

## APPLICATION FOR CERTIFICATION

On Behalf of

Harmonix Music Systems, Inc.

Wii Wireless Dongle

Model Number: WGTSELEA1B

FCC ID: VFRWGTSELEA1B

Prepared for : Harmonix Music Systems, Inc.  
625 Massachusetts Ave, 2nd Floor, Cambridge, MA  
02139

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-F09156  
Date of Test : Jul.16~27, 2009  
Date of Report : Jul.31, 2009

## TABLE OF CONTENTS

Description	Page
<b>1. SUMMARY OF STANDARDS AND RESULTS.....</b>	<b>1-1</b>
1.1. Description of Standards and Results .....	1-1
<b>2. GENERAL INFORMATION .....</b>	<b>2-1</b>
2.1. Description of Device (EUT) .....	2-1
2.2. Tested Supporting System Details .....	2-2
2.3. Test Facility .....	2-3
2.4. Measurement Uncertainty (95% confidence levels, k=2) .....	2-3
<b>3. POWER LINE CONDUCTED EMISSION TEST .....</b>	<b>3-1</b>
3.1. Test Equipments.....	3-1
3.2. Block Diagram of Test Setup.....	3-1
3.3. Power Line Conducted Emission Test Limits.....	3-1
3.4. Configuration of EUT on Test .....	3-2
3.5. Operating Condition of EUT.....	3-2
3.6. Test Procedure.....	3-2
3.7. Power Line Conducted Emission Test Results .....	3-2
<b>4. RADIATED EMISSION TEST .....</b>	<b>4-1</b>
4.1. Test Equipment .....	4-1
4.2. Block Diagram of Test Setup.....	4-1
4.3. Radiated Emission Limit.....	4-2
4.4. EUT Configuration on Test.....	4-3
4.5. Operating Condition of EUT.....	4-3
4.6. Test Procedure.....	4-3
4.7. Radiated Emission Test Results .....	4-3
<b>5. BAND EDGE COMPLIANCE TEST .....</b>	<b>5-1</b>
5.1. Test Equipment .....	5-1
5.2. Limit.....	5-1
5.3. Test Produce .....	5-1
5.4. Test Results .....	5-1
<b>6. 20DB BANDWIDTH TEST .....</b>	<b>6-1</b>
6.1. Test Equipment .....	6-1
6.2. Limit.....	6-1
6.3. Test Results .....	6-1
<b>7. DEVIATION TO TEST SPECIFICATIONS.....</b>	<b>7-1</b>
<b>8. PHOTOGRAPH OF TEST .....</b>	<b>8-1</b>
8.1. Photos of Power Line Conducted Emission Test.....	8-1
8.2. Photos of Radiated Emission Test.....	8-2
<b>9. PHOTOGRAPH OF EUT .....</b>	<b>9-1</b>

## TEST REPORT CERTIFICATION

Applicant : Harmonix Music Systems, Inc.  
Manufacturer : Dong Guan Contel Electronics Co., Ltd.  
EUT Description : Wii Wireless Dongle  
FCC ID : VFRWGTSELEA1B  
(A) MODEL NO. : WGTSELEA1B  
(B) SERIAL NO. : N/A  
(C) POWER SUPPLY : DC 5V From Wii  
(D) TEST VOLTAGE : DC 5V From Wii Input AC 120V/60Hz

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2008

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: Jul.16~ 27, 2009

Prepared by:

*Edie Huang*  
Edie Huang / Assistant

Reviewer:

*Jam Yu*  
Jamy Yu / Senior Engineer



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
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.4-2003	PASS
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.4-2003	PASS
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)

Description	:	Wii Wireless Dongle
Model Number	:	WGTSELEA1B
FCC ID	:	VFRWGTSELEA1B
Operation frequency	:	2.408GHz-----2.474GHz
Modulation Technology	:	GFSK
Power Supply	:	DC 5V From Wii Input AC 120V/60Hz (The supply voltage was varied between 85% and 115% of the nominal rated (120V/60Hz) supply voltage. And all the emissions include fundamental emissions had no change. So only the nominal power supply test data were recorded.)
Applicant	:	Harmonix Music Systems, Inc. 625 Massachusetts Ave, 2nd Floor, Cambridge, MA 02139
Manufacturer	:	Dong Guan Contel Electronics Co., Ltd. 2 <sup>nd</sup> Industrial Park, DiChong District, GaoBu Town, Dong Guan City, Guang Dong Province, China
Date of Test	:	Jul.16~27, 2009
Date of Receipt	:	Jul.15, 2009
Sample Type	:	Prototype production

## 2.2. Tested Supporting System Details

### 2.2.1. TV

EMC CODE	:	ACS-EMC-TV01T
M/N	:	1419A
Manufacturer	:	TCL
Power cord	:	Unshielded, Undetachabled, 1.8m

### 2.2.2. Wii

S/N	:	LJH11347884
-----	---	-------------

### 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 : Mar.31, 2009 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, 2009
- Accredited by NVLAP, USA  
NVLAP Code: 200372-0  
Apr. 01, 2009

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

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.40dB
Uncertainty for Radiation Emission test in 3m chamber	3.78 dB (Polarize: V)
	4.20 dB (Polarize: H)
Uncertainty for Output power test	0.94 dB
Uncertainty for Power density test	2.10 dB
Uncertainty for Temperature and humidity test	2%
	1°C
Uncertainty for Frequency range test	$1 \times 10^{-9}$
Uncertainty for Bandwidth test	$1 \times 10^{-9}$
Uncertainty for DC power test	0.042 %
Uncertainty for test site temperature and humidity	0.6°C
	3%

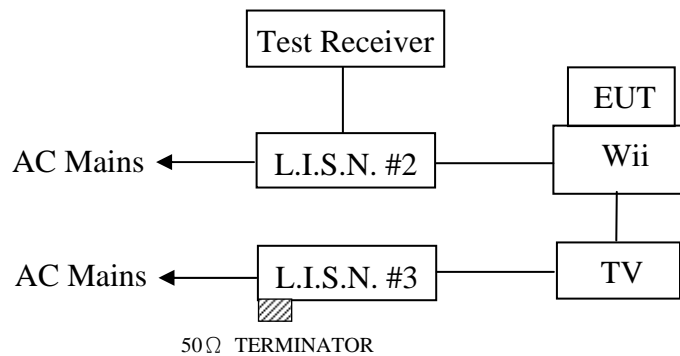
### 3. POWER LINE CONDUCTED EMISSION TEST

#### 3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Jan.10, 09	1 Year
2	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	May.08, 09	1 Year
3	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 09	1 Year
4	Terminator	Hubersuhner	50Ω	No. 1	May.08, 09	1 Year
5	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 09	1 Year
6	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 09	1 Year
7	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 09	1 Year

#### 3.2. Block Diagram of Test Setup

##### 3.2.1. Block diagram of connection between the EUT and Supporting System



*(EUT: Wii Wireless Dongle)*

#### 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. Wii Wireless Dongle (EUT)

Model Number : WGTSELEA1B  
Serial Number : N/A

#### 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. Turned on the power of all equipment.

3.5.3. Let the EUT worked in test modes (Tx Mode) and measured it.

### 3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via Wii 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). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#3). Power on the Wii and let it work normally, we use a test software, 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

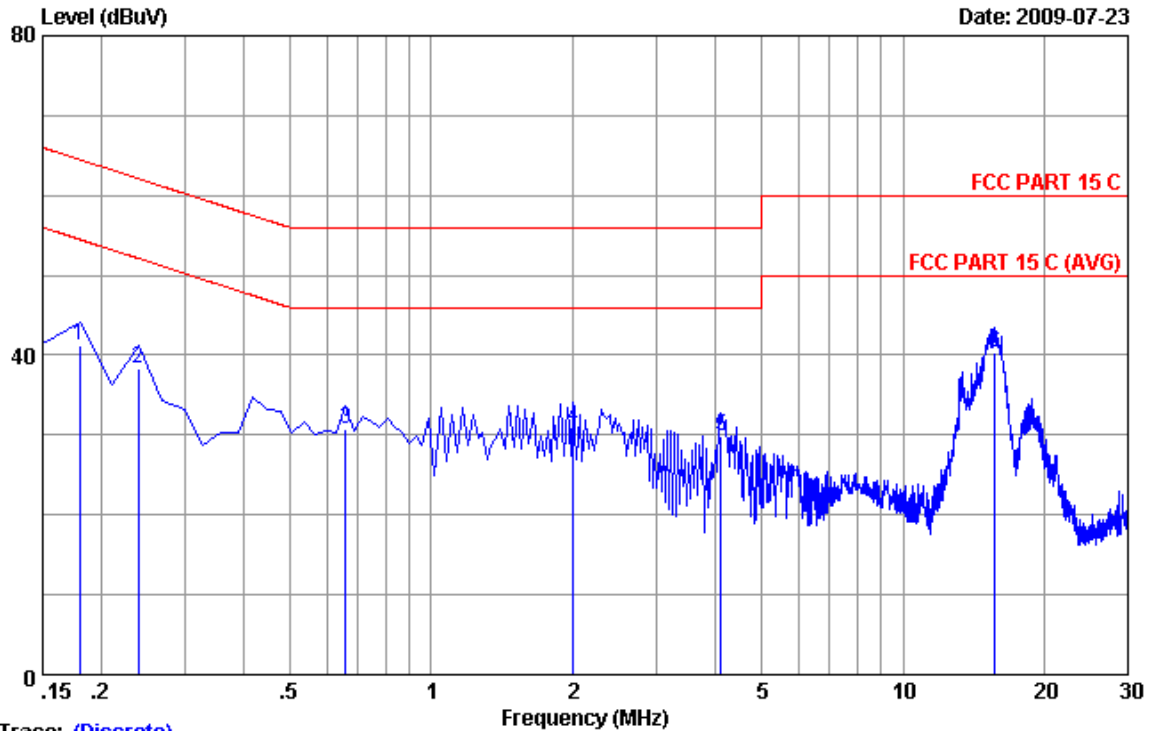
**PASS.** (All emissions not reported below are too low against the prescribed limits.)



NO.6 Ke Feng Road,Block 52,  
Shenzhen Science&Industry Park  
Nantou, Shenzhen,Guang dong, China.  
Tel:+86-755-26639495  
Fax:+86-755-26632877  
Postcode:518057

Data: 3 File: D:\DATA\2009 Report\H\HARMONIX\ACS9Q1148.EM6 (6)

Date: 2009-07-23



Trace: (Discrete)

Site no :Audix No.1 Conduction Data no :3  
Dis./Ant. \*\*: 2009 KNW407 VA  
Limit :FCC PART 15 C  
Env./Ins. :Temp:23'C Humi:54% Engineer :Power Feng  
EUT :Wii Wireless Dongle  
Power Rating :DC 5V from Wii Input AC 120V/60Hz  
Test Mode :Tx mode  
Memo :M/N:WGTSELEA1B

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17985	0.43	9.88	30.87	41.18	64.49	23.31	QP
2	0.23955	0.41	9.88	28.04	38.33	62.11	23.78	QP
3	0.65745	0.36	9.89	20.49	30.74	56.00	25.26	QP
4	2.001	0.36	9.90	20.76	31.02	56.00	24.98	QP
5	4.120	0.38	9.91	19.53	29.82	56.00	26.18	QP
6	15.642	0.49	9.97	29.94	40.40	60.00	19.60	QP

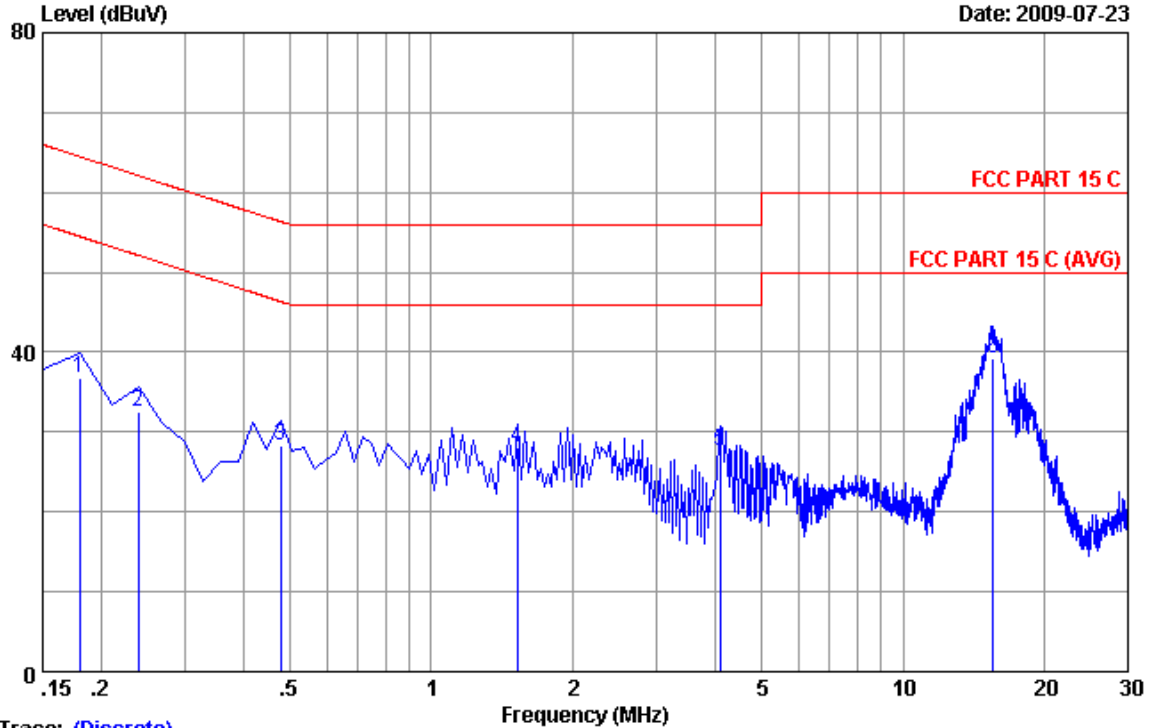
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading  
2.If the average limit is met when using a quasi-peak detector.  
the EUT shall be deemed to meet both limits and measurement  
with average detector is unnecessary.



