

FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

Activision Publishing, Inc

Wireless Portal of Power for Nintendo Wii & Wireless Portal of Power for PlayStation 3

Model No.: 83973790/84148790

Trade Name: Activision.

FCC ID: XLU83973790

Prepared for : Activision Publishing, Inc
3100 Ocean Park Boulevard., Santa Monica, CA90405,
USA

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
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Report Number : ACS-F11120
Date of Test : May.29~Jun.20, 2011
Date of Report : Jun.20, 2011

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FCC ID: XLU83973790

TEST REPORT CERTIFICATION

Applicant : Activision Publishing, Inc
Manufacturer : Sunlight Technology Electronic Manufacturing Co; Ltd.
EUT Description : Wireless Portal of Power for Nintendo Wii & Wireless Portal of Power for PlayStation 3
FCC ID : XLU83973790
(A) MODEL NO. : 83973790/84148790
(B) Trade Name : Activision.
(C) SERIAL NO. : N/A
(D) Power Supply : DC 4.5V
(E) TEST VOLTAGE : DC 4.5V

Tested for comply with:
FCC Rules and Regulations Part 15 Subpart C: 2008

Test procedure used:
ANSI C63.10:2009

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C requirements.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC and IC requirements.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : May.29~ Jun.20, 2011 Report of date: Jun.20, 2011

Prepared by : Blove Ye
Blove Ye / Assistant

Reviewer by : Ken Lu
Ken Lu / Senior Assistant

Approved & Authorized Signer : _____

Ken Lu / Manager



1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.10: 2009	N/A
Radiated Emission Test	FCC Part 15: 15.205, 15.209 FCC Part 15: 15.225(a)(b)(c)(d) ANSI C63.10: 2009	PASS
Frequency Tolerance Test	FCC Part 15: 15.225(e)	PASS
20dB Bandwidth Test	FCC Part 15: 15.215	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product Name	:	Wireless Portal of Power for Nintendo Wii & Wireless Portal of Power for PlayStation 3
Model Number	:	83973790/84148790 83973790/84148790 are all the same except the external label.
Trade Name	:	Activision.
FCC ID	:	XLU83973790
Operation frequency	:	2427.75MHz~2478.75MHz RF ID: 13.56MHz
Modulation	:	GMSK
Applicant	:	Activision Publishing, Inc 3100 Ocean Park Boulevard., Santa Monica, CA90405, USA
Manufacturer	:	Sunlight Technology Electronic Manufacturing Co; Ltd. New Asia Industrial City, Lin Village, Tangxia Town, Dongguan City, China
Date of Test	:	May.29~Jun.20, 2011
Date of Receipt	:	Apr.12, 2011
Sample Type	:	Prototype production

Note: This Report is only for RF ID, For frequency band 2427.75~2478.75MHz are reported in other report.

2.2. Block diagram of connection between the EUT and simulators

EUT 1

EUT 2

EUT 1: Wireless Portal of Power for Nintendo Wii

EUT 2: Wireless Portal of Power for Play station 3

(EUT: Wireless Portal of Power for Nintendo Wii & Wireless Portal of Power for PlayStation 3)

2.3. Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block, Shenzhen
Science & Industrial Park, Nantou,
Shenzhen, Guangdong, China

3m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 90454
Valid Date: Mar.31, 2012

3m & 10m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 794232
Valid Date: Dec.30, 2012

EMC Lab. : Certificated by Industry Canada
Registration Number: IC 5183A-1
Valid Date: Jul. 02, 2011

: Accredited by DATech, German
Registration Number: DAT-P-091/99-01
Valid Date: Feb. 01, 2014

Accredited by NVLAP, USA
NVLAP Code: 200372-0
Valid Date: Mar.31, 2012

2.4. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Radiation Emission test in 10m chamber	3.5dB (30~200MHz, Polarize: H)
	3.7dB (30~200MHz, Polarize: V)
	3.7dB (200M~1GHz, Polarize: H)
	3.7dB (200M~1GHz, Polarize: V)
Uncertainty for Frequency range test	7×10^{-8}
Uncertainty for Bandwidth test	83kHz
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and humidity	0.6°C
	3%

3. POWER LINE CONDUCTED EMISSION TEST

According to Paragraph (f) of FCC Part 15C 15.207, Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

4. RADIATED EMISSION TEST

4.1. Test Equipment

Frequency Range: 30-1000MHz

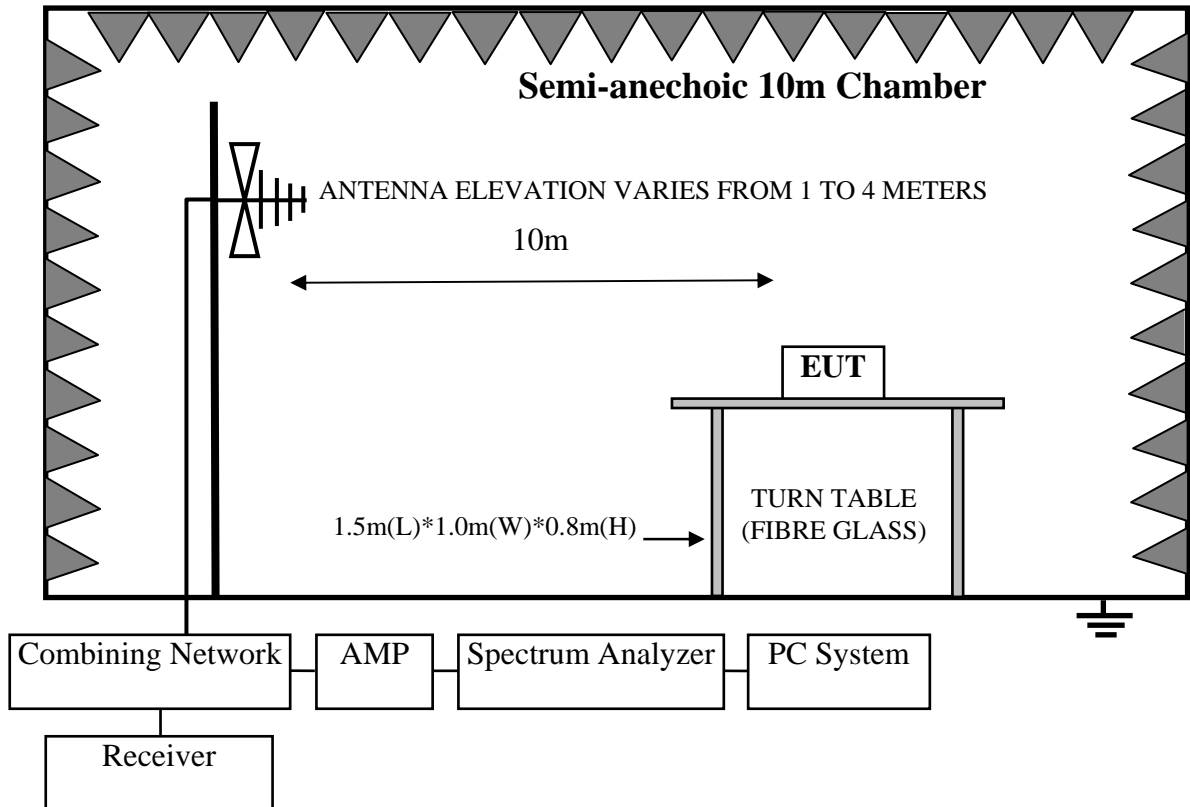
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	10m Chamber	AUDIX	N/A	N/A	Dec.05, 10	1 Year
2	EMC Analyzer	Agilent	E7405A	MY42000131	May.08, 11	1 Year
3	EMC Analyzer	Agilent	E7405A	MY45116588	May.08, 11	1 Year
4	Test Receiver	Rohde & Schwarz	ESCI	100842	May.08, 11	1 Year
5	Amplifier	Agilent	8447D	2944A10684	May.08, 11	1 Year
6	Amplifier	Agilent	8447D	2944A11140	May.08, 11	1 Year
7	Bilog Antenna	Schaffner	CBL6112D	25238	Mar.27, 10	1.5 Year
8	Bilog Antenna	Schaffner	CBL6112D	25237	Mar.27, 10	1.5 Year
9	RF Cable	MIYAZAKI	8D-FB	10m Chamber No.1	May.08, 11	1 Year
10	RF Cable	MIYAZAKI	8D-FB	10m Chamber No.2	May.08, 11	1 Year
11	Coaxial Switch	Anritsu	MP59B	6200766906	May.08, 11	1 Year
12	Coaxial Switch	Anritsu	MP59B	6200766905	May.08, 11	1 Year
13	Coaxial Switch	Anritsu	MP59B	6200313662	May.08, 11	1 Year

