

# **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:**  
**DATE(S) OF TESTING:**

February 13, 2012  
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". The signature is written in a cursive style with a horizontal line underneath it.

*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
The manufacturer declares that for all testing the EUT was configured as follows:
HW Version: P2
Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG
MAC Address: 0023ED6E76DC

## 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.

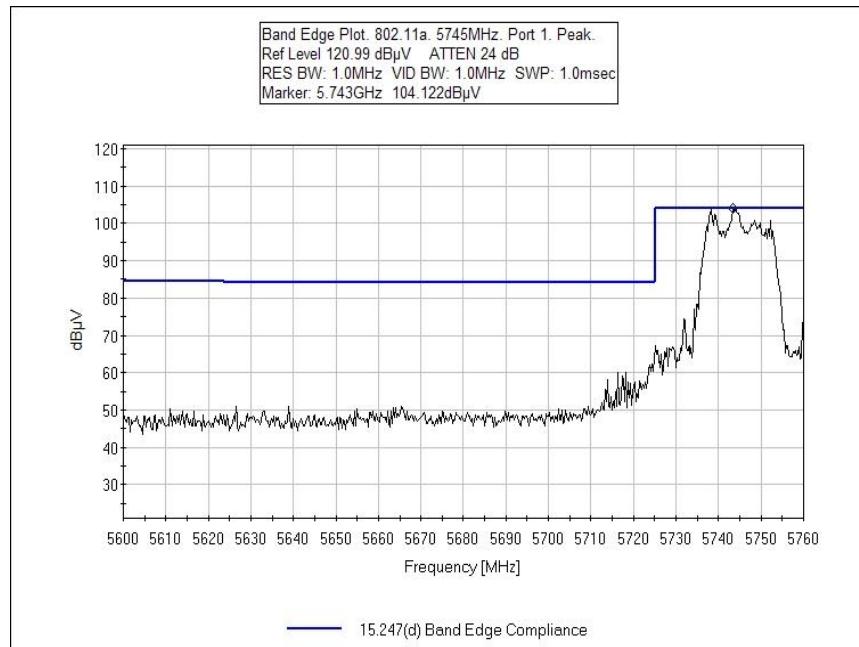
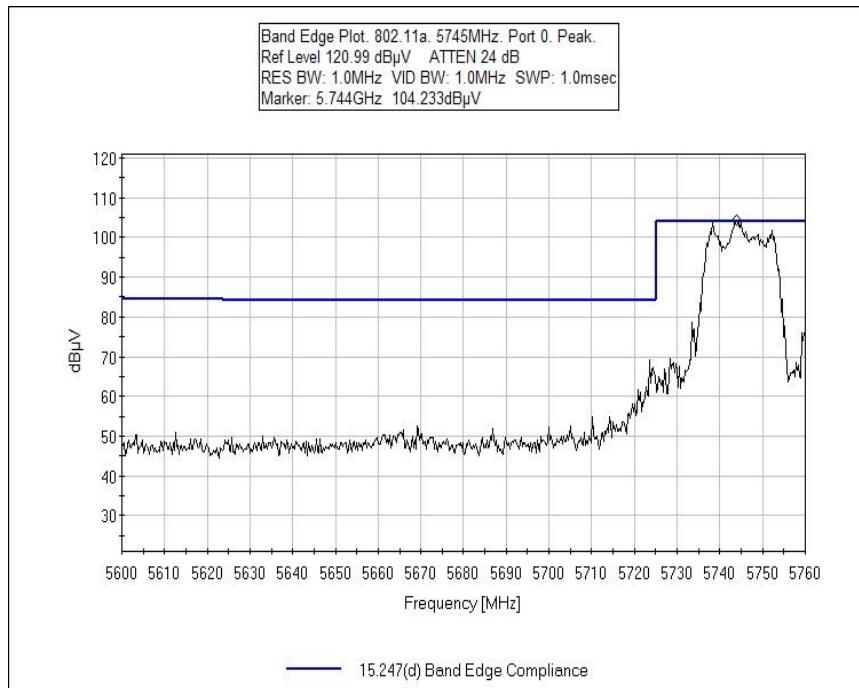
Integral Antenna Gain: 4.4 dBi max at 5GHz band

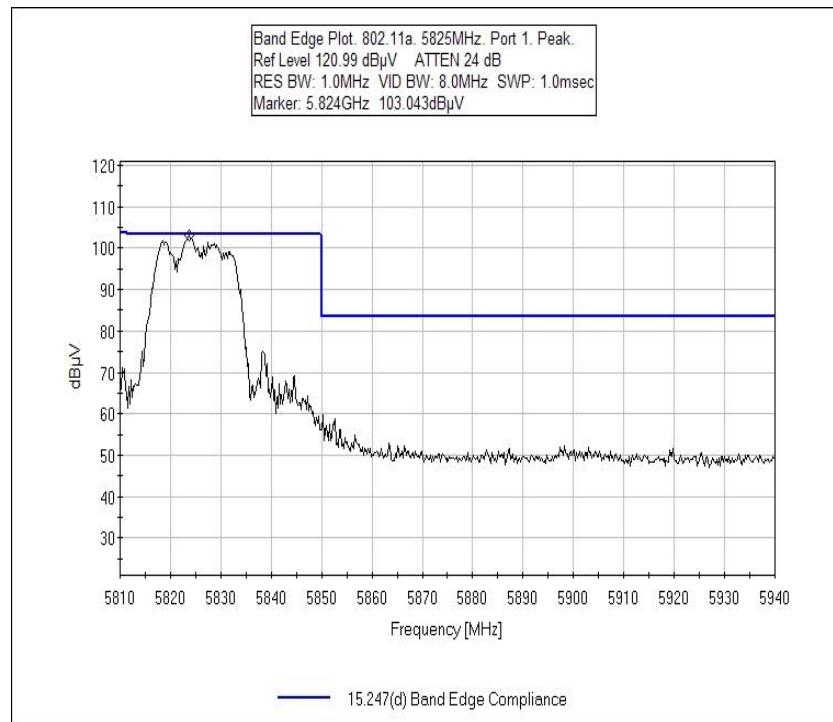
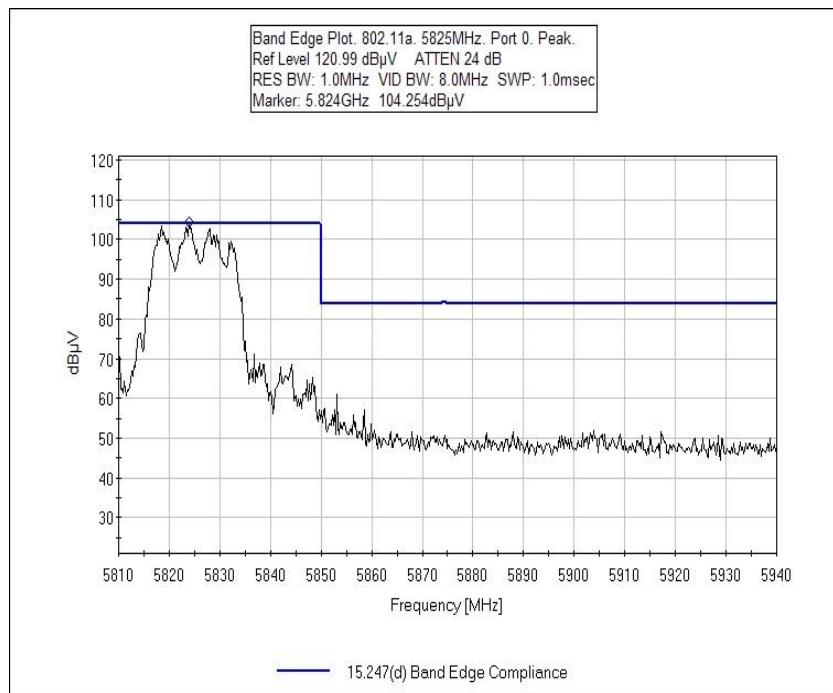


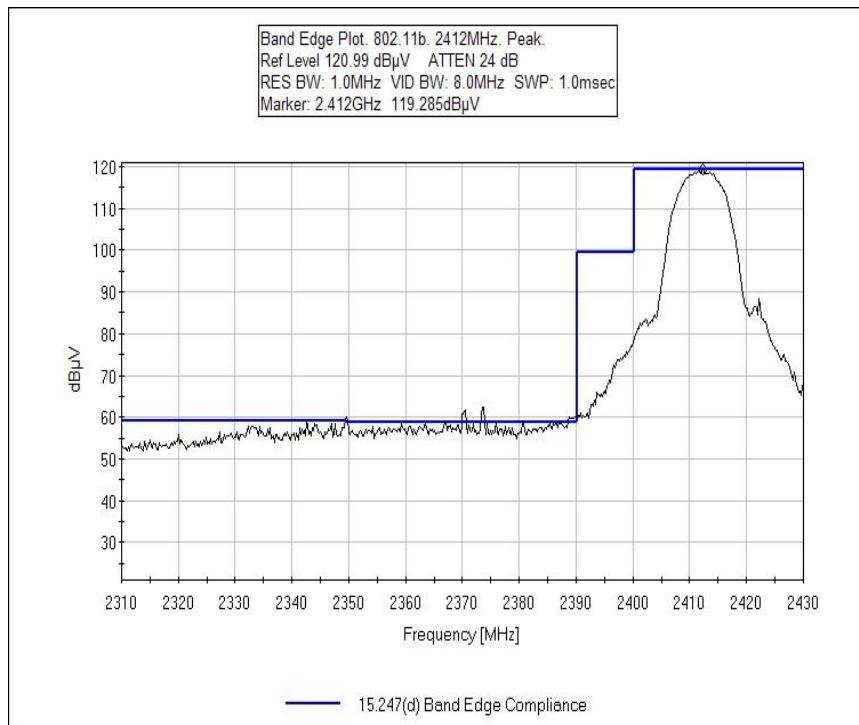
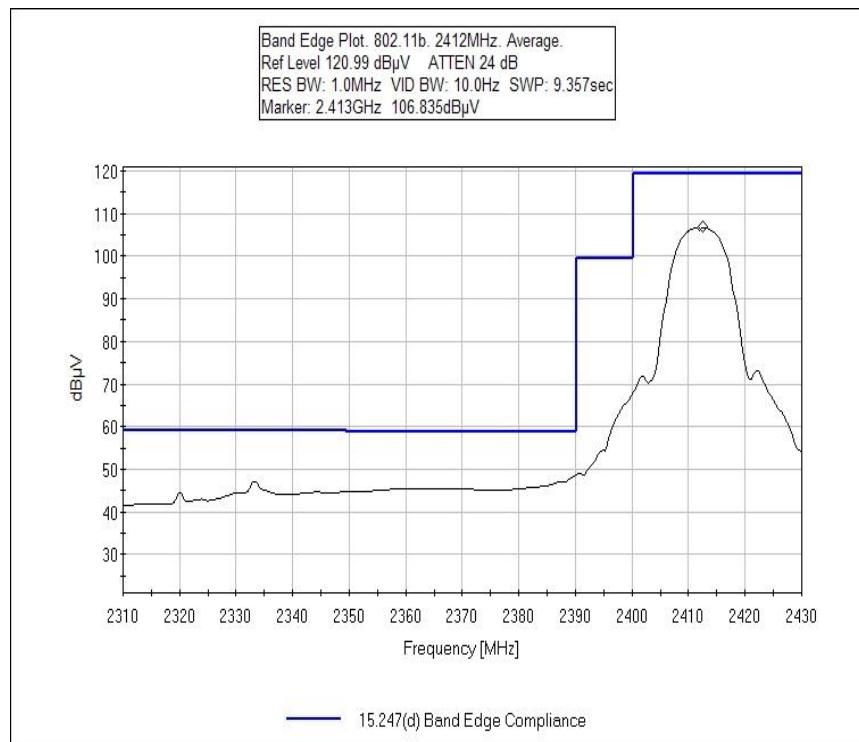
Engineer Name: S. Yamamoto

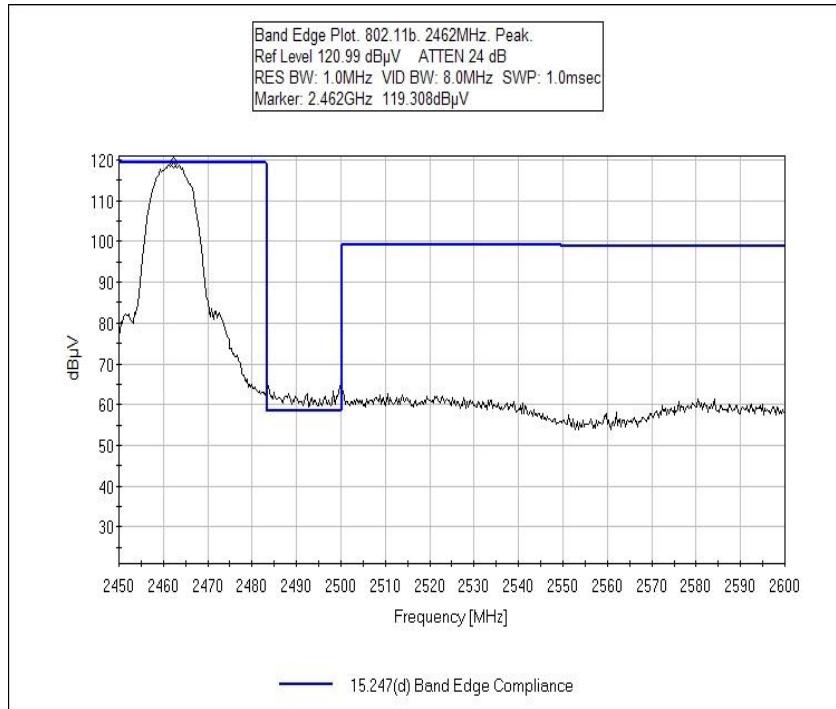
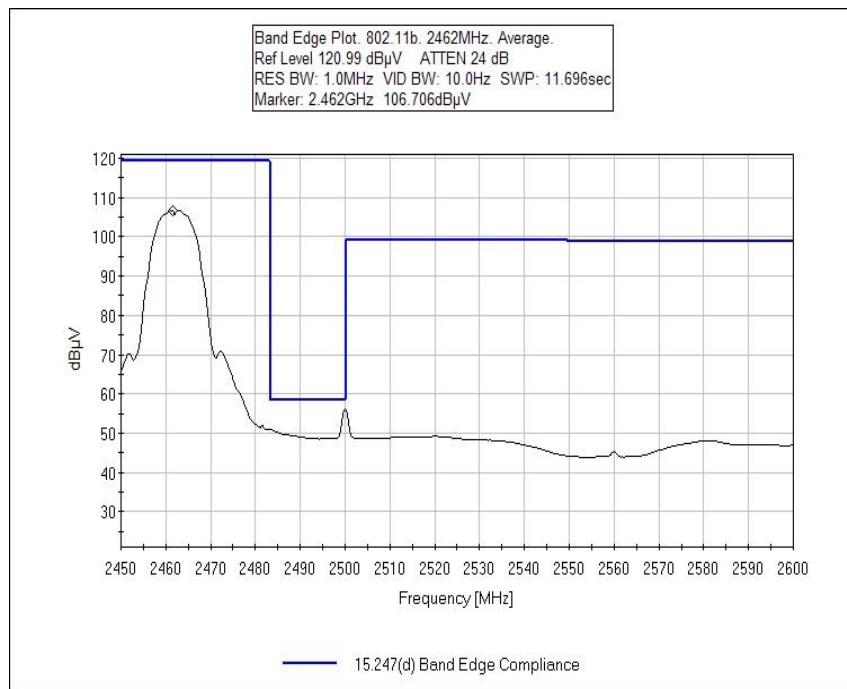
Test Equipment					
Asset/Serial #	Description	Model	Manufacturer	Cal Date	Cal Due
02672	Spectrum Analyzer	E4446A	Agilent	8/9/2010	8/9/2012
01646	Horn Antenna	3115	Emco	8/18/2010	8/18/2012
00786	Preamp	83017A	HP	8/5/2010	8/5/2012
03239	Cable	32022-2-29094K-24TC	Astrolab	8/30/2011	8/30/2013
P05421	Cable	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

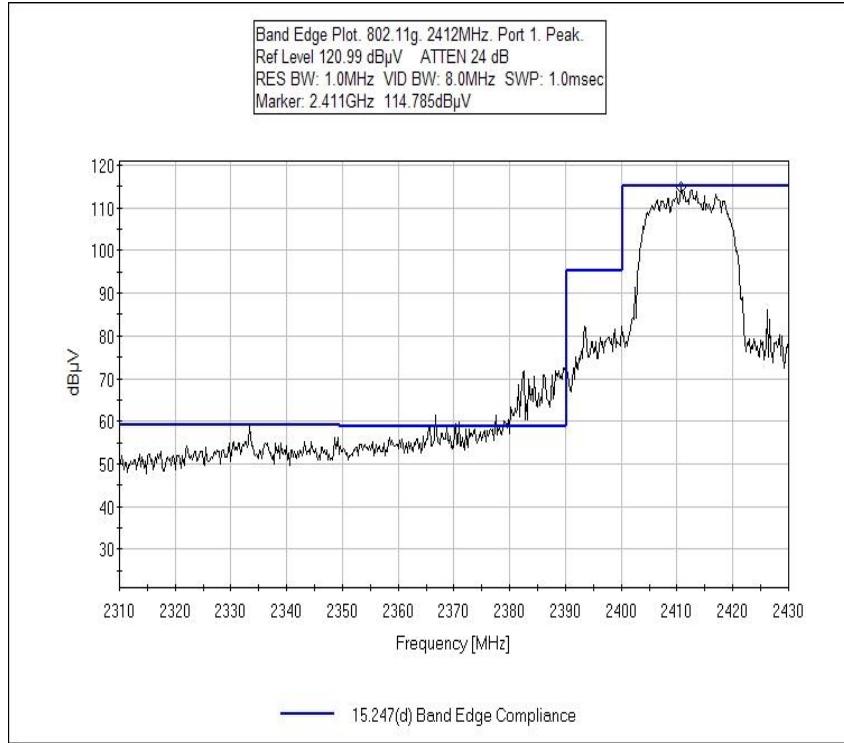
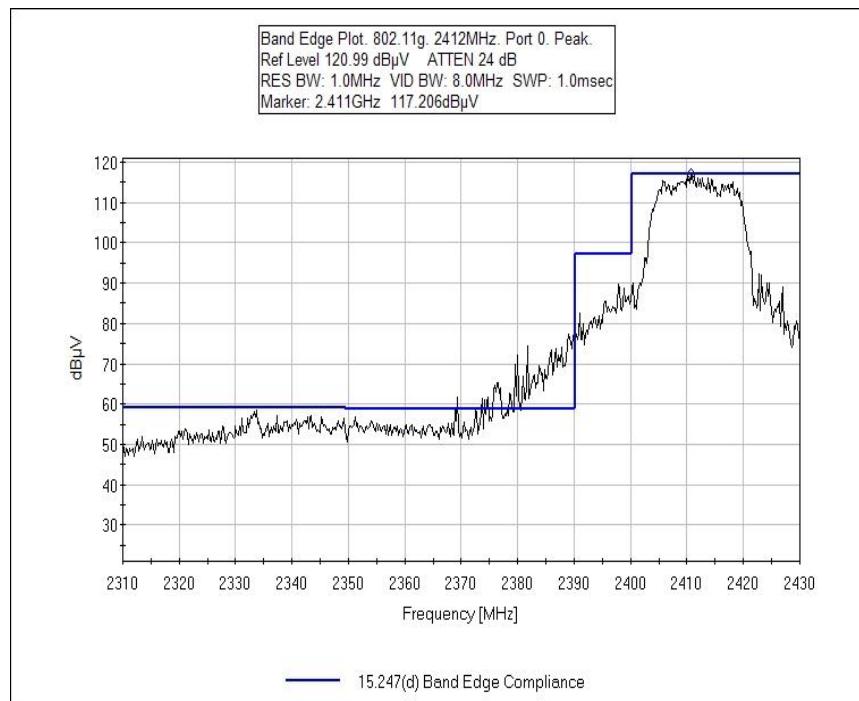
**Test Plots**

