APPLICATION FOR CERTIFICATION On Behalf of

RedOctane, Inc.

Guitar Hero World Tour - PS2 Wireless Guitar

Model Number: 95449.805

FCC ID: VFIBW95449805

Prepared for: RedOctane, Inc.

955 Benecia Avenue Sunnyvale, CA 94085, United States

Prepared By: Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F08324
Date of Test : Jun.23~24, 2008
Date of Report : Jul.08, 2008

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TEST REPORT CERTIFICATION

Applicant : RedOctane, Inc.

Manufacturer : Berway Technology Ltd.

EUT Description : Guitar Hero World Tour - PS2 Wireless Guitar

FCC ID : VFIBW95449805

(A) MODEL NO. ; 95449.805 (B) SERIAL NO. : N/A (C) POWER SUPPLY : DC 3V (D) TEST VOLTAGE : DC 3V

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2007

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits for radiated and conducted emissions.

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 tests. Also, this report shows that EUT is technically compliant with FCC requirements.

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:	Jun.23~24, 2008
Prepared by :	YoYo Wang / Assistant
Reviewer:	Jamy Yu / Senior Engineer
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Approved & Authorized Signer :	Stamp only for EV3 Dept. Report Signature: Len u %2.

Ken Lu / Deputy 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								
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.4-2003	N/A						
Radiated Emission Test	diated Emission Test FCC Part 15C: 15.249 ANSI C63.4-2003							
Band Edge Compliance Test	FCC Part 15: 15.249	PASS						
20dB Bandwidth Test	FCC Part 15: 15.215	PASS						
N/A is an abbreviation for Not Applicable.								

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name : Guitar Hero World Tour - PS2 Wireless Guitar

Model Number : 95449.805

FCC ID : VFIBW95449805

Operation frequency : 2410MHz~2470MHz

Modulation : MSK

Power Supply : DC 3V

(Note: New batteries were used for all test.)

Applicant : RedOctane, Inc.

955 Benecia Avenue Sunnyvale, CA 94085, United

States

Manufacturer : Berway Technology Ltd.

Unit 1301-03, 13/F., No.88 Kwai Cheong Road, Kwai

Chung, N.T., H.K.

Date of Test : Jun.23~24, 2008

Date of Receipt : Jun.16, 2008

Sample Type : Prototype production

Note: This EUT has two parts, one is guitar, the other one is dongle. We test "guitar" in this report.

2.2. 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 : Jun. 13, 2006 File on Federal Communication

Commission

Registration Number: 90454

3m & 10m Anechoic Chamber : Jan. 31, 2007 File on Federal Communication

Commission

Registration Number: 794232

EMC Lab. : Accredited by DATech, German

Registration Number: DAT-P-091/99-01

Dec. 20, 2007

Accredited by NVLAP, USA NVLAP Code: 200372-0

Apr.01, 2008

2.3. Test Uncertainty

No.	Item	MU	Remark
1.	Uncertainty for Conducted Emission Test	2.02dB	
2	Uncertainty for Radiation Emission test	3.44 dB	Polarize: V
Ζ.	in 3m chamber	3.96 dB	Polarize: H
		3.46 dB	Distance: 10m Polarize: V
2	Uncertainty for Radiation Emission test	3.82 dB	Distance: 10m Polarize: H
3.	in 10m chamber	3.64 dB	Distance: 3m Polarize: V
		4.02 dB	Distance: 3m Polarize: H

3. POWER LINE CONDUCTED EMISSION TEST

According to Paragraph (f) of FCC Part 15 section 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 rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	Jun 09,08	1/2 Year
2.	EMI Spectrum	Agilent	E7403A	MY42000106	May 10, 08	1 Year
3.	Test Receiver	Rohde & Schwarz	ESVS20	830350/005	May 10, 08	1 Year
4.	Amplifier	HP	8447D	2648A04738	Jan 09, 08	1/2 Year
5.	Bilog Antenna	Schaffner	CBL6112D	25237	Feb 21, 08	1 Year
6.	RF Cable	JINGCHENG	KLMR400	3# Chamber No.1	Jan 09, 08	1/2 Year
7.	RF Cable	JINGCHENG	JBY400	3# Chamber No.2	Jan 09, 08	1/2 Year
8.	RF Cable	JINGCHENG	JBY400	3# Chamber No.3	Jan 09, 08	1/2 Year
9.	RF Cable	JINGCHENG	JBY400	3# Chamber No.4	Jan 09, 08	1/2 Year
10.	Coaxial Switch	Anritsu	MP59B	M73989	Jan 09, 08	1/2 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	MY41440292	May 10, 08	1 Year
2.	Amp	HP	8449B	3008A00863	May 10, 08	1 Year
3.	Antenna	EMCO	3115	9607-4877	May 27, 08	1.5 Year
4	Antenna	EMCO	3116	00060088	May 28, 07	1.5Year
5.	HF Cable	Hubersuhne	Sucoflex 104	-	May 10, 08	1 Year

