

APPLICATION FOR CERTIFICATION

On Behalf of

Avnera Corporation

AM1G USB SENDER

Model Number: AVRB7101A

FCC ID: V3CAVRB7101A

Prepared for : Avnera Corporation
16505 NW Bethany Court, Suite 100 Beaverton, Oregon
97006, United States

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
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Report Number : ACS-F08385
Date of Test : Aug.25~27, 2008
Date of Report : Sep.04, 2008

TABLE OF CONTENTS

| Description | Page |
|--|------------|
| 1. SUMMARY OF STANDARDS AND RESULTS..... | 1-1 |
| 1.1. Description of Standards and Results | 1-1 |
| 2. GENERAL INFORMATION | 2-1 |
| 2.1. Description of Device (EUT) | 2-1 |
| 2.2. Tested Supporting System Details | 2-1 |
| 2.3. Test Facility | 2-2 |
| 2.4. Measurement Uncertainty | 2-2 |
| 3. POWER LINE CONDUCTED EMISSION TEST | 3-1 |
| 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 | 3-1 |
| 3.5. Operating Condition of EUT..... | 3-2 |
| 3.6. Test Procedure..... | 3-2 |
| 3.7. Power Line Conducted Emission Test Results | 3-2 |
| 4. RADIATED EMISSION TEST | 4-1 |
| 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 | 4-4 |
| 5. 6dB Bandwidth Test..... | 5-1 |
| 5.1. Test Equipment | 5-1 |
| 5.2. Test Information | 5-1 |
| 5.3. Test Procedure..... | 5-1 |
| 5.4. Test Results | 5-1 |
| 6. OUTPUT POWER TEST | 6-1 |
| 6.1. Test Equipment | 6-1 |
| 6.2. Limit(FCC Part 15C 15.247 b(3)) | 6-1 |
| 6.3. Test Procedure..... | 6-1 |
| 6.4. Test Results | 6-2 |
| 7. BAND EDGE COMPLIANCE TEST | 7-1 |
| 7.1. Test Equipment | 7-1 |
| 7.2. Limit..... | 7-1 |
| 7.3. Test Produce | 7-1 |
| 7.4. Test Results | 7-1 |
| 8. POWER SPECTRAL DENSITY TEST | 8-1 |
| 8.1. Test Equipment | 8-1 |
| 8.2. Limit..... | 8-1 |
| 8.3. Test Procedure..... | 8-1 |
| 8.4. Test Results | 8-2 |
| 9. MPE ESTIMATION | 9-1 |
| 9.1. Limit for General Population / Uncontrolled Exposures | 9-1 |
| 9.2. Estimation Result | 9-1 |

| | | |
|------------|--|-------------|
| 10. | ANTENNA REQUIREMENT | 10-1 |
| 11. | DEVIATION TO TEST SPECIFICATIONS..... | 11-1 |
| 12. | PHOTOGRAPH OF TEST | 12-1 |
| | 12.1. Photos of Power Line Conducted Emission Test | 12-1 |
| | 12.2. Photos of Radiated Emission Test..... | 12-2 |
| 13. | PHOTOGRAPH OF TEST | 13-1 |

TEST REPORT CERTIFICATION

Applicant : Avnera Corporation
 Manufacturer : Beautiful Enterprise Co., Ltd
 EUT Description : AM1G USB SENDER
 FCC ID : V3CAVRB7101A
 (A) MODEL NO. : AVRB7101A
 (B) SERIAL NO. : N/A
 (C) POWER SUPPLY : DC 5V
 (D) TEST VOLTAGE : DC 5V From PC AC 120V/60Hz

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 : Aug.25~27, 2008

Prepared by : YoYo Wang
 YoYo Wang / Assistant

Reviewer : Jamy Yu
 Jamy Yu / Senior Engineer



Approved & Authorized Signer : Ken Lu
 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 KDB558074 | PASS |
| Radiated Emission Test | FCC Part 15: 15.209 ANSI C63.4: 2003 KDB558074 | PASS |
| 6dB Bandwidth Test | FCC Part 15: 15.247 KDB558074 | PASS |
| Output Power Test | FCC Part 15: 15.247 KDB558074 | PASS |
| Band Edge Compliance Test | FCC Part 15: 15.247 KDB558074 | PASS |
| Power Spectral Density Test | FCC Part 15: 15.247 KDB558074 | 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 | : | AM1G USB SENDER |
| | | |
| Model Number | : | AVRB7101A |
| | | |
| FCC ID | : | V3CAVRB7101A |
| | | |
| 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 | : | -2.09dBm(Maximum measured) |
| | | |
| Antenna Assembly Gain | : | 0dBi (maximum) |
| | | |
| Applicant | : | Avnera Corporation |
| | | 16505 NW Bethany Court, Suite 100 Beaverton, Oregon |
| | | 97006, United States |
| | | |
| Manufacturer | : | Beautiful Enterprise Co., Ltd |
| | | 26th Floor, Beautiful Group Tower, 77 Connaught Road |
| | | Central, Hong Kong |
| | | |
| Date of Test | : | Aug.25~27, 2008 |
| | | |
| Date of Receipt | : | Aug.24, 2008 |
| | | |
| Sample Type | : | Prototype production |

2.2. Tested Supporting System Details

2.2.1. 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)

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. Measurement Uncertainty

| No. | Item | MU | Remark |
|-----|---|-----------------------|-------------|
| 1 | Uncertainty for Conducted Emission Test | 2.02dB | |
| 2 | Uncertainty for Radiated Emission Test<1GHz | 3.44 dB | Polarize: V |
| | | 3.96 dB | Polarize: H |
| 3. | Uncertainty for Radiated Emission Test>1GHz | 4.79dB | |
| 4. | Uncertainty for Frequency measure | 0.42×10^{-6} | |
| 5. | Uncertainty for conducted power measure | 0.112 | |

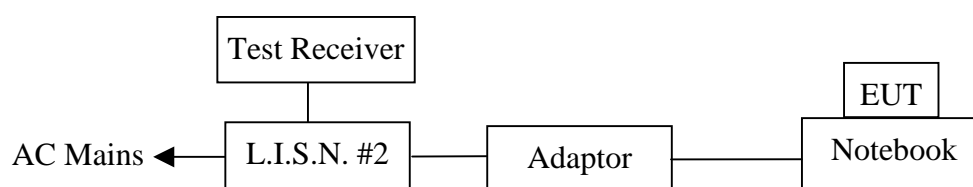
3. POWER LINE CONDUCTED EMISSION TEST

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 10,08 | 1 Year |
| 3. | Terminator | Hubersuhner | 50Ω | No. 1 | May 10,08 | 1 Year |
| 4. | RF Cable | Fujikura | 3D-2W | LISN Cable 1# | Jul.08, 08 | 1/2 Year |
| 5. | Coaxial Switch | Anritsu | MP59B | M55367 | Jul.08, 08 | 1/2 Year |
| 6. | Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | 100340 | Jul.08, 08 | 1/2 Year |

3.2. Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and simulators



(EUT: AM1G USB SENDER)

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. AM1G USB SENDER (EUT)

Model Number : AVRB7101A
Serial Number : N/A

3.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.3.

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.Notebook ran the Control program to control EUT Work in test mode (Tx Mode)

3.6.Test Procedure

The EUT Via Notebook is connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). 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.,

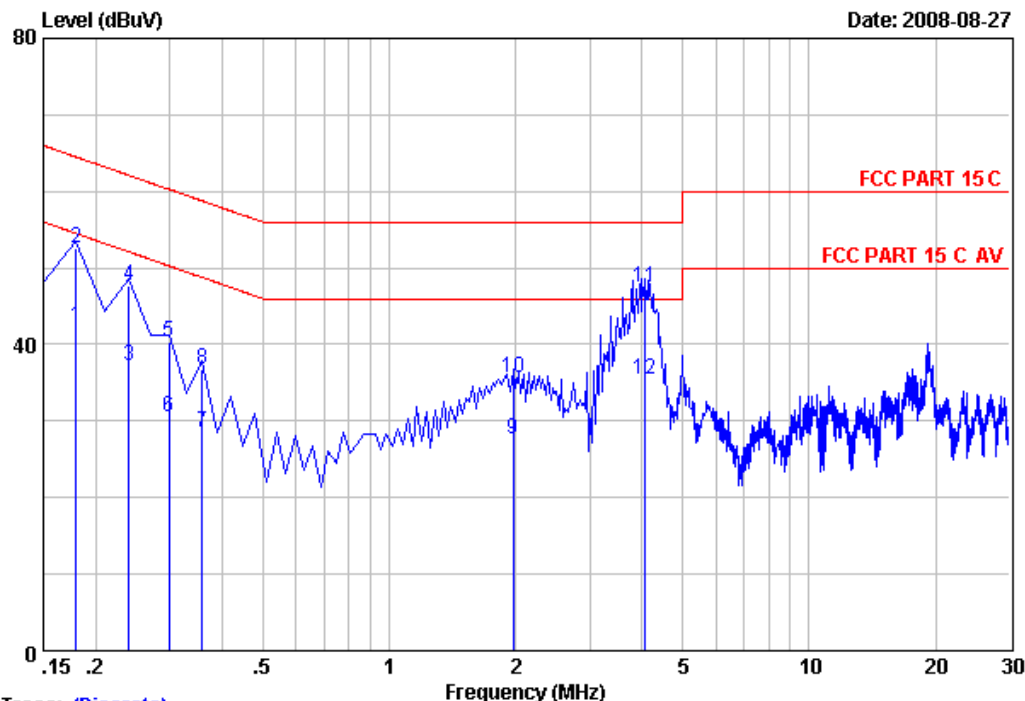
3.7.Power Line Conducted Emission Test Results

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



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Data: 1 File: D:\emc 002\DATA\2008 Test Data\B\ACS8Q1367.EMI (2)



