
10	1328.526	35.4	24.5	6.9	28.5	38.3	54.0	15.7	100	164
11	1512.820	32.1	24.9	7.5	28.5	36.0	54.0	18.0	100	140
12	1881.410	37.5	25.1	8.2	28.5	42.3	54.0	11.7	100	131
13	2250.003	34.1	26.1	9.0	28.5	40.7	54.0	13.3	100	276
14	2634.624	29.9	27.5	9.8	28.4	38.8	54.0	15.2	100	162
15	3027.258	27.1	28.8	10.6	28.4	38.1	54.0	15.9	100	168
16	5535.264	20.3	35.1	14.9	28.2	42.1	54.0	11.9	100	28

< RGB MODE_30 MHz ~ 1 GHz >

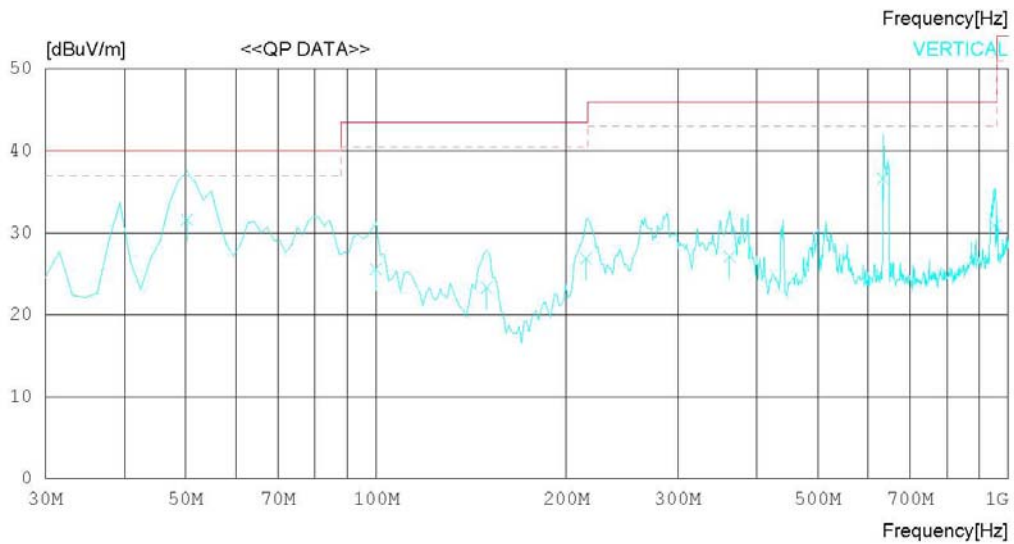
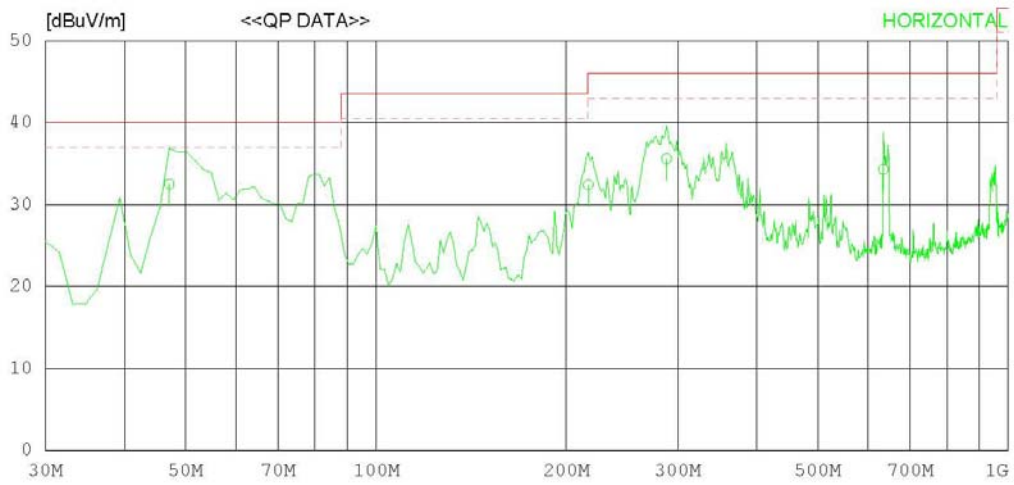
RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % R.H.
Test Condition	: RGB	Operator	:

