

APPLICATION FOR CERTIFICATION

On Behalf of

Mad Catz, Inc.

| EUT Description | Model Number |
|--|--------------|
| Wii Wireless Stratocaster guitar controller | 9656 |
| Wii Wireless American P-Bass guitar controller | 9666 |

FCC ID: P25G0MC9666H3008C

Prepared for : Mad Catz, Inc.
7480 Mission Valley Road, Suite 101, San Diego,
California, 92108

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
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Report Number : ACS-F08472
Date of Test : Dec.24, 2008
Date of Report : Dec.27, 2008

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TEST REPORT CERTIFICATION

Applicant : Mad Catz, Inc.

EUT Description & MODEL NO.

| EUT Description | Model Number |
|--|--------------|
| Wii Wireless Stratocaster guitar controller | 9656 |
| Wii Wireless American P-Bass guitar controller | 9666 |

FCC ID : P25G0MC9666H3008C

POWER SUPPLY : DC 3V

TEST VOLTAGE : DC 3V

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2007

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

The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of tests. Also, this report shows that EUT is technically compliant with FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test :

Dec.24, 2008

Prepared by :

Edie Huang

Edie Huang / Assistant

Reviewer :

Jamy 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 | N/A |
| Radiated Emission Test | FCC Part 15C: 15.209 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)

| | | | |
|-----------------------------------|---|--|--------------|
| EUT Description & Model Number | : | EUT Description | Model Number |
| | | Wii Wireless Stratocaster guitar controller | 9656 |
| | | Wii Wireless American P-Bass guitar controller | 9666 |

The size and appearance are different only.
Test Model No.: 9666

FCC ID : P25G0MC9666H3008C

Operation frequency : 2403.5MHz~2480.5MHz

Modulation : MSK

Power Supply : DC 3V
(Note: New batteries were used for all test.)

Applicant : Mad Catz, Inc.
7480 Mission Valley Road, Suite 101, San Diego, California,
92108

Date of Test : Dec.24, 2008

Date of Receipt : Dec.23, 2008

Sample Type : Prototype production

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

2.2. Tested Supporting System Details

2.2.1. External Function Switch

M/N : 6348
S/N : N/A
Manufacturer : Mad Catz, Inc.
Cable : Unshielded, Detachabled, 3.0m

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
Dec. 20, 2007
- Accredited by NVLAP, USA
NVLAP Code: 200372-0
Apr.01, 2008

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

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

3. POWER LINE CONDUCTED EMISSION TEST

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

4. RADIATED EMISSION TEST

4.1. Test Equipment

Frequency rang: 30~1000MHz

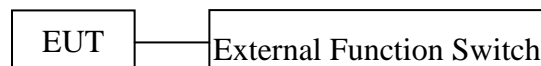
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|------|----------------|-----------------|-----------|-----------------|------------|---------------|
| 1. | 3#Chamber | AUDIX | N/A | N/A | Dec.05, 08 | 1/2 Year |
| 2. | EMI Spectrum | Agilent | E4407B | MY41440292 | May 10, 08 | 1 Year |
| 3. | Test Receiver | Rohde & Schwarz | ESVS10 | 834468/011 | May 10, 08 | 1 Year |
| 4. | Amplifier | HP | 8447D | 2648A04738 | Nov.04, 08 | 1/2 Year |
| 5. | Bilog Antenna | Schaffner | CBL6112D | 25237 | Mar.12, 08 | 1 Year |
| 6. | RF Cable | JINGCHENG | JB Y400 | 3# Chamber No.1 | Nov.01, 08 | 1/2 Year |
| 7. | RF Cable | JINGCHENG | JB Y400 | 3# Chamber No.2 | Nov.01, 08 | 1/2 Year |
| 8. | RF Cable | JINGCHENG | JB Y400 | 3# Chamber No.3 | Nov.01, 08 | 1/2 Year |
| 9. | RF Cable | JINGCHENG | JB Y400 | 3# Chamber No.4 | Nov.01, 08 | 1/2 Year |
| 10. | Coaxial Switch | Anritsu | MP59B | M73989 | Nov.01, 08 | 1/2 Year |

Frequency rang: above 1000MHz

| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|------|-----------|--------------|-------------|------------|------------|---------------|
| 1. | Spectrum | Agilent | E4446A | MY41440292 | May 10, 08 | 1 Year |
| 2. | Amp | HP | 8449B | 3008A00863 | May 10, 08 | 1 Year |
| 3. | Antenna | EMCO | 3115 | 9607-4877 | May 27, 08 | 1.5 Year |
| 4. | Antenna | EMCO | 3116 | 00060088 | May 28, 07 | 1.5Year |
| 5. | HF Cable | Hubersuhne | Sucoflex104 | - | May 10, 08 | 1 Year |

4.2. Block Diagram of Test Setup

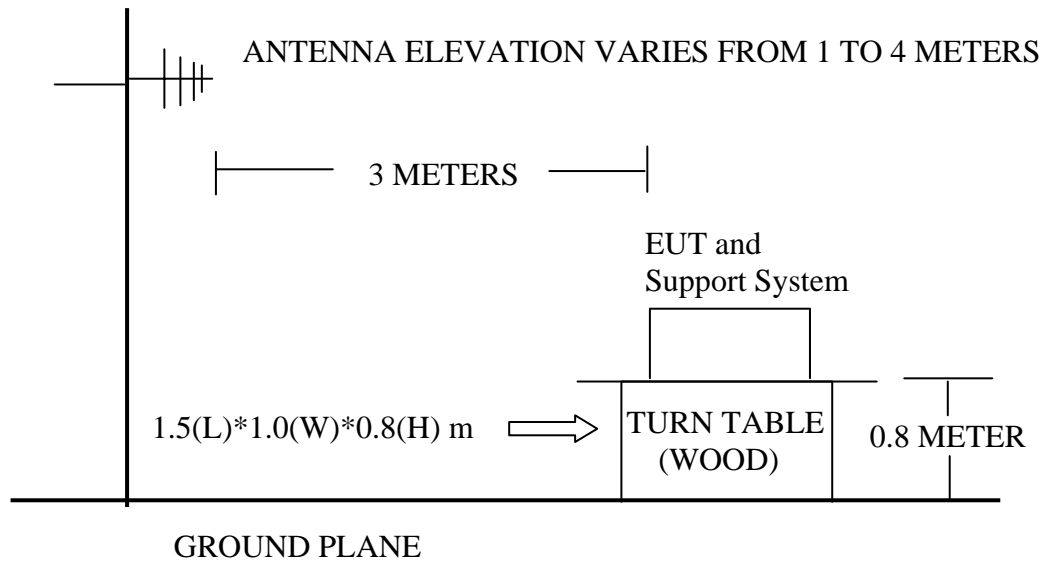
4.2.1. Block Diagram of connection between EUT and simulators



(EUT: Wii Wireless American P-Bass guitar controller)

4.2.2. Anechoic Chamber Setup Diagram

ANTENNA TOWER



4.3. Radiated Emission Limit Standard: FCC 15.249

| 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 |
| Local Oscillator: | 3 | 114.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 94.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average) | |
| Above 1000 | 3 | Other: 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. Wii Wireless American P-Bass guitar controller (EUT)

Model Number : 9666
Serial Number : N/A

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

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown in Section 4.2..

4.5.2. Let the EUT work in test modes (TX Mode) and test it.

4.6. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission Test.

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

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

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

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

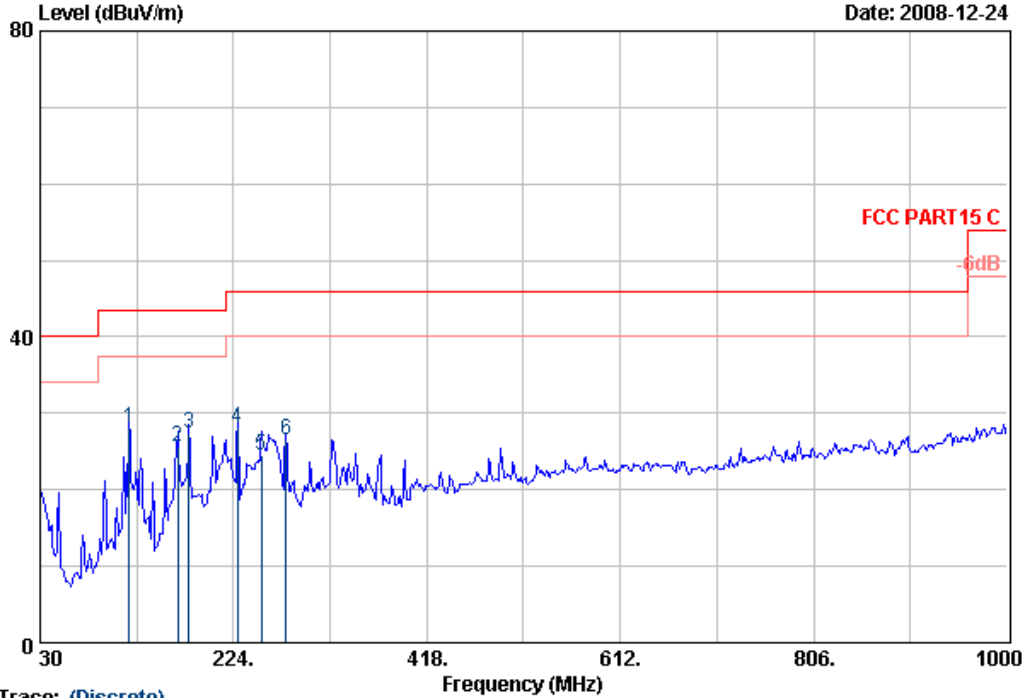
4.7. Radiated Emission Test Results

PASS.



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Data: 2 File: D:\2008 Report Data\M\MADCATZ\ACS8QH268.EMI (2)



Trace: (Discrete)
 Site no. : AUDIX 3m chamber Data no. : 2
 Dis. / Ant. : 3m CBL6112D Ant. pol. : HORIZONTAL
 Limit : FCC PART15 C
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX mode
 M/N : 9666 (guitar)

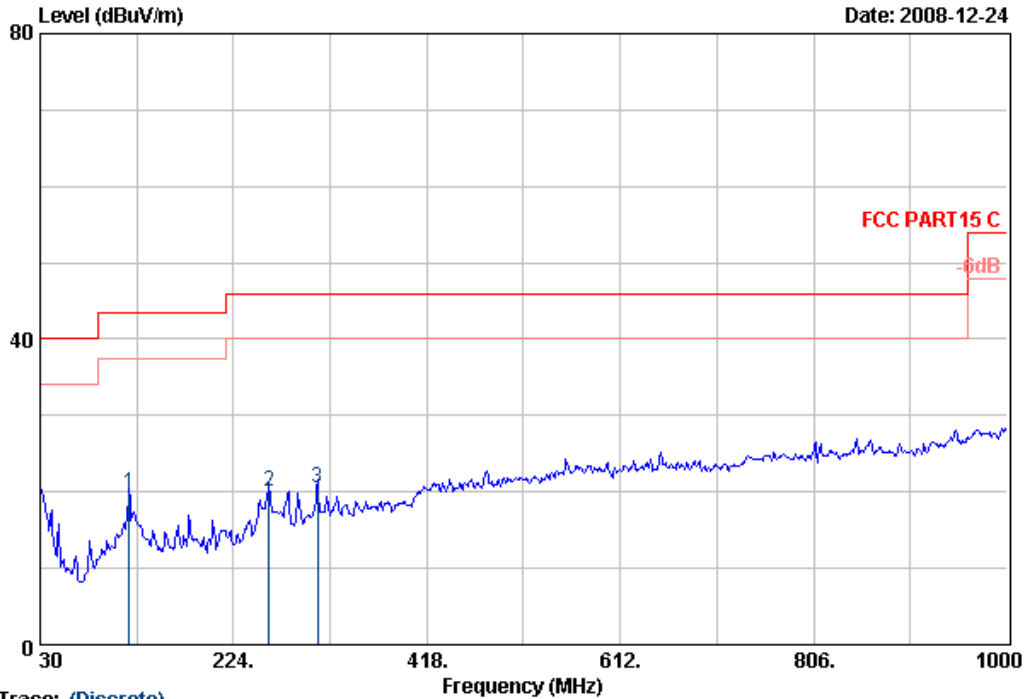
| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 119.24 | 13.10 | 1.02 | 13.92 | 28.04 | 43.50 | 15.46 | QP |
| 2 | 167.74 | 10.05 | 1.25 | 14.37 | 25.67 | 43.50 | 17.83 | QP |
| 3 | 179.38 | 9.45 | 1.30 | 16.72 | 27.47 | 43.50 | 16.03 | QP |
| 4 | 227.88 | 9.91 | 1.51 | 16.56 | 27.98 | 46.00 | 18.02 | QP |
| 5 | 252.13 | 12.63 | 1.62 | 10.37 | 24.62 | 46.00 | 21.38 | QP |
| 6 | 276.38 | 12.99 | 1.73 | 11.79 | 26.51 | 46.00 | 19.49 | 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: 1 File: D:\2008 Report Data\M\MADCATZ\ACS8QH268.EMI (2)