Trace: (Discrete)

Site no : Audix No.1 Conduction Data no : 1
Dis./Ant. : -- KNW407 1# VA
Limit : FCC PART 15 C
Env./Ins. : 29.5°C/55% ESHS 10 Engineer : Sunny
EUT : AM1G USB SENDER M/N: AVRB7101A
Power Rating : DC 5V From PC input AC120V/60Hz
Test Mode : Tx Mode

| No | Freq (MHz) | LISN Factor (dB) | Cable Loss (dB) | Reading (dBuV) | Emission | | | |
|----|---------------|------------------------|-----------------------|-------------------|-----------------|------------------|----------------|---------|
| | | | | | Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark |
| 1 | 0.18 | 0.29 | 10.15 | 32.00 | 42.44 | 54.49 | 12.05 | Average |
| 2 | 0.18 | 0.29 | 10.15 | 42.10 | 52.54 | 64.49 | 11.95 | QP |
| 3 | 0.24 | 0.28 | 10.15 | 26.78 | 37.21 | 52.11 | 14.90 | Average |
| 4 | 0.24 | 0.28 | 10.15 | 37.23 | 47.66 | 62.11 | 14.45 | QP |
| 5 | 0.30 | 0.26 | 10.15 | 29.88 | 40.29 | 60.26 | 19.97 | QP |
| 6 | 0.30 | 0.26 | 10.15 | 20.09 | 30.50 | 50.26 | 19.76 | Average |
| 7 | 0.36 | 0.24 | 10.14 | 18.20 | 28.58 | 48.75 | 20.17 | Average |
| 8 | 0.36 | 0.24 | 10.14 | 26.41 | 36.79 | 58.75 | 21.96 | QP |
| 9 | 1.97 | 0.10 | 10.15 | 17.30 | 27.55 | 46.00 | 18.45 | Average |
| 10 | 1.97 | 0.10 | 10.15 | 25.48 | 35.73 | 56.00 | 20.27 | QP |
| 11 | 4.06 | 0.10 | 10.18 | 37.23 | 47.51 | 56.00 | 8.49 | QP |
| 12 | 4.06 | 0.10 | 10.18 | 25.20 | 35.48 | 46.00 | 10.52 | Average |

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.

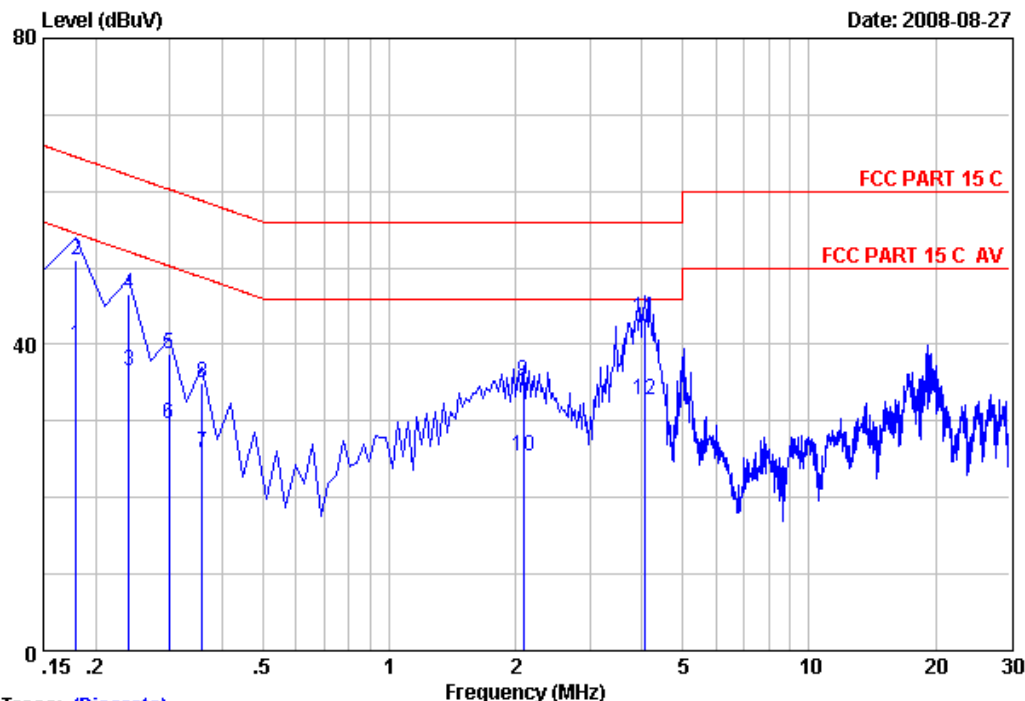


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Postcode:518057

Data: 2

File: D:\emc 002\DATA\2008 Test Data\B\ACS8Q1367.EMI (2)

Date: 2008-08-27



Trace: (Discrete)

Site no :Audix No.1 Conduction Data no :2
Dis./Ant. :-- KNW407 1# VB
Limit :FCC PART 15 C
Env./Ins. :29.5°C/55% ESHS 10 Engineer :Sunny
EUT :AM1G USB SENDER M/N:AVRB7101A
Power Rating :DC 5V From PC input AC120V/60Hz
Test Mode :Tx Mode

| No | Freq (MHz) | LISN Factor (dB) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark |
|----|---------------|------------------------|-----------------------|-------------------|-----------------------------|------------------|----------------|---------|
| 1 | 0.18 | 0.15 | 10.15 | 29.60 | 39.90 | 54.49 | 14.59 | Average |
| 2 | 0.18 | 0.15 | 10.15 | 40.65 | 50.95 | 64.49 | 13.54 | QP |
| 3 | 0.24 | 0.12 | 10.15 | 26.30 | 36.57 | 52.11 | 15.54 | Average |
| 4 | 0.24 | 0.12 | 10.15 | 36.41 | 46.68 | 62.11 | 15.43 | QP |
| 5 | 0.30 | 0.14 | 10.15 | 28.59 | 38.88 | 60.26 | 21.38 | QP |
| 6 | 0.30 | 0.14 | 10.15 | 19.30 | 29.59 | 50.26 | 20.67 | Average |
| 7 | 0.36 | 0.16 | 10.14 | 15.51 | 25.81 | 48.75 | 22.94 | Average |
| 8 | 0.36 | 0.16 | 10.14 | 24.78 | 35.08 | 58.75 | 23.67 | QP |
| 9 | 2.09 | 0.03 | 10.15 | 24.95 | 35.13 | 56.00 | 20.87 | QP |
| 10 | 2.09 | 0.03 | 10.15 | 15.20 | 25.38 | 46.00 | 20.62 | Average |
| 11 | 4.06 | 0.04 | 10.18 | 33.13 | 43.35 | 56.00 | 12.65 | QP |
| 12 | 4.06 | 0.04 | 10.18 | 22.60 | 32.82 | 46.00 | 13.18 | Average |

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

Frequency rang: 30~1000MHz

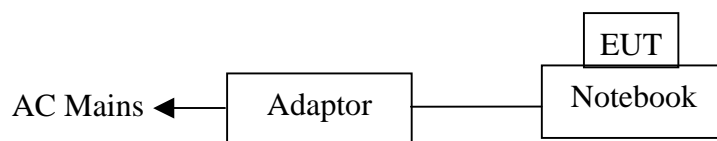
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|------|----------------|-----------------|-----------|-----------------|------------|---------------|
| 1. | 3#Chamber | AUDIX | N/A | N/A | Jun.09, 08 | 1/2 Year |
| 2. | EMI Spectrum | Agilent | E7403A | MY42000106 | May 10, 08 | 1 Year |
| 3. | Test Receiver | Rohde & Schwarz | ESVS20 | 830350/005 | May 10, 08 | 1 Year |
| 4. | Amplifier | HP | 8447D | 2648A04738 | Jul.08.08 | 1/2 Year |
| 5. | Bilog Antenna | Schaffner | CBL6112D | 25237 | Feb.21, 08 | 1 Year |
| 6. | RF Cable | JINGCHENG | KLMR400 | 3# Chamber No.1 | Jul.08.08 | 1/2 Year |
| 7. | RF Cable | JINGCHENG | JB Y400 | 3# Chamber No.2 | Jul.08.08 | 1/2 Year |
| 8. | RF Cable | JINGCHENG | JB Y400 | 3# Chamber No.3 | Jul.08.08 | 1/2 Year |
| 9. | RF Cable | JINGCHENG | JB Y400 | 3# Chamber No.4 | Jul.08.08 | 1/2 Year |
| 10. | Coaxial Switch | Anritsu | MP59B | M73989 | Jul.08.08 | 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

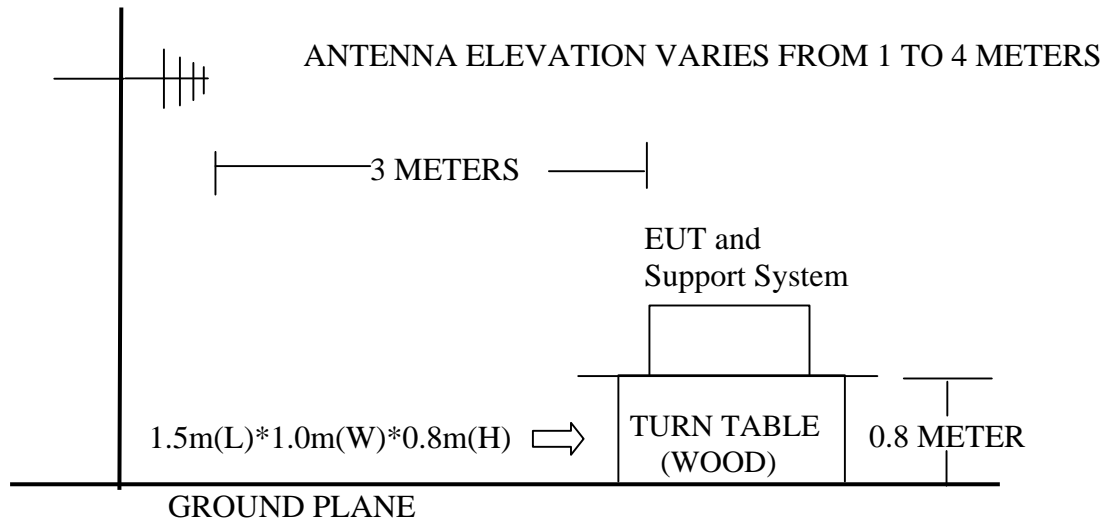
4.2.1. Block diagram of connection between the EUT and simulators



(EUT: AMIG USB SENDER)

4.2.2. In Anechoic Chamber

ANTENNA TOWER



4.3. Radiated Emission Limit

4.3.1.15.209 limits

| 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.