Frequency Range: 1.705-30MHz

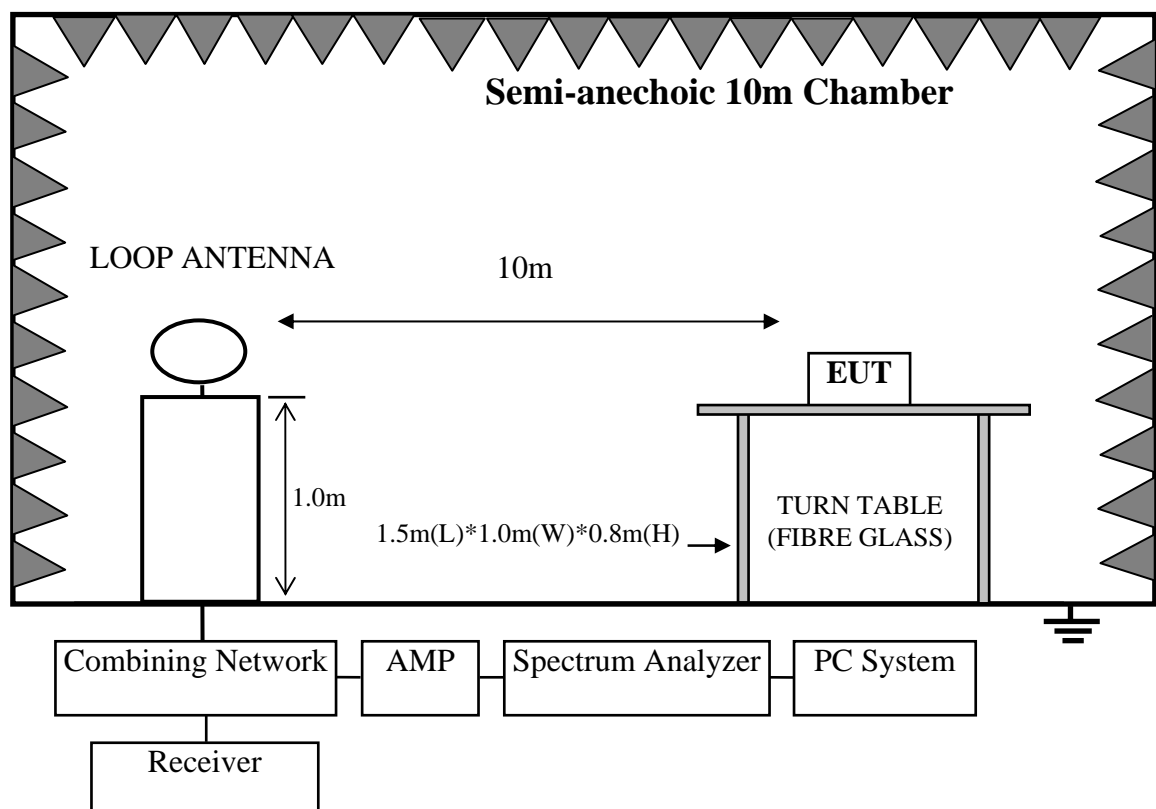
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	10m Chamber	AUDIX	N/A	N/A	Dec.05, 10	1 Year
2	EMC Analyzer	Agilent	E7405A	MY42000131	May.08, 11	1 Year
3	EMC Analyzer	Agilent	E7405A	MY45116588	May.08, 11	1 Year
4	Test Receiver	Rohde & Schwarz	ESCI	100842	May.08, 11	1 Year
5	Amplifier	Agilent	8447D	2944A10684	May.08, 11	1 Year
6	Amplifier	Agilent	8447D	2944A11140	May.08, 11	1 Year
7	Loop Antenna	Chase	HLA6120	1062	May.08, 11	1 Year
8	RF Cable	MIYAZAKI	8D-FB	10m Chamber No.1	May.08, 11	1 Year
9	RF Cable	MIYAZAKI	8D-FB	10m Chamber No.2	May.08, 11	1 Year
10	Coaxial Switch	Anritsu	MP59B	6200766906	May.08, 11	1 Year
11	Coaxial Switch	Anritsu	MP59B	6200766905	May.08, 11	1 Year
12	Coaxial Switch	Anritsu	MP59B	6200313662	May.08, 11	1 Year

4.2. Block Diagram of Test Setup

Frequency Range: 30-1000MHz



Frequency Range: 1.705-30MHz



4.3. Radiated Emission Limit

- (a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.
- (b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- (c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.
- (d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

Remark : (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

4.5. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.6. Operating Condition of EUT

4.6.1. Setup the EUT as shown in Section 4.2.

4.6.2. Turned on the power of all equipment.

4.6.3. Let the EUT work in test mode (Tx Mode) and tested it.

4.7. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it work in test mode, then test it. EUT is set 10 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

For frequency range below 30MHz the Loop antenna was used at 10m measurement distance with antenna heights of 1m and antenna loop front and side faced to the EUT. The axis of the antenna was rotated to maximize the emission. A CISPR quasi-peak detector is used for measurements below 30MHz and RBW/VBW is 9kHz/30kHz.

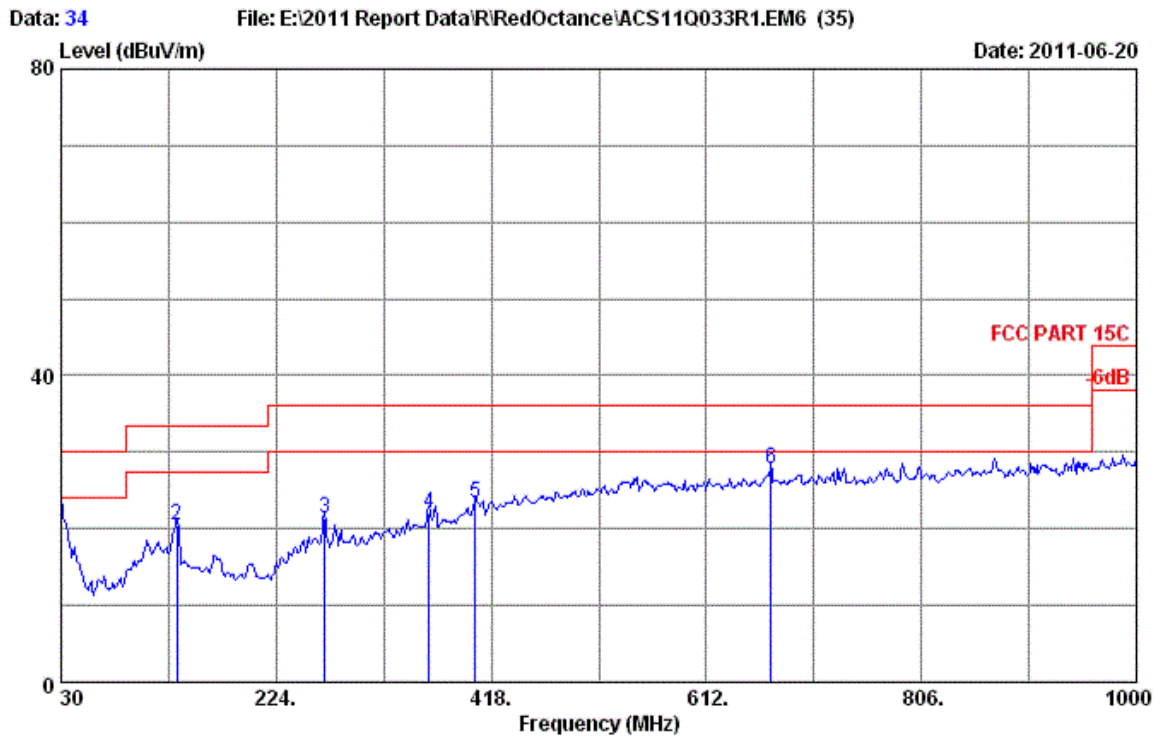
The limit 1.705MHz to 30MHz in clause 4.3 are specified at 30 meters, and measurements were made at 10 meters, the limit is translated to 10 meters by using a formula as follows:
$$\text{Limit}_{10\text{m}} = \text{Limit}_{30\text{m}} + 40\log(30\text{m}/10)$$

4.8. Radiated Emission Test Results

PASS.

The frequency range from 30MHz to 1000MHz and 1.705MHz to 30MHz is investigated. Please see the following pages.

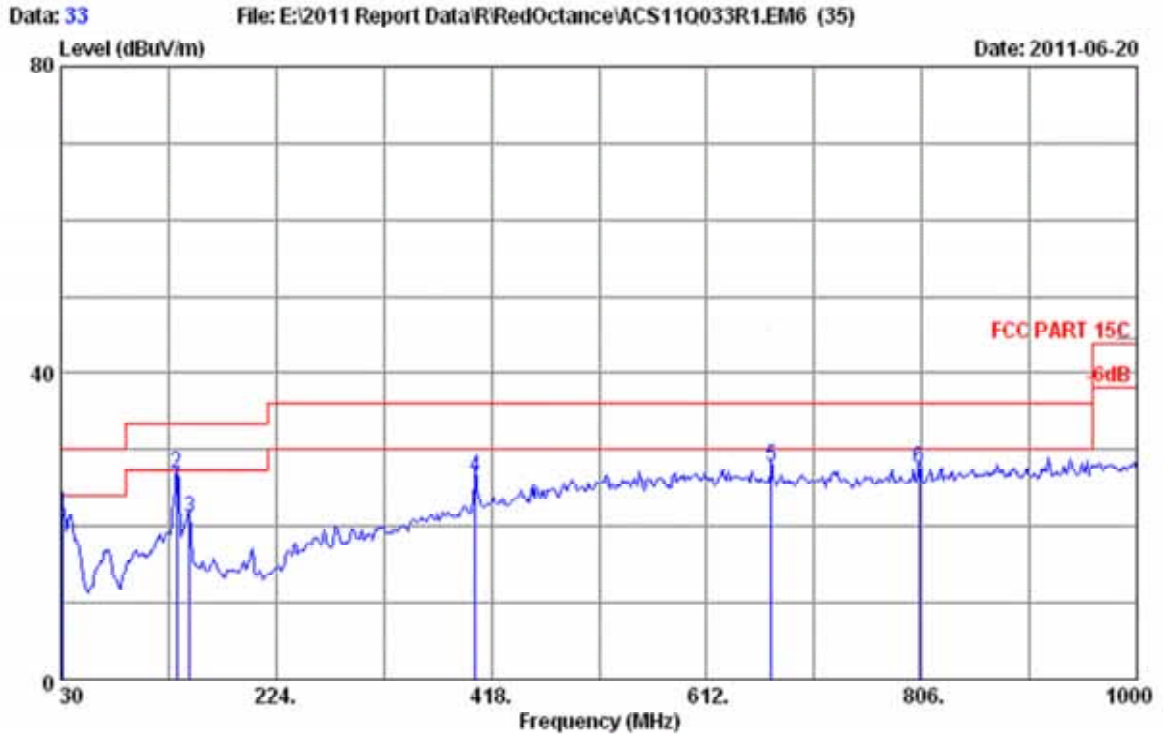
Note: According to exploratory test, 9kHz to 1.705MHz no obvious signal can be detected.