Trace: (Discrete)

| | | | |
|--------------|--|-----------|------------|
| Site no. | : AUDIX 3m chamber | Data no. | : 1 |
| Dis. / Ant. | : 3m CBL6112D | Ant. pol. | : VERTICAL |
| Limit | : FCC PART15 C | | |
| Env. / Ins. | : 23°C/54% | Engineer | : Power |
| EUT | : Wii Wireless American P-Bass guitar controller | | |
| Power Rating | : DC 3V | | |
| Test mode | : TX mode | | |
| M/N | : 9666 (guitar) | | |

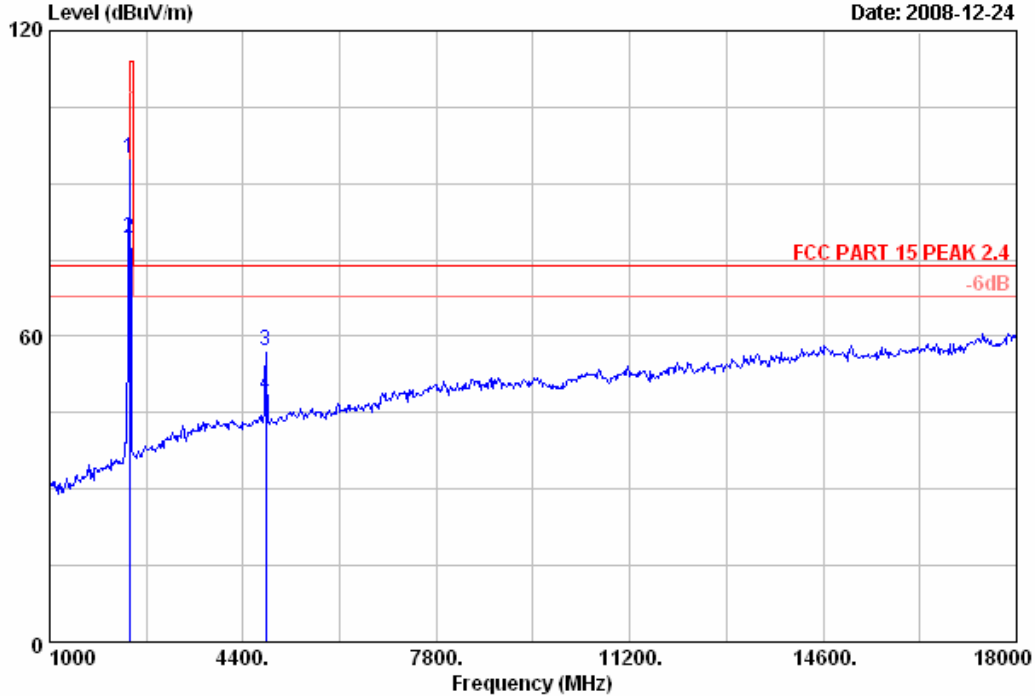
| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission | | | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
| | | | | | Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | |
| 1 | 119.24 | 13.10 | 1.02 | 5.72 | 19.84 | 43.50 | 23.66 | QP |
| 2 | 259.89 | 12.84 | 1.65 | 5.58 | 20.07 | 46.00 | 25.93 | QP |
| 3 | 308.39 | 13.72 | 1.86 | 4.97 | 20.55 | 46.00 | 25.45 | 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: 1 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 1
 Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2403.5MHz
 M/N : 9666 (guitar)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2403.500 | 28.48 | 6.73 | 35.18 | 94.98 | 95.01 | 114.00 | 18.99 | Peak |
| 2 | 2403.500 | 28.48 | 6.73 | 35.18 | 79.20 | 79.23 | 114.00 | 34.77 | Average |
| 3 | 4807.000 | 34.36 | 10.54 | 34.50 | 46.90 | 57.30 | 74.00 | 16.70 | Peak |
| 4 | 4807.000 | 34.36 | 10.54 | 34.50 | 38.13 | 48.53 | 74.00 | 25.47 | Average |

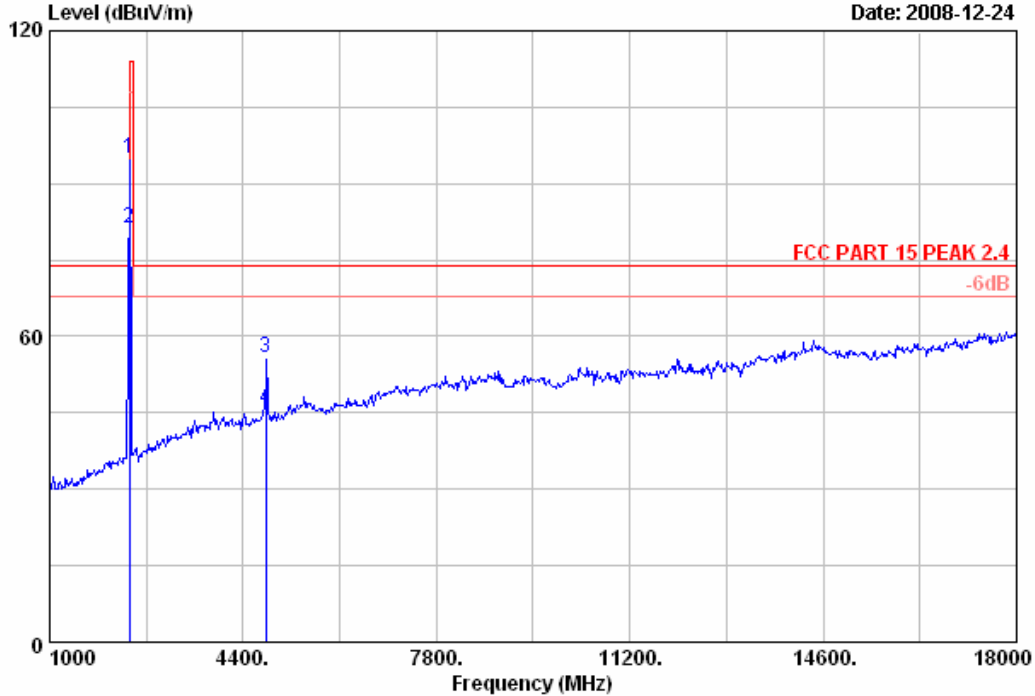
Remarks:

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: 2 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 2
 Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2403.5MHz
 M/N : 9666 (guitar)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2403.500 | 28.48 | 6.73 | 35.18 | 94.96 | 94.99 | 114.00 | 19.01 | Peak |
| 2 | 2403.500 | 28.48 | 6.73 | 35.18 | 81.27 | 81.30 | 114.00 | 32.70 | Average |
| 3 | 4807.000 | 34.36 | 10.54 | 34.50 | 45.49 | 55.89 | 74.00 | 18.11 | Peak |
| 4 | 4807.000 | 34.36 | 10.54 | 34.50 | 35.23 | 45.63 | 74.00 | 28.37 | Average |

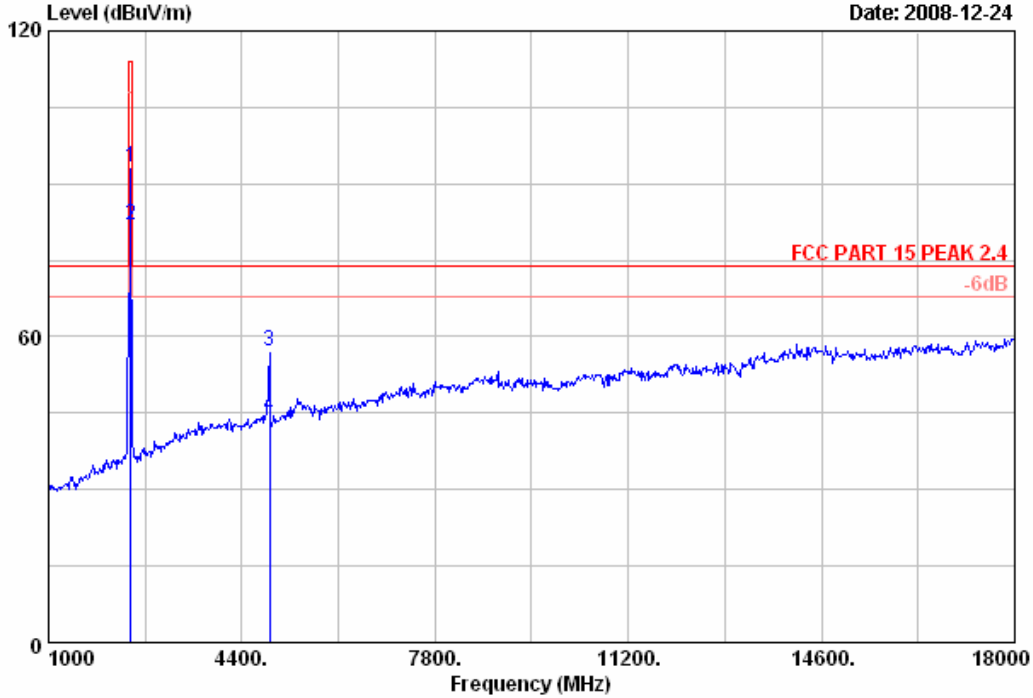
Remarks:

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: 3 File: E:\2008 report data\M\mad catz\ACS8QH268.EMI.EM6 (14)



Site no. : 3# Chamber Data no. : 3
 Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23*C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2441.5MHz
 M/N : 9666 (guitar)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2441.500 | 28.53 | 6.80 | 35.17 | 93.20 | 93.36 | 114.00 | 20.64 | Peak |
| 2 | 2441.500 | 28.53 | 6.80 | 35.17 | 81.66 | 81.82 | 114.00 | 32.18 | Average |
| 3 | 4883.000 | 34.78 | 10.57 | 34.48 | 46.30 | 57.17 | 74.00 | 16.83 | Peak |
| 4 | 4883.000 | 34.78 | 10.57 | 34.48 | 33.69 | 44.56 | 74.00 | 29.44 | Average |

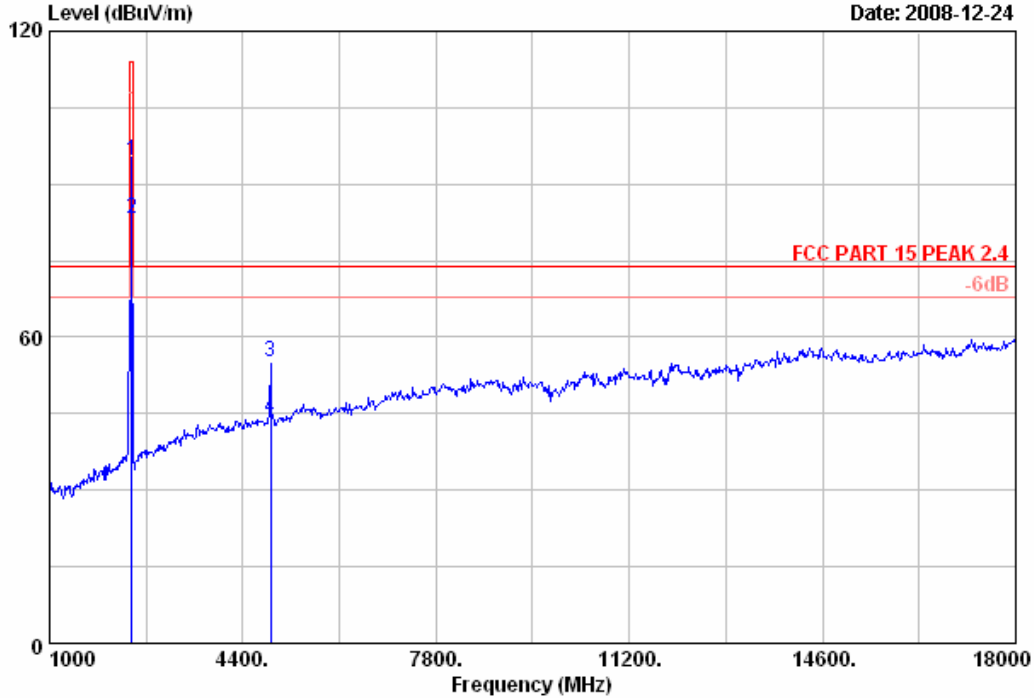
Remarks:

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: 4 File: E:\2008 report data\M\mad catz\ACS8QH268.EMI.EM6 (14)



Site no. : 3# Chamber Data no. : 4
 Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23*C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2441.5MHz
 M/N : 9666 (guitar)

| | Ant. | Cable | Amp | Emission | | | Margin | Remark | |
|----------------|------------------|--------------|----------------|-------------------|-------------------|--------------------|--------|--------|---------|
| Freq. (MHz) | Factor (dB/m) | Loss (dB) | Factor (dB) | Reading (dBuV) | Level (dBuV/m) | Limits (dBuV/m) | (dB) | | |
| 1 | 2441.500 | 28.53 | 6.80 | 35.17 | 94.49 | 94.65 | 114.00 | 19.35 | Peak |
| 2 | 2441.500 | 28.53 | 6.80 | 35.17 | 83.21 | 83.37 | 114.00 | 30.63 | Average |
| 3 | 4883.000 | 34.78 | 10.57 | 34.48 | 44.36 | 55.23 | 74.00 | 18.77 | Peak |
| 4 | 4883.000 | 34.78 | 10.57 | 34.48 | 33.15 | 44.02 | 74.00 | 29.98 | Average |