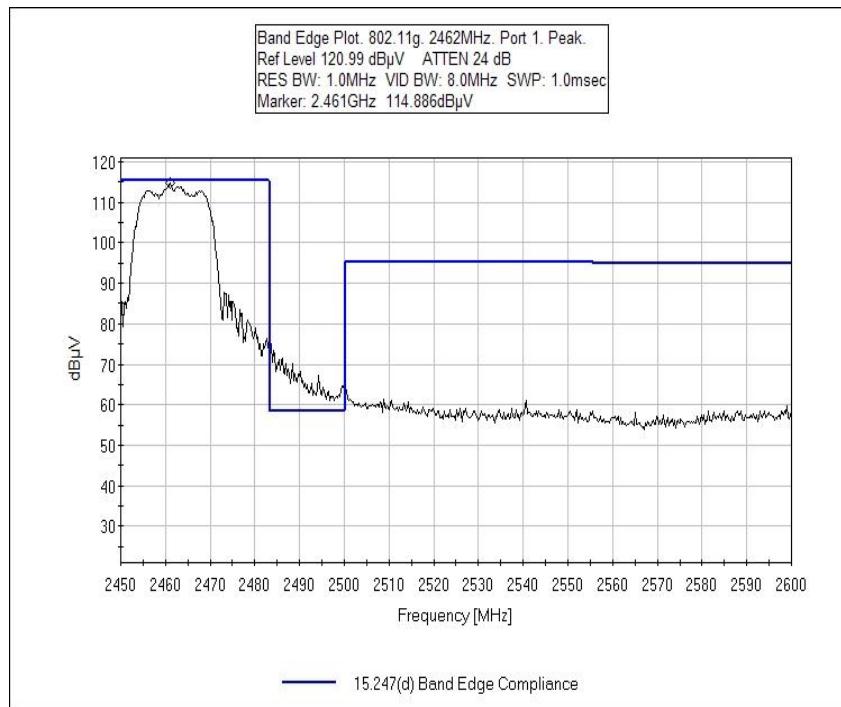
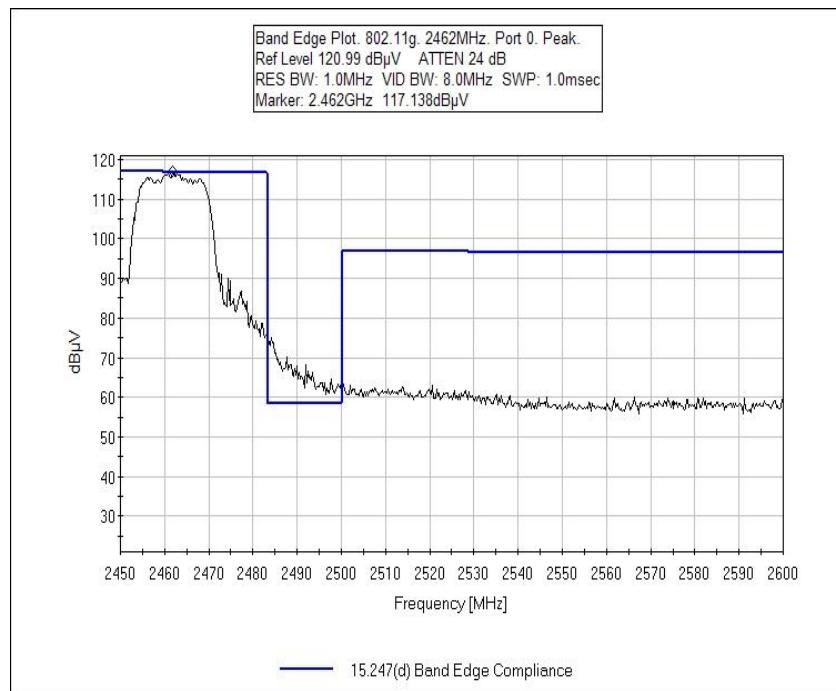


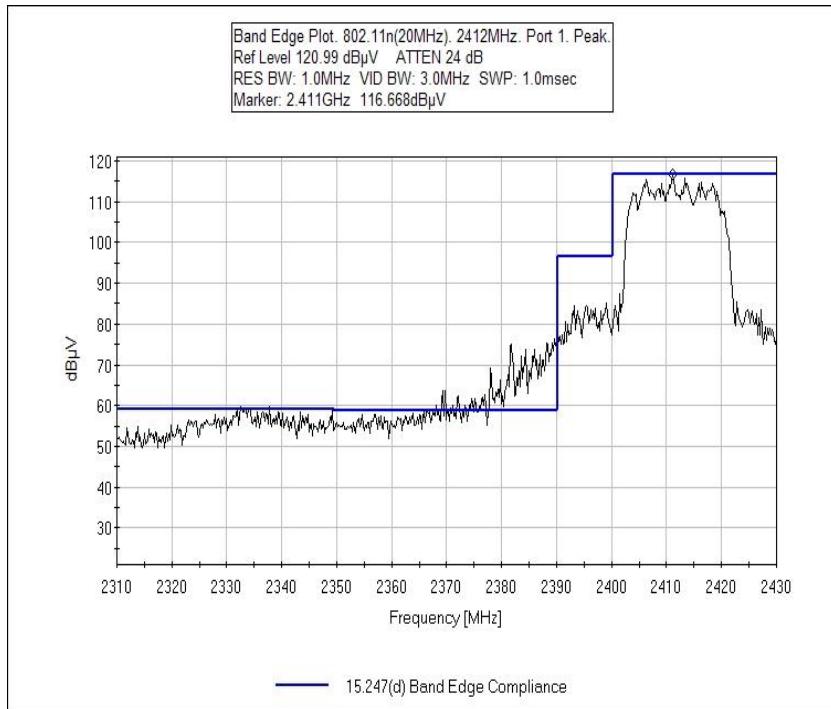
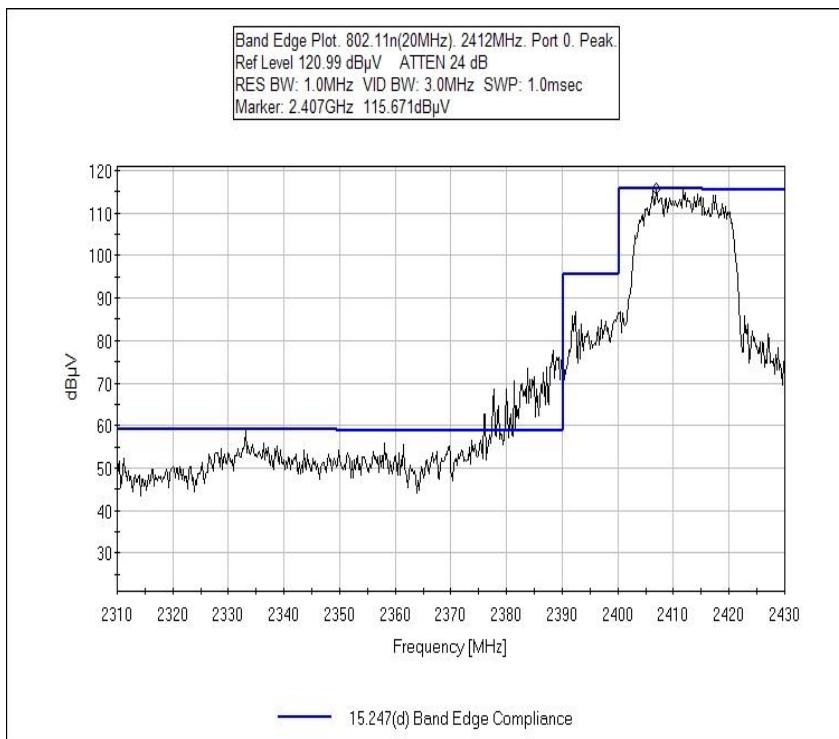


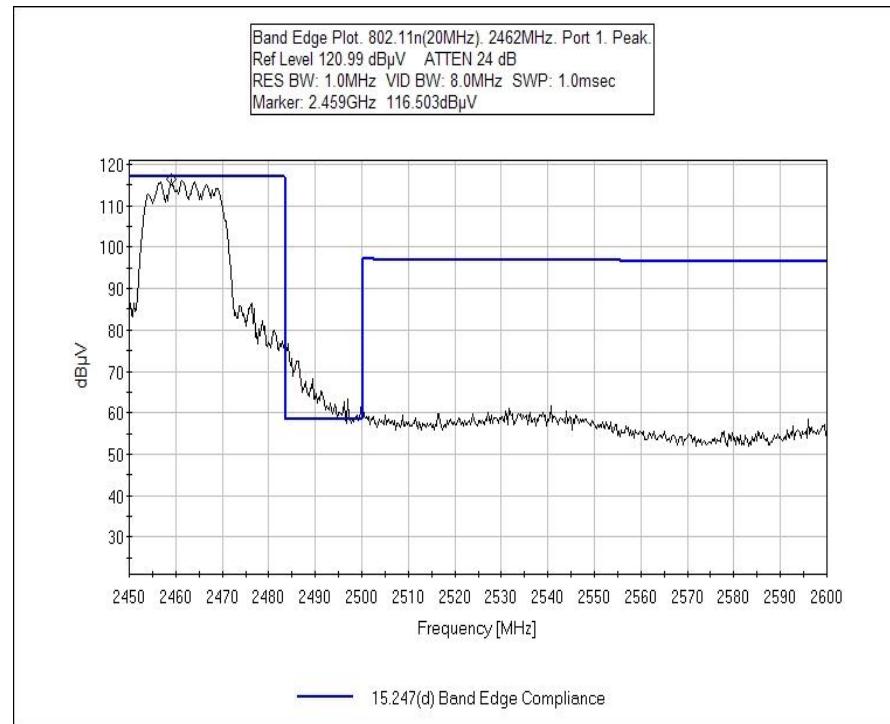
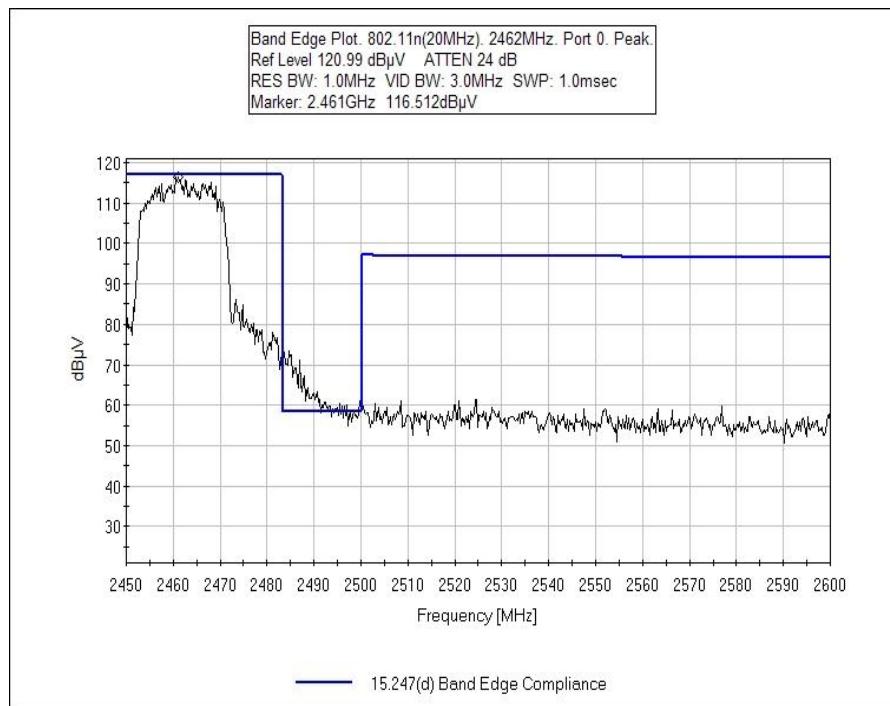


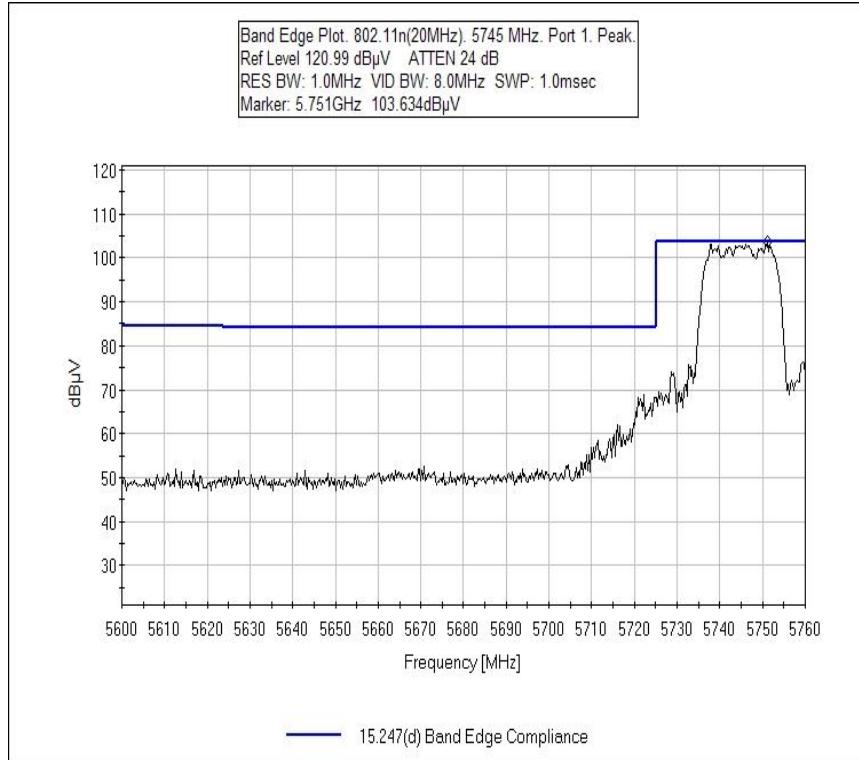
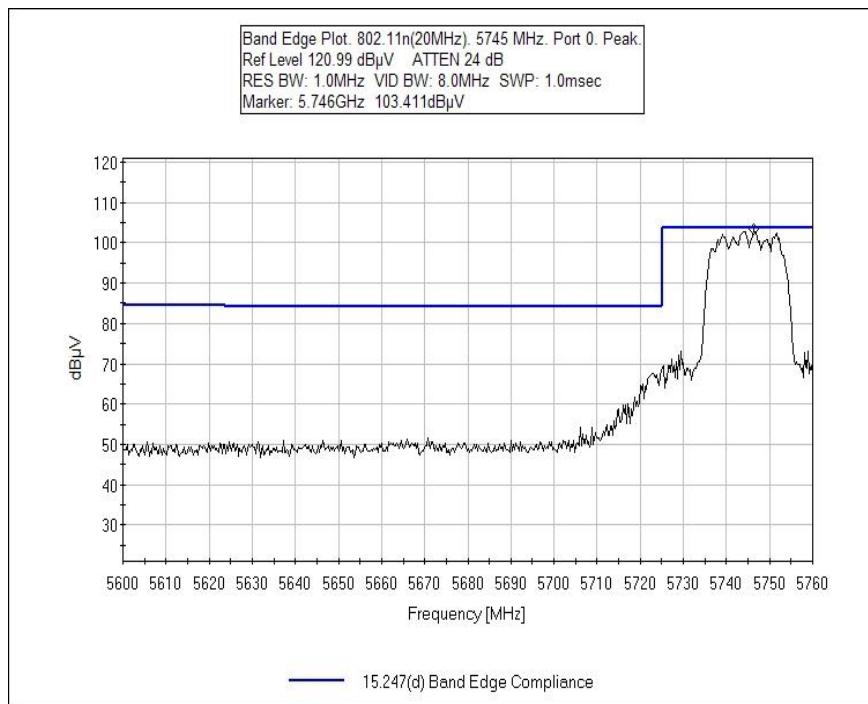