NO.6 Ke Feng Road,Block 52,  
Shenzhen Science&Industry Park  
Nantou, Shenzhen,Guang dong, China.  
Tel:+86-755-26639495  
Fax:+86-755-26632877  
Postcode:518057

Data: 4 File: D:\DATA\2009 Report\H\HARMONIX\ACS9Q1148.EM6 (6)

Date: 2009-07-23



Trace: (Discrete)

Site no :Audix No.1 Conduction Data no :4  
Dis./Ant. \*\*: 2009 KNW407 VB  
Limit :FCC PART 15 C  
Env./Ins. :Temp:23'C Humi:54% Engineer :Power Feng  
EUT :Wii Wireless Dongle  
Power Rating :DC 5V from Wii Input AC 120V/60Hz  
Test Mode :Tx mode  
Memo :M/N:WGTSELEA1B

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17985	0.45	9.88	26.47	36.80	64.49	27.69	QP
2	0.23955	0.43	9.88	22.26	32.57	62.11	29.54	QP
3	0.47835	0.35	9.89	18.16	28.40	56.37	27.97	QP
4	1.523	0.36	9.89	17.73	27.98	56.00	28.02	QP
5	4.090	0.37	9.91	17.44	27.72	56.00	28.28	QP
6	15.523	0.49	9.97	28.82	39.28	60.00	20.72	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+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

Frequency rang: 30~1000MHz

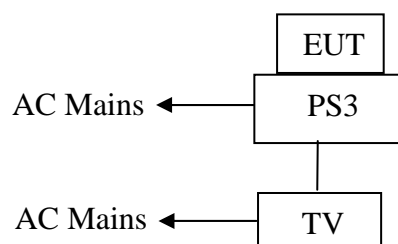
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05,08	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 09	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 09	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 09	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Nov.10, 08	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 09	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 09	1 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	May.27, 08	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	Nov.24, 08	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 09	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	271471/4	May.08, 09	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	29086/2	May.08, 09	1 Year

### 4.2. Block Diagram of Test Setup

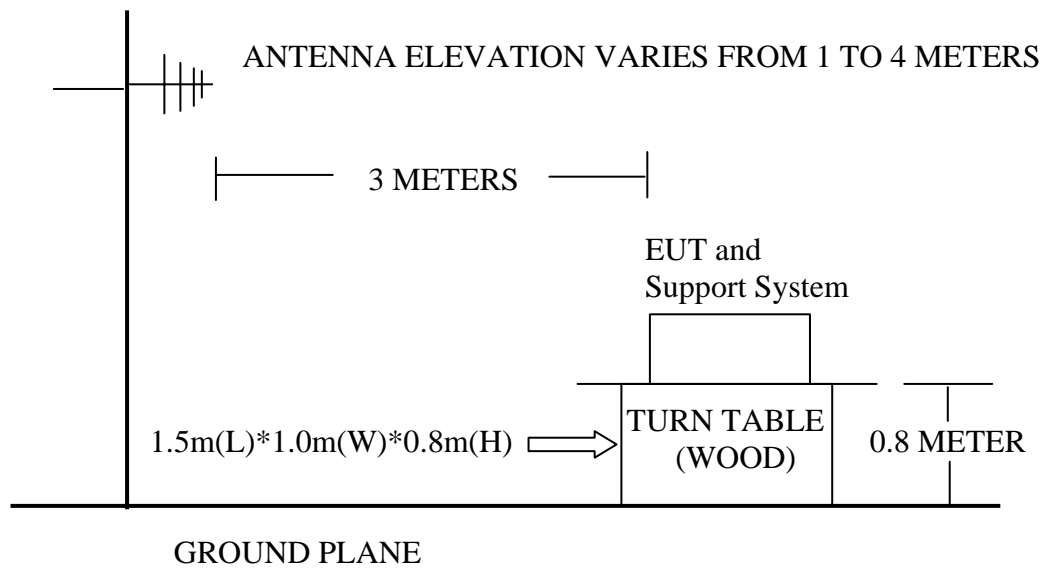
#### 4.2.1. Block diagram of connection between the EUT and simulators



*(EUT: Wii Wireless Dongle)*

## 4.2.2. In Anechoic Chamber

## ANTENNA TOWER



## 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 960MHz	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	
Field Strength of Fundamental emission for 2.4GHz-2.4835GHz	3	94.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average) 114.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak)	
Field Strength of Harmonics	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) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

#### 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.Wii Wireless Dongle (EUT)

Model Number : WGTSELEA1B  
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. Turned on the power of all equipment.

4.5.3.Let the EUT worked in test modes (Tx Mode) and test it.

#### 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 working in test mode, then test it. 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 are set on test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10<sup>th</sup> harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

#### 4.7.Radiated Emission Test Results

**PASS.**

All the emissions from 30MHz to 25GHz were comply with the 15.209 and 15.249 Limit.

All the fundamental emissions were PK measured and comply with Average limit, so the average levels were deemed to comply with average limit.

Test Frequency: 30MHz-1000MHz

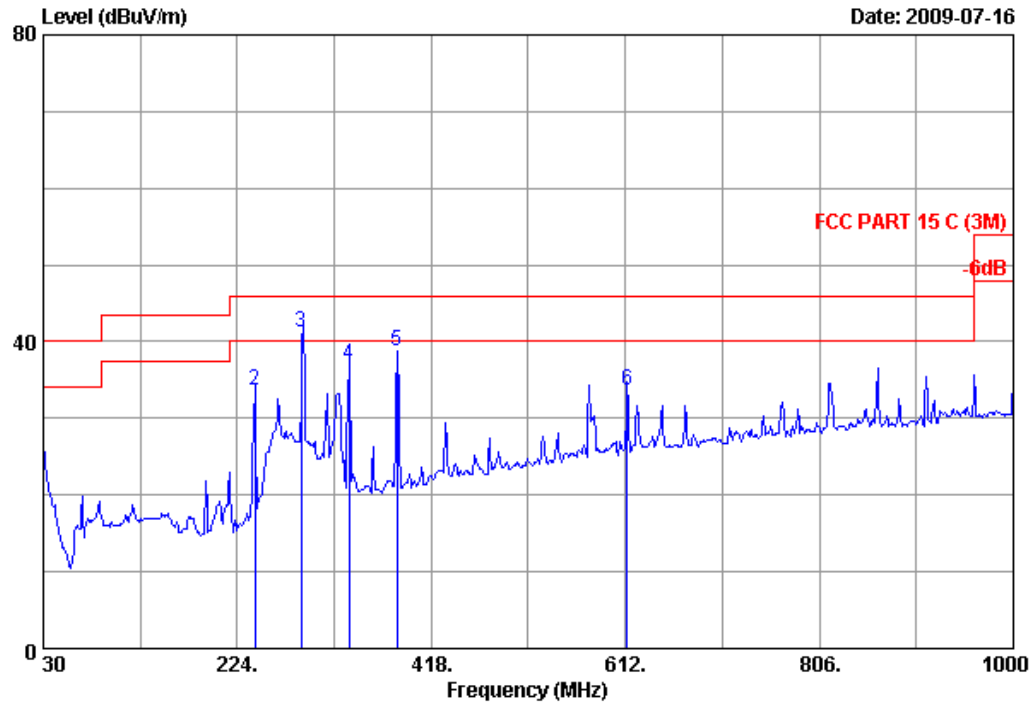


No.6, Ke Feng Road, Block 52,  
Shenzhen Science & Industry Park  
Nantou Shenzhen, Guangdong, China  
Tel: +86-755-26639495  
Fax: +86-755-26632877  
Postcode: 518057

Data: 2

File: D:\2009 Report Data\B\C\intel\ACS9Q1148.EM6 (2)

Date: 2009-07-16



Site no. : 3m Chamber Data no. : 2  
Dis. / Ant. : 3m CBL6111C Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 B (3M)  
Env. / Ins. : 24°C/56% Engineer : Cary  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power Rating : DC 5V From Wii Input 120V/60Hz  
Test Mode : Tx

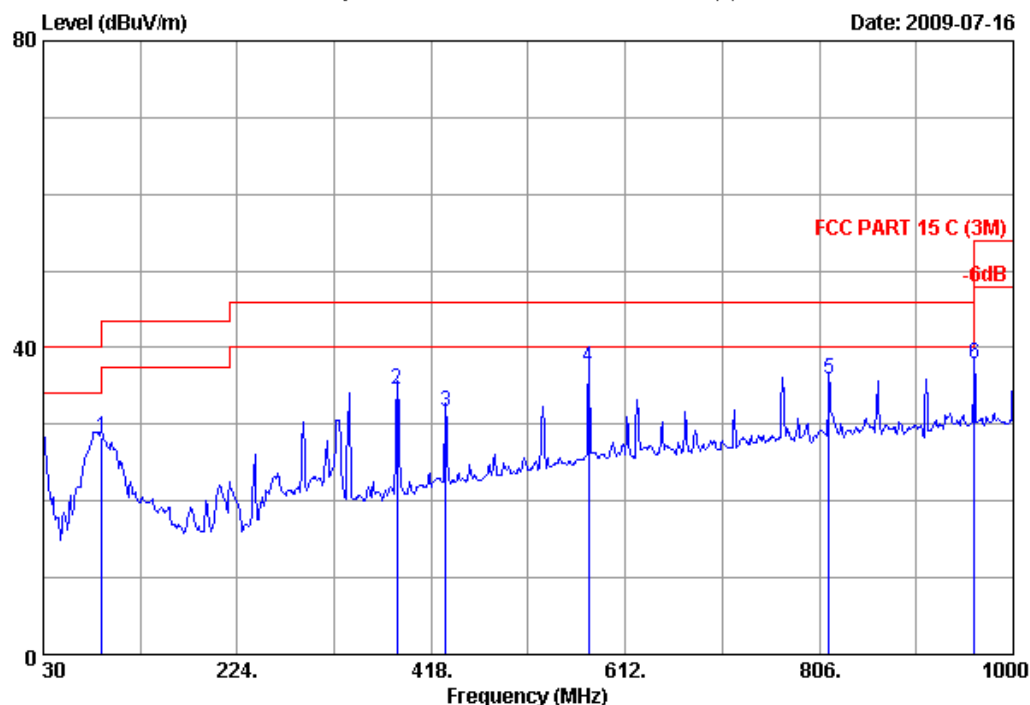
Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 30.000	19.86	0.52	4.91	25.29	40.00	14.71	QP
2 241.460	11.80	1.58	20.18	33.56	46.00	12.44	QP
3 288.020	13.37	1.71	26.20	41.28	46.00	4.72	QP
4 335.550	14.53	1.80	20.66	36.99	46.00	9.01	QP
5 384.050	15.72	1.90	21.13	38.75	46.00	7.25	QP
6 613.940	19.60	2.53	11.61	33.74	46.00	12.26	QP

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



No.6, Ke Feng Road, Block 52,  
Shenzhen Science & Industry Park  
Nantou Shenzhen, Guangdong, China  
Tel: +86-755-26639495  
Fax: +86-755-26632877  
Postcode: 518057

Data: 1 File: D:\2009 Report Data\B\C\intel\ACS9Q1148.EM6 (2)



Site no. : 3m Chamber Data no. : 1  
Dis. / Ant. : 3m CBL6111C Ant. pol. : VERTICAL  
Limit : FCC PART 15 B (3M)  
Env. / Ins. : 24°C/56% Engineer : Cary  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power Rating : DC 5V From Wii Input 120V/60Hz  
Test Mode : Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission			Margin (dB)	Remark
					Level (dBuV/m)	Limits (dBuV/m)			
1	88.200	8.69	0.85	18.72	28.26	43.50	15.24	QP	
2	384.050	15.72	1.90	17.01	34.63	46.00	11.37	QP	
3	432.550	16.90	2.03	12.75	31.68	46.00	14.32	QP	
4	575.140	19.37	2.43	15.54	37.34	46.00	8.66	QP	
5	815.700	21.89	3.07	10.92	35.88	46.00	10.12	QP	
6	961.200	23.69	3.38	10.72	37.79	54.00	16.21	QP	

