

APPLICATION FOR CERTIFICATION  
On Behalf of

Beautiful Enterprise Co., Ltd

Digital Wireless Stereo Headphones

Model Number: RF-WHP02

Prepared for : Beautiful Enterprise Co., Ltd  
26th Floor, Beautiful Group Tower, 77 Connaught Road  
Central, Hong Kong

Prepared By : Audix Technology (Shenzhen) Co., Ltd.  
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Report Number : ACS-F08157  
Date of Test : Feb.28 ~ Mar.18, 2008  
Date of Report : Mar.19, 2008

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## TEST REPORT CERTIFICATION

Applicant : Beautiful Enterprise Co., Ltd  
 Manufacturer : Shen Zhen Synchron Electronics Co., Ltd.  
 EUT Description : Digital Wireless Stereo Headphones  
 (A) MODEL NO. : RF-WHP02  
 (B) SERIAL NO. : N/A  
 (C) POWER SUPPLY : DC 5V From Adapter

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 both 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 these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the 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 : Feb.28 ~ Mar.18, 2008

Prepared by :

*YoYo Wang*

YoYo Wang / Assistant

Reviewer :

*Iceeman Hu*

Iceeman Hu / Supervisor

**AUDIX**

信華科技(深圳)有限公司

Audix Technology (Shenzhen) Co., Ltd.

EMC 部門報告專用章

Stamp only for EMC Dept. Report

Signature:

*Ken Lu 3/27/08*

Approved & Authorized Signer :

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
Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003 KDB58074	PASS
Radiated Emission Test	FCC Part 15: 15.209 ANSI C63.4: 2003 KDB58074	PASS
6dB Bandwidth Test	FCC Part 15: 15.247 KDB58074	PASS
Output Power Test	FCC Part 15: 15.247 KDB58074	PASS
Band Edge Compliance Test	FCC Part 15: 15.247 KDB58074	PASS
Power Spectral Density Test	FCC Part 15: 15.247 KDB58074	PASS
MPE ESTIMATION	FCC Part 2: 2.1093	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

Product name	:	Digital Wireless Stereo Headphones
Model Number	:	RF-WHP02
Operation frequency	:	2.405GHz-----2.477GHz ISM Band
Channel Number	:	37
Channel frequency	:	$F = 2405 + 2(K-1)$ K=1,2,.....37
Modulation Technology	:	PI/4 DQPSK Modulation
Output power	:	0.51dBm(Maximum measured)
Antenna Assembly Gain	:	2dBi (maximum)
Applicant	:	Beautiful Enterprise Co., Ltd 26th Floor, Beautiful Group Tower, 77 Connaught Road Central, Hong Kong
Manufacturer	:	Shen Zhen Synchron Electronics Co., Ltd. No.9 Mei Li Road, Xia Mei Lin, Fu Tian Area, ShenZhen, China.
Power Adapter	:	M/N: PLR-050100 US Cable: Unshielded, Detectable, 2.0m
Date of Test	:	Feb.28 ~ Mar.18, 2008
Date of Receipt	:	Feb.26, 2008
Sample Type	:	Prototype production
<p>Note: This product is a Digital Wireless Stereo Headphones with two parts, one is the headphone, the other is the docking station. It can transmit and receive by each other. In this report we test the part of docking station.</p>		

## 2.2. Tested Supporting System Details

### 2.2.1. MP3

M/N : E2  
S/N : N/A  
Manufacturer : Meizu

### 2.2.2. NOTEBOOK

M/N : PP09S  
S/N : N/A  
Manufacturer : DELL  
Power Adaptor : Manufacturer: DELL,  
M/N: LA65NS1-00  
Cable: Unshielded, Detachable,  
4.0m  
(Bond one ferrite core)  
Test software : AWAflash v1.58

2.2.3. USB Cable: Unshielded, Detachable, 1.5m

2.2.4. Audio Cable: Unshielded, Detachable, 1.5m

### 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	:	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 Feb. 02, 2004  Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr.01, 2007

### 2.4. Measurement Uncertainty

No.	Item	Uncertainty
1.	Uncertainty for Conducted Emission Test	1.22dB
2.	Uncertainty for Radiated Emission Test<1GHz	4.62dB
3.	Uncertainty for Radiated Emission Test>1GHz	4.79dB
4.	Uncertainty for Frequency measure	$0.42 \times 10^{-6}$
5.	Uncertainty for conducted power measure	0.112



### 3. POWER LINE CONDUCTED EMISSION TEST

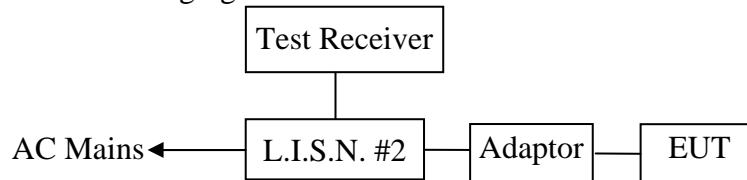
#### 3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Dec.19, 07	1 Year
2	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	May 11, 07	1 Year
3	Terminator	Hubersuhner	50Ω	No. 1	May 11, 07	1 Year
4	RF Cable	MIYAZAKI	5D-2W	LISN Cable 1#	Jan.09, 08	1/2 Year
5	Coaxial Switch	Anritsu	MP59B	M55367	Jan.09, 08	1/2 Year
6	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100340	Jan.09, 08	1/2 Year

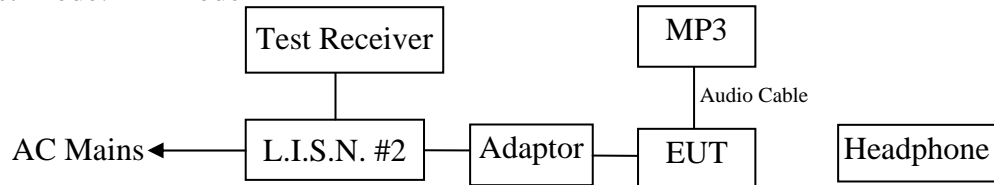
#### 3.2. Block Diagram of Test Setup

##### 3.2.1. Block diagram of connection between the EUT and simulators

Test Mode: Charging Mode



Test Mode: TX Mode



*(EUT: Digital Wireless Stereo Headphones)*

#### 3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. \* Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

#### 3.4. Configuration of EUT on Test

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

##### 3.4.1. Digital Wireless Stereo Headphones (EUT)

Model Number : RF-WHP02  
 Serial Number : N/A  
 Manufacturer : Shen Zhen Synchron Electronics Co., Ltd.

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

### 3.5.Operating Condition of EUT

3.5.1.Setup the EUT and simulator as shown as Section 3.2.

3.5.2.Turn on the power of all equipment.

3.5.3.Let the EUT worked in test mode (Tx + Charging) and measured it.

3.5.4.Tx mode: Transmitted 1KHz audio input by MP3.

3.5.5.The other peripheral devices were driven and operated in turn during all testing.

### 3.6.Test Procedure

The EUT is connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. Power on the PC and let it work normally, we use a keyboard test soft ware, let EUT working in test mode, then test it. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

The test result are reported on Section 3.7.,

### 3.7.Power Line Conducted Emission Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)

The EUT with the following test modes was tested and selected (mode 1&2) to read Q.P values and average values, all the test results are listed in next pages.

EUT: Digital Wireless Stereo Headphones Model No. : RF-WHP02

Test Date: Feb.28, 2008 Temperature: 23°C Humidity: 54%

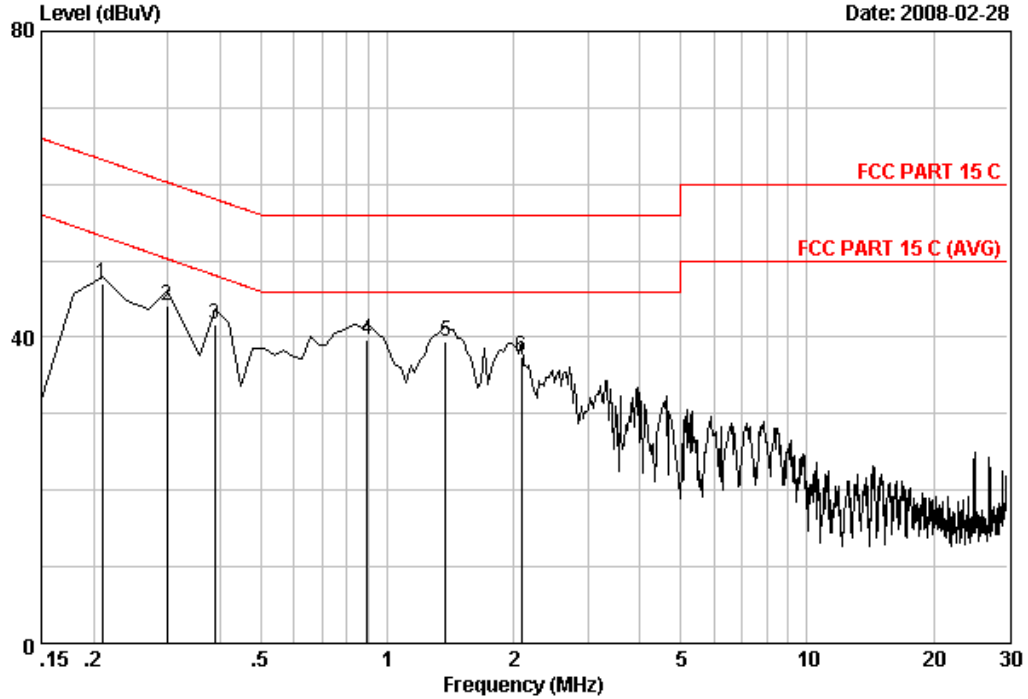
The details of test modes are as follows :

No.	Test Mode	Reference Test Data No.	
		VA	VB
1.	Charging	# 2	# 1
2.	TX Mode	# 3	# 4



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Data: 2 File: D:\emc 002\DATA\2008 Report\SI\Synchron\ACS8Q109.EMI (4)



Site no :AUDIX No.1 Conduction Data no :2  
 Dis./Ant. :-- KNW407 VA (1#)  
 Limit :FCC PART 15 C  
 Env./Ins. :Temp:23' Humi:54% ESHS10 Engineer :Jamy  
 EUT :Digital Wireless Stereo Headphones  
 Power Rating :DC 5V From adaptor AC 120V/60Hz  
 Test Mode :Charging  
 M/N :RF-WHP02  
 Memo :Docking Station

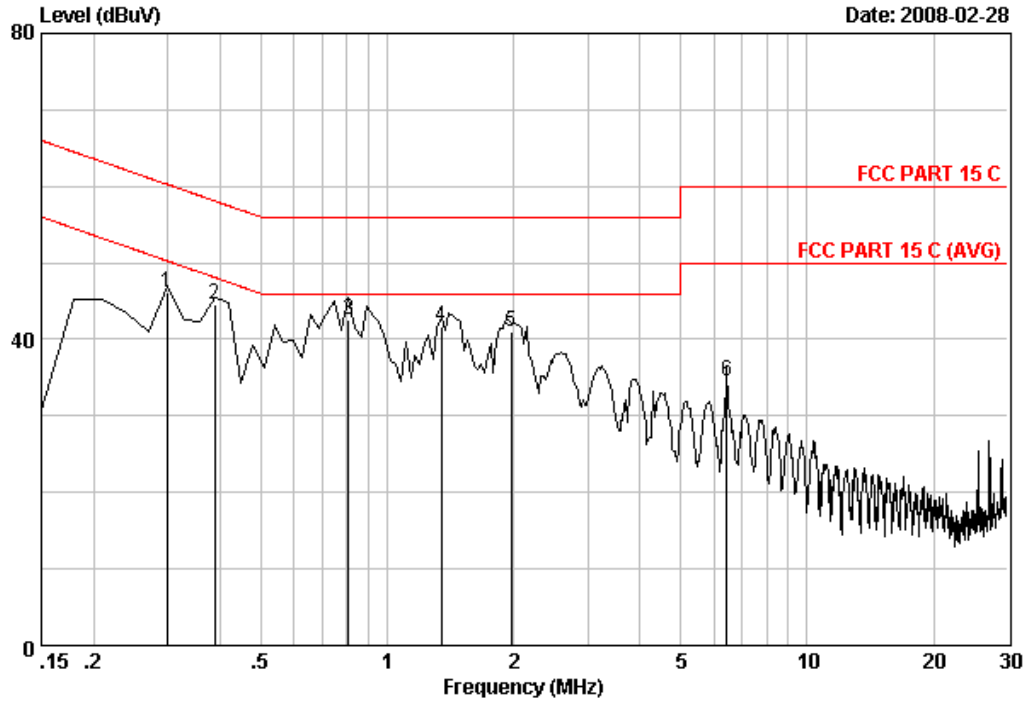
No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.21	0.15	10.15	36.68	46.98	63.22	16.24	QP
2	0.30	0.12	10.15	33.85	44.12	60.26	16.14	QP
3	0.39	0.09	10.14	31.50	41.73	58.09	16.36	QP
4	0.90	0.04	10.15	29.40	39.59	56.00	16.41	QP
5	1.37	0.04	10.15	29.16	39.35	56.00	16.65	QP
6	2.09	0.05	10.15	27.20	37.40	56.00	18.60	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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Data: 1 File: D:\emc 002\DATA\2008 Report\ACS8Q109.EMI (4)



Site no :AUDIX No.1 Conduction Data no :1  
 Dis./Ant. :-- KNW407 VB (1#)  
 Limit :FCC PART 15 C  
 Env./Ins. :Temp:23' Humi:54% ESHS10 Engineer :Jamy  
 EUT :Digital Wireless Stereo Headphones  
 Power Rating :DC 5V From adaptor AC 120V/60Hz  
 Test Mode :Charging  
 M/N :RF-WHP02  
 Memo :Docking Station