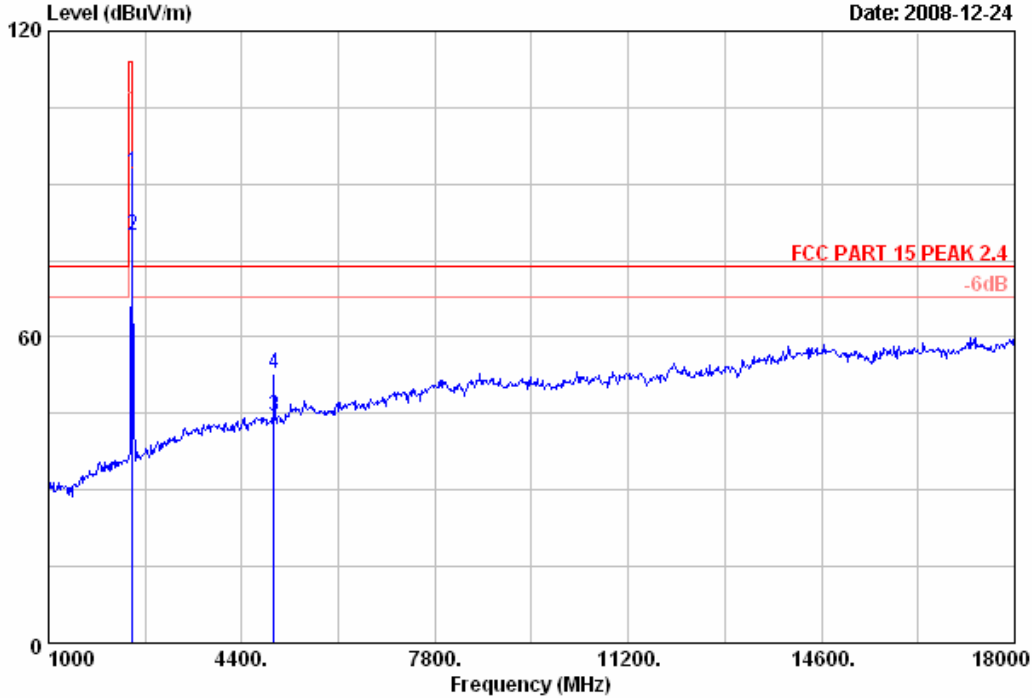
Remarks:

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: 5 File: E:\2008 report data\m\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 5
 Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23*C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2480.500 | 28.58 | 6.87 | 35.16 | 92.10 | 92.39 | 114.00 | 21.61 | Peak |
| 2 | 2480.500 | 28.58 | 6.87 | 35.16 | 79.74 | 80.03 | 114.00 | 33.97 | Average |
| 3 | 4961.000 | 35.29 | 10.59 | 34.46 | 32.93 | 44.35 | 74.00 | 29.65 | Average |
| 4 | 4961.000 | 35.29 | 10.59 | 34.46 | 41.38 | 52.80 | 74.00 | 21.20 | Peak |

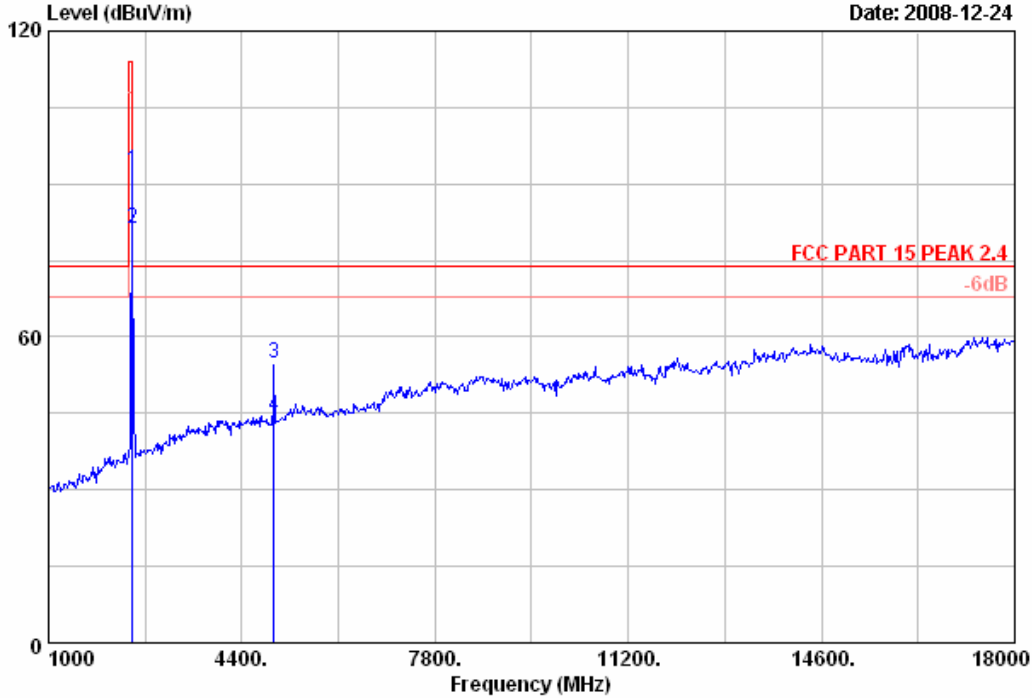
Remarks:

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: 6 File: E:\2008 report data\m\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 6
 Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23*C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2480.500 | 28.58 | 6.87 | 35.16 | 92.40 | 92.69 | 114.00 | 21.31 | Peak |
| 2 | 2480.500 | 28.58 | 6.87 | 35.16 | 80.89 | 81.18 | 114.00 | 32.82 | Average |
| 3 | 4961.000 | 35.29 | 10.59 | 34.46 | 43.40 | 54.82 | 74.00 | 19.18 | Peak |
| 4 | 4961.000 | 35.29 | 10.59 | 34.46 | 32.88 | 44.30 | 74.00 | 29.70 | 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.

5. BAND EDGE COMPLIANCE TEST

5.1. Test Equipment

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

5.2. Limit

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

5.3. Test Produce

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

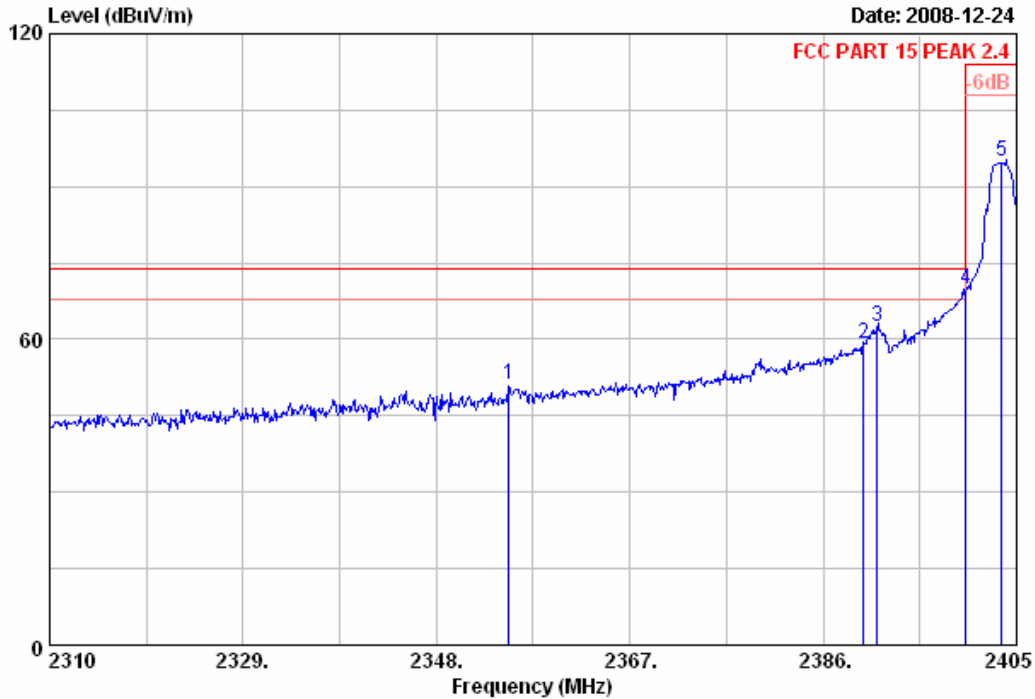
5.4. Test Results

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



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 Postcode:518057

Data: 11 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 11
 Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2403.5MHz
 M/N : 9666 (guitar)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 2355.125 | 28.41 | 6.67 | 35.19 | 51.11 | 51.00 | 74.00 | 23.00 | Peak |
| 2 | 2390.000 | 28.46 | 6.71 | 35.18 | 59.19 | 59.18 | 74.00 | 14.82 | Peak |
| 3 | 2391.320 | 28.46 | 6.71 | 35.18 | 62.60 | 62.59 | 74.00 | 11.41 | Peak |
| 4 | 2400.000 | 28.46 | 6.73 | 35.18 | 69.87 | 69.88 | 74.00 | 4.12 | Peak |
| 5 | 2403.500 | 28.48 | 6.73 | 35.18 | 94.99 | 95.02 | 114.00 | 18.98 | Peak |

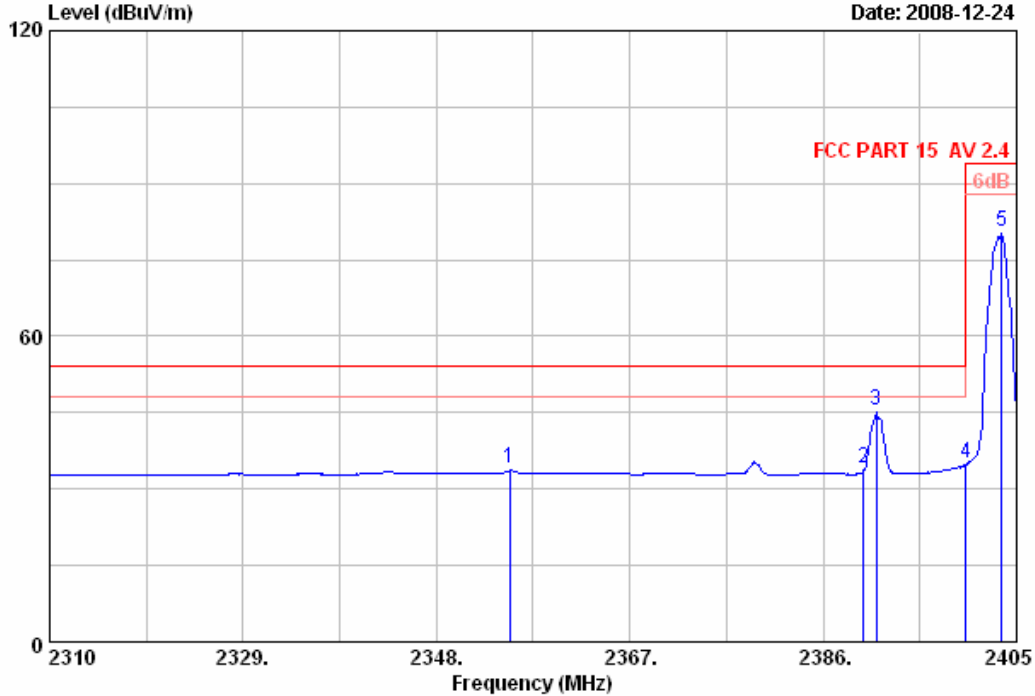
Remarks:

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: 12 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 12
 Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
 Limit : FCC PART 15 AV 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2403.5MHz
 M/N : 9666 (guitar)

| | Ant. | Cable | Amp | Emission | | | Margin | Remark |
|----------------|------------------|--------------|----------------|-------------------|-------------------|--------------------|--------|---------|
| Freq. (MHz) | Factor (dB/m) | Loss (dB) | Factor (dB) | Reading (dBuV) | Level (dBuV/m) | Limits (dBuV/m) | (dB) | |
| 1 | 28.41 | 6.67 | 35.19 | 34.23 | 34.12 | 54.00 | 19.88 | Average |
| 2 | 28.46 | 6.71 | 35.18 | 34.02 | 34.01 | 54.00 | 19.99 | Average |
| 3 | 28.46 | 6.71 | 35.18 | 45.36 | 45.35 | 54.00 | 8.65 | Average |
| 4 | 28.46 | 6.73 | 35.18 | 35.17 | 35.18 | 54.00 | 18.82 | Average |
| 5 | 28.48 | 6.73 | 35.18 | 80.42 | 80.45 | 94.00 | 13.55 | Average |