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



Test Frequency: 1GHz-18GHz

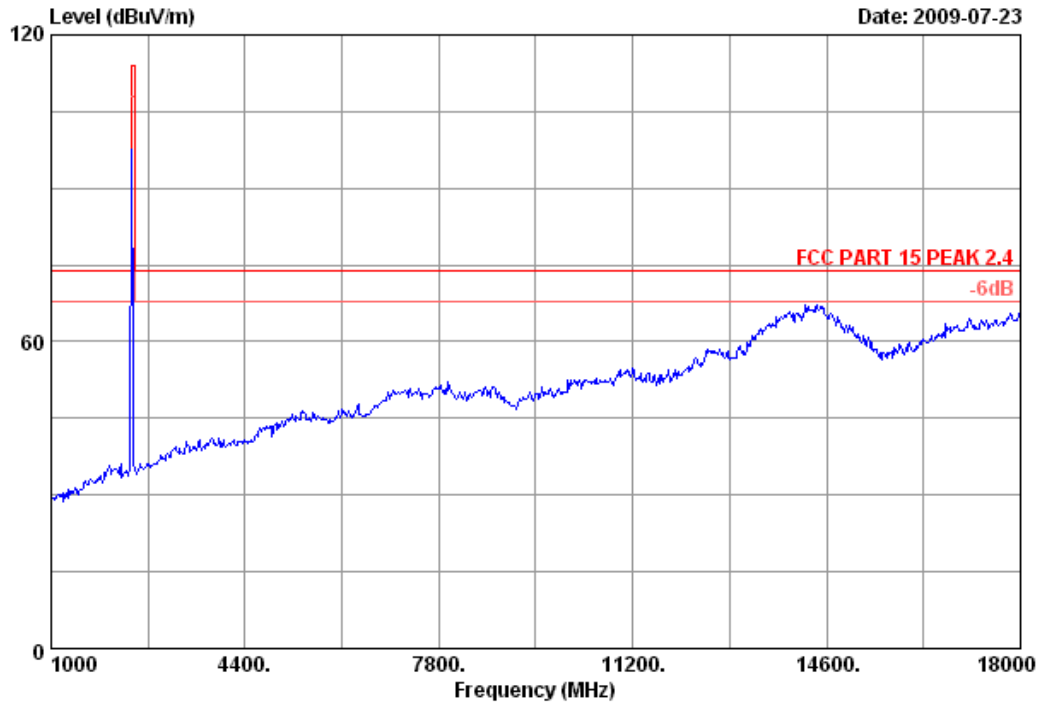


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 57

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no.	: 3m Chamber	Data no.	: 57
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	:Power Feng
EUT	: Wii Wireless Dongle		
Power	: DC 5V From Wii input AC 120V/60Hz		
Test mode	: Tx 2408MHz		
M/N	: WGTSELEA1B		

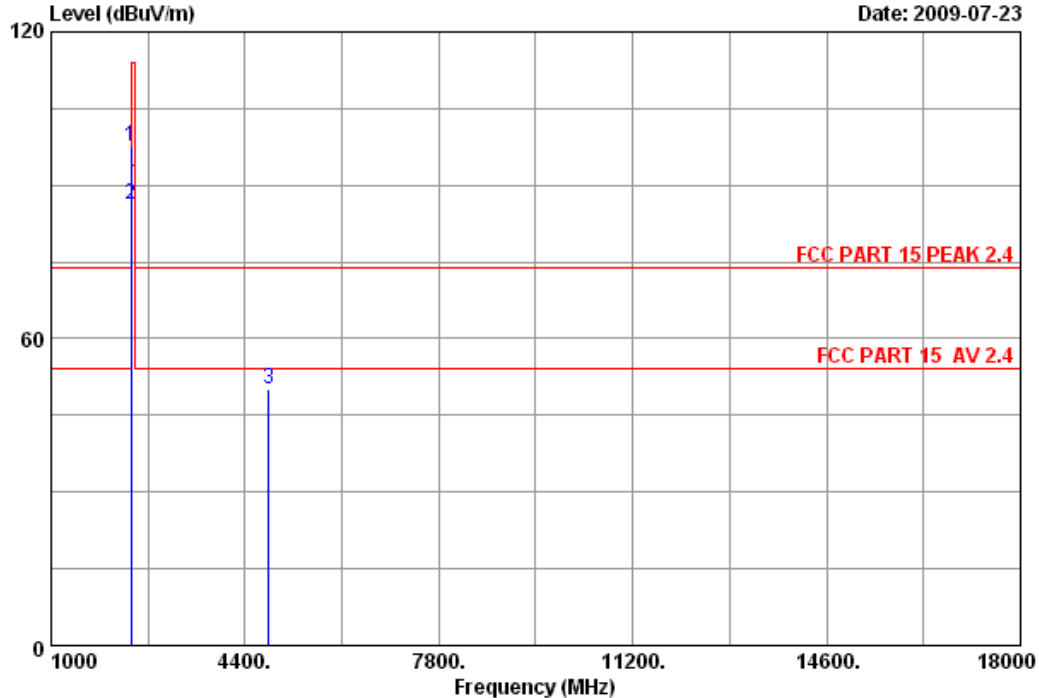


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 58

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no. : 3m Chamber Data no. : 58  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power Feng  
EUT : Wii Wireless Dongle  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2408MHz  
M/N : WGTSELEA1B

		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	2408.000	28.48	7.66	35.95	97.26	97.45	114.00	16.55	Peak
2	2408.000	28.48	7.66	35.95	85.98	86.17	94.00	7.83	Average
3	4816.000	34.36	10.80	35.37	40.31	50.10	74.00	23.90	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.

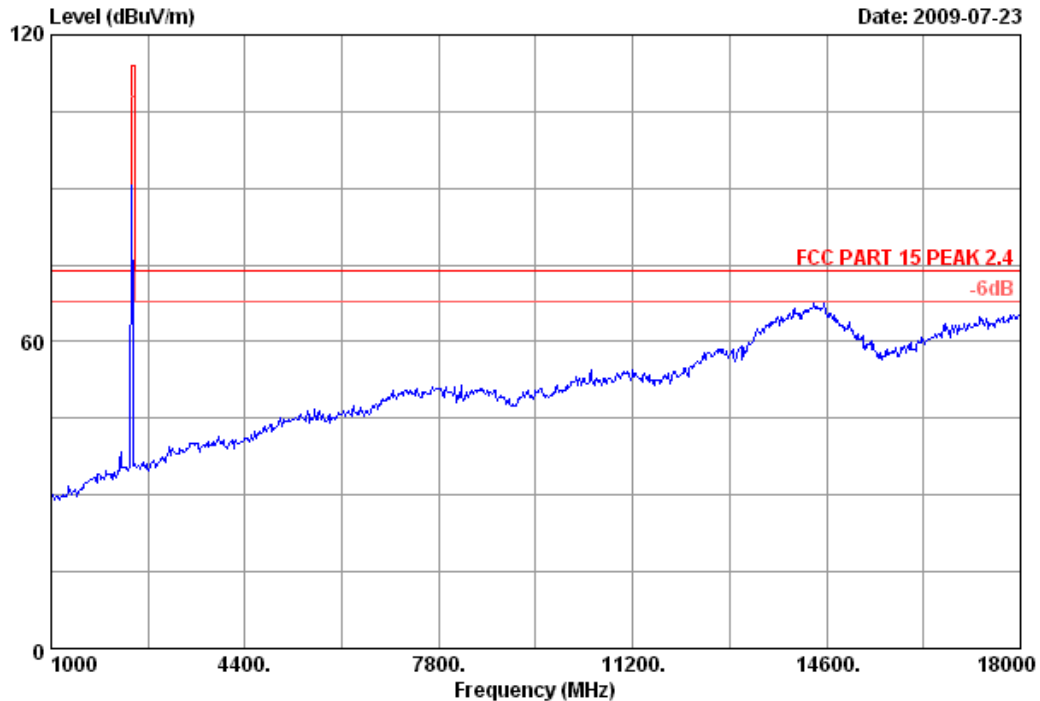


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 59

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no.	: 3m Chamber	Data no.	: 59
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Power Feng
EUT	: Wii Wireless Dongle		
Power	: DC 5V From Wii input AC 120V/60Hz		
Test mode	: Tx 2408MHz		
M/N	: WGTSELEA1B		

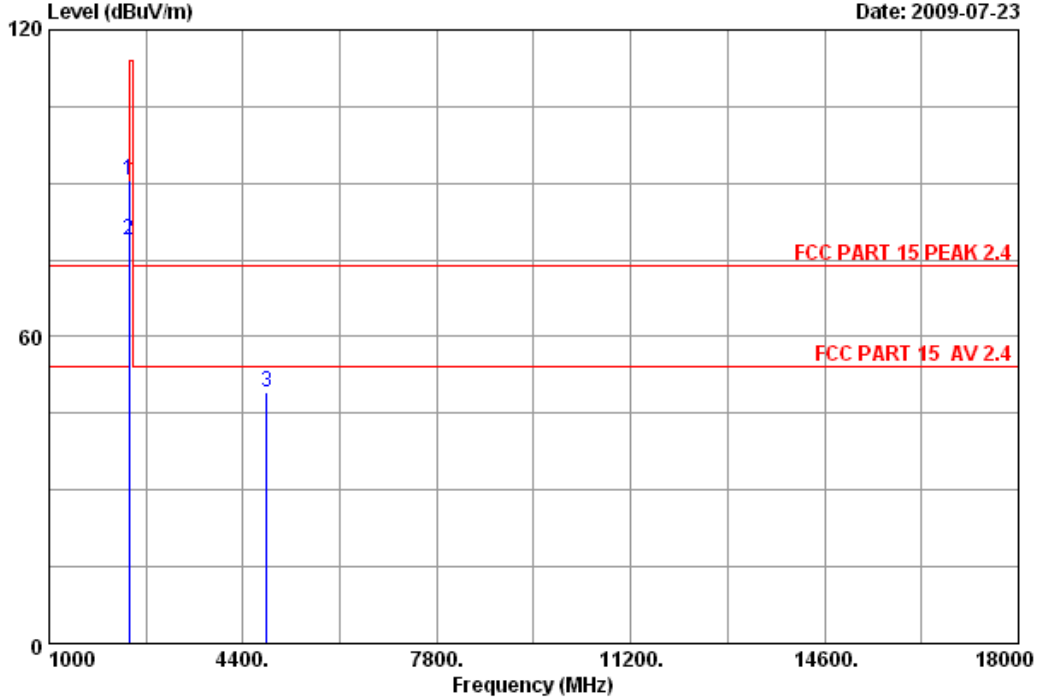


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 60

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no. : 3m Chamber Data no. : 60  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power Feng  
EUT : Wii Wireless Dongle  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2408MHz  
M/N : WGTSELEA1B

		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	2408.000	28.48	7.66	35.95	90.40	90.59	114.00	23.41	Peak
2	2408.000	28.48	7.66	35.95	78.68	78.87	94.00	15.13	Average
3	4816.000	34.36	10.80	35.37	39.20	48.99	74.00	25.01	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.