4.3.2. 15.205 Restricted bands of operation

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

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

4.4.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.AM1G USB SENDER (EUT)

Model Number : AVRB7101A
Serial Number : N/A

4.4.2.Support Equipment : As Tested Supporting System Detail, in Section 2.3.

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 ran the Control program to control EUT Work in test mode (Tx Mode)

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 soft ware, let EUT 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 test receiver (R&S ESVS20) 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 10th (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.

All the emissions from 30MHz to 25 GHz are comply with 15.209 limits

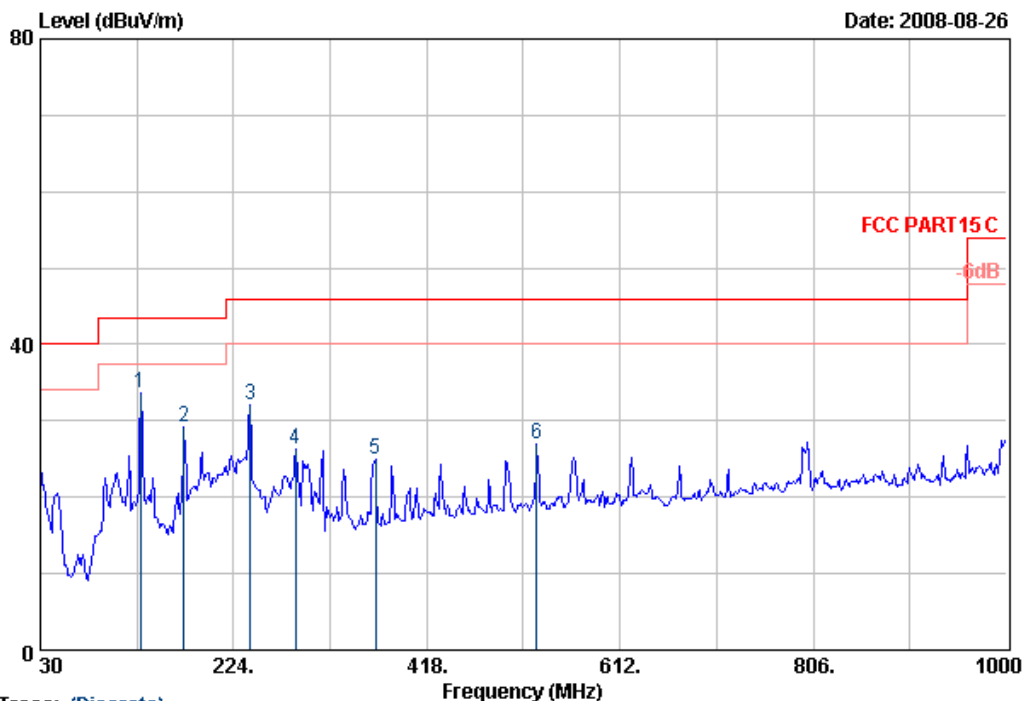
Frequency: 30MHz~1GHz



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Fax:+86-755-26632877
Postcode:518057

Data: 2 File: D:\2008 Report Data\B\ACS8Q1367.EMI (2)

Date: 2008-08-26



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 2
Dis. / Ant. : 3m CBL6112D Ant. pol. : HORIZONTAL
Limit : FCC PART15 C
Env. / Ins. : 24°C/56% ESVS20 Engineer : Sunny
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating : DC 5V From PC input AC120V/60Hz
Test Mode : Tx Mode

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 130.88 | 11.09 | 1.16 | 21.41 | 33.66 | 43.50 | 9.84 | QP |
| 2 | 174.53 | 8.51 | 1.27 | 19.47 | 29.25 | 43.50 | 14.25 | QP |
| 3 | 240.49 | 10.11 | 1.46 | 20.42 | 31.99 | 46.00 | 14.01 | QP |
| 4 | 286.08 | 11.68 | 1.55 | 13.02 | 26.25 | 46.00 | 19.75 | QP |
| 5 | 366.59 | 13.42 | 1.76 | 9.82 | 25.00 | 46.00 | 21.00 | QP |
| 6 | 528.58 | 15.86 | 2.09 | 8.95 | 26.90 | 46.00 | 19.10 | QP |

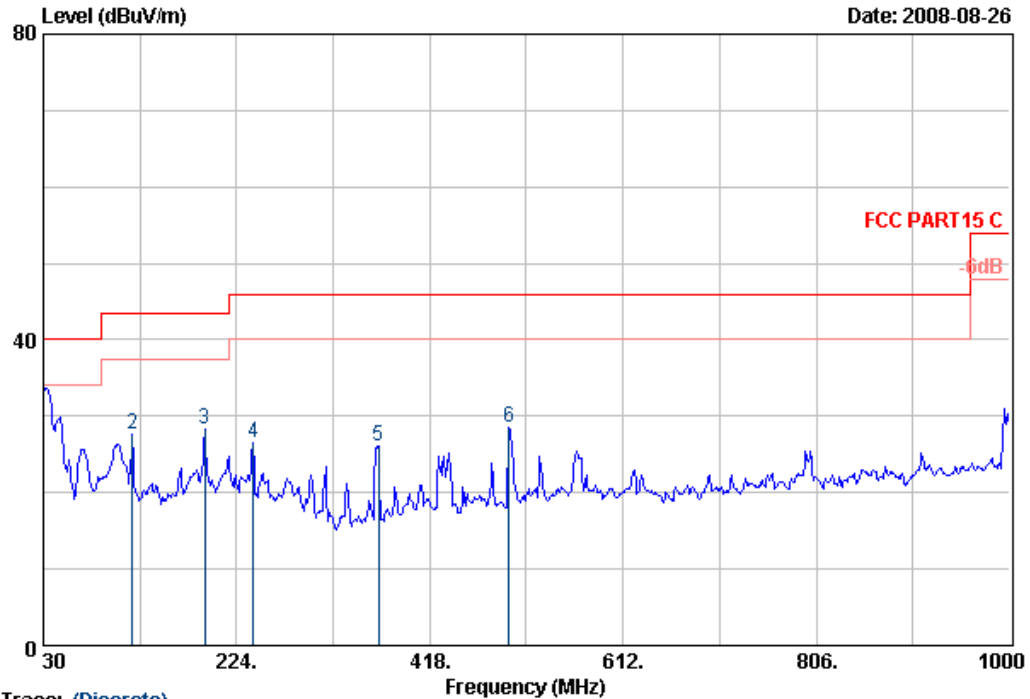
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Data: 1 File: D:\2008 Report Data\B\ACS8Q1367.EMI (2)

Date: 2008-08-26



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 1
Dis. / Ant. : 3m CBL6112D Ant. pol. : VERTICAL
Limit : FCC PART15 C
Env. / Ins. : 24°C/56% ESVS20 Engineer : Sunny
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating : DC 5V From PC input AC120V/60Hz
Test Mode : Tx Mode

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 30.00 | 19.92 | 0.68 | 13.39 | 33.99 | 40.00 | 6.01 | QP |
| 2 | 119.24 | 11.12 | 1.11 | 15.37 | 27.60 | 43.50 | 15.90 | QP |
| 3 | 191.99 | 8.04 | 1.30 | 18.90 | 28.24 | 43.50 | 15.26 | QP |
| 4 | 240.49 | 10.11 | 1.46 | 14.96 | 26.53 | 46.00 | 19.47 | QP |
| 5 | 366.59 | 13.42 | 1.76 | 10.95 | 26.13 | 46.00 | 19.87 | QP |
| 6 | 497.54 | 15.63 | 2.04 | 10.81 | 28.48 | 46.00 | 17.52 | 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