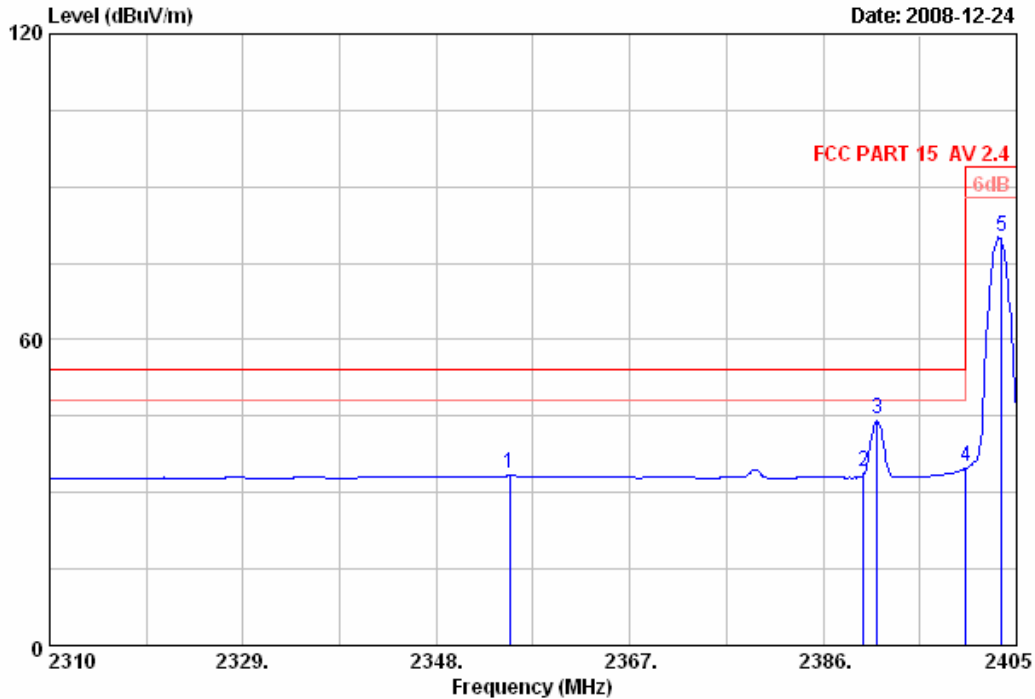
Remarks:

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: 13 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 13
 Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 AV 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | Ant. Cable Amp | | | | Emission | | | | |
|----------------|------------------|--------------|----------------|-------------------|-------------------|--------------------|----------------|--------|---------|
| Freq. (MHz) | Factor (dB/m) | Loss (dB) | Factor (dB) | Reading (dBuV) | Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark | |
| 1 | 2355.220 | 28.41 | 6.67 | 35.19 | 33.98 | 33.87 | 54.00 | 20.13 | Average |
| 2 | 2390.000 | 28.46 | 6.71 | 35.18 | 33.96 | 33.95 | 54.00 | 20.05 | Average |
| 3 | 2391.320 | 28.46 | 6.71 | 35.18 | 44.46 | 44.45 | 54.00 | 9.55 | Average |
| 4 | 2400.000 | 28.46 | 6.73 | 35.18 | 35.18 | 35.19 | 54.00 | 18.81 | Average |
| 5 | 2403.500 | 28.48 | 6.73 | 35.18 | 80.05 | 80.08 | 94.00 | 13.92 | Average |

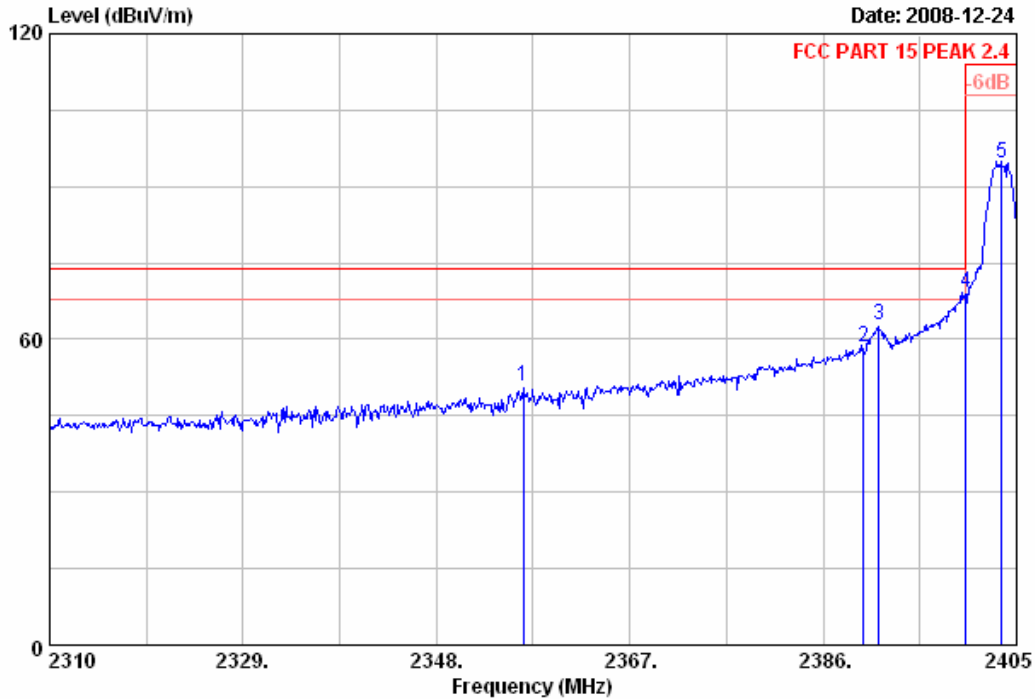
Remarks:

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: 14 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 14
 Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | 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 | 2356.550 | 28.41 | 6.69 | 35.19 | 50.85 | 50.76 | 74.00 | 23.24 | Peak |
| 2 | 2390.000 | 28.46 | 6.71 | 35.18 | 58.44 | 58.43 | 74.00 | 15.57 | Peak |
| 3 | 2391.510 | 28.46 | 6.71 | 35.18 | 62.70 | 62.69 | 74.00 | 11.31 | Peak |
| 4 | 2400.000 | 28.46 | 6.73 | 35.18 | 69.12 | 69.13 | 74.00 | 4.87 | Peak |
| 5 | 2403.500 | 28.48 | 6.73 | 35.18 | 94.44 | 94.47 | 114.00 | 19.53 | Peak |

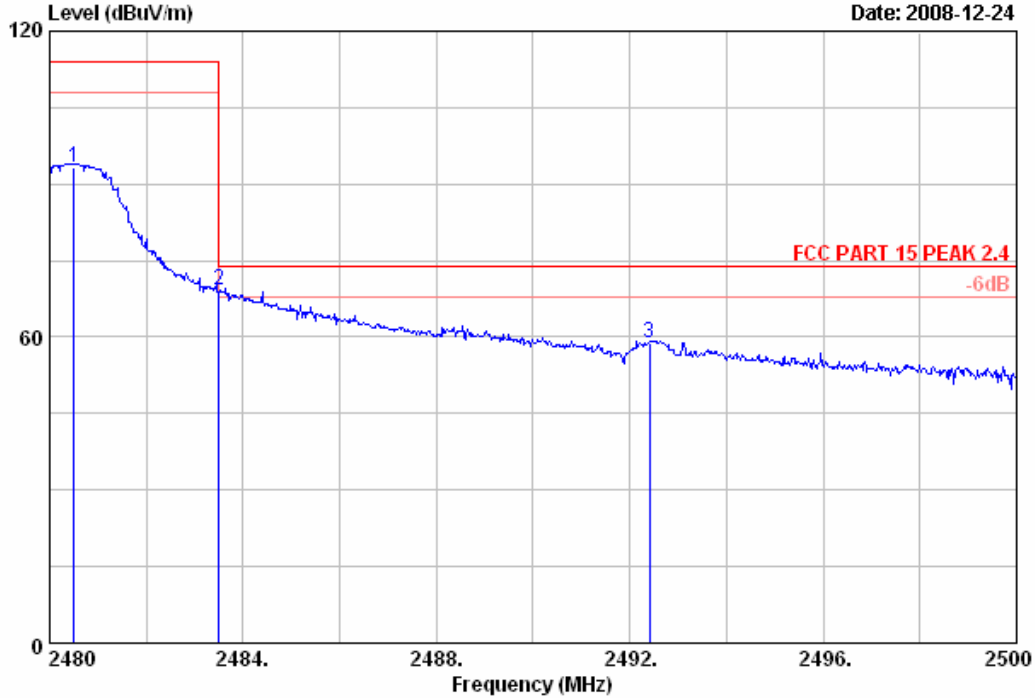
Remarks:

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: 7 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 7
 Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | 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 | 2480.500 | 28.58 | 6.87 | 35.16 | 93.03 | 93.32 | 114.00 | 20.68 | Peak |
| 2 | 2483.500 | 28.58 | 6.87 | 35.16 | 69.02 | 69.31 | 74.00 | 4.69 | Peak |
| 3 | 2492.400 | 28.60 | 6.91 | 35.15 | 58.34 | 58.70 | 74.00 | 15.30 | Peak |

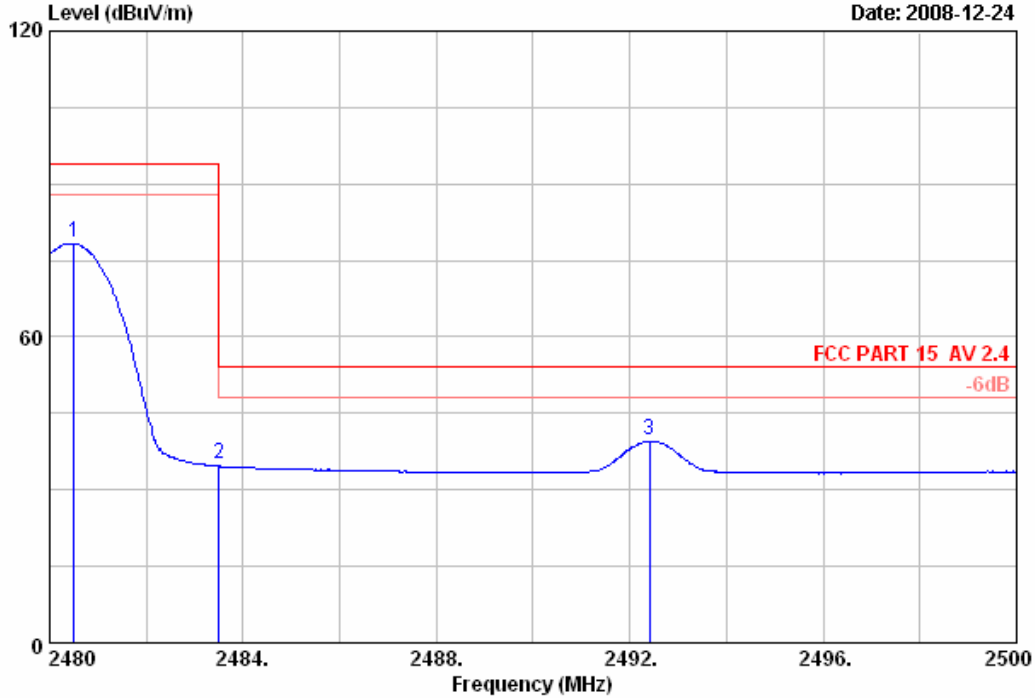
Remarks:

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



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Data: 8 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 8
 Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 AV 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | 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 | 2480.500 | 28.58 | 6.87 | 35.16 | 78.40 | 78.69 | 94.00 | 15.31 | Average |
| 2 | 2483.500 | 28.58 | 6.87 | 35.16 | 34.75 | 35.04 | 54.00 | 18.96 | Average |
| 3 | 2492.400 | 28.60 | 6.91 | 35.15 | 39.53 | 39.89 | 54.00 | 14.11 | Average |

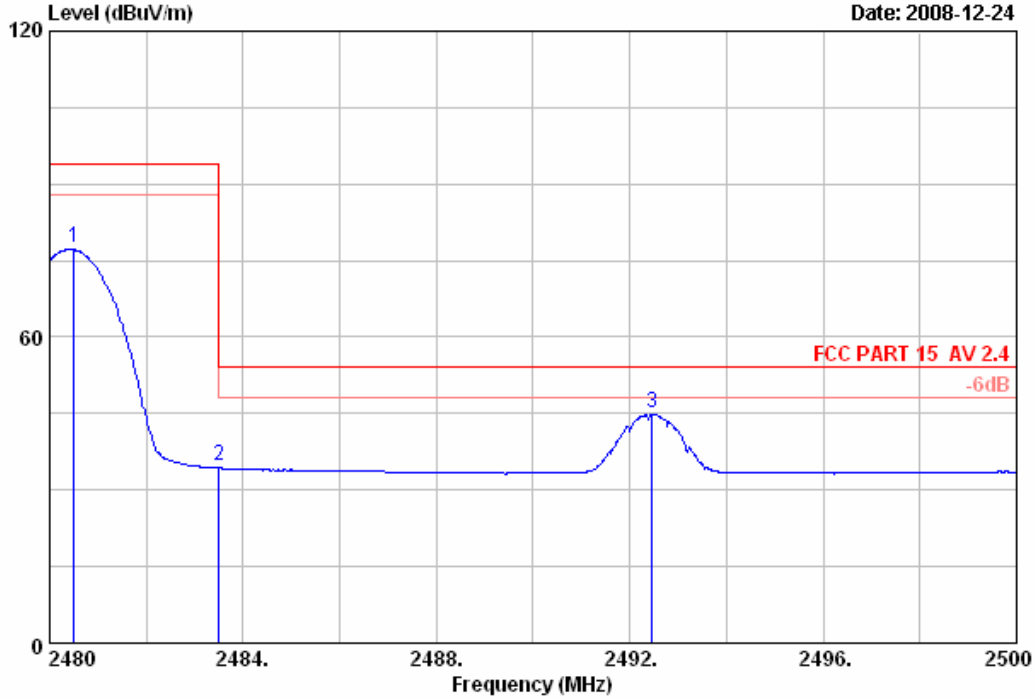
Remarks:

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: 9 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 9
 Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
 Limit : FCC PART 15 AV 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | 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 | 2480.500 | 28.58 | 6.87 | 35.16 | 77.42 | 77.71 | 94.00 | 16.29 | Average |
| 2 | 2483.500 | 28.58 | 6.87 | 35.16 | 34.36 | 34.65 | 54.00 | 19.35 | Average |
| 3 | 2492.460 | 28.60 | 6.91 | 35.15 | 44.80 | 45.16 | 54.00 | 8.84 | Average |

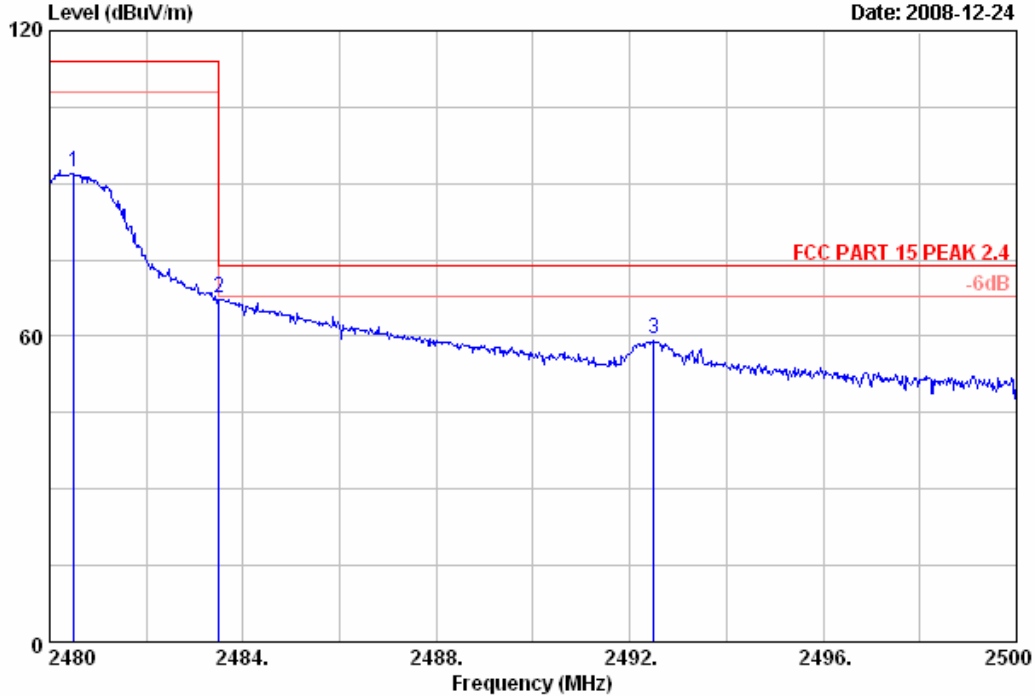
Remarks:

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: 10 File: E:\2008 report data\M\mad catz\ACS80H268.EMLEM6 (14)



Site no. : 3# Chamber Data no. : 10
 Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : 23°C/54% Engineer : Power
 EUT : Wii Wireless American P-Bass guitar controller
 Power Rating : DC 3V
 Test mode : TX 2480.5MHz
 M/N : 9666 (guitar)

| | Freq. | Ant. | Cable | Amp | Emission | | Limits | Margin | Remark |
|---|----------|--------|-------|-------|----------|-------|----------|--------|--------|
| | (MHz) | (dB/m) | (dB) | (dB) | Reading | Level | (dBuV/m) | (dB) | |
| 1 | 2480.500 | 28.58 | 6.87 | 35.16 | 91.89 | 92.18 | 114.00 | 21.82 | Peak |
| 2 | 2483.500 | 28.58 | 6.87 | 35.16 | 67.39 | 67.68 | 74.00 | 6.32 | Peak |
| 3 | 2492.500 | 28.60 | 6.91 | 35.15 | 59.09 | 59.45 | 74.00 | 14.55 | 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.

6. 20DB BANDWIDTH TEST

6.1. Test Equipment

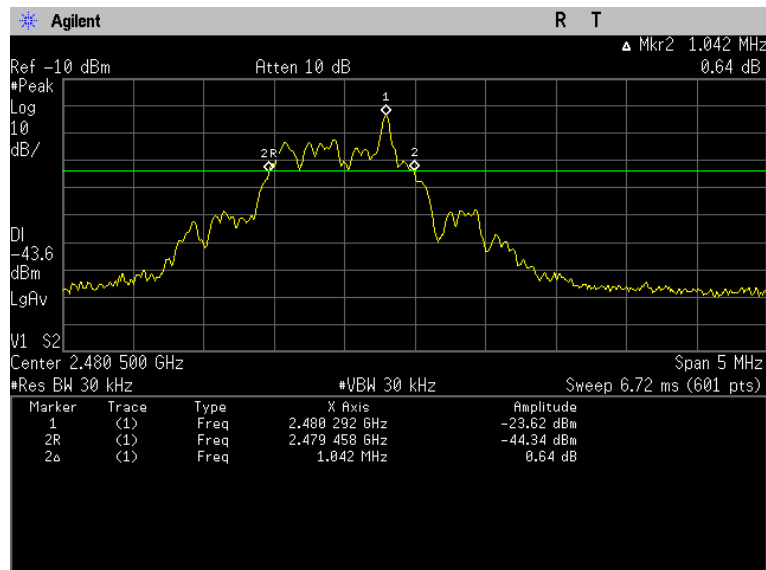
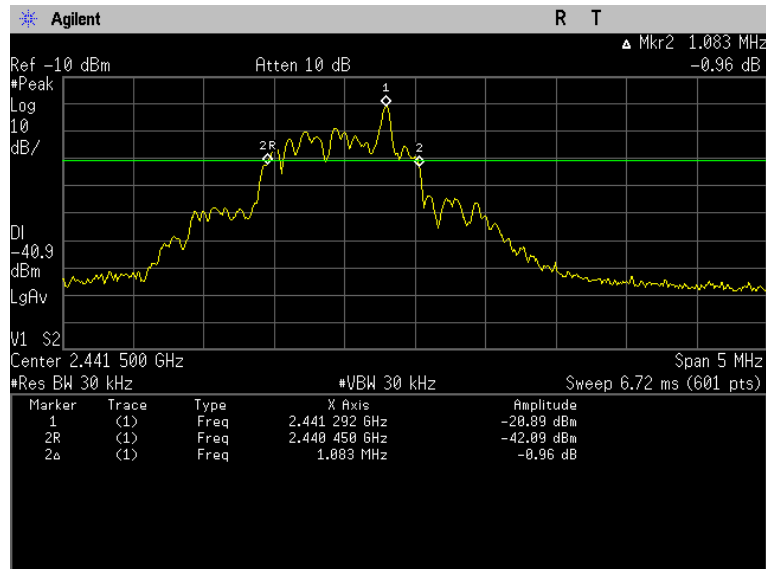
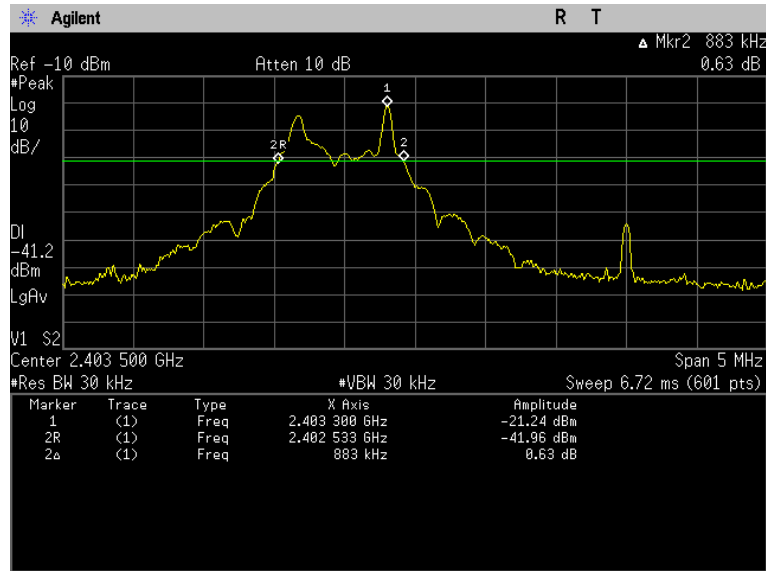
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|------|-------------------|--------------|--------------|------------|------------|---------------|
| 1 | Spectrum Analyzer | Agilent | E4446A | US44300459 | May,10, 08 | 1 Year |
| 2 | Attenuator | Agilent | 8491B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

6.2. Test Information

| | |
|----------------------|--|
| EUT: | Wii Wireless American P-Bass guitar controller |
| M/N: | 9666 |
| Test Date: | Dec.24, 2008 |
| Ambient Temperature: | 23°C |
| Relative Humidity: | 54% |
| Test standard: | FCC PART 15C: 15.215 |
| Test mode: | Transmitting |
| Test Frequency: | Low: 2403.5MHz Mid: 2441.5MHz High: 2480.5MHz |
| Test By: | Power |

6.3. Test Results

| CH | 20dB Bandwidth (kHz) | Limit (kHz) | Conclusion |
|--------|----------------------|-------------|------------|
| (Low) | 883 | --- | PASS |
| (Mid) | 1083 | --- | PASS |
| (High) | 1042 | --- | PASS |



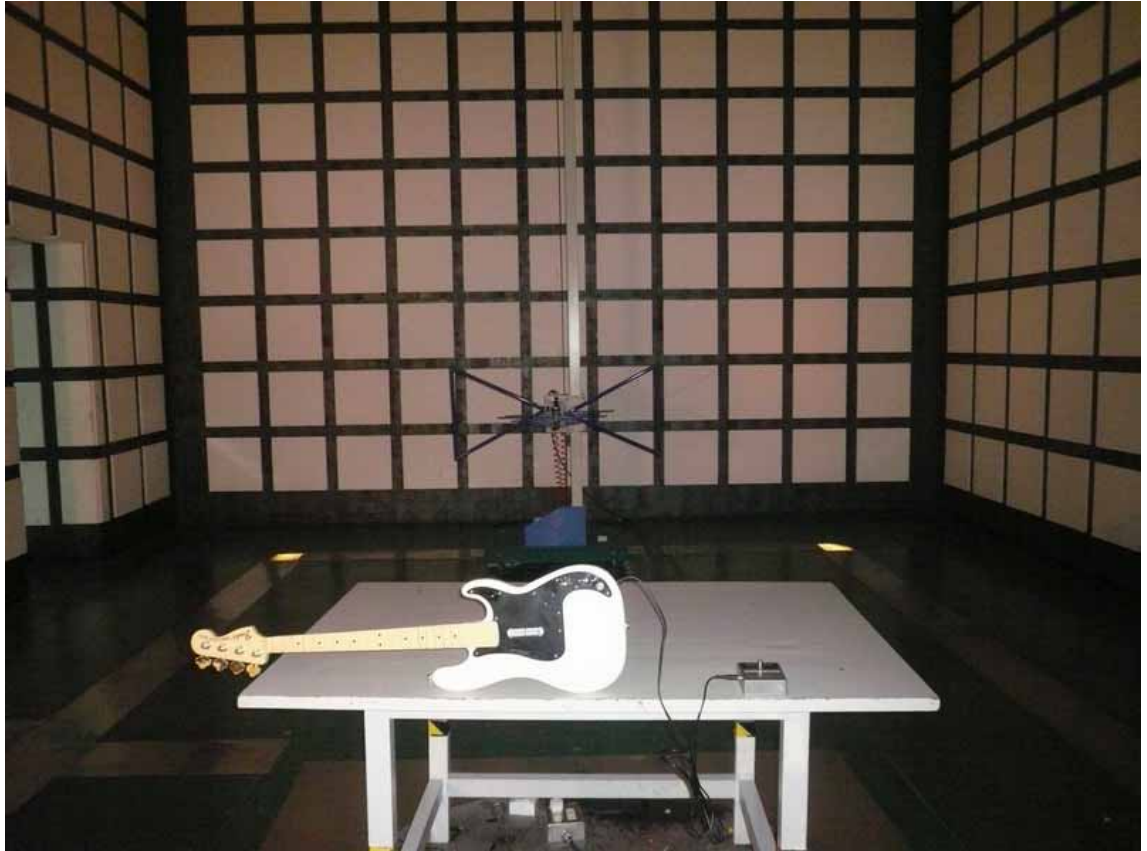
7. DEVIATION TO TEST SPECIFICATIONS

[NONE]