Site no. : 10m Chamber Data no. : 34
 Dis. / Ant. : 10m 10 CBL6112D 25238 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C
 Env. / Ins. : 24°C/56% Engineer : Leo-Li
 EUT : Wireless Portal of power for Playstation 3
 Power rating : DC 4.5V
 Test Mode : Tx Mode
 M/N:84148790

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	19.00	0.75	3.05	22.80	30.00	7.20	QP
2	134.760	11.60	1.56	7.26	20.42	33.50	13.08	QP
3	267.650	12.78	2.57	6.03	21.38	36.00	14.62	QP
4	361.740	14.79	3.25	3.97	22.01	36.00	13.99	QP
5	403.450	15.75	3.52	4.11	23.38	36.00	12.62	QP
6	670.200	18.90	5.09	3.85	27.84	36.00	8.16	QP

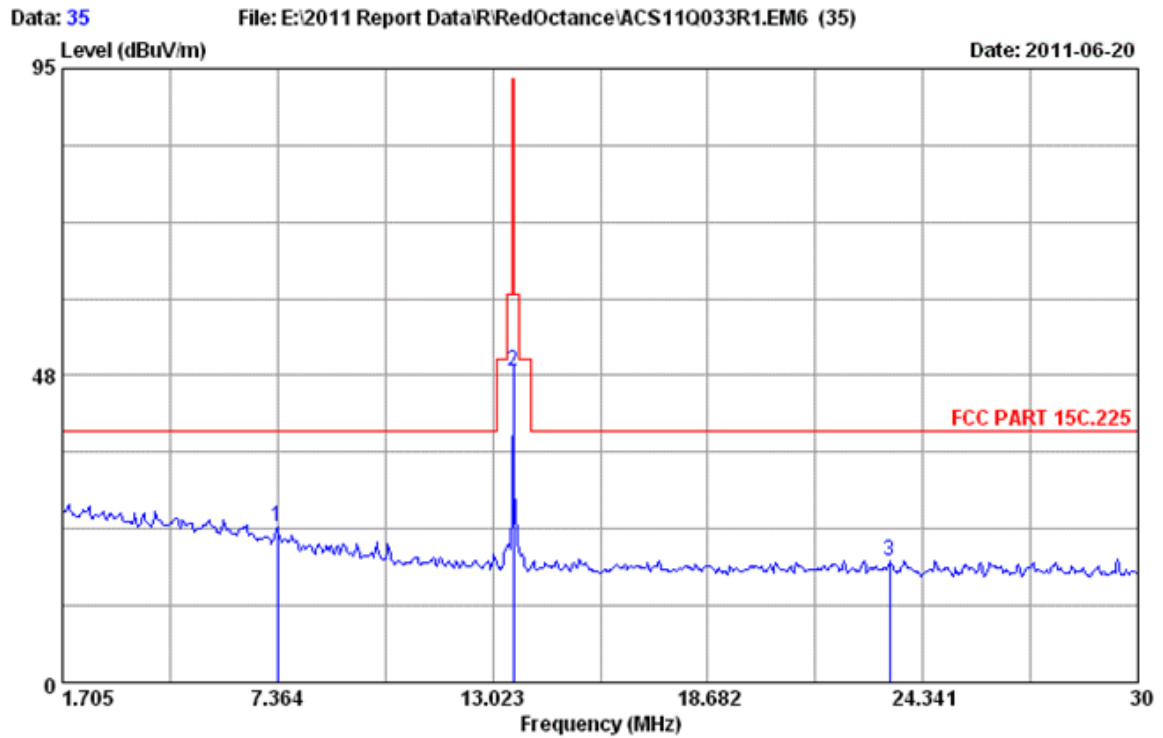
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 33
 Dis. / Ant. : 10m 10 CBL6112D 25237 Ant. pol. : VERTICAL
 Limit : FCC PART 15C
 Env. / Ins. : 24°C/56% Engineer : Leo-Li
 EUT : Wireless Portal of power for Playstation 3
 Power rating : DC 4.5V
 Test Mode : Tx Mode
 M/N:84146790

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.940	17.70	1.81	2.43	21.94	30.00	8.06	QP
2	134.760	11.80	3.29	11.76	26.85	33.50	6.65	QP
3	146.400	10.48	3.38	7.33	21.19	33.50	12.31	QP
4	403.450	15.85	5.53	5.24	26.62	36.00	9.38	QP
5	670.200	18.80	7.75	1.26	27.81	36.00	8.19	QP
6	804.060	19.80	8.34	-0.54	27.60	36.00	8.40	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 35
 Dis. / Ant. : 10m 2011 LOOP ANTENNA Ant. pol. :
 Limit : FCC PART 15C.225
 Env. / Ins. : 24°C/56% Engineer : Leo-Li
 EUT : Wireless Portal of power for Playstation 3
 Power rating : DC 4.5V
 Test Mode : Tx Mode
 M/N:84148790

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	7.357	20.82	0.45	2.85	24.12	39.00	14.88	QP
2	13.565	21.43	0.52	26.15	48.10	93.50	45.40	QP
3	23.462	21.96	0.54	-3.78	18.72	39.00	20.28	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

5. FREQUENCY STABILITY TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,11	1 Year
2.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,11	1Year

5.2. Limits

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

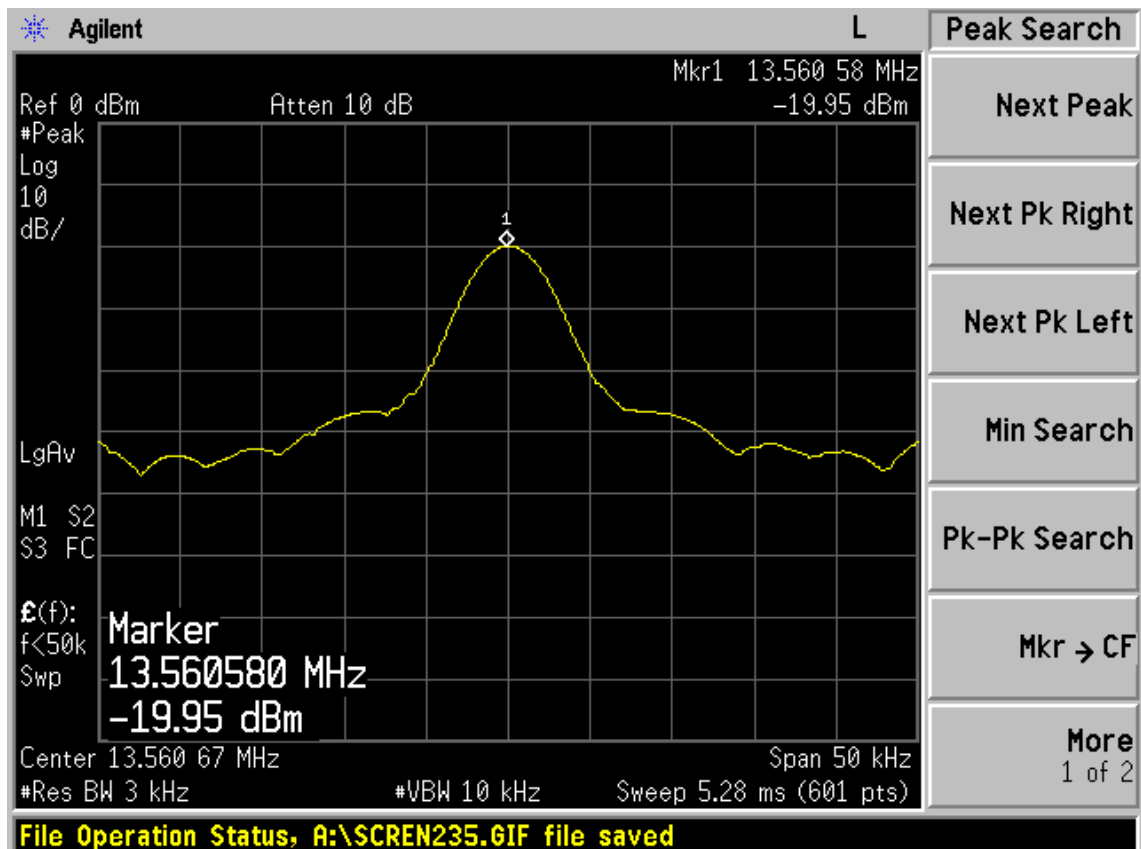
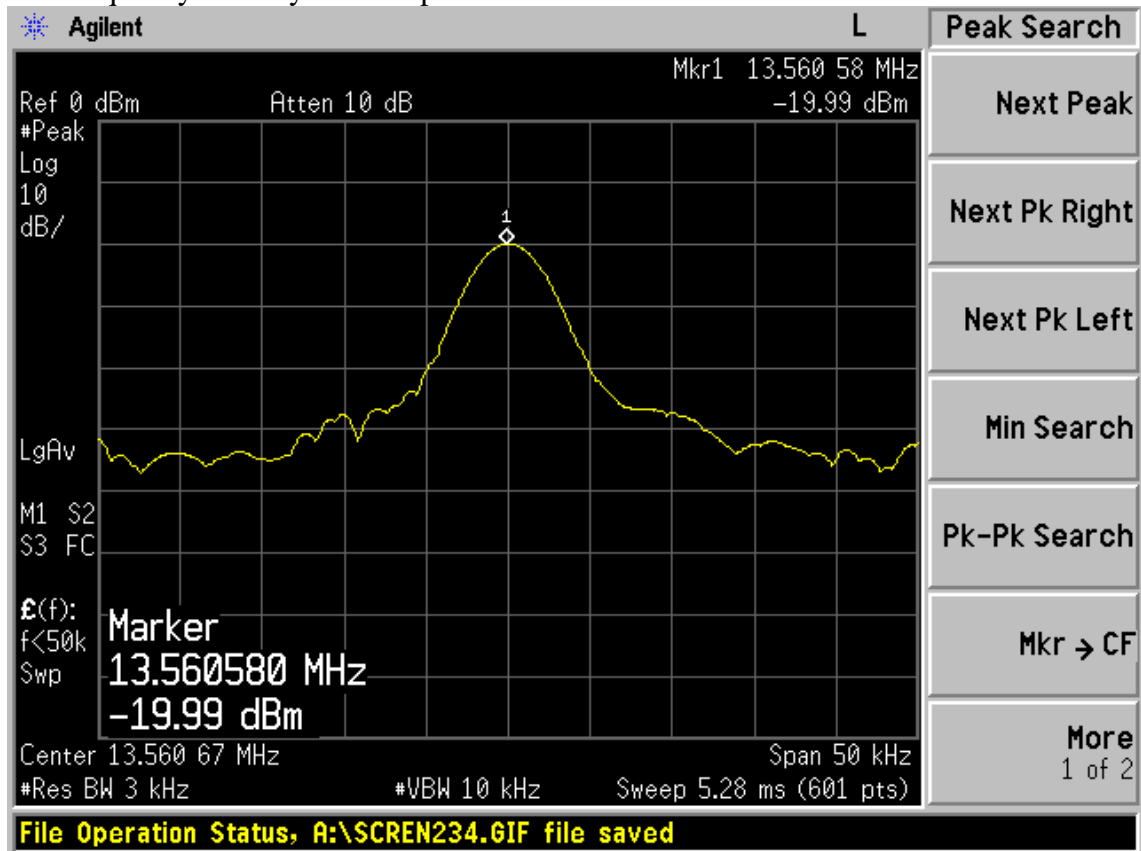
5.3. Test Procedure