Memo :

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



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % R.H.
Test Condition : RGB	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	47.099	44.1	11.5	1.2	24.3	32.5	40.0	7.5	400	358
2	216.539	43.2	10.7	2.4	23.9	32.4	46.0	13.6	199	358
3	288.045	43.0	13.5	2.8	23.7	35.6	46.0	10.4	100	1
4	634.695	35.1	18.6	4.2	23.6	34.3	46.0	11.7	199	39
----- Vertical -----										
5	50.208	46.3	8.3	1.4	24.4	31.6	40.0	8.4	100	358
6	99.952	37.6	10.7	1.4	24.1	25.6	43.5	17.9	100	358
7	149.696	35.4	10.4	1.7	24.2	23.3	43.5	20.2	100	252
8	214.984	37.8	10.6	2.4	23.9	26.9	43.5	16.6	100	320
9	362.660	32.1	15.2	3.4	23.6	27.1	46.0	18.9	201	1
10	634.695	37.4	18.6	4.2	23.6	36.6	46.0	9.4	100	358
11	953.368	26.8	21.6	5.4	22.9	30.9	46.0	15.1	100	191

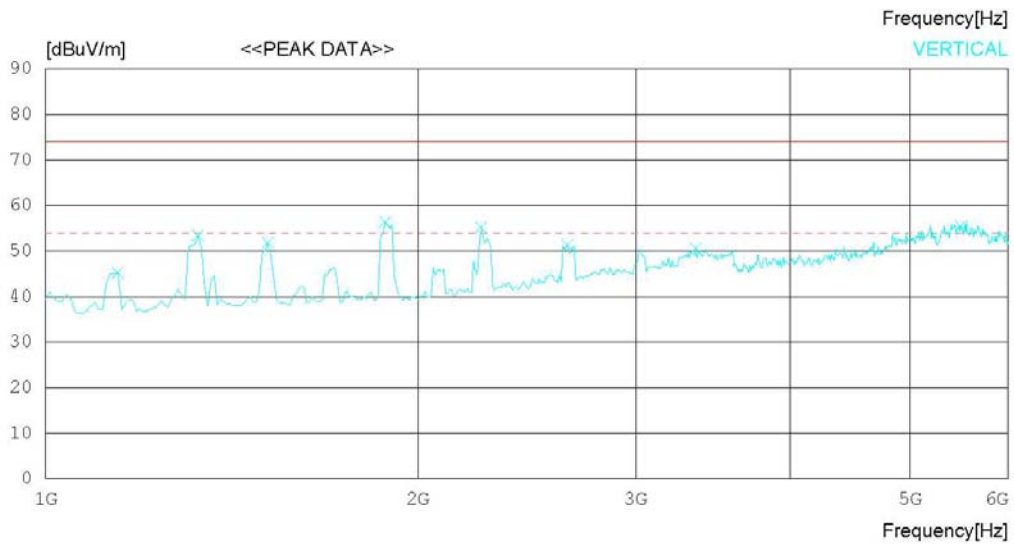
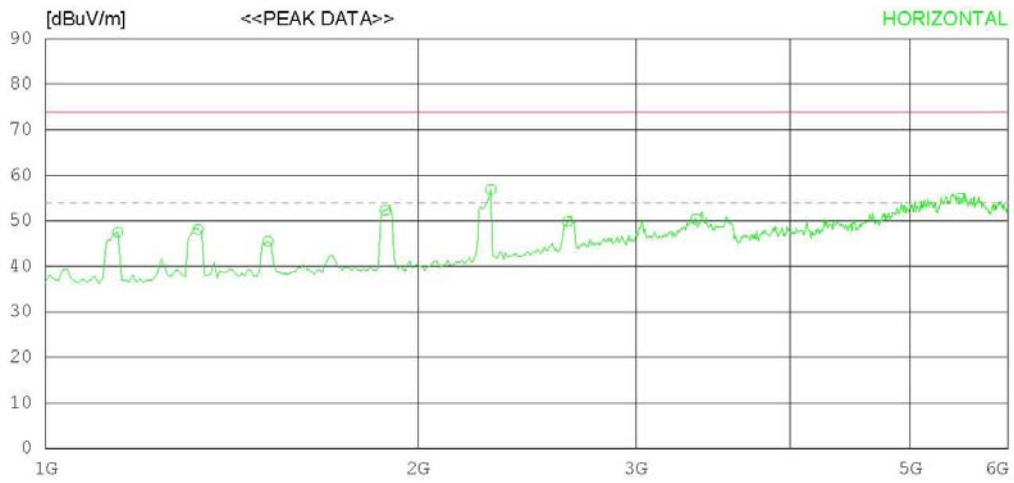
< RGB MODE_(1 ~ 6) GHz_Peak >

RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % R.H.
Test Condition	: RGB	Operator	:
Memo	:		

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % R.H.
Test Condition	: RGB	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	1144.231	45.7	24.1	6.2	28.5	47.5	74.0	26.5	100	157
2	1328.526	45.2	24.5	6.9	28.5	48.1	74.0	25.9	100	1
3	1512.820	41.6	24.9	7.5	28.5	45.5	74.0	28.5	100	122
4	1881.410	47.5	25.1	8.2	28.5	52.3	74.0	21.7	100	186
5	2290.067	50.0	26.3	9.1	28.5	56.9	74.0	17.1	100	1
6	2642.637	40.8	27.6	9.8	28.4	49.8	74.0	24.2	100	144
7	3355.788	38.5	28.9	11.4	28.4	50.4	74.0	23.6	100	152
8	5495.201	32.9	35.3	14.9	28.1	55.0	74.0	19	100	190
----- Vertical -----										
9	1144.231	43.5	24.1	6.2	28.5	45.3	74.0	28.7	100	129
10	1328.526	50.5	24.5	6.9	28.5	53.4	74.0	20.6	100	358
11	1512.820	47.9	24.9	7.5	28.5	51.8	74.0	22.2	100	138
12	1881.410	51.6	25.1	8.2	28.5	56.4	74.0	17.6	100	130
13	2250.003	48.6	26.1	9.0	28.5	55.2	74.0	18.8	100	276
14	2642.637	42.3	27.6	9.8	28.4	51.3	74.0	22.7	100	165
15	3355.788	38.7	28.9	11.4	28.4	50.6	74.0	23.4	100	358
16	5495.201	33.4	35.3	14.9	28.1	55.5	74.0	18.5	100	39