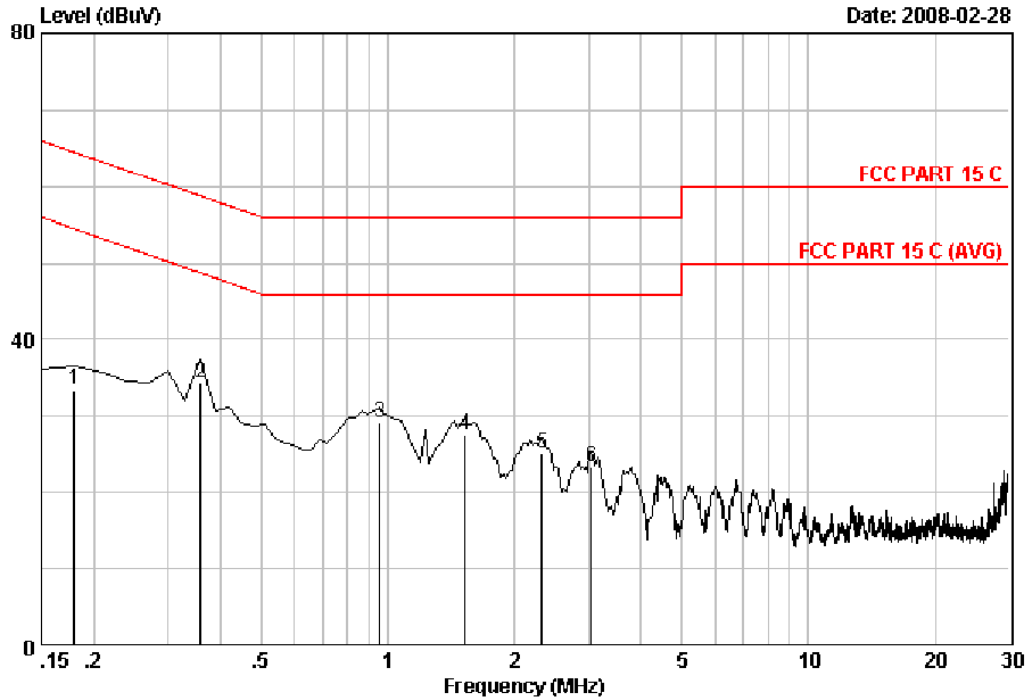
No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.30	0.12	10.15	35.75	46.02	60.26	14.24	QP
2	0.39	0.09	10.14	34.28	44.51	58.09	13.58	QP
3	0.81	0.04	10.14	32.32	42.50	56.00	13.50	QP
4	1.34	0.04	10.15	31.52	41.71	56.00	14.29	QP
5	1.97	0.05	10.15	30.84	41.04	56.00	14.96	QP
6	6.45	0.12	10.21	24.11	34.44	60.00	25.56	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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Data: 3 File: D:\emc 002\DATA\2008 Report\5\Synchron\ACS8Q109.EMI (4)



Site no :AUDIX No.1 Conduction Data no :3  
 Dis./Ant. :--- KNW407 VA (1#)  
 Limit :FCC PART 15 C  
 Env./Ins. :Temp:23' Humi:54% ESHS10 Engineer :Jamy  
 EUT :Digital Wireless Stereo Headphones  
 Power Rating :DC 5V From adaptor AC 120V/60Hz  
 Test Mode :Tx Mode  
 M/N :RF-WHP02  
 Memo :Docking Station

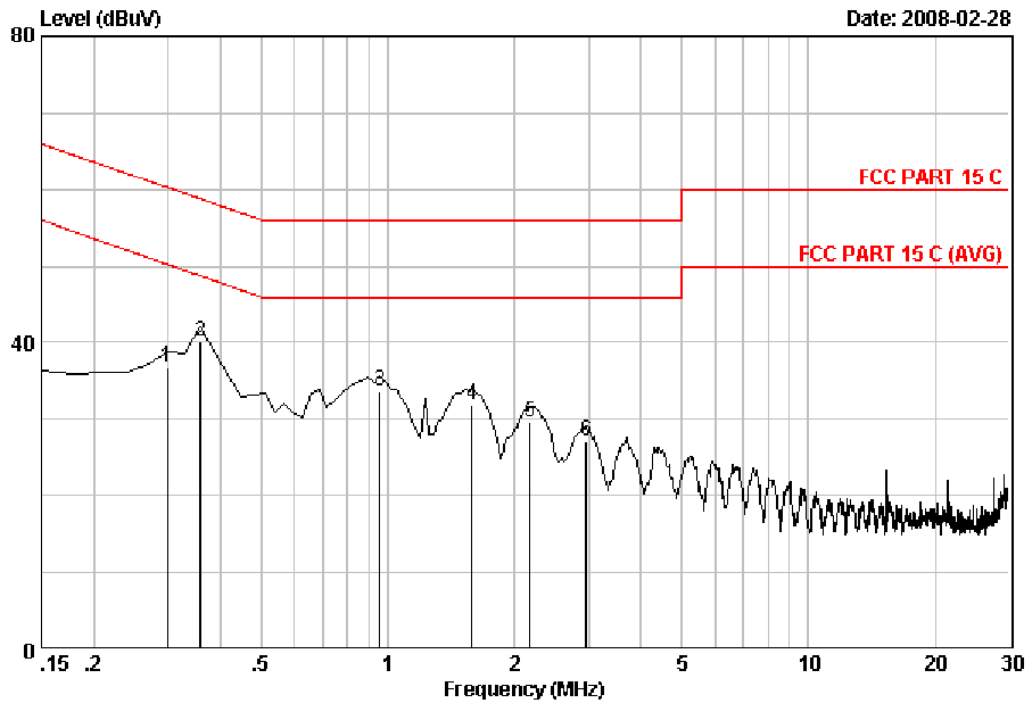
No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18	0.18	10.15	23.20	33.53	64.49	30.96	QP
2	0.36	0.10	10.14	24.13	34.37	58.75	24.38	QP
3	0.96	0.04	10.15	19.00	29.19	56.00	26.81	QP
4	1.52	0.05	10.15	17.54	27.74	56.00	28.26	QP
5	2.33	0.06	10.16	14.95	25.17	56.00	30.83	QP
6	3.05	0.08	10.17	13.18	23.43	56.00	32.57	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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Data: 4 File: D:\emc 002\DATA\2008 Report\5\Synchron\ACS8Q109.EMI (4)



Site no :AUDIX No.1 Conduction Data no :4  
 Dis./Ant. :--- KNW407 VB (1#)  
 Limit :FCC PART 15 C  
 Env./Ins. :Temp:23' Humi:54% ESHS10 Engineer :Jamy  
 EUT :Digital Wireless Stereo Headphones  
 Power Rating :DC 5V From adaptor AC 120V/60Hz  
 Test Mode :Tx Mode  
 M/N :RF-WHP02  
 Memo :Docking Station

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.30	0.12	10.15	26.49	36.76	60.26	23.50	QP
2	0.36	0.10	10.14	29.90	40.14	58.75	18.61	QP
3	0.96	0.04	10.15	23.48	33.67	56.00	22.33	QP
4	1.58	0.05	10.15	21.60	31.80	56.00	24.20	QP
5	2.18	0.06	10.15	19.53	29.74	56.00	26.26	QP
6	2.96	0.08	10.17	16.94	27.19	56.00	28.81	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

## 4. RADIATED EMISSION TEST

### 4.1. Test Equipment

The following test equipments are used during the radiated emission test:

#### 4.1.1. For Anechoic Chamber

Frequency rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	Dec.20, 07	1/2 Year
2.	EMI Spectrum	Agilent	E7403A	MY42000106	May 11, 07	1 Year
3.	Test Receiver	Rohde & Schwarz	ESVS20	830350/005	Dec.19, 07	1 Year
4.	Amplifier	HP	8447D	2944A04738	Jan.09, 08	1/2 Year
5.	Bilog Antenna	Schaffner	CBL6111C	2598	Feb.21, 08	1 Year
6.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.1	Jan.09, 08	1/2 Year
7.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.2	Jan.09, 08	1/2 Year
8.	RF Cable	FUJIKURAw	RG-55/U	3# Chamber No.3	Jan.09, 08	1/2 Year
9.	RF Cable	FUJIKURA	RG-55/U	3# Chamber No.4	Jan.09, 08	1/2 Year
10.	Coaxial Switch	Anritsu	MP59B	M73989	Jan.09, 08	1/2 Year

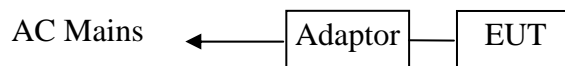
Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	MY41440292	May 11, 07	1 Year
2.	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	Antenna	EMCO	3116	00060088	May 28, 07	1 Year
5.	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year

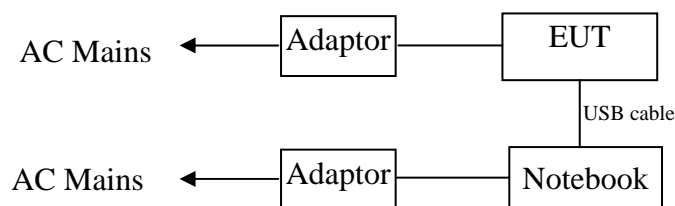
### 4.2. Block Diagram of Test Setup

#### 4.2.1. Block diagram of connection between the EUT and simulators

Test Mode: Charging Mode

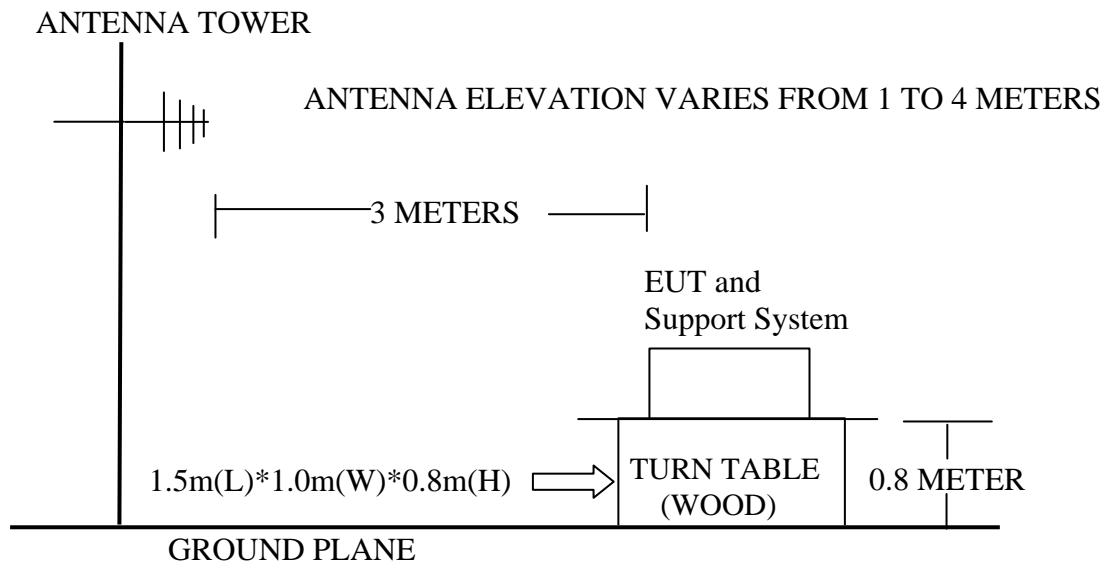


Test Mode: TX Mode



**(EUT: Digital Wireless Stereo Headphones)**

### 4.2.2. In Anechoic Chamber



### 4.3. Radiated Emission Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

- Remark :
- (1) Emission level  $\text{dB}\mu\text{V} = 20 \log$  Emission level  $\mu\text{V}/\text{m}$
  - (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. Digital Wireless Stereo Headphones (EUT)

Model Number : RF-WHP02  
 Serial Number : N/A  
 Manufacturer : Shen Zhen Synchron Electronics Co., Ltd.

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 and simulator as shown as Section 4.2.

4.5.2. Turn on the power of all equipment.

4.5.3. Notebook run test software to control EUT work in Tx Mode

4.5.4. The other peripheral devices were driven and operated in turn during all testing.

## 4.6. 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 normally, we use a keyboard test software, let EUT working in test mode, then test it. EUT is set 3 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.

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 10<sup>th</sup> harmonic are checked.

The test modes (TX / Charging) are tested in Anechoic Chamber and all the scanning waveforms are reported with antenna in horizontal and vertical polarization on Section 4.7.

## 4.7. Radiated Emission Test Results

**PASS.**

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector with 10Hz VBW above 1GHz

The radiated emissions from 18GHz to 25 GHz were Peak measured and complied with average limits, so the average level was deemed to meet average limits.