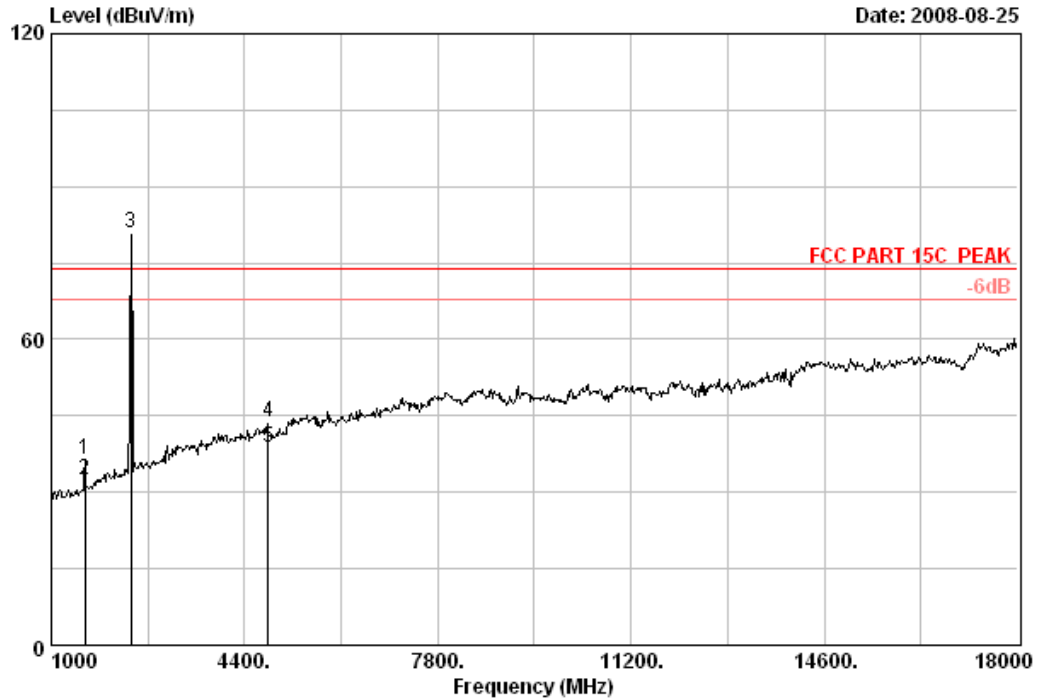


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Data: 1

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-25



Site no. : 3# Chamber Data no. : 1
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2405MHz
Memo :

| | | 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 | 1595.00 | 25.91 | 5.43 | 35.66 | 40.87 | 36.55 | 74.00 | 37.45 | Peak |
| 2 | 1595.00 | 25.91 | 5.43 | 35.66 | 36.89 | 32.57 | 54.00 | 21.43 | Average |
| 3 | 2405.00 | 29.03 | 6.73 | 35.18 | 80.45 | 81.03 | 74.00 | -7.03 | Peak |
| 4 | 4810.00 | 33.98 | 10.54 | 34.50 | 33.77 | 43.79 | 74.00 | 30.21 | Peak |
| 5 | 4810.00 | 33.98 | 10.54 | 34.50 | 28.68 | 38.70 | 54.00 | 15.30 | 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.

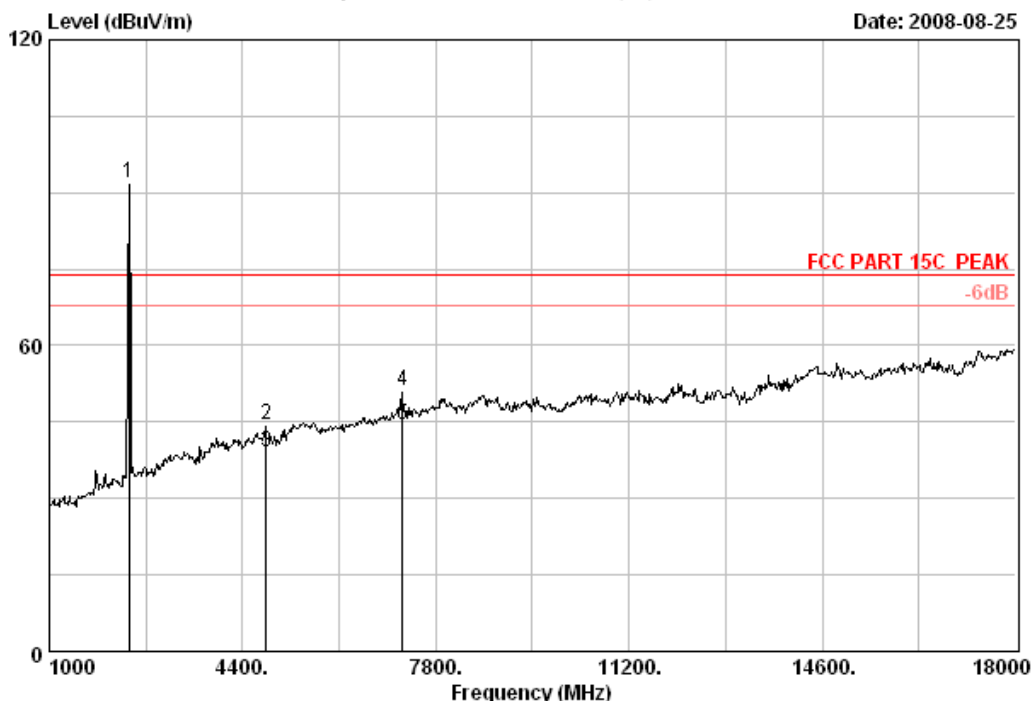


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Data: 2

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-25



Site no. : 3# Chamber Data no. : 2
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2405MHz
Memo :

| | 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 | 91.30 | 91.88 | 74.00 | -17.88 | Peak |
| 2 | 4810.00 | 33.98 | 10.54 | 34.50 | 34.52 | 44.54 | 74.00 | 29.46 | Peak |
| 3 | 4810.00 | 33.98 | 10.54 | 34.50 | 29.13 | 39.15 | 54.00 | 14.85 | Average |
| 4 | 7215.00 | 37.36 | 12.16 | 34.44 | 35.90 | 50.98 | 74.00 | 23.02 | Peak |
| 5 | 7215.00 | 37.36 | 12.16 | 34.44 | 29.33 | 44.41 | 54.00 | 9.59 | 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.

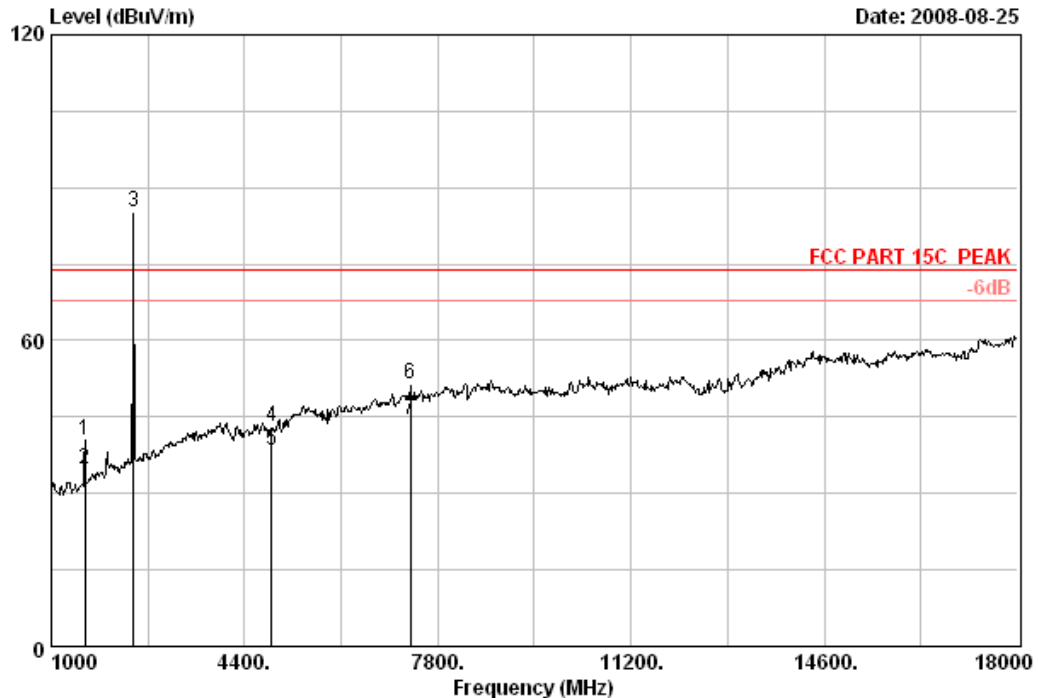


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Data: 3

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-25



Site no. : 3# Chamber Data no. : 3
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2441MHz
Memo :

| | 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 | 1595.00 | 25.91 | 5.43 | 35.66 | 44.62 | 40.30 | 74.00 | 33.70 | Peak |
| 2 | 1595.00 | 25.91 | 5.43 | 35.66 | 39.16 | 34.84 | 54.00 | 19.16 | Average |
| 3 | 2441.00 | 29.11 | 6.80 | 35.17 | 84.46 | 85.20 | 74.00 | -11.20 | Peak |
| 4 | 4882.00 | 34.16 | 10.57 | 34.48 | 32.89 | 43.14 | 74.00 | 30.86 | Peak |
| 5 | 4882.00 | 34.16 | 10.57 | 34.48 | 28.13 | 38.38 | 54.00 | 15.62 | Average |
| 6 | 7323.00 | 37.52 | 12.20 | 34.47 | 36.33 | 51.58 | 74.00 | 22.42 | Peak |
| 7 | 7323.00 | 37.52 | 12.20 | 34.47 | 29.11 | 44.36 | 54.00 | 9.64 | 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.

