

# Motorola Mobility, Inc.

## TEST REPORT FOR

### DOCSIS 3.0 Wi-Fi Gateway, SBG6580

#### Tested To The Following Standards:

FCC Part 15 Subpart C Sections 15.247  
&  
RSS-210 Issue 8

Report No.: 92800-8

Date of issue: March 5, 2012



This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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## ADMINISTRATIVE INFORMATION

### Test Report Information

**REPORT PREPARED FOR:**

Motorola Mobility, Inc.  
6450 Sequence Drive  
San Diego, CA 92121

**REPORT PREPARED BY:**

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CKC Laboratories, Inc.  
5046 Sierra Pines Drive  
Mariposa, CA 95338

REPRESENTATIVE: Chris Fulmer  
Customer Reference Number: MM1084691

Project Number: 92800

**DATE OF EQUIPMENT RECEIPT:**

February 13, 2012

**DATE(S) OF TESTING:**

February 13 - March 1, 2012

### Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

A handwritten signature in black ink that reads "Steve Behm".

**Steve Behm**  
*Director of Quality Assurance & Engineering Services*  
*CKC Laboratories, Inc.*

## Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):  
CKC Laboratories, Inc.  
110 Olinda Place  
Brea, CA 92823

## Site Registration & Accreditation Information

| Location | CB #   | TAIWAN         | CANADA  | FCC    | JAPAN                      |
|----------|--------|----------------|---------|--------|----------------------------|
| Brea A   | US0060 | SL2-IN-E-1146R | 3082D-1 | 90473  | R-2945 C-3248 T-1572       |
| Brea D   | US0060 | SL2-IN-E-1146R | 3082D-2 | 100638 | R-1256 C-1319 T-1660 G-255 |

## SUMMARY OF RESULTS

### Standard / Specification: FCC Part 15 Subpart C & RSS-210 Issue 8

| Description                               | Test Procedure/Method                                         | Results |
|-------------------------------------------|---------------------------------------------------------------|---------|
| Bandedge                                  | FCC Part 15 Subpart C / ITU-R 55/1 and KDB 558074             | Pass    |
| Field Strength of Spurious Emissions      | FCC Part 15 Subpart C Section 15.247(d) / 15.209 / KDB 558074 | Pass    |
| Emissions Falling Within Restricted Bands | RSS-210 Section 2.2                                           | Pass    |

## Conditions During Testing

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

| Summary of Conditions                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The manufacturer declares that for all testing the EUT was configured as follows:</p> <p>HW Version: P2</p> <p>Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG</p> <p>MAC Address: 0023ED6E76DC</p> |

## EQUIPMENT UNDER TEST (EUT)

### EQUIPMENT UNDER TEST

The following model was tested by CKC Laboratories: **SBG6580 P2**

Since the time of testing the manufacturer has chosen to use the following model name in its place. Any differences between the names does not affect their EMC characteristics and therefore meets the level of testing equivalent to the tested model name shown on the data sheets: **SBG6580**

#### DOCSIS 3.0 Wi-Fi Gateway

Manuf: Motorola Mobility, Inc.  
Model: SBG6580  
Serial: 35560113060065107050085

#### AC to 12Vdc Power Adapter

Manuf: Asian Power Devices, Inc.  
Model: WA-24|12FU  
Serial: NA

### PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

#### Broadband Router

Manuf: CASA Systems  
Model: C2200  
Serial: FD3460

#### Gigabit Switch

Manuf: Netgear  
Model: GS105v2  
Serial: NA

#### Laptop Computer

Manuf: HP  
Model: Compaq 6910p  
Serial: NA

#### Performance Analysis System

Manuf: Spirent  
Model: SMB-600B  
Serial: N06012143

#### 8 Way Splitter

Manuf: Regal  
Model: DS8DGV10  
Serial: NA

#### 8 Way Splitter

Manuf: Regal  
Model: DS8DGV10  
Serial: NA

#### DHCP Server

Manuf: HP  
Model: Compaq 6910p  
Serial: NA

#### Diplexer

Manuf: Eagle Comtronics  
Model: EDPF-65/85  
Serial: NA

#### Laptop Computer

Manuf: Dell  
Model: Precision M70  
Serial: NA

## FCC PART 15 SUBPART C

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR requirements for Unlicensed Radio Frequency Devices, Subpart C - Intentional Radiators.

### Bandedge

#### *Test Conditions / Setup*

The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT is stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The EUT Ethernet ports are connected to the performance analysis system. The EUT RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The performance analysis system is running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously. Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.

#### Frequency range of EUT: 2412 to 2462MHz

802.11b (11Mbps)

Transmit Frequencies: 2412MHz, 2437MHz, 2462MHz (Channel 1, 6, 11)

802.11g (6Mbps)

Transmit Frequencies: 2412MHz, 2437MHz, 2462MHz (Channel 1, 6, 11)

802.11n (20MHz) (7.2Mbps)

Transmit Frequencies: 2412MHz, 2437MHz, 2462MHz (Channel 1, 6, 11)

802.11n (40MHz) (15Mbps)

Transmit Frequencies: 2422MHz, 2437MHz, 2452MHz (Channel 1, 8, 11)

#### Frequency range of EUT: 5745 to 5825MHz

802.11a (6Mbps)

Transmit Frequencies: 5745MHz, 5785MHz, 5825MHz (Channel 149, 157, 165)

802.11n (20MHz) (7.2Mbps)

Transmit Frequencies: 5745MHz, 5785MHz, 5825MHz (Channel 149, 157, 165)

802.11n (40MHz) (15Mbps)

Transmit Frequencies: 5755MHz, 5795MHz (Channel 153, 161)

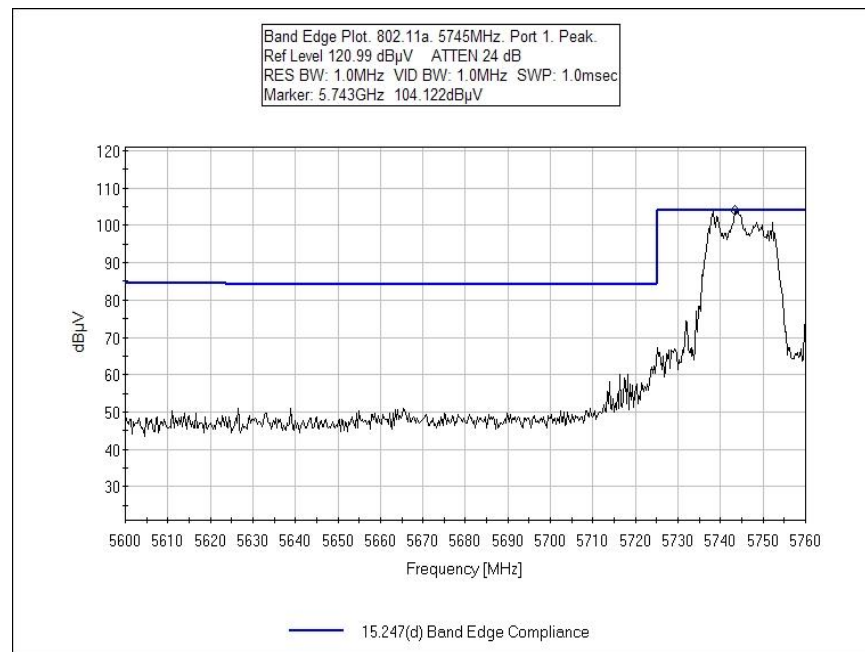
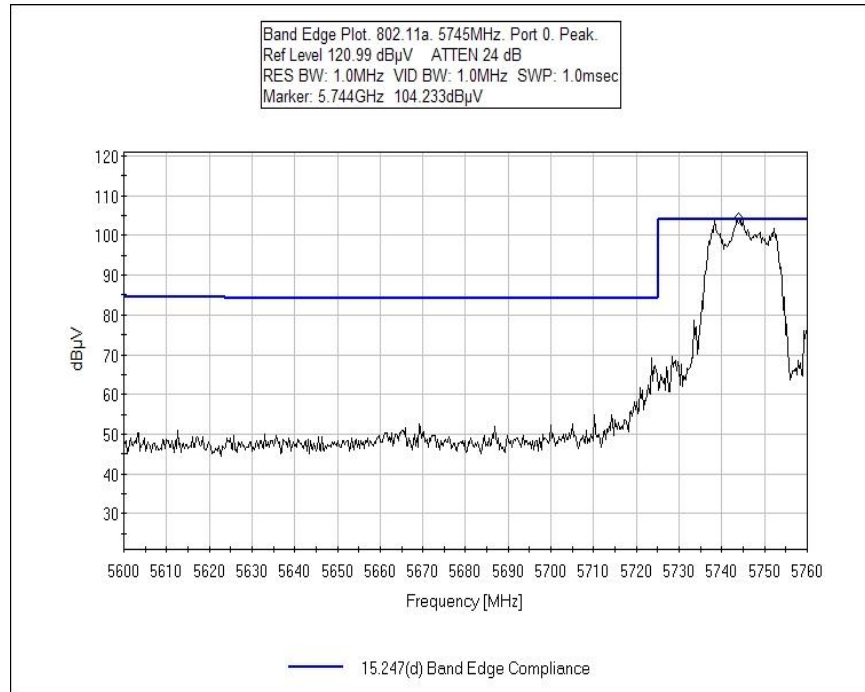
Integral Antenna Gain: 4.1 dBi max at 2.4GHz band.

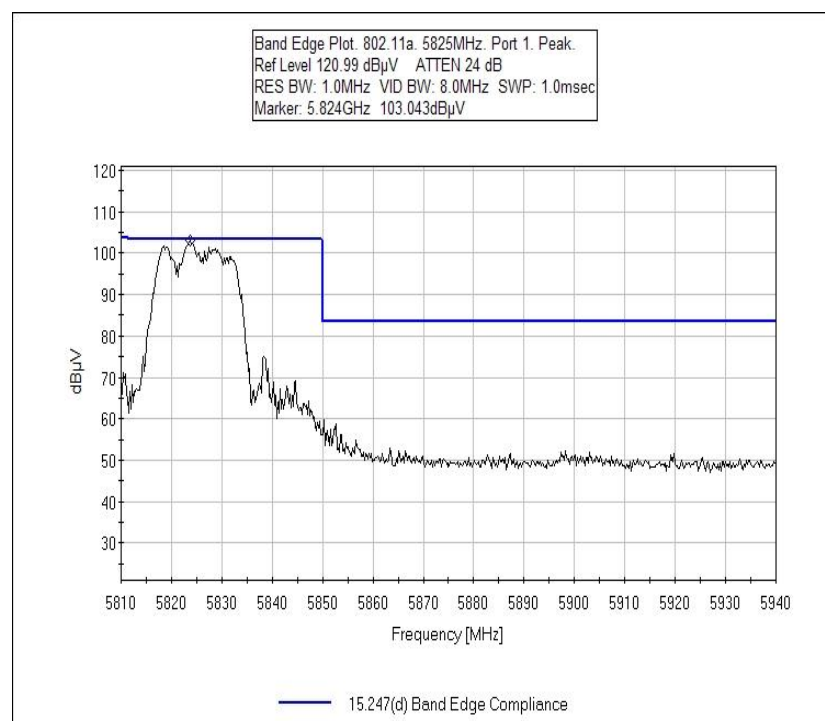
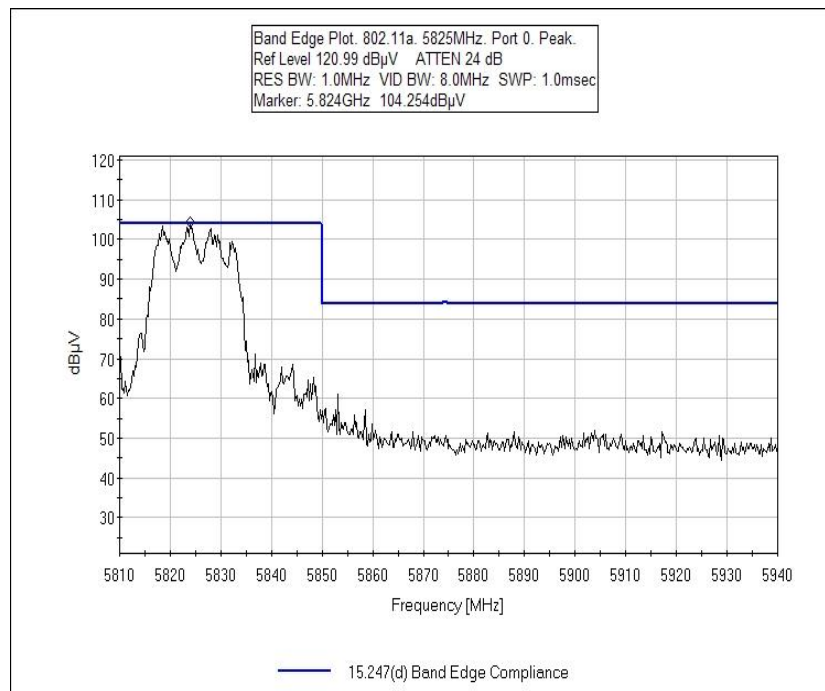
Integral Antenna Gain: 4.4 dBi max at 5GHz band

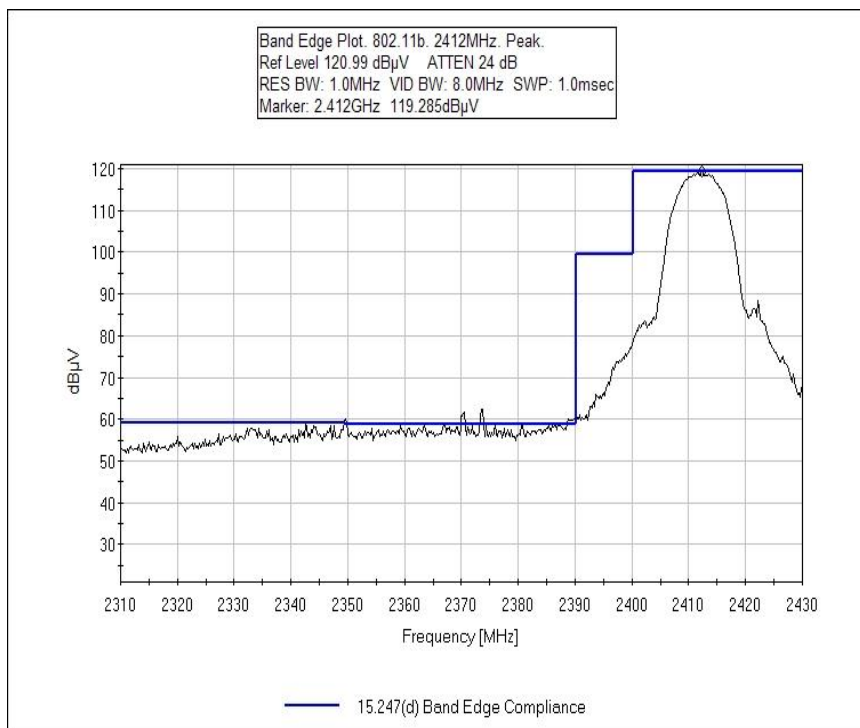
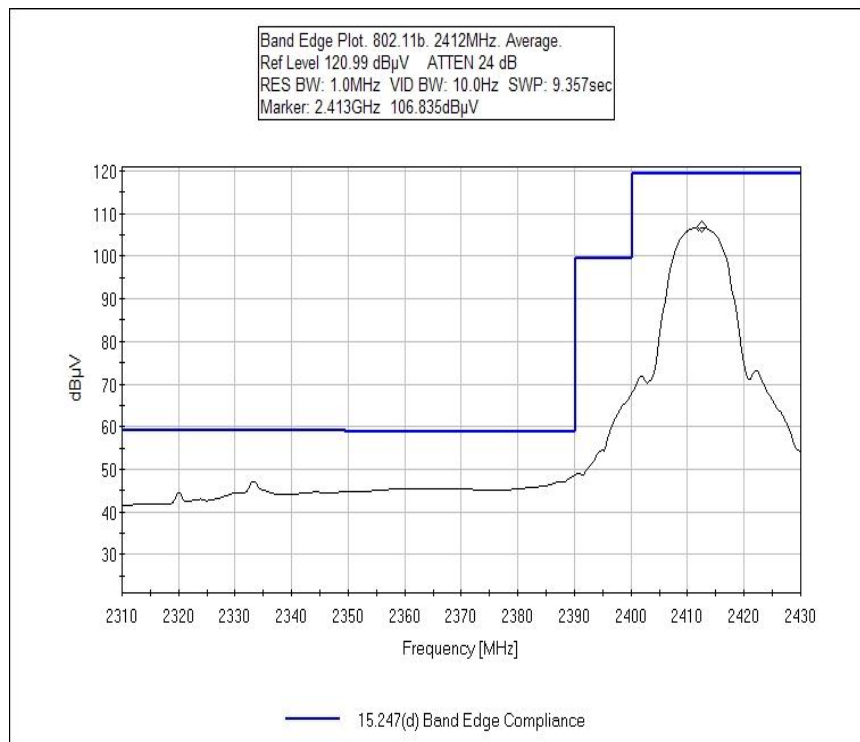
Engineer Name: S. Yamamoto

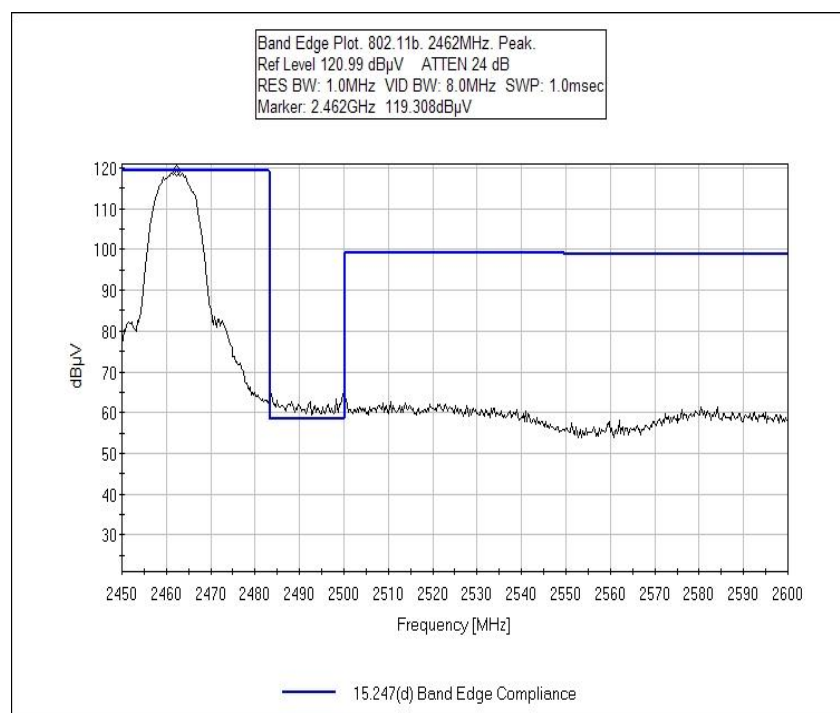
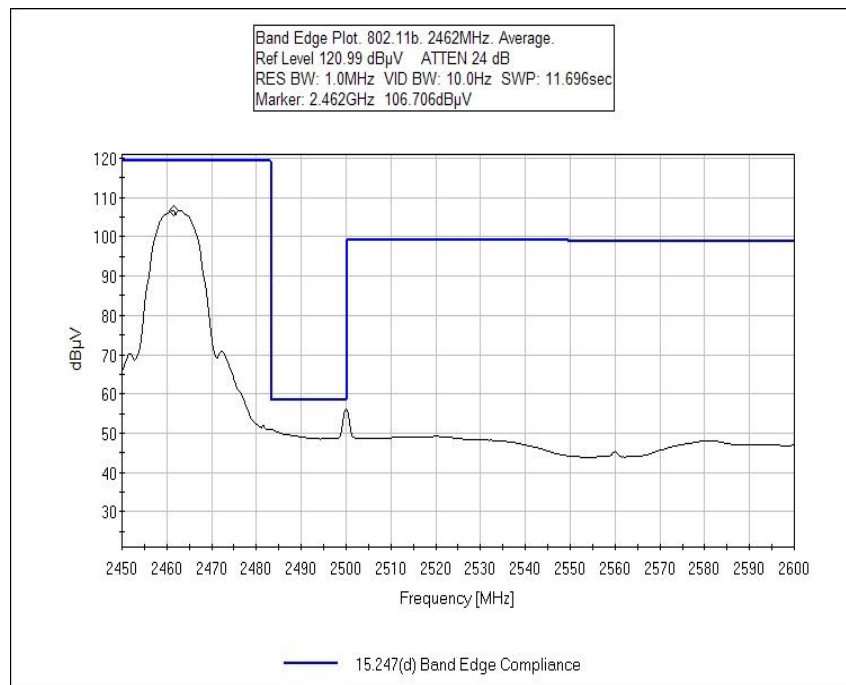
| Test Equipment |                   |                     |                |           |           |
|----------------|-------------------|---------------------|----------------|-----------|-----------|
| Asset/Serial # | Description       | Model               | Manufacturer   | Cal Date  | Cal Due   |
| 02672          | Spectrum Analyzer | E4446A              | Agilent        | 8/9/2010  | 8/9/2012  |
| 01646          | Horn Antenna      | 3115                | Emco           | 8/18/2010 | 8/18/2012 |
| 00786          | Preamp            | 83017A              | HP             | 8/5/2010  | 8/5/2012  |
| 03239          | Cable             | 32022-2-29094K-24TC | Astrolab       | 8/30/2011 | 8/30/2013 |
| P05421         | Cable             | Sucoflex 104A       | Huber & Suhner | 2/12/2010 | 2/12/2012 |
| P06081         | Cable             | 74Z-0-0-21/NCM 100  | Huber & Suhner | 4/28/2011 | 4/28/2013 |