Test Date: Mar.14~18, 2008      Temperature: 24°C      Humidity: 56%

The details of test modes are as follows :

Test Mode	Frequency (MHz)	Test Mode	Reference Test Data No.	
			Horizontal	Vertical
1.	30~1000	Charging	#8	#7
2.		Tx Mode	#20	#19
3.	1000~18000	Tx 2405MHz	#114(P), #115(Av)	#116(P), #117(Av)
4.		Tx 2441MHz	#120(P), #121(Av)	#118(P), #119(Av)
5.		Tx 2477MHz	#122(P), #123(Av)	#124(P), #125(Av)
6.	18000~25000	Tx 2405MHz	#178	#179
7.		Tx 2441MHz	#181	#180
8.		Tx 2477MHz	#182	#183
Note: "P" means "peak", "Av" means "average"				

Frequency: 30MHz~1GHz

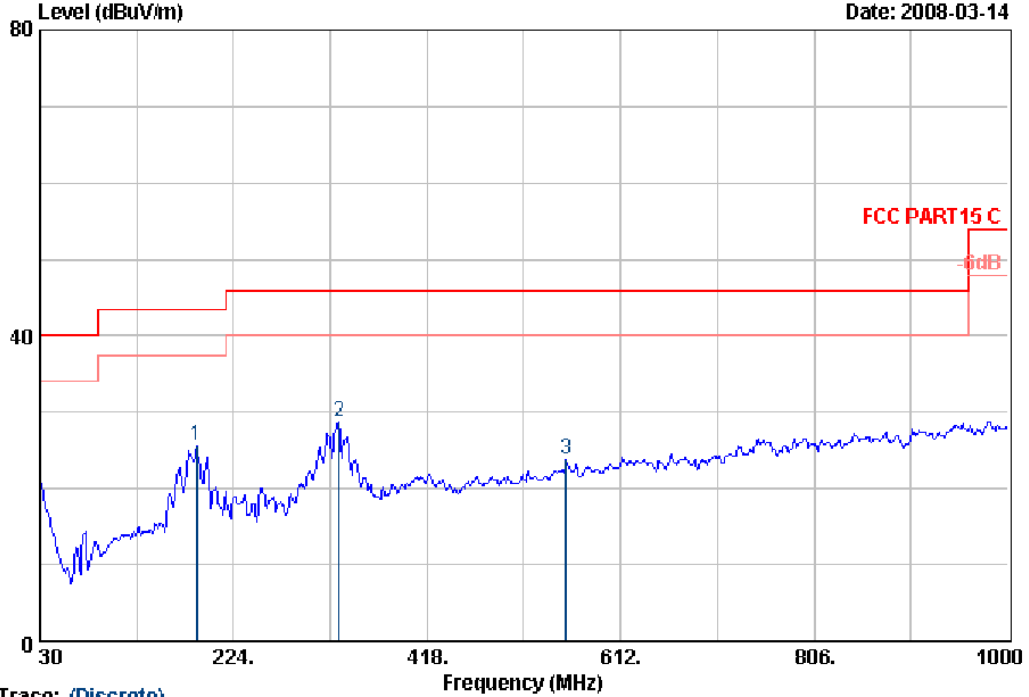


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Data: 8

File: D:\2008 Report Data\5\SYNCHRON\ACS8Q109.EMI (20)

Date: 2008-03-14



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 8  
 Dis. / Ant. : 3m 2598 Ant. pol. : HORIZONTAL  
 Limit : FCC PART15 C  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating : DC 5V From Adapter AC 120V/60Hz  
 Test Mode : Charging  
 M/N : RF-WHP02  
 Memo : Docking Station

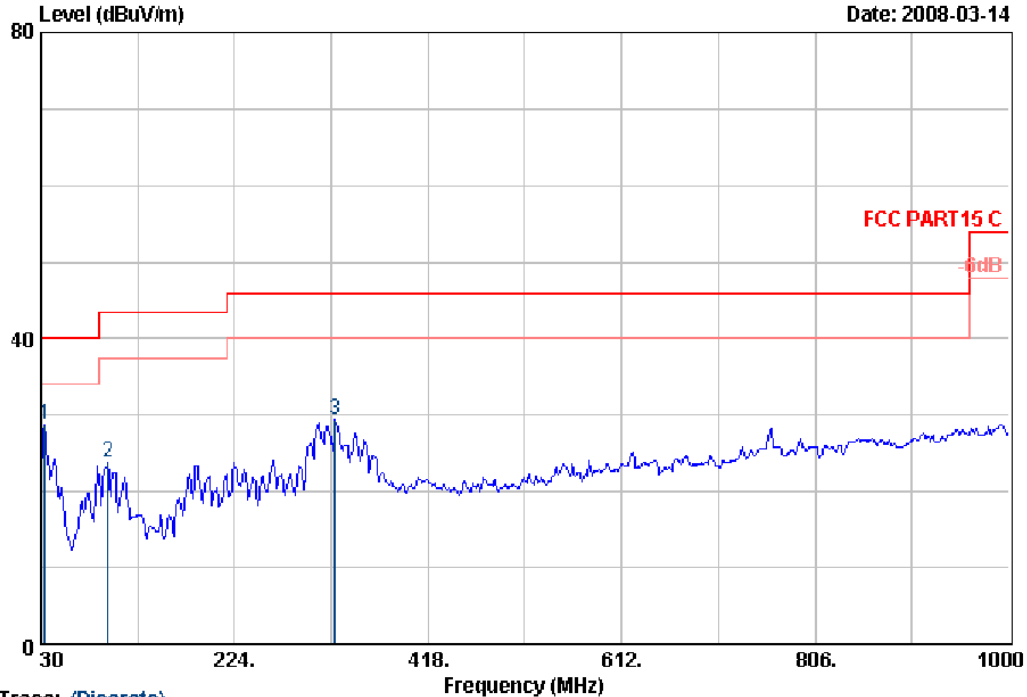
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission			Remark
					Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	187.14	9.28	1.30	14.99	25.57	43.50	17.93	QP
2	329.73	14.50	1.71	12.50	28.71	46.00	17.29	QP
3	557.68	19.34	2.09	2.35	23.78	46.00	22.22	QP

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



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Data: 7 File: D:\2008 Report Data\SYNCHRON\ACS8Q109.EMI (20) Date: 2008-03-14



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 7  
 Dis. / Ant. : 3m 2598 Ant. pol. : VERTICAL  
 Limit : FCC PART15 C  
 Env. / Ins. : 24\*C/56% ESVS20 Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating : DC 5V From Adapter AC 120V/60Hz  
 Test Mode : Charging  
 M/N : RF-WHP02  
 Memo : Docking Station

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission			Margin (dB)	Remark
				Level (dBuV/m)	Limits (dBuV/m)			
1	33.88	17.48	0.70	10.49	28.67	40.00	11.33	QP
2	96.93	9.98	1.08	12.89	23.95	43.50	19.55	QP
3	324.88	14.40	1.64	13.42	29.46	46.00	16.54	QP

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

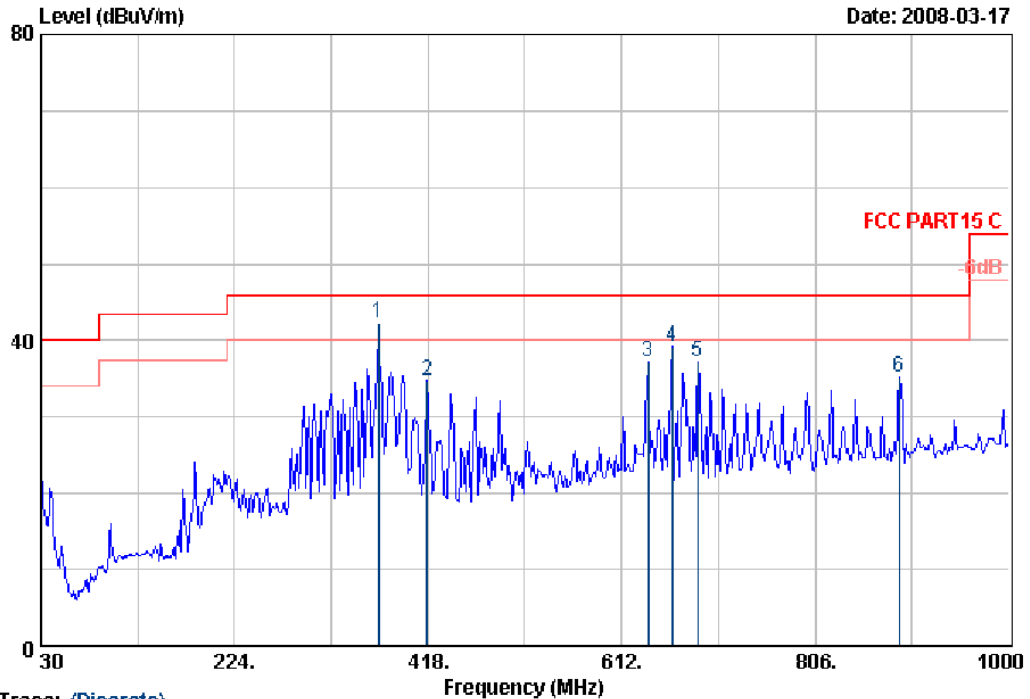


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Data: 20

File: D:\2008 Report Data\SI\SYNCHRON\ACS8Q109.EMI (20)

Date: 2008-03-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 20  
 Dis. / Ant. : 3m 2598 Ant. pol. : HORIZONTAL  
 Limit : FCC PART15 C  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating : DC 5V From Adapter AC120V/60Hz  
 Test Mode : TX  
 M/N : RF-WHP02  
 Memo : Docking Station

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark	
				Level (dBuV/m)	Limits (dBuV/m)			
1	368.64	15.47	1.78	25.20	42.45	46.00	3.55	QP
2	417.03	17.24	1.83	15.64	34.71	46.00	11.29	QP
3	638.19	20.26	2.39	14.50	37.15	46.00	8.85	QP
4	662.44	20.45	2.14	16.63	39.22	46.00	6.78	QP
5	688.63	20.60	2.40	14.16	37.16	46.00	8.84	QP
6	890.39	22.90	2.50	9.74	35.14	46.00	10.86	QP

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

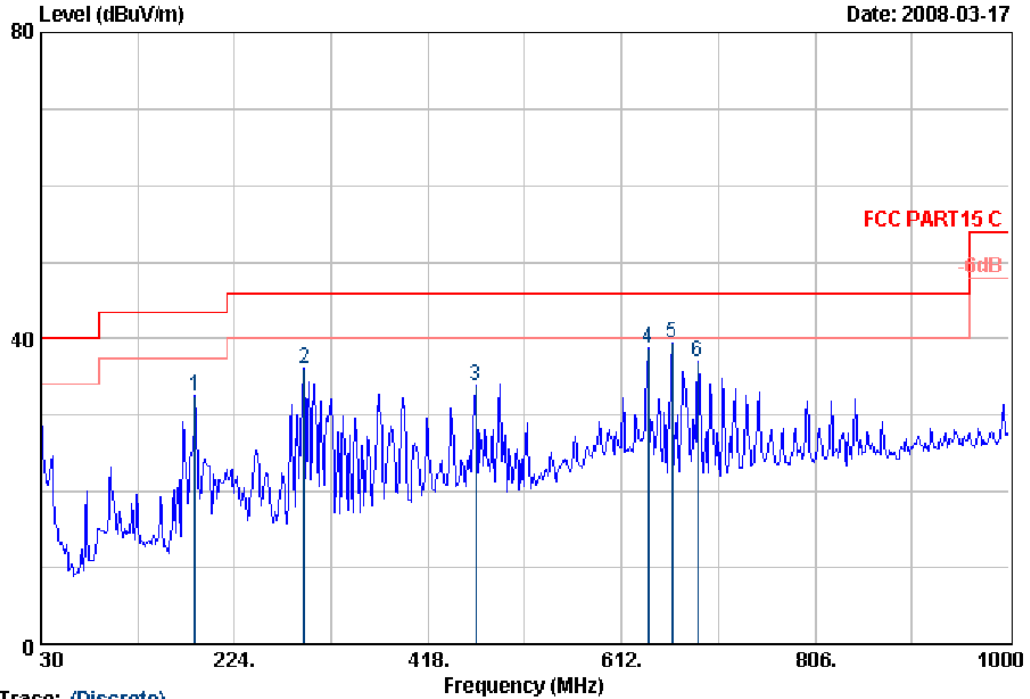


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Data: 19

File: D:\2008 Report Data\SI\SYNCHRON\ACS8Q109.EMI (20)

Date: 2008-03-17



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 19  
 Dis. / Ant. : 3m 2598 Ant. pol. : VERTICAL  
 Limit : FCC PART15 C  
 Env. / Ins. : 24°C/56% ESVS20 Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating : DC 5V From Adapter AC120V/60Hz  
 Test Mode : TX  
 M/N : RF-WHP02  
 Memo : Docking Station

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark	
				Level (dBuV/m)	Limits (dBuV/m)			
1	184.23	9.22	1.33	22.08	32.63	43.50	10.87	QP
2	293.84	13.66	1.53	20.88	36.07	46.00	9.93	QP
3	465.53	17.60	2.02	14.23	33.85	46.00	12.15	QP
4	638.19	20.26	2.39	16.23	38.88	46.00	7.12	QP
5	662.44	20.45	2.14	16.94	39.53	46.00	6.47	QP
6	688.63	20.60	2.40	13.97	36.97	46.00	9.03	QP