4.2. Block Diagram of Test Setup

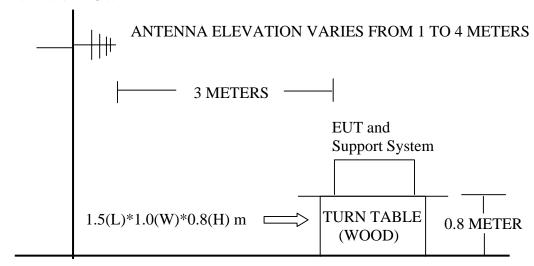
4.2.1. Block Diagram of connection between EUT and simulators

EUT

(EUT: Guitar Hero World Tour - PS2 Wireless Guitar)

4.2.2. Anechoic Chamber Setup Diagram

ANTENNA TOWER



GROUND PLANE

4.3. Radiated Emission Limit Standard: FCC 15.249

FREQUENCY	DISTANCE	FIELD STREM	NGTHS LIMIT
MHz	Meters	μV/m	$dB(\mu V)/m$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Local Oscillator:	3	114.0 dB(μ	V)/m (Peak)
		94.0 dB(μV	/)/m (Average)
Above 1000	3	Other:	
		74.0 dB(μV)/m (Peak)	
		54.0 dB(μV	V)/m (Average)

Remark : (1) Emission level $dB\mu V = 20 \log Emission$ level $\mu V/m$

- (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. 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.

4.4.1. Guitar Hero World Tour - PS2 Wireless Guitar (EUT)

Model Number : 95449.805 Serial Number : N/A

4.4.2. Support Equipment: As Tested Supporting System Detail, in Section 2.2.

4.5. Operating Condition of EUT

- 4.5.1. Setup the EUT as shown in Section 4.2..
- 4.5.2. Let the EUT work in test modes (TX Mode) and test it.

4.6. Test Procedure

The 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. The EUT is set 3 meters away from the receiving antenna, which is mounted on a 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 is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission Test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position and this position was also the normal use position.

The bandwidth of the EMI test receiver (R&S ESVS20) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW 10Hz VBW for average emission above 1GHz

The frequency range from 30MHz to 10th (25GHz) harmonic are checked.

4.7. Radiated Emission Test Results

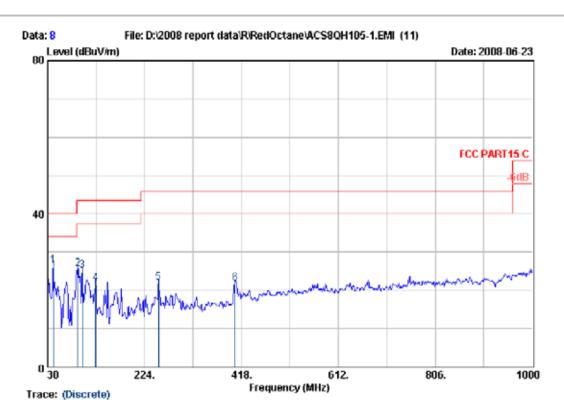
PASS.

All the emissions from 18GHz~25GHz are Peak measured and comply with Average limit.





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Data no. : 8

Site no. : 3m chamber Dis. / Ant. : 3m CBL6112D Ant. pol. : HORIZONTAL

: FCC PART15 C

Env. / Ins. : 24*C/56% ESVS20 Engineer : Jamy : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V Test Mode : Tx

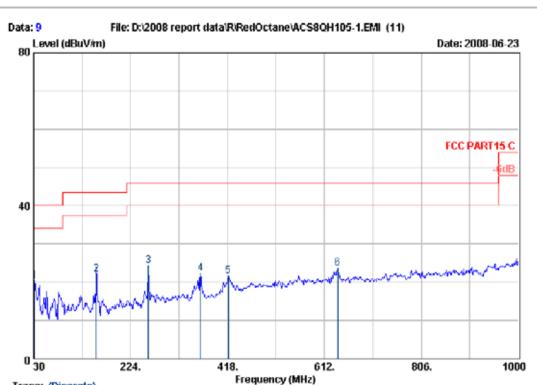
Model No. : 95449.805(Controller)

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emissio Level (dBuV/m)	n Limits (dBuV/m)	Margin (dB)	Remark
1	41.64	10.77	0.90	14.87	26.54	40.00	13.46	QP
2	90.14	9.10	1.31	15.26	25.67	43.50	17.83	QP
3	99.84	10.00	1.40	13.73	25.13	43.50	18.37	QP
4	126.03	10.20	1.52	10.16	21.88	43.50	21.62	QP
5	252.13	11.75	2.06	8.16	21.97	46.00	24.03	QP
6	405.39	15.30	2.70	3.76	21.76	46.00	24.24	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.