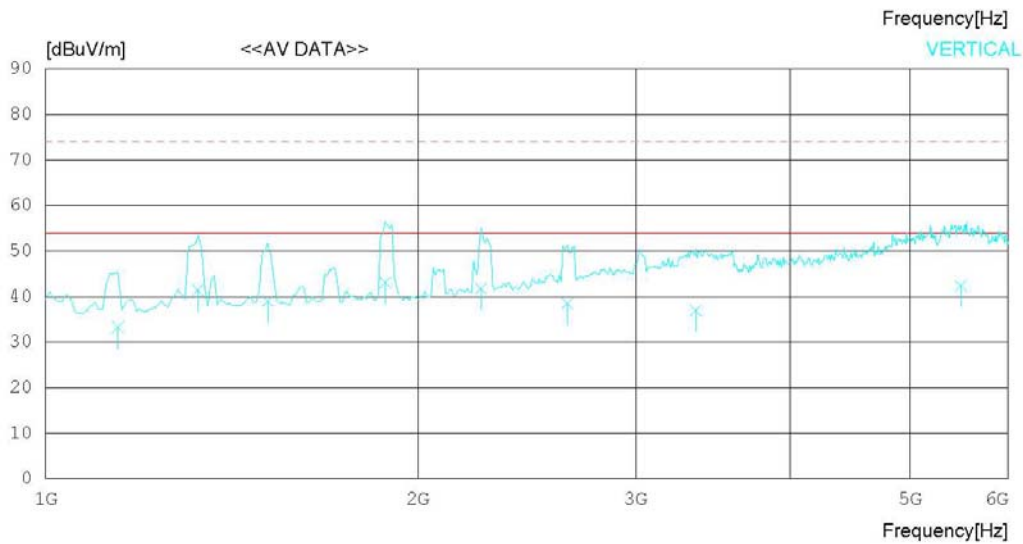
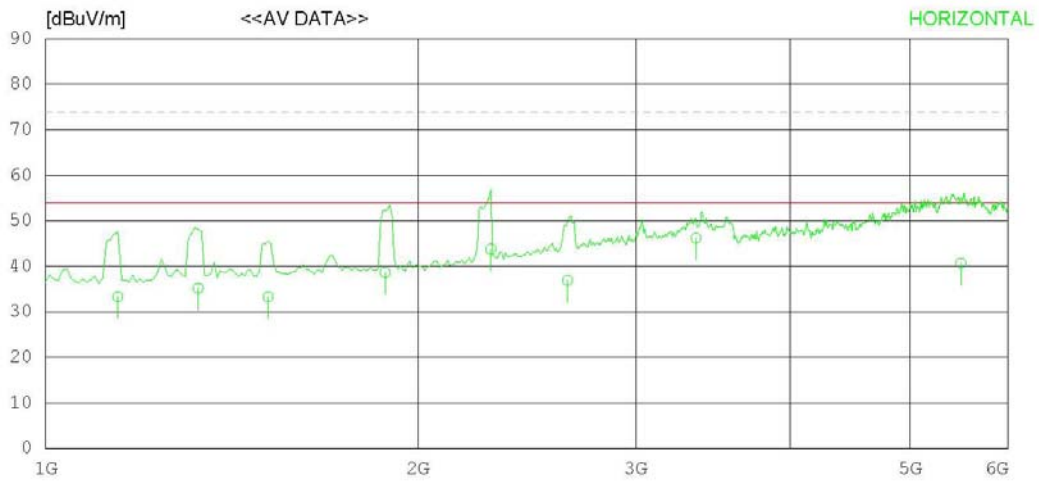
< RGB MODE_(1 ~ 6) GHz_Average >

RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % R.H.
Test Condition	: RGB	Operator	:
Memo	:		

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % R.H.
Test Condition : RGB	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	1144.231	31.5	24.1	6.2	28.5	33.3	54.0	20.7	100	157
2	1328.526	32.3	24.5	6.9	28.5	35.2	54.0	18.8	100	1
3	1512.820	29.4	24.9	7.5	28.5	33.3	54.0	20.7	100	122
4	1881.410	33.8	25.1	8.2	28.5	38.6	54.0	15.4	100	186
5	2290.067	36.9	26.3	9.1	28.5	43.8	54.0	10.2	100	1
6	2642.637	27.9	27.6	9.8	28.4	36.9	54.0	17.1	100	144
7	3355.788	34.3	28.9	11.4	28.4	46.2	54.0	7.8	100	152
8	5495.201	18.6	35.3	14.9	28.1	40.7	54.0	13.3	100	190
----- Vertical -----										
9	1144.231	31.5	24.1	6.2	28.5	33.3	54.0	20.7	100	129
10	1328.526	38.5	24.5	6.9	28.5	41.4	54.0	12.6	100	358
11	1512.820	35.1	24.9	7.5	28.5	39.0	54.0	15.0	100	138
12	1881.410	38.3	25.1	8.2	28.5	43.1	54.0	10.9	100	130
13	2250.003	35.1	26.1	9.0	28.5	41.7	54.0	12.3	100	276
14	2642.637	29.5	27.6	9.8	28.4	38.5	54.0	15.5	100	165
15	3355.788	25.1	28.9	11.4	28.4	37.0	54.0	17.0	100	358
16	5495.201	20.3	35.3	14.9	28.1	42.4	54.0	11.6	100	39