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

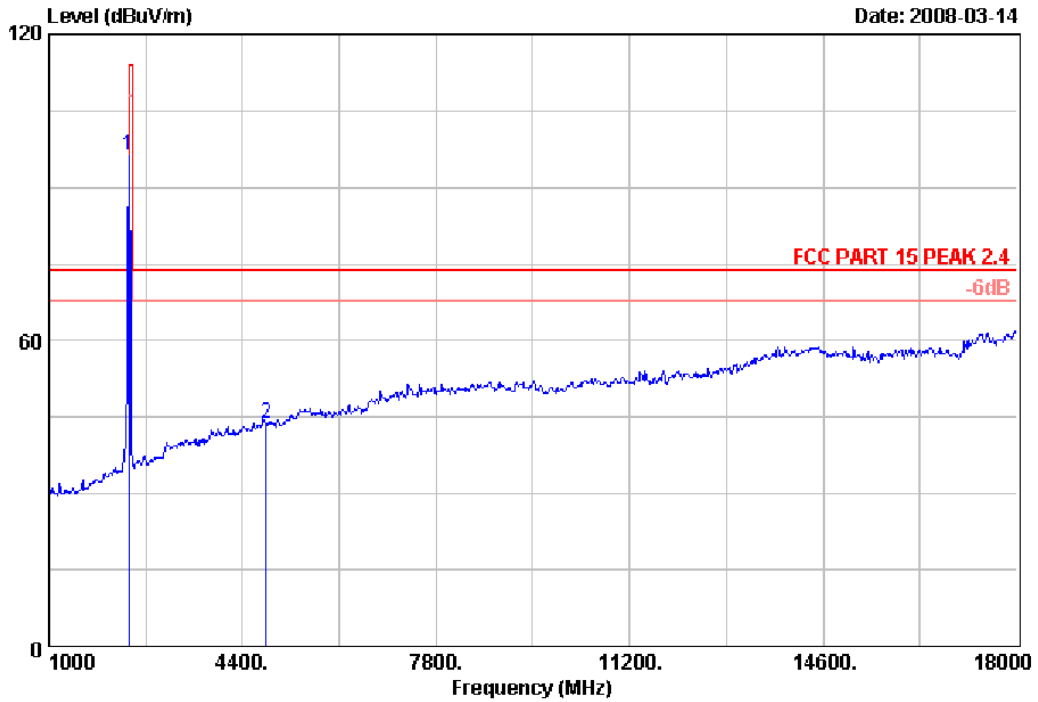
Frequency: 1GHz~18GHz



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Data: 114 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 114  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 PEAK 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH2:2405MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2405.00	29.03	6.73	35.18	95.77	96.35	114.00	17.65	Peak
2	4810.00	33.98	10.54	34.50	33.93	43.95	74.00	30.05	Peak

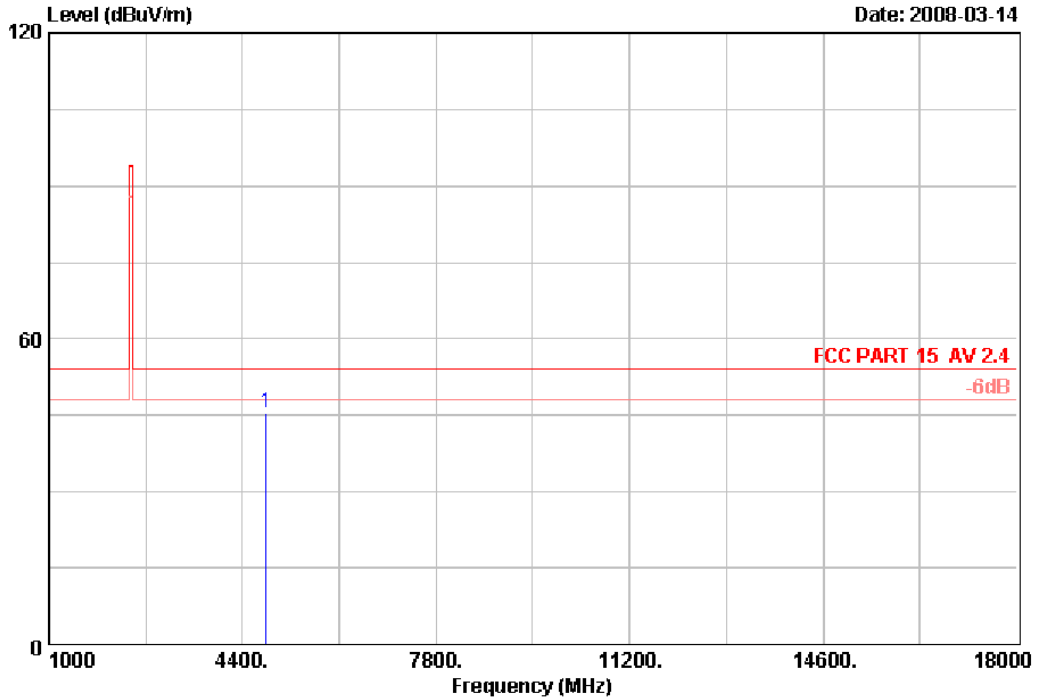
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 115 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 115  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH2:2405MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark	
-----	1	4810.00	33.98	10.54	34.50	35.58	45.60	54.00	8.40	Average

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

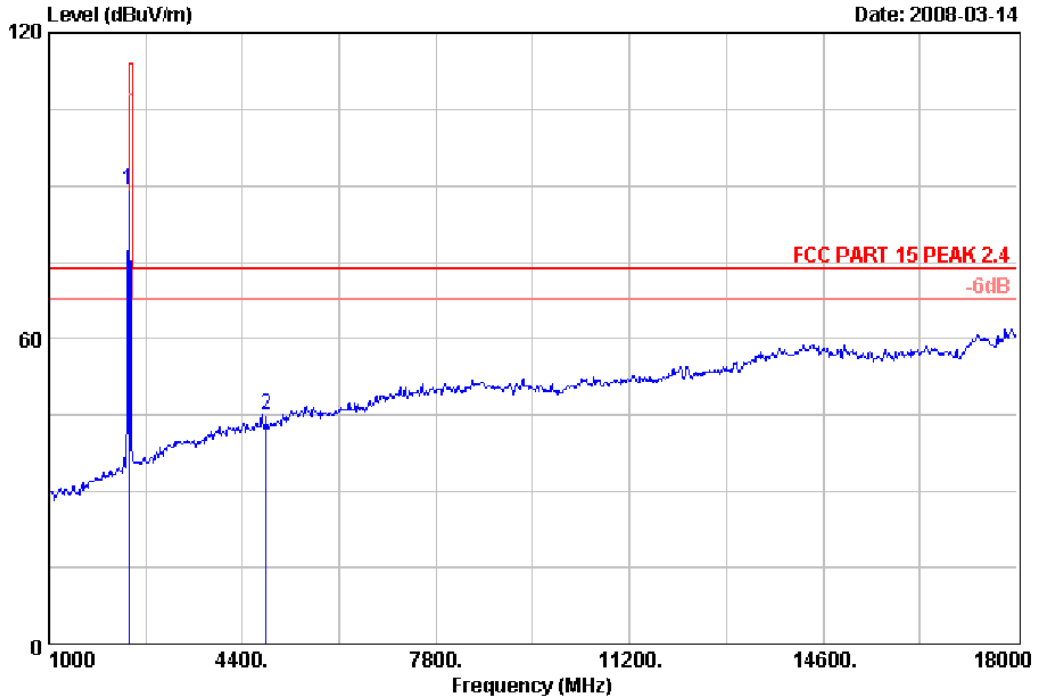




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Data: 116 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 116  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL  
 Limit : FCC PART 15 PEAK 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60HZ  
 Test Mode : TX CH2:2405MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2405.00	29.03	6.73	35.18	88.67	89.25	114.00	24.75	Peak
2	4810.00	33.98	10.54	34.50	35.24	45.26	74.00	28.74	Peak

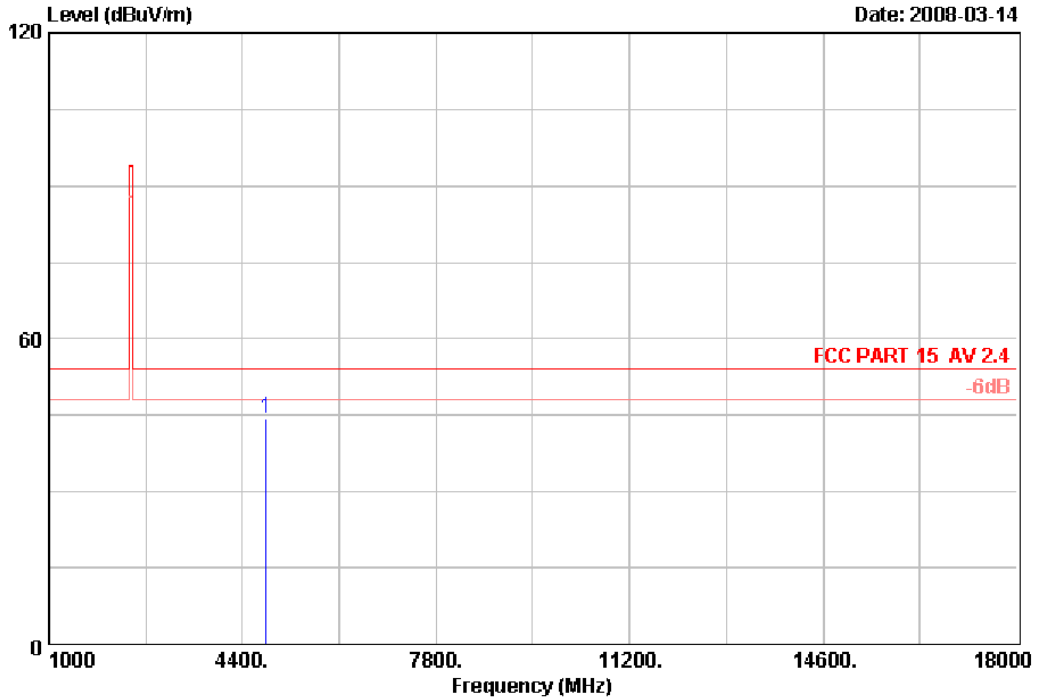
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 117 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 117  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH2:2405MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4810.00	33.98	10.54	34.50	34.52	44.54	54.00	9.46	Average

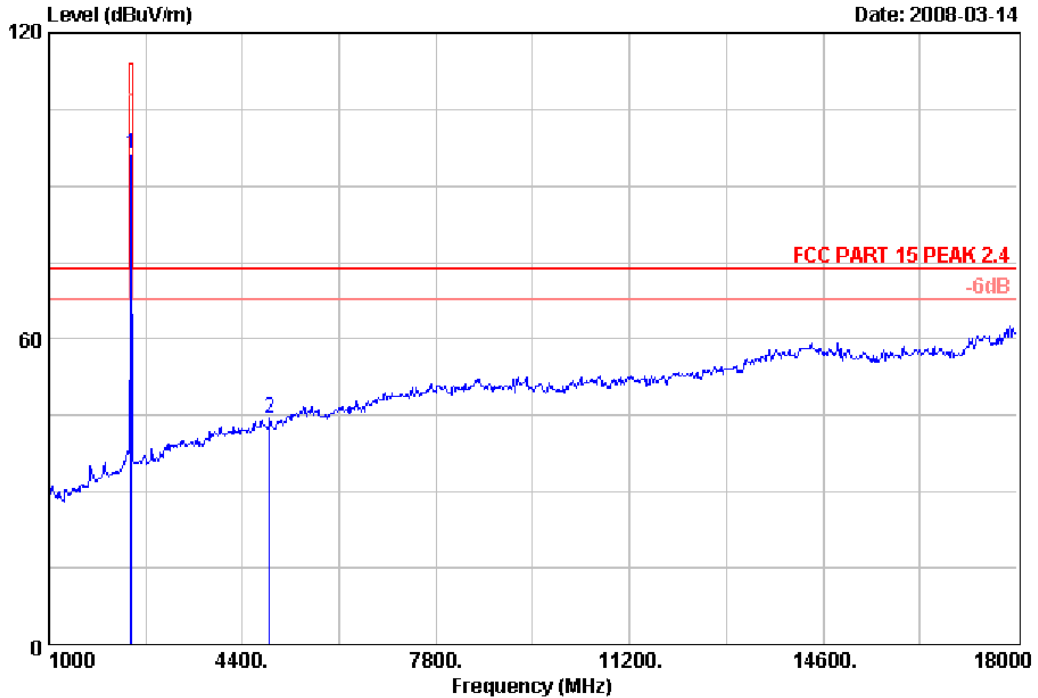
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 120 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 120  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 PEAK 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60HZ  
 Test Mode : TX CH20:2441MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.00	29.11	6.80	35.17	95.46	96.20	114.00	17.80	Peak
2	4882.00	34.16	10.57	34.48	34.32	44.57	74.00	29.43	Peak

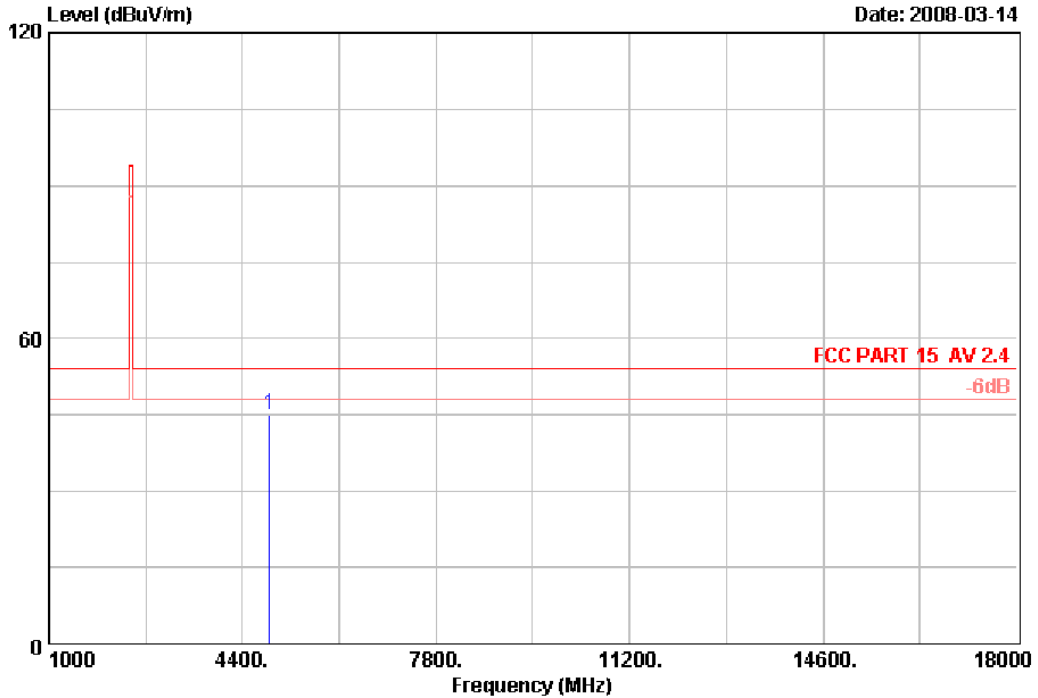
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 121 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 121  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH20:2441MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4882.00	34.16	10.57	34.48	34.85	45.10	54.00	8.90	Average