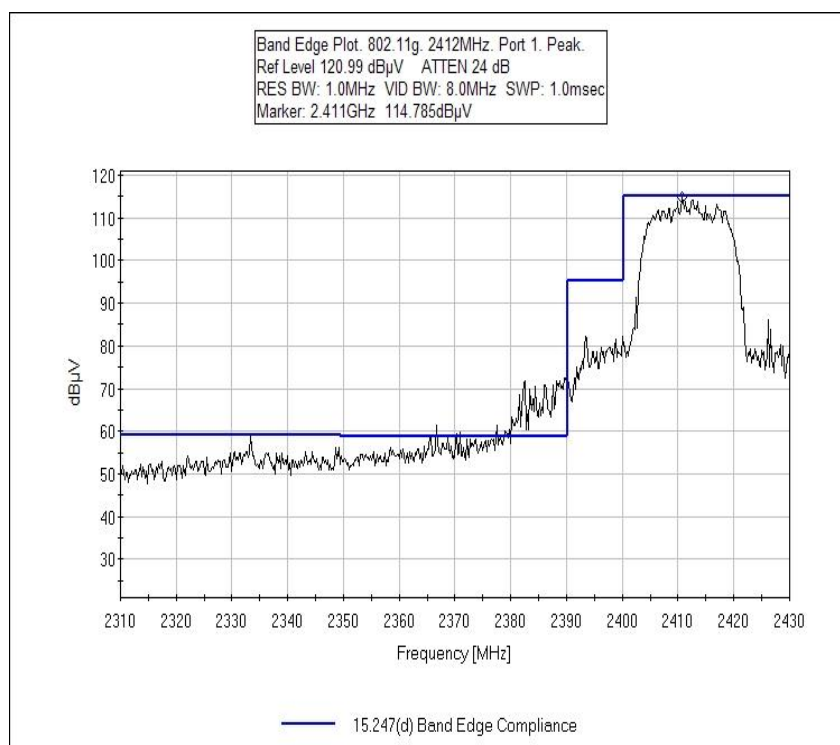
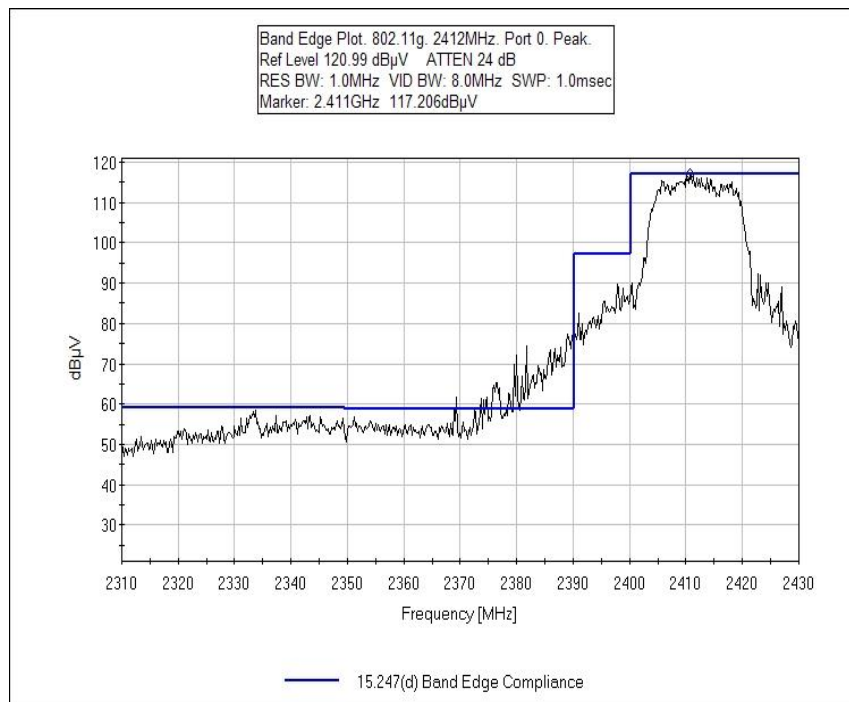
### Test Plots

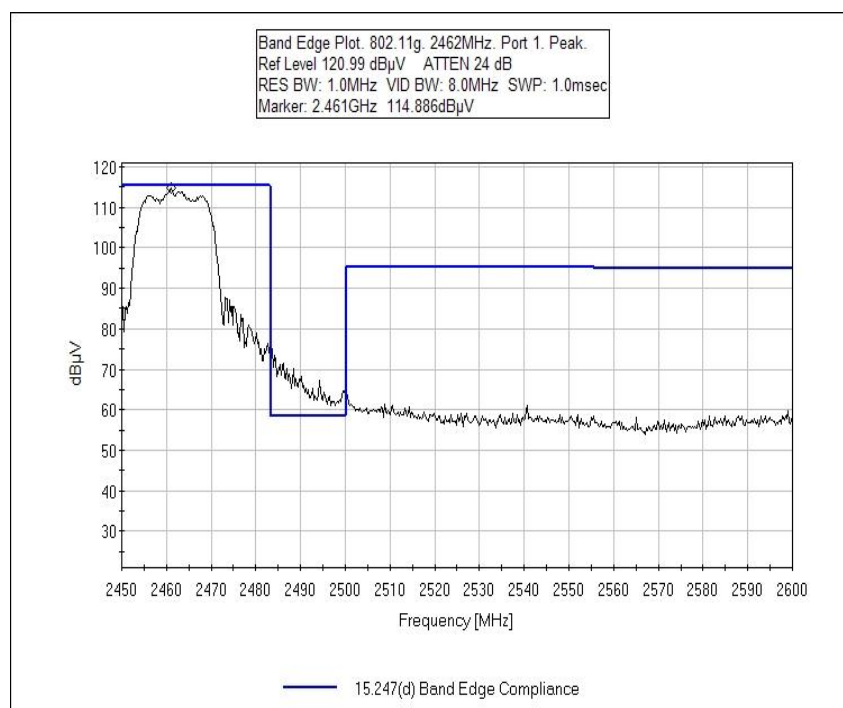
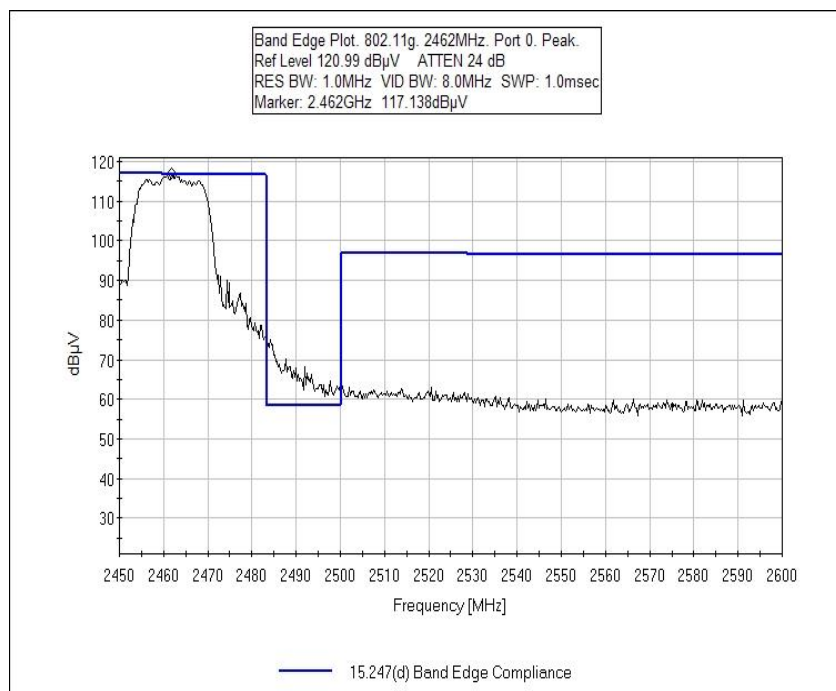


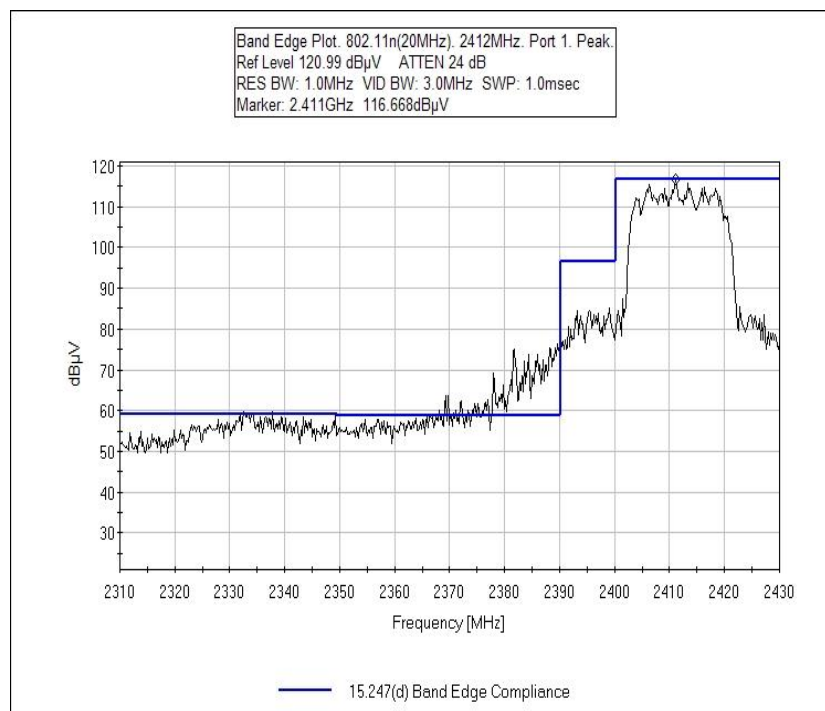
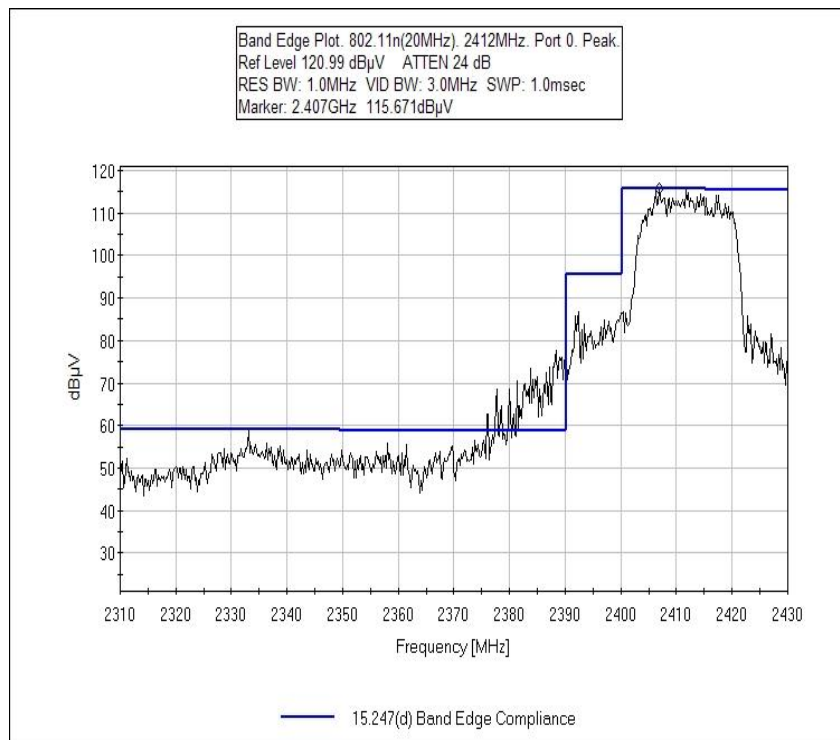


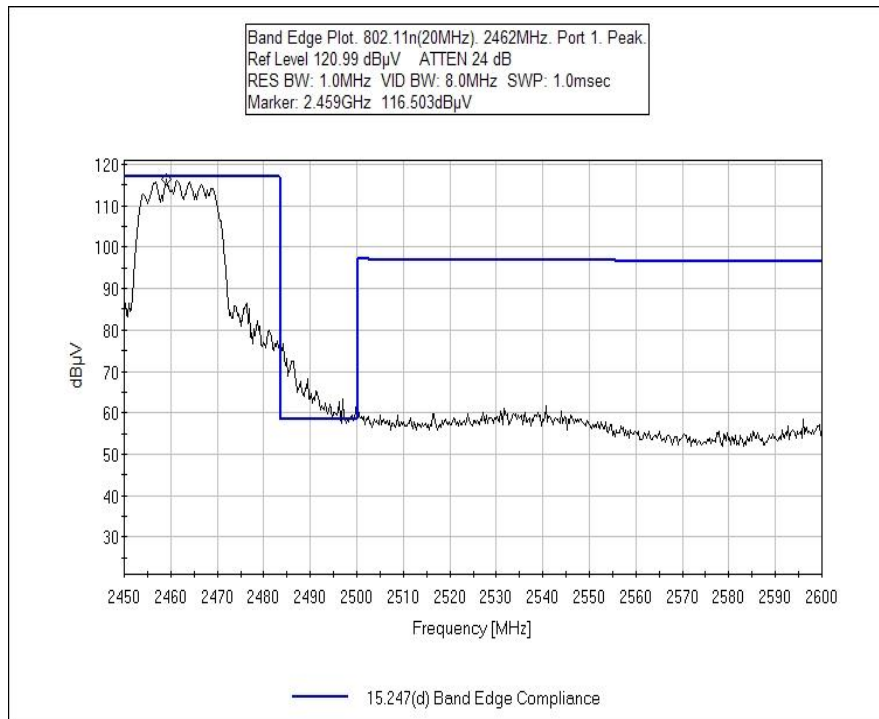
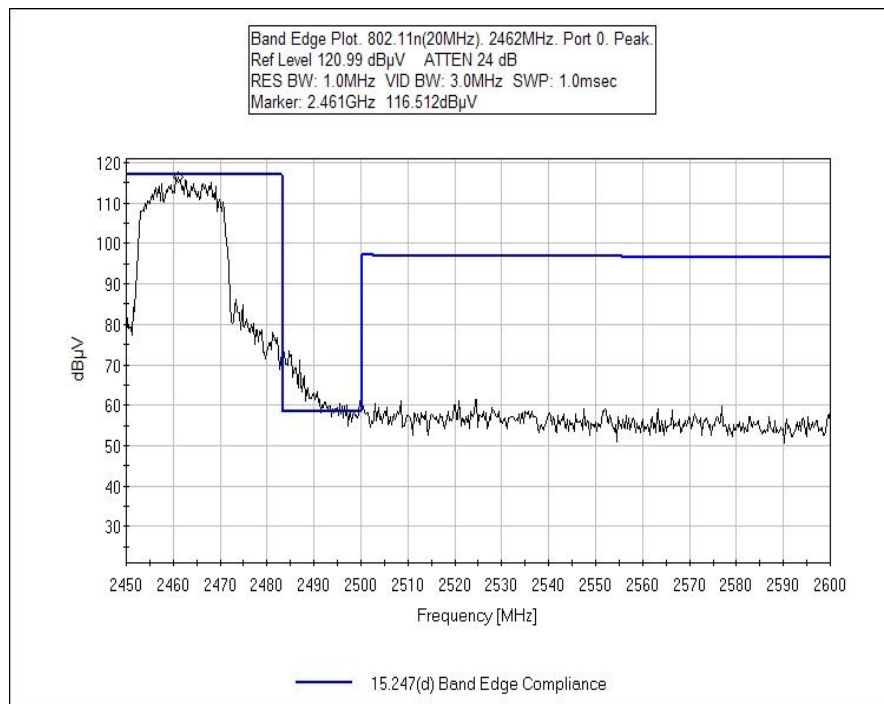


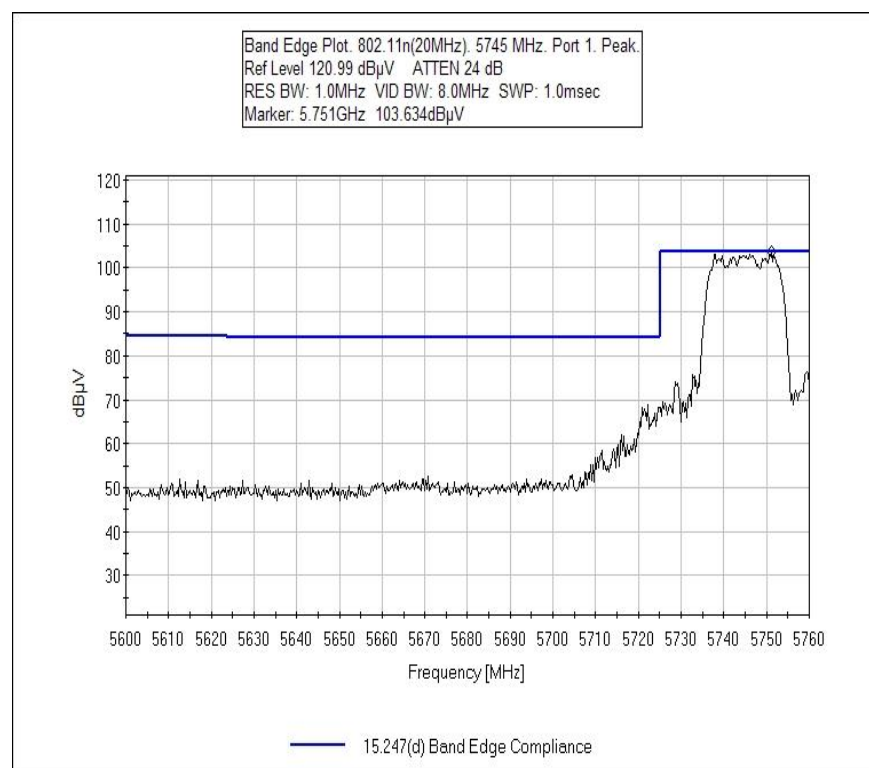
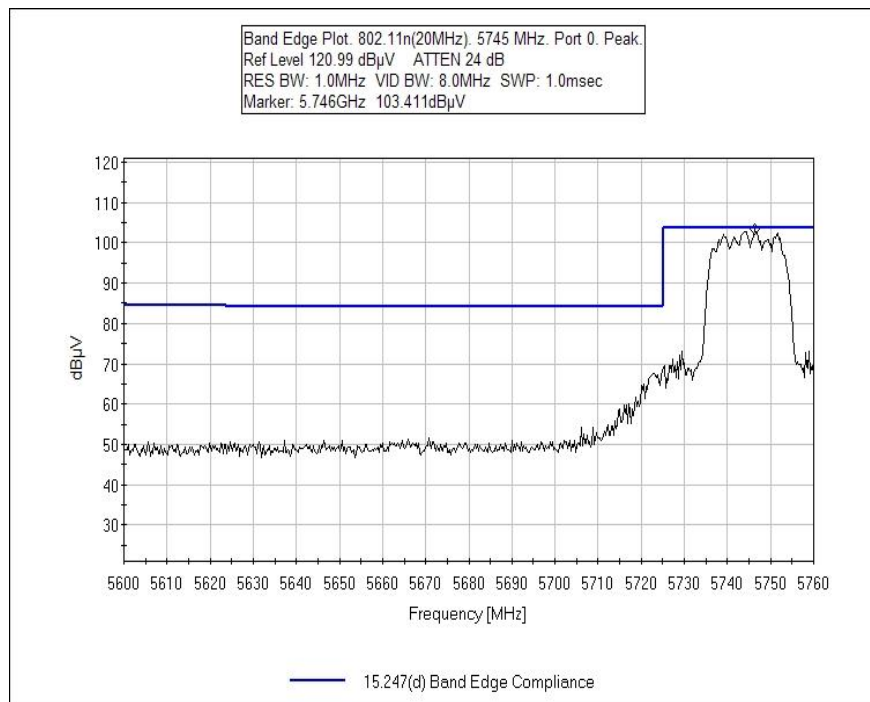


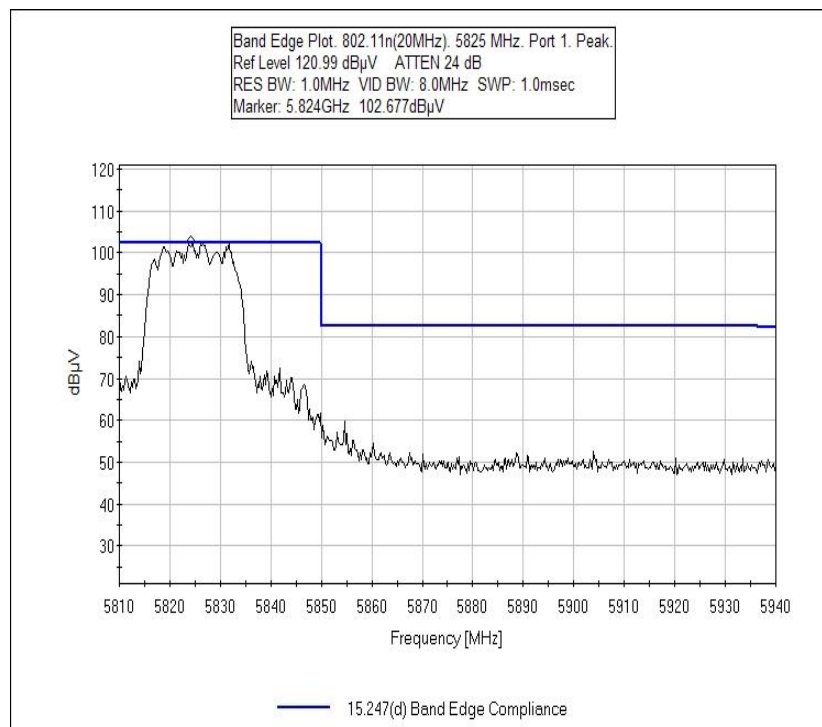
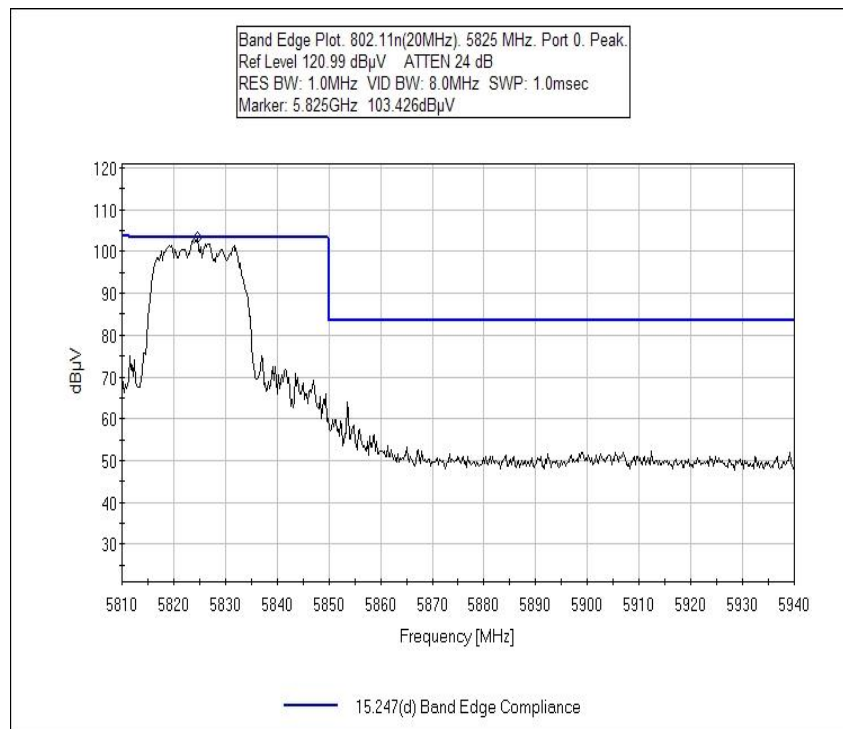