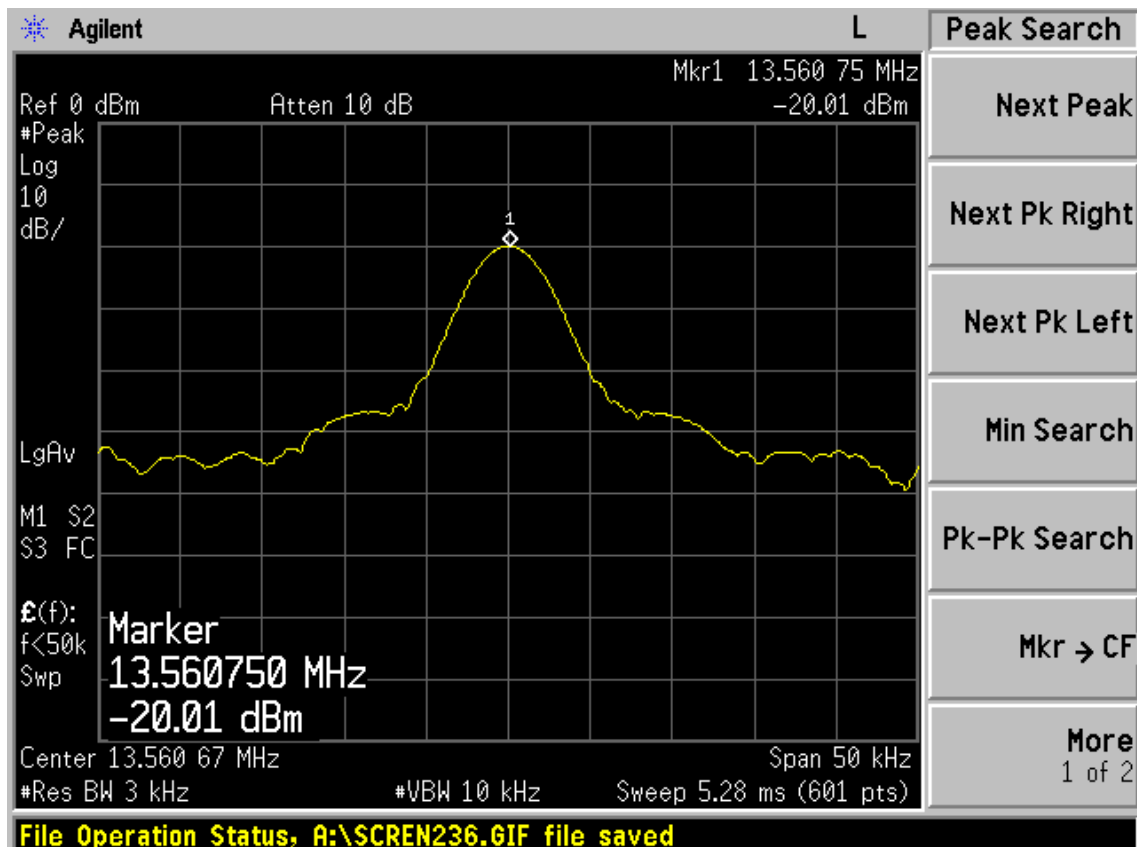
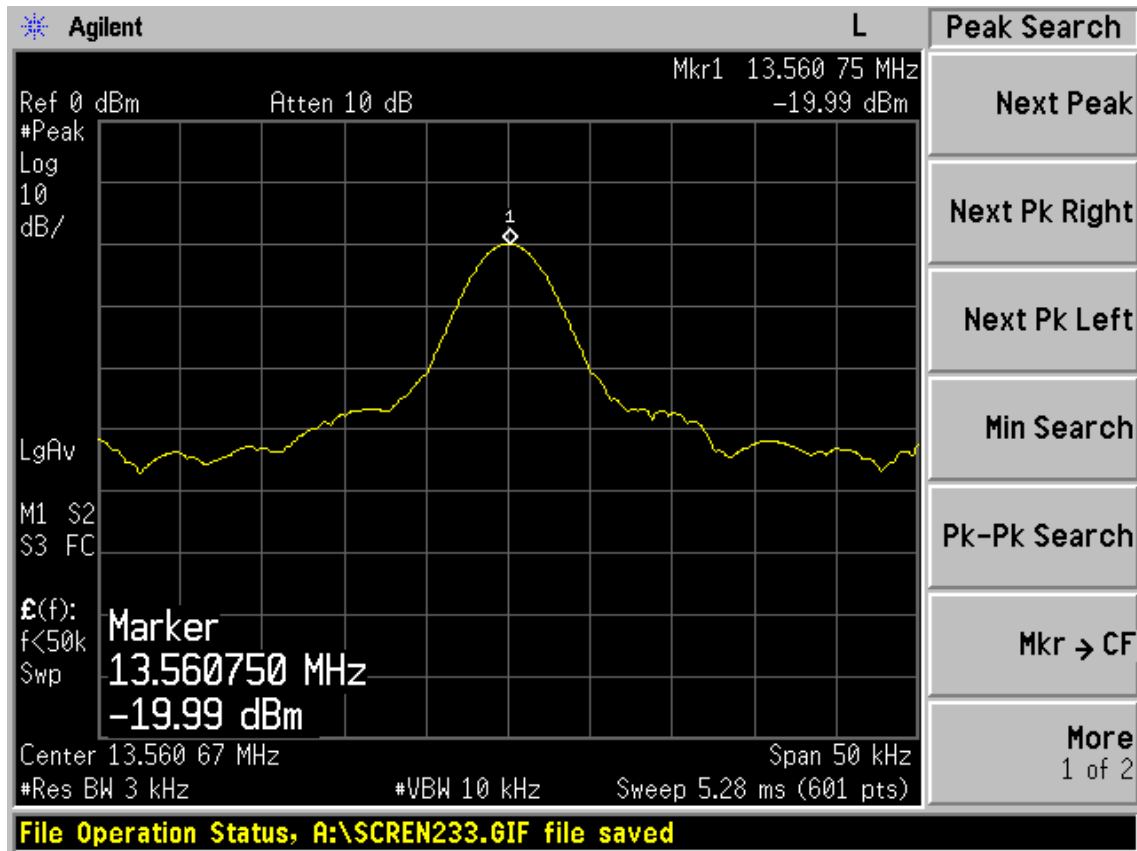
The EUT was placed in an environmental test chamber and powered such that control element received normal voltage and the transmitter provided maximum RF output.