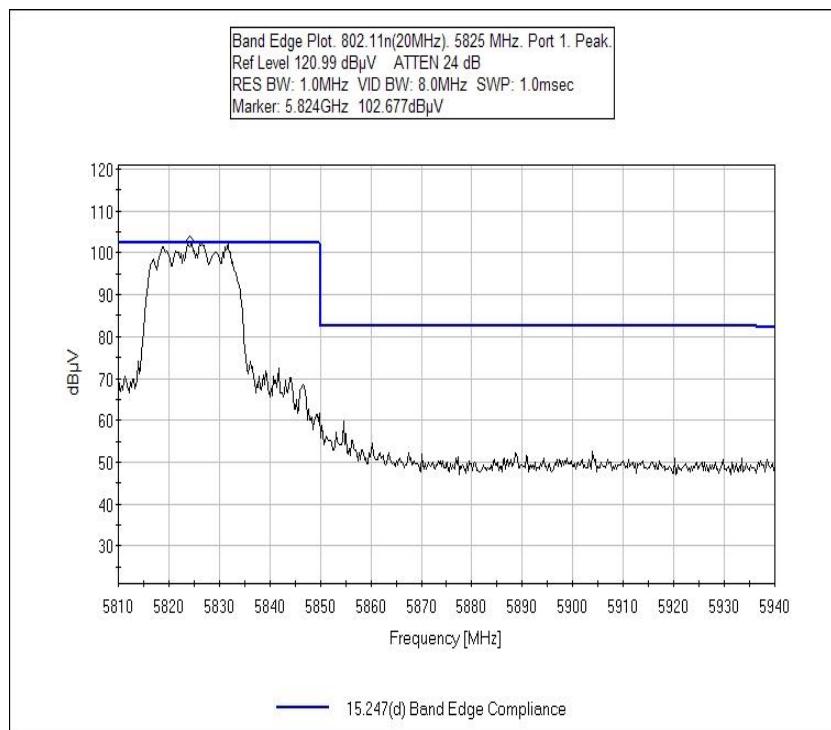
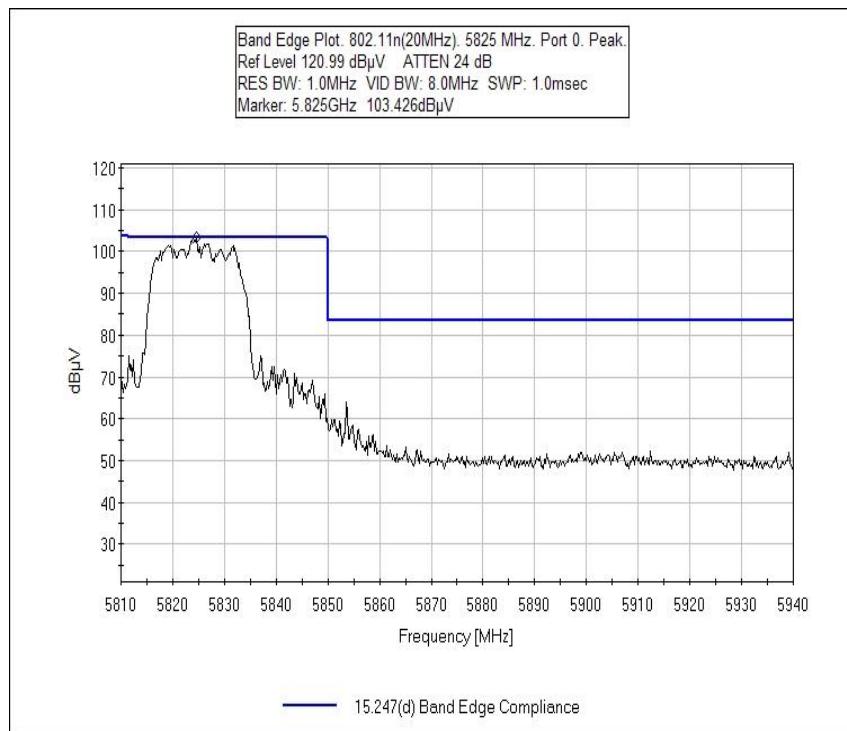


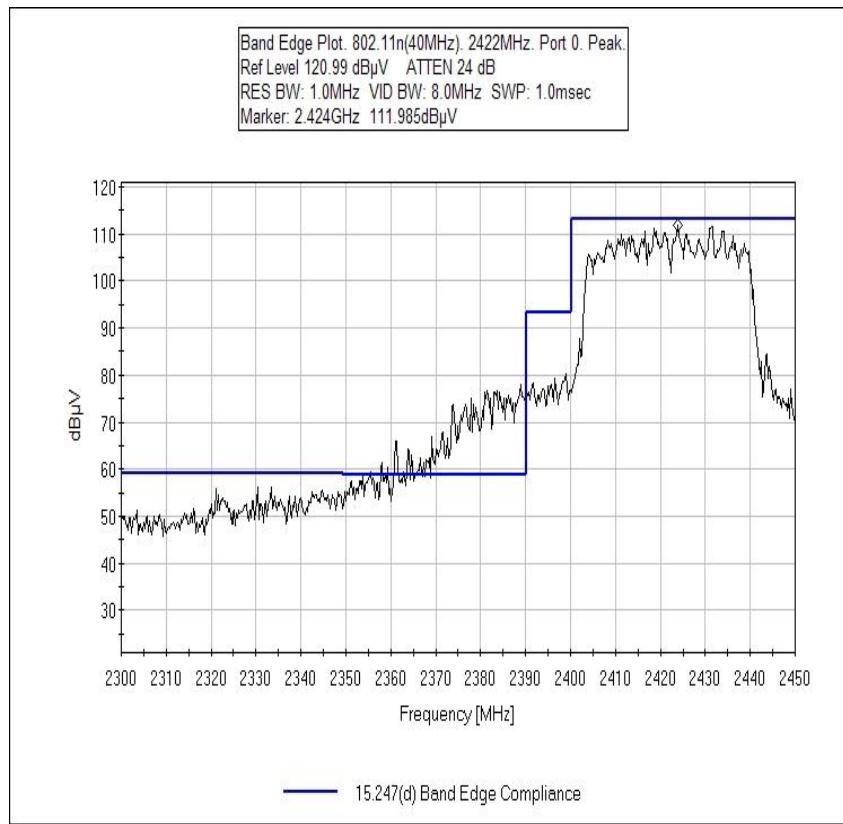
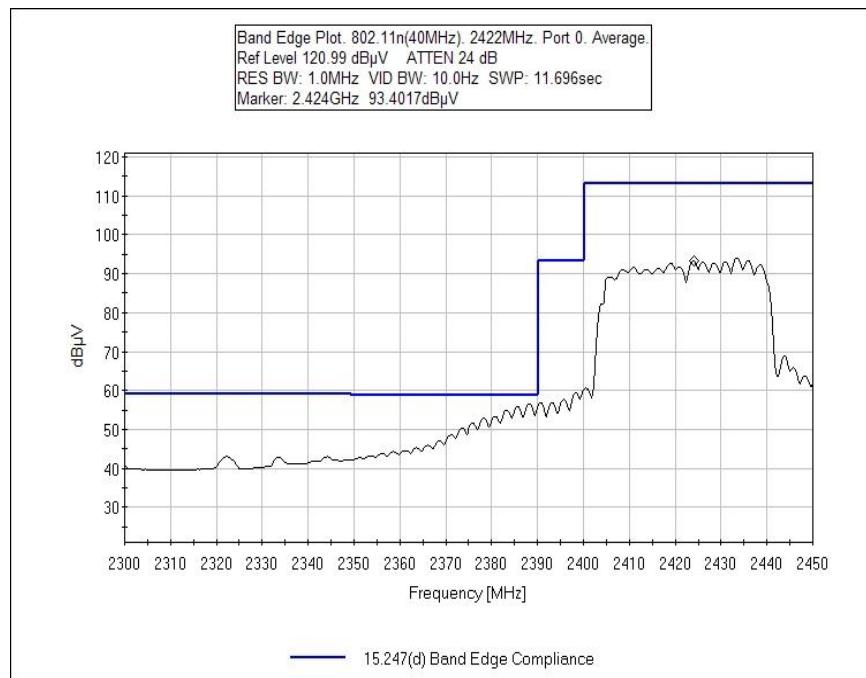


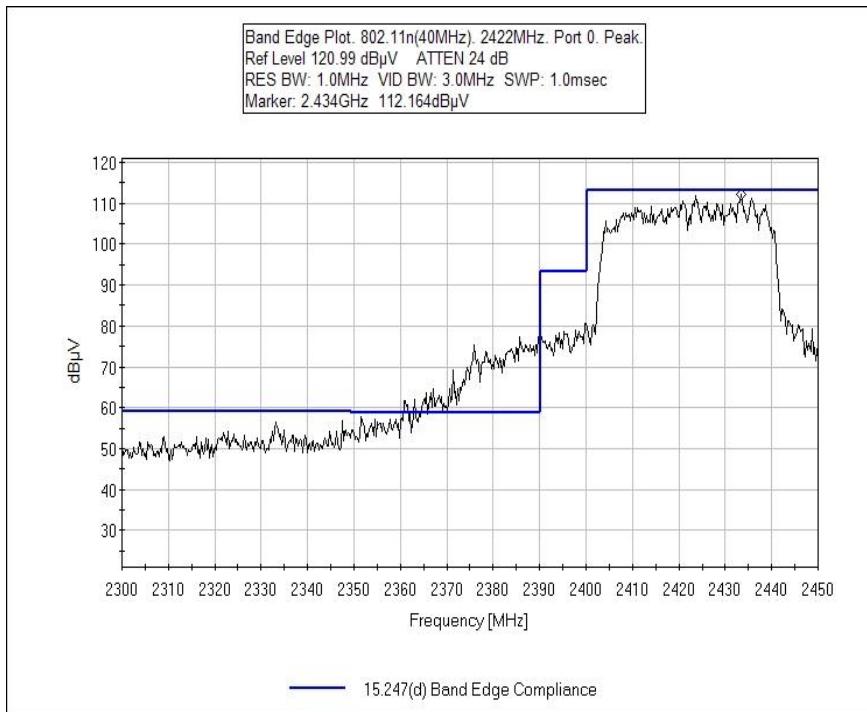
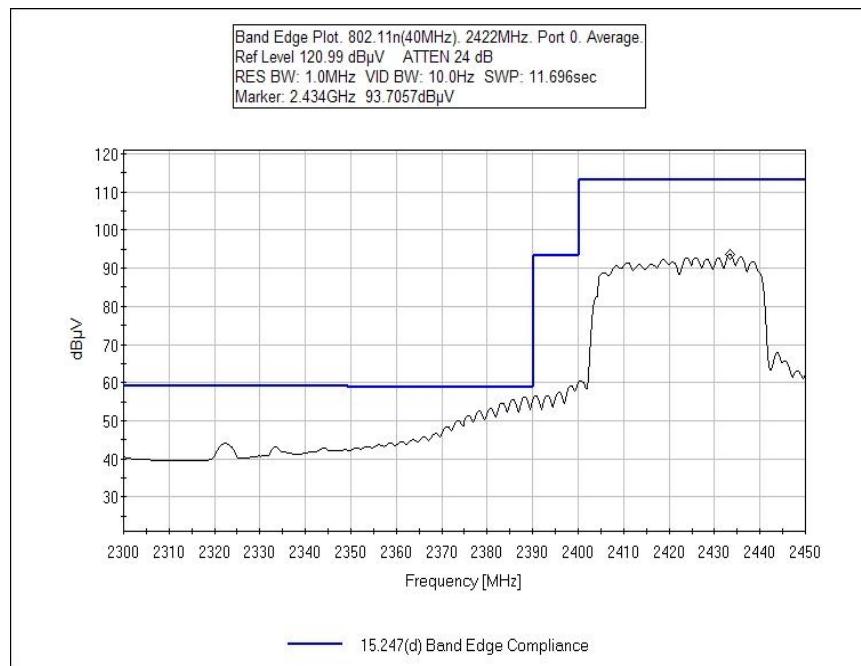


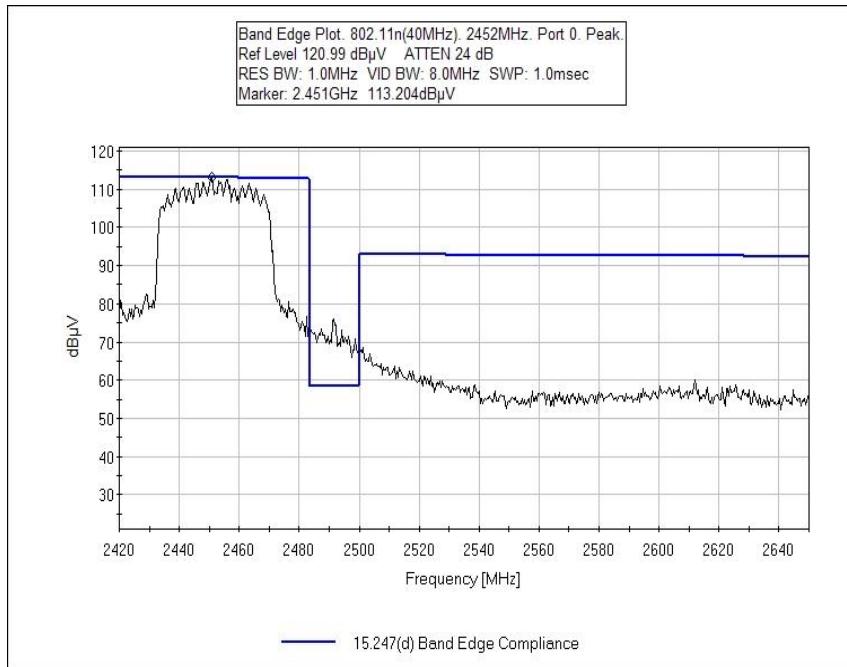
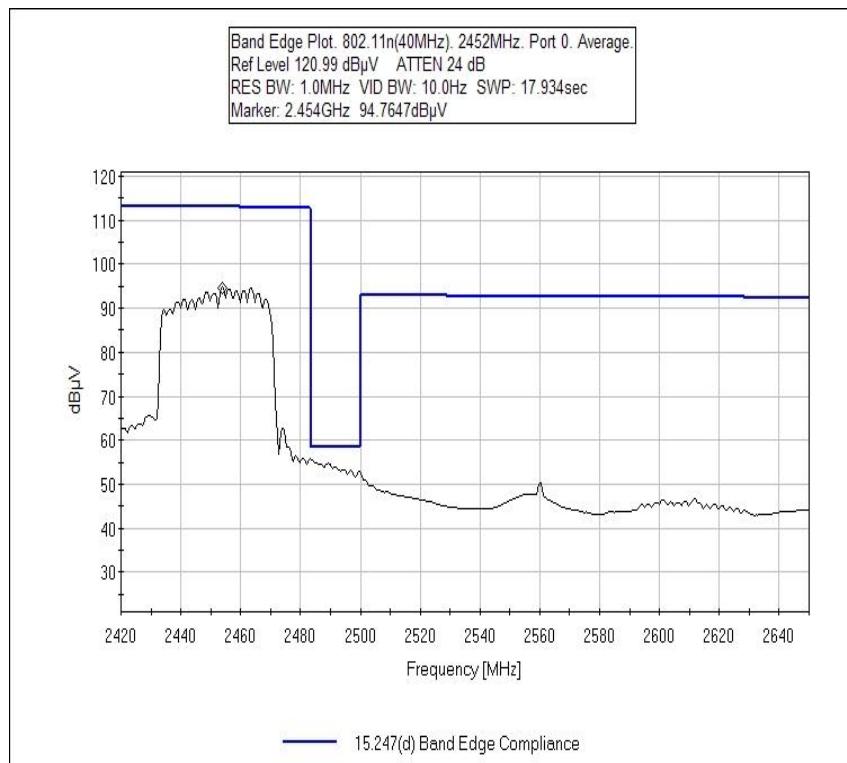


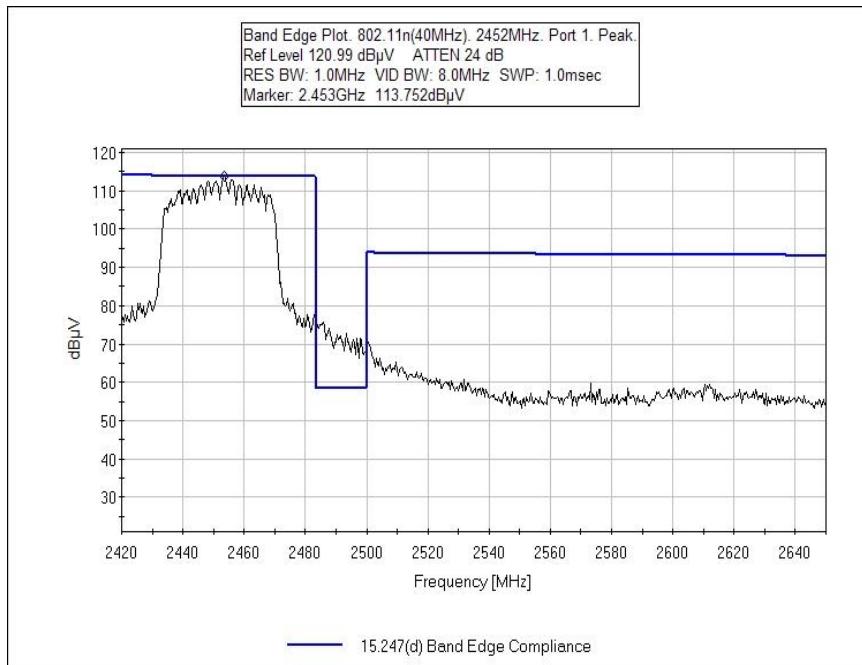
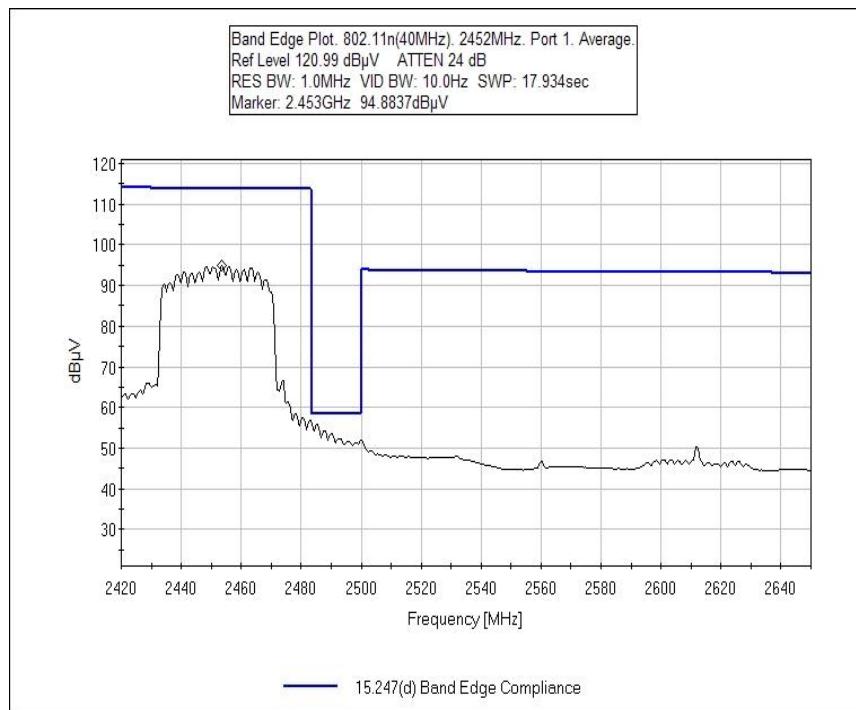