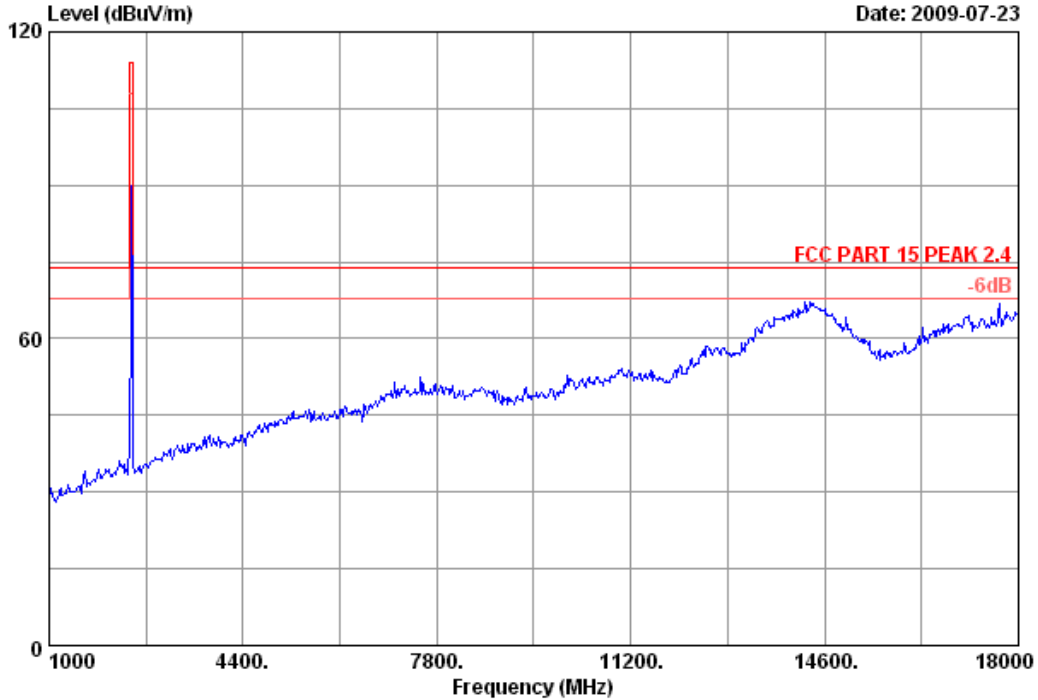


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 61

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no.	: 3m Chamber	Data no.	: 61
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	:Power Feng
EUT	: Wii Wireless Dongle		
Power	: DC 5V From Wii input AC 120V/60Hz		
Test mode	: Tx 2440MHz		
M/N	: WGTSELEA1B		

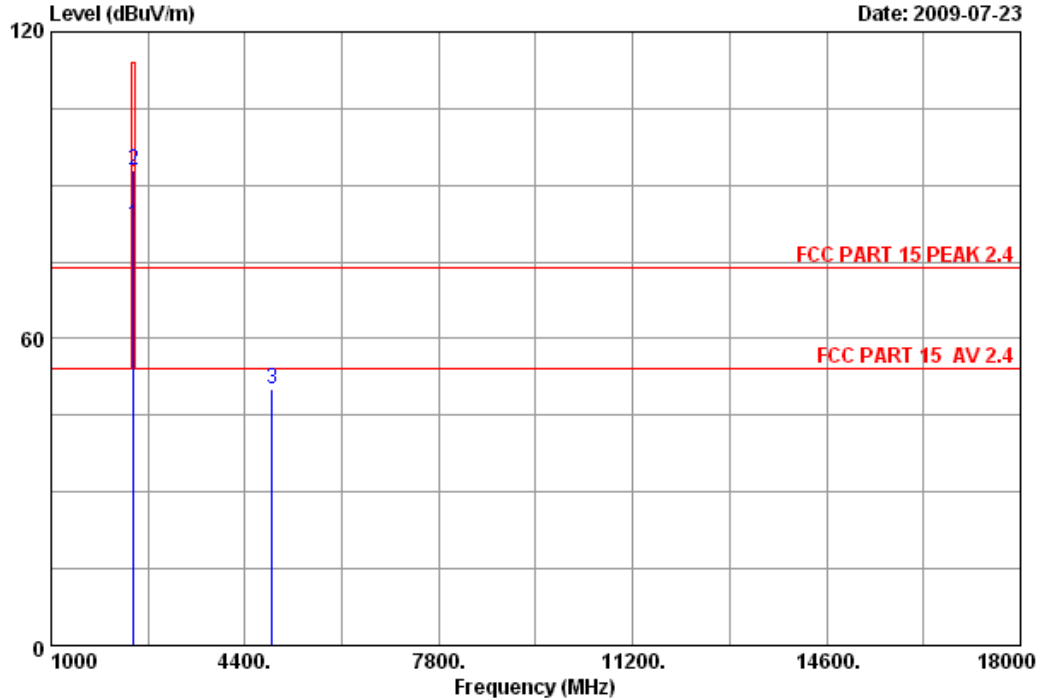


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 62

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no. : 3m Chamber Data no. : 62  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power Feng  
EUT : Wii Wireless Dongle  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2440MHz  
M/N : WGTSELEA1B

		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	2440.000	28.53	7.72	36.06	82.05	82.24	94.00	11.76	Average
2	2440.000	28.53	7.72	36.06	92.86	93.05	114.00	20.95	Peak
3	4880.000	34.78	10.95	35.36	39.87	50.24	74.00	23.76	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.

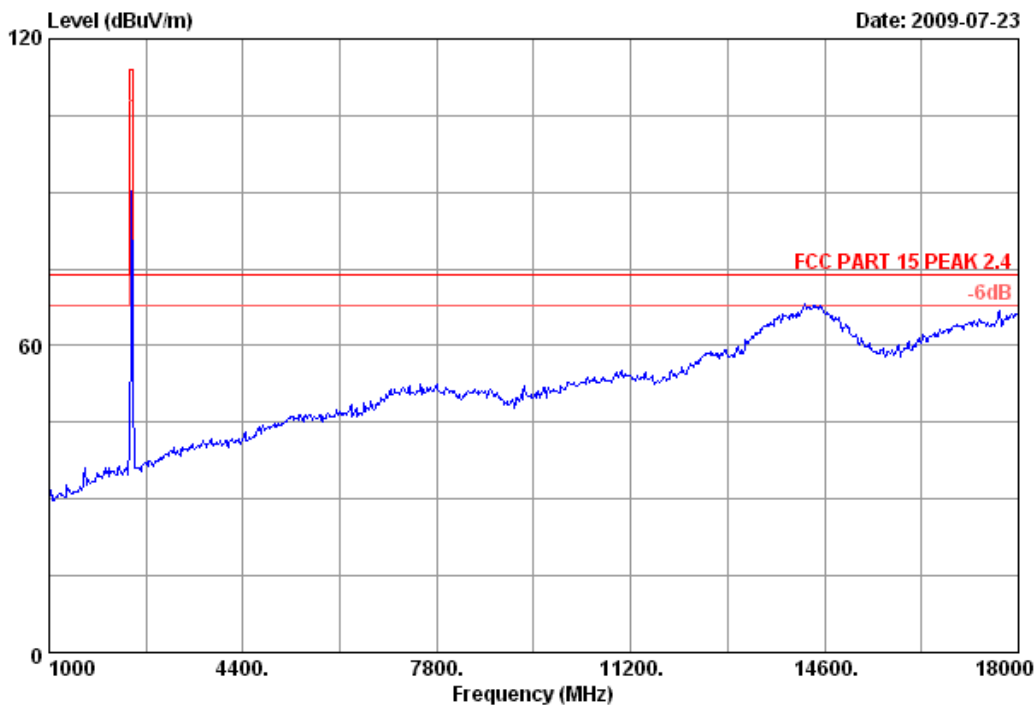


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 63

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no.	: 3m Chamber	Data no.	: 63
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	:Power Feng
EUT	: Wii Wireless Dongle		
Power	: DC 5V From Wii input AC 120V/60Hz		
Test mode	: Tx 2440MHz		
M/N	: WGTSELEA1B		

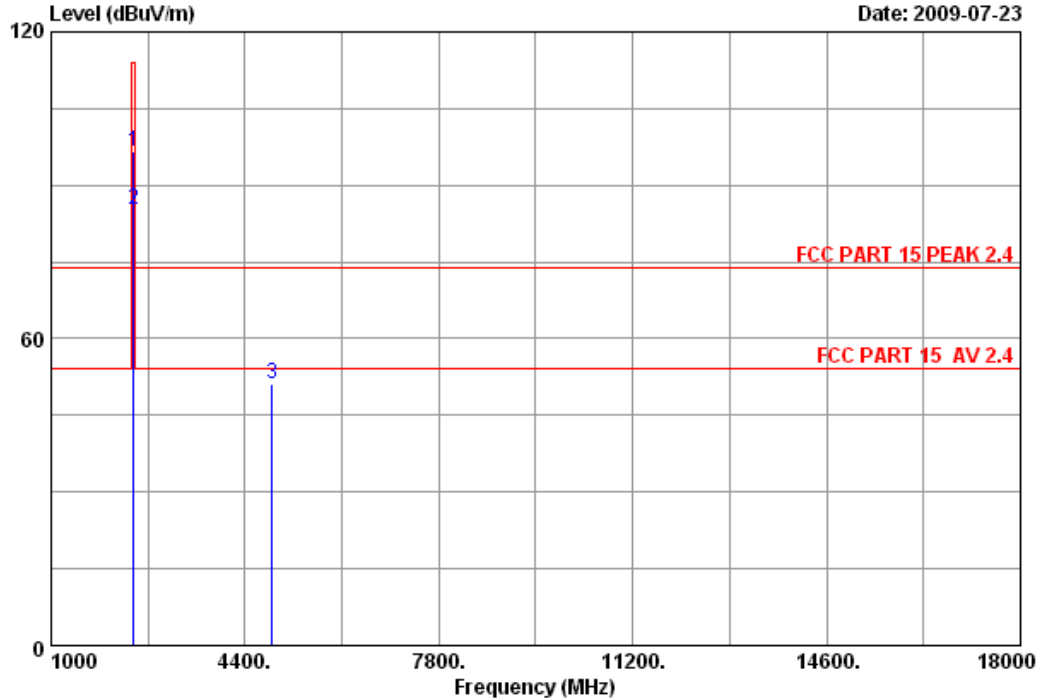


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 64

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no. : 3m Chamber Data no. : 64  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power Feng  
EUT : Wii Wireless Dongle  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2440MHz  
M/N : WGTSELEA1B

		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	2440.000	28.53	7.72	36.06	96.45	96.64	114.00	17.36	Peak
2	2440.000	28.53	7.72	36.06	84.95	85.14	94.00	8.86	Average
3	4880.000	34.78	10.95	35.36	40.85	51.22	74.00	22.78	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.



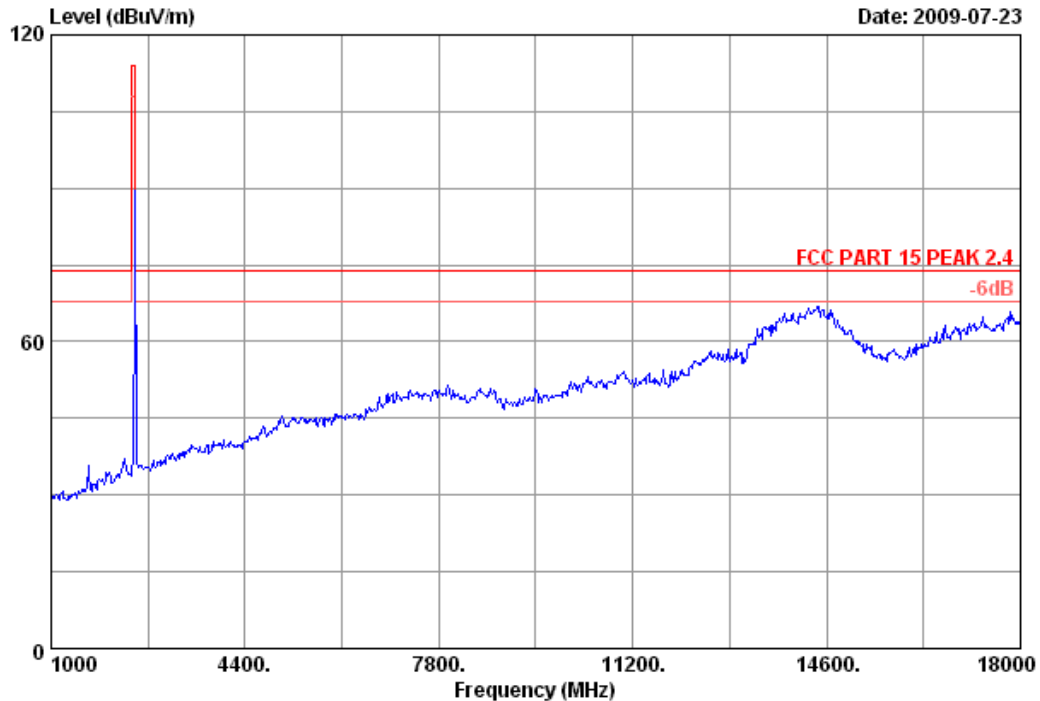


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 65

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no.	: 3m Chamber	Data no.	: 65
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Power Feng
EUT	: Wii Wireless Dongle		
Power	: DC 5V From Wii input AC 120V/60Hz		
Test mode	: Tx 2474MHz		
M/N	: WGTSELEA1B		

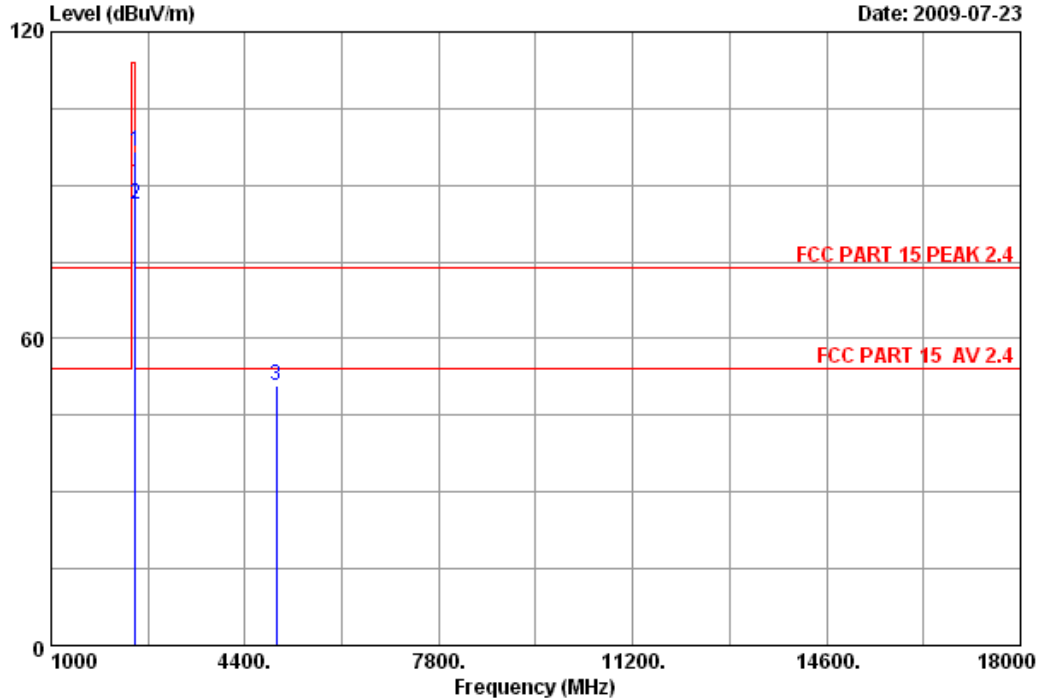


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 66

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no. : 3m Chamber Data no. : 66  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power Feng  
EUT : Wii Wireless Dongle  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2474MHz  
M/N : WGTSELEA1B

		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	2474.000	28.58	7.72	35.97	96.11	96.44	114.00	17.56	Peak
2	2474.000	28.58	7.72	35.97	85.93	86.26	94.00	7.74	Average
3	4948.000	35.19	11.03	35.40	40.12	50.94	74.00	23.06	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.