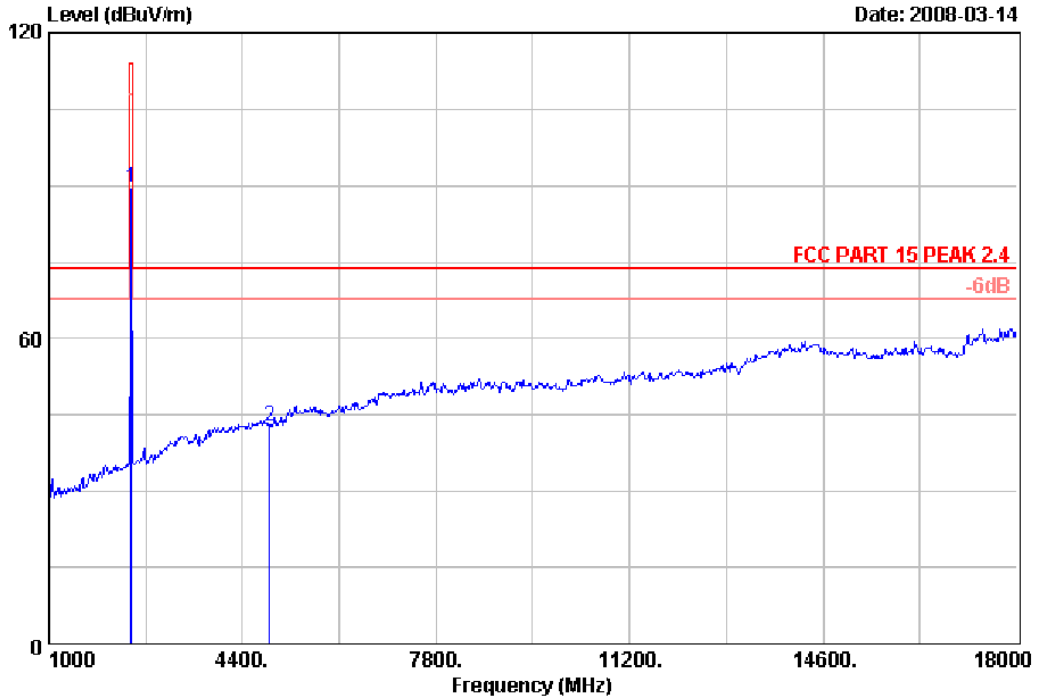
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 118 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 118  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL  
 Limit : FCC PART 15 PEAK 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH20:2441MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.00	29.11	6.80	35.17	88.76	89.50	114.00	24.50	Peak
2	4882.00	34.16	10.57	34.48	32.51	42.76	74.00	31.24	Peak

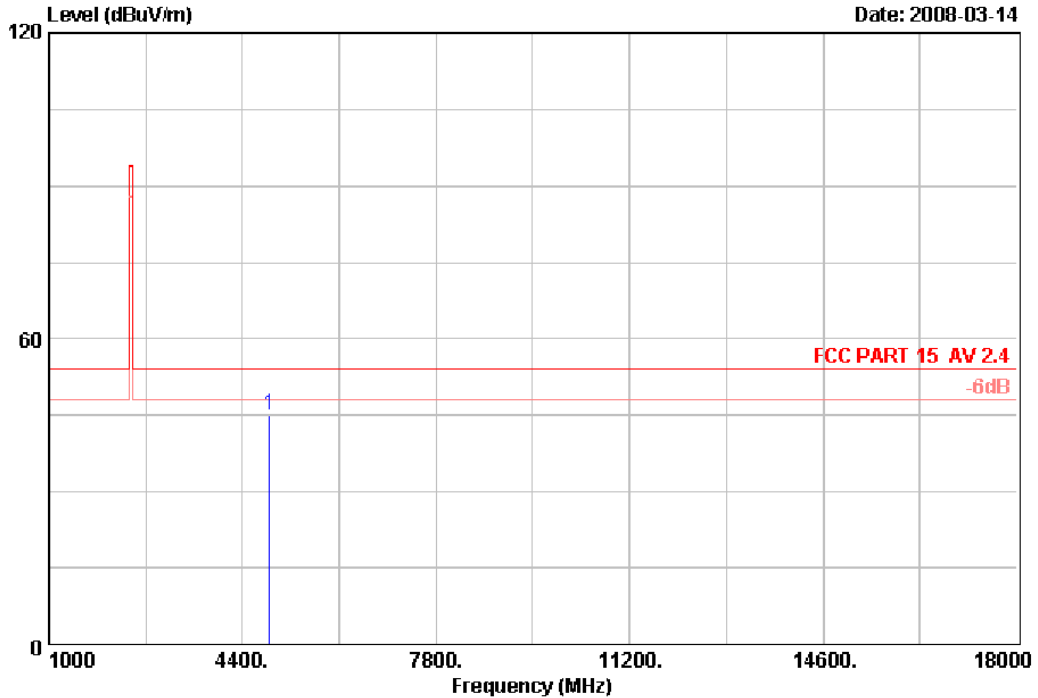
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 119 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 119  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH20:2441MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4882.00	34.16	10.57	34.48	34.79	45.04	54.00	8.96	Average

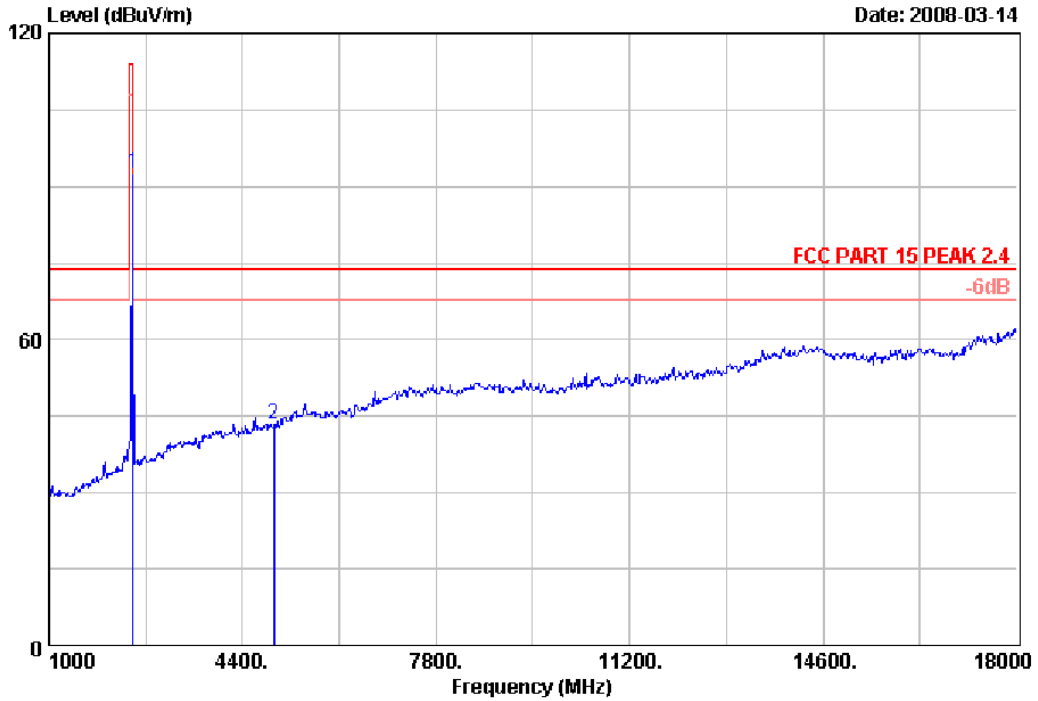
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 122 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 122  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 PEAK 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH38:2477MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2477.00	29.19	6.87	35.16	91.54	92.44	114.00	21.56	Peak
2	4954.00	34.38	10.58	34.46	32.88	43.38	74.00	30.62	Peak

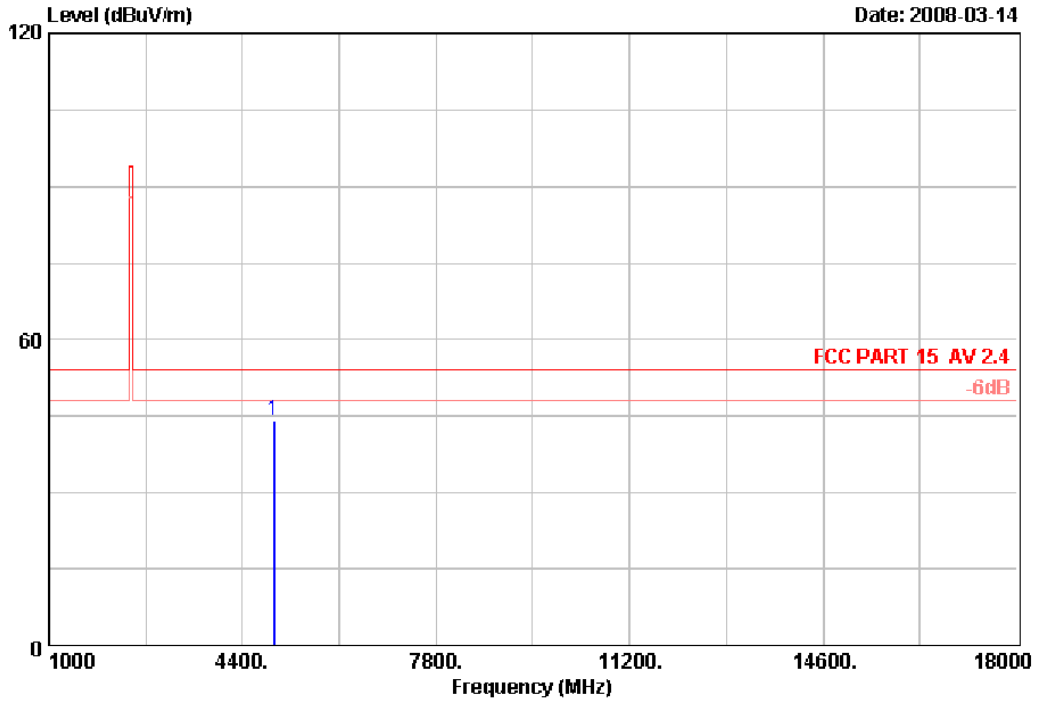
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 123 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 123  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH38:2477MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission			Margin (dB)	Remark	
				Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)			
1	4952.00	34.34	10.58	34.46	33.66	44.12	54.00	9.88	Average

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

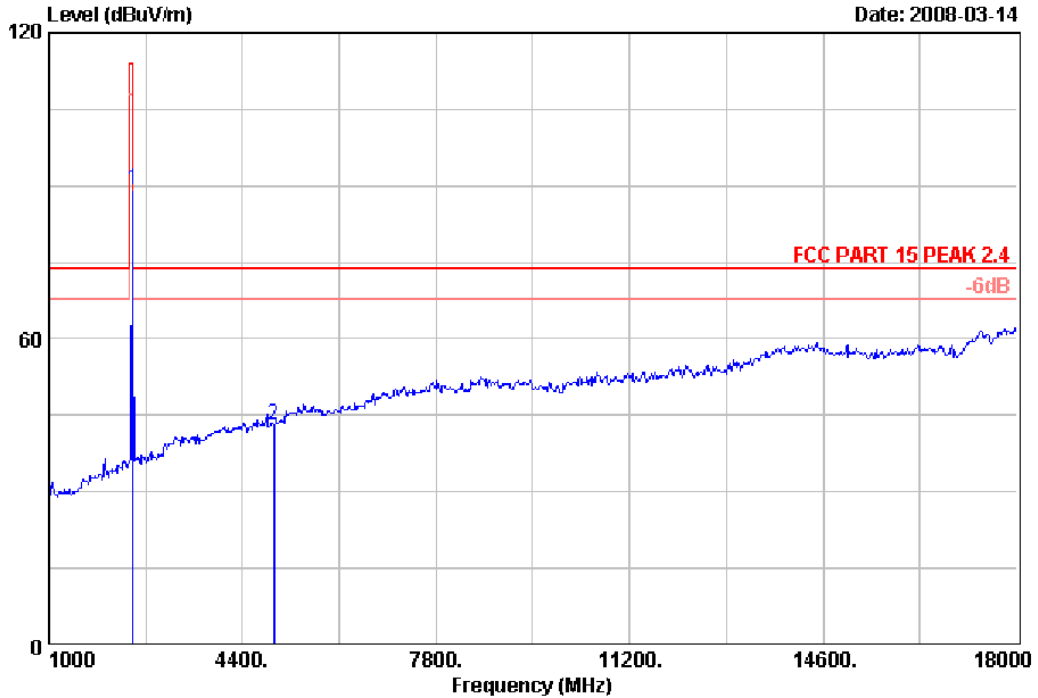




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Data: 124 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 124  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL  
 Limit : FCC PART 15 PEAK 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH38:2477MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2477.00	29.19	6.87	35.16	88.26	89.16	114.00	24.84	Peak
2	4954.00	34.38	10.58	34.46	32.55	43.05	74.00	30.95	Peak