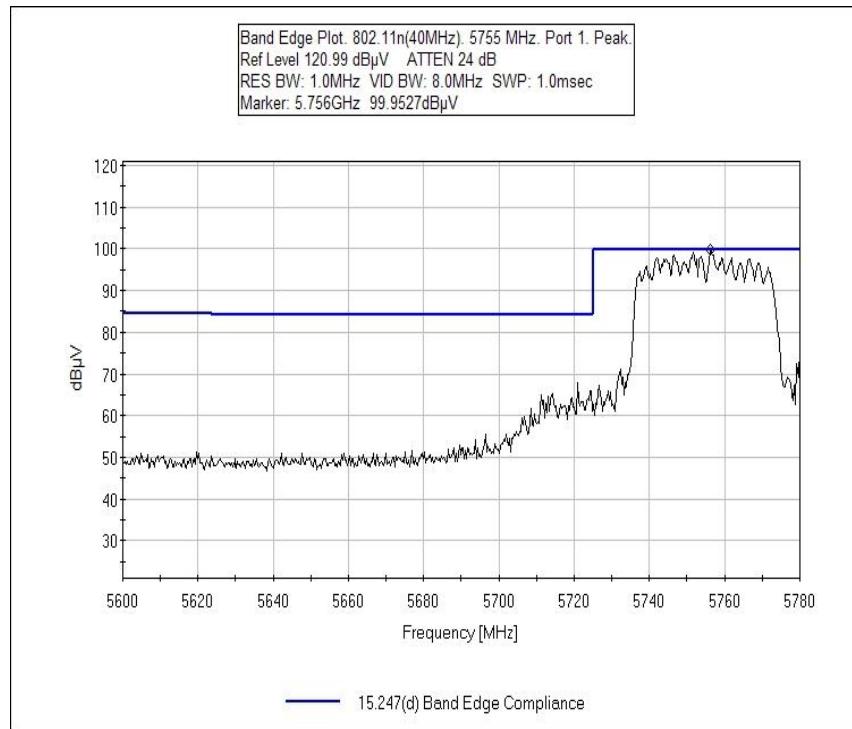
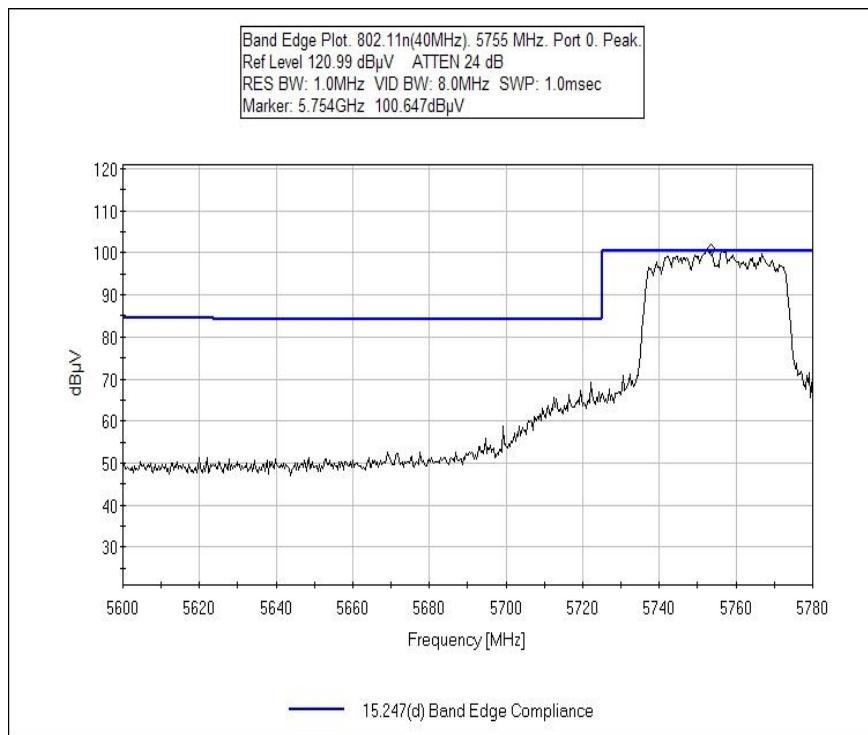


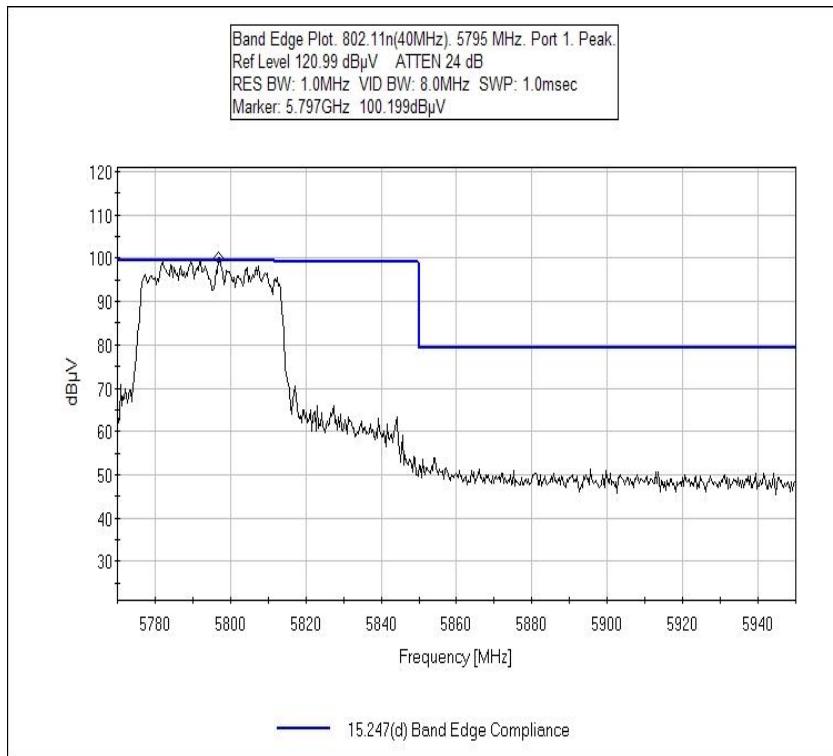
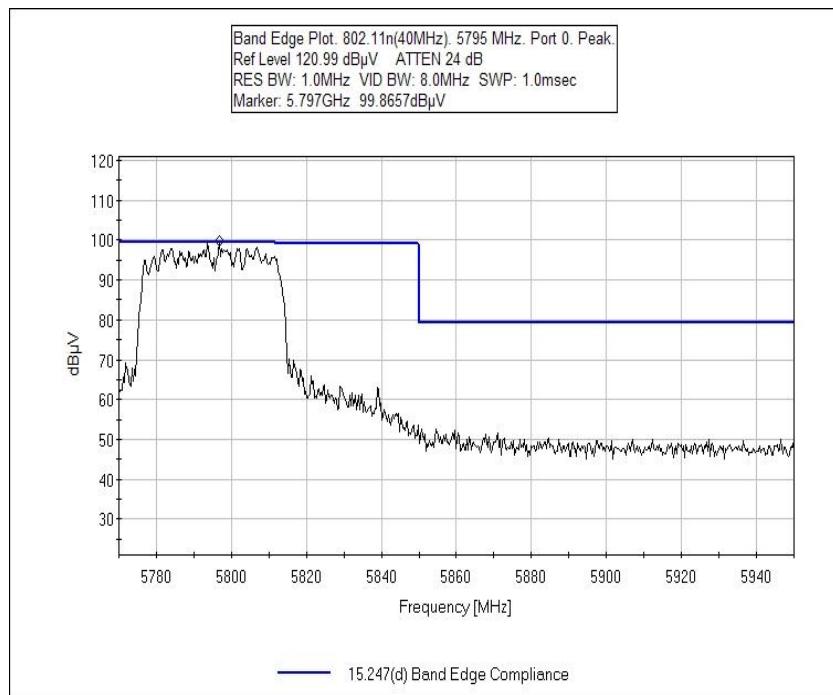


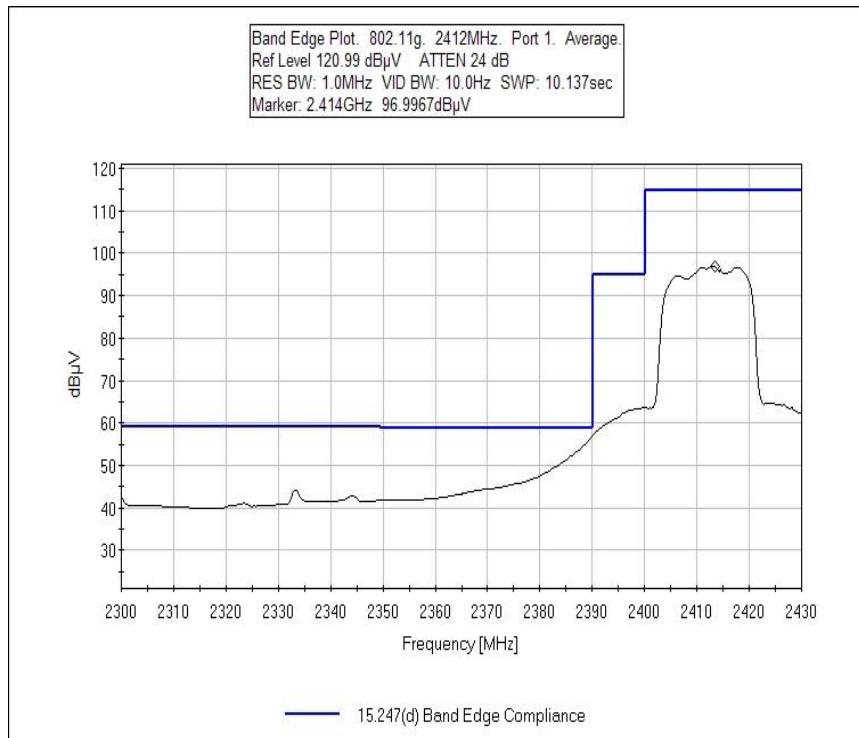
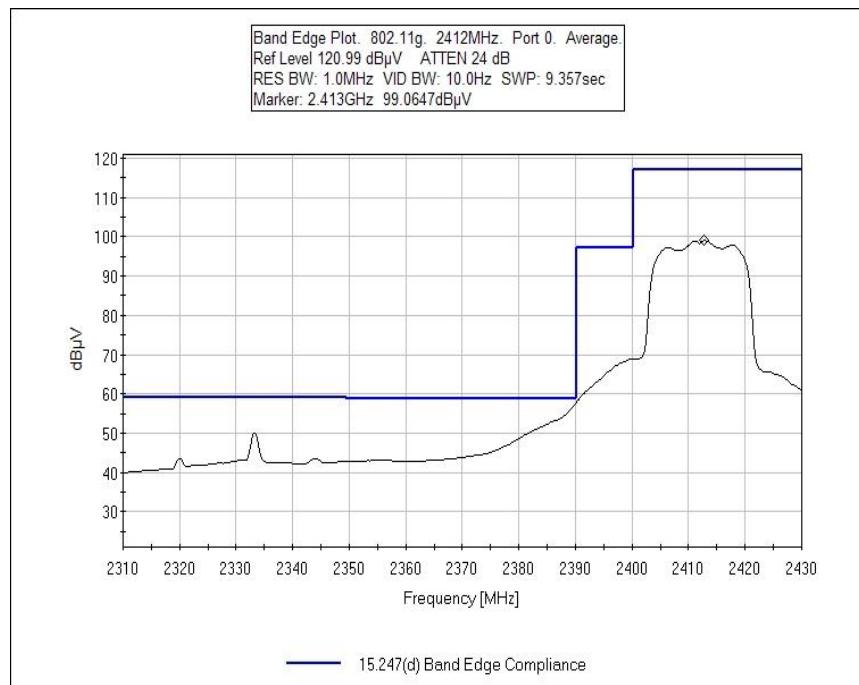


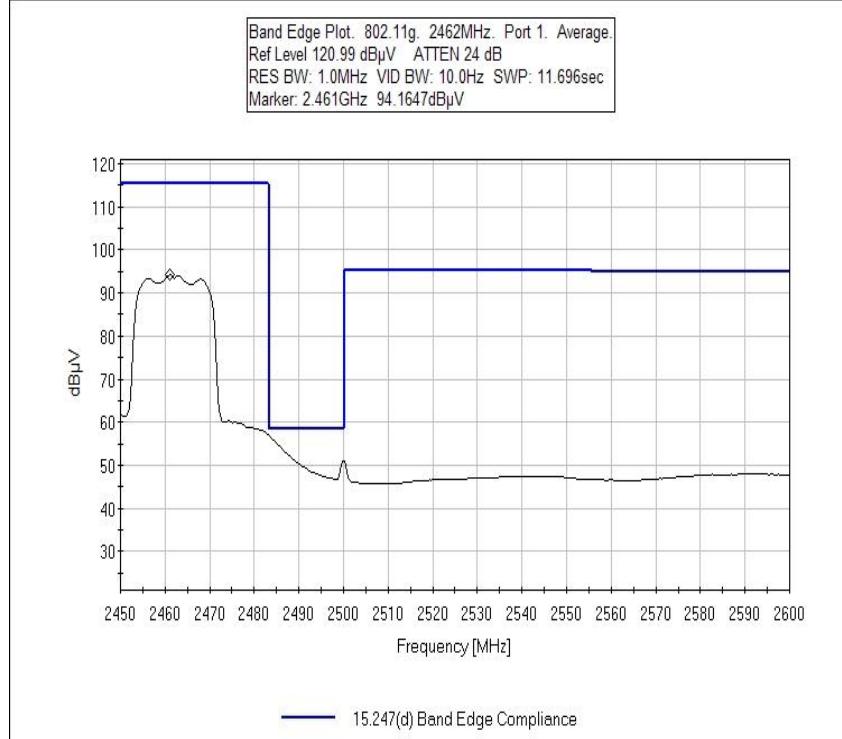
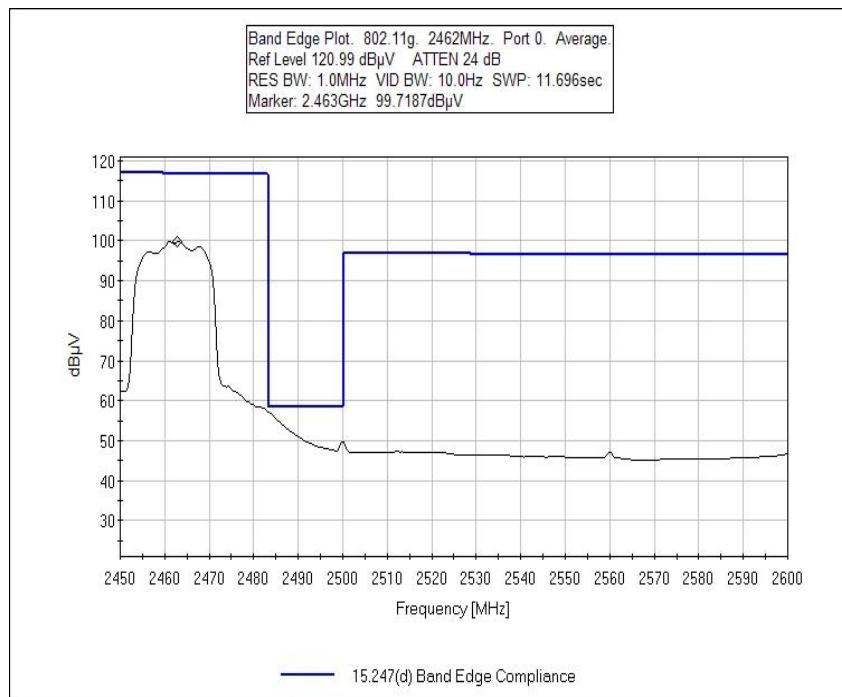