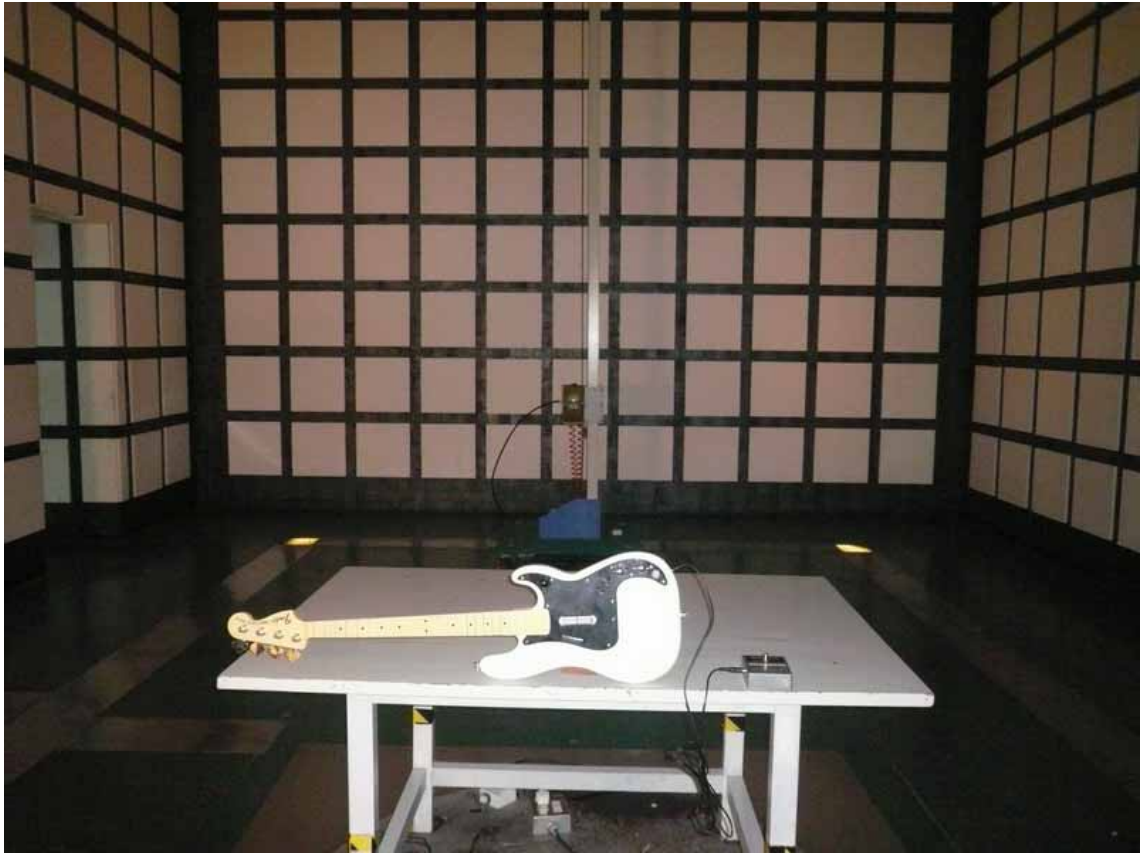
8. PHOTOGRAPH OF TEST

8.1. Photos of Radiated Emission Test (In Anechoic Chamber)

30~1000MHz



above 1000MHz



9. PHOTOGRAPHS OF EUT

Figure 1
General Appearance



Figure 2
General Appearance



Figure 3
General Appearance



Figure 4
General Appearance



Figure 5
General Appearance



Figure 6
General Appearance



Figure 7
Inside of the EUT



Figure 8
Inside of the EUT



Figure 9
Component Side of the PCB



Figure 10
Component Side of the PCB

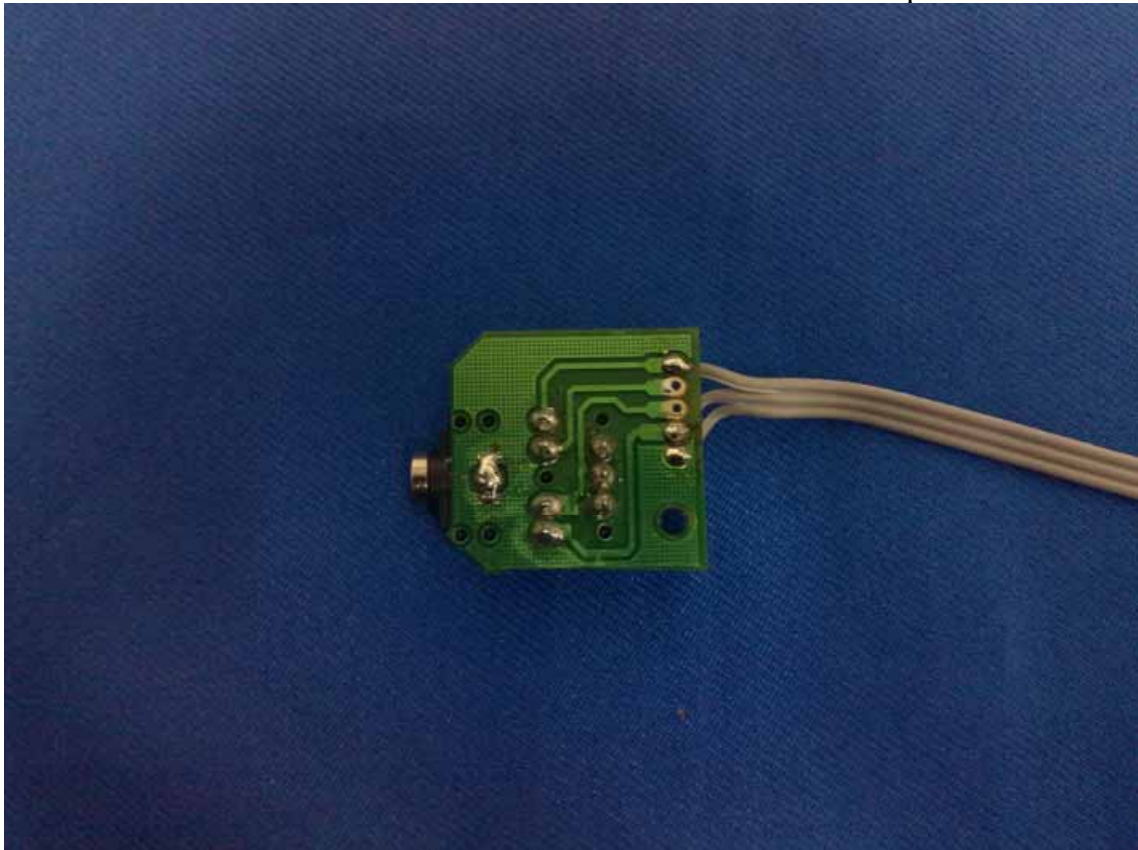