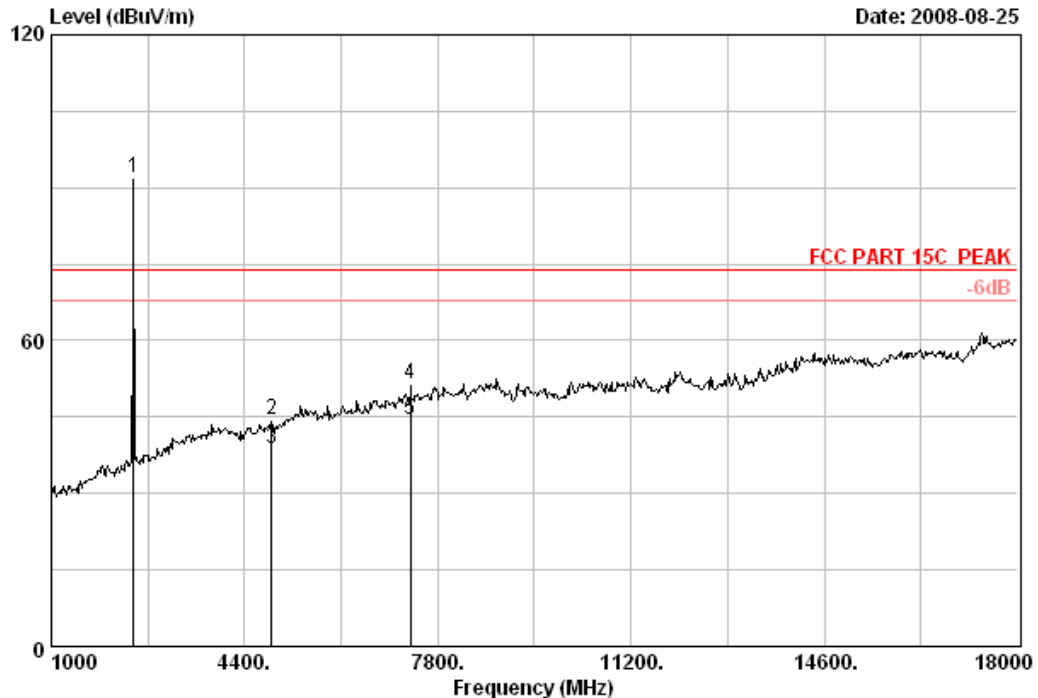


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Data: 4

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-25



Site no. : 3# Chamber Data no. : 4
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2441MHz
Memo :

| | 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 | 91.27 | 92.01 | 74.00 | -18.01 | Peak |
| 2 | 4882.00 | 34.16 | 10.57 | 34.48 | 34.23 | 44.48 | 74.00 | 29.52 | Peak |
| 3 | 4882.00 | 34.16 | 10.57 | 34.48 | 28.46 | 38.71 | 54.00 | 15.29 | Average |
| 4 | 7323.00 | 37.52 | 12.20 | 34.47 | 36.35 | 51.60 | 74.00 | 22.40 | Peak |
| 5 | 7323.00 | 37.52 | 12.20 | 34.47 | 29.15 | 44.40 | 54.00 | 9.60 | 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.

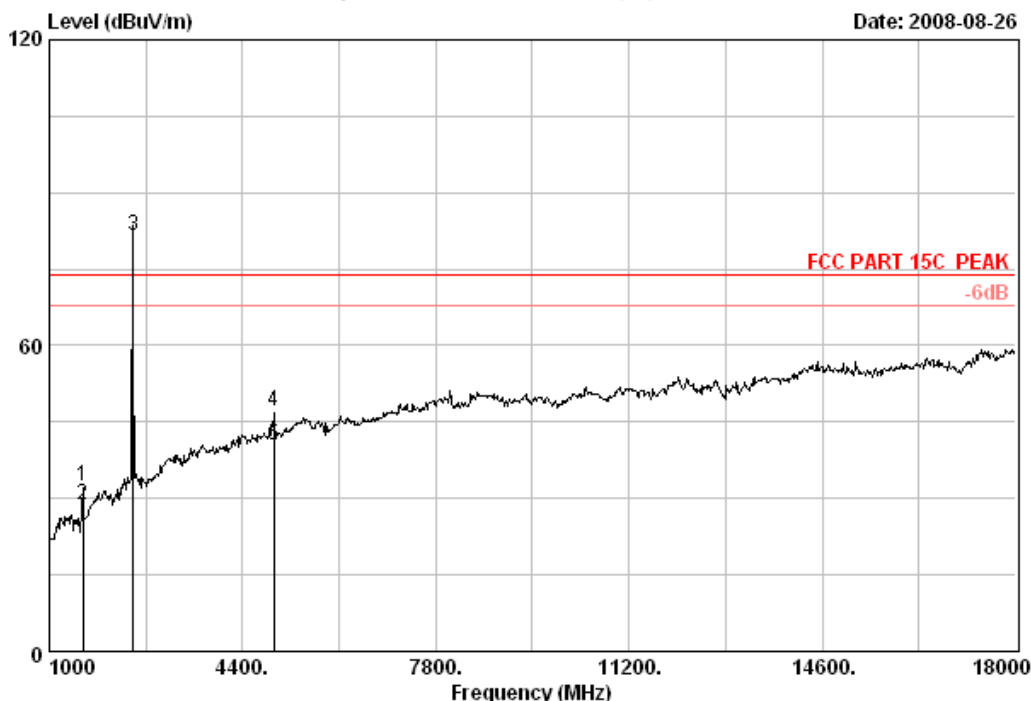


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Data: 5

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-26



Site no. : 3# Chamber Data no. : 5
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2477MHz
Memo :

| | 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 | 1595.00 | 25.91 | 5.43 | 35.66 | 36.60 | 32.28 | 74.00 | 41.72 | Peak |
| 2 | 1595.00 | 25.91 | 5.43 | 35.66 | 33.15 | 28.83 | 54.00 | 25.17 | Average |
| 3 | 2477.00 | 29.19 | 6.87 | 35.16 | 80.78 | 81.68 | 74.00 | -7.68 | Peak |
| 4 | 4954.00 | 34.38 | 10.58 | 34.46 | 36.55 | 47.05 | 74.00 | 26.95 | Peak |
| 5 | 4954.00 | 34.38 | 10.58 | 34.46 | 30.10 | 40.60 | 54.00 | 13.40 | 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.

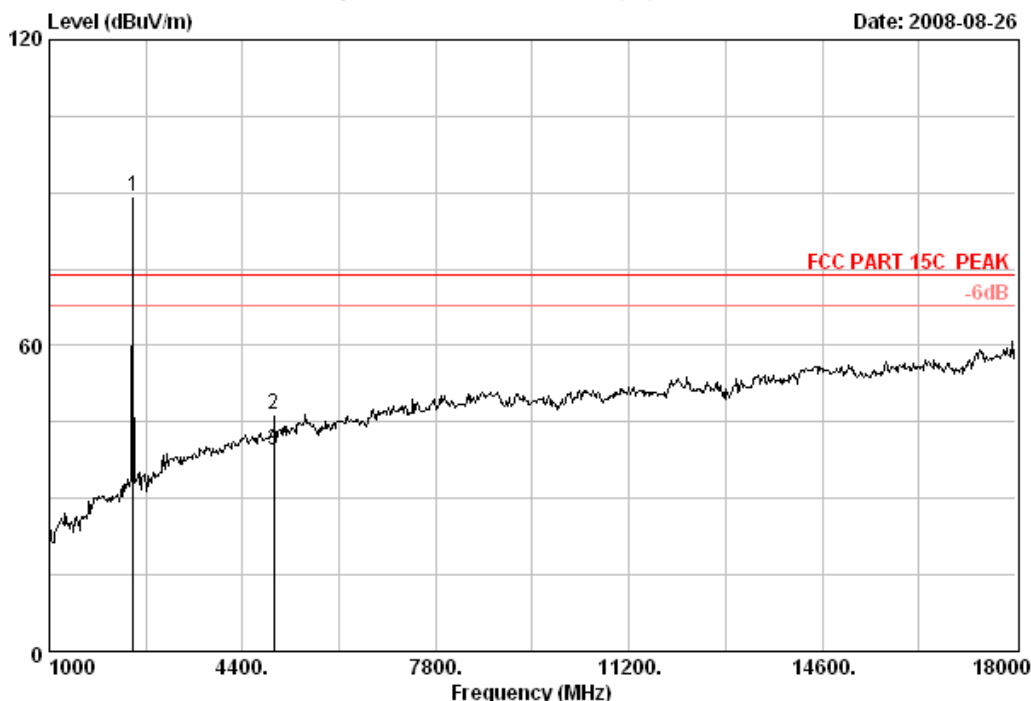


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Data: 6

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-26



Site no. : 3# Chamber Data no. : 6
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2477MHz
Memo :

| | 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 | 2477.00 | 29.19 | 6.87 | 35.16 | 88.30 | 89.20 | 74.00 | -15.20 | Peak |
| 2 | 4954.00 | 34.38 | 10.58 | 34.46 | 36.08 | 46.58 | 74.00 | 27.42 | Peak |
| 3 | 4954.00 | 34.38 | 10.58 | 34.46 | 29.04 | 39.54 | 54.00 | 14.46 | 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.

5. 6dB Bandwidth 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 | RF Cable | Hubersuhner | SUCOFLEX | 182768/4 | May,28, 08 | 1Year |

5.2. Test Information

| | |
|----------------------|--|
| EUT: | AM1G USB SENDER |
| M/N: | AVRB7101A |
| Test Date: | Aug.27, 2008 |
| Ambient Temperature: | 23℃ |
| Relative Humidity: | 60% |
| Test standard: | FCC PART 15C: 15.247 |
| Test mode: | TX Mode |
| Test Frequency: | CH Low: 2405MHz CH Mid: 2441MHz CH High: 2477MHz |
| Tested By: | Jamy |

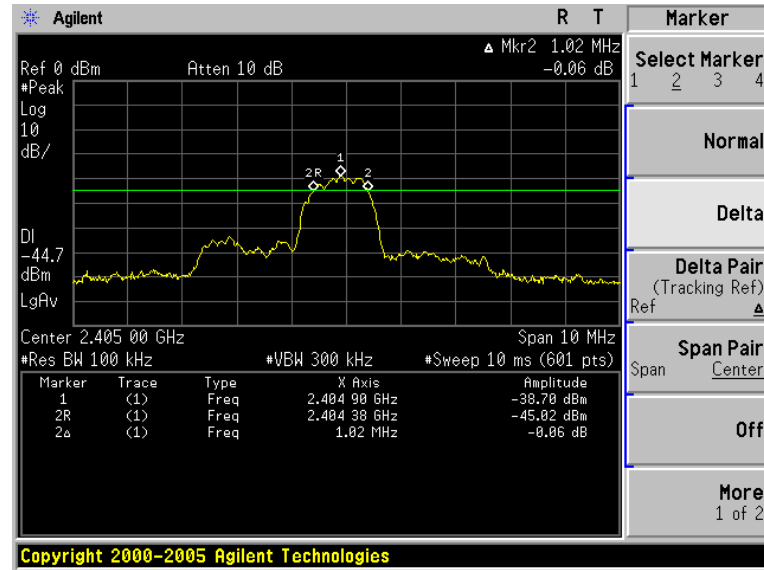
5.3. Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz 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.