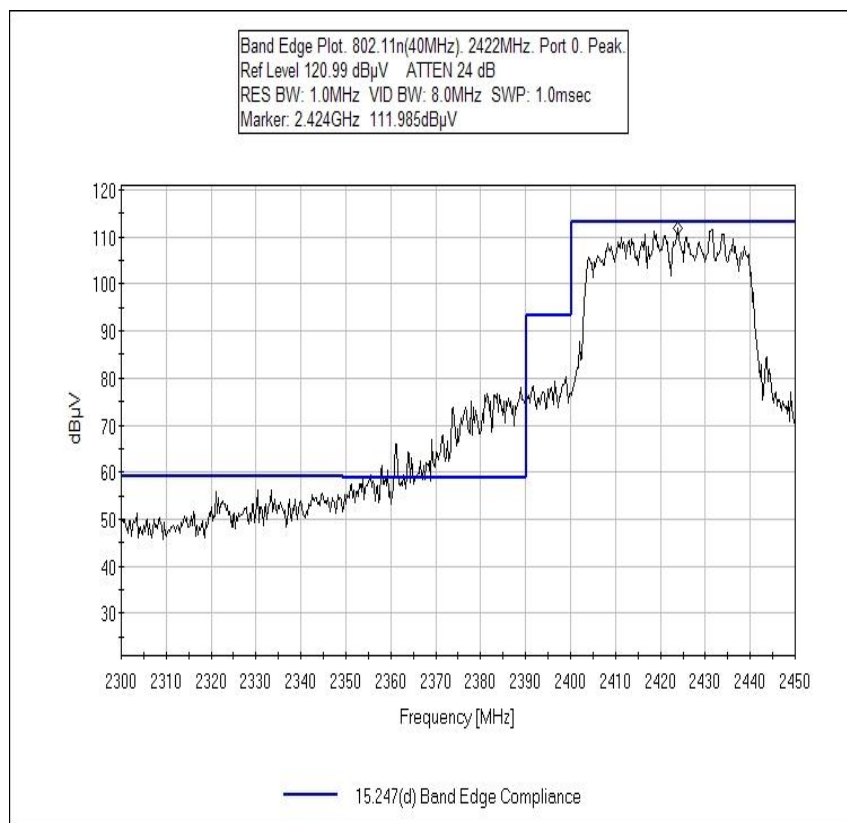
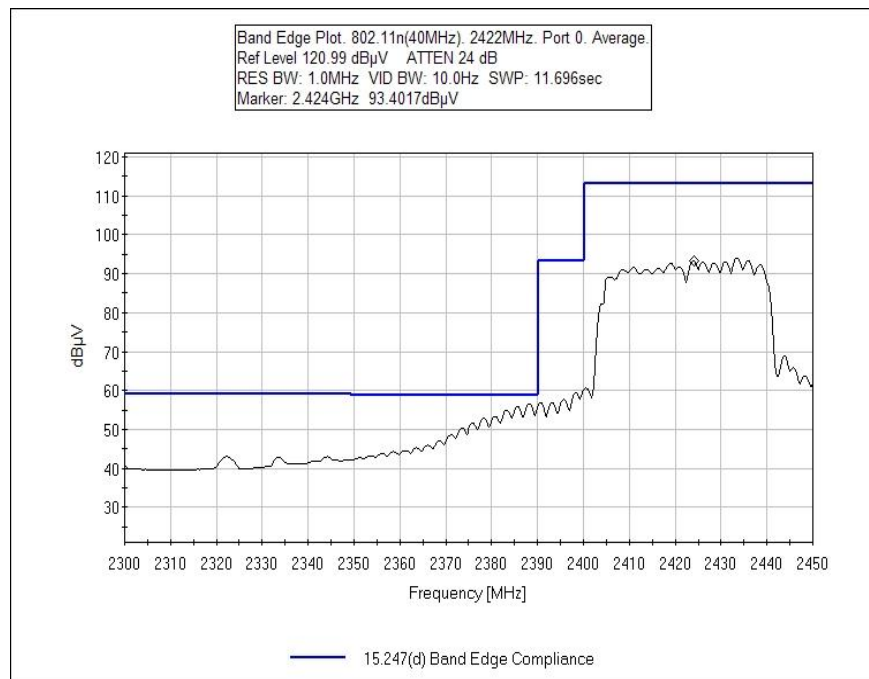


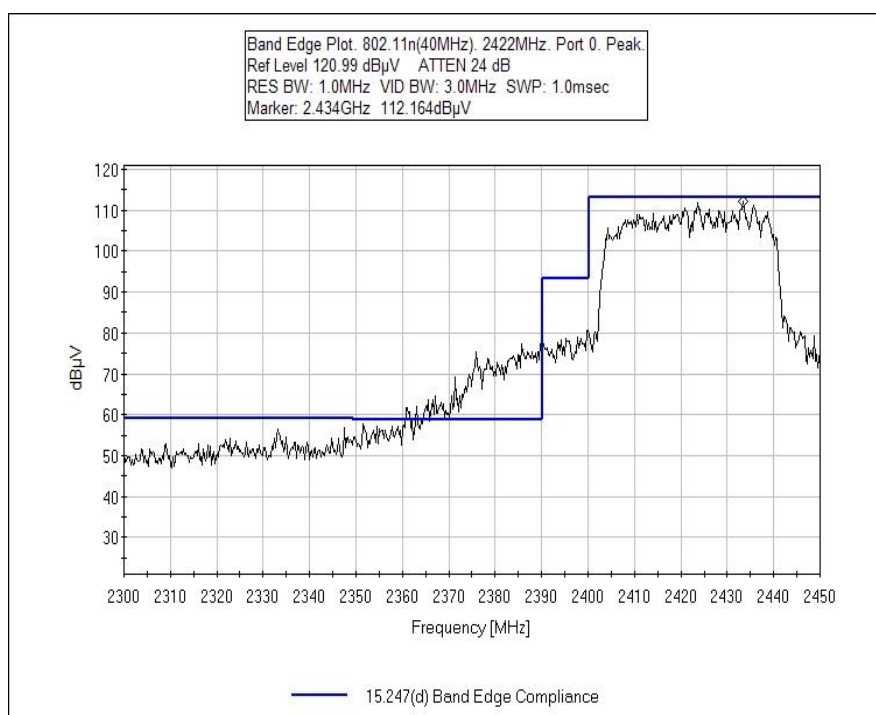
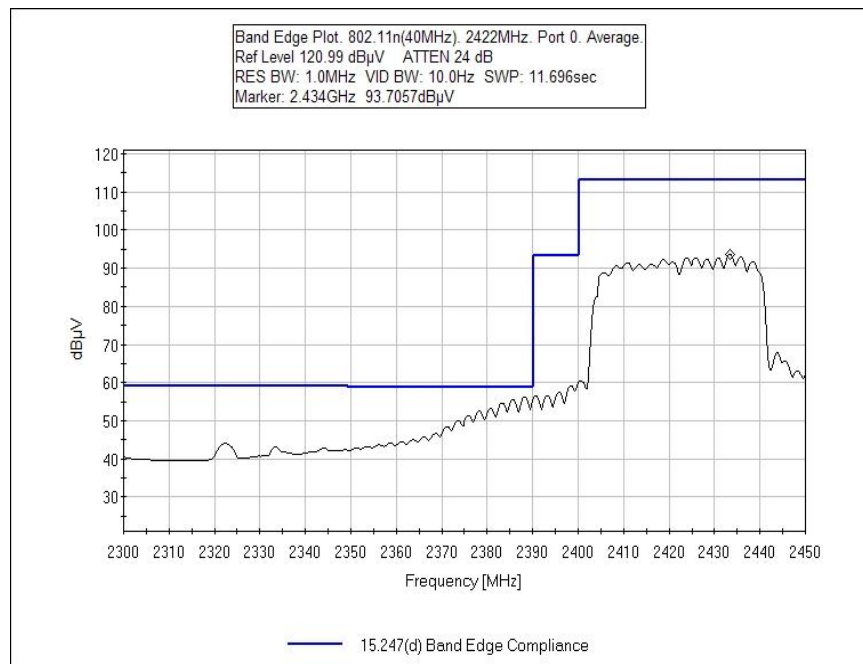


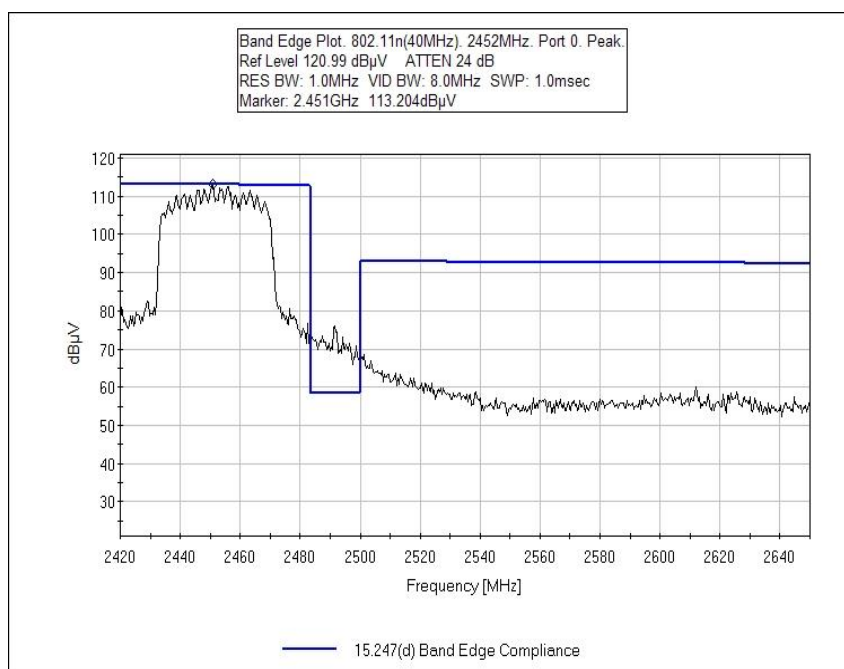
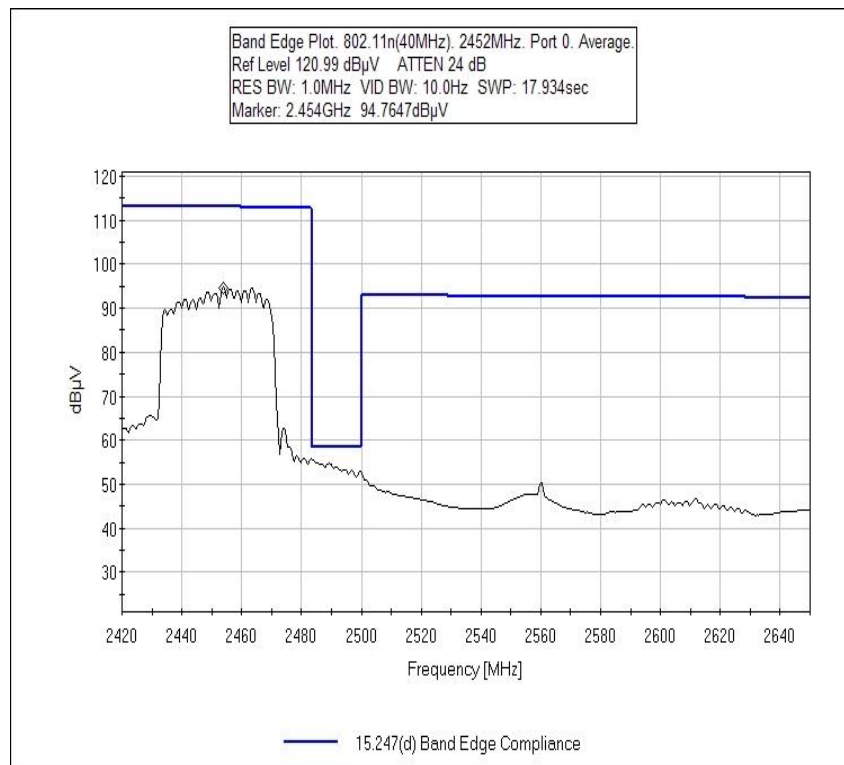


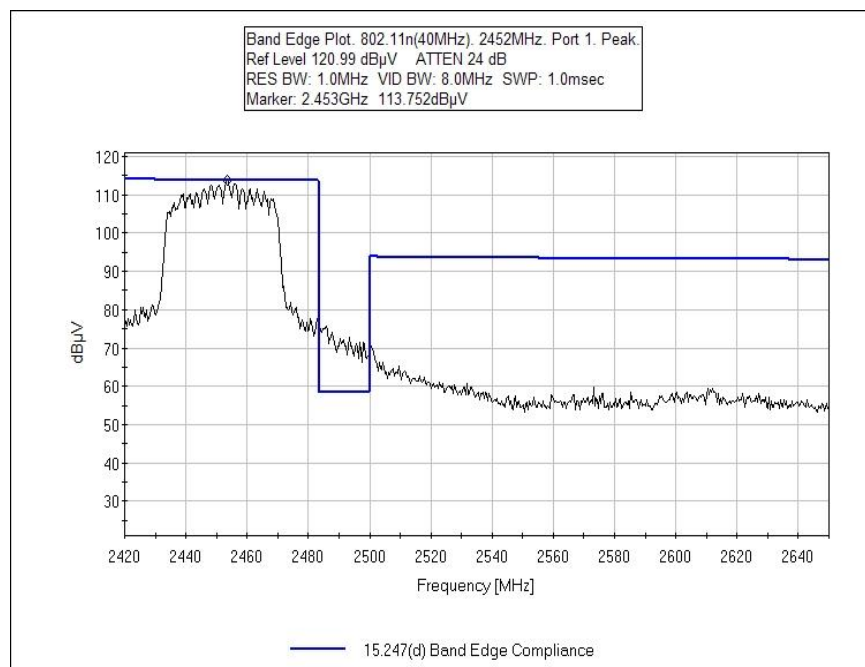
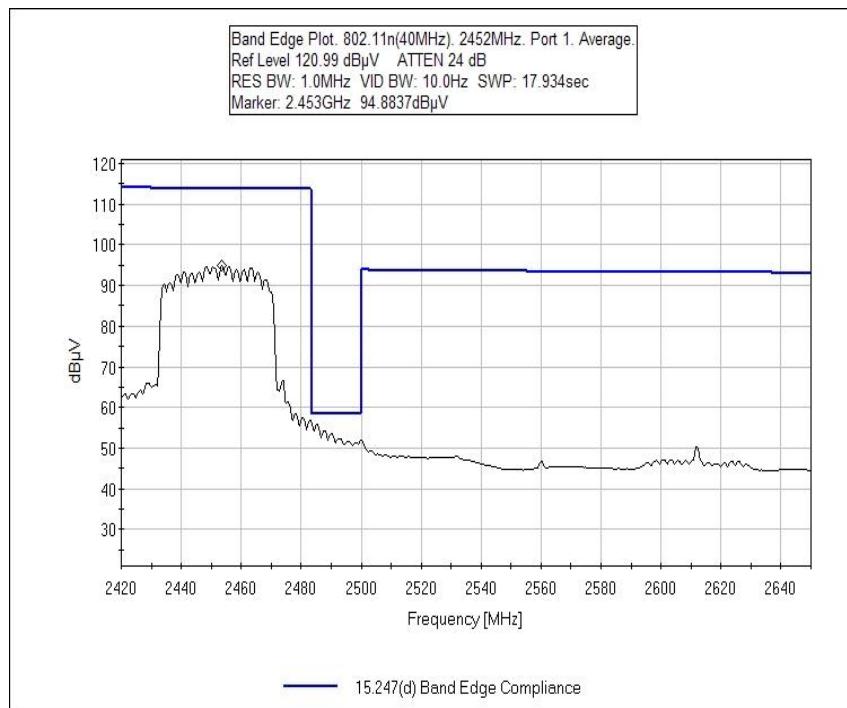


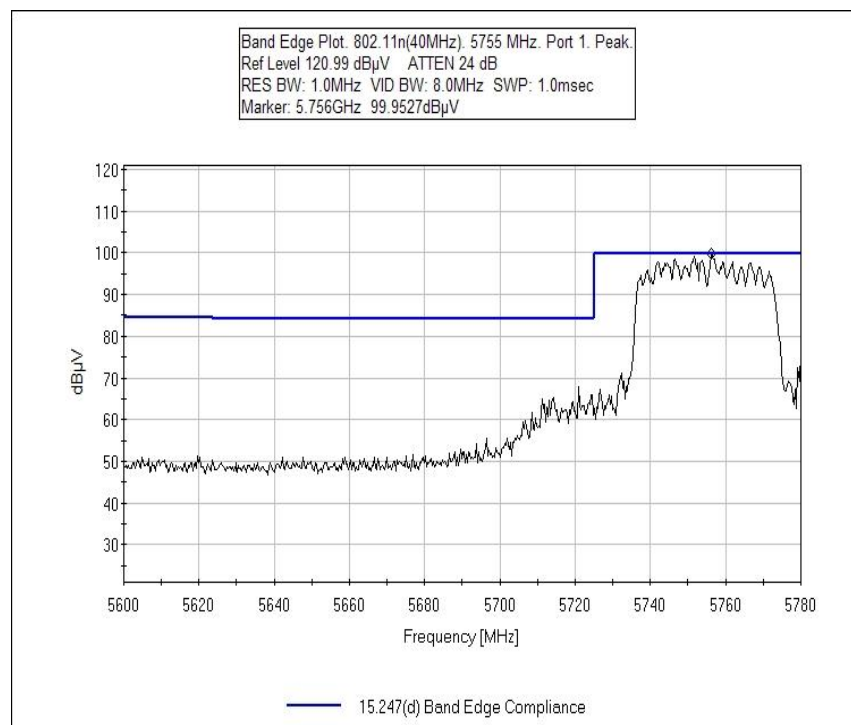
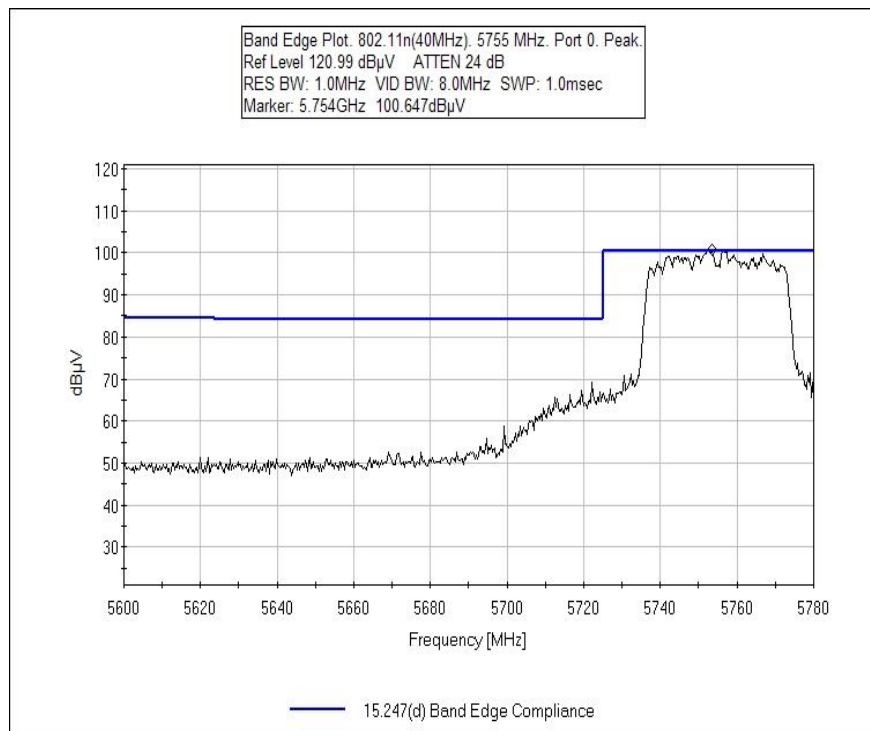


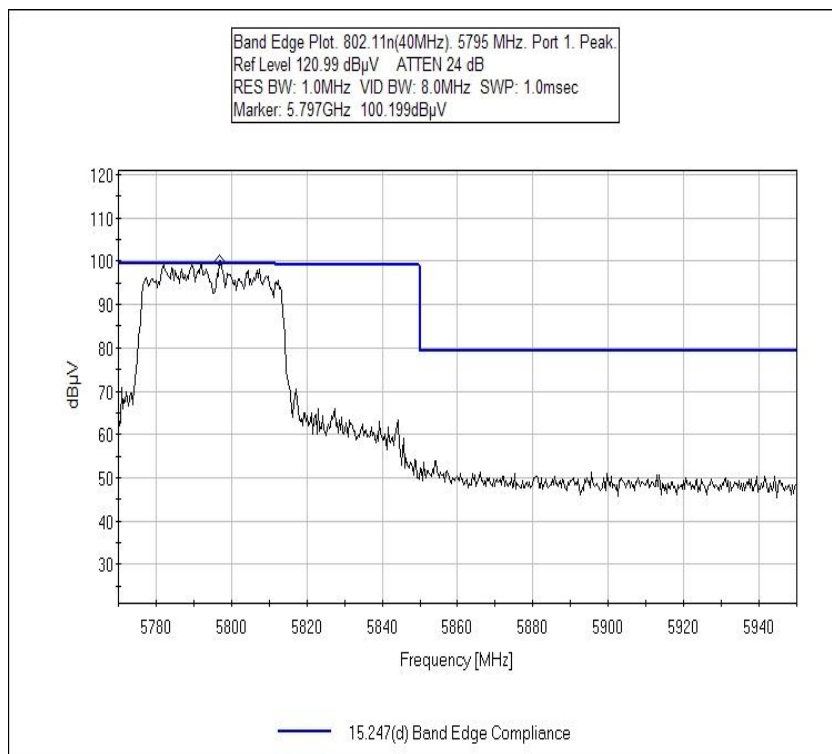
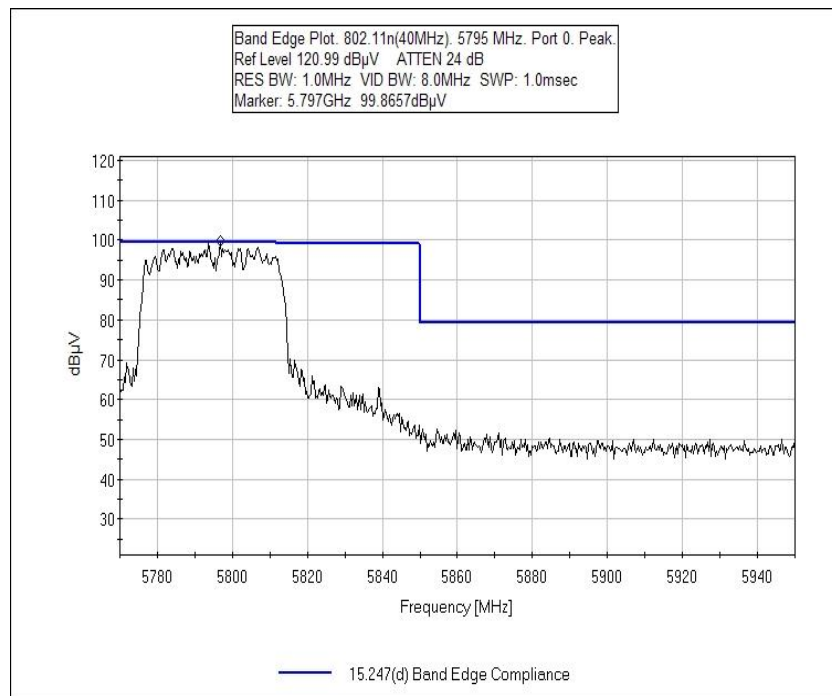