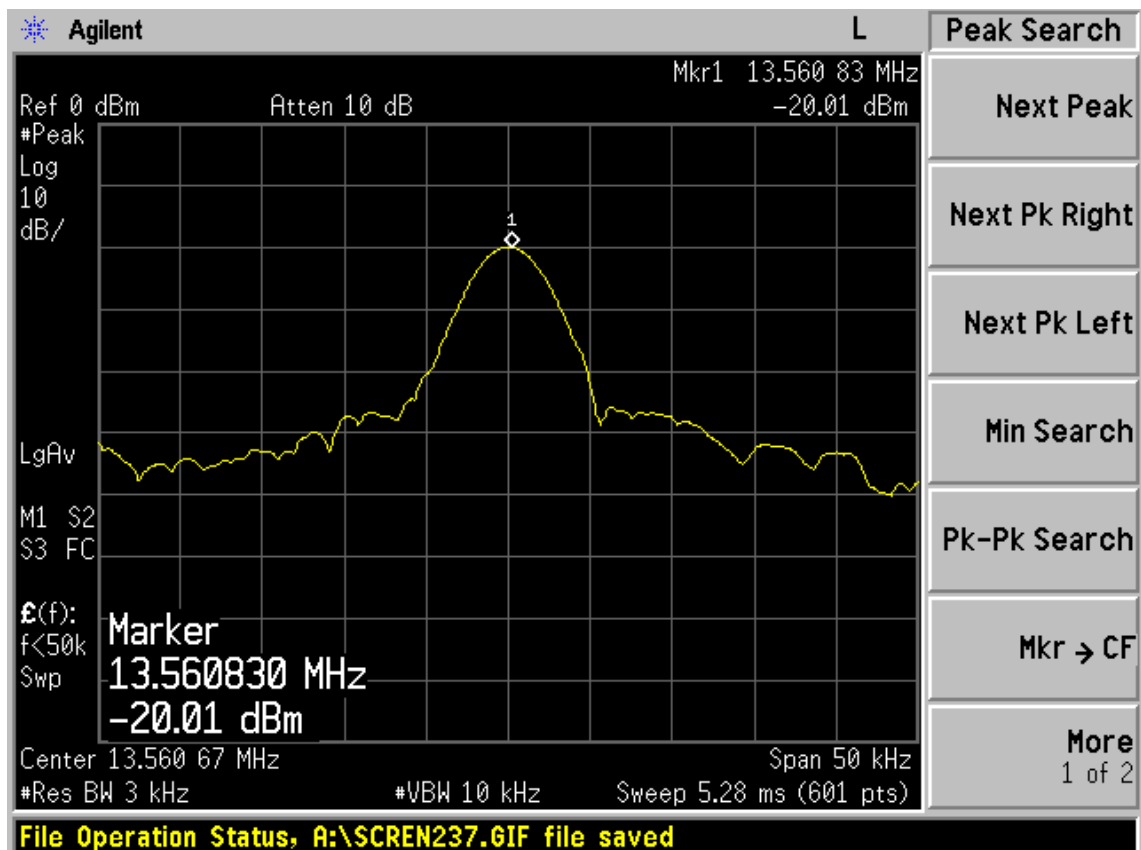
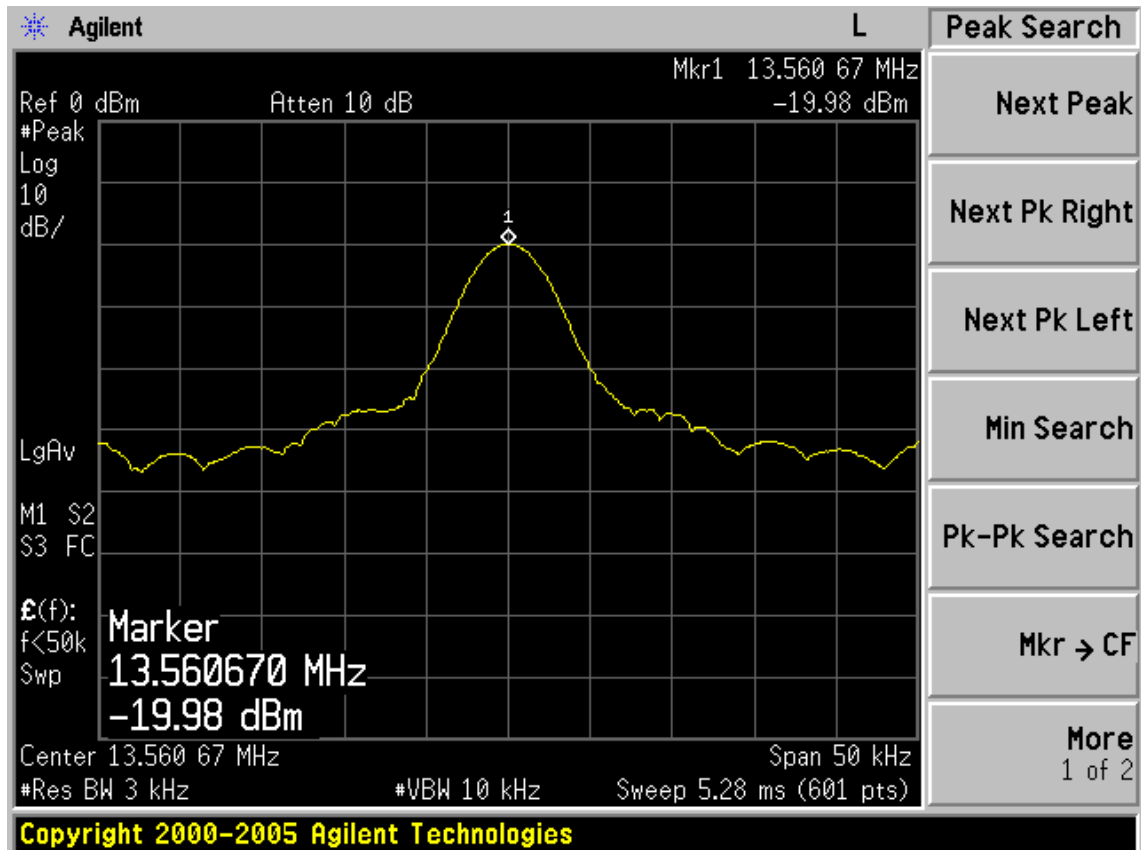
5.4. Test result

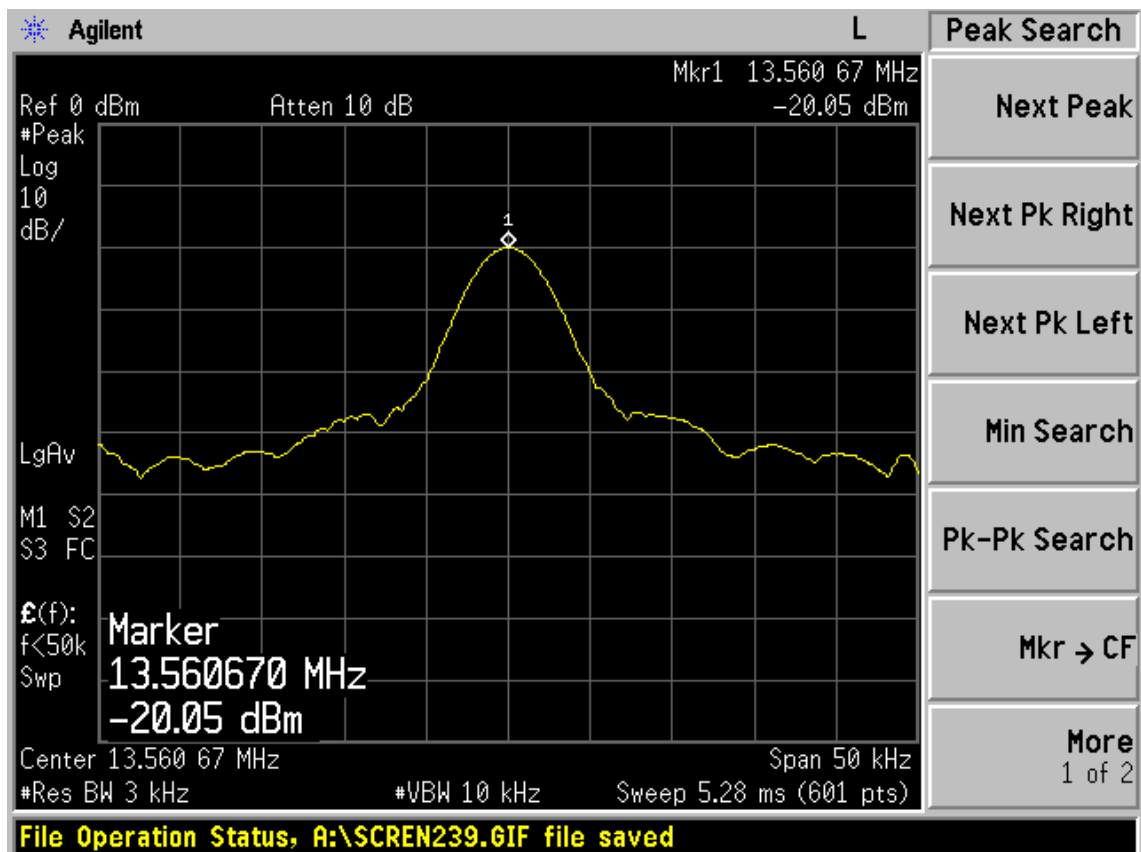
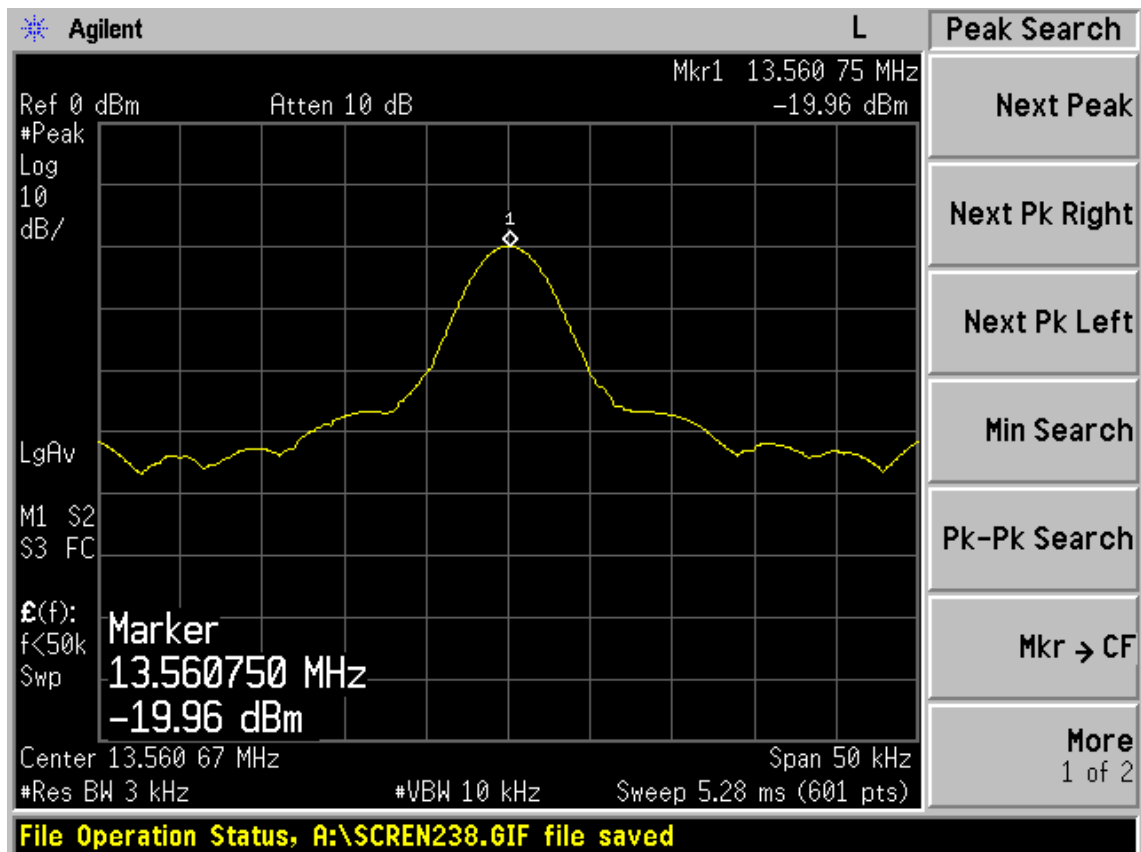
EUT: Wireless Portal of Power for PlayStation 3				
M/N: 84148790				
Power: DC 4.5V				
Test Date: 2011-06-18		Test site: RF Chamber		Tested by: Leo-Li
Ambient Temperature: 20℃		Relative Humidity: 56%		Pressure:101.7 kpa
Test Frequency:13.56MHz				
Frequency stability VS Voltage (Temperature:20℃)				
Supply Voltage （V）	Test result (MHz)	Deviation (ppm)	Limit (ppm)	Conclusion
3.825	13.56048	35	100	PASS
4.05	13.56063	46	100	
4.275	13.56073	54	100	
4.5	13.56070	52	100	
4.725	13.56060	44	100	
4.95	13.56050	37	100	
5.175	13.56074	55	100	
Frequency stability VS Temperature (supply voltage 4.5V)				
Temperature （℃）	Test result (MHz)	Deviation (ppm)	Limit (ppm)	Conclusion
-20	13.56067	49	100	PASS
-10	13.56075	55	100	
0	13.56058	43	100	
10	13.56058	43	100	
20	13.56075	55	100	
30	13.56083	61	100	
40	13.56075	55	100	
50	13.56067	49	100	