Figure 11
Component Side of the PCB



Figure 12
Component Side of the PCB

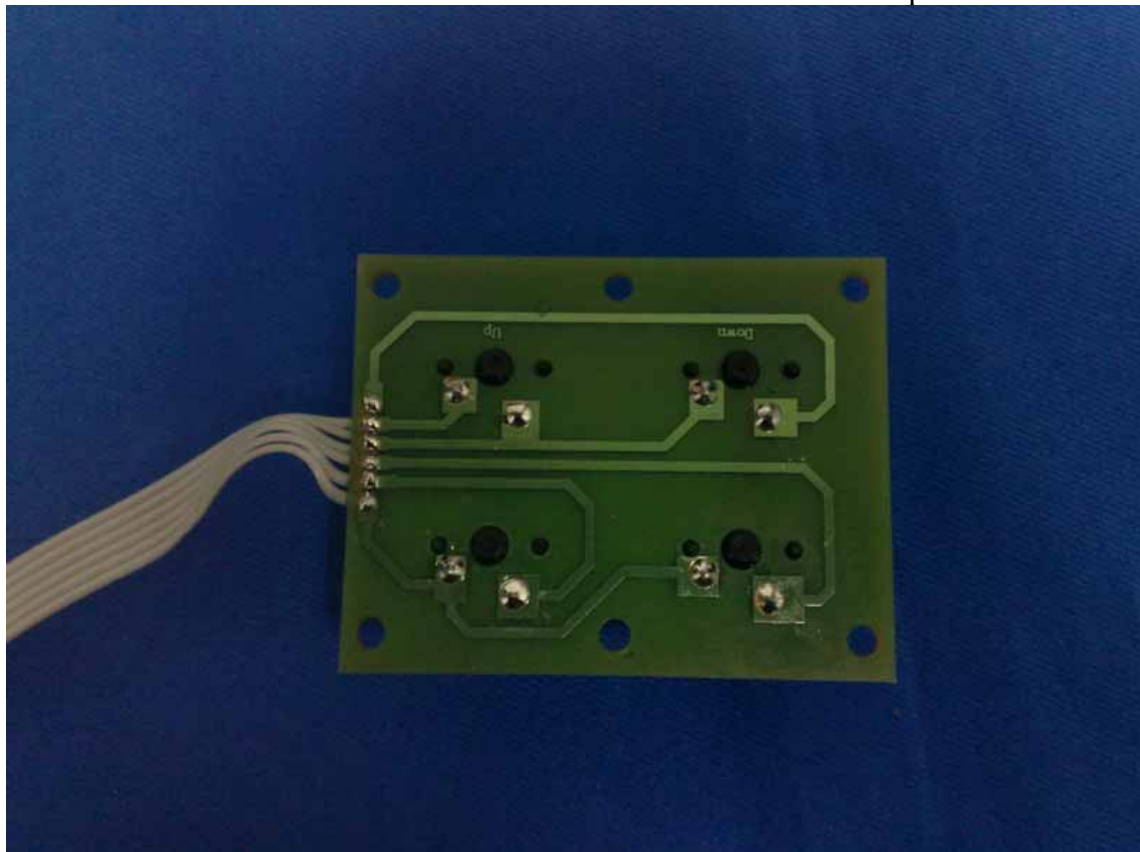


Figure 13
Component Side of the PCB

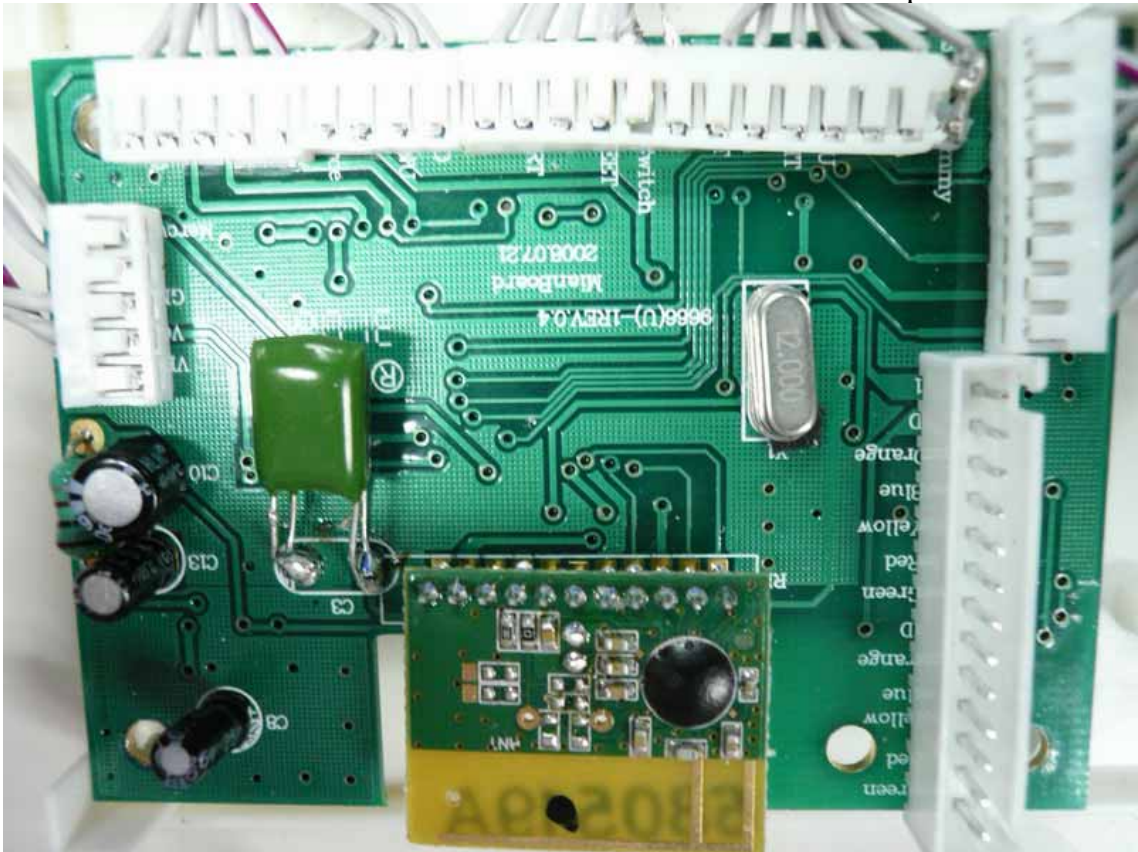


Figure 14
Component Side of the PCB



Figure 15
Component Side of the PCB



Figure 16
Component Side of the PCB

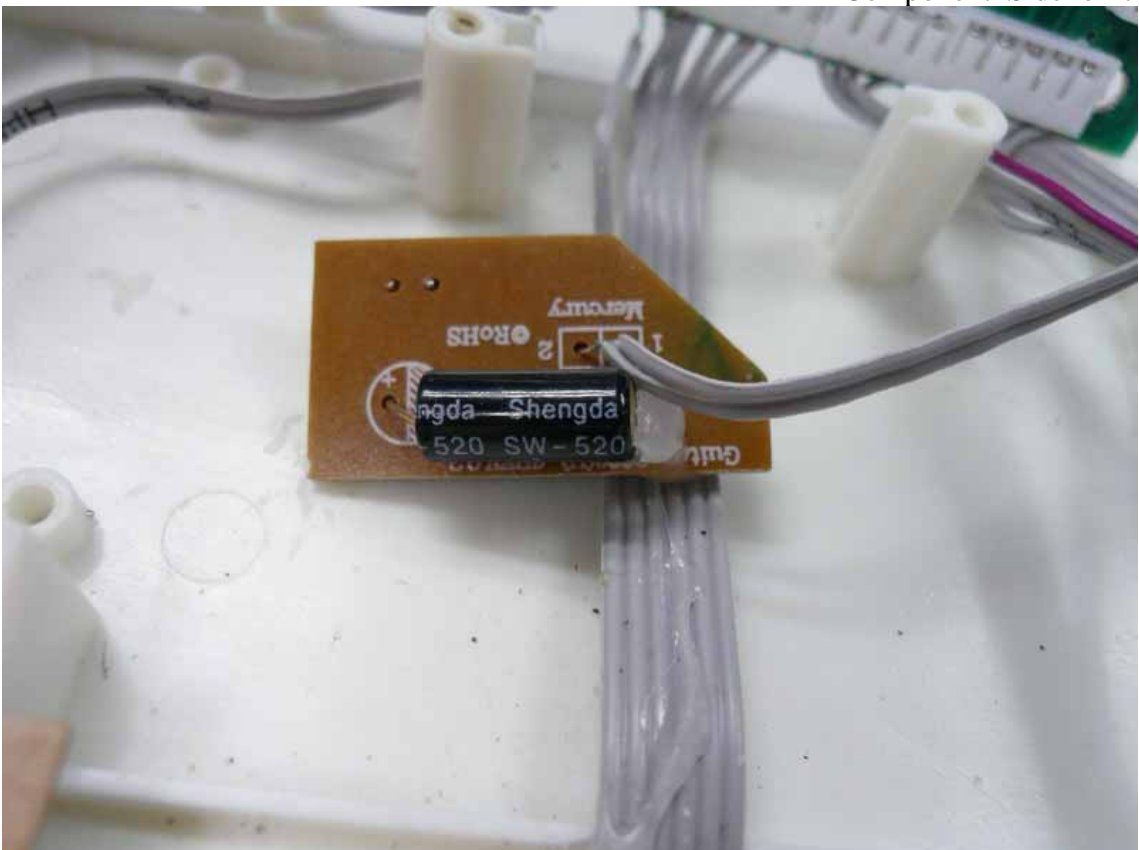


Figure 17
Component Side of the PCB

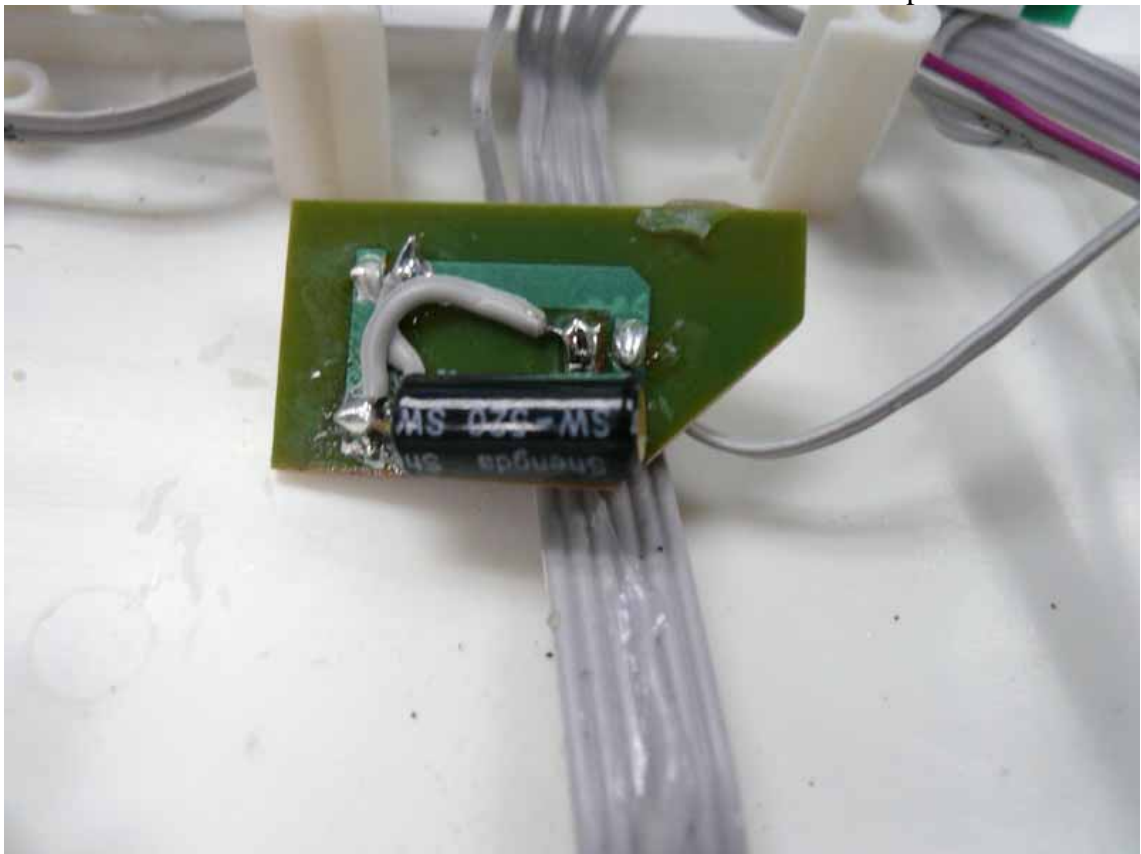


Figure 18
Component Side of the PCB

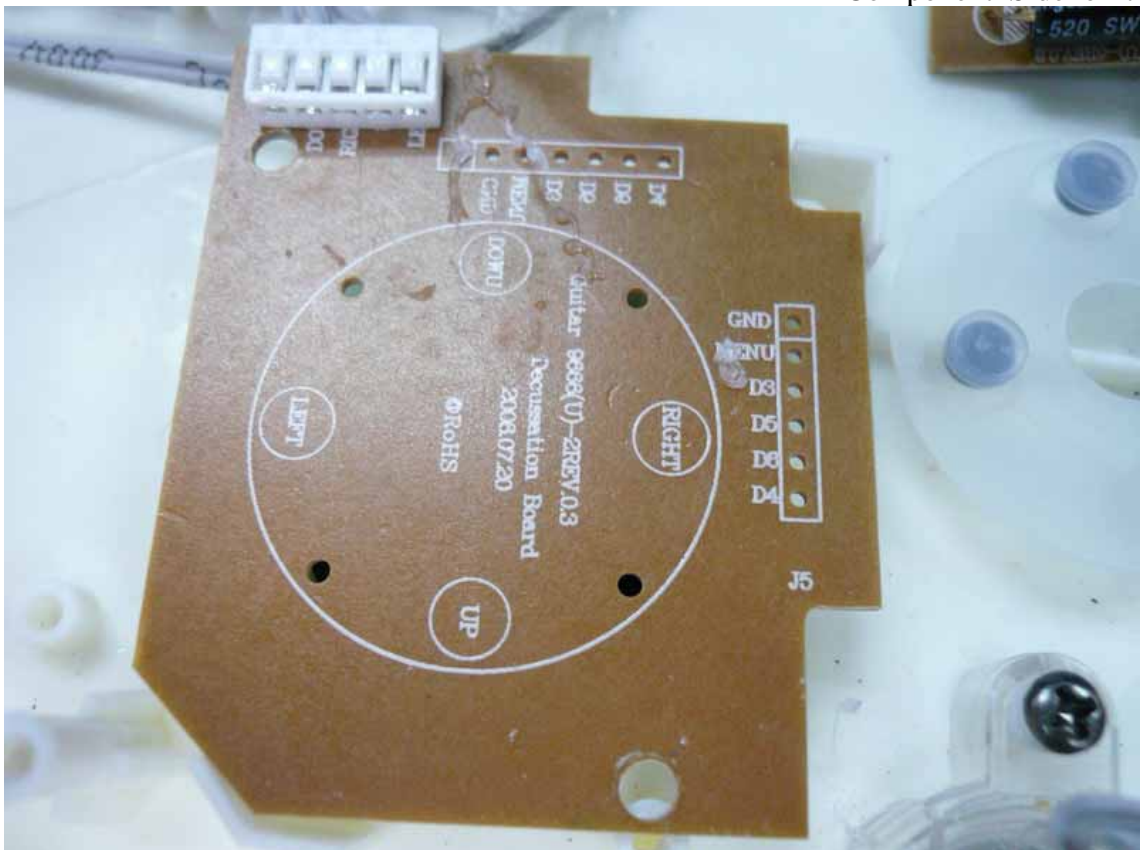