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Trace: (Discrete)

Site no. : 3m chamber Data no. : 9
Dis. / Ant. : 3m CBL6112D Ant. pol. : VERTICAL

Limit : FCC PART15 C

Env. / Ins. : 24*C/56% ESVS20 Engineer : Jamy EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V Test Mode : Tx

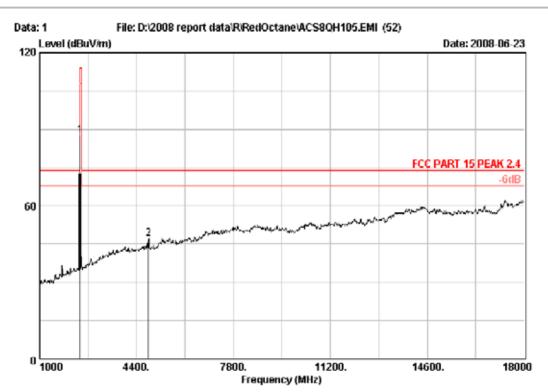
Model No. : 95449.805(Controller)

		Ant.	Cable		Emissio	n		
	Freq.	Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.94	15.67	0.78	3.91	20.36	40.00	19.64	QP
2	155.13	10.20	1.55	10.37	22.12	43.50	21.38	QP
3	259.89	12.00	2.09	10.25	24.34	46.00	21.66	QP
4	363.68	14.76	2.44	5.12	22.32	46.00	23.68	QP
5	419.94	15.50	2.65	3.46	21.61	46.00	24.39	QP
6	638.19	19.48	3.18	0.97	23.63	46.00	22.37	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.



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Site no. : 3# Chamber Data no. : 1

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

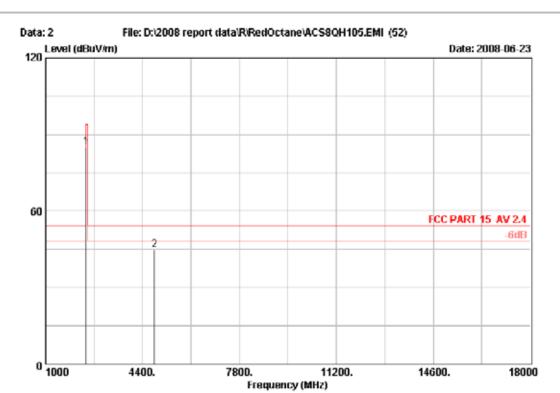
Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

		Ant.	Cable	Amp	Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2410.00	29.03	6.73	35.18	86.96	87.54	114.00	26.46	Peak
2	4820.00	34.02	10.54	34.49	37.05	47.12	74.00	26.88	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 2

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

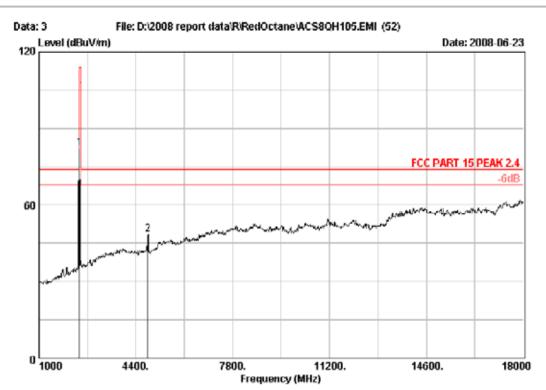
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1 2	2410.00 4820.00			35.18 34.49		84.85 44.92	94.00 54.00	9.15 9.08	Average Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





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: 3# Chamber Site no. Data no. : 3

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4 Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Node : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

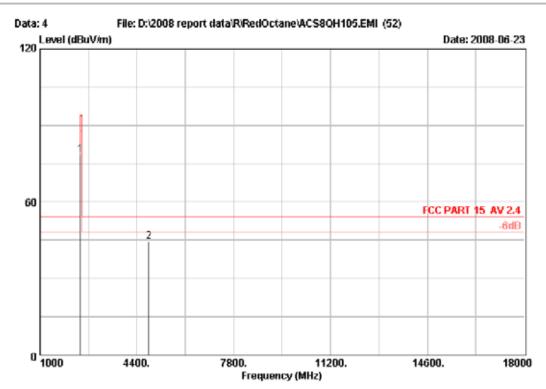
Freq.	Factor	Factor	Reading	Limits (dBuV/m)	_	Remark
2410.00 4820.00		 				Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





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Site no. : 3# Chamber Data no. : 4

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

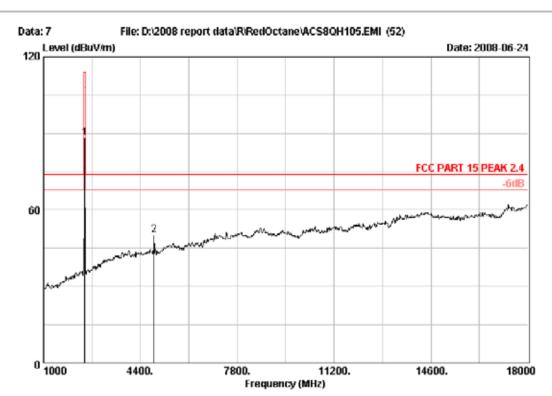
Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

Freq.		Factor	Reading	Emission Level (dBuV/m)	Limits	-	Remark
2410.00 4820.00						15.46 9.68	Average Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 7