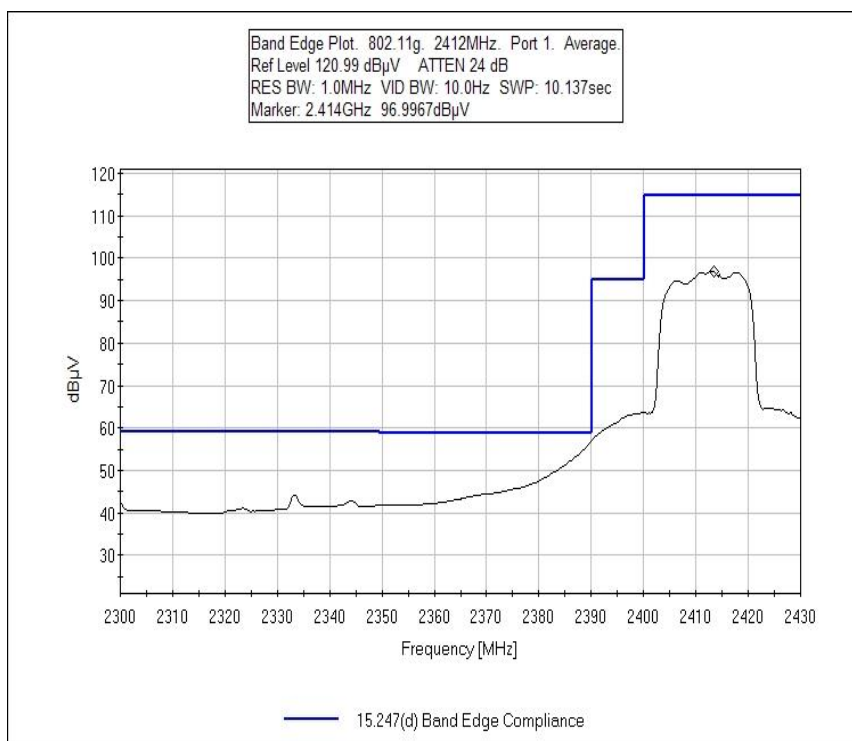
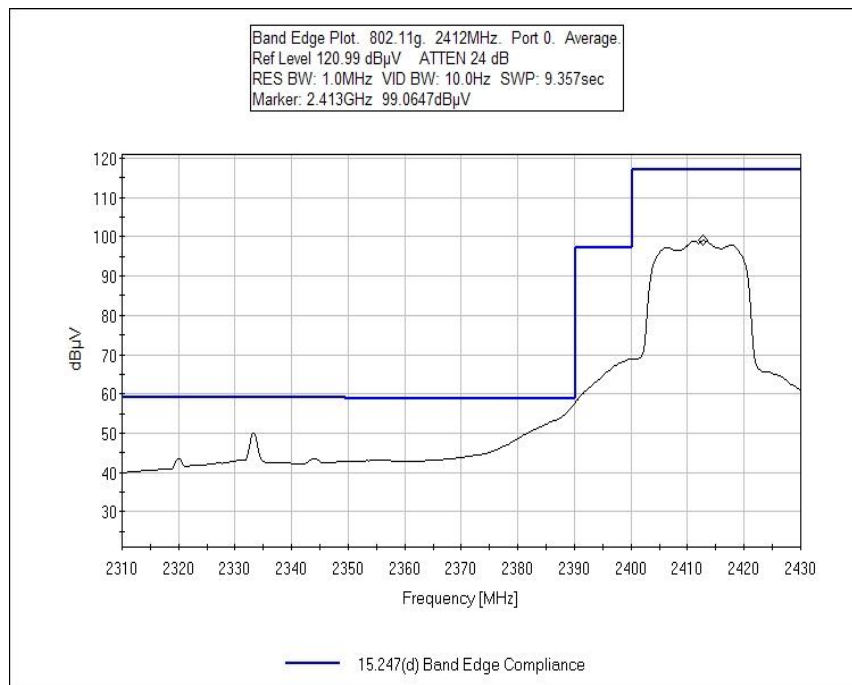


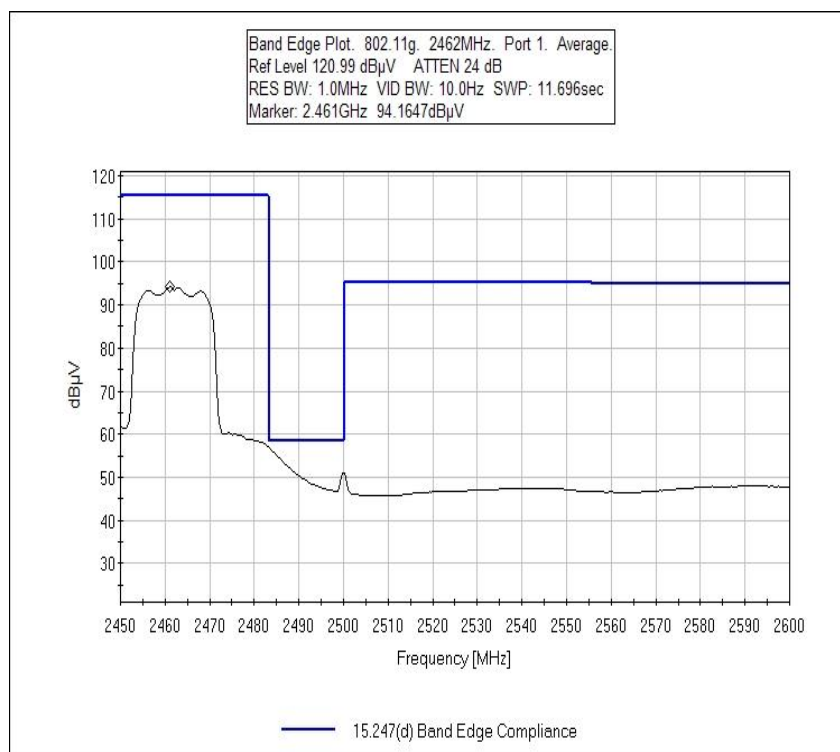
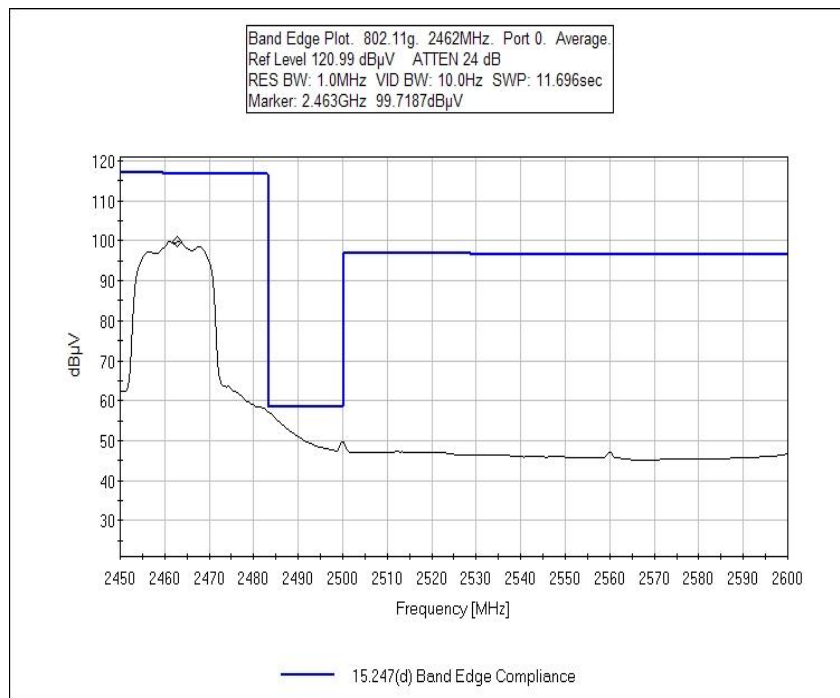


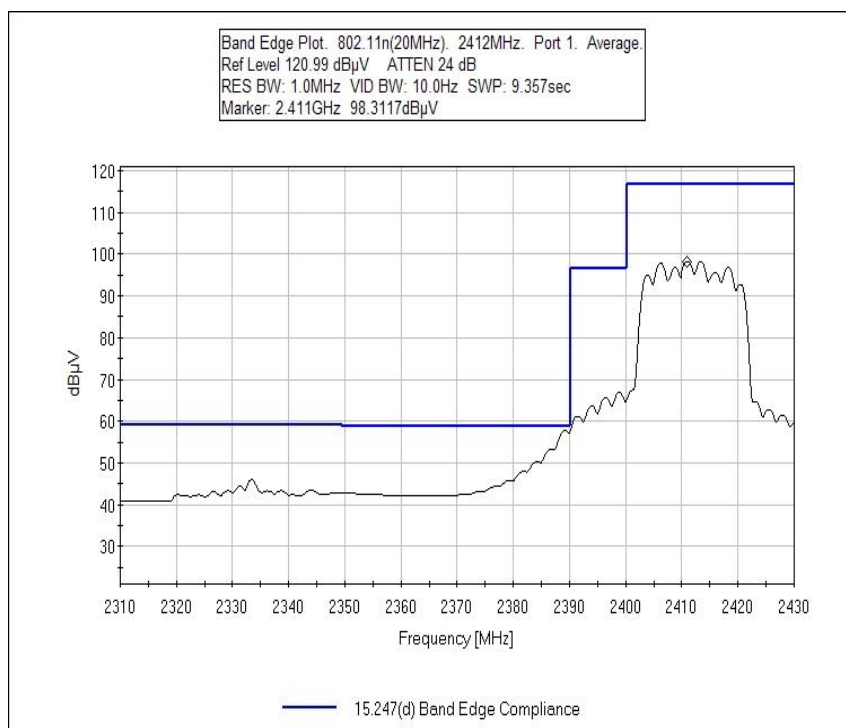
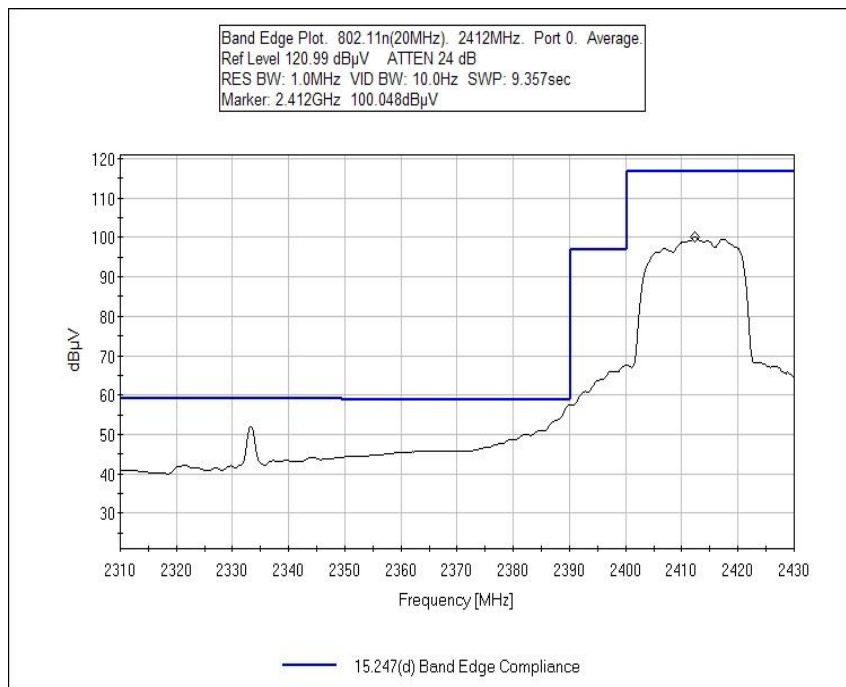


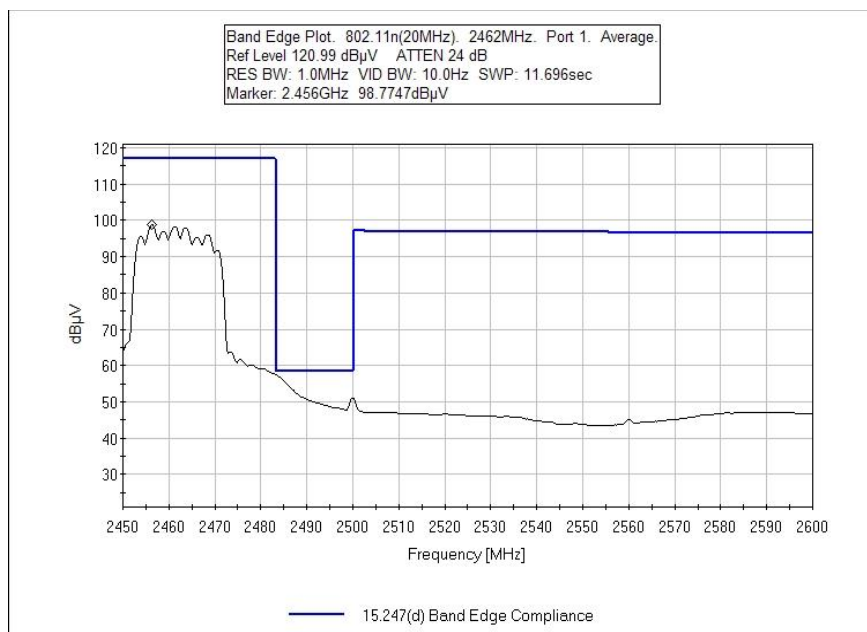
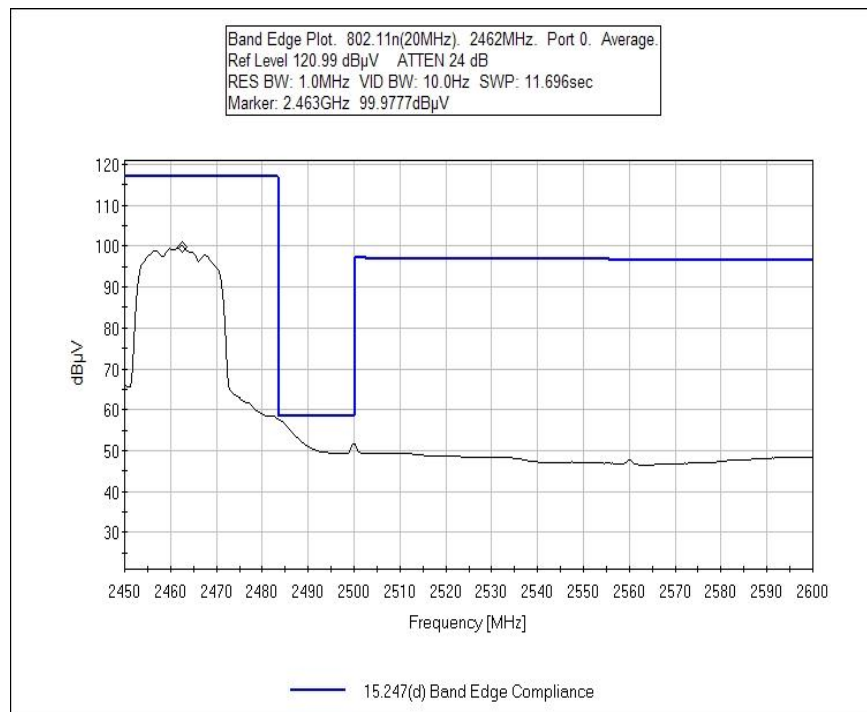












**Test Setup Photos**



## 15.247(d) Field Strength of Spurious Emissions

### Test Data Sheets

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 13:38:31  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 1  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

#### **Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.

Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 2412MHz to 2462MHz

Transmit Frequencies used for this data sheet: 2412MHz (Low), 2437MHz (Middle), and 2462MHz (High). Channels 1, 6, and 11. 802.11b (11 Mbps)

Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band

Frequency range of measurement = 9 kHz to 25GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.

15.205(a) and non-15.205(a) data contained within this sheet. All are within the 15.209(a) limit.

Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

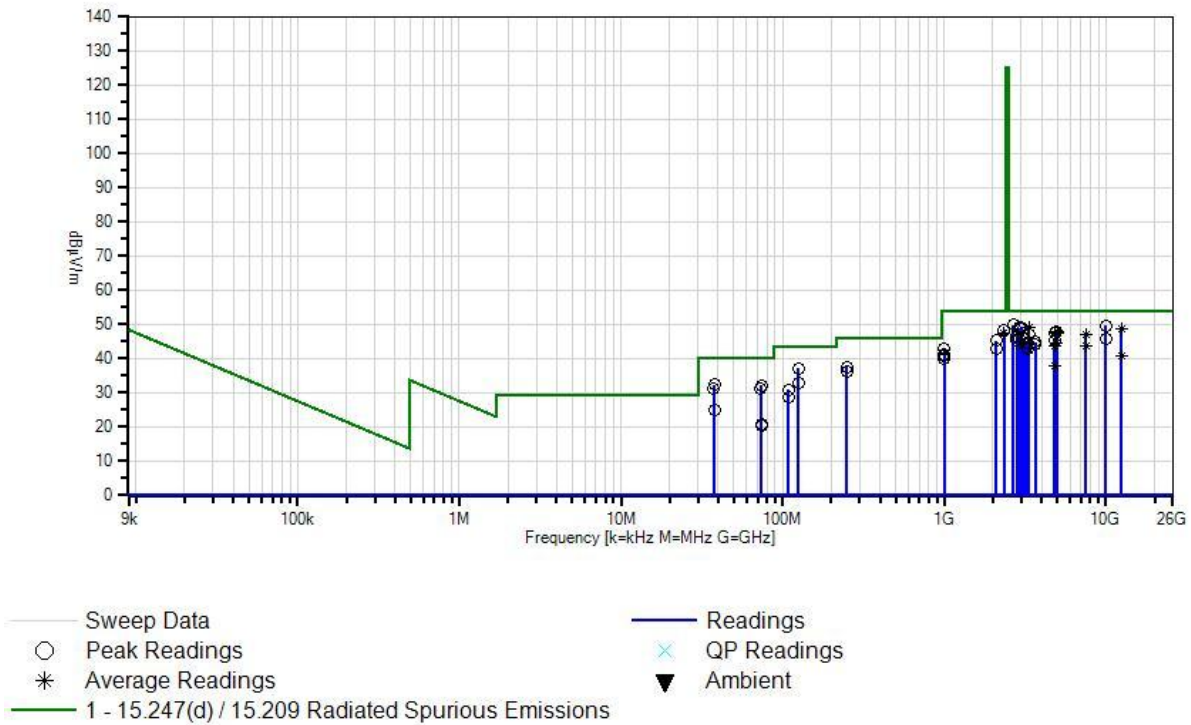
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 9999.966M             | 37.1       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7  | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 3  | 2999.984M             | 50.7       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5  | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 4  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 5  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 7  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 9  | 2999.985M             | 50.3       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5  | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 10 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 11 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 13 | 4923.958M             | 44.2       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 48.0         | 54.0         | -6.0   | Horiz |
| 14 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |
| 15 | 4999.978M<br>Ave      | 43.7       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |

|    |               |      |       |       |      |       |      |      |      |      |       |
|----|---------------|------|-------|-------|------|-------|------|------|------|------|-------|
| ^  | 4999.978M     | 46.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 17 | 2333.317M Ave | 52.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |               |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| ^  | 2333.317M     | 55.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |               |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| 19 | 4873.959M     | 43.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.5 | 54.0 | -6.5 | Horiz |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 20 | 7499.966M Ave | 38.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
|    |               |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |               |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| ^  | 7499.966M     | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |               |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |               |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 22 | 3333.321M     | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |               |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 23 | 2799.984M     | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |               |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 24 | 37.902M       | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 25 | 74.008M       | 51.8 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 26 | 3099.985M     | 47.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.7 | +1.5  |      |      |      |      |       |
|    |               |      | -37.8 | +30.2 | +0.7 |       |      |      |      |      |       |
| 27 | 9999.950M     | 33.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
|    |               |      | +0.0  | +0.8  | +7.3 | +2.7  |      |      |      |      |       |
|    |               |      | -35.9 | +37.2 | +0.5 |       |      |      |      |      |       |
| 28 | 3100.032M     | 47.2 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.9 | 54.0 | -8.1 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.7 | +1.5  |      |      |      |      |       |
|    |               |      | -37.8 | +30.2 | +0.7 |       |      |      |      |      |       |
| 29 | 2899.988M     | 47.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.6 | +1.4  |      |      |      |      |       |
|    |               |      | -37.9 | +29.7 | +1.1 |       |      |      |      |      |       |
| 30 | 249.998M      | 49.7 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 31 | 2799.982M     | 44.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |               |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 32 | 4823.959M     | 41.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.4 | 54.0 | -8.6 | Horiz |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.1 | +33.0 | +0.4 |       |      |      |      |      |       |

|    |                  |      |                       |                       |                      |               |      |      |      |       |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
| 34 | 2099.989M        | 50.5 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 45.3 | 54.0 | -8.7  | Horiz |
| 35 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
| 36 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
| 37 | 4923.957M<br>Ave | 41.0 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 44.8 | 54.0 | -9.2  | Vert  |
| ^  | 4923.957M        | 48.9 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 52.7 | 54.0 | -1.3  | Vert  |
| 39 | 3199.985M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.7 | 54.0 | -9.3  | Vert  |
| 40 | 3299.985M        | 45.3 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.6 | 54.0 | -9.4  | Vert  |
| 41 | 3666.655M        | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 42 | 249.998M         | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 43 | 7499.965M<br>Ave | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M        | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 45 | 4873.953M<br>Ave | 39.8 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 43.5 | 54.0 | -10.5 | Vert  |
| ^  | 4873.953M        | 47.9 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 51.6 | 54.0 | -2.4  | Vert  |
| 47 | 3199.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.4 | 54.0 | -10.6 | Horiz |
| 48 | 125.007M         | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 49 | 2099.991M        | 48.3 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 43.1 | 54.0 | -10.9 | Vert  |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 50 | 3299.992M             | 43.7 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.0 | 54.0 | -11.0 | Horiz |
| 51 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 52 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 53 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 54 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 56 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 57 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 58 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 59 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 60 | 4823.972M<br>Ave      | 34.2 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 37.8 | 54.0 | -16.2 | Vert  |
| ^  | 4823.972M             | 45.1 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 48.7 | 54.0 | -5.3  | Vert  |
| 62 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 63 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 13:38:31 Motorola Mobility, Inc. WO#: 92800  
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 1 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 14:31:39  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 2  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 2412MHz to 2462MHz</p> <p>Transmit Frequencies used for this data sheet: 2412MHz (Low), 2437MHz (Middle), and 2462MHz (High). Channels 1, 6, and 11. 802.11g (6 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 25GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>15.205(a) and non-15.205(a) data contained within this sheet. All are within the 15.209(a) limit.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