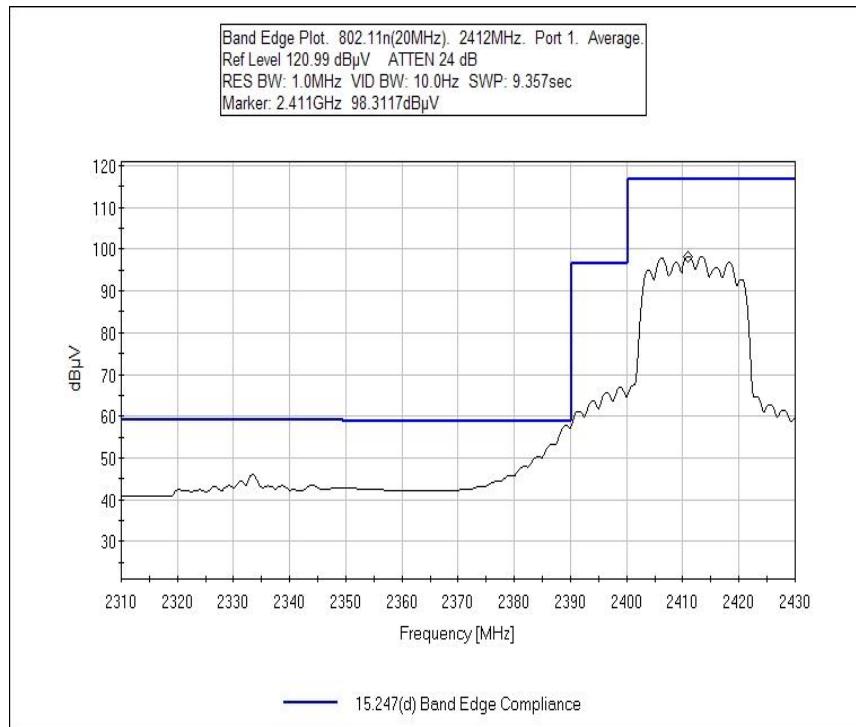
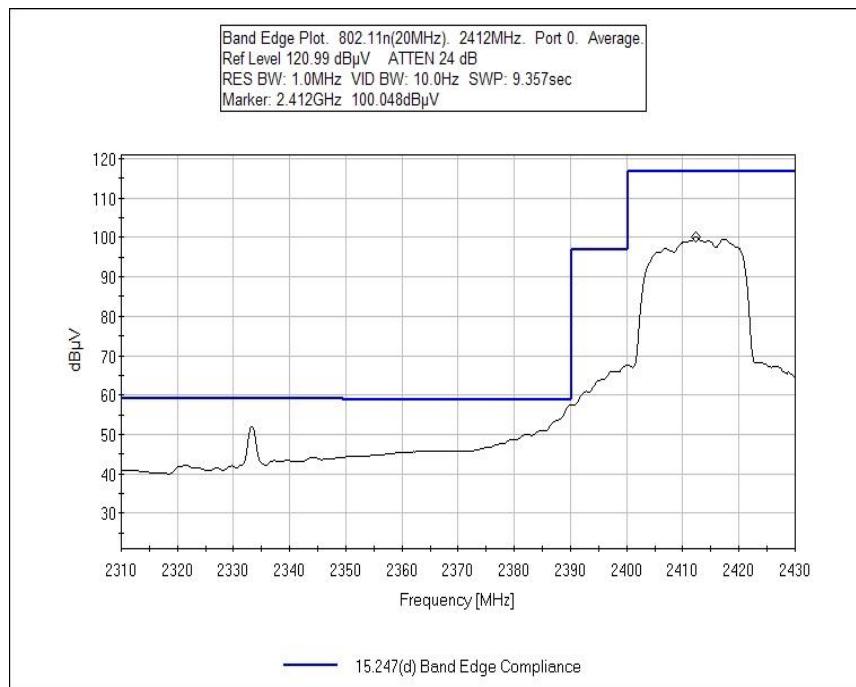


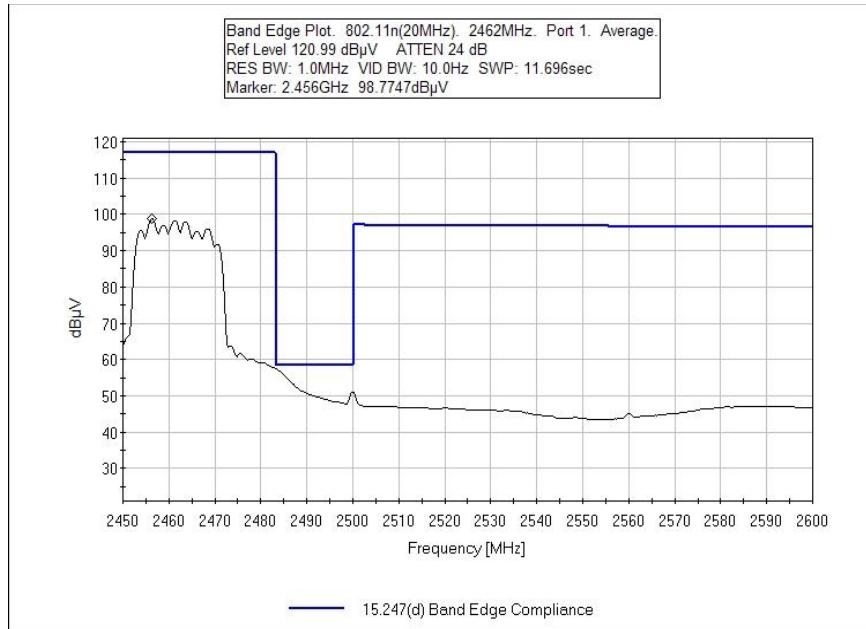
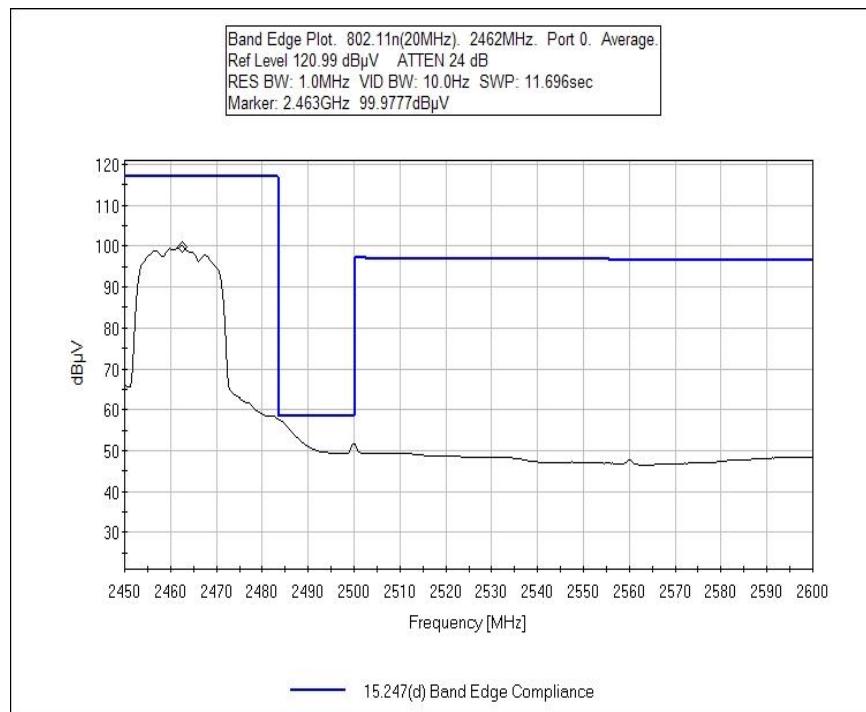












**Test Setup Photos**



## 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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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

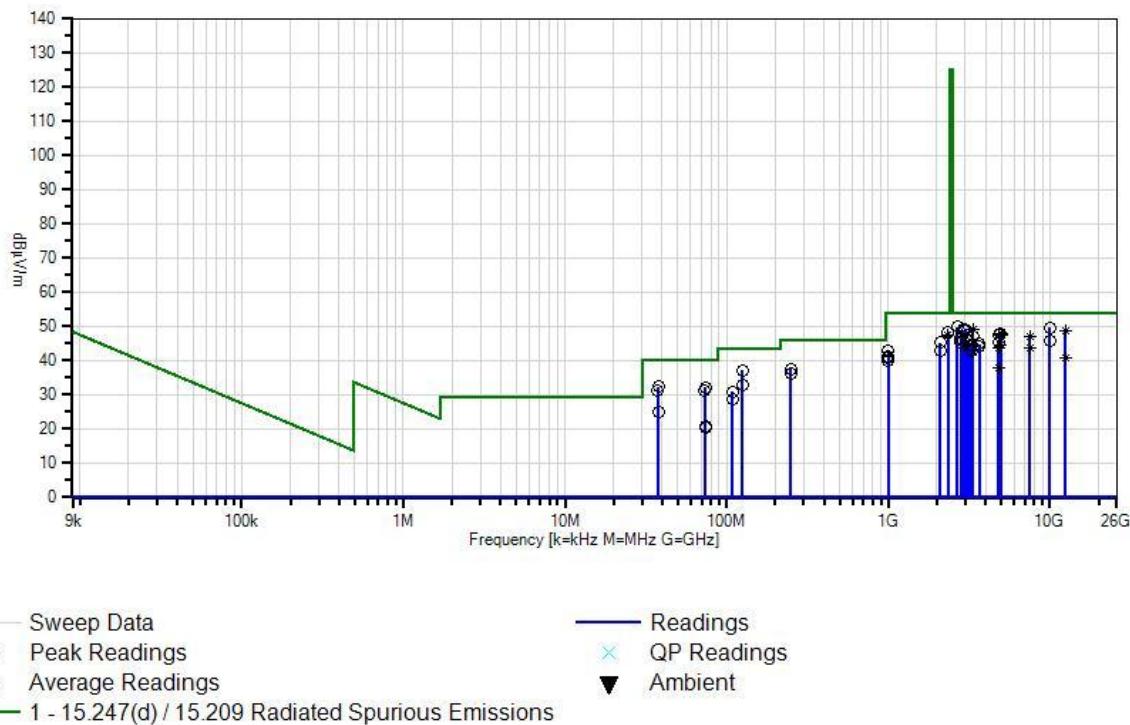
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB			Ant	
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4	+0.0	49.9	54.0	-4.1	Horiz
2	9999.966M	37.1	+0.0 +0.0 -35.9	+0.0 +0.8 +37.2	+0.0 +7.3 +0.5	+0.0 +2.7	+0.0	49.7	54.0	-4.3	Horiz
3	2999.984M	50.7	+0.0 +0.0 -37.8	+0.0 +0.4 +30.0	+0.0 +3.6 +0.9	+0.0 +1.5	+0.0	49.3	54.0	-4.7	Horiz
4	2899.988M	50.8	+0.0 +0.0 -37.9	+0.0 +0.4 +29.7	+0.0 +3.6 +1.1	+0.0 +1.4	+0.0	49.1	54.0	-4.9	Horiz
5	3333.317M	49.7	+0.0 Ave	+0.0 +0.0 -37.7	+0.0 +3.9 +30.7	+0.0 +1.5	+0.0	49.1	54.0	-4.9	Horiz
^	3333.317M	53.1	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5	+0.0	52.5	54.0	-1.5	Horiz
7	12499.947	33.3	+0.0 M Ave	+0.0 +0.8 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9	+0.0	48.9	54.0	-5.1	Horiz
^	12499.947	36.7	+0.0 M	+0.0 +0.8 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9	+0.0	52.3	54.0	-1.7	Horiz
9	2999.985M	50.3	+0.0 +0.0 -37.8	+0.0 +0.4 +30.0	+0.0 +3.6 +0.9	+0.0 +1.5	+0.0	48.9	54.0	-5.1	Vert
10	2333.324M	53.3	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +1.3	+0.0	48.5	54.0	-5.5	Vert
11	4999.977M	44.2	+0.0 Ave	+0.0 +0.0 -37.0	+0.0 +5.0 +33.3	+0.0 +1.8	+0.0	48.1	54.0	-5.9	Vert
^	4999.977M	47.0	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8	+0.0	50.9	54.0	-3.1	Vert
13	4923.958M	44.2	+0.0 +0.0 -37.1	+0.0 +0.5 +33.2	+0.0 +5.0 +0.4	+0.0 +1.8	+0.0	48.0	54.0	-6.0	Horiz
14	124.998M	50.8	+0.2 +0.0 +0.0	-27.8 +0.0 +0.0	+1.9 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0	37.2	43.5	-6.3	Vert
15	4999.978M	43.7	+0.0 Ave	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+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	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						
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	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						
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	-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						
34	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						
35	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						
36	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						
37	4923.957M	41.0	+0.0	+0.0	+0.0	+0.0	+0.0	44.8	54.0	-9.2	Vert
Ave			+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						
39	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						
40	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						
41	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						
42	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						
43	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave			+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						
45	4873.953M	39.8	+0.0	+0.0	+0.0	+0.0	+0.0	43.5	54.0	-10.5	Vert
Ave			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.1	+0.4						
^	4873.953M	47.9	+0.0	+0.0	+0.0	+0.0	+0.0	51.6	54.0	-2.4	Vert
			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.1	+0.4						
47	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						
48	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						
49	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						

50	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							
51	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
		+0.0	+0.0	+0.0	+0.0	+0.0					
		+0.0	+0.0	+0.0	+0.0	+0.0					
52	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
		+0.0	+0.0	+0.0	+0.0	+0.0					
		+0.0	+0.0	+0.0	+0.0	+0.0					
53	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							
54	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M	+0.0	+0.8	+8.9	+2.9						
	Ave	-35.9	+38.7	+0.2							
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M	+0.0	+0.8	+8.9	+2.9						
		-35.9	+38.7	+0.2							
56	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	+0.0	+0.0	+0.0					
57	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							
58	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	+0.0	+0.0	+0.0					
59	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	+0.0	+0.0	+0.0					
60	4823.972M	34.2	+0.0	+0.0	+0.0	+0.0	+0.0	37.8	54.0	-16.2	Vert
	Ave	+0.0	+0.5	+5.0	+1.8						
		-37.1	+33.0	+0.4							
^	4823.972M	45.1	+0.0	+0.0	+0.0	+0.0	+0.0	48.7	54.0	-5.3	Vert
		+0.0	+0.5	+5.0	+1.8						
		-37.1	+33.0	+0.4							
62	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	+0.0	+0.0	+0.0					
63	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	+0.0	+0.0	+0.0					

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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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.

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

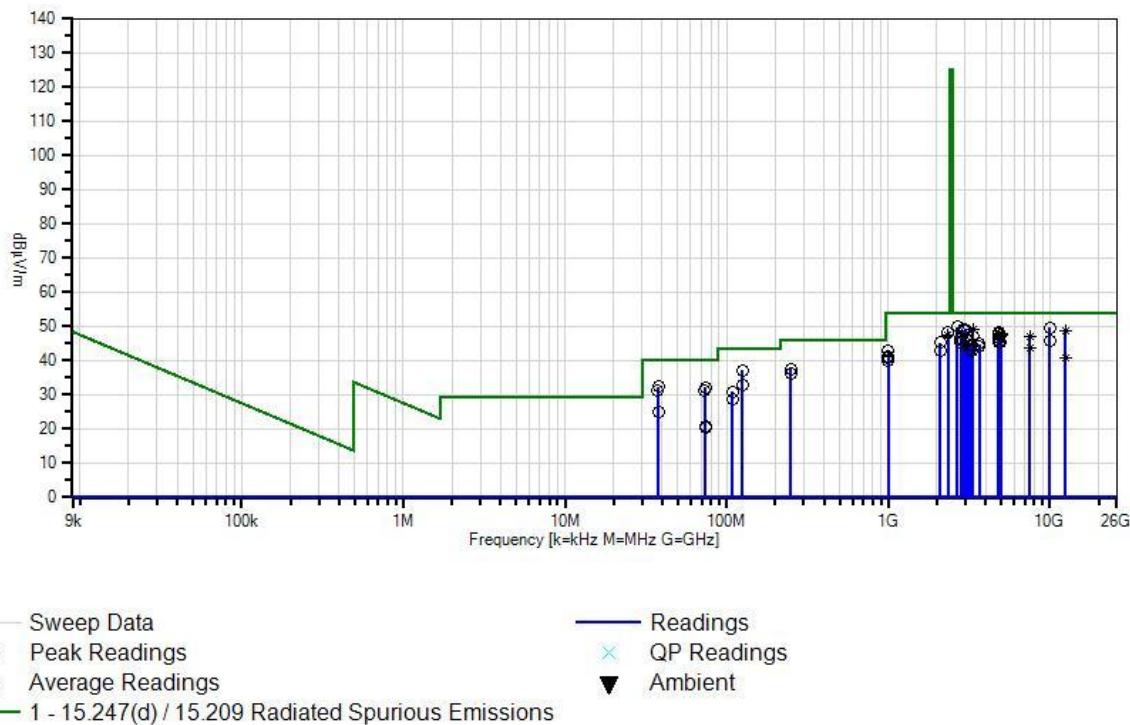
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters					
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist	Corr	Spec	Margin	Polar	
			MHz	dB $\mu$ V	dB	dB	dB	Table	dB $\mu$ V/m	dB $\mu$ V/m	dB	Ant
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4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

16	4923.998M	43.9	+0.0	+0.0	+0.0	+0.0	+0.0	47.7	54.0	-6.3	Vert
			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.2	+0.4						
17	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						
19	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						
21	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						
23	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						
24	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						
25	4873.995M	42.8	+0.0	+0.0	+0.0	+0.0	+0.0	46.5	54.0	-7.5	Vert
			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.1	+0.4						
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	+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	+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	+0.0					

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	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave		+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	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
51	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
52	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						
53	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
55	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	+0.0					
56	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						
57	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	+0.0					
58	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	+0.0					
59	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	+0.0					
60	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	+0.0					

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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

***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. 802.11n(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 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

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

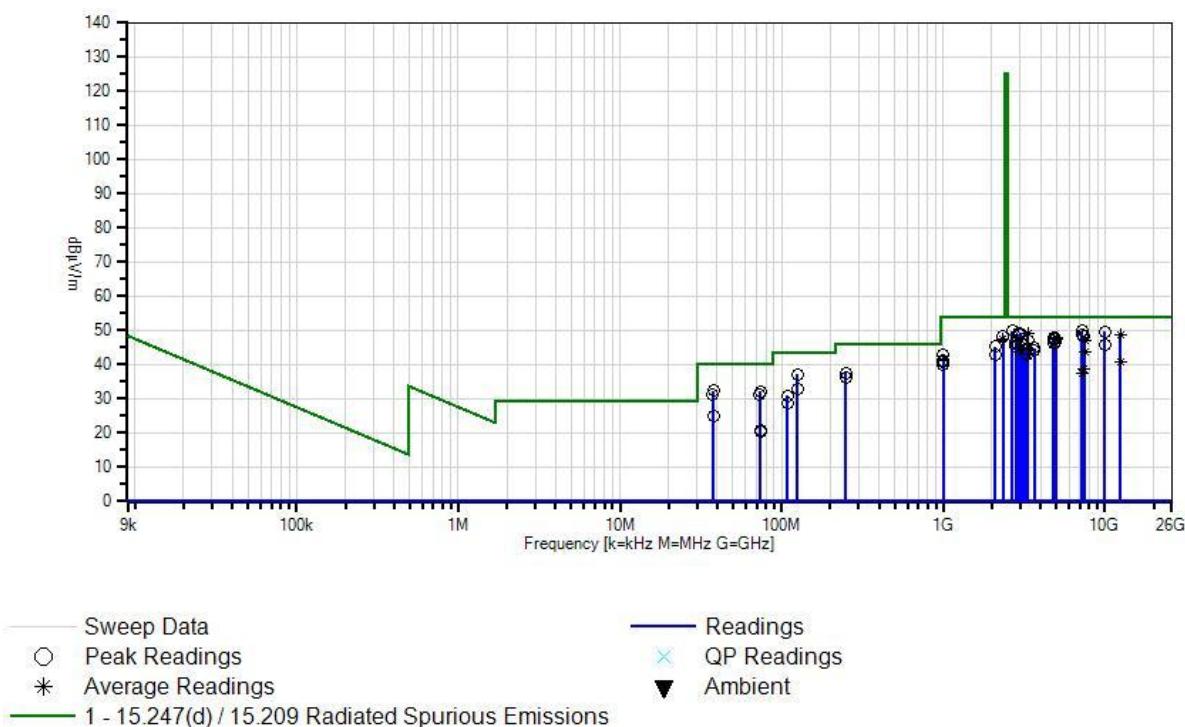
^	4999.977M	47.0	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
			+0.0	+0.5	+5.0	+1.8					
			-37.0	+33.3	+0.3						
17	4822.330M	44.3	+0.0	+0.0	+0.0	+0.0	+0.0	47.9	54.0	-6.1	Horiz
			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.0	+0.4						
18	124.998M	50.8	+0.2	-27.8	+1.9	+12.1	+0.0	37.2	43.5	-6.3	Vert
			+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	-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						
34	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						
35	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						
36	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						
37	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						
38	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						
39	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						
40	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						
41	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						
42	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						
43	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						
44	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						
45	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						
46	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						
47	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						
48	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave			+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						