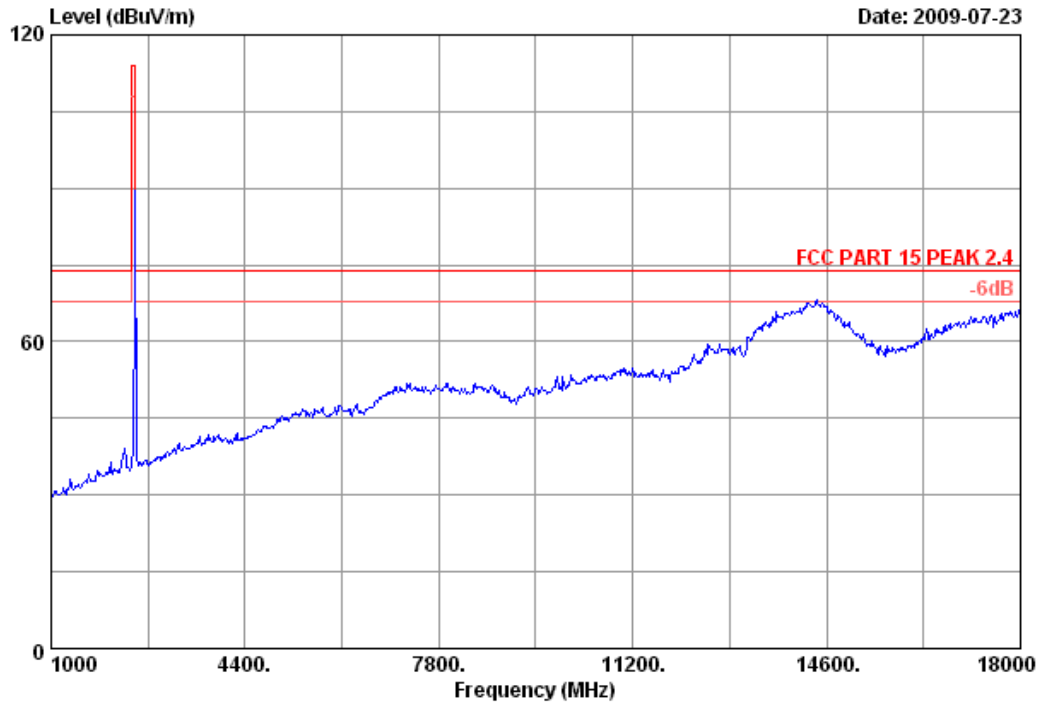


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 67

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no.	: 3m Chamber	Data no.	: 67
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Power Feng
EUT	: Wii Wireless Dongle		
Power	: DC 5V From Wii input AC 120V/60Hz		
Test mode	: Tx 2474MHz		
M/N	: WGTSELEA1B		

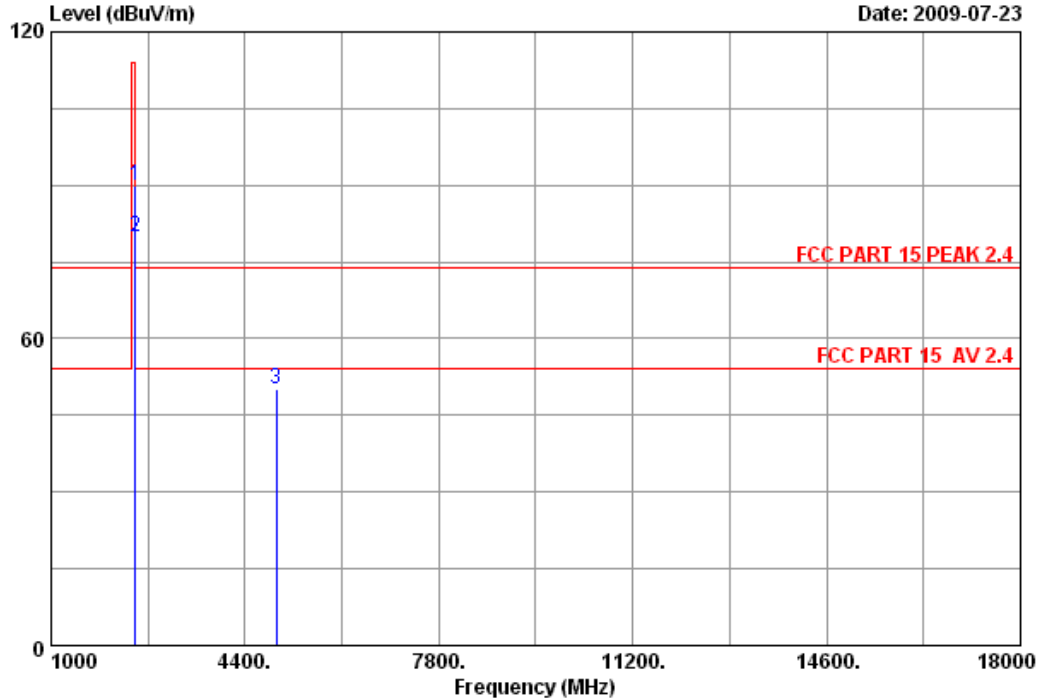


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 68

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (68)

Date: 2009-07-23



Site no. : 3m Chamber Data no. : 68  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power Feng  
EUT : Wii Wireless Dongle  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2474MHz  
M/N : WGTSELEA1B

		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	2474.000	28.58	7.72	35.97	89.68	90.01	114.00	23.99	Peak
2	2474.000	28.58	7.72	35.97	79.44	79.77	94.00	14.23	Average
3	4948.000	35.19	11.03	35.40	39.21	50.03	74.00	23.97	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.

## 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.08, 09	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May.27, 08	1.5 Year
3	Amplifier	Agilent	8449B	3008A02495	May.08, 09	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX 102	28620/2	May.08, 09	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX 102	271471/4	May.08, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX 102	29086/2	May.08, 09	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.)

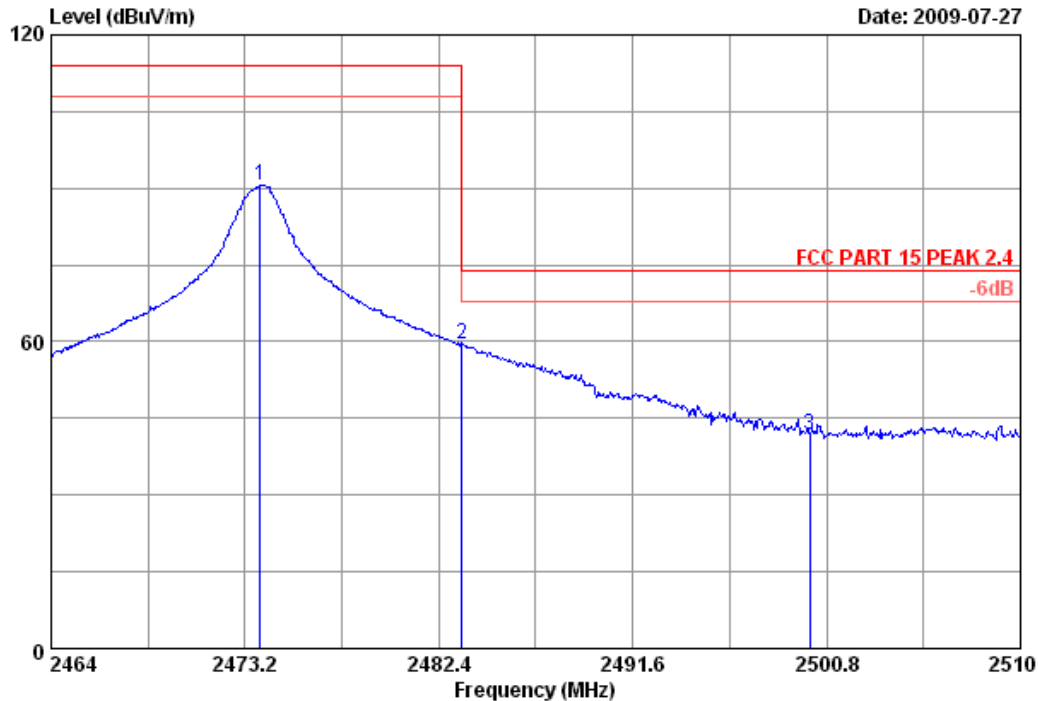
All the emissions outside operation frequency band comply with 15.209 limit.

All the PK measured emissions comply with average limit, so the average levels were deemed to comply with average limit.



No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 81 File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)



Site no.	: 3m Chamber	Data no.	: 81
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Power
EUT	: Wii Wireless Dongle M/N:WGTSELEA1B		
Power	: DC 5V From Wii input AC 120V/60Hz		
Test mode	: Tx 2474MHz		

	Freq.	Ant.	Cable	Amp.		Emission			
	(MHz)	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB)	(dbuv)	(dBuV/m)	(dBuV/m)	(dB)	
1	2473.936	28.58	7.72	35.97	90.26	90.59	114.00	23.41	Peak
2	2483.500	28.58	7.77	35.97	59.25	59.63	74.00	14.37	Peak
3	2500.000	28.60	7.77	36.00	41.36	41.73	74.00	32.27	Peak

Remarks:

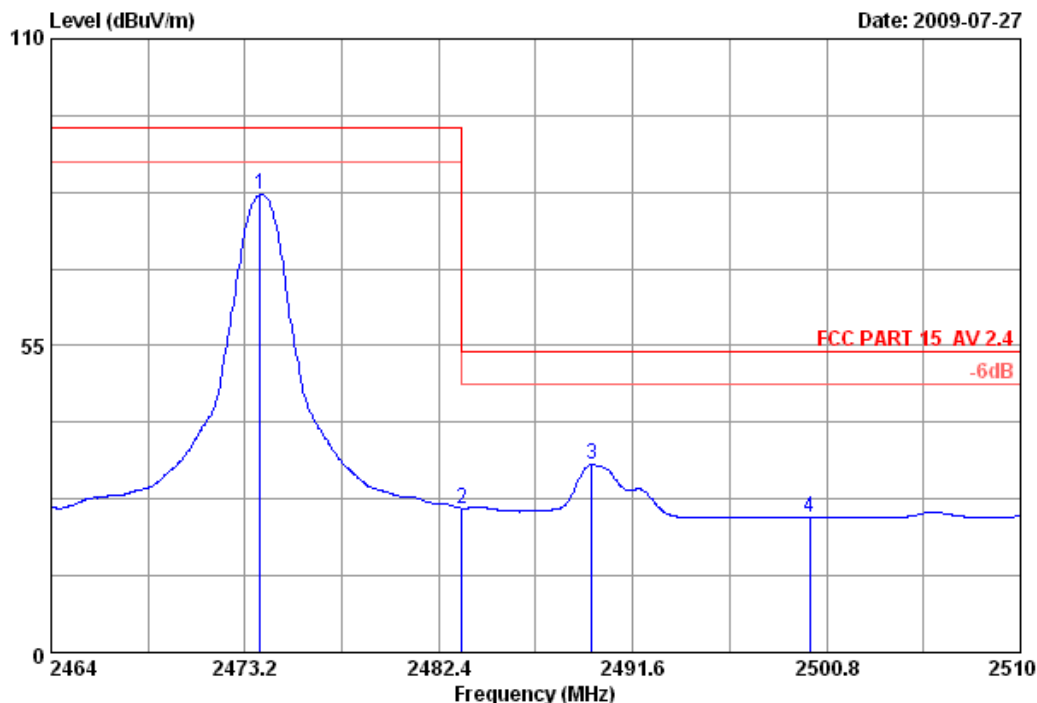
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 82 File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)

Date: 2009-07-27



Site no. : 3m Chamber Data no. : 82  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer : Power  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2474MHz

		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	2473.936	28.58	7.72	35.97	81.69	82.02	94.00	11.98	Average
2	2483.500	28.58	7.77	35.97	25.48	25.86	54.00	28.14	Average
3	2489.668	28.60	7.77	36.00	33.29	33.66	54.00	20.34	Average
4	2500.000	28.60	7.77	36.00	23.94	24.31	54.00	29.69	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.