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

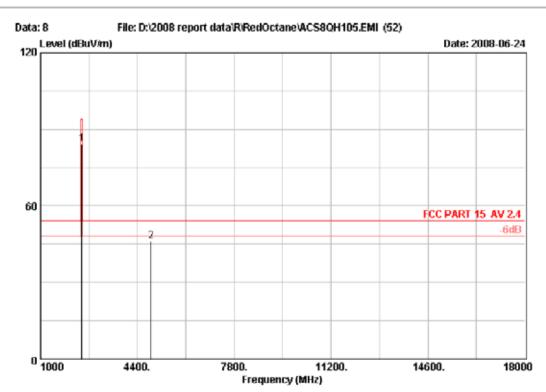
Test Mode : Tx CH Mid 2440MHz Model No. : 95449.805(Controller)

		Ant.	Cable	λmp		Emission	ı		
	Freq.				_		Limits	_	Remark
	(MHZ)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2440.00	29.11	6.80	35.17	87.57	88.31	114.00	25.69	Peak
2	4876.00	34.16	10.56	34.48	39.84	50.08	74.00	23.92	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 8

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Mid 2440MHz Model No. : 95449.805(Controller)

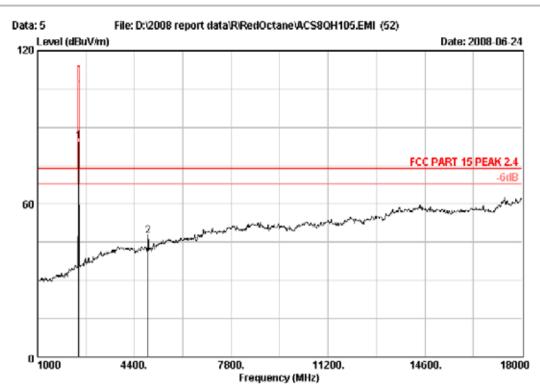
		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHZ)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2440.00	29.11	6.80	35.17	83.60	84.34	94.00	9.66	Average
2	4876.00	34.16	10.56	34.48	35.76	46.00	54.00	8.00	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





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Site no. : 3# Chamber Data no. : 5
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

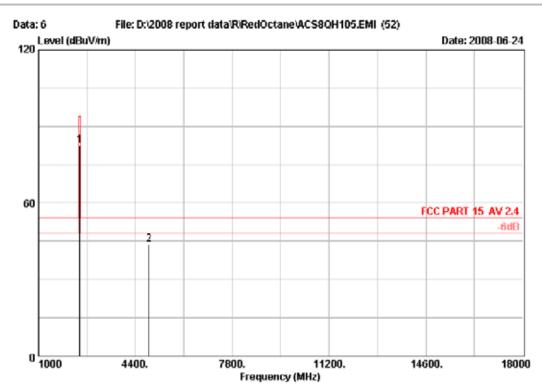
Test Mode : Tx CH Mid 2440MHz Model No. : 95449.805(Controller)

		Ant.	Cable	Amp					
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2440.00	29.11	6.80	35.17	83.69	84.43	114.00	29.57	Peak
2	4880.00	34.16	10.56	34.48	37.34	47.58	74.00	26.42	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 6

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

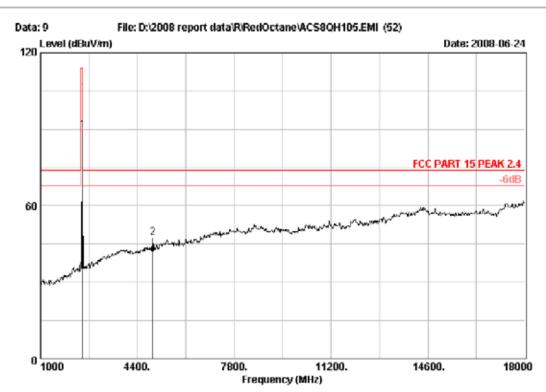
Test Mode : Tx CH Mid 2440MHz Model No. : 95449.805(Controller)

	Freq.	Factor	Cable Loss (dB)	Factor	Reading	Emission Level (dBuV/m)	Limits	-	Remark
1 2	2440.00 4880.00					82.65 43.65		11.35 10.35	Average Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 9

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

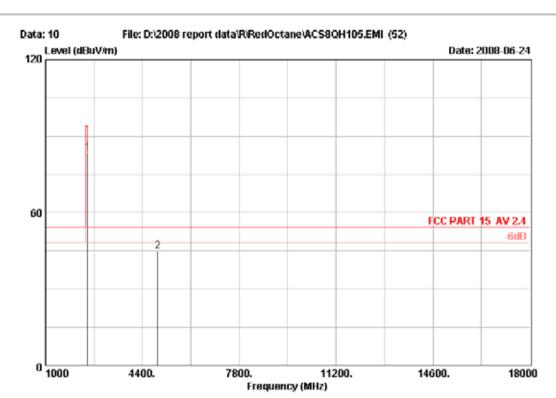
Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

		Ant.	Cable	Amp					
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHZ)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2470.00	29.15	6.87	35.16	88.75	89.61	114.00	24.39	Peak
2	4940.00	34.34	10.58	34.46	37.15	47.61	74.00	26.39	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 10