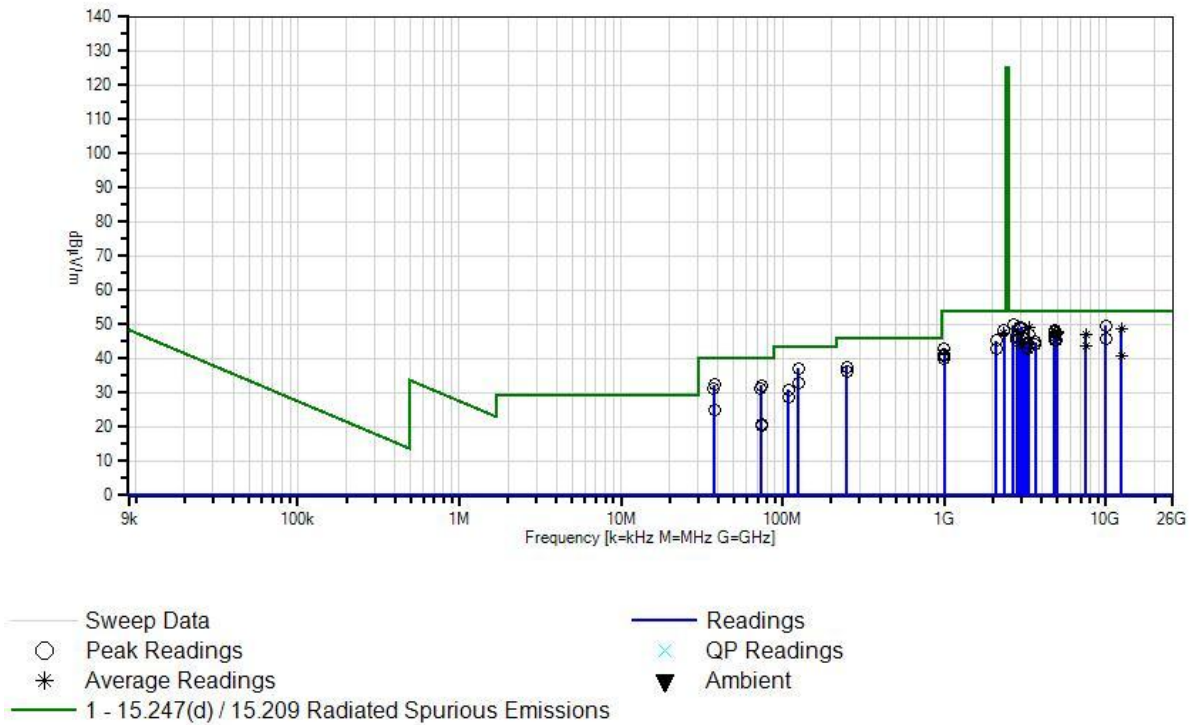
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 9999.966M             | 37.1       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7  | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 3  | 2999.984M             | 50.7       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5  | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 4  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 5  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 7  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 9  | 2999.985M             | 50.3       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5  | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 10 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 11 | 4823.988M             | 44.9       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 48.5         | 54.0         | -5.5   | Horiz |
| 12 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 14 | 4823.992M             | 44.4       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 48.0         | 54.0         | -6.0   | Vert  |
| 15 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |

|    |                  |      |                       |                       |                      |               |      |      |      |      |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|------|-------|
| 16 | 4923.998M        | 43.9 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 47.7 | 54.0 | -6.3 | Vert  |
| 17 | 4999.978M<br>Ave | 43.7 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 4999.978M        | 46.5 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
| 19 | 2333.317M<br>Ave | 52.4 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 2333.317M        | 55.6 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
| 21 | 7499.966M<br>Ave | 38.4 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
| ^  | 7499.966M        | 42.6 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
| 23 | 3333.321M        | 47.6 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
| 24 | 2799.984M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
| 25 | 4873.995M        | 42.8 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 46.5 | 54.0 | -7.5 | Vert  |
| 26 | 37.902M          | 44.5 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.5<br>+0.0 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
| 27 | 74.008M          | 51.8 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
| 28 | 3099.985M        | 47.3 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
| 29 | 9999.950M        | 33.4 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
| 30 | 3100.032M        | 47.2 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 45.9 | 54.0 | -8.1 | Horiz |
| 31 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
| 32 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |

|    |                  |      |       |       |      |       |      |      |      |       |       |
|----|------------------|------|-------|-------|------|-------|------|------|------|-------|-------|
| 33 | 2799.982M        | 44.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.5 | 54.0 | -8.5  | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |       |       |
|    |                  |      | -37.8 | +29.4 | +4.1 |       |      |      |      |       |       |
| 34 | 4923.823M        | 41.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.4 | 54.0 | -8.6  | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |       |       |
|    |                  |      | -37.1 | +33.2 | +0.4 |       |      |      |      |       |       |
| 35 | 4874.133M        | 41.7 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.4 | 54.0 | -8.6  | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |       |       |
|    |                  |      | -37.1 | +33.1 | +0.4 |       |      |      |      |       |       |
| 36 | 2099.989M        | 50.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.3 | 54.0 | -8.7  | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.0 | +1.2  |      |      |      |       |       |
|    |                  |      | -37.9 | +28.1 | +0.0 |       |      |      |      |       |       |
| 37 | 73.320M          | 51.2 | +0.1  | -27.9 | +1.4 | +6.5  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 38 | 37.609M          | 43.2 | +0.1  | -27.8 | +1.0 | +14.7 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 39 | 3666.656M        | 44.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
|    |                  |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |       |       |
|    |                  |      | -37.4 | +31.3 | +0.4 |       |      |      |      |       |       |
| 40 | 3199.985M        | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.7 | 54.0 | -9.3  | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.8 | +1.5  |      |      |      |       |       |
|    |                  |      | -37.8 | +30.4 | +0.6 |       |      |      |      |       |       |
| 41 | 3299.985M        | 45.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.6 | 54.0 | -9.4  | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |       |       |
|    |                  |      | -37.7 | +30.6 | +0.6 |       |      |      |      |       |       |
| 42 | 3666.655M        | 43.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
|    |                  |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |       |       |
|    |                  |      | -37.4 | +31.3 | +0.4 |       |      |      |      |       |       |
| 43 | 249.998M         | 48.2 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 44 | 7499.965M<br>Ave | 35.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |       |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |       |       |
| ^  | 7499.965M        | 40.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |       |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |       |       |
| 46 | 3199.982M        | 44.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 43.4 | 54.0 | -10.6 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.8 | +1.5  |      |      |      |       |       |
|    |                  |      | -37.8 | +30.4 | +0.6 |       |      |      |      |       |       |
| 47 | 125.007M         | 46.4 | +0.2  | -27.8 | +1.9 | +12.1 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 48 | 2099.991M        | 48.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 43.1 | 54.0 | -10.9 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.0 | +1.2  |      |      |      |       |       |
|    |                  |      | -37.9 | +28.1 | +0.0 |       |      |      |      |       |       |
| 49 | 3299.992M        | 43.7 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 43.0 | 54.0 | -11.0 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |       |       |
|    |                  |      | -37.7 | +30.6 | +0.6 |       |      |      |      |       |       |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 50 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 51 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 52 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 53 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 55 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 56 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 57 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 58 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 59 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 60 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 14:31:39 Motorola Mobility, Inc. WO#: 92800  
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 2 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 14:53:11  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 3  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 2412MHz to 2462MHz</p> <p>Transmit Frequencies used for this data sheet: 2412MHz (Low), 2437MHz (Middle), and 2462MHz (High). Channels 1, 6, and 11. 802.11n(20MHz) (7.2 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 25GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>15.205(a) and non-15.205(a) data contained within this sheet. All are within the 15.209(a) limit.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8     | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|--------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB           | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4 | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 7230.733M             | 41.2       | +0.0<br>+0.0<br>-36.8 | +0.0<br>+0.6<br>+36.1 | +0.0<br>+6.3<br>+0.2 | +0.0<br>+2.3 | +0.0  | 49.9         | 54.0         | -4.1   | Vert  |
| 3  | 9999.966M             | 37.1       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7 | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 4  | 2999.984M             | 50.7       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 5  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 6  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 8  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 10 | 2999.985M             | 50.3       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 11 | 7315.940M             | 40.0       | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.9 | +0.0<br>+6.4<br>+0.2 | +0.0<br>+2.3 | +0.0  | 48.7         | 54.0         | -5.3   | Horiz |
| 12 | 7310.730M             | 40.1       | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.9 | +0.0<br>+6.3<br>+0.2 | +0.0<br>+2.3 | +0.0  | 48.7         | 54.0         | -5.3   | Vert  |
| 13 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3 | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 14 | 7383.890M             | 39.7       | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.8 | +0.0<br>+6.4<br>+0.1 | +0.0<br>+2.3 | +0.0  | 48.2         | 54.0         | -5.8   | Vert  |
| 15 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8 | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |

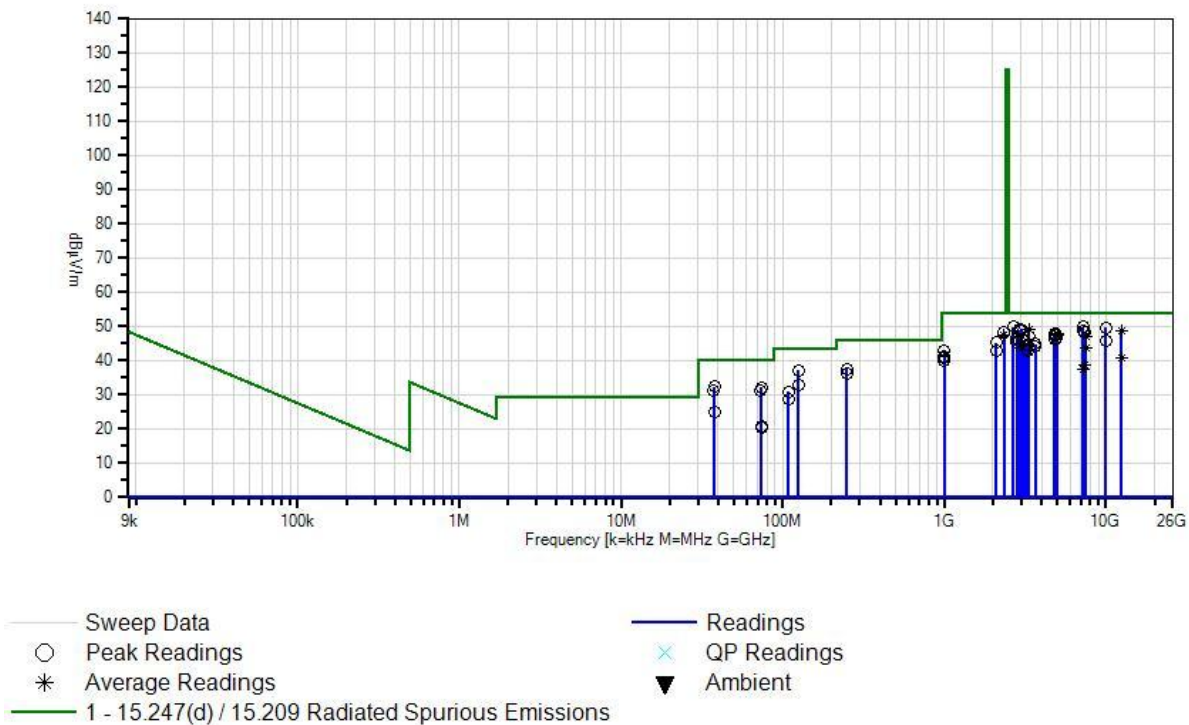
|    |           |      |       |       |      |       |      |      |      |      |       |
|----|-----------|------|-------|-------|------|-------|------|------|------|------|-------|
| ^  | 4999.977M | 47.0 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.9 | 54.0 | -3.1 | Vert  |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 17 | 4822.330M | 44.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.9 | 54.0 | -6.1 | Horiz |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.0 | +0.4 |       |      |      |      |      |       |
| 18 | 124.998M  | 50.8 | +0.2  | -27.8 | +1.9 | +12.1 | +0.0 | 37.2 | 43.5 | -6.3 | Vert  |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |           |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 19 | 4999.978M | 43.7 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    | Ave       |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| ^  | 4999.978M | 46.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 21 | 2333.317M | 52.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    | Ave       |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |           |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| ^  | 2333.317M | 55.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
|    |           |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |           |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| 23 | 4872.870M | 43.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Vert  |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 24 | 4824.530M | 43.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.5 | 54.0 | -6.5 | Vert  |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.0 | +0.4 |       |      |      |      |      |       |
| 25 | 4923.820M | 43.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.4 | 54.0 | -6.6 | Vert  |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.2 | +0.4 |       |      |      |      |      |       |
| 26 | 7499.966M | 38.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
|    | Ave       |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |           |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| ^  | 7499.966M | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |           |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |           |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 28 | 3333.321M | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |           |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |           |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 29 | 2799.984M | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |           |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |           |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 30 | 4926.810M | 42.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.7 | 54.0 | -7.3 | Horiz |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.2 | +0.4 |       |      |      |      |      |       |
| 31 | 37.902M   | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |           |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 32 | 4869.700M | 42.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.2 | 54.0 | -7.8 | Horiz |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |

|    |                  |      |                       |                       |                      |               |      |      |      |       |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 74.008M          | 51.8 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 32.1 | 40.0 | -7.9  | Vert  |
| 34 | 3099.985M        | 47.3 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 46.0 | 54.0 | -8.0  | Vert  |
| 35 | 9999.950M        | 33.4 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7  | +0.0 | 46.0 | 54.0 | -8.0  | Vert  |
| 36 | 3100.032M        | 47.2 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 45.9 | 54.0 | -8.1  | Horiz |
| 37 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3  | Vert  |
| 38 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4  | Vert  |
| 39 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5  | Vert  |
| 40 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
| 41 | 2099.989M        | 50.5 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 45.3 | 54.0 | -8.7  | Horiz |
| 42 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
| 43 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
| 44 | 3199.985M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.7 | 54.0 | -9.3  | Vert  |
| 45 | 3299.985M        | 45.3 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.6 | 54.0 | -9.4  | Vert  |
| 46 | 3666.655M        | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 47 | 249.998M         | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 48 | 7499.965M<br>Ave | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M        | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 50 | 3199.982M             | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.4 | 54.0 | -10.6 | Horiz |
| 51 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 52 | 2099.991M             | 48.3 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 43.1 | 54.0 | -10.9 | Vert  |
| 53 | 3299.992M             | 43.7 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.0 | 54.0 | -11.0 | Horiz |
| 54 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 55 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 56 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 57 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 59 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 60 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 61 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 62 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 63 | 7385.756M<br>Ave      | 30.4 | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.8 | +0.0<br>+6.4<br>+0.1 | +0.0<br>+2.3  | +0.0 | 38.9 | 54.0 | -15.1 | Horiz |
| ^  | 7385.756M             | 42.7 | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.8 | +0.0<br>+6.4<br>+0.1 | +0.0<br>+2.3  | +0.0 | 51.2 | 54.0 | -2.8  | Horiz |
| 65 | 7230.570M<br>Ave      | 28.8 | +0.0<br>+0.0<br>-36.8 | +0.0<br>+0.6<br>+36.1 | +0.0<br>+6.3<br>+0.2 | +0.0<br>+2.3  | +0.0 | 37.5 | 54.0 | -16.5 | Horiz |
| ^  | 7230.570M             | 43.3 | +0.0<br>+0.0<br>-36.8 | +0.0<br>+0.6<br>+36.1 | +0.0<br>+6.3<br>+0.2 | +0.0<br>+2.3  | +0.0 | 52.0 | 54.0 | -2.0  | Horiz |

|    |         |      |      |       |      |      |      |      |      |       |       |
|----|---------|------|------|-------|------|------|------|------|------|-------|-------|
| 67 | 74.012M | 40.6 | +0.1 | -27.9 | +1.4 | +6.7 | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
|    |         |      | +0.0 | +0.0  | +0.0 | +0.0 |      |      |      |       |       |
|    |         |      | +0.0 | +0.0  | +0.0 |      |      |      |      |       |       |
| 68 | 73.985M | 40.1 | +0.1 | -27.9 | +1.4 | +6.6 | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |
|    |         |      | +0.0 | +0.0  | +0.0 | +0.0 |      |      |      |       |       |
|    |         |      | +0.0 | +0.0  | +0.0 |      |      |      |      |       |       |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 14:53:11 Motorola Mobility, Inc. WO#: 92800  
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 3 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 15:09:29  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 4  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.

Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 2422MHz to 2452MHz

Transmit Frequencies used for this data sheet: 2422MHz (Low), 2437MHz (Middle), and 2452MHz (High). Channels 1, 6, and 11. 802.11n(40MHz) (15 Mbps)

Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band

Frequency range of measurement = 9 kHz to 25GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.

15.205(a) and non-15.205(a) data contained within this sheet. All are within the 15.209(a) limit.

Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

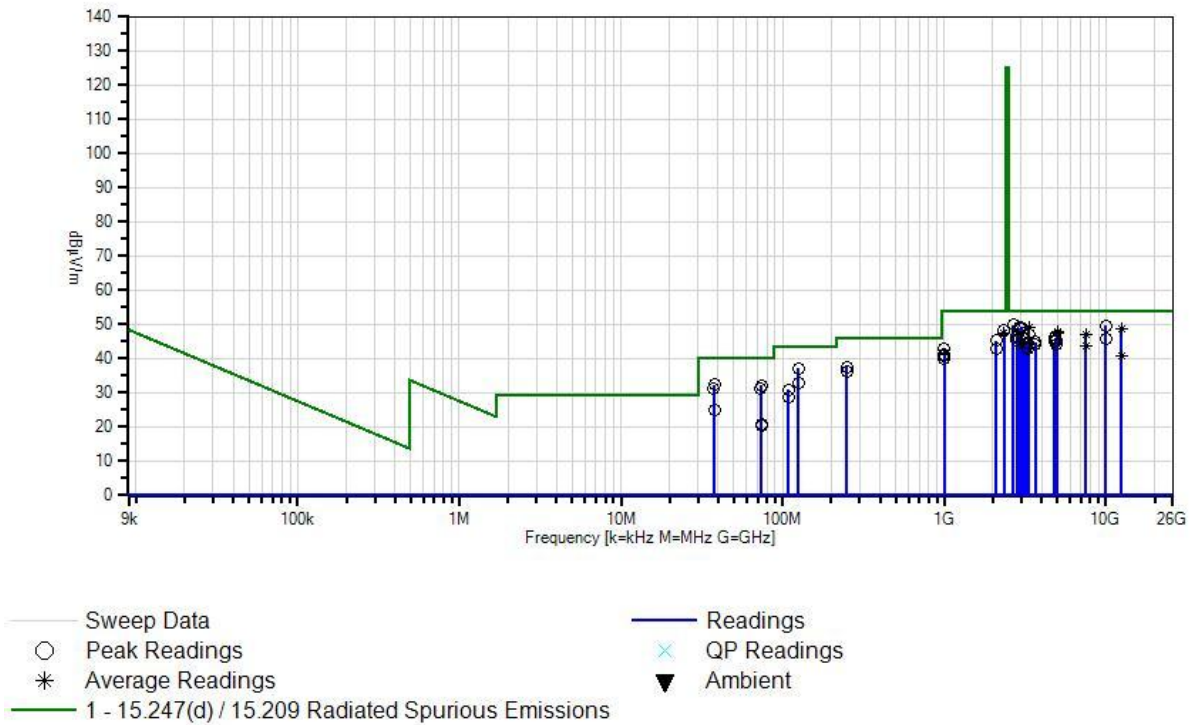
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 9999.966M             | 37.1       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7  | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 3  | 2999.984M             | 50.7       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5  | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 4  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 5  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 7  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 9  | 2999.985M             | 50.3       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5  | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 10 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 11 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 13 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |
| 14 | 4999.978M<br>Ave      | 43.7       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |
| ^  | 4999.978M             | 46.5       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.4         | 54.0         | -3.6   | Horiz |

|    |                  |      |                       |                       |                      |               |      |      |      |      |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|------|-------|
| 16 | 2333.317M<br>Ave | 52.4 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 2333.317M        | 55.6 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
| 18 | 7499.966M<br>Ave | 38.4 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
| ^  | 7499.966M        | 42.6 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
| 20 | 3333.321M        | 47.6 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
| 21 | 2799.984M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
| 22 | 37.902M          | 44.5 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.5<br>+0.0 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
| 23 | 4864.730M        | 42.4 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 46.1 | 54.0 | -7.9 | Vert  |
| 24 | 74.008M          | 51.8 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
| 25 | 3099.985M        | 47.3 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
| 26 | 9999.950M        | 33.4 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
| 27 | 3100.032M        | 47.2 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 45.9 | 54.0 | -8.1 | Horiz |
| 28 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
| 29 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
| 30 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
| 31 | 4867.330M        | 41.7 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 45.4 | 54.0 | -8.6 | Horiz |
| 32 | 4921.590M        | 41.6 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 45.4 | 54.0 | -8.6 | Vert  |

|    |                  |      |                       |                       |                      |               |      |      |      |       |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 2099.989M        | 50.5 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 45.3 | 54.0 | -8.7  | Horiz |
| 34 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
| 35 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
| 36 | 4856.320M        | 41.4 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 45.1 | 54.0 | -8.9  | Vert  |
| 37 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
| 38 | 4826.530M        | 41.2 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 44.8 | 54.0 | -9.2  | Horiz |
| 39 | 3199.985M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.7 | 54.0 | -9.3  | Vert  |
| 40 | 3299.985M        | 45.3 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.6 | 54.0 | -9.4  | Vert  |
| 41 | 3666.655M        | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 42 | 4906.220M        | 40.6 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 43 | 249.998M         | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 44 | 7499.965M<br>Ave | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M        | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 46 | 3199.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.4 | 54.0 | -10.6 | Horiz |
| 47 | 125.007M         | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 48 | 2099.991M        | 48.3 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 43.1 | 54.0 | -10.9 | Vert  |
| 49 | 3299.992M        | 43.7 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.0 | 54.0 | -11.0 | Horiz |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 50 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 51 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 52 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 53 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 55 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 56 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 57 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 58 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 59 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 60 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 15:09:29 Motorola Mobility, Inc. WO#: 92800  
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 4 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 15:42:35  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 5  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.

Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5745MHz to 5825MHz

Transmit Frequencies used for this data sheet: 5745MHz (Low), 5785MHz (Middle), and 5825MHz (High). Channels 149, 157, and 165. 802.11a (6 Mbps)

Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band

Frequency range of measurement = 9 kHz to 40GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 40000 MHz RBW=1 MHz, VBW=1 MHz.

15.205(a) and non-15.205(a) data contained within this sheet. All are within the 15.209(a) limit.

Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

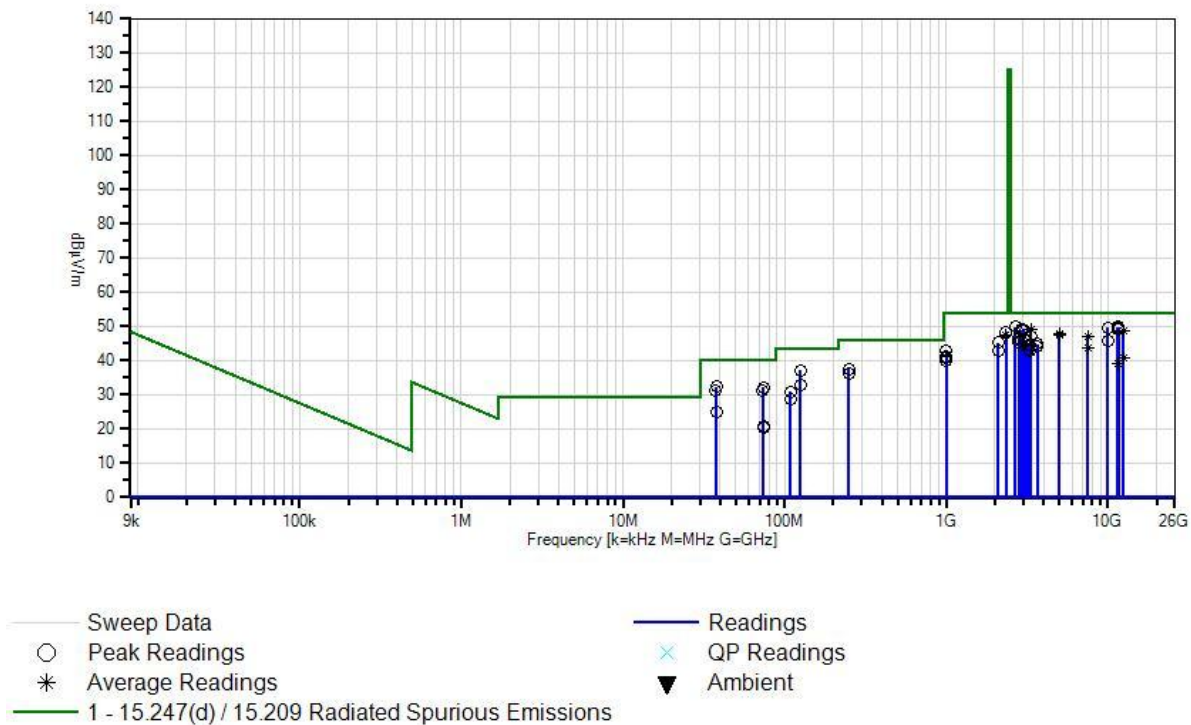
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8     | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|--------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB           | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 11648.970<br>M        | 37.1       | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 11568.220<br>M        | 37.1       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.9         | 54.0         | -4.1   | Vert  |
| 3  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4 | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 4  | 11489.560<br>M        | 37.2       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 49.8         | 54.0         | -4.2   | Vert  |
| 5  | 9999.966M             | 37.1       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7 | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 6  | 11569.330<br>M        | 36.9       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 7  | 2999.984M             | 50.7       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 8  | 11490.100<br>M        | 36.6       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 49.2         | 54.0         | -4.8   | Horiz |
| 9  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 10 | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 12 | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 14 | 2999.985M             | 50.3       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 15 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3 | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |

|    |                  |      |                       |                       |                      |               |      |      |      |      |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|------|-------|
| 16 | 4999.977M<br>Ave | 44.2 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 48.1 | 54.0 | -5.9 | Vert  |
| ^  | 4999.977M        | 47.0 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 50.9 | 54.0 | -3.1 | Vert  |
| 18 | 124.998M         | 50.8 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 37.2 | 43.5 | -6.3 | Vert  |
| 19 | 4999.978M<br>Ave | 43.7 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 4999.978M        | 46.5 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
| 21 | 2333.317M<br>Ave | 52.4 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 2333.317M        | 55.6 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
| 23 | 7499.966M<br>Ave | 38.4 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
| ^  | 7499.966M        | 42.6 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
| 25 | 3333.321M        | 47.6 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
| 26 | 2799.984M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
| 27 | 37.902M          | 44.5 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.5<br>+0.0 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
| 28 | 74.008M          | 51.8 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
| 29 | 3099.985M        | 47.3 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
| 30 | 9999.950M        | 33.4 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
| 31 | 3100.032M        | 47.2 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.2 | +0.0<br>+3.7<br>+0.7 | +0.0<br>+1.5  | +0.0 | 45.9 | 54.0 | -8.1 | Horiz |
| 32 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |

|    |                  |      |                       |                       |                      |               |      |      |      |       |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4  | Vert  |
| 34 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5  | Vert  |
| 35 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
| 36 | 2099.989M        | 50.5 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 45.3 | 54.0 | -8.7  | Horiz |
| 37 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
| 38 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
| 39 | 3199.985M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.7 | 54.0 | -9.3  | Vert  |
| 40 | 3299.985M        | 45.3 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.6 | 54.0 | -9.4  | Vert  |
| 41 | 3666.655M        | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 42 | 249.998M         | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 43 | 7499.965M<br>Ave | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M        | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 45 | 3199.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.4 | 54.0 | -10.6 | Horiz |
| 46 | 125.007M         | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 47 | 2099.991M        | 48.3 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 43.1 | 54.0 | -10.9 | Vert  |
| 48 | 3299.992M        | 43.7 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.0 | 54.0 | -11.0 | Horiz |
| 49 | 999.993M         | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 50 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 51 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 52 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 54 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 55 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 56 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 57 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 58 | 11650.100<br>M<br>Ave | 26.2 | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0 | 39.0 | 54.0 | -15.0 | Vert  |
| ^  | 11650.100<br>M        | 37.8 | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0 | 50.6 | 54.0 | -3.4  | Vert  |
| 60 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 61 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 15:42:35 Motorola Mobility, Inc. WO#: 92800  
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 5 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 16:07:42  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 6  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.

Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5745MHz to 5825MHz

Transmit Frequencies used for this data sheet: 5745MHz (Low), 5785MHz (Middle), and 5825MHz (High). Channels 149, 157, and 165. 802.11n (20MHz) (7.2 Mbps)

Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band

Frequency range of measurement = 9 kHz to 40GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 40000 MHz RBW=1 MHz, VBW=1 MHz.

15.205(a) and non-15.205(a) data contained within this sheet. All are within the 15.209(a) limit.

Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

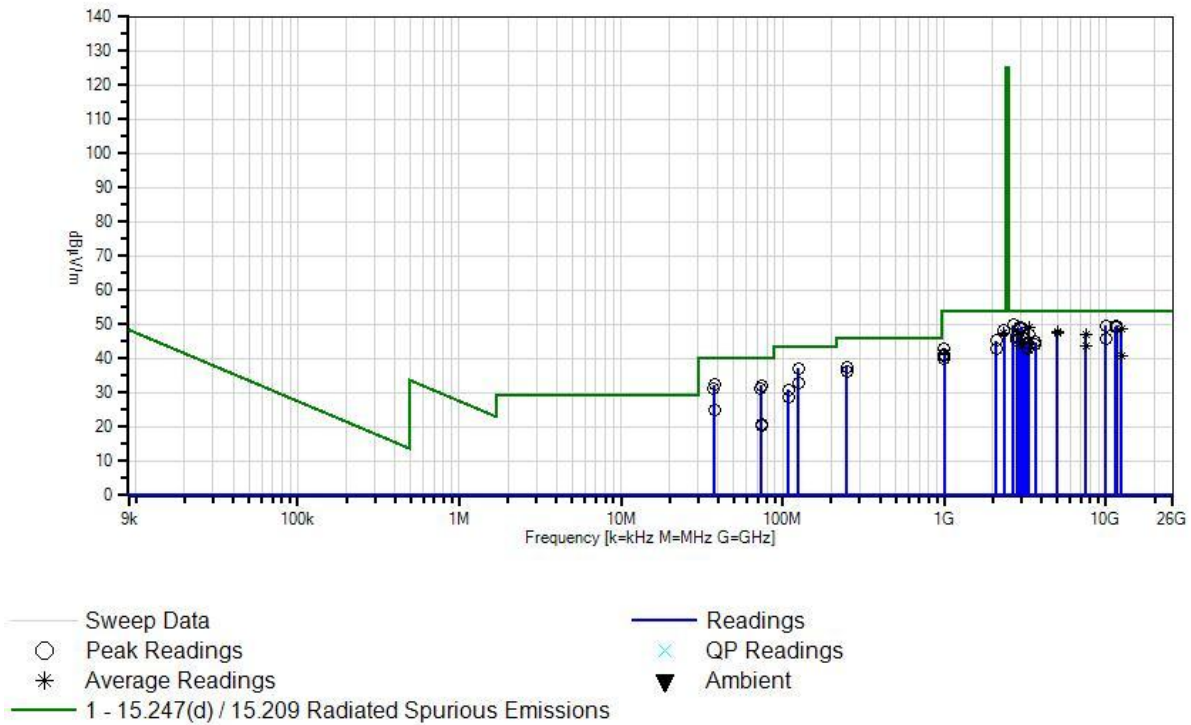
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8     | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|--------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB           | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4 | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 9999.966M             | 37.1       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7 | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 3  | 11649.730<br>M        | 36.9       | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.7         | 54.0         | -4.3   | Vert  |
| 4  | 11490.700<br>M        | 36.8       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 49.4         | 54.0         | -4.6   | Horiz |
| 5  | 2999.984M             | 50.7       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 6  | 11490.670<br>M        | 36.7       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 49.3         | 54.0         | -4.7   | Vert  |
| 7  | 11569.170<br>M        | 36.5       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 8  | 11650.070<br>M        | 36.5       | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 9  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 10 | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 12 | 11571.200<br>M        | 36.2       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.0         | 54.0         | -5.0   | Vert  |
| 13 | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 15 | 2999.985M             | 50.3       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |

|    |                  |      |       |       |      |       |      |      |      |      |       |
|----|------------------|------|-------|-------|------|-------|------|------|------|------|-------|
| 16 | 2333.324M        | 53.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 48.5 | 54.0 | -5.5 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |                  |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| 17 | 4999.977M<br>Ave | 44.2 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 48.1 | 54.0 | -5.9 | Vert  |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| ^  | 4999.977M        | 47.0 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.9 | 54.0 | -3.1 | Vert  |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 19 | 124.998M         | 50.8 | +0.2  | -27.8 | +1.9 | +12.1 | +0.0 | 37.2 | 43.5 | -6.3 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 20 | 4999.978M<br>Ave | 43.7 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| ^  | 4999.978M        | 46.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 22 | 2333.317M<br>Ave | 52.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |                  |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| ^  | 2333.317M        | 55.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |                  |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| 24 | 7499.966M<br>Ave | 38.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| ^  | 7499.966M        | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 26 | 3333.321M        | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |                  |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 27 | 2799.984M        | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |                  |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 28 | 37.902M          | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 29 | 74.008M          | 51.8 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 30 | 3099.985M        | 47.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.7 | +1.5  |      |      |      |      |       |
|    |                  |      | -37.8 | +30.2 | +0.7 |       |      |      |      |      |       |
| 31 | 9999.950M        | 33.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
|    |                  |      | +0.0  | +0.8  | +7.3 | +2.7  |      |      |      |      |       |
|    |                  |      | -35.9 | +37.2 | +0.5 |       |      |      |      |      |       |
| 32 | 3100.032M        | 47.2 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.9 | 54.0 | -8.1 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.7 | +1.5  |      |      |      |      |       |
|    |                  |      | -37.8 | +30.2 | +0.7 |       |      |      |      |      |       |

|    |                  |      |                       |                       |                      |               |      |      |      |       |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3  | Vert  |
| 34 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4  | Vert  |
| 35 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5  | Vert  |
| 36 | 2099.989M        | 50.5 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 45.3 | 54.0 | -8.7  | Horiz |
| 37 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
| 38 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
| 39 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
| 40 | 3199.985M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.7 | 54.0 | -9.3  | Vert  |
| 41 | 3299.985M        | 45.3 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.6 | 54.0 | -9.4  | Vert  |
| 42 | 3666.655M        | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 43 | 249.998M         | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 44 | 7499.965M<br>Ave | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M        | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 46 | 3199.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.4 | 54.0 | -10.6 | Horiz |
| 47 | 125.007M         | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 48 | 2099.991M        | 48.3 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 43.1 | 54.0 | -10.9 | Vert  |
| 49 | 3299.992M        | 43.7 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.0 | 54.0 | -11.0 | Horiz |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 50 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 51 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 52 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 53 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 55 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 56 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 57 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 58 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 59 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 60 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 16:07:42 Motorola Mobility, Inc. WO#: 92800  
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 6 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 16:15:22  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 7  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.

Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5755MHz to 5795MHz

Transmit Frequencies used for this data sheet: 5755MHz (Low), and 5795MHz (High). Channels 153, and 161. 802.11n (40MHz) (15 Mbps)

Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band

Frequency range of measurement = 9 kHz to 40GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 40000 MHz RBW=1 MHz, VBW=1 MHz.

15.205(a) and non-15.205(a) data contained within this sheet. All are within the 15.209(a) limit.

Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

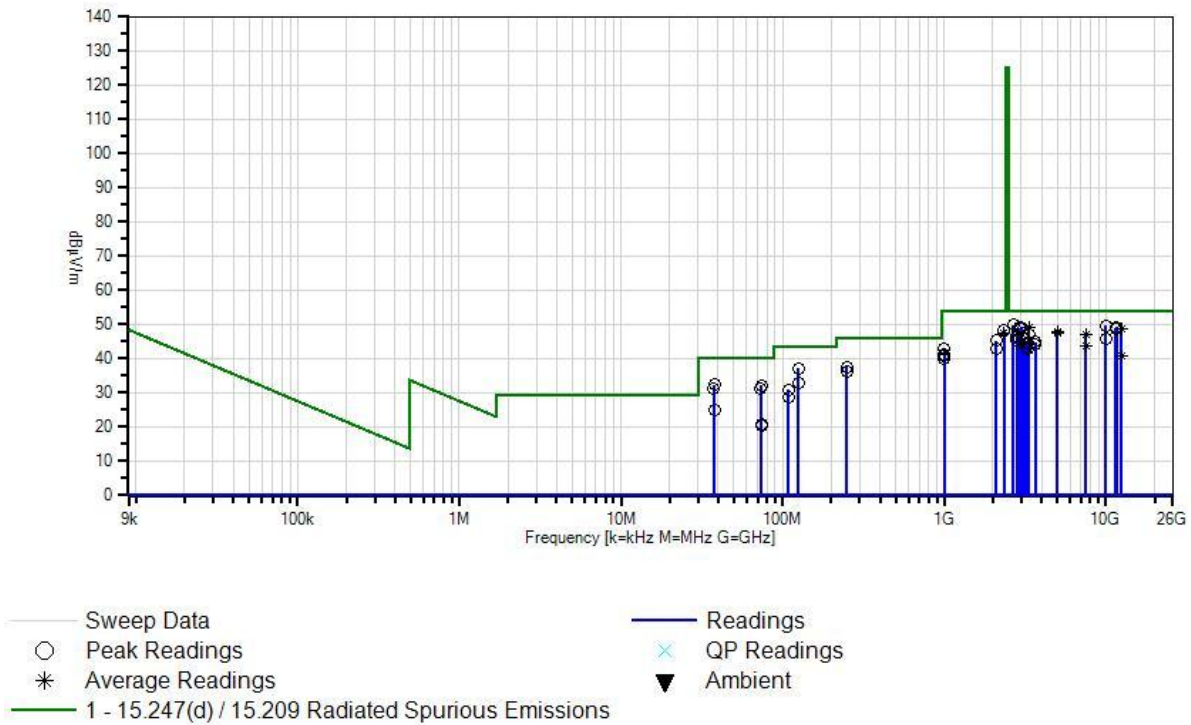
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8     | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|--------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB           | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4 | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 9999.966M             | 37.1       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+37.2 | +0.0<br>+7.3<br>+0.5 | +0.0<br>+2.7 | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 3  | 2999.984M             | 50.7       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 4  | 11590.170<br>M        | 36.4       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.2         | 54.0         | -4.8   | Horiz |
| 5  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 6  | 11590.060<br>M        | 36.3       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.1         | 54.0         | -4.9   | Vert  |
| 7  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 9  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 11 | 11509.683<br>M        | 36.3       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 12 | 11511.040<br>M        | 36.3       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| 13 | 2999.985M             | 50.3       | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.0 | +0.0<br>+3.6<br>+0.9 | +0.0<br>+1.5 | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 14 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3 | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 15 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8 | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |

|    |                  |      |       |       |      |       |      |      |      |      |       |
|----|------------------|------|-------|-------|------|-------|------|------|------|------|-------|
| ^  | 4999.977M        | 47.0 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.9 | 54.0 | -3.1 | Vert  |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 17 | 124.998M         | 50.8 | +0.2  | -27.8 | +1.9 | +12.1 | +0.0 | 37.2 | 43.5 | -6.3 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 18 | 4999.978M<br>Ave | 43.7 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| ^  | 4999.978M        | 46.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 20 | 2333.317M<br>Ave | 52.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |                  |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| ^  | 2333.317M        | 55.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |                  |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| 22 | 7499.966M<br>Ave | 38.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| ^  | 7499.966M        | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 24 | 3333.321M        | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |                  |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 25 | 2799.984M        | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |                  |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 26 | 37.902M          | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 27 | 74.008M          | 51.8 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 28 | 3099.985M        | 47.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.7 | +1.5  |      |      |      |      |       |
|    |                  |      | -37.8 | +30.2 | +0.7 |       |      |      |      |      |       |
| 29 | 9999.950M        | 33.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.0 | 54.0 | -8.0 | Vert  |
|    |                  |      | +0.0  | +0.8  | +7.3 | +2.7  |      |      |      |      |       |
|    |                  |      | -35.9 | +37.2 | +0.5 |       |      |      |      |      |       |
| 30 | 3100.032M        | 47.2 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.9 | 54.0 | -8.1 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.7 | +1.5  |      |      |      |      |       |
|    |                  |      | -37.8 | +30.2 | +0.7 |       |      |      |      |      |       |
| 31 | 2899.988M        | 47.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.6 | +1.4  |      |      |      |      |       |
|    |                  |      | -37.9 | +29.7 | +1.1 |       |      |      |      |      |       |
| 32 | 249.998M         | 49.7 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |

|    |                  |      |                       |                       |                      |               |      |      |      |       |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5  | Vert  |
| 34 | 2099.989M        | 50.5 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 45.3 | 54.0 | -8.7  | Horiz |
| 35 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
| 36 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
| 37 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
| 38 | 3199.985M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.7 | 54.0 | -9.3  | Vert  |
| 39 | 3299.985M        | 45.3 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 44.6 | 54.0 | -9.4  | Vert  |
| 40 | 3666.655M        | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 41 | 249.998M         | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 42 | 7499.965M<br>Ave | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M        | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 44 | 3199.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+30.4 | +0.0<br>+3.8<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.4 | 54.0 | -10.6 | Horiz |
| 45 | 125.007M         | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 46 | 2099.991M        | 48.3 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+28.1 | +0.0<br>+3.0<br>+0.0 | +0.0<br>+1.2  | +0.0 | 43.1 | 54.0 | -10.9 | Vert  |
| 47 | 3299.992M        | 43.7 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.6 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 43.0 | 54.0 | -11.0 | Horiz |
| 48 | 999.993M         | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 49 | 108.799M         | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |

|    |                |      |       |       |      |       |      |      |      |       |       |
|----|----------------|------|-------|-------|------|-------|------|------|------|-------|-------|
| 50 | 1000.008M      | 54.2 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
|    |                |      | +0.0  | +0.3  | +2.0 | +0.9  |      |      |      |       |       |
|    |                |      | -40.4 | +24.2 | +0.0 |       |      |      |      |       |       |
| 51 | 12499.972<br>M | 25.3 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
|    |                |      | +0.0  | +0.8  | +8.9 | +2.9  |      |      |      |       |       |
|    | Ave            |      | -35.9 | +38.7 | +0.2 |       |      |      |      |       |       |
| ^  | 12499.972<br>M | 33.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
|    |                |      | +0.0  | +0.8  | +8.9 | +2.9  |      |      |      |       |       |
|    |                |      | -35.9 | +38.7 | +0.2 |       |      |      |      |       |       |
| 53 | 999.992M       | 36.5 | +0.6  | -27.3 | +6.2 | +24.8 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
|    |                |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 54 | 1000.016M      | 53.1 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
|    |                |      | +0.0  | +0.3  | +2.0 | +0.9  |      |      |      |       |       |
|    |                |      | -40.4 | +24.2 | +0.0 |       |      |      |      |       |       |
| 55 | 108.804M       | 43.6 | +0.1  | -27.8 | +1.8 | +10.9 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
|    |                |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 56 | 37.877M        | 37.1 | +0.1  | -27.8 | +1.0 | +14.6 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
|    |                |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 57 | 74.012M        | 40.6 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
|    |                |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |
| 58 | 73.985M        | 40.1 | +0.1  | -27.9 | +1.4 | +6.6  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |
|    |                |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |       |       |
|    |                |      | +0.0  | +0.0  | +0.0 |       |      |      |      |       |       |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 16:15:22 Motorola Mobility, Inc. WO#: 92800  
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 7 Ext ATTN: 0 dB



**Test Setup Photos**



## RSS-210 §2.2 Restricted Bands

### Test Data

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**

Specification: **RSS-210 Unwanted Emissions in Restricted Bands (Radiated)**

Work Order #: **92800**

Date: 2/27/2012

Test Type: **Maximized Emissions**

Time: 13:38:31

Equipment: **DOCSIS 3.0 Wi-Fi Gateway**

Sequence#: 1

Manufacturer: Motorola Mobility, Inc.

Tested By: S. Yamamoto

Model: SBG6580 P2

S/N: 35560113060065107050085

#### Test Equipment:

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 2412MHz to 2462MHz</p> <p>Transmit Frequencies used for this data sheet: 2412MHz (Low), 2437MHz (Middle), and 2462MHz (High). Channels 1, 6, and 11. 802.11b (11 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 25GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

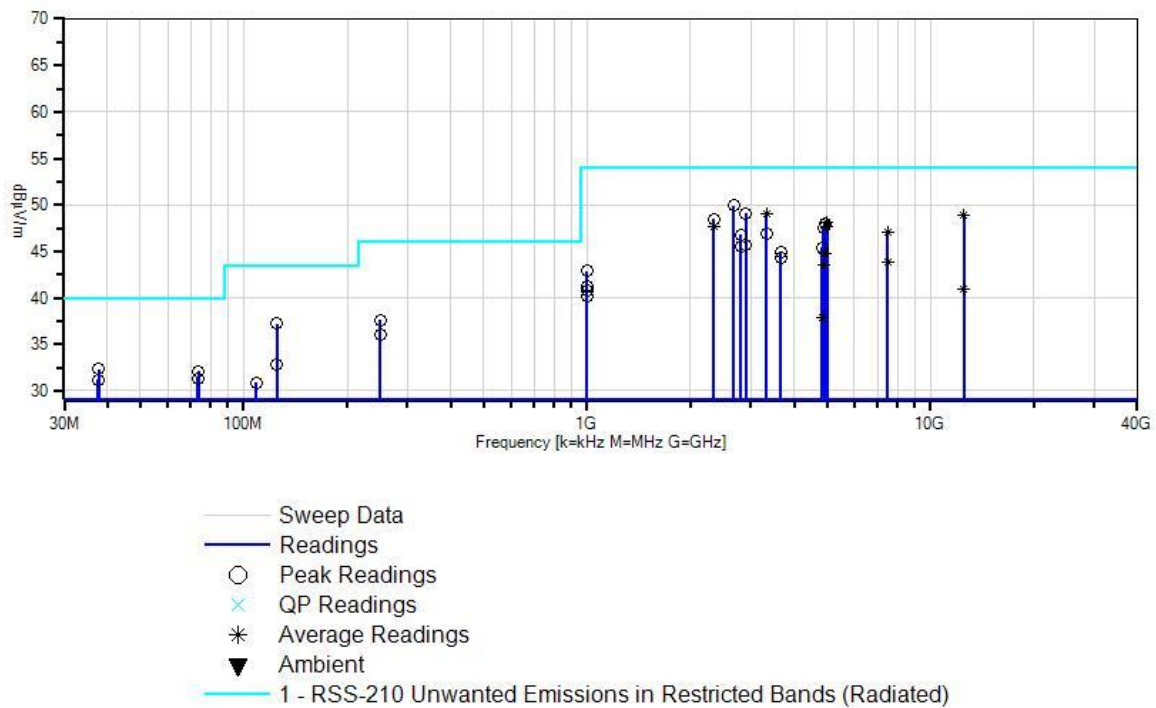
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 3  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 5  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 7  | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 8  | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 10 | 4923.958M             | 44.2       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 48.0         | 54.0         | -6.0   | Horiz |
| 11 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |
| 12 | 4999.978M<br>Ave      | 43.7       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |
| ^  | 4999.978M             | 46.5       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.4         | 54.0         | -3.6   | Horiz |
| 14 | 2333.317M<br>Ave      | 52.4       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |
| ^  | 2333.317M             | 55.6       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 50.8         | 54.0         | -3.2   | Horiz |

|    |                  |      |       |       |      |       |      |      |      |      |       |
|----|------------------|------|-------|-------|------|-------|------|------|------|------|-------|
| 16 | 4873.959M        | 43.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.5 | 54.0 | -6.5 | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 17 | 7499.966M<br>Ave | 38.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| ^  | 7499.966M        | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |                  |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |                  |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 19 | 3333.321M        | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |                  |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 20 | 2799.984M        | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |                  |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |                  |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 21 | 37.902M          | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 22 | 74.008M          | 51.8 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 23 | 2899.988M        | 47.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.6 | +1.4  |      |      |      |      |       |
|    |                  |      | -37.9 | +29.7 | +1.1 |       |      |      |      |      |       |
| 24 | 249.998M         | 49.7 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 25 | 2799.982M        | 44.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
|    |                  |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |                  |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 26 | 4823.959M        | 41.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.4 | 54.0 | -8.6 | Horiz |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.1 | +33.0 | +0.4 |       |      |      |      |      |       |
| 27 | 73.320M          | 51.2 | +0.1  | -27.9 | +1.4 | +6.5  | +0.0 | 31.3 | 40.0 | -8.7 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 28 | 37.609M          | 43.2 | +0.1  | -27.8 | +1.0 | +14.7 | +0.0 | 31.2 | 40.0 | -8.8 | Vert  |
|    |                  |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |                  |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 29 | 3666.656M        | 44.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.9 | 54.0 | -9.1 | Vert  |
|    |                  |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |      |       |
|    |                  |      | -37.4 | +31.3 | +0.4 |       |      |      |      |      |       |
| 30 | 4923.957M<br>Ave | 41.0 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.8 | 54.0 | -9.2 | Vert  |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.1 | +33.2 | +0.4 |       |      |      |      |      |       |
| ^  | 4923.957M        | 48.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 52.7 | 54.0 | -1.3 | Vert  |
|    |                  |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |                  |      | -37.1 | +33.2 | +0.4 |       |      |      |      |      |       |
| 32 | 3666.655M        | 43.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.3 | 54.0 | -9.7 | Horiz |
|    |                  |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |      |       |
|    |                  |      | -37.4 | +31.3 | +0.4 |       |      |      |      |      |       |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 249.998M              | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 34 | 7499.965M<br>Ave      | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M             | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 36 | 4873.953M<br>Ave      | 39.8 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 43.5 | 54.0 | -10.5 | Vert  |
| ^  | 4873.953M             | 47.9 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 51.6 | 54.0 | -2.4  | Vert  |
| 38 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 39 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 40 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 41 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 42 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 44 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 45 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 46 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 47 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 48 | 4823.972M<br>Ave      | 34.2 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 37.8 | 54.0 | -16.2 | Vert  |
| ^  | 4823.972M             | 45.1 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 48.7 | 54.0 | -5.3  | Vert  |

|    |         |      |      |       |      |      |      |      |      |       |       |
|----|---------|------|------|-------|------|------|------|------|------|-------|-------|
| 50 | 74.012M | 40.6 | +0.1 | -27.9 | +1.4 | +6.7 | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
|    |         |      | +0.0 | +0.0  | +0.0 | +0.0 |      |      |      |       |       |
|    |         |      | +0.0 | +0.0  | +0.0 |      |      |      |      |       |       |
| 51 | 73.985M | 40.1 | +0.1 | -27.9 | +1.4 | +6.6 | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |
|    |         |      | +0.0 | +0.0  | +0.0 | +0.0 |      |      |      |       |       |
|    |         |      | +0.0 | +0.0  | +0.0 |      |      |      |      |       |       |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 13:38:31 Motorola Mobility, Inc. WO#: 92800  
RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 1 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **RSS-210 Unwanted Emissions in Restricted Bands (Radiated)**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 14:31:39  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 2  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.

Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 2412MHz to 2462MHz

Transmit Frequencies used for this data sheet: 2412MHz (Low), 2437MHz (Middle), and 2462MHz (High). Channels 1, 6, and 11. 802.11g (6 Mbps)

Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band

Frequency range of measurement = 9 kHz to 25GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.

Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

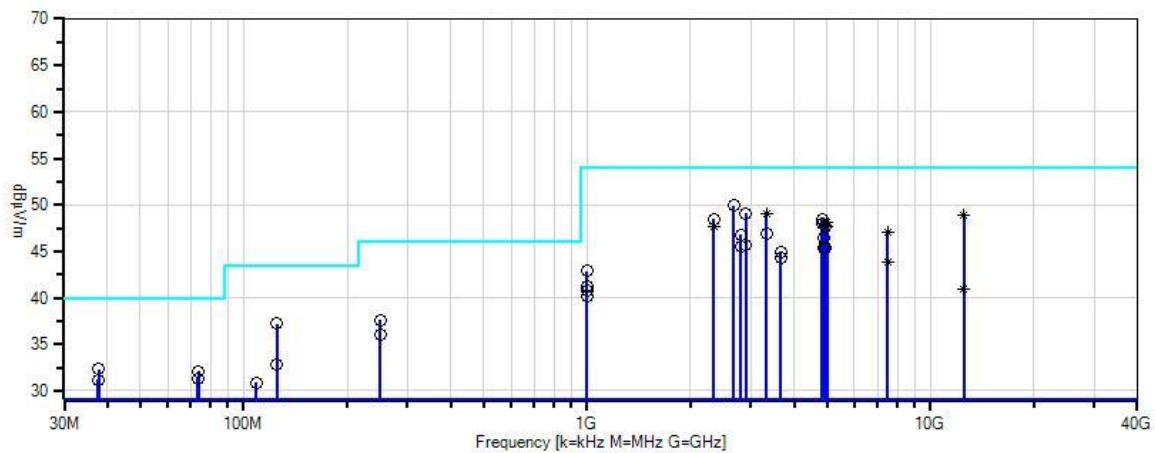
Test Distance: 3 Meters

| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 3  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 5  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 7  | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 8  | 4823.988M             | 44.9       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 48.5         | 54.0         | -5.5   | Horiz |
| 9  | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 11 | 4823.992M             | 44.4       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 48.0         | 54.0         | -6.0   | Vert  |
| 12 | 4923.998M             | 43.9       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 47.7         | 54.0         | -6.3   | Vert  |
| 13 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |
| 14 | 4999.978M<br>Ave      | 43.7       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |
| ^  | 4999.978M             | 46.5       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.4         | 54.0         | -3.6   | Horiz |

|    |                  |      |                       |                       |                      |               |      |      |      |      |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|------|-------|
| 16 | 2333.317M<br>Ave | 52.4 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 2333.317M        | 55.6 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
| 18 | 7499.966M<br>Ave | 38.4 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
| ^  | 7499.966M        | 42.6 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
| 20 | 3333.321M        | 47.6 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
| 21 | 2799.984M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
| 22 | 4873.995M        | 42.8 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 46.5 | 54.0 | -7.5 | Vert  |
| 23 | 37.902M          | 44.5 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.5<br>+0.0 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
| 24 | 74.008M          | 51.8 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
| 25 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
| 26 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
| 27 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
| 28 | 4923.823M        | 41.6 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.2 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 45.4 | 54.0 | -8.6 | Horiz |
| 29 | 4874.133M        | 41.7 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 45.4 | 54.0 | -8.6 | Horiz |
| 30 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7 | Vert  |
| 31 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8 | Vert  |
| 32 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1 | Vert  |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 3666.655M             | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 34 | 249.998M              | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 35 | 7499.965M<br>Ave      | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M             | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 37 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 38 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 39 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 40 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 41 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 43 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 44 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 45 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 46 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 47 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 48 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 14:31:39 Motorola Mobility, Inc. WO#: 92800  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 2 Ext ATTN: 0 dB



- Sweep Data
- Readings
- Peak Readings
- × QP Readings
- \* Average Readings
- ▼ Ambient
- 1 - RSS-210 Unwanted Emissions in Restricted Bands (Radiated)

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **RSS-210 Unwanted Emissions in Restricted Bands (Radiated)**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 14:53:11  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 3  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 2412MHz to 2462MHz</p> <p>Transmit Frequencies used for this data sheet: 2412MHz (Low), 2437MHz (Middle), and 2462MHz (High). Channels 1, 6, and 11. 802.11n(20MHz) (7.2 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 25GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

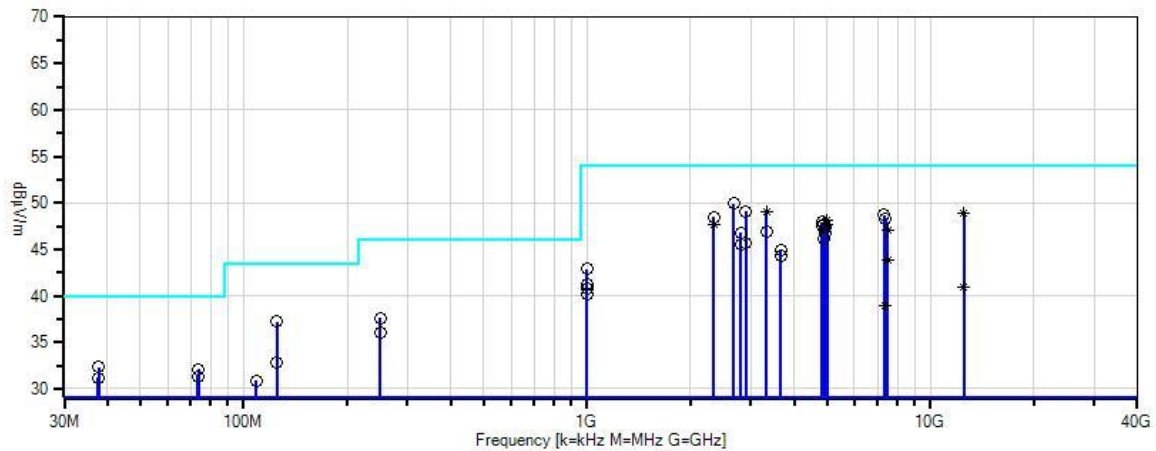
| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 3  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 5  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 7  | 7315.940M             | 40.0       | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.9 | +0.0<br>+6.4<br>+0.2 | +0.0<br>+2.3  | +0.0  | 48.7         | 54.0         | -5.3   | Horiz |
| 8  | 7310.730M             | 40.1       | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.9 | +0.0<br>+6.3<br>+0.2 | +0.0<br>+2.3  | +0.0  | 48.7         | 54.0         | -5.3   | Vert  |
| 9  | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 10 | 7383.890M             | 39.7       | +0.0<br>+0.0<br>-36.7 | +0.0<br>+0.6<br>+35.8 | +0.0<br>+6.4<br>+0.1 | +0.0<br>+2.3  | +0.0  | 48.2         | 54.0         | -5.8   | Vert  |
| 11 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 13 | 4822.330M             | 44.3       | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.0 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0  | 47.9         | 54.0         | -6.1   | Horiz |
| 14 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |
| 15 | 4999.978M<br>Ave      | 43.7       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |

|    |               |      |       |       |      |       |      |      |      |      |       |
|----|---------------|------|-------|-------|------|-------|------|------|------|------|-------|
| ^  | 4999.978M     | 46.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 17 | 2333.317M Ave | 52.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |               |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| ^  | 2333.317M     | 55.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |               |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| 19 | 4872.870M     | 43.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Vert  |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 20 | 4824.530M     | 43.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.5 | 54.0 | -6.5 | Vert  |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.1 | +33.0 | +0.4 |       |      |      |      |      |       |
| 21 | 4923.820M     | 43.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.4 | 54.0 | -6.6 | Vert  |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.1 | +33.2 | +0.4 |       |      |      |      |      |       |
| 22 | 7499.966M Ave | 38.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
|    |               |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |               |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| ^  | 7499.966M     | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |               |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |               |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 24 | 3333.321M     | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |               |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 25 | 2799.984M     | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |               |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 26 | 4926.810M     | 42.9 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.7 | 54.0 | -7.3 | Horiz |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.1 | +33.2 | +0.4 |       |      |      |      |      |       |
| 27 | 37.902M       | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 28 | 4869.700M     | 42.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.2 | 54.0 | -7.8 | Horiz |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 29 | 74.008M       | 51.8 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 30 | 2899.988M     | 47.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.6 | +1.4  |      |      |      |      |       |
|    |               |      | -37.9 | +29.7 | +1.1 |       |      |      |      |      |       |
| 31 | 249.998M      | 49.7 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 32 | 2799.982M     | 44.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |               |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 73.320M               | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7  | Vert  |
| 34 | 37.609M               | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8  | Vert  |
| 35 | 3666.656M             | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1  | Vert  |
| 36 | 3666.655M             | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 37 | 249.998M              | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 38 | 7499.965M<br>Ave      | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M             | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 40 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 41 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 42 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 43 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 44 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 46 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 47 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 48 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 49 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |

|    |           |      |       |       |      |      |      |      |      |       |       |
|----|-----------|------|-------|-------|------|------|------|------|------|-------|-------|
| 50 | 7385.756M | 30.4 | +0.0  | +0.0  | +0.0 | +0.0 | +0.0 | 38.9 | 54.0 | -15.1 | Horiz |
|    | Ave       |      | +0.0  | +0.6  | +6.4 | +2.3 |      |      |      |       |       |
|    |           |      | -36.7 | +35.8 | +0.1 |      |      |      |      |       |       |
| ^  | 7385.756M | 42.7 | +0.0  | +0.0  | +0.0 | +0.0 | +0.0 | 51.2 | 54.0 | -2.8  | Horiz |
|    |           |      | +0.0  | +0.6  | +6.4 | +2.3 |      |      |      |       |       |
|    |           |      | -36.7 | +35.8 | +0.1 |      |      |      |      |       |       |
| 52 | 74.012M   | 40.6 | +0.1  | -27.9 | +1.4 | +6.7 | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0 |      |      |      |       |       |
|    |           |      | +0.0  | +0.0  | +0.0 |      |      |      |      |       |       |
| 53 | 73.985M   | 40.1 | +0.1  | -27.9 | +1.4 | +6.6 | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0 |      |      |      |       |       |
|    |           |      | +0.0  | +0.0  | +0.0 |      |      |      |      |       |       |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 14:53:11 Motorola Mobility, Inc. WO#: 92800  
RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 3 Ext ATTN: 0 dB



- Sweep Data
- Readings
- Peak Readings
- × QP Readings
- \* Average Readings
- ▼ Ambient
- 1 - RSS-210 Unwanted Emissions in Restricted Bands (Radiated)

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **RSS-210 Unwanted Emissions in Restricted Bands (Radiated)**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 15:09:29  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 4  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 2422MHz to 2452MHz</p> <p>Transmit Frequencies used for this data sheet: 2422MHz (Low), 2437MHz (Middle), and 2452MHz (High). Channels 1, 6, and 11. 802.11n(40MHz) (15 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 25GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 26000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

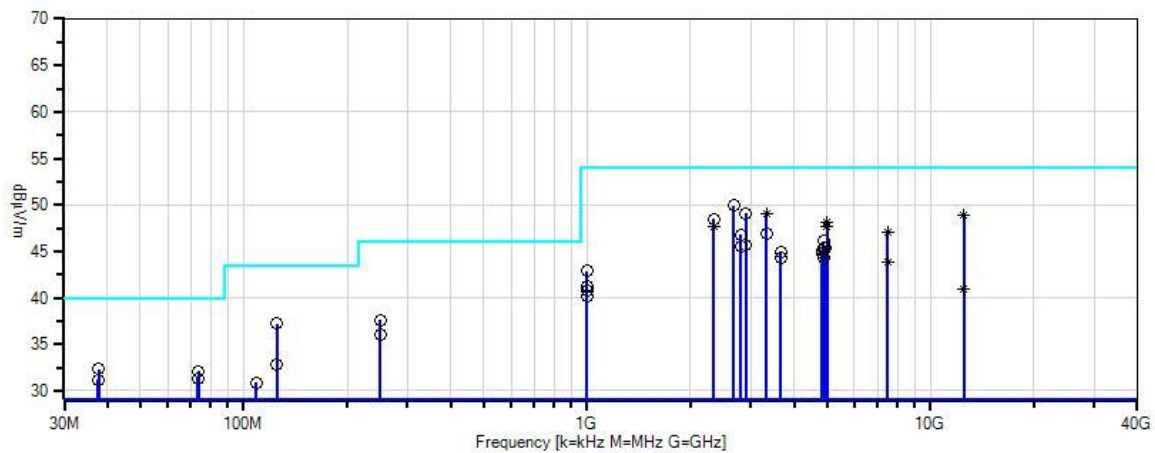
Test Distance: 3 Meters

| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 3  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 5  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 7  | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 8  | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 10 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |
| 11 | 4999.978M<br>Ave      | 43.7       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |
| ^  | 4999.978M             | 46.5       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.4         | 54.0         | -3.6   | Horiz |
| 13 | 2333.317M<br>Ave      | 52.4       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |
| ^  | 2333.317M             | 55.6       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 50.8         | 54.0         | -3.2   | Horiz |
| 15 | 7499.966M<br>Ave      | 38.4       | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0  | 47.0         | 54.0         | -7.0   | Horiz |

|    |           |      |       |       |      |       |      |      |      |      |       |
|----|-----------|------|-------|-------|------|-------|------|------|------|------|-------|
| ^  | 7499.966M | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |           |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |           |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 17 | 3333.321M | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |           |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |           |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 18 | 2799.984M | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |           |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |           |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 19 | 37.902M   | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |           |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 20 | 4864.730M | 42.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.1 | 54.0 | -7.9 | Vert  |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 21 | 74.008M   | 51.8 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |           |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 22 | 2899.988M | 47.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
|    |           |      | +0.0  | +0.4  | +3.6 | +1.4  |      |      |      |      |       |
|    |           |      | -37.9 | +29.7 | +1.1 |       |      |      |      |      |       |
| 23 | 249.998M  | 49.7 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |           |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 24 | 2799.982M | 44.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
|    |           |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |           |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 25 | 4921.590M | 41.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.4 | 54.0 | -8.6 | Vert  |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.2 | +0.4 |       |      |      |      |      |       |
| 26 | 4867.330M | 41.7 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.4 | 54.0 | -8.6 | Horiz |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 27 | 73.320M   | 51.2 | +0.1  | -27.9 | +1.4 | +6.5  | +0.0 | 31.3 | 40.0 | -8.7 | Vert  |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |           |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 28 | 37.609M   | 43.2 | +0.1  | -27.8 | +1.0 | +14.7 | +0.0 | 31.2 | 40.0 | -8.8 | Vert  |
|    |           |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |           |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 29 | 4856.320M | 41.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.1 | 54.0 | -8.9 | Vert  |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.1 | +0.4 |       |      |      |      |      |       |
| 30 | 3666.656M | 44.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.9 | 54.0 | -9.1 | Vert  |
|    |           |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |      |       |
|    |           |      | -37.4 | +31.3 | +0.4 |       |      |      |      |      |       |
| 31 | 4826.530M | 41.2 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.8 | 54.0 | -9.2 | Horiz |
|    |           |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |           |      | -37.1 | +33.0 | +0.4 |       |      |      |      |      |       |
| 32 | 3666.655M | 43.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.3 | 54.0 | -9.7 | Horiz |
|    |           |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |      |       |
|    |           |      | -37.4 | +31.3 | +0.4 |       |      |      |      |      |       |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 4906.220M             | 40.6 | +0.0<br>+0.0<br>-37.1 | +0.0<br>+0.5<br>+33.1 | +0.0<br>+5.0<br>+0.4 | +0.0<br>+1.8  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 34 | 249.998M              | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 35 | 7499.965M<br>Ave      | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M             | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 37 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 38 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 39 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 40 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 41 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 43 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 44 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 45 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 46 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 47 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 48 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 15:09:29 Motorola Mobility, Inc. WO#: 92800  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 4 Ext ATTN: 0 dB



- Sweep Data
- Readings
- Peak Readings
- × QP Readings
- \* Average Readings
- ▼ Ambient
- 1 - RSS-210 Unwanted Emissions in Restricted Bands (Radiated)

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **RSS-210 Unwanted Emissions in Restricted Bands (Radiated)**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 15:42:35  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 5  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 5745MHz to 5825MHz</p> <p>Transmit Frequencies used for this data sheet: 5745MHz (Low), 5785MHz (Middle), and 5825MHz (High). Channels 149, 157, and 165. 802.11a (6 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 40GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 40000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

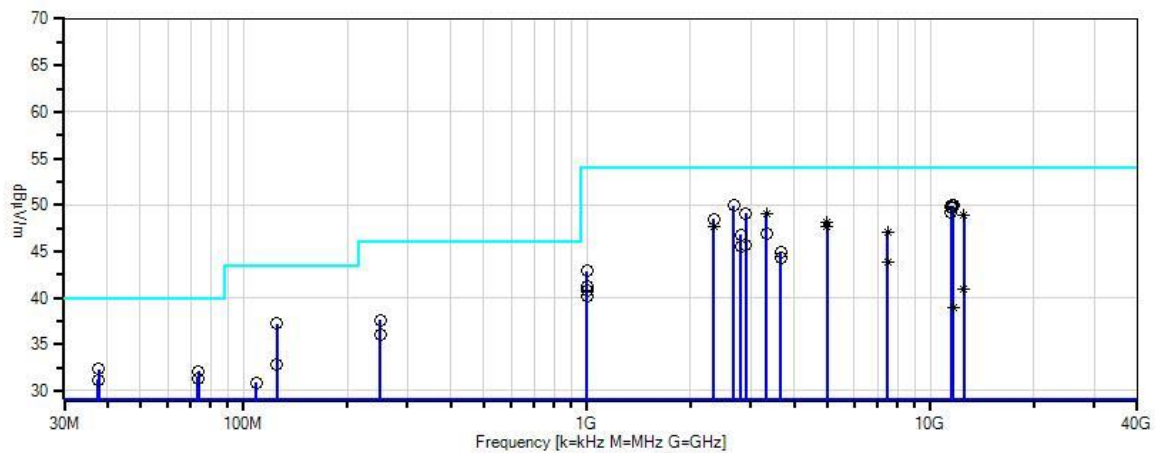
Test Distance: 3 Meters

| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 11648.970<br>M        | 37.1       | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 11568.220<br>M        | 37.1       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0  | 49.9         | 54.0         | -4.1   | Vert  |
| 3  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 4  | 11489.560<br>M        | 37.2       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9  | +0.0  | 49.8         | 54.0         | -4.2   | Vert  |
| 5  | 11569.330<br>M        | 36.9       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0  | 49.7         | 54.0         | -4.3   | Horiz |
| 6  | 11490.100<br>M        | 36.6       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9  | +0.0  | 49.2         | 54.0         | -4.8   | Horiz |
| 7  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 8  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 10 | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 12 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 13 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 15 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |

|    |                  |      |                       |                       |                      |               |      |      |      |      |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|------|-------|
| 16 | 4999.978M<br>Ave | 43.7 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 4999.978M        | 46.5 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
| 18 | 2333.317M<br>Ave | 52.4 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 2333.317M        | 55.6 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
| 20 | 7499.966M<br>Ave | 38.4 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
| ^  | 7499.966M        | 42.6 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
| 22 | 3333.321M        | 47.6 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
| 23 | 2799.984M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
| 24 | 37.902M          | 44.5 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.5<br>+0.0 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
| 25 | 74.008M          | 51.8 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
| 26 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
| 27 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
| 28 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
| 29 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7 | Vert  |
| 30 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8 | Vert  |
| 31 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1 | Vert  |
| 32 | 3666.655M        | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7 | Horiz |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 249.998M              | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 34 | 7499.965M<br>Ave      | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M             | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 36 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 37 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 38 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 39 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 40 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 42 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 43 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 44 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 45 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 46 | 11650.100<br>M<br>Ave | 26.2 | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0 | 39.0 | 54.0 | -15.0 | Vert  |
| ^  | 11650.100<br>M        | 37.8 | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0 | 50.6 | 54.0 | -3.4  | Vert  |
| 48 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 49 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 15:42:35 Motorola Mobility, Inc. WO#: 92800  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 5 Ext ATTN: 0 dB



- Sweep Data
- Readings
- Peak Readings
- × QP Readings
- \* Average Readings
- ▼ Ambient
- 1 - RSS-210 Unwanted Emissions in Restricted Bands (Radiated)

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **RSS-210 Unwanted Emissions in Restricted Bands (Radiated)**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 16:07:42  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 6  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 5745MHz to 5825MHz</p> <p>Transmit Frequencies used for this data sheet: 5745MHz (Low), 5785MHz (Middle), and 5825MHz (High). Channels 149, 157, and 165. 802.11n (20MHz) (7.2 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 40GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 40000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