< USB MODE_30 MHz ~ 1 GHz >

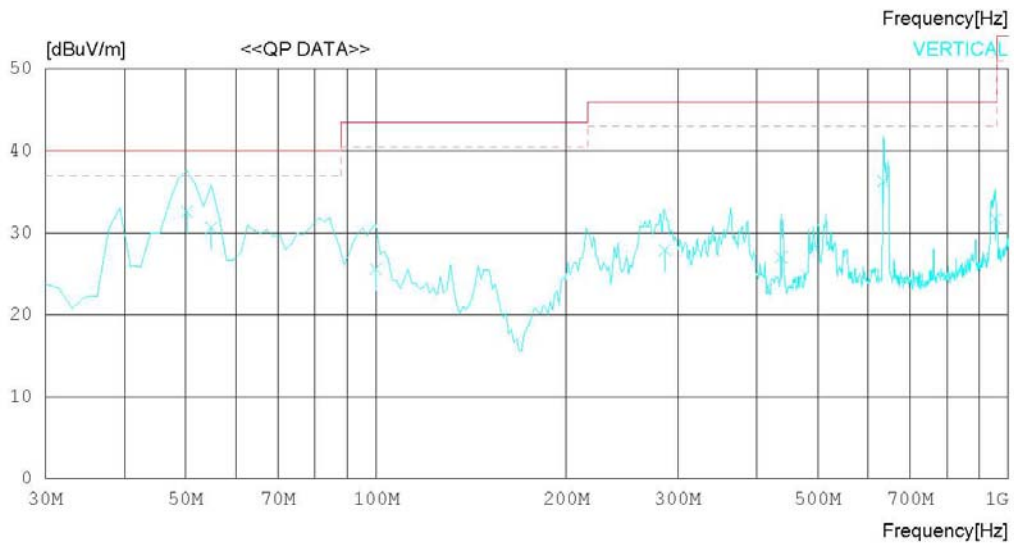
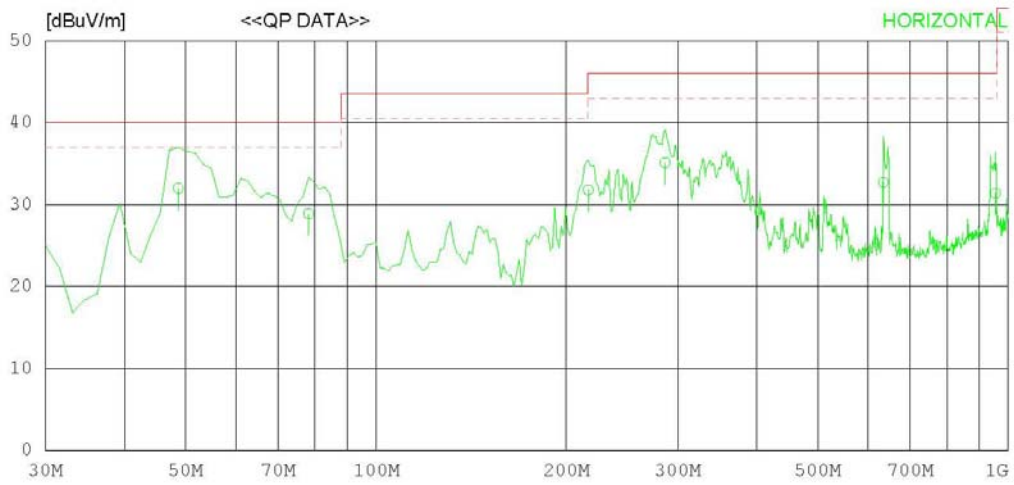
RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % R.H.
Test Condition	: USB	Operator	:

Memo :