50	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						
51	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						
52	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						
53	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						
54	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
55	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
56	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						
57	12499.972 M Ave	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					
			-35.9	+38.7	+0.2						
^	12499.972 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						
59	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						
60	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						
61	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						
62	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						
63	7385.756M Ave	30.4	+0.0	+0.0	+0.0	+0.0	+0.0	38.9	54.0	-15.1	Horiz
			+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						
65	7230.570M Ave	28.8	+0.0	+0.0	+0.0	+0.0	+0.0	37.5	54.0	-16.5	Horiz
			+0.0	+0.6	+6.3	+2.3					
			-36.8	+36.1	+0.2						
^	7230.570M	43.3	+0.0	+0.0	+0.0	+0.0	+0.0	52.0	54.0	-2.0	Horiz
			+0.0	+0.6	+6.3	+2.3					
			-36.8	+36.1	+0.2						

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	+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	+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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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

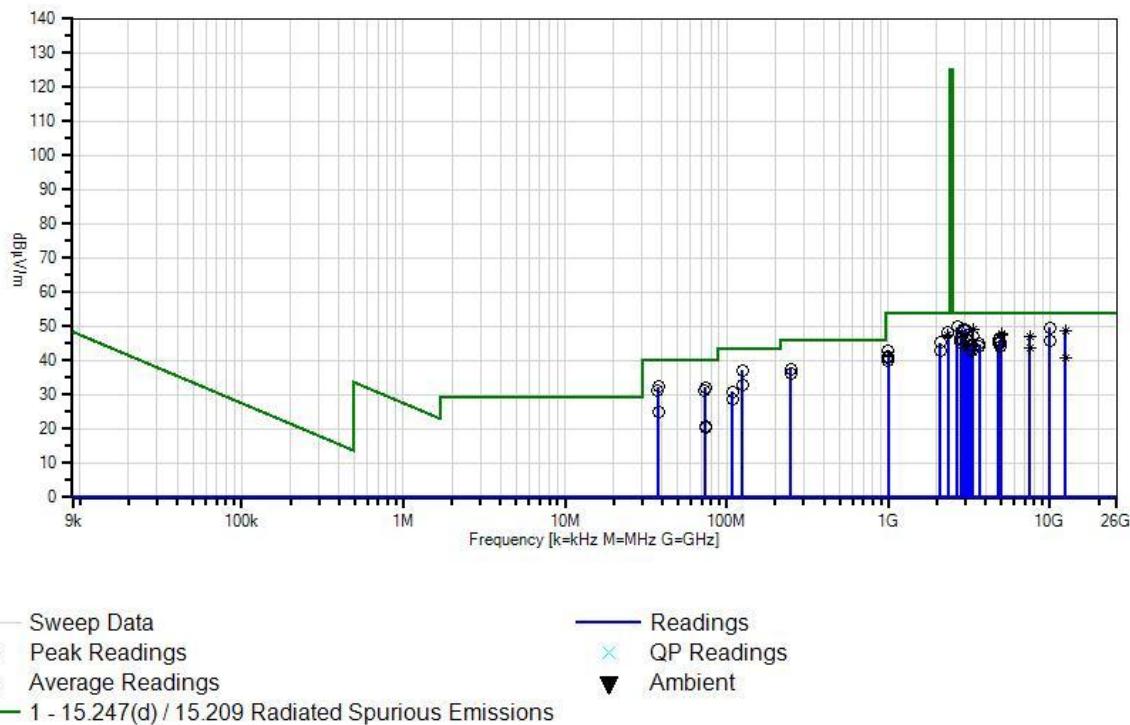
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB			Ant	
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4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

16	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							
18	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							
20	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							
21	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							
22	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							
23	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							
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	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							
26	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							
27	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							
28	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							
29	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							
30	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							
31	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							
32	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							

33	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							
34	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	+0.0	+0.0						
35	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	+0.0	+0.0						
36	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							
37	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							
38	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							
39	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							
40	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							
41	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							
42	4906.220M	40.6	+0.0	+0.0	+0.0	+0.0	+0.0	44.3	54.0	-9.7	Horiz
		+0.0	+0.5	+5.0	+1.8						
		-37.1	+33.1	+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	+0.0	+0.0						
44	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave		+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	+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	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
51	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
52	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						
53	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
55	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	+0.0					
56	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						
57	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	+0.0					
58	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	+0.0					
59	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	+0.0					
60	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	+0.0					

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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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

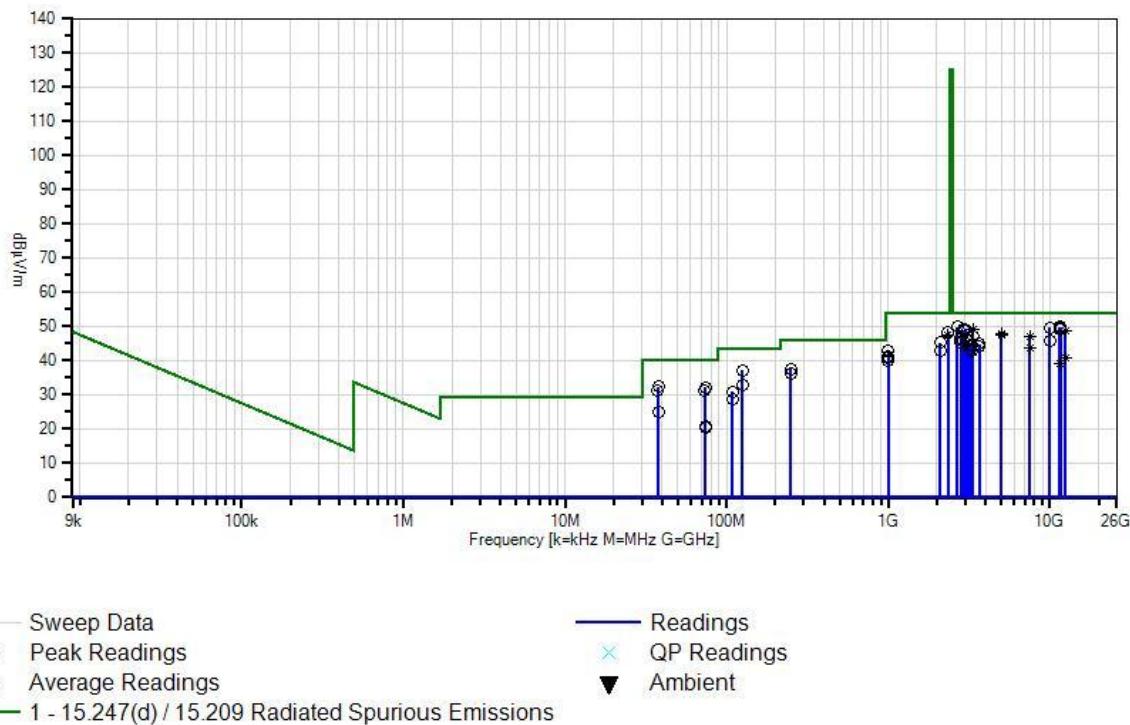
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9 MHz	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
1	11648.970 M	37.1	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Horiz
			+0.0	+0.8	+8.5	+2.9					
			-36.4	+36.5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

16	4999.977M	44.2	+0.0	+0.0	+0.0	+0.0	+0.0	48.1	54.0	-5.9	Vert
	Ave		+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							
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	+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	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							
25	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							
26	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							
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	+0.0						
28	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	+0.0						
29	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							
30	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							
31	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							
32	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							

33	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						
34	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						
35	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						
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	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						
38	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						
39	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						
40	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						
41	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						
42	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						
43	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave			+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						
45	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						
46	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						
47	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						
48	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						
49	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						

50	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
51	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						
52	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
54	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						
55	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						
56	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						
57	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						
58	11650.100	26.2	+0.0	+0.0	+0.0	+0.0	+0.0	39.0	54.0	-15.0	Vert
	M		+0.0	+0.8	+8.5	+2.9					
	Ave		-36.4	+36.5	+0.5						
^	11650.100	37.8	+0.0	+0.0	+0.0	+0.0	+0.0	50.6	54.0	-3.4	Vert
	M		+0.0	+0.8	+8.5	+2.9					
			-36.4	+36.5	+0.5						
60	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						
61	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: 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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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

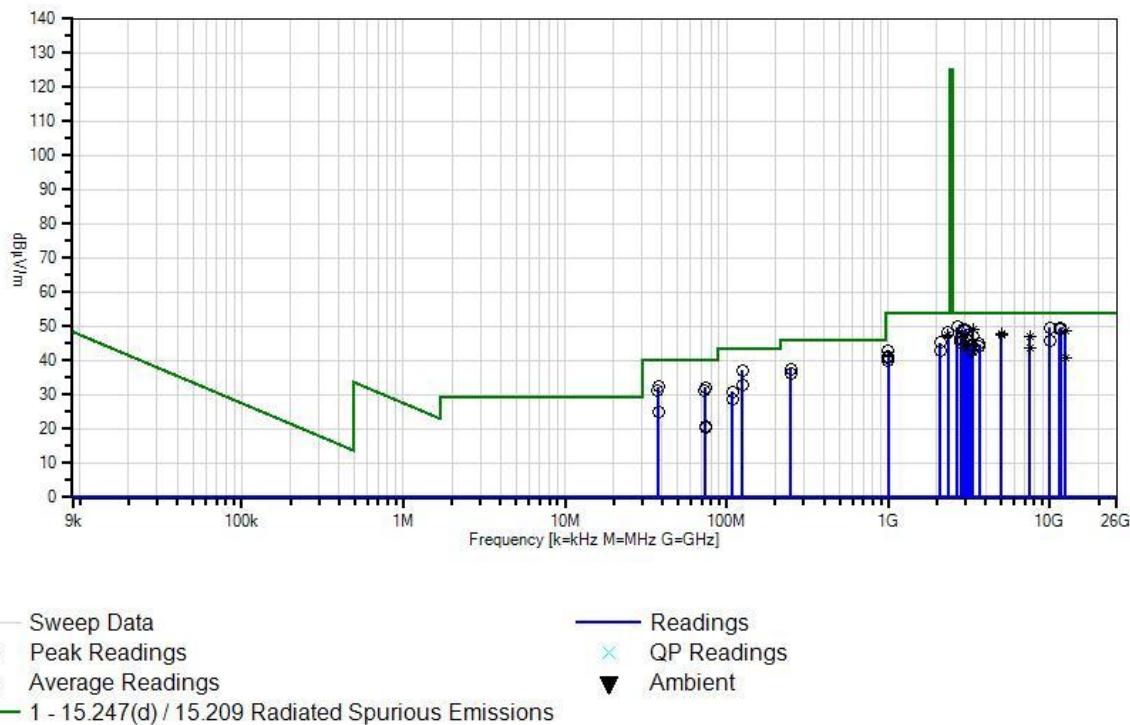
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters					
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist	Corr	Spec	Margin	Polar	
			MHz	dB $\mu$ V	dB	dB	dB	Table	dB $\mu$ V/m	dB $\mu$ V/m	dB	Ant
1	2666.655M	53.6	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Horiz
			+0.0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

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	44.2	+0.0	+0.0	+0.0	+0.0	+0.0	48.1	54.0	-5.9	Vert
	Ave		+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	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						
22	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						
24	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						
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	+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							
34	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	+0.0	+0.0	+0.0					
35	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							
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	+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	+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	+0.0	+0.0	+0.0					
44	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave		+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	+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	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
51	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
52	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						
53	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
55	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	+0.0					
56	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						
57	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	+0.0					
58	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	+0.0					
59	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	+0.0					
60	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	+0.0					

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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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

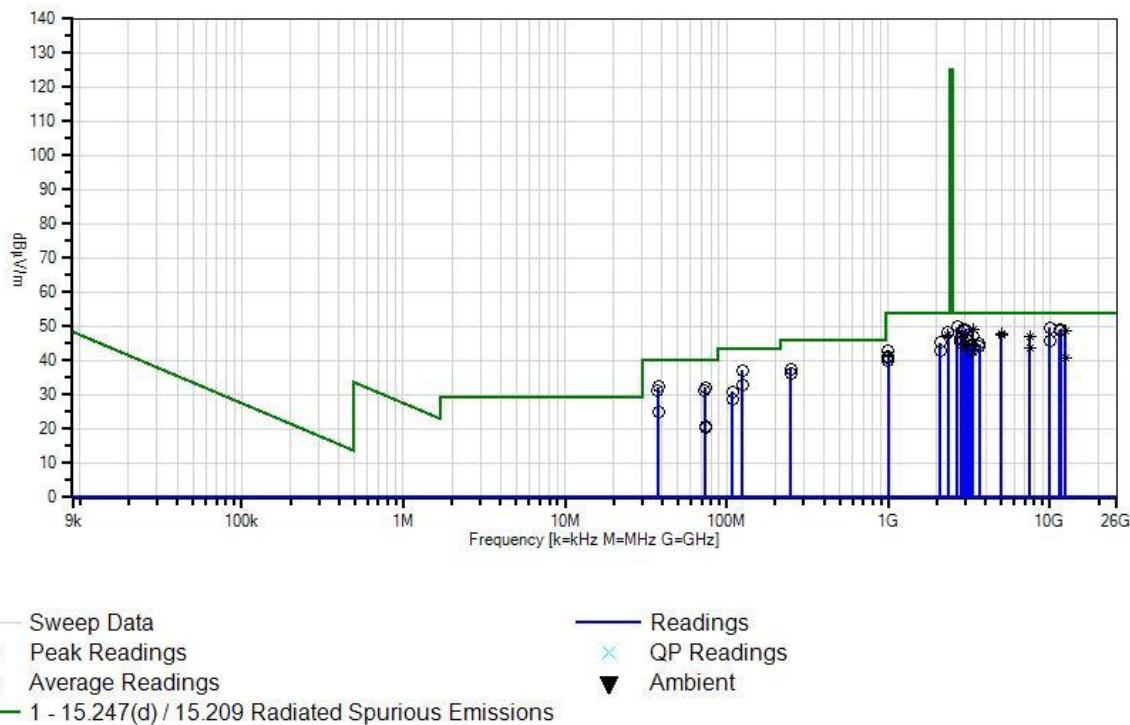
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB			Ant	
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4	+0.0	49.9	54.0	-4.1	Horiz
2	9999.966M	37.1	+0.0 +0.0 -35.9	+0.0 +0.8 +37.2	+0.0 +7.3 +0.5	+0.0 +2.7	+0.0	49.7	54.0	-4.3	Horiz
3	2999.984M	50.7	+0.0 +0.0 -37.8	+0.0 +0.4 +30.0	+0.0 +3.6 +0.9	+0.0 +1.5	+0.0	49.3	54.0	-4.7	Horiz
4	11590.170 M	36.4	+0.0 +0.0 -36.3	+0.0 +0.8 +36.4	+0.0 +8.5 +0.5	+0.0 +2.9	+0.0	49.2	54.0	-4.8	Horiz
5	2899.988M	50.8	+0.0 +0.0 -37.9	+0.0 +0.4 +29.7	+0.0 +3.6 +1.1	+0.0 +1.4	+0.0	49.1	54.0	-4.9	Horiz
6	11590.060 M	36.3	+0.0 +0.0 -36.3	+0.0 +0.8 +36.4	+0.0 +8.5 +0.5	+0.0 +2.9	+0.0	49.1	54.0	-4.9	Vert
7	3333.317M Ave	49.7	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5	+0.0	49.1	54.0	-4.9	Horiz
^	3333.317M	53.1	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5	+0.0	52.5	54.0	-1.5	Horiz
9	12499.947 M Ave	33.3	+0.0 +0.0 -35.9	+0.0 +0.8 +38.7	+0.0 +8.9 +0.2	+0.0 +2.9	+0.0	48.9	54.0	-5.1	Horiz
^	12499.947 M	36.7	+0.0 +0.0 -35.9	+0.0 +0.8 +38.7	+0.0 +8.9 +0.2	+0.0 +2.9	+0.0	52.3	54.0	-1.7	Horiz
11	11509.683 M	36.3	+0.0 +0.0 -36.3	+0.0 +0.8 +36.3	+0.0 +8.5 +0.4	+0.0 +2.9	+0.0	48.9	54.0	-5.1	Vert
12	11511.040 M	36.3	+0.0 +0.0 -36.3	+0.0 +0.8 +36.3	+0.0 +8.5 +0.4	+0.0 +2.9	+0.0	48.9	54.0	-5.1	Horiz
13	2999.985M	50.3	+0.0 +0.0 -37.8	+0.0 +0.4 +30.0	+0.0 +3.6 +0.9	+0.0 +1.5	+0.0	48.9	54.0	-5.1	Vert
14	2333.324M	53.3	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +1.3	+0.0	48.5	54.0	-5.5	Vert
15	4999.977M Ave	44.2	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +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	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						
20	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						
22	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						
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	+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	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							
35	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							
36	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							
37	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							
38	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							
39	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							
40	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							
41	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							
42	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave		+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							
44	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							
45	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							
46	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							
47	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							
48	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
		+0.0	+0.0	+0.0	+0.0						
		+0.0	+0.0	+0.0							
49	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
		+0.0	+0.0	+0.0	+0.0						
		+0.0	+0.0	+0.0							