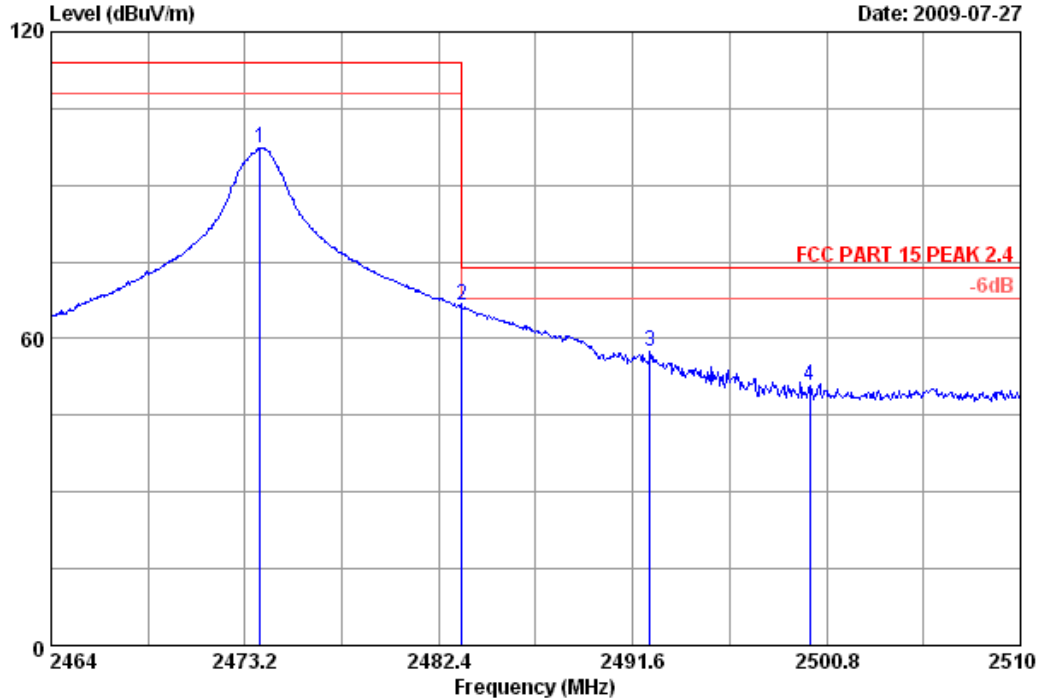


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 83

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)

Date: 2009-07-27



Site no. : 3m Chamber Data no. : 83  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2474MHz

		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	2473.936	28.58	7.72	35.97	97.03	97.36	114.00	16.64	Peak
2	2483.500	28.58	7.77	35.97	65.99	66.37	74.00	7.63	Peak
3	2492.428	28.60	7.77	36.00	57.02	57.39	74.00	16.61	Peak
4	2500.000	28.60	7.77	36.00	50.34	50.71	74.00	23.29	Peak

## Remarks:

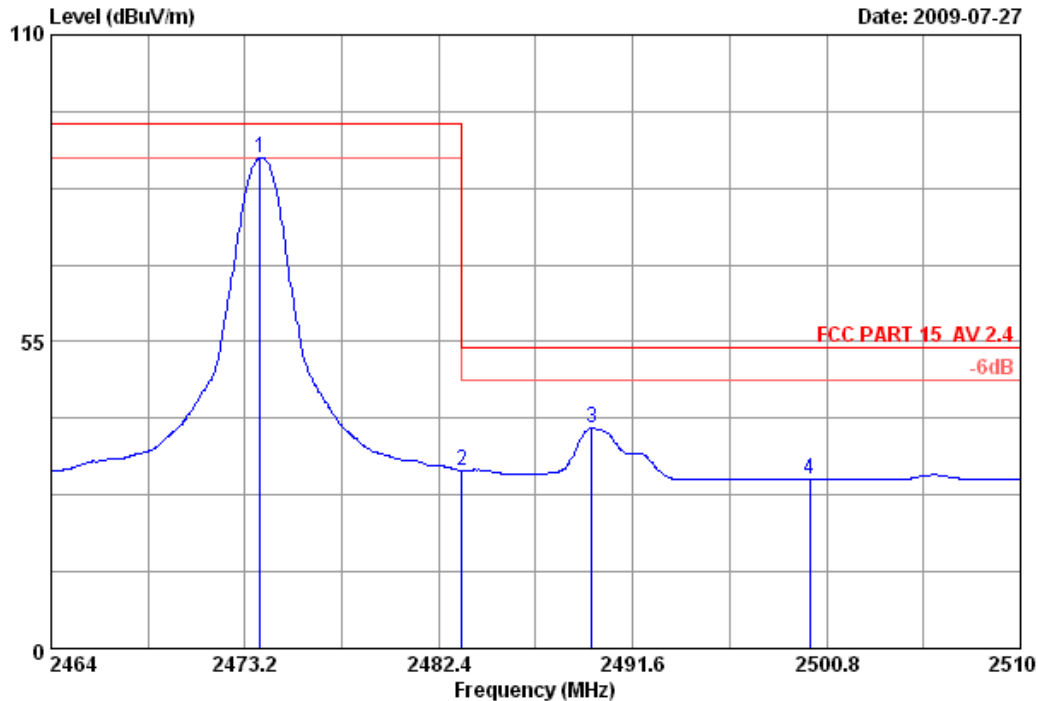
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.





No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 84 File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)



Site no. : 3m Chamber Data no. : 84  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer : Power  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2474MHz

		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	2473.936	28.58	7.72	35.97	87.65	87.98	94.00	6.02	Average
2	2483.500	28.58	7.77	35.97	31.43	31.81	54.00	22.19	Average
3	2489.668	28.60	7.77	36.00	39.11	39.48	54.00	14.52	Average
4	2500.000	28.60	7.77	36.00	29.92	30.29	54.00	23.71	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.

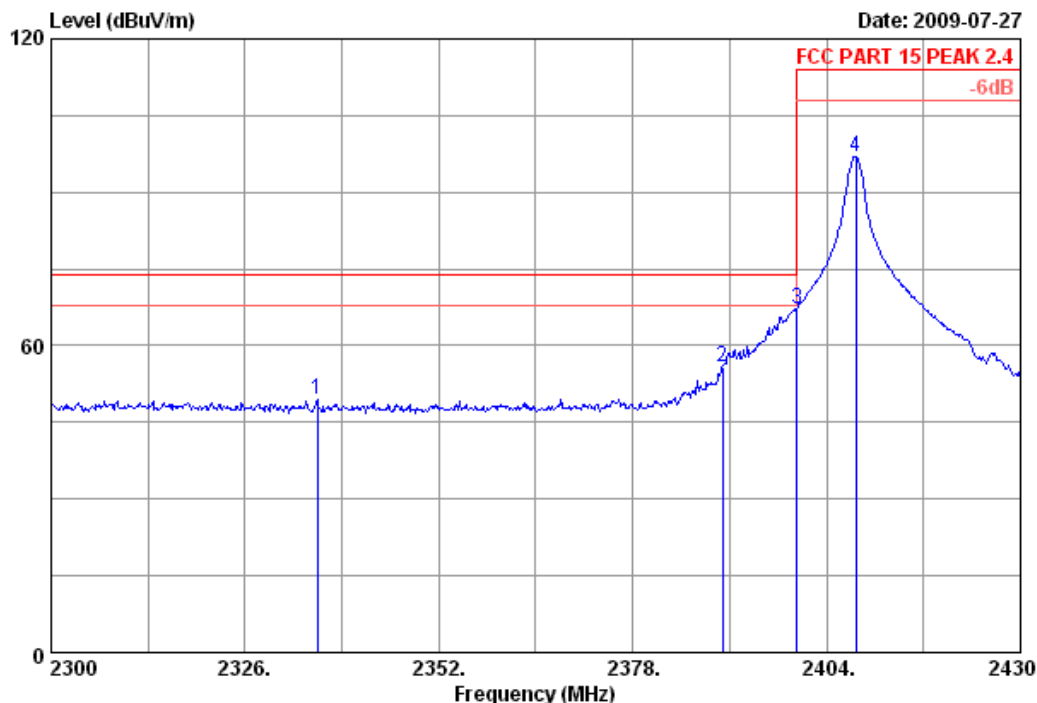


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 85

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)

Date: 2009-07-27



Site no. : 3m Chamber Data no. : 85  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2408MHz

		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	2335.750	28.38	7.61	35.99	49.52	49.52	74.00	24.48	Peak	
2	2390.000	28.46	7.66	36.09	55.66	55.69	74.00	18.31	Peak	
3	2400.000	28.46	7.66	36.09	67.32	67.35	74.00	6.65	Peak	
4	2407.900	28.48	7.66	35.95	96.89	97.08	114.00	16.92	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.

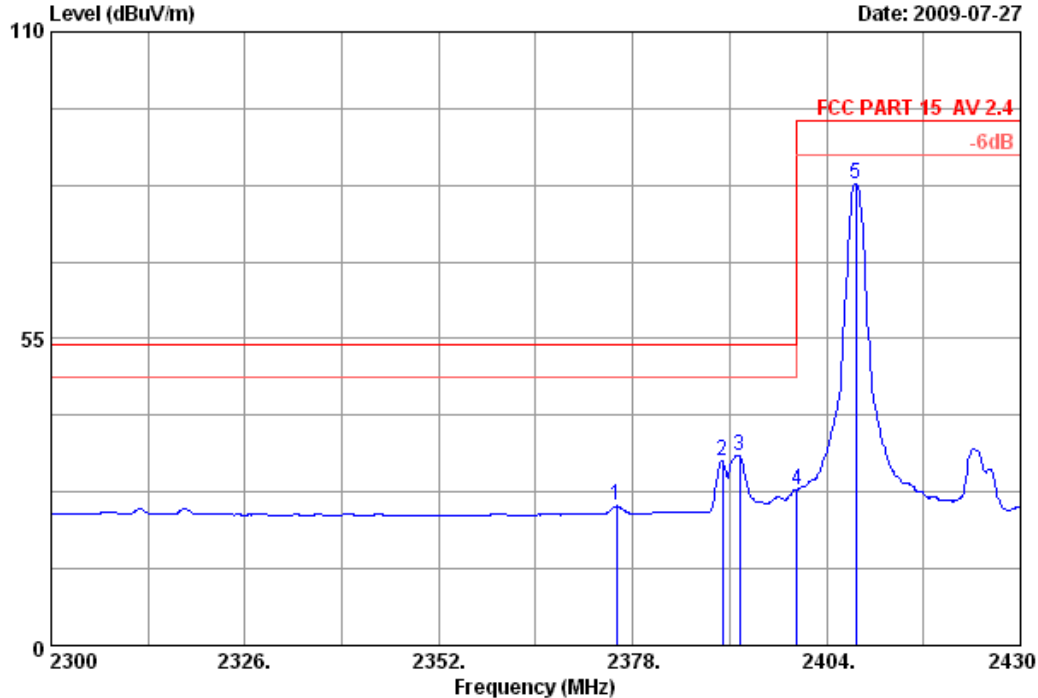


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 86

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)

Date: 2009-07-27



Site no. : 3m Chamber Data no. : 86  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer : Power  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2408MHz

		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	2375.790	28.43	7.66	36.00	24.90	24.99	54.00	29.01	Average
2	2390.000	28.46	7.66	36.09	32.93	32.96	54.00	21.04	Average
3	2392.300	28.46	7.66	36.09	34.12	34.15	54.00	19.85	Average
4	2400.000	28.46	7.66	36.09	27.92	27.95	54.00	26.05	Average
5	2407.900	28.48	7.66	35.95	82.69	82.88	94.00	11.12	Average