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

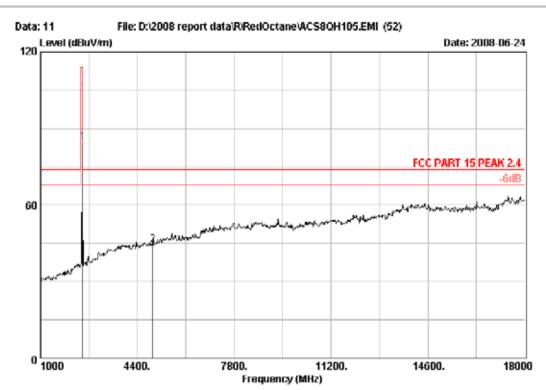
Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

		Ant.	Cable	Amp		Emission			
	Freq.				_		Limits	Margin	Remark
	(MHZ)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2470.00	29.15	6.87	35.16	82.29	83.15	94.00	10.85	Average
2	4940.00	34.34	10.58	34.46	34.36	44.82	54.00	9.18	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 11
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

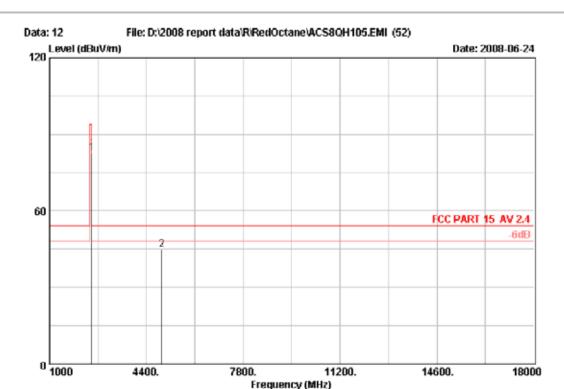
Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

	Freq.	Factor	Factor	Reading		Limits (dBuV/m)		Remark
1 2	2470.00 4940.00		 		84.52 44.52		29.48 29.48	Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 12 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

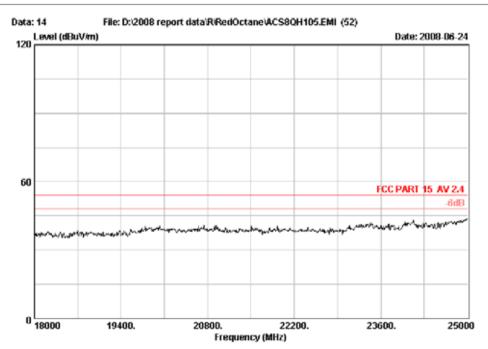
Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHZ)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2470.00	29.15	6.87	35.16	81.72	82.58	94.00	11.42	Average
2	4940.00	34.34	10.58	34.46	34.21	44.67	54.00	9.33	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 14

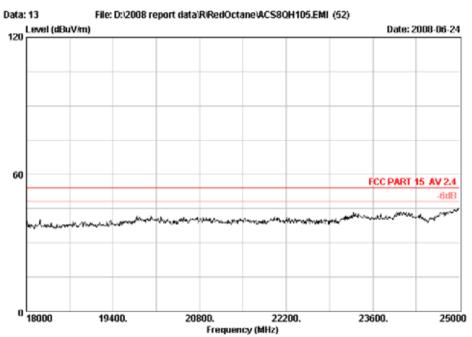
Dis. / Ant. : 3m 3116 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)



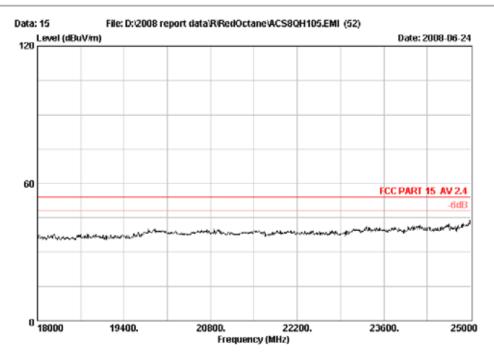
Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Low 2410HHz Model No. : 95449.805(Controller)



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Site no. : 3# Chamber Data no. : 15

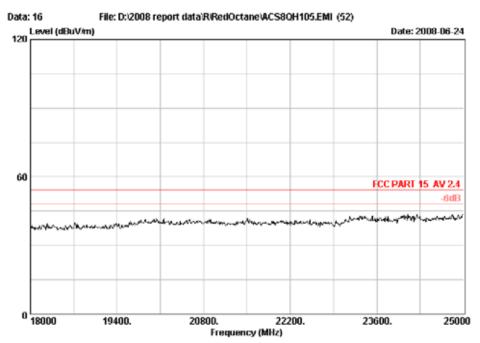
Dis. / Ant. : 3m 3116 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 AV 2.4

Env. / Ins.: 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Mid 2440MHz Model No. : 95449.805(Controller)



Site no. : 3# Chamber Data no. : 16 Dis. / Ant. : 3m 3116 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 AV 2.4