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	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

***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.

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

Ext Attn: 0 dB

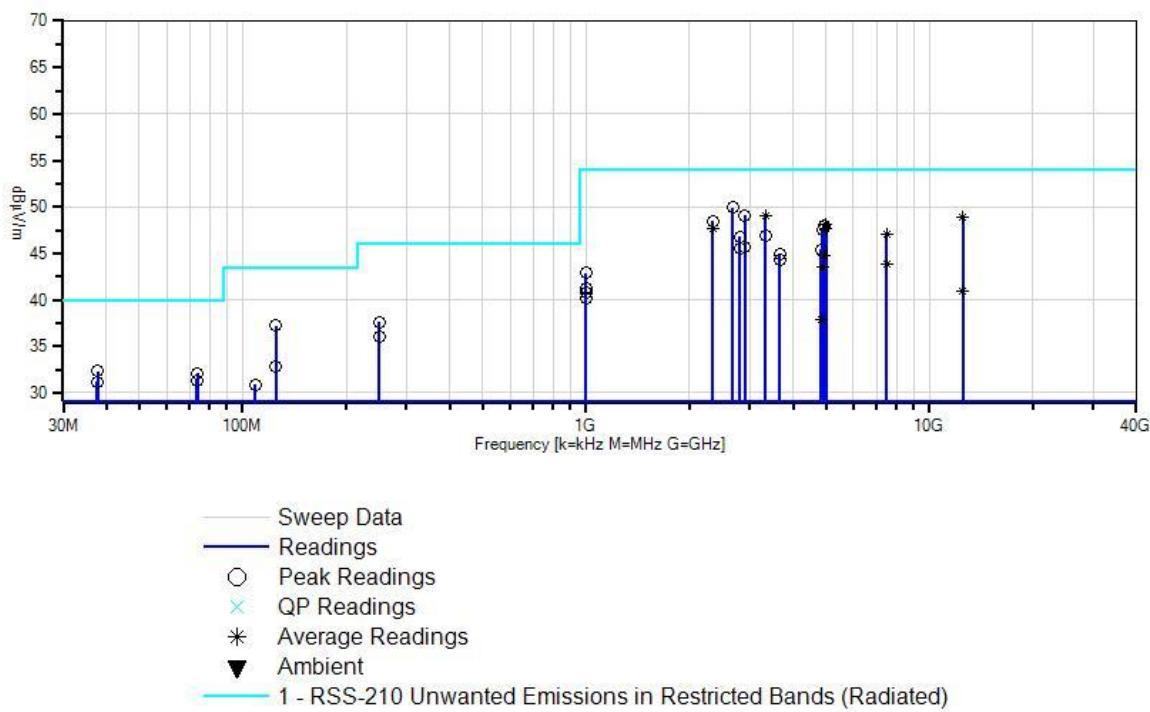
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB			Ant	
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4	+0.0	49.9	54.0	-4.1	Horiz
2	2899.988M	50.8	+0.0 +0.0 -37.9	+0.0 +0.4 +29.7	+0.0 +3.6 +1.1	+0.0 +1.4	+0.0	49.1	54.0	-4.9	Horiz
3	3333.317M	49.7	+0.0 Ave	+0.0 +0.4 -37.7	+0.0 +3.9 +30.7	+0.0 +1.5	+0.0	49.1	54.0	-4.9	Horiz
^	3333.317M	53.1	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5	+0.0	52.5	54.0	-1.5	Horiz
5	12499.947	33.3	+0.0 M Ave	+0.0 +0.8 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9 +0.2	+0.0	48.9	54.0	-5.1	Horiz
^	12499.947	36.7	+0.0 M	+0.0 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9 +0.2	+0.0	52.3	54.0	-1.7	Horiz
7	2333.324M	53.3	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +1.3	+0.0	48.5	54.0	-5.5	Vert
8	4999.977M	44.2	+0.0 Ave	+0.0 +0.5 -37.0	+0.0 +5.0 +33.3	+0.0 +1.8 +0.3	+0.0	48.1	54.0	-5.9	Vert
^	4999.977M	47.0	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8	+0.0	50.9	54.0	-3.1	Vert
10	4923.958M	44.2	+0.0 +0.0 -37.1	+0.0 +0.5 +33.2	+0.0 +5.0 +0.4	+0.0 +1.8	+0.0	48.0	54.0	-6.0	Horiz
11	124.998M	50.8	+0.2 +0.0 +0.0	-27.8 +0.0 +0.0	+1.9 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0	37.2	43.5	-6.3	Vert
12	4999.978M	43.7	+0.0 Ave	+0.0 +0.5 -37.0	+0.0 +5.0 +33.3	+0.0 +1.8 +0.3	+0.0	47.6	54.0	-6.4	Horiz
^	4999.978M	46.5	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8	+0.0	50.4	54.0	-3.6	Horiz
14	2333.317M	52.4	+0.0 Ave	+0.0 +0.4 -38.0	+0.0 +3.2 +28.3	+0.0 +1.3 +0.0	+0.0	47.6	54.0	-6.4	Horiz
^	2333.317M	55.6	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +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	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						
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	41.0	+0.0	+0.0	+0.0	+0.0	+0.0	44.8	54.0	-9.2	Vert
	Ave		+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	-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						
34	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave		+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						
36	4873.953M	39.8	+0.0	+0.0	+0.0	+0.0	+0.0	43.5	54.0	-10.5	Vert
	Ave		+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.1	+0.4						
^	4873.953M	47.9	+0.0	+0.0	+0.0	+0.0	+0.0	51.6	54.0	-2.4	Vert
			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.1	+0.4						
38	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						
39	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
40	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
41	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						
42	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
44	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						
45	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						
46	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						
47	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						
48	4823.972M	34.2	+0.0	+0.0	+0.0	+0.0	+0.0	37.8	54.0	-16.2	Vert
	Ave		+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.0	+0.4						
^	4823.972M	45.1	+0.0	+0.0	+0.0	+0.0	+0.0	48.7	54.0	-5.3	Vert
			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.0	+0.4						

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	+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	+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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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.

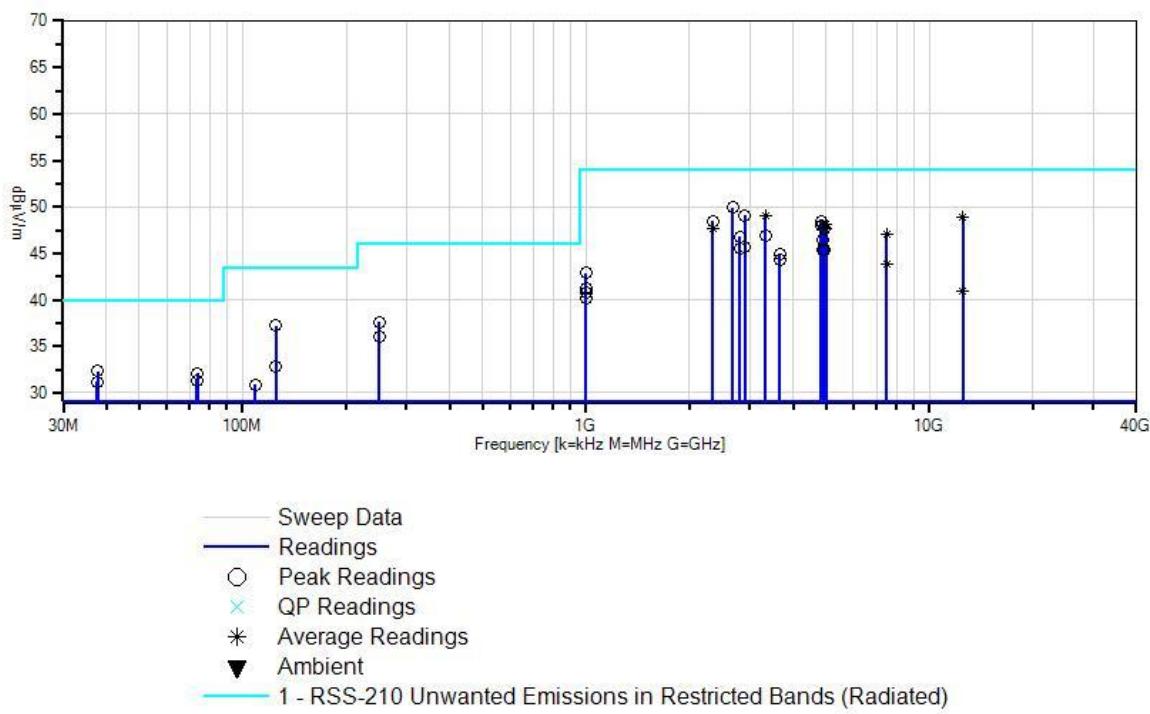
Ext Attn: 0 dB

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

16	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							
18	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							
20	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							
21	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							
22	4873.995M	42.8	+0.0	+0.0	+0.0	+0.0	+0.0	46.5	54.0	-7.5	Vert
		+0.0	+0.5	+5.0	+1.8						
		-37.1	+33.1	+0.4							
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	+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	+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	+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	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							
29	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							
30	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	+0.0						
31	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	+0.0						
32	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							

33	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						
34	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						
35	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave		+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						
37	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						
38	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
39	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
40	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						
41	12499.972M	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972M	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
43	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						
44	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						
45	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						
46	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						
47	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						
48	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: 14:31:39 Motorola Mobility, Inc. WO#: 92800  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 2 Ext ATTN: 0 dB





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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

***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. 802.11n(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 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

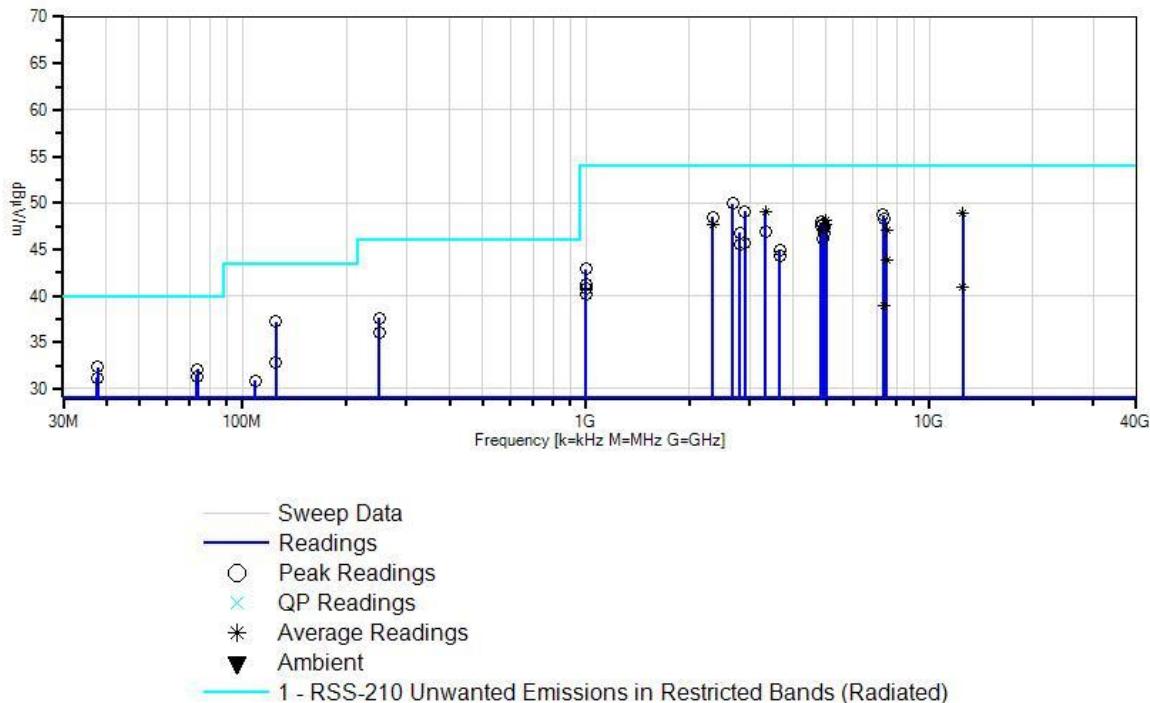
<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB			Ant	
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4	+0.0	49.9	54.0	-4.1	Horiz
2	2899.988M	50.8	+0.0 +0.0 -37.9	+0.0 +0.4 +29.7	+0.0 +3.6 +1.1	+0.0 +1.4	+0.0	49.1	54.0	-4.9	Horiz
3	3333.317M	49.7	+0.0 Ave	+0.0 +0.4 -37.7	+0.0 +3.9 +30.7	+0.0 +1.5	+0.0	49.1	54.0	-4.9	Horiz
^	3333.317M	53.1	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5	+0.0	52.5	54.0	-1.5	Horiz
5	12499.947	33.3	+0.0 M Ave	+0.0 +0.8 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9	+0.0	48.9	54.0	-5.1	Horiz
^	12499.947	36.7	+0.0 M	+0.0 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9	+0.0	52.3	54.0	-1.7	Horiz
7	7315.940M	40.0	+0.0 +0.0 -36.7	+0.0 +0.6 +35.9	+0.0 +6.4 +0.2	+0.0 +2.3	+0.0	48.7	54.0	-5.3	Horiz
8	7310.730M	40.1	+0.0 +0.0 -36.7	+0.0 +0.6 +35.9	+0.0 +6.3 +0.2	+0.0 +2.3	+0.0	48.7	54.0	-5.3	Vert
9	2333.324M	53.3	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +1.3	+0.0	48.5	54.0	-5.5	Vert
10	7383.890M	39.7	+0.0 +0.0 -36.7	+0.0 +0.6 +35.8	+0.0 +6.4 +0.1	+0.0 +2.3	+0.0	48.2	54.0	-5.8	Vert
11	4999.977M	44.2	+0.0 Ave	+0.0 +0.5 -37.0	+0.0 +5.0 +33.3	+0.0 +1.8	+0.0	48.1	54.0	-5.9	Vert
^	4999.977M	47.0	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8	+0.0	50.9	54.0	-3.1	Vert
13	4822.330M	44.3	+0.0 +0.0 -37.1	+0.0 +0.5 +33.0	+0.0 +5.0 +0.4	+0.0 +1.8	+0.0	47.9	54.0	-6.1	Horiz
14	124.998M	50.8	+0.2 +0.0 +0.0	-27.8 +0.0 +0.0	+1.9 +0.0 +0.0	+12.1 +0.0	+0.0	37.2	43.5	-6.3	Vert
15	4999.978M	43.7	+0.0 Ave	+0.0 +0.5 -37.0	+0.0 +5.0 +33.3	+0.0 +1.8 +0.3	+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	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						
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	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						
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	+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	+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	+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	-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						
34	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						
35	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						
36	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						
37	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						
38	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
Ave			+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						
40	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						
41	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
42	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
43	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						
44	12499.972M	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
Ave			+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
^	12499.972M	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
M			+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
46	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						
47	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						
48	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						
49	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						

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





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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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.

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

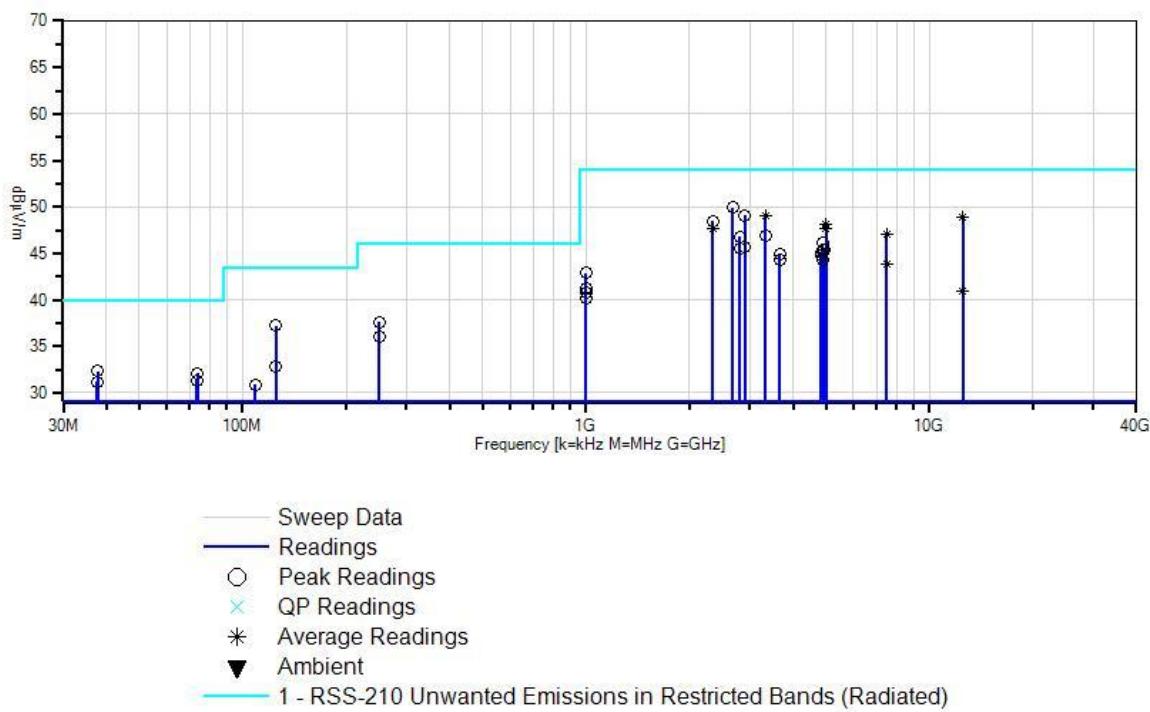
Ext Attn: 0 dB

<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB			Ant	
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4	+0.0	49.9	54.0	-4.1	Horiz
2	2899.988M	50.8	+0.0 +0.0 -37.9	+0.0 +0.4 +29.7	+0.0 +3.6 +1.1	+0.0 +1.4	+0.0	49.1	54.0	-4.9	Horiz
3	3333.317M	49.7	+0.0 Ave	+0.0 +0.4 -37.7	+0.0 +3.9 +30.7	+0.0 +1.5	+0.0	49.1	54.0	-4.9	Horiz
^	3333.317M	53.1	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5	+0.0	52.5	54.0	-1.5	Horiz
5	12499.947	33.3	+0.0 M Ave	+0.0 +0.8 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9 +0.2	+0.0	48.9	54.0	-5.1	Horiz
^	12499.947	36.7	+0.0 M	+0.0 -35.9	+0.0 +8.9 +38.7	+0.0 +2.9 +0.2	+0.0	52.3	54.0	-1.7	Horiz
7	2333.324M	53.3	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +1.3	+0.0	48.5	54.0	-5.5	Vert
8	4999.977M	44.2	+0.0 Ave	+0.0 +0.5 -37.0	+0.0 +5.0 +33.3	+0.0 +1.8 +0.3	+0.0	48.1	54.0	-5.9	Vert
^	4999.977M	47.0	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8	+0.0	50.9	54.0	-3.1	Vert
10	124.998M	50.8	+0.2 +0.0 +0.0	-27.8 +0.0 +0.0	+1.9 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0	37.2	43.5	-6.3	Vert
11	4999.978M	43.7	+0.0 Ave	+0.0 +0.5 -37.0	+0.0 +5.0 +33.3	+0.0 +1.8 +0.3	+0.0	47.6	54.0	-6.4	Horiz
^	4999.978M	46.5	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8	+0.0	50.4	54.0	-3.6	Horiz
13	2333.317M	52.4	+0.0 Ave	+0.0 +0.4 -38.0	+0.0 +3.2 +28.3	+0.0 +1.3 +0.0	+0.0	47.6	54.0	-6.4	Horiz
^	2333.317M	55.6	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +1.3	+0.0	50.8	54.0	-3.2	Horiz
15	7499.966M	38.4	+0.0 Ave	+0.0 +0.7 -36.5	+0.0 +6.5 +35.5	+0.0 +2.3 +0.1	+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	+0.0	+0.0	+0.0	+0.0	44.3	54.0	-9.7	Horiz
			+0.0	+0.5	+5.0	+1.8					
			-37.1	+33.1	+0.4						
34	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						
35	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave		+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						
37	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						
38	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
39	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
40	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						
41	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
43	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						
44	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						
45	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						
46	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						
47	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						
48	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: 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





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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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.