Figure 19
Component Side of the PCB

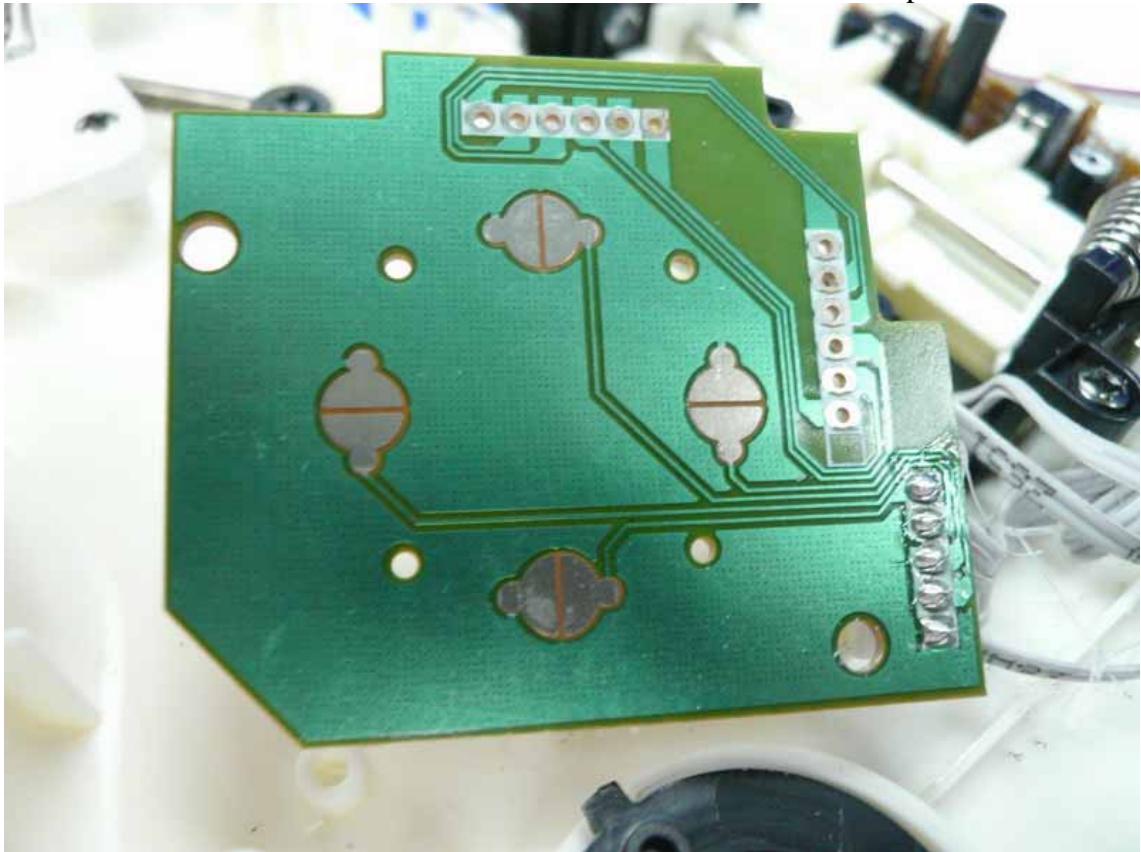


Figure 20
Component Side of the PCB



Figure 21
Component Side of the PCB

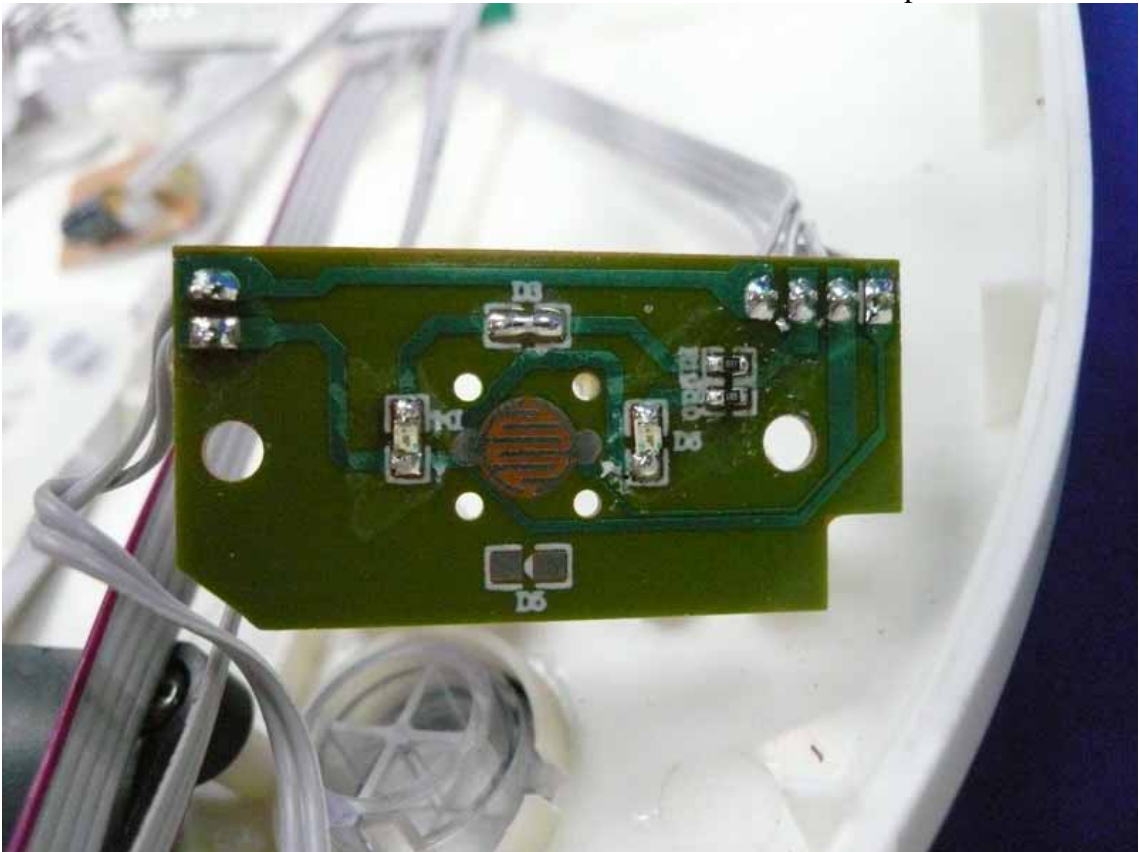


Figure 22
Component Side of the PCB



Figure 23
Component Side of the PCB

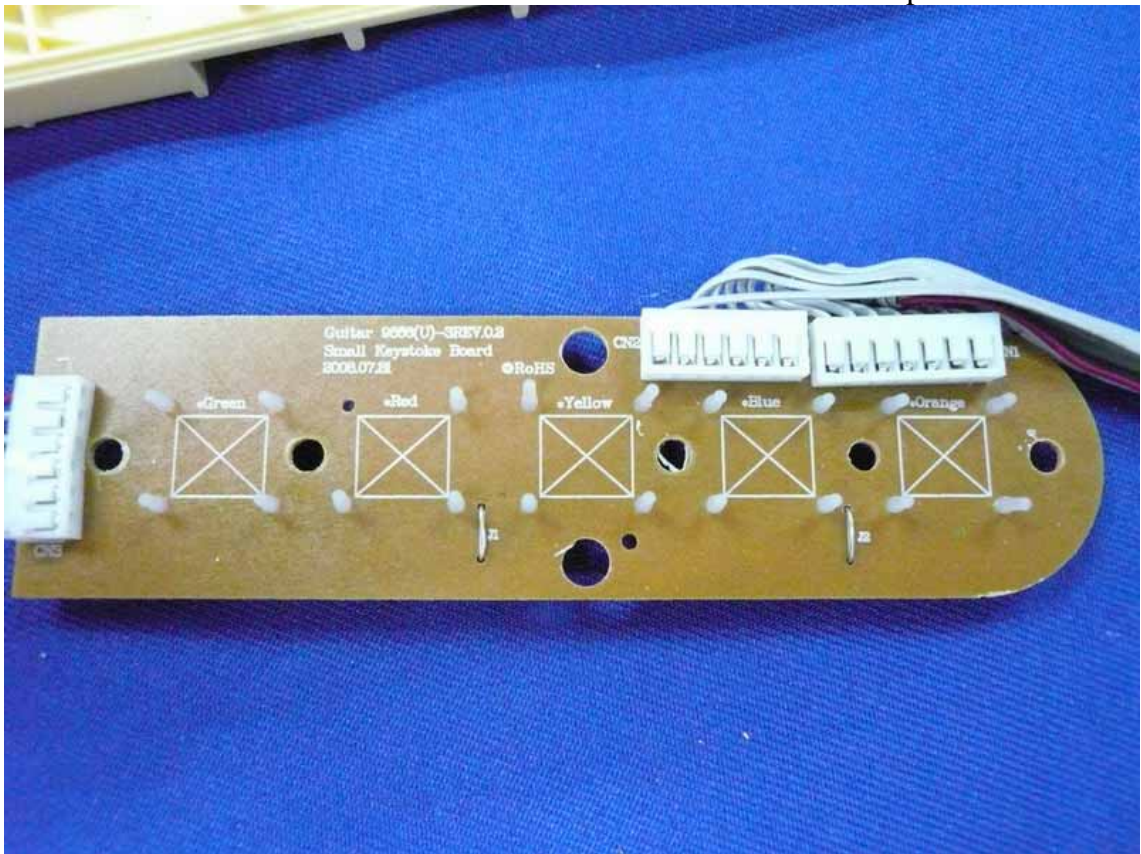


Figure 24
Component Side of the PCB

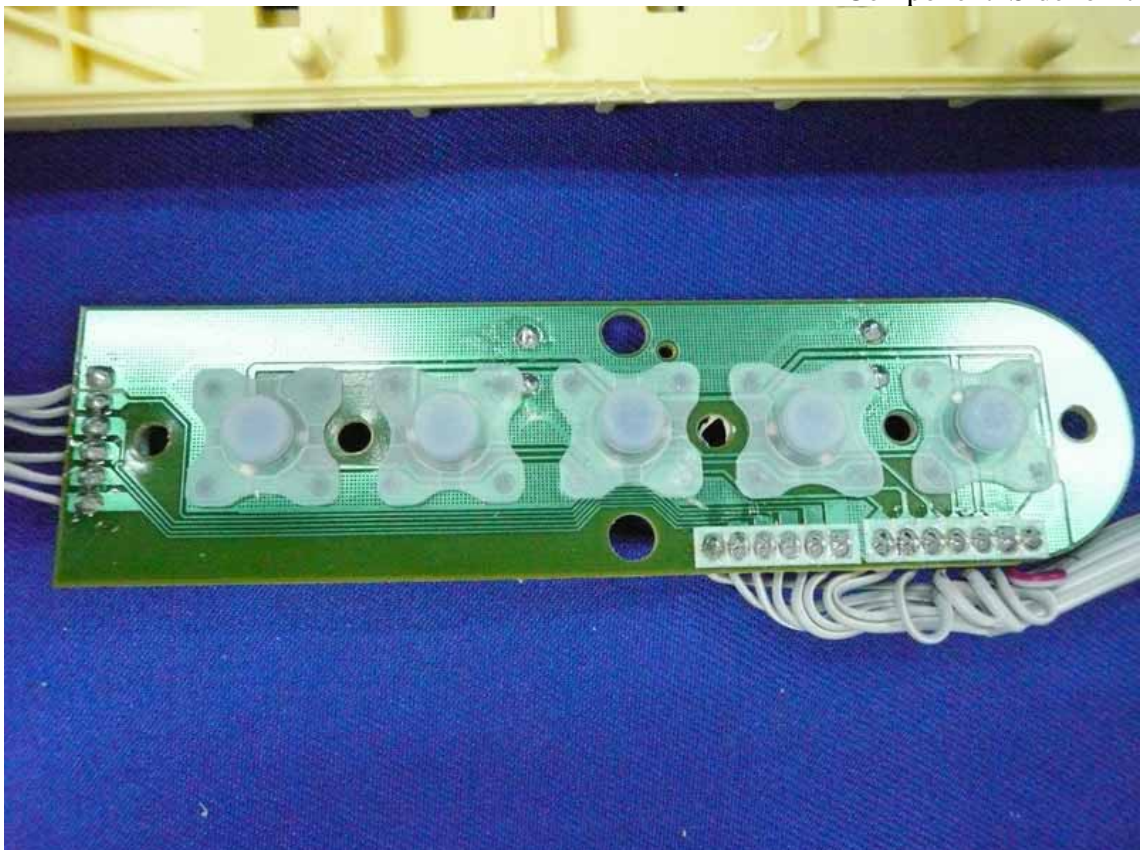


Figure 25
Inside of the EUT

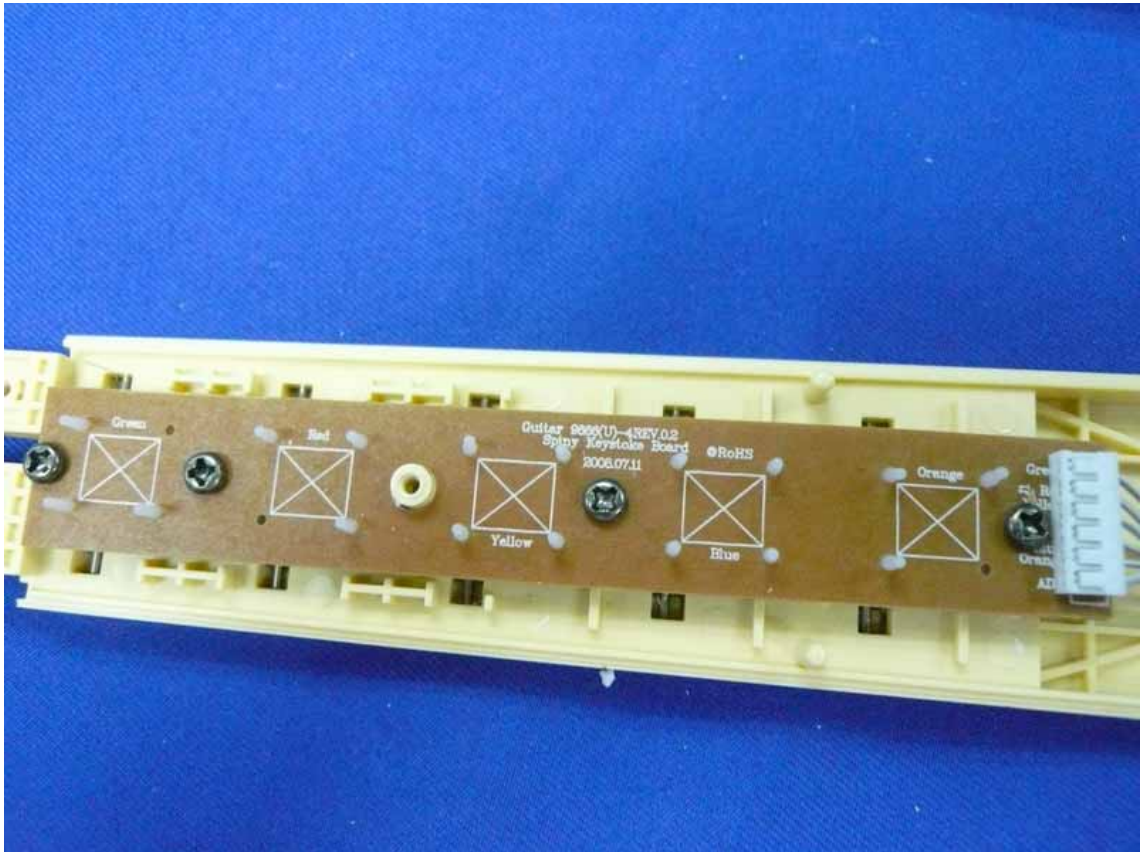


Figure 26
Component Side of the PCB