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



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % 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	48.654	45.2	9.8	1.3	24.3	32.0	40.0	8.0	400	358
2	78.189	44.6	7.0	1.6	24.3	28.9	40.0	11.1	400	206
3	216.539	42.6	10.7	2.4	23.9	31.8	46.0	14.2	100	1
4	286.490	42.5	13.5	2.8	23.7	35.1	46.0	10.9	100	1
5	634.695	33.5	18.6	4.2	23.6	32.7	46.0	13.3	199	39
6	954.923	27.3	21.6	5.4	22.9	31.4	46.0	14.6	100	359
----- Vertical -----										
7	50.208	47.3	8.3	1.4	24.4	32.6	40.0	7.4	100	207
8	54.872	46.7	6.9	1.4	24.4	30.6	40.0	9.4	201	187
9	99.952	37.6	10.7	1.4	24.1	25.6	43.5	17.9	100	358
10	286.490	35.3	13.5	2.8	23.7	27.9	46.0	18.1	201	218
11	437.274	30.3	16.5	3.5	23.3	27.0	46.0	19.0	100	358
12	634.695	37.1	18.6	4.2	23.6	36.3	46.0	9.7	100	358
13	954.923	27.6	21.6	5.4	22.9	31.7	46.0	14.3	300	0

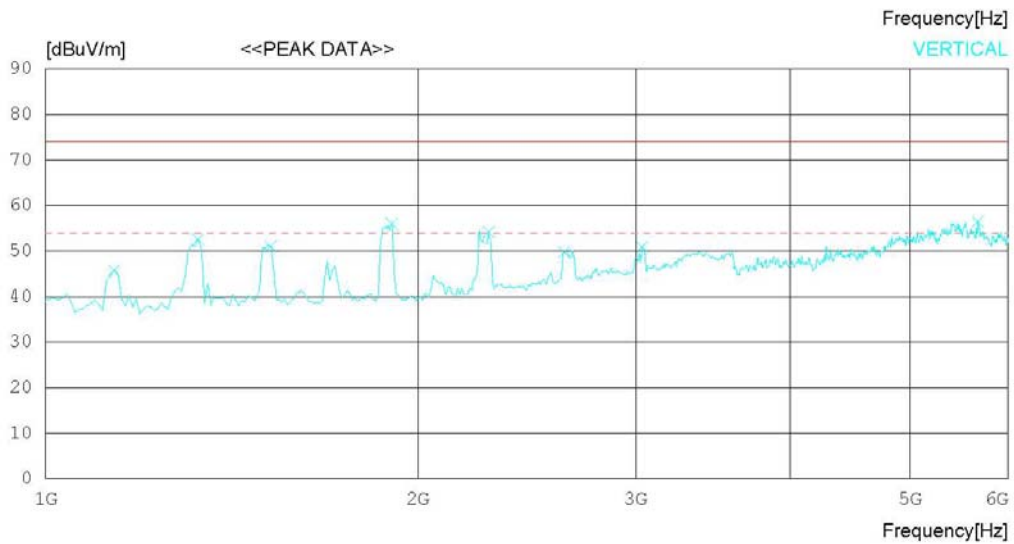
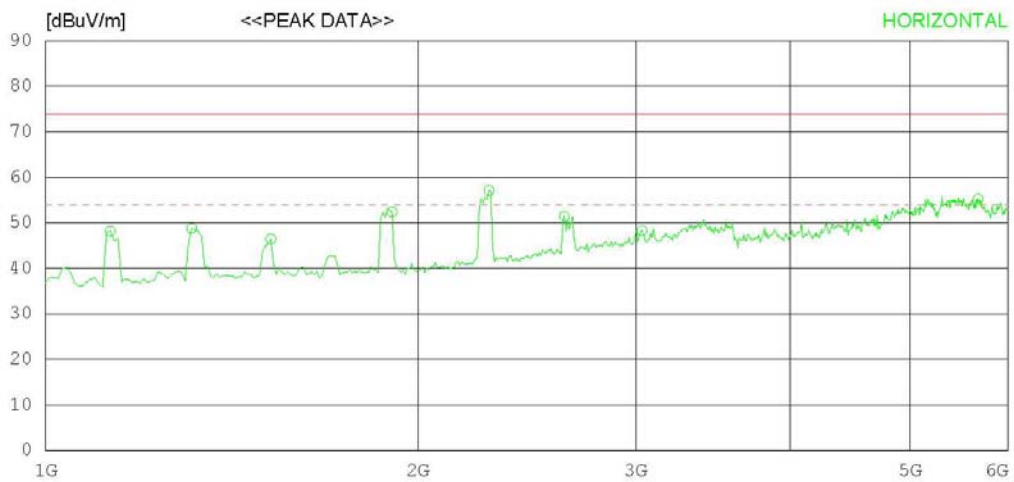
< USB MODE_(1 ~ 6) GHz_Peak >

RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % 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)



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % 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	1128.205	46.4	24.1	6.2	28.5	48.2	74.0	25.8	100	154
2	1312.500	46.0	24.5	6.8	28.5	48.8	74.0	25.2	100	146
3	1520.833	42.5	24.9	7.5	28.5	46.4	74.0	27.6	100	358
4	1905.448	47.5	25.1	8.3	28.5	52.4	74.0	21.6	100	137
5	2282.054	50.3	26.2	9.1	28.5	57.1	74.0	16.9	100	358
6	2626.611	42.5	27.5	9.8	28.4	51.4	74.0	22.6	100	141
7	3035.271	37.3	28.8	10.6	28.4	48.3	74.0	25.7	100	358
8	5671.480	34.0	34.2	15.2	28.2	55.2	74.0	18.8	100	273
----- Vertical -----										
9	1136.218	44.0	24.1	6.2	28.5	45.8	74.0	28.2	100	140
10	1328.526	49.6	24.5	6.9	28.5	52.5	74.0	21.5	100	140
11	1520.833	47.1	24.9	7.5	28.5	51.0	74.0	23	100	1
12	1905.448	51.1	25.1	8.3	28.5	56.0	74.0	18	100	1
13	2282.054	47.4	26.2	9.1	28.5	54.2	74.0	19.8	100	121
14	2626.611	40.8	27.5	9.8	28.4	49.7	74.0	24.3	100	160
15	3035.271	39.9	28.8	10.6	28.4	50.9	74.0	23.1	100	1
16	5671.480	35.3	34.2	15.2	28.2	56.5	74.0	17.5	100	270

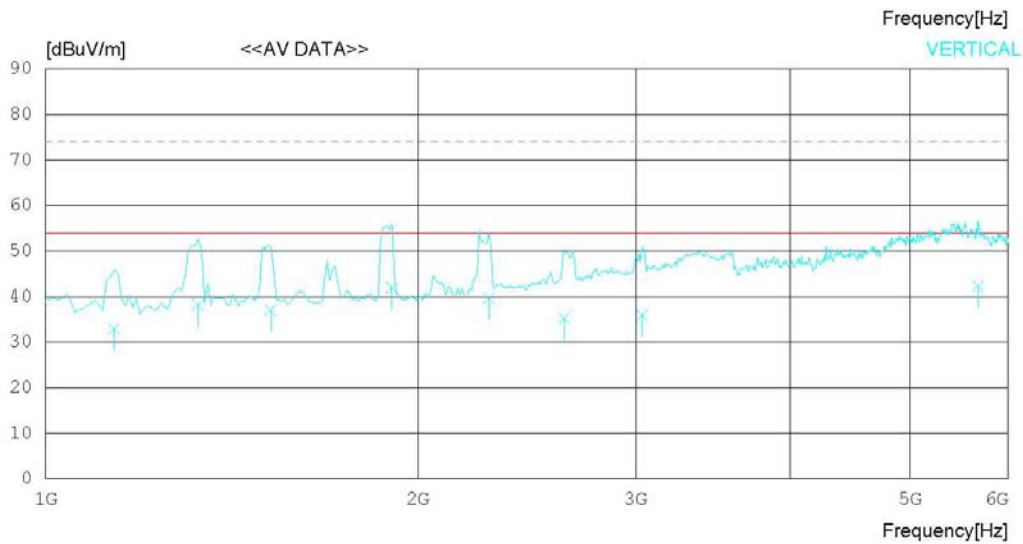
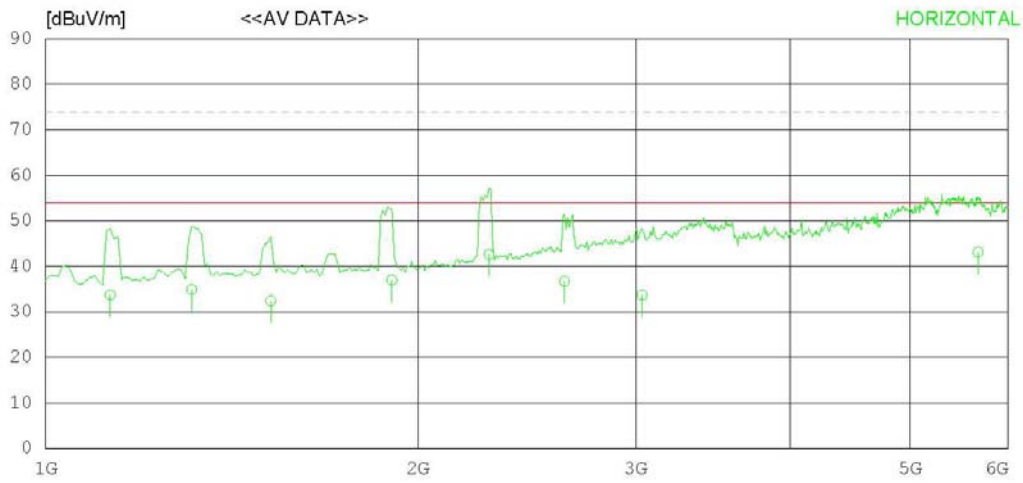
< USB MODE_(1 ~ 6) GHz_Average >