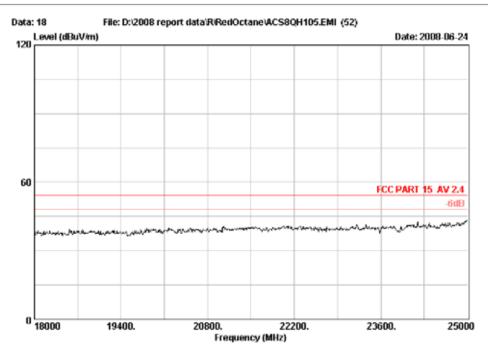
Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Hid 2440HHz Hodel No. : 95449.805(Controller)



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Site no. : 3# Chamber Data no. : 18

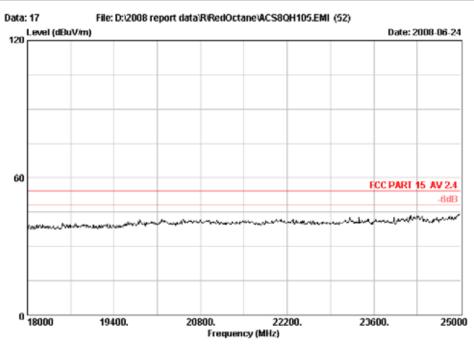
Dis. / Ant. : 3m 3116 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)



Site no. : 3# Chamber Data no. : 17 Dis. / Ant. : 3m 3116 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

5. BAND EDGE COMPLIANCE TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,10, 08	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May,27, 08	1.5 Year
3	Amplifier	HP	8449B	3008A00863	May,10, 08	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX	182769/4	May,28, 08	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX	182768/4	May,28, 08	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX	182771/4	May,28, 08	1 Year

5.2. Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in section 15.209, which is the lesser attenuation.

5.3. Test Produce

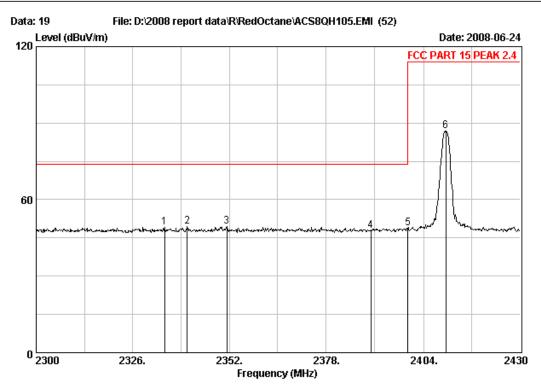
- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

5.4. Test Results

Pass (The testing data was attached in the next pages.)



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Site no. : 3# Chamber Data no. : 19
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

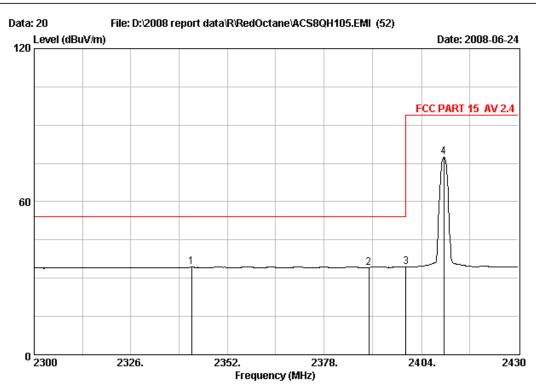
Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	•	Reading	Emission Level (dBuV/m)		Margin (dB)	Remark
1	2334.58	28.87	6.65	35.20	48.93	49.25	74.00	24.75	Peak
2	2340.69	28.87	6.67	35.19	49.06	49.41	74.00	24.59	Peak
3	2351.35	28.87	6.67	35.19	49.05	49.40	74.00	24.60	Peak
4	2390.00	28.99	6.71	35.18	47.38	47.90	74.00	26.10	Peak
5	2400.00	28.99	6.73	35.18	48.39	48.93	74.00	25.07	Peak
6	2409.98	29.03	6.73	35.18	86.25	86.83	114.00	27.17	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 20
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

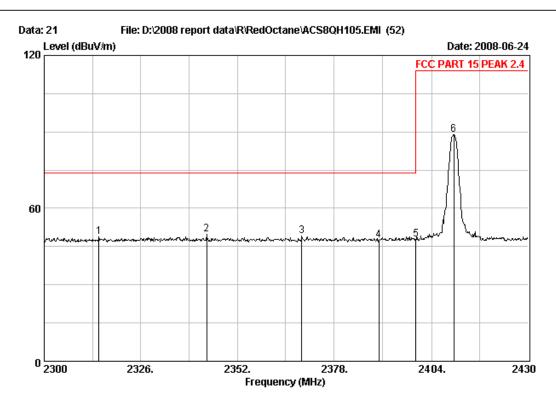
Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2342.38	28.87	6.67	35.19	33.96	34.31	54.00	19.69	Average
2	2390.00	28.99	6.71	35.18	33.67	34.19	54.00	19.81	Average
3	2400.00	28.99	6.73	35.18	33.96	34.50	54.00	19.50	Average
4	2409.98	29.03	6.73	35.18	76.88	77.46	94.00	16.54	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 21