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

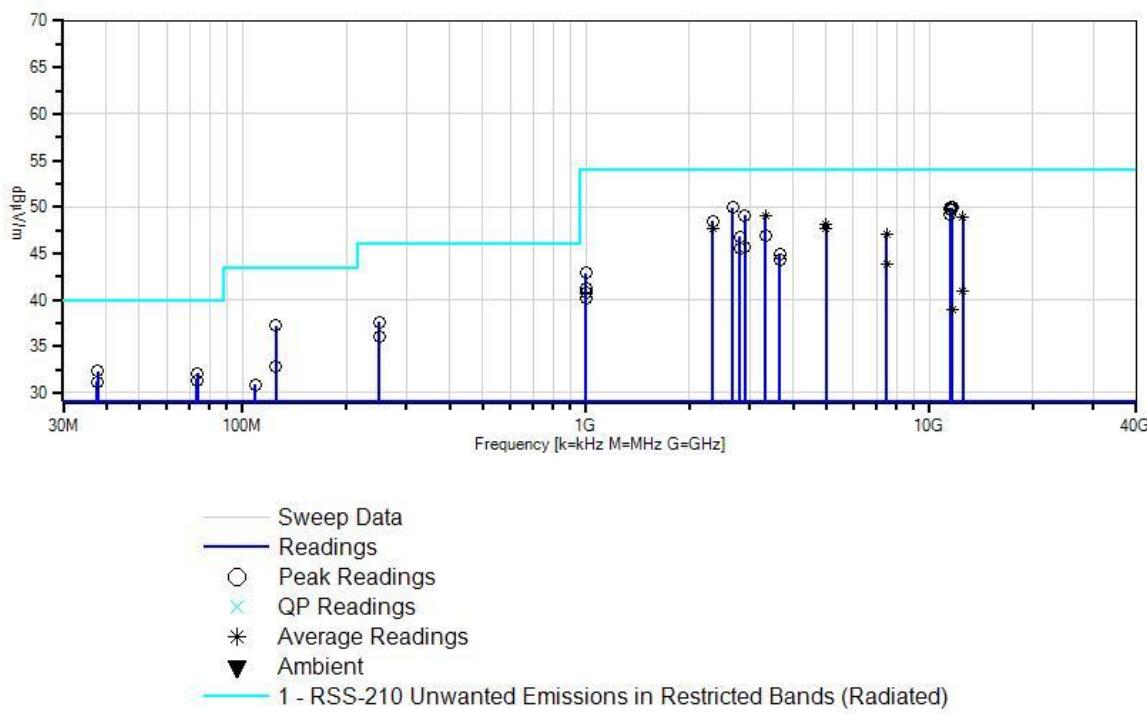
Ext Attn: 0 dB

<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB	dB $\mu$ V/m	dB $\mu$ V/m	Ant	
1	11648.970	37.1	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Horiz
			+0.0	+0.8	+8.5	+2.9					
			-36.4	+36.5	+0.5						
2	11568.220	37.1	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Vert
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.4	+0.5						
3	2666.655M	53.6	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Horiz
			+0.0	+0.4	+3.4	+1.4					
			-37.9	+29.0	+0.0						
4	11489.560	37.2	+0.0	+0.0	+0.0	+0.0	+0.0	49.8	54.0	-4.2	Vert
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.3	+0.4						
5	11569.330	36.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.7	54.0	-4.3	Horiz
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.4	+0.5						
6	11490.100	36.6	+0.0	+0.0	+0.0	+0.0	+0.0	49.2	54.0	-4.8	Horiz
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.3	+0.4						
7	2899.988M	50.8	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
			+0.0	+0.4	+3.6	+1.4					
			-37.9	+29.7	+1.1						
8	3333.317M	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
			+0.0	+0.4	+3.9	+1.5					
			-37.7	+30.7	+0.6						
^	3333.317M	53.1	+0.0	+0.0	+0.0	+0.0	+0.0	52.5	54.0	-1.5	Horiz
			+0.0	+0.4	+3.9	+1.5					
			-37.7	+30.7	+0.6						
10	12499.947	33.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Horiz
			+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
^	12499.947	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
			+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
12	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						
13	4999.977M	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						
15	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						

16	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							
18	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							
20	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							
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	+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	+0.0						
26	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							
27	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	+0.0						
28	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							
29	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	+0.0						
30	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	+0.0						
31	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							
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	-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						
34	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave		+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						
36	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						
37	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
38	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
39	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						
40	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
42	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						
43	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						
44	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						
45	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						
46	11650.100	26.2	+0.0	+0.0	+0.0	+0.0	+0.0	39.0	54.0	-15.0	Vert
	M		+0.0	+0.8	+8.5	+2.9					
	Ave		-36.4	+36.5	+0.5						
^	11650.100	37.8	+0.0	+0.0	+0.0	+0.0	+0.0	50.6	54.0	-3.4	Vert
	M		+0.0	+0.8	+8.5	+2.9					
			-36.4	+36.5	+0.5						
48	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						
49	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: 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





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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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.

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

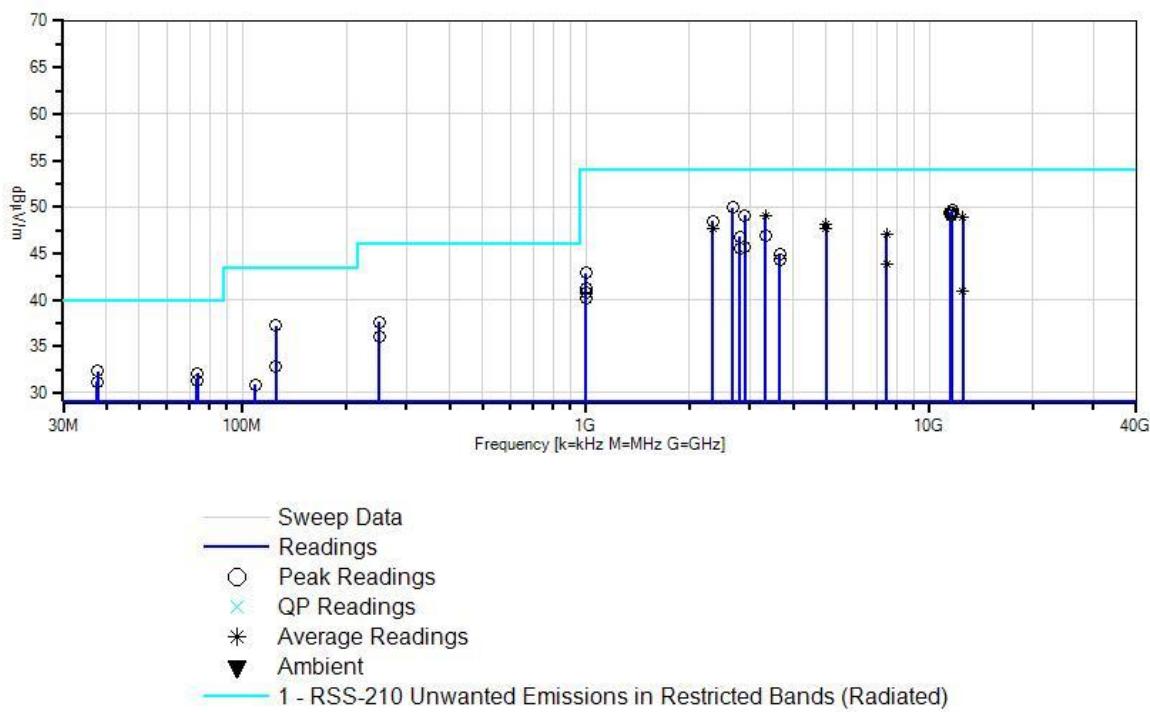
Ext Attn: 0 dB

<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar
			MHz	dB $\mu$ V	dB	dB	dB	dB $\mu$ V/m	dB $\mu$ V/m	Ant	
1	2666.655M	53.6	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Horiz
			+0.0	+0.4	+3.4	+1.4					
			-37.9	+29.0	+0.0						
2	11649.730M	36.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.7	54.0	-4.3	Vert
			+0.0	+0.8	+8.5	+2.9					
			-36.4	+36.5	+0.5						
3	11490.700M	36.8	+0.0	+0.0	+0.0	+0.0	+0.0	49.4	54.0	-4.6	Horiz
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.3	+0.4						
4	11650.070M	36.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.3	54.0	-4.7	Horiz
			+0.0	+0.8	+8.5	+2.9					
			-36.4	+36.5	+0.5						
5	11490.670M	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.3	54.0	-4.7	Vert
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.3	+0.4						
6	11569.170M	36.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.3	54.0	-4.7	Horiz
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.4	+0.5						
7	2899.988M	50.8	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
			+0.0	+0.4	+3.6	+1.4					
			-37.9	+29.7	+1.1						
8	3333.317M Ave	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
			+0.0	+0.4	+3.9	+1.5					
			-37.7	+30.7	+0.6						
^	3333.317M	53.1	+0.0	+0.0	+0.0	+0.0	+0.0	52.5	54.0	-1.5	Horiz
			+0.0	+0.4	+3.9	+1.5					
			-37.7	+30.7	+0.6						
10	11571.200M	36.2	+0.0	+0.0	+0.0	+0.0	+0.0	49.0	54.0	-5.0	Vert
			+0.0	+0.8	+8.5	+2.9					
			-36.3	+36.4	+0.5						
11	12499.947M Ave	33.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Horiz
			+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
^	12499.947M	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
			+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
13	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						
14	4999.977M 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						

16	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						
17	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						
19	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						
21	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						
23	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						
24	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						
25	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						
26	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						
27	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						
28	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						
29	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						
30	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						
31	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						
32	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						

33	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						
34	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						
35	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave		+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						
37	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						
38	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
39	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
40	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						
41	12499.972M	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2						
^	12499.972M	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0	+0.8	+8.9	+2.9					
			-35.9	+38.7	+0.2						
43	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						
44	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						
45	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						
46	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						
47	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						
48	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: 16:07:42 Motorola Mobility, Inc. WO#: 92800  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 6 Ext ATTN: 0 dB





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	3556011306006510705008
AC to 12Vdc Power Adapter	Asian Power Devices, Inc.	WA-24 12FU	5

**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.

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

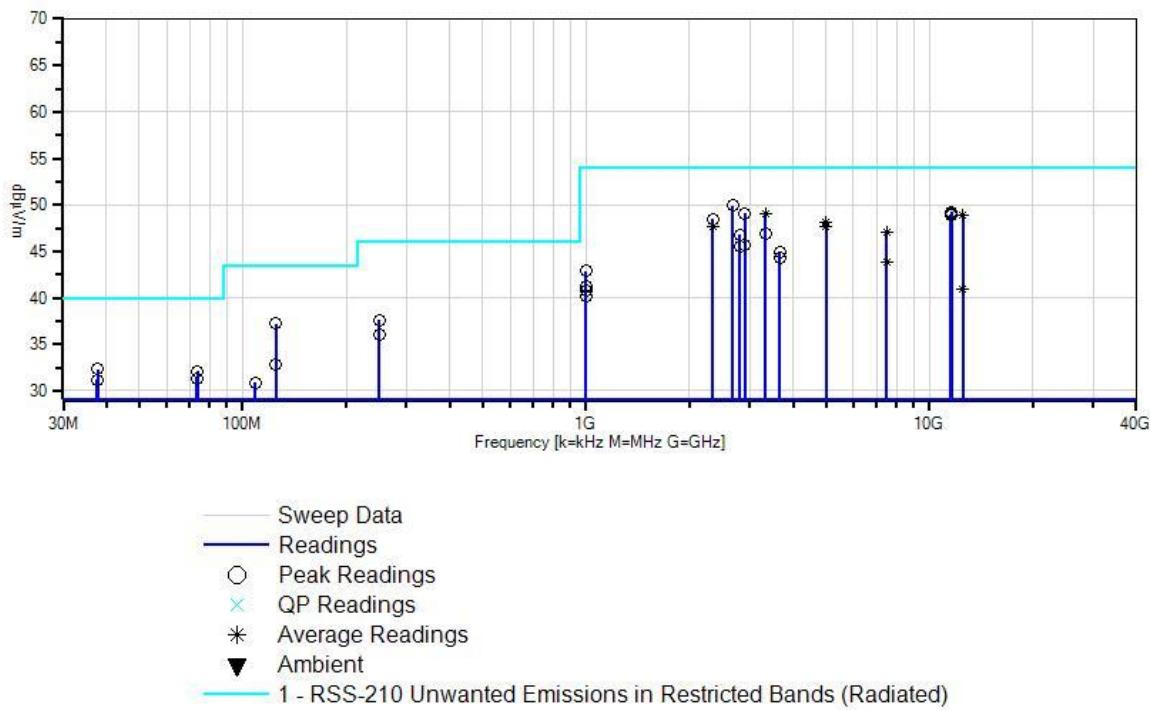
Ext Attn: 0 dB

<b>Measurement Data:</b>			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar
			MHz	dBµV	dB	dB				Ant	
1	2666.655M	53.6	+0.0 +0.0 -37.9	+0.0 +0.4 +29.0	+0.0 +3.4 +0.0	+0.0 +1.4				-4.1	Horiz
2	11590.170 M	36.4	+0.0 +0.0 -36.3	+0.0 +0.8 +36.4	+0.0 +8.5 +0.5	+0.0 +2.9				-4.8	Horiz
3	2899.988M	50.8	+0.0 +0.0 -37.9	+0.0 +0.4 +29.7	+0.0 +3.6 +1.1	+0.0 +1.4				-4.9	Horiz
4	11590.060 M	36.3	+0.0 +0.0 -36.3	+0.0 +0.8 +36.4	+0.0 +8.5 +0.5	+0.0 +2.9				-4.9	Vert
5	3333.317M Ave	49.7	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5				-4.9	Horiz
^	3333.317M	53.1	+0.0 +0.0 -37.7	+0.0 +0.4 +30.7	+0.0 +3.9 +0.6	+0.0 +1.5				-1.5	Horiz
7	12499.947 M Ave	33.3	+0.0 +0.0 -35.9	+0.0 +0.8 +38.7	+0.0 +8.9 +0.2	+0.0 +2.9				-5.1	Horiz
^	12499.947 M	36.7	+0.0 +0.0 -35.9	+0.0 +0.8 +38.7	+0.0 +8.9 +0.2	+0.0 +2.9				-1.7	Horiz
9	11511.040 M	36.3	+0.0 +0.0 -36.3	+0.0 +0.8 +36.3	+0.0 +8.5 +0.4	+0.0 +2.9				-5.1	Horiz
10	11509.683 M	36.3	+0.0 +0.0 -36.3	+0.0 +0.8 +36.3	+0.0 +8.5 +0.4	+0.0 +2.9				-5.1	Vert
11	2333.324M	53.3	+0.0 +0.0 -38.0	+0.0 +0.4 +28.3	+0.0 +3.2 +0.0	+0.0 +1.3				-5.5	Vert
12	4999.977M Ave	44.2	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8				-5.9	Vert
^	4999.977M	47.0	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8				-3.1	Vert
14	124.998M	50.8	+0.2 +0.0 +0.0	-27.8 +0.0 +0.0	+1.9 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0 37.2	43.5	-6.3		Vert
15	4999.978M Ave	43.7	+0.0 +0.0 -37.0	+0.0 +0.5 +33.3	+0.0 +5.0 +0.3	+0.0 +1.8				-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	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						
19	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						
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	+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	+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	+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	+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	+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	+0.0					

33	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave		+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							
35	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							
36	999.993M	38.6	+0.6	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
		+0.0	+0.0	+0.0	+0.0						
		+0.0	+0.0	+0.0							
37	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
		+0.0	+0.0	+0.0	+0.0						
		+0.0	+0.0	+0.0							
38	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							
39	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M	+0.0	+0.8	+8.9	+2.9						
	Ave	-35.9	+38.7	+0.2							
^	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M	+0.0	+0.8	+8.9	+2.9						
		-35.9	+38.7	+0.2							
41	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							
42	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							
43	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							
44	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							
45	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							
46	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  
 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 7 Ext ATTN: 0 dB



**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.

<b>SAMPLE CALCULATIONS</b>	
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.

<b>MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE</b>			
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.