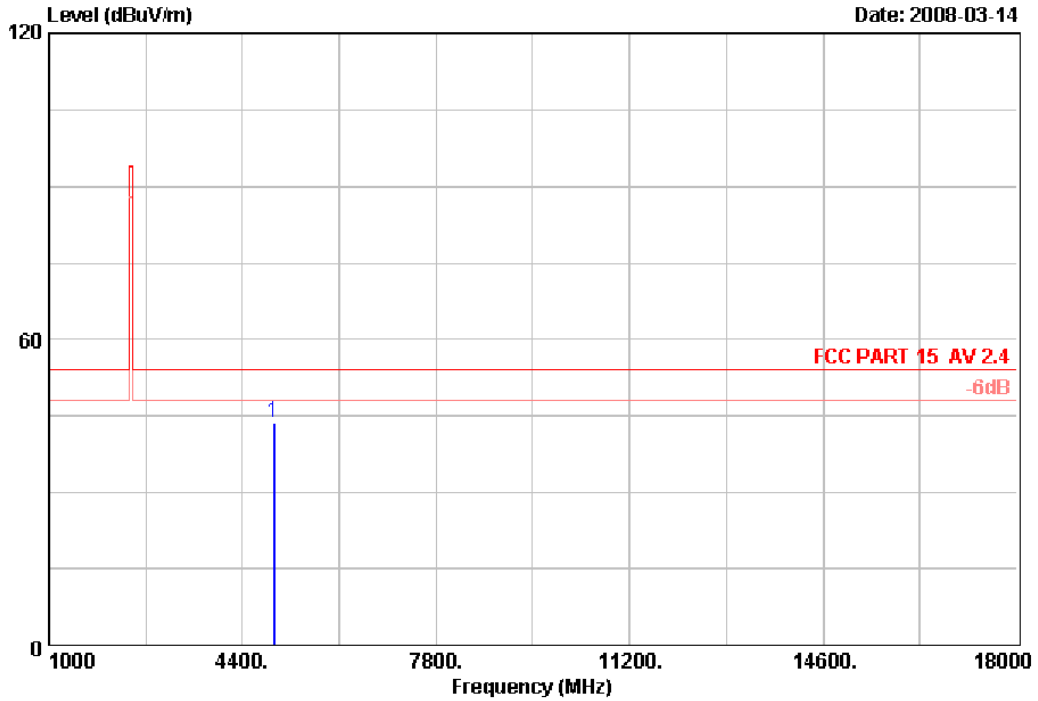
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



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 Postcode:518057

Data: 125 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-14



Site no. : RF Chamber Data no. : 125  
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH38:2477MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission			Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)		
1 4952.00	34.34	10.58	34.46	33.41	43.87	54.00	10.13	Average

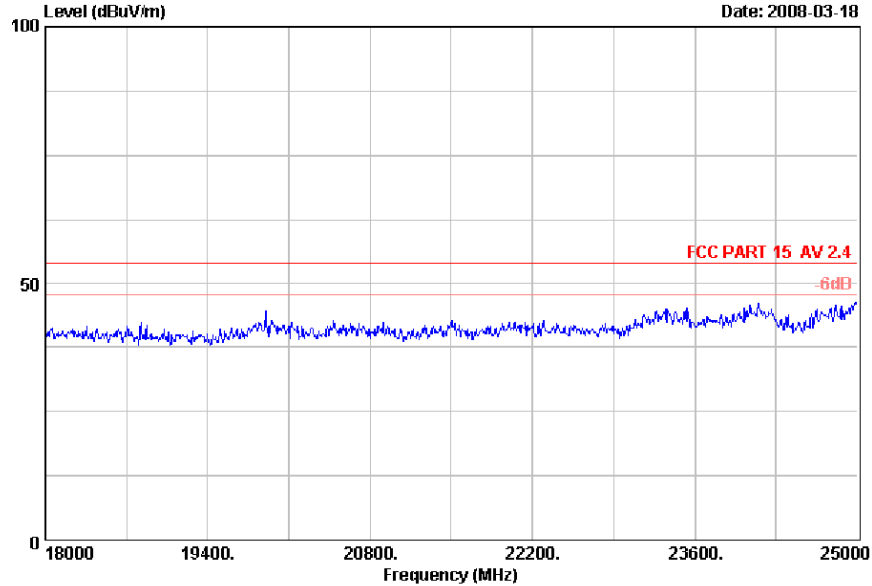
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

Frequency: 18GHz~25GHz



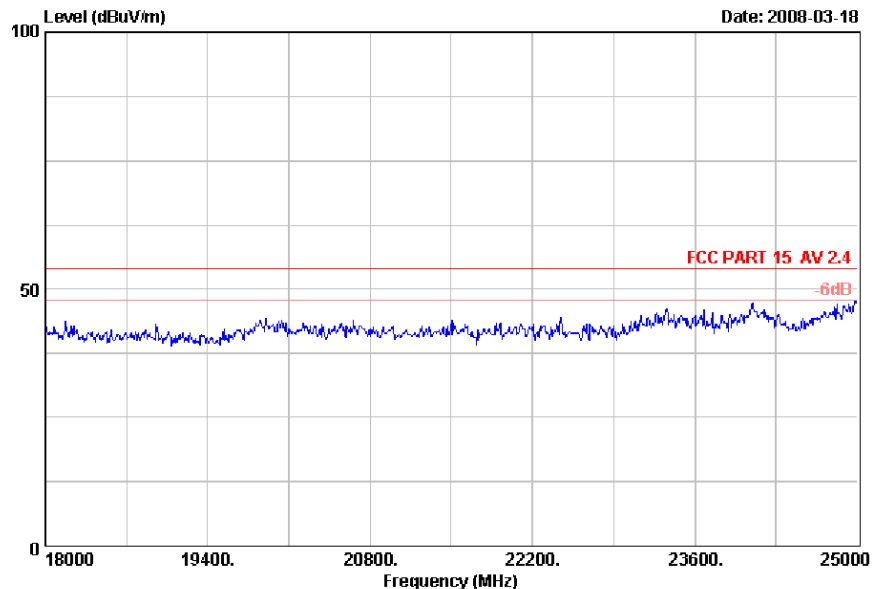
No.6 Ke Feng Road,B1:ck 52,  
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Postcode:518057

Data: 178 File: D:\2008 report data\B\ACS8Q109.EMI (189) Date: 2008-03-18



Site no. : RF Chamber Data no. : 178  
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer : Jamy  
EUT : Digital Wireless Stereo Headphones  
Power Rating: DC 5V From Adapter AC 120V/60Hz  
Test Mode : TX CH2:2405MHz  
M/N : RF-WHP02  
Memo : Docking Station

Data: 179 File: D:\2008 report data\B\ACS8Q109.EMI (189) Date: 2008-03-18



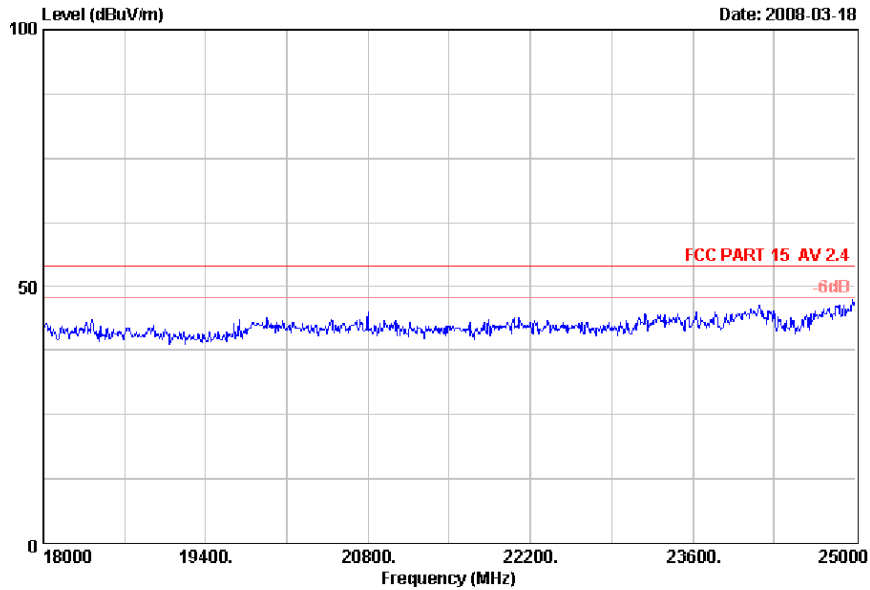
Site no. : RF Chamber Data no. : 179  
Dis. / Ant. : 3m Ant. pol. : VERTICAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer : Jamy  
EUT : Digital Wireless Stereo Headphones  
Power Rating: DC 5V From Adapter AC 120V/60Hz  
Test Mode : TX CH2:2405MHz  
M/N : RF-WHP02  
Memo : Docking Station



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Data: 181 File: D:\2008 report data\B\ACS8Q109.EMI (189)

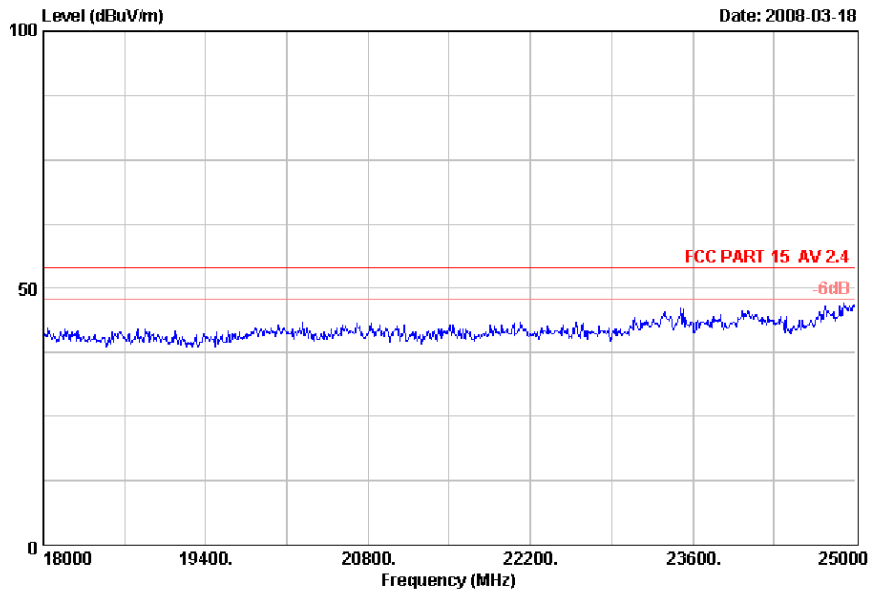
Date: 2008-03-18



Site no. : RF Chamber Data no. : 181  
 Dis. / Ant. : 3m Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH20:2441MHz  
 M/N : RF-WHP02  
 Memo : Docking Station

Data: 180 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-18



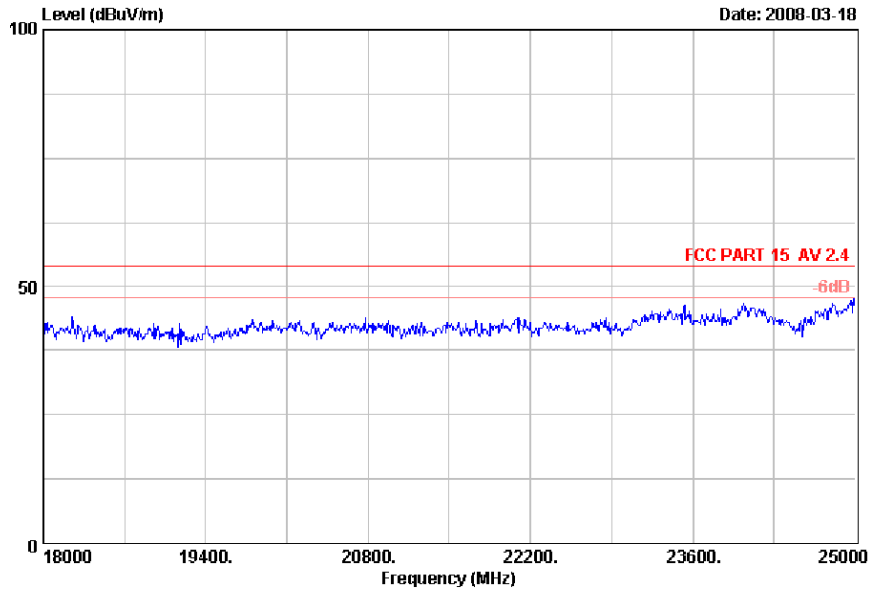
Site no. : RF Chamber Data no. : 180  
 Dis. / Ant. : 3m Ant. pol. : VERTICAL  
 Limit : FCC PART 15 AV 2.4  
 Env. / Ins. : 23°C/54% Engineer : Jamy  
 EUT : Digital Wireless Stereo Headphones  
 Power Rating: DC 5V From Adapter AC 120V/60Hz  
 Test Mode : TX CH20:2441MHz  
 M/N : RF-WHP02  
 Memo : Docking Station



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Data: 182 File: D:\2008 report data\B\ACS8Q109.EMI (189)