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny
EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

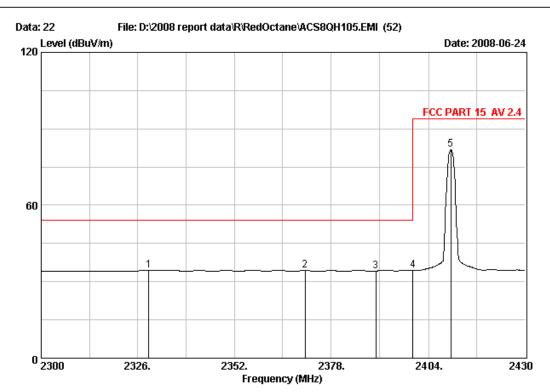
	Freq.		Cable Loss (dB)	Amp Factor (dB)	Reading			Margin (dB)	Remark
 1	2314.69	28.79	6.63	35.20	48.48	48.70	74.00	25.30	Peak
2	2343.68	28.87	6.67	35.19	49.32	49.67	74.00	24.33	Peak
3	2369.29	28.95	6.69	35.19	48.70	49.15	74.00	24.85	Peak
4	2390.00	28.99	6.71	35.18	46.89	47.41	74.00	26.59	Peak
5	2400.00	28.99	6.73	35.18	47.13	47.67	74.00	26.33	Peak
6	2409.98	29.03	6.73	35.18	88.23	88.81	114.00	25.19	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





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Site no. : 3# Chamber Data no. : 22

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny
EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH Low 2410MHz Model No. : 95449.805(Controller)

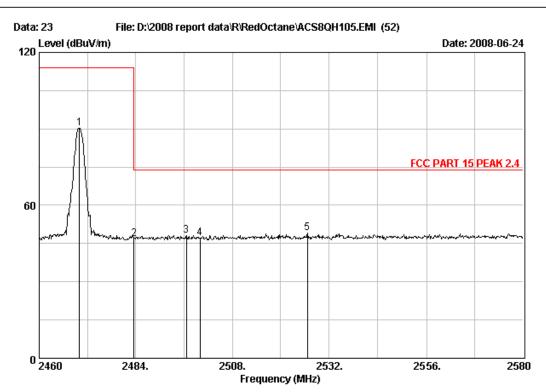
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)		Reading	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2 3 4	2328.99 2370.98 2390.00 2400.00	28.83 28.95 28.99 28.99	6.65 6.69 6.71 6.73	35.20 35.19 35.18 35.18	34.13 33.91 33.72 33.99	34.41 34.36 34.24 34.53	54.00 54.00 54.00 54.00	19.59 19.64 19.76 19.47	Average Average Average Average
5	2409.98	29.03	6.73	35.18	81.18	81.76	94.00	12.24	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





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Site no. : 3# Chamber Data no. : 23

Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny
EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

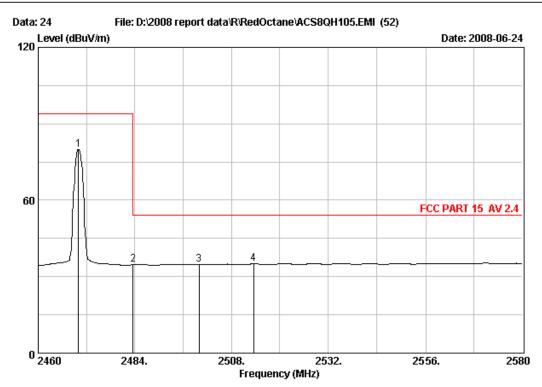
Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	•	Reading		Limits (dBuV/m)	Margin (dB)	Remark
1	2469.96	29.15	6.87	35.16	89.42	90.28	114.00	23.72	Peak
2	2483.50	29.19	6.87	35.16	45.82	46.72	74.00	27.28	Peak
3	2496.60	29.23	6.91	35.15	47.25	48.24	74.00	25.76	Peak
4	2500.00	29.23	6.91	35.15	46.17	47.16	74.00	26.84	Peak
5	2526.60	29.35	6.96	35.14	47.93	49.10	74.00	24.90	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber
Dis. / Ant. : 3m 3115 FACTOR Data no. : 24

Ant. pol. : HORIZONTAL

: FCC PART 15 AV 2.4 Limit

Env. / Ins. : 23*C/54% Engineer : Sunny : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH High 2470MHz
Model No. : 95449.805(Controller)

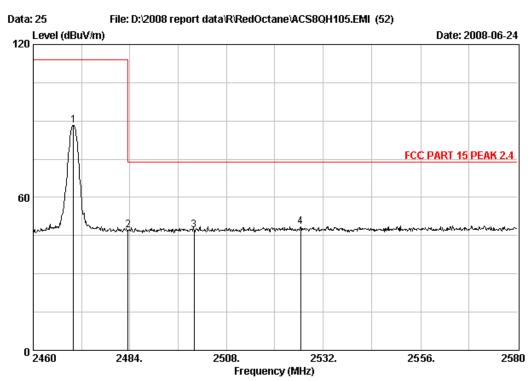
		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2469.96	29.15	6.87	35.16	79.17	80.03	94.00	13.97	Average
2	2483.50	29.19	6.87	35.16	33.75	34.65	54.00	19.35	Average
3	2500.00	29.23	6.91	35.15	33.91	34.90	54.00	19.10	Average
4	2513.52	29.29	6.93	35.14	33.89	34.97	54.00	19.03	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