## Remarks:

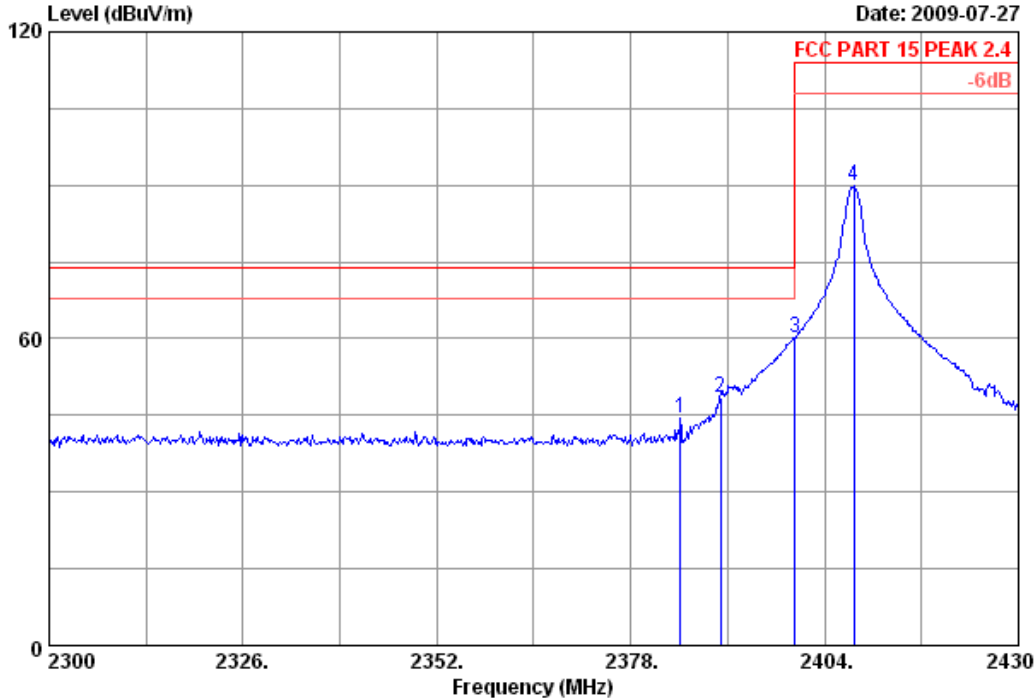
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 87 File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)

Date: 2009-07-27



Site no. : 3m Chamber Data no. : 87  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL  
Limit : FCC PART 15 PEAK 2.4  
Env. / Ins. : 23°C/54% Engineer : Power  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2408MHz

		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	2384.630	28.43	7.66	36.00	44.40	44.49	74.00	29.51	Peak
2	2390.000	28.46	7.66	36.09	48.33	48.36	74.00	25.64	Peak
3	2400.000	28.46	7.66	36.09	60.09	60.12	74.00	13.88	Peak
4	2407.900	28.48	7.66	35.95	89.71	89.90	114.00	24.10	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.

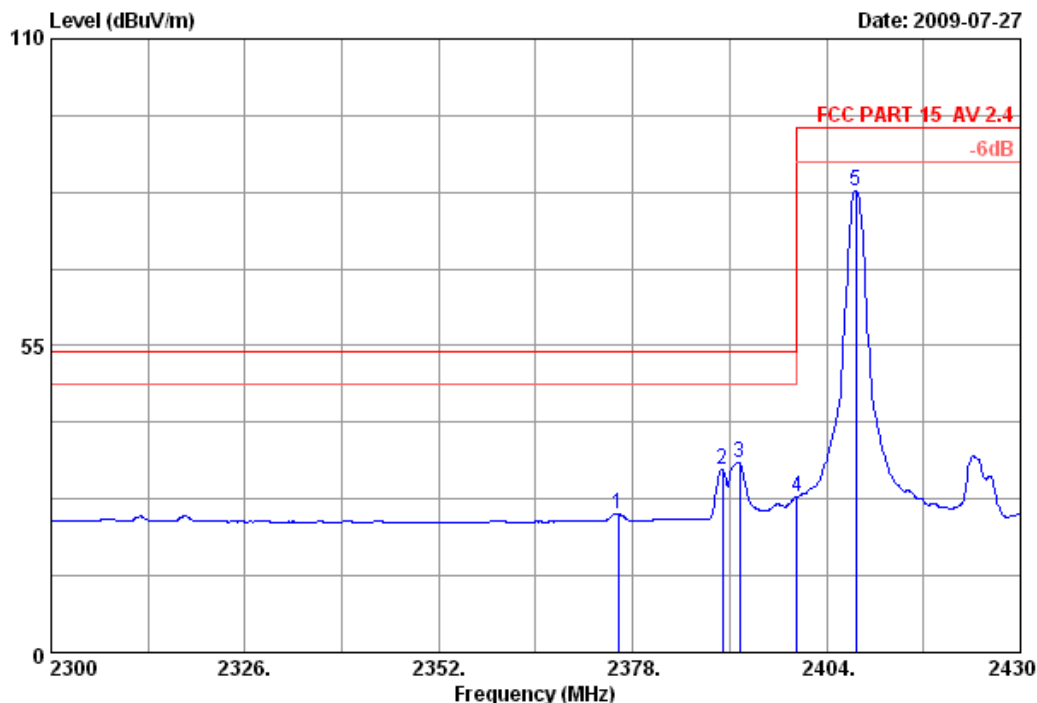


No.6 Ke Feng Road,Block 52,  
ShenZhen Science & Industry Park  
Noutou,ShenZhen,GuangDong,China  
Tel:+86-755-26639495-7  
Fax:+86-755-26632877  
Postcode:518057

Data: 88

File: E:\2009 report data\C\Contel\ACS9Q1148.EM6 (92)

Date: 2009-07-27



Site no. : 3m Chamber Data no. : 88  
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL  
Limit : FCC PART 15 AV 2.4  
Env. / Ins. : 23°C/54% Engineer :Power  
EUT : Wii Wireless Dongle M/N:WGTSELEA1B  
Power : DC 5V From Wii input AC 120V/60Hz  
Test mode : Tx 2408MHz

		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 2376.050	28.43	7.66	36.00	24.85	24.94	54.00	29.06	Average	
2 2390.000	28.46	7.66	36.09	32.77	32.80	54.00	21.20	Average	
3 2392.300	28.46	7.66	36.09	34.00	34.03	54.00	19.97	Average	
4 2400.000	28.46	7.66	36.09	27.81	27.84	54.00	26.16	Average	
5 2407.900	28.48	7.66	35.95	82.63	82.82	94.00	11.18	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.

## 6. 20DB BANDWIDTH TEST

### 6.1. Test Equipment

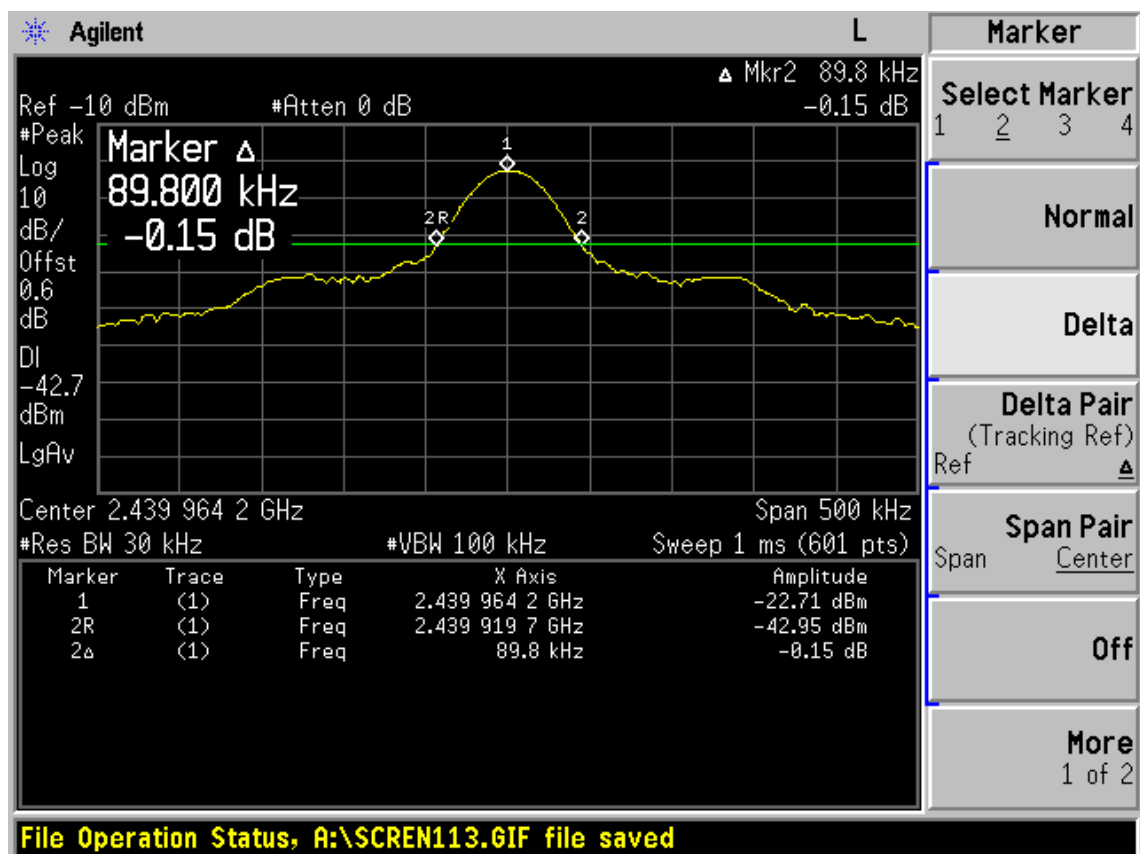
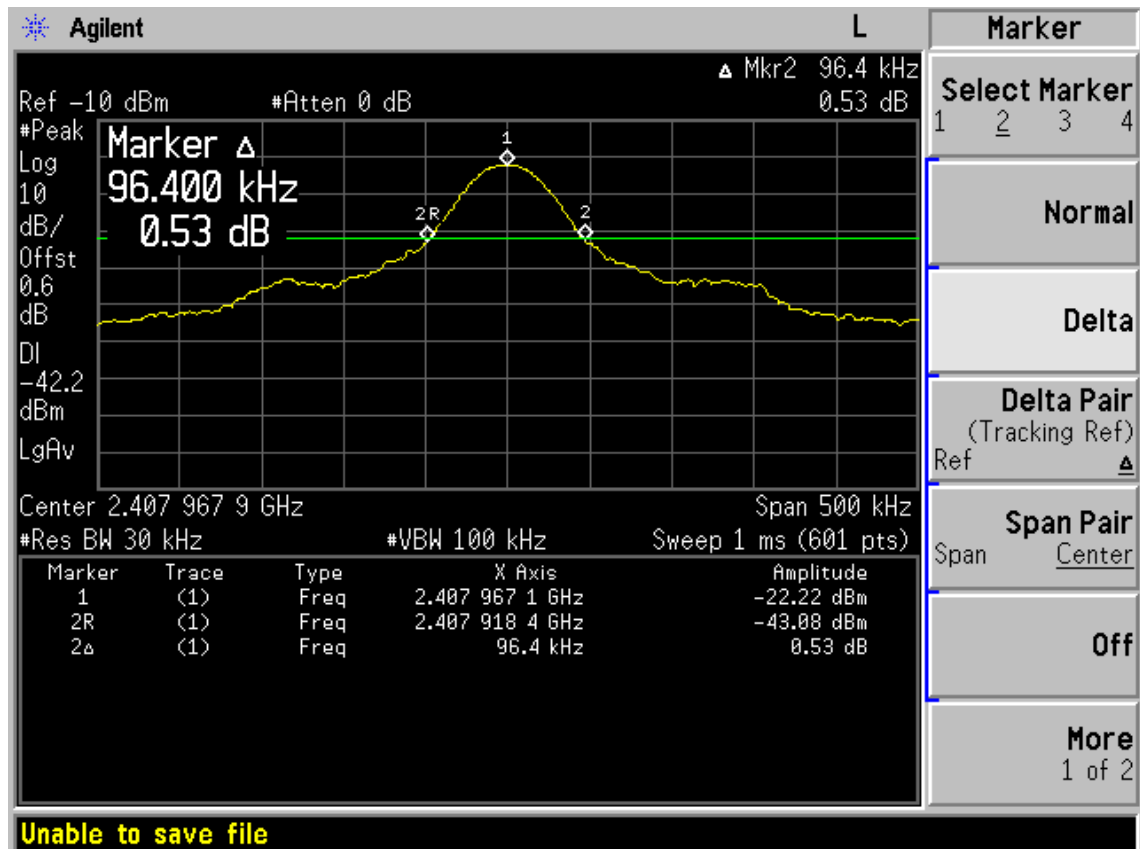
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,08, 09	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May,08, 09	1 Year