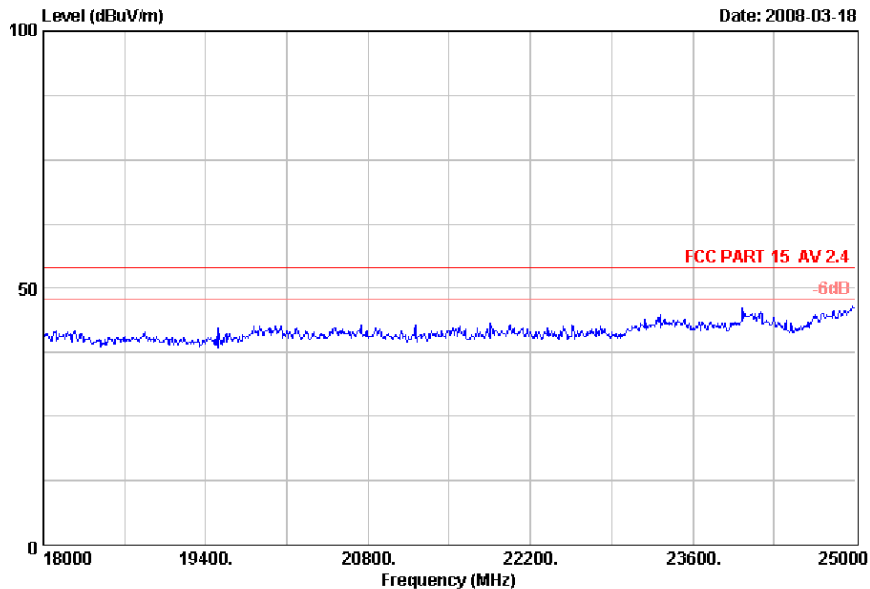
Date: 2008-03-18



Site no. : RF Chamber Data no. : 182  
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer : Jamy  
EUT : Digital Wireless Stereo Headphones  
Power Rating: DC 5V From Adapter AC 120V/60Hz  
Test Mode : TX CH38:2477MHz  
M/N : RF-WHP02  
Memo : Docking Station

Data: 183 File: D:\2008 report data\B\ACS8Q109.EMI (189)

Date: 2008-03-18



Site no. : RF Chamber Data no. : 183  
Dis. / Ant. : 3m Ant. pol. : VERTICAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer : Jamy  
EUT : Digital Wireless Stereo Headphones  
Power Rating: DC 5V From Adapter AC 120V/60Hz  
Test Mode : TX CH38:2477MHz  
M/N : RF-WHP02  
Memo : Docking Station

## 5. 6dB Bandwidth Test

### 5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum	Agilent	E4407B	MY41440292	May 11, 07	1 Year
2	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year

### 5.2. Test Information

EUT:	Digital Wireless Stereo Headphones
M/N:	RF-WHP02
Test Date:	Mar.18, 2008
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX
Test Frequency:	CH2: 2405MHz CH20: 2441MHz CH38: 2477MHz
Tested By:	Jamy

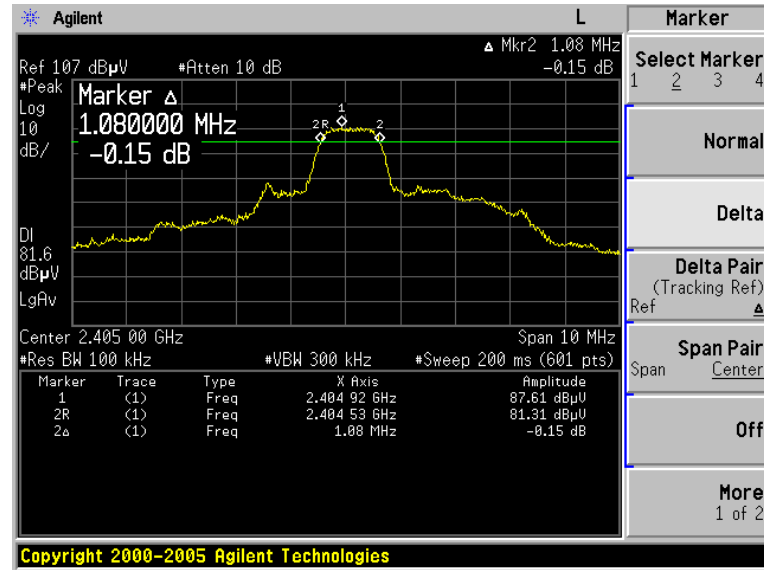
### 5.3. Test Procedure

The transmitter output was connected to a spectrum analyzer via a Attenuator . The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 100 KHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

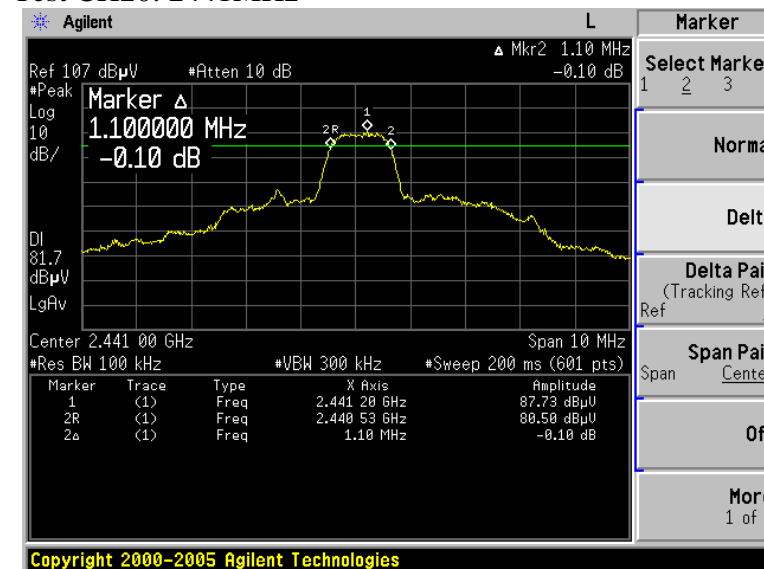
### 5.4. Test Results

CH	6dB Bandwidth (MHz)	Limit	Conclusion
2	1.08	>500	PASS
20	1.10	>500	PASS
38	1.12	>500	PASS

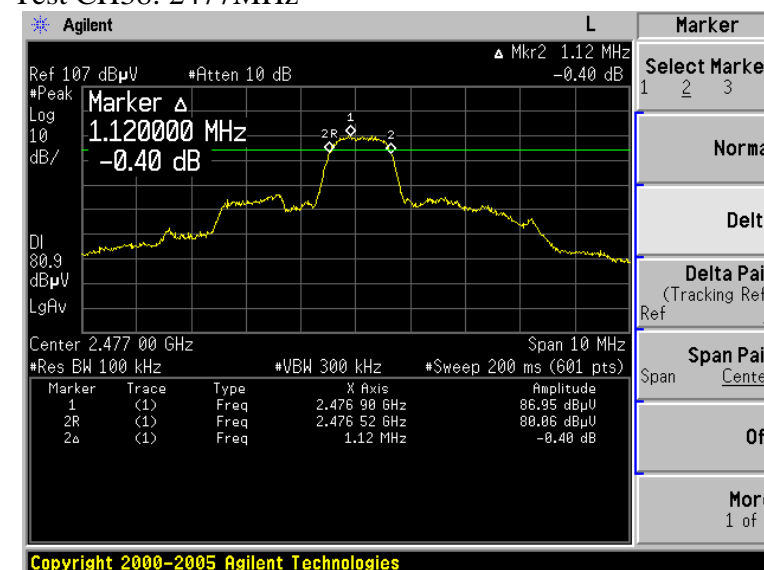
Test CH2: 2405MHz



Test CH20: 2441MHz



Test CH38: 2477MHz



## 6. OUTPUT POWER TEST

### 6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	SpectrumAnalyzer	Agilent	E4446A	US44300459	May,11, 07	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Jan, 23, 07	1.5 Year
3	Horn Antenna	EMCO	3115	9510-4580	May,11, 07	1.5 Year
4	Signal Generator	HP	83732B	6K00003262	May,11, 07	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX	182769/4	May,11,07	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX	182768/4	May,11, 07	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX	182771/4	May,11, 07	1 Year
8	Amplifier	HP	8449B	3008A00863	May,11, 07	1 Year

### 6.2. Test Information

EUT:	Digital Wireless Stereo Headphones
M/N:	RF-WHP02
Test Date:	Mar.14, 2008
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX
Test Frequency:	CH2: 2405MHz CH20: 2441MHz CH38: 2477MHz
Tested By:	Jamy

### 6.3. Test Procedure

- (1). The EUT was placed on a 0.8m high table in the chamber and turned on in continuously transmitting mode.
- (2). The maximum fundamental emission at 3m distance was measured and recorded with receive antenna in both vertical and horizontal by rotating the turntable and by lowering the receive antenna.
- (3). The EUT was then removed and replaced with a substitution antenna in the same position and the substitution antenna must have the same polarization with the receive antenna.
- (4). A signal which have the same frequency obtained in step 2 was fed to the substitution, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver, the level of the signal generator was adjusted until the measured field strength level in step 2 was obtained, recorded the level of the signal generator.
- (5). Repeated step 4 with both antenna polarizations
- (6). The radiated power is equal to the power supplied by the signal generator and corrections due to the gain of the substitution antenna and the cable loss between the signal generator and the substitution antenna.



## 6.4. Test Results

CH	Freq (MHz)	Ant Pol.	Electric Field Strength (dBuV/m)	SG Reading (dBm)	Tx Cable Loss (dB)	Tx Ant. Gain (dBi)	Result EIRP (dBm)	Limit EIRP (dBm)	Margin (dB)
Low	2405	H	94.27	-2.68	6.06	9.25	0.51	30	29.49
	2405	V	89.36	-7.81	6.06	9.25	-4.62	30	34.62
Mid	2441	H	93.28	-3.14	6.08	9.30	0.08	30	29.92
	2441	V	87.46	-9.84	6.08	9.30	-6.62	30	36.62
Hig	2477	H	92.54	-4.43	6.15	9.33	-1.25	30	31.25
	2477	V	88.66	-8.79	6.15	9.33	-5.61	30	35.61

Result = SG Reading – Tx Cable Loss + Tx Antenna Gain  
Rx-Antenna: Horn Antenna  
Tx-Antenna: Horn Antenna

## 7. BANDEDGE COMPLIANCE TEST

### 7.1. Test Equipment

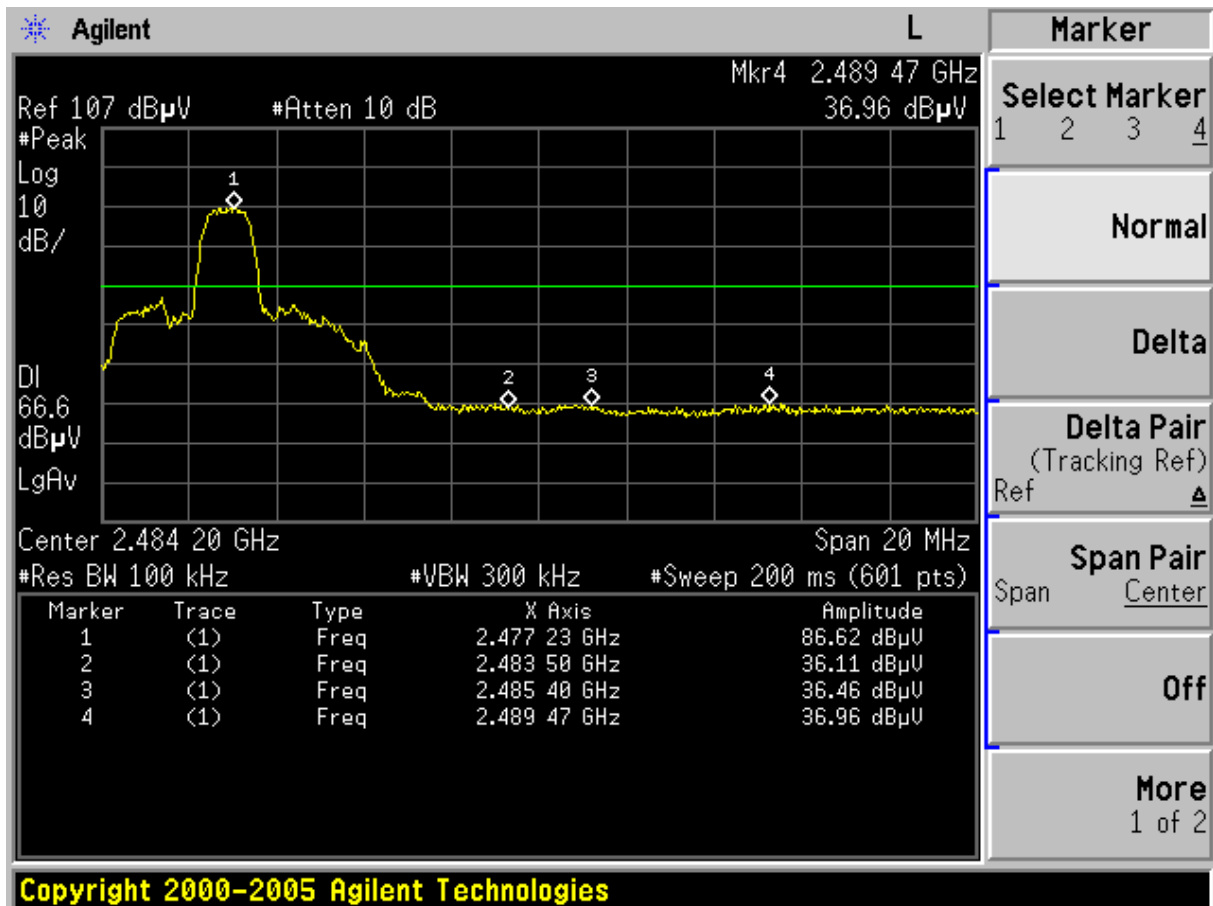
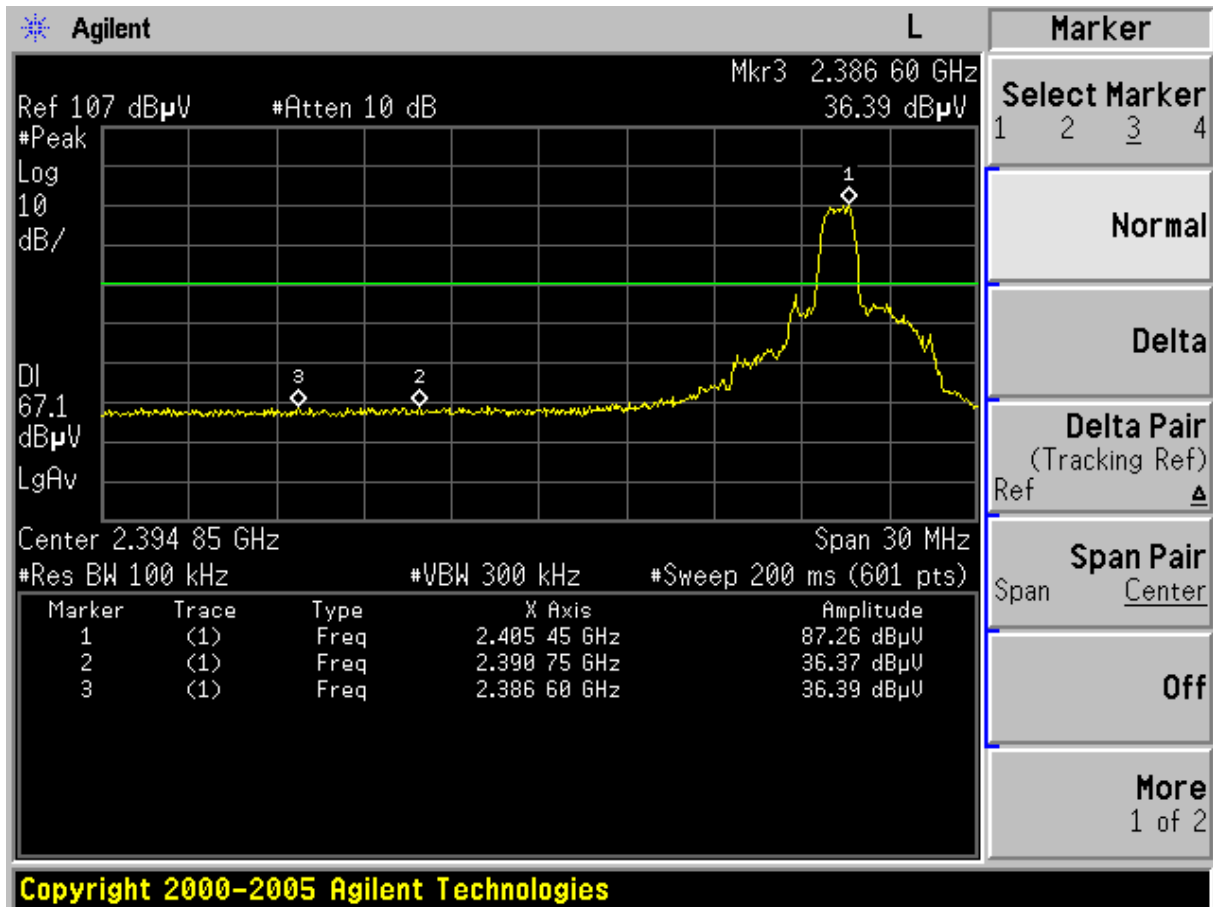
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 11, 07	1 Year
2.	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year