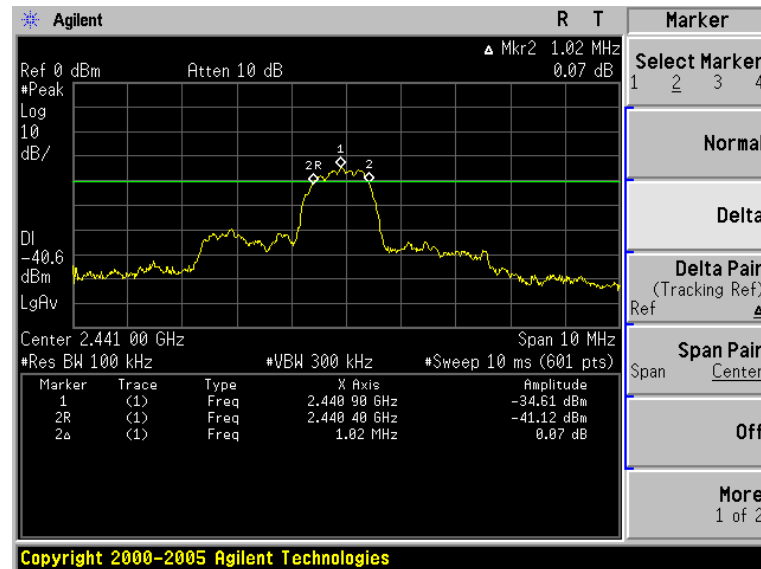
5.4. Test Results

| CH | 6dB Bandwidth (MHz) | Limit | Conclusion |
|------|---------------------|-------|------------|
| Low | 1.02 | >500 | PASS |
| Mid | 1.02 | >500 | PASS |
| High | 1.00 | >500 | PASS |

Test CH Low: 2405MHz



Test CH Mid: 2441MHz



6. OUTPUT POWER TEST

6.1. Test Equipment

| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|------|--------------|--------------|-----------|------------|------------|---------------|
| 1. | Attenuator | Agilent | 8491B | MY39262165 | May,28, 08 | 1 Year |
| 2 | Power meter | Anritsu | ML2487A | 6K00002472 | May,10, 08 | 1 Year |
| 3 | Power sensor | Anritsu | ML2491A | 032516 | 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 |

6.2. Limit(FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

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

| | | | | | | | | | |
|---|---------------|-------------|--|------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|----------------|
| EUT: AM1G USB SENDER | | | | | M/N: AVRB7101A | | | | |
| Power: DC 5V From PC input AC120V/60Hz | | | | | | | | | |
| Test Date: 2008/08/27 | | | Test site: RF Chamber | | | Engineer: Sunny | | | |
| Ambient Temperature: 24℃ | | | Relative Humidity: 50% | | | | | | |
| Test mode: TX Mode | | | | | | | | | |
| CH | Freq (MHz) | Ant Pol. | Electric Field Strength (dBuV/m) | SG Reading (dBm) | Tx Cable Loss (dB) | Tx Ant. Gain (dBi) | PK output power (dBm) | Limit (dBm) | Margin (dB) |
| Low | 2405 | H | 91.88 | -5.28 | 6.06 | 9.25 | -2.09 | 30 | 32.09 |
| | 2405 | V | 81.03 | -19.32 | 6.06 | 9.25 | -16.13 | 30 | 46.13 |
| Mid | 2441 | H | 92.01 | -8.19 | 6.08 | 9.30 | -4.97 | 30 | 34.97 |
| | 2441 | V | 85.20 | -15.32 | 6.08 | 9.30 | -12.10 | 30 | 42.10 |
| Hig | 2477 | H | 89.20 | -10.97 | 6.15 | 9.33 | -7.79 | 30 | 37.79 |
| | 2477 | V | 81.68 | -18.90 | 6.15 | 9.33 | -15.72 | 30 | 45.72 |
| PK output power = SG Reading – Tx Cable Loss + Tx Antenna Gain – EUT antenna Gain （0 dBi） | | | | | | | | | |

7. BAND EDGE COMPLIANCE TEST

7.1. 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 |

7.2. Limit

According to §15.247(c), in any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

7.3. Test Procedure

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

7.4. Test Results

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

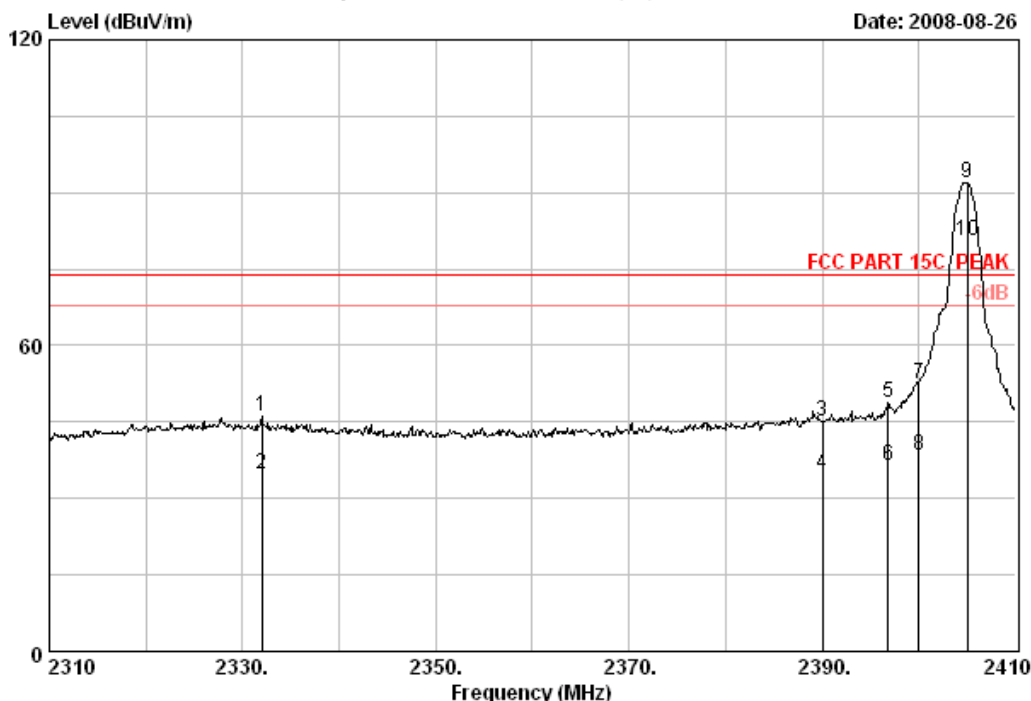


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Data: 7

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-26



Site no. : 3# Chamber Data no. : 7
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2405MHz
Memo :

| | 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 | 2332.00 | 28.83 | 6.65 | 35.20 | 45.82 | 46.10 | 74.00 | 27.90 | Peak |
| 2 | 2332.00 | 28.83 | 6.65 | 35.20 | 34.44 | 34.72 | 74.00 | 19.28 | Average |
| 3 | 2390.00 | 28.99 | 6.71 | 35.18 | 44.53 | 45.05 | 74.00 | 28.95 | Peak |
| 4 | 2390.00 | 28.99 | 6.71 | 35.18 | 34.16 | 34.68 | 74.00 | 19.32 | Average |
| 5 | 2396.80 | 28.99 | 6.73 | 35.18 | 48.36 | 48.90 | 74.00 | 25.10 | Peak |
| 6 | 2396.80 | 28.99 | 6.73 | 35.18 | 35.96 | 36.50 | 74.00 | 17.50 | Average |
| 7 | 2400.00 | 28.99 | 6.73 | 35.18 | 51.93 | 52.47 | 74.00 | 21.53 | Peak |
| 8 | 2400.00 | 28.99 | 6.73 | 35.18 | 37.75 | 38.29 | 74.00 | 15.71 | Average |
| 9 | 2405.00 | 29.03 | 6.73 | 35.18 | 91.31 | 91.89 | 74.00 | -17.89 | Peak |
| 10 | 2405.00 | 29.03 | 6.73 | 35.18 | 79.96 | 80.54 | 74.00 | -26.54 | 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.

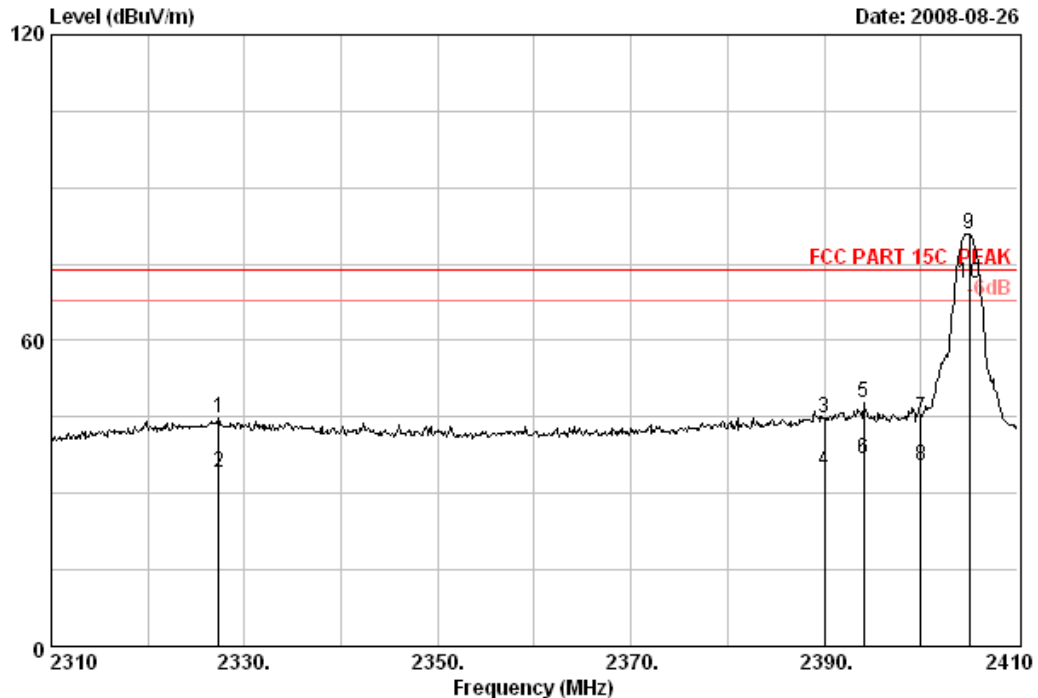


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Postcode:518057

Data: 8

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-26



Site no. : 3# Chamber Data no. : 8
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2405MHz
Memo :