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Site no. : 3# Chamber Data no. : 25
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

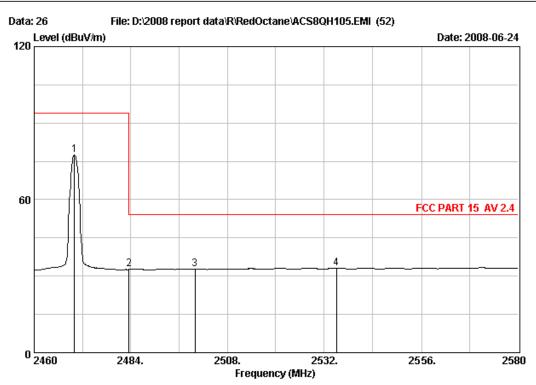
Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

 	Freq. (MHz)		Cable Loss (dB)		Reading	Emission Level (dBuV/m)		Margin (dB)	Remark
1	2469.96	29.15	6.87	35.16	87.39	88.25	114.00	25.75	Peak
2	2483.50	29.19	6.87	35.16	46.24	47.14	74.00	26.86	Peak
3	2500.00	29.23	6.91	35.15	46.29	47.28	74.00	26.72	Peak
4	2526.36	29.35	6.96	35.14	47.34	48.51	74.00	25.49	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3# Chamber Data no. : 26
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL

Limit : FCC PART 15 AV 2.4

Env. / Ins. : 23*C/54% Engineer : Sunny EUT : Guitar Hero World Tour-PS2 Wireless Guitar

Power Rating: DC 3V

Test Mode : Tx CH High 2470MHz Model No. : 95449.805(Controller)

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	•	Reading (dBuV)	•	Limits (dBuV/m)	Margin (dB)	Remark
1	2469.96	29.15	6.87	35.16	76.53	77.39	94.00	16.61	Average
2	2483.50	29.19	6.87	35.16	31.73	32.63	54.00	21.37	Average
3	2500.00	29.23	6.91	35.15	31.86	32.85	54.00	21.15	Average
4	2535.12	29.35	6.96	35.14	31.97	33.14	54.00	20.86	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

6. 20DB BANDWIDTH TEST

6.1. Test Equipment

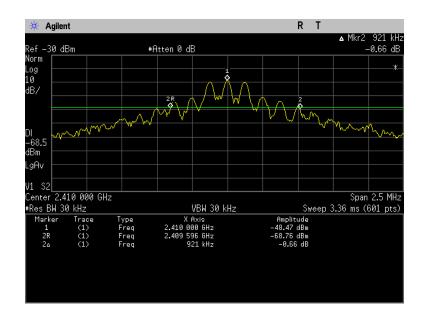
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.
						Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,10, 08	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,28, 08	1 Year
3	Bilog Antenna	Schaffner	CBL6112D	25238	Feb,21, 08	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX 102	2861812	May,28, 08	1Year
5	RF Cable	Hubersuhner	SUCOFLEX 102	28862212	May,28, 08	1 Year

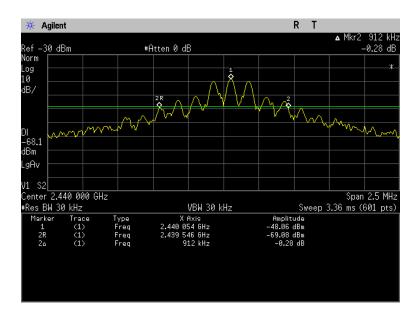
6.2. Test Information

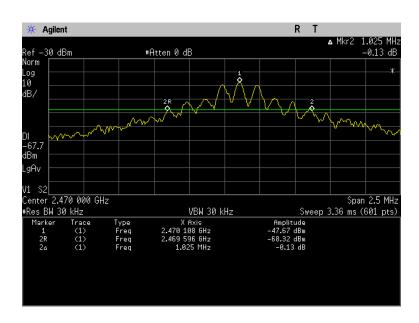
EUT:	Guitar Hero World Tour - PS2 Wireless Guitar		
M/N:	95449.805		
Test Date:	Jul.04, 2008		
Ambient Temperature:	23℃		
Relative Humidity:	54%		
Test standard:	FCC PART 15C: 15.215		
Test mode:	Transmitting		
Test Frequency:	Low: 2410MHz Mid: 2440MHz High: 2470MHz		
Test By:	Power		

6.3. Test Results

СН	20dB Bandwidth (kHz)	Limit (kHz)	Conclusion
(Low)	921		PASS
(Mid)	912		PASS
(High)	1025		PASS







7. DEVIATION TO TEST SPECIFICATIONS

[NONE]