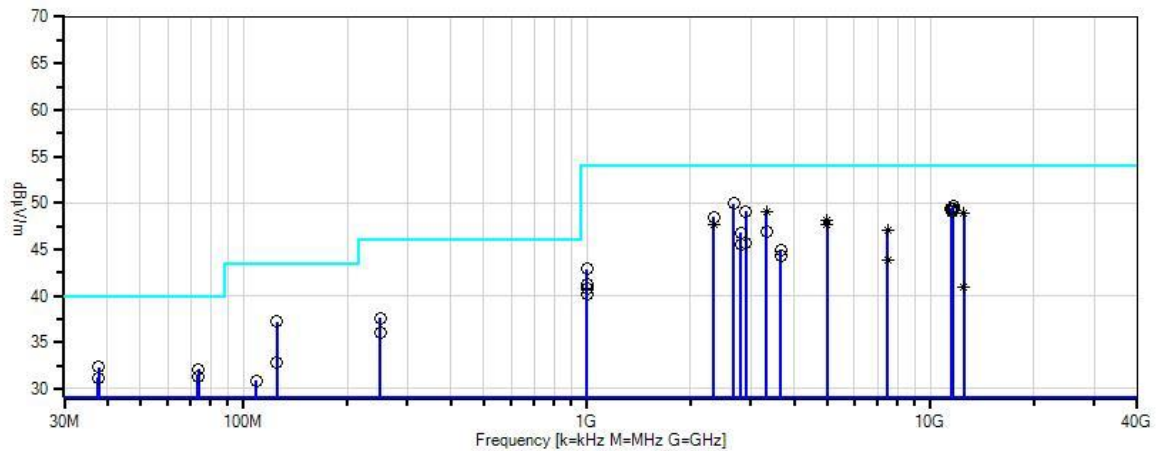
Test Distance: 3 Meters

| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8     | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|--------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB           | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4 | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 11649.730<br>M        | 36.9       | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.7         | 54.0         | -4.3   | Vert  |
| 3  | 11490.700<br>M        | 36.8       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 49.4         | 54.0         | -4.6   | Horiz |
| 4  | 11650.070<br>M        | 36.5       | +0.0<br>+0.0<br>-36.4 | +0.0<br>+0.8<br>+36.5 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 5  | 11490.670<br>M        | 36.7       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9 | +0.0  | 49.3         | 54.0         | -4.7   | Vert  |
| 6  | 11569.170<br>M        | 36.5       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.3         | 54.0         | -4.7   | Horiz |
| 7  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 8  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5 | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 10 | 11571.200<br>M        | 36.2       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9 | +0.0  | 49.0         | 54.0         | -5.0   | Vert  |
| 11 | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9 | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 13 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3 | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 14 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8 | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8 | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |

|    |                  |      |                       |                       |                      |               |      |      |      |      |       |
|----|------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|------|-------|
| 16 | 124.998M         | 50.8 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 37.2 | 43.5 | -6.3 | Vert  |
| 17 | 4999.978M<br>Ave | 43.7 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 4999.978M        | 46.5 | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
| 19 | 2333.317M<br>Ave | 52.4 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
| ^  | 2333.317M        | 55.6 | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
| 21 | 7499.966M<br>Ave | 38.4 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
| ^  | 7499.966M        | 42.6 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
| 23 | 3333.321M        | 47.6 | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
| 24 | 2799.984M        | 45.8 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
| 25 | 37.902M          | 44.5 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.5<br>+0.0 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
| 26 | 74.008M          | 51.8 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
| 27 | 2899.988M        | 47.4 | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
| 28 | 249.998M         | 49.7 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
| 29 | 2799.982M        | 44.5 | +0.0<br>+0.0<br>-37.8 | +0.0<br>+0.4<br>+29.4 | +0.0<br>+3.5<br>+4.1 | +0.0<br>+1.4  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
| 30 | 73.320M          | 51.2 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.5<br>+0.0  | +0.0 | 31.3 | 40.0 | -8.7 | Vert  |
| 31 | 37.609M          | 43.2 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.7<br>+0.0 | +0.0 | 31.2 | 40.0 | -8.8 | Vert  |
| 32 | 3666.656M        | 44.4 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.9 | 54.0 | -9.1 | Vert  |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 3666.655M             | 43.8 | +0.0<br>+0.0<br>-37.4 | +0.0<br>+0.4<br>+31.3 | +0.0<br>+4.2<br>+0.4 | +0.0<br>+1.6  | +0.0 | 44.3 | 54.0 | -9.7  | Horiz |
| 34 | 249.998M              | 48.2 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +2.8<br>+0.0<br>+0.0 | +12.7<br>+0.0 | +0.0 | 36.1 | 46.0 | -9.9  | Horiz |
| 35 | 7499.965M<br>Ave      | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M             | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 37 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 38 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 39 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 40 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 41 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 43 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 44 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 45 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 46 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 47 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 48 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 16:07:42 Motorola Mobility, Inc. WO#: 92800  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 6 Ext ATTN: 0 dB



- Sweep Data
- Readings
- Peak Readings
- × QP Readings
- \* Average Readings
- ▼ Ambient
- 1 - RSS-210 Unwanted Emissions in Restricted Bands (Radiated)

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **Motorola Mobility, Inc.**  
 Specification: **RSS-210 Unwanted Emissions in Restricted Bands (Radiated)**  
 Work Order #: **92800** Date: 2/27/2012  
 Test Type: **Maximized Emissions** Time: 16:15:22  
 Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 7  
 Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto  
 Model: SBG6580 P2  
 S/N: 35560113060065107050085

**Test Equipment:**

| ID  | Asset #  | Description                                             | Model                  | Calibration Date | Cal Due Date |
|-----|----------|---------------------------------------------------------|------------------------|------------------|--------------|
|     | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T1  | ANP05050 | Cable                                                   | RG223/U                | 3/21/2011        | 3/21/2013    |
| T2  | AN00309  | Preamp                                                  | 8447D                  | 5/7/2010         | 5/7/2012     |
| T3  | ANP05198 | Cable                                                   | 8268                   | 12/21/2010       | 12/21/2012   |
| T4  | AN01995  | Biconilog Antenna                                       | CBL6111C               | 3/8/2010         | 3/8/2012     |
|     | AN00314  | Loop Antenna                                            | 6502                   | 6/30/2010        | 6/30/2012    |
| T5  | AN02672  | Spectrum Analyzer                                       | E4446A                 | 8/9/2010         | 8/9/2012     |
| T6  | AN03239  | Cable                                                   | 32022-2-29094K-24TC    | 8/30/2011        | 8/30/2013    |
| T7  | ANP06081 | Cable                                                   | L1-PNMNM-48            | 4/28/2011        | 4/28/2013    |
| T8  | ANP05421 | Cable                                                   | Sucoflex 104A          | 2/8/2012         | 2/8/2014     |
| T9  | AN00786  | Preamp                                                  | 83017A                 | 8/5/2010         | 8/5/2012     |
| T10 | AN00849  | Horn Antenna                                            | 3115                   | 4/23/2010        | 4/23/2012    |
| T11 | AN02744  | High Pass Filter                                        | 11SH10-3000/T10000-O/O | 3/5/2010         | 3/5/2012     |
|     | ANP06153 | Cable                                                   | 16301                  | 10/27/2011       | 10/27/2013   |
|     | AN01413  | Horn Antenna-ANSI C63.5 Antenna Factors (dB)            | 84125-80008            | 12/2/2010        | 12/2/2012    |
|     | AN01413  | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | 84125-80008            | 12/2/2010        | 12/2/2012    |

**Equipment Under Test (\* = EUT):**

| Function                  | Manufacturer              | Model #    | S/N                     |
|---------------------------|---------------------------|------------|-------------------------|
| DOCSIS 3.0 Wi-Fi Gateway* | Motorola Mobility, Inc.   | SBG6580 P2 | 35560113060065107050085 |
| AC to 12Vdc Power Adapter | Asian Power Devices, Inc. | WA-24 12FU |                         |

**Support Devices:**

| Function                    | Manufacturer     | Model #       | S/N       |
|-----------------------------|------------------|---------------|-----------|
| Broadband Router            | CASA Systems     | C2200         | FD3460    |
| Gigabit Switch              | Netgear          | GS105v2       |           |
| Laptop Computer             | HP               | Compaq 6910p  |           |
| Performance Analysis System | Spirent          | SMB-600B      | N06012143 |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| 8 Way Splitter              | Regal            | DS8DGV10      |           |
| DHCP Server                 | HP               | Compaq 6910p  |           |
| Diplexer                    | Eagle Comtronics | EDPF-65/85    | (none)    |
| Laptop Computer             | Dell             | Precision M70 |           |

**Test Conditions / Notes:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The equipment under test (EUT) is a DOCSIS 3.0 Wi-Fi Gateway. The EUT and its AC to DC adapter are stand alone on the table top lined with 5cm thick Styrofoam. All other support equipment is located remote from this test area. The CM Ethernet ports are connected to the SmartBits performance analysis system. The CM RF port is connected to the diplexer, then splitters and finally to the broadband router (CASA). The DHCP server is connected to the broadband router through the gigabit switch. The laptop is connected to the performance analysis system. The SmartBits is turned on and running data. Tx Bytes Rate approximately 14.8 M and Rx Bytes Rate approximately 12.3 M. The CM is operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV. The EUT is transmitting continuously.</p> <p>Hardware Version: P2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.</p> <p>Frequency range of EUT: 5755MHz to 5795MHz</p> <p>Transmit Frequencies used for this data sheet: 5755MHz (Low), and 5795MHz (High). Channels 153, and 161. 802.11n (40MHz) (15 Mbps)</p> <p>Antenna: Antenna Gain: 4.1 dBi max at 2.4GHz band. Antenna Gain: 4.4 dBi max at 5GHz band</p> <p>Frequency range of measurement = 9 kHz to 40GHz.</p> <p>Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz- 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz- 40000 MHz RBW=1 MHz, VBW=1 MHz.</p> <p>Temperature: 18°C, Humidity: 48%, Pressure: 100kPa.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

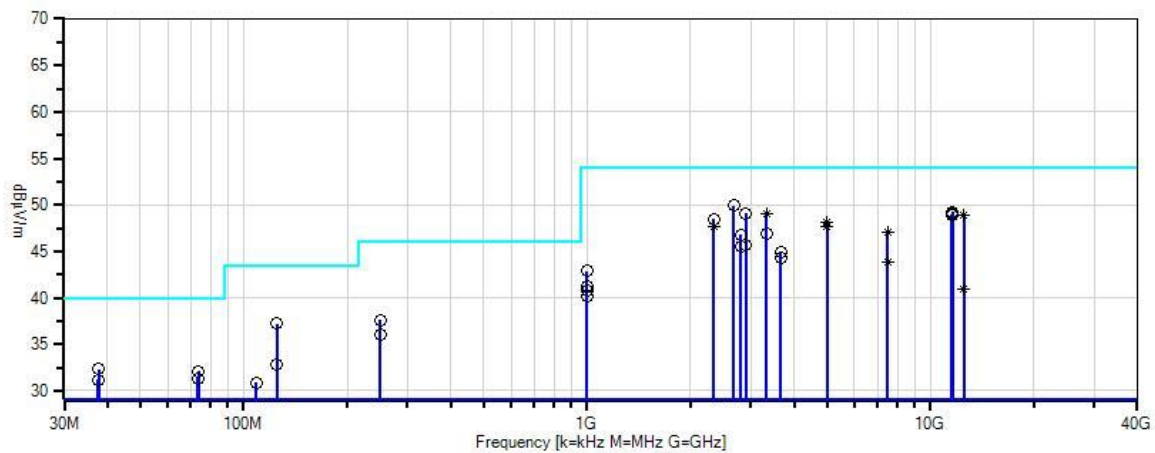
Test Distance: 3 Meters

| #  | Freq                  | Rdng       | T1<br>T5<br>T9        | T2<br>T6<br>T10       | T3<br>T7<br>T11      | T4<br>T8      | Dist  | Corr         | Spec         | Margin | Polar |
|----|-----------------------|------------|-----------------------|-----------------------|----------------------|---------------|-------|--------------|--------------|--------|-------|
|    | MHz                   | dB $\mu$ V | dB                    | dB                    | dB                   | dB            | Table | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Ant   |
| 1  | 2666.655M             | 53.6       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.0 | +0.0<br>+3.4<br>+0.0 | +0.0<br>+1.4  | +0.0  | 49.9         | 54.0         | -4.1   | Horiz |
| 2  | 11590.170<br>M        | 36.4       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0  | 49.2         | 54.0         | -4.8   | Horiz |
| 3  | 2899.988M             | 50.8       | +0.0<br>+0.0<br>-37.9 | +0.0<br>+0.4<br>+29.7 | +0.0<br>+3.6<br>+1.1 | +0.0<br>+1.4  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| 4  | 11590.060<br>M        | 36.3       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.4 | +0.0<br>+8.5<br>+0.5 | +0.0<br>+2.9  | +0.0  | 49.1         | 54.0         | -4.9   | Vert  |
| 5  | 3333.317M<br>Ave      | 49.7       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 49.1         | 54.0         | -4.9   | Horiz |
| ^  | 3333.317M             | 53.1       | +0.0<br>+0.0<br>-37.7 | +0.0<br>+0.4<br>+30.7 | +0.0<br>+3.9<br>+0.6 | +0.0<br>+1.5  | +0.0  | 52.5         | 54.0         | -1.5   | Horiz |
| 7  | 12499.947<br>M<br>Ave | 33.3       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| ^  | 12499.947<br>M        | 36.7       | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0  | 52.3         | 54.0         | -1.7   | Horiz |
| 9  | 11511.040<br>M        | 36.3       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Horiz |
| 10 | 11509.683<br>M        | 36.3       | +0.0<br>+0.0<br>-36.3 | +0.0<br>+0.8<br>+36.3 | +0.0<br>+8.5<br>+0.4 | +0.0<br>+2.9  | +0.0  | 48.9         | 54.0         | -5.1   | Vert  |
| 11 | 2333.324M             | 53.3       | +0.0<br>+0.0<br>-38.0 | +0.0<br>+0.4<br>+28.3 | +0.0<br>+3.2<br>+0.0 | +0.0<br>+1.3  | +0.0  | 48.5         | 54.0         | -5.5   | Vert  |
| 12 | 4999.977M<br>Ave      | 44.2       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 48.1         | 54.0         | -5.9   | Vert  |
| ^  | 4999.977M             | 47.0       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 50.9         | 54.0         | -3.1   | Vert  |
| 14 | 124.998M              | 50.8       | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0  | 37.2         | 43.5         | -6.3   | Vert  |
| 15 | 4999.978M<br>Ave      | 43.7       | +0.0<br>+0.0<br>-37.0 | +0.0<br>+0.5<br>+33.3 | +0.0<br>+5.0<br>+0.3 | +0.0<br>+1.8  | +0.0  | 47.6         | 54.0         | -6.4   | Horiz |

|    |               |      |       |       |      |       |      |      |      |      |       |
|----|---------------|------|-------|-------|------|-------|------|------|------|------|-------|
| ^  | 4999.978M     | 46.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.4 | 54.0 | -3.6 | Horiz |
|    |               |      | +0.0  | +0.5  | +5.0 | +1.8  |      |      |      |      |       |
|    |               |      | -37.0 | +33.3 | +0.3 |       |      |      |      |      |       |
| 17 | 2333.317M Ave | 52.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.6 | 54.0 | -6.4 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |               |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| ^  | 2333.317M     | 55.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 50.8 | 54.0 | -3.2 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.2 | +1.3  |      |      |      |      |       |
|    |               |      | -38.0 | +28.3 | +0.0 |       |      |      |      |      |       |
| 19 | 7499.966M Ave | 38.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Horiz |
|    |               |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |               |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| ^  | 7499.966M     | 42.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 51.2 | 54.0 | -2.8 | Horiz |
|    |               |      | +0.0  | +0.7  | +6.5 | +2.3  |      |      |      |      |       |
|    |               |      | -36.5 | +35.5 | +0.1 |       |      |      |      |      |       |
| 21 | 3333.321M     | 47.6 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 47.0 | 54.0 | -7.0 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.9 | +1.5  |      |      |      |      |       |
|    |               |      | -37.7 | +30.7 | +0.6 |       |      |      |      |      |       |
| 22 | 2799.984M     | 45.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 46.8 | 54.0 | -7.2 | Horiz |
|    |               |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |               |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 23 | 37.902M       | 44.5 | +0.1  | -27.8 | +1.0 | +14.5 | +0.0 | 32.3 | 40.0 | -7.7 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 24 | 74.008M       | 51.8 | +0.1  | -27.9 | +1.4 | +6.7  | +0.0 | 32.1 | 40.0 | -7.9 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 25 | 2899.988M     | 47.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.7 | 54.0 | -8.3 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.6 | +1.4  |      |      |      |      |       |
|    |               |      | -37.9 | +29.7 | +1.1 |       |      |      |      |      |       |
| 26 | 249.998M      | 49.7 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 37.6 | 46.0 | -8.4 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 27 | 2799.982M     | 44.5 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 45.5 | 54.0 | -8.5 | Vert  |
|    |               |      | +0.0  | +0.4  | +3.5 | +1.4  |      |      |      |      |       |
|    |               |      | -37.8 | +29.4 | +4.1 |       |      |      |      |      |       |
| 28 | 73.320M       | 51.2 | +0.1  | -27.9 | +1.4 | +6.5  | +0.0 | 31.3 | 40.0 | -8.7 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 29 | 37.609M       | 43.2 | +0.1  | -27.8 | +1.0 | +14.7 | +0.0 | 31.2 | 40.0 | -8.8 | Vert  |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |
| 30 | 3666.656M     | 44.4 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.9 | 54.0 | -9.1 | Vert  |
|    |               |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |      |       |
|    |               |      | -37.4 | +31.3 | +0.4 |       |      |      |      |      |       |
| 31 | 3666.655M     | 43.8 | +0.0  | +0.0  | +0.0 | +0.0  | +0.0 | 44.3 | 54.0 | -9.7 | Horiz |
|    |               |      | +0.0  | +0.4  | +4.2 | +1.6  |      |      |      |      |       |
|    |               |      | -37.4 | +31.3 | +0.4 |       |      |      |      |      |       |
| 32 | 249.998M      | 48.2 | +0.2  | -27.8 | +2.8 | +12.7 | +0.0 | 36.1 | 46.0 | -9.9 | Horiz |
|    |               |      | +0.0  | +0.0  | +0.0 | +0.0  |      |      |      |      |       |
|    |               |      | +0.0  | +0.0  | +0.0 |       |      |      |      |      |       |

|    |                       |      |                       |                       |                      |               |      |      |      |       |       |
|----|-----------------------|------|-----------------------|-----------------------|----------------------|---------------|------|------|------|-------|-------|
| 33 | 7499.965M<br>Ave      | 35.3 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 43.9 | 54.0 | -10.1 | Vert  |
| ^  | 7499.965M             | 40.9 | +0.0<br>+0.0<br>-36.5 | +0.0<br>+0.7<br>+35.5 | +0.0<br>+6.5<br>+0.1 | +0.0<br>+2.3  | +0.0 | 49.5 | 54.0 | -4.5  | Vert  |
| 35 | 125.007M              | 46.4 | +0.2<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.9<br>+0.0<br>+0.0 | +12.1<br>+0.0 | +0.0 | 32.8 | 43.5 | -10.7 | Horiz |
| 36 | 999.993M              | 38.6 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 42.9 | 54.0 | -11.1 | Vert  |
| 37 | 108.799M              | 45.9 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 30.9 | 43.5 | -12.6 | Vert  |
| 38 | 1000.008M             | 54.2 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 41.2 | 54.0 | -12.8 | Vert  |
| 39 | 12499.972<br>M<br>Ave | 25.3 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 40.9 | 54.0 | -13.1 | Vert  |
| ^  | 12499.972<br>M        | 33.5 | +0.0<br>+0.0<br>-35.9 | +0.0<br>+0.8<br>+38.7 | +0.0<br>+8.9<br>+0.2 | +0.0<br>+2.9  | +0.0 | 49.1 | 54.0 | -4.9  | Vert  |
| 41 | 999.992M              | 36.5 | +0.6<br>+0.0<br>+0.0  | -27.3<br>+0.0<br>+0.0 | +6.2<br>+0.0<br>+0.0 | +24.8<br>+0.0 | +0.0 | 40.8 | 54.0 | -13.2 | Horiz |
| 42 | 1000.016M             | 53.1 | +0.0<br>+0.0<br>-40.4 | +0.0<br>+0.3<br>+24.2 | +0.0<br>+2.0<br>+0.0 | +0.0<br>+0.9  | +0.0 | 40.1 | 54.0 | -13.9 | Horiz |
| 43 | 108.804M              | 43.6 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.8<br>+0.0<br>+0.0 | +10.9<br>+0.0 | +0.0 | 28.6 | 43.5 | -14.9 | Horiz |
| 44 | 37.877M               | 37.1 | +0.1<br>+0.0<br>+0.0  | -27.8<br>+0.0<br>+0.0 | +1.0<br>+0.0<br>+0.0 | +14.6<br>+0.0 | +0.0 | 25.0 | 40.0 | -15.0 | Horiz |
| 45 | 74.012M               | 40.6 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.7<br>+0.0  | +0.0 | 20.9 | 40.0 | -19.1 | Horiz |
| 46 | 73.985M               | 40.1 | +0.1<br>+0.0<br>+0.0  | -27.9<br>+0.0<br>+0.0 | +1.4<br>+0.0<br>+0.0 | +6.6<br>+0.0  | +0.0 | 20.3 | 40.0 | -19.7 | Horiz |

CKC Laboratories, Inc. Date: 2/27/2012 Time: 16:15:22 Motorola Mobility, Inc. WO#: 92800  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 7 Ext ATTN: 0 dB



- Sweep Data
- Readings
- Peak Readings
- × QP Readings
- \* Average Readings
- ▼ Ambient
- 1 - RSS-210 Unwanted Emissions in Restricted Bands (Radiated)

**Test Setup Photos**



## SUPPLEMENTAL INFORMATION

### Measurement Uncertainty

| Uncertainty Value | Parameter                 |
|-------------------|---------------------------|
| 4.73 dB           | Radiated Emissions        |
| 3.34 dB           | Mains Conducted Emissions |
| 3.30 dB           | Disturbance Power         |

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ . Compliance is deemed to occur provided measurements are below the specified limits.

### Emissions Test Details

#### TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

#### CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB $\mu$ V/m, the spectrum analyzer reading in dB $\mu$ V was corrected by using the following formula. This reading was then compared to the applicable specification limit.

| SAMPLE CALCULATIONS |                     |                |
|---------------------|---------------------|----------------|
|                     | Meter reading       | (dB $\mu$ V)   |
| +                   | Antenna Factor      | (dB)           |
| +                   | Cable Loss          | (dB)           |
| -                   | Distance Correction | (dB)           |
| -                   | Preamplifier Gain   | (dB)           |
| =                   | Corrected Reading   | (dB $\mu$ V/m) |

#### TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

| MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE |                     |                  |                   |
|------------------------------------------------------------|---------------------|------------------|-------------------|
| TEST                                                       | BEGINNING FREQUENCY | ENDING FREQUENCY | BANDWIDTH SETTING |
| CONDUCTED EMISSIONS                                        | 150 kHz             | 30 MHz           | 9 kHz             |
| RADIATED EMISSIONS                                         | 30 MHz              | 1000 MHz         | 120 kHz           |
| RADIATED EMISSIONS                                         | 1000 MHz            | >1 GHz           | 1 MHz             |

#### SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or carrot ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

##### Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

##### Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

##### Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.