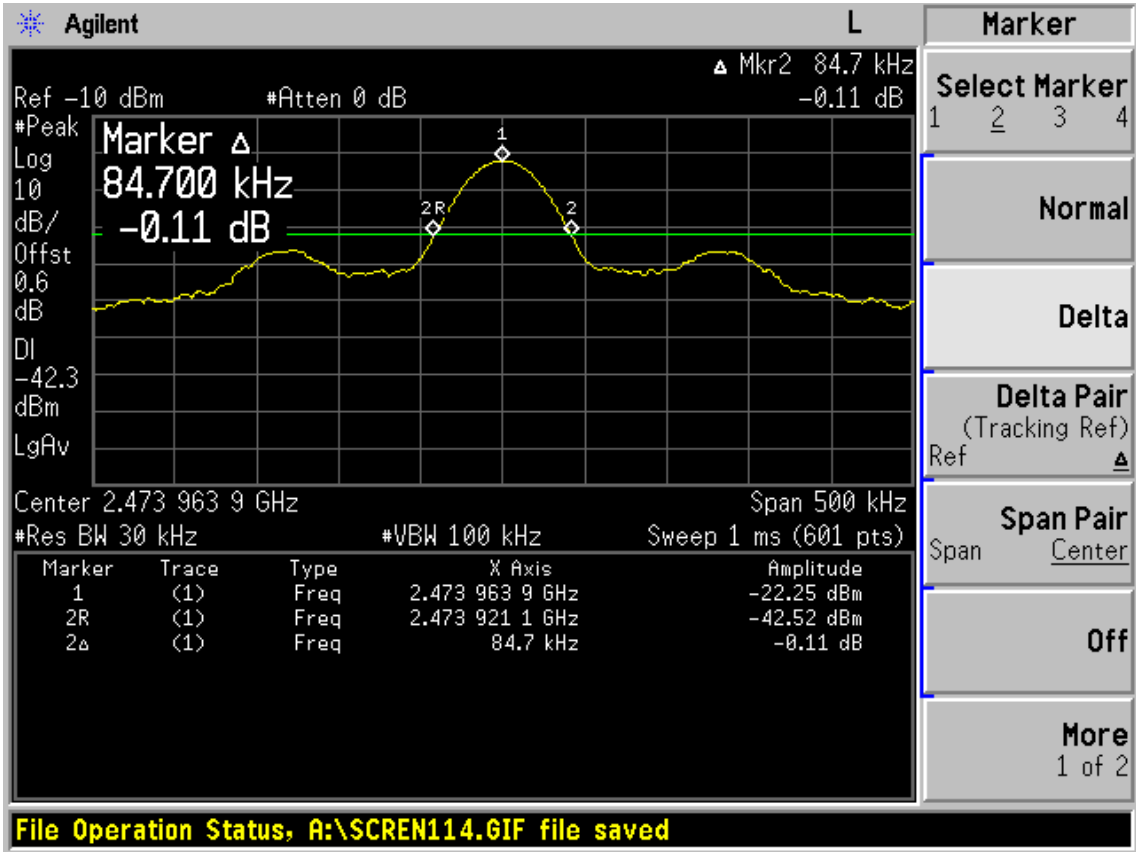
### 6.2. Limit

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

CH	20dB Bandwidth (kHz)	Limit (MHz)	Conclusion
(Low)	96.4	---	PASS
(Mid)	89.8	---	PASS
(High)	84.7	---	PASS







## **7. DEVIATION TO TEST SPECIFICATIONS**

[ NONE]

## 8. PHOTOGRAPH OF TEST

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



## 8.2.Photos of Radiated Emission Test

30-1000MHz



Above 1000MHz





## 9. PHOTOGRAPH OF EUT

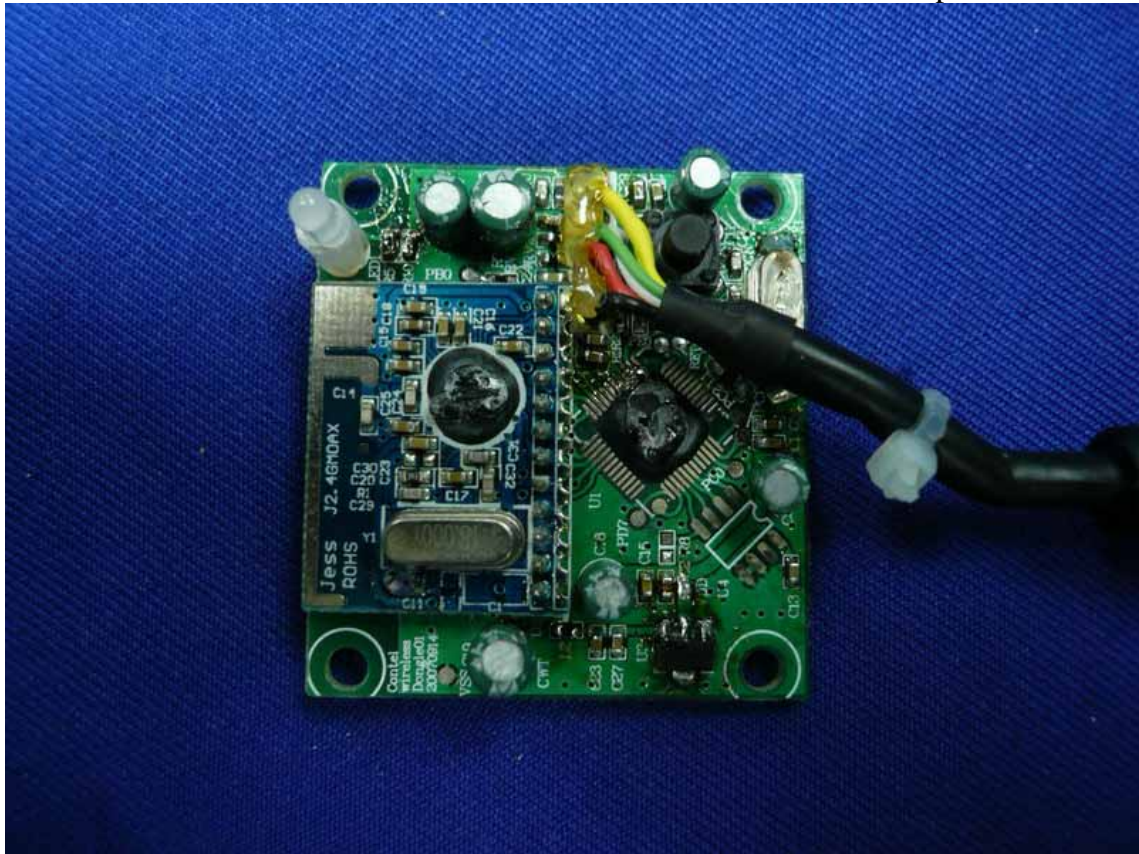
**Figure 1**  
General Appearance of the EUT



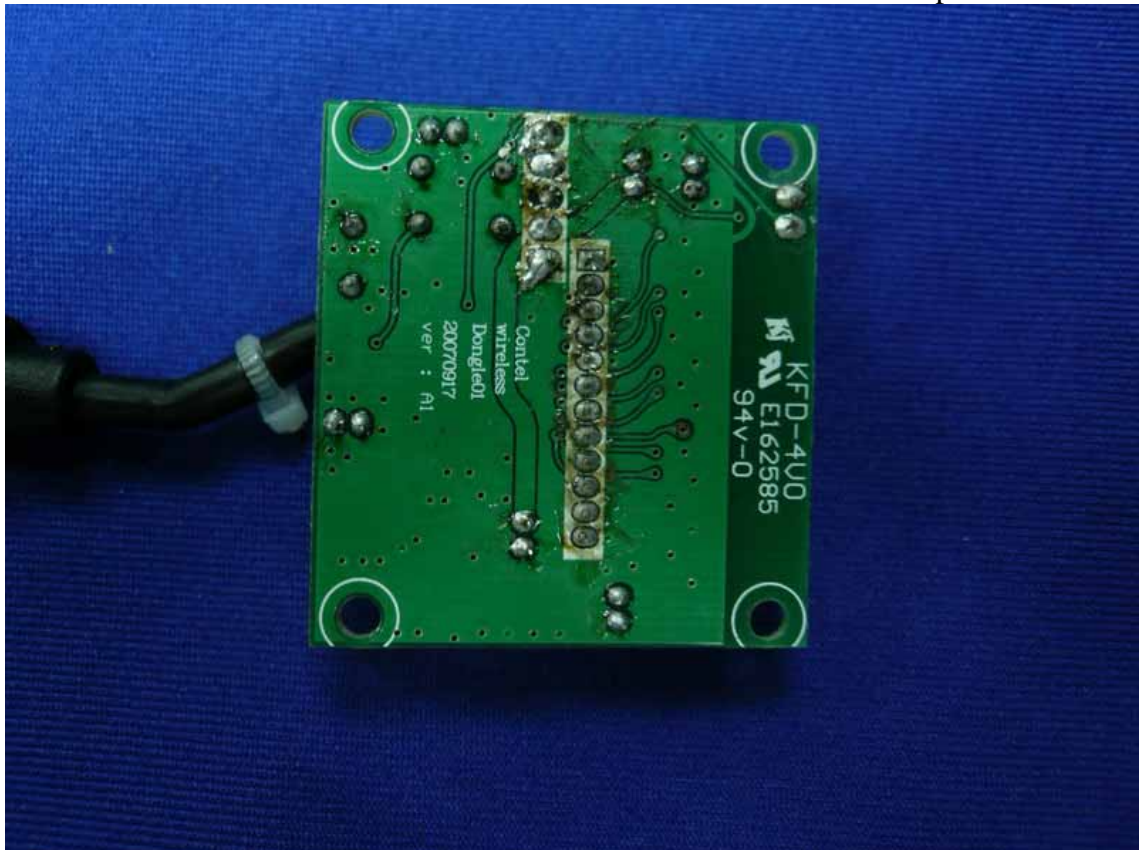
**Figure 2**  
General Appearance of the EUT



**Figure 3**  
Component Side of the PCB

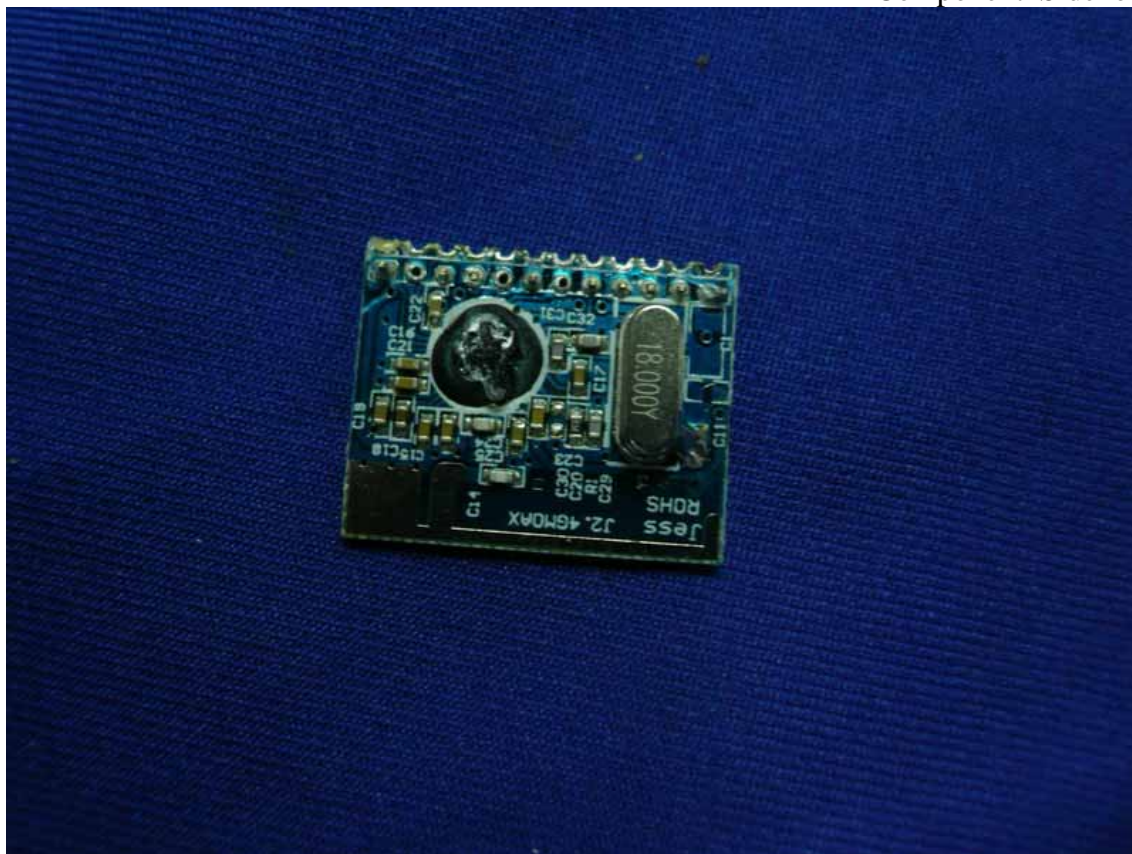


**Figure 4**  
Component Side of the PCB





**Figure 5**  
Component Side of the PCB



**Figure 6**  
Component Side of the PCB