### 7.2. Test Information

EUT:	Digital Wireless Stereo Headphones
M/N:	RF-WHP02
Test Date:	Mar.14, 2008
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX
Test Frequency:	CH2: 2405MHz CH38: 2477MHz
Test By:	Jamy

### 7.3. Test Results

Pass (The EUT was tested and all the test results are listed in following page.)



## 8. POWER SPECTRAL DENSITY TEST

### 8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May,11, 07	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Jan, 23, 07	1.5 Year
3	Horn Antenna	EMCO	3115	9510-4580	May,11, 07	1.5 Year
4	Signal Generator	HP	83732B	6K00003262	May,11, 07	1Year
5	RF Cable	Hubersuhner	SUCOFLEX	182769/4	May,11,07	1Year
6	RF Cable	Hubersuhner	SUCOFLEX	182768/4	May,11, 07	1Year
7	RF Cable	Hubersuhner	SUCOFLEX	182771/4	May,11, 07	1Year
8	Amplifier	HP	8449B	3008A00863	May,11, 07	1Year

### 8.2. Test Information

EUT:	Digital Wireless Stereo Headphones
M/N:	RF-WHP02
Test Date:	Mar.14, 2008
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX
Test Frequency:	CH2: 2405MHz CH20: 2441MHz CH38: 2477MHz
Test By:	Jamy

### 8.3. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a horn antenna in anechoic chamber. The maximum power density level at 3m was measured by spectrum analyzer with 3 kHz RBW and 30kHz VBW, sweep time=span/3kHz. Record this level with test antenna in horizontal and vertical polarization. Use substitution measurements as clause 6.3 to measured out the power density.

## 8.4. Test Results

CH	Freq (MHz)	Ant Pol.	Power density at 3m (dBm/3kHz)	SG Reading (dBm)	Tx Cable Loss (dB)	Tx Ant. Gain (dBi)	Result EIRP (dBm/3kHz)	Limit EIRP (dBm/3kHz)	Margin (dB)
Low	2405	H	-22.90	-12.88	6.06	9.25	-9.69	8	17.69
	2405	V	-30.09	-20.29	6.06	9.25	-17.10	8	25.10
Mid	2441	H	-26.18	-16.16	6.08	9.30	-12.94	8	20.94
	2441	V	-27.93	-18.23	6.08	9.30	-15.01	8	23.01
Hig	2477	H	-29.25	-19.24	6.15	9.33	-16.06	8	24.06
	2477	V	-33.67	-24.17	6.15	9.33	-20.99	8	28.99
Result = SG Reading – Tx Cable Loss + Tx Antenna Gain Rx-Antenna: Horn Antenna Tx-Antenna: Horn Antenna									

## 9. MPE ESTIMATION

### 9.1.Limit for General Population / Uncontrolled Exposures

Frequency	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
300MHz~1.5GHz	F/1500	30
1.5GHz~100GHz	1.0	30

Frequency (MHz)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
2405	1.0	30
2441	1.0	30
2477	1.0	30

Note: F = Frequency in MHz

### 9.2.Estimation Result

Channel	Frequency(MHz)	Peak output power(dBm)	antenna gain(dBi)	antenna gain (Linear)
2	2405	0.51	2	1.58
20	2441	0.08	2	1.58
38	2477	-1.25	2	1.58

Channel	Frequency(MHz)	Peak output power to antenna (mW)	Power density at 20cm(mW/ cm <sup>2</sup> )
2	2405	1.12	0.000352
20	2441	1.02	0.000321
38	2477	0.79	0.000248

## **10. ANTENNA REQUIREMENT**

### **10.1 STANDARD APPLICABLE**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### **10.2 ANTENNA CONNECTED CONSTRUCTION**

The antenna used for this product is PCB Antenna (see EUT photo) that no antenna other than that furnished by the responsible party shall be used with the device, The maximum peak gain of this antenna is only 2dBi.

## **11.DEVIATION TO TEST SPECIFICATIONS**

[ NONE]



## 12.PHOTOGRAPH

### 12.1.Photos of Power Line Conducted Emission Test

Test Mode: Charging Mode



Test Mode: TX Mode

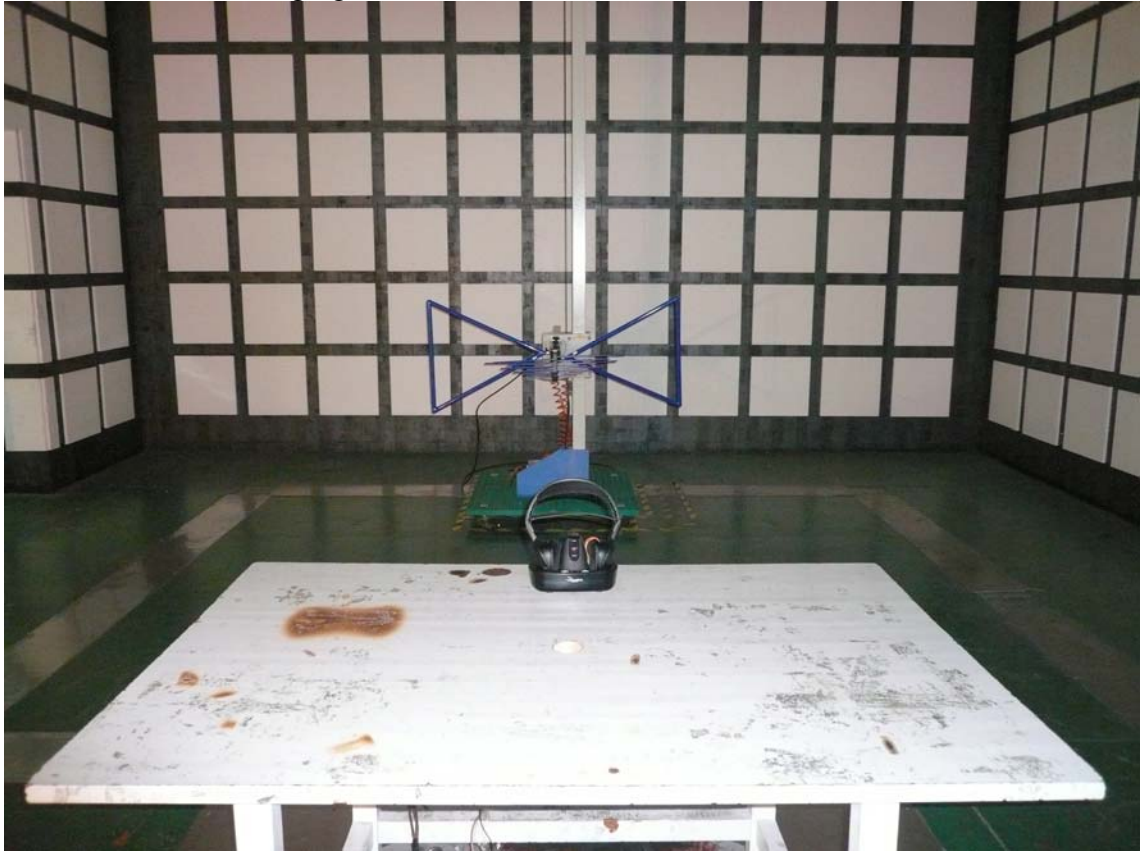




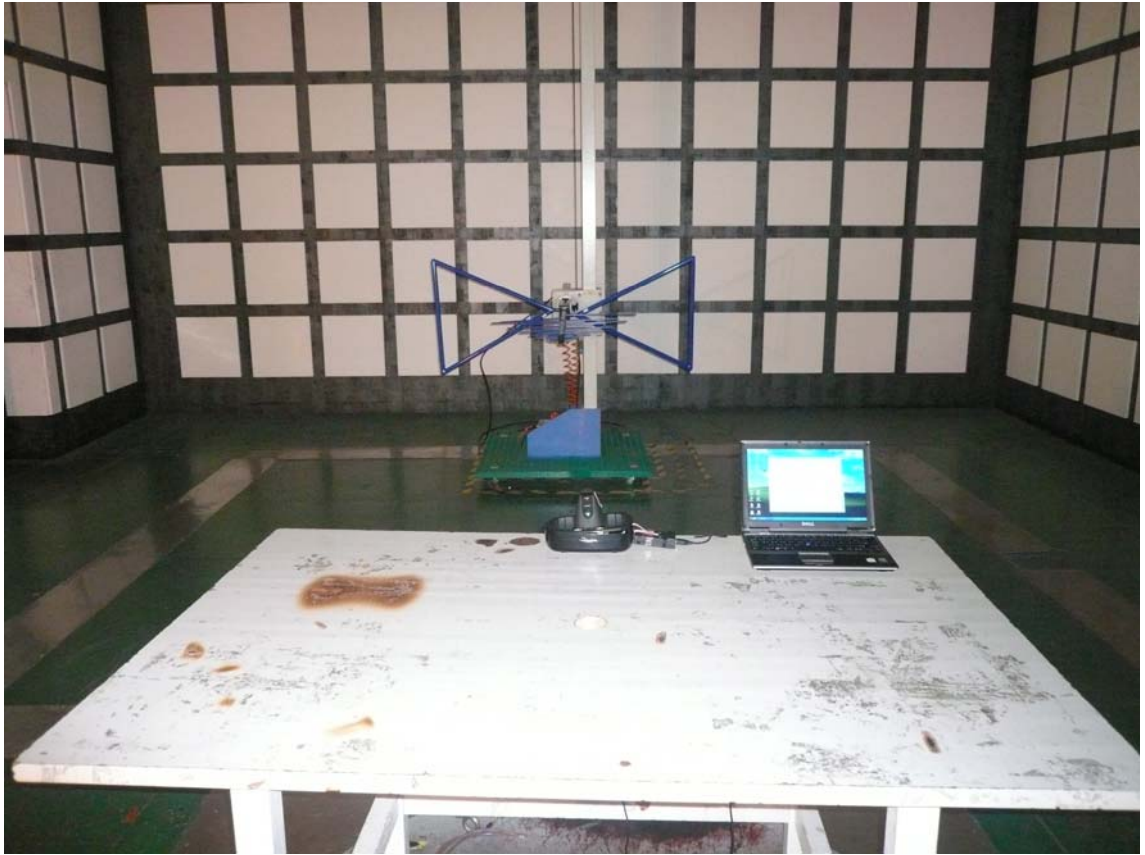
## 12.2.Photos of Radiated Emission Test

30-1000MHz

Test Mode: Charging Mode



Test Mode: TX Mode





Above 1000MHz