Frequency stability VS Temperature:

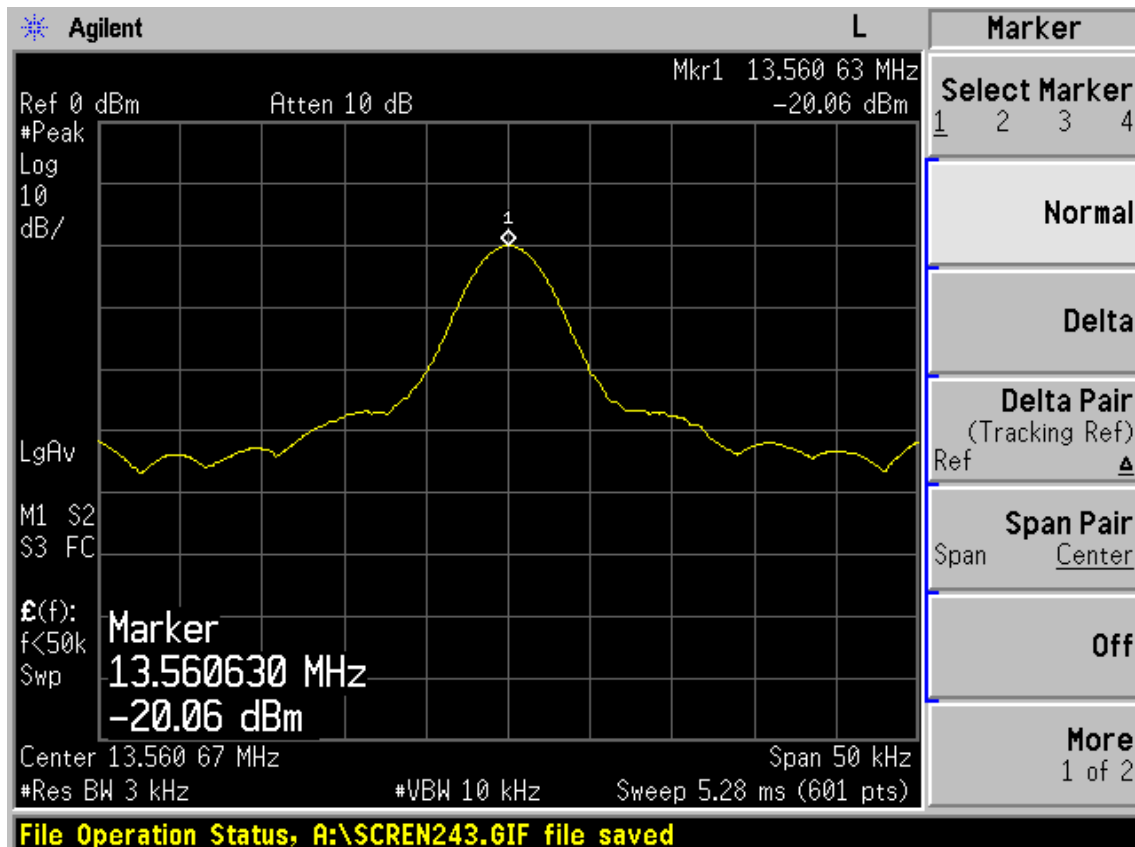
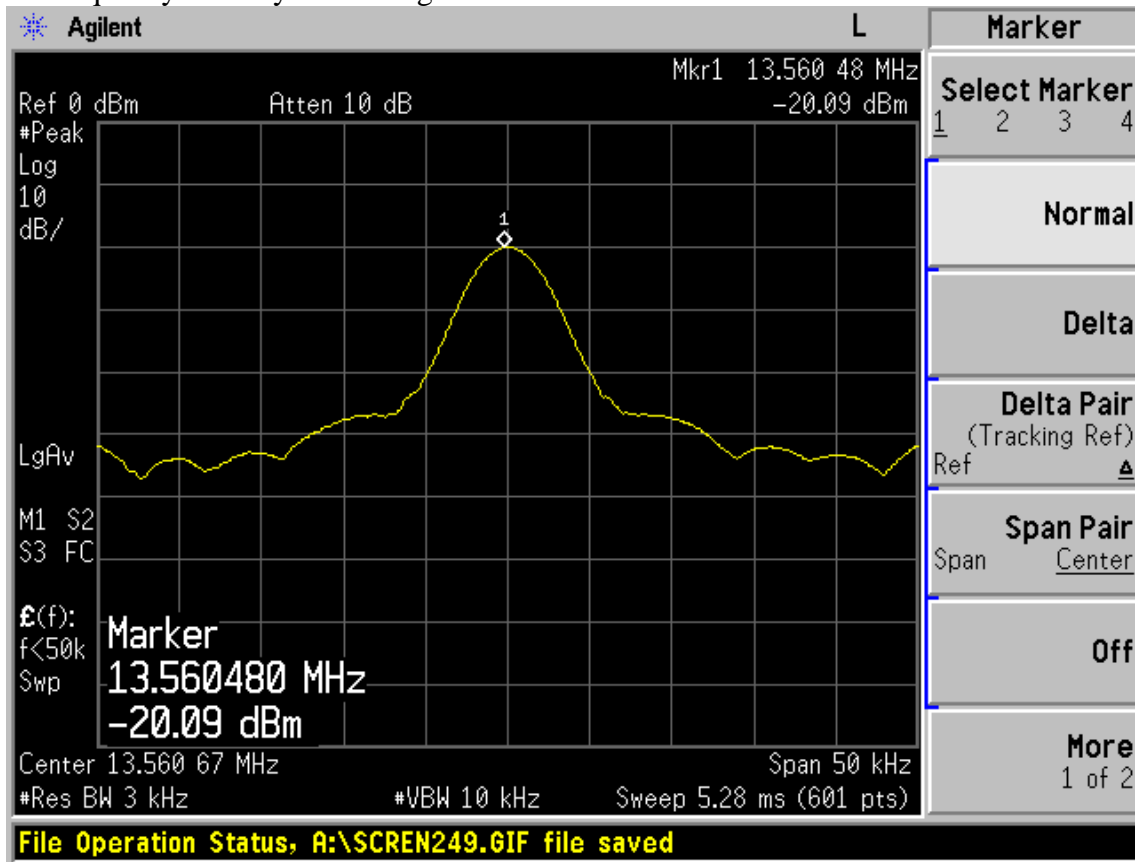