RADIATED EMISSION

Date : 2013-01-17

Model Name	: SA565-JP	Reference No.	:
Model No.	:	Power Supply	: 120 V 60 Hz
Serial No.	:	Temp/Humi	: 20 °C 40 % 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)



RADIATED EMISSION

Date : 2013-01-17

Model Name : SA565-JP	Reference No. :
Model No. :	Power Supply : 120 V 60 Hz
Serial No. :	Temp/Humi : 20 °C 40 % 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	1128.205	31.9	24.1	6.2	28.5	33.7	54.0	20.3	100	154
2	1312.500	32.1	24.5	6.8	28.5	34.9	54.0	19.1	100	146
3	1520.833	28.5	24.9	7.5	28.5	32.4	54.0	21.6	100	358
4	1905.448	32.1	25.1	8.3	28.5	37.0	54.0	17.0	100	137
5	2282.054	35.8	26.2	9.1	28.5	42.6	54.0	11.4	100	358
6	2626.611	27.8	27.5	9.8	28.4	36.7	54.0	17.3	100	141
7	3035.271	22.7	28.8	10.6	28.4	33.7	54.0	20.3	100	358
8	5671.480	21.9	34.2	15.2	28.2	43.1	54.0	10.9	100	273
----- Vertical -----										
9	1136.218	31.1	24.1	6.2	28.5	32.9	54.0	21.1	100	140
10	1328.526	35.3	24.5	6.9	28.5	38.2	54.0	15.8	100	140
11	1520.833	33.2	24.9	7.5	28.5	37.1	54.0	16.9	100	1
12	1905.448	37.1	25.1	8.3	28.5	42.0	54.0	12.0	100	1
13	2282.054	32.9	26.2	9.1	28.5	39.7	54.0	14.3	100	121
14	2626.611	26.4	27.5	9.8	28.4	35.3	54.0	18.7	100	160
15	3035.271	24.9	28.8	10.6	28.4	35.9	54.0	18.1	100	1
16	5671.480	21.1	34.2	15.2	28.2	42.3	54.0	11.7	100	270

Appendix 1

List of Test and Measurement Instruments

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment is identified by the Test Laboratory.

1. Conducted Disturbance

Name of Instrument	Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
<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	2012.03.13	2013.03.13
<input type="checkbox"/> ATTENUATOR	CFA-10BPJ-10	TAMAGAWA ELECTRONICS	1760307E	N/A	N/A
<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"/> 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 checked="" type="checkbox"/> BILOG ANTENNA	CBL6112B	SCHAFFNER	2737	2012.03.22	2014.03.22
<input type="checkbox"/> EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2012.03.06	2013.03.06
<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"/> AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2012.03.05	2013.03.05

Appendix 2

Report Revision History

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