| | 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 | 2327.30 | 28.83 | 6.65 | 35.20 | 44.36 | 44.64 | 74.00 | 29.36 | Peak |
| 2 | 2327.30 | 28.83 | 6.65 | 35.20 | 33.67 | 33.95 | 54.00 | 20.05 | Average |
| 3 | 2390.00 | 28.99 | 6.71 | 35.18 | 44.14 | 44.66 | 74.00 | 29.34 | Peak |
| 4 | 2390.00 | 28.99 | 6.71 | 35.18 | 33.89 | 34.41 | 54.00 | 19.59 | Average |
| 5 | 2394.10 | 28.99 | 6.73 | 35.18 | 47.31 | 47.85 | 74.00 | 26.15 | Peak |
| 6 | 2394.10 | 28.99 | 6.73 | 35.18 | 36.19 | 36.73 | 54.00 | 17.27 | Average |
| 7 | 2400.00 | 28.99 | 6.73 | 35.18 | 44.13 | 44.67 | 74.00 | 29.33 | Peak |
| 8 | 2400.00 | 28.99 | 6.73 | 35.18 | 34.84 | 35.38 | 54.00 | 18.62 | Average |
| 9 | 2405.00 | 29.03 | 6.73 | 35.18 | 80.45 | 81.03 | 74.00 | -7.03 | Peak |
| 10 | 2405.00 | 29.03 | 6.73 | 35.18 | 70.68 | 71.26 | 54.00 | -17.26 | 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.

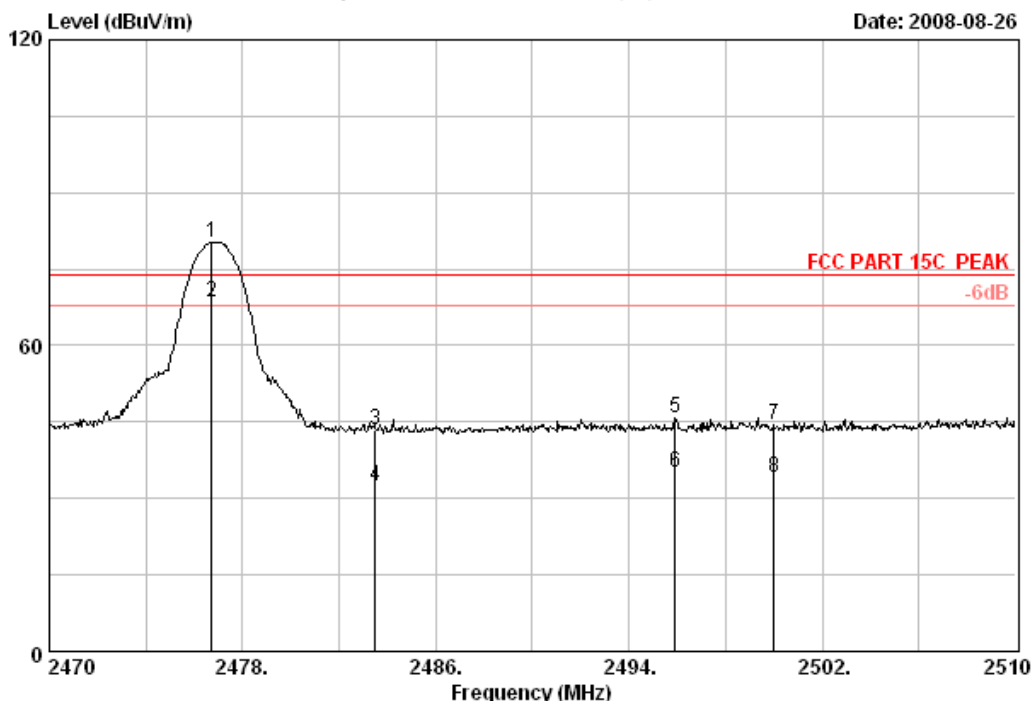


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Data: 9

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-26



Site no. : 3# Chamber Data no. : 9
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2477MHz
Memo :

| | 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 | 2476.72 | 29.19 | 6.87 | 35.16 | 79.41 | 80.31 | 74.00 | -6.31 | Peak |
| 2 | 2476.72 | 29.19 | 6.87 | 35.16 | 67.50 | 68.40 | 74.00 | -14.40 | Average |
| 3 | 2483.50 | 29.19 | 6.87 | 35.16 | 42.63 | 43.53 | 74.00 | 30.47 | Peak |
| 4 | 2483.50 | 29.19 | 6.87 | 35.16 | 31.66 | 32.56 | 74.00 | 21.44 | Average |
| 5 | 2495.92 | 29.23 | 6.91 | 35.15 | 44.84 | 45.83 | 74.00 | 28.17 | Peak |
| 6 | 2495.92 | 29.23 | 6.91 | 35.15 | 33.98 | 34.97 | 74.00 | 19.03 | Average |
| 7 | 2500.00 | 29.23 | 6.91 | 35.15 | 43.31 | 44.30 | 74.00 | 29.70 | Peak |
| 8 | 2500.00 | 29.23 | 6.91 | 35.15 | 33.01 | 34.00 | 74.00 | 20.00 | 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.

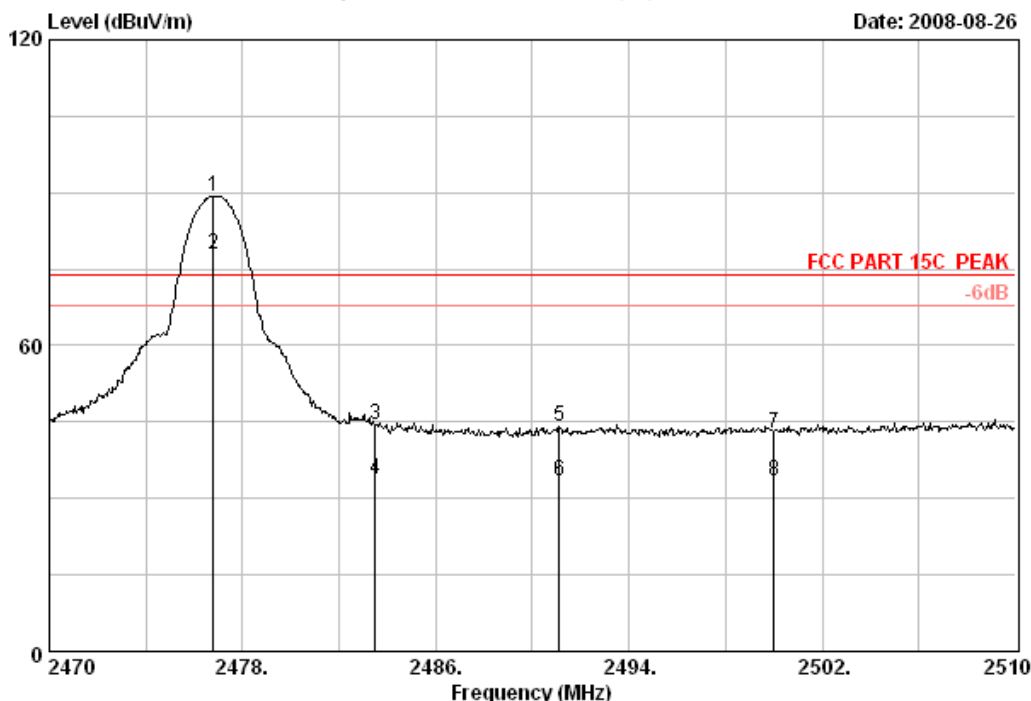


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Data: 10

File: E:\2008 report data\B\ACS8Q1367.EMI (16)

Date: 2008-08-26



Site no. : 3# Chamber Data no. : 10
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : AM1G USB SENDER M/N:AVRB7101A
Power Rating: DC 5V From PC input AC 120V/60Hz
Test mode : TX CH2477MHz
Memo :

| | 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 | 2476.80 | 29.19 | 6.87 | 35.16 | 88.42 | 89.32 | 74.00 | -15.32 | Peak |
| 2 | 2476.80 | 29.19 | 6.87 | 35.16 | 76.99 | 77.89 | 54.00 | -23.89 | Average |
| 3 | 2483.50 | 29.19 | 6.87 | 35.16 | 43.61 | 44.51 | 54.00 | 29.49 | Peak |
| 4 | 2483.50 | 29.19 | 6.87 | 35.16 | 32.96 | 33.86 | 54.00 | 20.14 | Average |
| 5 | 2491.12 | 29.23 | 6.91 | 35.15 | 43.13 | 44.12 | 74.00 | 29.88 | Peak |
| 6 | 2491.12 | 29.23 | 6.91 | 35.15 | 32.46 | 33.45 | 54.00 | 20.55 | Average |
| 7 | 2500.00 | 29.23 | 6.91 | 35.15 | 41.95 | 42.94 | 74.00 | 31.06 | Peak |
| 8 | 2500.00 | 29.23 | 6.91 | 35.15 | 32.29 | 33.28 | 54.00 | 20.72 | 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.