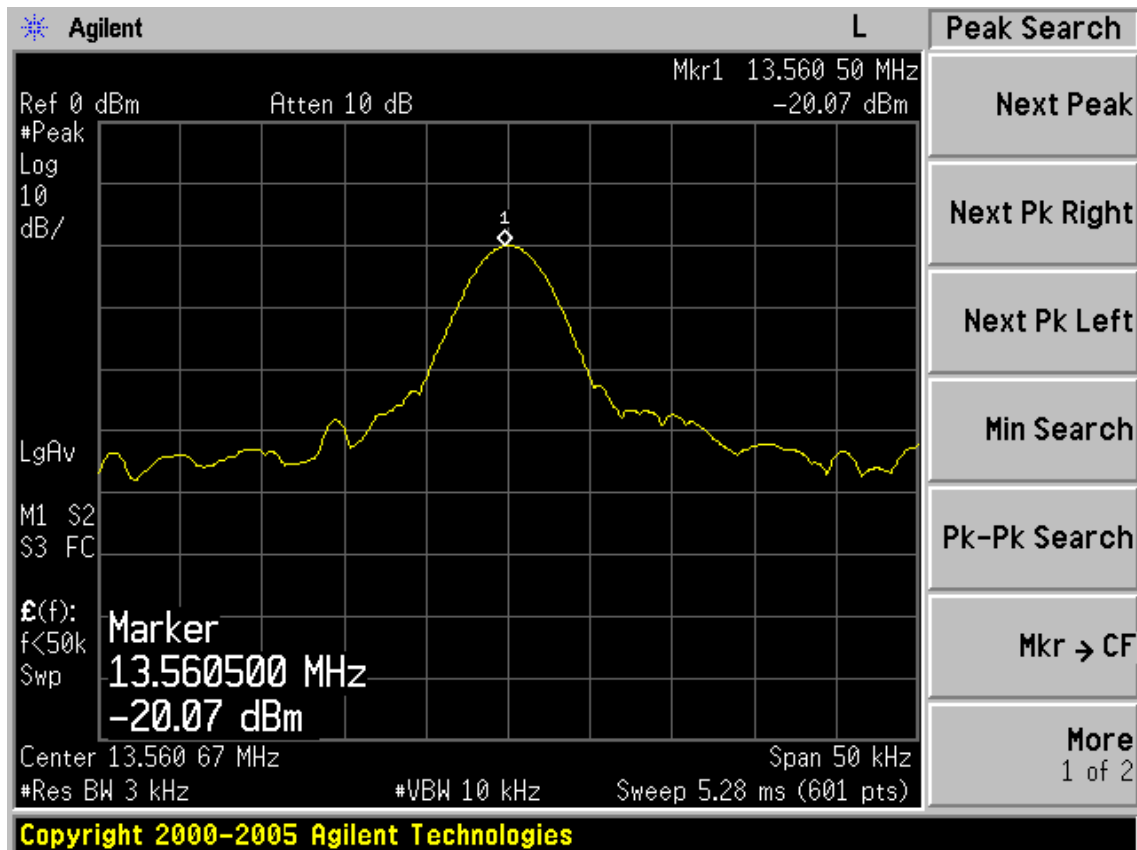
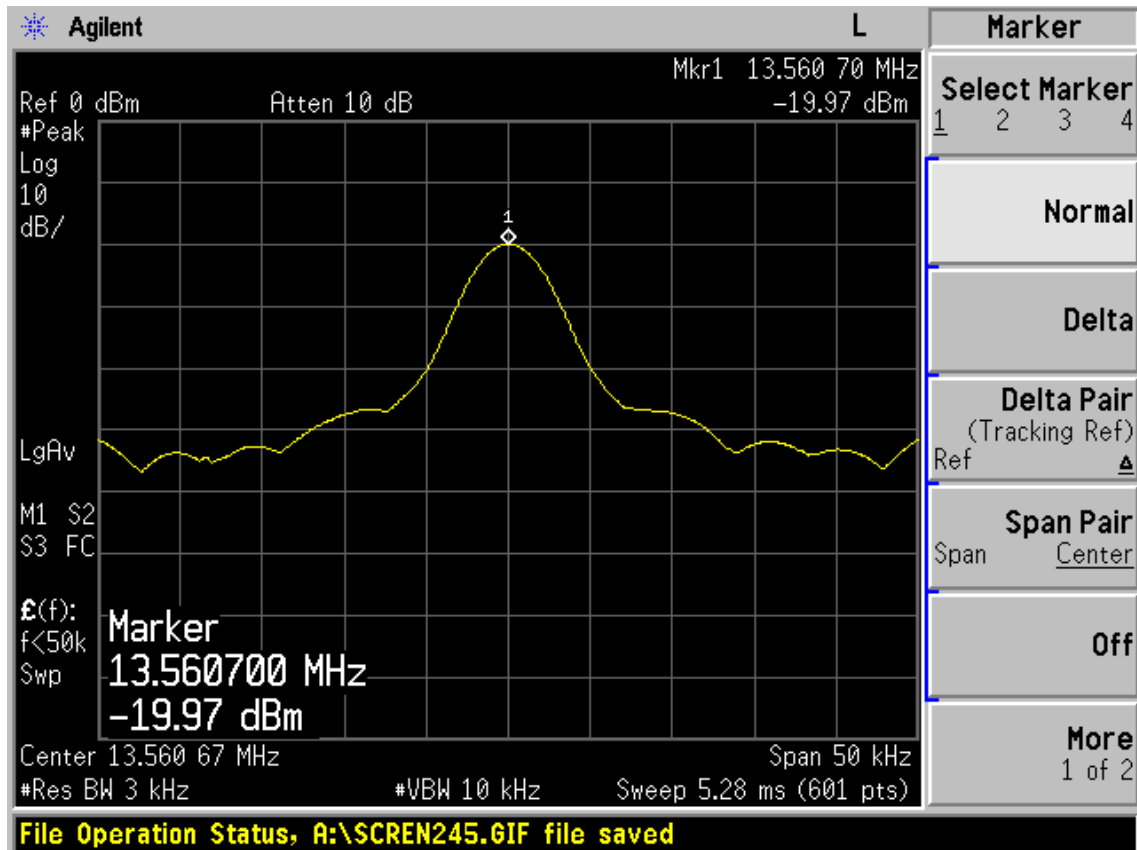


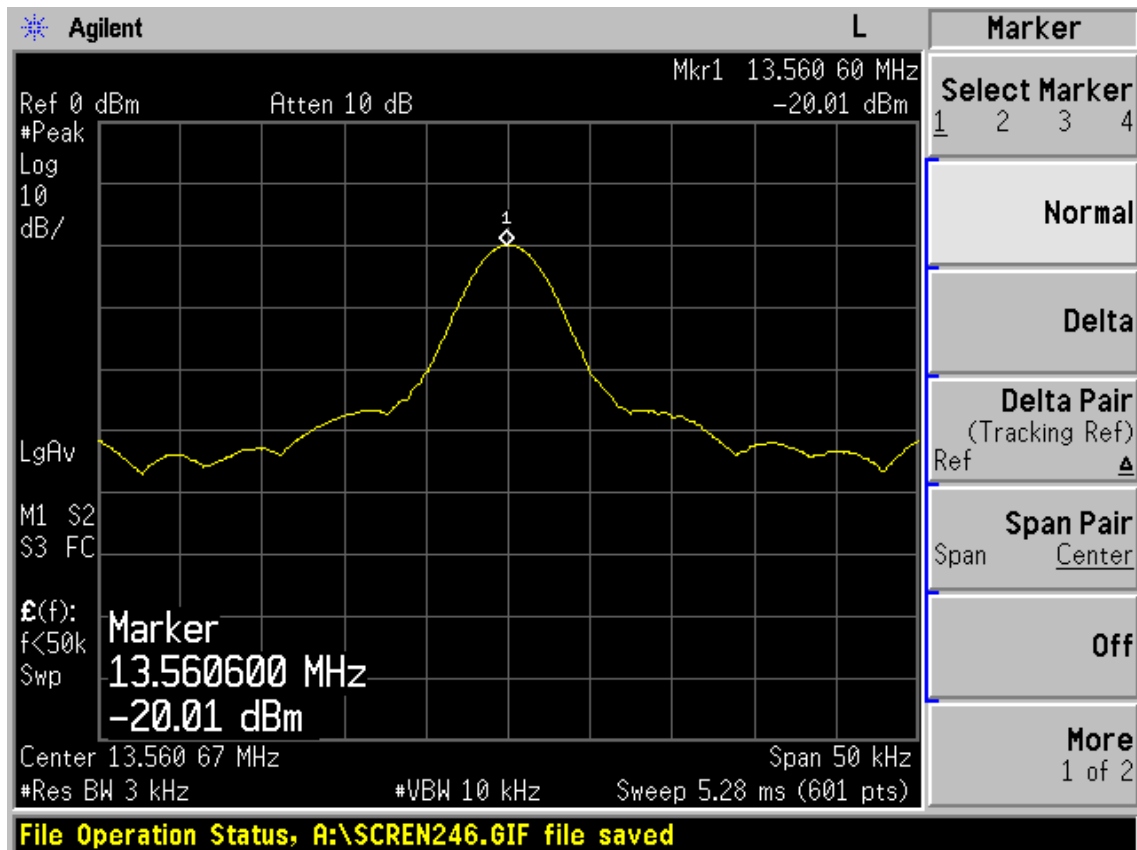
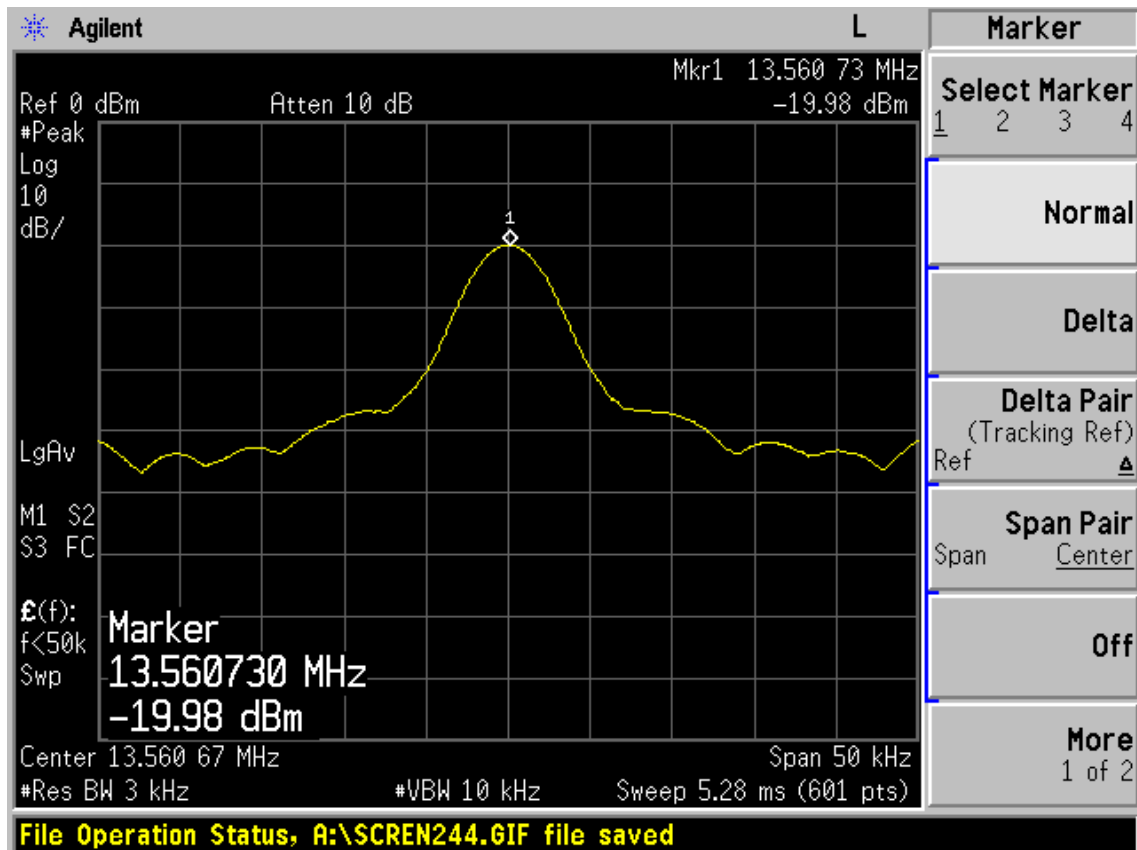