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,10, 08 | 1 Year |
| 2 | RF Cable | Hubersuhner | SUCOFLEX | 182768/4 | May,28, 08 | 1 Year |

8.2. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

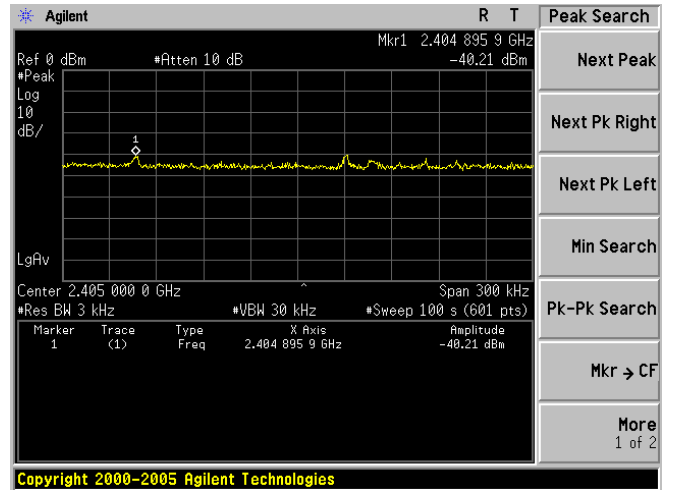
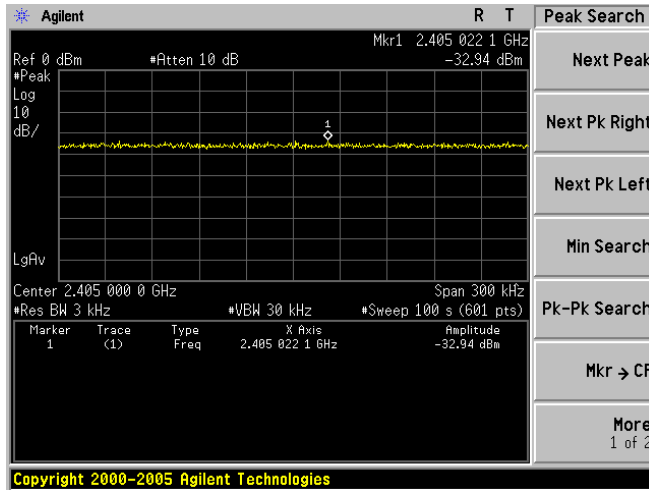
8.3. Test Procedure

- (1). The EUT was placed on a 0.8m high table in the chamber and turned on in continuously transmitting mode.
- (2). The maximum power density 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 power density 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.

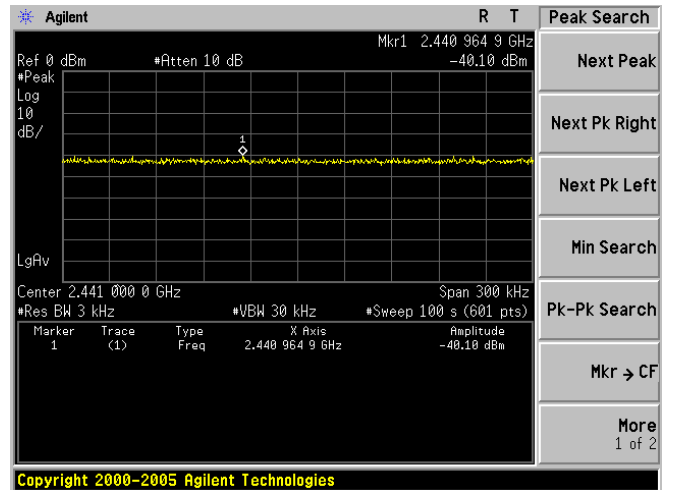
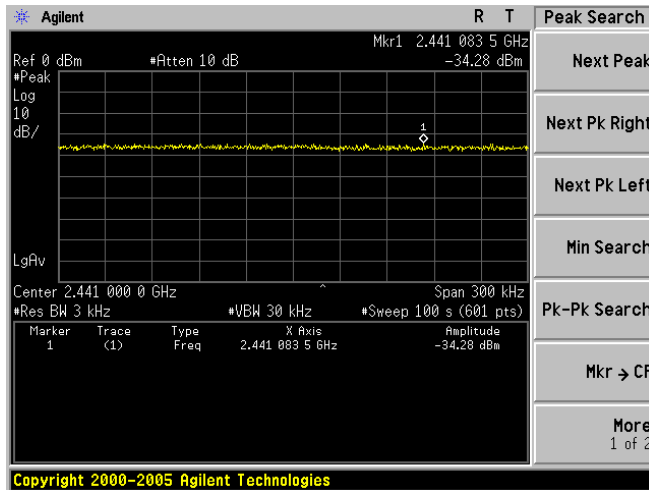
8.4. Test Results

| | | | | | | | | | |
|--|---------------|-------------|---------------------------------------|------------------------|-----------------------------|-----------------------------|----------------------|-------------------------|----------------|
| EUT: AM1G USB SENDER | | | | | | M/N: AVRB7101A | | | |
| Power: DC 5V From PC input AC 120V/60Hz | | | | | | | | | |
| Test Date: 2008/08/27 | | | | Test site: RF Chamber | | | Engineer: Sunny | | |
| Ambient Temperature: 25℃ | | | | Relative Humidity: 56% | | | | | |
| Test mode: TX Mode | | | | | | | | | |
| CH | Freq (MHz) | Ant Pol. | Power density at 3m (dBm/3kHz) | SG Reading (dBm) | Tx Cable Loss (dB) | Tx Ant. Gain (dBi) | Result (dBm/3kHz) | Limit (dBm/ 3kHz) | Margin (dB) |
| Low | 2405 | H | -32.94 | -26.08 | 6.06 | 9.25 | -22.89 | 8 | 30.89 |
| | 2405 | V | -40.21 | -33.55 | 6.06 | 9.25 | -30.36 | 8 | 38.36 |
| Mid | 2441 | H | -34.28 | -27.47 | 6.08 | 9.30 | -24.25 | 8 | 32.25 |
| | 2441 | V | -40.10 | -33.52 | 6.08 | 9.30 | -30.30 | 8 | 38.30 |
| Hig | 2477 | H | -35.60 | -28.76 | 6.15 | 9.33 | -25.58 | 8 | 33.58 |
| | 2477 | V | -41.44 | -34.92 | 6.15 | 9.33 | -31.74 | 8 | 39.74 |
| Result = SG Reading – Tx Cable Loss + Tx Antenna Gain – EUT Antenna Gain(0dBi) | | | | | | | | | |

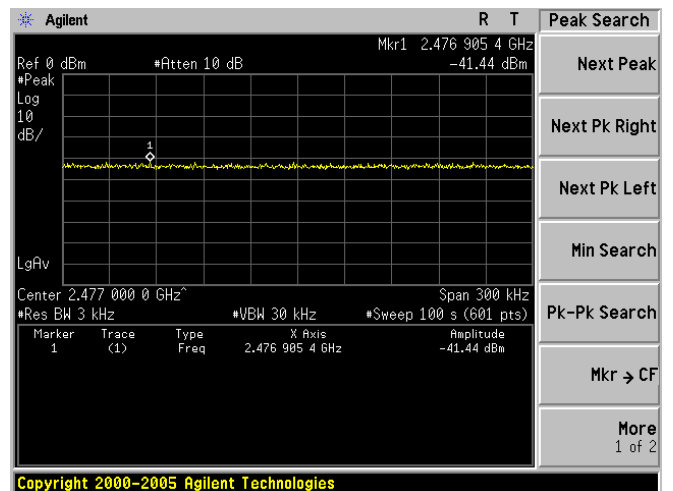
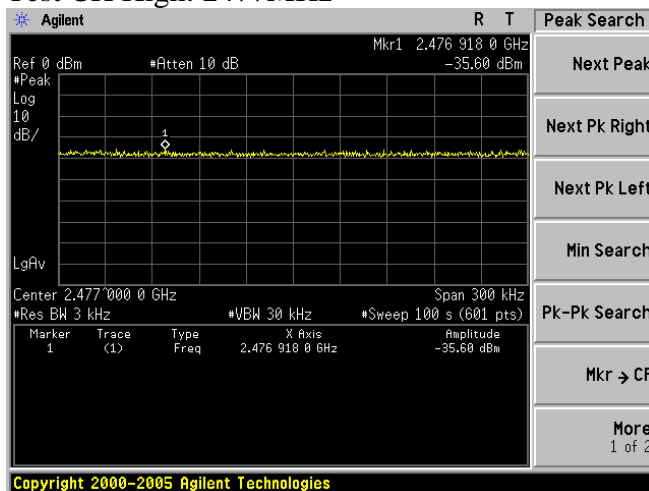
Test CH Low: 2405MHz



Test CH Mid: 2441MHz



Test CH High: 2477MHz



9. MPE ESTIMATION

9.1.Limit for General Population / Uncontrolled Exposures

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

| Frequency (MHz) | Power density (mW/cm ²) | 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) |
|---------|----------------|------------------------|-------------------|-----------------------|
| Low | 2405 | -2.09 | 0 | 1 |
| Mid | 2441 | -4.97 | 0 | 1 |
| High | 2477 | -7.79 | 0 | 1 |

| Channel | Frequency(MHz) | Peak output power to antenna (mW) | Power density at 20cm(mW/ cm ²) |
|---------|----------------|-----------------------------------|---|
| Low | 2405 | 0.618 | 0.00012 |
| Mid | 2441 | 0.318 | 0.00006 |
| High | 2477 | 0.166 | 0.00003 |

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 an integral 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 0dBi.

11.DEVIATION TO TEST SPECIFICATIONS

[NONE]