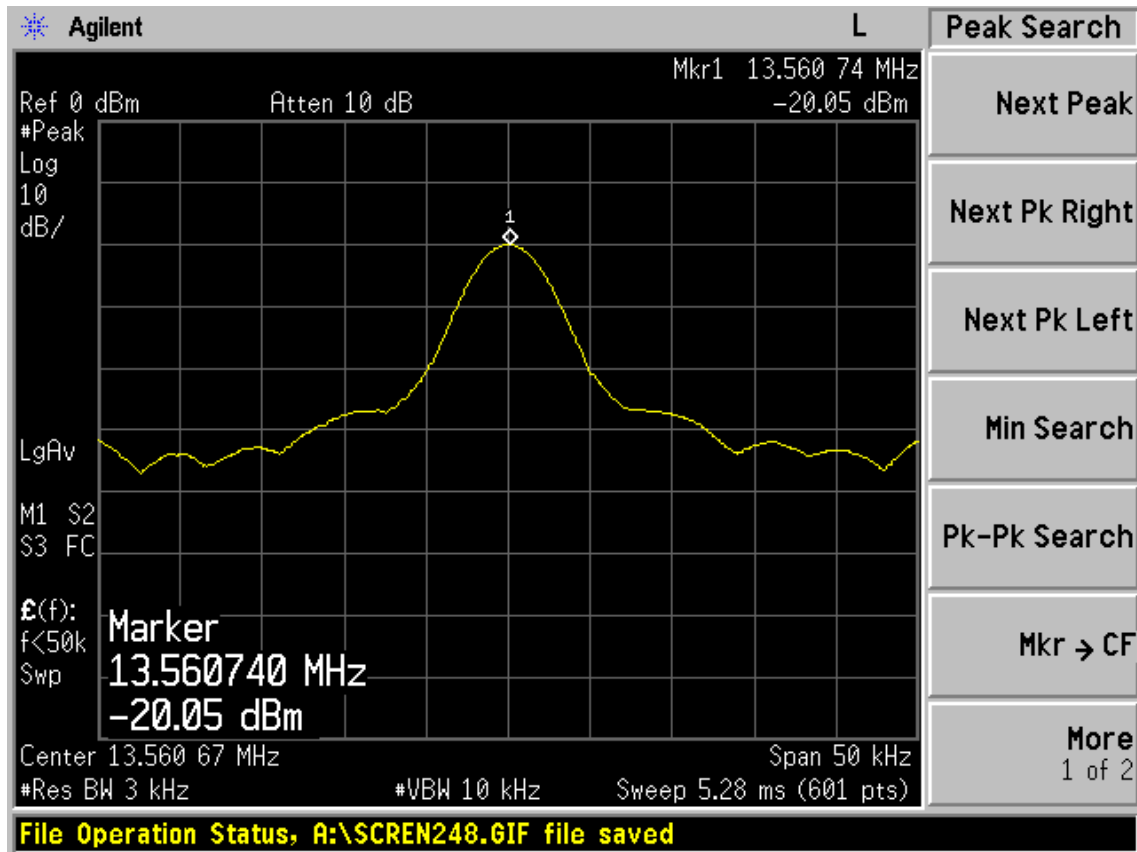


Frequency stability VS Voltage:









6. 20 DB BANDWIDTH TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,11	1 Year
2.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,11	1Year

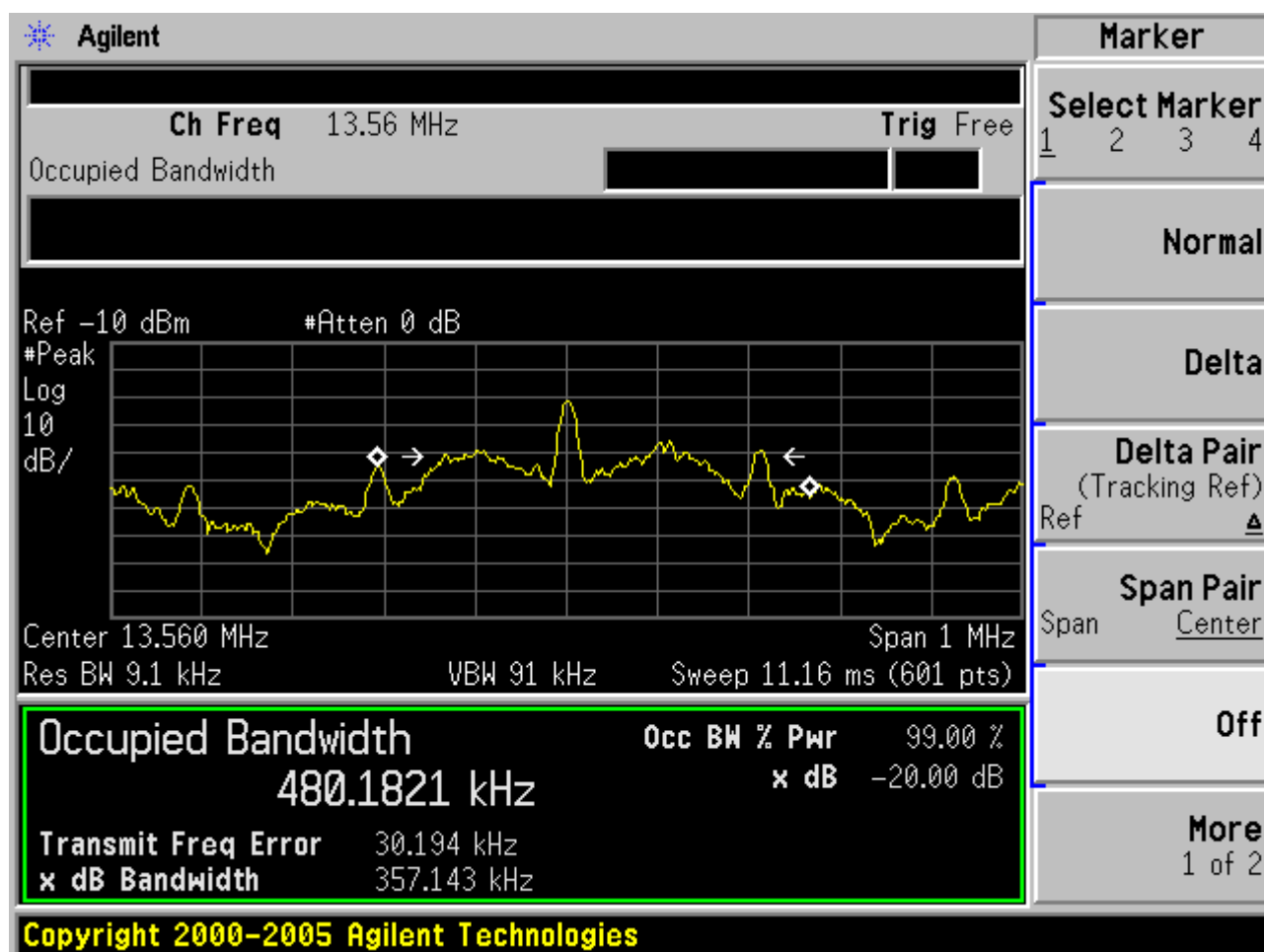
6.2.Limit

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

6.3. Test Results

EUT: Wireless Portal of Power for Playstation 3		
M/N: 84148790		
Test date:2011-05-29	Pressure: 101.8 kpa	Humidity: 52 %
Tested by: Leo-Li	Test site: RF site	Temperature : 24.8°C

Frequency	20dB bandwidth (KHz)	Limit (KHz)
13.56MHz	480.1821	N/A
Conclusion : PASS		



7. DEVIATION TO TEST SPECIFICATIONS

[NONE]